TRAFFIC IMPACT ANALYSIS

FOR

Walmart Fuel Station

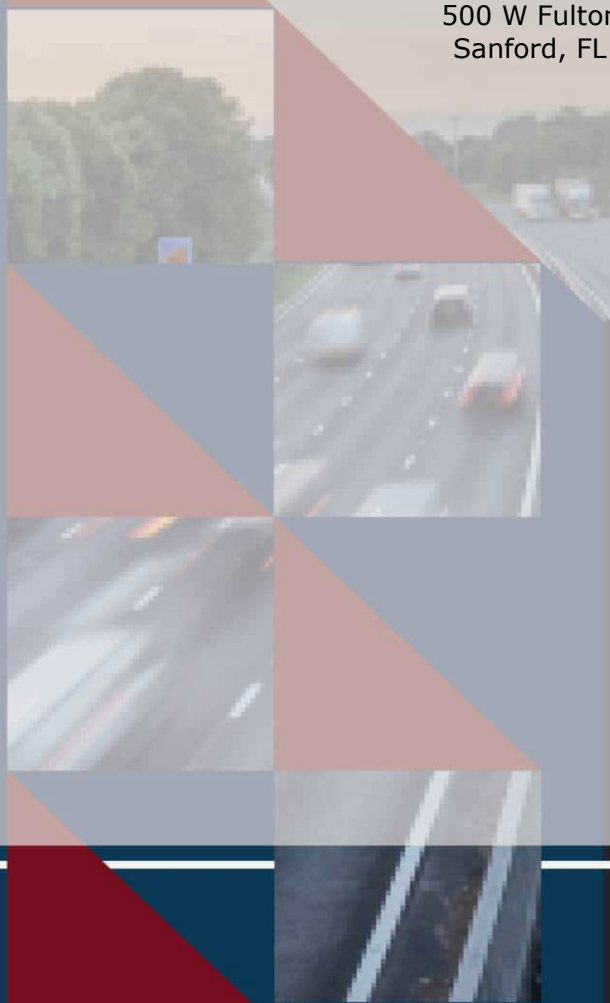
LOCATED

IN

Spring Hill, FL

Prepared For:

CPH Consulting, LLC
500 W Fulton Street
Sanford, FL 32771



FEBRUARY 2026

DRMP Project No. 25325

Prepared By: MW

Reviewed By: GV

DRMP

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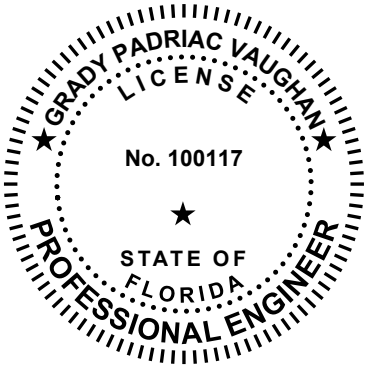

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Prepared For:

CPH Consulting, LLC

500 W Fulton Street

Sanford, FL 32771

Prepared By:

DRMP, Inc.

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DRMP

TECHNICAL APPENDIX

Walmart Fuel Station

Tampa, Florida

1. Introduction

The contents of this report present the findings of the Traffic Impact analysis (TIA) that was performed for the proposed Walmart Fuel Station development in accordance with the Florida Department of Transportation (FDOT) and Hernando County (County) Traffic Impact Analysis Guidelines. The proposed development is to be located at the existing Walmart Supercenter located at 1485 Commercial Way in Spring Hill, Florida. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed by the year 2027, consists of a fuel station that includes twelve (12) vehicle fueling positions (VFP) and a 1,618 square-foot convenience store.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing
- 2027 No-Build
- 2027 Build

1.1. Study Area

The proposed development is to be located at the existing Walmart Supercenter located at 1485 Commercial Way in Spring Hill, Florida. Refer to Figure 1 for the site location map. Refer to Figure 2 for a copy of the preliminary site plan. The study area was determined during scope coordination with the FDOT and County using the methodology in the FDOT guidelines. The submitted scope can be found in Appendix A. Refer to Table 1 for a summary of the existing roadway inventory. Figure 3 illustrates the existing lane configurations at the study intersections.

The study area consists of the following roadway segments:

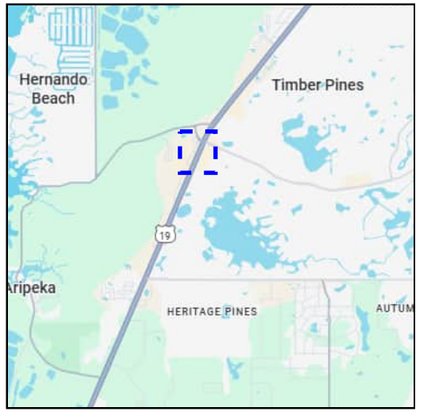
- US 19 (Commercial Way) from Hunters Lake Road to Forest Oaks Boulevard
- Spring Hill Drive from Commercial Way to Mariner Boulevard
- Osowaw Boulevard from Commercial Way to Osowaw Boulevard
- Applegate Drive from Commercial Way to Kenlake Avenue

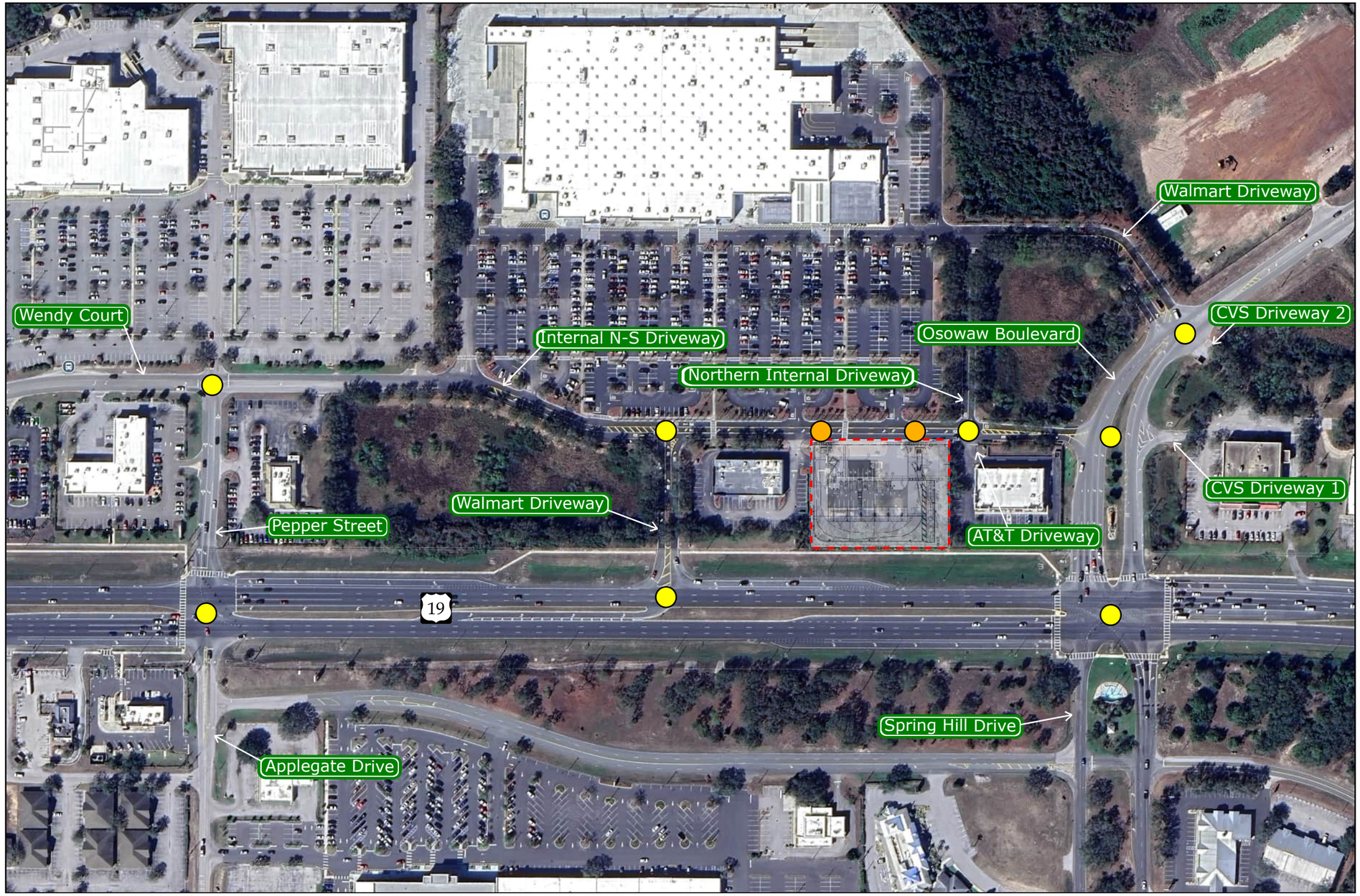
The study area consists of the following intersections:

- US 19 (Commercial Way) and Spring Hill Drive / Osowaw Boulevard (signalized)
- US 19 (Commercial Way) and Walmart Driveway (unsignalized)
- US 19 (Commercial Way) and Applegate Drive / Pepper Street (signalized)
- Pepper Street / Internal Walmart Driveway and Wendy Court / Internal N-S Driveway (unsignalized)
- Internal N-S Driveway and Walmart Driveway (unsignalized)
- Internal N-S Driveway and AT&T Driveway (unsignalized)
- Osowaw Boulevard and Internal N-S Driveway / CVS Driveway 1 (unsignalized)
- Osowaw Boulevard and Walmart Driveway / CVS Driveway 2 (unsignalized)
- Internal N-S Driveway and Proposed Site Drive 1 (unsignalized)
- Internal N-S Driveway and Proposed Site Drive 1 (unsignalized)

Table 1: Existing Roadway Inventory

Road Segment	From	To	2024 AADT (vpd)
US 19 (Commercial Way)	Hunters Lake Road	Forest Oaks Boulevard	43,000
Spring Hill Drive	Commercial Way	Mariner Boulevard	23,000
Osowaw Boulevard	Commercial Way	Osowaw Boulevard	1,200
Applegate Drive	Commercial Way	Kenlake Avenue	2,200





LEGEND

- Study Intersection
- Proposed Site Access
- Study Area

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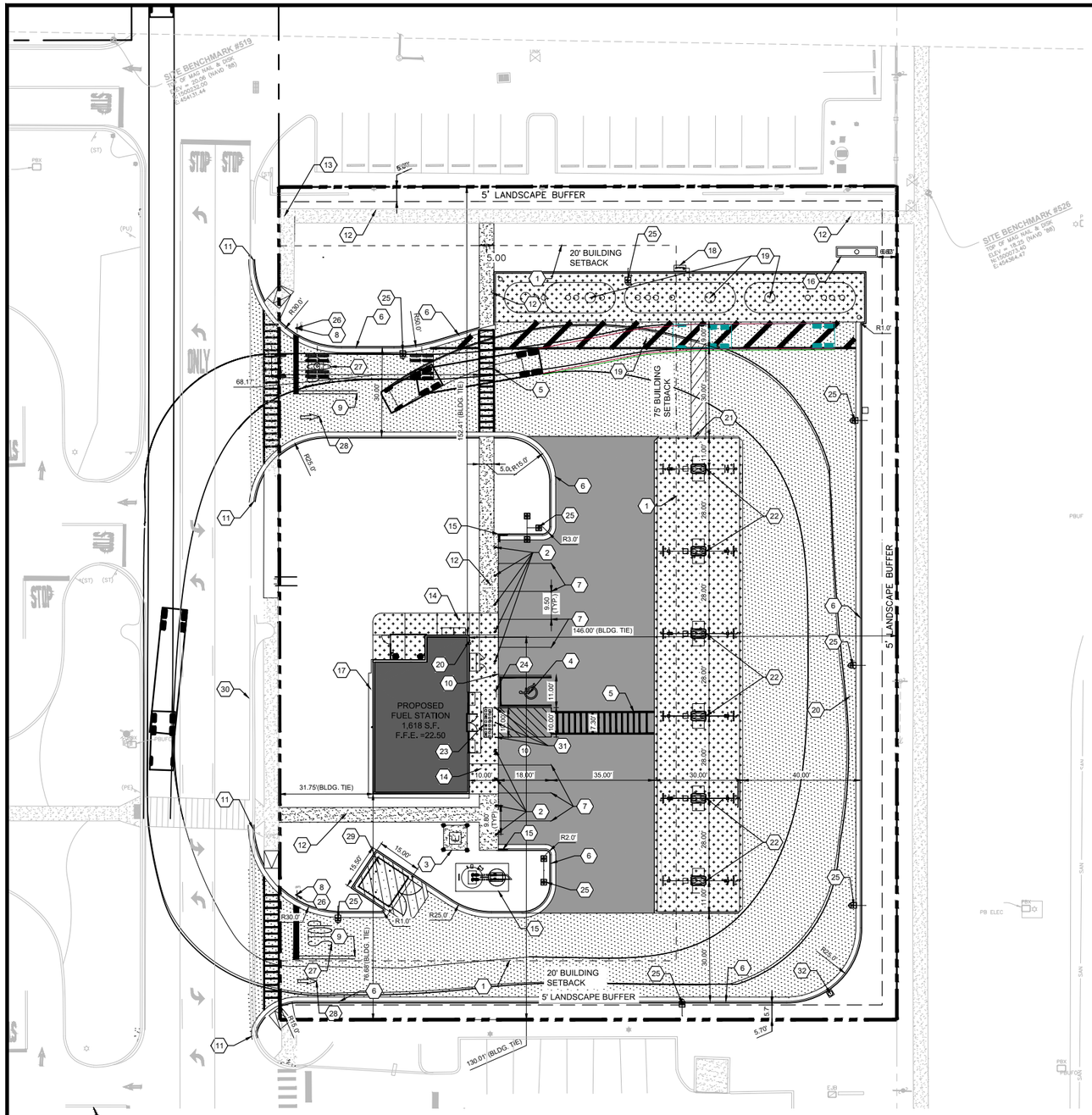
Walmart Fuel Station
Spring Hill, FL

Site Location Map

Scale: Not to Scale | Figure 1



NOTE:
ITEMS SHOWN SCREENED REPRESENT EXISTING CONDITIONS. ITEMS SHOWN BOLD REPRESENT PROPOSED CONDITIONS.

Always call 811 two full business days before you dig
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www.sunshine811.com

SITE BENCHMARK

#519
TOP OF MAG NAIL & DISK
ELEV = 20.06 (NAVD '88)
N:1500232.00
E:454131.44

#526
TOP OF MAG NAIL & DISK
ELEV = 18.25 (NAVD '88)
N:1500073.50
E:454364.47

SITE LEGEND

1. BUILDING SETBACK LINE PER ZONING RESOLUTION.
2. PIPE BOLLARD, SEE DETAIL SHEET C5.1.
3. CONCRETE TRANSFORMER PAD. SEE DETAIL SHEET C5.7. CONTRACTOR TO COORDINATE INSPECTION WITH UTILITY PROVIDER.
4. ACCESSIBLE PARKING SPACE PER FDOT INDEX NO. 711-001 AND SIGNAGE PER FDOT INDEX NO. 700-102 TYPICAL. SEE DETAIL SHEET.
5. PEDESTRIAN CROSSWALK, SEE PLAN FOR WIDTH, REF. WALMART DETAILS, SHEET C5.4.
6. 24" STANDARD CURB & GUTTER. SEE DETAIL SHEET C5.2.
7. PROPOSED SWSL / 4".
8. NEW SIGN MOUNTING AND BASE WITH BREAK AWAY POST.
9. PROPOSED DYSL / 4", REF. WALMART DETAILS, SHEET C5.3 (LINES TO BE EXTENDED FROM THE CROSSWALK/ STOP BAR).
10. FLUSH PAVEMENT AND SIDEWALK AREA.
11. COORDINATE WITH DEVELOPER'S CONTRACTOR TO CONSTRUCT SMOOTH TRANSITION TO EXISTING CURB AND PAVEMENT.
12. PROPOSED CONCRETE SIDEWALK, 5% MAX. LONGITUDINAL SLOPE, 2% MAX. CROSS SLOPE.
13. PROPOSED ACCESSIBLE CURB RAMP 1:12 MAX. SLOPE WITH 2' DEEP DETECTABLE WARNINGS, PER FDOT INDEX 522-002.
14. CONCRETE SIDEWALK, SEE ARCH. PLAN FOR SPECIFICATION AND DETAILS.
15. PROPOSED LIFT STATION ENCLOSURE, SEE ARCH PLANS FOR DETAILS.
16. PROPOSED MONUMENT SIGN LOCATION, BY OTHERS.
17. PROPOSED CONCRETE RODENT BARRIER, SEE ARCH PLANS FOR DETAILS.
18. PROPOSED TANK VENT SYSTEM, REF. FUEL PLANS FOR DETAILS.
19. PROPOSED UNDERGROUND FUEL STORAGE TANKS, REF. FUEL PLANS FOR DETAILS.
20. PROPOSED E-STOP, REF. ARCH. PLANS FOR DETAILS.
21. PROPOSED GAS CANOPY, REF. ARCH. PLANS FOR DETAILS.
22. PROPOSED FUEL DISPENSER (TYP.), REF. FUEL PLANS FOR DETAILS.
23. PROPOSED TACTILE WARNING, REF. ARCH PLANS.
24. NEW SIGN MOUNTING AND BASE WITH BOLLARD, SEE DETAIL SHEET C5.1.
25. PROPOSED SITE LIGHTING POLE (TYP.), REF. PHOTOMETRIC PLANS.
26. PROPOSED "STOP" SIGN
27. PROPOSED STOP TEXT AND STOP BAR, REF. WALMART DETAILS, SHEET C5.3.
28. PROPOSED OPEN ARROW PAVEMENT MARKINGS, REF. WALMART DETAILS, SHEET C5.3.
29. PROPOSED DUMPSTER ENCLOSURE.REF. ARCH PLANS FOR DETAILS
30. PROPOSED 24" CONCRETE GUTTER. SEE DETAIL SHEET C5.2.
31. PROPOSED ARCHITECTURAL BOLLARDS, REF. ARCH PLANS FOR DETAILS.
32. PROPOSED AIR STATION, REF. ARCH PLANS FOR DETAILS

SITE NOTES:

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3. ALL DISTURBED AREAS ARE THE RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL CURBED RADII ARE TO BE 10' UNLESS OTHERWISE NOTED. STRIPED RADII ARE TO BE 5'
5. ALL DIMENSIONS AND RADII ARE TO BE FACE OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
8. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY PREPARED BY CPH, CORP.
9. TOTAL LAND AREA IS 1.36± ACRES.
10. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE SITE SPECIFIC SPECIFICATIONS".
11. PYLON SIGNS SHALL BE CONSTRUCTED BY OTHERS.
12. REFER TO ARCH. PLANS FOR SITE LIGHTING.
13. ALL WM GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS. OUTLOT AREA TO BE KEPT FREE OF JOB TRAILERS AND STORAGE AFTER THE CONTRACT MILESTONE DATE FOR THE OUTLET. WM GENERAL CONTRACTOR TO PROVIDE CLEAR ACCESS FOR OUTLOT CONTRACTOR TO THE SPECIFIC PARCEL AT ALL TIMES AFTER MILESTONE DATE. PURCHASER OF OUTLOT TO PROVIDE PERMIT DOCUMENTS AND SWPPP REQUIRED BY STATE/LOCAL REQUIREMENTS FOR SPECIFIC OUTLOT.

SIGN LEGEND

(HC)	ACCESSIBLE PARKING (FTP-21-06 & FTP-22-06)
(ST)	STOP (R1-1)
(PE)	STOP HERE FOR PEDESTRIANS (SEE DETAIL SHEET)

PROPOSED LEGEND

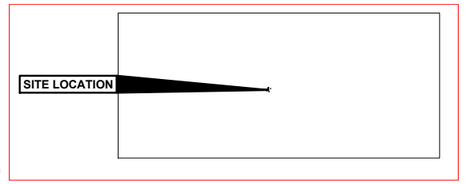
	PROPERTY LINE
	PROPOSED BUFFER LINE
	LANDSCAPE BUFFER LINE
	BUILDING SETBACK LINE

PAINTING STRIPING LEGEND

SWSL	SINGLE WHITE SOLID LINE
DYSL	DOUBLE YELLOW SOLID LINE

PROPOSED PAVEMENT LEGEND

	CONCRETE SIDEWALK: REF. DETAIL SHEET
	ARCHITECTURAL CONCRETE, SEE ARCH. PLANS
	STANDARD DUTY CONCRETE: REF DETAIL SHEET
	HEAVY DUTY CONCRETE: PER DETAIL SHEET
	STANDARD DUTY ASPHALT PAVEMENT: REF. DETAIL SHEET
	HEAVY DUTY ASPHALT PAVEMENT: REF. DETAIL SHEET
(10)	PARKING SPACE COUNT
	SITE LIGHTING, REF. PHOTOMETRIC PLANS
	TRANSFORMER



SITE DATA INFORMATION:

SITE PARCEL NUMBERS:

PARCEL NO. R29 223 17 2608 0000 0020 1867 COMMERCIAL WAY, 59,420 S.F.(1.36 AC.)

SECTION – 29 / TOWNSHIP – 23 S / RANGE – 17 E

ON–SITE LAND INFORMATION:

CURRENT LAND USE:	VACANT LAND
PROPOSED LAND USE:	FUEL STATION
CURRENT ZONING:	PDP(GC) WITH C2 USE– PLANNED DEVELOPMENT PROJECT
PROPOSED ZONING:	PDP(GC) WITH C2 USE– PLANNED DEVELOPMENT PROJECT
AREA OF PROPOSED IMPROVEMENTS:	59,420 S.F. (1.36 AC.)
DEVELOPMENT TYPE:	GENERAL COMMERCIAL

ADJACENT LAND INFORMATION:

	NORTH	EAST	SOUTH	WEST
EXISTING LAND USE	XXX	XXX	XXX	XXX
FUTURE LAND USE	XXX	XXX	XXX	XXX
EXISTING ZONING	XXX	XXX	XXX	XXX
PROPOSED ZONING	XXX	XXX	XXX	XXX

FLOOD ZONE INFORMATION:

HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) NUMBER 12053C0284E, COMMUNITY PANEL NO. 120110, HERNANDO COUNTY UNICORPORATED AREAS, EFFECTIVE DATE JANUARY 15, 2021, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE X, THE FLOOD ZONE "X"HAS A 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS WITH A 1% ANNUAL CHANCE FLOOD W/ AVERAGE DEPTH LESS THAN 1 FOOT – MINIMAL FLOOD HAZARD

BUILDING INFORMATION:

BUILDING AREA:	1,618± S.F.
BUILDING USE:	FUEL STATION + CONVENIENCE STORE
MAXIMUM BUILDING HEIGHT (COUNTY CODE):	35'
ACTUAL BUILDING HEIGHT (ONE STORY):	19'–0"
CANOPY HEIGHT	17'–8"
MAXIMUM FLOOR AREA RATIO (FAR) (COUNTY CODE):	0.75
MAXIMUM FLOOR AREA RATIO (FAR) PROVIDED:	2.72%

PERVIOUS / IMPERVIOUS AREAS:

PRE DEVELOPMENT:			
PERVIOUS AREA:	18,020 S.F.	(0.41 AC.)	(30.32%)
IMPERVIOUS AREA:	41,400 S.F.	(0.95 AC.)	(69.68%)
TOTAL SITE AREA:	59,420 S.F.	(1.36 AC.)	(100.00%)
POST DEVELOPMENT:			
PERVIOUS AREA:	21,810 S.F.	(0.50 AC.)	(36.70%)
IMPERVIOUS AREA:	37,610 S.F.	(0.86 AC.)	(63.30%)
TOTAL SITE AREA:	59,420 S.F.	(1.36 AC.)	(100.00%)

PARKING INFORMATION:

PARKING REQUIRED:

USE TYPE: GAS STATION + CONVENIENCE STORE
1 SPACES PER 4 PUMPS + 5/1,000 SF CONVENIENCE STORE AREA
(6 PUMPS / 4) + (5 x 1.618) = 10 SPACES REQUIRED.

PARKING SPACES PROVIDED = 10 (INC. 1 ADA SPACE AND 1 TRUCKING LOADING ZONE)

PARKING RATIO PROVIDED = 6 SPACES PER 1,000 SF

BLDG. SETBACKS AND LANDSCAPE BUFFERS:

PRINCIPLE BLDG. SETBACKS:	N	E	S	W
REQUIRED:	20'(MIN)	75'(MIN)	20'(MIN)	XX'(MIN)
PROVIDED :	152.41'	146.00'	76.68'	31.75'

ACCESSORY STRUCTURE (DUMPSTER) SETBACK:	N	E	S	W
REQUIRED:	X'	X'	X'	X'
PROVIDED :	225.3'	164.2'	36.6'	24.3'

SIGNAGE SETBACK:	N	E	S	W
REQUIRED:	X'	X'	X'	X'
PROVIDED :	XXX.XX'	XXX.XX'	XX.XX'	X.XX'

LANDSCAPE BUFFERS:	N	E	S	W
REQUIRED:	5'	5'	5'	XX'(MIN)
PROVIDED :	5.00'	6.63'	5.70'	X.XX'

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MATTHEW S. D'ANGELO LICENSE No. 91885 STATE OF FLORIDA PROFESSIONAL ENGINEER

Matthew D'Angelo, State of Florida, Professional Engineer, License No. 91885. This item has been digitally signed and sealed by 91885 on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

No.	Date	Revision
#	#	#
#	#	#

Designed: ##
Drawn: ##
Checked: ##
Job No.: UT-XXXX-XX
Date: 12/29/2025 © 2026

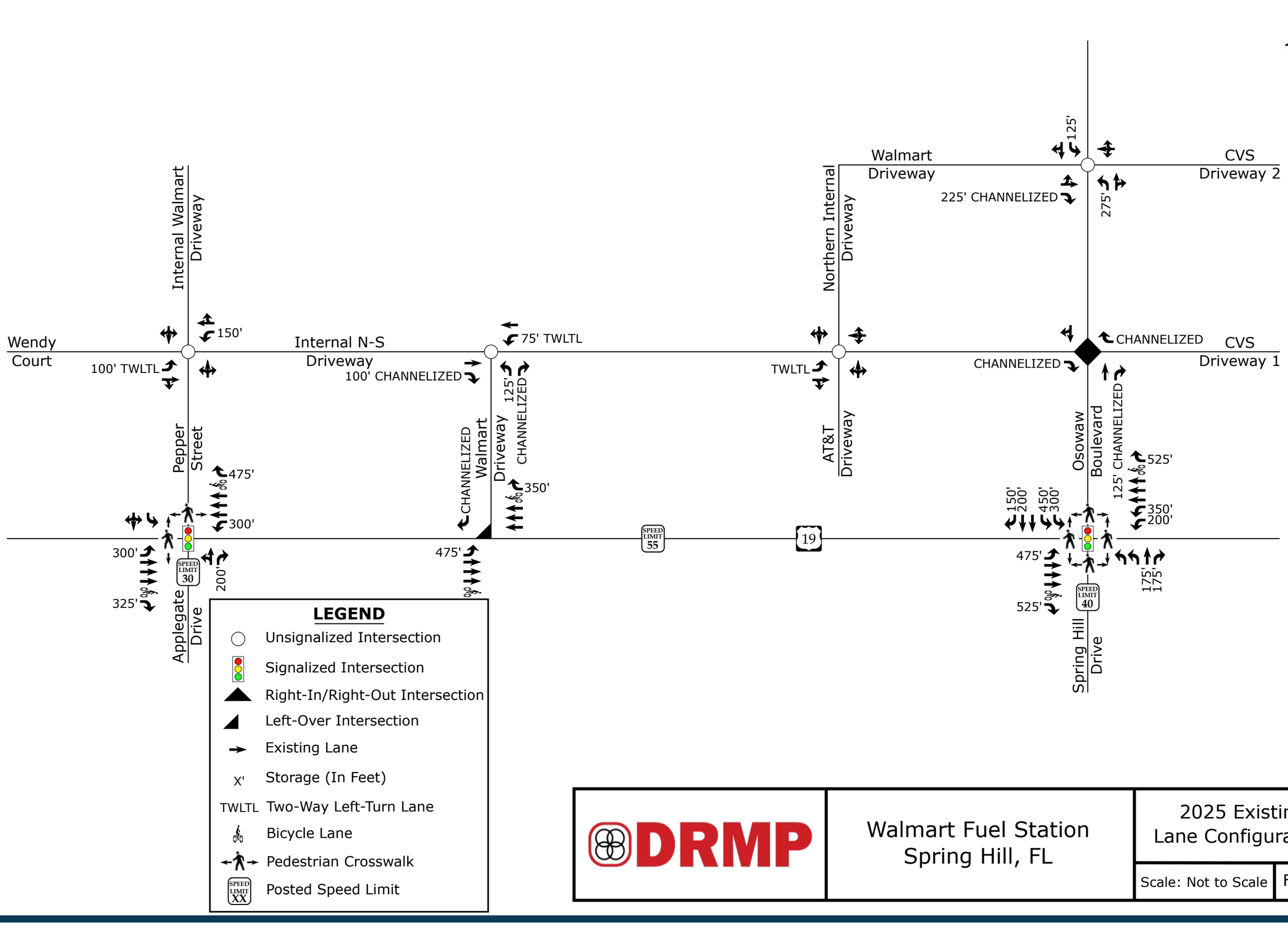
SITE DIMENSION PLAN

Walmart

STORE NO. 967-1011 FUEL STATION
HERNANDO COUNTY / FLORIDA 34606

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS.

Sheet No.
C1.2



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Walmart Fuel Station
Spring Hill, FL

2025 Existing Lane Configurations

Scale: Not to Scale | Figure 3

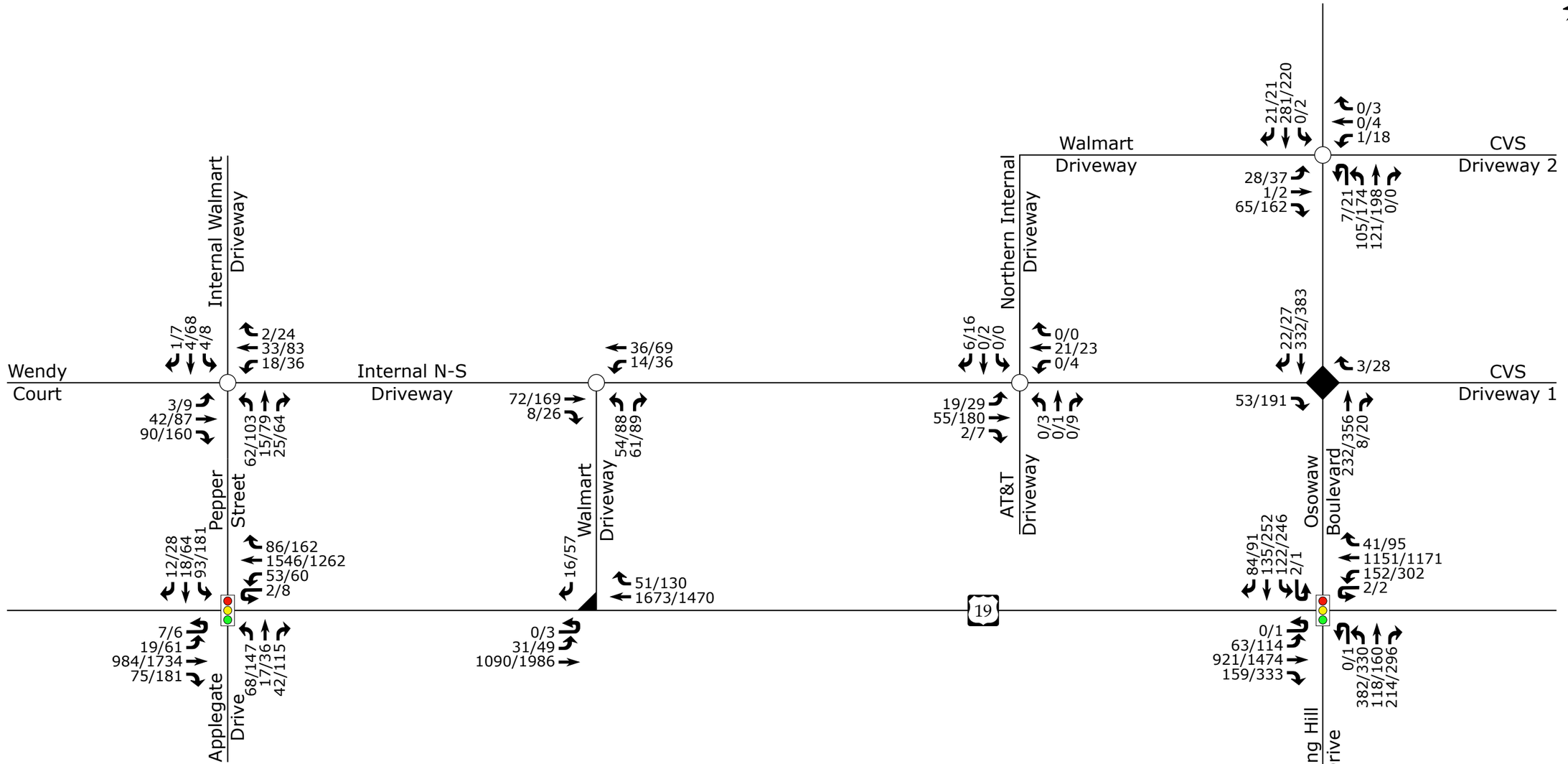
2. 2025 EXISTING PEAK HOUR CONDITIONS

2.1. 2025 Existing Peak Hour Traffic Volumes

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections November of 2025 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods. Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for 2025 existing weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. 2025 Existing Peak Hour Traffic Analysis

The 2025 existing weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. Signal information was obtained and is included in Appendix C. The results of the analysis are presented in Section 7 of this report.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

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Walmart Fuel Station
Spring Hill, FL

2025 Existing
Peak Hour Traffic

Scale: Not to Scale | Figure 4

3. 2027 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, no-build traffic projections are needed. No-build traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. No-build traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the FDOT and County, it was determined that an annual growth rate of 1.5% would be used to generate 2027 projected weekday AM and PM peak hour traffic volumes.

3.2. Adjacent Development Traffic

Based on coordination with the FDOT and County, it was determined there were no adjacent developments to consider with this study.

3.3. Future Roadway Improvements

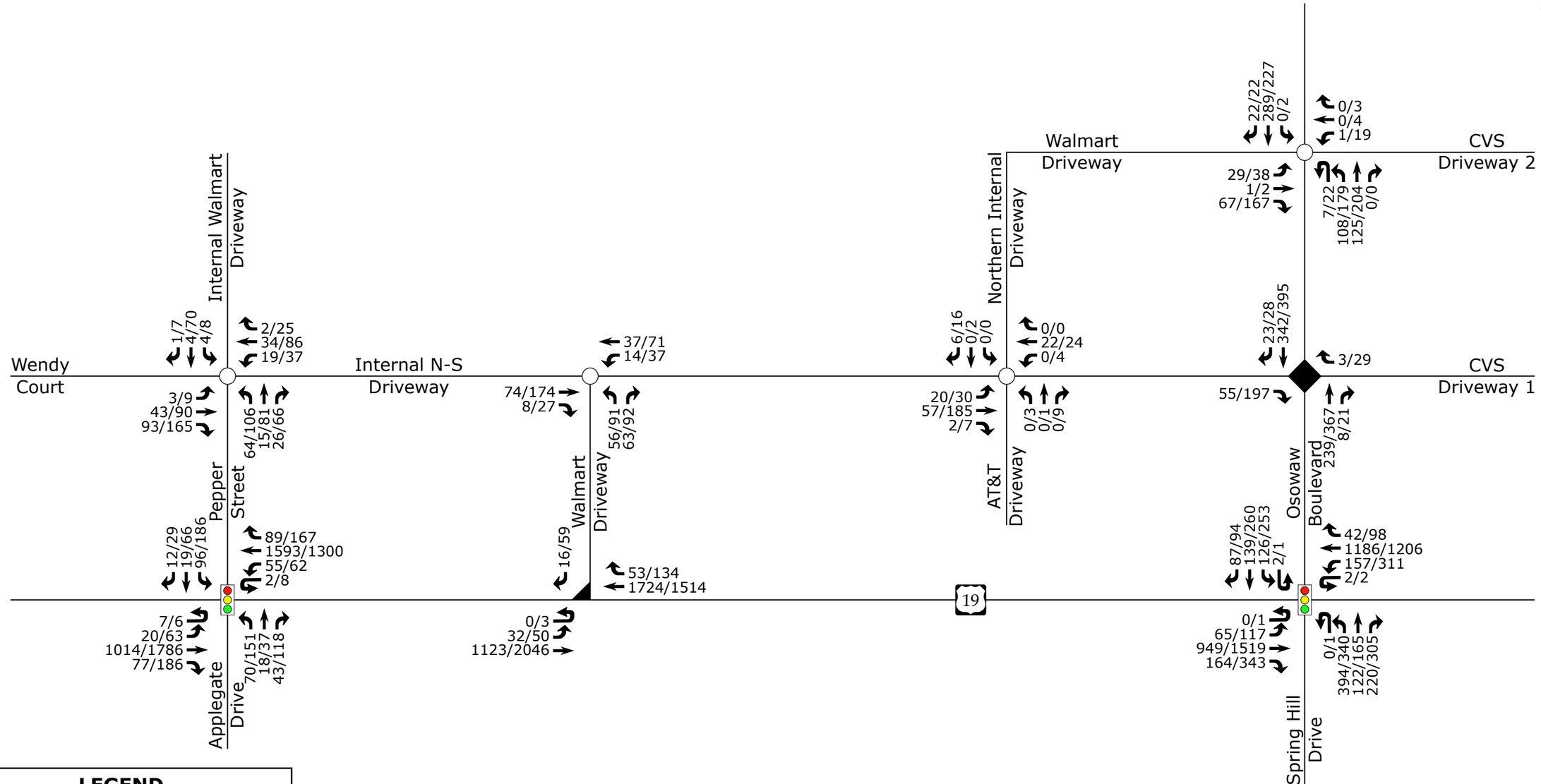
Through coordination with the FDOT and County, it was determined there were no future roadway improvements to consider with this study.

3.4. 2027 No-Build Peak Hour Traffic Volumes

The 2027 no-build traffic volumes were determined by projecting the 2025 existing peak hour traffic to the year 2027. Refer to Figure 5 for an illustration of the 2027 no-build peak hour traffic volumes at the study intersections.

3.5. 2027 No-Build Peak Hour Traffic Analysis

The 2027 no-build AM and PM peak hour traffic volumes at the study intersections were analyzed with no changes to the existing geometric roadway conditions. The analysis results are presented in Section 7 of this report.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

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Walmart Fuel Station
Spring Hill, FL

2027 No-Build
Peak Hour Traffic

Scale: Not to Scale | Figure 5

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

Trip estimates for the proposed fuel station were were estimated using methodology contained within the ITE Trip Generation Manual, 12th Edition. Additionally, pass-by trip reductions were applied based on ITE Land Use Code 944 (Gasoline/Service Station with Convenience Market). These pass-by percentages were used to account for vehicles already traveling along US 19 (Commercial Way) and Osowaw Boulevard that would briefly enter the site before continuing to their destination. Based on the location of the proposed gas station and the proximity to the existing Wal-Mart store, it is anticipated that some internal capture trips between the two uses will occur throughout the day. To be conservative, it was determined during scoping that internal capture trips would not be considered. The actual external trip generation of the proposed gas station may therefore be lower than analyzed in this study. Table 2 provides a summary of the trip generation potential for the site.

Table 2: Trip Generation Summary

Land Use	Intensity	Daily Traffic AADT (vpd)*	Weekday AM Peak Hour Trips (vph)			Weekday PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Fuel Station (944)	12 VFP	2,064	71	71	142	91	91	182
Pass-By Trips - From LUC 944 (58% AM, 42% PM)		*-1,072*	*-41*	*-41*	*-82*	*-38*	*-38*	*-76*
Total Primary Trips		**992**	**30**	**30**	**60**	**53**	**53**	**106**

4.2. Site Trip Distribution and Assignment

Site trips were distributed based on 2024 AADT data from the 2024 FDOT. Figure 8 illustrates the trip distribution percentages.

It is estimated that the site trips will be regionally distributed as follows:

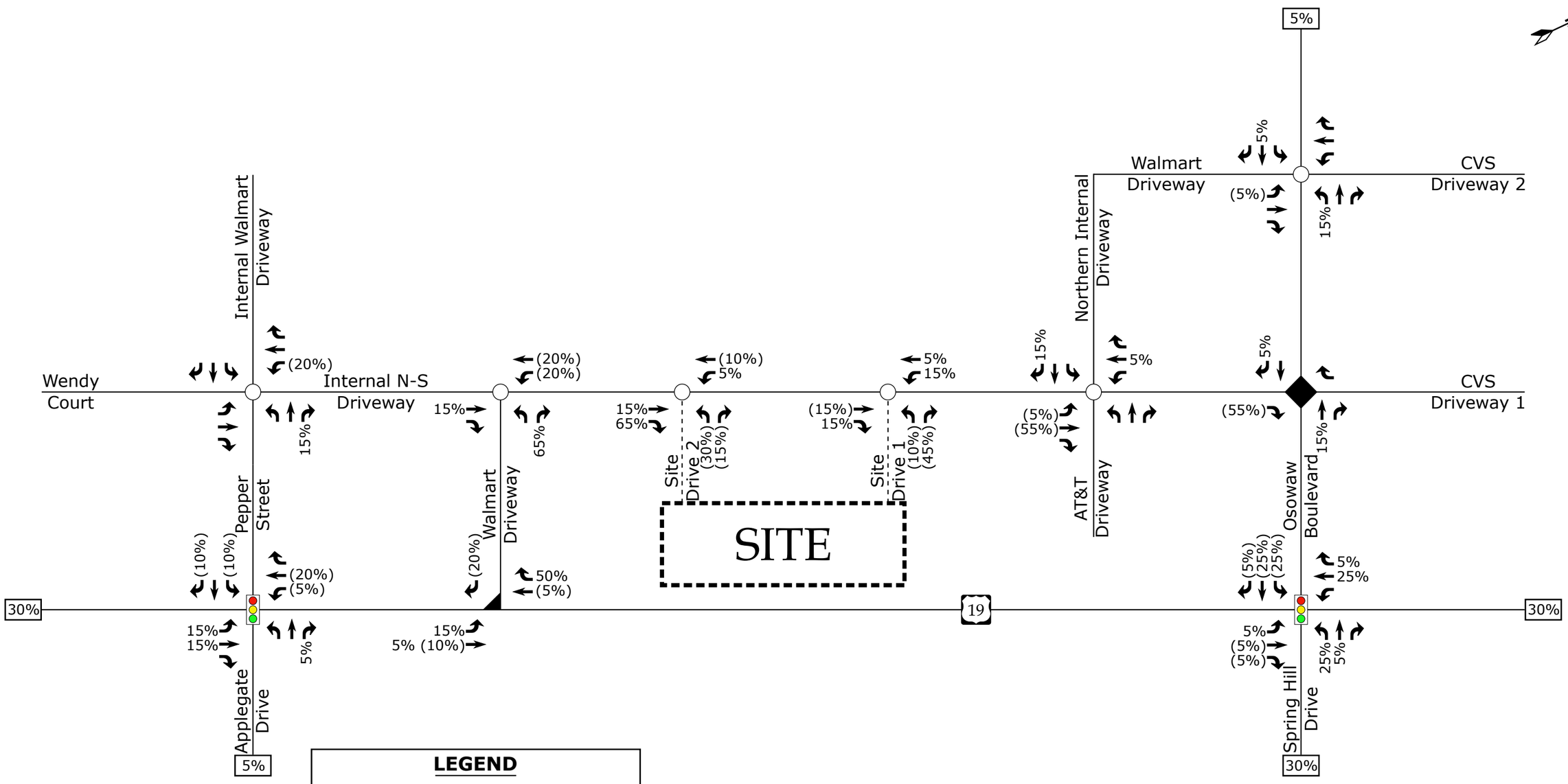
- 30% to/from the east via US 19
- 30% to/from the west via US 19
- 30% to/from the south via Spring Hill Drive

- 5% to/from the south via Applegate Drive
- 5% to/from the north via Osowaw Boulevard

The site trip distribution is shown in Figure 6. Refer to Figure 7 for the site trip assignment.

The pass-by site trips were distributed based on existing traffic patterns with consideration given to the proposed driveway access and site layout. Refer to Figure 8 for the pass-by site trip distribution. Pass-by site trips are shown in Figure 9.

The total site trips were determined by adding the primary site trips and the pass-by site trips. Refer to Figure 10 for the total peak hour site trips at the study intersections.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

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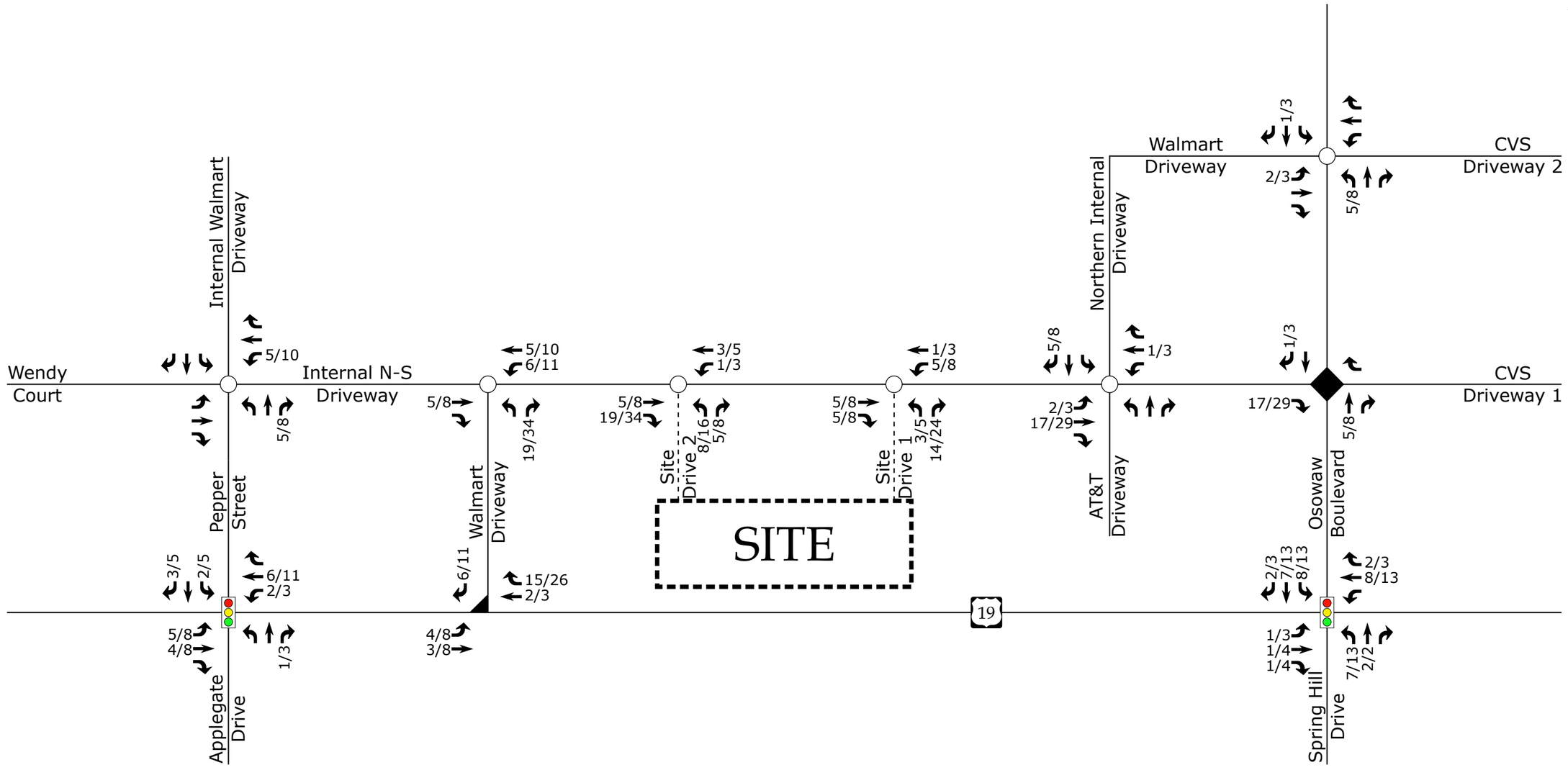
Walmart Fuel Station
Spring Hill, FL

Site Trip Distribution

Scale: Not to Scale

Figure 6



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

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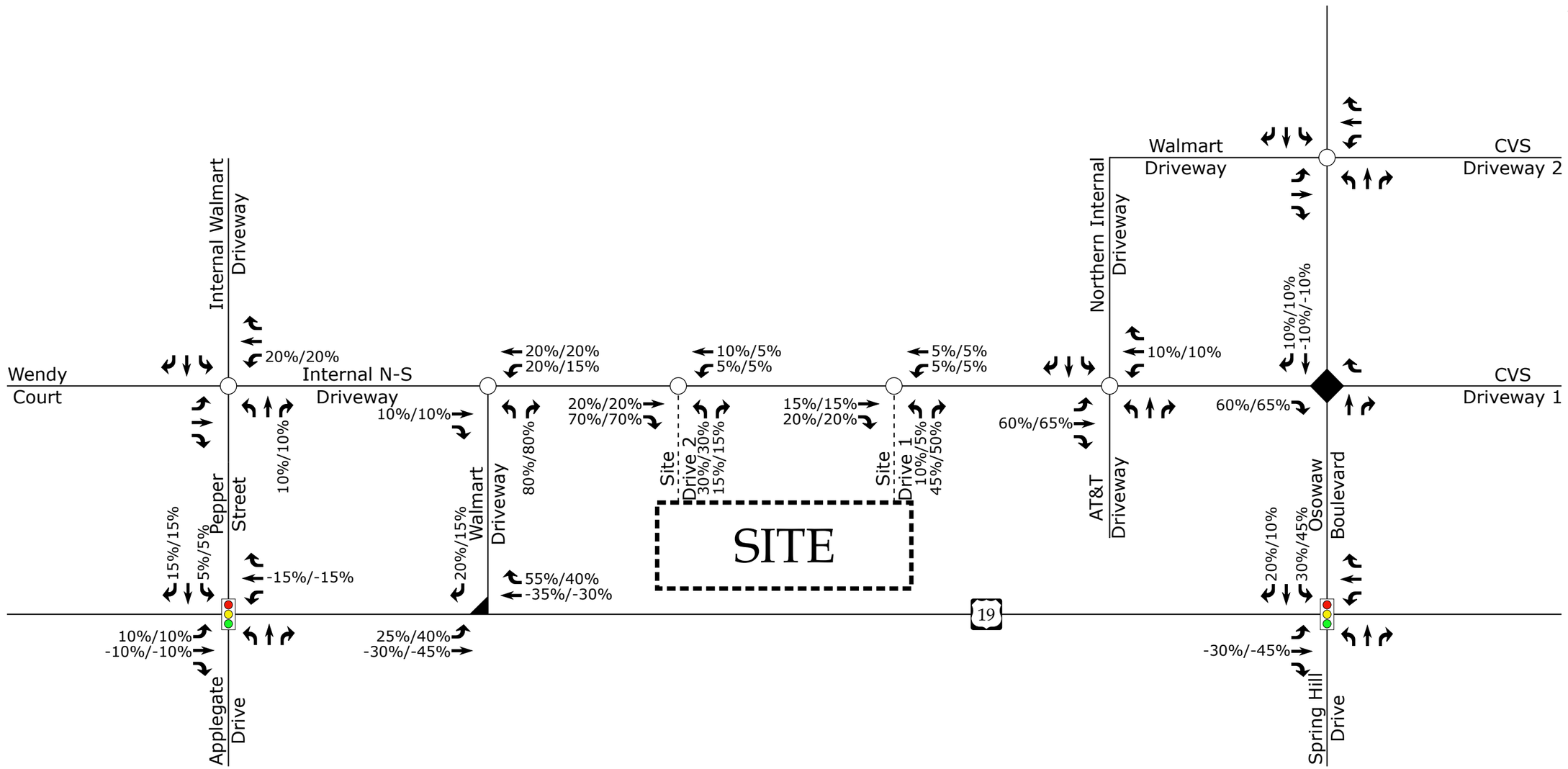
Walmart Fuel Station
Spring Hill, FL

Site Trip Assignment

Scale: Not to Scale | Figure 7



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Left-Over Intersection
- X% / Y% → Weekday AM / PM Pass-By Trip Distribution

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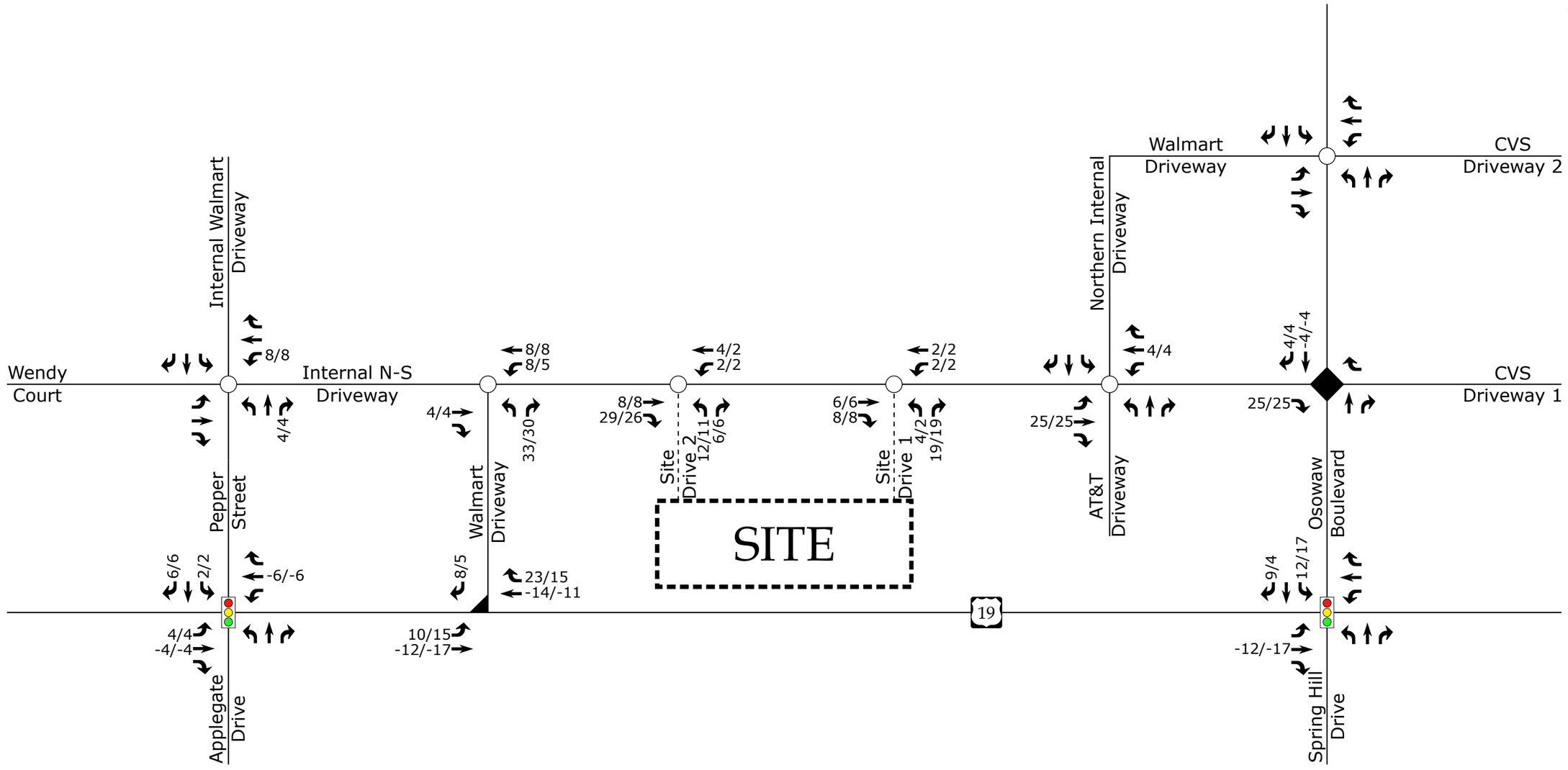
Walmart Fuel Station
Spring Hill, FL

Pass-By Site
Trip Distribution

Scale: Not to Scale | Figure 8



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Pass-by Trips

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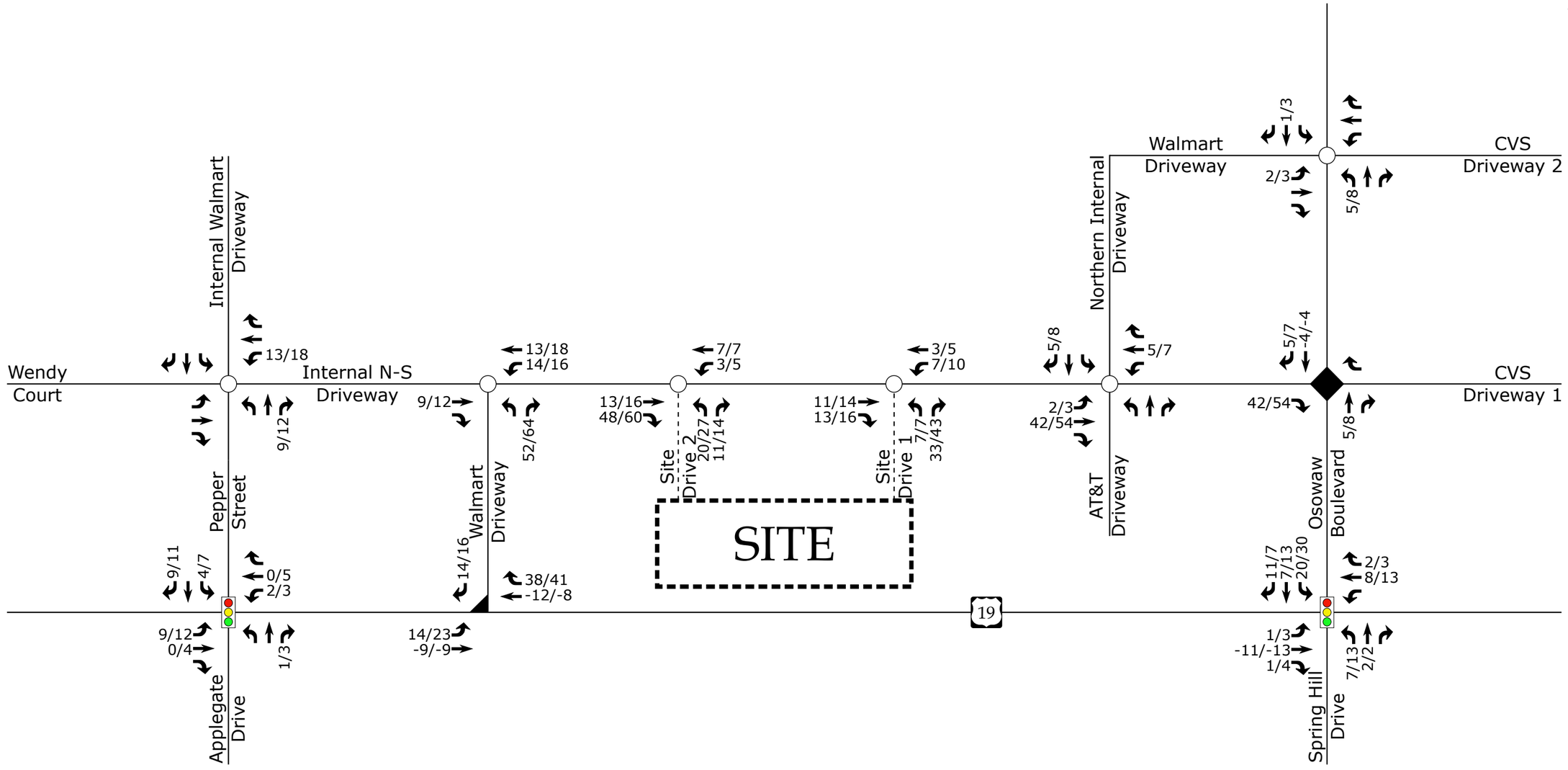
Walmart Fuel Station
Spring Hill, FL

Pass-By Site Trip Assignment

Scale: Not to Scale | Figure 9



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

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Walmart Fuel Station
Spring Hill, FL

Total Site Trip Assignment

Scale: Not to Scale | Figure 10

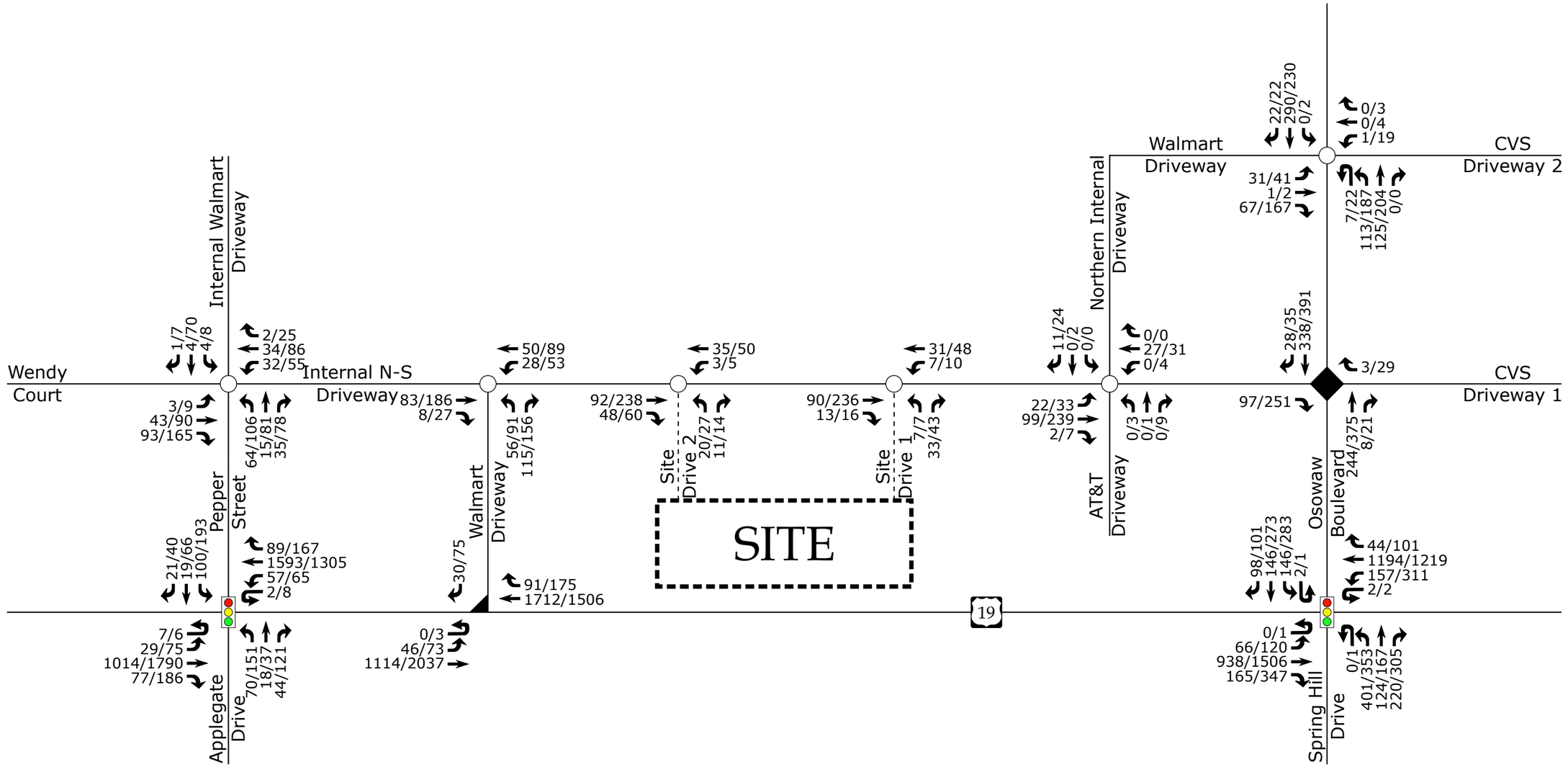
5. 2027 BUILD TRAFFIC CONDITIONS

5.1. 2027 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2027 no-build traffic volumes to determine the 2027 build traffic volumes. Refer to Figure 11 for an illustration of the 2027 build peak hour traffic volumes with the proposed site fully developed.

5.2. 2027 Build Peak Hour Traffic Analysis

Study intersections were analyzed with the 2027 build traffic volumes using the same methodology previously discussed for existing and no-build traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

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Walmart Fuel Station
Spring Hill, FL

2027 Build
Peak Hour Traffic

Scale: Not to Scale | Figure 11

6. TRAFFIC ANALYSIS METHODOLOGY

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual* (HCM), 6th Edition published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 11.1), was used to complete the analyses for the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level "F" where breakdown conditions are evident. Refer to Table 3 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 3: Highway Capacity Manual – Levels-of-Service and Delay

Unsignalized Intersection		Signalized Intersection	
Level of Service	**Average Control Delay Per Vehicle (Seconds)**	**Level of Service**	**Average Control Delay Per Vehicle (Seconds)**
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

7. 2025 EXISTING ANALYSIS

The 2025 Base Year No-Build scenario included the traffic characteristics that currently exist in the study area. Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections in November 2025 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods (Figure 4). Refer to Appendix D for the Synchro reports. All SimTraffic reports can be found in Appendix G.

All unsignalized minor and major street approaches operate at LOS C or better, with the exception of the northbound left approach from US 19 of the intersection of US 19 and Walmart Driveway, which operates at LOS E during both AM and PM peak hours. Note that significant delays are not uncommon at two-way stop-controlled intersections.

All signalized intersections operate at an overall LOS D or better.

Table 4: 2025 Existing Intersection Analysis

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
1	US 19 (Commercial Way) and Osowaw Boulevard / Spring Hill Drive	Osowaw Boulevard Eastbound	LT (2)	54.6	67.6	D	E	91	195	131	236
			TH (2)					103	202	133	275
			RT					117	124	132	182
		Spring Hill Drive Westbound	LT (2)	54.0	60.9	D	E	243	248	358	739
			TH					175	264	274	275
			RT					233	338	224	225
		US 19 (Commercial Way) Northbound	LT	19.6	34.5	B	C	116	m159	136	312
			TH (3)					127	#572	156	575
			RT					54	249	99	477
		US 19 (Commercial Way) Southbound	LT (2)	29.8	38.5	C	D	106	202	267	374
			TH (3)					365	447	339	446
			RT					33	83	64	129
		Overall		**33.8**	**44.1**	**C**	**D**				
2	US 19 and Walmart Driveway	Walmart Driveway Eastbound	RT	21.9	22.0	C	C	5	23	--	38
		US 19 (Commercial Way) Northbound	LT	39.6	37.9	E	E	23	35	91	116
			TH (3)					--	--	--	135
		US 19 (Commercial Way) Southbound	TH (3)	0	0	--	--	--	--	--	--
			RT					--	--	7	30
		Overall		**--**	**--**	**--**	**--**				
3	US 19 (Commercial Way) and Pepper Street / Applegate Drive	Pepper Street Eastbound	LT	64.5	74.0	E	E	111	229	111	206
			LT-TH-RT					111	230	126	266
		Applegate Drive Westbound	LT-TH	58.1	77.7	E	E	137	#371	168	466
			RT					64	167	92	278
		US 19 (Commercial Way) Northbound	LT	18.7	36.3	B	D	57	130	86	400
			TH (3)					287	741	307	635
			RT					25	84	57	425
		US 19 (Commercial Way) Southbound	LT	10.6	13.9	B	B	m97	m132	143	279
			TH (3)					226	172	272	322
			RT					m30	45	73	153
		Overall		**17.7**	**33.6**	**B**	**C**				
4	Pepper Street / Internal Walmart Driveway and Wendy Court / Internal N-S Driveway	Internal Walmart Driveway Eastbound	LT-TH-RT	7.6	9.5	A	A	0	13	36	77
		Pepper Street Westbound	LT-TH-RT	8.1	11.6	A	B	13	48	--	16
		Wendy Court Northbound	LT	8.1	9.1	A	B	0	3	--	33
			TH-RT	8.1	11.6			18	50	78	139
		Internal N-S Driveway Southbound	LT	8.3	9.7	A	A	3	5	33	54
			TH-RT	7.9	9.9			5	18	49	108
		Overall		**8.1**	**11.0**	**A**	**B**				

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Table 4: 2025 Existing Intersection Analysis *Continued*

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
5	Internal N-S Driveway and Walmart Driveway	Walmart Driveway Westbound	LT	7.3	7.4	A	A	3	5	--	--
			RT					0	0	60	85
		Internal N-S Driveway Northbound	TH	10.2	12.1	B	B	9	30	70	92
			RT					--	--	--	--
		Internal N-S Driveway Southbound	LT	10.1	11.9	B	B	2	7	36	45
			TH					4	10	51	77
		Overall		--	--	--	--				
6	Internal N-S Driveway and Northern Internal Driveway / AT&T Driveway	Northern Internal Driveway Eastbound	LT-TH-RT	6.8	7.1	A	A	0	3	31	40
		AT&T Driveway Westbound	LT-TH-RT	0	7.3	--	A	0	3	--	36
		Internal N-S Driveway Northbound	LT	7.7	8.8	A	A	3	3	30	48
			TH-RT					8	28	58	70
		Internal N-S Driveway Southbound	LT-TH-RT	7.3	7.5	A	A	3	3	31	53
		Overall		**7.6**	**8.5**	**A**	**A**				
7	Osowaw Boulevard and Internal N-S Driveway / CVS Driveway 1	Osowaw Boulevard Eastbound	TH (2)	0	0	--	--	--	--	--	--
			TH-RT					--	--	--	5
		Osowaw Boulevard Westbound	TH (2)	0	0	--	--	--	--	--	--
			RT					--	--	--	--
		Internal N-S Driveway Northbound	RT	10.7	13.0	B	B	8	35	22	103
		CVS Driveway 1 Southbound	RT	9.0	9.6	A	A	0	3	--	--
		Overall		--	--	--	--				
8	Osowaw Boulevard and Walmart Driveway / CVS Driveway 2	Walmart Driveway Eastbound	LT-TH	11.6	12.2	B	B	8	22	66	73
			RT					8	22	56	99
		CVS Driveway 2 Westbound	LT-TH-RT	14.3	18.3	B	C	0	7	11	49
		Osowaw Boulevard Northbound	LT	3.8	8.3	A	A	8	13	96	110
			TH-RT					0	0	--	--
		Osowaw Boulevard Southbound	LT	0	7.7	A	A	0	0	--	6
			TH-RT					0	0	13	8
		Overall		--	--	--	--				

Volume for the 95th percentile cycle exceeds capacity.
m Volume for the 95th percentile queue is metered by an upstream signal.

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Table 5: 2025 Existing Left Turn Lane Analysis

Intersection	Turn Lane	Posted Speed Limit	Existing Lane Length	Required Deceleration Length	Number of Lanes	95th Percentile Queue Length (AM)	95th Percentile Queue Length (PM)	Required Turn Lane Length	Turn Lane Length Deficiency
US 19 (Commercial Way) and Osowaw Boulevard / Spring Hill Drive	EBL	40	375	145	2	91	195	340	-35
	WBL	40	FULL	145	2	243	248	393	N/A
	NBL	55	475	240	1	116	159	399	-76
	SBL	55	375	240	2	106	202	442	67
US 19 (Commercial Way) and Walmart Driveway	NBL	55	475	240	1	23	35	275	-200
US 19 (Commercial Way) and Pepper Street / Applegate Drive	NBL	55	300	240	1	57	130	370	70
	SBL	55	300	240	1	97	132	372	72

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8. 2027 NO-BUILD ANALYSIS

The 2027 Future Year No-Build scenario includes the traffic characteristics that are expected to exist under future conditions, without the construction of the Walmart fuel station. Future Year peak hour traffic volumes were developed from growing the traffic at a 1.5% growth rate to the year 2027. No changes to the existing lane configurations were made. Table 7 summarizes the analysis results for this scenario. Refer to Appendix E for the Synchro reports. All SimTraffic reports can be found in Appendix H.

All intersections are expected to operate acceptably by the year 2027. The northbound left approach from US 19 at the intersection of US 19 and Walmart Driveway is expected to continue to operate at LOS E in the 2027 no-build scenario. Note that significant delays are not uncommon at two-way stop-controlled intersections.

Table 6: 2027 No-Build Roadway Segment Analysis

Roadway Segment	Current LOS	2024 Peak Hour Directional Service Volume (vph)	2024 AADT	2024 Peak Hour Directional Volume (vph)	2027 Peak Hour Directional Volume (vph)	2027 No-Build		
						Peak Hour Directional Volume (vph)	V/C	Exceeds Service Volume?
US 19/Commercial Way								
Hunters Lake Rd to Forest Oaks Blvd	D	2,810	43,000	2,129	2,226	2,226	0.79	No
Osowaw Blvd								
US 19/Commercial Way to Osowaw Blvd	D	870	1,200	59	62	62	0.07	No
Spring Hill Dr								
US 19/Commercial Way to FL 589	D	1,790	23,000	1,139	1,191	1,191	0.67	No
Applegate Dr								
US 19/Commercial Way to Kenlake Ave	C	970	2,200	109	114	114	0.12	No

Table 7: 2027 No-Build Intersection Analysis

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
1	US 19 and Spring Hill Drive/Osowaw Boulevard	Osowaw Boulevard Eastbound	LT (2)	54.7	68.1	D	E	94	200	168	226
			TH (2)					105	208	174	300
			RT					120	128	148	167
		Spring Hill Drive Westbound	LT (2)	54.3	61.3	D	E	252	256	343	957
			TH					181	271	273	275
			RT					238	350	225	225
		US 19 Northbound	LT	19.8	36.9	B	D	118	m157	140	413
			TH (3)					131	#725	192	693
			RT					56	m254	112	540
		US 19 Southbound	LT (2)	30.4	39.2	C	D	108	208	289	354
			TH (3)					379	464	373	442
			RT					33	85	74	100
		Overall		**34.1**	**45.4**	**C**	**D**				
2	US 19 and Walmart Driveway	Walmart Driveway Eastbound	RT	22.7	23.1	C	C	8	25	--	20
		US 19 Northbound	LT	43.2	41.6	E	E	25	40	99	188
			TH (3)					--	--	--	330
		US 19 Southbound	TH (3)	0	0	--	--	--	--	--	--
			RT					--	--	--	36
		Overall		**--**	**--**	**--**	**--**				
3	US 19 and Pepper Street/Applegate Drive	Pepper Street Eastbound	LT	64.5	73.8	E	E	115	234	113	208
			LT-TH-RT					114	237	143	247
		Applegate Drive Westbound	LT-TH	58	79.1	E	E	142	#386	162	532
			RT					64	171	88	300
		US 19 Northbound	LT	19.2	37.7	B	D	58	132	93	400
			TH (3)					301	781	297	689
			RT					26	87	78	424
		US 19 Southbound	LT	11.1	14.1	B	B	m99	m133	122	231
			TH (3)					264	184	283	265
			RT					m33	47	86	170
		Overall		**18.2**	**34.5**	**B**	**C**				
4	Wendy Court/Internal N-S Driveway and Southern Internal Driveway/Pepper Street	Southern Internal Driveway Eastbound	LT-TH-RT	7.7	9.7	A	A	0	13	31	70
		Pepper Street Westbound	LT-TH-RT	8.2	12	A	B	13	50	4	10
		Wendy Court Northbound	LT	8.1	9.2	A	B	0	3	23	29
			TH-RT	8.1	12			18	53	81	132
		Internal N-S Driveway Southbound	LT	8.3	9.8	A	A	3	5	29	56
			TH-RT	7.9	10			5	18	58	79
		Overall		**8.1**	**11.3**	**A**	**B**				
5	Internal N-S Driveway and Walmart Driveway	Walmart Driveway Westbound	LT	3.4	3.7	--	--	3	5	--	4
			RT					0	0	11	72
		Internal N-S Driveway Northbound	TH	10.3	12.2	B	B	9	31	59	90
			RT					--	--	--	--
		S Lois Ave Southbound	LT	10.2	12	B	B	2	7	36	40
			TH					4	10	45	64
		Overall		**7**	**9**	**A**	**A**				

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Table 7: 2027 No-Build Intersection Analysis *Continued*

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
6	Internal N-S Driveway and Northern Internal Driveway/AT&T Driveway	Northern Internal Driveway Eastbound	LT-TH-RT	6.8	7.1	A	A	0	3	31	31
		AT&T Driveway Westbound	LT-TH-RT	7.2	7.3	--	A	0	3	--	31
		Internal N-S Driveway Northbound	LT	7.8	8.9	A	A	3	3	30	44
			TH-RT					8	28	35	85
		Internal N-S Driveway Southbound	LT-TH-RT	7.3	7.6	A	A	3	3	36	40
		Overall		**7.6**	**8.6**	**A**	**A**				
7	Internal N-S Driveway/CVS Driveway 1 and Osowaw Boulevard	Osowaw Boulevard Eastbound	TH (2)	--	--	--	--	--	--	--	--
			TH-RT					--	--	--	--
		Osowaw Boulevard Westbound	TH (2)	--	--	--	--	--	--	--	--
			RT					--	--	--	--
		Internal N-S Driveway Northbound	RT	10.8	13.3	B	B	8	38	--	116
		CVS Driveway 1 Southbound	RT	9.1	9.7	A	A	0	3	--	--
		Overall		**--**	**--**	**--**	**--**				
8	Osowaw Boulevard and Walmart Driveway/CVS Driveway 2	Walmart Driveway Eastbound	LT-TH	12.5	13.2	B	B	8	15	52	69
			RT					8	23	31	91
		CVS Driveway 2 Westbound	LT-TH-RT	16.7	23.3	C	C	0	10	22	45
		Osowaw Boulevard Northbound	LT	--	--	--	--	--	--	89	110
			TH-RT					--	--	--	--
		Osowaw Boulevard Southbound	LT	0	7.7	A	A	0	0	--	11
			TH-RT					--	--	20	14
		Overall									

Volume for the 95th percentile cycle exceeds capacity.
m Volume for the 95th percentile queue is metered by an upstream signal.

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Table 8: 2027 No-Build Left Turn Lane Analysis

Intersection	Turn Lane	Posted Speed Limit	Existing Lane Length	Required Deceleration Length	Number of Lanes	95th Percentile Queue Length (AM)	95th Percentile Queue Length (PM)	Required Turn Lane Length	Turn Lane Length Deficiency
US 19 (Commercial Way) and Osowaw Boulevard / Spring Hill Drive	EBL	40	375	145	2	94	200	345	-30
	WBL	40	FULL	145	2	252	256	401	N/A
	NBL	55	475	240	1	118	157	397	-78
	SBL	55	375	240	2	108	208	448	73
US 19 (Commercial Way) and Walmart Driveway	NBL	55	475	240	1	25	40	280	-195
US 19 (Commercial Way) and Pepper Street / Applegate Drive	NBL	55	300	240	1	58	132	372	72
	SBL	55	300	240	1	99	133	373	73

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9. 2027 BUILD ANALYSIS

The 2027 Future Year Build scenario includes the traffic characteristics that are expected to exist under future conditions with the construction of the Walmart Fuel Station. Peak hour traffic volumes were developed from adding the site trip assignment to the 2027 No-Build peak hour traffic volumes. No changes to the existing lane configurations were made. Table 10 summarizes the analysis results for this scenario. Refer to Appendix F for the Synchro reports. All SimTraffic reports can be found in Appendix H.

The intersection of US 19 and Walmart Driveway is expected to continue to operate with delays in the 2027 build scenario. The major-street northbound left approach of US 19 is expected to operate at LOS F. Note that significant delays are not uncommon at two-way stop-controlled intersections, and do not always require improvements to be made. As the eastbound approach exiting the site is designed to operate as a right-in/right-out intersection, and expected northbound left-turn queuing is significantly less than the storage offered by the existing northbound left-turn lane, improvements by the development are not recommended.

Table 9: 2027 Build Roadway Segment Analysis

Roadway Segment	Current LOS	2024 Peak Hour Directional Service Volume (vph)	2024 AADT	2024 Peak Hour Directional Volume (vph)	2027 No-Build Peak Hour Directional Volume (vph)	Site Trips		2027 Build		
						Trip Dist %	Trips	Peak Hour Directional Volume (vph)	V/C	Exceeds Service Volume?
US 19/Commercial Dr										
Hunters Lake Rd to Forest Oaks Blvd	D	2,810	43,000	2,129	2,226	30%	32	2,258	0.80	No
Osowaw Blvd										
US 19/Commercial Way to Osowaw Blvd	D	870	1,200	59	62	5%	5	67	0.08	No
Spring Hill Dr										
US 19/Commercial Way to FL 589	D	1,790	23,000	1,139	1,191	30%	32	1,222	0.68	No
Applegate Dr										
US 19/Commercial Way to Kenlake Ave	C	970	2,200	109	114	5%	5	119	0.12	No

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Table 10: 2027 Build Intersection Analysis

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
1	US 19 and Spring Hill Drive/Osowaw Boulevard	Osowaw Boulevard Eastbound	LT (2)	54.7	69.0	D	E	107	221	149	240
			TH (2)					110	218	137	327
			RT					133	137	160	198
		Spring Hill Drive Westbound	LT (2)	54.4	61.8	D	E	257	265	367	590
			TH					182	274	274	275
			RT					238	350	225	225
		US 19 Northbound	LT	20.0	38.1	B	D	119	m159	151	329
			TH (3)					130	#713	193	629
			RT					56	m259	169	490
		US 19 Southbound	LT (2)	30.8	39.6	C	D	108	208	278	361
			TH (3)					383	471	370	448
			RT					34	88	66	117
		Overall		**34.7**	**46.4**	**C**	**D**				
2	US 19 and Walmart Driveway	Walmart Driveway Eastbound	RT	23.9	24.6	C	C	13	33	--	54
		US 19 Northbound	LT	52.4	57.3	F	F	43	73	112	168
			TH (3)					--	--	--	204
		US 19 Southbound	TH (3)	0	0	--	--	--	--	--	4
			RT					--	--	15	31
		Overall		**--**	**--**	**--**	**--**				
3	US 19 and Pepper Street/Applegate Drive	Pepper Street Eastbound	LT	64.6	73	E	E	125	248	107	231
			LT-TH-RT					121	245	146	274
		Applegate Drive Westbound	LT-TH	57.9	79.4	E	E	142	#386	179	511
			RT					65	175	137	300
		US 19 Northbound	LT	20.0	39.3	C	D	72	150	120	400
			TH (3)					305	795	321	829
			RT					27	91	78	425
		US 19 Southbound	LT	12.7	14.9	B	B	m101	m135	113	224
			TH (3)					283	206	300	316
			RT					m34	48	86	164
		Overall		**19.5**	**35.6**	**B**	**D**				
4	Wendy Court/Internal N-S Driveway and Southern Internal Driveway/Pepper Street	Southern Internal Driveway Eastbound	LT-TH-RT	7.7	9.8	A	A	0	13	31	88
		Pepper Street Westbound	LT-TH-RT	8.2	12.4	A	B	13	55	4	27
		Wendy Court Northbound	LT	8.2	12.1	A	B	0	3	28	33
			TH-RT					18	55	69	134
		Internal N-S Driveway Southbound	LT	8.2	10.1	A	B	5	10	52	78
			TH-RT					5	18	64	89
		Overall		**8.2**	**11.5**	**A**	**B**				
5	Internal N-S Driveway and Walmart Driveway	Walmart Driveway Westbound	LT	2.4	2.7	--	--	3	5	--	45
			RT					0	0	68	134
		Internal N-S Driveway Northbound	TH	10.4	12.5	B	B	11	34	62	84
			RT					--	--	--	22
		S Lois Ave Southbound	LT	10.3	12.5	B	B	4	11	54	57
			TH					6	13	71	72
		Overall		**6.4**	**8.5**	**A**	**A**				

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Table 10: 2027 Build Intersection Analysis *Continued*

Intersection Number	Intersection	Approach	Lane Group	Delay (sec/veh)		LOS		95th % Queue Length (ft)		Maximum Queue Length (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM
6	Internal N-S Driveway and Northern Internal Driveway/AT&T Driveway	Northern Internal Driveway Eastbound	LT-TH-RT	6.9	7.3	A	A	0	3	36	44
		AT&T Driveway Westbound	LT-TH-RT	0	7.5	--	A	0	3	--	30
		Internal N-S Driveway Northbound	LT	8	9.6	A	A	3	5	23	23
			TH-RT					13	40	57	65
		Internal N-S Driveway Southbound	LT-TH-RT	7.4	7.7	A	A	3	5	56	53
		Overall		**7.8**	**9.2**	**A**	**A**				
7	Internal N-S Driveway/CVS Driveway 1 and Osowaw Boulevard	Osowaw Boulevard Eastbound	TH (2)	0	0	--	--	--	--	--	--
			TH-RT					--	--	--	26
		Osowaw Boulevard Westbound	TH (2)	0	0	--	--	--	--	--	--
			RT					--	--	--	--
		Internal N-S Driveway Northbound	RT	11.3	14.6	B	B	15	53	22	113
		CVS Driveway 1 Southbound	RT	9.1	9.7	A	A	0	3	--	--
		Overall		**--**	**--**	**--**	**--**				
8	Osowaw Boulevard and Walmart Driveway/CVS Driveway 2	Walmart Driveway Eastbound	LT-TH	12.7	13.5	B	B	8	18	66	79
			RT					10	23	10	102
		CVS Driveway 2 Westbound	LT-TH-RT	16.9	24	C	C	0	13	21	44
		Osowaw Boulevard Northbound	LT	--	--	--	--	--	--	101	116
			TH-RT					--	--	--	10
		Osowaw Boulevard Southbound	LT	0	7.7	A	A	0	0	--	10
			TH-RT					--	--	9	15
		Overall		**--**	**--**	**--**	**--**				
9	Internal N-S Driveway and Site Drive 1	Site Drive 1 Westbound	LT-RT	9.1	10.2	A	B	5	5	50	88
		Internal N-S Driveway Northbound	TH-RT	--	--	--	--	--	--	36	128
		Internal N-S Driveway Southbound	LT	7.5	7.8	A	A	0	0	--	18
			TH					--	--	6	25
		Overall		**--**	**--**	**--**	**--**				
10	Internal N-S Driveway and Site Drive 2	Site Drive 2 Westbound	LT-RT	9.5	10.6	A	B	3	5	46	69
		Internal N-S Driveway Northbound	TH-RT	--	--	--	--	--	--	--	17
		Internal N-S Driveway Southbound	LT	7.5	7.9	A	A	0	0	12	30
			TH					--	--	--	--
		Overall		**--**	**--**	**--**	**--**				

Volume for the 95th percentile cycle exceeds capacity.
m Volume for the 95th percentile queue is metered by an upstream signal

DRMP

Table 11: 2027 Build Left Turn Lane Analysis

Intersection	Turn Lane	Posted Speed Limit	Existing Lane Length	Required Deceleration Length	Number of Lanes	95th Percentile Queue Length (AM)	95th Percentile Queue Length (PM)	Required Turn Lane Length	Turn Lane Length Deficiency
US 19 (Commercial Way) and Osowaw Boulevard / Spring Hill Drive	EBL	40	375	145	2	107	221	366	-9
	WBL	40	FULL	145	2	257	265	410	N/A
	NBL	55	475	240	1	119	159	399	-76
	SBL	55	375	240	2	108	208	448	73
US 19 (Commercial Way) and Walmart Driveway	NBL	55	475	240	1	43	73	313	-162
US 19 (Commercial Way) and Pepper Street / Applegate Drive	NBL	55	300	240	1	72	150	390	90
	SBL	55	300	240	1	101	135	375	75

DRMP

10. CONCLUSION

The recommendations in this report are outlined in the following sections.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to FDOT guidelines.

Intersection Capacity Analysis Summary

The existing intersection of US 19 and Walmart Driveway is expected to operate poorly under future year conditions whether or not the fuel station is built. Due to the low impact by the proposed development, no additional offsite improvements are recommended.

11. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. Refer to Figure 12 for an illustration of the recommended lane configurations.

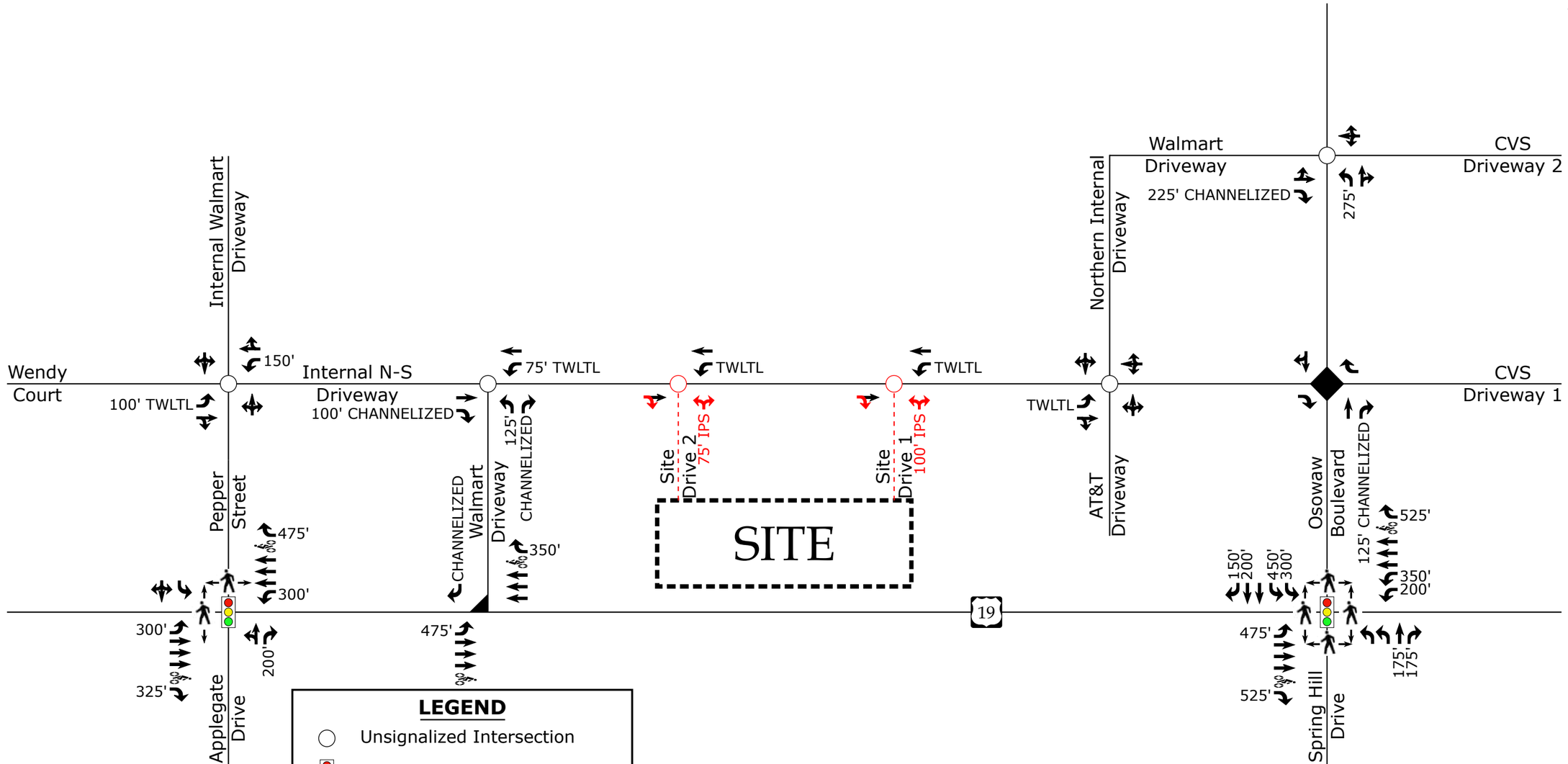
Recommended Improvements by Developer

Internal N-S Driveway and Site Drive 1:

- Construct the westbound proposed driveway as a full-movement driveway with one ingress lane and one egress lane striped as a shared left-turn/right-turn lane with an internal protected stem of at least 100 feet.
- Provide stop control for westbound approach.

Internal N-S Driveway and Site Drive 2:

- Construct the westbound proposed driveway as a full-movement driveway with one ingress lane and one egress lane striped as a shared left-turn/right-turn lane with an internal protected stem of at least 75 feet.
- Provide stop control for westbound approach.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- Existing Lane
- Improvement by Developer
- X' Storage (In Feet)
- TWLTL Two-Way Left-Turn Lane
- Bicycle Lane
- Pedestrian Crosswalk

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Walmart Fuel Station
Spring Hill, FL

Recommended Lane Configurations

Scale: Not to Scale | Figure 12

TECHNICAL APPENDIX

APPENDIX A

SCOPING DOCUMENTATION

December 11, 2025

Planning Department
Hernando County, FL
1653 Blaise Drive
Brooksville, FL 34601
Planning@hernandocounty.us

[Sent via Email]

Reference: Walmart Fuel Station – Spring Hill, Florida

Subject: Memorandum of Understanding for TIA Report

Dear Mr. Herring:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions related to the Traffic Impact Analysis (TIA) for the proposed Florida Walmart Fuel Station, at the existing Walmart Supercenter located at 1485 Commercial Way in Spring Hill, Florida. Refer to the attached site location map.

The development proposes a fuel station that includes twelve (12) vehicle fueling positions (VFP) and a 1,618 square-foot convenience store. Access to the fueling station will be provided via turning movements from Wendy Court. A new full-movement driveway will be constructed on the south side of the fuel parcel, and a second driveway will be located near the northern edge of the site.

The Walmart Supercenter driveways are currently not aligned with the access drives that serve the proposed development. No direct access to Commercial Way (US 19), Osowaw Boulevard, or Pepper Street is proposed. Fuel deliveries will utilize a designated zone along the eastern edge of Wendy Court, entering from the south and exiting north to Osowaw Boulevard.

Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 12th Edition. Refer to the following Table 1 for the proposed site trip generations.

Table 1: Site Trip Generation

Land Use (ITE Code)	Intensity	Daily Traffic AADT (vpd)	Weekday AM Peak Hour Trips (vph)			Weekday PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Gasoline Station (944)	12 VFP	2,064*	71	71	142	91	91	182
Pass-By Trips - From LUC 944 (58% AM, 42% PM)		*-1,072*	*-41*	*-41*	*-82*	*-38*	*-38*	*-76*
Total Primary Trips		**992**	**30**	**30**	**60**	**53**	**53**	**106**

*Note that the ITE *Trip Generation Manual* 12th Edition only provides the average daily trip value via the average rate.

It is estimated that upon build-out, the proposed development will generate approximately 2,064 site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 142 primary trips (71 entering and 71 exiting) will occur during the weekday AM peak hour and 182 primary trips (91 entering and 91 exiting) will occur during the weekday PM peak hour.

Pass-by trips were taken into consideration in this study. Pass-by trips are made by the traffic already using the adjacent roadway, entering the site as an intermediate stop on their way to another destination. Pass-by trips are expected to account for approximately 82 trips (41 entering and 41 exiting) during the weekday AM peak hour, and 76 trips (38 entering and 38 exiting) during the weekday PM peak hour. It should be noted that the pass-by trips were balanced, as it is likely that these trips would enter and exit in the same hour.

The total primary site trips are the calculated site trips after the reduction for internal capture and pass-by trips. Primary site trips are expected to generate approximately 60 primary trips (30 entering and 30 exiting) during the weekday AM peak hour and 106 primary trips (53 entering and 53 exiting) during the weekday PM peak hour.

Trip Generation

Site trips were distributed based on 2024 AADT data from the 2024 FDOT. Table 2 illustrates how the regional trip distribution percentages were calculated. Figure 3 illustrates the trip distribution percentages.

Table 2: Site Trip Distribution

Segment	From	To	2024 AADT	Percent of Total AADTs	Regional Trip Distribution Percentages
US 19 (Commercial Way)	Hunters Lake Rd	Forest Oaks Blvd	43,000	62.0%	60%
Spring Hill Dr	Commercial Way	Mariner Blvd	23,000	33.1%	30%
Osowaw Blvd	Commercial Way	Osowaw Blvd	1,200	1.7%	5%
Applegate Drive	Commercial Way	Kenlake Ave	2,200	3.2%	5%

Study Area

The study area was determined using the methodology in the City of Tampa Traffic Impact Analysis Guidelines. Refer to the table on the following page for a summary of the existing conditions inventory and study area determination. The study area consists of the following roadway segments:

- Commercial Way (US 19) and Spring Hill Drive / Osowaw Boulevard (signalized)
- Commercial Way (US 19) and Pepper Street / Applegate Drive (signalized)
- Osowaw Boulevard and Internal North–South Driveway / CVS Access 1
- Osowaw Boulevard and Walmart Access Driveway / CVS Access 2
- Internal North–South Driveway and Fuel Station Access Driveways 1 and 2
- Wendy Court and Internal North-South Driveway
- Pepper Street and Wendy Court

Existing Traffic Volumes

Existing peak hour traffic volumes will be determined based on turning movement counts conducted at the existing study intersections, during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods, while schools are in session for in-person learning.

Weekday AM and PM peak hour counts will be conducted at the following intersections:

- Commercial Way (US 19) and Spring Hill Drive / Osowaw Boulevard (signalized)
- Commercial Way (US 19) and Pepper Street / Applegate Drive (signalized)
- Osowaw Boulevard and Internal North–South Driveway / CVS Access 1
- Osowaw Boulevard and Walmart Access Driveway / CVS Access 2
- Internal North–South Driveway and Northern Internal Driveway / AT&T Driveway
- Internal North-South Driveway and Walmart Driveway
- Pepper Street and Wendy Court

Background Traffic Volumes

Based on historical Average Annual Daily Traffic (AADT) volumes from FDOT, background traffic volumes will be determined by projecting existing traffic volumes to the year 2027 using a 1.5% annual growth rate. Determination of the average growth rate is summarized in the table on the following page. Trips from vested/committed developments will be added to the project traffic volumes. Table 3 illustrates the methodology used to determine the annual growth rate.

Hernando County and FDOT are to confirm if there are any vested/committed developments to include in the TIA.

Table 3: Segmented Growth Rate Calculation

Segment	From	To	2023	2024	2023-2024 Growth Rate
US 19 (Commercial Way)	Hunters Lake Rd	Forest Oaks Blvd	41,000	43,000	4.88%
Spring Hill Dr	Commercial Way	Mariner Blvd	24,500	23,000	-6.12%
Osowaw Blvd	Commercial Way	Osowaw Blvd	N/A	1,200	N/A
Applegate Drive	Commercial Way	Kenlake Ave	N/A	2,200	N/A
				Average Growth Rate	**-0.62%**
				Weighted Average Growth Rate	**1.50%**

Future Roadway Improvements

The analysis also considers relevant regional planning documents issued by the Hernando/Citrus Metropolitan Planning Organization (MPO), including the 2050 Long-Range Transportation Plan (LRTP), Transit Development Plan (TDP), and Transportation Improvement Program (TIP). A corridor-wide Arterial Traffic Management System (ATMS) upgrade is listed in the 2026–2030 Transportation Improvement Program (TIP), including the addition of fiber, detectors, signal controller upgrades, and travel time readers. This improvement will apply to the entire corridor from the Pasco County Line to Citrus County but will not include any direct widening.

Analysis

All roadway segments will be analyzed for the 2025 Existing, 2027 No-Build, and 2027 Build conditions. All intersections will be analyzed using Synchro (Version 11.1) during the weekday AM and PM peak hours under the following scenarios:

- 2025 Existing
- 2027 No-Build
- 2027 Build

Left turn lane and right turn lane analysis will be performed at all signalized intersections to determine if existing storage lengths are adequate. Turn lane analysis will be performed at all proposed driveways.

Signal warrant analysis will be performed if delay and queue results indicate installation of a traffic signal is needed to reach satisfactory traffic operations. Warrants 1, 2, and 3 from the Manual on Uniform Traffic Control Devised would be reviewed.

Report

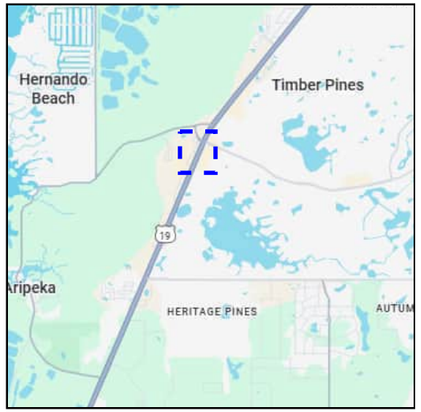
The TIA report will be prepared based on Hernando County and FDOT requirements. If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report. If you have any questions or concerns, please do not hesitate to contact me.

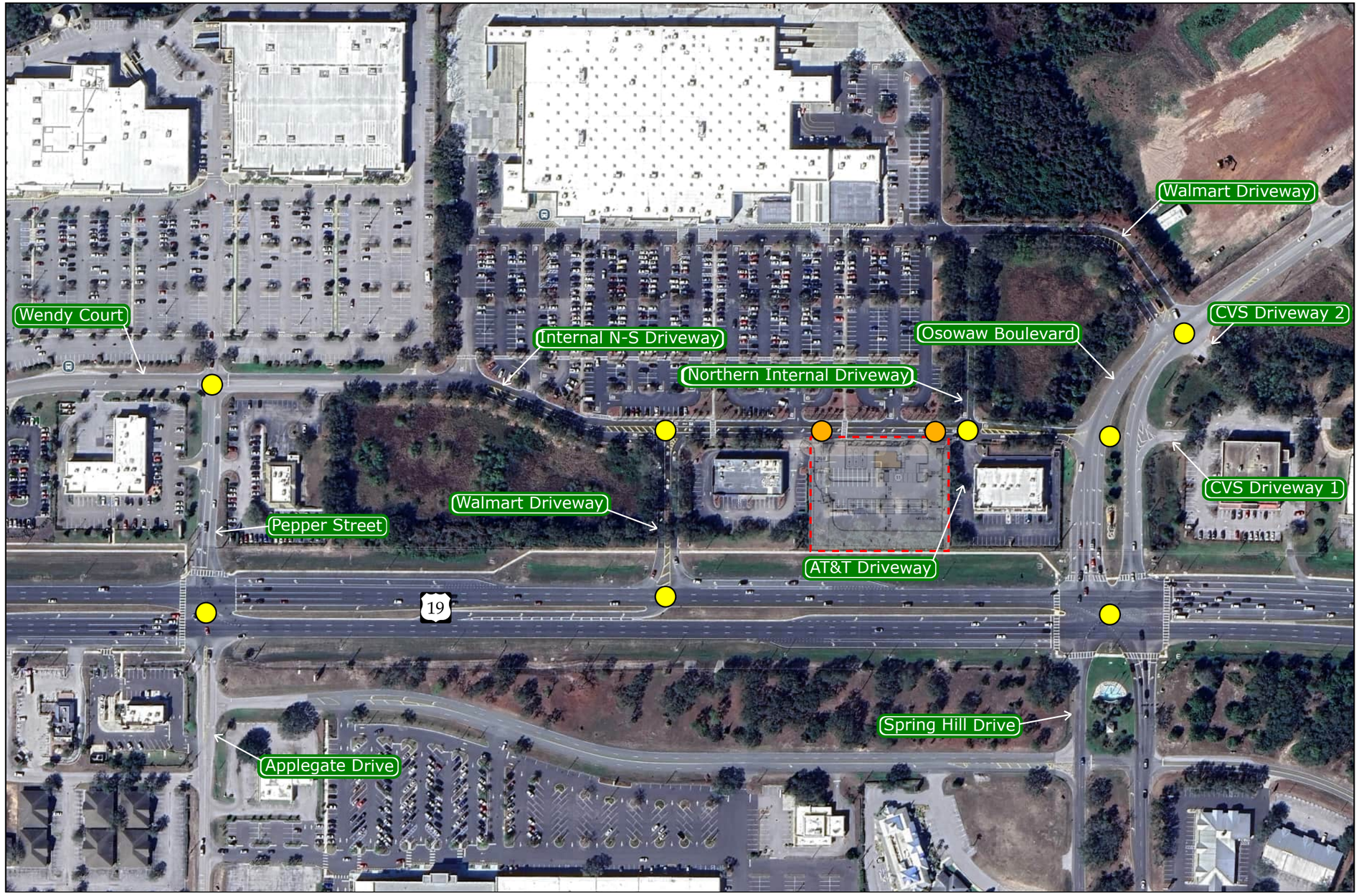
Sincerely,

Caroline Cheeves, PE
Traffic Analysis Project Manager
DRMP, Inc.

Attachments:

- Figure 1 - Site Location Map
- Figure 2 - Site Plan
- Figure 3 – Trip Distribution Percentages





LEGEND

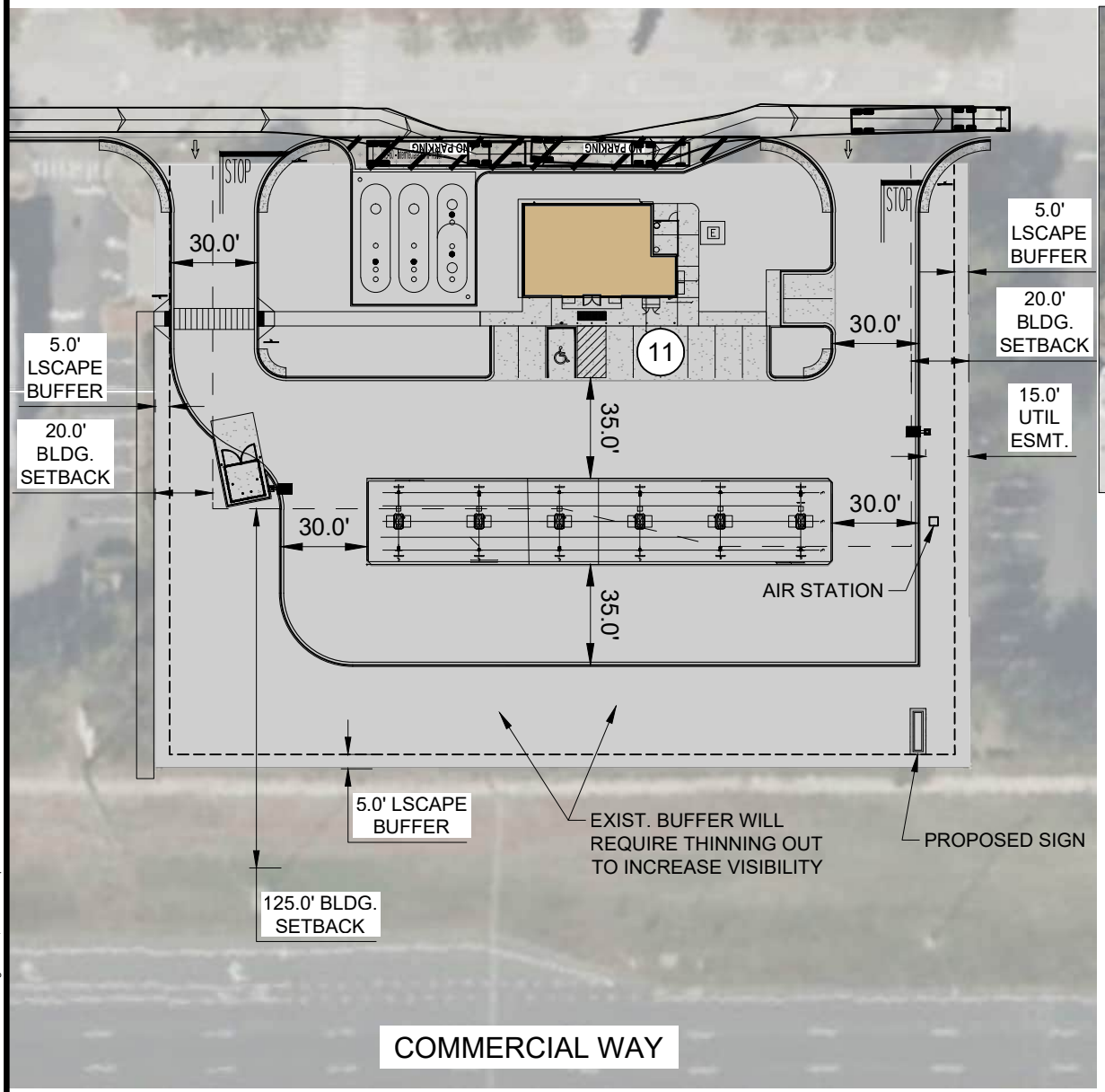
- Study Intersection
- Proposed Site Access
- Study Area

DRMP

Walmart Fuel Station
Spring Hill, FL

Site Location Map

Scale: Not to Scale | Figure 1



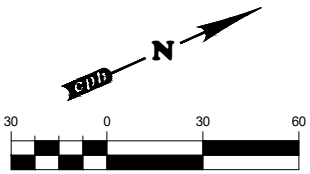
FUEL STATION
SCALE 1'=60'

OVERALL SITE
SCALE 1'=500'

SITE ANALYSIS TABLE

FUEL STATION: 1485 COMMERCIAL WAY, SPRING HILL, FL		
CURRENT ZONE:		PDP
EXISTING WALAMRT PARCEL AREA:		30.14 AC
EXISTING WALAMRT STORE AREA:		217,584 SF
	PARKING COUNT	PARKING RATIO
EXISTING PARKING	961 SPACES	4.4 / 1000 SF
PROPOSED PARKING	889 SPACES	4.1 / 1000 SF
AGENCY REQ. PARKING	871 SPACES	4.0 / 1000 SF
WALMART REQ. PARKING	871 SPACES	4.0 / 1000 SF
FUEL STATION STORE AREA		1,618 SF
EXISTING WALMART FUEL PARCEL AREA		NA
PROPOSED WALMART FUEL PARCEL AREA		1.36+/- AC
	PARKING COUNT	PARKING RATIO
PROPOSED PARKING	11 SPACES	6.8 / 1000 SF
CITY REQ. PARKING	7 SPACES	4.0 / 1000 SF
WALMART REQ. PARKING	5 SPACES	1 / 375 SF
	BUILDING SETBACK	LANDSCAPE BUFFER
FRONT	125'	5'
REAR	35'	5'
SIDE	20'	5'
SIDE	20'	5'

BUILDING , CANOPY & TANKS
SUP 1440 - 6 PUMPS INLINE
(3) 20,000 GALLON TANKS



REVISIONS | BY

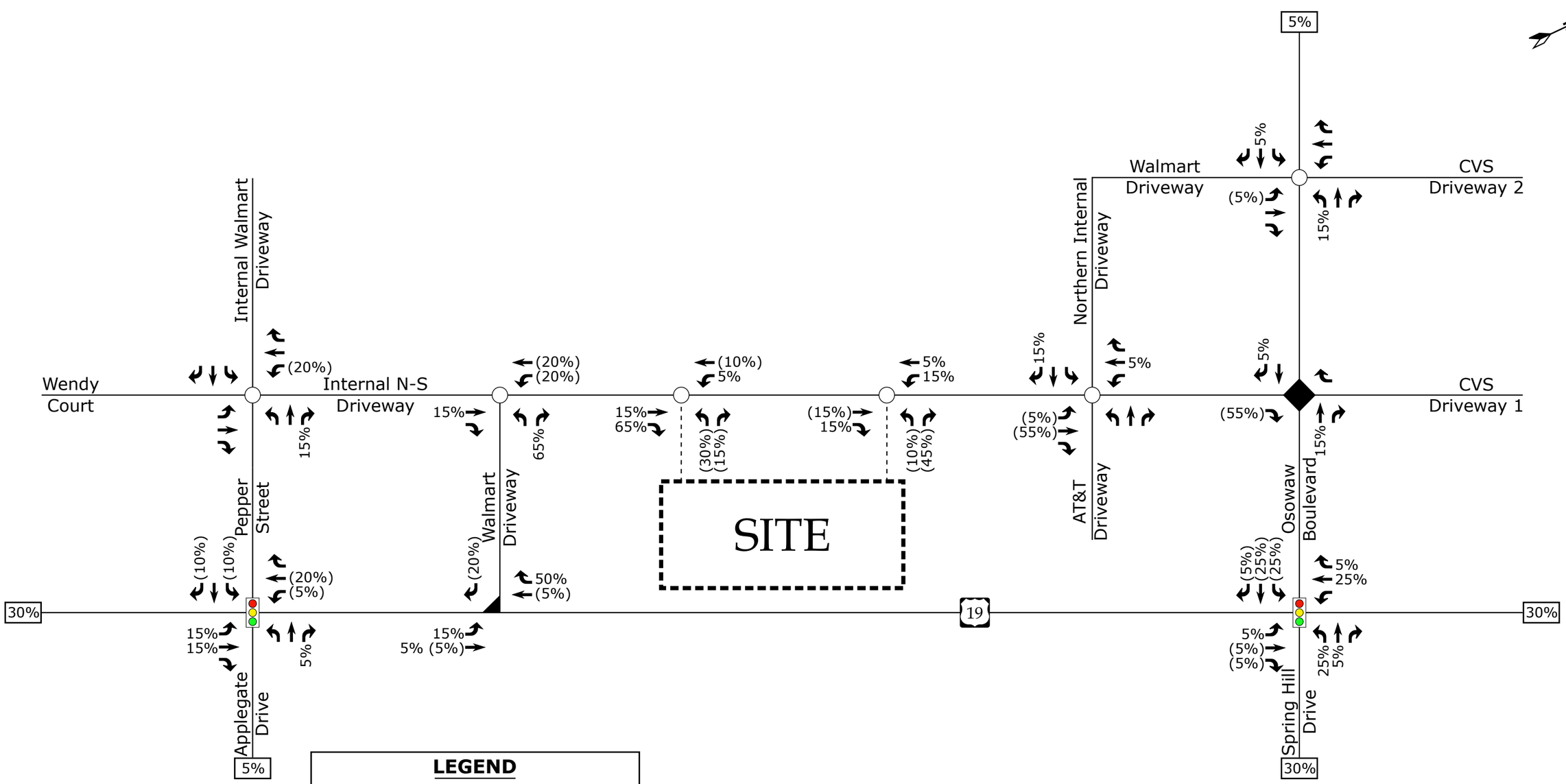
cph
500 WEST FULTON STREET
SUITE 600
CHICAGO, IL 60661
PH: 407.322.6841
www.cphcorp.com

STORE #967
WAL-MART STORES, INC.
1485 COMMERCIAL WAY
SPRING HILL, FLORIDA 34606

Walmart

DATE:
02/28/25

OPC PLAN



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Walmart Fuel Station
Spring Hill, FL

Site Trip Distribution

Scale: Not to Scale | Figure 8

APPENDIX B

TRAFFIC COUNT DATA

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: US-19 (Commercial Way) -- Spring Hill Dr / Osowaw Blvd

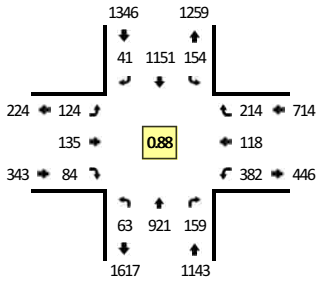
CITY/STATE: Hernando, FL

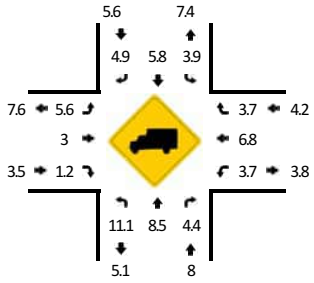
QC JOB #: 17330303

DATE: Thu, Nov 13 2025

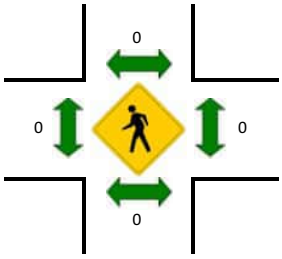
Peak-Hour: 7:30 AM -- 8:30 AM

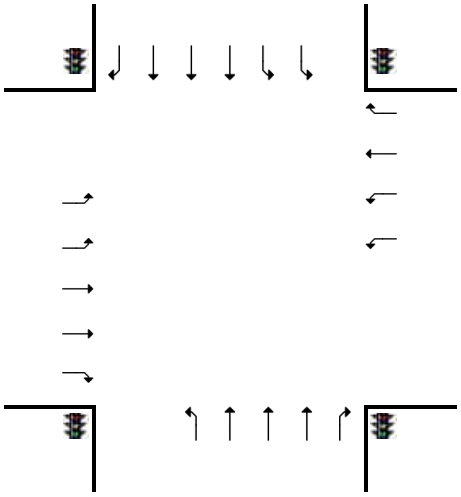
Peak 15-Min: 7:30 AM -- 7:45 AM

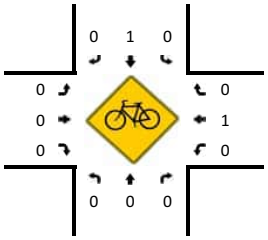


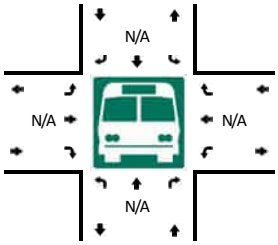


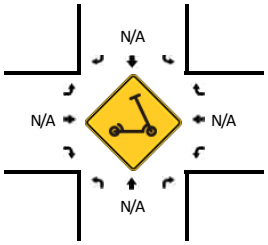
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				Spring Hill Dr / Osowaw Blvd (Eastbound)				Spring Hill Dr / Osowaw Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	11	138	19	0	17	276	2	0	22	21	14	0	85	11	32	0	648	
7:15 AM	6	177	28	0	25	335	9	1	11	23	14	0	102	19	34	0	784	
7:30 AM	16	279	52	0	35	359	8	0	18	19	16	1	118	22	60	0	1003	
7:45 AM	16	219	37	0	34	276	10	0	18	29	11	0	102	28	47	0	827	3262
8:00 AM	22	211	30	0	40	270	12	0	43	44	36	0	79	41	57	0	885	3499
8:15 AM	9	212	40	0	43	246	11	2	43	43	21	1	83	27	50	0	831	3546
8:30 AM	8	233	56	0	63	336	18	0	40	23	16	0	72	19	54	0	938	3481
8:45 AM	20	220	40	0	59	245	25	0	34	21	17	0	87	25	75	0	868	3522

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	64	1116	208	0	140	1436	32	0	72	76	64	4	472	88	240	0	4012
Heavy Trucks	16	96	4		4	80	4		8	4	0		12	12	16		256
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/20/2025 8:33 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

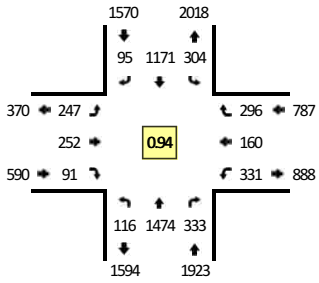
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

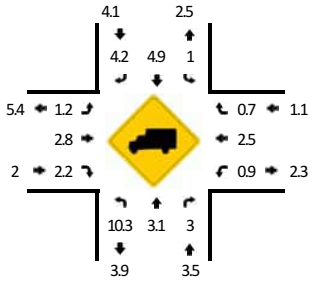
LOCATION: US-19 (Commercial Way) -- Spring Hill Dr / Osowaw Blvd | **QC JOB #:** 17330304

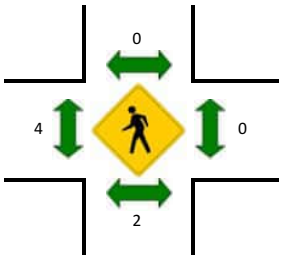
CITY/STATE: Hernando, FL | **DATE:** Thu, Nov 13 2025

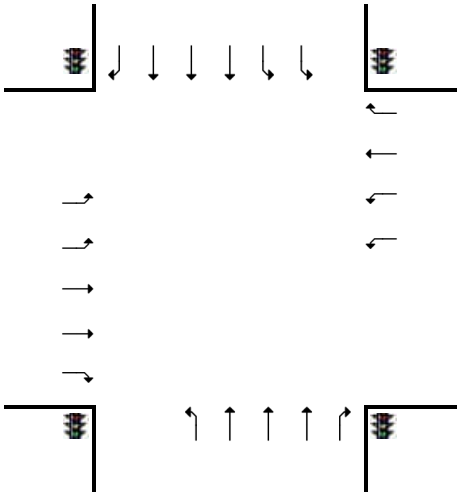
Peak-Hour: 4:30 PM -- 5:30 PM

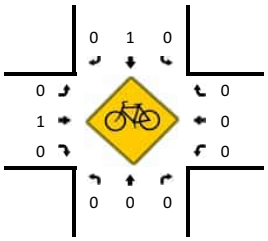
Peak 15-Min: 5:15 PM -- 5:30 PM

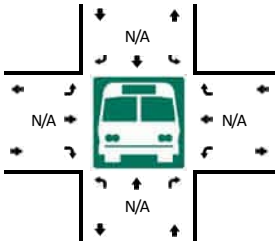


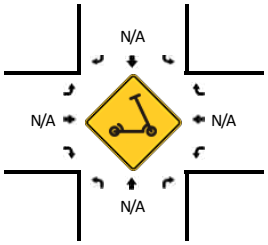












15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				Spring Hill Dr / Osowaw Blvd (Eastbound)				Spring Hill Dr / Osowaw Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	26	389	87	0	92	258	38	0	61	57	24	2	68	33	76	0	1211	
4:15 PM	20	326	89	0	80	274	31	1	60	58	30	0	77	46	72	0	1164	
4:30 PM	23	337	66	0	62	288	25	0	70	63	18	1	89	45	74	1	1162	
4:45 PM	29	382	80	1	72	278	26	1	43	54	25	0	75	33	84	0	1183	4720
5:00 PM	36	324	76	0	98	329	24	1	62	66	26	0	75	47	71	0	1235	4744
5:15 PM	26	431	111	1	70	276	20	0	71	69	22	0	91	35	67	0	1290	4870
5:30 PM	23	364	91	0	63	264	25	4	44	62	16	0	66	42	77	0	1141	4849
5:45 PM	15	325	101	0	58	186	26	6	74	54	15	0	76	41	71	0	1048	4714

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	104	1724	444	4	280	1104	80	0	284	276	88	0	364	140	268	0	5160
Heavy Trucks	0	52	16		4	72	8		4	4	4		0	4	0		168
Buses																	
Pedestrians		4				0				4				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

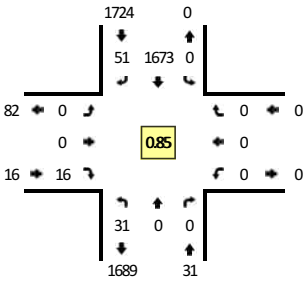
Report generated on 11/20/2025 8:33 AM

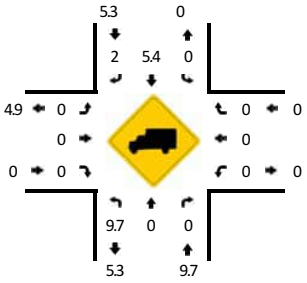
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

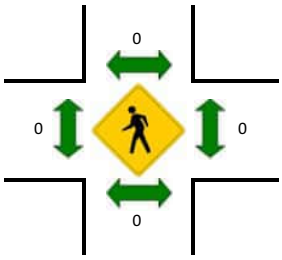
LOCATION: US-19 (Commercial Way) -- RIRO Walmart Dwy | **QC JOB #:** 17330305
CITY/STATE: Hernando, FL | **DATE:** Thu, Nov 13 2025

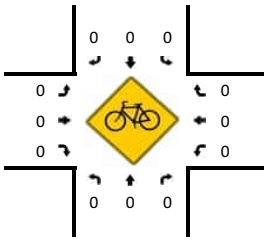
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

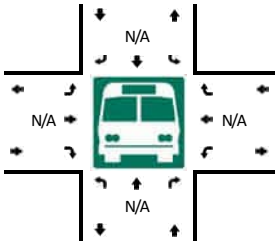


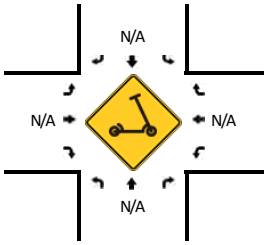


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				RIRO Walmart Dwy (Eastbound)				RIRO Walmart Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	6	0	0	0	0	364	5	0	0	0	6	0	0	0	0	0	381	
7:15 AM	6	0	0	0	0	433	9	0	0	0	1	0	0	0	0	0	449	
7:30 AM	5	0	0	0	0	496	13	0	0	0	5	0	0	0	0	0	519	
7:45 AM	9	0	0	0	0	372	16	0	0	0	6	0	0	0	0	0	403	1752
8:00 AM	11	0	0	0	0	372	13	0	0	0	4	0	0	0	0	0	400	1771
8:15 AM	12	0	0	0	0	331	17	0	0	0	5	0	0	0	0	0	365	1687
8:30 AM	4	0	0	0	0	397	24	0	0	0	5	1	0	0	0	0	431	1599
8:45 AM	7	0	0	1	0	321	24	0	0	0	7	0	0	0	0	0	360	1556

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	0	0	0	0	1984	52	0	0	0	20	0	0	0	0	0	2076
Heavy Trucks	0	0	0		0	104	4		0	0	0		0	0	0		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

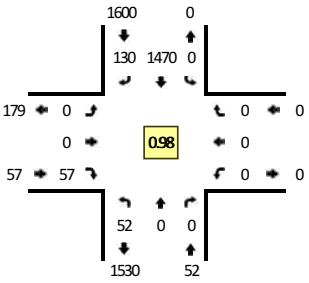
Comments:

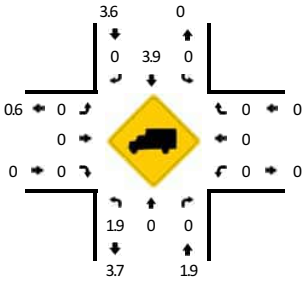
Report generated on 11/20/2025 8:33 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

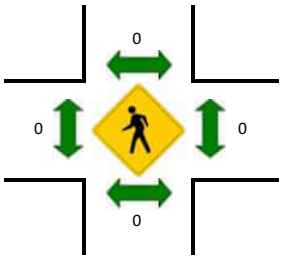
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

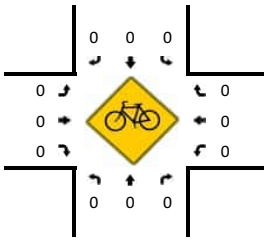
LOCATION: US-19 (Commercial Way) -- RIRO Walmart Dwy | **QC JOB #:** 17330306
CITY/STATE: Hernando, FL | **DATE:** Thu, Nov 13 2025

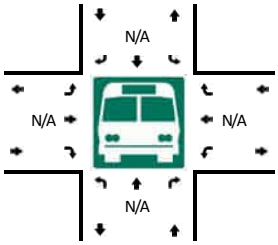
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

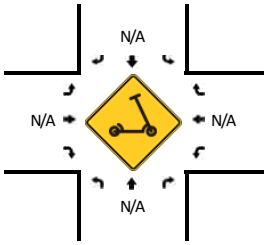












15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				RIRO Walmart Dwy (Eastbound)				RIRO Walmart Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	21	0	0	1	0	330	28	0	0	0	21	0	0	0	0	0	401	
4:15 PM	14	0	0	1	0	363	22	0	0	0	14	0	0	0	0	0	414	
4:30 PM	10	0	0	0	0	367	34	0	0	0	12	0	0	0	0	0	423	
4:45 PM	15	0	0	3	0	346	34	0	0	0	16	0	0	0	0	0	414	1652
5:00 PM	11	0	0	0	0	382	34	0	0	0	11	0	0	0	0	0	438	1689
5:15 PM	13	0	0	0	0	375	28	0	0	0	18	0	0	0	0	0	434	1709
5:30 PM	20	0	0	0	0	320	29	0	0	0	19	1	0	0	0	0	389	1675
5:45 PM	14	0	0	0	0	255	22	0	0	0	12	0	0	0	0	0	303	1564

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	44	0	0	0	0	1528	136	0	0	0	44	0	0	0	0	0	1752
Heavy Trucks	0	0	0		0	48	0		0	0	0		0	0	0		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/20/2025 8:33 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

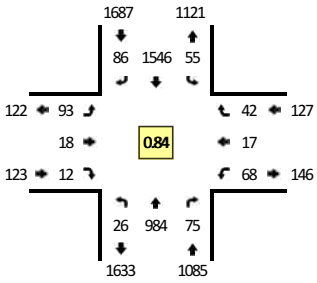
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

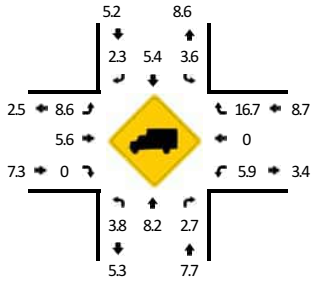
LOCATION: US-19 (Commercial Way) -- Pepper St / Applegate Dr | **QC JOB #:** 17330307

CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

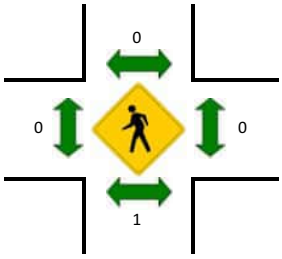
Peak-Hour: 7:15 AM -- 8:15 AM

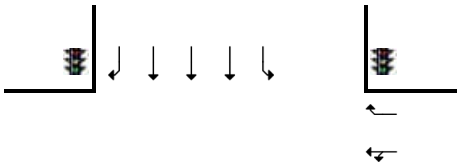
Peak 15-Min: 7:30 AM -- 7:45 AM

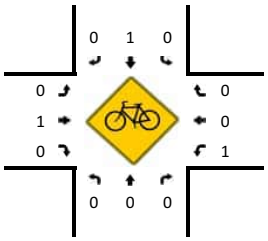


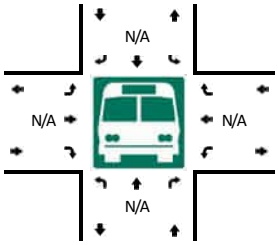


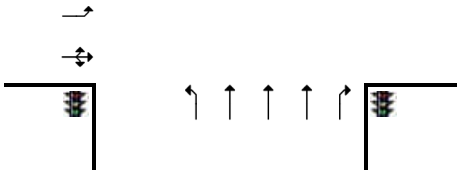
TRUE DATA TO IMPROVE MOBILITY

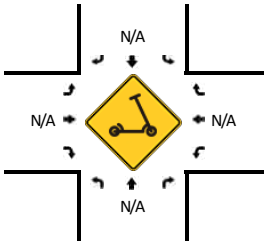












15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				Pepper St / Applegate Dr (Eastbound)				Pepper St / Applegate Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	158	8	4	7	365	4	0	8	4	3	0	14	0	8	0	588	
7:15 AM	4	216	18	2	10	388	24	0	10	2	0	0	19	4	9	0	706	
7:30 AM	4	264	16	1	16	468	30	1	50	6	5	0	19	1	18	0	899	
7:45 AM	7	276	22	2	19	338	19	0	20	8	2	0	15	11	6	0	745	2938
8:00 AM	4	228	19	2	8	352	13	1	13	2	5	0	15	1	9	0	672	3022
8:15 AM	10	252	17	1	18	297	18	0	6	4	3	0	12	5	14	0	657	2973
8:30 AM	13	289	27	4	28	345	27	0	17	7	3	0	23	5	18	0	806	2880
8:45 AM	12	245	33	1	20	288	21	1	13	8	6	0	15	7	17	0	687	2822

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	1056	64	4	64	1872	120	4	200	24	20	0	76	4	72	0	3596
Heavy Trucks	0	76	0		0	88	8		4	4	0		4	0	20		204
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

Comments:

Report generated on 11/20/2025 8:33 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

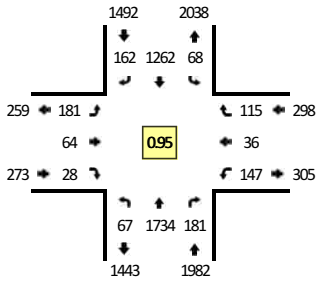
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: US-19 (Commercial Way) -- Pepper St / Applegate Dr | **QC JOB #:** 17330308

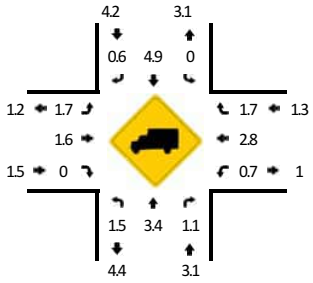
CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

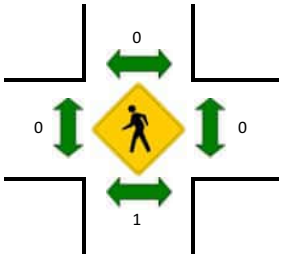
Peak-Hour: 4:45 PM -- 5:45 PM

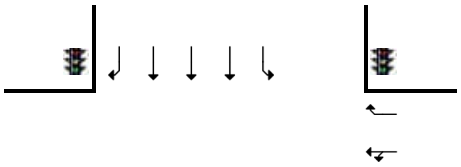
Peak 15-Min: 5:15 PM -- 5:30 PM

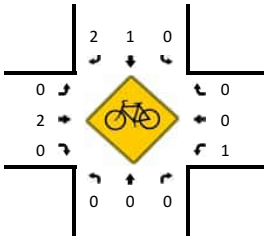


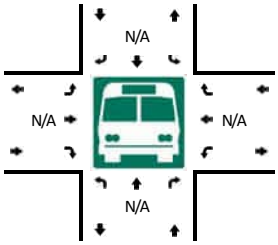
TRUE DATA TO IMPROVE MOBILITY

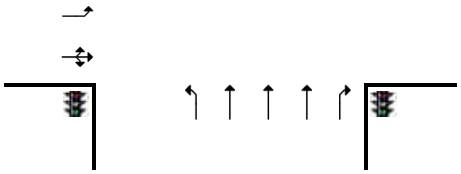


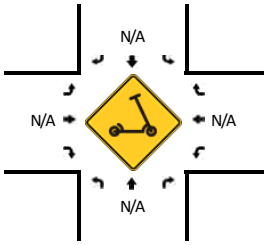












15-Min Count Period Beginning At	US-19 (Commercial Way) (Northbound)				US-19 (Commercial Way) (Southbound)				Pepper St / Applegate Dr (Eastbound)				Pepper St / Applegate Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	437	57	0	19	300	35	5	54	23	17	0	27	11	26	0	1028	
4:15 PM	18	385	61	1	23	301	29	0	46	14	10	0	37	7	34	0	966	
4:30 PM	3	338	54	0	21	325	52	0	48	15	12	0	46	10	30	0	954	
4:45 PM	12	429	46	1	18	302	50	3	32	9	3	0	35	5	32	0	977	3925
5:00 PM	18	432	44	3	15	326	32	1	57	16	13	0	38	11	38	0	1044	3941
5:15 PM	16	439	54	0	12	350	39	3	54	25	6	0	36	9	21	0	1064	4039
5:30 PM	15	434	37	2	15	284	41	1	38	14	6	0	38	11	24	0	960	4045
5:45 PM	21	397	40	1	11	221	28	1	49	21	12	0	37	9	24	0	872	3940

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	64	1756	216	0	48	1400	156	12	216	100	24	0	144	36	84	0	4256
Heavy Trucks	0	64	4		0	84	0		4	4	0		0	4	4		168
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	4		0	0	0		0	0	0		4
Scooters																	

Comments:

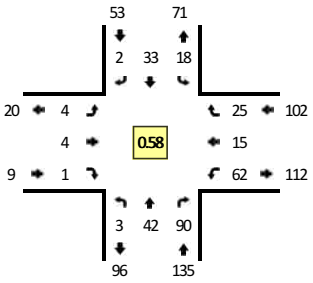
Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

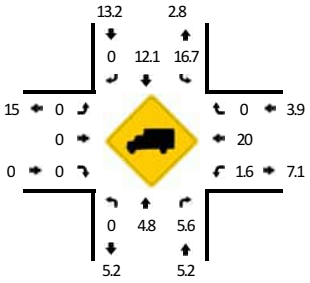
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Wendy Ct / Internal N-S Dwy -- Pepper St
CITY/STATE: Spring Hill, FL

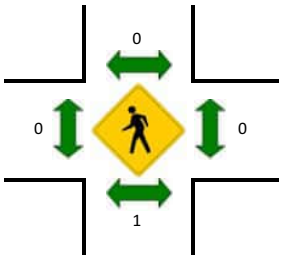
QC JOB #: 17330317
DATE: Thu, Nov 13 2025

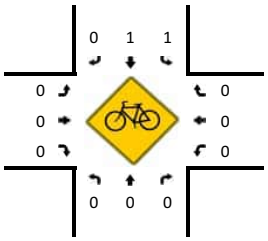
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

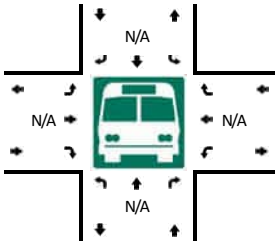


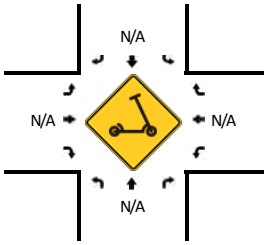


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Wendy Ct / Internal N-S Dwy (Northbound)				Wendy Ct / Internal N-S Dwy (Southbound)				Pepper St (Eastbound)				Pepper St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	4	4	0	4	5	0	0	0	2	0	0	3	1	3	0	26	
7:15 AM	1	3	8	0	3	7	0	0	0	2	0	0	20	1	5	0	50	
7:30 AM	2	17	58	0	3	12	0	0	2	2	0	0	28	4	2	0	130	
7:45 AM	1	12	21	0	3	9	1	0	1	2	0	0	12	7	10	0	79	285
8:00 AM	0	7	7	0	7	7	1	0	0	0	0	0	6	0	3	0	38	297
8:15 AM	0	6	4	0	5	5	0	0	1	0	1	0	16	4	10	0	52	299
8:30 AM	2	17	14	0	8	8	1	0	0	4	1	0	18	7	13	0	93	262
8:45 AM	0	13	8	0	10	13	0	0	0	0	0	0	17	3	10	0	74	257

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	68	232	0	12	48	0	0	8	8	0	0	112	16	8	0	520
Heavy Trucks	0	4	8		4	8	0		0	0	0		4	4	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: WB does not have a stop sign

Report generated on 11/20/2025 8:34 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

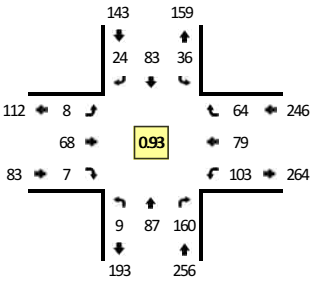
Type of peak hour being reported: Intersection Peak

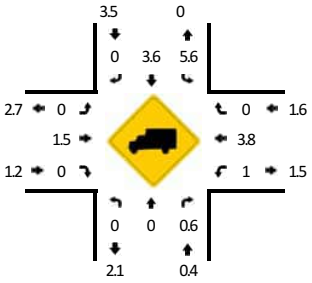
Method for determining peak hour: Total Entering Volume

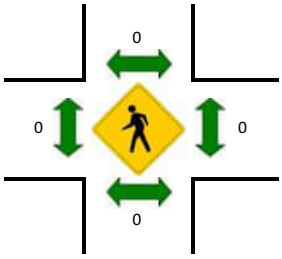
LOCATION: Wendy Ct / Internal N-S Dwy -- Pepper St
CITY/STATE: Spring Hill, FL

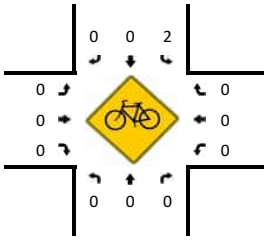
QC JOB #: 17330318
DATE: Thu, Nov 13 2025

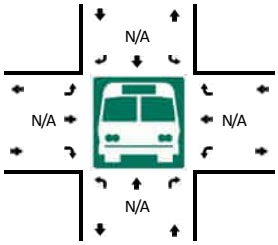
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

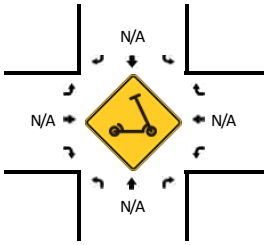












15-Min Count Period Beginning At	Wendy Ct / Internal N-S Dwy (Northbound)				Wendy Ct / Internal N-S Dwy (Southbound)				Pepper St (Eastbound)				Pepper St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	16	57	0	10	33	2	0	5	16	0	0	33	17	16	0	206	
4:15 PM	4	13	39	0	8	22	7	0	4	25	0	0	21	14	15	0	172	
4:30 PM	1	16	41	0	13	28	2	0	1	12	0	0	33	24	6	0	177	
4:45 PM	0	24	26	0	5	20	3	0	0	14	2	0	32	24	13	0	163	718
5:00 PM	3	19	50	0	11	22	6	0	3	18	3	0	19	17	18	0	189	701
5:15 PM	3	22	50	0	10	21	8	0	3	16	2	0	24	22	15	0	196	725
5:30 PM	3	22	34	0	10	20	7	0	2	20	0	0	28	16	18	0	180	728
5:45 PM	3	16	33	0	13	14	6	0	1	24	2	0	10	17	16	0	155	720

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	88	200	0	40	84	32	0	12	64	8	0	96	88	60	0	784
Heavy Trucks	0	0	4		4	0	0		0	0	0		4	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments: WB does not have a stop sign

Report generated on 11/20/2025 8:34 AM

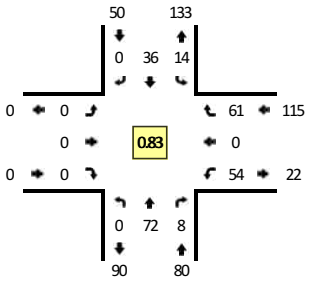
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

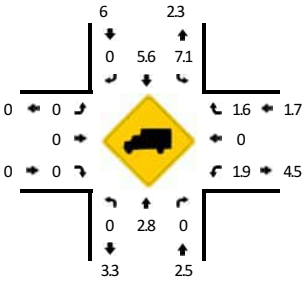
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Internal N-S Dwy -- Walmart Dwy
CITY/STATE: Hernando, FL

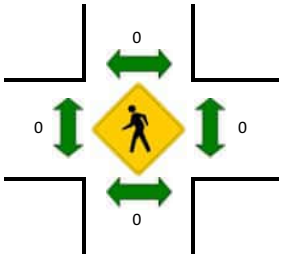
QC JOB #: 17330315
DATE: Thu, Nov 13 2025

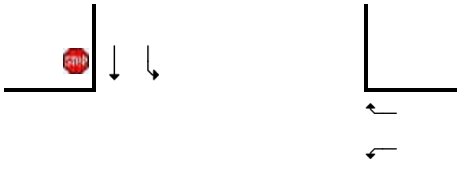
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

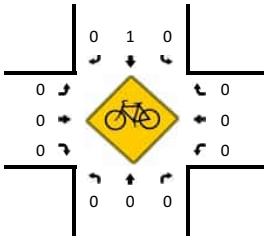


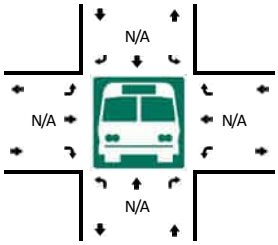


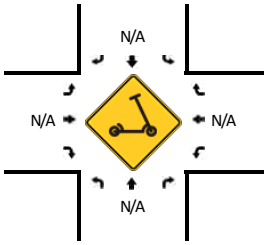
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Internal N-S Dwy (Northbound)				Internal N-S Dwy (Southbound)				Walmart Dwy (Eastbound)				Walmart Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	13	3	0	3	2	0	0	0	0	0	0	6	0	5	0	32	
7:15 AM	0	11	1	0	1	7	0	0	0	0	0	0	4	0	12	0	36	
7:30 AM	0	20	4	0	2	6	0	0	0	0	0	0	9	0	9	0	50	
7:45 AM	0	18	3	0	2	9	0	0	0	0	0	0	11	0	15	0	58	176
8:00 AM	0	14	2	0	2	7	0	0	0	0	0	0	9	0	15	0	49	193
8:15 AM	0	15	1	0	4	9	0	0	0	0	0	0	10	0	20	0	59	216
8:30 AM	0	23	2	0	4	7	0	0	0	0	0	0	19	0	8	0	63	229
8:45 AM	0	20	3	0	4	13	0	0	0	0	0	0	16	0	18	0	74	245

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	80	12	0	16	52	0	0	0	0	0	0	64	0	72	0	296
Heavy Trucks	0	0	0		0	0	0		0	0	0		4	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/20/2025 8:34 AM

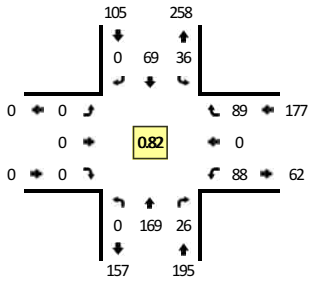
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

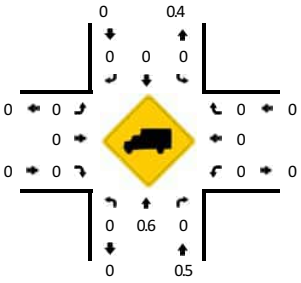
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Internal N-S Dwy -- Walmart Dwy
CITY/STATE: Hernando, FL

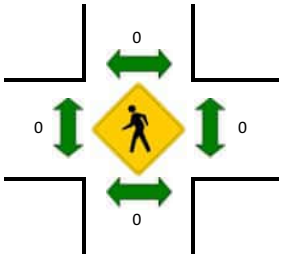
QC JOB #: 17330316
DATE: Thu, Nov 13 2025

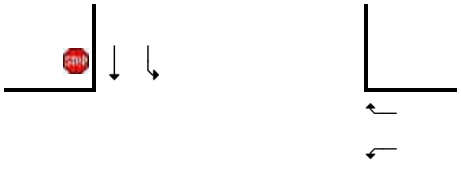
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

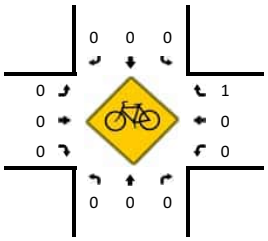


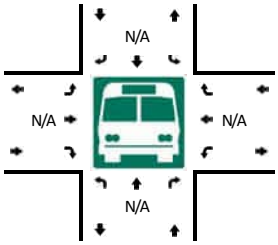


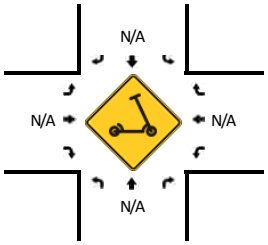
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Internal N-S Dwy (Northbound)				Internal N-S Dwy (Southbound)				Walmart Dwy (Eastbound)				Walmart Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	58	8	0	12	20	0	0	0	0	0	0	24	0	24	0	146	
4:15 PM	0	41	5	0	9	16	0	0	0	0	0	0	15	0	21	0	107	
4:30 PM	0	32	1	0	11	24	0	0	0	0	0	0	27	0	17	0	112	
4:45 PM	0	38	12	0	4	9	0	0	0	0	0	0	22	0	27	0	112	477
5:00 PM	0	40	6	0	6	12	0	0	0	0	0	0	25	0	20	0	109	440
5:15 PM	0	59	6	0	11	15	0	0	0	0	0	0	19	0	19	0	129	462
5:30 PM	0	42	10	0	10	8	0	0	0	0	0	0	29	0	22	0	121	471
5:45 PM	0	38	5	0	6	15	0	0	0	0	0	0	13	0	24	0	101	460

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	232	32	0	48	80	0	0	0	0	0	0	96	0	96	0	584
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	4		4
Scooters																	

Comments:

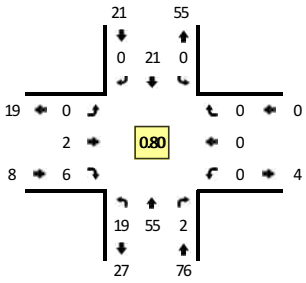
Report generated on 11/20/2025 8:34 AM

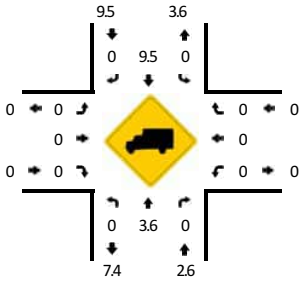
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

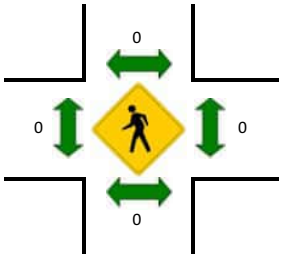
LOCATION: Internal N-S Dwy -- Northern Internal Dwy / AT | **QC JOB #:** 17330313
CITY/STATE: Hernando, FL | **DATE:** Thu, Nov 13 2025

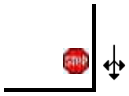
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

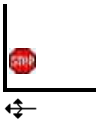


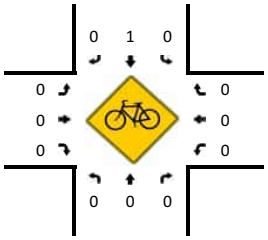


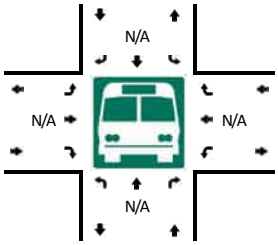
TRUE DATA TO IMPROVE MOBILITY

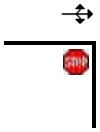


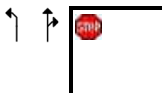


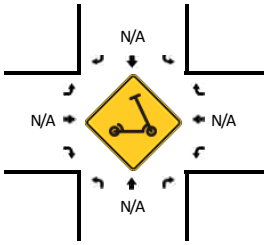












15-Min Count Period Beginning At	Internal N-S Dwy (Northbound)				Internal N-S Dwy (Southbound)				Northern Internal Dwy / AT (Eastbound)				Northern Internal Dwy / AT (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	17	
7:15 AM	3	12	0	0	0	6	0	0	0	0	2	0	0	0	0	0	23	
7:30 AM	2	19	0	0	0	6	0	0	0	0	0	0	0	0	0	0	27	
7:45 AM	7	8	0	0	0	6	0	0	0	0	1	0	0	0	0	0	22	89
8:00 AM	6	14	0	0	0	8	0	0	0	0	0	0	0	0	0	0	28	100
8:15 AM	3	12	0	0	0	2	0	0	0	1	2	0	0	0	0	0	20	97
8:30 AM	6	14	0	0	0	2	0	0	0	1	1	0	0	0	0	0	24	94
8:45 AM	4	15	2	0	0	9	0	0	0	0	3	0	0	0	0	0	33	105

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	60	8	0	0	36	0	0	0	0	12	0	0	0	0	0	132
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

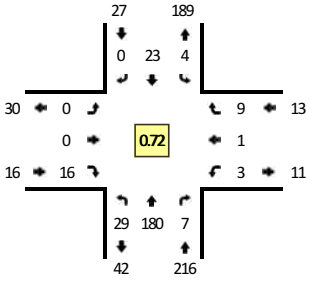
Comments:

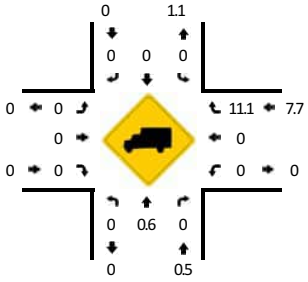
Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

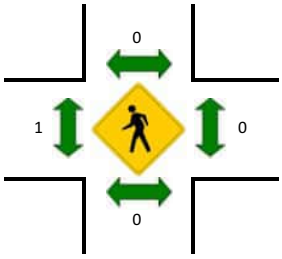
LOCATION: Internal N-S Dwy -- Northern Internal Dwy / AT | **QC JOB #:** 17330314
CITY/STATE: Hernando, FL | **DATE:** Thu, Nov 13 2025

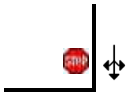
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

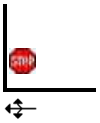


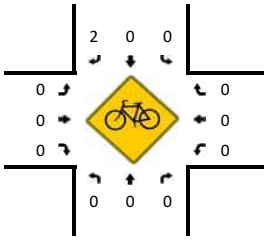


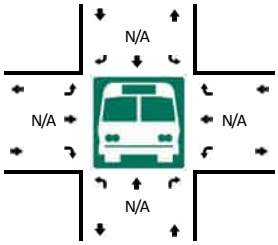
TRUE DATA TO IMPROVE MOBILITY

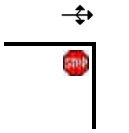


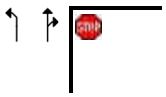


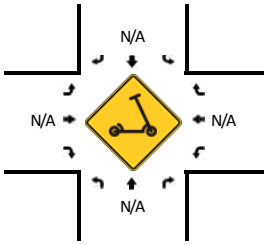












15-Min Count Period Beginning At	Internal N-S Dwy (Northbound)				Internal N-S Dwy (Southbound)				Northern Internal Dwy / AT (Eastbound)				Northern Internal Dwy / AT (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	56	3	0	3	9	0	0	0	0	4	0	1	0	1	0	94	
4:15 PM	2	43	1	0	1	4	0	0	0	0	4	0	1	0	2	0	58	
4:30 PM	5	41	2	0	0	6	0	0	0	0	7	0	1	1	5	0	68	
4:45 PM	5	40	1	0	0	4	0	0	0	0	1	0	0	0	1	0	52	272
5:00 PM	8	37	2	0	0	3	0	0	0	2	2	0	1	0	4	0	59	237
5:15 PM	12	54	0	0	0	6	0	0	0	0	2	0	1	0	2	0	77	256
5:30 PM	9	50	0	0	0	2	0	0	0	0	2	0	0	0	1	0	64	252
5:45 PM	6	35	0	0	1	6	0	0	0	0	2	0	0	0	0	0	50	250

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	224	12	0	12	36	0	0	0	0	16	0	4	0	4	0	376
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	8		0	0	0		0	0	0		8
Scooters																	

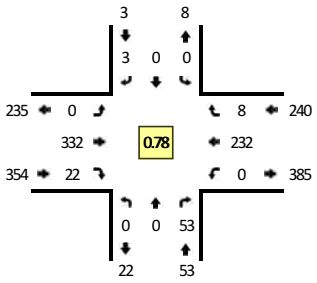
Comments:

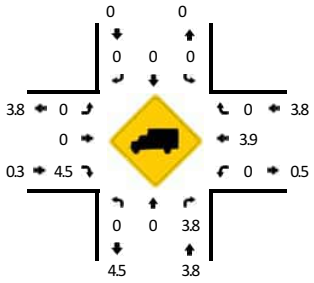
Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

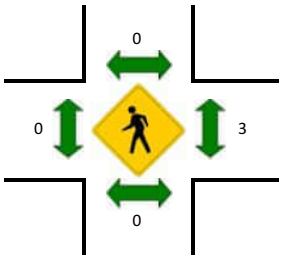
LOCATION: Internal N-S Dwy / CVS Access (1) -- Osowaw Blvd | **QC JOB #:** 17330309
CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

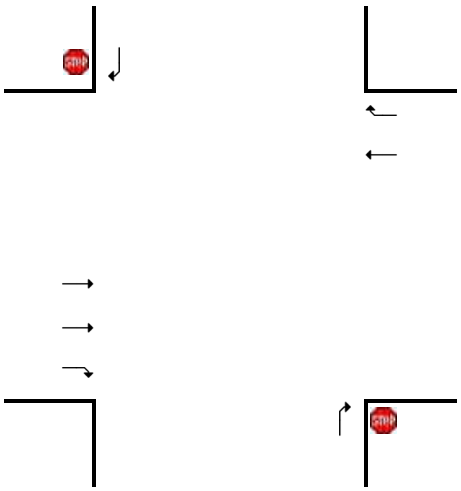
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

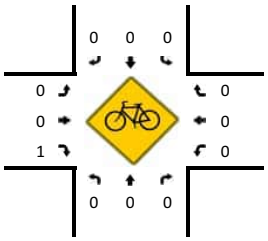


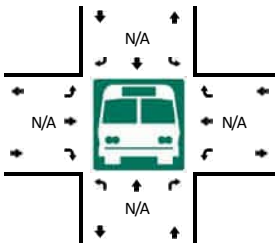


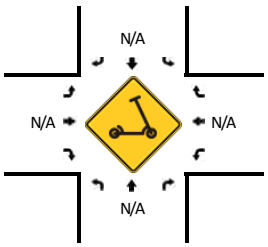
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Internal N-S Dwy / CVS Access (1) (Northbound)				Internal N-S Dwy / CVS Access (1) (Southbound)				Osowaw Blvd (Eastbound)				Osowaw Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	12	0	0	0	0	0	0	45	1	0	0	23	0	0	81	
7:15 AM	0	0	13	0	0	0	0	0	0	38	6	0	0	34	0	0	91	
7:30 AM	0	0	16	0	0	0	0	0	0	41	7	0	0	48	0	0	112	
7:45 AM	0	0	9	0	0	0	0	0	0	47	5	0	0	53	1	0	115	399
8:00 AM	0	0	13	0	0	0	0	0	0	113	8	0	0	72	3	0	209	527
8:15 AM	0	0	12	0	0	0	2	0	0	91	2	0	0	48	1	0	156	592
8:30 AM	0	0	14	0	0	0	1	0	0	68	2	0	0	43	2	0	130	610
8:45 AM	0	0	14	0	0	0	0	0	0	60	10	0	0	69	2	0	155	650

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	52	0	0	0	0	0	0	452	32	0	0	288	12	0	836
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	12	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	4		0	0	0		4
Scooters																	

Comments:

Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

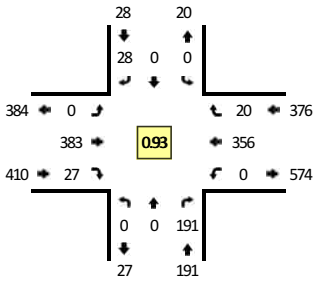
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

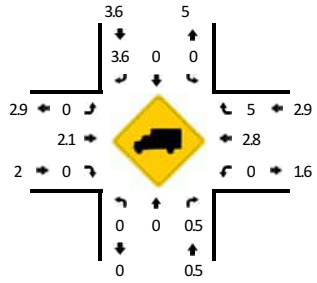
LOCATION: Internal N-S Dwy / CVS Access (1) -- Osowaw Blvd | **QC JOB #:** 17330310

CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

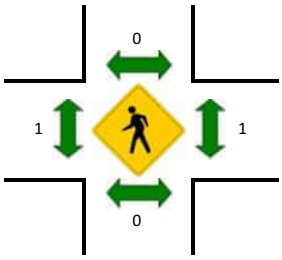
Peak-Hour: 4:00 PM -- 5:00 PM

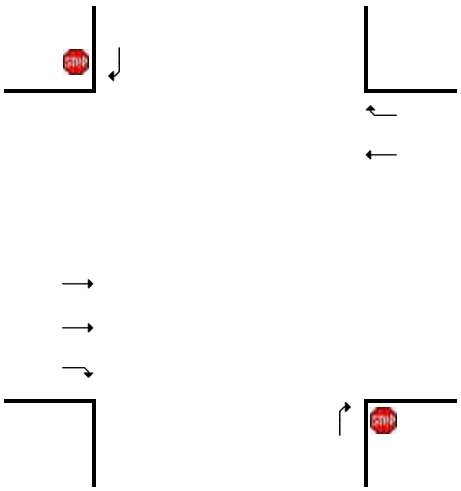
Peak 15-Min: 4:00 PM -- 4:15 PM

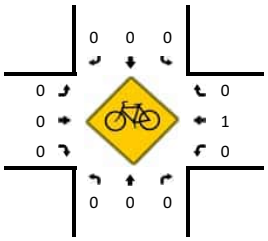


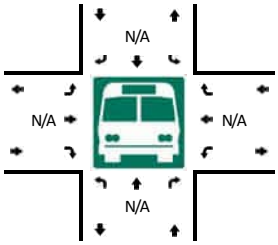


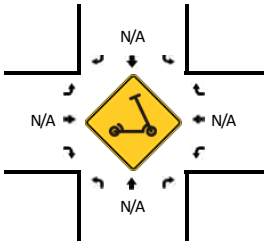
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Internal N-S Dwy / CVS Access (1) (Northbound)				Internal N-S Dwy / CVS Access (1) (Southbound)				Osowaw Blvd (Eastbound)				Osowaw Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	57	0	0	0	5	0	0	97	12	0	0	93	6	0	270	
4:15 PM	0	0	47	0	0	0	8	0	0	96	5	0	0	93	4	0	253	
4:30 PM	0	0	45	0	0	0	9	0	0	99	6	0	0	84	8	0	251	
4:45 PM	0	0	42	0	0	0	6	0	0	91	4	0	0	86	2	0	231	1005
5:00 PM	0	0	38	0	0	0	4	0	0	118	3	0	0	103	3	0	269	1004
5:15 PM	0	0	58	0	0	0	4	0	0	94	6	0	0	74	6	0	242	993
5:30 PM	0	0	52	0	0	0	5	0	0	81	2	0	0	87	4	0	231	973
5:45 PM	0	0	35	0	0	0	8	0	0	90	7	0	0	79	5	0	224	966

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	228	0	0	0	20	0	0	388	48	0	0	372	24	0	1080
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	12	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

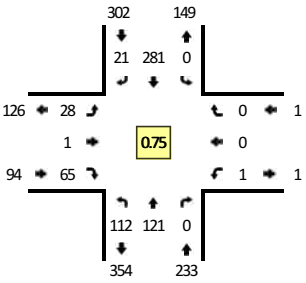
Comments:

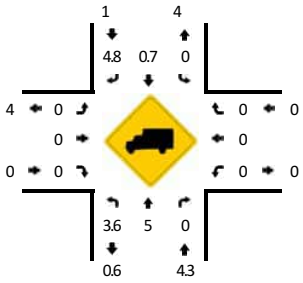
Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

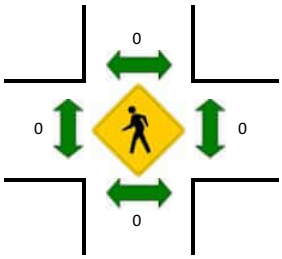
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

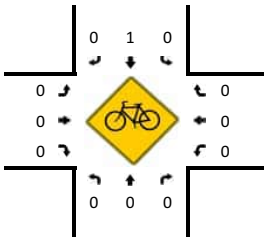
LOCATION: Osowaw Blvd -- Walmart Access Dwy / CVS Access (2) | **QC JOB #:** 17330311
CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

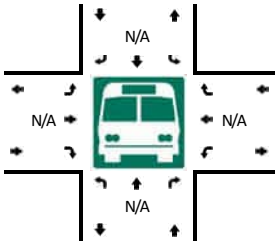
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

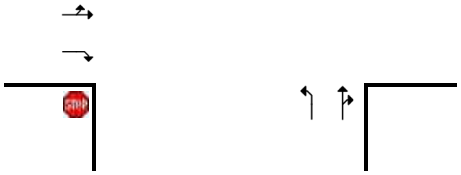


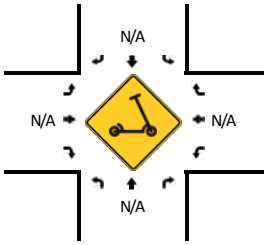












15-Min Count Period Beginning At	Osowaw Blvd (Northbound)				Osowaw Blvd (Southbound)				Walmart Access Dwy / CVS Access (2) (Eastbound)				Walmart Access Dwy / CVS Access (2) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	9	14	0	0	0	28	1	0	4	0	17	0	0	0	0	0	73	
7:15 AM	13	22	0	0	0	39	0	0	2	0	5	0	0	0	0	0	81	
7:30 AM	18	29	0	1	0	41	2	0	5	0	5	0	1	0	0	0	102	
7:45 AM	16	36	0	1	0	39	2	0	9	0	11	0	1	0	1	0	116	372
8:00 AM	20	53	0	0	0	108	5	0	8	0	15	0	0	0	0	0	209	508
8:15 AM	23	25	0	2	0	75	9	0	3	1	14	0	0	0	0	0	152	579
8:30 AM	31	9	0	4	0	48	6	0	9	0	21	0	0	0	0	0	128	605
8:45 AM	31	34	0	1	0	50	1	0	8	0	15	0	1	0	0	0	141	630

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	80	212	0	0	0	432	20	0	32	0	60	0	0	0	0	0	836
Heavy Trucks	4	8	0		0	0	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

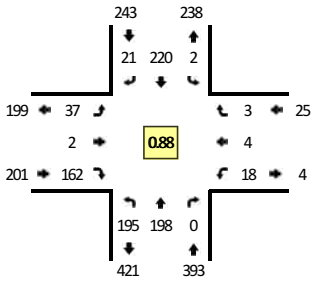
Comments:

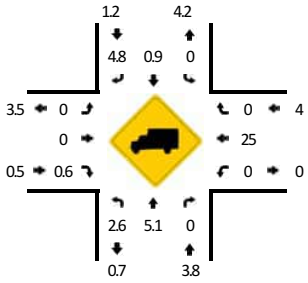
Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

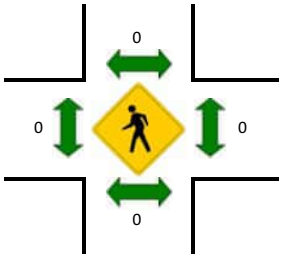
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

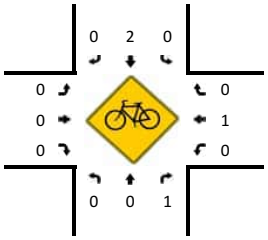
LOCATION: Osowaw Blvd -- Walmart Access Dwy / CVS Access (2) | **QC JOB #:** 17330312
CITY/STATE: Spring Hill, FL | **DATE:** Thu, Nov 13 2025

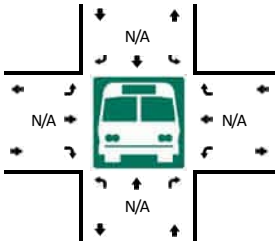
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

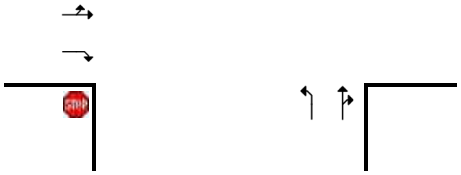


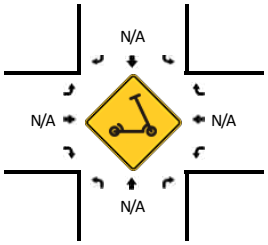












15-Min Count Period Beginning At	Osowaw Blvd (Northbound)				Osowaw Blvd (Southbound)				Walmart Access Dwy / CVS Access (2) (Eastbound)				Walmart Access Dwy / CVS Access (2) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	51	44	0	4	0	58	3	0	29	1	42	0	5	1	5	0	243	
4:15 PM	48	45	0	9	1	57	3	0	6	0	33	0	3	1	0	0	206	
4:30 PM	43	44	0	6	0	49	8	0	8	0	45	0	4	1	0	0	208	
4:45 PM	43	48	0	1	0	56	6	0	8	2	32	0	6	0	1	0	203	860
5:00 PM	40	61	0	5	1	58	4	0	15	0	52	0	5	2	2	0	245	862
5:15 PM	31	42	0	4	1	52	5	0	14	2	43	0	3	0	0	0	197	853
5:30 PM	40	47	1	5	1	50	7	0	12	0	26	0	2	1	2	0	194	839
5:45 PM	46	37	0	4	1	56	8	0	7	1	32	0	3	0	0	0	195	831

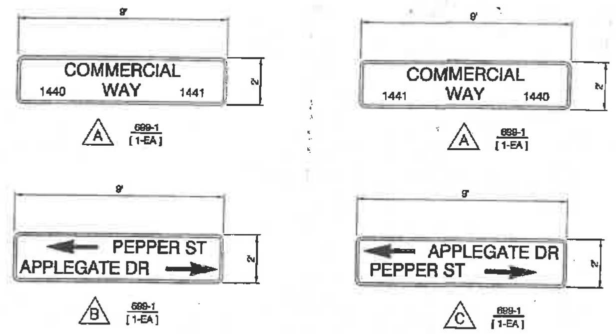
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	160	244	0	20	4	232	16	0	60	0	208	0	20	8	8	0	980
Heavy Trucks	4	28	0		0	4	0		0	0	0		0	4	0		40
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	8	0		0	0	0		0	4	0		12
Scooters																	

Comments:

Report generated on 11/20/2025 8:34 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

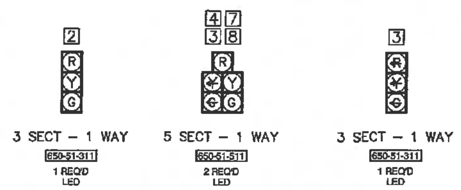
APPENDIX C

SIGNAL PLANS



SINGLE FACE INTERNALLY ILLUMINATED SIGNS

(SIGNS TO BE LOCATED ON EXISTING STRAIN POLES)



DETAIL OF SIGNAL FACES

GENERAL NOTES

1. THE CONTRACTOR SHALL MEET THE CRITERIA OUTLINED IN "THE MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNALS AND DEVICES".

2. THE LOCATIONS OF UTILITES SHOWN ON THE PLANS ARE APPROXIMATE. PRIOR TO DIGGING, THE CONTRACTORR SHALL DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES.

3. ONE WEEK PRIOR TO THE TRAFFIC SIGNAL INSTALLATION, PLEASE CONTACT:
   A.) MR. JIM ROSA, FDOT DISTRICT SEVEN TRAFFIC OPERATIONS
   CONSTRUCTION LIASON FDOT
   11201 NORTH MCKINLEY DRIVE
   TAMPA, FLORIDA 33612
   PHONE: (813) 975-6268

   B.) MR. RANDELL CLARK
   SIGNAL SYSTEM SPECIALIST
   HERNANDO COUNTY TRAFFIC OPERATIONS DIVISION
   1525 E JEFFERSON STREET
   BROOKSVILLE, FLORIDA 34701
   PHONE: (352) 754-4475, EX 17004

4. STATE OF FLORIDA STATUTE 556 (1993) REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE UTILITY OWNER NOT LESS THAN TWO (2) FULL BUSINESS DAYS AND NO MORE THAN FIVE (5) FULL BUSINESS DAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF "SUNSHINE" 1-800-432-4770.

5. ALL FIELD WIRING, INCLUDING SIGNAL HEAD WIRING AND LEAD-INS, SHALL BE IDENTIFIED BY CLEARLY MARKED WEATHER PROOF TAGS. THE PROPOSED TAGGING SYSTEM SHALL BE IN ACCORDANCE WITH THE CITY OF ST. PETERSBURG AND FDOT STANDARD SPECIFICATIONS.

6. WHEN A CONTRACTOR IS WORKING ON A SIGNAL IN AN INTERSECTION INSTALLING CONDUIT IN THE STREET, INSTALLING NEW SIGNAL EQUIPMENT, AND INSTALLING LOOPS AND RUNS, AND TURNING ON-OFF NEW SIGNAL WHERE A LANE IS CLOSED, A UNIFORMED LAW ENFORCEMENT OFFICER WITH MARKED VEHICLE SHALL BE UTILIZED TO DIRECT TRAFFIC. THE PAYMENT FOR A TRAFFIC CONTROL OFFICER SHALL BE PAID FOR UNDER ITEM NO. 102-14.

7. ALL NEW SIGNAL HEADS SHALL HAVE TUNNEL VISORS.

8. 699-1:
   INCLUDES ALL PIPES, BRACKETS, CLAMPS, NUTS, BOLTS, WIRE CONNECTIONS IN THE SIGNAL CABINET AND MISCELLANEOUS HARDWARE FOR THE CONTRACTOR TO FURNISH AND INSTALL THE INTERNALLY ILLUMINATED STREET NAME SIGNS TO ME MOUNTED ON THE STRAIN POLE AS SHOWN IN THE PLANS.

9. PRIOR TO ALL TRAFFIC SIGNAL CHANGES (I.E., MAINTENANCE OF TRAFFIC CHANGES, NEW SIGNAL INSTALLATIONS, DIFFERENT PAVEMENT CONFIGURATIONS, ETC.) CONTACT JILL WEHLE AT (813) 975-6241 FOR IMPLEMENTATION OF APPROPRIATE SIGNAL TIMINGS.

10. THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, IBERGLASS INSULATORS, AND / OR SIGNAL POLES.

11. THE CONTRACTOR SHALL SUBMIT THE ASBUILT PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO FINAL ACCEPTANCE. UPON FINAL ACCEPTANCE, THE ENGINEER SHALL PROVIDE AT LEAST ONE COPY OF THE FINAL AS-BUILT PLANS TO HERNANDO COUNTY AND ONE COPY TO FDOT DISTRICT TRAFFIC OPERATIONS. THE CONTRACTOR SHALL THEN TRANSFER THE SIGNAL TO HERNANDO COUNTY FOR MAINTENANCE.

12. 632-7-1: EACH PHASE / MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE / MOVEMENT. THIS INCLUDES THE LEFT TURN MOVEMENTS WHICH SHALL HAVE CONDUCTORS AVAILABLE FOR EITHER PROTECTED OR PERMISSIVE MOVEMENTS. THE CONTRACTOR SHALL VERIFY COLOR CODES FOR SIGNAL CABLE AND INTERCONNECT CABLE WITH THE HERNANDO COUNTY SIGNAL SHOP BEFORE ORDERING AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE AND F.D.O.T. SPECIFICATIONS. THERE SHALL BE ONE NEUTRAL PER APPROACH.

13. ALL FIELD WIRES IN CABINET SHALL BE IDENTIFIED WITH PANDUIT #PLFIM-C MARKER TIES OR EQUIVALENT.

14. ALL SIGNAL CABLE ON SPAN WIRES SHALL BE ATTACHED TO THE MESSENGER BY USE OF LASING ROD IN PLACE OF TIE WRAPS.

15. 650-51-511 AND 650-51-311; ALL TRAFFIC SIGNAL HEAD INDICATIONS SHALL BE LED.

16. ALL GROUND ROD CONNECTIONS SHALL BE MADE USING EXOTHERMIC WELD GROUND CONNECTORS.

   ALL UNUSED REDS SHALL BE HARD WIRED TO 120V AC; NO PLUG IN JUMPERS SHALL BE USED.

   CABLE CONDUIT BETWEEN THE CONTROLLER BASE AND ALL OF THE POLES SHALL BE A MINIMUM OF 2" PVC.

17. MAIN STREET IS U.S. HIGHWAY 19 (MOVEMENTS 2 AND 6), MINOR STREET IS PEPPER STREET / APPLEGATE DRIVE (MOVEMENTS 4 AND 8).

18. CONTROLLER CABINET AND OVERHEAD WIRING SHALL BE CAPABLE OF SOP 10 WITH ALL NECESSARY COMPONENTS AND OVERHEAD WIRING FURNISHED AND INSTALLED TO SUPPORT SOP 10.

19. THIS SIGNAL SHALL BE DESIGNED IN ACCORDANCE WITH FDOT DISTRICT 7 TRAFFIC DESIGN GUIDELINGES INDEXES 212, 214, AND 221.

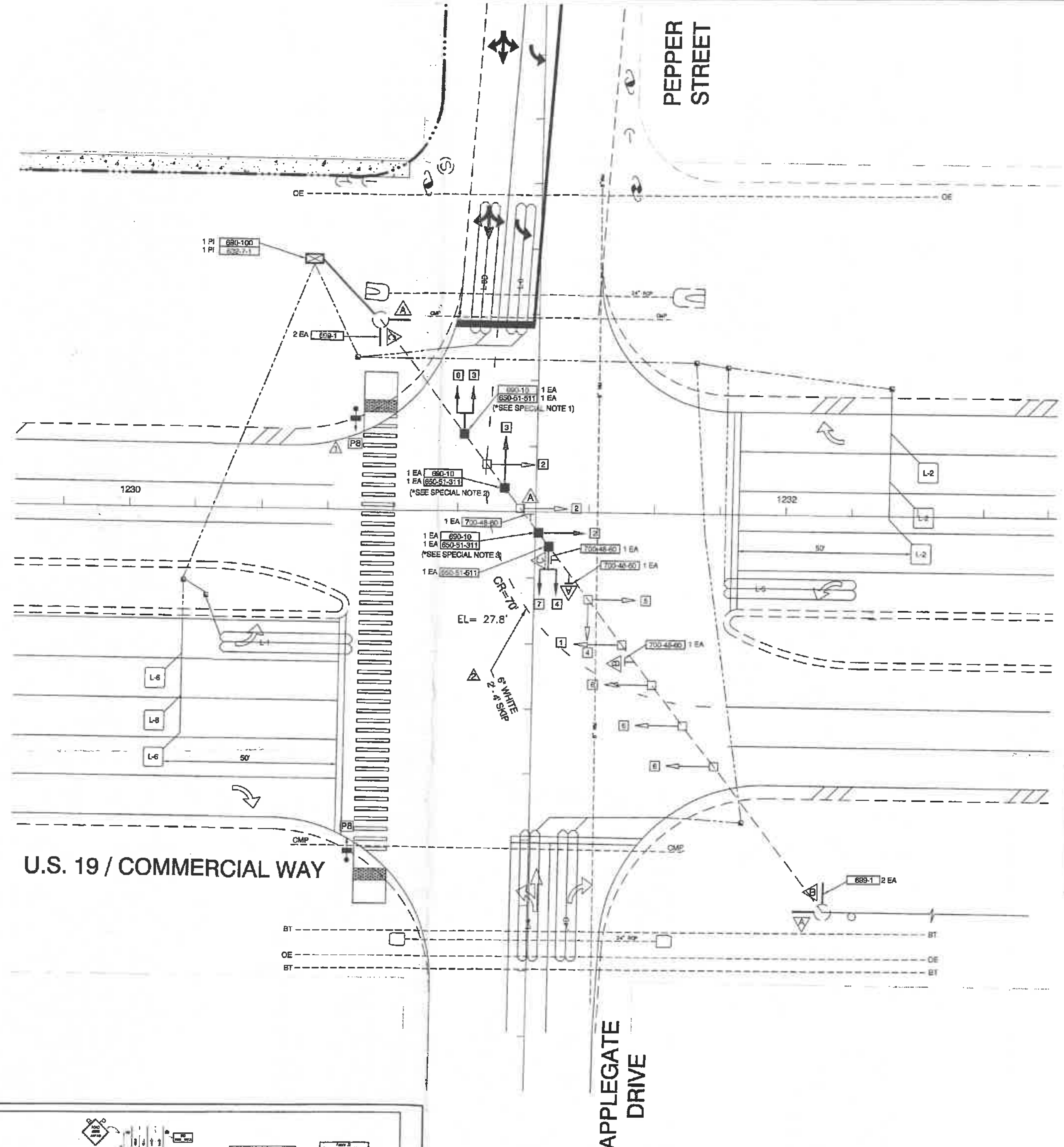
20. SIGNS SHALL BE CANTILEVERED, SINGLE FACED, ILLUMINATED.

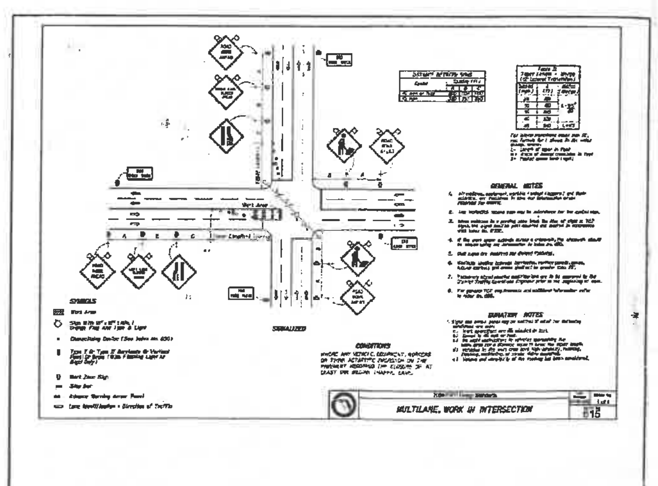
21. IDENTIFY THE FONTS ON THE SIGNS AS FOLLOWS:
   A) FOR STREET NAME, USE 8" EMOD, WITH CAPITAL FIRST LETTER AND REMAINING LETTERS IN LOWER CASE
   B) FOR BLOCK NUMBERS AND SUFFIX, USE 6"D, ALL CAPITALS
   C) ALL SIGNS TO HAVE WHITE LEGEND AND BORDER ON GREEN BACKGROUND.

22. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY; THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.

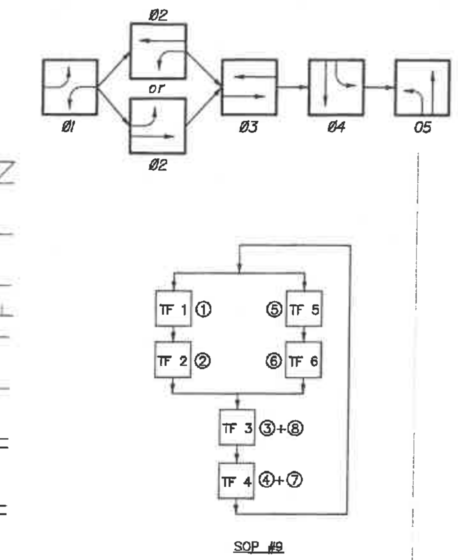
23. M.O.T. IN ACCORDANCE WITH FDOT STANDARD INDEX 615, SHEET 1 OF 1

24. ALL REMOVED EQUIPMENT SHALL BE DELIVERED TO:
   HERNANDO COUNTY DEPARTMENT OF PUBLIC WORKS
   1525 EAST JEFFERSON STREET
   BROOKSVILLE, FLORIDA 34601
   ATTN: DAVID BLAND





SIGNAL OPERATING PLAN NO. 9



SIGNAL TIMING CHART

	TIMING FUNCTION	1	2	3	4	5	6
	MOVEMENT NO.	1	2	3,8	4,7	5	6
TIMING FUNCTIONS	MIN. GREEN (INITIAL)	5	20	5	5	5	20
	EXT. (PASS)	3	4	3	3	3	4
	MAXIMUM GREEN 1	25	50	30	30	25	50
	MAXIMUM GREEN II	–	–	–	–	–	–
	YELLOW CLEARANCE	3.5	5.0	3.5	3.5	3.5	5.0
	ALL RED CLEARANCE	1.0	2.0	1.0	1.0	1.0	2.0
	PEDESTRIAN WALK	–	–	5.0	5.0	–	–
	PEDESTRIAN CLEARANCE	–	–	37.0	37.0	–	–
	RECALL	–	MIN	–	–	–	MIN

SIGNAL TIMINGS ARE INITIAL AND MAY NEED ADJUSTMENT BY HERNANDO COUNTY.

CONTROLLER OPERATION

1. MAJOR STREET IS U.S. 19 AND MINOR STREET IS APPLEGATE DRIVE.

2. CONTROLLER TO BE 8 PHASE, ACTUATED, SOLID STATE, WITH STANDARD SIGNAL OPERATING PLAN NO. 9.

SPECIAL NOTES

1. REMOVE EXISTING 3-SECTION HEAD.
   INSTALL 5 SECTION HEAD. LOCATION TO REMAIN SAME. EXISTING DISCONNECT TO BE USED.

2. REMOVE EXISTING 3-SECTION HEAD. INSTALL 3-SECTION HEAD WITH ARROWS. LOCATION TO REMAIN SAME. EXISTING DISCONNECT TO BE USED.

3. EXISTING 2 WAY 3-SECTION HEAD TO BE REPLACED BY A ONE WAY 3-SECTION HEAD. EXISTING DISCONNECT TO BE USED.

TABLE OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNITS	QNTY
632-7-1	SIGNALS CABLE (FURNISH & INSTALL)	PI	1
650-51-311	TRAFFIC SIGNAL (FURNISH & INSTALL) (3 SECTION) (STANDARD) (LED)	AS	2
650-51-511	TRAFFIC SIGNAL (FURNISH & INSTALL) (5 SECTION) (STANDARD) (LED)	AS	2
659-106	SIGNAL HEAD AUXILIARIES (FURNISH & INSTALL) (TUNNEL VISOR)	EA	16
699-1	INTERNALLY ILLUMINATED SIGN (FURNISH & INSTALL)	EA	4

ITEMS TO BE REMOVED

PAY ITEM NUMBER	DESCRIPTION	UNIT	QTY
690-100	SIGNAL EQUIPMENT, MISCELLANEOUS	PI	1
700-48-60	SIGN PANEL (REMOVE)	EA	4
690-10	TRAFFIC SIGNAL HEAD ASSEMBLY, (REMOVE)	EA	3

NO.	DATE	DESCRIPTION	BY
	6.22.08	AS PER COUNTY COMMENTS VIA EMAIL 5/21/08.	PSB
	3.24.08	AS PER THE COUNTY COMMENTS DATED 2/28/08.	RB

REVISIONS

SCALE: AS SHOWN
DRAWN BY: RDK
PROJ. MANAGER: J Caldera
PROJ. #: 2432-003
DATE: 01.24.2008

Jane A. Caldera 5/21/08
P.E. LIC. NO. 53118
NOT VALID UNLESS SIGNED & EMBOSSED BY A REGISTERED PROFESSIONAL
AVID GROUP
CERTIFICATE OF AUTHORIZATION No. 6139

ISSUED FOR: ☐ PRELIMINARY ☐ PERMITTING ☐ FINAL ■ CONSTRUCTION ☐ RECORD DWG

AVID
CIVIL ENGINEERING
LAND PLANNING
TRAFFIC/TRANSPORTATION
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SCIENCES
SURVEYING
GIS
2300 CURLEW ROAD, STE 100
PALM HARBOR, FLORIDA 34683
PHONE (727) 789-9500
FAX (727) 784-6662
AVIDGROUP.COM

US 19 AT APPLEGATE DRIVE
HERNANDO COUNTY, FLORIDA
SIGNAL MODIFICATION PLAN

SHEET NO. T-1.0

Time of Day Plan

Designed By:	***AHB***
Date:	***03/31/23***
Checked By:	***ZCP***
Date:	***03/31/23***

Arterial: SR 55 (US 19)
Section: 08020000
From: Applegate Dr/Pepper St
To: Northcliffe Blvd/Frontage Rd

ALL SEASON PLAN

Day	Time	Pattern	Cycle Length
Monday Thru Friday	0000 - 0600	99	FREE
	0545 - 0900	1	140
	0900 - 1500	2	150
	1500 - 1830	3	160
	1830 - 2100	4	140
	2100 - 2400	99	FREE
Saturday & Sunday	0000 - 0900	99	FREE
	0900 - 2100	5	150
	2100 - 2400	99	FREE

Designed By:	*AHB*
Date:	*03/31/23*
Checked By:	*ZCP*
Date:	*03/31/23*

Location Details			
Section:	*08020000*	Mile Post:	*1.926*
Major Street:	*SR 55 (US 19)*	Orientation:	*North-South*
Minor Street:	*Spring Hill Dr/Osowaw Blvd*	Orientation:	*East-West*
Sig ID:	*6-2*	System ID:	*08020*

Controller Timings (seconds)

Movement # (Controller Phase Ø)	1	2	3	4	5	6	7	8	Notes
Direction	*NBL*	*SB*	*EBL*	*WB*	*SBL*	*NB*	*WBL*	*EB*	
Turn Type	*Prot*	*Prot*	*Prot*	*Prot*	*Prot*	*Prot*	*Prot*	*Prot*	
Min Green	*5*	*20*	*5*	*10*	*5*	*20*	*5*	*10*	
Ext	*3.0*	*4.0*	*4.0*	*3.0*	*3.5*	*4.0*	*4.0*	*3.0*	
Yellow	*5.6*	*5.6*	*4.1*	*4.5*	*5.6*	*5.6*	*4.5*	*4.1*	
All Red	*2.4*	*2.6*	*3.6*	*3.3*	*2.6*	*2.4*	*3.3*	*3.6*	
Max I	*35*	*60*	*15*	*35*	*35*	*35*	*15*	*35*	
Max II	*15*	*50*	*15*	*20*	*15*	*50*	*15*	*20*	
Walk		*7*		*7*					
Flashing Don't Walk		*50*		*35*					
Detector Memory									
Det. Cross Switch.									
Dual Entry		*ON*		*ON*		*ON*		*ON*	
Vehicle Recall		*MIN*				*MIN*			
CNA		*ON*				*ON*			
Rest in Walk									

Coordination Timings (seconds)

Pattern	C/O/S	Cycle Length	Splits								Offset	Sequence	Coord Ø
1	-	*140*	*20*	*66*	*20*	*34*	*30*	*56*	*29*	*25*	*50*	*2*	*2 & 6*
2	-	*150*	*25*	*65*	*30*	*30*	*45*	*45*	*30*	*30*	*0*	*2*	*2 & 6*
3	-	*160*	*35*	*70*	*25*	*30*	*45*	*60*	*30*	*25*	*2*	*2*	*2 & 6*
4	-	*140*	*20*	*65*	*20*	*35*	*30*	*55*	*30*	*25*	*49*	*2*	*2 & 6*
5	-	*150*	*20*	*65*	*30*	*35*	*40*	*45*	*35*	*30*	*135*	*2*	*2 & 6*

Offset Reference Point
Lead

Notes:
1) Use 'Inhibit Max' during coordination.
2) Use Floating Force Offs.
3) Max recall Ø2 and Ø6 during coordination.
4) Mainline left turns must not come up togeter due to lane restrictions
5) Controller Brand: Econolite ASC/3-2100
6) Use ped time: Off
7) Transition Mode : Smooth (12%)

SOP 10 (Sequence 1)

Ring - 1	2	1	3	4
Ring - 2	5	6	7	8

SOP 10 (Sequence 2)

Ring - 1	2	1	3	4
Ring - 2	5	6	7	8

Time of Day Plan

Designed By:	***AHB***
Date:	***03/31/23***
Checked By:	***ZCP***
Date:	***03/31/23***

Arterial: SR 55 (US 19)
Section: 08020000
From: Applegate Dr/Pepper St
To: Northcliffe Blvd/Frontage Rd

ALL SEASON PLAN

Day	Time	Pattern	Cycle Length
Monday Thru Friday	0000 - 0600	99	FREE
	0545 - 0900	1	140
	0900 - 1500	2	150
	1500 - 1830	3	160
	1830 - 2100	4	140
	2100 - 2400	99	FREE
Saturday & Sunday	0000 - 0900	99	FREE
	0900 - 2100	5	150
	2100 - 2400	99	FREE

Designed By:	*AHB*
Date:	*03/31/23*
Checked By:	*ZCP*
Date:	*03/31/23*

Location Details			
Section:	*08020000*	Mile Post:	*1.583*
Major Street:	*SR 55 (US 19)*	Orientation:	*North-South*
Minor Street:	*Applegate Dr/Pepper St*	Orientation:	*East-West*
Sig ID:	*6-1*	System ID:	*08020*

Controller Timings (seconds)

Movement # (Controller Phase Ø)	1	2		4	5	6		8	Notes
Direction	*NBL*	*SB*		*WB*	*SBL*	*NB*		*EB*	
Turn Type	*Prot*	*Prot*		*Prot*	*Prot*	*Prot*		*Prot*	
Min Green	*10*	*20*		*5*	*10*	*20*		*5*	
Ext	*3.0*	*4.0*		*3.0*	*3.0*	*4.0*		*3.0*	
Yellow	*5.6*	*5.5*		*3.7*	*5.5*	*5.6*		*3.4*	
All Red	*2.0*	*2.0*		*3.7*	*2.0*	*2.0*		*5.0*	
Max I	*35*	*60*		*35*	*35*	*60*		*35*	
Max II	*10*	*50*		*20*	*10*	*50*		*20*	
Walk		*7*						*7*	
Flashing Don't Walk		*19*						*40*	
Detector Memory									
Det. Cross Switch.									
Dual Entry		*ON*				*ON*			
Vehicle Recall		*MIN*				*MIN*			
CNA		*ON*				*ON*			
Rest in Walk									

Coordination Timings (seconds)

Pattern	C/O/S	Cycle Length	Splits								Offset	Sequence	Coord Ø
1	-	*140*	*25*	*60*		*27*	*25*	*60*		*28*	*51*	*4*	*2 & 6*
2	-	*150*	*25*	*65*		*25*	*25*	*65*		*35*	*12*	*4*	*2 & 6*
3	-	*160*	*25*	*54*		*25*	*25*	*54*		*56*	*18*	*4*	*2 & 6*
4	-	*140*	*22*	*37*		*25*	*22*	*37*		*56*	*63*	*4*	*2 & 6*
5	-	*150*	*25*	*44*		*25*	*25*	*44*		*56*	*145*	*4*	*2 & 6*

Offset Reference Point
Lead

Notes:
1) Use 'Inhibit Max' during coordination.
2) Use Floating Force Offs.
3) Max recall Ø2 and Ø6 during coordination.
4) Controller Brand: Econolite ASC/3-2100
5) Use ped time: Off
6) Transition Mode : Smooth (12%)

SOP 9 (Sequence 1)

Ring - 1	1	2	8	4
Ring - 2	5	6		

SOP 9 (Sequence 4)

Ring - 1	1	2	8	4
Ring - 2	6	5		

CONTRACT PLANS COMPONENTS

ROADWAY PLANS

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

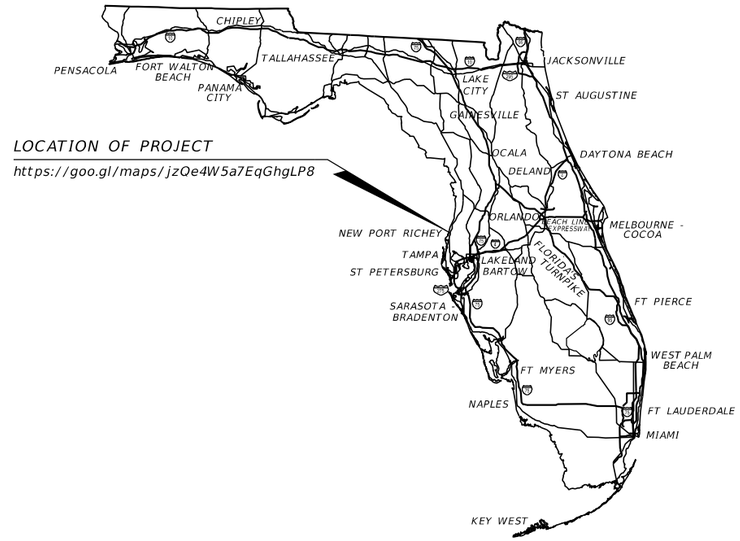
FINANCIAL PROJECT ID 254677-2-52-93

(FEDERAL FUNDS)

HERNANDO COUNTY (08020)

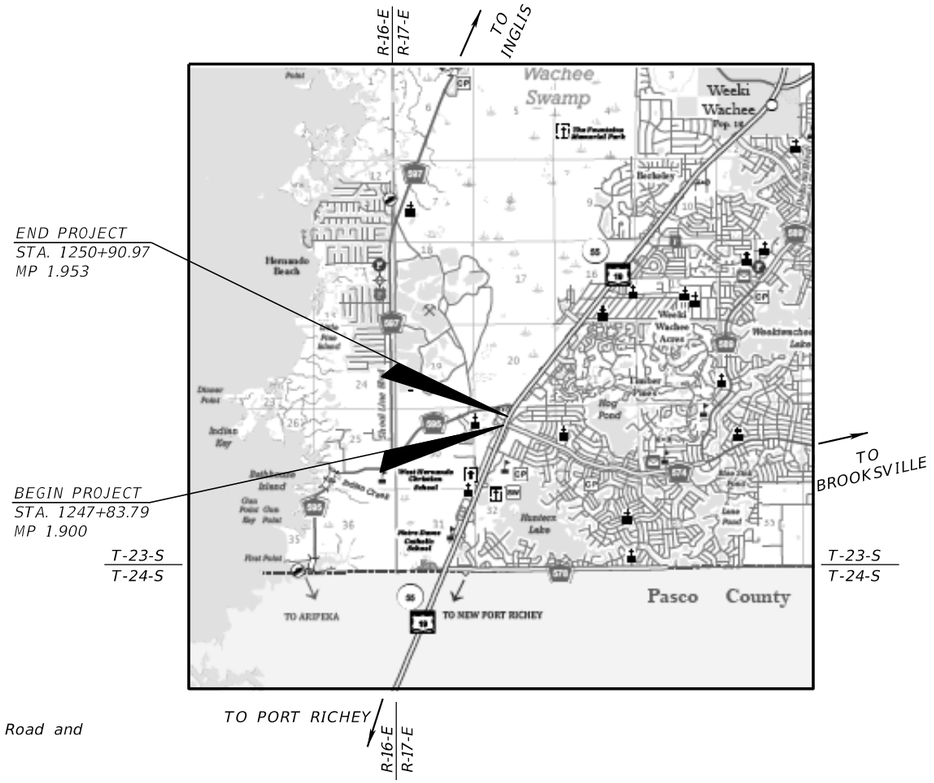
STATE ROAD NO. 55 (US 19)

TASK WORK ORDER #36



LOCATION OF PROJECT

https://goo.gl/maps/jzQe4W5a7EqGhgLP8



INDEX OF ROADWAY PLANS

wsp

SUBMITTAL RFC
QC CHECKING PROCESS

	Signature	Date	Discipline
ORIGINATOR (Ready for Checking)	K. Pritchard	1/9/23	RDWY
CHECKER Correct: Yellow Highlight Incorrect: Red Markups Comments: Black Cloud			
BACKCHECKER (Originator) Agree: Green Checks Disagree: Green Strike Through			
CORRECTOR Blue Circle			
VERIFIER Correct: Green Circle Incorrect: Red on clean print & return To Backchecker New Comment: Black Cloud			
QC Process Approved By:			

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2020-21 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: IR102-600

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, January 2021 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

ROADWAY PLANS ENGINEER OF RECORD:

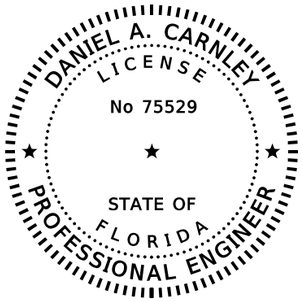
DANIEL A. CARNLEY, P.E. NO. 75529
WSP USA, INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607
(813) 520-4444
CONTRACT NO.: C-E7R27
VENDOR NO.: 111531569

FDOT PROJECT MANAGER:

MEGAN ARASTEH, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
E7R27	22	1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

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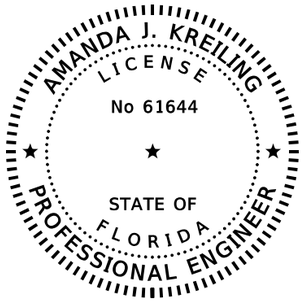
WSP USA, INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FLORIDA 33607
DANIEL A. CARNLEY, P.E. NO. 75529

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

ROADWAY PLANS

SHEET NUMBER	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3 - 4	SUMMARY OF PAY ITEMS
5 - 7	TYPICAL SECTION
8	GENERAL NOTES
9	ROADWAY PLAN
10 - 11	TEMPORARY TRAFFIC CONTROL PLAN
SQ-1	SUMMARY OF QUANTITIES



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WSP USA, INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FLORIDA 33607
CAITLIN E. CARNLEY, P.E. NO. 86250

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

ROADWAY PLANS

SHEET NUMBER	SHEET DESCRIPTION
2	SIGNATURE SHEET
12	SIGNING AND PAVEMENT MARKING PLAN
13	SIGNALIZATION PLAN
14	LIGHTING PLAN
15	LIGHTING SERVICE POINT DETAILS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL A. CARNLEY
P.E. NO.: 75529
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SIGNATURE SHEET

SHEET NO. 2

SUMMARY OF PAY ITEMS

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY TOTAL	
			PLAN	FINAL
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
102-14	TRAFFIC CONTROL OFFICER	HR	160	
102-4	PEDESTRIAN SPECIAL DETOUR	LS	2	
102-60	WORK ZONE SIGN	ED	3106	
102-74-1	CHANNELIZING DEVICE- TYPES I, II, D1, VP, DRUM, OR VLCD	ED	3012	
102-74-8	CHANNELIZING DEVICE- PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	FD	1600	
102- 76	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	136	
102-99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	230	
102-104	TEMPORARY SIGNALIZATION AND MAINTENANCE OF INTERSECTION	ED	115	
102-107-1	TEMPORARY TRAFFIC DETECTION AND MAINTENANCE OF INTERSECTION	ED	115	
102-115	CHANNELIZING DEVICE (TEMPORARY)(TYPE III) (6')	ED	160	
102-150-1	PORTABLE REGULATORY SIGN	ED	160	
102-150-2	RADAR SPEED DISPLAY UNIT	ED	160	
104-18	INLET PROTECTION SYSTEM	EA	1	
110-2-1	CLEARING & GRUBBING (PUSH BUTTON CONTRACT)	AC	0.09	
110-4-10	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	83	
120-1	REGULAR EXCAVATION	CY	57.0	
120-6	EMBANKMENT	CY	28.5	
160-4	TYPE B STABILIZATION	SY	38	
285-715	OPTIONAL BASE, BASE GROUP 15, ASPHALT	SY	47	
327-70-19	MILLING EXIST ASPH PAVT, 3/4" AVG DEPTH	SY	2292	
334-1-14	SUPERPAVE ASPHALTIC CONC, TRAFFIC C, 1-199 TONS	TN	10.3	
337-7-25	ASPHALT CONCRETE FRICTION COURSE (FC-5, PG 76-22), 1-199 TONS	TN	92.2	
425-6	ADJUSTING VALVE BOXES	EA	1	
520-1-7	CONCRETE CURB & GUTTER, TYPE E	LF	35	
520-2-2	CONCRETE CURB, TYPE B	LF	33	
520-5-11	TRAFFIC SEPARATOR CONCRETE - TYPE I, 4' WIDE	LF	7	
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	122	
527-2	DETECTABLE WARNINGS	SF	157	
570-1-2	PERFORMANCE TURF, SOD	SY	232	

REVISIONS			
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STATE OF FLORIDA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SUMMARY OF PAY ITEMS (1)

SHEET NO. 3

SUMMARY OF PAY ITEMS

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY TOTAL	
			PLAN	FINAL
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	705	
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	620	
632-7-1	SIGNAL CABLE (NEW OR RECONSTRUCTED INTERSECTION - FURNISH & INSTALL)	PI	1	
632-7-6	SIGNAL CABLE (REMOVE) (WITHIN INTERSECTION)	PI	1	
635-2-11	PULL & SPLICE BOX (F&I) (13" X 24" COVER SIZE)	EA	24	
635-2-14	PULL & SPLICE BOX (F&I) (17" X 30" COVER SIZE)	EA	2	
646-1-11	ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)	EA	8	
646-1-60	ALUMINUM SIGNALS POLE (REMOVE)	EA	2	
653-1-11	PEDESTRIAN SIGNAL (F&I) (LED COUNTDOWN) (1 WAY)	AS	8	
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	13	
665-1-11	PEDESTRIAN DETECTOR (F&I) (STANDARD)	EA	8	
670-5-400	TRAFFIC CONTROLLER ASSEMBLY (MODIFY)	AS	1	
676-1-500	TRAFFIC SIGNAL CONTROLLER CABINET (ADJUST / MODIFY)	EA	1	
678-1-102	CONTROLLER ACCESSORIES (F&I) (TYPE 6 CONFLICT MONITOR)	EA	2	
700-1-11	SINGLE POST SIGN (F&I) (GROUND MOUNT) (UP TO 12 SF)	AS	2	
700-1-50	SINGLE POST SIGN (RELOCATE)	AS	3	
700-1-60	SINGLE POST SIGN (REMOVE)	AS	3	
705-10-1	OBJECT MARKER (TYPE 1)	EA	2	
705-11-3	DELINEATOR (FLEXIBLE HIGH VISIBLITY MEDIAN)	EA	2	
706-1-1	RAISED PAVEMENT MARKER, TYPE B WITHOUT FINAL SURFACE MARKINGS	EA	53	
*	WHITE/RED (W/R)		33	
	MONO DIRECTIONAL YELLOW (MD/Y)		20	
710-11-101	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (SOLID) (6")	GM	0.116	
710-11-102*	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (SOLID FOR INTERCHANGE AND URBAN ISLAND)(8")	GM	0.036	
710-11-123	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (SOLID) (12")	LF	910	
710-11-124*	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (SOLID) (18")	LF	23	
710-11-125	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (SOLID) (24")	LF	375	
710-11-141	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 DOTTED EXTENSION, 6"	GM	0.020	
710-11-170	PAINTED PAVEMENT MARKINGS (STANDARD) (WHITE) (ARROWS)	EA	7	
710-11-201	PAINTED PAVEMENT MARKINGS (STANDARD) (YELLOW) (SOLID) (6")	GM	0.034	
710-11-290	PAINTED PAVEMENT MARKINGS (STANDARD) (YELLOW) (ISLAND NOSE)	SF	18	
711-11-123	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (12")	LF	767	
711-11-124	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (18")	LF	23	
711-11-125	THERMOPLASTIC (STANDARD) (WHITE) (SOLID) (24")	LF	189	
711-11-141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.020	
711-11-170	THERMOPLASTIC (STANDARD) (WHITE) (ARROW)	EA	7	
711-14-125	THERMOPLASTIC (PREFORMED) (WHITE) (SOLID) (24")	LF	671	
711-14-160	THERMOPLASTIC (PREFORMED) (WHITE) (MESSAGE)	EA	2	
711-14-170	THERMOPLASTIC (PREFORMED) (WHITE) (ARROWS)	EA	2	
711-15-101	THERMOPLASTIC (STANDARD - OPEN GRADED ASPHALT) (WHITE) (SOLID) (6")	GM	0.116	
711-15-102	THERMOPLASTIC (STANDARD - OPEN GRADED ASPHALT) (WHITE) (SOLID) (8")	GM	0.036	
711-15-201	THERMOPLASTIC (STANDARD - OPEN GRADED ASPHALT) (YELLOW) (SOLID) (6")	GM	0.034	
711-17	THERMOPLASTIC (REMOVE EXISTING)	SF	1334	
715-1-12	LIGHTING CONDUCTORS (F&I) (INSULATED) (NO. 8 TO NO. 6)	LF	2850	
715-4-14	LIGHT POLE COMPLETE (F&I) (STANDARD) STANDARD FOUNDATION (45' MOUNTING HEIGHT)	EA	3	
715-4-60	LIGHT POLE COMPLETE (RELOCATE)	EA	1	
715-4-70	LIGHT POLE COMPLETE (REMOVE POLE AND FOUNDATION)	EA	1	
715-7-11	LOAD CENTER (F&I) (SECONDARY VOLTAGE)	EA	1	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM (CONVENTIONAL)	EA	3	

*710-11-123, 710-11-125, AND 711-17 INCLUDE THE COST TO CONSTRUCT A TEMPORARY CROSSWALK IN PHASE I OF THE TEMPORARY TRAFFIC CONTROL PLAN.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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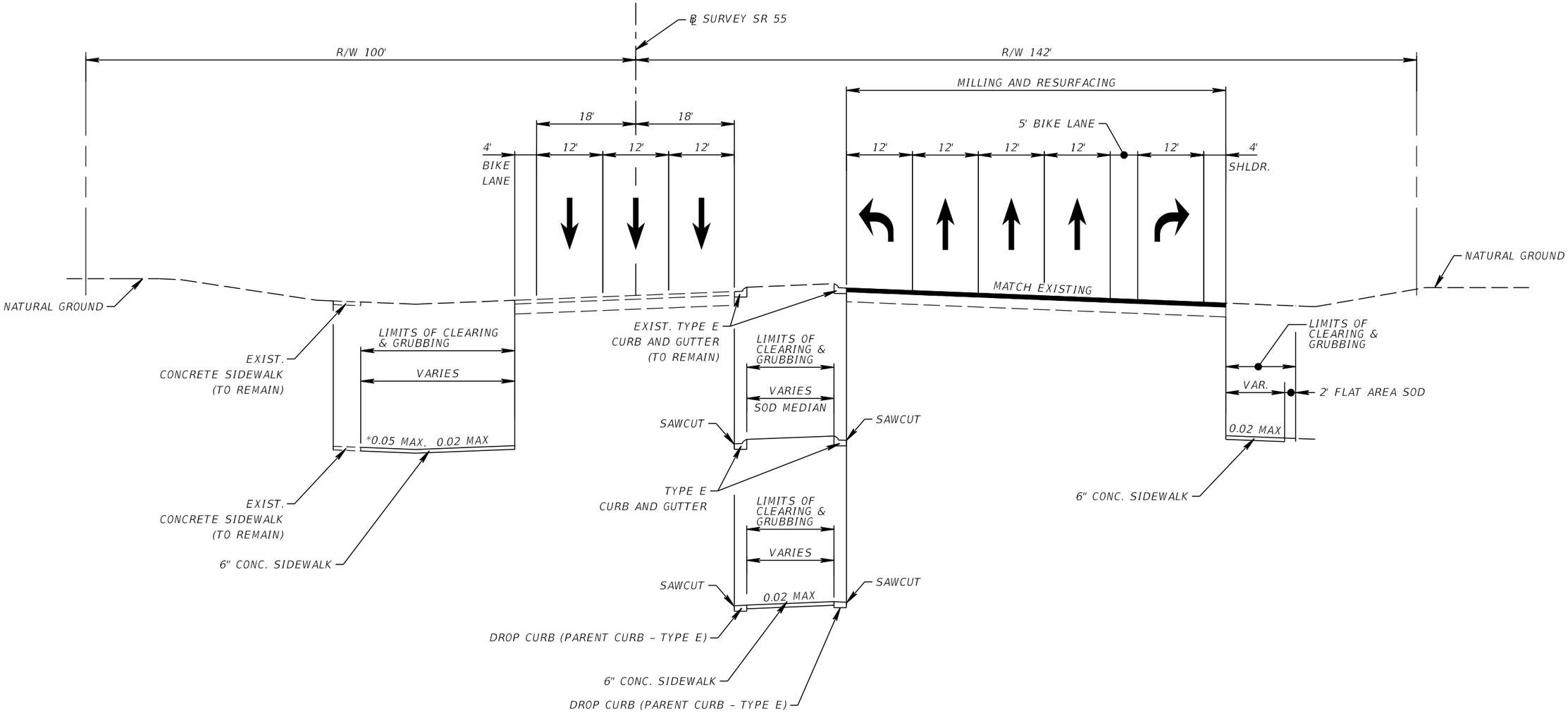
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SUMMARY OF PAY ITEMS (2)

SHEET NO. 4



*0.05 MAX. IS LIMITED TO THE LONGITUDINAL PROFILE.
USE 0.02 MAX. FOR PERPENDICULAR CROSS SLOPE

SR 55 (US 19)
(SOUTH LEG - SEE PLANS FOR LIMITS)

TRAFFIC DATA

CURRENT YEAR = 2022 AADT = 45000
ESTIMATED OPENING YEAR = N/A AADT = N/A
ESTIMATED DESIGN YEAR = N/A AADT = N/A
K = 9 % D = 54% T = 5 % (24 HOUR)
DESIGN HOUR T = 2%
DESIGN SPEED = 65 MPH

MILLING AND RESURFACING

MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (3/4")
RESURFACE WITH FRICTION COURSE FC-5 (3/4") (PG 76-22)

REVISIONS			
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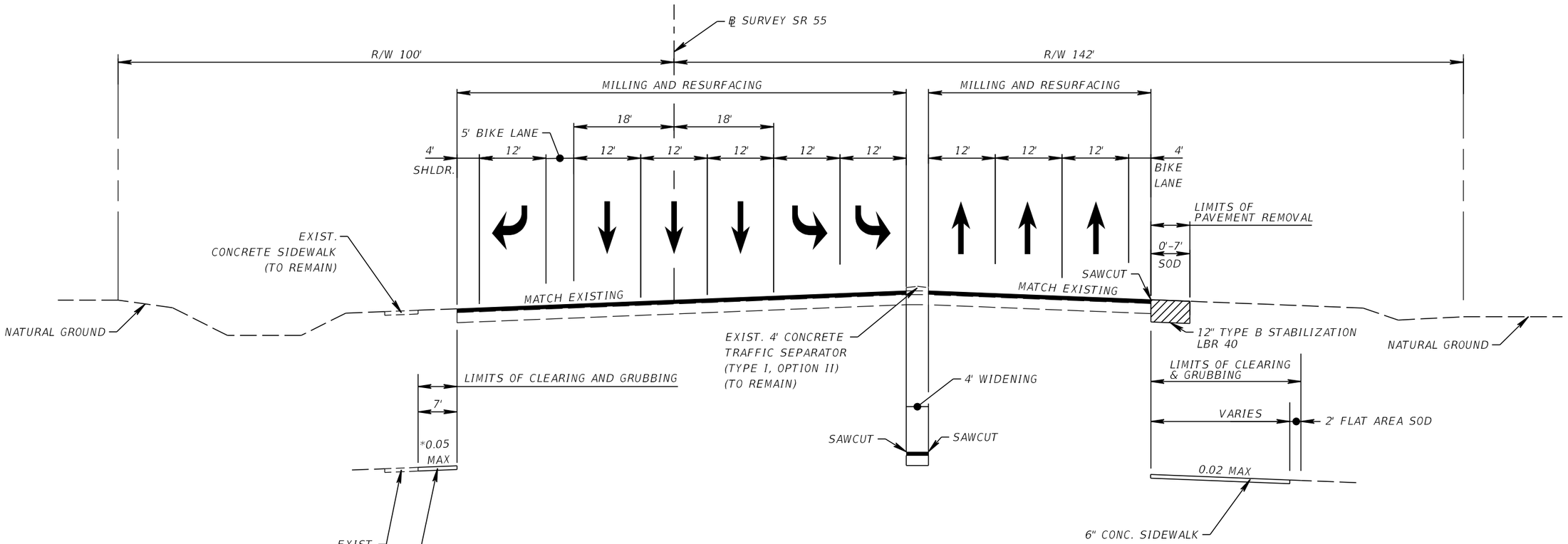
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

TYPICAL SECTION (1)

SHEET NO. 5



*0.05 MAX. IS LIMITED TO THE LONGITUDINAL PROFILE.
USE 0.02 MAX. FOR PERPENDICULAR CROSS SLOPE

SR 55 (US 19)
(NORTH LEG - SEE PLANS FOR LIMITS)

MILLING AND RESURFACING

MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (3/4")
RESURFACE WITH FRICTION COURSE FC-5 (3/4") (PG 76-22)

WIDENING

OPTIONAL BASE GROUP 15 (TYPE B-12.5 ONLY)
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (4")
WITH FRICTION COURSE FC-5 (3/4") (PG 76-22)

TRAFFIC DATA

CURRENT YEAR = 2022 AADT = 45000
ESTIMATED OPENING YEAR = N/A AADT = N/A
ESTIMATED DESIGN YEAR = N/A AADT = N/A
K = 9 % D = 54% T = 5 % (24 HOUR)
DESIGN HOUR T = 2%
DESIGN SPEED = 65 MPH

REVISIONS			
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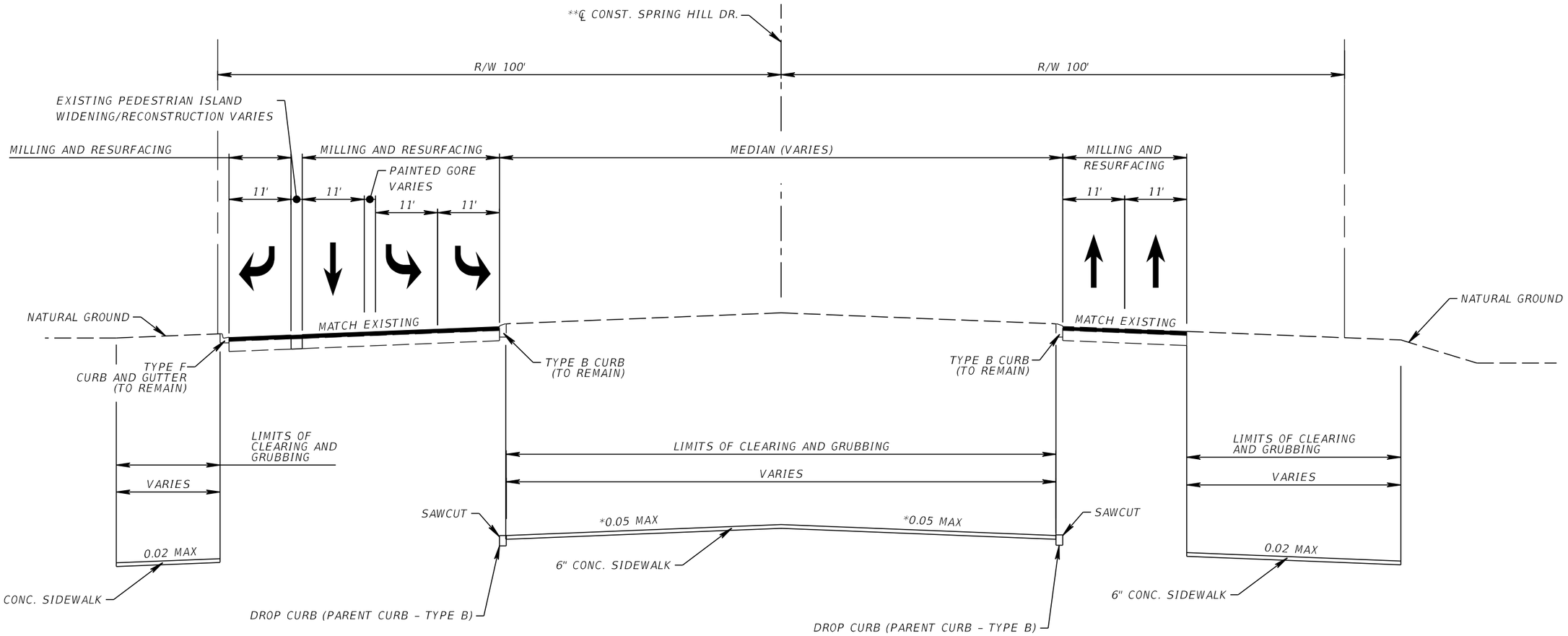
SR 55	HERNANDO	254677-2-52-93

TYPICAL SECTION (2)

SHEET NO. 6

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



*0.05 MAX. IS LIMITED TO THE LONGITUDINAL PROFILE.
USE 0.02 MAX. FOR PERPENDICULAR CROSS SLOPE

**CONSTRUCTION STAKING TO BE BASED ON THE BASELINE OF SURVEY OF SR 55

TRAFFIC DATA

CURRENT YEAR = 2022 AADT = 45000
ESTIMATED OPENING YEAR = N/A AADT = N/A
ESTIMATED DESIGN YEAR = N/A AADT = N/A
K = 9 % D = 54% T = 6% (24 HOUR)
DESIGN HOUR T = 3%
DESIGN SPEED = 40 MPH

SPRING HILL DR. (EAST LEG)
(SEE PLANS FOR LIMITS)

MILLING AND RESURFACING

MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (3/4")
RESURFACE WITH FRICTION COURSE FC-5 (3/4") (PG 76-22)

WIDENING

OPTIONAL BASE GROUP 15 (TYPE B-12.5 ONLY)
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (4")
WITH FRICTION COURSE FC-5 (3/4") (PG 76-22)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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SR 55	HERNANDO	254677-2-52-93

TYPICAL SECTION (3)

SHEET NO. 7

GENERAL NOTES

1. PROJECT RIGHT-OF-WAY, SURVEY CONTROL AND ALIGNMENTS WERE ESTABLISHED FROM FPID:427152-1-52-01

2. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED Vv, Vh, AND Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

3. UTILITY/AGENCY OWNERS:

COMPANY	CONTACT	TELEPHONE NUMBERS
AT&T DISTRIBUTION	RICK MARINO	352-238-1882
CENTURYLINK/LUMEN	MARK (WOODY) CALDWELL	321-287-9942
HERNANDO COUNTY	JARED WARING	352-754-4759
SPECTRUM	WAYNE MICHAELS	352-302-6615
TECO PEOPLES GAS	JENNA JACKSON	813-917-9446
WITHLACOOCHEE RIVER ELECTRIC COMPANY	DON TAULBEE	352-596-4000 X3138
ZAYO GROUP/FORMERLY LIGHTWAVE, LLC	BRUCE HERRINGTON	252-207-2400

4. SPECIAL EVENT DAYS FOR THIS PROJECT INCLUDE:
EVENTS IN HOMOSASSA WITH AN ANTICIPATED CROWD OF 20K OR HIGHER
EVENTS IN SPRING HILL WITH AN ANTICIPATED CROWD OF 20K OR HIGHER

SIGNALIZATION NOTES

1. MAINTAINING AGENCY: HERNANDO COUNTY.

2. CONTACT THE FOLLOWING PERSONNEL ONE WEEK PRIOR TO THE TRAFFIC SIGNAL CONSTRUCTION:

A) CURTIS DEMPSEY, FDOT DISTRICT SEVEN TRAFFIC OPERATIONS
CONSTRUCTION LIAISON
FLORIDA DEPARTMENT OF TRANSPORTATION
11201 NORTH McKINLEY DRIVE
TAMPA, FLORIDA 33612
PHONE: (813) 975 – 6226
EMAIL: curtis.dempsey@dot.state.fl.us

B) HERNANDO COUNTY DEPARTMENT OF PUBLIC WORKS
1525 EAST JEFFERSON STREET
BROOKSVILLE, FLORIDA 34601
PHONE: (352) 754 – 4060

3. PRIOR TO INSTALLATION OF NEW TRAFFIC SIGNAL, CONTACT HERNANDO COUNTY DEPARTMENT OF PUBLIC WORKS AT (352) 754–4060 AT LEAST 48 HOURS IN ADVANCE FOR IMPLEMENTATION OF APPROPRIATE SIGNAL TIMINGS.

4. MEET THE FOLLOWING REQUIREMENTS WHEN USING THE EQUIPMENT TO INSTALL THE MAST ARM POLE FOUNDATIONS:

A) MAINTAIN OVERHEAD LINE LOCATIONS BOTH VERTICALLY AND HORIZONTALLY.

5. USE A NINE CONDUCTOR SIGNAL CABLE FOR EACH TURNING MOVEMENT SIGNAL HEAD. USE A SEVEN CONDUCTOR SIGNAL CABLE FOR EACH THROUGH MOVEMENT SIGNAL INDICATION. USE A FIVE CONDUCTOR SIGNAL CABLE FOR EACH PEDESTRIAN MOVEMENT SIGNAL INDICATION. USE A TWO CONDUCTOR SHIELDED CABLE FOR EACH PEDESTRIAN BUTTON. USE A FIVE CONDUCTOR CABLE FOR EACH ILLUMINATED LED STREET NAME SIGN. CONTACT HERNANDO COUNTY DEPARTMENT OF PUBLIC WORKS TRAFFIC AT (352)754–4060 FOR UPDATES.

PAY ITEM NOTES

630–2–11:
TWO SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL SIGNAL MAST ARMS. THERE SHALL BE A MINIMUM OF TWO RUNS OF 2" CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET.

630–2–12:
CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE NOTED IN THE PLANS.

632–7–1:
WIRE EACH PHASE/MOVEMENT FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT, COORDINATE APPROVED SPLICE KITS WITH HERNANDO COUNTY AND INSTALL IN THE BASE OF THE SIGNAL POLE. THIS INCLUDES THE LEFT TURN MOVEMENT THAT HAS CONDUCTORS AVAILABLE FOR EITHER PROTECTED OR PERMISSIVE MOVEMENTS. VERIFY COLOR CODES FOR SIGNAL CABLE WITH THE HERNANDO COUNTY TRAFFIC SIGNAL SUPERVISOR BEFORE ORDERING. WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE. INCLUDE ONE NEUTRAL PER APPROACH. WIRE ALL PEDESTRIAN DETECTORS USING SEPARATE CABLE, UTILIZING LOW VOLTAGE CONDUIT AND PULL BOXES. REFER TO THE MAST ARM TABULATION SHEET FOR MORE INFORMATION.

635–2–11 / 635–2–14:
THE SIGNAL CABLE PULL BOXES ADJACENT TO THE CONTROLLER CABINET SHALL BE 17"X30". ALL PULL BOX LIDS FOR PULL BOXES USED SIGNALIZATION SHALL DISPLAY THE TEXT, "TRAFFIC SIGNAL" IN STAMPED EMBOSSED LETTERS.

665–1–11:
PUSH BUTTON SHALL HAVE A VISUAL INDICATION OF ACTUATION AND SHALL REMAIN ILLUMINATED UNTIL THE PEDESTRIAN WALK INDICATION IS DISPLAYED.

670–5–400:

NOTIFY THE HERNANDO COUNTY SIGNAL SHOP AND FDOT DISTRICT SEVEN TRAFFIC OPERATIONS VIA PHONE AT (352)754–4060 AT LEAST 48 HOURS IN ADVANCE OF TURNING ON A NEW OR MODIFIED CONTROLLER CABINET ASSEMBLY.

REVISIONS			
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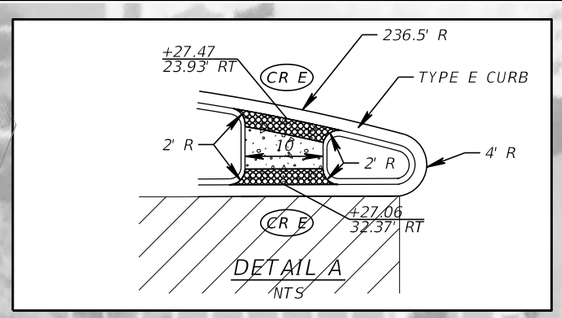
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

GENERAL NOTES

SHEET NO. 8



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ROADWAY PLAN

SHEET NO. 9

TEMPORARY TRAFFIC CONTROL PLAN (TTCP) PHASING NOTES:

PHASE I:

THE INTENT OF THIS PHASE IS TO CONSTRUCT THE PROPOSED PAVEMENT WIDENING, SIDEWALK AND CURB WORK, SIGNALIZATION/LIGHTING CONDUIT, PULL BOXES, AND LIGHTING/SIGNAL FOUNDATION WORK IN SUCH A WAY THAT AT LEAST ONE CROSSWALK SPANNING SR 55 (US 19) IS PROVIDED AT ALL TIMES.

1. INSTALL ADVANCE WARNING SIGNS AS SHOWN IN THE ADVANCE WARNING SIGN DETAILS.

2. CONSTRUCT PROPOSED MEDIAN WORK ON THE SOUTH SIDE OF SR 55 (US 19) BY CLOSING THE INSIDE SOUTHBOUND TRAVEL LANE AND THE NORTHBOUND LEFT TURN LANE USING INDEX 102-613,102-615 AND 102-670. UTILIZE THE NORTHBOUND INSIDE TRAVEL LANE TO MAINTAIN THE NORTHBOUND LEFT MOVEMENT. MAINTAIN ALL TURNING MOVEMENTS THROUGH THE INTERSECTION WITH A TRAFFIC CONTROL OFFICER.

3. CONSTRUCT SIDEWALK AND CURB WORK, SIGNALIZATION/LIGHTING CONDUIT, PULL BOXES, AND LIGHTING/SIGNAL FOUNDATION WORK ON THE SOUTHEAST AND SOUTHWEST QUADRANTS OF THE INTERSECTION USING INDEX 102-613, 102-616, 102-660 AND 102-670. REMOVE EXISTING STRIPING AND PLACE TEMPORARY STRIPING TO ALLOW FOR A TEMPORARY CROSSWALK SPANNING SR 55 (US 19) AT THE SOUTH LEG OF THE INTERSECTION AT THE LOCATION SHOWN IN THE SIGNING AND PAVEMENT MARKING PLAN.

4. CONSTRUCT PROPOSED MEDIAN WORK ON THE NORTH SIDE OF SR 55 (US 19) BY CLOSING THE INSIDE NORTHBOUND TRAVEL LANE, THE INSIDE SOUTHBOUND LEFT TURN LANE, AND THE INSIDE EASTBOUND LEFT TURN LANE USING INDEX 102-613, 102-615 AND 102-670. UTILIZE THE SOUTHBOUND OUTSIDE TURN LANE TO MAINTAIN THE SOUTHBOUND LEFT MOVEMENT AND THE OUTSIDE EASTBOUND TURN LANE TO MAINTAIN THE EASTBOUND LEFT MOVEMENT. MAINTAIN ALL TURNING MOVEMENTS THROUGH THE INTERSECTION WITH A TRAFFIC CONTROL OFFICER. CLOSE THE EXISTING CROSSWALK AT THE NORTH LEG OF THE INTERSECTION AND MAINTAIN PEDESTRIAN ROUTES USING THE SOUTH LEG CROSSING.

5. CONSTRUCT THE PROPOSED PAVEMENT WIDENING ON SPRING HILL DRIVE BY CLOSING THE WESTBOUND RIGHT TURN LANE UTILIZING INDEX 102-613 AND 102-616. ADDITIONALLY, PLACE CHANNELIZING DEVICES ALONG THE SOUTH EDGE OF THE STRIPED GORE TO THE NORTH OF THE WESTBOUND TRAVEL LANE. MAINTAIN THE WESTBOUND RIGHT TURN MOVEMENT UTILIZING THE WESTBOUND THROUGH LANE AND A TRAFFIC CONTROL OFFICER.

6. CONSTRUCT PROPOSED MEDIAN WORK ON SPRING HILL DRIVE BY CLOSING THE INSIDE WESTBOUND TURN LANE UTILIZING INDEX 102-613, 102-615, AND 102-616. MAINTAIN THE EASTBOUND TRAVEL LANES WITH A MINIMUM 10-FT TRAVEL LANE.

7. CONSTRUCT SIDEWALK AND CURB WORK, SIGNALIZATION/LIGHTING CONDUIT, PULL BOXES, AND LIGHTING/SIGNAL FOUNDATION WORK ON THE NORTHEAST AND NORTHWEST QUADRANTS OF THE INTERSECTION USING INDEX 102-613, 102-616, 102-660 AND 102-670. PRIOR TO THE PAVEMENT REMOVAL WORK ON THE NORTHEAST QUADRANT OF THE INTERSECTION, PLEASE ASSURE THE EXISTING PEDESTRIAN ISLAND HAS BEEN REMOVED AND WIDENED PER PLANS TO PROVIDE A RIDEABLE PAVEMENT SURFACE ALONG WITH A TEMPORARY STRIPING THAT ALLOWS FOR A MINIMUM 11-FT WESTBOUND RIGHT TURN LANE.

PHASE II:

THE INTENT OF THIS PHASE IS TO MILL AND RESURFACE THE ROADWAY AND TO INSTALL FINAL SIGNAL AND LIGHTING COMPONENTS.

1. MAINTAIN ADVANCE WARNING SIGN DETAILS.

2. INSTALL THE PROPOSED LIGHTING AND PEDESTRIAN SIGNAL ON THE FOUNDATIONS CONSTRUCTED IN PHASE I UTILIZING INDEX 102-613, 102-615, AND 102-670.

3. MILL AND RESURFACE THE ROADWAY AND PLACE FINAL PAVEMENT MARKINGS (PAINT) UTILIZING INDEX 102-613, 102-615, 102-616, 102-617, 102-623 AND 102-670. ALSO, INCLUDE ANY TRAFFIC SIGNAL LOOPS PER THE PLANS. DUE TO COMPLEXITY AND SIZE OF THE INTERSECTION UTILIZE UP TO TWO (2) TRAFFIC CONTROL OFFICERS TO ASSIST IN MAINTAINING TURNING MOVEMENTS AT THE INTERSECTION.

PHASE III:

THE INTENT OF THIS PHASE IS TO PLACE THE FINAL PAVEMENT MARKINGS (THERMOS) AFTER THE 14 DAY PAVEMENT CURE PERIOD UTILIZING INDEX 102-613, 102-615, 102-616, 102-617, 102-623 AND 102-670.

TEMPORARY TRAFFIC CONTROL PLAN (TTCP) GENERAL NOTES:

1. THE EXISTING POSTED SPEED LIMIT OF 55 MPH FOR SR 55 (US 19) SHALL BE MAINTAINED. THE EXISTING POSTED SPEED LIMIT OF 40 MPH FOR SPRING HILL DRIVE SHALL BE MAINTAINED. THE EXISTING POSTED SPEED LIMIT OF 40 MPH FOR OSOWAW BOULEVARD SHALL BE MAINTAINED.

2. CONSULT FDOT STANDARD PLAN INDICES 102-600 SERIES AS APPLICABLE FOR MAINTENANCE OF TRAFFIC.

3. NO SINGLE LANE CLOSURES ARE PERMITTED FOR SR 55 (US 19) BETWEEN 7 AM TO 8 PM AND NO DOUBLE LANE CLOSURES ARE PERMITTED FOR SR 55 (US 19) BETWEEN 6 AM TO 10 PM.

4. UTILIZE TRAFFIC CONTROL OFFICER AND/OR CERTIFIED FLAGGER TO MAINTAIN BICYCLE TRAFFIC THROUGH THE WORK ZONE DURING CONSTRUCTION OPERATIONS.

5. THE BIKE LANE WILL REMAIN OPEN AND FREE OF OBSTRUCTIONS WHEN FLAGGERS OR TRAFFIC CONTROL OFFICERS ARE NOT PROVIDED AND WILL REMAIN CONNECTED TO THE EXISTING FACILITY WHEN CONSTRUCTION IS NOT ACTIVELY TAKING PLACE.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL A. CARNLEY
P.E. NO.: 75529
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

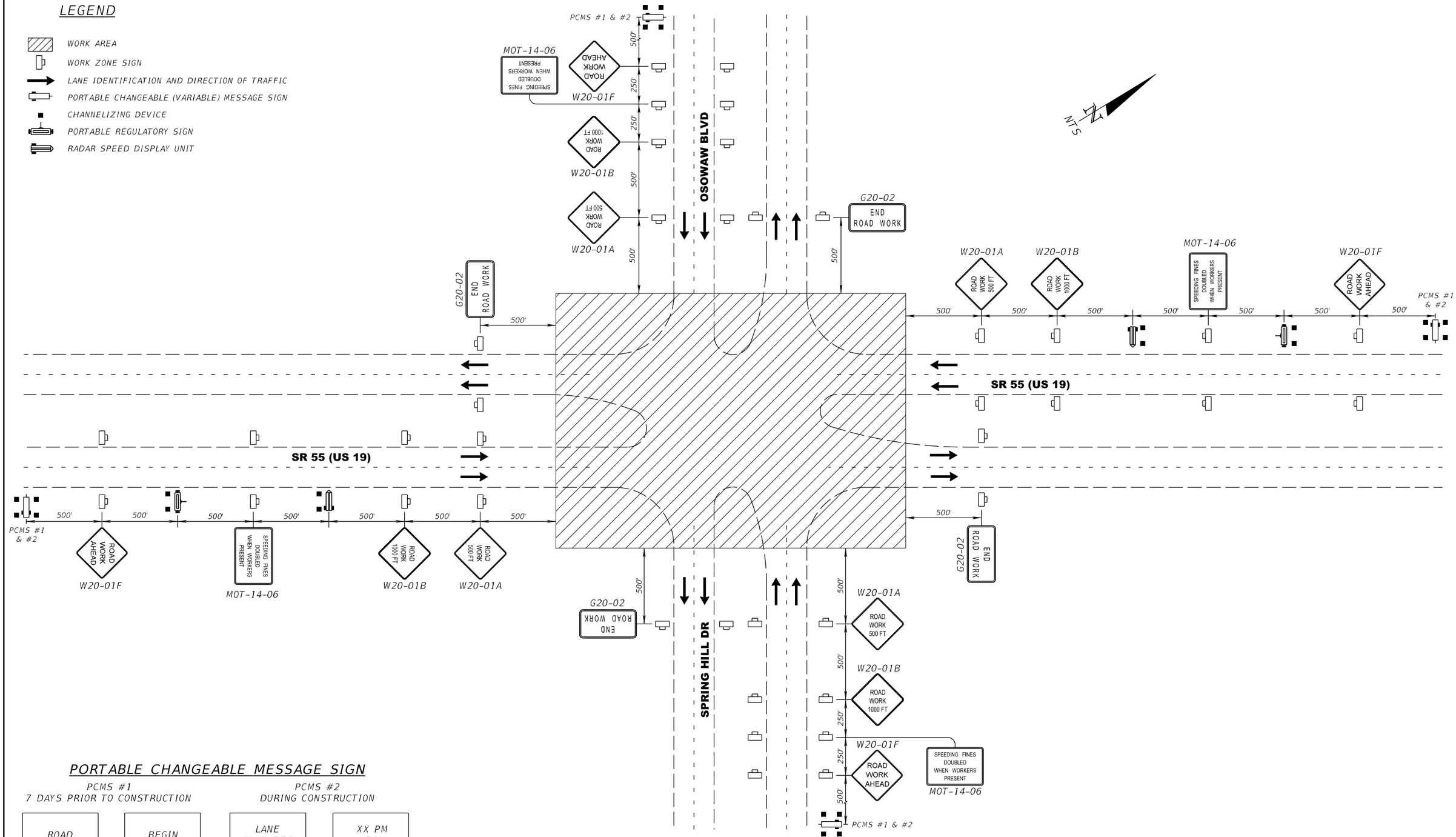
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

TEMPORARY TRAFFIC CONTROL PLAN (01)

SHEET NO. 10

LEGEND

- WORK AREA
- WORK ZONE SIGN
- LANE IDENTIFICATION AND DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN
- CHANNELIZING DEVICE
- PORTABLE REGULATORY SIGN
- RADAR SPEED DISPLAY UNIT



PORTABLE CHANGEABLE MESSAGE SIGN

PCMS #1 7 DAYS PRIOR TO CONSTRUCTION		PCMS #2 DURING CONSTRUCTION	
ROAD WORK	BEGIN XX/XX	LANE CLOSURES AHEAD	XX PM TO XX AM

ADVANCE WARNING SIGNS

NTS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL A. CARNLEY
P.E. NO.: 75529
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

TEMPORARY TRAFFIC CONTROL PLAN (02)

SHEET NO. 11

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SUMMARY OF VERIFIED UTILITIES

Vvh #	UTILITY DESCRIPTION (Owner, type)	SIZE	MATERIALS	℄ and/or ℄			EXISTING GROUND ELEVATION	TOP ELEVATION	COMMENTS
				STATION	OFFSET	LT/RT			
101	HERNANDO COUNTY, WATER	8"	PVC	1248+41.85	77.21'	LT	18.55	13.00	UTILITY VERIFIED
102	FRONTIER, TELEPHONE	2"	DBC	1250+29.47	152.39'	RT	19.40	17.16	POSSIBLE OOS TELEPHONE
103	HERNANDO COUNTY, FOC	2 @ 2"	PE	1250+31.58	152.34'	RT	19.29	13.61	UTILITY VERIFIED
104	N/A	N/A	N/A	1250+84.91	49.48'	LT	19.74	9.74	TRENCHED TO 4'; CLEARED TO 10'
105	N/A	N/A	N/A	1250+84.94	53.11'	LT	19.68	9.68	TRENCHED TO 4'; CLEARED TO 10'
106	N/A	N/A	N/A	1248+38.66	75.81'	LT	19.15	9.15	TRENCHED TO 4'; CLEARED TO 10'
107	LUMEN, FO	UNKNOWN	PE	1248+43.85	73.16'	LT	19.21	9.77	UNABLE TO VISUALIZE DUE TO CAVE IN
108	FRONTIER, BT	0.5"	DBC	1250+32.20	151.33'	RT	19.27	16.27	UTILITY VERIFIED
109	HERNANDO COUNTY, FM	POSSIBLE 12"	DIP	1250+86.22	56.36'	LT	19.26	11.62	UTILITY VERIFIED
110	N/A	N/A	N/A	1250+34.56	151.64'	RT	19.60	9.60	TRENCHED TO 4'; CLEARED TO 10'

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL A. CARNLEY
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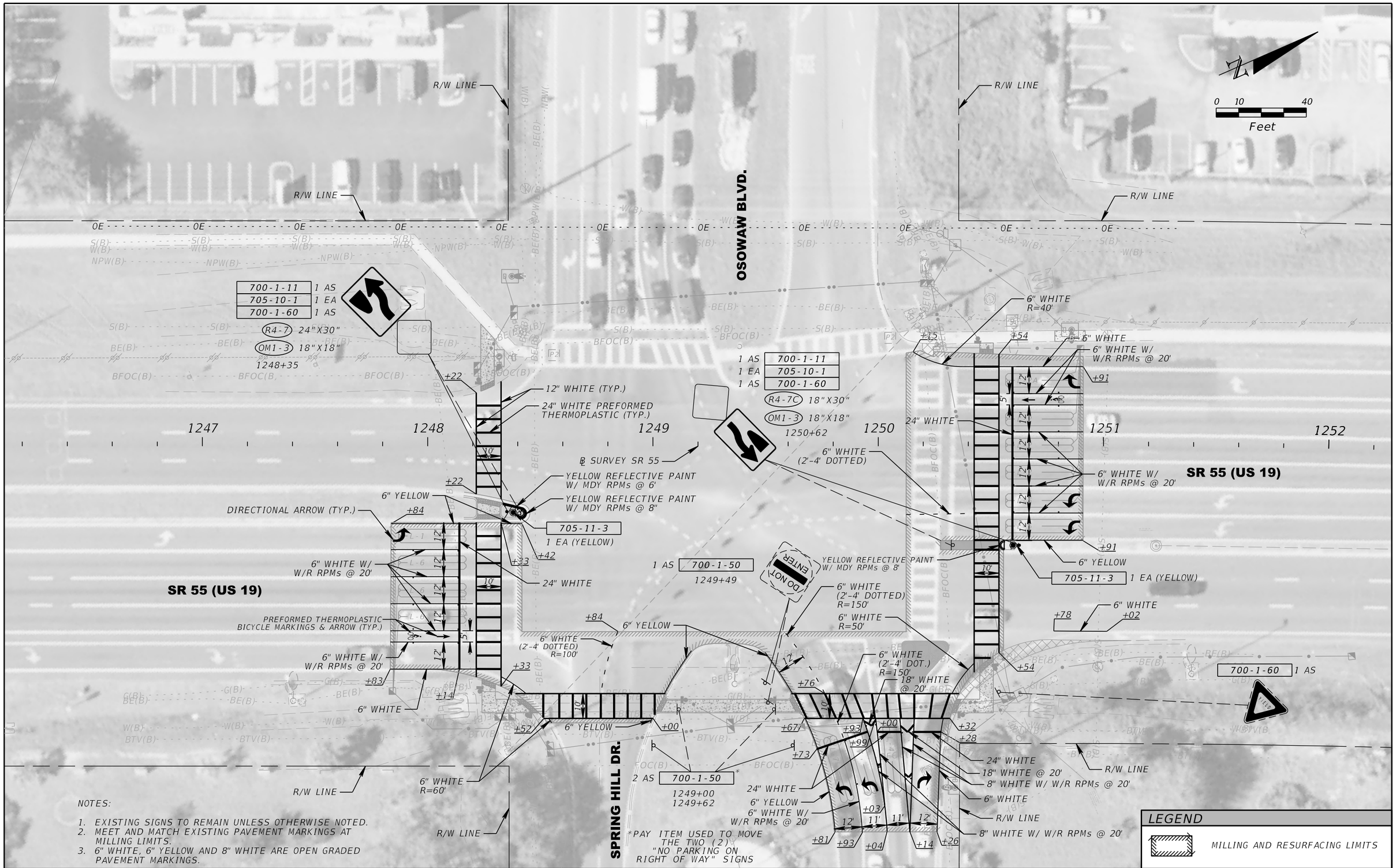
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SUMMARY OF VERIFIED UTILITIES

SHEET NO. 12



THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AMANDA J. KREILING
P.E. NO.: 61644
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

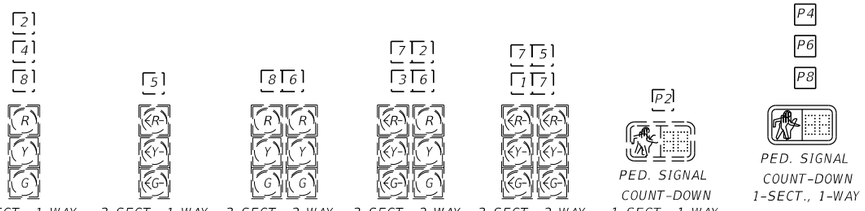
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO. 13

SIGNAL HEAD DETAILS:



NOTES:

1. SR 55 (US 19) IS THE MAJOR STREET, POSTED SPEED = 60 MPH. OSOWAW BLVD. IS THE MINOR STREET, POSTED SPEED = 35 MPH. SPRING HILL DR. IS THE MINOR STREET, POSTED SPEED = 30 MPH.
2. WHEN THE SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW, AND ALL OTHER MOVEMENTS SHALL FLASH RED.
3. SIGNAL TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE ENGINEER.
4. SEE LIGHTING PLAN FOR LIGHTING CONDUCTOR DETAILS.
5. MOVEMENT P6 SHALL OPERATE AS A SINGLE STAGE CROSSING, BUT SHALL BE WIRED FOR A 2-STAGE CROSSING.
6. EXISTING VEHICULAR SIGNAL HEAD LOCATIONS ARE APPROXIMATE.

630-2-11	2 RUNS @ 10 LF
632-7-1	1 PI
632-7-6	1 PI
635-2-14	2 EA
670-5-400	1 AS
676-1-500	1 EA
678-1-102	2 EA

UTILIZE EXIST. CONDUIT FOR NEW PED. MOVEMENTS, IF AVAILABLE OR CORE DRILL EXISTING CABINET BASE. ADJUST SIGNAL TIMINGS AND CONNECT NEW PEDESTRIAN MOVEMENTS. PAY ITEM 678-1-102 SHALL BE USED FOR NEW REQUIRED LOAD SWITCHES.

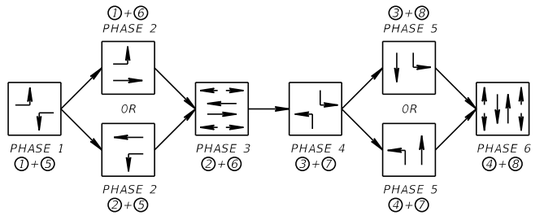
0 10 50
Feet

DETECTORS FOR LOOPS

LOOP	NO. OF NEW LOOPS	NO. OF NEW DETECT.	DELAY TIME (SEC.)
L-1	1	-	-
L-2	3	-	-
L-2A	1	-	15
L-3	**	**	**
L-4	1	-	-
L-5	2	-	-
L-6	3	-	-
L-7	2	-	-
L-8	**	**	**
L-8A	**	**	**

** EXISTING TO REMAIN

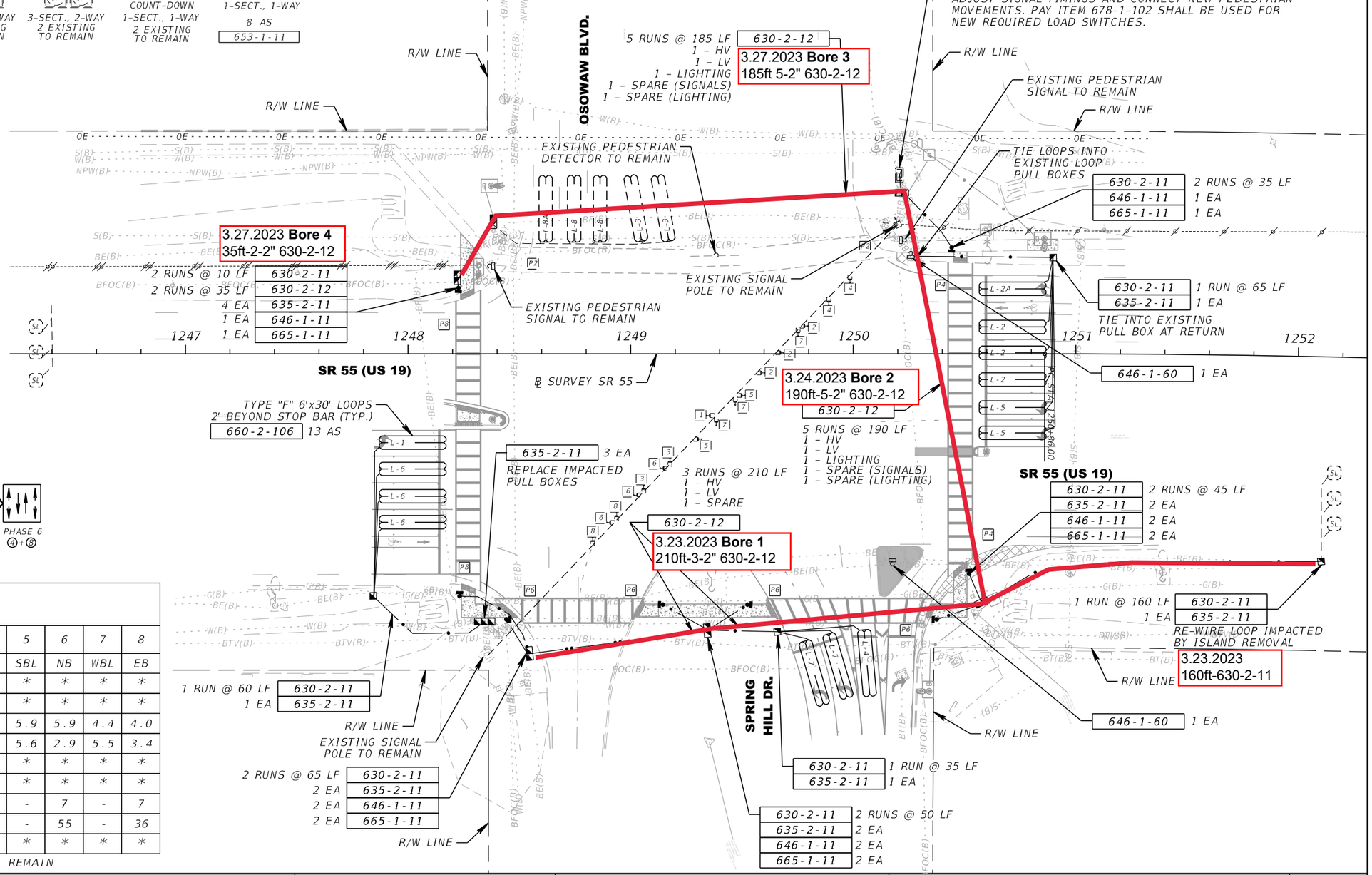
PROPOSED S.O.P.:



CONTROLLER TIMINGS

CONTROLLER PHASE, MOVEMENT NUMBER	1	2	3	4	5	6	7	8
DIRECTION	NBL	SB	EBL	WB	SBL	NB	WBL	EB
MINIMUM GREEN	*	*	*	*	*	*	*	*
EXTENSION	*	*	*	*	*	*	*	*
YELLOW CLEARANCE	5.9	5.9	4.0	4.4	5.9	5.9	4.4	4.0
ALL RED	5.6	2.9	5.5	3.4	5.6	2.9	5.5	3.4
MAXIMUM GREEN 1	*	*	*	*	*	*	*	*
MAXIMUM GREEN 2	*	*	*	*	*	*	*	*
PEDESTRIAN WALK	-	7	-	7	-	7	-	7
PED. CLEARANCE	-	49	-	39	-	55	-	36
RECALL	*	*	*	*	*	*	*	*

* EXISTING TIMINGS TO REMAIN



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AMANDA J. KREILING
P.E. NO.: 61644
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SIGNALIZATION PLAN

SHEET NO. 14

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

LIGHTING LEGEND

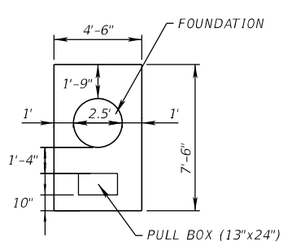
LABEL	SYMBOL	DESCRIPTION
A		MANUFACTURER: GE LIGHTING SOLUTIONS, MODEL: EVOLVE ERL2 SERIES LED FIXTURE, PHOTOMETRIC CURVE NUMBER: ERL2 30D340.IES. LUMINAIRE IS HORIZONTAL, POLE TOP MOUNTED, AT 45 FEET MOUNTING HEIGHT, ATTACHED TO SHOULDER MOUNTED CONVENTIONAL LIGHT POLE, WIRED FOR 120V OPERATION. SYMBOL INCLUDES LUMINAIRE, ARM, POLE, TRANSFORMER BREAKAWAY BASE, POLE CABLE DISTRIBUTION SYSTEM (PCDS), FOUNDATION AND CONCRETE SLAB. PULL BOX AND PCDS PAID FOR SEPARATELY.
B		MANUFACTURER: GE LIGHTING SOLUTIONS, MODEL: EVOLVE ERL2 SERIES LED FIXTURE, PHOTOMETRIC CURVE NUMBER: ERL2 27D340.IES. LUMINAIRE IS HORIZONTAL, POLE TOP MOUNTED, AT 45 FEET MOUNTING HEIGHT, ATTACHED TO SHOULDER MOUNTED CONVENTIONAL LIGHT POLE, WIRED FOR 120V OPERATION. SYMBOL INCLUDES LUMINAIRE, ARM, POLE, TRANSFORMER BREAKAWAY BASE, POLE CABLE DISTRIBUTION SYSTEM (PCDS), FOUNDATION AND CONCRETE SLAB. PULL BOX AND PCDS PAID FOR SEPARATELY.
		PROPOSED LIGHTING PULL BOX. PAY ITEM 635-2-11
		INITIAL AND FINAL LOCATION OF RELOCATED LIGHT POLE IMPACTED BY SIDEWALK AND GRADING WORK. ADJUST LIGHT POLE ELEVATION TO MEET FINISHED GRADE.

LIGHTING NOTES

1. MAINTAINING AGENCY: HERNANDO COUNTY
2. THE LOCATION OF LIGHT POLES, PULL BOXES AND SERVICE DISCONNECT ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED UPON APPROVAL OF THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
3. NOTIFY HERNANDO COUNTY 7 DAYS BEFORE FINAL ACCEPTANCE FOR INSPECTION.
4. SEE SIGNALIZATION PLAN FOR ADDITIONAL DIRECTIONAL BORE PAY ITEM DETAILS.
5. LUMINAIRE ATTACHMENT SHOP DRAWING SUBMITTAL REQUIRED.
6. CONCRETE SLAB FOR POLE T-1-3 SHALL BE INCORPORATED INTO ADJACENT PROPOSED SIDEWALK.

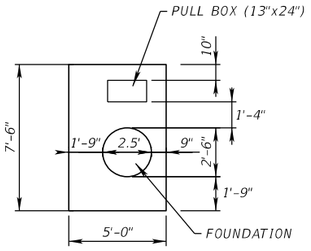
POLE A-1-2 SLAB DETAIL

N.T.S.



POLE T-1-2 SLAB DETAIL

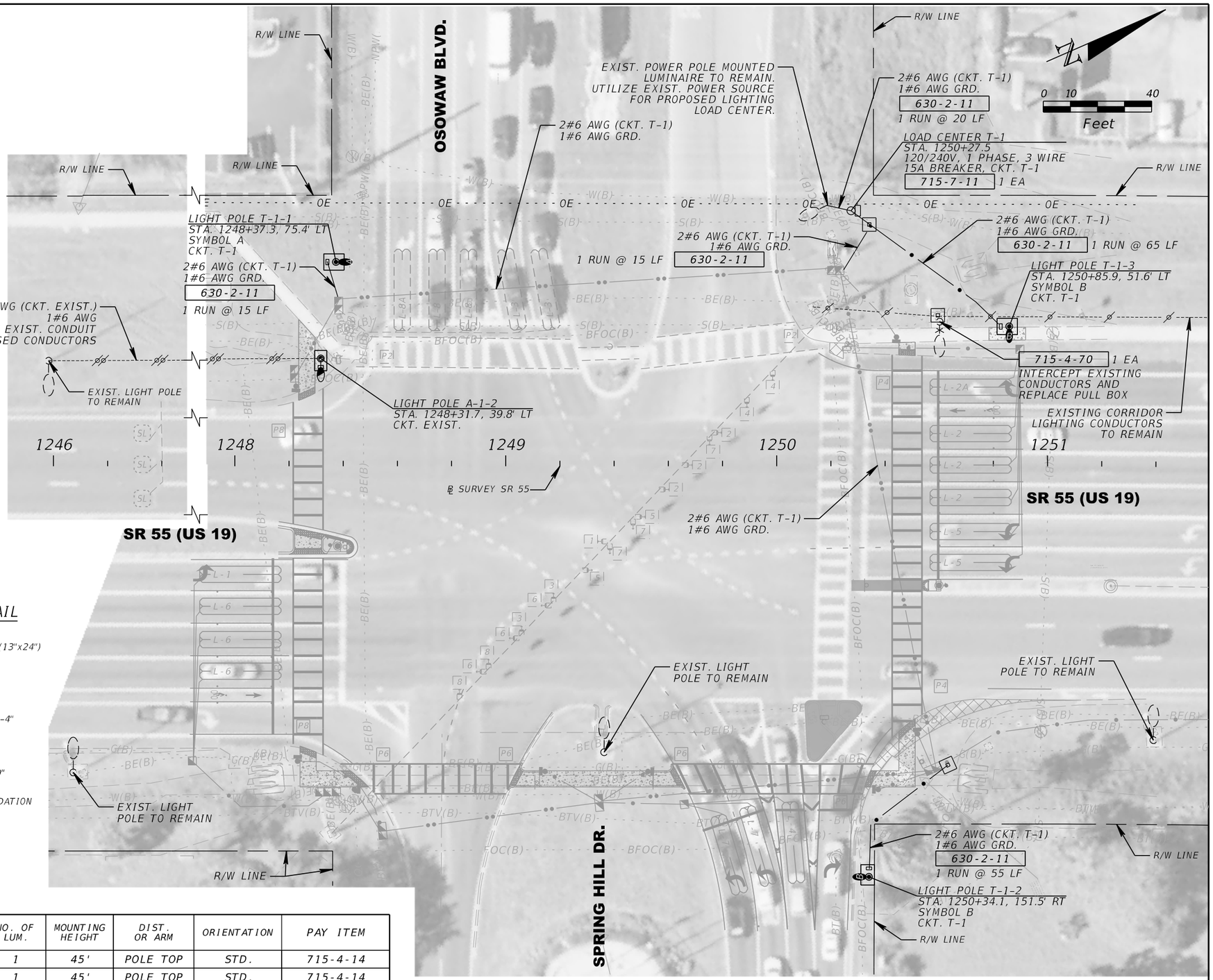
N.T.S.



LIGHTING DATA TABLE

POLE NO.	LUM. LABEL	WATTAGE	CIRCUIT	STATION	OFFSET	NO. OF LUM.	MOUNTING HEIGHT	DIST. OR ARM	ORIENTATION	PAY ITEM
T-1-1	A	278	T-1	1248+37.3	75.4' LT.	1	45'	POLE TOP	STD.	715-4-14
T-1-2	B	237	T-1	1250+34.1	151.5' RT.	1	45'	POLE TOP	STD.	715-4-14
T-1-3	B	237	T-1	1250+85.9	51.6' LT.	1	45'	POLE TOP	STD.	715-4-14
A-1-2	N/A	EXIST.	EXIST.	1248+31.7	39.8' LT.	EXIST.	EXIST.	EXIST.	STD.	715-4-60

STD. ORIENTATION = PERPENDICULAR TO ADJACENT ROADWAY



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AMANDA J. KREILING
P.E. NO.: 61644
WSP USA INC.
5411 SKYCENTER DR., SUITE 650
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

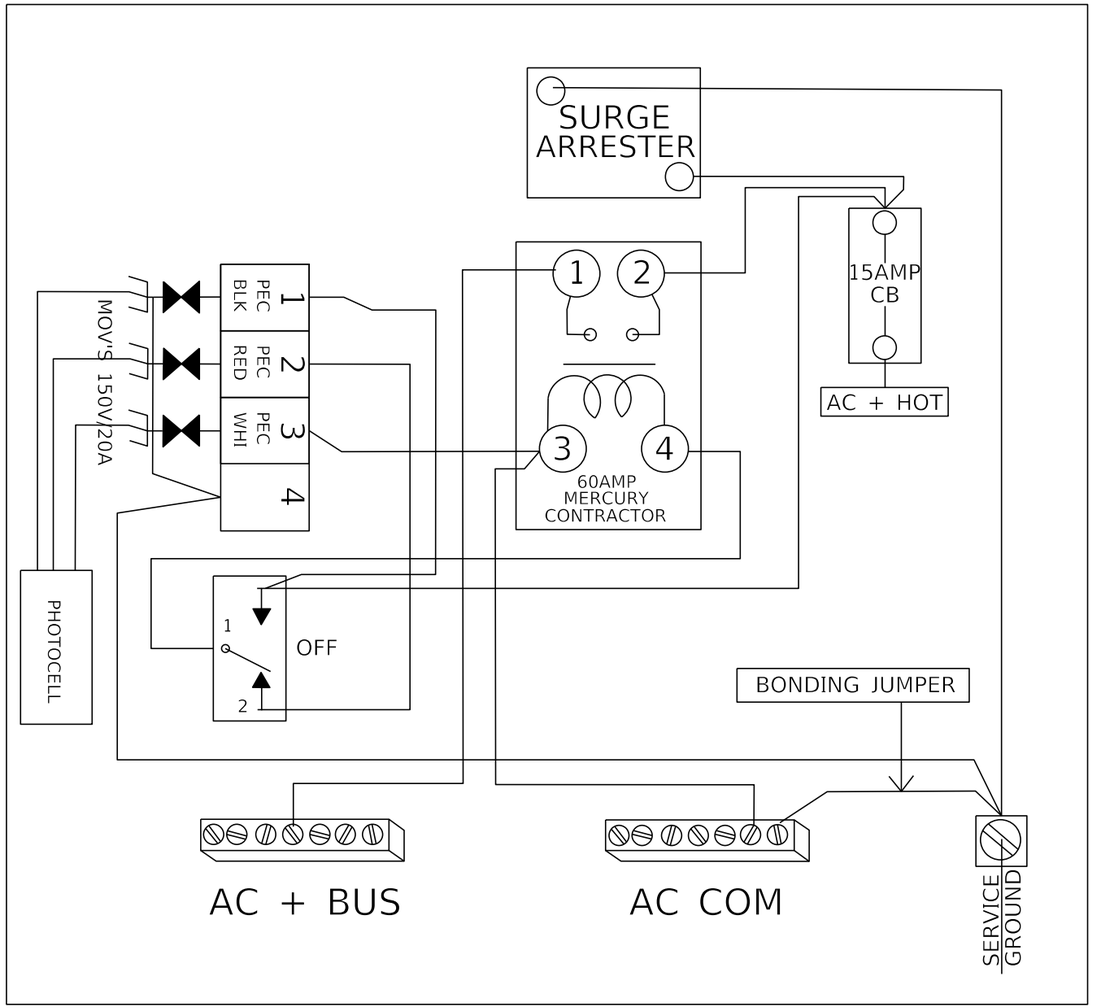
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

LIGHTING PLAN

SHEET NO. 15

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

NEMA TYPE I ENCLOSURE



* THE SWITCH ABOVE IS SHOWN IN THE AUTO POSITION.

NOTE:

1. THE MINIMUM CABINET DIMENSIONS ARE 13" X 10" X 11".

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

AMANDA J. KREILING
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WSP USA INC.
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

LIGHTING SERVICE POINT DETAILS

SHEET NO. 16

SUMMARY OF PAVEMENT

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION STA. TO STA.	SIDE	AREA ID	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
285715	OPTIONAL BASE, BASE GROUP 15	1250+10.27 to 1250+30.76	RT	22502	SY	34.9		47			
		1250+27.62 to 1250+55.96	RT	22509		11.9					
0327 70 19	MILLING EXIST ASPH PAVT, 3/4" AVG DEPTH	1247+83.79 to 1250+90.97	LT/RT	47540	SY	2292.2		2292			
0334 1 14	SUPERPAVE ASPHALTIC CONC, TRAFFIC C, 1-199 TONS	1250+10.27 to 1250+30.76	RT	43453	TN	7.70		10.3			
		1250+27.62 to 1250+55.96	RT	43448		2.63					
0337 7 25	ASPHALT CONCRETE FRICTION COURSE (FC-5, PG 76-22), 1-199 TONS	1247+83.79 to 1250+90.97	LT/RT	47588	TN	91.69		92.2			
		1250+27.62 to 1250+55.96	RT	31953		0.50					

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DANIEL A. CARNLEY
P.E. NO.: 75529
WSP USA INC.
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TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	HERNANDO	254677-2-52-93

SUMMARY OF QUANTITIES

SHEET NO.
SQ-1

Submittal Report

Financial Project:	254677-2-52-93	Submittal Type:	PLANS
Submittal Phase:	FINAL	Submittal Staff Type:	CONSULTANT
Received Date:	12/13/2022	Response Due Date:	1/12/2023
Grace Period:	0	District:	SEVENTH
Status:	OPEN	Create Date:	12/13/2022
Create User Id:	KNJACHD	Last Update:	12/13/2022
		Last Update User Id:	KNJACHD

Description:

TWO #36 DBPB V - Commercial Way (US 19) at Spring Hill Drive Pedestrian and Lighting Crosswalk Improvements. Reviewers, please send David Hernandez an e-mail (david.hernandez2@dot.state.fl.us) with final sign off if you have no further comments and previous phase submittal comments were addressed. Thank you.

Threads:

Name	Assignment	Due Date	Status	Comments
Abdul Waris	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
ALLEN TURNER	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Allison Conner	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Anthony Celani	LEAD REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
10	COMMENT SUBMITTED FOR RESPONSE	DANIEL CARNLEY		DRAINAGE

Created By	Created On	
Anthony Celani	12/27/2022	-

Provided via Exhibit to the reviewer

Demonstrate that the added sidewalk at the corners of the intersection will not block or impede flow into the ditch system.

Name	Assignment	Due Date	Status	Comments
Blake Stallworth	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Brian McDermott	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
CAITLIN CARNLEY	LEAD DESIGNER	1/12/2023	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Calvin Mason	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
CARLENE RIECSS	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Catie Neal	REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
2	COMMENT AGREED WITH			ENVIRONMENTAL MANAGEMENT OFF.

Created By	Created On	Version	Delegate For
Catie Neal	12/19/2022	1	

A natural resource review of the Final Plans has been completed on behalf of the District Seven Environmental Management Office (DEMO). Based on the project plans and location, there are no impacts to farmlands, Section 4(f) resources, floodplains, wetlands, surface waters, protected species, or habitat anticipated. DEMO will review any future submittals as necessary to confirm that this determination remains valid in accordance with federal and state regulations.

DANIEL CARNLEY	1/4/2023	1	

Comment Agreed & Closed

Name	Assignment	Due Date	Status	Comments
Chad Stewart	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Charles Manganaro	LEAD REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
3	COMMENT AGREED WITH			CONSTRUCTION

Created By	Created On	Version	Delegate For
Charles Manganaro	12/21/2022	1	

Sheet 3- a pay item should be added for inlet protection

DANIEL CARNLEY	1/4/2023	1	

Comment Agreed & Closed

Name	Assignment	Due Date	Status	Comments
Cristina Suarez	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
DANIEL CARNLEY	CONSULTANT PROJECT MANAGER	1/12/2023	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
DANIEL HUNTER	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Daniel Lauricello	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
DAVID GORDINIER	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
David Grillo	LEAD REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
1	COMMENT AGREED WITH			RAILROAD

Created By	Created On	Version	Delegate For
David Grillo	12/13/2022	1	

No Comment

DANIEL CARNLEY	1/4/2023	1	

Comment Agreed & Closed

Name	Assignment	Due Date	Status	Comments
David Guttenplan	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments

David Hernandez Jr	IN-HOUSE PROJECT MANAGER AST.	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
David Skrelunas	REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Demetrio Arencibia	LEAD REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Donald Marco	LEAD REVIEWER	12/29/2022	ACTIVE	0*
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Edward Cronyn	LEAD REVIEWER	12/29/2022	ACTIVE	0*
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Elizabeth (Jill) Wehle	LEAD REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Emilio Dominguez	LEAD REVIEWER	12/29/2022	ACTIVE	0*
Name	**Assignment**	**Due Date**	**Status**	**Comments**
FRED LAPIANA	LEAD REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
Gautom Dey	LEAD REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
George Boyle	LEAD REVIEWER	12/29/2022	ACTIVE	0
Name	**Assignment**	**Due Date**	**Status**	**Comments**
HOSSEIN AMIRI	REVIEWER	12/29/2022	ACTIVE	5

No	**Status**	**Current Holder**	**Reference**	**Categories**
4	RESPONSE SUBMITTED	HOSSEIN AMIRI	10 - Phase 1 N2	TRAFFIC ANALYSIS,TRAFFIC CONTROL,SAFETY

Created By	**Created On**	**Version**	**Delegate For**
HOSSEIN AMIRI	12/23/2022	1	

Consider providing temporary dotted guideline striping to provide guidance for the temporary turn lane changes.

DANIEL CARNLEY	1/4/2023	1	

Disagree this only happens during night operations and complex movements are to be handled with a traffic control officer.

No	**Status**	**Current Holder**	**Reference**	**Categories**
5	RESPONSE SUBMITTED	HOSSEIN AMIRI	10 - Phase 1 N2	TRAFFIC ANALYSIS,TRAFFIC CONTROL,SAFETY

Created By	**Created On**	**Version**	**Delegate For**
HOSSEIN AMIRI	12/23/2022	1	

Please provide a note stating traffic signal head adjustments are needed and are to be coordinated with the traffic operations office prior to implementation.

DANIEL CARNLEY	1/4/2023	1	

Disagree this only happens during night operations and complex movements are to be handled with a traffic control officer.

No	Status	Current Holder	Reference	Categories
6	RESPONSE SUBMITTED	HOSSEIN AMIRI	10 - Phase 1 N4	TRAFFIC ANALYSIS,TRAFFIC CONTROL,SAFETY

Created By	Created On	Version	Delegate For
HOSSEIN AMIRI	12/23/2022	1	

Note 4 calls for maintaining the southbound left turns from the inside travel lane. Given the dual left configuration of the southbound approach, are double lane closure required to accommodate this work? If not, consider revising the note to call for maintaining the outside left turn lane which would leave the southbound through movement undisrupted.
Since the northbound inside lane needs to be closed for this work, consider the closure of the eastbound inside left turn movement from Osowaw Blvd or providing no turn on red signs for the westbound traffic on Spring Hill Dr turning right toward northbound SR 55 (US 19).

DANIEL CARNLEY	1/4/2023	1	

Agree, the outside SB turn lane will be maintained, and the inside EB left turn will be closed.

No	Status	Current Holder	Reference	Categories
7	RESPONSE SUBMITTED	HOSSEIN AMIRI	10 - Phase 1 N6	TRAFFIC ANALYSIS,TRAFFIC CONTROL,SAFETY

Created By	Created On	Version	Delegate For
HOSSEIN AMIRI	12/23/2022	1	

Is the closure of the eastbound inside lane adjacent to the median required for accommodating median work on Spring Hill Dr? It seems provisions of closing the inside lane have been removed from this final submittal.

DANIEL CARNLEY	1/4/2023	1	

Yes this was discussed with FDOT Roadway Design and the contractor where they feel they can complete this work without the additional closure and associated traffic impacts.

No	Status	Current Holder	Reference	Categories
8	COMMENT AGREED WITH		10 - TTCP General Notes	TRAFFIC ANALYSIS,TRAFFIC CONTROL,SAFETY

Created By	Created On	Version	Delegate For
HOSSEIN AMIRI	12/23/2022	1	

Please revise the title of the notes on the bottom part of the sheet to state TTCP General notes instead of Phasing notes.

DANIEL CARNLEY	1/4/2023	1	

Comment Agreed & Closed

Name	Assignment	Due Date	Status	Comments
Jacqueline Beebe	LEAD REVIEWER	12/29/2022	ACTIVE	0
James Ledbetter	LEAD REVIEWER	12/29/2022	ACTIVE	0
Joel Johnson	LEAD REVIEWER	12/29/2022	ACTIVE	0
Joel Provenzano	LEAD REVIEWER	12/29/2022	ACTIVE	0
John Escobio	LEAD REVIEWER	12/29/2022	ACTIVE	0
JON SANCHEZ	LEAD REVIEWER	12/29/2022	ACTIVE	0
Joseph Feaster	LEAD REVIEWER	12/29/2022	ACTIVE	0*
Julie Scanlon	LEAD REVIEWER	12/29/2022	ACTIVE	0*
Katina Kavouklis	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
KEITH A LARSON	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Kirk Bogen	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Kisan Patel	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Larry Hagen	LEAD REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
9	COMMENT SUBMITTED FOR RESPONSE	CAITLIN CARNLEY	Sheet 14	SIGNALIZATION

Created By	Created On	Version	Delegate For
Larry Hagen	12/27/2022	1	

For US 19, the posted speed is 60 mph according to note 1. The yellow time for 60 mph per the TEM is 5.9 seconds. Plans show 5.5 seconds for those movements.

Name	Assignment	Due Date	Status	Comments
LILLIAN HOYT	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Lynn Decker	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Madhu Madaram	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Marcel Goss	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Mark Chianese	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
MARK MORGAN	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Marlene Hebert	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Megan Arasteh	IN-HOUSE PROJECT MANAGER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Megan Miller	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Michael R. Brown	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Omar Chehab	LEAD REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
Peter (Ping) Hsu	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Randall Aebersold	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
REBECCA SPAIN SCHWARZ	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Reebie Simms	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Robert F. Grimsley	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Robin Rhinesmith	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Rohan Abraham	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
RON PATEL	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Sarah Guagnini	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Sarah Guagnini	REVIEWER	12/29/2022	ACTIVE	1

No	Status	Current Holder	Reference	Categories
14	COMMENT AGREED WITH			CULTURAL RESOURCES,ENVIRONMENTAL MANAGEMENT OFF.

Created By	Created On	Version	Delegate For
Sarah Guagnini	12/29/2022	1	

A cultural resource review of the Final plans (dated December 2022) has been completed on behalf of Robin Rhinesmith. These plans were compared to the Phase III plans (dated October 2022). There are no changes to the scope of work. Based on a desktop review, there are no cultural resource concerns. This project qualifies as a minor project under the FDOT/Federal Highway Administration (FHWA) Programmatic Agreement (PA) (Stipulation VI). Therefore, a Minor Project Notification Form was submitted to the State Historic Preservation Officer (SHPO) on December 7, 2022, to notify them of this finding. No further cultural resource coordination is needed unless there are changes to the scope of work and/or right of way requirements.

DANIEL CARNLEY	1/4/2023	1	

Comment Agreed & Closed

Name	Assignment	Due Date	Status	Comments
SCOTT HERRING	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Skipper Pomicter	REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
STEPHEN STACK	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
STEVE DIEZ	LEAD REVIEWER	12/29/2022	ACTIVE	0

Name	Assignment	Due Date	Status	Comments
Taylor Smith	REVIEWER	12/29/2022	ACTIVE	0*

Name	Assignment	Due Date	Status	Comments
TODD CROSBY	LEAD REVIEWER	12/29/2022	ACTIVE	3

No	Status	Current Holder	Reference	Categories
11	COMMENT SUBMITTED FOR RESPONSE	CAITLIN CARNLEY		SIGNING AND MARKING

Created By	Created On	Version	Delegate For
TODD CROSBY	12/28/2022	1	

1. Will signage be installed at Crosswalk on Springhill Drive "No Stopping in Crosswalk"

No	Status	Current Holder	Reference	Categories
12	COMMENT SUBMITTED FOR RESPONSE	CAITLIN CARNLEY		SIGNING AND MARKING

Created By	Created On	Version	Delegate For
TODD CROSBY	12/28/2022	1	

On Springhill Drive will areas between lanes be gorged as in the existing condition

No	Status	Current Holder	Reference	Categories
13	COMMENT SUBMITTED FOR RESPONSE	CAITLIN CARNLEY		SIGNING AND MARKING

Created By	Created On	Version	Delegate For
TODD CROSBY	12/28/2022	1	

Include a note that the No Parking signs with in the fountain area need to remain. they can be relocated but need to remain in the median area.

RE: Task 36 RFC Comments

EJ

Escobio, John <John.Escobio@dot.state.fl.us>
To Pritchard, Kyle A.
Cc Carnley, Danny; Hernandez Jr., David

Reply | Reply All | Forward | ...

Mon 1/9/2023 9:39 AM

Kyle,
On TTCP Plan Sht. 10, note 6 should be expanded to include median work adjacent to the EB inside lane of Spring Hill Dr. I spoke to Danny C. about this some time ago and we agreed that it could be done by placing barrels offset about 5' from the inside edge (no lane closure required).
JE

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS

2025 EXISTING

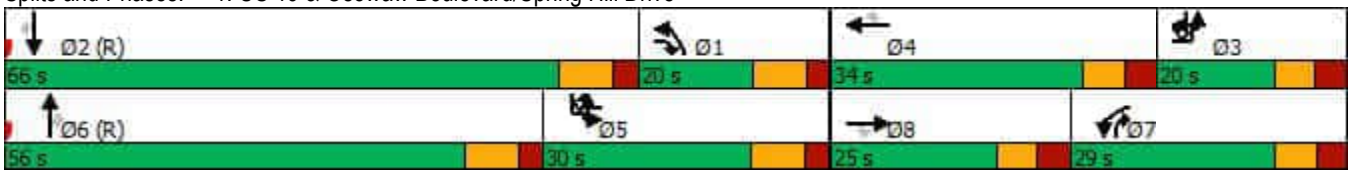
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	2	122	135	84	382	118	214	63	921	159	2	152
Future Volume (vph)	2	122	135	84	382	118	214	63	921	159	2	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175	0		175	475		525		275
Storage Lanes		2		2	2		2	1		1		2
Taper Length (ft)		100			100			100				100
Lane Util. Factor	0.95	0.97	0.95	1.00	0.97	1.00	1.00	1.00	0.91	1.00	0.91	0.97
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950				0.950
Satd. Flow (prot)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Flt Permitted		0.950			0.950			0.950				0.950
Satd. Flow (perm)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			40			40			55			
Link Distance (ft)			352			1085			891			
Travel Time (s)			6.0			18.5			11.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	136	150	93	424	131	238	70	1023	177	2	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	138	150	93	424	131	238	70	1023	177	0	171
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot
Protected Phases	3!	3	8	1	7	4	5!	1	6	7	5!	5
Permitted Phases				8			4			6		
Detector Phase	3	3	8	1	7	4	5	1	6	7	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	20.0	5.0	5.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	17.8	13.2	13.0	28.0	12.8	13.2	13.2
Total Split (s)	20.0	20.0	25.0	20.0	29.0	34.0	30.0	20.0	56.0	29.0	30.0	30.0
Total Split (%)	14.3%	14.3%	17.9%	14.3%	20.7%	24.3%	21.4%	14.3%	40.0%	20.7%	21.4%	21.4%
Maximum Green (s)	12.3	12.3	17.3	12.0	21.2	26.2	21.8	12.0	48.0	21.2	21.8	21.8
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	5.6	5.6	5.6	4.5	5.6	5.6
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	2.6	2.4	2.4	3.3	2.6	2.6
Lost Time Adjust (s)		-2.7	-2.7	-3.0	-2.8	-2.8	-3.2	-3.0	-3.0	-2.8		-3.2
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	3.0	3.5	3.0	4.0	4.0	3.5	3.5
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)		21.8	14.3	33.1	25.5	18.0	46.8	13.8	56.4	86.9		23.8
Actuated g/C Ratio		0.16	0.10	0.24	0.18	0.13	0.33	0.10	0.40	0.62		0.17
v/c Ratio		0.26	0.41	0.25	0.68	0.55	0.45	0.40	0.50	0.18		0.29
Control Delay		53.4	62.1	44.3	59.2	65.2	38.6	54.0	19.2	8.6		51.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay		53.4	62.1	44.3	59.2	65.2	38.6	54.0	19.2	8.6		51.9
LOS		D	E	D	E	E	D	D	B	A		D
Approach Delay			54.6			54.0			19.6			
Approach LOS			D			D			B			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1151	41
Future Volume (vph)	1151	41
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		525
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	1088	
Travel Time (s)	13.5	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1279	46
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1279	46
Turn Type	NA	pm+ov
Protected Phases	2	3!
Permitted Phases		2
Detector Phase	2	3
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	28.2	12.7
Total Split (s)	66.0	20.0
Total Split (%)	47.1%	14.3%
Maximum Green (s)	57.8	12.3
Yellow Time (s)	5.6	4.1
All-Red Time (s)	2.6	3.6
Lost Time Adjust (s)	-3.2	-2.7
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	4.0	4.0
Recall Mode	C-Max	None
Act Effct Green (s)	66.4	93.2
Actuated g/C Ratio	0.47	0.67
v/c Ratio	0.53	0.04
Control Delay	27.6	9.5
Queue Delay	0.0	0.0
Total Delay	27.6	9.5
LOS	C	A
Approach Delay	29.8	
Approach LOS	C	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)		57	68	69	185	114	167	62	113	37		70
Queue Length 95th (ft)		91	103	117	243	175	233	116	127	54		106
Internal Link Dist (ft)			272			1005			811			
Turn Bay Length (ft)				175			175	475		525		275
Base Capacity (vph)		534	505	365	640	385	520	189	2049	967		613
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0		0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0		0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0		0
Reduced v/c Ratio		0.26	0.30	0.25	0.66	0.34	0.46	0.37	0.50	0.18		0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 50 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 33.8		Intersection LOS: C	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			
! Phase conflict between lane groups.			

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	304	14
Queue Length 95th (ft)	365	33
Internal Link Dist (ft)	1008	
Turn Bay Length (ft)		525
Base Capacity (vph)	2412	1053
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	0.04

Intersection Summary

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	246	252	91	1	330	160	296	1	114	1474	333
Future Volume (vph)	1	246	252	91	1	330	160	296	1	114	1474	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175		0		175		475		525
Storage Lanes		2		2		2		2		1		1
Taper Length (ft)		100				100				100		
Lane Util. Factor	0.95	0.97	0.95	1.00	1.00	0.97	1.00	1.00	0.91	1.00	0.91	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Flt Permitted		0.950				0.950				0.950		
Satd. Flow (perm)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			40				40				55	
Link Distance (ft)			352				1085				891	
Travel Time (s)			6.0				18.5				11.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	273	280	101	1	367	178	329	1	127	1638	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	280	101	0	368	178	329	0	128	1638	370
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov
Protected Phases	3!	3	8	1!	7!	7	4	5!	1!	1	6	7!
Permitted Phases				8				4				6
Detector Phase	3	3	8	1	7	7	4	5	1	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	5.0	10.0	5.0	5.0	5.0	20.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	12.8	17.8	13.2	13.0	13.0	28.0	12.8
Total Split (s)	25.0	25.0	25.0	35.0	30.0	30.0	30.0	45.0	35.0	35.0	60.0	30.0
Total Split (%)	15.6%	15.6%	15.6%	21.9%	18.8%	18.8%	18.8%	28.1%	21.9%	21.9%	37.5%	18.8%
Maximum Green (s)	17.3	17.3	17.3	27.0	22.2	22.2	22.2	36.8	27.0	27.0	52.0	22.2
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	4.5	5.6	5.6	5.6	5.6	4.5
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	3.3	2.6	2.4	2.4	2.4	3.3
Lost Time Adjust (s)		-2.7	-2.7	-3.0		-2.8	-2.8	-3.2		-3.0	-3.0	-2.8
Total Lost Time (s)		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.5	3.0	3.0	4.0	4.0
Recall Mode	None	None	None	None	None	None	None	None	None	None	C-Max	None
Act Effct Green (s)		22.4	19.4	49.3		25.3	22.3	62.1		24.8	60.5	90.7
Actuated g/C Ratio		0.14	0.12	0.31		0.16	0.14	0.39		0.16	0.38	0.57
v/c Ratio		0.57	0.65	0.21		0.68	0.69	0.54		0.47	0.85	0.41
Control Delay		69.1	75.5	41.6		70.5	79.2	40.4		44.4	36.8	20.7
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		69.1	75.5	41.6		70.5	79.2	40.4		44.4	36.8	20.7
LOS		E	E	D		E	E	D		D	D	C
Approach Delay			67.6				60.9				34.5	
Approach LOS			E				E				C	

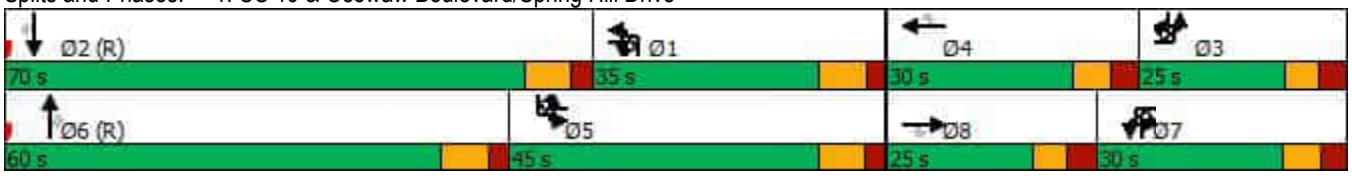
Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	302	1171	95
Future Volume (vph)	2	302	1171	95
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		275		525
Storage Lanes		2		1
Taper Length (ft)		100		
Lane Util. Factor	0.91	0.97	0.91	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	3433	5085	1583
Flt Permitted		0.950		
Satd. Flow (perm)	0	3433	5085	1583
Right Turn on Red				No
Satd. Flow (RTOR)				
Link Speed (mph)			55	
Link Distance (ft)			1088	
Travel Time (s)			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	336	1301	106
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	338	1301	106
Turn Type	Prot	Prot	NA	pm+ov
Protected Phases	5!	5	2	3!
Permitted Phases				2
Detector Phase	5	5	2	3
Switch Phase				
Minimum Initial (s)	5.0	5.0	20.0	5.0
Minimum Split (s)	13.2	13.2	28.2	12.7
Total Split (s)	45.0	45.0	70.0	25.0
Total Split (%)	28.1%	28.1%	43.8%	15.6%
Maximum Green (s)	36.8	36.8	61.8	17.3
Yellow Time (s)	5.6	5.6	5.6	4.1
All-Red Time (s)	2.6	2.6	2.6	3.6
Lost Time Adjust (s)		-3.2	-3.2	-2.7
Total Lost Time (s)		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	4.0	4.0
Recall Mode	None	None	C-Max	None
Act Effct Green (s)		34.8	70.5	97.9
Actuated g/C Ratio		0.22	0.44	0.61
v/c Ratio		0.45	0.58	0.11
Control Delay		55.7	36.0	14.8
Queue Delay		0.0	0.0	0.0
Total Delay		55.7	36.0	14.8
LOS		E	D	B
Approach Delay			38.5	
Approach LOS			D	

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Queue Length 50th (ft)		136	148	77		185	179	259		131	347	118
Queue Length 95th (ft)		195	202	124		248	264	338		m159	#572	249
Internal Link Dist (ft)			272				1005				811	
Turn Bay Length (ft)				175				175		475		525
Base Capacity (vph)		481	453	479		560	293	605		331	1921	896
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		0.57	0.62	0.21		0.66	0.61	0.54		0.39	0.85	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 2 (1%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 44.1		Intersection LOS: D	
Intersection Capacity Utilization 79.2%		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.
! Phase conflict between lane groups.

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Lane Group	SBU	SBL	SBT	SBR
Queue Length 50th (ft)		158	395	46
Queue Length 95th (ft)		202	447	83
Internal Link Dist (ft)			1008	
Turn Bay Length (ft)		275		525
Base Capacity (vph)		858	2239	968
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.39	0.58	0.11

Intersection Summary

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	31	1090	1673	51
Future Vol, veh/h	0	16	31	1090	1673	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	475	-	-	350
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	34	1211	1859	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	930	1916	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	0	231	138	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	231	138	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.9	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	138	-	231	-	-
HCM Lane V/C Ratio	0.25	-	0.077	-	-
HCM Control Delay (s)	39.6	-	21.9	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	0.9	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	57	3	49	1986	1470	130
Future Vol, veh/h	0	57	3	49	1986	1470	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Stop	-	-	None	-	None
Storage Length	-	0	-	475	-	-	350
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	63	3	54	2207	1633	144

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	-	817	1192	1777	0	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.64	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	2.32	3.12	-	-	-
Pot Cap-1 Maneuver	0	274	344	162	-	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	-	274	166	166	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	166	-	274	-	-
HCM Lane V/C Ratio	0.348	-	0.231	-	-
HCM Control Delay (s)	37.9	-	22	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	0.9	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	93	18	12	68	17	42	7	19	984	75	2	53
Future Volume (vph)	93	18	12	68	17	42	7	19	984	75	2	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.971				0.850				0.850		
Flt Protected	0.950	0.975			0.962			0.950				0.950
Satd. Flow (prot)	1681	1675	0	0	1792	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.975			0.962			0.950				0.950
Satd. Flow (perm)	1681	1675	0	0	1792	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	20	13	76	19	47	8	21	1093	83	2	59
Shared Lane Traffic (%)	34%											
Lane Group Flow (vph)	68	68	0	0	95	47	0	29	1093	83	0	61
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	28.0	28.0		27.0	27.0	25.0	25.0	25.0	60.0	27.0	25.0	25.0
Total Split (%)	20.0%	20.0%		19.3%	19.3%	17.9%	17.9%	17.9%	42.9%	19.3%	17.9%	17.9%
Maximum Green (s)	19.6	19.6		19.6	19.6	17.5	17.4	17.4	52.4	19.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	14.4	14.4			15.1	30.8		13.8	80.2	96.4		13.7
Actuated g/C Ratio	0.10	0.10			0.11	0.22		0.10	0.57	0.69		0.10
v/c Ratio	0.39	0.40			0.49	0.14		0.17	0.38	0.08		0.35
Control Delay	64.5	64.6			66.8	40.5		59.5	18.7	4.9		48.7
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	64.5	64.6			66.8	40.5		59.5	18.7	4.9		48.7
LOS	E	E			E	D		E	B	A		D
Approach Delay		64.5			58.1				18.7			
Approach LOS		E			E				B			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1546	86
Future Volume (vph)	1546	86
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1718	96
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1718	96
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	60.0	28.0
Total Split (%)	42.9%	20.0%
Maximum Green (s)	52.5	19.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	83.7	103.2
Actuated g/C Ratio	0.60	0.74
v/c Ratio	0.56	0.08
Control Delay	9.5	4.9
Queue Delay	0.0	0.0
Total Delay	9.5	4.9
LOS	A	A
Approach Delay	10.6	
Approach LOS	B	

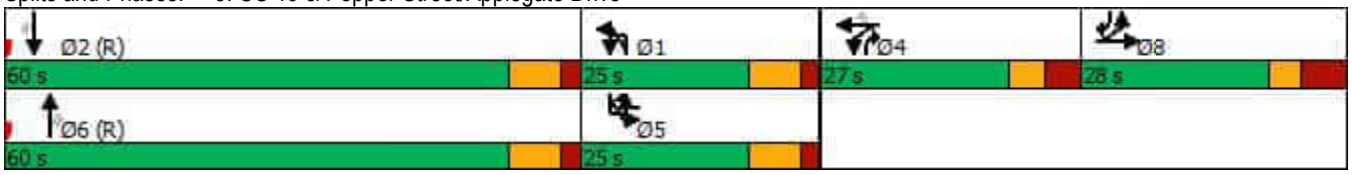
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	62	62			83	34		25	199	11		55
Queue Length 95th (ft)	111	111			137	64		57	287	25		m97
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	276	275			281	361		252	2914	1167		252
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	0.25	0.25			0.34	0.13		0.12	0.38	0.07		0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 51 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

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

! Phase conflict between lane groups.

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	130	17
Queue Length 95th (ft)	226	m30
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	3041	1164
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.56	0.08

Intersection Summary

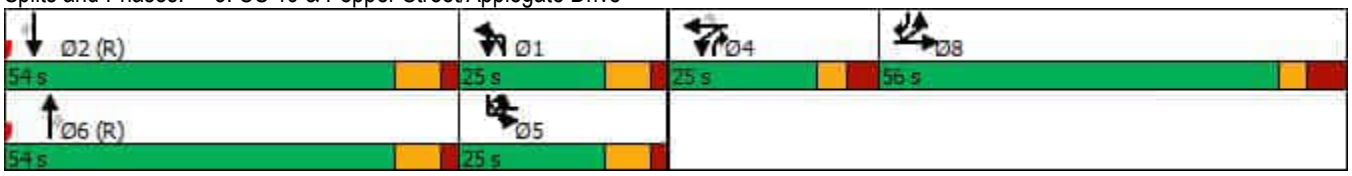
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	181	64	28	147	36	115	6	61	1734	181	8	60
Future Volume (vph)	181	64	28	147	36	115	6	61	1734	181	8	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.969				0.850				0.850		
Flt Protected	0.950	0.984			0.961			0.950				0.950
Satd. Flow (prot)	1681	1687	0	0	1790	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.984			0.961			0.950				0.950
Satd. Flow (perm)	1681	1687	0	0	1790	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	201	71	31	163	40	128	7	68	1927	201	9	67
Shared Lane Traffic (%)	25%											
Lane Group Flow (vph)	151	152	0	0	203	128	0	75	1927	201	0	76
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	56.0	56.0		25.0	25.0	25.0	25.0	25.0	54.0	25.0	25.0	25.0
Total Split (%)	35.0%	35.0%		15.6%	15.6%	15.6%	15.6%	15.6%	33.8%	15.6%	15.6%	15.6%
Maximum Green (s)	47.6	47.6		17.6	17.6	17.5	17.4	17.4	46.4	17.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	23.5	23.5			21.4	43.7		17.3	77.8	99.2		17.3
Actuated g/C Ratio	0.15	0.15			0.13	0.27		0.11	0.49	0.62		0.11
v/c Ratio	0.61	0.62			0.85	0.30		0.39	0.78	0.20		0.40
Control Delay	74.0	74.1			96.6	47.7		71.9	37.9	7.9		51.8
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	74.0	74.1			96.6	47.7		71.9	37.9	7.9		51.8
LOS	E	E			F	D		E	D	A		D
Approach Delay		74.0			77.7				36.3			
Approach LOS		E			E				D			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1262	162
Future Volume (vph)	1262	162
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1402	180
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1402	180
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	54.0	56.0
Total Split (%)	33.8%	35.0%
Maximum Green (s)	46.5	47.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	77.8	106.3
Actuated g/C Ratio	0.49	0.66
v/c Ratio	0.57	0.17
Control Delay	12.9	6.2
Queue Delay	0.0	0.0
Total Delay	12.9	6.2
LOS	B	A
Approach Delay	13.9	
Approach LOS	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	158	160			210	105		74	610	44		77
Queue Length 95th (ft)	229	230			#371	167		130	741	84		m132
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	535	537			239	424		221	2473	981		221
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	0.28	0.28			0.85	0.30		0.34	0.78	0.20		0.34

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 74.4%		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.			
! Phase conflict between lane groups.			

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	116	32
Queue Length 95th (ft)	172	45
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	2473	1051
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.57	0.17

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	1	62	15	25	3	42	90	18	33	2
Future Vol, veh/h	4	4	1	62	15	25	3	42	90	18	33	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	1	69	17	28	3	47	100	20	37	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	7.6	8.1	8.1	8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	44%	61%	100%	0%
Vol Thru, %	0%	32%	44%	15%	0%	94%
Vol Right, %	0%	68%	11%	25%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	132	9	102	18	35
LT Vol	3	0	4	62	18	0
Through Vol	0	42	4	15	0	33
RT Vol	0	90	1	25	0	2
Lane Flow Rate	3	147	10	113	20	39
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.005	0.18	0.013	0.139	0.03	0.053
Departure Headway (Hd)	5.39	4.409	4.573	4.407	5.439	4.897
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	668	818	785	816	660	733
Service Time	3.09	2.109	2.589	2.419	3.155	2.613
HCM Lane V/C Ratio	0.004	0.18	0.013	0.138	0.03	0.053
HCM Control Delay	8.1	8.1	7.6	8.1	8.3	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0	0.5	0.1	0.2

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	68	7	103	79	64	9	87	160	36	83	24
Future Vol, veh/h	8	68	7	103	79	64	9	87	160	36	83	24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	76	8	114	88	71	10	97	178	40	92	27
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.5	11.6	11.5	9.8
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	10%	42%	100%	0%
Vol Thru, %	0%	35%	82%	32%	0%	78%
Vol Right, %	0%	65%	8%	26%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	247	83	246	36	107
LT Vol	9	0	8	103	36	0
Through Vol	0	87	68	79	0	83
RT Vol	0	160	7	64	0	24
Lane Flow Rate	10	274	92	273	40	119
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.017	0.405	0.142	0.396	0.072	0.19
Departure Headway (Hd)	6.285	5.319	5.562	5.214	6.435	5.768
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	570	678	645	692	557	623
Service Time	4.013	3.047	3.598	3.242	4.166	3.499
HCM Lane V/C Ratio	0.018	0.404	0.143	0.395	0.072	0.191
HCM Control Delay	9.1	11.6	9.5	11.6	9.7	9.9
HCM Lane LOS	A	B	A	B	A	A
HCM 95th-tile Q	0.1	2	0.5	1.9	0.2	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	54	61	72	8	14	36
Future Volume (Veh/h)	54	61	72	8	14	36
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	60	68	80	9	16	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		120	0	160	120
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		120	0	160	120
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	96		89	99	98	95
cM capacity (veh/h)	1623		742	1085	713	742

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	60	68	89	16	40
Volume Left	60	0	0	16	0
Volume Right	0	68	9	0	0
cSH	1623	1700	825	713	742
Volume to Capacity	0.04	0.04	0.11	0.02	0.05
Queue Length 95th (ft)	3	0	9	2	4
Control Delay (s)	7.3	0.0	10.2	10.2	10.1
Lane LOS	A		B	B	B
Approach Delay (s)	3.4		10.2	10.1	
Approach LOS			B	B	

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	88	89	169	26	36	69
Future Volume (Veh/h)	88	89	169	26	36	69
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	98	99	188	29	40	77
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		196	0	290	196
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		196	0	290	196
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	94		71	97	92	88
cM capacity (veh/h)	1623		657	1085	480	657

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	98	99	217	40	77
Volume Left	98	0	0	40	0
Volume Right	0	99	29	0	0
cSH	1623	1700	759	480	657
Volume to Capacity	0.06	0.06	0.29	0.08	0.12
Queue Length 95th (ft)	5	0	30	7	10
Control Delay (s)	7.4	0.0	12.1	13.2	11.2
Lane LOS	A		B	B	B
Approach Delay (s)	3.7		12.1	11.9	
Approach LOS			B	B	

Intersection Summary			
Average Delay	8.9		
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	6	0	0	0	19	55	2	0	21	0
Future Vol, veh/h	0	2	6	0	0	0	19	55	2	0	21	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	7	0	0	0	21	61	2	0	23	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	6.8	0	7.7	7.3
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	96%	25%	100%	100%
Vol Right, %	0%	4%	75%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	57	8	0	21
LT Vol	19	0	0	0	0
Through Vol	0	55	2	0	21
RT Vol	0	2	6	0	0
Lane Flow Rate	21	63	9	0	23
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.03	0.08	0.009	0	0.027
Departure Headway (Hd)	5.061	4.537	3.666	4.124	4.111
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	711	794	962	0	870
Service Time	2.767	2.242	1.741	2.201	2.141
HCM Lane V/C Ratio	0.03	0.079	0.009	0	0.026
HCM Control Delay	7.9	7.6	6.8	7.2	7.3
HCM Lane LOS	A	A	A	N	A
HCM 95th-tile Q	0.1	0.3	0	0	0.1

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	3	1	9	29	180	7	4	23	0
Future Vol, veh/h	0	0	16	3	1	9	29	180	7	4	23	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	3	1	10	32	200	8	4	26	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.1	7.3	8.8	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	23%	15%
Vol Thru, %	0%	96%	0%	8%	85%
Vol Right, %	0%	4%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	187	16	13	27
LT Vol	29	0	0	3	4
Through Vol	0	180	0	1	23
RT Vol	0	7	16	9	0
Lane Flow Rate	32	208	18	14	30
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.046	0.264	0.02	0.017	0.036
Departure Headway (Hd)	5.106	4.58	3.986	4.221	4.295
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	785	903	853	821
Service Time	2.828	2.301	1.987	2.222	2.386
HCM Lane V/C Ratio	0.046	0.265	0.02	0.016	0.037
HCM Control Delay	8.1	8.9	7.1	7.3	7.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	1.1	0.1	0.1	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	0	332	22	0	232	8	0	0	53	0	0	3
Future Vol, veh/h	0	332	22	0	232	8	0	0	53	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	369	24	0	258	9	0	0	59	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	197	-	-	129
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	690	0	0	897
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	690	-	-	897
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.7	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	690	-	-	-	897
HCM Lane V/C Ratio	0.085	-	-	-	0.004
HCM Control Delay (s)	10.7	-	-	-	9
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	383	27	0	356	20	0	0	191	0	0	28
Future Vol, veh/h	0	383	27	0	356	20	0	0	191	0	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	426	30	0	396	22	0	0	212	0	0	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	228	-	-	198
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	660	0	0	810
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	660	-	-	810
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13	9.6
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	660	-	-	-	810
HCM Lane V/C Ratio	0.322	-	-	-	0.038
HCM Control Delay (s)	13	-	-	-	9.6
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	1.4	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	28	1	65	1	0	0	7	105	121	0	0	281	21
Future Vol, veh/h	28	1	65	1	0	0	7	105	121	0	0	281	21
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	1	72	1	0	0	8	117	134	0	0	312	23

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	692	708	324	692	719	134	-	335	0	0	134	0	0
Stage 1	324	324	-	368	384	-	-	-	-	-	-	-	-
Stage 2	368	384	-	324	335	-	-	-	-	-	-	-	-
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	358	360	717	358	354	915	-	1224	-	-	1451	-	-
Stage 1	688	650	-	652	611	-	-	-	-	-	-	-	-
Stage 2	652	611	-	688	643	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	358	360	717	321	354	915	~ -16	~ -16	-	-	1451	-	-
Mov Cap-2 Maneuver	358	360	-	321	354	-	-	-	-	-	-	-	-
Stage 1	688	650	-	652	611	-	-	-	-	-	-	-	-
Stage 2	652	611	-	618	643	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	16.3		0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	358	717	321	1451	-	-
HCM Lane V/C Ratio	-	-	-	0.09	0.101	0.003	-	-	-
HCM Control Delay (s)	-	-	-	16	10.6	16.3	0	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.3	0.3	0	0	-	-

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

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	37	2	162	18	4	3	21	174	198	0	2	220	21
Future Vol, veh/h	37	2	162	18	4	3	21	174	198	0	2	220	21
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	2	180	20	4	3	23	193	220	0	2	244	23

Major/Minor	Minor2			Minor1				Major1			Major2		
Conflicting Flow All	870	912	256	867	923	220	-	267	0	0	220	0	0
Stage 1	260	260	-	606	652	-	-	-	-	-	-	-	-
Stage 2	610	652	-	261	271	-	-	-	-	-	-	-	-
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	272	274	783	273	270	820	-	1297	-	-	1349	-	-
Stage 1	745	693	-	484	464	-	-	-	-	-	-	-	-
Stage 2	482	464	-	744	685	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	267	274	783	209	270	820	~ -9	~ -9	-	-	1349	-	-
Mov Cap-2 Maneuver	267	274	-	209	270	-	-	-	-	-	-	-	-
Stage 1	745	692	-	484	464	-	-	-	-	-	-	-	-
Stage 2	475	464	-	570	684	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13	22		0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	267	783	239	1349	-	-
HCM Lane V/C Ratio	-	-	-	0.162	0.23	0.116	0.002	-	-
HCM Control Delay (s)	-	-	-	21.1	11	22	7.7	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.6	0.9	0.4	0	-	-

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

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

2027 NO-BUILD

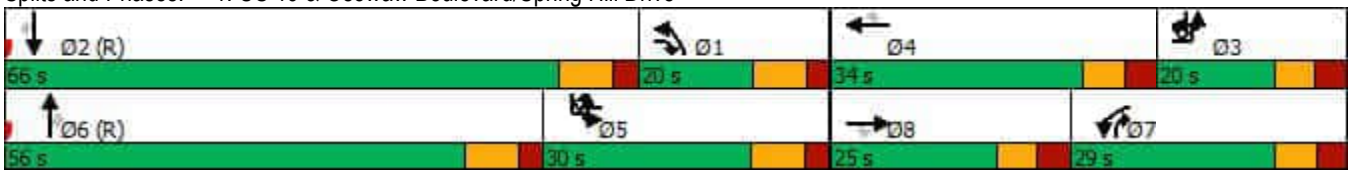
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	2	126	139	87	394	122	220	65	949	164	2	157
Future Volume (vph)	2	126	139	87	394	122	220	65	949	164	2	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175	0		175	475		525		275
Storage Lanes		2		2	2		2	1		1		2
Taper Length (ft)		100			100			100				100
Lane Util. Factor	0.95	0.97	0.95	1.00	0.97	1.00	1.00	1.00	0.91	1.00	0.91	0.97
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950				0.950
Satd. Flow (prot)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Flt Permitted		0.950			0.950			0.950				0.950
Satd. Flow (perm)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			40			40			55			
Link Distance (ft)			352			1085			891			
Travel Time (s)			6.0			18.5			11.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	140	154	97	438	136	244	72	1054	182	2	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	154	97	438	136	244	72	1054	182	0	176
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot
Protected Phases	3!	3	8	1	7	4	5!	1	6	7	5!	5
Permitted Phases				8			4			6		
Detector Phase	3	3	8	1	7	4	5	1	6	7	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	20.0	5.0	5.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	17.8	13.2	13.0	28.0	12.8	13.2	13.2
Total Split (s)	20.0	20.0	25.0	20.0	29.0	34.0	30.0	20.0	56.0	29.0	30.0	30.0
Total Split (%)	14.3%	14.3%	17.9%	14.3%	20.7%	24.3%	21.4%	14.3%	40.0%	20.7%	21.4%	21.4%
Maximum Green (s)	12.3	12.3	17.3	12.0	21.2	26.2	21.8	12.0	48.0	21.2	21.8	21.8
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	5.6	5.6	5.6	4.5	5.6	5.6
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	2.6	2.4	2.4	3.3	2.6	2.6
Lost Time Adjust (s)		-2.7	-2.7	-3.0	-2.8	-2.8	-3.2	-3.0	-3.0	-2.8		-3.2
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	3.0	3.5	3.0	4.0	4.0	3.5	3.5
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)		21.8	14.5	33.3	25.7	18.3	47.2	13.9	56.0	86.7		23.9
Actuated g/C Ratio		0.16	0.10	0.24	0.18	0.13	0.34	0.10	0.40	0.62		0.17
v/c Ratio		0.27	0.42	0.26	0.70	0.56	0.46	0.41	0.52	0.19		0.30
Control Delay		53.6	62.2	44.4	59.7	65.3	38.5	53.7	19.4	8.7		52.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay		53.6	62.2	44.4	59.7	65.3	38.5	53.7	19.4	8.7		52.0
LOS		D	E	D	E	E	D	D	B	A		D
Approach Delay			54.7			54.3			19.8			
Approach LOS			D			D			B			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1186	42
Future Volume (vph)	1186	42
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		525
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	1088	
Travel Time (s)	13.5	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1318	47
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1318	47
Turn Type	NA	pm+ov
Protected Phases	2	3!
Permitted Phases		2
Detector Phase	2	3
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	28.2	12.7
Total Split (s)	66.0	20.0
Total Split (%)	47.1%	14.3%
Maximum Green (s)	57.8	12.3
Yellow Time (s)	5.6	4.1
All-Red Time (s)	2.6	3.6
Lost Time Adjust (s)	-3.2	-2.7
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	4.0	4.0
Recall Mode	C-Max	None
Act Effct Green (s)	66.0	92.8
Actuated g/C Ratio	0.47	0.66
v/c Ratio	0.55	0.04
Control Delay	28.2	9.7
Queue Delay	0.0	0.0
Total Delay	28.2	9.7
LOS	C	A
Approach Delay	30.4	
Approach LOS	C	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)		58	70	72	191	118	172	64	116	38		72
Queue Length 95th (ft)		94	105	120	252	181	238	118	131	56		108
Internal Link Dist (ft)			272			1005			811			
Turn Bay Length (ft)				175			175	475		525		275
Base Capacity (vph)		534	505	367	642	385	523	189	2034	974		613
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0		0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0		0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0		0
Reduced v/c Ratio		0.27	0.30	0.26	0.68	0.35	0.47	0.38	0.52	0.19		0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 50 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 34.1		Intersection LOS: C	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			
! Phase conflict between lane groups.			

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	319	14
Queue Length 95th (ft)	379	33
Internal Link Dist (ft)	1008	
Turn Bay Length (ft)		525
Base Capacity (vph)	2397	1049
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.55	0.04

Intersection Summary

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	253	260	94	1	340	165	305	1	117	1519	343
Future Volume (vph)	1	253	260	94	1	340	165	305	1	117	1519	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175		0		175		475		525
Storage Lanes		2		2		2		2		1		1
Taper Length (ft)		100				100				100		
Lane Util. Factor	0.95	0.97	0.95	1.00	1.00	0.97	1.00	1.00	0.91	1.00	0.91	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Flt Permitted		0.950				0.950				0.950		
Satd. Flow (perm)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			40				40				55	
Link Distance (ft)			352				1085				891	
Travel Time (s)			6.0				18.5				11.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	281	289	104	1	378	183	339	1	130	1688	381
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	282	289	104	0	379	183	339	0	131	1688	381
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov
Protected Phases	3!	3	8	1!	7!	7	4	5!	1!	1	6	7!
Permitted Phases				8				4				6
Detector Phase	3	3	8	1	7	7	4	5	1	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	5.0	10.0	5.0	5.0	5.0	20.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	12.8	17.8	13.2	13.0	13.0	28.0	12.8
Total Split (s)	25.0	25.0	25.0	35.0	30.0	30.0	30.0	45.0	35.0	35.0	60.0	30.0
Total Split (%)	15.6%	15.6%	15.6%	21.9%	18.8%	18.8%	18.8%	28.1%	21.9%	21.9%	37.5%	18.8%
Maximum Green (s)	17.3	17.3	17.3	27.0	22.2	22.2	22.2	36.8	27.0	27.0	52.0	22.2
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	4.5	5.6	5.6	5.6	5.6	4.5
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	3.3	2.6	2.4	2.4	2.4	3.3
Lost Time Adjust (s)		-2.7	-2.7	-3.0		-2.8	-2.8	-3.2		-3.0	-3.0	-2.8
Total Lost Time (s)		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.5	3.0	3.0	4.0	4.0
Recall Mode	None	None	None	None	None	None	None	None	None	None	C-Max	None
Act Effct Green (s)		22.4	19.5	50.0		25.4	22.4	63.0		25.5	59.6	90.0
Actuated g/C Ratio		0.14	0.12	0.31		0.16	0.14	0.39		0.16	0.37	0.56
v/c Ratio		0.59	0.67	0.21		0.70	0.70	0.54		0.46	0.89	0.43
Control Delay		69.6	76.3	41.3		71.1	80.0	40.1		43.1	39.8	21.8
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		69.6	76.3	41.3		71.1	80.0	40.1		43.1	39.8	21.8
LOS		E	E	D		E	F	D		D	D	C
Approach Delay			68.1				61.3				36.9	
Approach LOS			E				E				D	

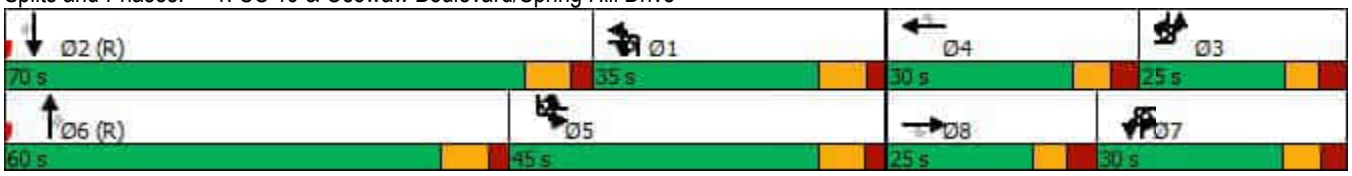
Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	311	1206	98
Future Volume (vph)	2	311	1206	98
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		275		525
Storage Lanes		2		1
Taper Length (ft)		100		
Lane Util. Factor	0.91	0.97	0.91	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	3433	5085	1583
Flt Permitted		0.950		
Satd. Flow (perm)	0	3433	5085	1583
Right Turn on Red				No
Satd. Flow (RTOR)				
Link Speed (mph)			55	
Link Distance (ft)			1088	
Travel Time (s)			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	346	1340	109
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	348	1340	109
Turn Type	Prot	Prot	NA	pm+ov
Protected Phases	5!	5	2	3!
Permitted Phases				2
Detector Phase	5	5	2	3
Switch Phase				
Minimum Initial (s)	5.0	5.0	20.0	5.0
Minimum Split (s)	13.2	13.2	28.2	12.7
Total Split (s)	45.0	45.0	70.0	25.0
Total Split (%)	28.1%	28.1%	43.8%	15.6%
Maximum Green (s)	36.8	36.8	61.8	17.3
Yellow Time (s)	5.6	5.6	5.6	4.1
All-Red Time (s)	2.6	2.6	2.6	3.6
Lost Time Adjust (s)		-3.2	-3.2	-2.7
Total Lost Time (s)		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	4.0	4.0
Recall Mode	None	None	C-Max	None
Act Effct Green (s)		35.5	69.6	97.0
Actuated g/C Ratio		0.22	0.44	0.61
v/c Ratio		0.46	0.61	0.11
Control Delay		55.3	37.0	15.1
Queue Delay		0.0	0.0	0.0
Total Delay		55.3	37.0	15.1
LOS		E	D	B
Approach Delay			39.2	
Approach LOS			D	

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Queue Length 50th (ft)		142	153	79		192	184	266		134	421	133
Queue Length 95th (ft)		200	208	128		256	271	350		m157	#725	m254
Internal Link Dist (ft)			272				1005				811	
Turn Bay Length (ft)				175				175		475		525
Base Capacity (vph)		481	450	483		561	293	611		331	1893	887
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		0.59	0.64	0.22		0.68	0.62	0.55		0.40	0.89	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 2 (1%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 81.1%		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.
! Phase conflict between lane groups.

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	32	1123	1724	53
Future Vol, veh/h	0	16	32	1123	1724	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	475	-	-	350
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	36	1248	1916	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	958	1975	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	0	221	129	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	221	129	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.7	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	129	-	221	-	-
HCM Lane V/C Ratio	0.276	-	0.08	-	-
HCM Control Delay (s)	43.2	-	22.7	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	1	-	0.3	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	59	3	50	2046	1514	134
Future Vol, veh/h	0	59	3	50	2046	1514	134
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Stop	-	-	None	-	None
Storage Length	-	0	-	475	-	-	350
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	66	3	56	2273	1682	149

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	-	841	1228	1831	0	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.64	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	2.32	3.12	-	-	-
Pot Cap-1 Maneuver	0	264	328	152	-	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	-	264	156	156	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.1	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	156	-	264	-	-
HCM Lane V/C Ratio	0.377	-	0.248	-	-
HCM Control Delay (s)	41.6	-	23.1	-	-
HCM Lane LOS	E	-	C	-	-
HCM 95th %tile Q(veh)	1.6	-	1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	96	19	12	70	18	43	7	20	1014	77	2	55
Future Volume (vph)	96	19	12	70	18	43	7	20	1014	77	2	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.972				0.850				0.850		
Flt Protected	0.950	0.975			0.962			0.950				0.950
Satd. Flow (prot)	1681	1677	0	0	1792	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.975			0.962			0.950				0.950
Satd. Flow (perm)	1681	1677	0	0	1792	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	21	13	78	20	48	8	22	1127	86	2	61
Shared Lane Traffic (%)	34%											
Lane Group Flow (vph)	71	70	0	0	98	48	0	30	1127	86	0	63
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	28.0	28.0		27.0	27.0	25.0	25.0	25.0	60.0	27.0	25.0	25.0
Total Split (%)	20.0%	20.0%		19.3%	19.3%	17.9%	17.9%	17.9%	42.9%	19.3%	17.9%	17.9%
Maximum Green (s)	19.6	19.6		19.6	19.6	17.5	17.4	17.4	52.4	19.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	14.7	14.7			15.4	31.1		13.9	79.6	96.0		13.8
Actuated g/C Ratio	0.10	0.10			0.11	0.22		0.10	0.57	0.69		0.10
v/c Ratio	0.40	0.40			0.50	0.14		0.17	0.39	0.08		0.36
Control Delay	64.5	64.4			66.7	40.3		59.4	19.3	5.0		48.5
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	64.5	64.4			66.7	40.3		59.4	19.3	5.0		48.5
LOS	E	E			E	D		E	B	A		D
Approach Delay		64.5			58.0				19.2			
Approach LOS		E			E				B			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1593	89
Future Volume (vph)	1593	89
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1770	99
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1770	99
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	60.0	28.0
Total Split (%)	42.9%	20.0%
Maximum Green (s)	52.5	19.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	83.1	102.8
Actuated g/C Ratio	0.59	0.73
v/c Ratio	0.59	0.09
Control Delay	10.1	5.2
Queue Delay	0.0	0.0
Total Delay	10.1	5.2
LOS	B	A
Approach Delay	11.1	
Approach LOS	B	

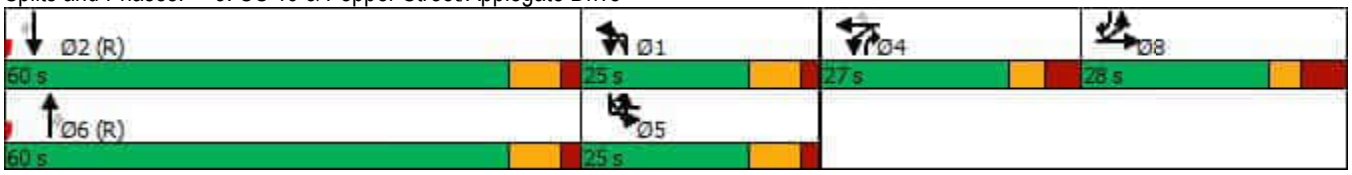
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	64	64			85	35		26	209	12		56
Queue Length 95th (ft)	115	114			142	64		58	301	26		m99
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	276	275			281	364		252	2890	1159		252
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	0.26	0.25			0.35	0.13		0.12	0.39	0.07		0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 51 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			

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

! Phase conflict between lane groups.

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	134	18
Queue Length 95th (ft)	264	m33
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	3017	1159
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.59	0.09

Intersection Summary

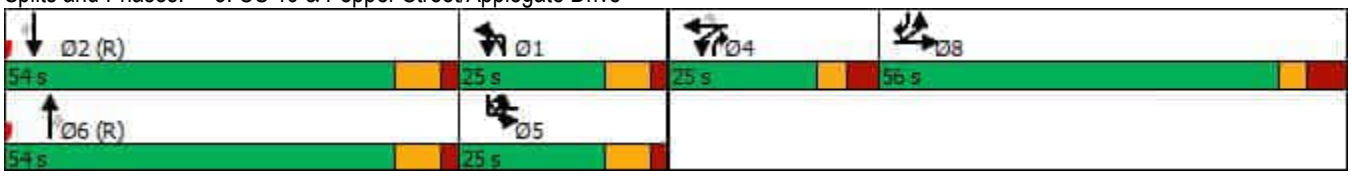
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	186	66	29	151	37	118	6	63	1786	186	8	62
Future Volume (vph)	186	66	29	151	37	118	6	63	1786	186	8	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.969				0.850				0.850		
Flt Protected	0.950	0.984			0.961			0.950				0.950
Satd. Flow (prot)	1681	1687	0	0	1790	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.984			0.961			0.950				0.950
Satd. Flow (perm)	1681	1687	0	0	1790	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	73	32	168	41	131	7	70	1984	207	9	69
Shared Lane Traffic (%)	25%											
Lane Group Flow (vph)	155	157	0	0	209	131	0	77	1984	207	0	78
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	56.0	56.0		25.0	25.0	25.0	25.0	25.0	54.0	25.0	25.0	25.0
Total Split (%)	35.0%	35.0%		15.6%	15.6%	15.6%	15.6%	15.6%	33.8%	15.6%	15.6%	15.6%
Maximum Green (s)	47.6	47.6		17.6	17.6	17.5	17.4	17.4	46.4	17.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	23.9	23.9			21.6	44.0		17.4	77.1	98.7		17.4
Actuated g/C Ratio	0.15	0.15			0.14	0.28		0.11	0.48	0.62		0.11
v/c Ratio	0.62	0.62			0.87	0.30		0.40	0.81	0.21		0.41
Control Delay	73.7	74.0			98.8	47.8		72.1	39.5	8.1		51.0
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	73.7	74.0			98.8	47.8		72.1	39.5	8.1		51.0
LOS	E	E			F	D		E	D	A		D
Approach Delay		73.8			79.1				37.7			
Approach LOS		E			E				D			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1300	167
Future Volume (vph)	1300	167
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1444	186
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1444	186
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	54.0	56.0
Total Split (%)	33.8%	35.0%
Maximum Green (s)	46.5	47.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	77.1	106.0
Actuated g/C Ratio	0.48	0.66
v/c Ratio	0.59	0.18
Control Delay	13.1	6.2
Queue Delay	0.0	0.0
Total Delay	13.1	6.2
LOS	B	A
Approach Delay	14.1	
Approach LOS	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	162	165			217	108		76	644	46		79
Queue Length 95th (ft)	234	237			#386	171		132	781	87		m133
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	535	537			241	426		221	2449	976		221
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	0.29	0.29			0.87	0.31		0.35	0.81	0.21		0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 34.5		Intersection LOS: C	
Intersection Capacity Utilization 75.6%		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.			
! Phase conflict between lane groups.			

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	116	33
Queue Length 95th (ft)	184	47
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	2449	1048
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.59	0.18

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	1	64	15	26	3	43	93	19	34	2
Future Vol, veh/h	4	4	1	64	15	26	3	43	93	19	34	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	1	71	17	29	3	48	103	21	38	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	7.7	8.2	8.1	8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	44%	61%	100%	0%
Vol Thru, %	0%	32%	44%	14%	0%	94%
Vol Right, %	0%	68%	11%	25%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	136	9	105	19	36
LT Vol	3	0	4	64	19	0
Through Vol	0	43	4	15	0	34
RT Vol	0	93	1	26	0	2
Lane Flow Rate	3	151	10	117	21	40
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.005	0.185	0.013	0.143	0.032	0.055
Departure Headway (Hd)	5.401	4.419	4.593	4.421	5.454	4.913
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	667	818	781	813	659	732
Service Time	3.101	2.119	2.61	2.434	3.167	2.626
HCM Lane V/C Ratio	0.004	0.185	0.013	0.144	0.032	0.055
HCM Control Delay	8.1	8.1	7.7	8.2	8.3	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0	0.5	0.1	0.2

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	70	7	106	81	66	9	90	165	37	86	25
Future Vol, veh/h	8	70	7	106	81	66	9	90	165	37	86	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	78	8	118	90	73	10	100	183	41	96	28
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.7	12	11.9	10
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	9%	42%	100%	0%
Vol Thru, %	0%	35%	82%	32%	0%	77%
Vol Right, %	0%	65%	8%	26%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	255	85	253	37	111
LT Vol	9	0	8	106	37	0
Through Vol	0	90	70	81	0	86
RT Vol	0	165	7	66	0	25
Lane Flow Rate	10	283	94	281	41	123
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.018	0.423	0.148	0.411	0.074	0.2
Departure Headway (Hd)	6.337	5.371	5.634	5.268	6.493	5.825
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	566	672	636	683	552	617
Service Time	4.067	3.101	3.677	3.302	4.23	3.561
HCM Lane V/C Ratio	0.018	0.421	0.148	0.411	0.074	0.199
HCM Control Delay	9.2	12	9.7	12	9.8	10
HCM Lane LOS	A	B	A	B	A	A
HCM 95th-tile Q	0.1	2.1	0.5	2	0.2	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	56	63	74	8	14	37
Future Volume (Veh/h)	56	63	74	8	14	37
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	62	70	82	9	16	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		124	0	165	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		124	0	165	124
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	96		89	99	98	94
cM capacity (veh/h)	1623		737	1085	705	737

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	62	70	91	16	41
Volume Left	62	0	0	16	0
Volume Right	0	70	9	0	0
cSH	1623	1700	818	705	737
Volume to Capacity	0.04	0.04	0.11	0.02	0.06
Queue Length 95th (ft)	3	0	9	2	4
Control Delay (s)	7.3	0.0	10.3	10.2	10.2
Lane LOS	A		B	B	B
Approach Delay (s)	3.4		10.3	10.2	
Approach LOS			B	B	

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	92	174	27	37	71
Future Volume (Veh/h)	91	92	174	27	37	71
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	101	102	193	30	41	79
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		202	0	298	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		202	0	298	202
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	94		70	97	91	88
cM capacity (veh/h)	1623		651	1085	468	651

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	101	102	223	41	79
Volume Left	101	0	0	41	0
Volume Right	0	102	30	0	0
cSH	1623	1700	752	468	651
Volume to Capacity	0.06	0.06	0.30	0.09	0.12
Queue Length 95th (ft)	5	0	31	7	10
Control Delay (s)	7.4	0.0	12.2	13.4	11.3
Lane LOS	A		B	B	B
Approach Delay (s)	3.7		12.2	12.0	
Approach LOS			B	B	

Intersection Summary			
Average Delay	9.0		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	6	0	0	0	20	57	2	0	22	0
Future Vol, veh/h	0	2	6	0	0	0	20	57	2	0	22	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	7	0	0	0	22	63	2	0	24	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	6.8	0	7.8	7.3
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	97%	25%	100%	100%
Vol Right, %	0%	3%	75%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	59	8	0	22
LT Vol	20	0	0	0	0
Through Vol	0	57	2	0	22
RT Vol	0	2	6	0	0
Lane Flow Rate	22	66	9	0	24
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.031	0.083	0.009	0	0.028
Departure Headway (Hd)	5.062	4.538	3.673	4.131	4.113
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	711	793	960	0	869
Service Time	2.767	2.243	1.75	2.21	2.144
HCM Lane V/C Ratio	0.031	0.083	0.009	0	0.028
HCM Control Delay	7.9	7.7	6.8	7.2	7.3
HCM Lane LOS	A	A	A	N	A
HCM 95th-tile Q	0.1	0.3	0	0	0.1

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	3	1	9	30	185	7	4	24	0
Future Vol, veh/h	0	0	16	3	1	9	30	185	7	4	24	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	3	1	10	33	206	8	4	27	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.1	7.3	8.9	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	23%	14%
Vol Thru, %	0%	96%	0%	8%	86%
Vol Right, %	0%	4%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	192	16	13	28
LT Vol	30	0	0	3	4
Through Vol	0	185	0	1	24
RT Vol	0	7	16	9	0
Lane Flow Rate	33	213	18	14	31
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.047	0.271	0.02	0.017	0.037
Departure Headway (Hd)	5.107	4.581	4.002	4.237	4.298
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	703	785	900	850	820
Service Time	2.828	2.302	2.003	2.238	2.391
HCM Lane V/C Ratio	0.047	0.271	0.02	0.016	0.038
HCM Control Delay	8.1	9	7.1	7.3	7.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	1.1	0.1	0.1	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	0	342	23	0	239	8	0	0	55	0	0	3
Future Vol, veh/h	0	342	23	0	239	8	0	0	55	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	380	26	0	266	9	0	0	61	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	203	-	-	133
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	684	0	0	892
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	684	-	-	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.8	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	684	-	-	-	892
HCM Lane V/C Ratio	0.089	-	-	-	0.004
HCM Control Delay (s)	10.8	-	-	-	9.1
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	395	28	0	367	21	0	0	197	0	0	29
Future Vol, veh/h	0	395	28	0	367	21	0	0	197	0	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	439	31	0	408	23	0	0	219	0	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	235	-	-	204
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	653	0	0	803
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	653	-	-	803
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.3	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	653	-	-	-	803
HCM Lane V/C Ratio	0.335	-	-	-	0.04
HCM Control Delay (s)	13.3	-	-	-	9.7
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	1.5	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	29	1	67	1	0	0	7	108	125	0	0	289	22
Future Vol, veh/h	29	1	67	1	0	0	7	108	125	0	0	289	22
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1	74	1	0	0	8	120	139	0	0	321	24

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	712	728	333	713	740	139	-	345	0	0	139	0	0
Stage 1	333	333	-	379	395	-	-	-	-	-	-	-	-
Stage 2	379	395	-	334	345	-	-	-	-	-	-	-	-
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	347	350	709	347	345	909	-	1214	-	-	1445	-	-
Stage 1	681	644	-	643	605	-	-	-	-	-	-	-	-
Stage 2	643	605	-	680	636	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	347	350	709	310	345	909	~ -17	~ -17	-	-	1445	-	-
Mov Cap-2 Maneuver	347	350	-	310	345	-	-	-	-	-	-	-	-
Stage 1	681	644	-	643	605	-	-	-	-	-	-	-	-
Stage 2	643	605	-	608	636	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.5	16.7		0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	347	709	310	1445	-	-
HCM Lane V/C Ratio	-	-	-	0.096	0.105	0.004	-	-	-
HCM Control Delay (s)	-	-	-	16.5	10.7	16.7	0	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.3	0.3	0	0	-	-

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

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	38	2	167	19	4	3	22	179	204	0	2	227	22
Future Vol, veh/h	38	2	167	19	4	3	22	179	204	0	2	227	22
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	2	186	21	4	3	24	199	227	0	2	252	24

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	897	941	264	894	953	227	-	276	0	0	227	0	0
Stage 1	268	268	-	625	673	-	-	-	-	-	-	-	-
Stage 2	629	673	-	269	280	-	-	-	-	-	-	-	-
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	261	263	775	262	259	812	-	1287	-	-	1341	-	-
Stage 1	738	687	-	473	454	-	-	-	-	-	-	-	-
Stage 2	470	454	-	737	679	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	256	263	775	198	259	812	~ -9	~ -9	-	-	1341	-	-
Mov Cap-2 Maneuver	256	263	-	198	259	-	-	-	-	-	-	-	-
Stage 1	738	686	-	473	454	-	-	-	-	-	-	-	-
Stage 2	463	454	-	558	678	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	23.3		0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	256	775	226	1341	-	-
HCM Lane V/C Ratio	-	-	-	0.174	0.239	0.128	0.002	-	-
HCM Control Delay (s)	-	-	-	22	11.1	23.3	7.7	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.6	0.9	0.4	0	-	-

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

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

2027 BUILD

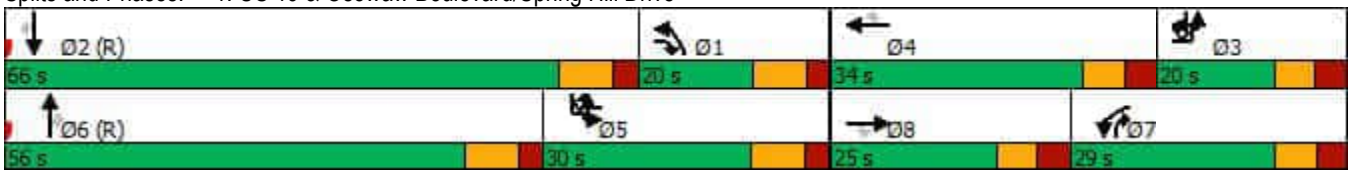
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	2	146	146	98	401	124	220	66	938	165	2	157
Future Volume (vph)	2	146	146	98	401	124	220	66	938	165	2	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175	0		175	475		525		275
Storage Lanes		2		2	2		2	1		1		2
Taper Length (ft)		100			100			100				100
Lane Util. Factor	0.95	0.97	0.95	1.00	0.97	1.00	1.00	1.00	0.91	1.00	0.91	0.97
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950				0.950
Satd. Flow (prot)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Flt Permitted		0.950			0.950			0.950				0.950
Satd. Flow (perm)	0	3433	3539	1583	3433	1863	1583	1770	5085	1583	0	3433
Right Turn on Red				No			No			No		
Satd. Flow (RTOR)												
Link Speed (mph)			40			40			55			
Link Distance (ft)			352			1085			891			
Travel Time (s)			6.0			18.5			11.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	162	162	109	446	138	244	73	1042	183	2	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	162	109	446	138	244	73	1042	183	0	176
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	Prot
Protected Phases	3!	3	8	1	7	4	5!	1	6	7	5!	5
Permitted Phases				8			4			6		
Detector Phase	3	3	8	1	7	4	5	1	6	7	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	20.0	5.0	5.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	17.8	13.2	13.0	28.0	12.8	13.2	13.2
Total Split (s)	20.0	20.0	25.0	20.0	29.0	34.0	30.0	20.0	56.0	29.0	30.0	30.0
Total Split (%)	14.3%	14.3%	17.9%	14.3%	20.7%	24.3%	21.4%	14.3%	40.0%	20.7%	21.4%	21.4%
Maximum Green (s)	12.3	12.3	17.3	12.0	21.2	26.2	21.8	12.0	48.0	21.2	21.8	21.8
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	5.6	5.6	5.6	4.5	5.6	5.6
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	2.6	2.4	2.4	3.3	2.6	2.6
Lost Time Adjust (s)		-2.7	-2.7	-3.0	-2.8	-2.8	-3.2	-3.0	-3.0	-2.8		-3.2
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	3.0	3.5	3.0	4.0	4.0	3.5	3.5
Recall Mode	None	None	None	None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)		22.1	14.7	33.9	25.9	18.5	47.6	14.1	55.3	86.1		24.1
Actuated g/C Ratio		0.16	0.10	0.24	0.18	0.13	0.34	0.10	0.40	0.62		0.17
v/c Ratio		0.30	0.44	0.29	0.70	0.56	0.45	0.41	0.52	0.19		0.30
Control Delay		54.0	62.2	44.6	59.9	65.2	38.2	53.2	19.6	8.8		51.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay		54.0	62.2	44.6	59.9	65.2	38.2	53.2	19.6	8.8		51.8
LOS		D	E	D	E	E	D	D	B	A		D
Approach Delay			54.7			54.4			20.0			
Approach LOS			D			D			B			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1194	44
Future Volume (vph)	1194	44
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		525
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	1088	
Travel Time (s)	13.5	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1327	49
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1327	49
Turn Type	NA	pm+ov
Protected Phases	2	3!
Permitted Phases		2
Detector Phase	2	3
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	28.2	12.7
Total Split (s)	66.0	20.0
Total Split (%)	47.1%	14.3%
Maximum Green (s)	57.8	12.3
Yellow Time (s)	5.6	4.1
All-Red Time (s)	2.6	3.6
Lost Time Adjust (s)	-3.2	-2.7
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	4.0	4.0
Recall Mode	C-Max	None
Act Effct Green (s)	65.3	92.4
Actuated g/C Ratio	0.47	0.66
v/c Ratio	0.56	0.05
Control Delay	28.8	9.8
Queue Delay	0.0	0.0
Total Delay	28.8	9.8
LOS	C	A
Approach Delay	30.8	
Approach LOS	C	

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)		68	74	81	194	120	171	65	116	39		72
Queue Length 95th (ft)		107	110	133	257	182	238	119	130	56		108
Internal Link Dist (ft)			272			1005			811			
Turn Bay Length (ft)				175			175	475		525		275
Base Capacity (vph)		542	505	369	646	385	525	189	2007	968		613
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0		0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0		0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0		0
Reduced v/c Ratio		0.30	0.32	0.30	0.69	0.36	0.46	0.39	0.52	0.19		0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 50 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 34.7		Intersection LOS: C	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			
! Phase conflict between lane groups.			

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	324	15
Queue Length 95th (ft)	383	34
Internal Link Dist (ft)	1008	
Turn Bay Length (ft)		525
Base Capacity (vph)	2370	1044
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.56	0.05

Intersection Summary

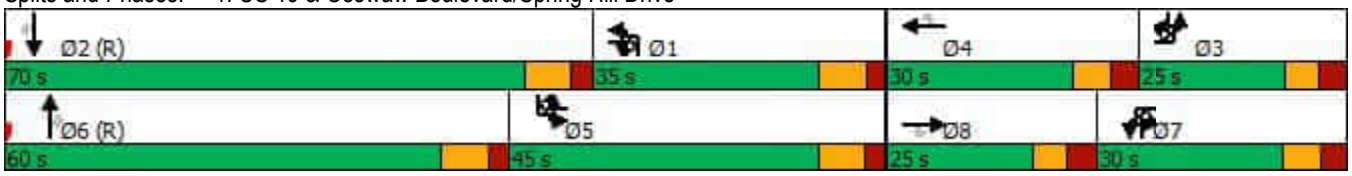
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	283	273	101	1	353	167	305	1	120	1506	347
Future Volume (vph)	1	283	273	101	1	353	167	305	1	120	1506	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		175		0		175		475		525
Storage Lanes		2		2		2		2		1		1
Taper Length (ft)		100				100				100		
Lane Util. Factor	0.95	0.97	0.95	1.00	1.00	0.97	1.00	1.00	0.91	1.00	0.91	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Flt Permitted		0.950				0.950				0.950		
Satd. Flow (perm)	0	3433	3539	1583	0	3433	1863	1583	0	1770	5085	1583
Right Turn on Red				No				No				No
Satd. Flow (RTOR)												
Link Speed (mph)			40				40				55	
Link Distance (ft)			352				1085				891	
Travel Time (s)			6.0				18.5				11.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1	314	303	112	1	392	186	339	1	133	1673	386
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	315	303	112	0	393	186	339	0	134	1673	386
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov
Protected Phases	3!	3	8	1!	7!	7	4	5!	1!	1	6	7!
Permitted Phases				8				4				6
Detector Phase	3	3	8	1	7	7	4	5	1	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	10.0	5.0	5.0	5.0	10.0	5.0	5.0	5.0	20.0	5.0
Minimum Split (s)	12.7	12.7	17.7	13.0	12.8	12.8	17.8	13.2	13.0	13.0	28.0	12.8
Total Split (s)	25.0	25.0	25.0	35.0	30.0	30.0	30.0	45.0	35.0	35.0	60.0	30.0
Total Split (%)	15.6%	15.6%	15.6%	21.9%	18.8%	18.8%	18.8%	28.1%	21.9%	21.9%	37.5%	18.8%
Maximum Green (s)	17.3	17.3	17.3	27.0	22.2	22.2	22.2	36.8	27.0	27.0	52.0	22.2
Yellow Time (s)	4.1	4.1	4.1	5.6	4.5	4.5	4.5	5.6	5.6	5.6	5.6	4.5
All-Red Time (s)	3.6	3.6	3.6	2.4	3.3	3.3	3.3	2.6	2.4	2.4	2.4	3.3
Lost Time Adjust (s)		-2.7	-2.7	-3.0		-2.8	-2.8	-3.2		-3.0	-3.0	-2.8
Total Lost Time (s)		5.0	5.0	5.0		5.0	5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.5	3.0	3.0	4.0	4.0
Recall Mode	None	None	None	None	None	None	None	None	None	None	C-Max	None
Act Effct Green (s)		22.9	19.8	50.3		25.7	22.6	63.1		25.5	59.0	89.7
Actuated g/C Ratio		0.14	0.12	0.31		0.16	0.14	0.39		0.16	0.37	0.56
v/c Ratio		0.64	0.69	0.23		0.71	0.71	0.54		0.48	0.89	0.44
Control Delay		71.2	76.9	41.4		71.8	80.4	40.1		42.7	41.2	22.9
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		71.2	76.9	41.4		71.8	80.4	40.1		42.7	41.2	22.9
LOS		E	E	D		E	F	D		D	D	C
Approach Delay			69.0				61.8				38.1	
Approach LOS			E				E				D	

Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	311	1219	101
Future Volume (vph)	2	311	1219	101
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		275		525
Storage Lanes		2		1
Taper Length (ft)		100		
Lane Util. Factor	0.91	0.97	0.91	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	3433	5085	1583
Flt Permitted		0.950		
Satd. Flow (perm)	0	3433	5085	1583
Right Turn on Red				No
Satd. Flow (RTOR)				
Link Speed (mph)			55	
Link Distance (ft)			1088	
Travel Time (s)			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	346	1354	112
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	348	1354	112
Turn Type	Prot	Prot	NA	pm+ov
Protected Phases	5!	5	2	3!
Permitted Phases				2
Detector Phase	5	5	2	3
Switch Phase				
Minimum Initial (s)	5.0	5.0	20.0	5.0
Minimum Split (s)	13.2	13.2	28.2	12.7
Total Split (s)	45.0	45.0	70.0	25.0
Total Split (%)	28.1%	28.1%	43.8%	15.6%
Maximum Green (s)	36.8	36.8	61.8	17.3
Yellow Time (s)	5.6	5.6	5.6	4.1
All-Red Time (s)	2.6	2.6	2.6	3.6
Lost Time Adjust (s)		-3.2	-3.2	-2.7
Total Lost Time (s)		5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	4.0	4.0
Recall Mode	None	None	C-Max	None
Act Effct Green (s)		35.5	69.0	96.9
Actuated g/C Ratio		0.22	0.43	0.61
v/c Ratio		0.46	0.62	0.12
Control Delay		55.4	37.6	15.2
Queue Delay		0.0	0.0	0.0
Total Delay		55.4	37.6	15.2
LOS		E	D	B
Approach Delay			39.6	
Approach LOS			D	

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Queue Length 50th (ft)		160	160	85		201	187	266		138	412	141
Queue Length 95th (ft)		221	218	137		265	274	350		m159	#713	m259
Internal Link Dist (ft)			272				1005				811	
Turn Bay Length (ft)				175				175		475		525
Base Capacity (vph)		491	453	486		560	293	613		331	1875	881
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		0.64	0.67	0.23		0.70	0.63	0.55		0.40	0.89	0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 2 (1%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 46.4		Intersection LOS: D	
Intersection Capacity Utilization 81.7%		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.			
! Phase conflict between lane groups.			

Splits and Phases: 1: US 19 & Osowaw Boulevard/Spring Hill Drive



Lane Group	SBU	SBL	SBT	SBR
Queue Length 50th (ft)		162	417	50
Queue Length 95th (ft)		208	471	88
Internal Link Dist (ft)			1008	
Turn Bay Length (ft)		275		525
Base Capacity (vph)		858	2193	958
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.41	0.62	0.12

Intersection Summary

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	30	46	1114	1712	91
Future Vol, veh/h	0	30	46	1114	1712	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	-	0	475	-	-	350
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	51	1238	1902	101

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	951	2003	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	0	224	125	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	224	125	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	2.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	125	-	224	-	-
HCM Lane V/C Ratio	0.409	-	0.149	-	-
HCM Control Delay (s)	52.4	-	23.9	-	-
HCM Lane LOS	F	-	C	-	-
HCM 95th %tile Q(veh)	1.7	-	0.5	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Vol, veh/h	0	75	3	73	2037	1506	175
Future Vol, veh/h	0	75	3	73	2037	1506	175
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Stop	-	-	None	-	None
Storage Length	-	0	-	475	-	-	350
Veh in Median Storage, #	0	-	-	-	0	0	-
Grade, %	0	-	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	83	3	81	2263	1673	194

Major/Minor	Minor2		Major1			Major2	
Conflicting Flow All	-	837	1222	1867	0	-	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.64	5.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	2.32	3.12	-	-	-
Pot Cap-1 Maneuver	0	266	331	146	-	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	-	266	148	148	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.6	2.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	148	-	266	-	-
HCM Lane V/C Ratio	0.571	-	0.313	-	-
HCM Control Delay (s)	57.3	-	24.6	-	-
HCM Lane LOS	F	-	C	-	-
HCM 95th %tile Q(veh)	2.9	-	1.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	100	19	21	70	18	44	7	29	1014	77	2	57
Future Volume (vph)	100	19	21	70	18	44	7	29	1014	77	2	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.955				0.850				0.850		
Flt Protected	0.950	0.979			0.962			0.950				0.950
Satd. Flow (prot)	1681	1654	0	0	1792	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.979			0.962			0.950				0.950
Satd. Flow (perm)	1681	1654	0	0	1792	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	111	21	23	78	20	49	8	32	1127	86	2	63
Shared Lane Traffic (%)	29%											
Lane Group Flow (vph)	79	76	0	0	98	49	0	40	1127	86	0	65
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	28.0	28.0		27.0	27.0	25.0	25.0	25.0	60.0	27.0	25.0	25.0
Total Split (%)	20.0%	20.0%		19.3%	19.3%	17.9%	17.9%	17.9%	42.9%	19.3%	17.9%	17.9%
Maximum Green (s)	19.6	19.6		19.6	19.6	17.5	17.4	17.4	52.4	19.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	15.3	15.3			15.4	31.2		14.0	78.9	95.3		13.9
Actuated g/C Ratio	0.11	0.11			0.11	0.22		0.10	0.56	0.68		0.10
v/c Ratio	0.43	0.42			0.50	0.14		0.23	0.39	0.08		0.37
Control Delay	64.7	64.5			66.7	40.2		60.7	19.7	5.2		48.9
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	64.7	64.5			66.7	40.2		60.7	19.7	5.2		48.9
LOS	E	E			E	D		E	B	A		D
Approach Delay		64.6			57.9				20.0			
Approach LOS		E			E				C			

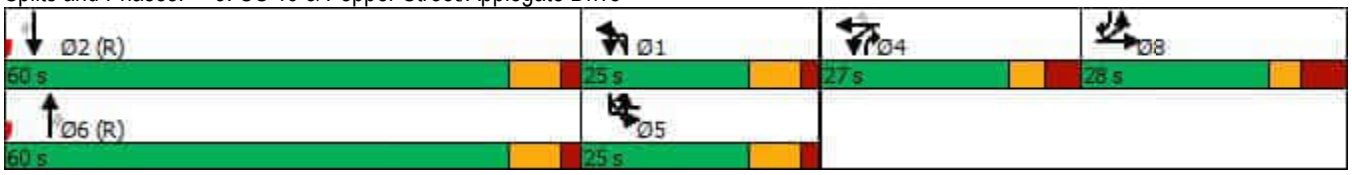
Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1593	89
Future Volume (vph)	1593	89
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1770	99
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1770	99
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	60.0	28.0
Total Split (%)	42.9%	20.0%
Maximum Green (s)	52.5	19.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	78.9	99.2
Actuated g/C Ratio	0.56	0.71
v/c Ratio	0.62	0.09
Control Delay	11.7	5.7
Queue Delay	0.0	0.0
Total Delay	11.7	5.7
LOS	B	A
Approach Delay	12.7	
Approach LOS	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	71	69			85	35		34	212	12		59
Queue Length 95th (ft)	125	121			142	65		72	305	27		m101
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	276	271			281	365		252	2864	1151		252
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	0.29	0.28			0.35	0.13		0.16	0.39	0.07		0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 51 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

! Phase conflict between lane groups.

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	138	18
Queue Length 95th (ft)	283	m34
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	2864	1116
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.62	0.09

Intersection Summary

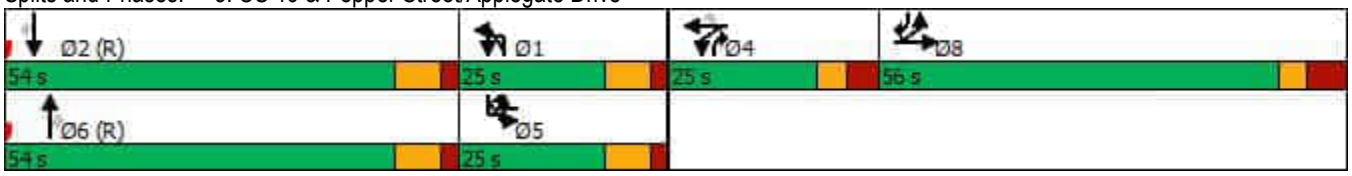
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	193	66	40	151	37	121	6	75	1790	186	8	65
Future Volume (vph)	193	66	40	151	37	121	6	75	1790	186	8	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200		300		325		300
Storage Lanes	1		0	0		1		1		1		1
Taper Length (ft)	100			100				100				100
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.960				0.850				0.850		
Flt Protected	0.950	0.986			0.961			0.950				0.950
Satd. Flow (prot)	1681	1675	0	0	1790	1583	0	1770	5085	1583	0	1770
Flt Permitted	0.950	0.986			0.961			0.950				0.950
Satd. Flow (perm)	1681	1675	0	0	1790	1583	0	1770	5085	1583	0	1770
Right Turn on Red			No			No				No		
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				55			
Link Distance (ft)		455			1096				1049			
Travel Time (s)		12.4			24.9				13.0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	214	73	44	168	41	134	7	83	1989	207	9	72
Shared Lane Traffic (%)	22%											
Lane Group Flow (vph)	167	164	0	0	209	134	0	90	1989	207	0	81
Turn Type	Split	NA		Split	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	Prot
Protected Phases	8	8		4	4	5!	1	1	6	4	5!	5
Permitted Phases						4				6		
Detector Phase	8	8		4	4	5	1	1	6	4	5	5
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	10.0	10.0	10.0	20.0	5.0	10.0	10.0
Minimum Split (s)	13.4	13.4		12.4	12.4	17.5	17.6	17.6	27.6	12.4	17.5	17.5
Total Split (s)	56.0	56.0		25.0	25.0	25.0	25.0	25.0	54.0	25.0	25.0	25.0
Total Split (%)	35.0%	35.0%		15.6%	15.6%	15.6%	15.6%	15.6%	33.8%	15.6%	15.6%	15.6%
Maximum Green (s)	47.6	47.6		17.6	17.6	17.5	17.4	17.4	46.4	17.6	17.5	17.5
Yellow Time (s)	3.4	3.4		3.7	3.7	5.5	5.6	5.6	5.6	3.7	5.5	5.5
All-Red Time (s)	5.0	5.0		3.7	3.7	2.0	2.0	2.0	2.0	3.7	2.0	2.0
Lost Time Adjust (s)	-3.4	-3.4			-2.4	-2.5		-2.6	-2.6	-2.4		-2.5
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.0	5.0	5.0		5.0
Lead/Lag						Lag	Lag	Lag	Lead		Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	None	C-Max	None	None	None
Act Effct Green (s)	25.1	25.1			21.5	44.0		17.5	75.9	97.3		17.5
Actuated g/C Ratio	0.16	0.16			0.13	0.28		0.11	0.47	0.61		0.11
v/c Ratio	0.63	0.62			0.87	0.31		0.46	0.83	0.21		0.42
Control Delay	73.3	72.8			99.5	47.9		74.3	40.9	8.5		51.8
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	73.3	72.8			99.5	47.9		74.3	40.9	8.5		51.8
LOS	E	E			F	D		E	D	A		D
Approach Delay		73.0			79.4				39.3			
Approach LOS		E			E				D			

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1305	167
Future Volume (vph)	1305	167
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		475
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.91	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	5085	1583
Flt Permitted		
Satd. Flow (perm)	5085	1583
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	55	
Link Distance (ft)	939	
Travel Time (s)	11.6	
Peak Hour Factor	0.90	0.90
Adj. Flow (vph)	1450	186
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1450	186
Turn Type	NA	pm+ov
Protected Phases	2	8
Permitted Phases		2
Detector Phase	2	8
Switch Phase		
Minimum Initial (s)	20.0	5.0
Minimum Split (s)	27.5	13.4
Total Split (s)	54.0	56.0
Total Split (%)	33.8%	35.0%
Maximum Green (s)	46.5	47.6
Yellow Time (s)	5.5	3.4
All-Red Time (s)	2.0	5.0
Lost Time Adjust (s)	-2.5	-3.4
Total Lost Time (s)	5.0	5.0
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	4.0	3.0
Recall Mode	C-Max	None
Act Effct Green (s)	75.9	106.0
Actuated g/C Ratio	0.47	0.66
v/c Ratio	0.60	0.18
Control Delay	13.9	6.3
Queue Delay	0.0	0.0
Total Delay	13.9	6.3
LOS	B	A
Approach Delay	14.9	
Approach LOS	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Queue Length 50th (ft)	174	171			218	111		89	654	48		83
Queue Length 95th (ft)	248	245			#386	175		150	795	91		m135
Internal Link Dist (ft)		375			1016				969			
Turn Bay Length (ft)						200		300		325		300
Base Capacity (vph)	535	533			240	426		221	2410	963		221
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	0.31	0.31			0.87	0.31		0.41	0.83	0.21		0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 35.6		Intersection LOS: D	
Intersection Capacity Utilization 76.2%		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.			
! Phase conflict between lane groups.			

Splits and Phases: 3: US 19 & Pepper Street/Applegate Drive



Lane Group	SBT	SBR
Queue Length 50th (ft)	130	34
Queue Length 95th (ft)	206	48
Internal Link Dist (ft)	859	
Turn Bay Length (ft)		475
Base Capacity (vph)	2410	1048
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.60	0.18

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	1	64	15	35	3	43	93	32	34	2
Future Vol, veh/h	4	4	1	64	15	35	3	43	93	32	34	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	1	71	17	39	3	48	103	36	38	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	7.7	8.2	8.2	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	44%	56%	100%	0%
Vol Thru, %	0%	32%	44%	13%	0%	94%
Vol Right, %	0%	68%	11%	31%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	136	9	114	32	36
LT Vol	3	0	4	64	32	0
Through Vol	0	43	4	15	0	34
RT Vol	0	93	1	35	0	2
Lane Flow Rate	3	151	10	127	36	40
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.005	0.187	0.013	0.155	0.054	0.055
Departure Headway (Hd)	5.427	4.444	4.647	4.416	5.478	4.937
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	662	810	772	814	656	728
Service Time	3.14	2.158	2.665	2.43	3.194	2.652
HCM Lane V/C Ratio	0.005	0.186	0.013	0.156	0.055	0.055
HCM Control Delay	8.2	8.2	7.7	8.2	8.5	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0.7	0	0.5	0.2	0.2

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	70	7	106	81	78	9	90	165	55	86	25
Future Vol, veh/h	8	70	7	106	81	78	9	90	165	55	86	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	78	8	118	90	87	10	100	183	61	96	28
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.8	12.4	12.1	10.1
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	9%	40%	100%	0%
Vol Thru, %	0%	35%	82%	31%	0%	77%
Vol Right, %	0%	65%	8%	29%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	255	85	265	55	111
LT Vol	9	0	8	106	55	0
Through Vol	0	90	70	81	0	86
RT Vol	0	165	7	78	0	25
Lane Flow Rate	10	283	94	294	61	123
Geometry Grp	5	5	2	2	5	5
Degree of Util (X)	0.018	0.429	0.15	0.434	0.111	0.201
Departure Headway (Hd)	6.418	5.452	5.731	5.309	6.549	5.88
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	660	624	677	547	609
Service Time	4.154	3.186	3.779	3.346	4.291	3.622
HCM Lane V/C Ratio	0.018	0.429	0.151	0.434	0.112	0.202
HCM Control Delay	9.3	12.2	9.8	12.4	10.1	10.1
HCM Lane LOS	A	B	A	B	B	B
HCM 95th-tile Q	0.1	2.2	0.5	2.2	0.4	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	56	115	83	8	28	50
Future Volume (Veh/h)	56	115	83	8	28	50
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	62	128	92	9	31	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		124	0	170	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		124	0	170	124
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	96		88	99	96	92
cM capacity (veh/h)	1623		737	1085	691	737

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	62	128	101	31	56
Volume Left	62	0	0	31	0
Volume Right	0	128	9	0	0
cSH	1623	1700	809	691	737
Volume to Capacity	0.04	0.08	0.12	0.04	0.08
Queue Length 95th (ft)	3	0	11	4	6
Control Delay (s)	7.3	0.0	10.4	10.5	10.3
Lane LOS	A		B	B	B
Approach Delay (s)	2.4		10.4	10.3	
Approach LOS			B	B	

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	156	186	27	53	89
Future Volume (Veh/h)	91	156	186	27	53	89
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	101	173	207	30	59	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				4		
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		202	0	306	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		202	0	306	202
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	94		68	97	87	85
cM capacity (veh/h)	1623		651	1085	453	651

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	101	173	237	59	99
Volume Left	101	0	0	59	0
Volume Right	0	173	30	0	0
cSH	1623	1700	745	453	651
Volume to Capacity	0.06	0.10	0.32	0.13	0.15
Queue Length 95th (ft)	5	0	34	11	13
Control Delay (s)	7.4	0.0	12.5	14.1	11.5
Lane LOS	A		B	B	B
Approach Delay (s)	2.7		12.5	12.5	
Approach LOS			B	B	

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	11	0	0	0	22	99	2	0	27	0
Future Vol, veh/h	0	2	11	0	0	0	22	99	2	0	27	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	12	0	0	0	24	110	2	0	30	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	6.9	0	8	7.4
HCM LOS	A	-	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	98%	15%	100%	100%
Vol Right, %	0%	2%	85%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	101	13	0	27
LT Vol	22	0	0	0	0
Through Vol	0	99	2	0	27
RT Vol	0	2	11	0	0
Lane Flow Rate	24	112	14	0	30
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.034	0.142	0.015	0	0.035
Departure Headway (Hd)	5.075	4.561	3.819	4.343	4.159
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	709	790	943	0	856
Service Time	2.783	2.269	1.819	2.343	2.205
HCM Lane V/C Ratio	0.034	0.142	0.015	0	0.035
HCM Control Delay	8	8	6.9	7.3	7.4
HCM Lane LOS	A	A	A	N	A
HCM 95th-tile Q	0.1	0.5	0	0	0.1

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	24	3	1	9	33	239	7	4	31	0
Future Vol, veh/h	0	0	24	3	1	9	33	239	7	4	31	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	27	3	1	10	37	266	8	4	34	0
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.3	7.5	9.6	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	23%	11%
Vol Thru, %	0%	97%	0%	8%	89%
Vol Right, %	0%	3%	100%	69%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	246	24	13	35
LT Vol	33	0	0	3	4
Through Vol	0	239	0	1	31
RT Vol	0	7	24	9	0
Lane Flow Rate	37	273	27	14	39
Geometry Grp	5	5	2	2	4a
Degree of Util (X)	0.052	0.35	0.031	0.018	0.048
Departure Headway (Hd)	5.127	4.607	4.17	4.415	4.47
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	699	779	863	815	805
Service Time	2.858	2.338	2.173	2.419	2.477
HCM Lane V/C Ratio	0.053	0.35	0.031	0.017	0.048
HCM Control Delay	8.1	9.8	7.3	7.5	7.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	1.6	0.1	0.1	0.2

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	338	28	0	244	8	0	0	97	0	0	3
Future Vol, veh/h	0	338	28	0	244	8	0	0	97	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	376	31	0	271	9	0	0	108	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	204	-	-	136
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	683	0	0	888
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	683	-	-	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.3	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	683	-	-	-	888
HCM Lane V/C Ratio	0.158	-	-	-	0.004
HCM Control Delay (s)	11.3	-	-	-	9.1
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	391	35	0	375	21	0	0	251	0	0	29
Future Vol, veh/h	0	391	35	0	375	21	0	0	251	0	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Stop	-	-	Stop
Storage Length	23	-	-	12	-	125	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	434	39	0	417	23	0	0	279	0	0	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	237	-	-	209
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	651	0	0	797
Stage 1	0	-	-	0	-	0	0	0	-	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	651	-	-	797
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.6	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	651	-	-	-	797
HCM Lane V/C Ratio	0.428	-	-	-	0.04
HCM Control Delay (s)	14.6	-	-	-	9.7
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	2.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	31	1	67	1	0	0	7	113	125	0	0	290	22
Future Vol, veh/h	31	1	67	1	0	0	7	113	125	0	0	290	22
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	1	74	1	0	0	8	126	139	0	0	322	24

Major/Minor	Minor2			Minor1				Major1			Major2		
Conflicting Flow All	725	741	334	726	753	139	-	346	0	0	139	0	0
Stage 1	334	334	-	391	407	-	-	-	-	-	-	-	-
Stage 2	391	407	-	335	346	-	-	-	-	-	-	-	-
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	340	344	708	340	339	909	-	1213	-	-	1445	-	-
Stage 1	680	643	-	633	597	-	-	-	-	-	-	-	-
Stage 2	633	597	-	679	635	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	340	344	708	304	339	909	~ -17	~ -17	-	-	1445	-	-
Mov Cap-2 Maneuver	340	344	-	304	339	-	-	-	-	-	-	-	-
Stage 1	680	643	-	633	597	-	-	-	-	-	-	-	-
Stage 2	633	597	-	607	635	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	16.9		0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	340	708	304	1445	-	-
HCM Lane V/C Ratio	-	-	-	0.105	0.105	0.004	-	-	-
HCM Control Delay (s)	-	-	-	16.8	10.7	16.9	0	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.3	0.4	0	0	-	-

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

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	41	2	167	19	4	3	22	187	204	0	2	230	22
Future Vol, veh/h	41	2	167	19	4	3	22	187	204	0	2	230	22
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	-	-	Stop	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	225	-	-	-	-	0	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	2	186	21	4	3	24	208	227	0	2	256	24

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	919	963	268	916	975	227	-	280	0	0	227	0	0
Stage 1	272	272	-	643	691	-	-	-	-	-	-	-	-
Stage 2	647	691	-	273	284	-	-	-	-	-	-	-	-
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	252	256	771	253	251	812	-	1283	-	-	1341	-	-
Stage 1	734	685	-	462	446	-	-	-	-	-	-	-	-
Stage 2	460	446	-	733	676	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	247	256	771	191	251	812	~ -10	~ -10	-	-	1341	-	-
Mov Cap-2 Maneuver	247	256	-	191	251	-	-	-	-	-	-	-	-
Stage 1	734	684	-	462	446	-	-	-	-	-	-	-	-
Stage 2	454	446	-	554	675	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	24		0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	247	771	218	1341	-	-
HCM Lane V/C Ratio	-	-	-	0.193	0.241	0.133	0.002	-	-
HCM Control Delay (s)	-	-	-	23	11.1	24	7.7	-	-
HCM Lane LOS	-	-	-	C	B	C	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.7	0.9	0.5	0	-	-

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

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	33	90	13	7	31
Future Vol, veh/h	7	33	90	13	7	31
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	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	37	100	14	8	34

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	157	107	0	0	114	0
Stage 1	107	-	-	-	-	-
Stage 2	50	-	-	-	-	-
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	834	947	-	-	1475	-
Stage 1	917	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	830	947	-	-	1475	-
Mov Cap-2 Maneuver	806	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	967	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	919	1475	-
HCM Lane V/C Ratio	-	-	0.048	0.005	-
HCM Control Delay (s)	-	-	9.1	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	43	236	16	10	48
Future Vol, veh/h	7	43	236	16	10	48
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	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	48	262	18	11	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	346	271	0	0	280	0
Stage 1	271	-	-	-	-	-
Stage 2	75	-	-	-	-	-
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	651	768	-	-	1283	-
Stage 1	775	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	645	768	-	-	1283	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	939	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	753	1283	-
HCM Lane V/C Ratio	-	-	0.074	0.009	-
HCM Control Delay (s)	-	-	10.2	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	11	92	48	3	35
Future Vol, veh/h	20	11	92	48	3	35
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	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	12	102	53	3	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	174	129	0	0	155	0
Stage 1	129	-	-	-	-	-
Stage 2	45	-	-	-	-	-
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	816	921	-	-	1425	-
Stage 1	897	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	814	921	-	-	1425	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	834	1425	-
HCM Lane V/C Ratio	-	-	0.041	0.002	-
HCM Control Delay (s)	-	-	9.5	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	14	238	60	5	50
Future Vol, veh/h	27	14	238	60	5	50
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	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	16	264	67	6	56

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	366	298	0	0	331	0
Stage 1	298	-	-	-	-	-
Stage 2	68	-	-	-	-	-
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	634	741	-	-	1228	-
Stage 1	753	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	631	741	-	-	1228	-
Mov Cap-2 Maneuver	657	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	683	1228	-
HCM Lane V/C Ratio	-	-	0.067	0.005	-
HCM Control Delay (s)	-	-	10.6	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

SIMTRAFFIC QUEUING ANALYSIS

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	106	131	133	118	132	302	358	274	224	136	156	145
Average Queue (ft)	45	73	72	48	64	185	175	139	138	46	93	83
95th Queue (ft)	95	124	118	103	121	260	282	254	227	102	140	134
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)							5	3	5			
Queuing Penalty (veh)							19	7	11			

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	140	99	153	267	339	321	253	64
Average Queue (ft)	66	26	42	104	242	216	164	15
95th Queue (ft)	124	72	109	194	324	295	245	45
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)				0	3			
Queuing Penalty (veh)				0	5			

Intersection: 2: US 19 & Walmart Driveway

Movement	NB	SB
Directions Served	L	R
Maximum Queue (ft)	91	7
Average Queue (ft)	28	0
95th Queue (ft)	70	5
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	475	350
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	111	126	168	92	86	307	261	237	57	143	244	271
Average Queue (ft)	36	65	73	29	27	185	145	100	20	47	119	128
95th Queue (ft)	81	113	133	68	69	273	238	192	53	106	228	244
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)			0			0					0	
Queuing Penalty (veh)			0			0					0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	272	73
Average Queue (ft)	132	17
95th Queue (ft)	249	53
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	NB	NB	SB	SB
Directions Served	LTR	L	TR	L	TR
Maximum Queue (ft)	36	29	78	33	49
Average Queue (ft)	8	2	41	11	23
95th Queue (ft)	31	13	66	35	49
Link Distance (ft)	994		1006		863
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		150	
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	NB	SB	SB
Directions Served	R	T	L	T
Maximum Queue (ft)	60	70	36	51
Average Queue (ft)	3	34	13	23
95th Queue (ft)	25	56	38	50
Link Distance (ft)	255	863		539
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			75	
Storage Blk Time (%)		0		0
Queuing Penalty (veh)		0		0

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	NB	NB	SB
Directions Served	LTR	L	TR	LTR
Maximum Queue (ft)	31	30	58	31
Average Queue (ft)	7	17	27	17
95th Queue (ft)	28	41	46	41
Link Distance (ft)	986		539	204
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement	NB
Directions Served	R
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	204
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	UL	TR
Maximum Queue (ft)	66	56	11	96	13
Average Queue (ft)	21	3	1	29	0
95th Queue (ft)	52	27	9	68	5
Link Distance (ft)	972		1006	197	1041
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		225			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 42

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	UL	L	T	R	UL	T	T
Maximum Queue (ft)	214	236	275	227	182	567	739	275	225	312	548	575
Average Queue (ft)	113	138	135	117	74	211	309	226	193	89	377	400
95th Queue (ft)	193	207	226	194	147	400	602	330	255	251	546	568
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)	0	0	1	0			1					
Queuing Penalty (veh)	0	0	1	0			0					
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)			3	2	0		13	19	17		5	
Queuing Penalty (veh)			8	2	0		66	34	32		6	

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	575	477	232	374	446	401	362	129
Average Queue (ft)	391	229	125	187	288	267	245	43
95th Queue (ft)	569	402	211	313	406	370	345	99
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)	4			0	9			
Queuing Penalty (veh)	15			0	29			

Intersection: 2: US 19 & Walmart Driveway

Movement	EB	NB	NB	NB	SB
Directions Served	R	UL	T	T	R
Maximum Queue (ft)	38	116	135	7	30
Average Queue (ft)	2	39	4	0	1
95th Queue (ft)	19	86	95	5	10
Link Distance (ft)	255		870	870	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		475			350
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	206	266	466	278	400	635	628	547	425	279	315	322
Average Queue (ft)	104	150	253	133	135	441	398	351	107	111	130	156
95th Queue (ft)	176	230	458	290	365	598	566	494	319	250	247	264
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)			30	1	0	25		10		4	0	
Queuing Penalty (veh)			39	1	0	19		20		19	0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	291	153
Average Queue (ft)	159	56
95th Queue (ft)	261	121
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	77	16	33	139	54	108
Average Queue (ft)	37	1	10	63	24	44
95th Queue (ft)	60	10	33	104	47	77
Link Distance (ft)	994	350		1006		863
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		150	
Storage Blk Time (%)				1		0
Queuing Penalty (veh)				0		0

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	NB	SB	SB
Directions Served	R	T	L	T
Maximum Queue (ft)	85	92	45	77
Average Queue (ft)	8	46	24	36
95th Queue (ft)	51	72	48	61
Link Distance (ft)	255	863		539
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			75	
Storage Blk Time (%)	0	0		0
Queuing Penalty (veh)	0	0		0

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	40	36	48	70	53
Average Queue (ft)	15	12	19	38	23
95th Queue (ft)	41	38	45	60	49
Link Distance (ft)	986	1061		539	204
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	5	103
Average Queue (ft)	0	21
95th Queue (ft)	3	76
Link Distance (ft)	197	204
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	UL	L	TR
Maximum Queue (ft)	73	99	49	110	6	8
Average Queue (ft)	29	25	15	38	0	0
95th Queue (ft)	63	80	42	83	4	4
Link Distance (ft)	972		1006	197		1041
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225			125	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 294

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	123	168	174	164	148	285	343	273	225	140	192	189
Average Queue (ft)	47	79	78	54	64	182	175	133	141	52	104	97
95th Queue (ft)	102	135	136	115	122	260	279	249	225	115	166	162
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)			0	0								
Queuing Penalty (veh)			0	0								
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)			0	0	0		7	3	5			
Queuing Penalty (veh)			0	0	0		26	7	12			

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	169	112	138	289	373	339	271	74
Average Queue (ft)	77	32	47	116	254	228	172	12
95th Queue (ft)	145	86	114	210	345	315	253	43
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)				0	4			
Queuing Penalty (veh)				0	7			

Intersection: 2: US 19 & Walmart Driveway

Movement	NB
Directions Served	L
Maximum Queue (ft)	99
Average Queue (ft)	28
95th Queue (ft)	68
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	475
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	113	143	162	88	93	297	268	198	78	122	276	283
Average Queue (ft)	37	66	79	28	30	197	152	91	23	44	145	154
95th Queue (ft)	83	118	139	67	70	293	251	179	58	93	262	274
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)						0					0	
Queuing Penalty (veh)						0					0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	283	86
Average Queue (ft)	154	17
95th Queue (ft)	276	52
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	31	4	23	81	29	58
Average Queue (ft)	7	0	2	43	14	24
95th Queue (ft)	27	3	15	67	37	51
Link Distance (ft)	994	350		1006		863
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		150	
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	NB	SB	SB
Directions Served	R	T	L	T
Maximum Queue (ft)	11	59	36	45
Average Queue (ft)	1	33	12	24
95th Queue (ft)	11	53	37	48
Link Distance (ft)	255	863		539
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			75	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	NB	NB	SB
Directions Served	LTR	L	TR	LTR
Maximum Queue (ft)	31	30	35	36
Average Queue (ft)	9	13	26	18
95th Queue (ft)	32	37	44	43
Link Distance (ft)	986		539	204
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	UL	TR
Maximum Queue (ft)	52	31	22	89	20
Average Queue (ft)	23	1	1	32	1
95th Queue (ft)	49	13	11	70	9
Link Distance (ft)	972		1006	197	1041
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		225			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 53

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	UL	L	T	R	UL	T	T
Maximum Queue (ft)	196	226	300	232	167	752	957	275	225	413	680	693
Average Queue (ft)	108	136	153	130	71	239	342	218	182	120	454	466
95th Queue (ft)	182	205	249	207	143	487	724	333	270	371	723	730
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)		0	1	0			3				5	5
Queuing Penalty (veh)		0	2	0			0				38	36
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)			5	2	0		16	18	16	0	16	
Queuing Penalty (veh)			12	2	1		83	33	30	0	21	

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	675	540	235	354	442	384	390	100
Average Queue (ft)	467	295	137	197	284	268	246	37
95th Queue (ft)	738	559	219	311	387	360	347	83
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)	5							
Queuing Penalty (veh)	39							
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)	15	0	0	1	8			
Queuing Penalty (veh)	56	0	0	3	30			

Intersection: 2: US 19 & Walmart Driveway

Movement	EB	NB	NB	NB	NB	SB
Directions Served	R	UL	T	T	T	R
Maximum Queue (ft)	20	188	292	215	330	36
Average Queue (ft)	1	44	49	54	57	2
95th Queue (ft)	12	154	303	338	328	15
Link Distance (ft)	255		870	870	870	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		475				350
Storage Blk Time (%)			1			
Queuing Penalty (veh)			0			

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	208	247	532	300	400	689	646	541	424	231	265	253
Average Queue (ft)	98	155	298	154	146	481	439	384	110	87	124	144
95th Queue (ft)	174	237	509	332	381	643	582	518	329	213	222	239
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)			45	1	0	30		14		1	0	
Queuing Penalty (veh)			58	2	0	23		30		2	0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	262	170
Average Queue (ft)	152	63
95th Queue (ft)	248	134
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	70	10	29	132	56	79
Average Queue (ft)	39	0	7	62	21	40
95th Queue (ft)	63	6	27	98	48	67
Link Distance (ft)	994	350		1006		863
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		150	
Storage Blk Time (%)				1		
Queuing Penalty (veh)				0		

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	4	72	90	40	64
Average Queue (ft)	0	11	43	22	32
95th Queue (ft)	3	49	69	46	52
Link Distance (ft)		255	863		539
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	125			75	
Storage Blk Time (%)			0		0
Queuing Penalty (veh)			0		0

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	31	31	44	85	40
Average Queue (ft)	14	10	20	39	20
95th Queue (ft)	39	34	45	64	45
Link Distance (ft)	986	1061		539	204
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			100		
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement	NB
Directions Served	R
Maximum Queue (ft)	116
Average Queue (ft)	19
95th Queue (ft)	76
Link Distance (ft)	204
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	UL	L	TR
Maximum Queue (ft)	69	91	45	110	11	14
Average Queue (ft)	30	23	19	39	0	0
95th Queue (ft)	60	77	43	81	5	6
Link Distance (ft)	972		1006	197		1041
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225			125	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 502

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	L	L	T	R	L	T	T
Maximum Queue (ft)	120	149	137	130	160	345	367	274	225	151	193	190
Average Queue (ft)	49	79	81	63	71	198	193	148	143	57	101	94
95th Queue (ft)	97	127	125	117	139	283	313	262	229	122	167	161
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)					0		7	4	6			
Queuing Penalty (veh)					0		25	9	13			

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	184	169	170	278	370	353	312	66
Average Queue (ft)	77	40	54	126	262	241	194	15
95th Queue (ft)	158	112	131	235	354	331	285	45
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)				0	5			
Queuing Penalty (veh)				0	9			

Intersection: 2: US 19 & Walmart Driveway

Movement	NB	SB
Directions Served	L	R
Maximum Queue (ft)	112	15
Average Queue (ft)	40	0
95th Queue (ft)	86	6
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	475	350
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	107	146	179	137	120	321	281	240	78	113	286	294
Average Queue (ft)	41	76	82	37	40	200	156	109	21	42	154	165
95th Queue (ft)	87	127	145	94	91	289	253	206	59	89	269	281
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)			0	0		1					0	
Queuing Penalty (veh)			0	0		0					0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	300	86
Average Queue (ft)	167	20
95th Queue (ft)	283	57
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	31	4	28	69	52	64
Average Queue (ft)	7	0	2	42	21	26
95th Queue (ft)	29	3	14	64	46	52
Link Distance (ft)	994	350		1006		863
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		150	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	NB	SB	SB
Directions Served	R	T	L	T
Maximum Queue (ft)	68	62	54	71
Average Queue (ft)	6	33	23	31
95th Queue (ft)	37	56	49	58
Link Distance (ft)	255	863		247
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			75	
Storage Blk Time (%)	0		0	0
Queuing Penalty (veh)	0		0	0

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	NB	NB	SB
Directions Served	LTR	L	TR	LTR
Maximum Queue (ft)	36	23	57	56
Average Queue (ft)	14	10	32	21
95th Queue (ft)	39	28	44	48
Link Distance (ft)	987		23	204
Upstream Blk Time (%)		1	8	
Queuing Penalty (veh)		0	11	
Storage Bay Dist (ft)		100		
Storage Blk Time (%)		1	8	
Queuing Penalty (veh)		1	2	

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement	NB
Directions Served	R
Maximum Queue (ft)	22
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	204
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	UL	TR
Maximum Queue (ft)	66	10	21	101	9
Average Queue (ft)	24	0	1	34	0
95th Queue (ft)	51	7	10	75	5
Link Distance (ft)	972		1006	197	1041
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		225			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: Internal N-S Driveway & Site Drive 1

Movement	WB	NB	SB
Directions Served	LR	TR	T
Maximum Queue (ft)	50	36	6
Average Queue (ft)	27	7	0
95th Queue (ft)	52	30	4
Link Distance (ft)	1066	157	23
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 10: Internal N-S Driveway & Site Drive 2

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	46	12
Average Queue (ft)	22	0
95th Queue (ft)	46	6
Link Distance (ft)	1092	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		25
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Network Summary

Network wide Queuing Penalty: 70

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	UL	L	T	T	R	UL	L	T	R	UL	T	T
Maximum Queue (ft)	222	240	327	240	198	386	590	275	225	329	612	629
Average Queue (ft)	118	153	183	143	85	215	304	224	191	97	417	440
95th Queue (ft)	196	225	313	230	172	335	528	330	256	261	579	607
Link Distance (ft)	246	246	246			1009	1009				778	778
Upstream Blk Time (%)	0	0	3	0							0	0
Queuing Penalty (veh)	0	0	6	0							0	0
Storage Bay Dist (ft)				175	175			175	175	475		
Storage Blk Time (%)			9	4	1		17	16	19		8	
Queuing Penalty (veh)			24	6	1		88	32	36		10	

Intersection: 1: US 19 & Osowaw Boulevard/Spring Hill Drive

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	606	490	257	361	448	386	365	117
Average Queue (ft)	430	272	147	205	290	272	262	43
95th Queue (ft)	594	455	239	325	397	361	352	92
Link Distance (ft)	778				1031	1031	1031	
Upstream Blk Time (%)	0							
Queuing Penalty (veh)	0							
Storage Bay Dist (ft)		525	275	275				525
Storage Blk Time (%)	7		0	0	8			
Queuing Penalty (veh)	25		0	2	28			

Intersection: 2: US 19 & Walmart Driveway

Movement	EB	NB	NB	NB	NB	SB	SB
Directions Served	R	UL	T	T	T	T	R
Maximum Queue (ft)	54	168	16	204	201	4	31
Average Queue (ft)	4	54	1	7	13	0	3
95th Queue (ft)	29	118	12	131	184	3	18
Link Distance (ft)	255		870	870	870	778	
Upstream Blk Time (%)				0	0		
Queuing Penalty (veh)				0	0		
Storage Bay Dist (ft)		475				350	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	LT	R	UL	T	T	T	R	UL	T	T
Maximum Queue (ft)	231	274	511	300	400	829	805	710	425	224	273	296
Average Queue (ft)	115	167	282	151	168	564	522	447	171	82	137	163
95th Queue (ft)	193	250	479	318	429	800	752	655	439	181	233	259
Link Distance (ft)	350	350	1026			1015	1015	1015			870	870
Upstream Blk Time (%)							0					
Queuing Penalty (veh)							0					
Storage Bay Dist (ft)				200	300				325	300		
Storage Blk Time (%)			41	1		37		20		0	0	
Queuing Penalty (veh)			55	2		34		42		0	0	

Intersection: 3: US 19 & Pepper Street/Applegate Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	316	164
Average Queue (ft)	168	67
95th Queue (ft)	263	139
Link Distance (ft)	870	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		475
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Wendy Court/Internal N-S Driveway & Southern Internal Driveway/Pepper Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	88	27	33	134	78	89
Average Queue (ft)	38	2	8	67	31	41
95th Queue (ft)	67	12	29	107	59	69
Link Distance (ft)	994	350		1006		863
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		150	
Storage Blk Time (%)				1		
Queuing Penalty (veh)				0		

Intersection: 5: Internal N-S Driveway & Walmart Driveway

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	R	L	T
Maximum Queue (ft)	45	134	84	22	57	72
Average Queue (ft)	2	26	46	1	27	36
95th Queue (ft)	32	85	71	11	51	59
Link Distance (ft)		255	863			247
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	125			100	75	
Storage Blk Time (%)		0	0		0	0
Queuing Penalty (veh)		0	0		0	0

Intersection: 6: Internal N-S Driveway & Northern Internal Driveway/AT&T Driveway

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	44	30	23	65	53
Average Queue (ft)	16	11	15	35	25
95th Queue (ft)	43	35	32	49	49
Link Distance (ft)	987	1060		23	204
Upstream Blk Time (%)			1	20	
Queuing Penalty (veh)			0	63	
Storage Bay Dist (ft)			100		
Storage Blk Time (%)			1	20	
Queuing Penalty (veh)			4	8	

Intersection: 7: Internal N-S Driveway/CVS Driveway 1 & Osowaw Boulevard

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	26	113
Average Queue (ft)	2	28
95th Queue (ft)	19	92
Link Distance (ft)	197	204
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 8: Osowaw Boulevard & Walmart Driveway/CVS Driveway 2

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	UL	TR	L	TR
Maximum Queue (ft)	79	102	44	116	10	10	15
Average Queue (ft)	33	21	17	45	0	0	1
95th Queue (ft)	65	77	42	93	7	5	8
Link Distance (ft)	972		1006	197	197		1041
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		225				125	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: Internal N-S Driveway & Site Drive 1

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	88	128	18	25
Average Queue (ft)	38	38	1	1
95th Queue (ft)	75	86	9	12
Link Distance (ft)	1066	157		23
Upstream Blk Time (%)		0	0	0
Queuing Penalty (veh)		0	0	0
Storage Bay Dist (ft)			25	
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 10: Internal N-S Driveway & Site Drive 2

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	69	17	30
Average Queue (ft)	28	1	3
95th Queue (ft)	56	11	17
Link Distance (ft)	1092	247	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			25
Storage Blk Time (%)			1
Queuing Penalty (veh)			0

Network Summary

Network wide Queuing Penalty: 472