



FEBRUARY 10, 2017

Final Report

SR 46 FROM EAST OF SR 415 TO CR 426

TRAFFIC FORECASTS UPDATE REPORT

Prepared for
Seminole County, FL



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The current report is prepared in support of SR 46 Widening Project from just east of SR 415 to CR 426 (Financial Project ID: 240216-4-28-01; Federal Aid Project No: TCSP-045-U), in Seminole County. The purpose of this study is to update the design year (2045) traffic forecasts for the SR 46 study corridor and validate the need for four-lane widening of the study corridor using the revised design year traffic forecasts.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated 12/14/2016 and executed by FHWA and FDOT.

Prepared for
Seminole County, FL

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1 Overview

The current study was initiated by Seminole County in support of SR 46 Widening Project from just east of SR 415 to CR 426 (Financial Project ID: 240216-4-28-01; Federal Aid Project No: TCSP-045-U), in Seminole County. SR 46 is proposed to be widened to four lanes from the current 2-lane configuration. The project location map is shown in Figure 1.

The purpose of this study is to update the design year (2045) traffic forecasts for the SR 46 study corridor and validate the need for four-lane widening of the study corridor using the revised design year traffic forecasts. The justification (per Part 2, Chapter 5 of FDOT's *PD&E Manual*) for this reevaluation comes from a change in the adopted regional travel demand model, and a change in the design year of the project. The previous Design Traffic Technical Memorandum (DTTM) (completed in May 2012) had used the previous iteration of the regional travel demand model (with 2005 as the base year and 2035 as the horizon year) and had assumed a project design year of 2035. The latest update to the regional travel demand model (with 2009 as the base year and 2040 as the horizon year) has the latest planning assumptions and represents a significant change in travel forecasts. The next sections of this document provide additional details of the overall traffic forecasting process.

SR 46 within the study limits is primarily an east/west facility from SR 415 to Osceola Road and a northwest/southeast facility from Osceola Road to CR 426. SR 46 from just east of SR 415 to CR 426 is classified as a rural principal arterial with a Level of Service (LOS) standard "C" (source: Florida Department of Transportation [FDOT]). The proposed widening of SR 46 study corridor is included as a planned cost feasible improvement in the MetroPlan Orlando 2040 Long Range Transportation Plan (LRTP).

This document provides a recommended growth rate, including the methodology used to derive this growth rate, for the study corridor. In addition, this document provides a planning level roadway Level of Service (LOS) analysis for the 2-lane (No Build) and 4-lane (Build) alternatives using Florida Department of Transportation (FDOT's) Generalized Service Volumes, provided in the 2013 Quality/LOS (Q/LOS) Handbook.

2 Existing Traffic Data

Existing year 2016 traffic counts were collected at the following six (6) locations to support the study tasks.

72-hour classification counts were collected at the following three (3) locations:

- SR 46 west of SR 415
- SR 46 between SR 415 and Osceola Road
- SR 46 west of CR 426.

72-hour volume counts were collected at the following three (3) locations:

- SR 46 between Osceola Road and Mullet Lake Park Rd
- SR 46 between Mullet Lake Park Road and Woodridge Drive
- SR 46 east of CR 426



 Project Location



Figure 1
Project Location Map

The following Table 1 provides a summary of the existing Average Annual Daily Traffic (AADT) volumes derived from the field counts. Based on the information shown in Table 1, SR 46 between SR 415 and CR 426 carries AADT volumes ranging between 10,100 and 12,000. Field counts and the latest seasonal and axle factors obtained from the 2015 FTI DVD are provided in **Appendix A**.

Table 1: Existing AADT Volume Summary

Section	Existing Year (2016) Count	Count Start Date	Count Type	Seasonal Factor (SF)	Axle Factor (AF)	Existing Year (2016) AADT
SR 46						
West of SR 415	11,533	05/17/16	Class	1.00	1.00	11,500
SR 415 to Osceola Rd	11,958	05/17/16	Class	1.00	1.00	12,000
Osceola Rd to Mullet Lake Park Rd	10,613	05/17/16	Volume	1.00	0.95	10,100
Mullet Lake Park Rd to Woodridge Dr	11,124	05/17/16	Volume	1.00	0.95	10,600
Woodridge Dr to CR 426	10,051	05/17/16	Class	1.00	1.00	10,100
east of CR 426	7,457	05/17/16	Volume	1.00	0.95	7,100

Notes:

1. AADT = Traffic Count*SF*AF
2. Latest available SF and AF were obtained from the 2015 Florida Transportation Information (FTI) DVD

3 Base Year Sub Area Model Validation

The traffic model applied for this study was based on the adopted Orlando Urban Area Transportation Study (OUATS). The model is an evaluation tool that represents land use and transportation interaction to assess the capability of the region’s highway and transit networks to support anticipated growth. The latest adopted model has a 2009 base year model and a 2040 LRTP model. Sub-area model validation for this study was performed for base year 2009 traffic conditions.

The sub area model validation for the SR 46 planning study area was performed to achieve better results in forecasting the future year traffic for roadways within the study area. The model refinement was performed by fine-tuning the network using the guidelines identified in FDOT Project Traffic Forecasting Handbook (2014).

The model validation was performed to ensure that the model is accurate enough to forecast the number of lanes required to handle the future project volumes. The supporting documents for the sub area validation process are provided in **Appendix B**.

3.1 Base Year Model Adjustments

A reasonableness check of the 2009 base year model network was conducted within the planning study area. The following network changes were implemented as part of the validation process. No other changes were applied to the base year model.

- The speed limit was changed from 31 mph to 35 mph for East Lake Mary Blvd from Skyway Dr to SR 46

- Missing connections between Old Mims Rd and CR 426 and between S. Jungle Rd and SR 46 were established.
- The speed limit was changed from 32/35 mph to 30 mph for Snow Hill Rd from Old Mims Rd to SR 46
- The facility type for Lockwood Blvd from CR 419 to CR 426/Geneva Dr was changed from 42/43 to 47.

3.2 Model Validation Results

The validation of a traffic model involves verifying various statistics, most of which are related to actual ground counts that have been collected on various links throughout the highway network. As Measures Of Effectiveness (MOEs), ratio of assigned volume to count volume and Root Mean Square Error (RMSE) have been used in this study to evaluate whether the year 2009 model has been validated within the allowable limits.

The year 2009 AADT counts for individual roadway segments were obtained from Seminole County. The Peak Season Weekday Average Daily Traffic (PSWADT) volumes obtained from the OUATS were converted to AADT volumes using the 2009 Model Output Conversion Factor (MOCF) factor of 0.98 obtained from the FTI DVD.

3.2.1 Ratio of Volumes to Counts

The ratio of assigned volume to count volume on individual roadway links was calculated as one MOE. Nine (9) roadway segments were used to evaluate and compare the model volumes against the ground counts within the study area. Table 2 illustrates the volume to count ratios for different facility types. The individual link and ground counts are provided in **Appendix B**. As shown in Table 2, all of the facility types perform well within the preferable levels of accuracy.

Table 2: Base Year Volume to Count Ratio Summary

Facility Type	Acceptable	Preferable	Before	After
Freeway (FT1X,FT8X,FT9X)	+/- 7%	+/- 6%	NA	NA
Divided Arterial (FT2X)	+/- 15%	+/- 10%	-15.69%	6.92%
Undivided Arterial (FT3X)	+/- 15%	+/- 10%	2.49%	-2.33%
Collector (FT4X)	+/- 25%	+/- 20%	-6.01%	-11.58%
One-Way (FT6X)	+/- 25%	+/- 20%	NA	NA

3.2.2 Root Mean Square Error (RMSE)

The percent RMSE for the study corridors is another aggregate measure of how well the model has been validated against the ground counts within the study area. The RMSE values shown in Table 3 clearly shows that the adjusted network has been well fine-tuned to replicate the ground counts within study area.

Table 3: Base Year RMSE by Volume Group

Volume Group (vpd)	% RMSE	Acceptable % RMSE	Preferable % RMSE
1-5,000	N/A	100%	45%
5,000 -9,999	7.64%	45%	35%
10,000 -14,999	7.19%	35%	27%
15,000 – 19,999	6.45%	30%	25%
20,000 – 29,999	N/A	27%	15%
30,000 – 49,999	N/A	25%	15%
50,000 – 59,999	N/A	20%	10%
> 60,000	N/A	19%	10%
Area wide	3.48%	45%	35%

4 Development of Future Traffic Forecasts

The development of traffic projections for any roadway corridor requires the examination of historical growth, proposed development levels within the corridor vicinity, and a basic understanding of local traffic circulation patterns and travel characteristics of the corridor. As such, the following sources were used to derive reasonable future traffic forecasts for the study corridor.

- **Travel Demand Model:** The latest adopted OUATS was used in the traffic forecasting process. The base year 2009 and design year 2040 model volumes from the latest adopted Orlando Urban Area Transportation Study (OUATS) were used to derive model based annual growth rates.
- **Historical Traffic Trends Analysis:** Historical traffic trends analysis was conducted for SR 46 study corridor using traffic data between 2006 and 2015 available from Seminole County and annual growth rates were derived.
- **Population Projections:** Population projections from the Bureau of Economic and Business Research (BEBR) was also used. Annual growth rates were derived using 2015 estimate and 2045 estimates for the low, medium and high population projections.

4.1 Study Alternatives

Based on the direction from Seminole County, a No Build alternative and a Build alternative were evaluated. The No Build alternative maintains the existing two-lane roadway section, whereas the Build alternative evaluates a four-lane section.

4.2 Model Based Growth Rates

The year 2040 OUATS model was reviewed to check if it included programmed (source: latest MetroPlan Orlando Transportation Improvement Program (TIP); Fiscal Year [FY] 2016/17 - FY 2020/2021) and planned improvements (source: 2040 MetroPlan Orlando LRTP) near the study limits. Based on the latest available TIP, Preliminary Engineering (PE) phase for this SR 46 widening project is funded during fiscal year 2020/21 time-period. Based on the latest available 2040 LRTP, SR 46 4-lane widening from SR 415 to CR 426 is included as a planned improvement with construction phase funded by year 2025.

As the next step, annual growth rates were calculated between 2009 and 2040 model volumes. Table 4 illustrates the model growth rates for the study corridor. As shown in Table 4, the model based average growth rates are 3.2% and 4.5% for the No Build and Build alternatives, respectively. The relevant pages from the MetroPlan Orlando TIP and LRTP, and 2040 model volume plots are provided in **Appendix C**.

Table 4: Model Based Growth Rates

SR 46 Roadway Link	Base Year (2009) Model Volume	No Build (2-lane) 2040 Model Volume	Build (4-lane) 2040 Model Volume	No Build Annual Growth Rate	Build Annual Growth Rate
East of SR 415	11,545	22,260	26,872	3.0%	4.3%
East of Richmond Ave	11,093	21,883	26,072	3.1%	4.4%
West of Osceola Rd	10,614	21,133	25,290	3.2%	4.5%
East of Osceola Rd	9,045	18,095	22,166	3.2%	4.7%
West of Woodridge Dr	10,058	19,667	23,653	3.1%	4.4%
West of CR 426	8,069	16,614	20,284	3.4%	4.9%
Average				3.2%	4.5%

4.3 Historic Traffic Growth Rates

Based on the historic count information obtained from Seminole County, a trends analysis was performed for the four available count stations (272 through 275 between 2006 and 2015) on SR 46. Based on this historical data, future growth trends were established by a least square linear regression of the historic counts.

These trend analysis sheets are provided in **Appendix D**. The R-squared value (which determines the goodness-of-fit) for the all the four stations ranged between 0% and 32%. Therefore, the trends analysis results were not considered in the growth rate recommendation.

4.4 Population Projections

Population projection data obtained from BEBR published by the University of Florida were used for comparison purposes. The year 2015 and the low, medium and high 2045 population estimates were used to obtain the corresponding growth rates for Seminole County (see Table 5).

The high estimate was used for the purpose of this study. The BEBR population projection data are enclosed in **Appendix E**.

Table 5: Population Based Growth Rates

County	Population Analysis		
	2015	2045	Annual Growth Rate
Seminole	442,903	Low - 471,500	0.22%
		Medium - 580,600	1.04%
		High - 694,200	1.89%

4.5 Recommended Growth Rate & Future Traffic Forecasts

The growth rates obtained from the above three sources combined with the existing and expected land use along the study corridor, were reviewed to derive a recommended growth rate for the study corridor.

Given the potential for traffic growth along the study corridor, annual growth rates of 3.2% and 4.5% for the No Build and Build alternatives (based on travel demand model volumes), respectively will be used to derive the 2045 roadway volumes for SR 46 study corridor. Table 6 shows the design year 2045 AADT volumes for SR 46 study corridor.

Table 6: Year 2045 Traffic Forecasts

SR 46 Roadway Section	Existing 2016 AADT	No Build (2-lane) 2045 AADT	Build (4-lane) 2045 AADT
SR 415 to Osceola Rd	12,000	23,100	27,700
Osceola Rd to Mullet Lake Park Rd	10,100	19,500	23,300
Mullet Lake Park Rd to Woodridge Dr	10,600	20,400	24,400
Woodridge Dr to CR 426	10,100	19,500	23,300

5 Design Year 2045 Roadway Analysis

This section presents the results of the design year 2045 planning level roadway operational analysis for the No Build and Build alternatives.

The latest available FDOT’s Generalized Service Volumes from the 2013 Q/LOS Handbook for a rural developed area (provided in **Appendix F**) are used to determine the design year roadway LOS for SR 46 study corridor. The following Table 7 illustrates the roadway LOS summary for the No Build and Build alternatives.

Table 7: Year 2045 Roadway LOS Analysis Summary

SR 46 Roadway Section	FDOT LOS Standard (Rural Area)	No Build (2-lane) Alternative			Build (2-lane) Alternative		
		Roadway Capacity	2045 AADT	2045 LOS	Roadway Capacity	2045 AADT	2045 LOS
SR 415 to Osceola Rd	C	16,400	23,100	E	40,700	27,700	C
Osceola Rd to Mullet Lake Park Rd	C		19,500	D		23,300	B
Mullet Lake Park Rd to Woodridge Dr	C		20,400	D		24,400	B
Woodridge Dr to CR 426	C		19,500	D		23,300	B

Notes: LOS in red color denotes failing LOS condition

Based on the results provided in Table 7, the projected LOS for SR 46 study corridor under the No Build alternative will exceed the FDOT standard LOS “C” condition in 2045. Under the Build alternative, the study corridor is projected to operate within the LOS standard in 2045. Based on projected traffic forecasts for the interim years (2017 to 2044), SR 46 between SR 415 and Osceola Road is expected to exceed LOS standard C by year 2028. SR 46 section between Osceola Road and CR 426 (considering an AADT of 20,400 for 2045) is expected to fail by 2033.

The project traffic assumption summary figure (Figure 5-1 Project Traffic Assumption Summary from Part 2, Chapter 3 of the FDOT’s *PD&E Manual*) is provided in **Appendix G** of this report.

6 Study Conclusion

Based on the evaluation of roadway operating conditions for the design year 2045 No Build and Build traffic conditions, this study recommends that SR 46 be widened to four lanes to handle the projected traffic volumes within the study corridor. As such, the recommendation to four-lane SR 46 (as recommended in the previously completed DTTM) was determined using the latest adopted regional travel demand model (OUATS 2040) and remains valid.

Appendix A

- Year 2016 Field Collected Traffic Counts
- Year 2015 FDOT Seasonal and Axle Factors

TRAFFIC COUNT DATA

VHB PROJECT NO: 62518.58 Task 115
 LOCATION CODE: C-1
 COUNT LOCATION: SR-46 West of E. Lake Mary Blvd.
 EQUIPMENT ID: P227/P127

TYPE OF COUNT: 72 Hour Classification Count

TIME OF COUNT:
 Start Date: 5/17/2016 Start Time: Midnight
 End Date: 5/19/2016 End Time: Midnight

VOLUMES:

		Peak Hour Time: 5:00 PM
Average Daily:	11,533	Average Peak Hour: 1,009
Daily Truck Avg:	1,479	Max Hour Truck Avg: 147
		Peak Hour Truck Avg: 100

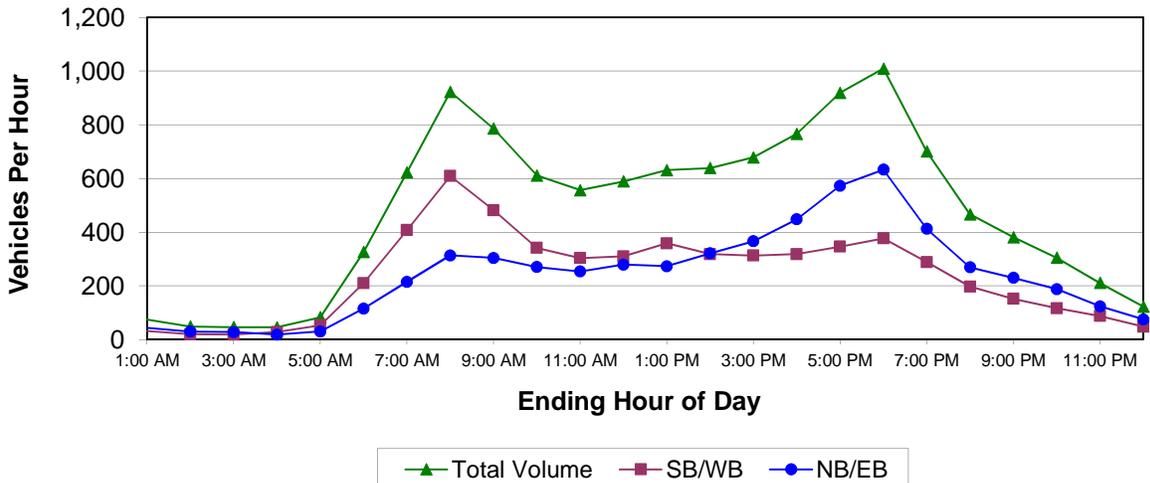
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 8.8%	D= 62.7%
T Max Hour 14.6%	T daily 12.8%
T med (max) 10.4%	T med Daily 9.2%
T heavy (max) 4.2%	T heavy Daily 3.6%
T Peak Hour 9.9%	
T med Peak Hour 7.5%	
T heavy Peak Hour 2.4%	

HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

VHB PROJECT NO: 62518.58 Task 115
 LOCATION CODE: C-1
 COUNT LOCATION: SR-46 West of E. Lake Mary Blvd.
 EQUIPMENT ID: P227/P127

HOUR ENDING AT	HOURLY VOLUME DIRECTION (NB OR EB)	HOURLY VOLUME DIRECTION (SB OR WB)	TOTAL VOLUME BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB OR EB)	DISTRIBUTION PERCENT DIRECTION (SB OR WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	43	31	74	0.75%	0.54%	0.64%
2:00 AM	29	19	48	0.50%	0.34%	0.42%
3:00 AM	28	18	46	0.48%	0.31%	0.40%
4:00 AM	18	27	45	0.31%	0.48%	0.39%
5:00 AM	30	53	82	0.51%	0.92%	0.71%
6:00 AM	115	210	325	1.99%	3.67%	2.82%
7:00 AM	215	407	622	3.70%	7.11%	5.40%
8:00 AM	313	609	922	5.40%	10.63%	8.00%
9:00 AM	304	482	785	5.23%	8.41%	6.81%
10:00 AM	270	341	611	4.65%	5.95%	5.30%
11:00 AM	253	303	556	4.36%	5.30%	4.82%
12:00 PM	279	310	589	4.81%	5.41%	5.10%
1:00 PM	273	358	631	4.70%	6.26%	5.47%
2:00 PM	321	318	639	5.53%	5.55%	5.54%
3:00 PM	366	313	678	6.30%	5.46%	5.88%
4:00 PM	448	318	766	7.72%	5.55%	6.64%
5:00 PM	573	346	919	9.87%	6.04%	7.97%
6:00 PM	633	377	1,009	10.90%	6.58%	8.75%
7:00 PM	412	288	700	7.10%	5.03%	6.07%
8:00 PM	269	197	466	4.63%	3.44%	4.04%
9:00 PM	229	151	381	3.95%	2.64%	3.30%
10:00 PM	188	116	304	3.23%	2.03%	2.64%
11:00 PM	123	87	211	2.12%	1.52%	1.83%
12:00 AM	75	48	122	1.29%	0.83%	1.06%
TOTALS	5,806	5,727	11,533	100.0%	100.0%	100.0%



ANNUAL VEHICLE CLASSIFICATION REPORT

VHB PROJECT NO: 62518.58 Task 115
 LOCATION CODE: C-1
 COUNT LOCATION: SR-46 West of E. Lake Mary Blvd.
 EQUIPMENT ID: P227/P127

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	75	0.65%
Class 2	Cars	8,061	69.90%
Class 3	Pick-Ups & Vans	1,918	16.63%
Class 4	Buses	135	1.17%
Class 5	2 Axle, Single Unit Trucks	931	8.07%
Class 6	3 Axle, Single Unit Trucks	96	0.83%
Class 7	4 Axle, Single Unit Trucks	11	0.10%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	134	1.16%
Class 9	3 Axle Tractor with 2 Axle Trailer	166	1.44%
Class 10	3 Axle Tractor with 3 Axle Trailer	5	0.04%
Class 11	5 Axle Multi Trailer	0	0.00%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	0	0.00%
Class 14	Not Used	0	0.00%
Class 15	Other	0	0.00%
TOTALS		11,533	100.00%

TRAFFIC COUNT DATA

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-2
 COUNT LOCATION: SR-46 Btwn. E. Lake Mary Blvd.SR-415 and Osceola Road
 EQUIPMENT ID: P220

TYPE OF COUNT: 72 Hour Classification Count

TIME OF COUNT:
 Start Date: 5/17/2016 Start Time: Midnight
 End Date: 5/19/2016 End Time: Midnight

VOLUMES:

		Peak Hour Time: 4:45 PM
Average Daily:	11,958	Average Peak Hour: 1,109
Daily Truck Avg:	1,418	Max Hour Truck Avg: 128
		Peak Hour Truck Avg: 116

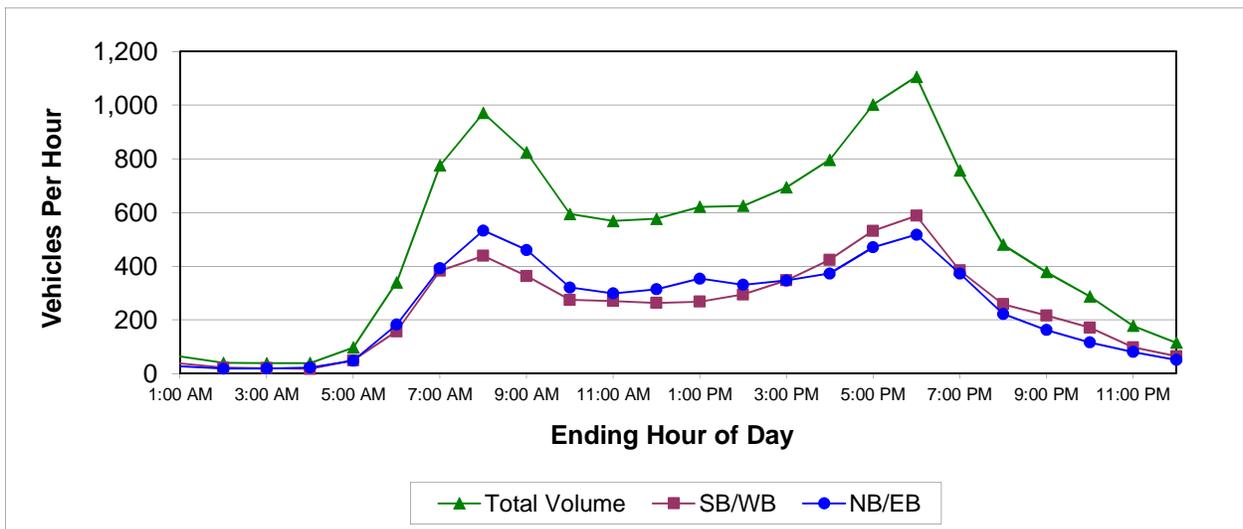
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.3%	D= 53.6%
T Max Hour 11.5%	T daily 11.9%
T med (max) 9.3%	T med Daily 9.7%
T heavy (max) 2.2%	T heavy Daily 2.1%
T Peak Hour 10.4%	
T med Peak Hour 8.7%	
T heavy Peak Hour 1.7%	

HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-2
 COUNT LOCATION: SR-46 Btwn. E. Lake Mary Blvd.SR-415 and Osceola Road
 EQUIPMENT ID: P220

HOUR ENDING AT	HOURLY VOLUME DIRECTION (NB OR EB)	HOURLY VOLUME DIRECTION (SB OR WB)	TOTAL VOLUME BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB OR EB)	DISTRIBUTION PERCENT DIRECTION (SB OR WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	27	37	64	0.45%	0.62%	0.53%
2:00 AM	18	22	39	0.29%	0.37%	0.33%
3:00 AM	18	20	38	0.30%	0.34%	0.32%
4:00 AM	22	17	39	0.37%	0.29%	0.33%
5:00 AM	48	49	97	0.79%	0.83%	0.81%
6:00 AM	182	157	339	3.03%	2.64%	2.83%
7:00 AM	392	383	775	6.51%	6.45%	6.48%
8:00 AM	532	438	971	8.84%	7.39%	8.12%
9:00 AM	460	363	823	7.64%	6.12%	6.89%
10:00 AM	320	274	594	5.31%	4.62%	4.97%
11:00 AM	298	270	568	4.95%	4.55%	4.75%
12:00 PM	314	263	576	5.21%	4.43%	4.82%
1:00 PM	353	267	621	5.86%	4.51%	5.19%
2:00 PM	330	294	625	5.48%	4.96%	5.22%
3:00 PM	346	347	693	5.75%	5.84%	5.80%
4:00 PM	372	423	796	6.18%	7.14%	6.65%
5:00 PM	470	531	1,002	7.81%	8.96%	8.38%
6:00 PM	517	588	1,105	8.59%	9.91%	9.24%
7:00 PM	373	384	757	6.19%	6.47%	6.33%
8:00 PM	222	258	480	3.68%	4.35%	4.01%
9:00 PM	162	216	378	2.69%	3.64%	3.16%
10:00 PM	116	171	287	1.93%	2.88%	2.40%
11:00 PM	80	98	178	1.33%	1.65%	1.49%
12:00 AM	51	64	115	0.84%	1.08%	0.96%
TOTALS	6,025	5,933	11,958	100.0%	100.0%	100.0%



ANNUAL VEHICLE CLASSIFICATION REPORT

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-2
 COUNT LOCATION: SR-46 Btwn. E. Lake Mary Blvd.SR-415 and Osceola Road
 EQUIPMENT ID: P220

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	60	0.50%
Class 2	Cars	7,979	66.73%
Class 3	Pick-Ups & Vans	2,501	20.91%
Class 4	Buses	120	1.00%
Class 5	2 Axle, Single Unit Trucks	1,042	8.71%
Class 6	3 Axle, Single Unit Trucks	10	0.08%
Class 7	4 Axle, Single Unit Trucks	0	0.00%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	241	2.02%
Class 9	3 Axle Tractor with 2 Axle Trailer	3	0.03%
Class 10	3 Axle Tractor with 3 Axle Trailer	0	0.00%
Class 11	5 Axle Multi Trailer	1	0.01%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	0	0.00%
Class 14	Not Used	0	0.00%
Class 15	Other	0	0.00%
TOTALS		11,958	100.00%

Traffic Count Data

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-1
COUNT LOCATION	SR-46 Btwn Osceola Road and Mullet Lake Park Road
VHB PROJECT #	62518.58 T115
Equipment ID	P200/P238

TYPE OF COUNT: 72-Hour APPROACH VOLUME COUNT

TIME OF COUNT:

Start Date	May 17, 2016	Start Time	12:00 AM
End Date	May 21, 2016	End Time	12:00 AM

VOLUME AVERAGES

	Total	EB	WB
ADT	10,613	5,184	5,429
Peak Hour	4:45 PM to	5:45 PM	
	Peak Hour Total	EB	WB
	1,008	521	487

MEASURED TRAVEL CHARACTERISTICS

Peak to Daily Ratio

K = 9.50% **D = 51.7%**

Hourly Distribution of Traffic Volumes

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-1
COUNT LOCATION	SR-46 Btwn Osceola Road and Mullet Lake Park Road
VHB PROJECT #	62518.58 T115
Equipment ID	P200/P238

HOUR END AT	HOURLY VOLUME DIRECTION (EB)	HOURLY VOLUME DIRECTION (WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (EB)	DISTRIBUTION PERCENT DIRECTION (WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	31	28	59	0.60%	0.52%	0.56%
2:00 AM	17	17	34	0.33%	0.31%	0.32%
3:00 AM	18	15	33	0.35%	0.28%	0.31%
4:00 AM	18	24	42	0.35%	0.44%	0.40%
5:00 AM	47	41	88	0.91%	0.76%	0.83%
6:00 AM	153	153	306	2.95%	2.82%	2.88%
7:00 AM	369	334	703	7.12%	6.15%	6.62%
8:00 AM	438	472	910	8.45%	8.69%	8.57%
9:00 AM	362	393	755	6.98%	7.24%	7.11%
10:00 AM	267	268	535	5.15%	4.94%	5.04%
11:00 AM	247	258	505	4.76%	4.75%	4.76%
12:00 PM	230	282	512	4.44%	5.19%	4.82%
1:00 PM	239	318	557	4.61%	5.86%	5.25%
2:00 PM	231	292	523	4.46%	5.38%	4.93%
3:00 PM	258	319	577	4.98%	5.88%	5.44%
4:00 PM	322	346	668	6.21%	6.37%	6.29%
5:00 PM	434	465	899	8.37%	8.57%	8.47%
6:00 PM	513	483	996	9.90%	8.90%	9.38%
7:00 PM	334	341	675	6.44%	6.28%	6.36%
8:00 PM	219	206	425	4.22%	3.79%	4.00%
9:00 PM	170	141	311	3.28%	2.60%	2.93%
10:00 PM	123	110	233	2.37%	2.03%	2.20%
11:00 PM	92	75	167	1.77%	1.38%	1.57%
12:00 AM	52	48	100	1.00%	0.88%	0.94%
TOTALS	5,184	5,429	10,613	100.00%	100.00%	100.00%

Traffic Count Data

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-2
COUNT LOCATION	SR-46 Btwn. Mullet Lake Park Road and Woodridge Drive
VHB PROJECT #	62518.58 T115
Equipment ID	P53/P40

TYPE OF COUNT: 72-Hour APPROACH VOLUME COUNT

TIME OF COUNT:

Start Date	May 17, 2016	Start Time	12:00 AM
End Date	May 21, 2016	End Time	12:00 AM

VOLUME AVERAGES

	<u>Total</u>		<u>EB</u>		<u>WB</u>
ADT	11,124		5,534		5,590
Peak Hour	4:45 PM	to	5:45 PM		
	<u>Peak Hour Total</u>		<u>EB</u>		<u>WB</u>
	1,037		529		508

MEASURED TRAVEL CHARACTERISTICS

Peak to Daily Ratio

K = 9.32% **D = 51.0%**

Hourly Distribution of Traffic Volumes

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-2
COUNT LOCATION	SR-46 Btwn. Mullet Lake Park Road and Woodridge Drive
VHB PROJECT #	62518.58 T115
Equipment ID	P53/P40

HOUR END AT	HOURLY VOLUME DIRECTION (EB)	HOURLY VOLUME DIRECTION (WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (EB)	DISTRIBUTION PERCENT DIRECTION (WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	29	29	58	0.52%	0.52%	0.52%
2:00 AM	22	13	35	0.40%	0.23%	0.31%
3:00 AM	19	16	35	0.34%	0.29%	0.31%
4:00 AM	19	22	41	0.34%	0.39%	0.37%
5:00 AM	49	45	94	0.89%	0.81%	0.85%
6:00 AM	158	159	317	2.86%	2.84%	2.85%
7:00 AM	396	337	733	7.16%	6.03%	6.59%
8:00 AM	460	475	935	8.31%	8.50%	8.41%
9:00 AM	394	394	788	7.12%	7.05%	7.08%
10:00 AM	283	272	555	5.11%	4.87%	4.99%
11:00 AM	261	270	531	4.72%	4.83%	4.77%
12:00 PM	249	282	531	4.50%	5.04%	4.77%
1:00 PM	251	324	575	4.54%	5.80%	5.17%
2:00 PM	262	302	564	4.73%	5.40%	5.07%
3:00 PM	306	325	631	5.53%	5.81%	5.67%
4:00 PM	356	370	726	6.43%	6.62%	6.53%
5:00 PM	454	488	942	8.20%	8.73%	8.47%
6:00 PM	523	497	1,020	9.45%	8.89%	9.17%
7:00 PM	348	354	702	6.29%	6.33%	6.31%
8:00 PM	230	212	442	4.16%	3.79%	3.97%
9:00 PM	184	154	338	3.32%	2.75%	3.04%
10:00 PM	139	122	261	2.51%	2.18%	2.35%
11:00 PM	89	80	169	1.61%	1.43%	1.52%
12:00 AM	53	48	101	0.96%	0.86%	0.91%
TOTALS	5,534	5,590	11,124	100.00%	100.00%	100.00%

TRAFFIC COUNT DATA

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-3
 COUNT LOCATION: SR-46 West of CR-426 1st Street
 EQUIPMENT ID: P153

TYPE OF COUNT: 72 Hour Classification Count

TIME OF COUNT:
 Start Date: 5/17/2016 Start Time: Midnight
 End Date: 5/19/2016 End Time: Midnight

VOLUMES:

		Peak Hour Time: 4:45 PM
Average Daily:	10,051	Average Peak Hour: 922
Daily Truck Avg:	1,434	Max Hour Truck Avg: 147
		Peak Hour Truck Avg: 117

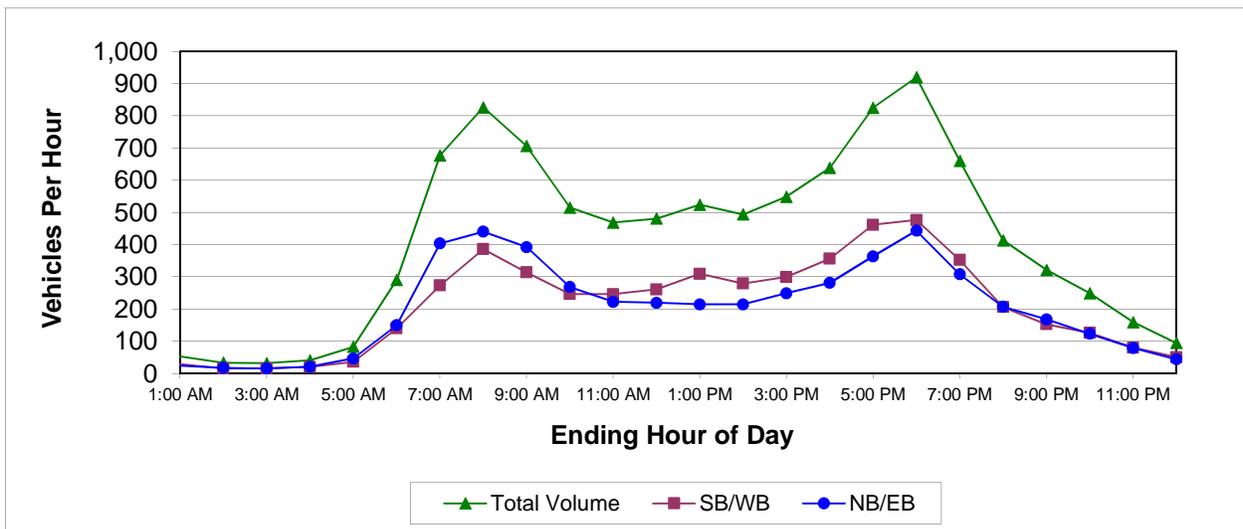
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.2%	D= 52.8%
T Max Hour 16.0%	T daily 14.3%
T med (max) 10.6%	T med Daily 9.6%
T heavy (max) 5.4%	T heavy Daily 4.7%
T Peak Hour 12.7%	
T med Peak Hour 9.3%	
T heavy Peak Hour 3.4%	

HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-3
 COUNT LOCATION: SR-46 West of CR-426 1st Street
 EQUIPMENT ID: P153

HOUR ENDING AT	HOURLY VOLUME DIRECTION (NB OR EB)	HOURLY VOLUME DIRECTION (SB OR WB)	TOTAL VOLUME BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB OR EB)	DISTRIBUTION PERCENT DIRECTION (SB OR WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	24	29	53	0.48%	0.57%	0.53%
2:00 AM	17	16	33	0.35%	0.31%	0.33%
3:00 AM	16	16	32	0.32%	0.31%	0.32%
4:00 AM	21	20	41	0.42%	0.39%	0.40%
5:00 AM	46	36	83	0.94%	0.71%	0.82%
6:00 AM	150	140	290	3.05%	2.73%	2.89%
7:00 AM	404	273	677	8.21%	5.32%	6.74%
8:00 AM	440	386	826	8.96%	7.52%	8.22%
9:00 AM	392	314	706	7.98%	6.11%	7.02%
10:00 AM	268	247	515	5.46%	4.80%	5.12%
11:00 AM	223	246	469	4.53%	4.79%	4.66%
12:00 PM	220	261	481	4.47%	5.08%	4.78%
1:00 PM	215	309	524	4.37%	6.02%	5.21%
2:00 PM	214	279	494	4.36%	5.44%	4.91%
3:00 PM	249	299	548	5.06%	5.83%	5.46%
4:00 PM	281	356	638	5.72%	6.94%	6.34%
5:00 PM	364	462	825	7.40%	8.99%	8.21%
6:00 PM	443	476	920	9.02%	9.28%	9.15%
7:00 PM	308	352	660	6.26%	6.86%	6.57%
8:00 PM	207	206	413	4.21%	4.02%	4.11%
9:00 PM	168	153	321	3.42%	2.97%	3.19%
10:00 PM	123	126	249	2.50%	2.45%	2.48%
11:00 PM	79	80	159	1.61%	1.56%	1.58%
12:00 AM	44	51	95	0.89%	0.99%	0.94%
TOTALS	4,916	5,134	10,051	100.0%	100.0%	100.0%



ANNUAL VEHICLE CLASSIFICATION REPORT

VHB PROJECT NO: 62518.58 T115
 LOCATION CODE: C-3
 COUNT LOCATION: SR-46 West of CR-426 1st Street
 EQUIPMENT ID: P153

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	109	1.08%
Class 2	Cars	6,841	68.06%
Class 3	Pick-Ups & Vans	1,667	16.58%
Class 4	Buses	61	0.61%
Class 5	2 Axle, Single Unit Trucks	899	8.94%
Class 6	3 Axle, Single Unit Trucks	100	0.99%
Class 7	4 Axle, Single Unit Trucks	19	0.19%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	187	1.86%
Class 9	3 Axle Tractor with 2 Axle Trailer	159	1.58%
Class 10	3 Axle Tractor with 3 Axle Trailer	4	0.04%
Class 11	5 Axle Multi Trailer	0	0.00%
Class 12	6 Axle Multi Trailer	4	0.04%
Class 13	7 or more Axles	2	0.02%
Class 14	Not Used	0	0.00%
Class 15	Other	0	0.00%
TOTALS		10,052	100.00%

Traffic Count Data

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-3
COUNT LOCATION	SR-46 East of CR-426-1st Street
VHB PROJECT #	62518.58 T115
Equipment ID	P145/P247

TYPE OF COUNT: 72-Hour APPROACH VOLUME COUNT

TIME OF COUNT:

Start Date	May 17, 2016	Start Time	12:00 AM
End Date	May 21, 2016	End Time	12:00 AM

VOLUME AVERAGES

	<u>Total</u>	<u>EB</u>	<u>WB</u>
ADT	7,457	3,603	3,854
Peak Hour	5:00 PM to 6:00 PM		
	<u>Peak Hour Total</u>	<u>EB</u>	<u>WB</u>
	640	345	295

MEASURED TRAVEL CHARACTERISTICS

Peak to Daily Ratio

K =	8.58%	D =	53.9%
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Hourly Distribution of Traffic Volumes

Vanasse Hangen Brustlin, Inc.

PROJECT	SR 46 PD&E Study update
LOCATION CODE	V-3
COUNT LOCATION	SR-46 East of CR-426-1st Street
VHB PROJECT #	62518.58 T115
Equipment ID	P145/P247

HOUR END AT	HOURLY VOLUME DIRECTION (EB)	HOURLY VOLUME DIRECTION (WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (EB)	DISTRIBUTION PERCENT DIRECTION (WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	22	20	42	0.61%	0.52%	0.56%
2:00 AM	12	11	23	0.33%	0.29%	0.31%
3:00 AM	14	12	26	0.39%	0.31%	0.35%
4:00 AM	16	22	38	0.44%	0.57%	0.51%
5:00 AM	31	36	67	0.86%	0.93%	0.90%
6:00 AM	106	128	234	2.94%	3.32%	3.14%
7:00 AM	206	274	480	5.72%	7.11%	6.44%
8:00 AM	246	354	600	6.83%	9.19%	8.05%
9:00 AM	217	269	486	6.02%	6.98%	6.52%
10:00 AM	187	191	378	5.19%	4.96%	5.07%
11:00 AM	179	199	378	4.97%	5.16%	5.07%
12:00 PM	178	222	400	4.94%	5.76%	5.36%
1:00 PM	186	241	427	5.16%	6.25%	5.73%
2:00 PM	190	225	415	5.27%	5.84%	5.57%
3:00 PM	205	217	422	5.69%	5.63%	5.66%
4:00 PM	239	226	465	6.63%	5.86%	6.24%
5:00 PM	291	294	585	8.08%	7.63%	7.84%
6:00 PM	345	295	640	9.58%	7.65%	8.58%
7:00 PM	239	229	468	6.63%	5.94%	6.28%
8:00 PM	162	127	289	4.50%	3.30%	3.88%
9:00 PM	124	91	215	3.44%	2.36%	2.88%
10:00 PM	104	74	178	2.89%	1.92%	2.39%
11:00 PM	68	64	132	1.89%	1.66%	1.77%
12:00 AM	36	33	69	1.00%	0.86%	0.93%
TOTALS	3,603	3,854	7,457	100.00%	100.00%	100.00%

2015 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 77 - SEMINOLE

WEEK	DATES	SR419/434	TO SR417	7709	US17/92	7710	SR446, EAST	OF US17/92	7711	SR426	7712
1	01/01/2015 - 01/03/2015			0.98		0.99			0.96		0.97
2	01/04/2015 - 01/10/2015			0.98		0.98			0.96		0.97
3	01/11/2015 - 01/17/2015			0.98		0.97			0.96		0.97
4	01/18/2015 - 01/24/2015			0.98		0.97			0.96		0.97
5	01/25/2015 - 01/31/2015			0.98		0.98			0.96		0.97
6	02/01/2015 - 02/07/2015			0.98		0.98			0.95		0.97
7	02/08/2015 - 02/14/2015			0.98		0.99			0.95		0.97
8	02/15/2015 - 02/21/2015			0.98		0.99			0.95		0.97
9	02/22/2015 - 02/28/2015			0.98		0.99			0.95		0.97
10	03/01/2015 - 03/07/2015			0.98		1.00			0.95		0.97
11	03/08/2015 - 03/14/2015			0.98		1.00			0.95		0.97
12	03/15/2015 - 03/21/2015			0.98		1.00			0.95		0.97
13	03/22/2015 - 03/28/2015			0.98		1.00			0.95		0.97
14	03/29/2015 - 04/04/2015			0.98		1.00			0.95		0.97
15	04/05/2015 - 04/11/2015			0.98		1.00			0.95		0.97
16	04/12/2015 - 04/18/2015			0.98		1.00			0.95		0.97
17	04/19/2015 - 04/25/2015			0.98		0.99			0.95		0.97
18	04/26/2015 - 05/02/2015			0.98		0.99			0.95		0.97
19	05/03/2015 - 05/09/2015			0.98		0.99			0.95		0.97
20	05/10/2015 - 05/16/2015			0.98		0.99			0.95		0.97
21	05/17/2015 - 05/23/2015			0.98		0.99			0.95		0.97
22	05/24/2015 - 05/30/2015			0.98		0.99			0.95		0.97
23	05/31/2015 - 06/06/2015			0.98		0.98			0.95		0.97
24	06/07/2015 - 06/13/2015			0.98		0.98			0.95		0.97
25	06/14/2015 - 06/20/2015			0.98		0.98			0.95		0.97
26	06/21/2015 - 06/27/2015			0.98		0.98			0.95		0.97
27	06/28/2015 - 07/04/2015			0.98		0.99			0.95		0.97
28	07/05/2015 - 07/11/2015			0.98		0.99			0.95		0.97
29	07/12/2015 - 07/18/2015			0.98		0.99			0.95		0.97
30	07/19/2015 - 07/25/2015			0.98		0.99			0.95		0.97
31	07/26/2015 - 08/01/2015			0.98		0.99			0.96		0.97
32	08/02/2015 - 08/08/2015			0.98		0.99			0.96		0.97
33	08/09/2015 - 08/15/2015			0.98		0.99			0.96		0.97
34	08/16/2015 - 08/22/2015			0.98		0.99			0.96		0.97
35	08/23/2015 - 08/29/2015			0.98		0.99			0.96		0.97
36	08/30/2015 - 09/05/2015			0.98		0.98			0.96		0.97
37	09/06/2015 - 09/12/2015			0.98		0.98			0.96		0.97
38	09/13/2015 - 09/19/2015			0.98		0.98			0.96		0.97
39	09/20/2015 - 09/26/2015			0.98		0.98			0.96		0.97
40	09/27/2015 - 10/03/2015			0.98		0.99			0.96		0.97
41	10/04/2015 - 10/10/2015			0.98		0.99			0.96		0.97
42	10/11/2015 - 10/17/2015			0.98		0.99			0.96		0.97
43	10/18/2015 - 10/24/2015			0.98		0.99			0.96		0.97
44	10/25/2015 - 10/31/2015			0.98		0.99			0.96		0.97
45	11/01/2015 - 11/07/2015			0.98		0.99			0.96		0.97
46	11/08/2015 - 11/14/2015			0.98		0.99			0.96		0.97
47	11/15/2015 - 11/21/2015			0.98		0.99			0.96		0.97
48	11/22/2015 - 11/28/2015			0.98		0.99			0.96		0.97
49	11/29/2015 - 12/05/2015			0.98		0.99			0.96		0.97
50	12/06/2015 - 12/12/2015			0.98		0.99			0.96		0.97
51	12/13/2015 - 12/19/2015			0.98		0.99			0.96		0.97
52	12/20/2015 - 12/26/2015			0.98		0.98			0.96		0.97
53	12/27/2015 - 12/31/2015			0.98		0.97			0.96		0.97

2015 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 7700 SEMINOLE COUNTYWIDE

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2015 - 01/03/2015	0.99	1.01
2	01/04/2015 - 01/10/2015	1.03	1.05
3	01/11/2015 - 01/17/2015	1.06	1.08
4	01/18/2015 - 01/24/2015	1.04	1.06
5	01/25/2015 - 01/31/2015	1.03	1.05
6	02/01/2015 - 02/07/2015	1.01	1.03
7	02/08/2015 - 02/14/2015	1.00	1.02
* 8	02/15/2015 - 02/21/2015	0.99	1.01
* 9	02/22/2015 - 02/28/2015	0.98	1.00
*10	03/01/2015 - 03/07/2015	0.97	0.99
*11	03/08/2015 - 03/14/2015	0.96	0.98
*12	03/15/2015 - 03/21/2015	0.96	0.98
*13	03/22/2015 - 03/28/2015	0.96	0.98
*14	03/29/2015 - 04/04/2015	0.97	0.99
*15	04/05/2015 - 04/11/2015	0.97	0.99
*16	04/12/2015 - 04/18/2015	0.98	1.00
*17	04/19/2015 - 04/25/2015	0.98	1.00
*18	04/26/2015 - 05/02/2015	0.99	1.01
*19	05/03/2015 - 05/09/2015	0.99	1.01
*20	05/10/2015 - 05/16/2015	1.00	1.02
21	05/17/2015 - 05/23/2015	1.00	1.02
22	05/24/2015 - 05/30/2015	1.01	1.03
23	05/31/2015 - 06/06/2015	1.01	1.03
24	06/07/2015 - 06/13/2015	1.02	1.04
25	06/14/2015 - 06/20/2015	1.02	1.04
26	06/21/2015 - 06/27/2015	1.02	1.04
27	06/28/2015 - 07/04/2015	1.02	1.04
28	07/05/2015 - 07/11/2015	1.03	1.05
29	07/12/2015 - 07/18/2015	1.02	1.04
30	07/19/2015 - 07/25/2015	1.02	1.04
31	07/26/2015 - 08/01/2015	1.02	1.04
32	08/02/2015 - 08/08/2015	1.02	1.04
33	08/09/2015 - 08/15/2015	1.02	1.04
34	08/16/2015 - 08/22/2015	1.02	1.04
35	08/23/2015 - 08/29/2015	1.02	1.04
36	08/30/2015 - 09/05/2015	1.03	1.05
37	09/06/2015 - 09/12/2015	1.03	1.05
38	09/13/2015 - 09/19/2015	1.02	1.04
39	09/20/2015 - 09/26/2015	1.01	1.03
40	09/27/2015 - 10/03/2015	1.00	1.02
41	10/04/2015 - 10/10/2015	0.99	1.01
42	10/11/2015 - 10/17/2015	0.98	1.00
43	10/18/2015 - 10/24/2015	0.98	1.00
44	10/25/2015 - 10/31/2015	0.99	1.01
45	11/01/2015 - 11/07/2015	0.99	1.01
46	11/08/2015 - 11/14/2015	1.00	1.02
47	11/15/2015 - 11/21/2015	1.00	1.02
48	11/22/2015 - 11/28/2015	1.00	1.02
49	11/29/2015 - 12/05/2015	0.99	1.01
50	12/06/2015 - 12/12/2015	0.99	1.01
51	12/13/2015 - 12/19/2015	1.01	1.03
52	12/20/2015 - 12/26/2015	1.04	1.06
53	12/27/2015 - 12/31/2015	1.06	1.08

* PEAK SEASON

03-MAR-2016 11:19:29

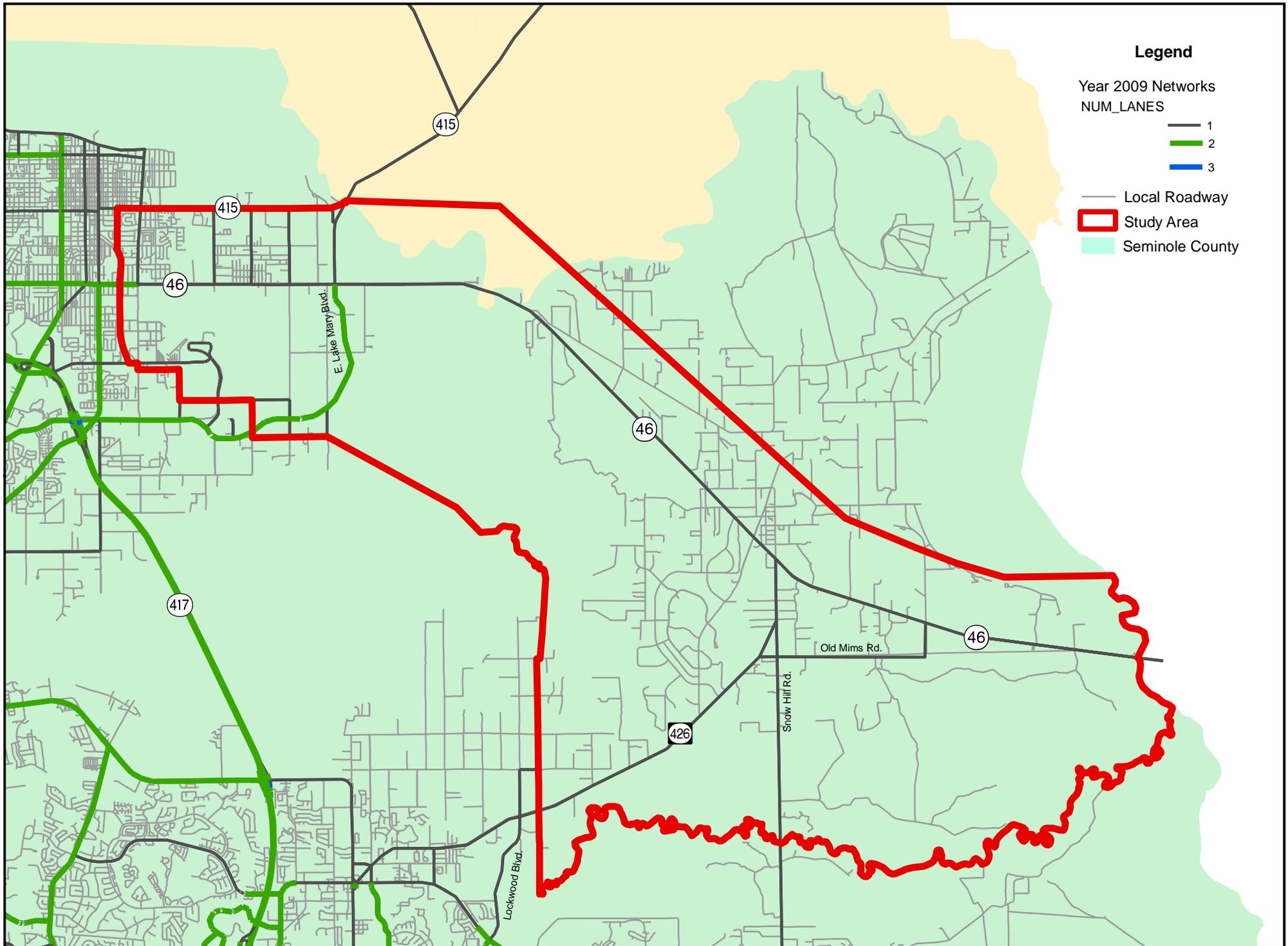
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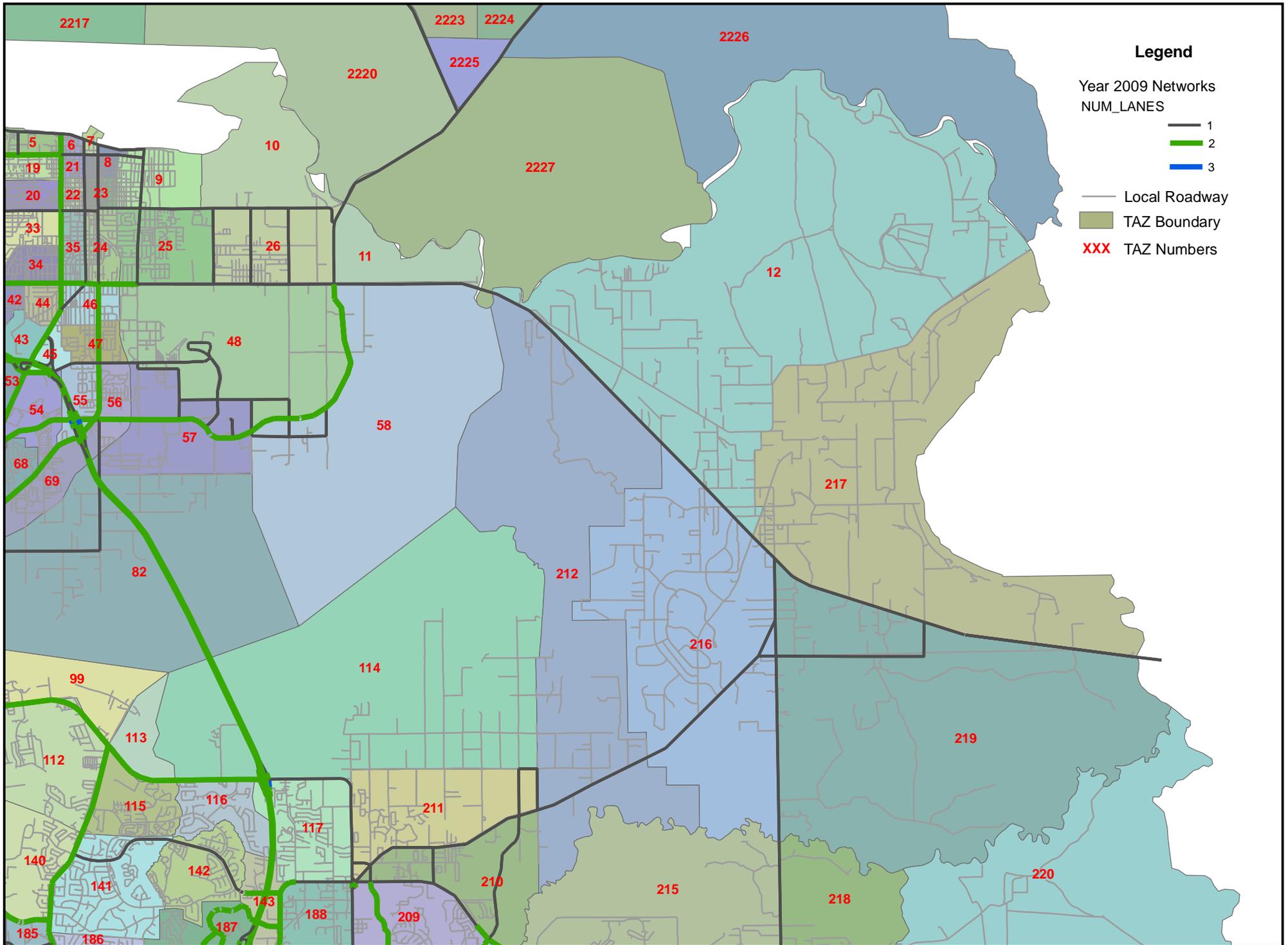
Appendix B

- Sub Area Model Validation Supporting Documents

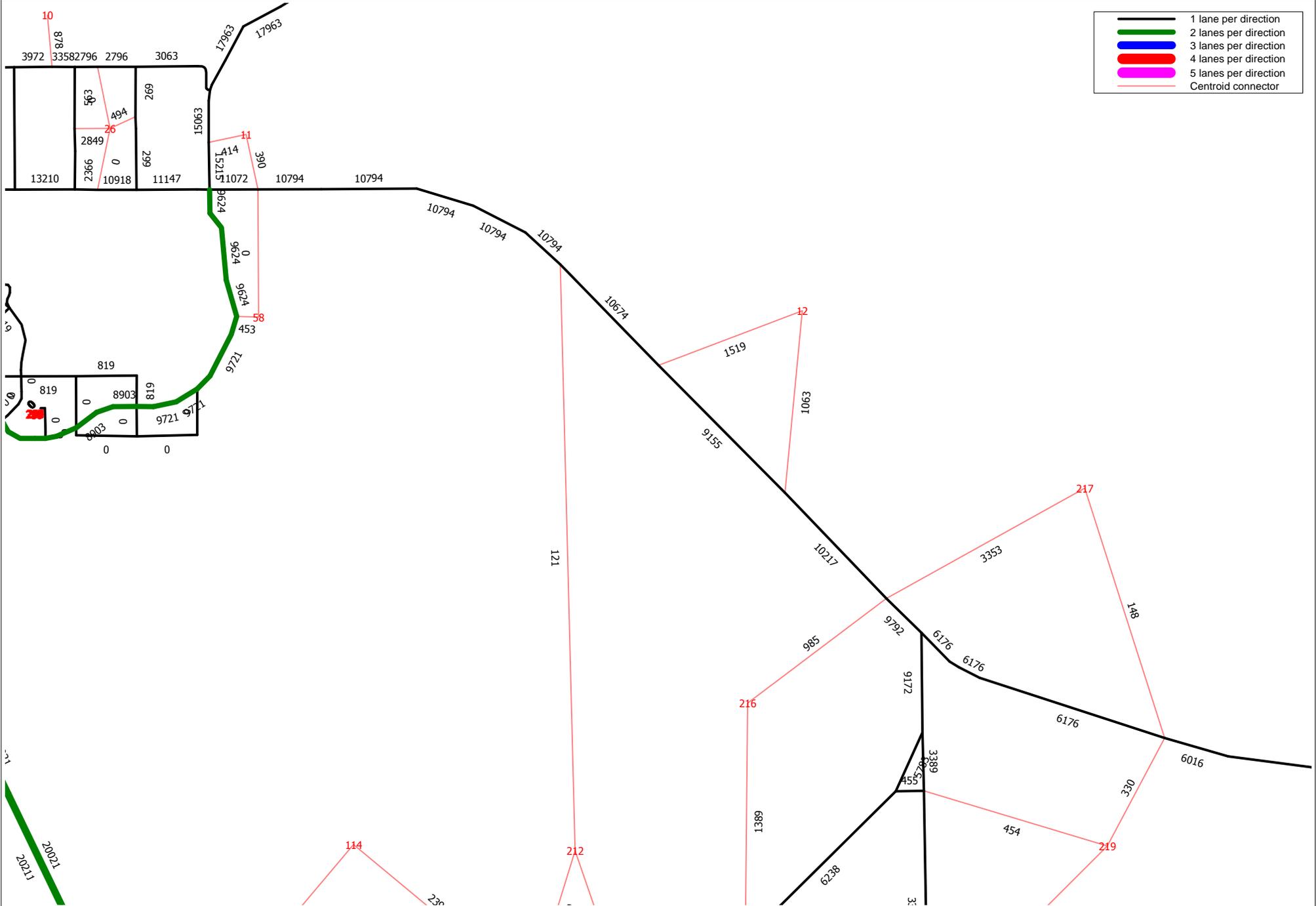
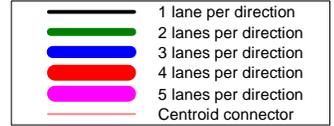
SR 46 Sub-Area Model Validation Study Area



SR 46 Planning Study Area TAZ Map



Year 2009 Base OUATS - Total Traffic Volumes (PSWADT)
 SR 46 study before validation



E:\FSUTMS\ID5\OUATS.40\Base\SR46Before\Output\HRLDXY_B09.NET 8/16/2016

SR 46 Study

- Year 2009 Validation Link Report

SL No	Roadway Name	Location	Count Source	Year 2009 AADT Count	Facility Type Before	2009 Model PSWADT Before Validation	2009 Model AADT Before Validation Total	Facility Type After	2009 Model PSWADT After Validation	2009 Model AADT After Validation Total
1	SR 46	W. of SR 415	Seminole County	10,989	31	11,147	10,924	31	9,363	9,176
2	SR 46	SR 415 to Osceola Rd	Seminole County	11,328	31	11,072	10,851	31	11,545	11,314
3	SR 46	Osceola Rd to CR 426	FTI	8,000	31	9,792	9,596	31	8,069	7,908
4	SR 46	E. of CR 426	Seminole County	6,244	31	6,176	6,052	31	5,896	5,778
5	SR 415	S. of Volusia County Line	Seminole County	17,131	31	17,963	17,604	31	18,636	18,263
6	SR 415	N. of SR 46	Seminole County	16,392	45	15,215	14,911	45	15,679	15,365
7	E. Lake Mary Blvd	S. of SR 46	Seminole County	11,299	22	9,721	9,527	22	12,327	12,080
8	CR 426	S. of SR 46	Seminole County	8,114	43	9,172	8,989	43	7,135	6,992
9	CR 426	S. of Old Mims Rd	Seminole County	7,425	43	6,238	6,113	43	5,996	5,876

Notes: 1) When not available, 2009 AADT volume was interpolated using 2008 and 2010 data (SI# 2 and 7);
For CR 426, 2010 data was used (because 2009 counts were not comparable to other year counts)
2) A MOCF of 0.98 (source: 2009 FTI DVD) was used to convert PSWADT to AADT

Appendix C

- Pages from MetroPlan Orlando TIP and LRTP for SR 46
- 2040 model volume plots

MetroPlan Orlando
Transportation Improvement Program
State Highway Projects
Seminole County

FDOT Financial Management Number	Project Name or Designation	Project Description				2040 L RTP Reference	Historic Cost Prior to 2016/17 (\$000's)	Project Status and Cost (\$000's)							Estimated Future Cost After 2020/21 (\$000's)	Total Project Cost (\$000's)	Responsible Agency		
		From	To	Length (Miles)	Work Description			2016/17	2017/18	2018/19	2019/20	2020/21	Funding Sources	Project Phases					
2401961	SR 15/600/US 17/92	Shepard Rd.	Lake Mary Blvd.	3.65	Widen to 6 Lanes	Tech. Rep. 3 page 18	65,928	146	0	0	0	0	0	0	DDR	CST	0	66,074	FDOT
2402002 <i>SIS Project</i>	SR 429/46/Wekiva Pkwy.	Wekiva River Rd.	Orange Blvd.	3.53	New Road Construction	Tech. Rep. 3 page 17		23,200	16,900	2,296	10,618	0	0	0	DDR	ROW			FDOT
								300	380	171	0	0	0	0	DIH	ROW			
								0	0	11,341	0	0	0	0	WKOC	ROW			
								0	92,231	0	0	0	0	0	ACNP	CST			
								0	1,751	0	0	0	0	0	CM	CST			
								0	7,423	1,200	0	0	0	0	DDR	CST			
								0	917	0	0	0	0	0	DIH	CST			
								0	35,000	0	0	0	0	0	PKED	CST			
								0	25,778	0	0	0	0	0	SA	CST			
								0	16,885	0	0	0	0	0	STED	CST			
								0	6,229	0	0	0	0	0	WKOC	CST			
							24,033	23,500	203,494	15,008	10,618	0	0	0	Total		0	276,653	
2402003 <i>SIS Project</i>	SR 46/Wekiva Pkwy.	W of Center Rd.	I-4	1.88	Widen to 6 Lanes	Tech. Rep. 3 page 17		1,662	0	0	0	0	0	0	DDR	PE			FDOT
								0	0	22,445	0	0	0	0	ACNP	CST			
								0	0	81	0	0	0	0	DDR	CST			
								0	0	243	0	0	0	0	DIH	CST			
							10	1,662	0	22,769	0	0	0	0	Total		0	24,441	
2402004 <i>SIS Project</i>	SR 429/46/Wekiva Pkwy.	Orange Blvd.	W of I-4	2.64	New Road Construction	Tech. Rep. 3 page 17		0	2,472	0	0	0	0	0	DDR	PE			FDOT
								300	245	3,067	6,208	0	0	0	DDR	ROW			
								100	30	11	0	0	0	0	DIH	ROW			
								500	0	0	0	0	0	0	PKED	ROW			
								10,000	15,000	9,052	0	0	0	0	WKBL	ROW			
								1,000	1,500	1,800	0	0	0	0	WKOC	ROW			
								0	0	97,188	0	0	0	0	ACNP	DSB			
								0	0	0	1,800	0	0	0	DDR	DSB			
								0	0	1,535	0	0	0	0	DIH	DSB			
								0	0	25,000	0	0	0	0	PKED	DSB			
								0	0	114,417	0	0	0	0	WKOC	DSB			
							40,426	11,900	19,247	252,070	8,008	0	0	0	Total		0	331,651	
2402162	SR 46	Mellonville Ave.	SR 415	2.64	Widen to 4 Lanes	Tech. Rep. 3 page 18		0	0	117	0	0	0	0	DDR	CST			FDOT
								0	0	590	0	0	0	0	DDR	INC			
								0	0	15,462	0	0	0	0	DDR	Payback			
							34,666	0	0	16,169	0	0	0	0	Total		0	50,835	
2402167	SR 46	SR 415	CR 426	7.39	Safety Improvements	Tech. Rep. 3 page 18		904	0	0	0	0	0	0	DDR	CST			FDOT
								139	0	0	0	0	0	0	DIH	CST			
								327	0	0	0	0	0	0	DS	CST			
							911	1,370	0	0	0	0	0	0	Total		0	2,281	
2402168	SR 46	SR 415	CR 426	8.56	Widen to 4 Lanes	Tech. Rep. 3 page 18		0	0	0	0	2,326	0	0	DDR	PE			FDOT
								0	0	0	30	0	0	0	DIH	PE			
								0	0	0	0	5,119	0	0	DS	PE			
							0	0	0	0	30	7,445	0	0	Total		62,000	69,475	

TABLE 7: STRATEGIC INTERMODAL SYSTEM (SIS) PROJECTS

Roadway	From	To	Improvement	Phase(s)	Funded by
I-4	Polk/Osceola County Line	SR 435/Kirkman Rd	Ultimate Configuration for General Use & Managed Lanes	D,R,C	2025
I-4	SR 434	Seminole/Volusia Co. Line	Ultimate Configuration for General Use & Managed Lanes	D,R,C	2025
Wekiva Parkway **	US 441	I-4	New Expressway	D,R,C	2025
SR 528/Beachline Expressway	I-4	Florida's Turnpike	Widen to 8 Lanes	P,D,R,C	2030

* Transportation Improvement Program (TIP 2016-2020)
 ** Refer to Prioritized Project List (PPL)
 P = Project Development & Engineering (PD&E), D = Design, R = Right of Way (ROW), C = Construction

TABLE 8: FEDERAL & STATE FUNDED COST FEASIBLE PROJECTS

Roadway	From	To	Improvement	Phase(s) to be funded	Funded by
SR 46	Mellonville Ave.	SR 415	Widen to 4 Lanes	C	2020*
SR 434/Forest City Rd.	Edgewater Dr.	Orange/Seminole Co. Line	Widen to 6 Lanes	C	2020*
SR 423/John Young Pkwy.	SR 50	Shader Rd.	Widen to 6 Lanes	C	2020*
SR 434	at CR 427		Improve Intersection	P,D,R,C	2020*
SR 434	Range Line Rd.	US 17/92	Multimodal/CSS Improvements	P,D,R,C	2020*
Hoagland Blvd. Phase 2	US 17/92	5th St.	Widen to 4 Lanes/Realign	C	2020*
SR 414/Maitland Blvd.	I-4	Maitland Ave.	Widen to 6 Lanes	R,C	2020*
SR 434	Smith St.	Franklin St.	Widen to 4 Lanes - Phase 1	C	2020*
SR 426/CR 419	Pine Ave.	Avenue B	Widen to 4 Lanes - Phase 2	R,C	2025
CR 419	Avenue B	W of Lockwood Blvd.	Widen to 4 Lanes - Phase 3	R,C	2025
SR 50	E. Old Cheney Hwy.	SR 520	Widen to 6 Lanes	R,C	2025
SR 527/Orange Ave.	SR 482/Sand Lake Rd.	SR 15/Hoffner Ave.	Multimodal/CSS Improvements - PD&E Only	P,C	2025
SR 434/Alafaya Tr.	SR 50	McCulloch Rd.	Multimodal/CSS Improvements - PD&E Only	P, D,C	2025
SR 15/600/US 17/92 & Lee Rd Ext	Norfolk Ave SR15/600/US 17/92	Monroe St./Denning Dr	Construct medians/improve Intersection/ Extend Road	P,D,R, C	2025
SR 46	SR 415	CR 426	Safety Improvements - Phase 1	P,D,R, C	2025
SR 46	SR 415	CR 426	Widen to 4 Lanes - Phase 2	P,D,R,C	2025
John Young Pkwy.	Pleasant Hill Rd.	Portage St.	Widen to 6 Lanes	C	2025
SR 535	Orange/Osceola Co. Line	I-4	Widen to 6 Lanes (2 miles) and 8 Lanes (1.5 miles) - PD&E Only	P,D,R,C	2025
SR 438/Silver Star Rd	SR 429	Bluford Ave	Widen to 4 Lanes - PD&E Only	P	2025
SR 527/Orange Ave	Pineloch Ave	Anderson St	Multimodal /CSS Improvements - PD&E Only	P	2025
SR 436	US 17/92	Wilshire Dr.	Widen to 8 Lanes/CSS Improvements - PD&E Only	P	2025
SR 436	Newburyport Ave	CR 427/Ronald Reagan Blvd.	Intersection Improvements - PD&E Only	P	2025

Note: For detailed information related to the estimated cost for each project phase, see page 15 of this Technical Report #3.

Year 2040 CF OUATS - SR 46 Total Traffic Volumes (PSWADT) - No Build



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Appendix D

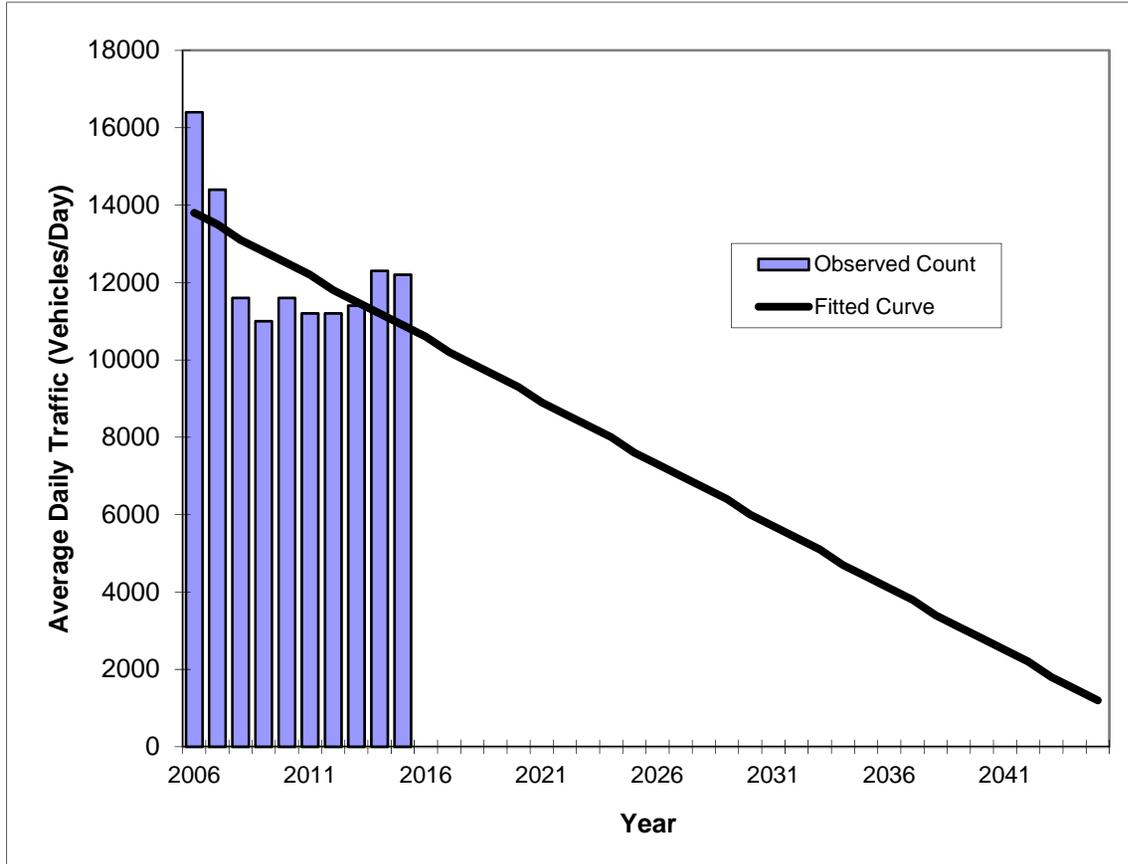
- Historical Trends Analysis Sheets

Traffic Trends - V3.0

SR 46 -- 100' East of Beardall Ave

FIN#	0
Location	13

County:	Seminole (77)
Station #:	Sem-272
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	16400	13800
2007	14400	13500
2008	11600	13100
2009	11000	12800
2010	11600	12500
2011	11200	12200
2012	11200	11800
2013	11400	11500
2014	12300	11200
2015	12200	10900
2025 Opening Year Trend		
2025	N/A	7600
2035 Mid-Year Trend		
2035	N/A	4400
2045 Design Year Trend		
2045	N/A	1200
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-323
Trend R-squared:	31.74%
Trend Annual Historic Growth Rate:	-2.33%
Trend Growth Rate (2015 to Design Year):	-2.97%
Printed:	29-Aug-16
Straight Line Growth Option	

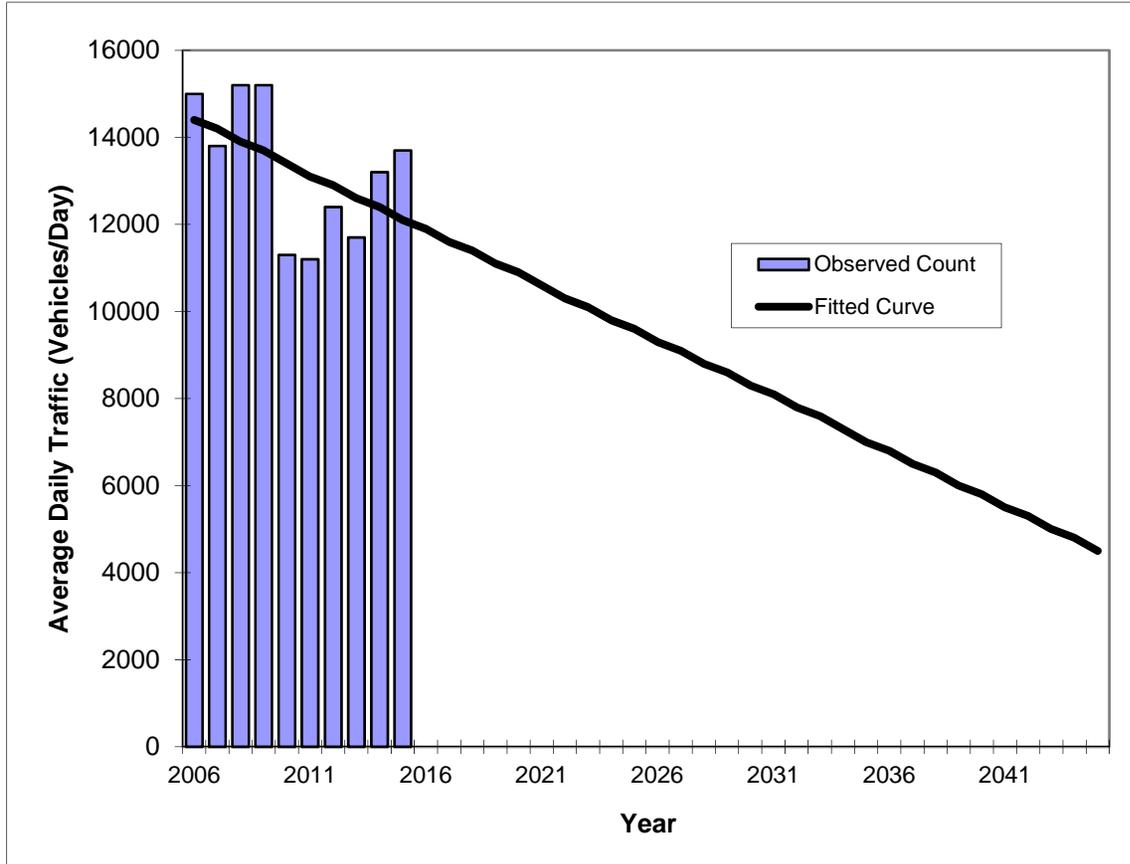
*Axle-Adjusted

Traffic Trends - V3.0

SR 46 -- 500' E of SR 415 to Osceola Rd

FIN#	0
Location	14

County:	Seminole (77)
Station #:	Sem-273
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	15000	14400
2007	13800	14200
2008	15200	13900
2009	15200	13700
2010	11300	13400
2011	11200	13100
2012	12400	12900
2013	11700	12600
2014	13200	12400
2015	13700	12100
2025 Opening Year Trend		
2025	N/A	9600
2035 Mid-Year Trend		
2035	N/A	7000
2045 Design Year Trend		
2045	N/A	4500
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-254
Trend R-squared:	23.86%
Trend Annual Historic Growth Rate:	-1.77%
Trend Growth Rate (2015 to Design Year):	-2.09%
Printed:	29-Aug-16
Straight Line Growth Option	

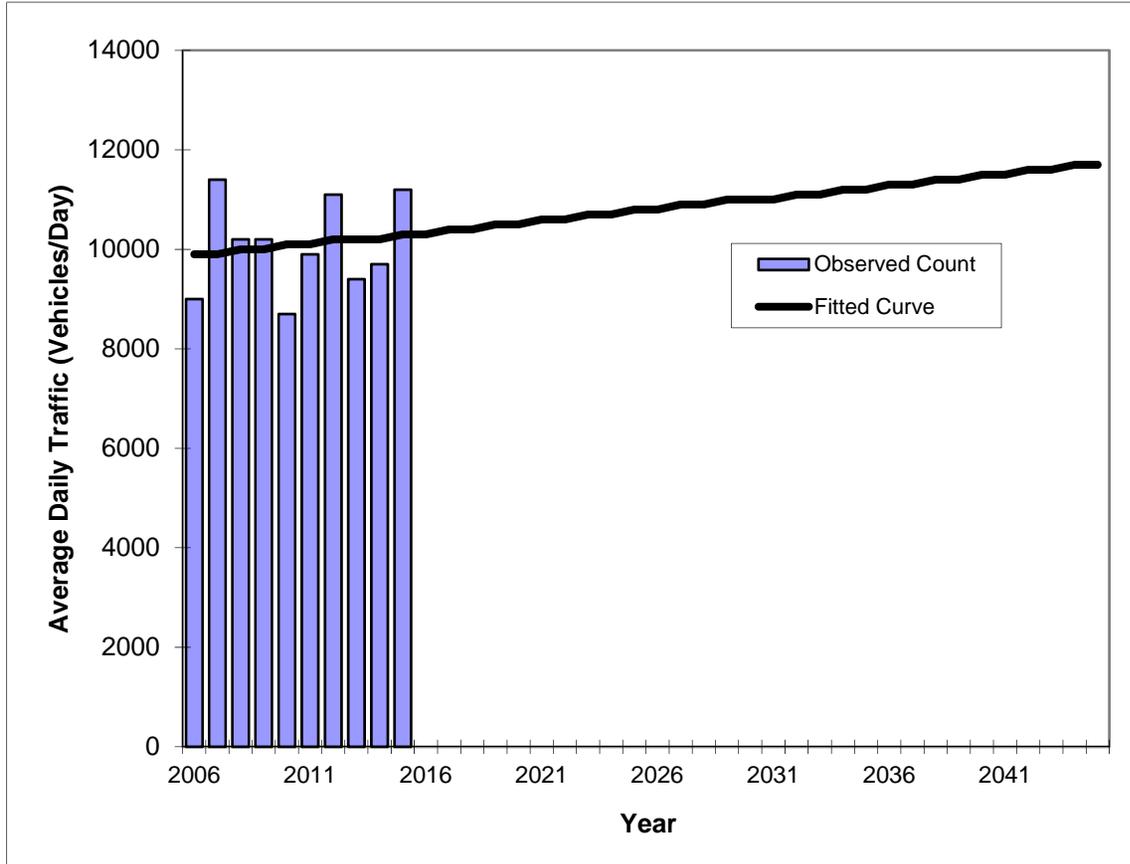
*Axle-Adjusted

Traffic Trends - V3.0

SR 46 -- On Torrent Point St-Osceola Rd to CR 426

FIN#	0
Location	15

County:	Seminole (77)
Station #:	Sem-274
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	9000	9900
2007	11400	9900
2008	10200	10000
2009	10200	10000
2010	8700	10100
2011	9900	10100
2012	11100	10200
2013	9400	10200
2014	9700	10200
2015	11200	10300
2025 Opening Year Trend		
2025	N/A	10800
2035 Mid-Year Trend		
2035	N/A	11200
2045 Design Year Trend		
2045	N/A	11700
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	47
Trend R-squared:	2.37%
Trend Annual Historic Growth Rate:	0.45%
Trend Growth Rate (2015 to Design Year):	0.45%
Printed:	29-Aug-16
Straight Line Growth Option	

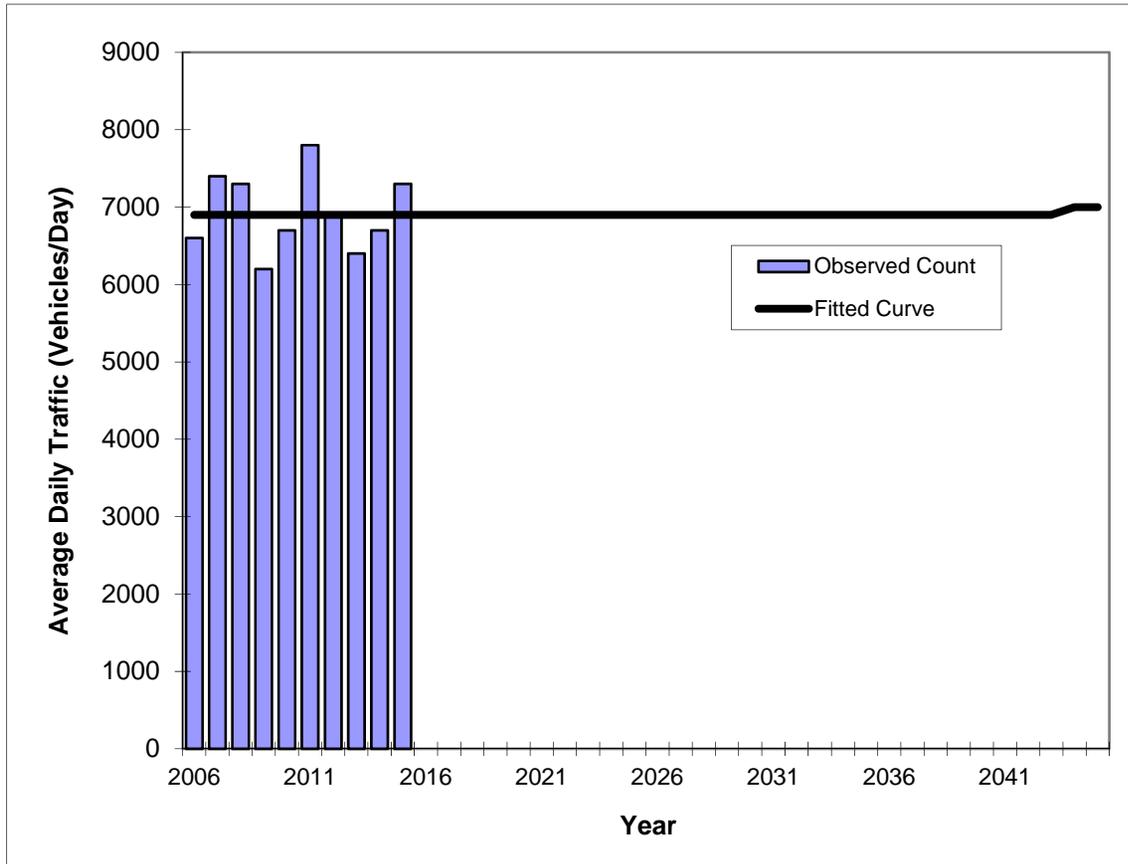
*Axle-Adjusted

Traffic Trends - V3.0

SR 46 -- CR 426 to Volusia County Line

FIN#	0
Location	16

County:	Seminole (77)
Station #:	Sem-275
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	6600	6900
2007	7400	6900
2008	7300	6900
2009	6200	6900
2010	6700	6900
2011	7800	6900
2012	6900	6900
2013	6400	6900
2014	6700	6900
2015	7300	6900
2025 Opening Year Trend		
2025	N/A	6900
2035 Mid-Year Trend		
2035	N/A	6900
2045 Design Year Trend		
2045	N/A	7000
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	1
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2015 to Design Year):	0.05%
Printed:	29-Aug-16
Straight Line Growth Option	

*Axle-Adjusted

Appendix E

- BEBR Population Projection Data

Projections of Florida Population by County, 2020–2045, with Estimates for 2015

Stefan Rayer, Population Program Director

Ying Wang, Research Demographer

The Bureau of Economic and Business Research (BEBR) has been making population projections for Florida and its counties since the 1970s. This report presents our most recent set of projections and describes the methodology used to construct those projections. To account for uncertainty regarding future population growth, we publish three series of projections. We believe the medium series is the most likely to provide accurate forecasts in most circumstances, but the low and high series provide an indication of the uncertainty surrounding the medium series. It should be noted that these projections refer solely to permanent residents of Florida; they do not include tourists or seasonal residents.

State projections

The starting point for the state-level projections was the 2010 census count by age and sex as reported by the U.S. Census Bureau. Projections were made in five-year intervals using a cohort-component methodology in which births, deaths, and migration were projected separately for each age/sex group. We applied three different sets of assumptions to provide low, medium, and high series of projections. Although the low and high series do not provide absolute bounds on future population growth, they offer a reasonable range in which Florida's future population is likely to fall.

Survival rates were applied to each age/sex group to project future deaths in the population. These rates were based on Florida Life Tables for 2009–2011, using mortality data published by the Office of Vital Statistics in the Florida Department of Health. The survival rates were adjusted upward in 2020, 2025,

2030, 2035, and 2040 to account for projected increases in life expectancy. These adjustments were based on projected increases in survival rates released by the U.S. Census Bureau. We used the same mortality assumptions for all three series of projections because there is much less uncertainty regarding future changes in mortality rates than is true for migration and fertility rates.

Domestic migration rates by age and sex were based on data from Public Use Microdata Sample (PUMS) files from the 2009–2013 American Community Survey (ACS). Since migration estimates from the ACS cover a one-year period, we developed a methodology for converting one-year data into five-year data. Using PUMS files, IRS migration records, and 1990 and 2000 census data, we developed a set of conversion factors and applied them to the 2009–2013 PUMS data. The conversion process raised the one-year migration estimates by a factor of 3.4 for in-migration and by 3.0 for out-migration. We calculated in-migration rates by dividing the number of persons moving to Florida from other states by the 2011 population of the United States (minus Florida) and calculated out-migration rates by dividing the number of persons leaving Florida by Florida's 2011 population. In both instances, rates were calculated separately for males and females for each five-year age group up to 85+.

These in- and out-migration rates were weighted to account for recent changes in Florida's population growth rates and to provide alternative scenarios regarding future growth. For each of the three series, projections of domestic in-migration were made by applying weighted in-migration rates to the projected

Projections of Florida Population by County, 2020–2045, with Estimates for 2015 (continued)

County and State	Estimates April 1, 2015	Projections, April 1					
		2020	2025	2030	2035	2040	2045
SANTA ROSA	162,925						
Low		167,400	172,900	177,500	180,600	182,800	184,300
Medium		178,700	192,900	205,100	216,100	226,600	236,800
High		187,800	208,500	228,900	249,200	270,100	291,800
SARASOTA	392,090						
Low		395,000	399,500	403,200	403,000	400,300	397,200
Medium		415,900	436,600	453,900	467,000	478,100	489,300
High		434,300	467,300	499,200	528,400	556,100	584,700
SEMINOLE	442,903						
Low		450,200	458,900	466,200	470,400	472,000	471,500
Medium		474,500	502,100	525,400	545,800	563,900	580,600
High		494,900	536,800	577,300	616,800	655,600	694,200
SUMTER	115,657						
Low		128,100	141,100	152,800	162,400	170,000	175,500
Medium		141,000	165,200	187,900	209,600	230,500	250,700
High		149,500	180,500	213,200	247,700	283,900	322,000
SUWANNEE	44,452						
Low		44,200	44,400	44,600	44,500	44,300	43,800
Medium		47,000	49,300	51,300	53,200	54,800	56,300
High		49,600	53,500	57,500	61,400	65,400	69,300
TAYLOR	22,824						
Low		22,000	21,600	21,300	21,000	20,500	20,000
Medium		23,400	23,900	24,400	24,800	25,100	25,400
High		24,700	26,100	27,400	28,800	30,100	31,400
UNION	15,918						
Low		15,400	15,200	15,000	14,800	14,500	14,200
Medium		16,600	17,200	17,700	18,200	18,700	19,100
High		17,700	18,900	20,200	21,500	22,800	24,200
VOLUSIA	510,494						
Low		514,600	520,000	524,500	524,300	523,500	521,300
Medium		535,800	557,300	574,100	585,900	598,000	608,700
High		554,600	589,800	622,800	651,700	681,200	710,300
WAKULLA	31,283						
Low		31,500	32,000	32,400	32,700	32,900	32,800
Medium		33,500	35,600	37,400	39,100	40,700	42,200
High		35,300	38,600	41,800	45,200	48,600	52,000
WALTON	60,687						
Low		64,000	67,600	70,900	73,400	74,700	75,400
Medium		69,300	77,200	84,400	91,100	96,700	102,100
High		73,200	84,000	95,200	106,600	117,600	128,700
WASHINGTON	24,975						
Low		24,400	24,200	24,000	23,600	23,100	22,500
Medium		25,900	26,800	27,400	27,900	28,300	28,700
High		27,400	29,200	30,900	32,400	33,900	35,400
FLORIDA	19,815,183						
Low		20,726,400	21,588,200	22,364,100	23,027,000	23,596,600	24,097,600
Medium		21,372,200	22,799,500	24,071,000	25,212,400	26,252,100	27,217,600
High		22,028,800	23,908,700	25,614,700	27,204,800	28,694,700	30,113,600

Appendix F

- FDOT Generalized Daily Service Volumes for Rural Developed Area
- Traffic Forecasts for Interim Years (2017-2044)

**Generalized Annual Average Daily Volumes for Florida's
Rural Undeveloped Areas and
Developed Areas Less Than 5,000 Population¹**

12/18/12

INTERRUPTED FLOW FACILITIES						UNINTERRUPTED FLOW FACILITIES					
STATE SIGNALIZED ARTERIALS						FREEWAYS					
Lanes	Median	B	C	D	E	Lanes	B	C	D	E	
2	Undivided	*	12,900	14,200	**	4	28,800	43,000	52,300	60,000	
4	Divided	*	29,300	30,400	**	6	43,000	64,000	78,300	92,500	
6	Divided	*	45,200	45,800	**	8	57,500	85,400	104,400	123,500	
Non-State Signalized Roadway Adjustments (Alter corresponding state volumes by the indicated percent.) Non-State Signalized Roadways - 10%						Freeway Adjustments Auxiliary Lanes Present in Both Directions + 20,000					
Median & Turn Lane Adjustments						UNINTERRUPTED FLOW HIGHWAYS					
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors		Rural Undeveloped					
2	Divided	Yes	No	+5%		Lanes	Median	B	C	D	E
2	Undivided	No	No	-20%		2	Undivided	4,700	8,400	14,300	28,600
Multi	Undivided	Yes	No	-5%		4	Divided	25,700	40,300	51,000	57,900
Multi	Undivided	No	No	-25%		6	Divided	38,800	60,400	76,700	86,800
-	-	-	Yes	+ 5%		Developed Areas					
One-Way Facility Adjustment Multiply the corresponding two-directional volumes in this table by 0.6						Lanes	Median	B	C	D	E
						2	Undivided	8,700	16,400	23,100	31,500
						4	Divided	25,900	40,700	52,400	59,600
						6	Divided	38,800	61,000	78,400	89,500
BICYCLE MODE² (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)						Passing Lane Adjustments Alter LOS B-D volumes in proportion to the passing lane length to the highway segment length					
Rural Undeveloped						Uninterrupted Flow Highway Adjustments					
Paved						Lanes	Median	Exclusive left lanes		Adjustment factors	
Shoulder/Bicycle						2	Divided	Yes		+5%	
Lane Coverage						Multi	Undivided	Yes		-5%	
0-49%						Multi	Undivided	No		-25%	
50-84%											
85-100%											
Developed Areas											
Paved											
Shoulder/Bicycle											
Lane Coverage											
0-49%											
50-84%											
85-100%											
PEDESTRIAN MODE² (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)											
Sidewalk Coverage											
0-49%											
50-84%											
85-100%											
						¹ Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.					
						² Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.					
						* Cannot be achieved using table input value defaults.					
						** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.					
						Source: Florida Department of Transportation Systems Planning Office www.dot.state.fl.us/planning/systems/sm/los/default.shtm					

Interim Year Traffic Forecasts

Year	SR 46: SR 415 to Osceola Rd	SR 46: Osceola Rd to Mullet Lake Park Rd	SR 46: Mullet Lake Park Rd to Woodridge Dr	SR 46: Woodridge Dr to CR 426
2016	12,000	10,100	10,600	10,100
2017	12400	10400	10900	10400
2018	12800	10700	11300	10700
2019	13200	11100	11600	11100
2020	13500	11400	12000	11400
2021	13900	11700	12300	11700
2022	14300	12000	12600	12000
2023	14700	12400	13000	12400
2024	15100	12700	13300	12700
2025	15500	13000	13700	13000
2026	15800	13300	14000	13300
2027	16200	13700	14300	13700
2028	16600	14000	14700	14000
2029	17000	14300	15000	14300
2030	17400	14600	15300	14600
2031	17800	14900	15700	14900
2032	18100	15300	16000	15300
2033	18500	15600	16400	15600
2034	18900	15900	16700	15900
2035	19300	16200	17000	16200
2036	19700	16600	17400	16600
2037	20100	16900	17700	16900
2038	20400	17200	18100	17200
2039	20800	17500	18400	17500
2040	21200	17900	18700	17900
2041	21600	18200	19100	18200
2042	22000	18500	19400	18500
2043	22400	18800	19800	18800
2044	22800	19100	20100	19100
2045	23100	19500	20400	19500

Appendix G

- Figure 5-1 Project Traffic Assumption Summary

Traffic forecast for the project was developed using:	
<input type="checkbox"/> Travel Demand Model	<input type="checkbox"/> Growth Rates
Type of Travel Demand Model Used: <input type="checkbox"/> Metropolitan Planning Model <input type="checkbox"/> Other Model _____	<i>Refer to appropriate section of Project Traffic Analysis Report that discusses growth rates</i>
Is the travel demand model based on the latest adopted Long Range Transportation Plan?	
<input type="checkbox"/> YES	<input type="checkbox"/> NO
_____ Date when MPO adopted the latest Long Range Transportation Plan	Explain why?
_____ Base Year of Travel Demand Model	
_____ Horizon Year of Travel Demand Model	
Long Range Transportation Plan documentation is available at (provide web address): _____	
Traffic Data and Factors	
Standard K = _____ D Factor = _____ T _{Daily} = _____	Traffic Counts Collection Year = _____ Opening Year = _____ Interim Year = _____ Design Year = _____
Discuss any changes in land use, economics, population and employment data since the model was built	

Figure 5-1 Project Traffic Assumption Summary