

MAY 2012

# FINAL SR 46 DESIGN TRAFFIC Technical Memorandum

FINANCIAL PROJECT ID: 240216-4-28-01  
ROADWAY IDS: 7704000 & 77040100

PREPARED FOR:



PREPARED BY:



# Final

## SR 46 Design Traffic Technical Memorandum

This Final Design Traffic Technical Memorandum is prepared in support of the evaluation of possible alternative improvements to the SR 46 corridor from SR 415/E. Lake Mary Boulevard to CR 426 in Seminole County, Florida (State Financial Project Number 240216-4-28-01). Phase I of the technical memorandum includes the development of existing traffic volumes, evaluation of existing operating conditions, development of design traffic characteristics, and crash analysis. Phase II of the study entails the development of future traffic forecasts for No-Build and Build Alternatives and evaluation of the characteristics and operating conditions of the corridor during the service life of the proposed roadway project.

**Financial Project ID: 240216-4-28-01**

**Roadway IDs: 77040000 and 77040100**

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**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

May 07, 2012



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# 1. Introduction

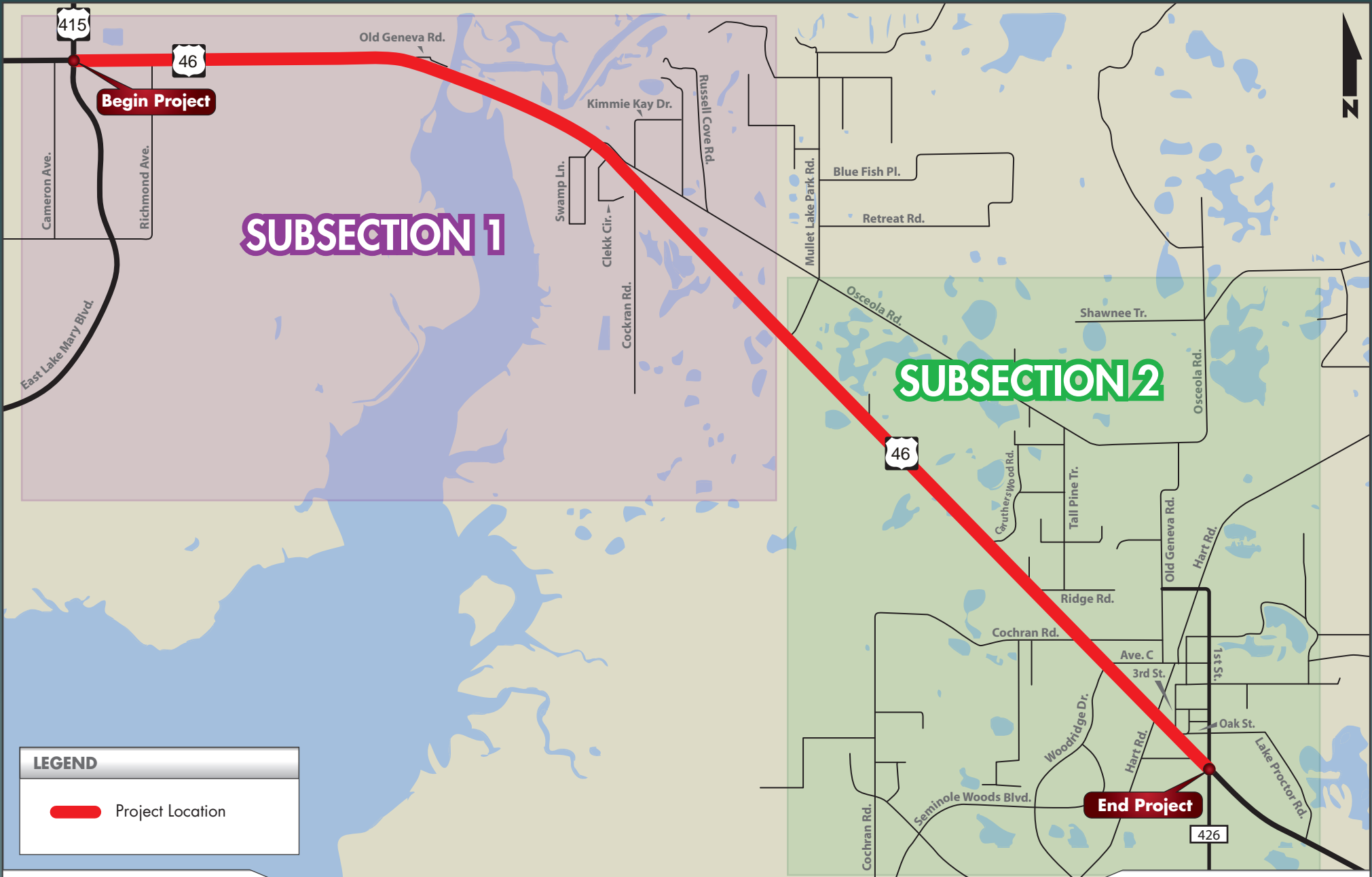
## 1.1 Background

Seminole County is conducting a Project Development and Environment (PD&E) study to evaluate possible alternative improvements to the SR 46 corridor from SR 415/E. Lake Mary Boulevard to CR 426 in Seminole County, Florida (State Financial Project Number 240216-4-28-01). GMB Engineers & Planners, Inc. has been retained by the Seminole County, as a sub-consultant to URS Corporation Southern (URS) to perform the design traffic analysis to determine the impacts and assess the need for future capacity improvements along SR 46 from SR 415/E. Lake Mary Boulevard to CR 426. The Final Technical Memorandum evaluates the existing and future conditions and provides recommended design characteristics and recommended improvements to accommodate future traffic projections along the SR 46 corridor.

The Design Traffic Process for this study is separated into two phases. They are:

- **Existing Conditions** – This phase of the study entails the development of existing traffic volumes, design characteristics, evaluation of existing operating conditions, and crash analysis.
- **Future Conditions** – This phase of the study entails the development of future traffic forecasts for the No Build and the Build Alternatives. In addition, this study includes an evaluation of the characteristics and operating conditions of the corridor during the service life of the proposed roadway project.

The current document is prepared in support of both the Existing Conditions and Future Conditions phases of the Design Traffic Analysis. This report has been prepared taking into account the comments provided by FDOT on December 1, 2011 (regarding to the existing conditions and the development of future traffic forecasts), the comments provided by Seminole County on March 17, 2012 (regarding the SR 46 Design Technical Memorandum – Draft Report), and a meeting held among GMB, URS, Kittelson, and Seminole County staff on May 2, 2012. The responses prepared by GMB Engineers and Planners, Inc. addressing the review comments by FDOT and Seminole County can be found in **Appendix A** of this report. The study area map is shown in **Figure 1**.



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**Design Traffic for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 1**  
 Project Location Map



## 1.2 Description of Project

The SR 46 corridor is primarily an east/west facility from SR 415 to W Osceola Road and a northwest/southeast facility from W Osceola Road to CR 426. The major portion of the roadway segment to be studied is a rural principal arterial. The existing roadway consists of two travel lanes with a rural, open drainage system. Widening of SR 46 corridor between SR 415 and CR 426 as a four-lane section is included as a planned cost feasible improvement in the Metroplan Orlando 2030 Orlando Urban Area Transportation Study (OUATS) Long Range Transportation Plan (LRTP). The PD&E study will evaluate SR 46 improvements as a means of providing additional capacity, reducing congestion along the corridor, and operate as an improved emergency evacuation route.

## 1.3 Objective

The objective of this Technical Memorandum is to provide the Seminole County with the existing and future traffic forecasts for the No Build and Build Alternatives, and an evaluation of the roadway characteristics and operational conditions for the study corridor. This report entails the development of base year 2011 AADT, Peak Hour Volumes, intersection and roadway Level of Service (LOS) for the base year 2011. This report also involves the development of the design traffic characteristics including Standard K factor, Design Hour Directional Demand ( $D_{30}$ ), and percentage of trucks for both the design hour and daily demand ( $T_f$ ,  $T_{24}$ ) that will be used in obtaining the future traffic volumes and future operational analysis.

This report includes the development of AADT, Directional Design Hour Volumes (DDHV), intersection and roadway Level of Service (LOS) for the opening year 2015, mid-design year 2025 and design year 2035 for the No Build and Build Alternatives, and signal warrant analysis for unsignalized intersections along the study corridor for the same future time periods.

## 1.4 Methodology

The methodology used for the development of this report includes:

- Collect available traffic count information from the FDOT's and County's historical traffic count records and from actual field count data. Review previous studies, traffic characteristics and other relevant data for the study corridor.

- Based on the data collection, use the collected year 2011 peak hour turning movement counts for performing intersection and arterial LOS analyses for the project corridor.
- Evaluate the existing traffic volumes based on capacity to determine if the roadway is currently operating under constrained or unconstrained conditions.
- Based on the data collection process, estimate the travel roadway characteristics of the corridor. These characteristics include Standard K factor, Directional Design Hour factor ( $D_{30}$ ), Daily Truck factor ( $T_{24}$ ), and Peak Truck factor ( $T_f$ ).
- Collect five years of crash data along SR 46 for the study intersections within the study limits to perform crash analysis.
- Develop future year traffic volume forecasts for the corridor based on trends analysis of historical traffic counts, and/or travel demand models (FSUTMS), previous studies, and Bureau of Economic Business Research (BEBR) population projections.
- Develop the design hour turning movement volumes for the opening year and design year for the No Build and Build alternatives by applying the design characteristics including Standard K and  $D_{30}$  to the future year AADTs using TURNS5 program.
- Provide LOS analysis for the intersections and roadway segments along the study corridor for the No Build and Build alternatives for the opening, mid-design and design year design hour conditions.
- Based on the level of service analysis, provide recommendations for improvements to accommodate the anticipated travel demand.



## 2. Project Information

### 2.1 Project Location, Limits and Field Inventory

**Within the project limits, SR 46 is a two-lane rural principal arterial with an open drainage system serving both local and regional traffic. In addition, SR 46 serves as a major evacuation route for Northern Brevard and Southern Volusia Counties.** The recently extended four lane divided Lake Mary Boulevard intersects SR 46 at SR 415 and provides a direct connection to the Orlando-Sanford International Airport. The existing roadway characteristics that are relevant to this study are shown in **Table 1**. Straight Line Diagrams (SLDs) and the relevant Roadway Characteristics Inventory data (RCI) for the SR 46 corridor are provided in **Appendix B** of this report.

**Table 1: Roadway Characteristics of SR 46 Corridor**

Characteristic	Observation
<b>Limits</b>	SR 415 (MP 3.660) – CR 426 (MP 11.047)
<b>Location</b>	Seminole County
<b>FDOT Roadway ID</b>	➤ 77040000 (MP 3.660 to MP 5.295) and (MP 6.480 to MP 11.047) and 77040100 (MP 0.000 to MP 1.177)
<b>Roadway Maintaining Agency</b>	State
<b>Functional Classification</b>	<ul style="list-style-type: none"> <li>➤ Two Lane Undivided Urban Other Principal Arterial – SR 415 (MP 3.660) to (MP 4.078)</li> <li>➤ Two Lane Undivided Rural Other Principal Arterial – (MP 4.078) to CR 426 (MP 11.047)</li> </ul>
<b>Speed Limits</b>	<ul style="list-style-type: none"> <li>➤ SR 415 (MP 3.660) to East of SR 415 (MP 3.820): 50 MPH</li> <li>➤ East of SR 415 (MP 3.820) to East of Hart Road (MP 10.717): 55MPH</li> <li>➤ East of Hart Road (MP 10.717) to CR 426 (MP 11.047): 45 MPH</li> </ul>
<b>Adopted LOS</b>	<ul style="list-style-type: none"> <li>➤ FDOT LOS standard of “D” – Urban portion from SR 415 (MP 3.660) to (MP 4.078)</li> <li>➤ FDOT LOS standard of “C” – Rural portion from MP 4.078 to CR 426 (MP 11.047)</li> <li>➤ Seminole County has an adopted LOS standard of “E” for the entire corridor</li> </ul>
<b>Signalized Intersections from West to East</b>	<ul style="list-style-type: none"> <li>➤ SR 415/E. Lake Mary Boulevard (MP 3.660) (SIGNALIZED)</li> <li>➤ CR 426/1<sup>st</sup> Street (MP 11.047) (SIGNALIZED)</li> </ul>
<b>Land Uses</b>	<ul style="list-style-type: none"> <li>➤ Predominantly commercial in the vicinity of SR 415</li> <li>➤ Predominantly vacant lands (north of SR 46) and managed environmental lands (south of SR 46) between east of SR 415 and Old Geneva Road</li> <li>➤ Predominantly residential (north of SR 46) and residential (south of SR 46) between Old Geneva Road and CR 426.</li> </ul>
<b>Pavement Width</b>	12 foot wide travel lanes
<b>Sidewalks</b>	None
<b>Parallel Parking</b>	None
<b>Shared Use Path and Bike Lanes</b>	None

### 3. Existing Conditions

This section describes the analysis of traffic flow operating conditions for the base year 2011 at the major intersections and roadway segments along the project corridor.

In analyzing the year 2011 operating conditions of the intersections and roadway segments, traffic counts collected from the field during August and September 2011 were used along with the existing roadway and intersection geometry. The actual turning movement volumes collected in the field were used for the year 2011 level of service (LOS) analysis for the intersections and roadway segments.

The year 2011 conditions intersection LOS analysis was performed using the signal timing data provided by Seminole County. The existing conditions intersection LOS analysis was performed using the Synchro Software (version 7.0). In addition, the existing conditions arterial LOS analysis was performed by comparing the existing arterial traffic volumes against generalized peak hour directional service volumes obtained from the [2009 FDOT Quality/Level of Service Handbook](#). The following sub-sections describe the overall process.

#### 3.1 Traffic Count Information

**Figures 2-1 and 2-2** provide the location of traffic counts and type of traffic count data collected for the study. All existing traffic count data was collected during August and September of 2011. The data collected included:

- 🌀 72 – Hour bi-directional classification volume counts (3 locations)
- 🌀 72 – Hour bi-directional volume counts (8 locations)
- 🌀 24 – Hour bi-directional volume counts (7 locations)
- 🌀 4 – Hour intersection turning movement counts for a.m. and p.m. peak hours (7 intersections)
- 🌀 1 – Hour Manual Traffic Counts (3 locations)

The weekday turning movement counts were collected for the intersections between the peak hours of 7:00-9:00 a.m. and 4:00-6:00 p.m.



All traffic count data collected were adjusted utilizing the latest (2010) FDOT axle (where applicable) and seasonal adjustment factors for Seminole County to provide 2011 annual average conditions.

As part of the traffic count program for this project, and as mentioned above, three locations along SR 46 were utilized in this study as vehicle classification counts. Vehicle composition for the classification count was broken into three primary vehicle types:

- Passenger Vehicles – Motorcycles, Cars, Vans, and Pickups;
- Medium Truck – Buses and 2 axle Single Unit Trucks;
- Heavy Trucks – (3 or 4 axles) Single Unit Trucks, 2 axle Tractors (with 1 or 2 axle Trailer), 3 axle Trailers (2 or 3 axle Trailers), and (5, 6 and 7 axle) Multi-trailers.

Based on these categories, percentages for overall trucks (medium and heavy) were determined for peak and daily traffic conditions. Copies of all traffic count data are provided in **Appendix C**. FDOT axle and seasonal adjustment factors for Seminole County are provided in **Appendix D**.



**LEGEND**

- - 4 Hour Turning Movement Counts
- ▲ - 72 Hour Classification Counts
- - 72 Hour Volume Counts
- ★ - 24 Hour Volume Counts
- ⬠ - 1 Hour Volume Counts

DATE CREATED: 9/13/2011

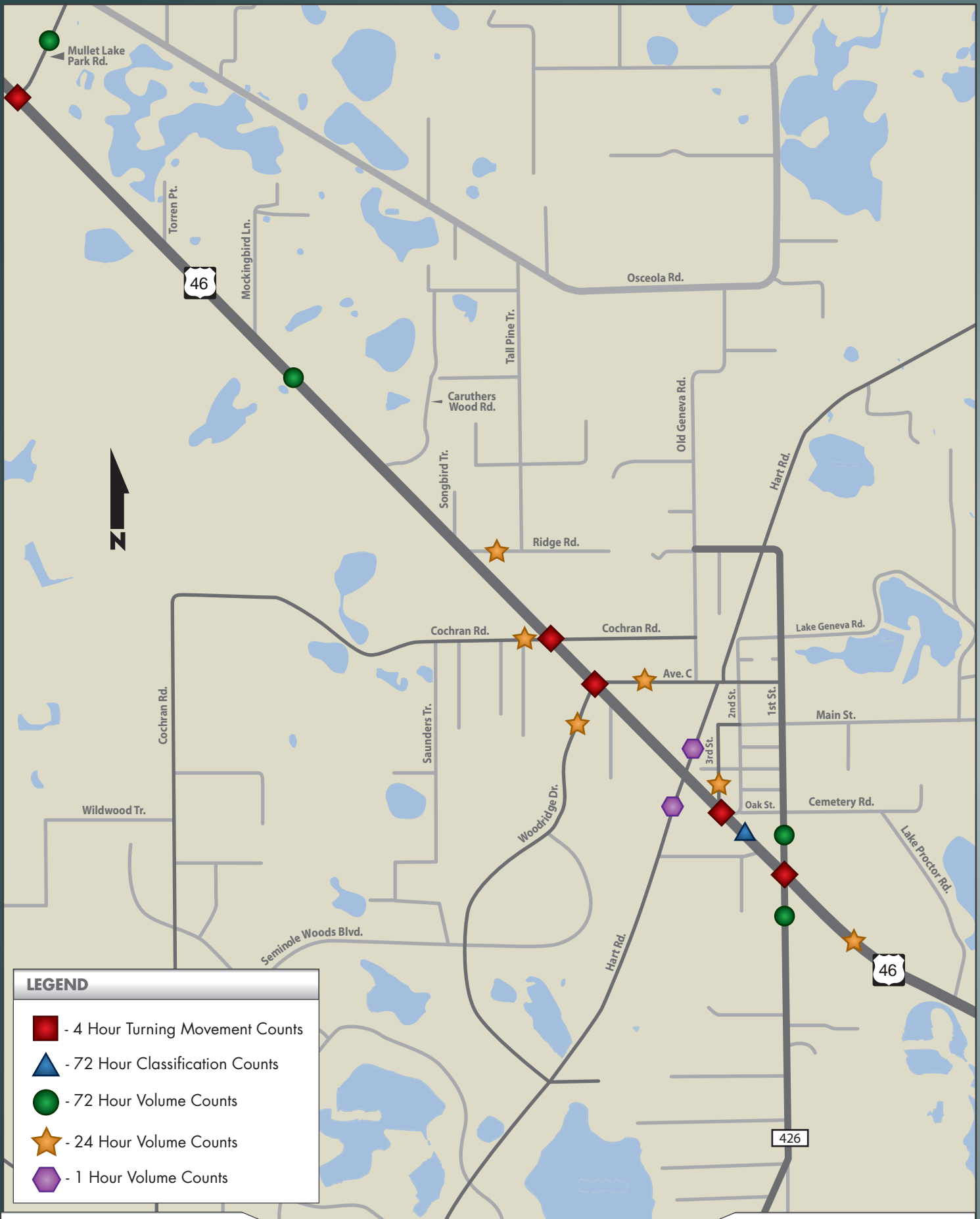
PROJECT NUMBER: 11-014.01



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**FIGURE 2-1**  
 Traffic Count Location  
 Subsection 1



**LEGEND**

- ◆ - 4 Hour Turning Movement Counts
- ▲ - 72 Hour Classification Counts
- - 72 Hour Volume Counts
- ★ - 24 Hour Volume Counts
- ⬡ - 1 Hour Volume Counts

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01



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**FIGURE 2-2**  
 Traffic Count Location  
 Subsection 2

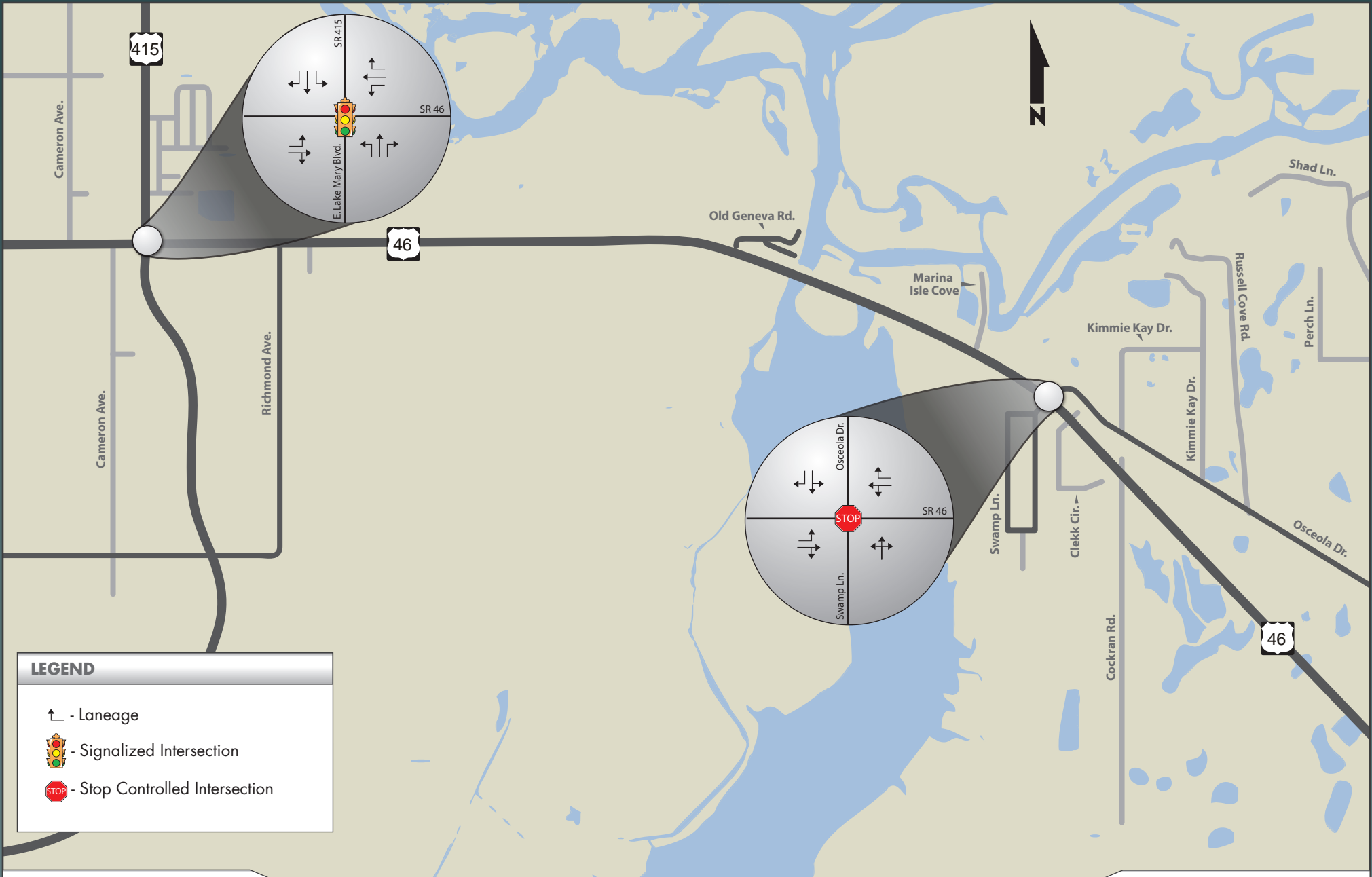
## 3.2 Existing Geometry

**Figures 3-1 through 3-2** provide the year 2011 intersection geometry for all the intersections to be evaluated in this study. The year 2011 intersection geometry information was obtained and verified based on field visits and aerial photographs. The following intersections are evaluated as part of this study:

- SR 46 and SR 415/E. Lake Mary Blvd (Signalized)
- SR 46 and Osceola Rd (Unsignalized)
- SR 46 and Mullet Lake Park Rd (Unsignalized)
- SR 46 and Woodridge Dr/Avenue C (Unsignalized)
- SR 46 and Cochran Rd (Unsignalized)
- SR 46 and 3<sup>rd</sup> St/Oak St (Unsignalized)
- SR 46 and CR 426/1<sup>st</sup> St (Signalized)

The intersection geometry information was collected during the traffic count data collection phase. The existing geometry plays a vital role in assessing the intersection LOS. LOS is a qualitative measure of how efficient a roadway or intersection operates. LOS A represents the highest traffic flow quality, while LOS E represents traffic flow at capacity. LOS F represents forced flow congested conditions. LOS B, C and D represent a gradual degradation in traffic flow quality before reaching capacity. The existing geometry was considered as one of the factors in determining potential intersection improvements to accommodate the travel demand.





**LEGEND**

↑ - Laneage

- Signalized Intersection

- Stop Controlled Intersection

DATE CREATED: 9/13/2011

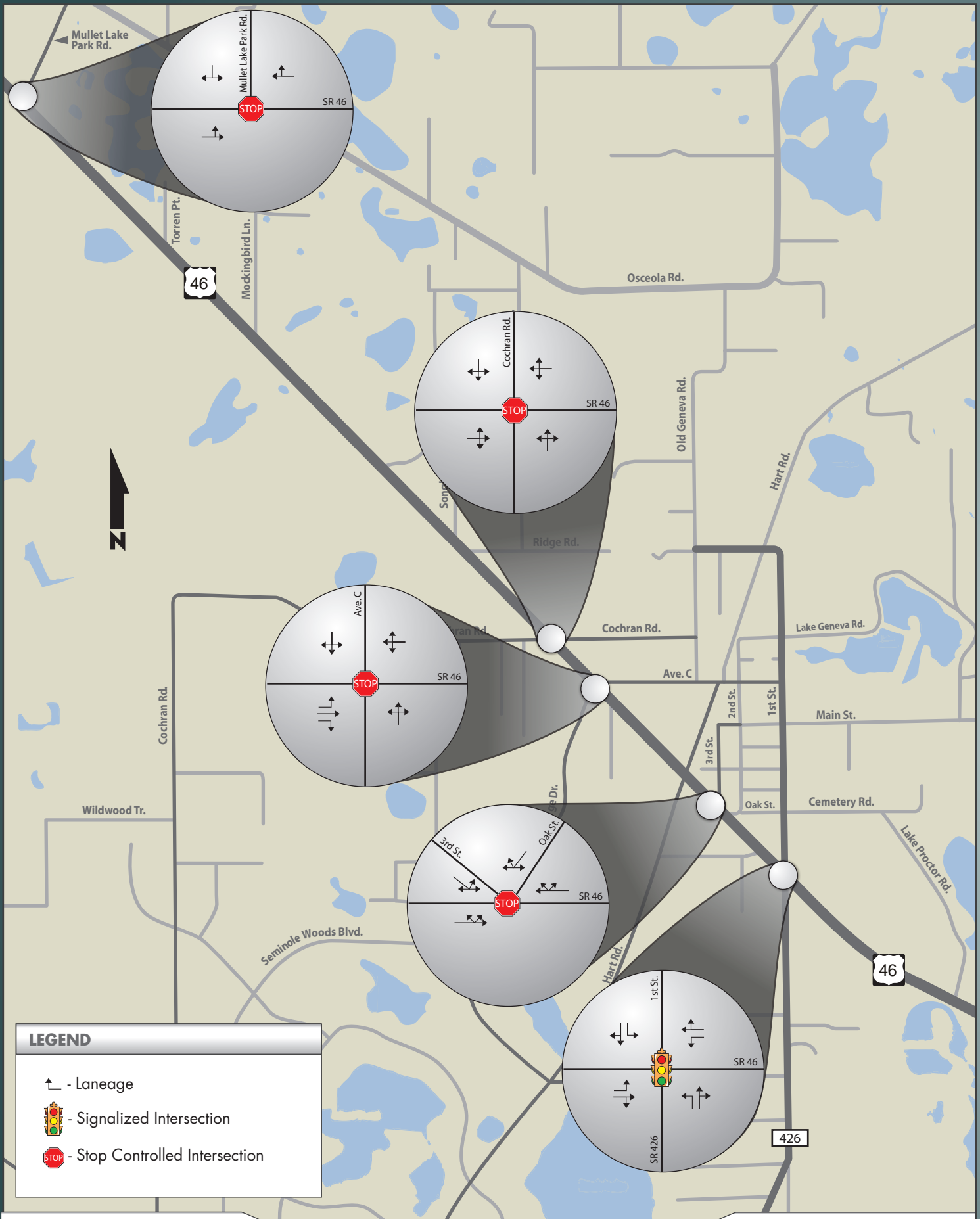
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**FIGURE 3-1**  
 Year 2011 Existing Geometry  
 Subsection 1



**LEGEND**

- Laneage
- Signalized Intersection
- Stop Controlled Intersection

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01

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**FIGURE 3-2**  
 Year 2011 Existing Geometry  
 Subsection 2

### 3.3 Existing Traffic Volumes

Traffic count information collected was used to develop existing traffic characteristics for the project corridors and the intersecting side streets. The truck factor for the peak condition was used in the existing intersection analysis. Based on the 72-Hour classification counts, the 72-Hour volume counts, and the 24-Hour volume counts, the directional split (D measured) for the roadways in the study area were derived. For the purpose of this study, p.m. peak hour volume counts and standard “K” factors were used to determine the daily traffic volumes for Old Geneva Road (north of SR 46) and Hart Road (north and south of SR 46).

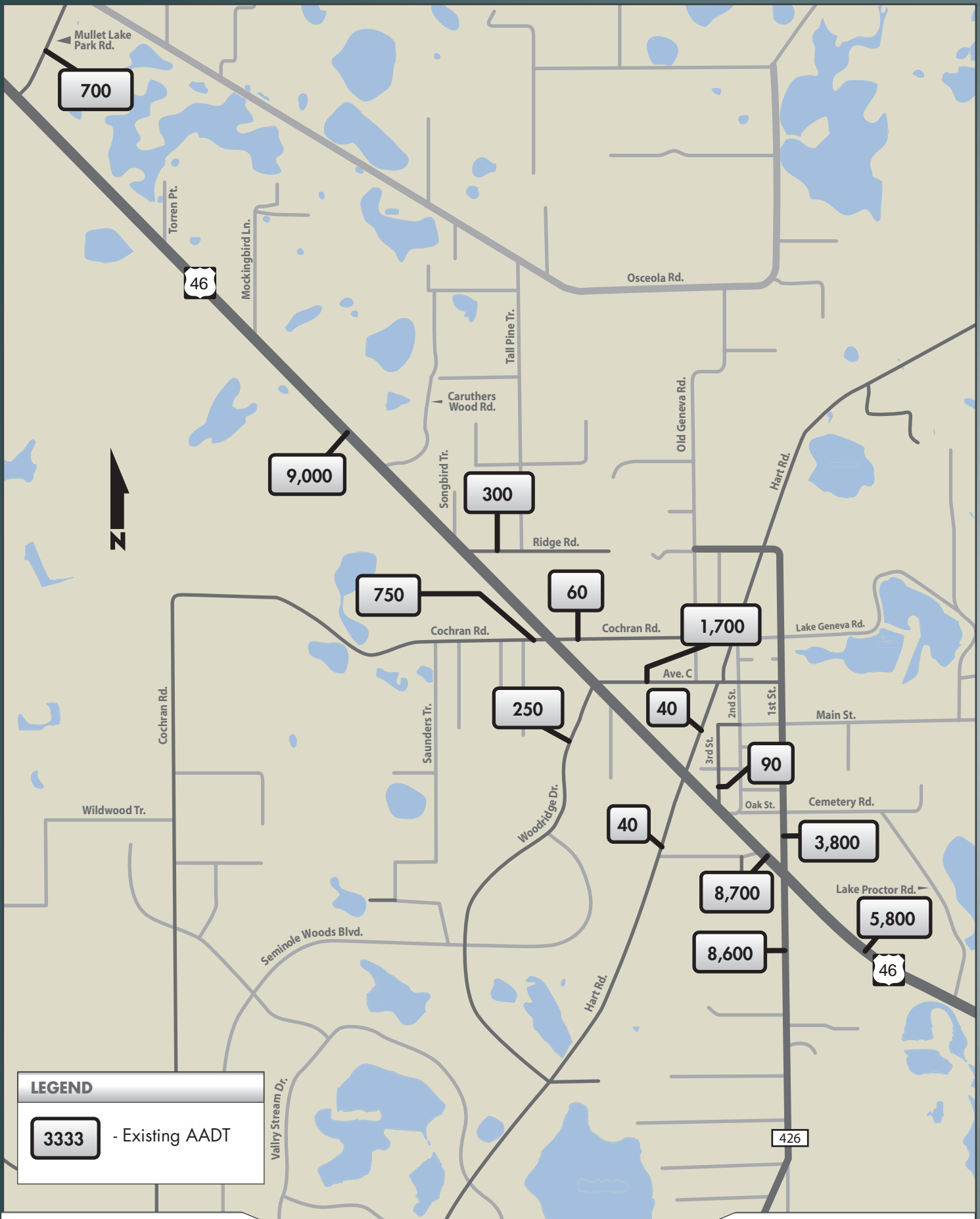
The adjusted AADT volumes for the individual roadway segments are provided in **Table 2 and Figures 4-1 and 4-2**.

**TABLE 2**  
**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**YR 2011 Existing Traffic Volumes**

Roadway / Segment	Traffic Count Date	Type of Count	Measured Characteristics								Axle Adj. <sup>2</sup>	Seasonal Adj. <sup>1</sup>	Adjusted AADT <sup>3</sup>	
			ADT	Peak Hr.	NB/EB	SB/WB	Peak Time	"K"	"D"	"T <sub>24</sub> "				"T <sub>f</sub> "
<b>Mainline Characteristics</b>														
<b>SR 46</b>														
West of SR 415/Lake Mary Boulevard	9/13/2011 to 9/15/2011	72-Hour Classification	10,435	887	608	279	4:30-5:30 PM	8.50%	68.55%	8.80%	6.10%	1.00	1.00	10,500
B/W SR 415/Lake Mary Boulevard and Osceola Road	8/23/2011 to 8/25/2011	72-Hour Classification	10,435	967	538	429	4:45-5:45 PM	9.27%	55.64%	11.80%	8.30%	1.00	1.01	10,500
B/W Osceola Road and Mullet Lake Park Road	8/30/2011 to 9/1/2011	72-Hour Bi Directional	8,863	820	439	381	5:15-6:15 PM	9.25%	53.54%	NA	NA	0.96	1.01	8,600
B/W Mullet Lake Park Road and Woodridge Drive	9/13/2011 to 9/15/2011	72-Hour Bi Directional	9,336	865	433	432	5:00-6:00 PM	9.27%	50.06%	NA	NA	0.96	1.00	9,000
West of CR 426	9/13/2011 to 9/15/2011	72-Hour Classification	8,691	822	386	436	4:45-5:45 PM	9.46%	53.04%	11.40%	8.60%	1.00	1.00	8,700
East of CR 426	8/30/2011	24-Hour Bi Directional	5,965	520	304	216	5:30-6:30 PM	8.72%	58.46%	NA	NA	0.96	1.01	5,800
<b>Side Street Characteristics</b>														
<b>SR 415/Lake Mary Boulevard</b>														
North of SR 46	8/23/2011 to 8/25/2011	72-Hour Bi Directional	15,858	1,632	1,195	437	4:45-5:45 PM	10.29%	73.21%	NA	NA	0.98	1.01	15,500
South of SR 46	8/23/2011 to 8/25/2011	72-Hour Bi Directional	9,263	1,002	145	857	7:15-8:15 AM	10.81%	85.52%	NA	NA	0.99	1.01	9,300
<b>Richmond Avenue</b>														
South of SR 46	8/30/2011	24-Hour Bi Directional	244	36	15	21	7:15-8:15 AM	14.75%	58.33%	NA	NA	0.99	1.01	250
<b>Old Geneva Road</b>														
North of SR 46	9/15/2011	1 Hour Manual Count <sup>4</sup>	133	12	7	5	5:00-6:00 PM	9.00%	58.33%	NA	NA	NA	1.00	150
<b>Osceola Road</b>														
East of SR 46	9/13/2011 to 9/15/2011	72-Hour Bi Directional	2,243	198	75	123	3:30-4:30 PM	8.81%	62.10%	NA	NA	0.97	1.00	2,200
<b>Mullet Lake Park Road</b>														
North of SR 46	8/23/2011 to 8/25/2011	72-Hour Bi Directional	693	60	37	23	6:00-7:00 PM	8.70%	61.33%	NA	NA	0.97	1.01	700
<b>Ridge Road</b>														
East of SR 46	8/23/2011	24-Hour Bi Directional	285	30	10	20	8:30-9:30 AM	10.53%	66.67%	NA	NA	0.97	1.01	300
<b>Cochran Road</b>														
East of SR 46	8/23/2011	4 Hour Manual Count <sup>4</sup>	56	5	2	3	7:00-8:00 AM	9.00%	60.00%	NA	NA	NA	1.01	60
West of SR 46	8/23/2011	24-Hour Bi Directional	757	82	64	18	7:30-8:30 AM	10.83%	78.05%	NA	NA	0.97	1.01	750
<b>Avenue C/Woodridge Drive</b>														
East of SR 46	8/23/2011	24-Hour Bi Directional	1,693	189	100	89	7:45-8:45 AM	11.16%	52.91%	NA	NA	0.97	1.01	1,700
West of SR 46	8/23/2011	24-Hour Bi Directional	238	31	22	9	8:15-9:15 AM	13.03%	70.97%	NA	NA	0.97	1.01	250
<b>Hart Road</b>														
North of SR 46	9/15/2011	1 Hour Manual Count <sup>4</sup>	44	4	2	2	4:00-5:00 PM	9.00%	50.00%	NA	NA	NA	1.00	40
South of SR 46	9/15/2011	1 Hour Manual Count <sup>4</sup>	44	4	3	1	4:00-5:00 PM	9.00%	75.00%	NA	NA	NA	1.00	40
<b>3rd Street</b>														
North of SR 46	8/23/2011	24-Hour Bi Directional	89	10	3	7	4:00-5:00 PM	11.24%	70.00%	NA	NA	0.97	1.01	90
<b>CR 426/1st Street</b>														
North of SR 46	9/13/2011 to 9/15/2011	72-Hour Bi Directional	3,922	421	172	249	8:00-9:00 AM	10.73%	59.14%	NA	NA	0.97	1.00	3,800
South of SR 46	8/23/2011 to 8/25/2011	72-Hour Bi Directional	8,742	832	313	519	7:30-8:30 AM	9.52%	62.39%	NA	NA	0.97	1.01	8,600

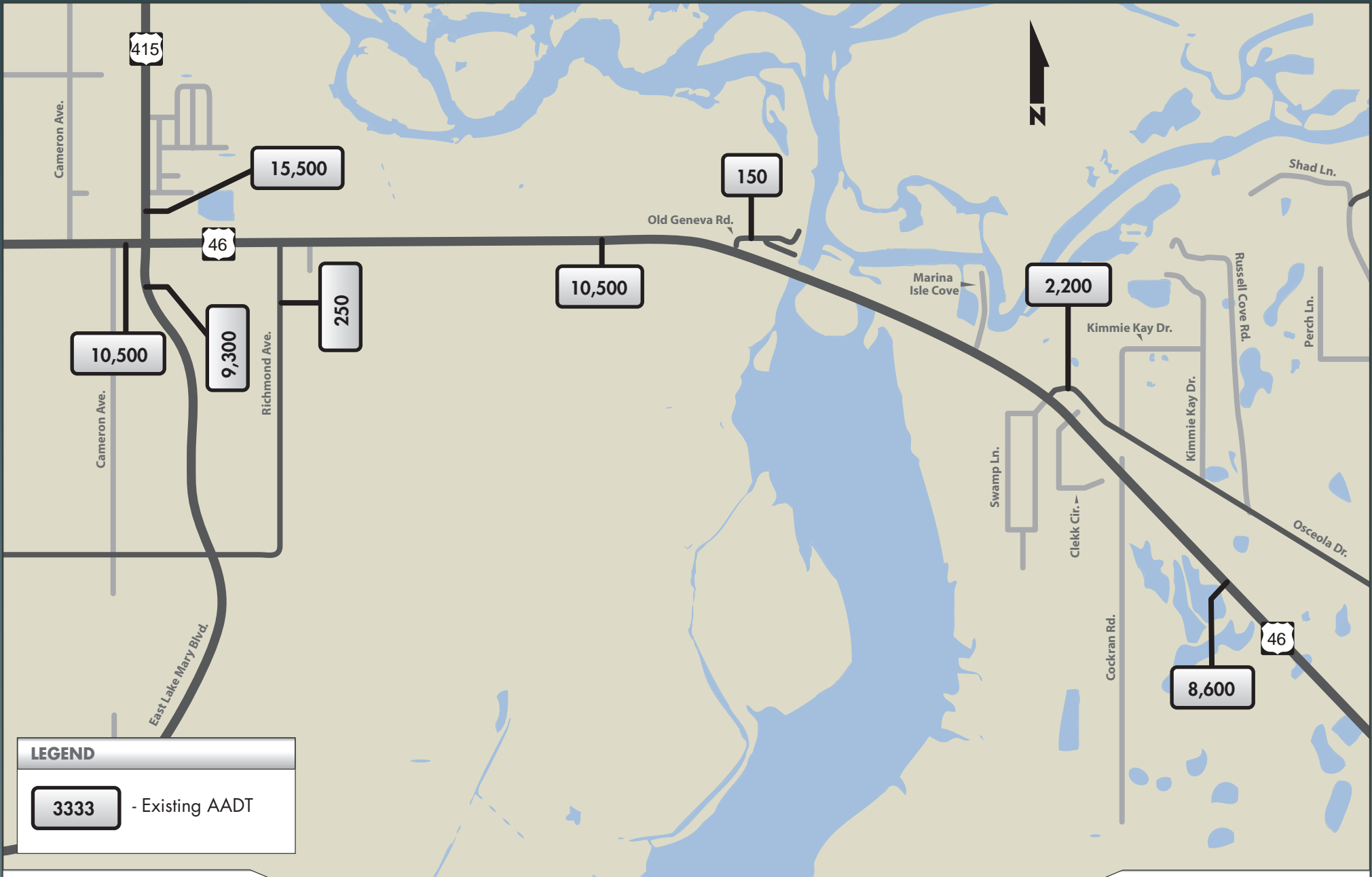
**Notes:**

1. Most Recent Seasonal Adjustment factors were obtained from FDOT 2010 Traffic Count CD.
2. Axle Adjustment factors were obtained from FDOT 2010 Traffic Count CD.
3. Measured ADT \* Axle Adjustment \* Seasonal Adjustment = Adjusted AADT
4. ADT was estimated using the peak hour volume and the standard "K" factor.



DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01



**LEGEND**

3333 - Existing AADT

DATE CREATED: 9/15/2011

PROJECT NUMBER: 11-014.01



**GMB ENGINEERS & PLANNERS, INC.**  
 2602 East Livingston Street  
 Orlando, Florida 32803

**Design Traffic for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 4-1**  
 Year 2011 Existing AADT  
 Subsection 1

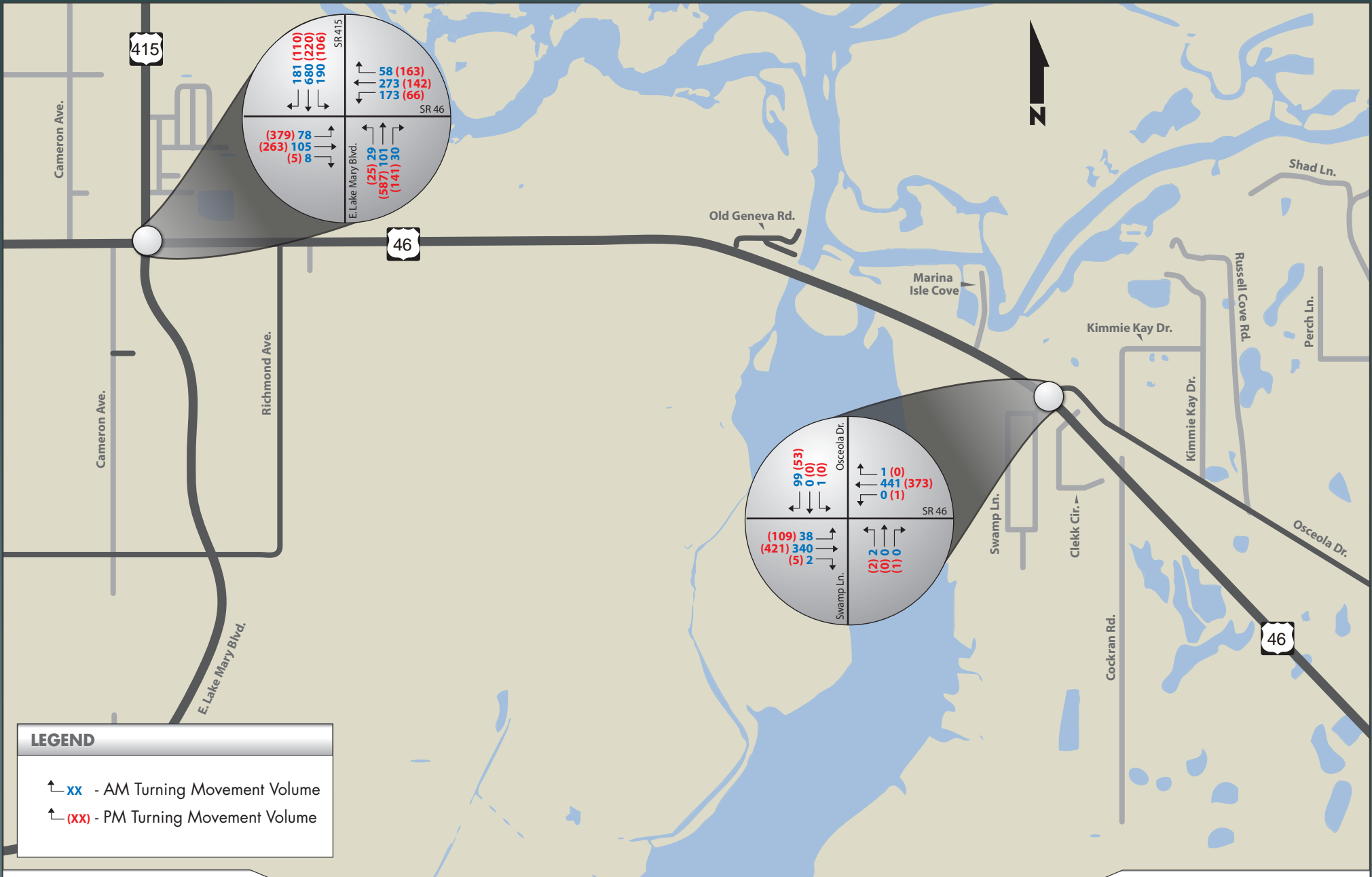


### 3.3.1 Year 2011 Turning Movement Counts

Turning movement counts were obtained for the a.m. and p.m. peak hour conditions for the above-mentioned intersections. The actual (original) year 2011 a.m., and p.m. peak hour turning movement volumes collected at the study intersections are shown in **Appendix C**. For the purposes of this study, the original year 2011 a.m., and p.m. peak hour turning movement volumes were adjusted using a seasonal adjustment factor of 1.01 obtained from the 2010 Florida Traffic Information (FTI) DVD and are shown in **Figures 5-1 and 5-2**.

### 3.4 Year 2011 LOS Analysis

The level of service for the study intersections was determined using the procedures as outlined in the Transportation Research Board's – Highway Capacity Manual (HCM 2000) using the Synchro software version 7. Specific analysis techniques utilized in the study include the signalized, unsignalized intersections and arterial analyses. Since Synchro calculates arterial LOS only between signalized intersections, the a.m. and p.m. peak hour peak direction volumes between the intersections were compared against the latest Generalized Peak Hour Directional Service Volumes (dated October 4, 2010) from 2009 FDOT Quality/Level Of Service Handbook to obtain the arterial LOS.



DATE CREATED: 9/13/2011

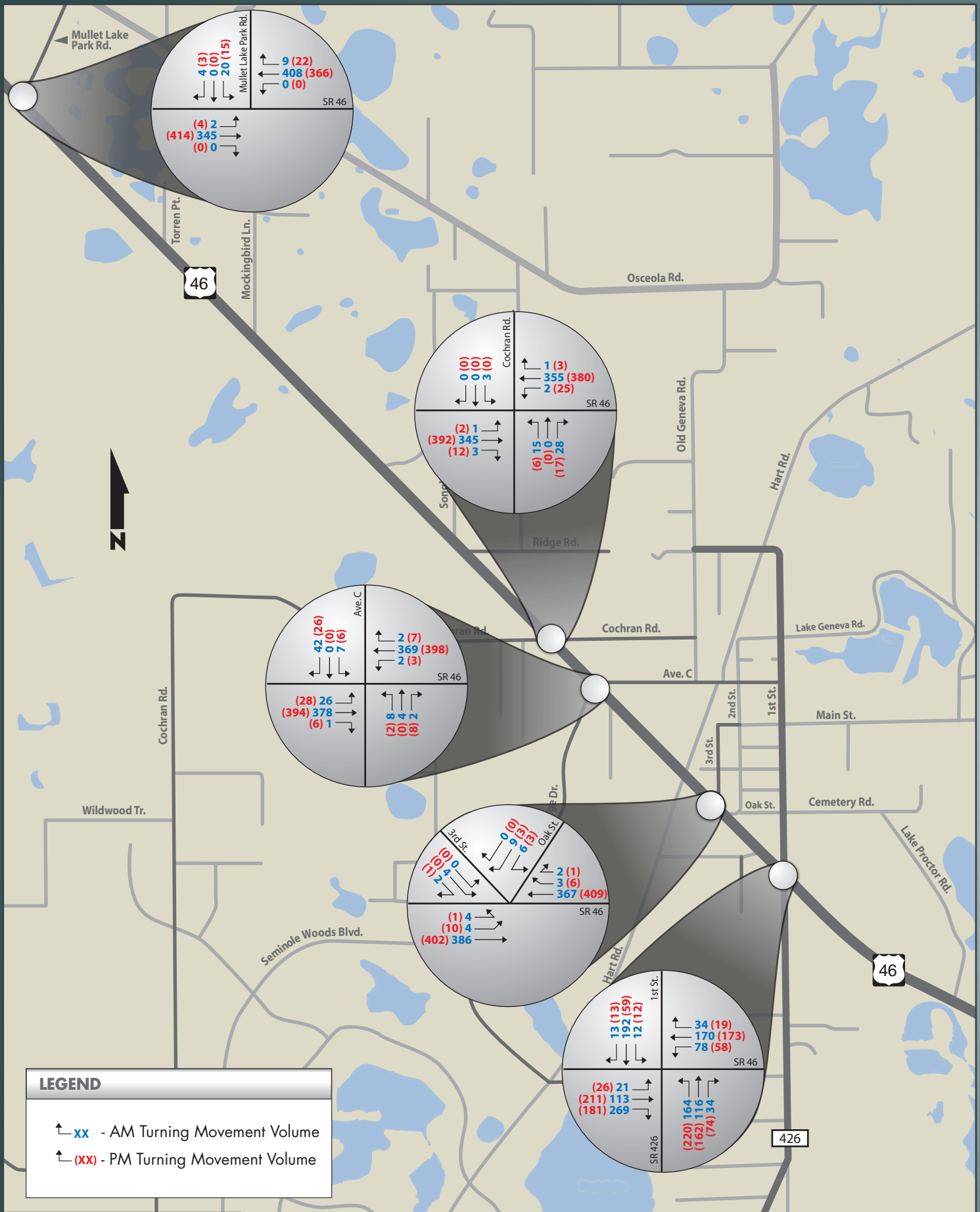
PROJECT NUMBER: 11-014.01



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**Design Traffic for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 5-1**  
 Year 2011 AM Peak and PM Peak Hour  
 Turning Movement Volumes - Subsection 1



DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01

### 3.4.1 Year 2011 Intersection LOS Analysis

The year 2011 a.m. and p.m. peak hour turning movement volumes along with the year 2011 intersection geometry were used in the intersection LOS analysis. The signal timing data provided by the county was used in the intersection LOS analysis for the signalized intersections of SR 46 at SR 415/Lake Mary Boulevard and SR 46 at CR 426/1<sup>st</sup> Street. The two signals along SR 46 corridor operate under actuated-uncoordinated mode both in the a.m. and p.m. peak periods.

According to Exhibit 16-2 (page 16-2) of Highway Capacity Manual (HCM 2000), an average control delay per vehicle from 55 seconds up to 80 seconds is considered LOS E condition and beyond 80 seconds is considered LOS F condition at a signalized intersection.

A summary of the LOS analysis for the study intersections is included in **Table 3**.

**Table 3: Year 2011 Existing Intersection LOS Analysis Summary**

Study Intersection	Traffic Control	Adopted LOS	AM Peak Hour		PM Peak Hour	
			Delay (sec/vehicle)	LOS	Delay (sec/vehicle)	LOS
<b>SR 46 @</b>						
SR 415/Lake Mary Blvd	Signal	D	36.5	D	40.3	D
Osceola Rd	Stop	C	8.8/15.3	A/C	8.5/13.8	A/B
Mullet Lake Park Rd	Stop	C	0.1/17.3	A/C	0.1/17.5	A/C
Cochran Rd	Stop	C	0.1/18.1	A/C	0.8/13.4	A/B
Woodridge Dr/Ave C	Stop	C	8.3/18.9	A/C	8.3/13.4	A/B
3 <sup>rd</sup> St/Oak St	Stop	C	0.2/15.3	A/C	0.3/14.7	A/B
CR 426/1 <sup>st</sup> St	Signal	C	18.7	B	15.3	B

**Notes:**

1. HCM based outputs are presented in this table for both the signalized and unsignalized intersections.
2. Overall intersection delay and LOS results are reported for signalized intersections.
3. In case of unsignalized intersections, worst-case results (delay and LOS) are reported for movements in both the major and minor approaches.

As shown in **Table 3**, during the year 2011 a.m. and p.m. peak hour conditions, all the signalized and unsignalized intersections along the project corridor were found to operate at or above the adopted LOS standard. The existing year 2011 a.m. and p.m. peak hour intersection capacity analysis along with the signal timing data used in the intersection analysis are included in **Appendix E**.

### 3.4.2 Year 2011 Arterial LOS Analysis

FDOT has classified the study segment along SR 46 between SR 415/Lake Mary Boulevard and Richmond Avenue as an urban principal arterial (class 1) with a LOS standard “D”. For the purpose of assessing the arterial LOS of this segment of SR 46, the generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 7 of the 2009 FDOT Quality/Level Of Service Handbook and are shown below.

- LOS B – 510 vehicles per hour (VPH)
- LOS C – 820 VPH
- LOS D – 880 VPH
- LOS E – 880 VPH

Furthermore, FDOT has classified the study segment along SR 46 between Richmond Avenue and CR 426 as a rural principal arterial with a LOS standard “C”. For the purpose of assessing the arterial LOS of this segment of SR 46, the generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 9 of the 2009 FDOT Quality/Level Of Service Handbook and are shown below.

- LOS B – 240 VPH
- LOS C – 430 VPH
- LOS D – 740 VPH
- LOS E – 1,480 VPH

As shown in **Table 4**, the SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street currently operates at acceptable level of service conditions during the a.m. peak and p.m. peak hours with the exception of the segment of SR 46 between Richmond Avenue and Mullet Park Road, which operates at a deficient LOS of “D” during the existing a.m. peak hour conditions, and the segment of SR 46 between Richmond Avenue and Osceola Road, which operates at a deficient LOS of “D” during the existing p.m. peak hour conditions.

**Table 4: Year 2011 Existing Arterial LOS Analysis Summary**

Roadway Segment on SR 46	Area Type	LOS Std.	Peak Hour Peak Direction Volume (VPH)	Arterial LOS
<b>AM Peak Hour (Westbound)</b>				
East of CR 426	Rural	C	282	C
West of CR 426	Rural	C	347	C
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	419	C
B/W Osceola Road and Mullet Lake Park Road	Rural	C	442	D
Richmond Avenue and Osceola Road	Rural	C	542	D
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	504	B
West of SR 415/Lake Mary Boulevard	Urban	D	483	B
<b>PM Peak Hour (Eastbound)</b>				
West of SR 415/Lake Mary Boulevard	Urban	D	647	C
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	510	C
Richmond Avenue and Osceola Road	Rural	C	535	D
B/W Osceola Road and Mullet Lake Park Road	Rural	C	422	C
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	428	C
West of CR 426	Rural	C	418	C
East of CR 426	Rural	C	297	C

Tables 7 and 9 of the 2009 FDOT Quality/Level of Service Handbook are included in **Appendix F**.

### 3.5 Crash Analysis

Crash records along SR 46 between SR 415/Lake Mary Boulevard and CR 426/1<sup>st</sup> Street were reviewed from January 1, 2006 until May 31, 2011. Information relating to the crash occurrences within the study area was provided by Seminole County and is summarized in Tables G-1 through G-15 (included in **Appendix G**). The crashes were categorized by intersections. The crash data was analyzed using the procedures outlined in the **FDOT Topic Number 500-000-100-C, Section 1 pages 21 to 24**.

**Table 5** shows a summary of the total number of collisions, fatalities, injuries that occurred at the intersections along SR 46 corridor. As seen in **Table 5**, between January 1, 2006 and May 31, 2011, two hundred thirty five (235) crashes occurred along the SR 46 corridor resulting in one hundred and twenty eight (128) injuries, six (6) fatalities and property damage estimated at \$1,495,192.



**Table 5: Crash Data Summary**

Intersection	Total Crashes <sup>(1)</sup>	Fatalities	Injuries	Property Damages (\$)	Appendix Table
<b>SR 46 @</b>					
SR 415	116	1	61	\$674,627	G-1
Richmond Avenue	14	1	16	\$95,700	G-2
Old Geneva Road	11	1	9	\$99,800	G-3
Osceola Road	12	0	3	\$66,150	G-4
Clekk Circle	1	0	6	\$7,150	G-5
Mullet Lake	9	0	9	\$74,700	G-6
Torren Point	4	0	0	\$ 21,000	G-7
Mocking Bird Lane	8	0	1	\$48,125	G-8
Songbird Trail	3	0	3	\$20,000	G-9
Ridge Road	1	0	0	\$500	G-10
Cochran Road	5	1	0	\$16,150	G-11
Woodridge Drive	6	0	1	\$12,800	G-12
Hart Road	3	0	0	\$18,400	G-13
Oak Street	3	2	2	\$45,700	G-14
CR 426	39	0	17	\$294,390	G-15
<b>Total</b>	<b>235</b>	<b>6</b>	<b>128</b>	<b>\$1,145,192</b>	

**Notes:**

1) The total crashes include all crashes that occurred within 500 feet of the intersections.

Based on the SR 46 corridor crash data analysis, the traffic volumes, and traffic patterns, the crash types along SR 46 from SR 415 to Osceola Road (approximately 2.72 miles) appear to be different to the crash types along SR 46 from Osceola Road to CR 426 (approximately 4.69 miles). Therefore, the crash rates were calculated separately for the two segments mentioned above.

One hundred and fifty three (153) crashes occurred between January 1, 2006 and May 31, 2011 along the roadway segment of SR 46 from SR 415 to Osceola Road resulting in an average of 28.25 crashes per year. The crash rate for SR 46 from SR 415 to Osceola Road was 2.72 crashes per million vehicle miles (C/MVM) traveled.

Similarly, eighty-two (82) crashes occurred between January 1, 2006 and May 31, 2011 along the roadway segment of SR 46 from Osceola Road to CR 426 resulting in an average of 15.14 crashes per

year. The crash rate for the second segment of the study corridor of SR 46 from Osceola Road to CR 426 was 1.01 crashes per million vehicle miles (C/MVM) traveled.

*The crash rate in C/MVM for SR 46 from SR 415 to Osceola Road is calculated as follows:*

$$\begin{aligned} \text{Crash rate} &= (N * 1,000,000) / (365 * Y * \text{AADT} * L) \\ &= (153 * 1,000,000) / (365 * 5.416 * 10,435 * 2.72) \\ &= \mathbf{2.72 \text{ C/MVM}} \end{aligned}$$

*The crash rate in C/MVM for SR 46 from Osceola Road to CR 426 is calculated as follows:*

$$\begin{aligned} \text{Crash rate} &= (N * 1,000,000) / (365 * Y * \text{AADT} * L) \\ &= (82 * 1,000,000) / (365 * 5.416 * 8,963 * 4.69) \\ &= \mathbf{1.01 \text{ C/MVM}} \end{aligned}$$

Where

- N = number of crashes*
- Y = number of years*
- AADT = Annual Average Daily Traffic*
- L = Length of the segment in miles*

It should be noted that the statewide average crash rate for similar facilities (rural 2 lane undivided roadway segments) is 0.525 C/MVM. Therefore, the crash rate for the SR 46 roadway segments is higher than the statewide average crash rate for similar facilities.

### **3.5.1 Crash Analysis Observations**

Among the two hundred and thirty five (235) crashes that occurred along SR 46, the rear end crashes accounted for 45.1% (106 crashes), angle crashes accounted for 10.6% (25 crashes), sideswipe crashes accounted to 10.2% (24 crashes) of the total crashes, and left-turn crashes accounted to 5.5% (13 crashes) of the total crashes.

The rear end crashes are typical of signalized intersections, which induce stop and go traffic. The angle collisions are due to the motorist disregarding the traffic signal at the intersection. The sideswipe collisions are mainly due to improper lane change, and left turn collisions are due to the motorists failing to yield the right of way during the permissive left turn phase and disregarding the traffic signal at the intersection.

Six (6) fatalities and one hundred and twenty eight (128) injuries occurred along the SR 46 corridor between January 1, 2006 and May 31, 2011. It should be noted that five (5) out the six (6) fatalities that occurred along the SR 46 corridor involved motorcycle passengers and were mostly caused by careless driving.

The following paragraphs attempt to summarize the important observations based on the crash analysis for the individual study intersection within the study period.

#### **SR 46 @ SR 415 (signalized)**

- 116 (49.4%) out of the total 235 crashes along the SR 46 corridor occurred at or near the intersection of SR 46 and SR 415. These crashes resulted in one fatality, 61 injuries and \$674,627 in property damage.
- The fatality that occurred at this intersection resulted from an angle crash where a vehicle traveling southbound through (north to south) the intersection disregarded the traffic signal and was struck by a vehicle traveling westbound (east to west) through the intersection (August 24, 2010).
- Out of the total 116 crashes at this intersection, 62 (53%) were rear-end crashes, which are typical of a signalized intersection. In addition, there were 16 angle (14%), 12 sideswipe (10%), and 12 left turn (10%) crashes at the intersection.

#### **SR 46 @ Richmond Avenue (unsignalized)**

- Out of the total 14 crashes that occurred at this intersection, there were 6 rear-end (43%), 1 angle (7%), 2 sideswipe (14%), and 2 ran off road (14%) type crashes at the intersection. These crashes resulted in one fatality, 16 injuries and \$95,700 in property damage.
- The fatality that occurred at this intersection resulted from an angle crash where a vehicle (motorcycle) attempting to make a northbound right turn maneuver (north to east) failed to yield the right of and was struck by a vehicle (motorcycle) traveling eastbound (west to east) through the intersection. The two motorist were ejected from the vehicles involved in this crash (October 7, 2006).

**SR 46 @ Old Geneva Road (unsignalized)**

- Out of the total 11 crashes that occurred at this intersection, there were 4 rear-end (36%), 1 sideswipe (9%), and 3 ran off road (27%) type crashes at the intersection. These crashes resulted in one fatality, 9 injuries and \$99,800 in property damage.
- The fatality that occurred at this intersection resulted from a vehicle traveling westbound (east to west) which drove left of the center lane and struck 3 oncoming vehicles (2 motorcycles and a car) traveling eastbound (west to east)( September 19, 2009).
- 5 (45%) out of the total 11 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Osceola Road (unsignalized)**

- Out of the total 12 crashes that occurred at this intersection, there were 4 rear-end (33%), 1 angle (8%), 1 left turn (8%), 1 sideswipe (8%), and 2 ran off road (17%) type crashes at the intersection. These crashes resulted in 3 injuries and \$66,150 in property damage.
- 7 (58%) out of the total 12 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Clekk Circle (unsignalized)**

- Only 1 sideswipe crash was reported for careless driving resulting in 6 injuries and property damage of \$7,150 at this intersection.

**SR 46 @ Mullet Lake Park Road (unsignalized)**

- 9 crashes occurred at this intersection resulting in 9 injuries and \$74,700 in property damage.
- Out of the total 9 crashes that occurred at this intersection, there were 6 (67%) crashes where the vehicle ran off the road mostly as a result of careless driving.
- 5 (56%) out of the total 9 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Torren Point (unsignalized)**

- 3 (75%) out of the total 4 crashes at this intersection were rear-end crashes, which occurred due to careless driving. These 4 crashes resulted in no fatalities, no injuries and \$21,000 in property damage.

**SR 46 @ Mockingbird Lane (unsignalized)**

- Out of the total 8 crashes that occurred at this intersection, there were 6 other (75%) and 2 rear end (25%) crashes at the intersection. These crashes resulted in no fatalities, one injury and \$48,125 in property damage.

**SR 46 @ Songbird Trail (unsignalized)**

- Out of the total 3 crashes that occurred at this intersection, there were 2 ran off road (67%) and 1 sideswipe (33%) crash at the intersection. These crashes resulted in no fatalities, one injury and \$20,000 in property damage.

**SR 46 @ Ridge Road (unsignalized)**

- Only one crash was reported at the intersection, which occurred when the motorist was not able to avoid a movable object on the roadway. No improper driving/action was reported.

**SR 46 @ Cochran Road (unsignalized)**

- Out of the total 5 crashes that occurred at this intersection, there were 1 sideswipe (20%) and 1 sideswipe (20%) and 3 other (60%) crashes at the intersection. These crashes resulted in one fatality, no injuries and \$16,150 in property damage.
- The fatality that occurred at this intersection resulted from a vehicle (a motorcycle) traveling westbound (east to west) which overturned while trying to stop for stopped traffic ahead. The passenger was ejected from the motorcycle (March 7, 2010).
- 4 (80%) out of the total 5 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Woodridge Drive (unsignalized)**

- Out of the total 6 crashes that occurred at this intersection, there were 2 rear-end (33%), 2 sideswipe (33%) and 2 other (34%) crashes at the intersection. These crashes resulted in no fatalities, one injury and \$12,800 in property damage.
- 4 (67% %) out of the total 6 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Hart Road (unsignalized)**

- Out of the total 3 crashes that occurred at this intersection, there were one angle (33%) and 2, rear-end (67%) crashes at the intersection. These crashes resulted in no fatalities, no injuries and \$18,400 in property damage.
- 2 (67%) out of the total 3 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ Oak Street (unsignalized)**

- Out of the total 3 crashes that occurred at this intersection, there were one ran off road (33%) and 2 rear-end (67%) crashes at the intersection. These crashes resulted in two fatalities, two injuries and \$45,700 in property damage.
- The 2 fatalities that occurred at this intersection resulted from a crash where 3 vehicles were involved (2 motorcycles and a vehicle pulling a trailer with no tail lights). The crash occurred when one of the motorcycles collided with the rear end of the trailer. The motorcycle overturned after the impact and the passenger was ejected from the vehicle. The second motorcycle overturned while trying to avoid colliding with the first motorcycle. The passenger of the second motorcycle was also ejected (March 5, 2011).
- 2 (67%) out of the total 3 crashes at this intersection occurred during nighttime conditions.

**SR 46 @ CR 426 (signalized)**

- 39 (16.6%) out of the total 235 crashes along the SR 46 corridor occurred at or near the intersection of SR 46 and CR 426. These crashes resulted in no fatalities, 17 injuries and \$294,390 in property damage.

- Out of the total 39 crashes at this intersection, 19 (49%) were rear-end crashes, which are typical of a signalized intersection. In addition, there were 6 angle (15%), 2 sideswipe (5%), and 1 right turn (3%) crashes at the intersection.
  
- 10 (26%) out of the total 39 crashes at this intersection occurred during nighttime conditions.



## 4. Development of Design Characteristics

The design traffic characteristics established in this section were used in developing design hour volumes (DHV) for the intersections and directional design hour volumes (DDHV) for the roadway segments for the future conditions. These characteristics are determined based on the procedure outlined in the FDOT's Project Traffic Forecasting Handbook, dated October 2002.

### 4.1 Standard K Factor

The K factor represents the relationship between the travel demand occurring during the peak hour and the average annual daily traffic. The ratio of peak hour to annual average daily traffic factor (K) is used in the FDOT's planning through design phases. As indicated in the Draft Issue Paper on Improving Florida's Transportation Planning and Design Analysis Time Period Process (Adopting Standard K Factors throughout FDOT) dated July 15, 2011, a **Standard K Factor of 9.0%** for Arterials and Highways within "Transitioning to Urbanized Areas (Fringe Development Areas)" is recommended for the SR 46 corridor and the side streets that intersect the corridor.

### 4.2 D<sub>30</sub> Factor

The D<sub>30</sub> factor represents the directional factor occurring in the traffic flow during the 30th highest hour. In determining this factor for SR 46 and the side streets that intersect the main roadway corridor, statewide and national guidelines were compared to the field collected project traffic counts and traffic information contained in the 2010 FTI DVD. The measured D for the study area roadways are shown in **Table 6**. The average of the measured D factors for SR 46 corridor within the study limits is 53.07%.

**Table 6: YR 2011 Measured "D" Factors**

Roadway / Segment	2011 Measured "D"
<b>Mainline Characteristics</b>	
<b>SR 46</b>	
B/W SR 415/Lake Mary Boulevard and Osceola Road	55.64%
B/W Osceola Road and Mullet Lake Park Road	53.54%
B/W Mullet Lake Park Road and Woodridge Drive	50.06%
West of CR 426	53.04%
<b>Average</b>	<b>53.07%</b>
<b>Side Street Characteristics</b>	
<b>SR 415/Lake Mary Boulevard</b>	
North of SR 46	73.21%
South of SR 46	85.52%
<b>Average</b>	<b>79.37%</b>
<b>Osceola Road</b>	
East of SR 46	62.06%
<b>Mullet Lake Park Road</b>	
North of SR 46	61.33%
<b>Cochran Road</b>	
East of SR 46	60.00%
West of SR 46	78.05%
<b>Average</b>	<b>69.03%</b>
<b>Avenue C/Woodridge Drive</b>	
East of SR 46	52.91%
West of SR 46	70.97%
<b>Average</b>	<b>61.94%</b>
<b>3<sup>rd</sup> Street</b>	
North of SR 46	70.00%
<b>CR 426/1<sup>st</sup> Street</b>	
North of SR 46	59.14%
South of SR 46	62.39%
<b>Average</b>	<b>60.77%</b>

The 2010 FTI DVD was used to obtain the historical  $D_{30}$  factors for five (5) years between 2006 and 2010 for the FDOT count location sites #770299 (SR 46 west of the Saint John's river Bridge) and #770174 (SR 46 west of CR 426). As seen in **Table 7**, the average, minimum, and maximum  $D_{30}$  factors over the five

years for the two (2) count location sites along the SR 46 corridor are 52.78%, 52.08% and 53.66%, respectively.

**Table 7: Historical FTI Data - D<sub>30</sub> Values**

Year	Count Locations along SR 46		Average
	Site # 770299 (West of St. Johns River)	Site # 770174 (West of CR 426)	
2006	52.00%	52.16%	52.08%
2007	52.35%	52.41%	52.38%
2008	54.56%	52.75%	53.66%
2009	54.56%	51.56%	53.06%
2010	52.91%	51.95%	52.43%
<b>Average</b>	53.28%	52.17%	52.72%
<b>Minimum</b>	52.00%	51.56%	52.08%
<b>Maximum</b>	54.56%	52.75%	53.66%

**Table 8** provides the current recommended range of D<sub>30</sub> values from the FDOT Project Traffic Forecasting Handbook (2002) and the Highway Capacity Manual (HCM 2000) for rural and urban arterials.

**Table 8: Recommended Range of D<sub>30</sub> Values**

Values	Rural Arterial		Urban Arterial	
	FDOT <sup>1</sup>	HCM <sup>2</sup>	FDOT <sup>1</sup>	HCM <sup>2</sup>
Low	51.1%	54.0%	50.8%	52.0%
Average	58.1%	58.0%	57.9%	54.5%
High	79.6%	62.0%	67.1%	57.0%

Notes:

1) FDOT Project Traffic Forecasting Handbook, October 2002, Figure 3.10

2) FDOT Project Traffic Forecasting Handbook, October 2002, Figure 3.11

#### 4.2.1 SR 46 Corridor

The average measured D from the 2011 traffic counts is 53.07%, while the average historical  $D_{30}$  obtained from the 2010 FTI DVD is 52.7%. Therefore, based on the comparison of average measured D and average historical  $D_{30}$ , a  $D_{30}$  factor of 53.0% is recommended for the SR 46 corridor.

#### 4.2.2 Side Streets

For the purposes of this study, the measured D values from the 2011 traffic counts will be used for all the side streets as the recommended  $D_{30}$  factors. However, the recommended  $D_{30}$  factors will be restricted to the upper FDOT accepted limit for rural and urban arterials as shown in **Table 8**.

### 4.3 $T_{24}$ & $T_f$ Factors

The daily truck factor,  $T_{24}$  represents the percentage composition of medium sized and heavy trucks occurring in the traffic stream for a 24-hour period. The peak hour truck factor,  $T_f$ , is the percentage of truck traffic during the peak hour and is recommended as one-half of the  $T_{24}$  factor in the Project Traffic Forecasting Handbook. The truck factor for the daily condition will be used in determining Equivalent Single Axle Loadings (ESAL) for the project corridor.

As mentioned earlier in the report, three (3) 72 Hour bi-directional classification volume counts were conducted along SR 46 west of SR 415, between SR 415/Lake Mary Boulevard and Osceola Road, and west of CR 426. However, the year 2011 measured  $T_{24}$  and  $T_f$  factors for the SR 46 corridor were obtained from the counts collected between SR 415/Lake Mary Boulevard and Osceola Road and west of CR 426 since they are located within the study limits. As shown in **Table 9**, an average  $T_{24}$  factor of 11.6% and an average  $T_f$  factor of 8.5% were measured for the SR 46 corridor.

**Table 9: YR 2011 Measured “ $T_{24}$ ” and “ $T_f$ ” Factors**

Roadway / Segment	2011 Measured “ $T_{24}$ ”	2011 Measured “ $T_f$ ”
<b>SR 46</b>		
B/W SR 415/Lake Mary Boulevard and Osceola Road	11.8%	8.3%
West of CR 426	11.4%	8.6%
<b>Average</b>	<b>11.6%</b>	<b>8.5%</b>

**Table 10** contains the historical SR 46  $T_{24}$  factors, from the 2010 FTI DVD, for years 2006 through 2010 for the two (2) FDOT count site locations within the corridor (sites #770299 and #770174).

**Table 10: SR 46 Historical FTI Data -  $T_{24}$  Values**

Year	Count Locations along SR 46		Average
	Site # 770299 (West of St. Johns River)	Site # 770174 (West of CR 426)	
2006	12.70%	12.80%	12.75%
2007	12.20%	13.90%	13.05%
2008	12.20%	13.10%	12.65%
2009	12.20%	12.50%	12.35%
2010	10.10%	11.00%	10.55%
<b>Average</b>	11.88%	12.66%	12.27%
<b>Minimum</b>	10.10%	11.00%	10.55%
<b>Maximum</b>	12.70%	13.90%	13.05%

#### 4.3.1 SR 46 Corridor

The measured  $T_{24}$  from the 2011 traffic counts is 11.6%, while the average of the historical  $T_{24}$  factors is 12.3%. In order to be conservative a  $T_{24}$  factor of **12.3%** is recommended for the SR 46 corridor. In addition, a  $T_f$  factor of **8.5%** as measured in the field is recommended for the SR 46 corridor.

#### 4.3.2 Side Streets

Truck factors were not measured for the side streets. Historical data from the 2010 FTI DVD is also not available for the side streets, with the exception of SR 415 north of SR 46. Therefore, for the purposes of this study, a  $T_{24}$  factor of **2.0%** and a  $T_f$  factor of **1.0%** are recommended for all the side streets, with the exception of SR 415 and Osceola Road north of SR 46. An average historical  $T_{24}$  factor of **8.8%** and a  $T_f$  factor of **4.4%** are recommended for SR 415 north of SR 46. A  $T_{24}$  factor of **10.0%** and a  $T_f$  factor of **10.0%** are recommended for Osceola Road north of SR 46 based on the 4 hour TMC volume counts collected.

#### 4.4 Recommended Design Traffic Characteristics

Based on the afore-mentioned discussions, the following **Table 11** provides a summary of the recommended design traffic characteristics for this study.

**Table 11: Recommended Design Traffic Characteristics**

Roadway / Segment	Recommended Design Characteristics			
	Standard "K" Factor	"D <sub>30</sub> " Factor	"T <sub>24</sub> " Factor	"T <sub>f</sub> " Factor
<b>Mainline Characteristics</b>				
<b>SR 46</b>	9.0%	53.0%	12.3%	8.5%
<b>Side Street Characteristics</b>				
<b>SR 415 (north of SR 46)</b>	9.0%	67.1%	8.8%	4.4%
<b>Lake Mary Boulevard</b>	9.0%	67.1%	2.0%	1.0%
<b>Osceola Road</b>	9.0%	62.1%	10.0% <sup>1</sup>	10.0% <sup>1</sup>
<b>Mullet Lake Park Road</b>	9.0%	61.3%	2.0%	1.0%
<b>Cochran Road</b>	9.0%	69.0%	2.0%	1.0%
<b>Avenue C/Woodridge Drive</b>	9.0%	61.9%	2.0%	1.0%
<b>3<sup>rd</sup> Street/Oak Street</b>	9.0%	70.0%	2.0%	1.0%
<b>CR 426/1<sup>st</sup> Street</b>	9.0%	60.8%	2.0%	1.0%

Notes:

1) The "T<sub>24</sub>" and "T<sub>f</sub>" for Osceola Road north of SR 46 were determined from the 4 hour Turning Movement Count collected in the field.

## 5. Development of Future Traffic Forecasts

The development of traffic projections for the SR 46 study 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.

### 5.1 Design Period

Based on the information provided by Seminole County, the following design periods were used to provide the future traffic forecasts and roadway and intersection operation analysis for the study corridor.

- Opening Year – 2015
- Mid-design Year – 2025
- Design Year – 2035

### 5.2 Programmed and Planned Improvements

The following programmed / planned improvements are scheduled for the study area and were identified based on a review of the latest MetroPlan Orlando Transportation Improvement Program (TIP) (Fiscal Year [FY] 2011/12 - FY 2015/2016), and MetroPlan Orlando 2030 Long Range Transportation Plan (LRTP). The programmed / planned improvement documentation can be found in **Appendix H**.

#### 5.2.1 Programmed Improvements

The following programmed improvements are scheduled for the study corridor and the intersecting corridors in the next five years, based on the latest MetroPlan Orlando TIP:

- **SR 415 from SR 46 to Volusia County Line:** This section of SR 415 is scheduled to be widened to a four-lane roadway and has construction funding in the FY 2011/2012.
- **SR 46 from Mellonville Avenue to SR 415:** Funding to acquire Right of Way (ROW) for the widening of this segment from two (2) lanes to four (4) lanes and construction is programmed for FY 2011/2012 and 2015/2016, respectively.
- **SR 46 from SR 415 to CR 426:** Funding for the Preliminary Engineering phase for the widening of this segment from two (2) lanes to four (4) lanes will be available by the FY 2014/2015.



### 5.2.2 Planned Improvements

The following improvements are planned for the study corridor and the intersecting corridors by the year 2030 based on the adopted Metroplan Orlando 2030 LRTP:

- **Lake Mary Boulevard from Country Club Road to SR 46:** Widen this section of Lake Mary Boulevard from four (4) to six (6) lanes. It should be noted that this improvement is not identified in the Seminole County Comprehensive Plan and based on discussions with Seminole County staff was not included in this study.
- **SR 46 from SR 415 to CR 426:** Widen this section of SR 46 from two (2) to four (4) lanes.
- **SR 46 from CR 426 to Volusia County Line:** Widen this section of SR 46 from two (2) to four (4) lanes.

## 5.3 Year 2035 Roadway Analysis Alternatives

As mentioned before, the future traffic forecast volumes were determined for the No Build and the Build Alternatives.

### 5.3.1 No Build Alternative

For the purpose of this scenario, the No Build traffic forecasts were developed for the SR 46 corridor from SR 415 to CR 426 as a two (2) lane roadway.

### 5.3.2 Build Alternative

For the purpose of this scenario, the Build traffic forecasts were developed for the SR 46 corridor from SR 415 to CR 426 as a four (4) lane roadway. As mentioned earlier, the Build Alternative is consistent with the latest adopted MetroPlan Orlando LRTP.

## 5.4 Future Travel Demand

The development of traffic forecasts for study corridors is not complete without a review of the historical traffic growth, population estimates along the corridor, and a review of the future year model forecasts. Due to the specific conditions associated with any roadway, it is necessary to utilize the various methods in projecting future traffic forecasts (such as trends analysis, population estimates and

Travel Demand Models) for comparison purposes. The following sections discuss the various methodologies used in developing future travel demand in the study.

#### 5.4.1 Historical Traffic Growth

A trend analysis was performed for four (4) FDOT count stations along SR 46, and one (1) FDOT count station at SR 415. In addition, trend analyses were conducted at Osceola Road (north of SR 46) and CR 426 (south of SR 46) based on historical traffic information obtained from Seminole County. These count stations, provided historic counts ranging from 2000 to 2010. Based on this historical data, future growth trends were established by a least square linear regression of the historic counts. However, none of the trend R-squared values that give the goodness of fit of the model were greater than the required 75% for the models to trust. Therefore, the historical growths produced by trends analyses were not used in the development of future traffic forecasts. **Table 12** summarizes the trend analysis results. The trend analysis sheets are provided as **Appendix I**.

**Table 12: Trend Analysis Growth Rates**

Location	2011 AADT	2035 AADT	R <sup>2</sup> (%)	Annual Growth Rate (%)
<b>Mainline)</b>				
SR 46 (West of SR 415)	10,500	0	60.13%	-4.2%
SR 46 (SR 415 to Osceola Road)	10,500	9,200	16.94%	-0.5%
SR 46 (Osceola Road to CR 426)	9,000	8,100	6.04%	-0.4%
SR 46 (East of CR 426)	5,800	5,800	1.94%	0.0%
<b>Side Streets</b>				
SR 415 (North of SR 46)	15,500	24,300	46.43%	2.4%
Osceola Road (North of SR 46)	2,200	3,500	14.44%	2.5%
CR 426 (South of SR 46)	8,600	6,800	2.18%	-0.9%

#### 5.4.2 Seminole County Population Projections

In addition to the trends analysis, population projection data obtained from the Bureau of Economic Business Research (BEBR) published by the University of Florida were used for comparison purposes. **Table 13** shows the year 2010 population data and the high and medium population estimates for the Year 2035 along with the corresponding growth rate.

**Table 13: Population Analysis**

Seminole County	Population Analysis		
	2010	2035	Growth
Medium Population Estimate	422,718	540,000	1.11%
High Population Estimate	422,718	656,800	2.22%

As seen on **Table 13**, the high and medium population estimates obtained from BEBR reported an annual growth rate of 2.2% and 1.1% per year, respectively. The BEBR population projection data are enclosed in **Appendix J**.

#### **5.4.3 Travel Demand Model**

The modeling efforts were completed for the No Build and Build Alternatives using the latest year 2035 Central Florida Regional Planning Model, Version 5.0 (CFRPM V5.0) released in 2010 and the most current Orlando Metroplan Year 2030 Orlando Urban Area Transportation Study (OUATS) cost feasible model.

The model based traffic projections for the No Build and the Build Alternatives were assessed for their reasonableness. Before accepting the model results as appropriate for use in the design traffic report, the results of the CFRPM and the OUATS transportation models for the study area were reviewed closely to determine the accuracy of the traffic forecasts.

The year 2010 Seminole countywide Model Conversion Output Factor (MOCF) of 0.98 was used to convert the Peak Season Weekday Average Daily Traffic (PSWADT) obtained from the travel demand models to Annual Average Daily Traffic (AADT). The year 2030 OUATS and 2035 CFRPM travel demand models were used to develop AADT volumes for the No Build & Build Alternatives. As seen in **Table 14**, the No Build and Build AADT projections obtained from the OUATS and CFRPM models were used to develop annual growth rates for the study corridor. Based on the OUATS model projections, the SR 46 corridor is anticipated to have an annual growth rate of 6.5% and 7.6% for the No Build and Build Alternatives, respectively. In addition, the CFRPM model projects the SR 46 corridor to sustain an annual growth rate of 8.1% and 10.3% for the No Build and Build Alternatives, respectively. The OUATS and CFRPM model plots have been enclosed in **Appendix K**.

**Table 14**  
**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**Model Analysis Growth Rates**

Roadway Segment	NO BUILD - OUATS			Build - OUATS			NO BUILD - CFRPM			Build - CFRPM		
	YR 2011	YR 2030	Growth Rate	YR 2011	YR 2030	Growth Rate	YR 2011	YR 2035	Growth Rate	YR 2011	YR 2035	Growth Rate
<b>Mainline</b>												
<b>SR 46</b>												
West of SR 415	10,500	21,522	5.5%	10,500	23,709	6.6%	10,500	25,675	6.0%	10,500	29,098	7.4%
SR 415 to Osceola Road	10,500	25,078	7.3%	10,500	28,484	9.0%	10,500	26,493	6.3%	10,500	33,058	9.0%
Osceola Road to CR 426	9,000	23,600	8.5%	9,000	26,739	10.4%	9,000	25,340	7.6%	9,000	31,798	10.6%
East of CR 426	5,800	10,719	4.5%	5,800	10,737	4.5%	5,800	23,206	12.5%	5,800	25,584	14.2%
<b>AVERAGE</b>			<b>6.5%</b>			<b>7.6%</b>			<b>8.1%</b>			<b>10.3%</b>
<b>Side Streets</b>												
<b>SR 415</b>												
North of SR 46	15,500	33,570	6.1%	15,500	33,402	6.1%	15,500	39,746	6.5%	15,500	39,673	6.5%
South of SR 46	9,300	19,237	5.6%	9,300	26,066	9.5%	9,300	31,517	10.0%	9,300	31,639	10.0%
<b>Osceola Road</b>												
North of SR 46	2,200	----	----	2,200	----	----	2,200	----	----	2,200	----	----
<b>CR 426</b>												
North of SR 46	3,800	----	----	3,800	----	----	3,800	----	----	3,800	----	----
South of SR 46	8,600	23,965	9.4%	8,600	20,843	7.5%	8,600	19,242	5.2%	8,600	21,078	6.0%

## 5.5 Recommended Growth Rates

The growth rates obtained from the Trend Analysis, the OUATS model, the CFRPM Model, and the population estimates were compared in order to develop the recommended growth rates for the corridor. Based on the comparison of growth rates obtained using the four (4) methodologies, we recommend to use the annual growth rates of 8.1% and 10.3% obtained from the CFRPM model for the SR 46 corridor for both the No Build and Build Alternatives, respectively.

It is to be noted that these recommended annual growth rates appear to be high since the base traffic volumes at the corridor are low. The use of the CFRPM model traffic projections to develop the SR 46 corridor annual growth rates for the No Build and Build Alternatives is appropriate based on the fact that the CFRPM model is a district-wide model and includes Volusia County in its entirety. This is a critical consideration when developing the future traffic volume forecasts since SR 415 and SR 46 extend into Volusia County. In addition, based on conversations with Seminole County staff it was determined that while there are no approved Development of Regional impacts (DRIs) in the vicinity of the project, the study corridor is anticipated to incur substantial growth from cumulative effects of Sub DRI level developments that could be developed individually. Furthermore, as indicated in the Seminole County Future Land Use Element Objective 19, the Orlando Sanford International Airport has been identified as an Economic Development Target Area. Economic Development Target Areas are identified as areas to implement an aggressive strategy to attract specific industries which deliver economic growth. With this being said, it is anticipated that large industrial developments as well as new runways are anticipated to be built by the Build Alternative Design year of 2035 in the vicinity of the Orlando Sanford International Airport.

Furthermore, the only corridors to the north and south that would serve traffic traveling east-west through the district are the SR 50 corridor and the SR 44 corridor. However, the SR 50 and SR 46 corridors are not comparable parallel routes to the SR 46 corridor since the SR 50 corridor is located approximately 12-15 miles south of the SR 46 corridor and the SR 44 corridor is located approximately 15-19 miles north of the SR 46 corridor. In addition, the only access connections from to SR 50 to SR 46 are the Greenway Expressway (on the west portion of the corridors) and I-95 (on the east portion of the corridors). The only access connections from SR 44 to SR 46 are CR 415 (on the west portion of the corridors) and I-95 (on the east portion of the corridors).

Based on the above mentioned facts, the fact that SR 46 is an emergency evacuation route and based on the input obtained from the Seminole County staff, the recommended growth rates of 8.1% for No Build and a 10.3% for Build Alternative for the SR 46 corridor are reasonable for the purpose of developing the future year traffic forecasts.

**Table 15** summarizes the recommended annual growth rate of 8.1% for the SR 46 corridor No Build Alternative and the recommended annual growth rate of 10.3% for the SR 46 corridor Build Alternative. Furthermore, it is recommended that the growth rates obtained from the CFRPM model be used for CR 426 (south of SR 46).

Based on the CFRPM model, the annual growth rates for SR 415/Lake Mary Boulevard (north and south of SR 46) are 6.5% and 10.0%, respectively. However, these growth rates appear to be unrealistically high due to the fact that the CFRPM cost feasible model network includes Lake Mary Boulevard from Country Club Road to SR 46 as a six (6) lane planned roadway improvement. It should be noted that this improvement is not included in any future plans of the Seminole County Comprehensive Plan. Furthermore, based on conversations with Seminole County staff, it was determined that the widening of Lake Mary Boulevard south of SR 46 to six lanes is unlikely to occur by the design year 2035. Therefore, the future traffic forecasts for SR 415 (north of SR 46) and Lake Mary Boulevard (south of SR 46) were restricted to the future year AADT of 34,500 and 24,500, respectively (obtained based on design year traffic volumes and design hour  $K_{30}$ ) reported in the SR 46 Project Traffic for PD&E and Design Report (from US 17/92 to SR 415), Financial Project ID: 240216-1, dated May 2005. Based on these future traffic forecasts, the recommended annual growth rate for the Build and No Build Alternatives is 5.1% for SR 415 (north of SR 46) and 6.8% for Lake Mary Boulevard (south of SR 46).

Due to the lack of information on all the other side streets, it is recommended that an annual growth rate of 2.0% be used to develop the future traffic forecasts for the No Build and Build Alternatives. The recommended growth rates are summarized in **Table 15**.

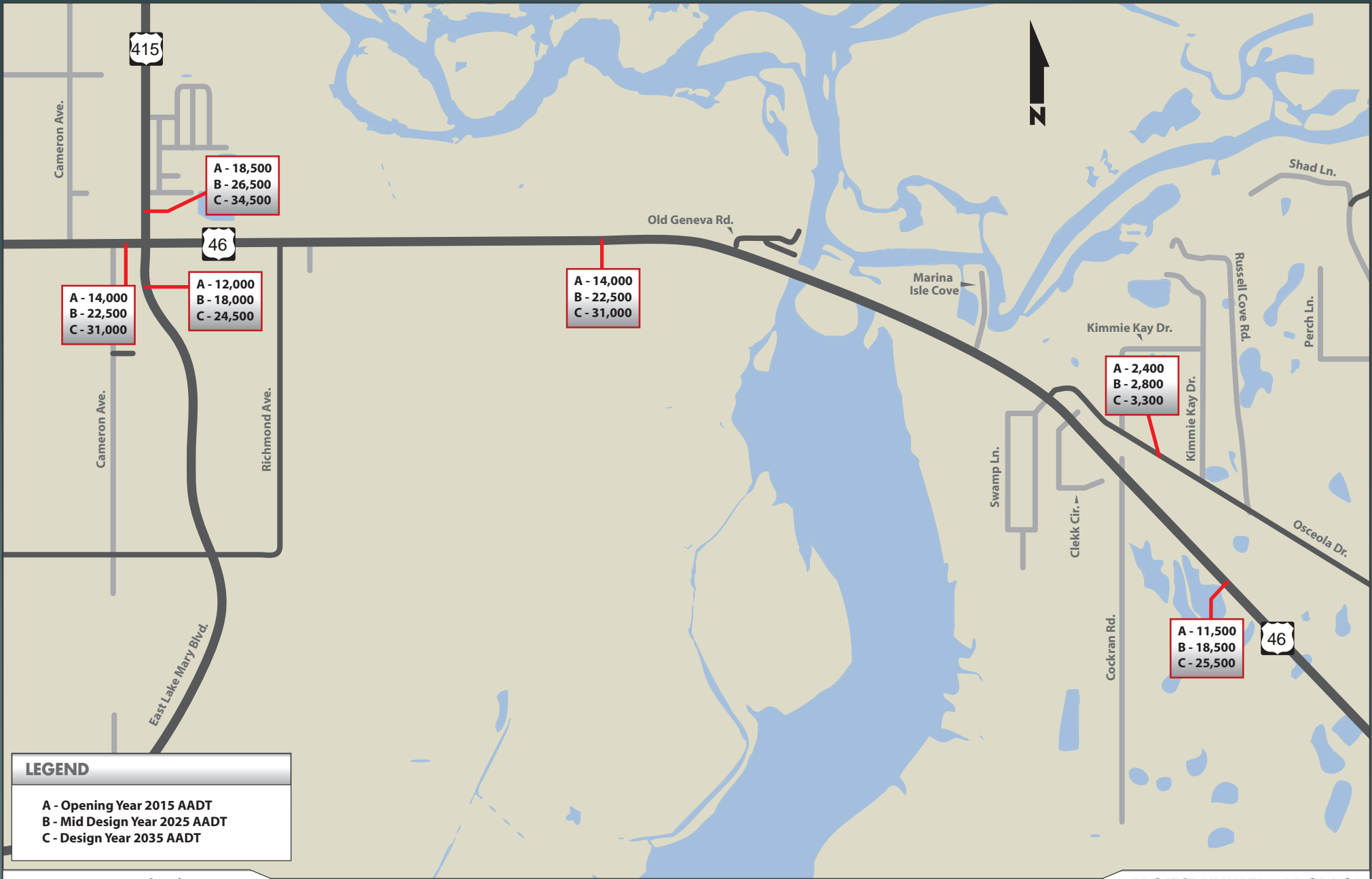
**Table 15: Recommended Growth Rates**

Roadway / Segment	No Build Alternative Growth Rate	Build Alternative Growth Rate
<b>Mainline</b>		
<b>SR 46</b>	8.1%	10.3%
<b>Side Streets</b>		
<b>SR 415 (north of SR 46)</b>	5.1% <sup>(1)</sup>	5.1% <sup>(1)</sup>
<b>Lake Mary Boulevard (south of SR 46)</b>	6.8% <sup>(1)</sup>	6.8% <sup>(1)</sup>
<b>Osceola Road</b>	2.0%	2.0%
<b>Mullet Lake Park Road</b>	2.0%	2.0%
<b>Cochran Road</b>	2.0%	2.0%
<b>Avenue C/Woodridge Drive</b>	2.0%	2.0%
<b>3<sup>rd</sup> Street/Oak Street</b>	2.0%	2.0%
<b>1<sup>st</sup> Street (north of SR 46)</b>	2.0%	2.0%
<b>CR 426 (south of SR 46)</b>	5.2%	6.0%

*1) The annual growth rates for SR 415 (north of SR 46) and Lake Mary Boulevard (south of SR 46) were developed by comparing the 2011 AADT and future year AADT (obtained based on the design year traffic volumes and design hour K<sub>30</sub> reported in the SR 46 Project Traffic for PD&E and Design Report (from US 17/92 to SR 415), Financial Project ID: 240216-1, dated May 2005.*

## 5.6 No Build & Build Future AADT Volumes

The design year 2035 daily traffic volumes for the No Build and Build Alternatives were derived using the recommended annual growth rates (included in Table 15). In addition, the opening year 2015 and mid-design year 2025 traffic volumes were derived using interpolation of traffic volumes between 2011 and 2035. The future year AADT volumes for the No Build Alternative are shown in **Figures 6-1 and 6-2**. Furthermore, the future year AADT volumes are shown in **Figures 7-1 and 7-2** for the Build Alternative.



DATE CREATED: 10/13/2011

PROJECT NUMBER: 11-014.01

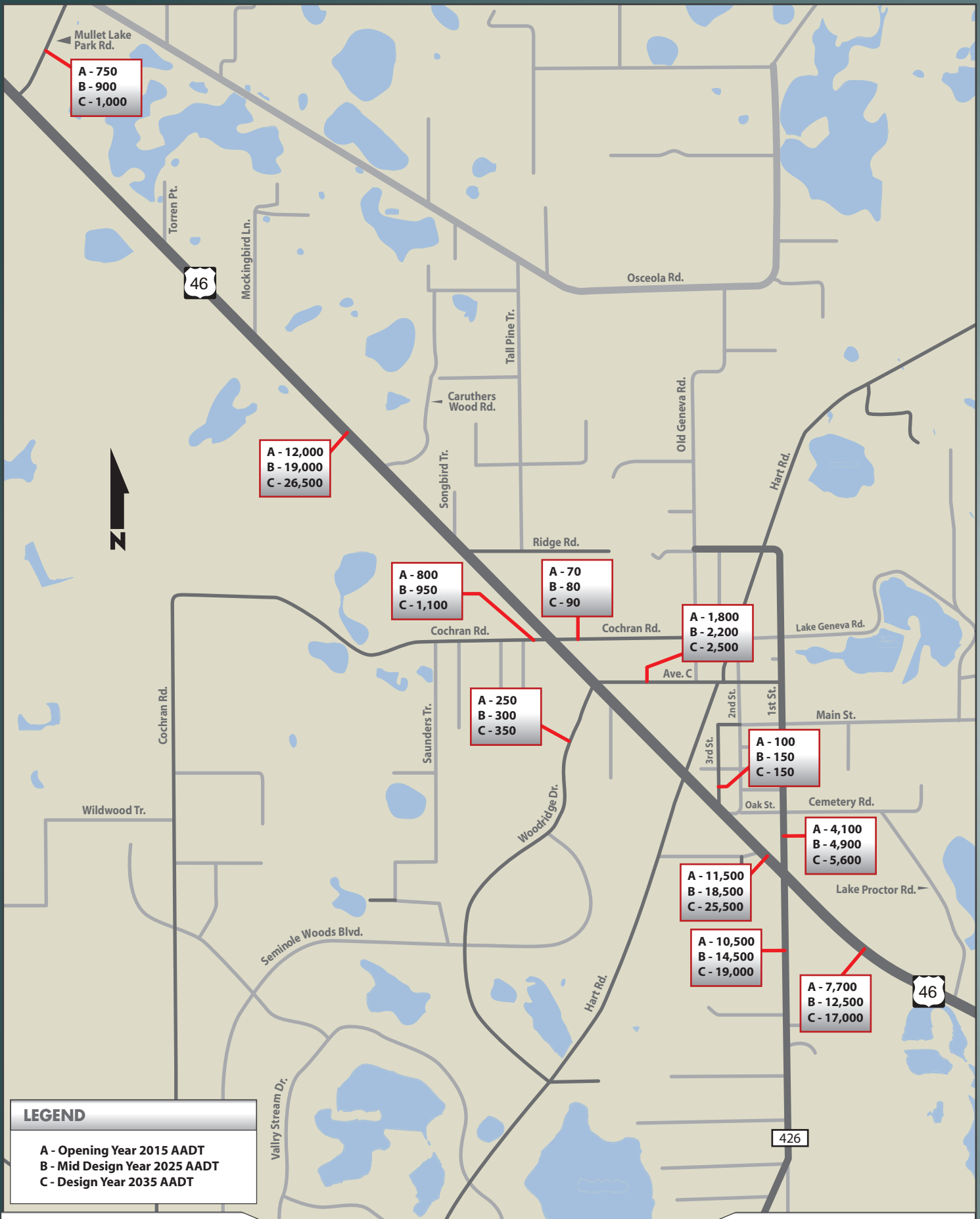


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**FIGURE 6-1**  
 Future AADT Volumes  
 No Build Alternative - Subsection 1





DATE CREATED: 10/13/2011

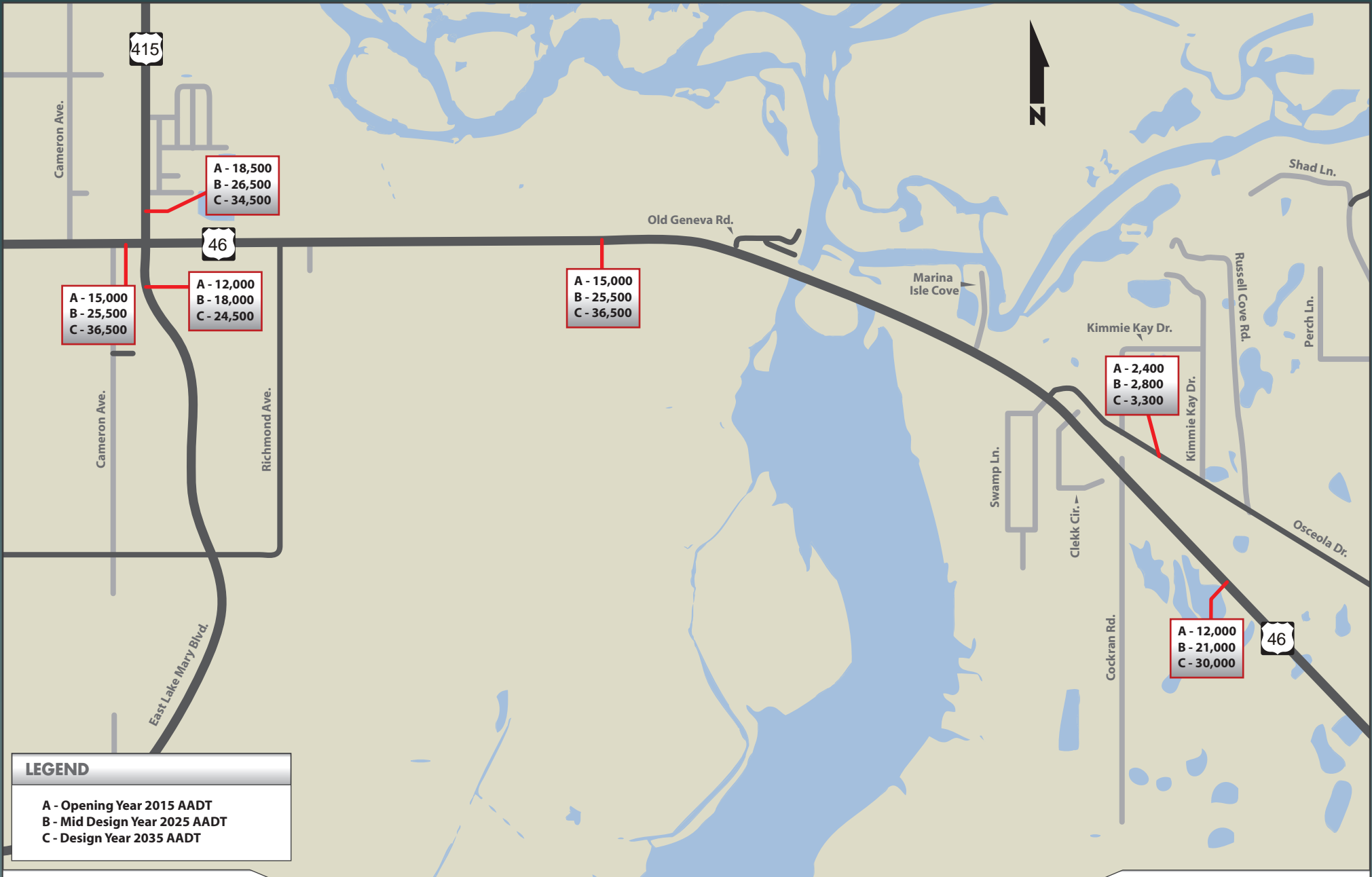
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**FIGURE 6-2**  
 Future AADT Volumes  
 No Build Alternative - Subsection 2



**LEGEND**

- A - Opening Year 2015 AADT
- B - Mid Design Year 2025 AADT
- C - Design Year 2035 AADT

DATE CREATED: 10/13/2011

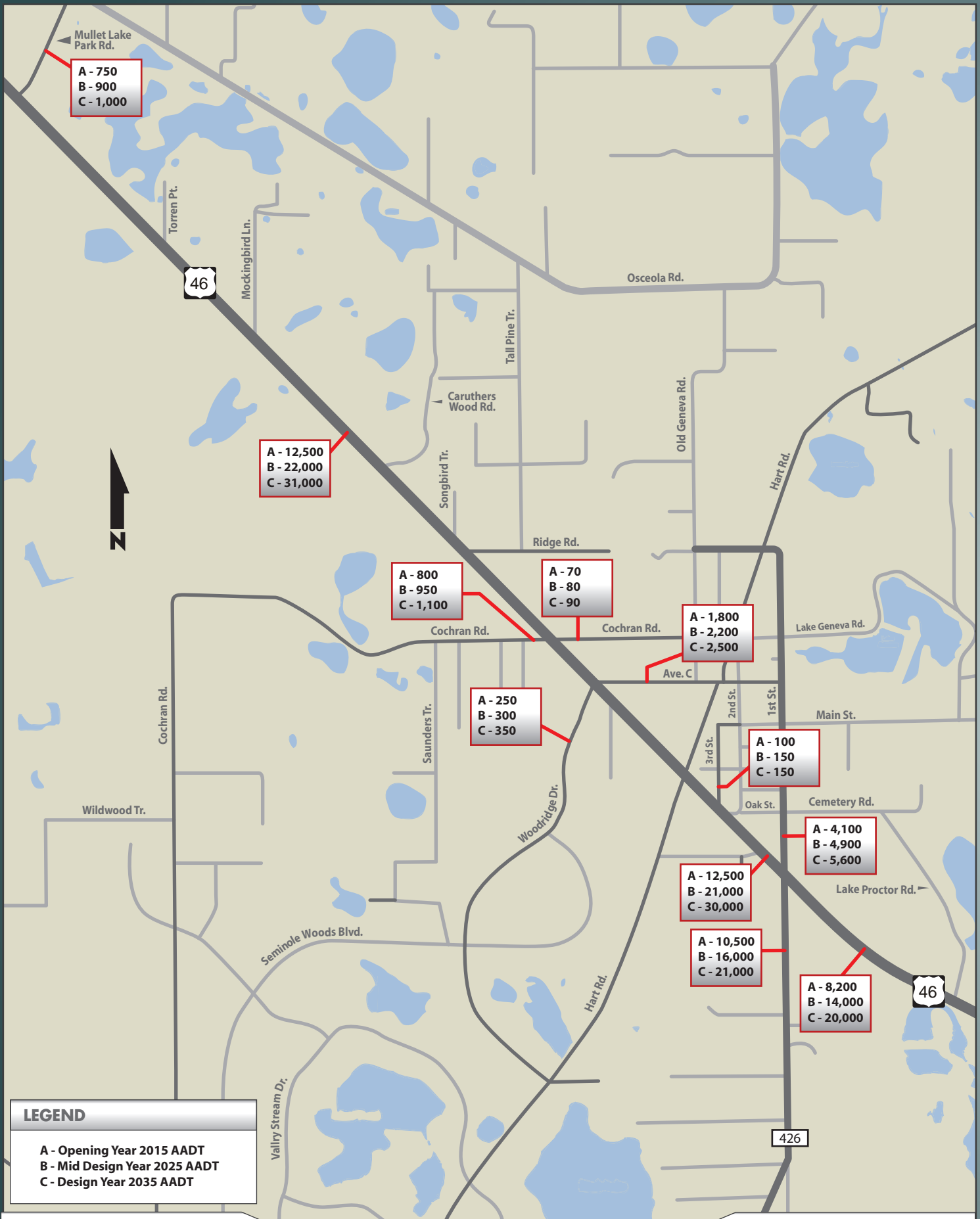
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**FIGURE 7-1**  
 Future AADT Volumes  
 Build Alternative - Subsection 1



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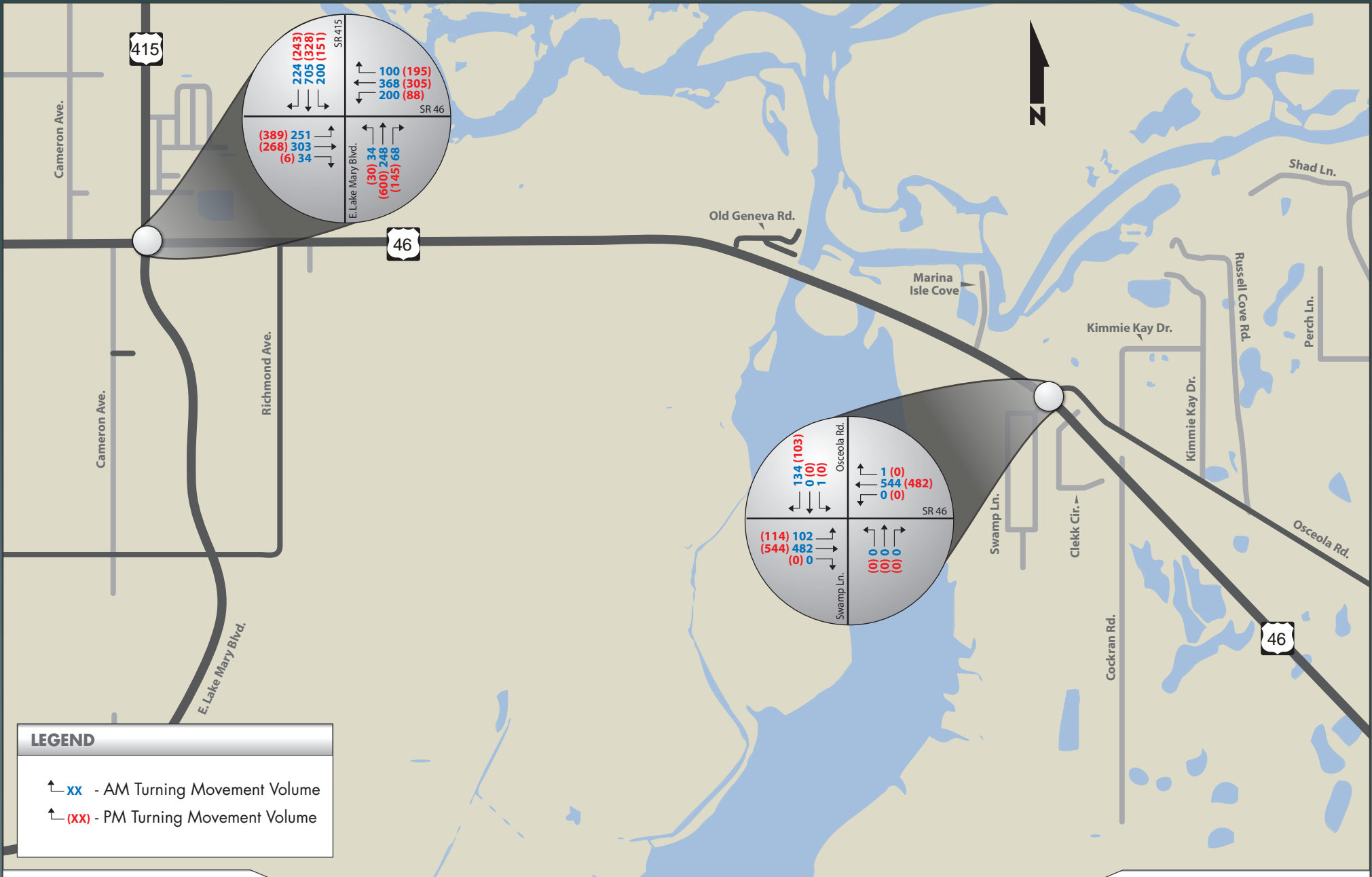
**FIGURE 7-2**  
 Future AADT Volumes  
 Build Alternative - Subsection 2

## 5.7 Intersection Design Hour Volumes

The existing and future year AADTs for the No Build and Build Alternatives along with the recommended traffic characteristics were used to develop the design hour volumes (DHVs) for both the a.m. and p.m. design hours at the intersections for the opening, mid-design and design years.

The DHVs for the intersections were developed using the TURNS5 spreadsheet, which balances AADTs and calculates DHVs based on Standard K and  $D_{30}$  factors used as input into the program. The estimated design hour volumes for the a.m. and p.m. design hours from TURNS5 spreadsheet were assessed for reasonableness. In general, adjustments were made to ensure that the year 2015, 2025 and 2035 design hour volumes were higher than the existing peak hour volumes. Furthermore, the future year design turning movements were adjusted to reasonably match the Directional Design Hour Volume (DDHV) exiting the intersections along SR 46. These adjustments are necessary because accepting an estimated volume that is unrealistically large may lead to over design and accepting an estimated volume that is too small may result in an inadequate design. The adjustments that were made are reported in the TURNS5 output sheets included in **Appendix L**.

The future year a.m. and p.m. design hour volumes for the No Build Alternative are shown in **Figures 8-1** and **8-2**, **Figures 9-1** and **9-2** and **Figures 10-1** and **10-2** for the years 2015, 2025 and 2035, respectively. The future year a.m. and p.m. design hour volumes for the Build Alternative are shown in **Figures 11-1** and **11-2**, **Figures 12-1** and **12-2** and **Figures 13-1** and **13-2** for years 2015, 2025 and 2035, respectively.



DATE CREATED: 1/31/2012

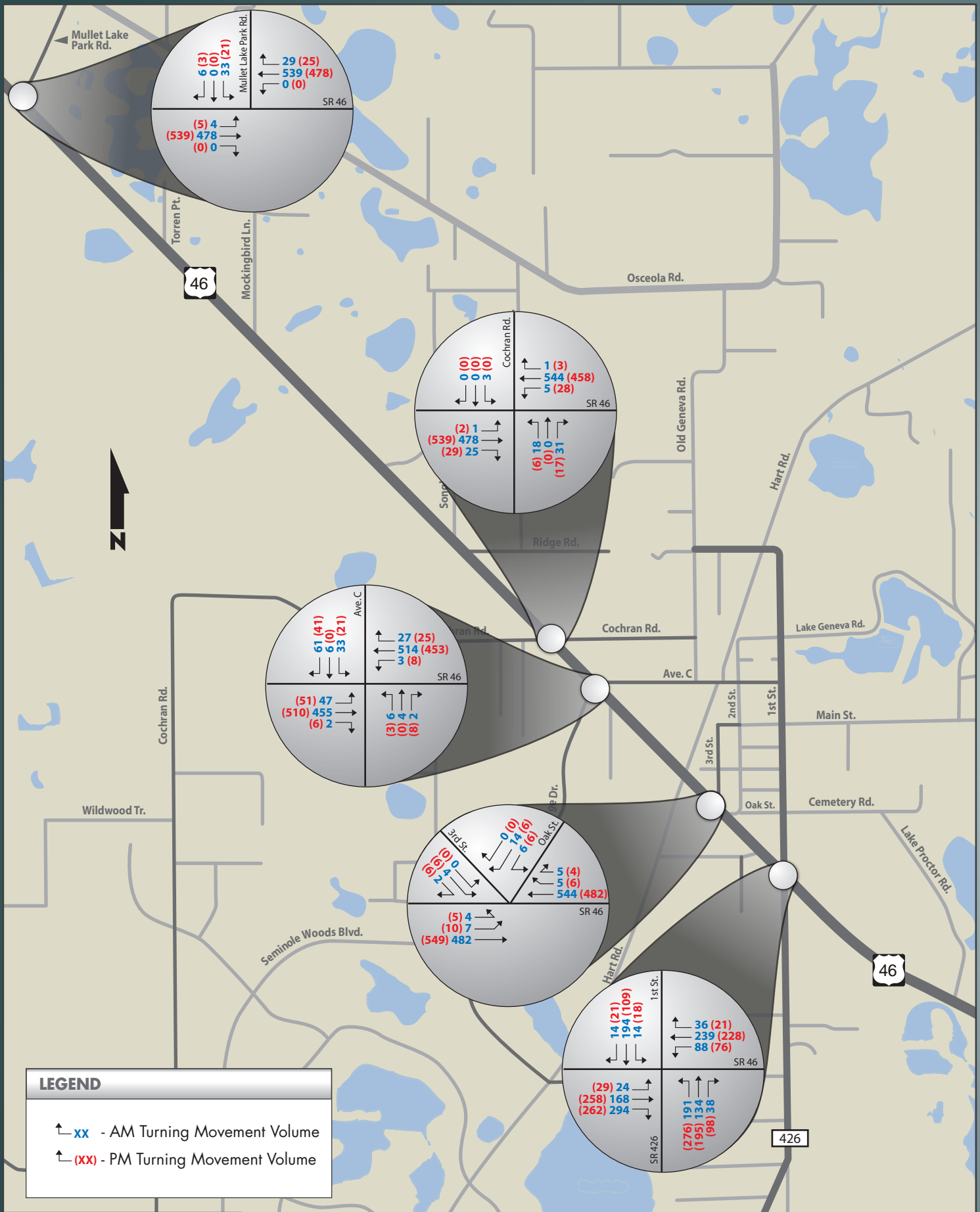
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**FIGURE 8-1**  
 Year 2015 Design Hour Turning Movement  
 Volumes No Build - Subsection 1



DATE CREATED: 1/31/2012

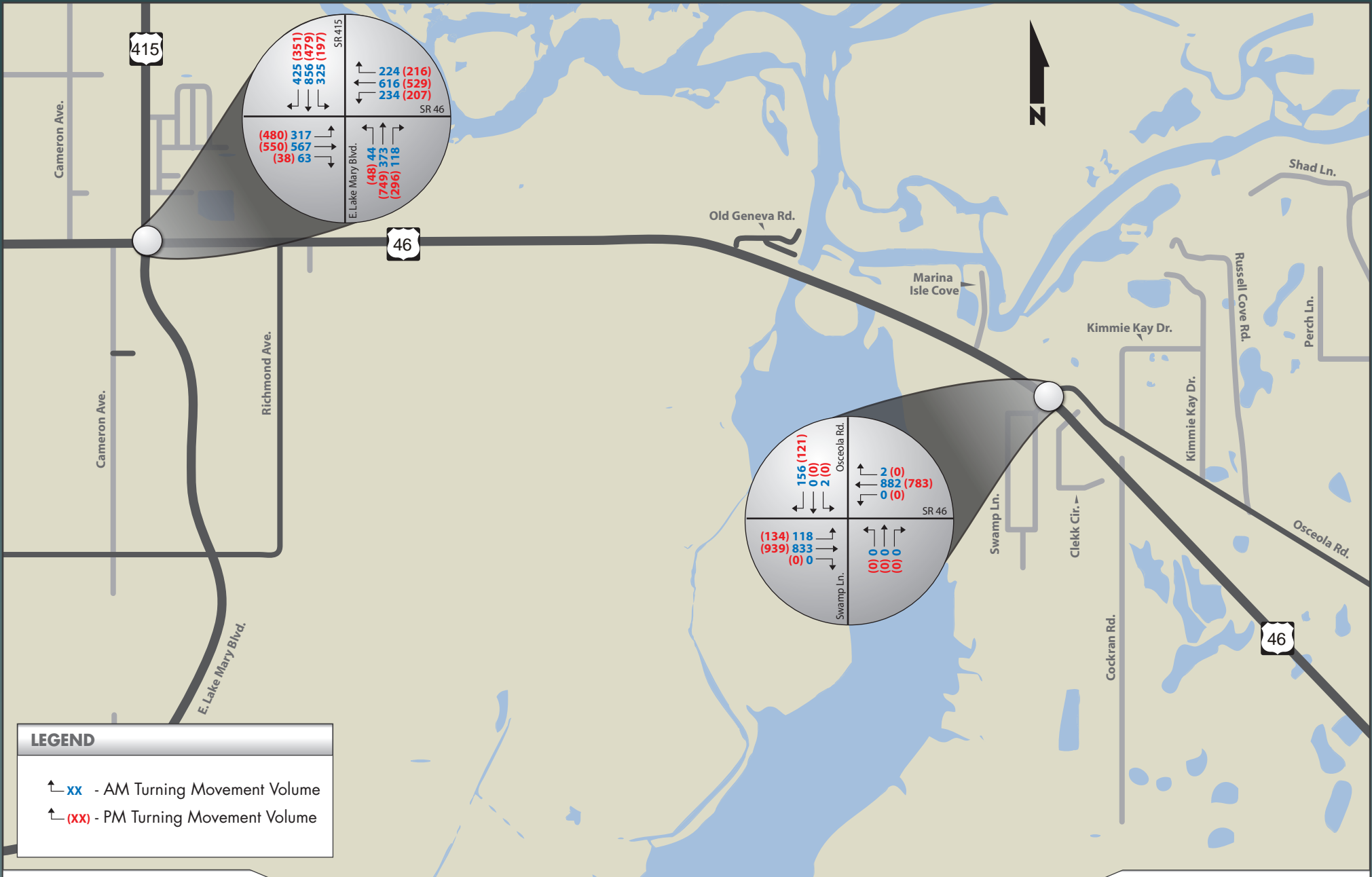
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**FIGURE 8-2**  
 Year 2015 Design Hour  
 Turning Movement Volumes  
 No Build - Subsection 2



DATE CREATED: 1/31/2012

PROJECT NUMBER: 11-014.01

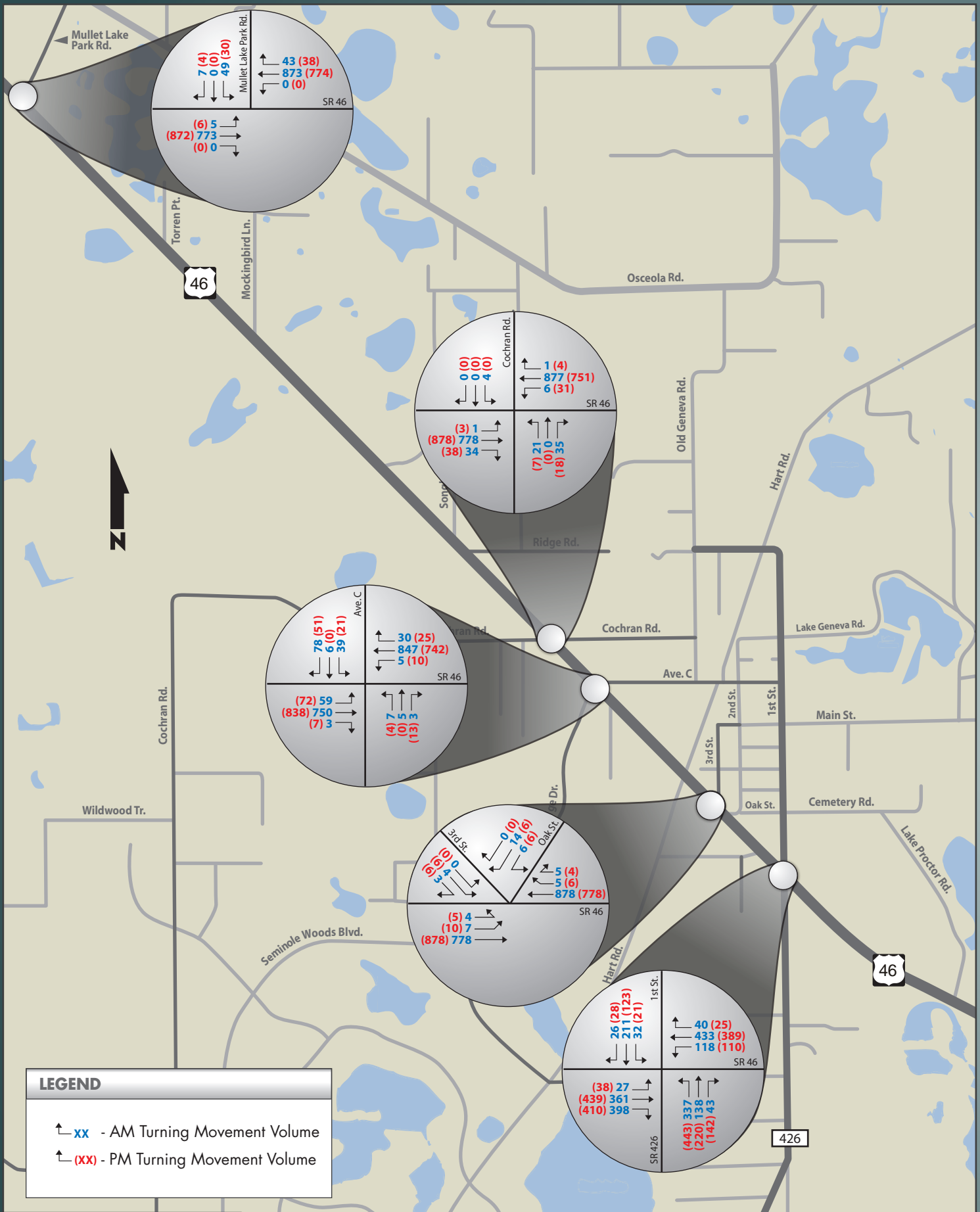


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**FIGURE 9-1**  
 Year 2025 Design Hour Turning Movement  
 Volumes No Build - Subsection 1





DATE CREATED: 1/31/2012

PROJECT NUMBER: 11-014.01

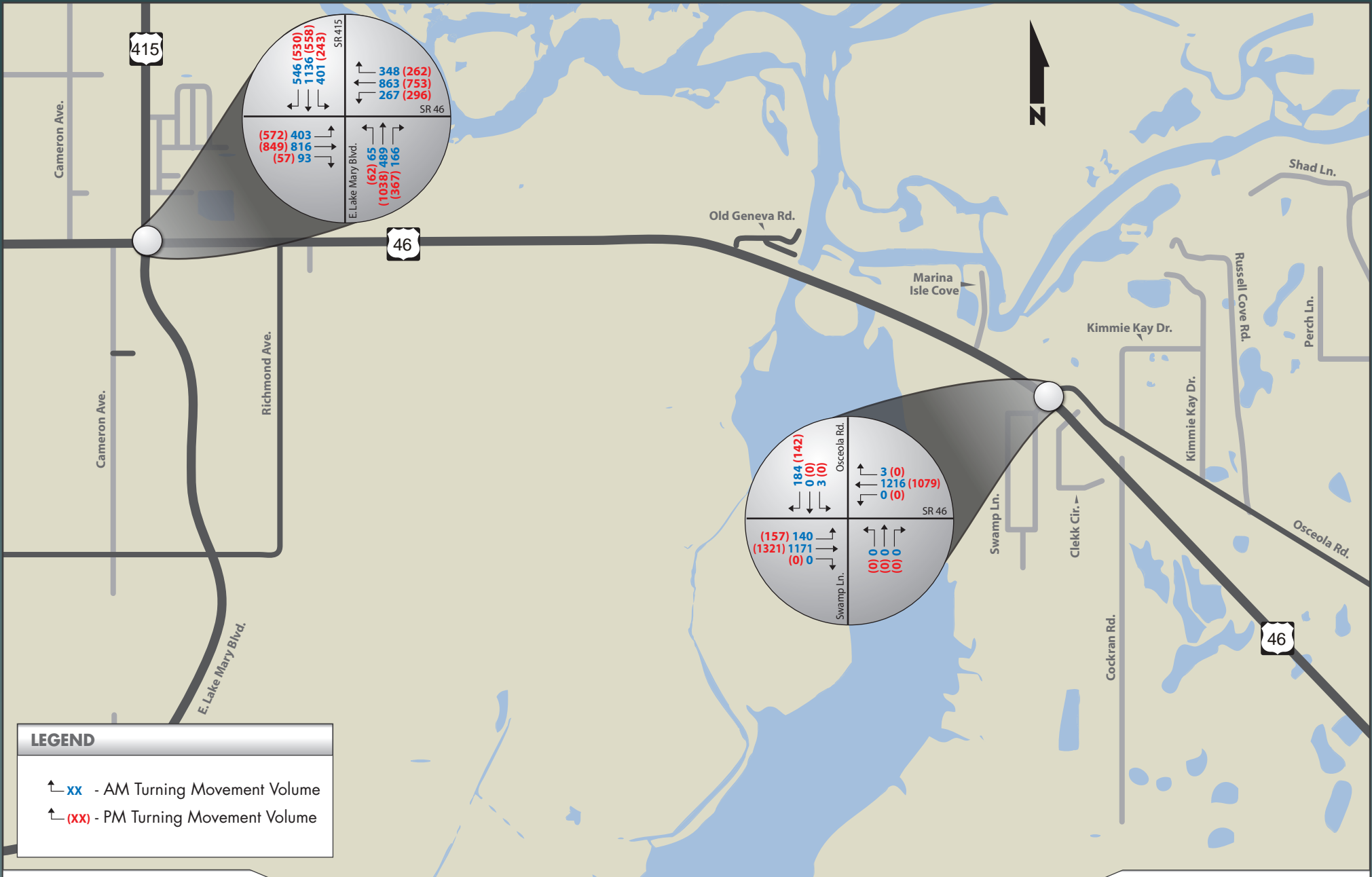


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**FIGURE 9-2**  
 Year 2025 Design Hour  
 Turning Movement Volumes  
 No Build - Subsection 2





DATE CREATED: 1/31/2012

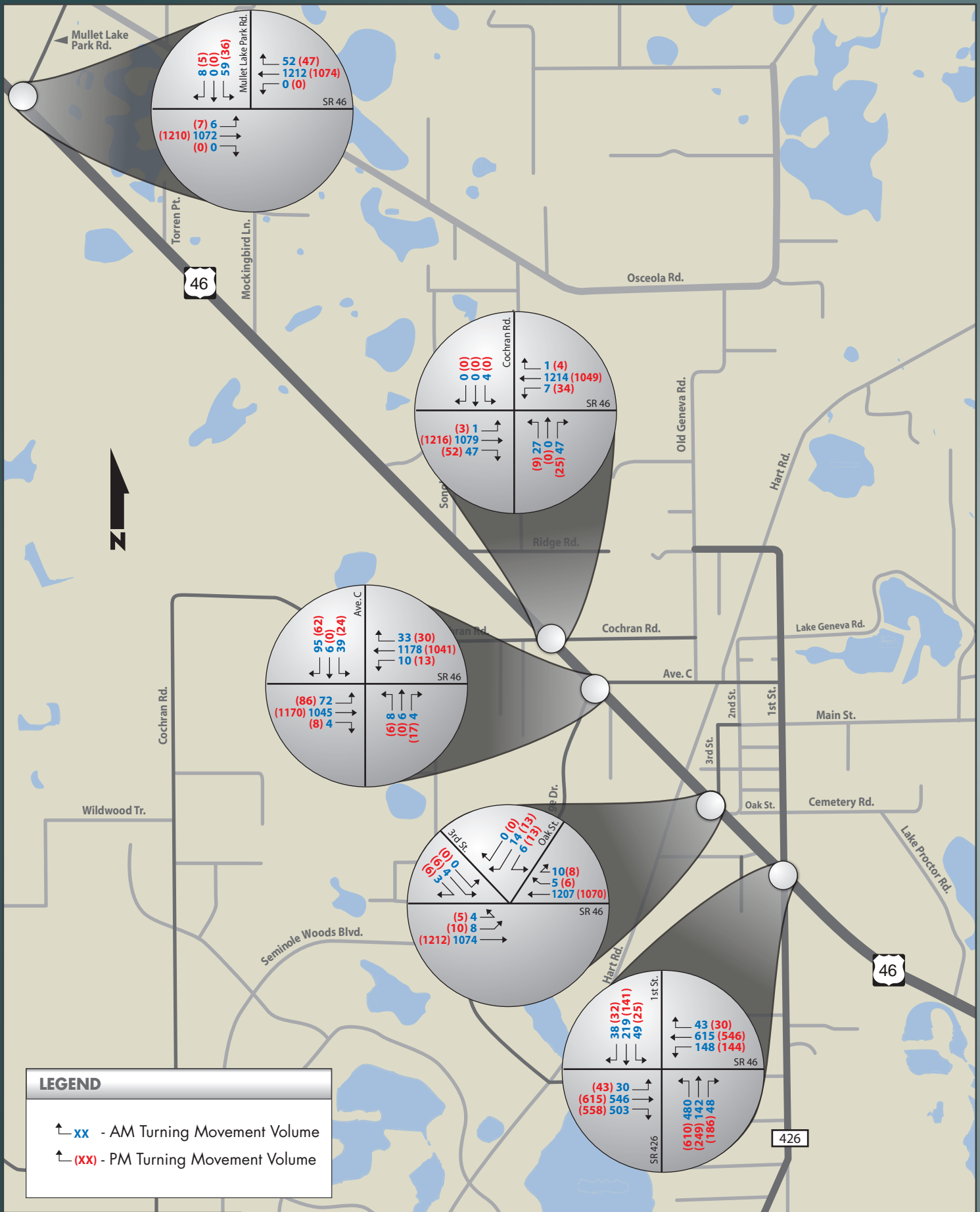
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**FIGURE 10-1**  
 Year 2035 Design Hour Turning Movement  
 Volumes No Build - Subsection 1



DATE CREATED: 1/31/2012

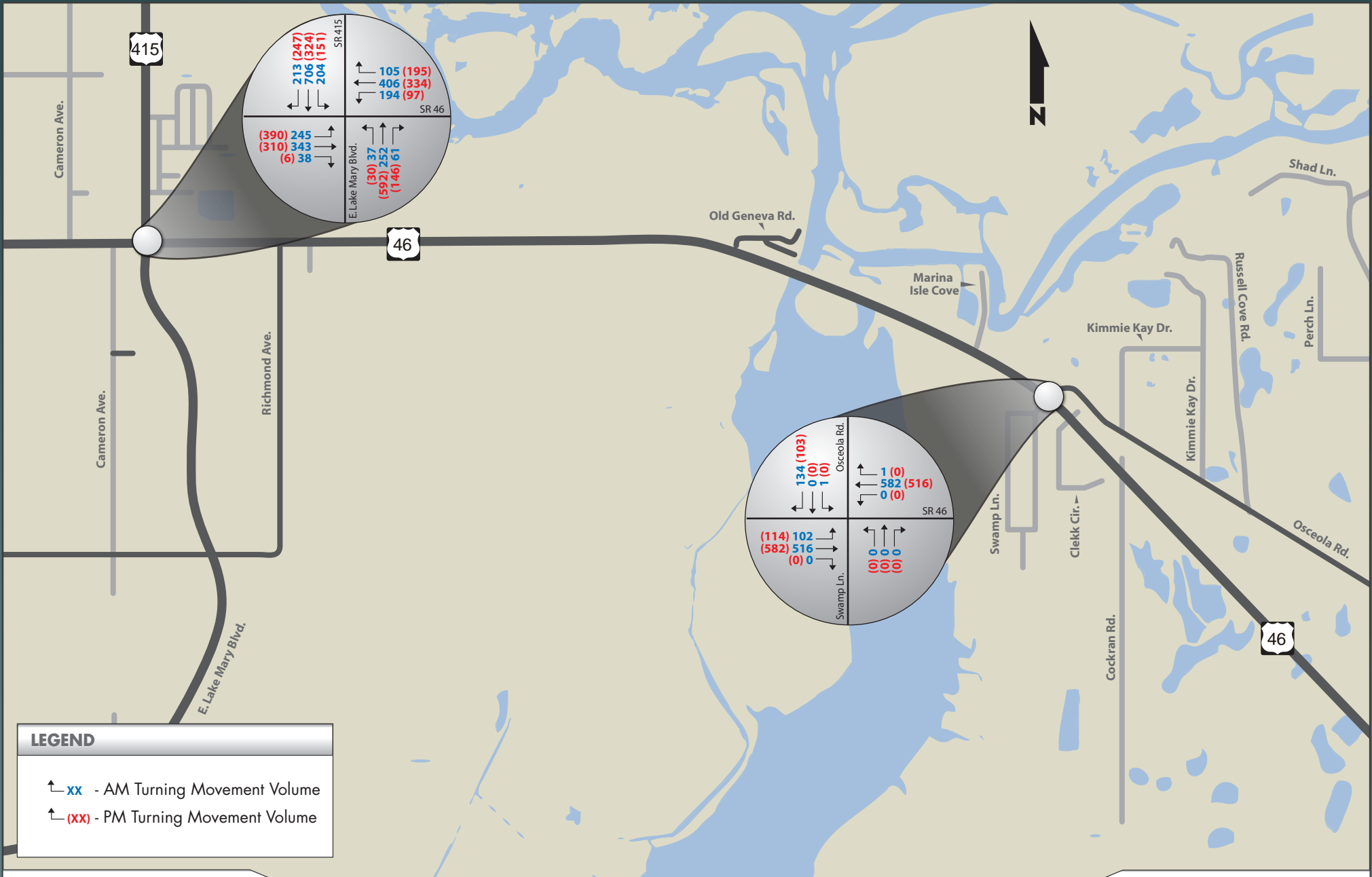
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 Orlando, Florida 32803

**Design Traffic  
 for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 10-2**  
 Year 2035 Design Hour  
 Turning Movement Volumes  
 No Build - Subsection 2



DATE CREATED: 1/31/2012

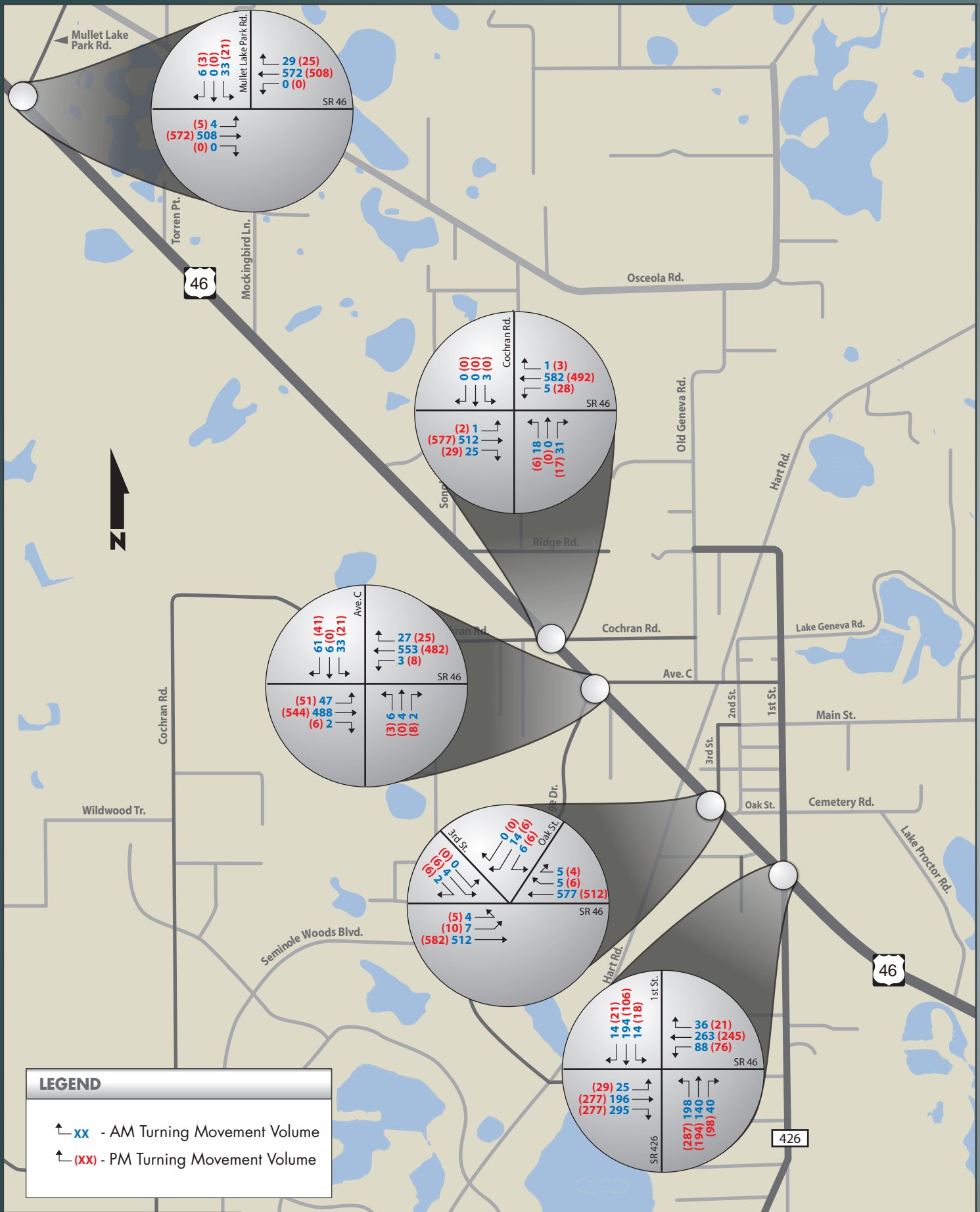
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**FIGURE 11-1**  
 Year 2015 Design Hour Turning Movement  
 Volumes Build - Subsection 1



DATE CREATED: 1/31/2012

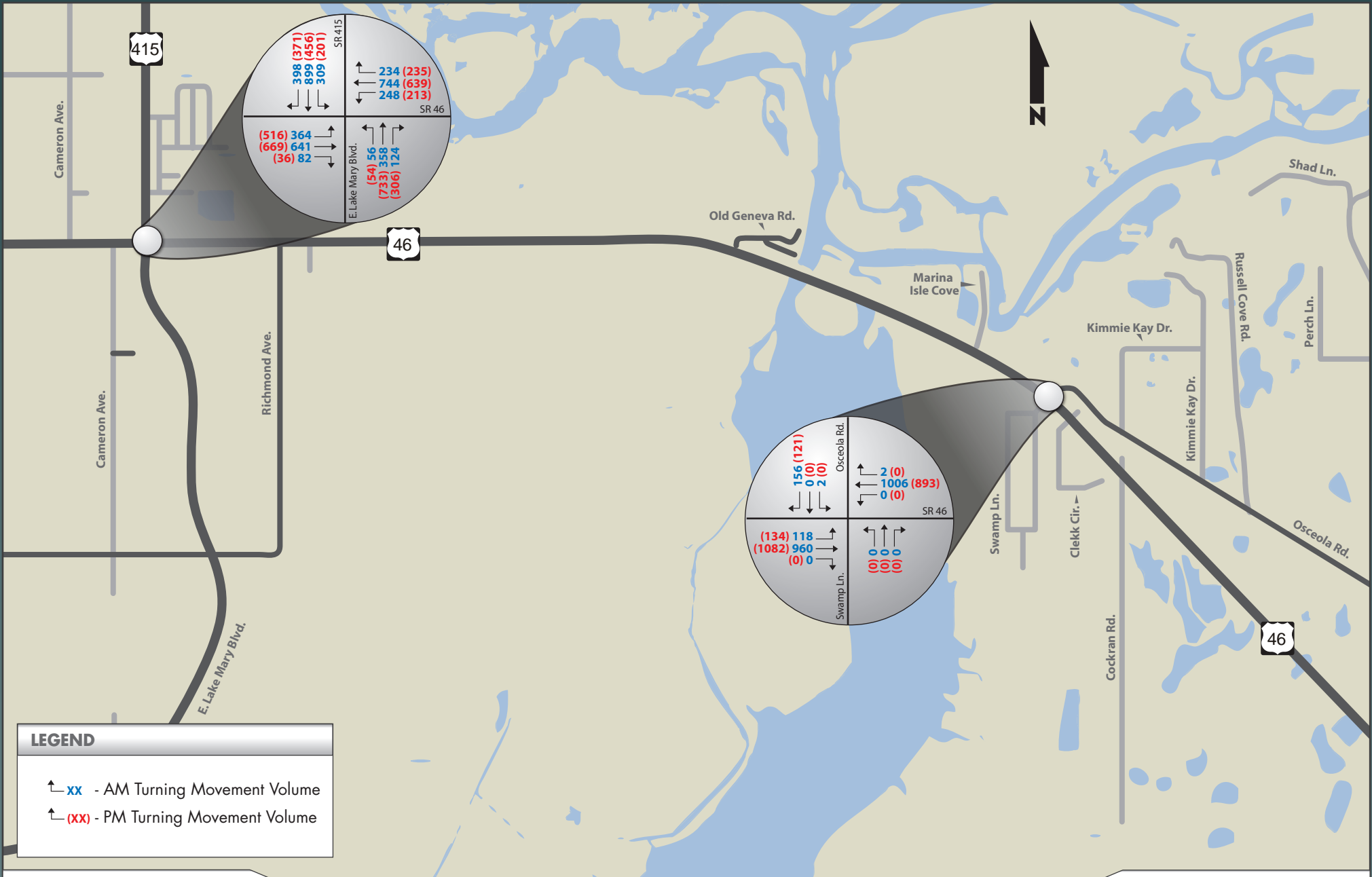
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**FIGURE 11-2**  
 Year 2015 Design Hour  
 Turning Movement Volumes  
 Build - Subsection 2



DATE CREATED: 1/31/2012

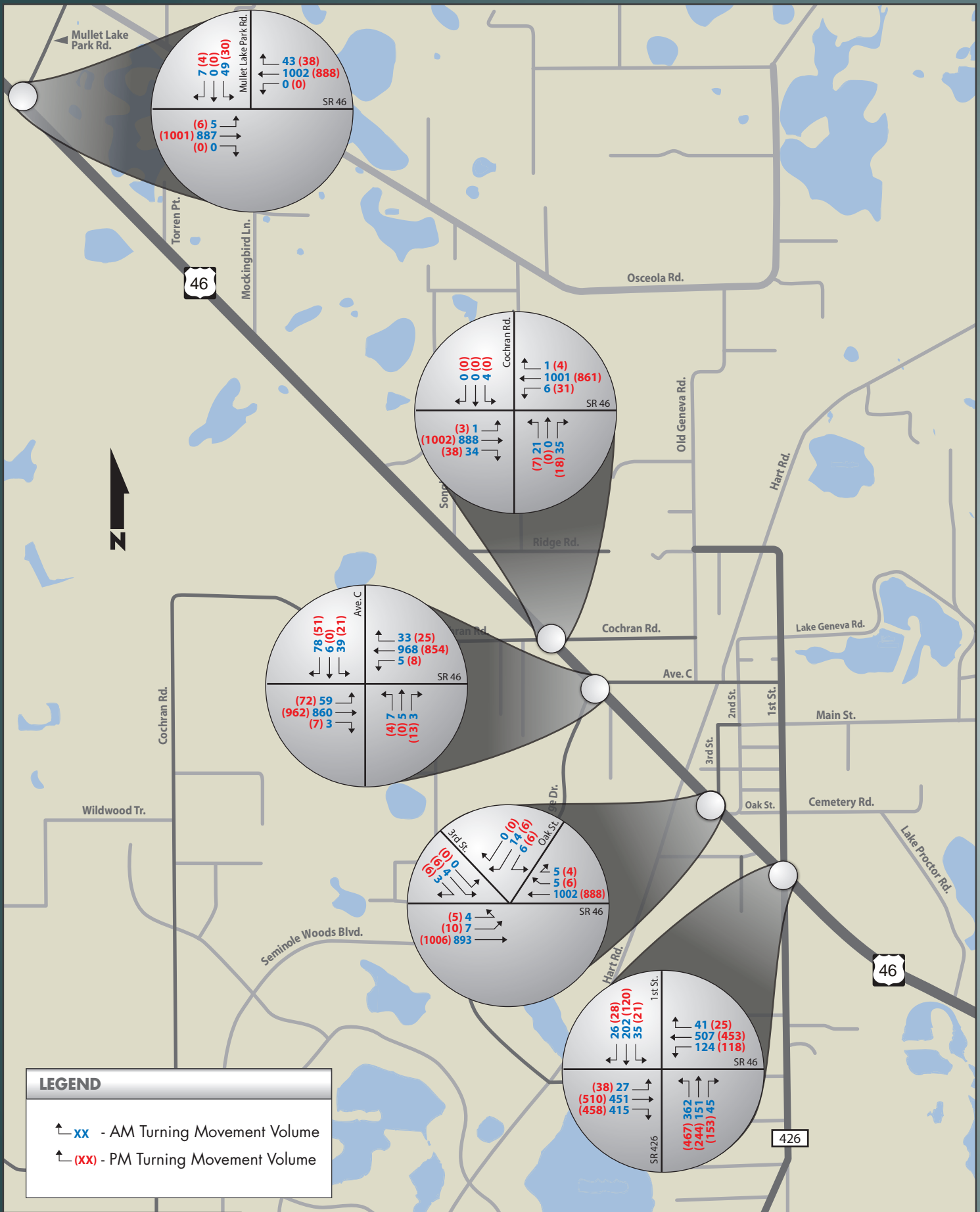
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**FIGURE 12-1**  
 Year 2025 Design Hour Turning Movement  
 Volumes Build - Subsection 1



DATE CREATED: 1/31/2012

PROJECT NUMBER: 11-014.01

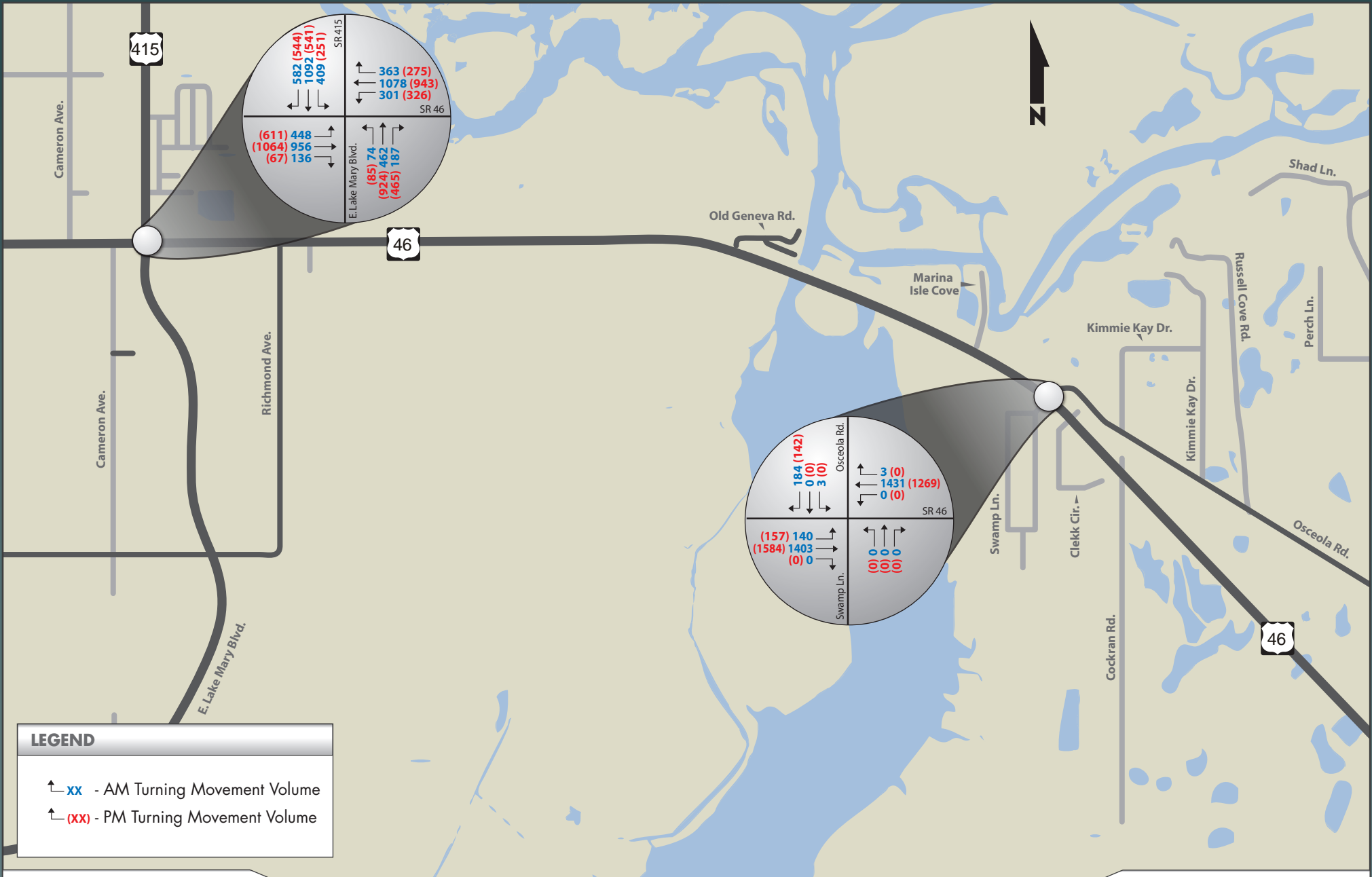


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**FIGURE 12-2**  
 Year 2025 Design Hour  
 Turning Movement Volumes  
 Build - Subsection 2





DATE CREATED: 1/31/2012

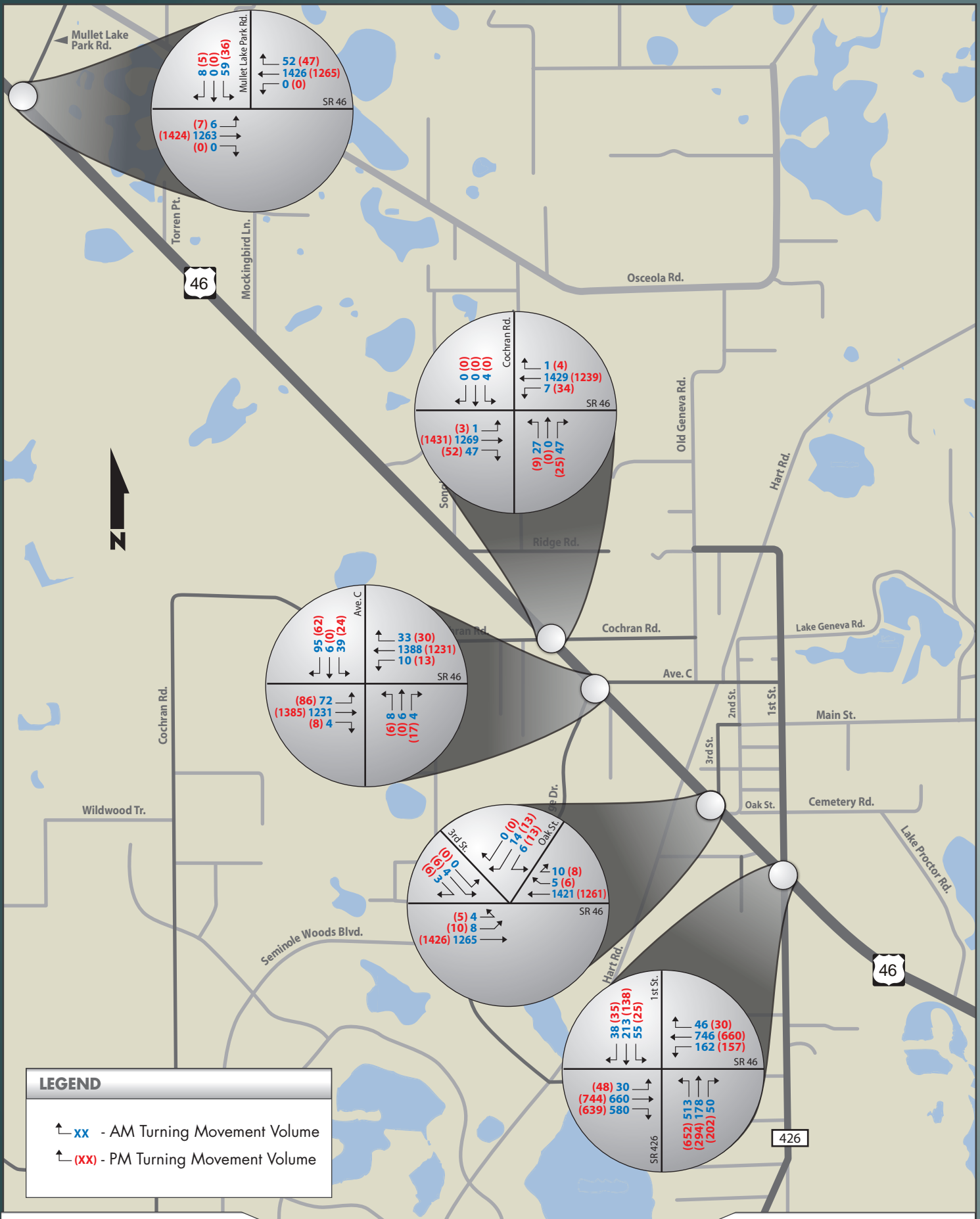
PROJECT NUMBER: 11-014.01



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**FIGURE 13-1**  
 Year 2035 Design Hour Turning Movement  
 Volumes Build - Subsection 1



DATE CREATED: 1/31/2012

PROJECT NUMBER: 11-014.01



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**FIGURE 13-2**  
Year 2035 Design Hour  
Turning Movement Volumes  
Build - Subsection 2



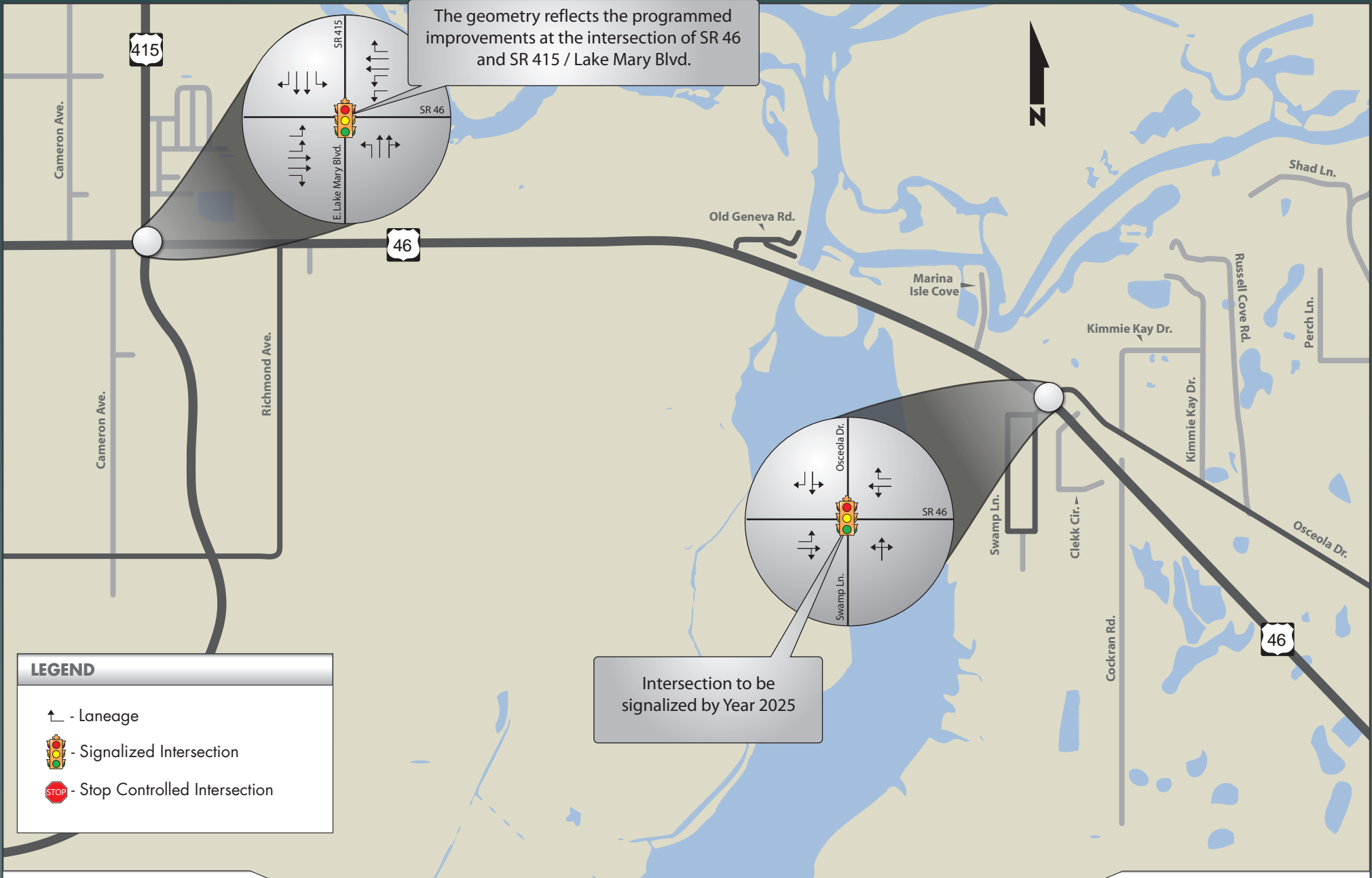
## 6. Future Operational Analysis

This section presents the results of the LOS operational analysis for the No Build and Build Alternatives. The Build Alternative was designed to examine how the four (4) lane widening of the SR 46 corridor and different geometric improvements at the study intersections would affect the traffic flow. The level of service for the study intersections was determined using the procedures as outlined in the Transportation Research Board's – Highway Capacity Manual (HCM 2000) using the Synchro software version 7. Specific analysis techniques utilized in the study include the signalized, unsignalized intersections and arterial analyses. Since Synchro calculates arterial LOS only between signalized intersections, the a.m. and p.m. peak hour peak direction volumes between the intersections were compared against the latest Generalized Peak Hour Directional Service Volumes (dated October 4, 2010) from 2009 FDOT Quality/Level Of Service Handbook to obtain the arterial LOS.

### 6.1 No Build Alternative Operational Analysis

#### 6.1.1 No Build Geometry

The No Build geometry illustrated in **Figures 14-1** and **14-2** is the same as the existing roadway (2 lanes) and intersection geometry with the exception that it includes the programmed intersection improvements at SR 46 and SR 415/Lake Mary Boulevard beginning from the opening year 2015. The widening of SR 415 from SR 46 to the Volusia County line is programmed for construction in the FY 2011/2012 and the widening of SR 46 from Mellonville Avenue to SR 415 is programmed for construction in the FY 2015/2016.



The geometry reflects the programmed improvements at the intersection of SR 46 and SR 415 / Lake Mary Blvd.

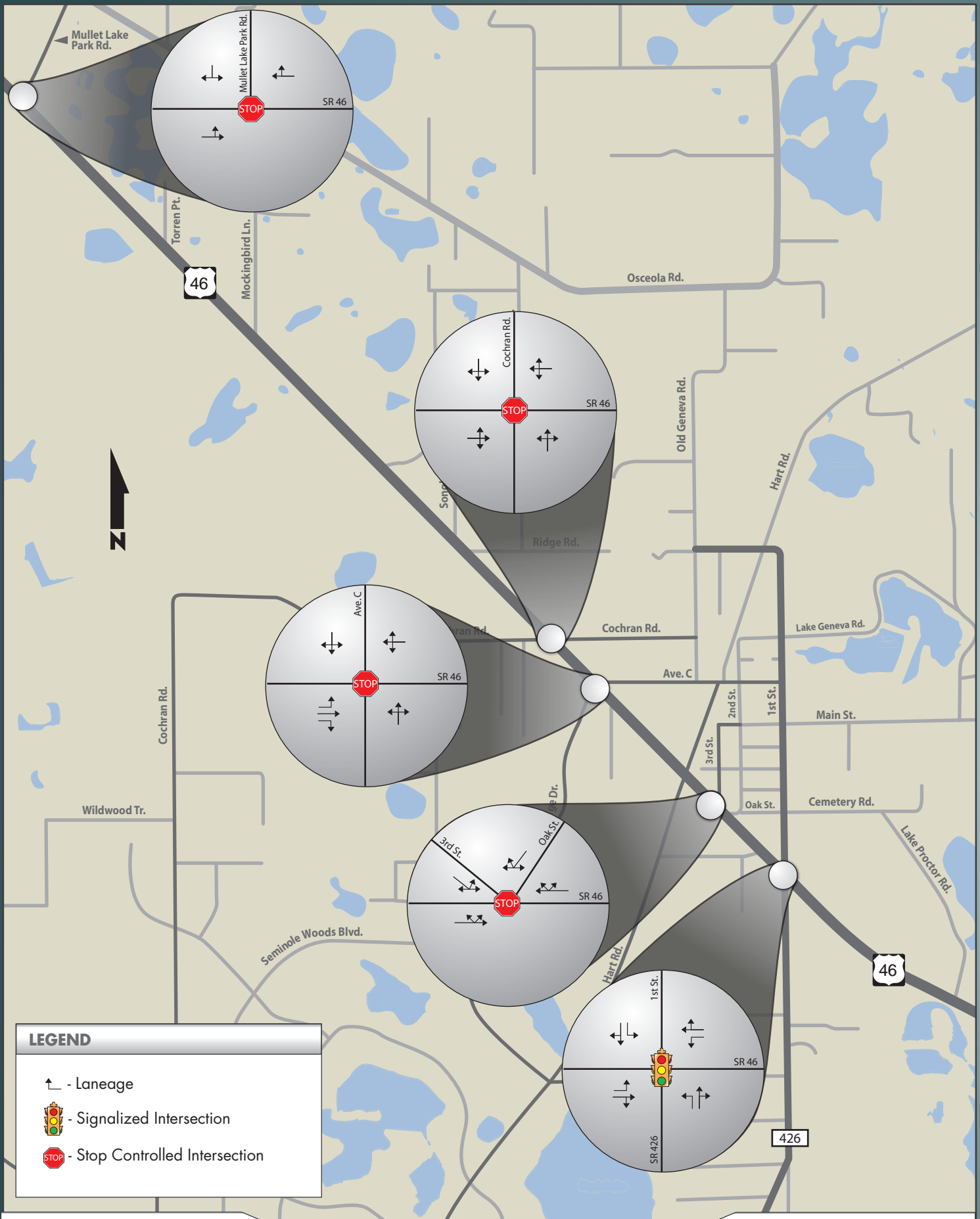
Intersection to be signaled by Year 2025

**LEGEND**

- Laneage
- Signalized Intersection
- Stop Controlled Intersection

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01



**LEGEND**

- Laneage
- Signalized Intersection
- Stop Controlled Intersection

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01

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 for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 14-2**  
 No Build Geometry  
 Subsection 2

### 6.1.2 Signal Warrant Analysis for the No Build Alternative

The unsignalized intersections of SR 46 at Osceola Road, SR 46 at Mullet Lake Park Road, SR 46 at Cochran Road, SR 46 at Woodridge Drive/Avenue C, and SR 46 at Oak Street/3<sup>rd</sup> Street were evaluated for future signal requirements. The need for future signal requirements at these locations was evaluated using Signal Warrant 1A as specified in the Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition. Signal Warrant 1A is the Minimum Vehicle Volumes Warrant. It is to be noted, that the traffic volume threshold criterion for Signal Warrant 1B are substantially lower than those of Signal Warrant 1A and should be supported by delay data collected in the field to show that the intersection experiences excessive delay. Therefore, Warrant 1B was not used for Signal Warrant analysis for the future design years.

The future AADT volumes at these intersections were segregated using the same hourly percentages from the existing 72 or 24 hour tube counts to obtain the eight highest hourly volumes. Based on the condition that the posted speed limit along SR 46 is greater than 40 mph, the corresponding 70 percent volume criteria for signal warrant 1A was considered for all the unsignalized intersections.

- **SR 46 and Osceola Road:** The eastbound left turning movement was considered as the minor street approach and the westbound approach was considered as the major street approach for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for seven of the eight hours required for the minor street approach volumes during the opening year 2015. However, the intersection traffic volumes met the 70% volume criteria for all the required eight hours for the major and minor street approach volumes during the mid design year 2025 and the design year 2035.
- **SR 46 and Mullet Lake Park Road:** The traffic volume in the southbound approach was considered for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for any of the required eight hours for the side street volumes during the design year 2035.
- **SR 46 and Cochran Road:** Since the traffic volume in the eastbound approach is anticipated to be significantly larger than the traffic volume in the westbound approach, the traffic volume in the eastbound approach was considered for the purpose of signal warrant 1A. Based on the

signal warrant analysis, this intersection did not meet the 70% volume criteria for any of the required eight hours for the side street volumes during the design year 2035.

- **SR 46 and Woodridge Drive/Avenue C:** Since the traffic volume in the westbound approach (along Avenue C) is anticipated to be significantly larger than the traffic volume in the eastbound approach (along Woodridge Drive), the traffic volume along Avenue C (the westbound approach) was considered for the purpose of signal warrant 1A. Based on the signal warrant analysis, this intersection only meet the 70% volume criteria for two hours of the required eight hours for the side street volumes during the design year 2035.
- **SR 46 and 3<sup>rd</sup> Street/ Oak Street:** The 24 hour percentages for the southbound approach were not available when this report was prepared. Therefore, it was assumed that the minor approach 24 hour volume percentages at this intersection would be consistent with those of the minor approach at the intersection of SR 46 and Woodridge Drive/Avenue C. The traffic volume in the southbound approach was considered for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for any of the required eight hours for the side street volumes during the design year 2035.

The anticipated traffic volumes during the design year 2035 did not meet the 70% criteria for signal warrant 1A at any of the unsignalized intersections along the SR 46 corridor with the exception of the intersection of SR 46 and Osceola Road. The intersection of SR 46 and Osceola Road met the 70% criteria for signal warrant 1A starting in the mid design year 2025, therefore it was analyzed as a traffic signal controlled intersection for the years 2025 and 2035 No Build Alternative conditions. The other four unsignalized intersections were analyzed under a stop control during the opening, mid and design years for the No Build Alternative. The signal warrant sheets are provided in **Appendix M** of this report.

### **6.1.3 Intersection Operational Analysis – No Build Alternative**

Intersection operational analyses were performed for the opening, mid-design and design years for the No Build Alternative for the a.m. and p.m. design hours. The results of the intersection analysis are summarized in **Table 16**. The Synchro Intersection Analysis Outputs for the No Build Alternative can be found in **Appendix N**.

**Table 16: Future Intersection LOS Summary – No Build Alternative**

Study Intersection	Traffic Control	Adopted LOS	YR 2015		YR 2025		YR 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
<b>AM Peak Hour</b>								
<b>SR 46 @</b>								
SR 415/Lake Mary Blvd	Signal	D	31.0	C	42.9	D	<b>80.7</b>	<b>F</b>
Osceola Rd	Stop	C	9.2/15.9	A/C	11.1	B	23.7	C
Mullet Lake Park Rd	Stop	C	<b>0.1/26.0</b>	<b>A/D</b>	<b>0.2/153.4</b>	<b>A/F</b>	<b>0.5/1,221.3</b>	<b>A/F</b>
Cochran Rd	Stop	C	<b>0.1/26.7</b>	<b>A/D</b>	<b>0.2/76.5</b>	<b>A/F</b>	<b>0.7/464.1</b>	<b>A/F</b>
Woodridge Dr/Ave C	Stop	C	<b>8.9/27.7</b>	<b>A/D</b>	<b>10.5/201.4</b>	<b>B/F</b>	<b>13.1/1,055.2</b>	<b>B/F</b>
3 <sup>rd</sup> St/Oak St	Stop	C	0.3/20.4	A/C	<b>0.5/44.0</b>	<b>A/E</b>	<b>1.4/129.2</b>	<b>A/F</b>
CR 426/1 <sup>st</sup> St	Signal	C	20.9	C	<b>55.1</b>	<b>E</b>	<b>159.1</b>	<b>F</b>
<b>PM Peak Hour</b>								
<b>SR 46 @</b>								
SR 415/Lake Mary Blvd	Signal	D	39.0	D	<b>78.9</b>	<b>E</b>	<b>147.0</b>	<b>F</b>
Osceola Rd	Stop	C	9.0/13.2	A/B	10.2	B	<b>38.5</b>	<b>D</b>
Mullet Lake Park Rd	Stop	C	0.1/24.6	A/C	<b>0.2/95.9</b>	<b>A/F</b>	<b>0.7/724.8</b>	<b>A/F</b>
Cochran Rd	Stop	C	0.9/16.3	A/C	<b>1.3/35.8</b>	<b>A/E</b>	<b>3.0/146.6</b>	<b>A/F</b>
Woodridge Dr/Ave C	Stop	C	8.7/19.6	A/C	<b>10.1/66.0</b>	<b>B/F</b>	<b>12.1/695.9</b>	<b>B/F</b>
3 <sup>rd</sup> St/Oak St	Stop	C	0.4/18.4	A/C	<b>0.7/42.2</b>	<b>A/E</b>	<b>1.8/203.6</b>	<b>A/F</b>
CR 426/1 <sup>st</sup> St	Signal	C	21.4	C	<b>71.6</b>	<b>E</b>	<b>183.3</b>	<b>F</b>

**Notes:**

1. HCM based outputs are presented in this table for both the signalized and unsignalized intersections.
2. Overall intersection delay and LOS results are reported for signalized intersections.
3. In case of unsignalized intersections, worst case results (delay and LOS) are reported for movements in both the major and minor approaches.
4. Delay is presented in seconds/vehicle.
5. The intersection of SR 46 and Osceola Road was analyzed as a traffic signal controlled intersection starting in the mid design year 2025.

➤ **Opening Year 2015 - AM & PM Design Hours**

As shown in Table 16, under the No Build Alternative, the following intersections are projected to operate below the adopted LOS standard during the 2015 traffic conditions.

- The minor street approach at SR 46 and Mullet Lake Park Road (a.m. design hour).
- The minor street approach at SR 46 and Woodridge Drive/Avenue C (a.m. design hour).
- The minor street approach at SR 46 and Cochran Road (a.m. design hour).

➤ **Mid-design Year 2025 - AM & PM Design Hours**

Under the No Build Alternative, the following intersections are projected to operate below the adopted LOS standard during the 2025 a.m. and p.m. design hours.

- SR 46 and SR 415/Lake Mary Boulevard (p.m. design hour).
- The minor street approach at SR 46 and Mullet Lake Park Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Cochran Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Woodridge Drive/Avenue C (a.m. and p.m. design hours).
- The minor street approach at SR 46 and 3<sup>rd</sup> Street/Oak Street (a.m. and p.m. design hours).
- SR 46 and CR 426/1<sup>st</sup> Street (a.m. and p.m. design hours).

➤ **Design Year 2035 - AM & PM Design Hours**

Under the No Build Alternative, the following intersections are projected to operate below the adopted LOS standard during the 2035 a.m. and p.m. design hours.

- SR 46 and SR 415/Lake Mary Boulevard (a.m. and p.m. design hours).
- SR 46 and Osceola Road (p.m. design hour).
- The minor street approach at SR 46 and Mullet Lake Park Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Cochran Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Woodridge Drive/Avenue C (a.m. and p.m. design hours).
- The minor street approach at SR 46 and 3<sup>rd</sup> Street/Oak Street (a.m. and p.m. design hours).
- SR 46 and CR 426/1<sup>st</sup> Street (a.m. and p.m. design hours).

In conclusion, all of the study intersections on the SR 46 study corridor are projected to operate below the adopted LOS standard by the year 2035. Furthermore, it is recommended that all the unsignalized intersections along the study corridor be revisited periodically in the future to determine if any of the signal warrants are satisfied. The actual determination of when these intersections will be signalized shall be based on actual traffic counts and other pertinent data required for signal warrant analysis.

#### 6.1.4 Future Arterial LOS Analysis – No Build Alternative

FDOT has classified the study segment along SR 46 between SR 415/Lake Mary Boulevard and Richmond Avenue as an urban principal arterial (class 1) with a LOS standard “D”. For the purpose of assessing the arterial LOS of this segment of SR 46, the generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 7 of the 2009 FDOT Quality/Level of Service Handbook and are shown below.

- LOS B – 510 VPH
- LOS C – 820 VPH
- LOS D – 880 VPH
- LOS E – 880 VPH

Furthermore, FDOT has classified the study segment along SR 46 between Richmond Avenue and CR 426 as a rural principal arterial with a LOS standard “C”. For the purpose of assessing the arterial LOS of this segment of SR 46, the generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 9 of the 2009 FDOT Quality/Level Of Service Handbook and are shown below.

- LOS B – 240 VPH
- LOS C – 430 VPH
- LOS D – 740 VPH
- LOS E – 1,480 VPH

Tables 7 and 9 of the 2009 FDOT Quality/Level of Service Handbook are included in **Appendix F**.

As shown in **Table 17**, the SR 46 corridor from Richmond Avenue and CR 426, is projected to operate at a deficient LOS of “D” under the No Build alternative during the opening year 2015 directional design hour conditions. Furthermore, the entire SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street is anticipated to operate under unacceptable level of service during the mid design year 2025 and design year 2035 directional design hour conditions under the No Build alternative.



**Table 17**  
**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**Future Arterial LOS Analysis Summary – No Build Alternative**

Roadway Segment on SR 46	Area Type	LOS Std.	Maximum Service Volume (MSV)	AADT	Standard "K" Factor	"D <sub>30</sub> " Factor	Directional Design Hour Volumes (DDHV)	Arterial LOS	Adverse?
<b>Opening Year - 2015</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	880	14,000	9.0%	53.0%	650	C	No
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	880	14,000	9.0%	53.0%	650	C	No
Richmond Avenue and Osceola Road	Rural	C	430	14,000	9.0%	53.0%	650	D	Yes
B/W Osceola Road and Mullet Lake Park Road	Rural	C	430	11,500	9.0%	53.0%	550	D	Yes
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	430	12,000	9.0%	53.0%	550	D	Yes
West of CR 426	Rural	C	430	11,500	9.0%	53.0%	550	D	Yes
East of CR 426	Rural	C	430	7,700	9.0%	53.0%	350	C	No
<b>Mid Design Year - 2025</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	880	22,500	9.0%	53.0%	1,100	F	Yes
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	880	22,500	9.0%	53.0%	1,100	F	Yes
Richmond Avenue and Osceola Road	Rural	C	430	22,500	9.0%	53.0%	1,100	E	Yes
B/W Osceola Road and Mullet Lake Park Road	Rural	C	430	18,500	9.0%	53.0%	900	E	Yes
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	430	19,000	9.0%	53.0%	900	E	Yes
West of CR 426	Rural	C	430	18,500	9.0%	53.0%	900	E	Yes
East of CR 426	Rural	C	430	12,500	9.0%	53.0%	600	D	Yes
<b>Design Year - 2035</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	880	31,000	9.0%	53.0%	1,500	F	Yes
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	880	31,000	9.0%	53.0%	1,500	F	Yes
Richmond Avenue and Osceola Road	Rural	C	430	31,000	9.0%	53.0%	1,500	F	Yes
B/W Osceola Road and Mullet Lake Park Road	Rural	C	430	25,500	9.0%	53.0%	1,200	E	Yes
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	430	26,500	9.0%	53.0%	1,300	E	Yes
West of CR 426	Rural	C	430	25,500	9.0%	53.0%	1,200	E	Yes
East of CR 426	Rural	C	430	17,000	9.0%	53.0%	800	E	Yes

## 6.2 Build Alternative Operational Analysis

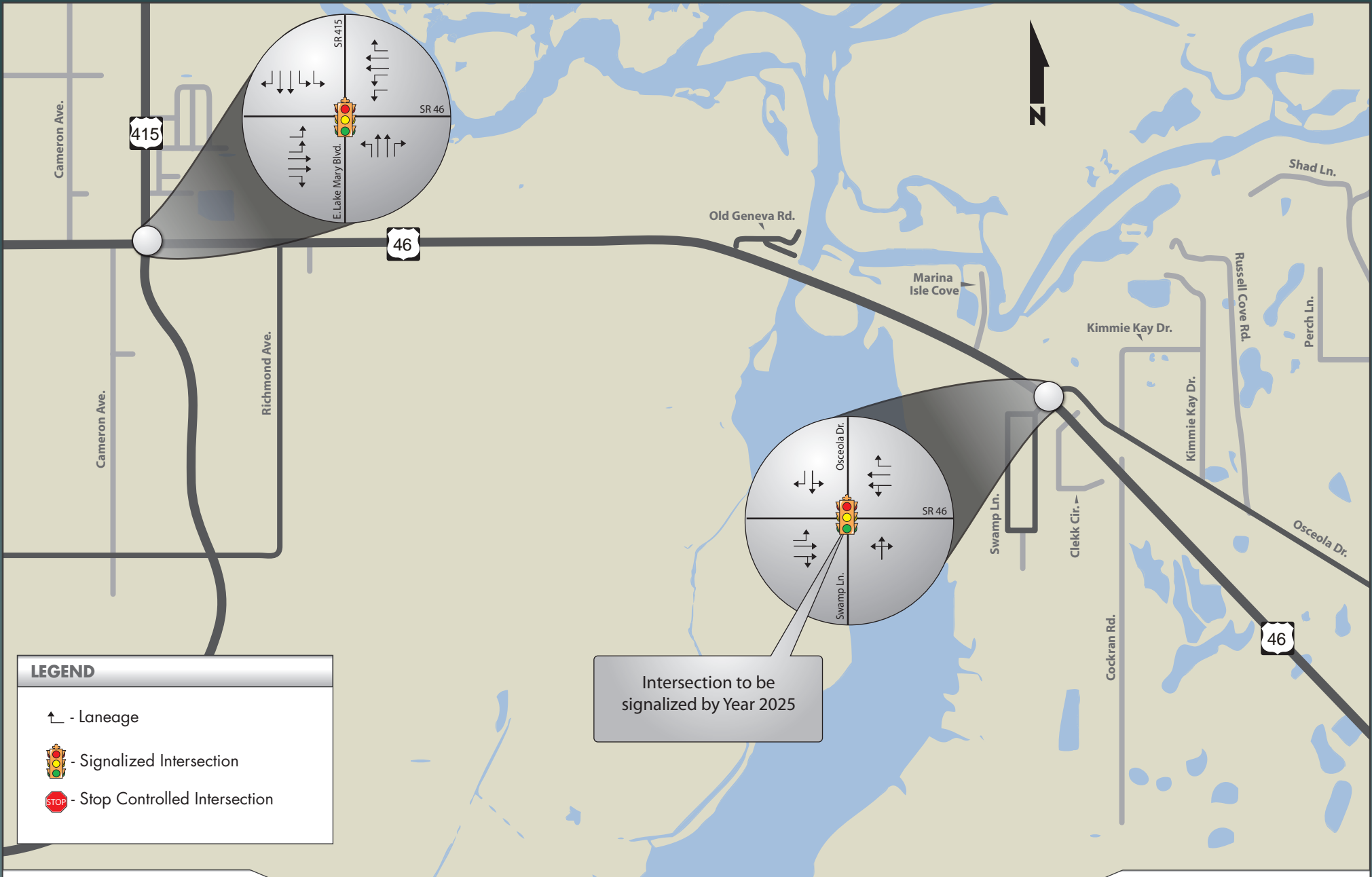
### 6.2.1 Build Alternative Geometry

The proposed build geometry for SR 46 from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street as shown in **Figures 15-1** and **15-2** includes an additional through lane in the eastbound and westbound directions and turn lane improvements as required to handle the projected traffic volumes. The proposed build geometry also includes the programmed intersection improvement at SR 46 and SR 415/Lake Mary Boulevard and additional turn lane improvements beginning from the opening year 2015. The widening of SR 415 from SR 46 is programmed for construction by FY 2011/2012 and the widening of SR 46 from Mellonville Avenue to SR 415 is programmed for construction by FY 2015/2016.

### 6.2.2 Signal Warrant Analysis for the Build Alternative

The unsignalized intersections of SR 46 at Osceola Road, SR 46 at Mullet Lake Road, SR 46 at Cochran Road, SR 46 at Woodridge Drive/Avenue C, and SR 46 at Oak Street/3<sup>rd</sup> Street were evaluated for future signal requirements. The need for future signal requirements at these locations was evaluated using Signal Warrant 1A as specified in the MUTCD 2009 Edition. It is to be noted, that the traffic volume threshold criterion for Signal Warrant 1B are substantially lower than those of Signal Warrant 1A and should be supported by delay data collected in the field to show that the intersection experiences excessive delay. Therefore, Warrant 1B was not used for Signal Warrant analysis for the future design years.

The future eight highest hours traffic volumes at these intersections were derived by multiplying the forecasted AADTs by the existing hourly profile percentages obtained from the 24 hour or 72 hour tube counts collected along the intersection approaches. Based on the condition that the posted speed limit along SR 46 is anticipated to be greater than 40 mph, the corresponding 70 percent volume criteria for signal warrant 1A was considered for all the unsignalized intersections.



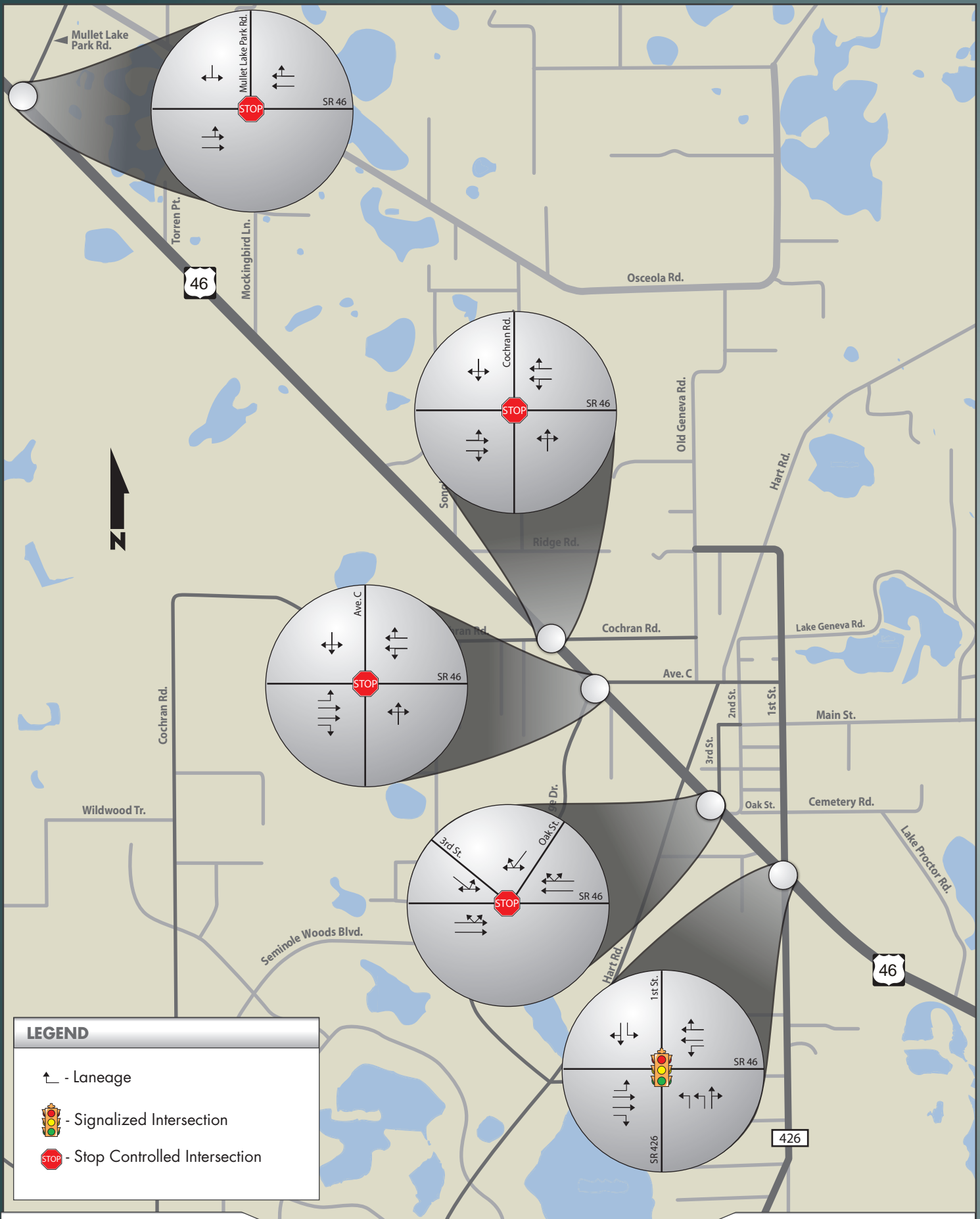
**LEGEND**

- ↑ - Laneage
- Signalized Intersection
- Stop Controlled Intersection

Intersection to be signaled by Year 2025

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01



**LEGEND**

- Laneage
- Signalized Intersection
- Stop Controlled Intersection

DATE CREATED: 9/13/2011

PROJECT NUMBER: 11-014.01



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 for SR 46 PD&E**  
 Financial Project ID: 240216-4-28-01

**FIGURE 15-2**  
 Build Geometry  
 Subsection 2

- **SR 46 and Osceola Road:** The eastbound left turning movement was considered as the minor street approach and the westbound approach was considered as the major street approach for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for six of the eight hours required for the minor street approach volumes during the opening year 2015. However, the intersection traffic volumes met the 70% volume criteria for all the required eight hours for the major and minor street approach volumes during the mid design year 2025 and the design year 2035.
- **SR 46 and Mullet Lake Park Road:** The traffic volume in the southbound approach was considered for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for any of the required eight hours for the side street volumes during the design year 2035.
- **SR 46 and Cochran Road:** Since the traffic volume in the eastbound approach is anticipated to be significantly larger than the traffic volume in the westbound approach, the traffic volume in the eastbound approach was considered for the purpose of signal warrant 1A. Based on the signal warrant analysis, this intersection did not meet the 70% volume criteria for any of the required eight hours for the side street volumes during the design year 2035.
- **SR 46 and Woodridge Drive/Avenue C:** Since the traffic volume in the westbound approach (along Avenue C) is anticipated to be significantly larger than the traffic volume in the eastbound approach (along Woodridge Drive), the traffic volume along Avenue C (the westbound approach) was considered for the purpose of signal warrant 1A. Based on the signal warrant analysis, this intersection only meet the 70% volume criteria for two hours of the required eight hours for the side street volumes during the design year 2035.
- **SR 46 and 3<sup>rd</sup> Street/Oak Street:** The 24 hour percentages for intersection at the southbound approach were not available when this report was prepared. Therefore, an assumption was made that the 24 hour percentages at this intersection would be consistent with those of the minor approach at the intersection of SR 46 and Woodridge Drive/Avenue C. The traffic volume in the southbound approach was considered for the purpose of signal warrant 1A at this intersection. Based on the signal warrant analysis, this intersection did not meet the 70%

volume criteria for any of the required eight hours for the side street volumes during the design year 2035.

The anticipated traffic volumes during the design year 2035 did not meet the 70% criteria for signal warrant 1A at any of the unsignalized intersections along the SR 46 corridor with the exception of the intersection of SR 46 and Osceola Road. The intersection of SR 46 and Osceola Road met the 70% criteria for signal warrant 1A starting in the mid design year 2025, therefore it was analyzed as a traffic signal controlled intersection for the years 2025 and 2035 Build Alternative conditions. The other four unsignalized intersections were analyzed under a stop control during the opening, mid and design years for the Build Alternative. The signal warrant sheets are provided in **Appendix M** of this report.

### **6.2.3 Intersection Operational Analysis – Build Alternative**

Intersection operational analyses were performed for the opening, mid-design and design years for the Build Alternative for the a.m. and p.m. design hours. The results of the intersection analysis are summarized in Table 18. The Synchro Intersection Analysis Outputs for the Build Alternative can be found in **Appendix O**.

**Table 18: Future Intersection LOS Summary – Build Alternative**

Study Intersection	Traffic Control	Adopted LOS	YR 2015		YR 2025		YR 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
<b>AM Peak Hour</b>								
<b>SR 46 @</b>								
SR 415/Lake Mary Blvd	Signal	D	33.3	C	48.3	D	<b>70.4</b>	<b>E</b>
Osceola Rd	Stop	C	9.4/15.0	A/B	7.6	A	10.0	B
Mullet Lake Park Rd	Stop	C	0.3/15.7	A/C	<b>0.3/31.7</b>	<b>A/D</b>	<b>0.5/94.4</b>	<b>A/F</b>
Cochran Rd	Stop	C	0.2/16.0	A/C	<b>0.3/26.5</b>	<b>A/D</b>	<b>0.5/47.4</b>	<b>A/E</b>
Woodridge Dr/Ave C	Stop	C	9.1/16.7	A/C	<b>11.5/29.2</b>	<b>B/D</b>	<b>15.7/87.2</b>	<b>C/F</b>
3 <sup>rd</sup> St/Oak St	Stop	C	0.7/13.8	A/B	0.3/20.0	A/C	<b>2.5/32.0</b>	<b>A/D</b>
CR 426/1 <sup>st</sup> St	Signal	C	18.3	B	19.0	B	24.7	C
<b>PM Peak Hour</b>								
<b>SR 46 @</b>								
SR 415/Lake Mary Blvd	Signal	D	33.6	C	46.2	D	<b>68.1</b>	<b>E</b>
Osceola Rd	Stop	C	9.2/11.1	A/B	6.7	A	8.6	A
Mullet Lake Park Rd	Stop	C	0.3/14.8	A/B	<b>0.3/25.2</b>	<b>A/D</b>	<b>0.5/50.0</b>	<b>A/E</b>
Cochran Rd	Stop	C	1.3/12.1	A/B	1.6/17.3	A/C	<b>3.0/27.6</b>	<b>A/D</b>
Woodridge Dr/Ave C	Stop	C	8.9/12.9	A/B	10.8/18.9	B/C	<b>14.2/35.7</b>	<b>B/E</b>
3 <sup>rd</sup> St/Oak St	Stop	C	0.8/12.6	A/B	1.1/17.8	A/C	<b>2.2/29.2</b>	<b>A/D</b>
CR 426/1 <sup>st</sup> St	Signal	C	16.0	B	18.1	B	25.5	C

**Notes:**

1. HCM based outputs are presented in this table for both the signalized and unsignalized intersections.
2. Overall intersection delay and LOS results are reported for signalized intersections.
3. In case of unsignalized intersections, worst case results (delay and LOS) are reported for movements in both the major and minor approaches.
4. Delay is presented in seconds/vehicle.
5. The intersection of SR 46 and Osceola Road was analyzed as a traffic signal controlled intersection starting in the mid design year 2025.

➤ **Opening Year 2015 - AM & PM Design Hours**

As shown in Table 18, under the Build Alternative, all the intersections are projected to operate at acceptable level of service conditions during the opening year 2015 a.m. and p.m. peak hours.

➤ **Mid-design Year 2025 - AM & PM Design Hours**

Under the Build Alternative, only the minor street approaches at two unsignalized intersections are projected to operate below the adopted LOS standard during the 2025 a.m. and p.m. design hours.

- The minor street approach at SR 46 and Mullet Lake Park Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Cochran Road (a.m. design hour).
- The minor street approach at SR 46 and Woodridge Drive/Avenue C (a.m. design hour).

➤ **Design Year 2035 - AM & PM Design Hours**

Under the Build Alternative, the following intersections are projected to operate below the adopted LOS standard during the 2035 a.m. and p.m. design hours.

- SR 46 and SR 415/Lake Mary Boulevard (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Mullet Lake Park Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Cochran Road (a.m. and p.m. design hours).
- The minor street approach at SR 46 and Woodridge Drive/Avenue C (a.m. and p.m. design hours).
- The minor street approach at SR 46 and 3<sup>rd</sup> Street/Oak Street (a.m. and p.m. design hours).

In conclusion, the intersection of SR 46 and SR 415/Lake Mary Boulevard is anticipated to operate at an adverse level of service of “E” during the year 2035 (a.m. and p.m. peak hour) when compared against the FDOT adopted level of service standard of “D”. However, Seminole County has an adopted level of service of “E” for this section of SR 46; therefore this intersection is anticipated to operate under acceptable conditions when compared against the County standards.

Seminole County adopted LOS standard for the side streets at the study unsignalized intersections is “LOS E”. Therefore, only the intersections of SR 46 and Mullet Lake Park Rd (side street delay of 87.2 sec/veh) and SR 46 and Woodridge Dr (side street delay of 94.4 sec/veh) display an adverse LOS of “F” (when compared against Seminole County LOS standards) during the Design Year 2035 a.m. peak hour conditions. It is to be noted that it is typical for unsignalized intersections to display an adverse LOS for the minor side streets and the delay displayed at these two intersections is not excessive. Therefore, additional minor improvements were not considered at the minor streets for the future Build condition analyses. Furthermore, the addition of the Build Alternative improvements at the SR 46 corridor intersections results in improved level of service conditions and reduced delay compared to the level of service conditions from the No Build Alternative.



#### 6.2.4 Future Arterial LOS Analysis – Build Alternative

Based on the FDOT classification of SR 46 between SR 415/Lake Mary Boulevard and Richmond Avenue as an urban principal arterial (class 1) and the Build Alternative geometry (4 lanes), the following generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 7 of the 2009 FDOT Quality/Level Of Service Handbook for the purpose of assessing the arterial LOS of this segment of SR 46:

- LOS B – 1,560 VPH
- LOS C – 1,890 VPH
- LOS D – 1,960 VPH
- LOS E – 1,960 VPH

Furthermore, based on the FDOT classification of SR 46 between Richmond Avenue and CR 426 as rural principal arterial and the Build Alternative geometry (4 lanes), the following generalized peak hour directional service volumes for the LOS letters “B” through “E” were obtained from Table 7 of the 2009 FDOT Quality/Level Of Service Handbook for the purpose of assessing the arterial LOS of this segment of SR 46:

- LOS B – 1,410 VPH
- LOS C – 2,210 VPH
- LOS D – 2,800 VPH
- LOS E – 3,180 VPH

Tables 7 and 9 of the 2009 FDOT Quality/Level of Service Handbook are included in **Appendix F**.

As shown in **Table 19**, all the segments within the SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street are anticipated to operate at acceptable level of service conditions during the opening year 2015, mid design year 2025, and design year 2035 direction design hour conditions.

**Table 19**  
**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**Future Arterial LOS Analysis Summary – Build Alternative**

Roadway Segment on SR 46	Area Type	LOS Std.	Maximum Service Volume (MSV)	AADT	Standard "K" Factor	"D <sub>30</sub> " Factor	Directional Design Hour Volumes (DDHV)	Arterial LOS	Adverse?
<b>Opening Year - 2015</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	1,960	15,000	9.0%	53.0%	700	B	No
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	1,960	15,000	9.0%	53.0%	700	B	No
Richmond Avenue and Osceola Road	Rural	C	2,210	15,000	9.0%	53.0%	700	B	No
B/W Osceola Road and Mullet Lake Park Road	Rural	C	2,210	12,000	9.0%	53.0%	550	B	No
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	2,210	12,500	9.0%	53.0%	600	B	No
West of CR 426	Rural	C	2,210	12,500	9.0%	53.0%	600	B	No
East of CR 426	Rural	C	2,210	8,200	9.0%	53.0%	400	B	No
<b>Mid Design Year - 2025</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	1,960	25,500	9.0%	53.0%	1,200	B	No
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	1,960	25,500	9.0%	53.0%	1,200	B	No
Richmond Avenue and Osceola Road	Rural	C	2,210	25,500	9.0%	53.0%	1,200	B	No
B/W Osceola Road and Mullet Lake Park Road	Rural	C	2,210	21,000	9.0%	53.0%	1,000	B	No
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	2,210	22,000	9.0%	53.0%	1,000	B	No
West of CR 426	Rural	C	2,210	21,000	9.0%	53.0%	1,000	B	No
East of CR 426	Rural	C	2,210	14,000	9.0%	53.0%	650	B	No
<b>Design Year - 2035</b>									
West of SR 415/Lake Mary Boulevard	Urban	D	1,960	36,500	9.0%	53.0%	1,700	C	No
B/W SR 415/Lake Mary Boulevard and Richmond Avenue	Urban	D	1,960	36,500	9.0%	53.0%	1,700	C	No
Richmond Avenue and Osceola Road	Rural	C	2,210	36,500	9.0%	53.0%	1,700	C	No
B/W Osceola Road and Mullet Lake Park Road	Rural	C	2,210	30,000	9.0%	53.0%	1,400	B	No
B/W Mullet Lake Park Road and Woodridge Drive	Rural	C	2,210	31,000	9.0%	53.0%	1,500	C	No
West of CR 426	Rural	C	2,210	30,000	9.0%	53.0%	1,400	B	No
East of CR 426	Rural	C	2,210	20,000	9.0%	53.0%	950	B	No

## 7. Summary and Recommendations

This design traffic technical memorandum was prepared as part of the PD&E study for SR 46 from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street in Seminole County.

### 7.1 Existing Conditions

Traffic data was collected for the year 2011 and existing conditions were evaluated including arterial and intersection levels of service (a.m. and p.m. peak hours) conditions. All the signalized and unsignalized intersections along the project corridor were found to operate at or above the adopted LOS standard during the year 2011 a.m. and p.m. peak hour conditions. The SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street currently operates at acceptable level of service conditions during the a.m. peak and p.m. peak hours with the exception of the segment of SR 46 between Richmond Avenue and Mullet Park Road, which operates at a deficient LOS of “D” during the existing a.m. peak hour conditions, and the segment of SR 46 between Richmond Avenue and Osceola Road, which operates at a deficient LOS of “D” during the existing p.m. peak hour conditions.

### 7.2 No Build Alternative

The No Build geometry illustrated in **Figures 14-1** and **14-2** is the same as the existing roadway (2 lanes) and intersection geometry with the exception that it includes the programmed intersection improvements at SR 46 and SR 415/Lake Mary Boulevard beginning from the opening year 2015.

In addition, the intersection of SR 46 and Osceola Road met the 70% criteria for signal warrant 1A starting in the mid design year 2025. Therefore, it was analyzed as a traffic signal controlled intersection for the years 2025 and 2035 No Build Alternative conditions. All of the intersections on the SR 46 study corridor are projected to operate below the adopted LOS standard by the year 2035. Furthermore, it is recommended that all the unsignalized intersections along the study corridor be revisited periodically in the future to determine if any of the signal warrants are satisfied. The actual determination of when these intersections will be signalized shall be based on actual traffic counts and other pertinent data required for signal warrant analysis.

The SR 46 corridor from the SR 46 corridor from Richmond Avenue and CR 426, is projected to operate at a deficient LOS of “D” under the No Build alternative during the opening year 2015 directional design hour conditions. Furthermore, the entire SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street is anticipated to operate under unacceptable level of service during the mid design year 2025 and design year 2035 directional design hour conditions under the No Build alternative.

### 7.3 Build Alternative

The proposed build geometry for SR 46 from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street as shown in **Figures 15-1** and **15-2** includes an additional through lane in the eastbound and westbound directions and turn lane improvements as required to handle the projected traffic volumes. The proposed build geometry also includes the programmed intersection improvement at SR 46 and SR 415/Lake Mary Boulevard and additional turn lane improvements beginning from the opening year 2015.

The intersection of SR 46 and Osceola Road met the 70% criteria for signal warrant 1A starting in the mid design year 2025. Therefore, it was analyzed as a traffic signal controlled intersection for the years 2025 and 2035 Build Alternative conditions.

The intersection of SR 46 and SR 415/Lake Mary Boulevard is anticipated to operate at an adverse level of service of “E” during the years 2025 (p.m. peak hour) and 2035 (a.m. and p.m. peak hour) when compared against the FDOT adopted level of service standard of “D”. However, Seminole County has an adopted level of service of “E” for this section of SR 46; therefore this intersection is anticipated to operate under acceptable conditions when compared against the County standards.

Furthermore, the intersections of SR 46 at Mullet Lake Park Road, SR 46 at Cochran Road, SR 46 at Woodridge Drive/Avenue C, and SR 46 at 3<sup>rd</sup> Street/Oak Street display adverse levels of service during the mid design year 2025 and design year 2035 only in the side street movements, which is typical of unsignalized intersections. It should also be noted that the addition of the Build Alternative improvements at the SR 46 corridor intersections resulted in improved level of service conditions compared to the level of service conditions from the No Build Alternative.

All the segments within the SR 46 corridor from SR 415/Lake Mary Boulevard to CR 426/1<sup>st</sup> Street are anticipated to operate at acceptable level of service conditions during the opening year 2015, mid design year 2025, and design year 2035 direction design hour conditions.

In addition to the above mentioned improvements, this study used the red time formula (source: ITE Traffic Engineering Manual, 5<sup>th</sup> Edition) to develop the queue length requirements at signalized intersections for the Build Alternative. The recommended queue lengths for the turn lanes are shown in **Table 20**.

**Table 20: Recommended Queue Lengths – Year 2035 Build Alternative**

Intersection	Turn Lane Queue Length (feet) <sup>(1)</sup>							
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
SR 46 and SR 415/Lake Mary Boulevard	350	125	200	300	100	675	175	425
SR 46 and Osceola Road	100	-	-	100	-	-	100	100
SR 46 and CR 426/1 <sup>st</sup> Street	100	325	100	-	200	-	100	-

**Note:**

1. Recommended queue lengths are based on red time formula and are the higher values between the a.m. and p.m. design hour conditions.
2. Based on the 95<sup>th</sup> percentile queue length obtained from the Synchro intersection analysis, the recommended queue length for the eastbound left turn lane at the intersection of SR 46 and Woodridge Dr/Ave C is 25 feet.

The tables provided in **Appendix P** of this report show the recommended queue lengths for turn lanes based on the red time formula for the design year 2035 a.m. and p.m. design hour conditions for the Build Alternative.

It should be noted that the specific lengths do not include the taper or deceleration distance (refer to [FDOT index 301](#) to determine the appropriate specific taper and deceleration length). These storage lengths are recommended at locations where these lengths can be achieved. Actual design and implementation of these storage length requirements will be a function of design and the physical practicality of their construction.

In addition, Equivalent Single Axle Load (ESAL) calculations were performed for four different sections along the SR 46 study corridor for the Build Alternative. The four sections include:

- SR 46 between SR 415/Lake Mary Boulevard and Richmond Avenue
- SR 46 between Richmond Avenue and Osceola Road
- SR 46 between Osceola Road and CR 426/1<sup>st</sup> Street
- SR 46 east of CR 426/1<sup>st</sup> Street

The ESAL calculations are provided in **Appendix Q** of this report.

## 8. Appendices

**Appendix A** – Response to Agencies Comments

**Appendix B** – Straight Line Diagrams & RCI Data for SR 46 Corridor

**Appendix C** – Raw Traffic Counts

**Appendix D** – FDOT Counts and Seasonal & Axle Factors for 2010

**Appendix E** – Signal Timings & SYNCHRO Intersection Analysis Outputs for Year 2011

**Appendix F** – 2009 FDOT Quality/Level of Service Handbook Tables

**Appendix G** – Crash Data Analysis Summary Tables

**Appendix H** – Programmed / Planned Improvement Documentation

**Appendix I** – Trend Analysis Summary Sheets

**Appendix J** – BEBR Population Projection Data

**Appendix K** – OUATS and CFRPM Model Plots

**Appendix L** – TURNS5 Sheets

**Appendix M** – Signal Warrant Analysis Worksheets

**Appendix N** - SYNCHRO Intersection Analysis Outputs for No Build Alternative

**Appendix O** - SYNCHRO Intersection Analysis Outputs for Build Alternative

**Appendix P** – Recommended Queue Length of Turn Lanes for Signalized Intersections – Build Alternative

**Appendix Q** – ESAL Calculations

**Appendix R** - Figure 5-1 Project Traffic Assumption Summary

# Appendix A

## Response to Agencies Comments





GMB ENGINEERS & PLANNERS, INC.

December 13, 2011

Terry Rains,  
Project Manager – Design Traffic  
FDOT District 5  
719 S. Woodland Blvd.  
Deland, FL 32720

RE: **SR 46 Design Traffic Technical Memorandum (DTTM) - Draft Existing Conditions (September 2011) and Development of Future Traffic Forecasts (October 2011) – Responses to FDOT Review Comments**  
***GMB Project No.: 11-014.01***

Dear Terry:

The following are the responses to comments for the SR 46 DTTM - Draft Existing Conditions (September 2011) and Development of Future Traffic Forecasts (October 2011):

#### **EXISTING CONDITIONS MEMORANDUM**

**Comment # 1:**

Please verify the Figure titles in the report and the Table of Contents. Figure 1 is listed as Project Location Map and TOC has it as Study Area.

***Response to Comment # 1:***

*The Table of Contents has been revised to list Figure 1 as Project Location Map.*

**Comment# 2:**

Section 1.3 –  $T_{\text{peak}}$  and  $T_f$  imply Peak Hour Truck factors. Please change the reference for daily truck percentage.

***Response to Comment # 2:***

*The text in Section 1.3 has been revised as requested.*

**Comment # 3:**

In Table 2, please include Heavy vehicle factors for daily and peak hour conditions from the classification counts where applicable.

***Response to Comment # 3:***

*Table 2 has been revised to include the field measured heavy vehicle factors for daily and peak hour conditions for the three locations where classification counts were collected.*

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**Comment # 4:**

For classification and/or volume counts collected for 72 hour period, please include counts for all 3 days and not just the 3 day average in the Appendices.

**Response to Comment # 4:**

*Appendix B has been updated to include all the 3 days of counts and their averages for each of the 72 hour period counts (including the 72 hour classification counts).*

**Comment # 5:**

Figure 4-1 depicts the Existing Year AADTs, however the title refers to AADT and Peak Hour Peak Direction Volumes. Please update the graphic accordingly.

**Response to Comment # 5:**

*The title for Figure 4-1 has been revised to Existing Year AADTs.*

**Comment # 6:**

In Figure 4-2, the AADT for Cochran Road – east of SR 46 is incorrect. Table 2 lists the AADT as 60. Please update the graphic.

**Response to Comment # 6:**

*Figure 4-2 has been revised to display the correct AADT for Cochran Road east of SR 46.*

**Comment # 7:**

In Figure 5-1, Year 2011 AM Peak and PM Peak Hour Turning Movement Volumes – Subsection 1, please verify the volumes. The southbound right turn volume for SR 46 at SR 415 during PM peak is incorrect.

**Response to Comment # 7:**

*Figure 5-1 has been revised to display the correct southbound right turn volume for SR 46 at SR 415 during PM peak condition.*

**Comment # 8:**

Figure 5-2, the two cross streets Oak Street and 3rd Street are closely spaced near SR 46. It is recommended that the Turning Movement Volumes for these streets are derived for the same time period. For example, during AM peak, the peak for 3rd Street intersection is 7:15 am to 8:15 am, whereas the intersection with Oak Street is from 8 am to 9 am.

**Response to Comment # 8:**

*Figure 5-2 has been revised to show the traffic volumes from Oak Street from 7:15 to 8:15 a.m. and from 5:00 to 6:00 p.m. to be consistent with the peak hours of the overall intersection.*



**Comment # 9:**

Section 3.4.1, In general, Synchro software is recommended for closely spaced signalized urban corridors, the study segment of SR 46 is mostly rural with only two intersections being signalized. The intersection of SR 46 at SR 415 (at the beginning of the project limits) and SR 46 at CR 426 (at the end of the project limits) are the only signalized intersections, intersections in between are all two way stop controlled. The FDOT's approved HCS software would have been appropriate for analysis.

**Response to Comment # 9:**

*It is noted that the intersections of SR 46 at SR 415 (at the beginning of the project limits) and SR 46 at CR 426 (at the end of the project limits) are the only signalized intersections within the project area. The use of the Synchro software is still appropriate for the analysis since only the results of the Synchro HCM Unsignalized/Signalized Intersection Capacity Analyzes are being reported in this analysis.*

**Comment # 10:**

Table 3, Year 2011 Existing Intersection LOS Analysis Summary – please verify the delay values listed. Some of the values correspond to a movement rather than the approach. Also, please specify the approach corresponding to the delay/LOS listed in the table.

**Response to Comment # 10:**

*Please note that Table 3 displays overall LOS and delay for signalized intersections. For the purpose of unsignalized intersections, Table 3 reports the LOS and delay for the worst movement at both the major and the major intersection approaches. Furthermore, please see the revised Table 3 footnote.*

**Comment # 11:**

Section 3.4.2, Based on FDOT District 5's LOS (2010\_D5\_LOS\_ALL) database, the section of SR 46 from M.P. 4.078 (East of Richmond Ave.) to the end of project limits is classified as a rural two lane uninterrupted highway. Also, per the posted speed limit of 55 mph, it is suggested that SR 46 be analyzed using Two Lane Highway module of HCS software. This takes into account the effect of passing lanes and the density of access points along the corridor on the supply side and also heavy vehicles on the demand side for a more accurate Level of Service for the corridor. The Generalized Level of Service tables are based on certain default characteristics.

**Response to Comment # 11:**

*While it is noted that the FDOT District 5's LOS (2010\_D5\_LOS\_ALL) database classifies the section of SR 46 from East of Richmond Ave. to CR 426 as a rural two lane uninterrupted highway, the use of the Two Lane Highway module of HCS*



*software to analyze this segment is not considered to be appropriate since the east portion of the subject segment is located in what is considered to be the “core and heart” of the Geneva community. To further support this argument, it should be noted that there are no passing zones available along SR 46 from approximately 1.75 miles west of CR 426 to CR 426.*

*However, in order to provide a comparison of the results between the analysis based on generalized service volumes and analysis based on the Two Lane Highway HCS software, the Two Lane Highway HCS software was used to analyze the section of SR 46 from East of Richmond Ave. to CR 426. The HCS software shows that the segment currently operates at LOS “D” during the YR 2011 conditions which is consistent with the results documented in the report (based on generalized service volumes). The Two Lane Highway HCS summary sheets are enclosed.*

**Comment # 12:**

Section 3.5, Please update the crash rate equation to show that all of  $(365*Y*AADT*L)$  is part of the denominator. Also check calculations for crash rate for Section 1. Using the given data, the average crash rate comes to 2.72 C/MVM.

**Response to Comment # 12:**

*The formula has been revised as requested and the crash rate for SR 46 from SR 415 to Osceola Road was revised to 2.72 crashes per million vehicle miles (C/MVM) traveled.*

**Comment # 13:**

Section 3.5.1, overall description is very detailed and provides insight on the potential causes for crashes. In page 30, for the intersection of SR 46 @ CR 426, 2<sup>nd</sup> bullet, total crashes is 39, not 116. Please revise.

**Response to Comment # 13:**

*The total number of crashes at the intersection of SR 46 and CR 426 has been revised from 116 to 39 (in page 30).*

**Comment # 14:**

The recommended  $K$ ,  $D_{30}$  and  $T_{24}$  factors are reasonable. However, for the design hour truck factors for SR 46, it is suggested that the  $T_f$  factors obtained from the classification counts be used instead of the standard assumption (50% of  $T_{24}$ ). From the two classification counts along SR 46 within project limits,  $T_{peak}$  is found to be between 8.3% and 8.6%. It is suggested that a  $T_f$  factor for SR 46 be recommended within the above range.

**Response to Comment # 14:**

*The recommended  $T_f$  for SR 46 was revised to 8.5% based on the two classification counts along SR 46 within project limits*



## DEVELOPMENT OF FUTURE TRAFFIC FORECASTS MEMORANDUM

### **Comment # 15:**

The memorandum mentions a review process was conducted to determine the accuracy of the model traffic forecasts. Please provide details of the review process. Explain if a base year model validation was performed including any review of zdata and network characteristics.

### **Response to Comment # 15:**

*A base year model validation was not performed as part of the process to determine the accuracy of the model traffic forecasts. Instead a review of the growth rates generated by the OUATS and CFRPM travel demands model was conducted to determine the reasonableness of the traffic projections. In addition, as mentioned in the Development Of Future Traffic Forecasts Memorandum, the selection of the CFRPM model as the preferred tool to develop the No Build and Build traffic forecasts was based on the fact that the CFRPM model is a district-wide model and includes Volusia County in its entirety.*

### **Comment # 16:**

The recommended growth rates of 8.1% for No Build and a 10.3% for Build scenario for SR 46 corridor are significantly high for this rural area of Seminole County. Having known this area for the last 20 years, where growth has been minimal, with no known potential developments within the vicinity of the project it seems hard to justify the high growth. Also, the most recent BEBR projections show a lower growth rate for Volusia County than Seminole County and no potential DRIs exist along the corridor towards I-95 in Volusia County that could trigger significant growth.

Parallel facilities such as SR 50 to the south in Orange county and SR 44 to the north in Volusia county exist that could serve through traffic traveling from west side of the district to the east.

Even though CFRPM model is a regional model, sub area analysis is necessary to justify any future traffic projections. We suggest a sub area model validation be performed before using future projections from the model directly or consider developing a growth rate from the model base year and future year traffic data. Using the CFRPM 5.0 adopted model, a growth rate of 3.9% was observed for the section of SR 46 east of SR 415 using the base year 2005 and horizon 2035.

Consider recommending a growth rate based on a combination of model growth and population projections for the area.



**Response to Comment # 16:**

It is noted that *no potential DRIs exist along the SR 46 corridor. However, based on conversations with Seminole County staff it was determined that the study corridor is anticipated to incur substantial growth from cumulative effects of Sub DRI level developments that could be developed individually. Furthermore, as indicated in the Seminole County Future Land Use Element Objective 19, the Orlando Sanford International Airport has been identified as an Economic Development Target Area. Economic Development Target Areas are identified as areas to implement an aggressive strategy to attract specific industries which deliver economic growth. With this being said it is anticipated that large industrial developments as well as new runways are anticipated to be built by the Build Scenario Design year of 2035 in the vicinity of the Orlando Sanford International Airport.*

*In addition, it should be noted that the SR 50 and the SR 44 corridors are not comparable parallel routes to the SR 46 corridor as they do not serve the same traffic traveling from west side of the district to the east. The SR 50 corridor is located approximately 12-15 miles south of the SR 46 corridor with the only access connections from to SR 50 to SR 46 being the Greenway Expressway (on the west portion of the corridors) and I-95 (on the east portion of the corridors). Furthermore, the SR 44 corridor is located approximately 15 to 19 miles north of the SR 46 corridor with the only access connections from SR 44 to SR 46 being CR 415 (on the west portion of the corridors) and I-95 (on the east portion of the corridors).*

*Based on the above mentioned facts, the fact that SR 46 is an emergency evacuation route and based on the input obtained from the Seminole County staff, the recommended growth rates of 8.1% for No Build and a 10.3% for Build scenario for the SR 46 corridor are reasonable for the purpose of developing the future year traffic forecasts.*

Cc: Jane Everett, P.E., URS Corporation  
Dr. Ayman Mohamed, PHD, P.E., URS Corporation  
Mary McGehee, FDOT District 5  
Veena Madineni, P.E., Ghyabi & Associates  
Sean L. Castello, P.E., Ghyabi & Associates





GMB ENGINEERS & PLANNERS, INC.

## Two Lane Highway HCS Summary Sheets

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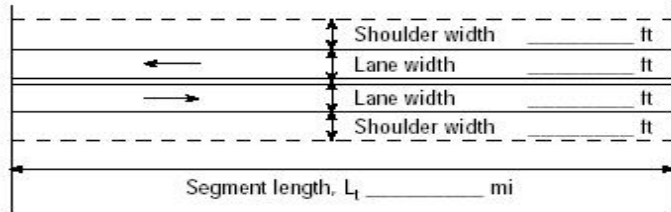


## TWO-WAY TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	JT	Highway	SR 46
Agency or Company		From/To	Richmond to CR 426
Date Performed	12/6/2011	Jurisdiction	Seminole County
Analysis Time Period	Peak Hour	Analysis Year	2011

Project Description: PD&E Design Traffic

### Input Data

 <p style="text-align: center;">Segment length, <math>L_1</math> _____ mi</p>	<table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Class I highway</td> <td><input type="checkbox"/> Class II highway</td> </tr> <tr> <td>Terrain <input checked="" type="checkbox"/> Level</td> <td><input type="checkbox"/> Rolling</td> </tr> <tr> <td>Two-way hourly volume</td> <td style="text-align: right;">865 veh/h</td> </tr> <tr> <td>Directional split</td> <td style="text-align: right;">53 / 47</td> </tr> <tr> <td>Peak-hour factor, PHF</td> <td style="text-align: right;">0.94</td> </tr> <tr> <td>No-passing zone</td> <td style="text-align: right;">51</td> </tr> <tr> <td>% Trucks and Buses, <math>P_T</math></td> <td style="text-align: right;">8%</td> </tr> <tr> <td>% Recreational vehicles, <math>P_R</math></td> <td style="text-align: right;">0%</td> </tr> <tr> <td>Access points/ mi</td> <td style="text-align: right;">4</td> </tr> </table>	<input checked="" type="checkbox"/> Class I highway	<input type="checkbox"/> Class II highway	Terrain <input checked="" type="checkbox"/> Level	<input type="checkbox"/> Rolling	Two-way hourly volume	865 veh/h	Directional split	53 / 47	Peak-hour factor, PHF	0.94	No-passing zone	51	% Trucks and Buses, $P_T$	8%	% Recreational vehicles, $P_R$	0%	Access points/ mi	4
<input checked="" type="checkbox"/> Class I highway	<input type="checkbox"/> Class II highway																		
Terrain <input checked="" type="checkbox"/> Level	<input type="checkbox"/> Rolling																		
Two-way hourly volume	865 veh/h																		
Directional split	53 / 47																		
Peak-hour factor, PHF	0.94																		
No-passing zone	51																		
% Trucks and Buses, $P_T$	8%																		
% Recreational vehicles, $P_R$	0%																		
Access points/ mi	4																		

### Average Travel Speed

Grade adjustment factor, $f_G$ (Exhibit 20-7)	1.00
Passenger-car equivalents for trucks, $E_T$ (Exhibit 20-9)	1.2
Passenger-car equivalents for RVs, $E_R$ (Exhibit 20-9)	1.0
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	0.984
Two-way flow rate <sup>1</sup> , $v_p$ (pc/h)= $V/(PHF * f_G * f_{HV})$	935
$v_p$ * highest directional split proportion <sup>2</sup> (pc/h)	496
Free-Flow Speed from Field Measurement	Estimated Free-Flow Speed
Field Measured speed, $S_{FM}$ _____ mi/h	Base free-flow speed, $BFFS_{FM}$ _____ 60.0 mi/h
Observed volume, $V_f$ _____ veh/h	Adj. for lane width and shoulder width <sup>3</sup> , $f_{LS}$ (Exhibit 20-5) _____ 0.0 mi/h
Free-flow speed, $FFS = S_{FM} + 0.00776(V_f / f_{HV})$ _____ mi/h	Adj. for access points, $f_A$ (Exhibit 20-6) _____ 1.0 mi/h
	Free-flow speed, $FFS (FSS=BFFS-f_{LS}-f_A)$ _____ 59.0 mi/h
Adj. for no-passing zones, $f_{np}$ ( mi/h) (Exhibit 20-11)	1.9
Average travel speed, $ATS$ ( mi/h) $ATS=FFS-0.00776v_p-f_{np}$	49.8

### Percent Time-Spent-Following

Grade Adjustment factor, $f_G$ (Exhibit 20-8)	1.00
Passenger-car equivalents for trucks, $E_T$ (Exhibit 20-10)	1.1
Passenger-car equivalents for RVs, $E_R$ (Exhibit 20-10)	1.0
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	0.992
Two-way flow rate <sup>1</sup> , $v_p$ (pc/h)= $V/(PHF * f_G * f_{HV})$	928
$v_p$ * highest directional split proportion <sup>2</sup> (pc/h)	492
Base percent time-spent-following, $BPTSF(\%)=100(1-e^{-0.000879v_p})$	55.8
Adj. for directional distribution and no-passing zone, $f_{dnp}(\%)(Exh. 20-12)$	11.4
Percent time-spent-following, $PTSF(\%)=BPTSF+f_{dnp}$	67.2

### Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 20-3 for Class I or 20-4 for Class II)	D
Volume to capacity ratio, $v/c=V_p/3,200$	0.29
Peak 15-min veh-miles of travel, $VMT_{15} (veh-m)=0.25L_1(V/PHF)$	1610



Peak-hour vehicle-miles of travel, $VMT_{60}(\text{veh} \cdot \text{mi}) = V \cdot L_t$	6055
Peak 15-min total travel time, $TT_{15}(\text{veh} \cdot \text{h}) = VMT_{15}/ATS$	32.3
<b>Notes</b>	
1. If $V_p \geq 3,200$ pc/h, terminate analysis-the LOS is F.	
2. If highest directional split $V_p \geq 1,700$ pc/h, terminated anlysis-the LOS is F.	

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GMB ENGINEERS & PLANNERS, INC.

May 7, 2012

Shad Smith, P.E.  
Principal Engineer, Engineering Division  
Seminole County Public Works Department  
520 W. Lake Mary Blvd, Suite 200  
Sanford, FL 32773

RE: **SR 46 Draft Design Traffic Technical Memorandum (DTTM) – Responses to Seminole County Review Comments**  
**FDOT Financial Project ID: 240216-4-28-01**  
**Seminole County RFP # PS-5738-10/JVP**  
**GMB Project No.: 11-014.01**

Dear Shad:

The following are the responses to comments prepared by Seminole County for the SR 46 Draft DTTM dated March 17, 2012:

## **Future Year Turning Movement Development**

### **Comment # 1:**

As a general comment, the roadway name labels on the TURNS5 outputs were incorrect for some intersections, including SR 46 at SR 415. Labels shown on the outputs were backwards (i.e. SR 415 was identified as SR 46 and vice versa). In addition, only one (of out five) TURNS5 output sheets was provided. Other output sheets (not included) display a comparison of estimated turning movements against existing flows, which aids in the review of the TURNS5 output for reasonableness. This doesn't impact the conclusions of the analysis but made it more difficult to review. For any updates to the design traffic volumes, please verify the roadway labels and provide the full TURNS5 output.

### **Response to Comment # 1:**

**Please see the revised Appendix L. The roadway name labels for all the TURNS5 inputs and outputs have been revised. In addition, all the TURNS5 output sheets have been provided.**

### **Comment # 2:**

Extensive manual adjustments were made to the TURNS5 outputs for each of the study intersections. No discussion or documentation was provided regarding these adjustments. Please provide additional discussion to clarify the

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rationale/methodology for the manual adjustments at each of the study intersections.

**Response to Comment # 2:**

The Design Hourly Volumes (DHV) for the intersections were developed using the TURNS5 spreadsheet, which balances Annual Average Daily Traffic (AADT) and calculates DHV's based on Standard K and D<sub>30</sub> factors used as input into the program. The estimated DHVs for the a.m. and p.m. design hours from TURNS5 spreadsheet were assessed for reasonableness. The manual adjustments to the intersections DHVs ensured that the traffic volumes in the future design years 2015, 2025, and 2035 were greater than those in the existing year 2011 conditions. In addition, the future year design turning movements were adjusted to reasonably match the Directional Design Hour Volumes (DDHV) exiting the intersection along SR 46.

**Comment # 3:**

Turning movements are generally balanced throughout the study area for all three design years, but the following identified segments exhibited relatively large gain/loss". Please provide additional discussion relating the source of these volume imbalances between intersections:

- Westbound S.R. 46 between C.R. 426 and Oak St/3rd St (typically gains ~100 vehicles)
- Eastbound S.R. 46 between S.R. 415 and Osceola Rd (loses 60-80 vehicles in No-Build 2025 and 2035)
- Eastbound S.R. 46 between Osceola Rd and Mullet Lake Park Rd (loses 60-100 vehicles in No-Build 2025 and 2035).

**Response to Comment # 3:**

The future turning movements were not balanced to be exact between the abovementioned intersections due to the presence of multiple driveways that could attract traffic during the future design years. It should be noted that there are multiple driveways between CR 426 and Oak St/3rd St, including Peace Hill Pl and the driveway accessing the gas station at the northwest quadrant of the intersection of SR 46 and CR 426.

In addition, the intersections of SR 46 and SR 415 and SR 46 and Osceola Rd are approximately 2.8 miles apart and there are multiple connections between the intersections, including Richmond Ave and Old Geneva Rd. Furthermore, the intersections of SR 46 and Osceola Rd and SR 46 and Mullet Lake Park Rd are approximately 1.4 miles apart and there are driveways existing between the intersections, including Clekk Cir and Swamp Ln. It also should be noted that there is the vast potential for future development (based on the projected socio economic data and based on discussions with Seminole County staff)



**along the SR 46 corridor and that multiple driveways might be opened by the Design Year 2035 conditions.**

**Comment # 4:**

In general, the Opening Year 2015 volumes appear to be high for some turning movements to/from the minor streets at several intersections when compared with existing year 2011 turning movement counts. Additional manual adjustment may be appropriate to further refine the opening year volumes. More specific examples are provided in Comments 5 through 8.

**Response to Comment # 4:**

**Consistent with the Response to Comment # 2, the Opening Year 2015, Mid Design Year 2025, and Design Year 2035 DHVs for the intersections were developed using the TURNS5 spreadsheet which balances Annual Average Daily Traffic (AADT) and calculates DHV's based on Standard K and  $D_{30}$  factors and turning movement percentages used as input into the program. The resulting opening year DHVs could be higher than existing TMCs due to the use of Standard K.**

**It is to be noted that the recommended intersection geometries and queue lengths are determined based on the Design Year 2035 conditions. It should also be noted that the intersection Synchro analysis indicates that the intersections are anticipated to operate at acceptable levels of service during the Opening YR 2015 based on 2015 DHVs and the recommended Build intersection geometries.**

**Comment # 5:**

At SR 46/SR 415

- Please provide further clarification on the manual adjustments made to this intersection.
- For 2015 conditions, volumes on the SB SR 415 approach were not manually adjusted; however, the volumes forecast by TURNS5 result high growth (such as the SB right-turn which goes from 110 vehicles in 2011 to 243 vehicles in 2015 under no-build conditions). Similarly, the WB through movement in the PM peak hour is forecast to increase from 142 vehicles in the PM peak hour to 305 vehicles in the 2015 no-build condition. This appears to be an unreasonably high growth over 4 years – please clarify why manual adjustments were not also made to the WB through movement.

**Response to Comment # 5:**

**Please refer to the response to comment # 4.**



**Comment # 6:**

At SR 46/Osceola Road:

- For No-Build AM Peak Conditions, a 2035 AADT of 28,800 vehicles is input for the EB Approach into TURNS5. An AADT of 31,000 vehicles is identified in Figure 6-1 for SR 46 to the west of the bridge. Similarly for build conditions, an AADT of 36,500 is identified west of the bridge, with 33,300 daily vehicles used in TURNS 5 for SR 46 west of Osceola Road. Given the lack of existing development along SR 46 between Richmond Ave and Osceola Road, please provide additional discussion on where the remaining 2200 daily vehicles are expected to be attenuated to the west of Osceola Road?
- The eastbound left-turn appears to be high for the 2015 conditions. The 2011 volume of 38 vehicles is shown to grow to 102 vehicles by 2015 for both build and no-build. Given the future year 2035 volume of 140 vehicles, consider adjusting the 2015 turn projection. A similar observation was noted for the SB right-turn movement in the PM peak hour.

**Response to Comment # 6:**

**In order for the TURNS5 spreadsheet to run correctly, the traffic volumes for any one of the intersection approaches cannot be higher than the addition of the other approaches. With this in mind and as seen in Figure 6-1, the No Build 2035 AADT traffic forecast for the EB approach was 31,000 which is more than the sum of the SB (3,300 AADT) and WB (25,500 AADT) approaches. Therefore, for the purpose of this scenario an AADT of 28,800 was used as an input for the EB approach. However, it should be noted that the EB DDHVs were adjusted to reflect the approach AADT of 31,000 in the TURNS5 output sheet ( $31,000 \times 0.90$  K factor  $\times 0.53$  D30 = 1,478 EB PM Peak DDHV). The same procedure was followed to project the future traffic turning movements at this intersection during all the future year scenarios.**

**Also, please refer to the response to Comment # 4.**

**Comment # 7:**

At SR 46/Cochran Road:

- Several intersection turning movements are identified to have zero vehicles in the 2015, 2025, and 2035 projections. However, existing turning movement counts showed several vehicles where the projections showed zero, including: WB left-turn, NB right-turn, and SB left-turn. Please verify that zero future volumes for these movements is appropriate



**Response to Comment # 7:**

The traffic DHV forecasts for the intersection of SR 46 and Cochran Rd were revised based on this comment. The WB left, NB right, and SB left turn traffic volumes were calculated by growing the existing traffic volumes by an annual growth rate of 2.0%. The corresponding analysis has been updated to reflect the changes.

**Comment # 8:**

At SR 46/CR 426

- Several movements show a high percentage of growth between 2011 and 2015. The southbound through movement on CR 426 is 59 vehicles in the 2011 PM peak. The 2015 no-build and build forecasts show volumes of 106 and 109 vehicles respectively. Similarly the eastbound right-turn also is projected to have a high percentage of growth – from 181 in 2011 to 262 and 277 vehicles under no-build and build conditions respectively. Please verify the 2015 volume estimates against the 2011 volumes for reasonableness.

**Response to Comment # 8:**

Please refer to the response to comment # 4.

**SIGNAL WARRANT Analyses**

**Comment # 9:**

Please verify the calculations of the 8 highest hourly volumes. For SR 46 at Osceola Road in year 2015, the no-build PM Peak volume of 114 is shown. However, the projected AM peak hour of 102 is not shown in the signal warrant estimates (the next highest value after 114 is 98 which is also in the pm timeframe).

**Response to Comment # 9:**

For the purpose of the Synchro analysis, Opening Year 2015, Mid Design Year 2025, and Design Year 2035 DHVs for the intersection of SR 46 and Osceola Rd were developed using the TURNS5 spreadsheet, which balances Annual Average Daily Traffic (AADT) and calculates DHV's based on Standard K and D30 factors used as input into the program. However, for the purpose of the signal warrant analyses, the future eight highest hours traffic volumes were derived by multiplying the forecasted AADTs by the existing hourly profile percentages obtained from the 24 hour or 72 hour tube counts collected along the intersection approaches.



**Comment # 10:**

The signal warrant analysis was conducted for Warrant 1A only. Given the high projected delay at some of the sides streets (such as SR 46/Woodbridge Rd) in 2025 and 2035, Warrant 1B may also be applicable. Please identify whether consideration of Warrant 1B would change the conclusions of the signal warrant analysis for the SR 46/Woodbridge Rd intersection.

**Response to Comment # 10:**

The traffic volume threshold criterion for Signal Warrant 1B are substantially lower than those of Signal Warrant 1A and should be supported by delay data collected in the field to show that the intersection experiences excessive delay. Therefore, Warrant 1B was not used for Signal Warrant analysis for the future years for the intersection of SR 46 and Woodbridge Dr. (the only unsignalized intersection that meets Warrant 1B volume criteria). Furthermore, the report recommends that all the unsignalized intersections displaying adverse LOS conditions during the future conditions should be periodically monitored for signalization.

## **Intersection Analyses**

**Comment # 11:**

The no-build analysis indicates delays exceeding the level of service standard on the minor road approaches for many of the unsignalized intersections. Consideration of smaller intersection improvements to provide left-or right turn lanes on the minor road approaches may have a significant benefit in reducing minor street delays.

**Response to Comment # 11:**

The No Build analysis typically only considers geometric improvements that are programmed. Therefore, no smaller intersection improvements were considered in the determination of the future year intersection LOS conditions under the No Build condition.

**Comment # 12:**

Under the build conditions analysis, minor street delays exceeding the level of service were noted at Mullet Lake Park Road, Cochran Rd, Woodridge Dr, and 3rd/Oak St. Consideration for turn lane improvements on the minor streets at these locations may help provide acceptable future conditions operations given that signals do not appear to be warranted at these locations in the future.

**Response to Comment # 12:**

It should be noted that the Seminole County adopted LOS standard for the side streets at the study unsignalized intersections is “LOS E”. Furthermore, only the



intersections of SR 46 and Mullet Lake Park Rd (side street delay of 87.2 sec/veh) and SR 46 and Woodbridge Dr (side street delay of 94.4 sec/veh) display an adverse LOS of “F” during the Design Year 2035 a.m. peak hour conditions.

It is to be noted that it is typical for unsignalized intersections to display an adverse LOS for the minor side streets and the delay displayed at these two intersections is not excessive. However, a Synchro analysis was conducted to show the benefit of adding a turn lane to the side street with the worst operating conditions at the intersections of SR 46 and Mullet Lake Park Rd and SR 46 and Woodbridge Dr during the design YR 2035 Build Scenario. The following table summarizes the results of the Synchro analysis:

Study Intersection	Adopted LOS	YR 2035 (With No Minor Improvements)		YR 2035 (With Minor Improvements)		Decrease in Delay (%)
		Side Street Delay	LOS	Side Street Delay	LOS	
<b>AM Peak Hour</b>						
<b>SR 46 @</b>						
Mullet Lake Park Rd	C	94.4	F	87.8	F	7.0%
Woodridge Dr/Ave C	C	87.2	F	43.3	E	50.3%
<b>PM Peak Hour</b>						
<b>SR 46 @</b>						
Mullet Lake Park Rd	C	50.0	E	48.5	E	3.0%
Woodridge Dr/Ave C	C	35.7	E	27.9	D	21.8%

*Note: The shown delay corresponds to the overall approach delay for the side street movement under the worst operation conditions at the intersections.*
















As seen in the following table adding a turn lane at the southbound approach of the SR 46 and Mullet Lake Park Rd intersection would improve the overall delay of the southbound approach by 7.0% and 3.0% during the a.m. and p.m. peak hours, respectively during the design YR 2035. In addition, adding a turn lane at the westbound approach of the SR 46 and Woodridge Dr intersection would improve the overall delay of the westbound approach by 50.3% and 21.8% during the a.m. and p.m. peak hours, respectively during the design YR 2035.























HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	59	0	8	6	1263	0	0	1426	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	62	0	8	6	1329	0	0	1501	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2101	2898	665	2206	2871	778	1556			1329		
vC1, stage 1 conf vol	1342	1342		1528	1528							
vC2, stage 2 conf vol	759	1556		677	1342							
vCu, unblocked vol	2101	2898	665	2206	2871	778	1556			1329		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	34	100	98	98			100		
cM capacity (veh/h)	112	94	407	94	97	341	389			526		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	71	449	886	1001	555							
Volume Left	62	6	0	0	0							
Volume Right	8	0	0	0	55							
cSH	103	389	1700	1700	1700							
Volume to Capacity	0.68	0.02	0.52	0.59	0.33							
Queue Length 95th (ft)	87	1	0	0	0							
Control Delay (s)	94.4	0.5	0.0	0.0	0.0							
Lane LOS	F	A										
Approach Delay (s)	94.4	0.2		0.0								
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			2.3									
Intersection Capacity Utilization			51.5%		ICU Level of Service					A		
Analysis Period (min)			15									




















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	59	0	8	6	1263	0	0	1426	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	62	0	8	6	1329	0	0	1501	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2101	2898	665	2206	2871	778	1556			1329		
vC1, stage 1 conf vol	1342	1342		1528	1528							
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tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	34	100	98	98			100		
cM capacity (veh/h)	112	94	407	94	97	341	389			526		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SB 2</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	62	8	449	886	1001	555						
Volume Left	62	0	6	0	0	0						
Volume Right	0	8	0	0	0	55						
cSH	94	341	389	1700	1700	1700						
Volume to Capacity	0.66	0.02	0.02	0.52	0.59	0.33						
Queue Length 95th (ft)	80	2	1	0	0	0						
Control Delay (s)	97.6	15.8	0.5	0.0	0.0	0.0						
Lane LOS	F	C	A									
Approach Delay (s)	87.8		0.2		0.0							
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			2.2									
Intersection Capacity Utilization			51.1%		ICU Level of Service					A		
Analysis Period (min)			15									





















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 AM Peak Hour  
Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	8	6	4	39	6	95	72	1231	4	10	1388	33	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	8	6	4	41	6	100	76	1296	4	11	1461	35	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								Raised			Raised		
Median storage (veh)								1			1		
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2302	2964	648	2306	2951	748	1496			1300			
vC1, stage 1 conf vol	1447	1447		1499	1499								
vC2, stage 2 conf vol	855	1517		807	1452								
vCu, unblocked vol	2302	2964	648	2306	2951	748	1496			1300			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3			
tC, 2 stage (s)	6.5	5.5		6.5	5.5								
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	87	90	99	51	92	72	82			98			
cM capacity (veh/h)	63	62	415	84	80	357	412			493			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>SE 3</b>	<b>SE 4</b>	<b>NW 1</b>	<b>NW 2</b>					
Volume Total	19	147	76	648	648	4	741	765					
Volume Left	8	41	76	0	0	0	11	0					
Volume Right	4	100	0	0	0	4	0	35					
cSH	77	173	412	1700	1700	1700	493	1700					
Volume to Capacity	0.25	0.85	0.18	0.38	0.38	0.00	0.02	0.45					
Queue Length 95th (ft)	22	150	17	0	0	0	2	0					
Control Delay (s)	66.2	87.2	15.7	0.0	0.0	0.0	0.6	0.0					
Lane LOS	F	F	C				A						
Approach Delay (s)	66.2	87.2	0.9				0.3						
Approach LOS	F	F											
<b>Intersection Summary</b>													
Average Delay			5.2										
Intersection Capacity Utilization			75.8%		ICU Level of Service					D			
Analysis Period (min)			15										
















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 AM Peak Hour  
Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	8	6	4	39	6	95	72	1231	4	10	1388	33	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	8	6	4	41	6	100	76	1296	4	11	1461	35	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								Raised			Raised		
Median storage (veh)								1			1		
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2302	2964	648	2306	2951	748	1496			1300			
vC1, stage 1 conf vol	1447	1447		1499	1499								
vC2, stage 2 conf vol	855	1517		807	1452								
vCu, unblocked vol	2302	2964	648	2306	2951	748	1496			1300			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3			
tC, 2 stage (s)	6.5	5.5		6.5	5.5								
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	87	90	99	51	92	72	82			98			
cM capacity (veh/h)	63	62	415	84	80	357	412			493			
Direction, Lane #	EB 1	WB 1	WB 2	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2				
Volume Total	19	47	100	76	648	648	4	741	765				
Volume Left	8	41	0	76	0	0	0	11	0				
Volume Right	4	0	100	0	0	0	4	0	35				
cSH	77	83	357	412	1700	1700	1700	493	1700				
Volume to Capacity	0.25	0.57	0.28	0.18	0.38	0.38	0.00	0.02	0.45				
Queue Length 95th (ft)	22	63	28	17	0	0	0	2	0				
Control Delay (s)	66.2	94.6	19.0	15.7	0.0	0.0	0.0	0.6	0.0				
Lane LOS	F	F	C	C				A					
Approach Delay (s)	66.2	43.3		0.9				0.3					
Approach LOS	F	E											
Intersection Summary													
Average Delay			3.0										
Intersection Capacity Utilization			74.2%		ICU Level of Service				D				
Analysis Period (min)			15										



















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	5	7	1424	0	0	1265	47
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	38	0	5	7	1499	0	0	1332	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2185	2895	749	2121	2870	691	1381			1499		
vC1, stage 1 conf vol	1514	1514		1356	1356							
vC2, stage 2 conf vol	671	1381		764	1514							
vCu, unblocked vol	2185	2895	749	2121	2870	691	1381			1499		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	66	100	99	98			100		
cM capacity (veh/h)	96	95	359	111	97	390	457			453		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	43	507	999	888	493							
Volume Left	38	7	0	0	0							
Volume Right	5	0	0	0	49							
cSH	122	457	1700	1700	1700							
Volume to Capacity	0.35	0.02	0.59	0.52	0.29							
Queue Length 95th (ft)	36	1	0	0	0							
Control Delay (s)	50.0	0.5	0.0	0.0	0.0							
Lane LOS	E	A										
Approach Delay (s)	50.0	0.2		0.0								
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.8									
Intersection Capacity Utilization			54.2%		ICU Level of Service					A		
Analysis Period (min)			15									



















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	5	7	1424	0	0	1265	47
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	38	0	5	7	1499	0	0	1332	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2185	2895	749	2121	2870	691	1381			1499		
vC1, stage 1 conf vol	1514	1514		1356	1356							
vC2, stage 2 conf vol	671	1381		764	1514							
vCu, unblocked vol	2185	2895	749	2121	2870	691	1381			1499		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	66	100	99	98			100		
cM capacity (veh/h)	96	95	359	111	97	390	457			453		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SB 2</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	38	5	507	999	888	493						
Volume Left	38	0	7	0	0	0						
Volume Right	0	5	0	0	0	49						
cSH	111	390	457	1700	1700	1700						
Volume to Capacity	0.34	0.01	0.02	0.59	0.52	0.29						
Queue Length 95th (ft)	34	1	1	0	0	0						
Control Delay (s)	53.3	14.4	0.5	0.0	0.0	0.0						
Lane LOS	F	B	A									
Approach Delay (s)	48.5		0.2		0.0							
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.8									
Intersection Capacity Utilization			54.2%		ICU Level of Service					A		
Analysis Period (min)			15									




















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 PM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	6	0	17	24	0	62	86	1385	8	13	1231	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	0	18	25	0	65	91	1458	8	14	1296	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2379	2994	729	2267	2986	664	1327			1466		
vC1, stage 1 conf vol	1639	1639		1339	1339							
vC2, stage 2 conf vol	741	1355		928	1647							
vCu, unblocked vol	2379	2994	729	2267	2986	664	1327			1466		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	90	100	95	72	100	84	81			97		
cM capacity (veh/h)	61	62	368	90	72	406	480			423		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2				
Volume Total	24	91	91	729	729	8	662	679				
Volume Left	6	25	91	0	0	0	14	0				
Volume Right	18	65	0	0	0	8	0	32				
cSH	158	205	480	1700	1700	1700	423	1700				
Volume to Capacity	0.15	0.44	0.19	0.43	0.43	0.00	0.03	0.40				
Queue Length 95th (ft)	13	52	17	0	0	0	3	0				
Control Delay (s)	31.8	35.7	14.2	0.0	0.0	0.0	1.0	0.0				
Lane LOS	D	E	B				A					
Approach Delay (s)	31.8	35.7	0.8				0.5					
Approach LOS	D	E										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			85.2%	ICU Level of Service	E							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 PM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	6	0	17	24	0	62	86	1385	8	13	1231	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	0	18	25	0	65	91	1458	8	14	1296	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2379	2994	729	2267	2986	664	1327			1466		
vC1, stage 1 conf vol	1639	1639		1339	1339							
vC2, stage 2 conf vol	741	1355		928	1647							
vCu, unblocked vol	2379	2994	729	2267	2986	664	1327			1466		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	90	100	95	72	100	84	81			97		
cM capacity (veh/h)	61	62	368	90	72	406	480			423		
Direction, Lane #	EB 1	WB 1	WB 2	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2			
Volume Total	24	25	65	91	729	729	8	662	679			
Volume Left	6	25	0	91	0	0	0	14	0			
Volume Right	18	0	65	0	0	0	8	0	32			
cSH	158	90	406	480	1700	1700	1700	423	1700			
Volume to Capacity	0.15	0.28	0.16	0.19	0.43	0.43	0.00	0.03	0.40			
Queue Length 95th (ft)	13	26	14	17	0	0	0	3	0			
Control Delay (s)	31.8	59.9	15.6	14.2	0.0	0.0	0.0	1.0	0.0			
Lane LOS	D	F	C	B				A				
Approach Delay (s)	31.8	27.9		0.8				0.5				
Approach LOS	D	D										
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			85.0%		ICU Level of Service			E				
Analysis Period (min)			15									



# Appendix B

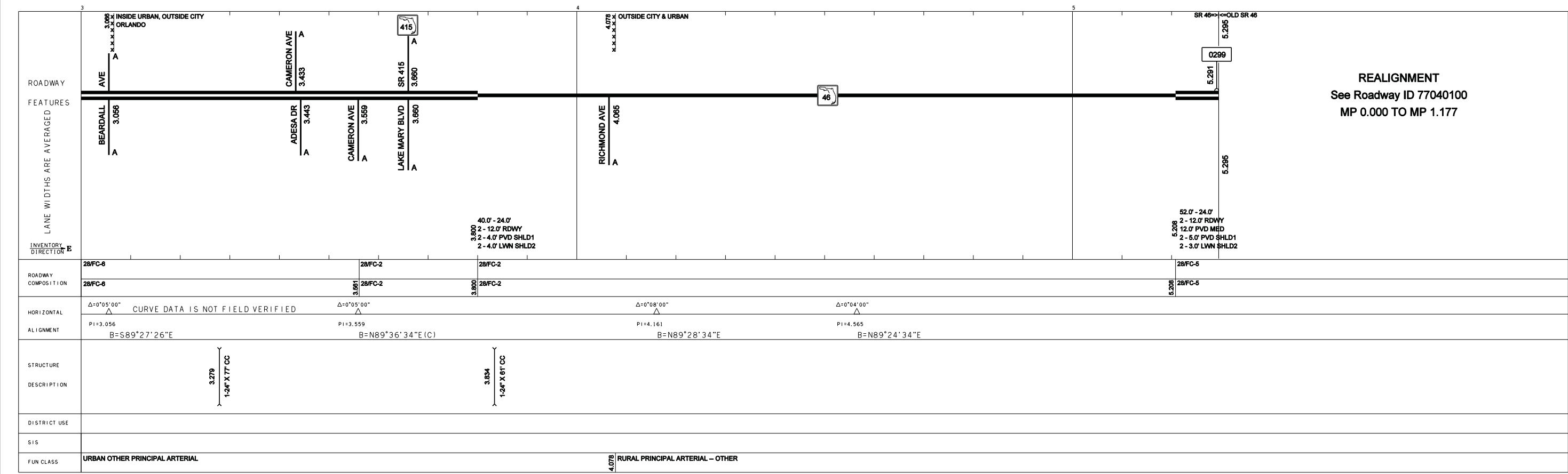
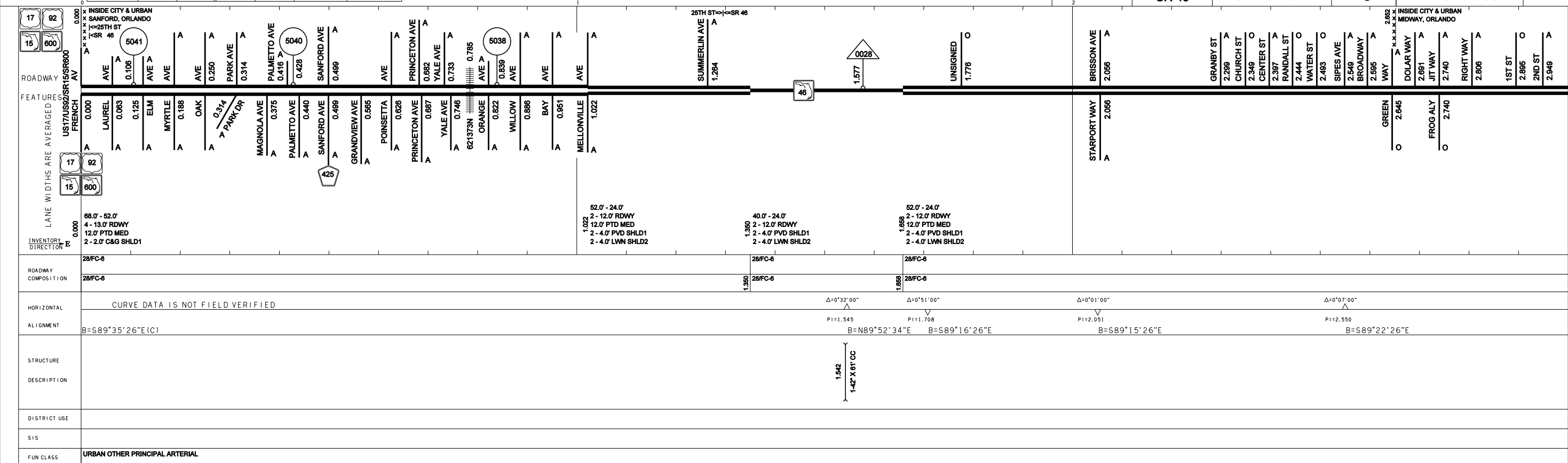
## Straight Line Diagrams & RCI Data for SR 46 Corridor

# STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.:
	SR 46	SEMINOLE	5	77 040 000	1 of 3

DATE		5 YR INV	S/D REV	BMP	EMP	INV	S/D REV
02/08/08		KA	03/24/08	000.000	016.100	06/04/10	06/21/10
BY							
URS				000.000	016.000	07/07/09	18/04/09



**REALIGNMENT**  
See Roadway ID 77040100  
MP 0.000 TO MP 1.177

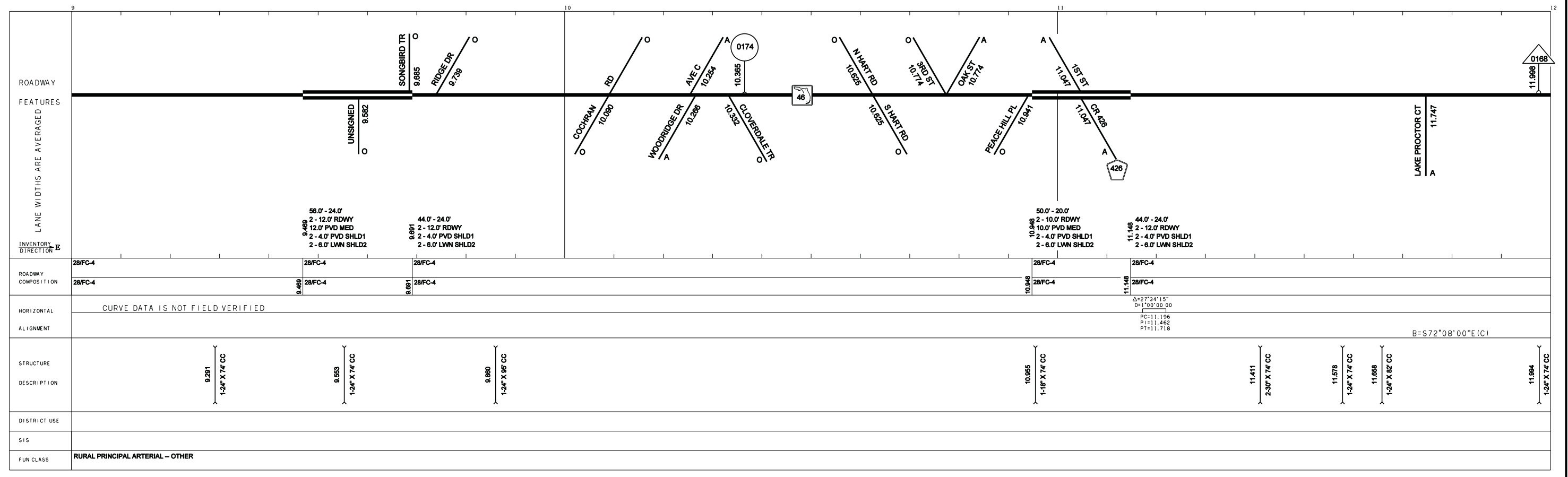
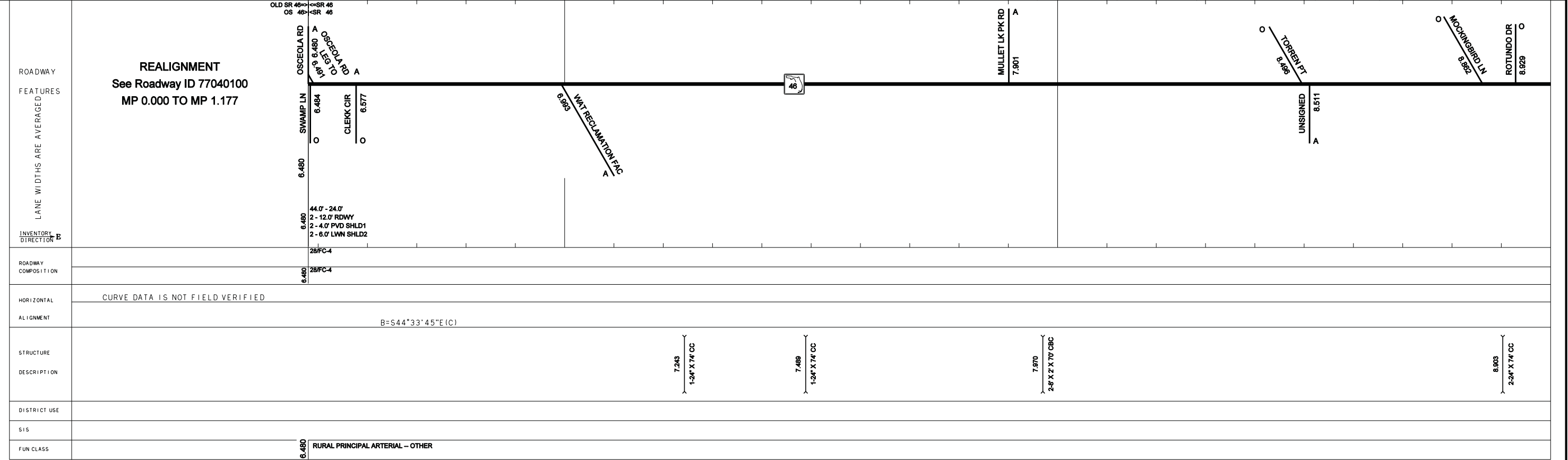
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DATE		BY		5 YR INV		SLO REV		BMP		EMP		INTERIM REVISIONS		SLO REV	
DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY
02/08/08	KA	03/24/08	URS	000.000	016.100	06/04/10	KA	06/21/10	URS	07/07/09	KA	18/04/09	URS		

# STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.:
	SR 46	SEMINOLE	5	77 040 000	2 of 3



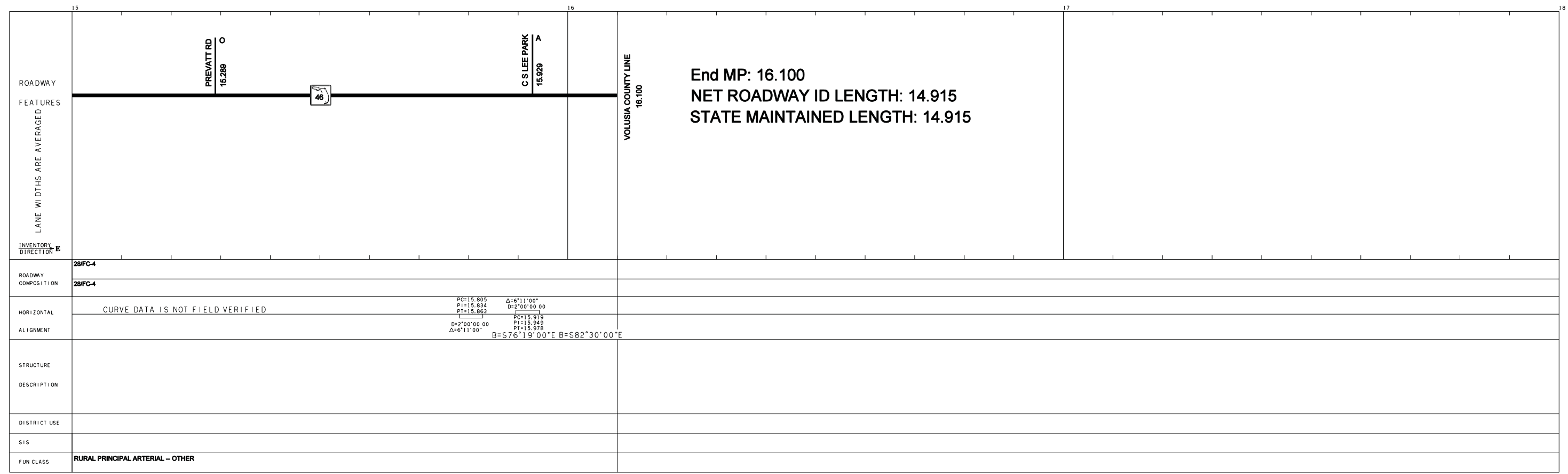
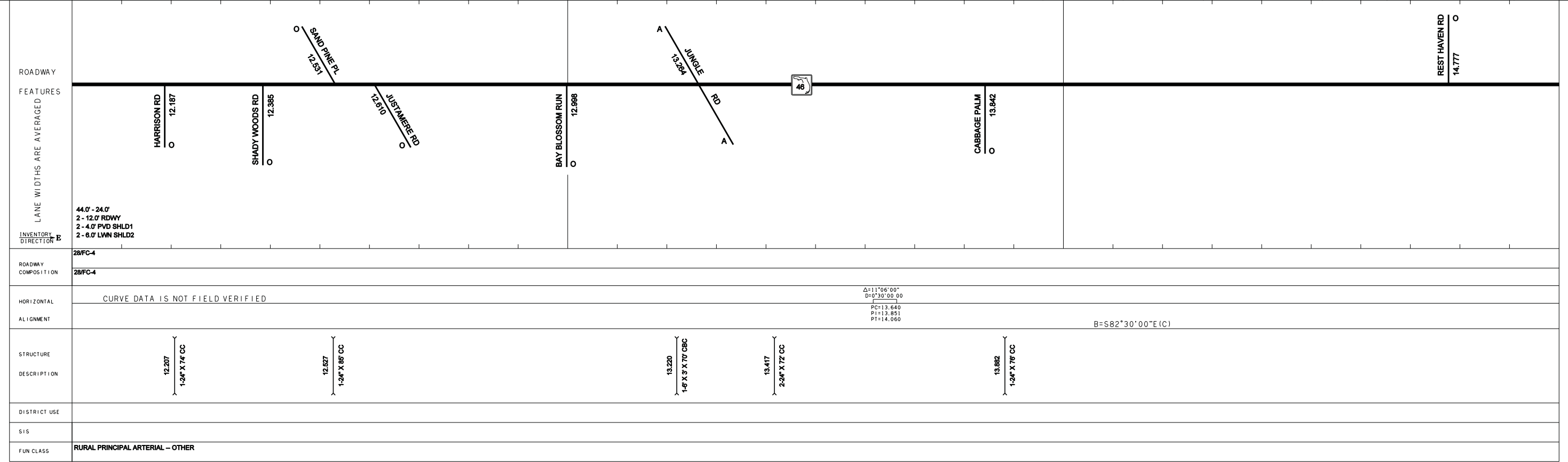
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		INTERIM REVISIONS						
DATE	BY	5 YR INV	SLD REV	BMP	EMP	INV	KA	SLD REV
02/08/08	KA		03/24/08	000.000	016.100	06/04/10	KA	06/21/10
			URS	000.000	016.000	07/07/09	KA	18/04/09
								URS

# STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

INT. or US ROUTE NO	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.:
	SR 46	SEMINOLE	5	77 040 000	3 of 3



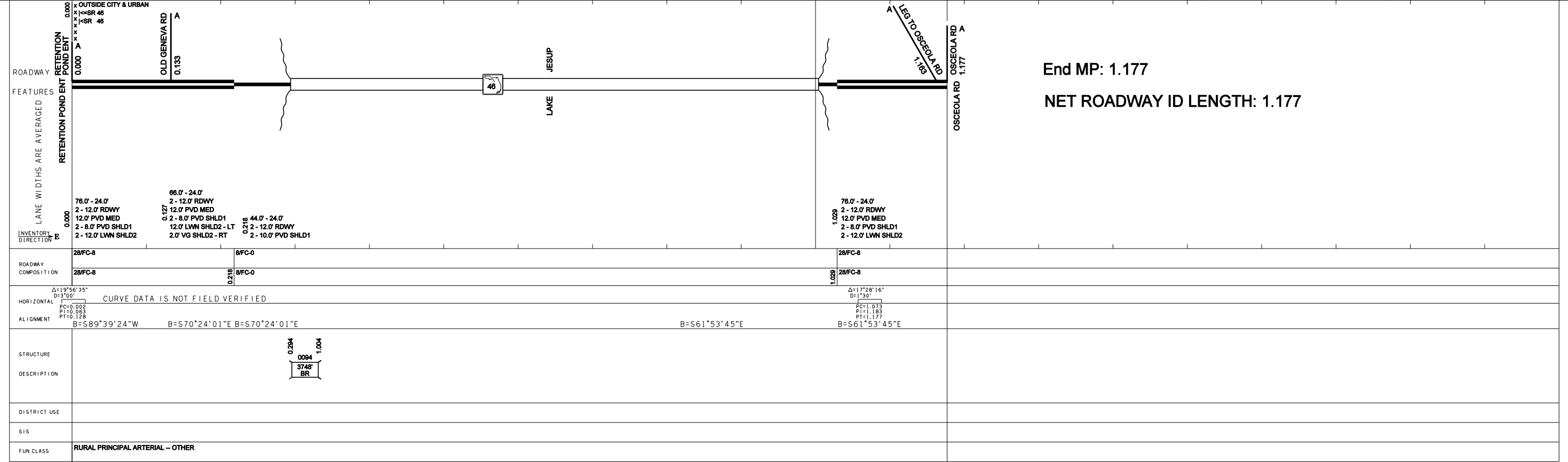
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# STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

FLORIDA DEPARTMENT OF TRANSPORTATION

INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO.:
	SR 46	SEMINOLE	5	77 040 100	1 OF 1

5 YR INV		SLD REV		BMP		EMP		INTERIM REVISIONS	
DATE	BY	DATE	BY					INV	SLD REV
06/04/10	KA	06/21/10	URS						



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**ID:** [77040000](#)    **Man-Dist:** 5    **Geo-Dist:**    **County:** 5 SEMINOL    **Beg. MP:** 0    **End. MP:** 16.1    **Net Length:** 14.915    **Overall Status:** ACTIVE WITH COMBINATION  
**Description:** SR 46 FROM SR 15 TO VOLUSIA CO LINE    [VideoLog](#)    [Enterprise GIS](#)

**Feature 212 - THRU LANES** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
1.61	3.8	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		MT593LF 11/25/2008
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		MT593LF 11/25/2008
1.61	3.8	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		MT593LF 11/25/2008
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		MT593LF 11/25/2008
3.8	5.208	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 11/22/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 11/22/1999
5.208	5.533	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		RCICNVRT 11/22/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		RCICNVRT 11/22/1999
5.208	5.533	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		RCICNVRT 11/22/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		RCICNVRT 11/22/1999
5.533	5.705	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 11/22/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 11/22/1999
5.808	6.23	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 01/23/1995
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 01/23/1995
6.23	6.445	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		RCICNVRT 01/23/1995
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		RCICNVRT 01/23/1995
6.23	6.445	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		RCICNVRT 01/23/1995
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		RCICNVRT 01/23/1995
6.445	9.469	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 06/18/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 06/18/1999
9.469	9.691	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		RCICNVRT 06/18/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		RCICNVRT 06/18/1999
9.469	9.691	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		RCICNVRT 06/18/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		RCICNVRT 06/18/1999
9.691	10.948	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 06/18/1999
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 06/18/1999
10.948	11.148	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		RCICNVRT 11/16/1990
		<a href="#">PAVEMENT SURFACE WIDTH</a>	10	FT	L		RCICNVRT 11/16/1990
10.948	11.148	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		RCICNVRT 11/16/1990
		<a href="#">PAVEMENT SURFACE WIDTH</a>	10	FT	R		RCICNVRT 11/16/1990
11.148	16.1	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		RCICNVRT 11/16/1990
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		RCICNVRT 11/16/1990

**Feature 214 - OUTSIDE SHOULDERS** **LENGTH/NON-INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
1.61	3.8	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	L	L	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	L	L	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	L	L	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	R	R	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	R	R	MT593AK 02/26/2008
1.61	3.8	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	R	R	MT593AK 02/26/2008
3.8	5.208	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
3.8	5.208	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
3.8	5.208	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	C	R & L	MT593AK 02/26/2008
3.8	5.208	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	L	L	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	3	FT	L	L	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER WIDTH</a>	5	FT	L	L	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	R	R	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	3	FT	R	R	MT593AK 02/26/2008
5.208	5.533	<a href="#">HIGHWAY SHOULDER WIDTH</a>	5	FT	R	R	MT593AK 02/26/2008
5.533	5.705	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
5.533	5.705	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
5.533	5.705	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	C	R & L	MT593AK 02/26/2008
5.533	5.705	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008
5.808	6.23	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
5.808	6.23	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
5.808	6.23	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	C	R & L	MT593AK 02/26/2008
5.808	6.23	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008

6.23	6.445	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	L	L	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	L	L	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	L	L	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	R	R	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	4	FT	R	R	MT593AK 02/26/2008
6.23	6.445	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	R	R	MT593AK 02/26/2008
6.445	9.469	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
6.445	9.469	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
6.445	9.469	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	C	R & L	MT593AK 02/26/2008
6.445	9.469	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	L	L	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	L	L	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	L	L	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	R	R	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	R	R	MT593AK 02/26/2008
9.469	9.691	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	R	R	MT593AK 02/26/2008
9.691	10.948	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
9.691	10.948	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
9.691	10.948	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	C	R & L	MT593AK 02/26/2008
9.691	10.948	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	L	L	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	L	L	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	L	L	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	R	R	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	R	R	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	R	R	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	R	R	MT593AK 02/26/2008
10.948	11.148	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	R	R	MT593AK 02/26/2008
11.148	16.1	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 02/26/2008
11.148	16.1	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	3 - LAWN	CD	C	R & L	MT593AK 02/26/2008
11.148	16.1	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	6	FT	C	R & L	MT593AK 02/26/2008
11.148	16.1	<a href="#">HIGHWAY SHOULDER WIDTH</a>	4	FT	C	R & L	MT593AK 02/26/2008

**Feature 216 - BIKE LANES/PED SIDEWALK** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
1.022	5.078	<a href="#">BICYCLE LANE</a>	UNDESIG	CD	L		KNMEIGP 12/04/2008
1.022	5.078	<a href="#">BICYCLE LANE</a>	UNDESIG	CD	R		KNMEIGP 12/04/2008
2.202	2.893	<a href="#">SIDEWALK BARRIER CODE</a>	BARRIER	CD	L		MT593AK 10/25/2010
		<a href="#">SIDEWALK WIDTH AND SEP.</a>	5	FT	L	L	MT593AK 10/25/2010
2.647	2.799	<a href="#">SIDEWALK BARRIER CODE</a>	BARRIER	CD	R		MT593AK 10/25/2010
		<a href="#">SIDEWALK WIDTH AND SEP.</a>	5	FT	R	R	MT593AK 10/25/2010

**Feature 217 - SIDEWALKS** **LENGTH/NON-INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
2.202	2.893	<a href="#">SIDEWALK WIDTH</a>	5	FT	L	R	MT593AK 02/26/2008
2.647	2.799	<a href="#">SIDEWALK WIDTH</a>	5	FT	R	R	MT593AK 02/26/2008

**Feature 311 - SPEED ZONE** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
1.374	3.82	<a href="#">DATE SPEED ZONE APPROVED</a>	76	DA	C		RCICNVRT 02/12/1980
		<a href="#">MAXIMUM SPEED LIMIT</a>	50	MH	C		RCICNVRT 02/12/1980
	3.82	<a href="#">MAXIMUM SPEED LIMIT</a>	55	MH	C		RCICNVRT 11/13/1984
5.808	10.717	<a href="#">MAXIMUM SPEED LIMIT</a>	55	MH	C		RCICNVRT 11/13/1984
10.717	11.347	<a href="#">DATE SPEED ZONE APPROVED</a>	81	DA	C		RCICNVRT 09/30/1982
		<a href="#">MAXIMUM SPEED LIMIT</a>	45	MH	C		RCICNVRT 09/30/1982
11.347	16.1	<a href="#">MAXIMUM SPEED LIMIT</a>	55	MH	C		RCICNVRT 11/13/1984

Roadway ID: [77040100](#) Man- Geo-Dist: 5 County: 5 SEMINO Beg. MP: 0 End. MP: 1.177 Net Length: 1.177 Overall Status: ACTIVE ON THE SHS  
 Description: SR 46 FROM RET POND ENT TO OSCEOLA RD [VideoLog](#) [Enterprise GIS](#)

**Feature 212 - THRU LANES** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
0	0.218	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		MT593AK 06/04/2010
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		MT593AK 06/04/2010
0	0.218	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		MT593AK 06/04/2010
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		MT593AK 06/04/2010
0.218	1.029	<a href="#">NUMBER OF ROADWAY LANES</a>	2	EA	C		MT593AK 06/04/2010
		<a href="#">PAVEMENT SURFACE WIDTH</a>	24	FT	C		MT593AK 06/04/2010
1.029	1.177	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	L		MT593AK 06/04/2010
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	L		MT593AK 06/04/2010
1.029	1.177	<a href="#">NUMBER OF ROADWAY LANES</a>	1	EA	R		MT593AK 06/04/2010
		<a href="#">PAVEMENT SURFACE WIDTH</a>	12	FT	R		MT593AK 06/04/2010

**Feature 214 - OUTSIDE SHOULDERS** **LENGTH/NON-INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
0	0.127	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	LAWN	CD	R	R	MT593AK 06/04/2010
0	0.127	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	12	FT	R	R	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	LAWN	CD	L	L	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	12	FT	L	L	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER WIDTH</a>	8	FT	L	L	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 06/04/2010
0	0.218	<a href="#">HIGHWAY SHOULDER WIDTH</a>	8	FT	R	R	MT593AK 06/04/2010
0.127	0.218	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	VALLEY	CD	R	R	MT593AK 06/04/2010
0.127	0.218	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	2	FT	R	R	MT593AK 06/04/2010
0.218	1.029	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	C	R & L	MT593AK 06/04/2010
0.218	1.029	<a href="#">HIGHWAY SHOULDER WIDTH</a>	10	FT	C	R & L	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	L	L	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	LAWN	CD	L	L	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	12	FT	L	L	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER WIDTH</a>	8	FT	L	L	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER TYPE</a>	PAVED	CD	R	R	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER TYPE 2</a>	LAWN	CD	R	R	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER WIDTH 2</a>	12	FT	R	R	MT593AK 06/04/2010
1.029	1.177	<a href="#">HIGHWAY SHOULDER WIDTH</a>	8	FT	R	R	MT593AK 06/04/2010

**Feature 216 - BIKE LANES/PED SIDEWALK** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
There is no Characteristic Data to view for the Information Selected.							

**Feature 217 - SIDEWALKS** **LENGTH/NON-INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
There is no Characteristic Data to view for the Information Selected.							

**Feature 311 - SPEED ZONE** **LENGTH/INTERLOCKING**

Beg. MP	End. MP	Characteristic	Value	Unit	Side	Offset	Char. Updated
There is no Characteristic Data to view for the Information Selected.							



# Appendix C

## Raw Traffic Counts

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

TYPE OF COUNT:  
72 Hour (Average) Classification Count

TIME OF COUNT:  
 Start Date: 9/13/2011      Start Time: Midnight  
 End Date: 9/15/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:30 PM
Average Daily:	10,435	Average Peak Hour:	887
Daily Truck Avg:	922	Max Hour Truck Avg:	93
		Peak Hour Truck Avg:	54

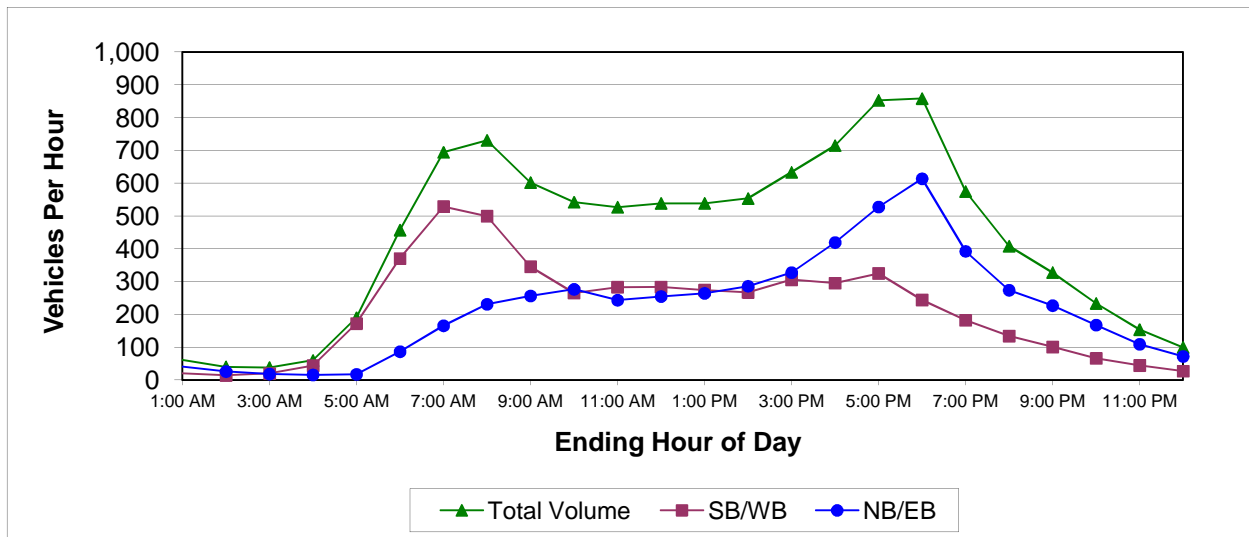
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 8.5%	D= 68.6%
T Max Hour 10.5%	T daily 8.8%
T med (max) 5.5%	T med Daily 4.5%
T heavy (max) 5.0%	T heavy Daily 4.3%
T Peak Hour 6.1%	
T med Peak Hour 3.5%	Axle Factor 0.97
T heavy Peak Hour 2.6%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

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	41	20	62	0.78%	0.40%	0.59%
2:00 AM	26	14	40	0.49%	0.28%	0.39%
3:00 AM	18	20	38	0.34%	0.39%	0.37%
4:00 AM	16	44	60	0.30%	0.86%	0.57%
5:00 AM	18	172	190	0.33%	3.37%	1.82%
6:00 AM	87	371	457	1.63%	7.24%	4.38%
7:00 AM	166	529	695	3.12%	10.34%	6.66%
8:00 AM	231	500	731	4.35%	9.76%	7.01%
9:00 AM	257	346	602	4.83%	6.75%	5.77%
10:00 AM	277	266	542	5.20%	5.19%	5.20%
11:00 AM	244	283	527	4.58%	5.54%	5.05%
12:00 PM	255	284	539	4.80%	5.54%	5.16%
1:00 PM	265	274	539	4.98%	5.36%	5.17%
2:00 PM	286	267	554	5.38%	5.22%	5.31%
3:00 PM	328	306	634	6.16%	5.98%	6.07%
4:00 PM	419	296	715	7.89%	5.78%	6.85%
5:00 PM	528	325	853	9.92%	6.36%	8.17%
6:00 PM	614	244	858	11.55%	4.77%	8.23%
7:00 PM	393	182	575	7.38%	3.56%	5.51%
8:00 PM	274	134	408	5.15%	2.62%	3.91%
9:00 PM	227	101	328	4.27%	1.97%	3.14%
10:00 PM	168	66	234	3.15%	1.30%	2.24%
11:00 PM	109	45	154	2.06%	0.87%	1.48%
12:00 AM	72	27	100	1.36%	0.53%	0.96%
<b>TOTALS</b>	<b>5,318</b>	<b>5,118</b>	<b>10,435</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	126	1.21%
Class 2	Cars	7,449	71.38%
Class 3	Pick-Ups & Vans	1,857	17.80%
Class 4	Buses	89	0.85%
Class 5	2 Axle, Single Unit Trucks	381	3.65%
Class 6	3 Axle, Single Unit Trucks	86	0.82%
Class 7	4 Axle, Single Unit Trucks	28	0.27%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	159	1.52%
Class 9	3 Axle Tractor with 2 Axle Trailer	173	1.66%
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	1	0.01%
Class 13	7 or more Axles	1	0.01%
Class 14	Not Used	81	0.78%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,435</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/13/2011      Start Time: Midnight  
 End Date: 9/13/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:45 PM
Average Daily:	10,263	Average Peak Hour:	872
Daily Truck Avg:	934	Max Hour Truck Avg:	106
		Peak Hour Truck Avg:	55

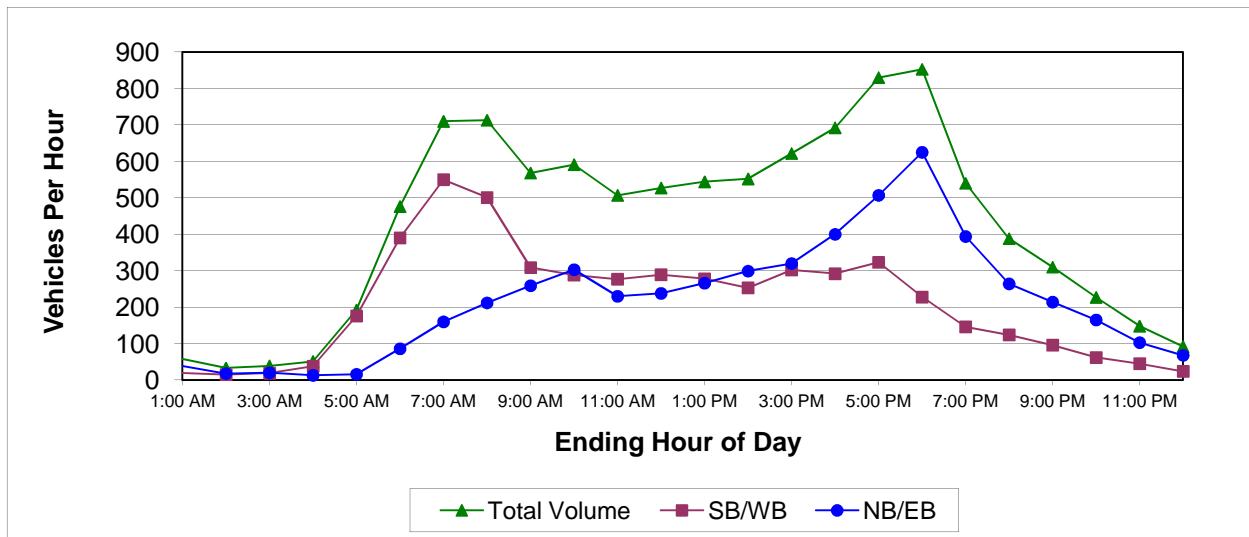
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 8.5%	D= 68.9%
T Max Hour 12.2%	T daily 9.1%
T med (max) 6.1%	T med Daily 4.8%
T heavy (max) 6.1%	T heavy Daily 4.3%
T Peak Hour 6.3%	
T med Peak Hour 3.7%	Axle Factor 0.97
T heavy Peak Hour 2.6%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

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	39	19	58	0.75%	0.38%	0.57%
2:00 AM	18	15	33	0.34%	0.30%	0.32%
3:00 AM	20	19	39	0.38%	0.38%	0.38%
4:00 AM	13	38	51	0.25%	0.75%	0.50%
5:00 AM	16	176	192	0.31%	3.49%	1.87%
6:00 AM	86	390	476	1.65%	7.73%	4.64%
7:00 AM	160	550	710	3.07%	10.90%	6.92%
8:00 AM	212	501	713	4.06%	9.93%	6.95%
9:00 AM	259	309	568	4.96%	6.13%	5.53%
10:00 AM	303	288	591	5.81%	5.71%	5.76%
11:00 AM	230	277	507	4.41%	5.49%	4.94%
12:00 PM	238	289	527	4.56%	5.73%	5.13%
1:00 PM	266	278	544	5.10%	5.51%	5.30%
2:00 PM	299	253	552	5.73%	5.02%	5.38%
3:00 PM	320	302	622	6.13%	5.99%	6.06%
4:00 PM	400	292	692	7.66%	5.79%	6.74%
5:00 PM	507	323	830	9.71%	6.40%	8.09%
6:00 PM	625	228	853	11.98%	4.52%	8.31%
7:00 PM	394	146	540	7.55%	2.89%	5.26%
8:00 PM	264	124	388	5.06%	2.46%	3.78%
9:00 PM	214	96	310	4.10%	1.90%	3.02%
10:00 PM	165	62	227	3.16%	1.23%	2.21%
11:00 PM	103	45	148	1.97%	0.89%	1.44%
12:00 AM	68	24	92	1.30%	0.48%	0.90%
<b>TOTALS</b>	<b>5,219</b>	<b>5,044</b>	<b>10,263</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	127	1.24%
Class 2	Cars	7,362	71.73%
Class 3	Pick-Ups & Vans	1,795	17.49%
Class 4	Buses	91	0.89%
Class 5	2 Axle, Single Unit Trucks	397	3.87%
Class 6	3 Axle, Single Unit Trucks	94	0.92%
Class 7	4 Axle, Single Unit Trucks	41	0.40%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	149	1.45%
Class 9	3 Axle Tractor with 2 Axle Trailer	155	1.51%
Class 10	3 Axle Tractor with 3 Axle Trailer	5	0.05%
Class 11	5 Axle Multi Trailer	0	0.00%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	1	0.01%
Class 14	Not Used	45	0.44%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,263</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/14/2011      Start Time: Midnight  
 End Date: 9/14/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:45 PM
Average Daily:	10,488	Average Peak Hour:	904
Daily Truck Avg:	862	Max Hour Truck Avg:	100
		Peak Hour Truck Avg:	47

TRAVEL CHARACTERISTICS:

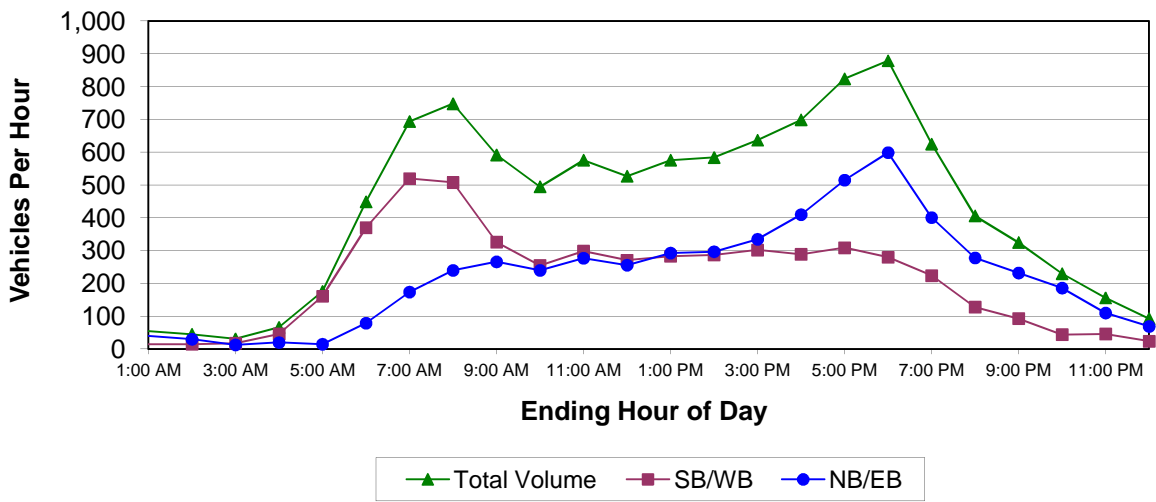
K MEASURED	D MEASURED
K= 8.6%	D= 68.5%
T Max Hour 11.1%	T daily 8.2%
T med (max) 6.1%	T med Daily 4.3%
T heavy (max) 5.0%	T heavy Daily 4.0%
T Peak Hour 5.2%	
T med Peak Hour 3.0%	Axle Factor 0.97
T heavy Peak Hour 2.2%	



## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

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	40	15	55	0.74%	0.29%	0.52%
2:00 AM	30	15	45	0.56%	0.29%	0.43%
3:00 AM	13	18	31	0.24%	0.35%	0.30%
4:00 AM	20	46	66	0.37%	0.90%	0.63%
5:00 AM	15	161	176	0.28%	3.15%	1.68%
6:00 AM	79	370	449	1.47%	7.24%	4.28%
7:00 AM	174	520	694	3.24%	10.17%	6.62%
8:00 AM	240	508	748	4.47%	9.94%	7.13%
9:00 AM	266	326	592	4.95%	6.38%	5.64%
10:00 AM	240	255	495	4.47%	4.99%	4.72%
11:00 AM	277	299	576	5.15%	5.85%	5.49%
12:00 PM	256	271	527	4.76%	5.30%	5.02%
1:00 PM	293	283	576	5.45%	5.53%	5.49%
2:00 PM	297	287	584	5.53%	5.61%	5.57%
3:00 PM	335	302	637	6.23%	5.91%	6.07%
4:00 PM	410	289	699	7.63%	5.65%	6.66%
5:00 PM	515	309	824	9.58%	6.04%	7.86%
6:00 PM	599	280	879	11.14%	5.48%	8.38%
7:00 PM	401	224	625	7.46%	4.38%	5.96%
8:00 PM	278	128	406	5.17%	2.50%	3.87%
9:00 PM	232	93	325	4.32%	1.82%	3.10%
10:00 PM	186	44	230	3.46%	0.86%	2.19%
11:00 PM	110	46	156	2.05%	0.90%	1.49%
12:00 AM	69	24	93	1.28%	0.47%	0.89%
<b>TOTALS</b>	<b>5,375</b>	<b>5,113</b>	<b>10,488</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	132	1.26%
Class 2	Cars	7,539	71.88%
Class 3	Pick-Ups & Vans	1,900	18.12%
Class 4	Buses	86	0.82%
Class 5	2 Axle, Single Unit Trucks	361	3.44%
Class 6	3 Axle, Single Unit Trucks	69	0.66%
Class 7	4 Axle, Single Unit Trucks	5	0.05%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	159	1.52%
Class 9	3 Axle Tractor with 2 Axle Trailer	175	1.67%
Class 10	3 Axle Tractor with 3 Axle Trailer	5	0.05%
Class 11	5 Axle Multi Trailer	0	0.00%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	1	0.01%
Class 14	Not Used	55	0.52%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,488</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/15/2011      Start Time: Midnight  
 End Date: 9/15/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time: 4:15 PM
Average Daily:	10,555	Average Peak Hour: 908
Daily Truck Avg:	971	Max Hour Truck Avg: 106
		Peak Hour Truck Avg: 69

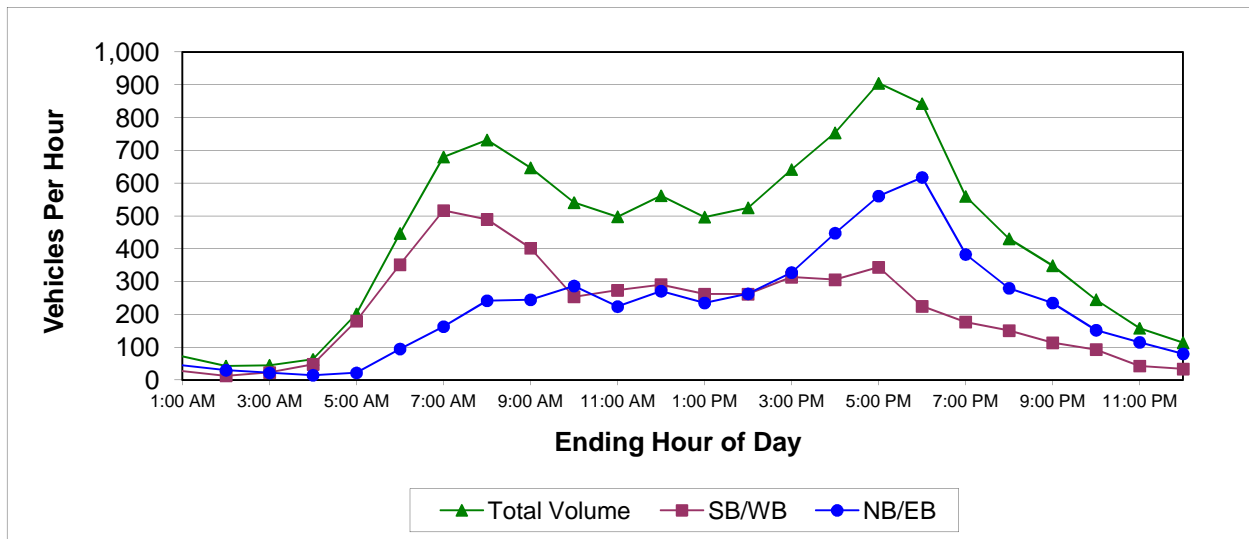
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 8.6%	D= 64.2%
T Max Hour 11.7%	T daily 9.2%
T med (max) 5.6%	T med Daily 4.5%
T heavy (max) 6.1%	T heavy Daily 4.7%
T Peak Hour 7.6%	
T med Peak Hour 5.0%	Axle Factor 0.96
T heavy Peak Hour 2.6%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

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	45	27	72	0.84%	0.52%	0.68%
2:00 AM	30	13	43	0.56%	0.25%	0.41%
3:00 AM	22	23	45	0.41%	0.44%	0.43%
4:00 AM	15	48	63	0.28%	0.92%	0.60%
5:00 AM	22	180	202	0.41%	3.46%	1.91%
6:00 AM	95	352	447	1.77%	6.77%	4.23%
7:00 AM	163	517	680	3.04%	9.95%	6.44%
8:00 AM	242	490	732	4.52%	9.43%	6.94%
9:00 AM	245	402	647	4.57%	7.74%	6.13%
10:00 AM	287	254	541	5.36%	4.89%	5.13%
11:00 AM	224	274	498	4.18%	5.27%	4.72%
12:00 PM	271	291	562	5.06%	5.60%	5.32%
1:00 PM	235	262	497	4.39%	5.04%	4.71%
2:00 PM	263	262	525	4.91%	5.04%	4.97%
3:00 PM	328	314	642	6.12%	6.04%	6.08%
4:00 PM	448	306	754	8.36%	5.89%	7.14%
5:00 PM	561	344	905	10.47%	6.62%	8.57%
6:00 PM	618	225	843	11.53%	4.33%	7.99%
7:00 PM	383	177	560	7.15%	3.41%	5.31%
8:00 PM	280	151	431	5.22%	2.91%	4.08%
9:00 PM	235	114	349	4.39%	2.19%	3.31%
10:00 PM	152	93	245	2.84%	1.79%	2.32%
11:00 PM	115	43	158	2.15%	0.83%	1.50%
12:00 AM	80	34	114	1.49%	0.65%	1.08%
<b>TOTALS</b>	<b>5,359</b>	<b>5,196</b>	<b>10,555</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of Lake Mary Blvd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	120	1.14%
Class 2	Cars	7,445	70.54%
Class 3	Pick-Ups & Vans	1,875	17.76%
Class 4	Buses	89	0.84%
Class 5	2 Axle, Single Unit Trucks	386	3.66%
Class 6	3 Axle, Single Unit Trucks	95	0.90%
Class 7	4 Axle, Single Unit Trucks	38	0.36%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	169	1.60%
Class 9	3 Axle Tractor with 2 Axle Trailer	190	1.80%
Class 10	3 Axle Tractor with 3 Axle Trailer	2	0.02%
Class 11	5 Axle Multi Trailer	1	0.01%
Class 12	6 Axle Multi Trailer	0	0.00%
Class 13	7 or more Axles	1	0.01%
Class 14	Not Used	144	1.36%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,555</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

TYPE OF COUNT: 72 Hour (Average) Classification Count

TIME OF COUNT:  
 Start Date: 8/23/2011      Start Time: Midnight  
 End Date: 8/25/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:45 PM
Average Daily:	10,435	Average Peak Hour:	967
Daily Truck Avg:	1,230	Max Hour Truck Avg:	114
		Peak Hour Truck Avg:	81

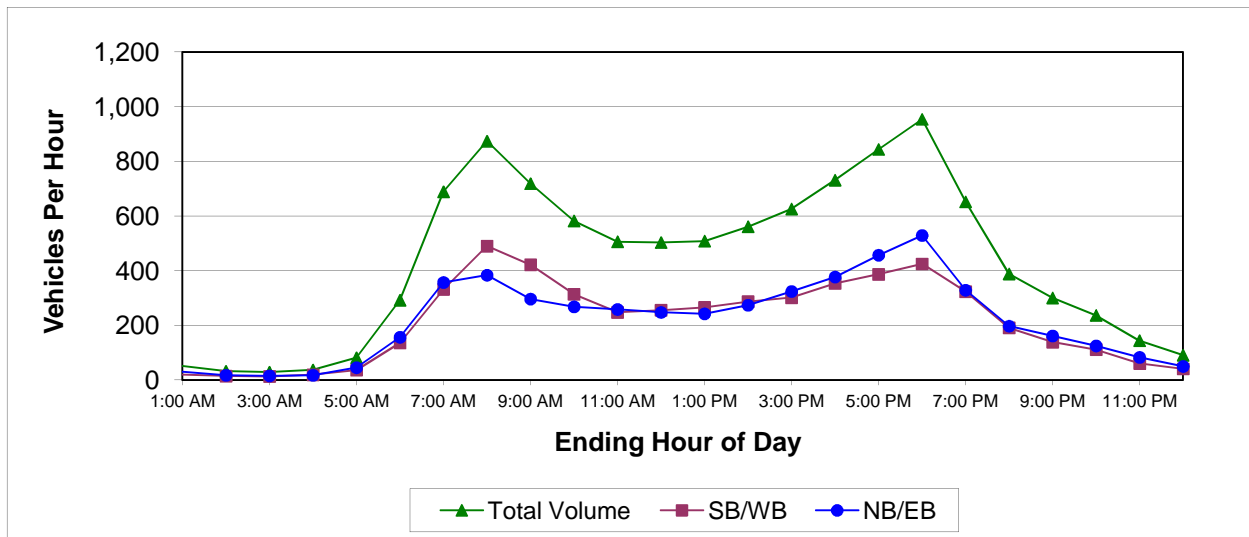
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.3%	D= 55.6%
T Max Hour 11.8%	T daily 11.8%
T med (max) 5.9%	T med Daily 6.1%
T heavy (max) 5.9%	T heavy Daily 5.7%
T Peak Hour 8.3%	
T med Peak Hour 4.6%	Axle Factor 0.92
T heavy Peak Hour 3.8%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

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	31	20	51	0.59%	0.39%	0.49%
2:00 AM	18	15	32	0.34%	0.28%	0.31%
3:00 AM	16	13	29	0.30%	0.26%	0.28%
4:00 AM	18	19	37	0.34%	0.37%	0.35%
5:00 AM	45	36	82	0.86%	0.70%	0.78%
6:00 AM	157	136	292	2.99%	2.61%	2.80%
7:00 AM	357	332	689	6.81%	6.39%	6.60%
8:00 AM	384	490	874	7.31%	9.45%	8.38%
9:00 AM	297	422	719	5.65%	8.13%	6.89%
10:00 AM	268	314	582	5.11%	6.05%	5.58%
11:00 AM	258	248	506	4.92%	4.77%	4.85%
12:00 PM	248	256	503	4.72%	4.93%	4.82%
1:00 PM	243	266	509	4.63%	5.13%	4.87%
2:00 PM	274	287	561	5.22%	5.53%	5.38%
3:00 PM	324	302	626	6.18%	5.81%	6.00%
4:00 PM	377	354	731	7.19%	6.82%	7.01%
5:00 PM	457	387	844	8.71%	7.46%	8.09%
6:00 PM	529	425	954	10.08%	8.19%	9.14%
7:00 PM	329	323	652	6.26%	6.23%	6.25%
8:00 PM	197	191	388	3.76%	3.68%	3.72%
9:00 PM	162	139	301	3.08%	2.68%	2.88%
10:00 PM	125	112	237	2.38%	2.15%	2.27%
11:00 PM	83	61	144	1.59%	1.18%	1.38%
12:00 AM	50	41	91	0.95%	0.79%	0.87%
<b>TOTALS</b>	<b>5,246</b>	<b>5,188</b>	<b>10,435</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	127	1.22%
Class 2	Cars	6,160	59.03%
Class 3	Pick-Ups & Vans	2,454	23.52%
Class 4	Buses	108	1.03%
Class 5	2 Axle, Single Unit Trucks	532	5.10%
Class 6	3 Axle, Single Unit Trucks	81	0.78%
Class 7	4 Axle, Single Unit Trucks	12	0.11%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	228	2.18%
Class 9	3 Axle Tractor with 2 Axle Trailer	251	2.41%
Class 10	3 Axle Tractor with 3 Axle Trailer	10	0.10%
Class 11	5 Axle Multi Trailer	1	0.01%
Class 12	6 Axle Multi Trailer	2	0.02%
Class 13	7 or more Axles	5	0.05%
Class 14	Not Used	464	4.45%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,435</b>	<b>100.00%</b>



# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 8/23/2011      Start Time: Midnight  
 End Date: 8/23/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	5:00 PM
Average Daily:	10,472	Average Peak Hour:	980
Daily Truck Avg:	1,216	Max Hour Truck Avg:	122
		Peak Hour Truck Avg:	65

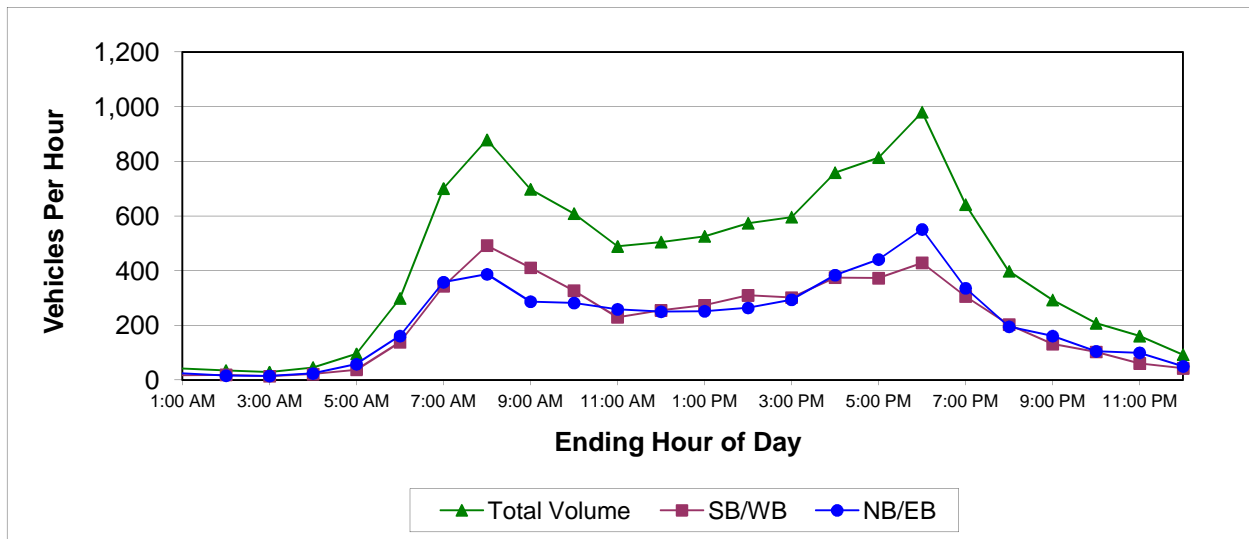
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.4%	D= 56.2%
T Max Hour 12.4%	T daily 11.6%
T med (max) 6.7%	T med Daily 6.3%
T heavy (max) 5.7%	T heavy Daily 5.3%
T Peak Hour 6.6%	
T med Peak Hour 4.1%	Axle Factor 0.93
T heavy Peak Hour 2.6%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

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	25	17	42	0.48%	0.33%	0.40%
2:00 AM	16	19	35	0.30%	0.36%	0.33%
3:00 AM	15	14	29	0.29%	0.27%	0.28%
4:00 AM	24	22	46	0.46%	0.42%	0.44%
5:00 AM	58	38	96	1.10%	0.73%	0.92%
6:00 AM	161	138	299	3.06%	2.65%	2.86%
7:00 AM	358	343	701	6.81%	6.57%	6.69%
8:00 AM	387	492	879	7.36%	9.43%	8.39%
9:00 AM	287	411	698	5.46%	7.88%	6.67%
10:00 AM	282	327	609	5.37%	6.27%	5.82%
11:00 AM	259	230	489	4.93%	4.41%	4.67%
12:00 PM	250	255	505	4.76%	4.89%	4.82%
1:00 PM	252	274	526	4.80%	5.25%	5.02%
2:00 PM	264	310	574	5.02%	5.94%	5.48%
3:00 PM	294	302	596	5.59%	5.79%	5.69%
4:00 PM	384	375	759	7.31%	7.19%	7.25%
5:00 PM	441	373	814	8.39%	7.15%	7.77%
6:00 PM	551	429	980	10.49%	8.22%	9.36%
7:00 PM	336	306	642	6.39%	5.87%	6.13%
8:00 PM	195	203	398	3.71%	3.89%	3.80%
9:00 PM	161	132	293	3.06%	2.53%	2.80%
10:00 PM	105	103	208	2.00%	1.97%	1.99%
11:00 PM	100	61	161	1.90%	1.17%	1.54%
12:00 AM	50	43	93	0.95%	0.82%	0.89%
<b>TOTALS</b>	<b>5,255</b>	<b>5,217</b>	<b>10,472</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	138	1.32%
Class 2	Cars	6,270	59.87%
Class 3	Pick-Ups & Vans	2,427	23.18%
Class 4	Buses	101	0.96%
Class 5	2 Axle, Single Unit Trucks	562	5.37%
Class 6	3 Axle, Single Unit Trucks	76	0.73%
Class 7	4 Axle, Single Unit Trucks	12	0.11%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	187	1.79%
Class 9	3 Axle Tractor with 2 Axle Trailer	262	2.50%
Class 10	3 Axle Tractor with 3 Axle Trailer	11	0.11%
Class 11	5 Axle Multi Trailer	0	0.00%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	4	0.04%
Class 14	Not Used	421	4.02%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,472</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 8/24/2011      Start Time: Midnight  
 End Date: 8/24/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:30 PM
Average Daily:	10,196	Average Peak Hour:	948
Daily Truck Avg:	1,219	Max Hour Truck Avg:	132
		Peak Hour Truck Avg:	74

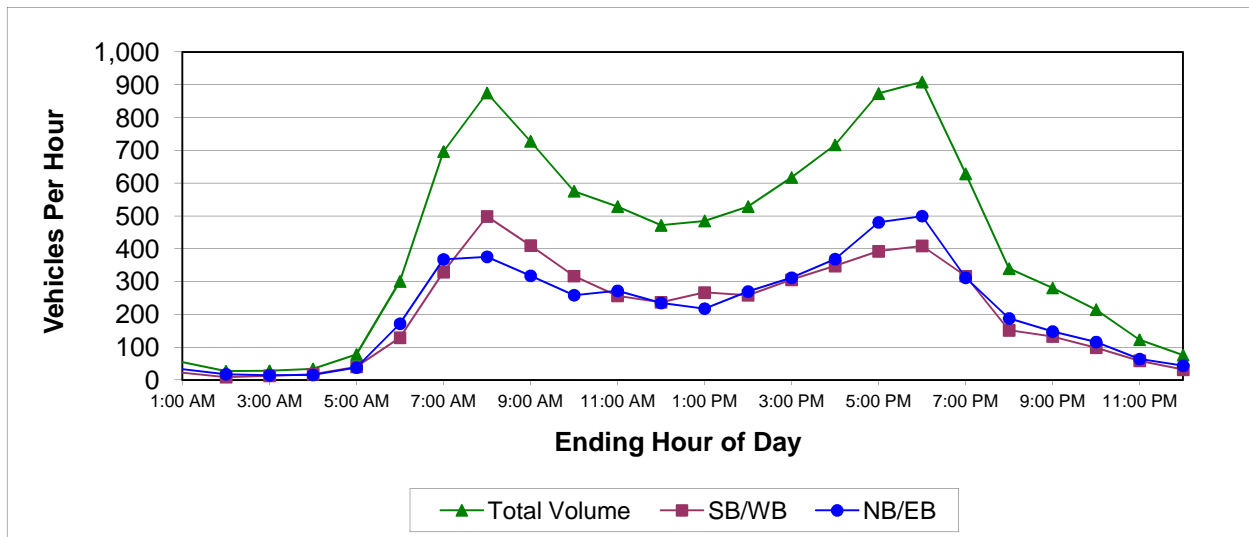
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.3%	D= 54.3%
T Max Hour 13.9%	T daily 12.0%
T med (max) 7.0%	T med Daily 6.2%
T heavy (max) 7.0%	T heavy Daily 5.7%
T Peak Hour 7.8%	
T med Peak Hour 4.3%	Axle Factor 0.92
T heavy Peak Hour 3.5%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

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	33	22	55	0.64%	0.44%	0.54%
2:00 AM	18	9	27	0.35%	0.18%	0.26%
3:00 AM	15	13	28	0.29%	0.26%	0.27%
4:00 AM	16	18	34	0.31%	0.36%	0.33%
5:00 AM	38	40	78	0.74%	0.79%	0.77%
6:00 AM	172	129	301	3.35%	2.55%	2.95%
7:00 AM	368	329	697	7.16%	6.51%	6.84%
8:00 AM	376	499	875	7.31%	9.87%	8.58%
9:00 AM	318	410	728	6.18%	8.11%	7.14%
10:00 AM	259	317	576	5.04%	6.27%	5.65%
11:00 AM	272	257	529	5.29%	5.09%	5.19%
12:00 PM	235	237	472	4.57%	4.69%	4.63%
1:00 PM	218	267	485	4.24%	5.28%	4.76%
2:00 PM	270	259	529	5.25%	5.12%	5.19%
3:00 PM	312	306	618	6.07%	6.05%	6.06%
4:00 PM	369	348	717	7.18%	6.89%	7.03%
5:00 PM	481	393	874	9.35%	7.78%	8.57%
6:00 PM	500	409	909	9.72%	8.09%	8.92%
7:00 PM	312	317	629	6.07%	6.27%	6.17%
8:00 PM	188	152	340	3.66%	3.01%	3.33%
9:00 PM	148	133	281	2.88%	2.63%	2.76%
10:00 PM	116	99	215	2.26%	1.96%	2.11%
11:00 PM	64	59	123	1.24%	1.17%	1.21%
12:00 AM	44	32	76	0.86%	0.63%	0.75%
<b>TOTALS</b>	<b>5,142</b>	<b>5,054</b>	<b>10,196</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	114	1.12%
Class 2	Cars	6,005	58.90%
Class 3	Pick-Ups & Vans	2,402	23.56%
Class 4	Buses	115	1.13%
Class 5	2 Axle, Single Unit Trucks	519	5.09%
Class 6	3 Axle, Single Unit Trucks	82	0.80%
Class 7	4 Axle, Single Unit Trucks	11	0.11%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	234	2.30%
Class 9	3 Axle Tractor with 2 Axle Trailer	242	2.37%
Class 10	3 Axle Tractor with 3 Axle Trailer	9	0.09%
Class 11	5 Axle Multi Trailer	2	0.02%
Class 12	6 Axle Multi Trailer	2	0.02%
Class 13	7 or more Axles	3	0.03%
Class 14	Not Used	456	4.47%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,196</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 8/25/2011      Start Time: Midnight  
 End Date: 8/25/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:45 PM
Average Daily:	10,636	Average Peak Hour:	985
Daily Truck Avg:	1,255	Max Hour Truck Avg:	130
		Peak Hour Truck Avg:	92

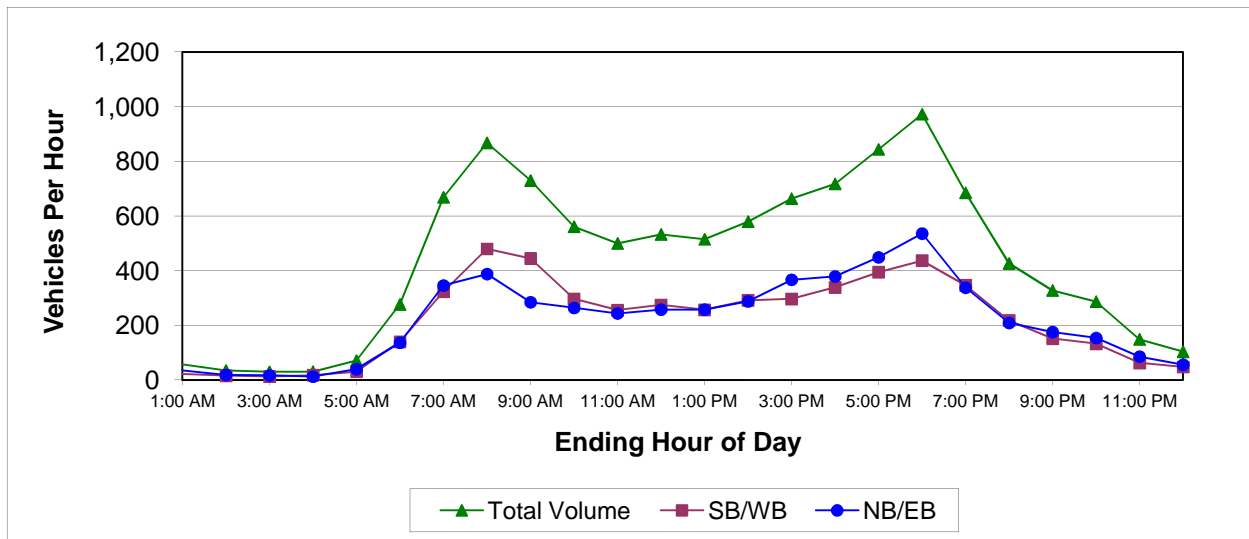
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.3%	D= 56.5%
T Max Hour 13.2%	T daily 11.8%
T med (max) 6.7%	T med Daily 5.9%
T heavy (max) 6.5%	T heavy Daily 5.9%
T Peak Hour 9.3%	
T med Peak Hour 4.8%	Axle Factor 0.92
T heavy Peak Hour 4.6%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

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	35	22	57	0.66%	0.42%	0.54%
2:00 AM	19	16	35	0.36%	0.30%	0.33%
3:00 AM	17	13	30	0.32%	0.25%	0.28%
4:00 AM	13	18	31	0.24%	0.34%	0.29%
5:00 AM	40	31	71	0.75%	0.59%	0.67%
6:00 AM	137	140	277	2.56%	2.64%	2.60%
7:00 AM	346	323	669	6.48%	6.10%	6.29%
8:00 AM	388	480	868	7.26%	9.07%	8.16%
9:00 AM	285	445	730	5.34%	8.41%	6.86%
10:00 AM	264	297	561	4.94%	5.61%	5.27%
11:00 AM	244	256	500	4.57%	4.84%	4.70%
12:00 PM	258	275	533	4.83%	5.19%	5.01%
1:00 PM	258	257	515	4.83%	4.85%	4.84%
2:00 PM	288	292	580	5.39%	5.52%	5.45%
3:00 PM	367	297	664	6.87%	5.61%	6.24%
4:00 PM	379	339	718	7.09%	6.40%	6.75%
5:00 PM	449	395	844	8.41%	7.46%	7.94%
6:00 PM	536	437	973	10.03%	8.25%	9.15%
7:00 PM	338	347	685	6.33%	6.55%	6.44%
8:00 PM	209	218	427	3.91%	4.12%	4.01%
9:00 PM	176	152	328	3.29%	2.87%	3.08%
10:00 PM	154	133	287	2.88%	2.51%	2.70%
11:00 PM	86	63	149	1.61%	1.19%	1.40%
12:00 AM	56	48	104	1.05%	0.91%	0.98%
<b>TOTALS</b>	<b>5,342</b>	<b>5,294</b>	<b>10,636</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>





## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 46 Between Lake Mary Blvd and Osceola Rd

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	128	1.20%
Class 2	Cars	6,205	58.34%
Class 3	Pick-Ups & Vans	2,532	23.81%
Class 4	Buses	108	1.02%
Class 5	2 Axle, Single Unit Trucks	516	4.85%
Class 6	3 Axle, Single Unit Trucks	84	0.79%
Class 7	4 Axle, Single Unit Trucks	12	0.11%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	264	2.48%
Class 9	3 Axle Tractor with 2 Axle Trailer	249	2.34%
Class 10	3 Axle Tractor with 3 Axle Trailer	11	0.10%
Class 11	5 Axle Multi Trailer	1	0.01%
Class 12	6 Axle Multi Trailer	2	0.02%
Class 13	7 or more Axles	8	0.08%
Class 14	Not Used	516	4.85%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>10,636</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	SR 46 btw Osceola Rd & Mullet Lake Park Rd
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	30-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	1-Sep-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	8,863	<b>PEAK HOUR</b>	820
		<b>PEAK END TIME</b>	6:15 PM
		<b>PEAK NB/EB MOVEMENT</b>	439
		<b>PEAK SB/WB MOVEMENT</b>	381

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.25%	<b>D=</b>	53.5%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	1
COUNT LOCATION	SR 46 btw Osceola Rd & Mullet Lake Park Rd
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	22	27	50	0.50%	0.62%	0.56%
02:00 AM	16	13	30	0.37%	0.30%	0.33%
03:00 AM	14	13	27	0.32%	0.29%	0.31%
04:00 AM	17	16	33	0.39%	0.35%	0.37%
05:00 AM	31	21	52	0.71%	0.47%	0.59%
06:00 AM	126	69	195	2.84%	1.55%	2.20%
07:00 AM	269	236	505	6.08%	5.32%	5.70%
08:00 AM	361	385	747	8.16%	8.69%	8.42%
09:00 AM	316	392	707	7.12%	8.84%	7.98%
10:00 AM	233	258	492	5.27%	5.83%	5.55%
11:00 AM	225	221	446	5.07%	4.99%	5.03%
12:00 PM	199	214	413	4.48%	4.84%	4.66%
01:00 PM	210	226	436	4.73%	5.10%	4.92%
02:00 PM	205	193	397	4.62%	4.35%	4.48%
03:00 PM	236	241	477	5.33%	5.43%	5.38%
04:00 PM	292	284	576	6.58%	6.41%	6.50%
05:00 PM	352	348	700	7.94%	7.85%	7.89%
06:00 PM	425	395	820	9.59%	8.90%	9.25%
07:00 PM	334	309	643	7.55%	6.96%	7.25%
08:00 PM	191	189	380	4.32%	4.26%	4.29%
09:00 PM	131	150	281	2.96%	3.38%	3.17%
10:00 PM	95	118	214	2.15%	2.67%	2.41%
11:00 PM	87	71	158	1.96%	1.60%	1.78%
12:00 AM	42	45	87	0.95%	1.01%	0.98%
<b>TOTALS</b>	<b>4,431</b>	<b>4,433</b>	<b>8,863</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	SR 46 btw Osceola Rd & Mullet Lake Park Rd
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	30-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	30-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	8,747	<b>PEAK HOUR</b>	835
		<b>PEAK END TIME</b>	5:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	433
		<b>PEAK SB/WB MOVEMENT</b>	402

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.55%	<b>D=</b>	51.9%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	1
COUNT LOCATION	SR 46 btw Osceola Rd & Mullet Lake Park Rd
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	24	33	57	0.55%	0.75%	0.65%
02:00 AM	19	10	29	0.44%	0.23%	0.33%
03:00 AM	17	13	30	0.39%	0.30%	0.34%
04:00 AM	23	10	33	0.53%	0.23%	0.38%
05:00 AM	33	20	53	0.76%	0.45%	0.61%
06:00 AM	126	64	190	2.90%	1.45%	2.17%
07:00 AM	255	233	488	5.87%	5.29%	5.58%
08:00 AM	341	376	717	7.86%	8.53%	8.20%
09:00 AM	274	410	684	6.31%	9.31%	7.82%
10:00 AM	264	284	548	6.08%	6.45%	6.27%
11:00 AM	253	256	509	5.83%	5.81%	5.82%
12:00 PM	209	197	406	4.81%	4.47%	4.64%
01:00 PM	198	227	425	4.56%	5.15%	4.86%
02:00 PM	210	187	397	4.84%	4.24%	4.54%
03:00 PM	229	238	467	5.28%	5.40%	5.34%
04:00 PM	292	286	578	6.73%	6.49%	6.61%
05:00 PM	350	327	677	8.06%	7.42%	7.74%
06:00 PM	420	414	834	9.68%	9.40%	9.53%
07:00 PM	285	320	605	6.57%	7.26%	6.92%
08:00 PM	212	168	380	4.88%	3.81%	4.34%
09:00 PM	123	130	253	2.83%	2.95%	2.89%
10:00 PM	76	100	176	1.75%	2.27%	2.01%
11:00 PM	76	54	130	1.75%	1.23%	1.49%
12:00 AM	32	49	81	0.74%	1.11%	0.93%
<b>TOTALS</b>	<b>4,341</b>	<b>4,406</b>	<b>8,747</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	SR 46 btw Osceola Rd & Mullet Lake Park Rd
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	31-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	31-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	8,597	<b>PEAK HOUR</b>	821
		<b>PEAK END TIME</b>	8:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	385
		<b>PEAK SB/WB MOVEMENT</b>	436

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.55%	<b>D=</b>	53.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	1
COUNT LOCATION	SR 46 btw Osceola Rd & Mullet Lake Park Rd
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	18	24	42	0.42%	0.56%	0.49%
02:00 AM	18	13	31	0.42%	0.30%	0.36%
03:00 AM	11	8	19	0.26%	0.19%	0.22%
04:00 AM	16	16	32	0.37%	0.37%	0.37%
05:00 AM	26	17	43	0.61%	0.39%	0.50%
06:00 AM	124	67	191	2.89%	1.55%	2.22%
07:00 AM	267	239	506	6.23%	5.54%	5.89%
08:00 AM	364	394	758	8.49%	9.14%	8.82%
09:00 AM	324	375	699	7.56%	8.70%	8.13%
10:00 AM	229	249	478	5.34%	5.78%	5.56%
11:00 AM	179	205	384	4.18%	4.76%	4.47%
12:00 PM	170	208	378	3.97%	4.82%	4.40%
01:00 PM	192	200	392	4.48%	4.64%	4.56%
02:00 PM	208	207	415	4.85%	4.80%	4.83%
03:00 PM	236	243	479	5.51%	5.64%	5.57%
04:00 PM	314	297	611	7.33%	6.89%	7.11%
05:00 PM	371	367	738	8.66%	8.51%	8.58%
06:00 PM	417	366	783	9.73%	8.49%	9.11%
07:00 PM	295	273	568	6.88%	6.33%	6.61%
08:00 PM	154	184	338	3.59%	4.27%	3.93%
09:00 PM	110	152	262	2.57%	3.53%	3.05%
10:00 PM	98	96	194	2.29%	2.23%	2.26%
11:00 PM	98	76	174	2.29%	1.76%	2.02%
12:00 AM	47	35	82	1.10%	0.81%	0.95%
<b>TOTALS</b>	<b>4,286</b>	<b>4,311</b>	<b>8,597</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	SR 46 btw Osceola Rd & Mullet Lake Park Rd
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	1-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	1-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,246	<b>PEAK HOUR</b>	873
		<b>PEAK END TIME</b>	6:15 PM
		<b>PEAK NB/EB MOVEMENT</b>	483
		<b>PEAK SB/WB MOVEMENT</b>	390

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.44%	<b>D=</b>	55.3%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	1
COUNT LOCATION	SR 46 btw Osceola Rd & Mullet Lake Park Rd
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	25	25	50	0.54%	0.55%	0.54%
02:00 AM	12	17	29	0.26%	0.37%	0.31%
03:00 AM	15	18	33	0.32%	0.39%	0.36%
04:00 AM	13	21	34	0.28%	0.46%	0.37%
05:00 AM	35	26	61	0.75%	0.57%	0.66%
06:00 AM	128	75	203	2.74%	1.64%	2.20%
07:00 AM	286	235	521	6.13%	5.13%	5.63%
08:00 AM	379	386	765	8.12%	8.43%	8.27%
09:00 AM	349	390	739	7.48%	8.51%	7.99%
10:00 AM	207	242	449	4.44%	5.28%	4.86%
11:00 AM	242	202	444	5.19%	4.41%	4.80%
12:00 PM	217	238	455	4.65%	5.20%	4.92%
01:00 PM	239	251	490	5.12%	5.48%	5.30%
02:00 PM	196	184	380	4.20%	4.02%	4.11%
03:00 PM	244	241	485	5.23%	5.26%	5.25%
04:00 PM	269	270	539	5.77%	5.89%	5.83%
05:00 PM	334	350	684	7.16%	7.64%	7.40%
06:00 PM	438	404	842	9.39%	8.82%	9.11%
07:00 PM	423	333	756	9.07%	7.27%	8.18%
08:00 PM	208	214	422	4.46%	4.67%	4.56%
09:00 PM	161	167	328	3.45%	3.65%	3.55%
10:00 PM	112	159	271	2.40%	3.47%	2.93%
11:00 PM	86	83	169	1.84%	1.81%	1.83%
12:00 AM	47	50	97	1.01%	1.09%	1.05%
<b>TOTALS</b>	<b>4,665</b>	<b>4,581</b>	<b>9,246</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	2
<b>COUNT LOCATION</b>	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	9,336	<b>PEAK HOUR</b>	865
		<b>PEAK END TIME</b>	6:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	433
		<b>PEAK SB/WB MOVEMENT</b>	432

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.26%	<b>D=</b>	50.0%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	2
COUNT LOCATION	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	21	25	46	0.45%	0.55%	0.50%
02:00 AM	17	19	36	0.36%	0.41%	0.39%
03:00 AM	16	9	25	0.34%	0.19%	0.27%
04:00 AM	16	20	36	0.34%	0.44%	0.39%
05:00 AM	31	21	52	0.67%	0.45%	0.56%
06:00 AM	104	66	170	2.21%	1.42%	1.82%
07:00 AM	282	212	495	6.01%	4.58%	5.30%
08:00 AM	377	375	752	8.02%	8.08%	8.05%
09:00 AM	366	403	769	7.79%	8.68%	8.23%
10:00 AM	285	265	550	6.07%	5.71%	5.89%
11:00 AM	268	225	493	5.71%	4.85%	5.28%
12:00 PM	218	222	440	4.65%	4.78%	4.72%
01:00 PM	212	229	441	4.52%	4.94%	4.73%
02:00 PM	226	236	462	4.81%	5.09%	4.95%
03:00 PM	238	256	494	5.08%	5.52%	5.29%
04:00 PM	290	294	584	6.18%	6.34%	6.26%
05:00 PM	368	372	739	7.83%	8.01%	7.92%
06:00 PM	433	432	865	9.21%	9.31%	9.26%
07:00 PM	336	336	672	7.16%	7.23%	7.19%
08:00 PM	200	213	413	4.26%	4.60%	4.43%
09:00 PM	162	175	337	3.45%	3.77%	3.61%
10:00 PM	111	120	230	2.36%	2.58%	2.47%
11:00 PM	73	74	147	1.56%	1.59%	1.57%
12:00 AM	45	42	87	0.97%	0.90%	0.93%
<b>TOTALS</b>	<b>4,695</b>	<b>4,641</b>	<b>9,336</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	2
<b>COUNT LOCATION</b>	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	13-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	8,978	<b>PEAK HOUR</b>	848
		<b>PEAK END TIME</b>	6:15 PM
		<b>PEAK NB/EB MOVEMENT</b>	443
		<b>PEAK SB/WB MOVEMENT</b>	405

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.45%	<b>D=</b>	52.2%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	2
COUNT LOCATION	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	21	25	46	0.46%	0.57%	0.51%
02:00 AM	16	18	34	0.35%	0.41%	0.38%
03:00 AM	11	11	22	0.24%	0.25%	0.25%
04:00 AM	22	24	46	0.48%	0.54%	0.51%
05:00 AM	26	23	49	0.57%	0.52%	0.55%
06:00 AM	104	64	168	2.28%	1.45%	1.87%
07:00 AM	284	195	479	6.23%	4.41%	5.34%
08:00 AM	374	373	747	8.21%	8.44%	8.32%
09:00 AM	373	393	766	8.19%	8.89%	8.53%
10:00 AM	289	262	551	6.34%	5.93%	6.14%
11:00 AM	252	213	465	5.53%	4.82%	5.18%
12:00 PM	192	226	418	4.21%	5.11%	4.66%
01:00 PM	171	222	393	3.75%	5.02%	4.38%
02:00 PM	232	210	442	5.09%	4.75%	4.92%
03:00 PM	210	216	426	4.61%	4.89%	4.74%
04:00 PM	300	277	577	6.58%	6.27%	6.43%
05:00 PM	339	392	731	7.44%	8.87%	8.14%
06:00 PM	429	413	842	9.41%	9.34%	9.38%
07:00 PM	341	318	659	7.48%	7.19%	7.34%
08:00 PM	191	187	378	4.19%	4.23%	4.21%
09:00 PM	162	156	318	3.55%	3.53%	3.54%
10:00 PM	113	105	218	2.48%	2.38%	2.43%
11:00 PM	62	66	128	1.36%	1.49%	1.43%
12:00 AM	43	32	75	0.94%	0.72%	0.84%
<b>TOTALS</b>	<b>4,557</b>	<b>4,421</b>	<b>8,978</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	2
<b>COUNT LOCATION</b>	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	14-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	14-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,306	<b>PEAK HOUR</b>	855
		<b>PEAK END TIME</b>	6:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	429
		<b>PEAK SB/WB MOVEMENT</b>	426

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.19%	<b>D=</b>	50.2%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	2
COUNT LOCATION	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	20	21	41	0.43%	0.46%	0.44%
02:00 AM	18	15	33	0.38%	0.33%	0.35%
03:00 AM	24	7	31	0.51%	0.15%	0.33%
04:00 AM	9	20	29	0.19%	0.43%	0.31%
05:00 AM	30	24	54	0.64%	0.52%	0.58%
06:00 AM	105	59	164	2.24%	1.28%	1.76%
07:00 AM	275	215	490	5.85%	4.66%	5.27%
08:00 AM	389	385	774	8.28%	8.35%	8.32%
09:00 AM	337	400	737	7.17%	8.68%	7.92%
10:00 AM	279	263	542	5.94%	5.71%	5.82%
11:00 AM	296	213	509	6.30%	4.62%	5.47%
12:00 PM	231	203	434	4.92%	4.40%	4.66%
01:00 PM	205	206	411	4.36%	4.47%	4.42%
02:00 PM	235	270	505	5.00%	5.86%	5.43%
03:00 PM	246	284	530	5.24%	6.16%	5.70%
04:00 PM	280	277	557	5.96%	6.01%	5.99%
05:00 PM	373	357	730	7.94%	7.75%	7.84%
06:00 PM	429	426	855	9.13%	9.24%	9.19%
07:00 PM	320	346	666	6.81%	7.51%	7.16%
08:00 PM	210	231	441	4.47%	5.01%	4.74%
09:00 PM	158	176	334	3.36%	3.82%	3.59%
10:00 PM	105	106	211	2.24%	2.30%	2.27%
11:00 PM	82	62	144	1.75%	1.35%	1.55%
12:00 AM	41	43	84	0.87%	0.93%	0.90%
<b>TOTALS</b>	<b>4,697</b>	<b>4,609</b>	<b>9,306</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	2
<b>COUNT LOCATION</b>	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	15-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,724	<b>PEAK HOUR</b>	897
		<b>PEAK END TIME</b>	6:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	440
		<b>PEAK SB/WB MOVEMENT</b>	457

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.22%	<b>D=</b>	50.9%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	2
COUNT LOCATION	SR 46 btw Mullet Lake Park Rd & Woodridge Dr.
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	22	30	52	0.46%	0.61%	0.53%
02:00 AM	17	24	41	0.35%	0.49%	0.42%
03:00 AM	13	9	22	0.27%	0.18%	0.23%
04:00 AM	17	17	34	0.35%	0.35%	0.35%
05:00 AM	38	15	53	0.79%	0.31%	0.55%
06:00 AM	103	75	178	2.13%	1.53%	1.83%
07:00 AM	288	227	515	5.96%	4.64%	5.30%
08:00 AM	367	367	734	7.60%	7.50%	7.55%
09:00 AM	387	416	803	8.01%	8.50%	8.26%
10:00 AM	287	270	557	5.94%	5.52%	5.73%
11:00 AM	257	249	506	5.32%	5.09%	5.20%
12:00 PM	232	237	469	4.80%	4.84%	4.82%
01:00 PM	260	260	520	5.38%	5.31%	5.35%
02:00 PM	210	228	438	4.35%	4.66%	4.50%
03:00 PM	259	268	527	5.36%	5.48%	5.42%
04:00 PM	290	328	618	6.00%	6.70%	6.36%
05:00 PM	391	366	757	8.09%	7.48%	7.78%
06:00 PM	440	457	897	9.11%	9.34%	9.22%
07:00 PM	347	343	690	7.18%	7.01%	7.10%
08:00 PM	199	222	421	4.12%	4.54%	4.33%
09:00 PM	166	193	359	3.44%	3.95%	3.69%
10:00 PM	114	148	262	2.36%	3.03%	2.69%
11:00 PM	76	93	169	1.57%	1.90%	1.74%
12:00 AM	52	50	102	1.08%	1.02%	1.05%
<b>TOTALS</b>	<b>4,832</b>	<b>4,892</b>	<b>9,724</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

TYPE OF COUNT: 72 Hour (Average) Classification Count

TIME OF COUNT:  
 Start Date: 9/13/2011      Start Time: Midnight  
 End Date: 9/15/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time: 4:45 PM	
Average Daily:	8,691	Average Peak Hour:	822
Daily Truck Avg:	992	Max Hour Truck Avg:	96
		Peak Hour Truck Avg:	70

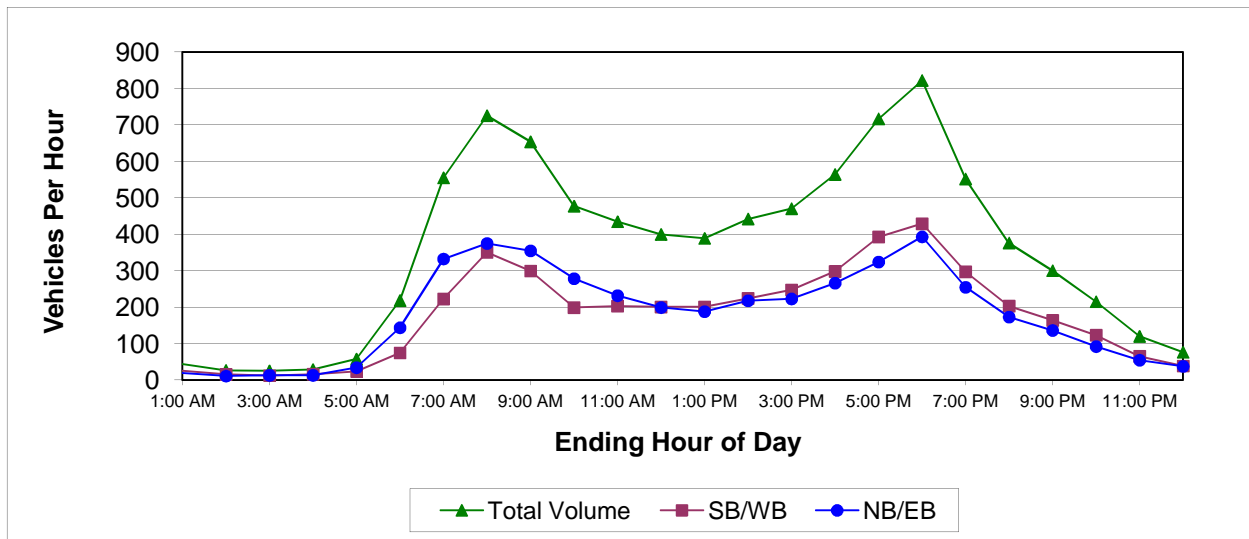
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.5%	D= 53.0%
T Max Hour 11.7%	T daily 11.4%
T med (max) 7.5%	T med Daily 6.8%
T heavy (max) 4.3%	T heavy Daily 4.6%
T Peak Hour 8.6%	
T med Peak Hour 5.4%	Axle Factor 0.92
T heavy Peak Hour 3.2%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

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	19	25	44	0.44%	0.59%	0.51%
2:00 AM	11	16	27	0.25%	0.36%	0.31%
3:00 AM	13	12	25	0.30%	0.29%	0.29%
4:00 AM	13	16	29	0.30%	0.37%	0.33%
5:00 AM	34	24	58	0.78%	0.55%	0.66%
6:00 AM	144	75	218	3.29%	1.73%	2.51%
7:00 AM	332	223	555	7.61%	5.15%	6.39%
8:00 AM	375	351	726	8.59%	8.10%	8.35%
9:00 AM	355	299	654	8.13%	6.92%	7.52%
10:00 AM	278	199	477	6.38%	4.60%	5.49%
11:00 AM	232	203	435	5.31%	4.69%	5.00%
12:00 PM	199	201	400	4.56%	4.64%	4.60%
1:00 PM	188	201	389	4.31%	4.65%	4.48%
2:00 PM	218	224	442	4.99%	5.18%	5.09%
3:00 PM	223	248	470	5.10%	5.72%	5.41%
4:00 PM	266	298	564	6.09%	6.89%	6.49%
5:00 PM	324	393	717	7.42%	9.07%	8.25%
6:00 PM	393	429	822	9.00%	9.91%	9.46%
7:00 PM	255	297	552	5.84%	6.86%	6.35%
8:00 PM	173	203	376	3.96%	4.69%	4.33%
9:00 PM	136	164	300	3.12%	3.79%	3.46%
10:00 PM	92	123	215	2.11%	2.84%	2.47%
11:00 PM	55	65	120	1.25%	1.51%	1.38%
12:00 AM	38	39	76	0.86%	0.89%	0.88%
<b>TOTALS</b>	<b>4,364</b>	<b>4,327</b>	<b>8,691</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	142	1.63%
Class 2	Cars	5,086	58.51%
Class 3	Pick-Ups & Vans	2,014	23.17%
Class 4	Buses	115	1.32%
Class 5	2 Axle, Single Unit Trucks	480	5.52%
Class 6	3 Axle, Single Unit Trucks	58	0.67%
Class 7	4 Axle, Single Unit Trucks	7	0.08%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	173	1.99%
Class 9	3 Axle Tractor with 2 Axle Trailer	149	1.71%
Class 10	3 Axle Tractor with 3 Axle Trailer	7	0.08%
Class 11	5 Axle Multi Trailer	2	0.02%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	1	0.01%
Class 14	Not Used	457	5.26%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>8,692</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/13/2011      Start Time: Midnight  
 End Date: 9/13/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	5:00 PM
Average Daily:	8,378	Average Peak Hour:	823
Daily Truck Avg:	969	Max Hour Truck Avg:	118
		Peak Hour Truck Avg:	84

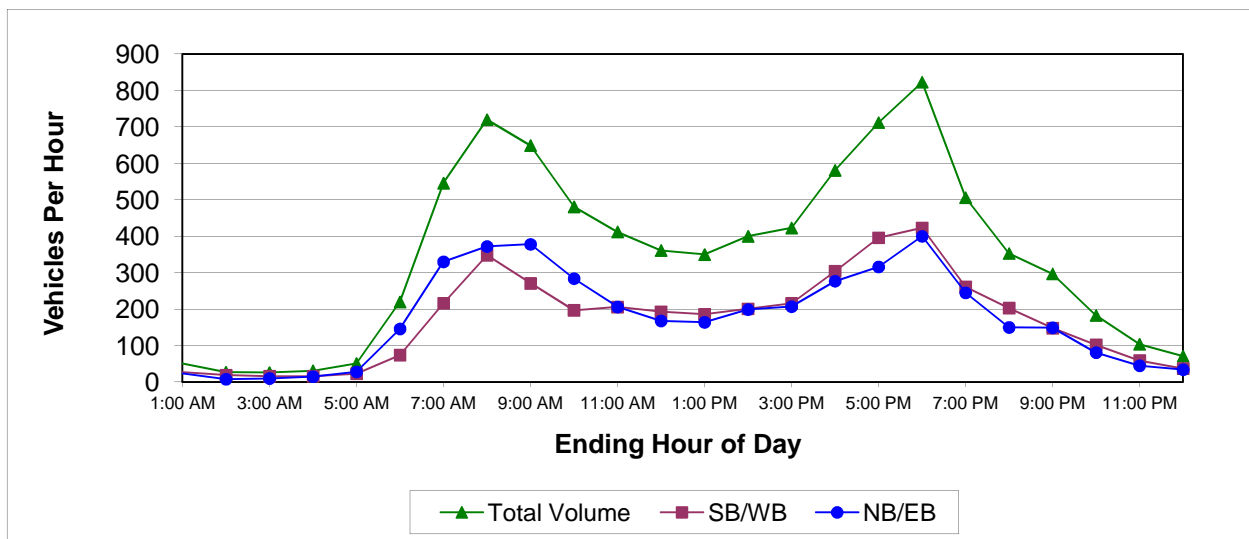
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.8%	D= 51.4%
T Max Hour 14.3%	T daily 11.6%
T med (max) 9.0%	T med Daily 6.9%
T heavy (max) 5.3%	T heavy Daily 4.7%
T Peak Hour 10.2%	
T med Peak Hour 6.7%	Axle Factor 0.92
T heavy Peak Hour 3.5%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

HOURLY 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	27	51	0.57%	0.65%	0.61%
2:00 AM	8	19	27	0.19%	0.46%	0.32%
3:00 AM	10	16	26	0.24%	0.39%	0.31%
4:00 AM	15	16	31	0.35%	0.39%	0.37%
5:00 AM	28	23	51	0.66%	0.56%	0.61%
6:00 AM	146	74	220	3.45%	1.79%	2.63%
7:00 AM	330	216	546	7.79%	5.21%	6.52%
8:00 AM	372	348	720	8.78%	8.40%	8.59%
9:00 AM	378	271	649	8.92%	6.54%	7.75%
10:00 AM	284	197	481	6.70%	4.76%	5.74%
11:00 AM	206	206	412	4.86%	4.97%	4.92%
12:00 PM	168	193	361	3.97%	4.66%	4.31%
1:00 PM	164	186	350	3.87%	4.49%	4.18%
2:00 PM	199	201	400	4.70%	4.85%	4.77%
3:00 PM	207	216	423	4.89%	5.21%	5.05%
4:00 PM	277	304	581	6.54%	7.34%	6.93%
5:00 PM	316	396	712	7.46%	9.56%	8.50%
6:00 PM	400	423	823	9.44%	10.21%	9.82%
7:00 PM	245	261	506	5.78%	6.30%	6.04%
8:00 PM	150	203	353	3.54%	4.90%	4.21%
9:00 PM	149	148	297	3.52%	3.57%	3.54%
10:00 PM	81	102	183	1.91%	2.46%	2.18%
11:00 PM	45	59	104	1.06%	1.42%	1.24%
12:00 AM	34	37	71	0.80%	0.89%	0.85%
<b>TOTALS</b>	<b>4,236</b>	<b>4,142</b>	<b>8,378</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	138	1.65%
Class 2	Cars	4,973	59.36%
Class 3	Pick-Ups & Vans	1,872	22.34%
Class 4	Buses	104	1.24%
Class 5	2 Axle, Single Unit Trucks	474	5.66%
Class 6	3 Axle, Single Unit Trucks	56	0.67%
Class 7	4 Axle, Single Unit Trucks	6	0.07%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	158	1.89%
Class 9	3 Axle Tractor with 2 Axle Trailer	165	1.97%
Class 10	3 Axle Tractor with 3 Axle Trailer	4	0.05%
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	426	5.08%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>8,378</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

TYPE OF COUNT:  
72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/14/2011      Start Time: Midnight  
 End Date: 9/14/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:45 PM
Average Daily:	8,581	Average Peak Hour:	800
Daily Truck Avg:	958	Max Hour Truck Avg:	100
		Peak Hour Truck Avg:	55

TRAVEL CHARACTERISTICS:

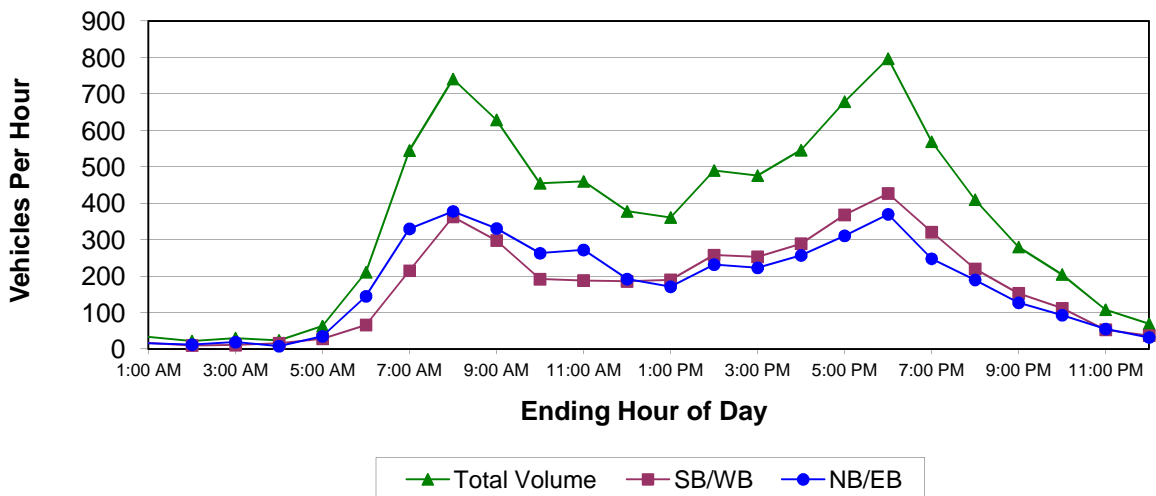
K MEASURED	D MEASURED
K= 9.3%	D= 53.5%
T Max Hour 12.5%	T daily 11.2%
T med (max) 7.9%	T med Daily 6.8%
T heavy (max) 4.6%	T heavy Daily 4.4%
T Peak Hour 6.9%	
T med Peak Hour 3.5%	Axle Factor 0.92
T heavy Peak Hour 3.4%	



## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

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	16	17	33	0.37%	0.40%	0.38%
2:00 AM	12	10	22	0.28%	0.23%	0.26%
3:00 AM	19	11	30	0.44%	0.26%	0.35%
4:00 AM	8	16	24	0.19%	0.37%	0.28%
5:00 AM	35	28	63	0.81%	0.66%	0.73%
6:00 AM	145	66	211	3.36%	1.55%	2.46%
7:00 AM	330	215	545	7.66%	5.03%	6.35%
8:00 AM	378	363	741	8.77%	8.50%	8.64%
9:00 AM	331	298	629	7.68%	6.98%	7.33%
10:00 AM	263	192	455	6.10%	4.50%	5.30%
11:00 AM	272	188	460	6.31%	4.40%	5.36%
12:00 PM	192	186	378	4.45%	4.35%	4.41%
1:00 PM	171	190	361	3.97%	4.45%	4.21%
2:00 PM	232	258	490	5.38%	6.04%	5.71%
3:00 PM	223	253	476	5.17%	5.92%	5.55%
4:00 PM	257	289	546	5.96%	6.77%	6.36%
5:00 PM	311	368	679	7.22%	8.62%	7.91%
6:00 PM	370	427	797	8.58%	10.00%	9.29%
7:00 PM	248	321	569	5.75%	7.52%	6.63%
8:00 PM	190	220	410	4.41%	5.15%	4.78%
9:00 PM	127	153	280	2.95%	3.58%	3.26%
10:00 PM	93	112	205	2.16%	2.62%	2.39%
11:00 PM	55	53	108	1.28%	1.24%	1.26%
12:00 AM	32	37	69	0.74%	0.87%	0.80%
<b>TOTALS</b>	<b>4,310</b>	<b>4,271</b>	<b>8,581</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	123	1.43%
Class 2	Cars	4,994	58.20%
Class 3	Pick-Ups & Vans	2,048	23.87%
Class 4	Buses	117	1.36%
Class 5	2 Axle, Single Unit Trucks	463	5.40%
Class 6	3 Axle, Single Unit Trucks	62	0.72%
Class 7	4 Axle, Single Unit Trucks	7	0.08%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	165	1.92%
Class 9	3 Axle Tractor with 2 Axle Trailer	129	1.50%
Class 10	3 Axle Tractor with 3 Axle Trailer	11	0.13%
Class 11	5 Axle Multi Trailer	3	0.03%
Class 12	6 Axle Multi Trailer	1	0.01%
Class 13	7 or more Axles	0	0.00%
Class 14	Not Used	458	5.34%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>8,581</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

Project Name SR 46  
 Project # 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

TYPE OF COUNT: 72 Hour Classification Count

TIME OF COUNT:  
 Start Date: 9/15/2011      Start Time: Midnight  
 End Date: 9/15/2011      End Time: Midnight

VOLUMES:

		Peak Hour Time:	4:30 PM
Average Daily:	9,115	Average Peak Hour:	856
Daily Truck Avg:	1,050	Max Hour Truck Avg:	112
		Peak Hour Truck Avg:	73

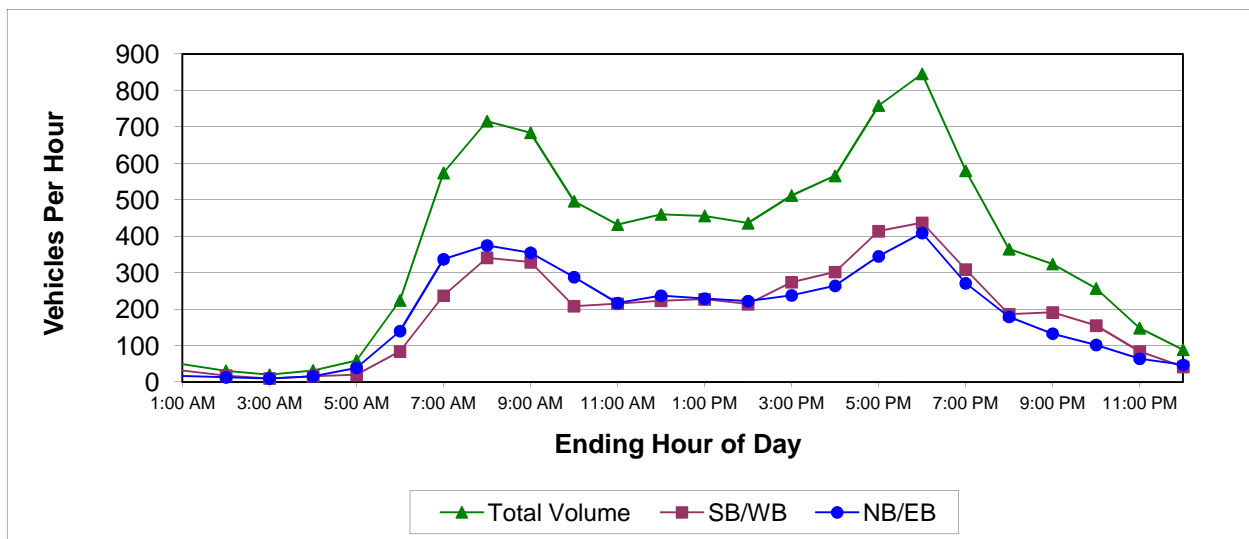
TRAVEL CHARACTERISTICS:

K MEASURED	D MEASURED
K= 9.4%	D= 54.7%
T Max Hour 13.1%	T daily 11.5%
T med (max) 7.9%	T med Daily 6.9%
T heavy (max) 5.1%	T heavy Daily 4.6%
T Peak Hour 8.5%	
T med Peak Hour 5.6%	Axle Factor 0.92
T heavy Peak Hour 2.9%	

## HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

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	17	32	49	0.37%	0.70%	0.54%
2:00 AM	13	18	31	0.29%	0.39%	0.34%
3:00 AM	10	10	20	0.22%	0.22%	0.22%
4:00 AM	16	16	32	0.35%	0.35%	0.35%
5:00 AM	39	20	59	0.86%	0.44%	0.65%
6:00 AM	140	84	224	3.08%	1.84%	2.46%
7:00 AM	337	237	574	7.41%	5.19%	6.30%
8:00 AM	375	341	716	8.25%	7.46%	7.86%
9:00 AM	355	329	684	7.81%	7.20%	7.50%
10:00 AM	288	208	496	6.33%	4.55%	5.44%
11:00 AM	217	215	432	4.77%	4.71%	4.74%
12:00 PM	237	223	460	5.21%	4.88%	5.05%
1:00 PM	229	227	456	5.04%	4.97%	5.00%
2:00 PM	222	214	436	4.88%	4.68%	4.78%
3:00 PM	238	274	512	5.23%	6.00%	5.62%
4:00 PM	264	302	566	5.81%	6.61%	6.21%
5:00 PM	345	414	759	7.59%	9.06%	8.33%
6:00 PM	409	437	846	8.99%	9.57%	9.28%
7:00 PM	271	309	580	5.96%	6.76%	6.36%
8:00 PM	179	186	365	3.94%	4.07%	4.00%
9:00 PM	133	191	324	2.93%	4.18%	3.55%
10:00 PM	102	155	257	2.24%	3.39%	2.82%
11:00 PM	64	84	148	1.41%	1.84%	1.62%
12:00 AM	47	42	89	1.03%	0.92%	0.98%
<b>TOTALS</b>	<b>4,547</b>	<b>4,568</b>	<b>9,115</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



## ANNUAL VEHICLE CLASSIFICATION REPORT

FINANCE NO: SR 46  
 LOCATION CODE: 11-014.01  
 COUNT LOCATION: SR 46 W of CR 426

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	164	1.80%
Class 2	Cars	5,291	58.05%
Class 3	Pick-Ups & Vans	2,122	23.28%
Class 4	Buses	123	1.35%
Class 5	2 Axle, Single Unit Trucks	504	5.53%
Class 6	3 Axle, Single Unit Trucks	55	0.60%
Class 7	4 Axle, Single Unit Trucks	9	0.10%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	195	2.14%
Class 9	3 Axle Tractor with 2 Axle Trailer	153	1.68%
Class 10	3 Axle Tractor with 3 Axle Trailer	7	0.08%
Class 11	5 Axle Multi Trailer	2	0.02%
Class 12	6 Axle Multi Trailer	0	0.00%
Class 13	7 or more Axles	2	0.02%
Class 14	Not Used	488	5.35%
Class 15	Other	0	0.00%
<b>TOTALS</b>		<b>9,115</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	3
<b>COUNT LOCATION</b>	SR 46 East of CR 426
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	30-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	5,965	<b>PEAK HOUR</b>	520
		<b>PEAK END TIME</b>	6:30 PM
		<b>PEAK NB/EB MOVEMENT</b>	304
		<b>PEAK SB/WB MOVEMENT</b>	216

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	8.72%	<b>D=</b>	58.5%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	3
COUNT LOCATION	SR 46 East of CR 426
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	15	23	38	0.52%	0.75%	0.64%
02:00 AM	19	7	26	0.65%	0.23%	0.44%
03:00 AM	10	11	21	0.34%	0.36%	0.35%
04:00 AM	17	7	24	0.58%	0.23%	0.40%
05:00 AM	27	19	46	0.93%	0.62%	0.77%
06:00 AM	78	59	137	2.68%	1.93%	2.30%
07:00 AM	139	198	337	4.78%	6.48%	5.65%
08:00 AM	178	291	469	6.12%	9.53%	7.86%
09:00 AM	157	280	437	5.40%	9.17%	7.33%
10:00 AM	154	218	372	5.29%	7.14%	6.24%
11:00 AM	160	180	340	5.50%	5.89%	5.70%
12:00 PM	154	143	297	5.29%	4.68%	4.98%
01:00 PM	136	192	328	4.67%	6.28%	5.50%
02:00 PM	149	155	304	5.12%	5.07%	5.10%
03:00 PM	166	151	317	5.70%	4.94%	5.31%
04:00 PM	203	210	413	6.98%	6.87%	6.92%
05:00 PM	242	224	466	8.32%	7.33%	7.81%
06:00 PM	265	221	486	9.11%	7.23%	8.15%
07:00 PM	231	181	412	7.94%	5.92%	6.91%
08:00 PM	150	111	261	5.15%	3.63%	4.38%
09:00 PM	108	73	181	3.71%	2.39%	3.03%
10:00 PM	72	47	119	2.47%	1.54%	1.99%
11:00 PM	59	28	87	2.03%	0.92%	1.46%
12:00 AM	21	26	47	0.72%	0.85%	0.79%
<b>TOTALS</b>	<b>2,910</b>	<b>3,055</b>	<b>5,965</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	5
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	15,858	<b>PEAK HOUR</b>	1,632
		<b>PEAK END TIME</b>	5:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	1,195
		<b>PEAK SB/WB MOVEMENT</b>	437

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.29%	<b>D=</b>	73.2%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	5
COUNT LOCATION	E. Lake Mary Blvd., North of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	70	27	96	0.87%	0.34%	0.61%
02:00 AM	36	21	58	0.46%	0.27%	0.36%
03:00 AM	21	18	39	0.27%	0.22%	0.25%
04:00 AM	19	24	44	0.24%	0.31%	0.28%
05:00 AM	26	113	139	0.33%	1.44%	0.88%
06:00 AM	60	386	445	0.75%	4.90%	2.81%
07:00 AM	175	877	1,052	2.19%	11.13%	6.63%
08:00 AM	291	1,150	1,441	3.65%	14.60%	9.09%
09:00 AM	302	863	1,166	3.79%	10.96%	7.35%
10:00 AM	304	470	774	3.80%	5.97%	4.88%
11:00 AM	265	385	650	3.32%	4.89%	4.10%
12:00 PM	287	343	630	3.59%	4.35%	3.97%
01:00 PM	346	360	706	4.34%	4.57%	4.45%
02:00 PM	398	359	757	4.99%	4.56%	4.77%
03:00 PM	462	354	816	5.79%	4.49%	5.15%
04:00 PM	679	344	1,023	8.51%	4.36%	6.45%
05:00 PM	932	397	1,329	11.67%	5.04%	8.38%
06:00 PM	1,192	432	1,624	14.93%	5.48%	10.24%
07:00 PM	798	289	1,086	9.99%	3.66%	6.85%
08:00 PM	461	208	669	5.78%	2.64%	4.22%
09:00 PM	328	171	500	4.11%	2.18%	3.15%
10:00 PM	259	131	390	3.25%	1.67%	2.46%
11:00 PM	164	97	261	2.05%	1.23%	1.64%
12:00 AM	106	58	164	1.33%	0.73%	1.03%
<b>TOTALS</b>	<b>7,981</b>	<b>7,876</b>	<b>15,858</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	5
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	23-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	15,814	<b>PEAK HOUR</b>	1,688
		<b>PEAK END TIME</b>	5:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	1,208
		<b>PEAK SB/WB MOVEMENT</b>	480

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.67%	<b>D=</b>	71.6%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 5  
 COUNT LOCATION E. Lake Mary Blvd., North of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	77	26	103	0.97%	0.33%	0.65%
02:00 AM	27	18	45	0.34%	0.23%	0.28%
03:00 AM	19	16	35	0.24%	0.20%	0.22%
04:00 AM	17	31	48	0.21%	0.39%	0.30%
05:00 AM	29	118	147	0.36%	1.50%	0.93%
06:00 AM	58	390	448	0.73%	4.97%	2.83%
07:00 AM	172	913	1,085	2.16%	11.63%	6.86%
08:00 AM	295	1,113	1,408	3.70%	14.18%	8.90%
09:00 AM	321	881	1,202	4.03%	11.22%	7.60%
10:00 AM	318	462	780	3.99%	5.88%	4.93%
11:00 AM	271	403	674	3.40%	5.13%	4.26%
12:00 PM	306	338	644	3.84%	4.31%	4.07%
01:00 PM	342	342	684	4.29%	4.36%	4.33%
02:00 PM	356	356	712	4.47%	4.53%	4.50%
03:00 PM	437	392	829	5.49%	4.99%	5.24%
04:00 PM	677	342	1,019	8.50%	4.36%	6.44%
05:00 PM	956	378	1,334	12.01%	4.81%	8.44%
06:00 PM	1,199	474	1,673	15.06%	6.04%	10.58%
07:00 PM	833	273	1,106	10.46%	3.48%	6.99%
08:00 PM	466	179	645	5.85%	2.28%	4.08%
09:00 PM	290	155	445	3.64%	1.97%	2.81%
10:00 PM	231	117	348	2.90%	1.49%	2.20%
11:00 PM	170	79	249	2.13%	1.01%	1.57%
12:00 AM	96	55	151	1.21%	0.70%	0.95%
<b>TOTALS</b>	<b>7,963</b>	<b>7,851</b>	<b>15,814</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	5
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	24-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	24-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	16,165	<b>PEAK HOUR</b>	1,633
		<b>PEAK END TIME</b>	5:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	1,204
		<b>PEAK SB/WB MOVEMENT</b>	429

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.10%	<b>D=</b>	73.7%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 5  
**COUNT LOCATION** E. Lake Mary Blvd., North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	65	21	86	0.80%	0.26%	0.53%
02:00 AM	38	24	62	0.47%	0.30%	0.38%
03:00 AM	25	18	43	0.31%	0.22%	0.27%
04:00 AM	17	18	35	0.21%	0.22%	0.22%
05:00 AM	23	102	125	0.28%	1.27%	0.77%
06:00 AM	59	382	441	0.73%	4.75%	2.73%
07:00 AM	168	851	1,019	2.07%	10.59%	6.30%
08:00 AM	323	1,198	1,521	3.97%	14.91%	9.41%
09:00 AM	280	872	1,152	3.44%	10.85%	7.13%
10:00 AM	340	475	815	4.18%	5.91%	5.04%
11:00 AM	266	392	658	3.27%	4.88%	4.07%
12:00 PM	288	358	646	3.54%	4.45%	4.00%
01:00 PM	364	377	741	4.48%	4.69%	4.58%
02:00 PM	435	376	811	5.35%	4.68%	5.02%
03:00 PM	497	326	823	6.11%	4.06%	5.09%
04:00 PM	653	368	1,021	8.03%	4.58%	6.32%
05:00 PM	904	423	1,327	11.12%	5.26%	8.21%
06:00 PM	1,207	424	1,631	14.85%	5.28%	10.09%
07:00 PM	814	293	1,107	10.01%	3.65%	6.85%
08:00 PM	462	231	693	5.68%	2.87%	4.29%
09:00 PM	351	178	529	4.32%	2.21%	3.27%
10:00 PM	290	147	437	3.57%	1.83%	2.70%
11:00 PM	156	114	270	1.92%	1.42%	1.67%
12:00 AM	103	69	172	1.27%	0.86%	1.06%
<b>TOTALS</b>	<b>8,128</b>	<b>8,037</b>	<b>16,165</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	5
COUNT LOCATION	E. Lake Mary Blvd., North of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	25-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	15,594	<b>PEAK HOUR</b>	1,576
		<b>PEAK END TIME</b>	5:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	1,173
		<b>PEAK SB/WB MOVEMENT</b>	403

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.11%	<b>D=</b>	74.4%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 5  
**COUNT LOCATION** E. Lake Mary Blvd., North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	67	33	100	0.85%	0.43%	0.64%
02:00 AM	44	22	66	0.56%	0.28%	0.42%
03:00 AM	20	19	39	0.25%	0.25%	0.25%
04:00 AM	24	24	48	0.31%	0.31%	0.31%
05:00 AM	26	120	146	0.33%	1.55%	0.94%
06:00 AM	62	385	447	0.79%	4.97%	2.87%
07:00 AM	185	866	1,051	2.36%	11.19%	6.74%
08:00 AM	255	1,139	1,394	3.25%	14.71%	8.94%
09:00 AM	306	837	1,143	3.90%	10.81%	7.33%
10:00 AM	253	473	726	3.22%	6.11%	4.66%
11:00 AM	258	360	618	3.29%	4.65%	3.96%
12:00 PM	266	333	599	3.39%	4.30%	3.84%
01:00 PM	332	361	693	4.23%	4.66%	4.44%
02:00 PM	403	345	748	5.13%	4.46%	4.80%
03:00 PM	452	344	796	5.76%	4.44%	5.10%
04:00 PM	708	321	1,029	9.02%	4.15%	6.60%
05:00 PM	935	390	1,325	11.91%	5.04%	8.50%
06:00 PM	1,170	398	1,568	14.90%	5.14%	10.06%
07:00 PM	746	300	1,046	9.50%	3.88%	6.71%
08:00 PM	456	213	669	5.81%	2.75%	4.29%
09:00 PM	344	181	525	4.38%	2.34%	3.37%
10:00 PM	256	130	386	3.26%	1.68%	2.48%
11:00 PM	165	98	263	2.10%	1.27%	1.69%
12:00 AM	120	49	169	1.53%	0.63%	1.08%
<b>TOTALS</b>	<b>7,853</b>	<b>7,741</b>	<b>15,594</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	4
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	9,263	<b>PEAK HOUR</b>	1,002
		<b>PEAK END TIME</b>	8:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	145
		<b>PEAK SB/WB MOVEMENT</b>	857

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.81%	<b>D=</b>	85.6%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	4
COUNT LOCATION	E. Lake Mary Blvd., South of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	24	15	39	0.61%	0.27%	0.42%
02:00 AM	12	13	25	0.31%	0.24%	0.27%
03:00 AM	13	12	26	0.34%	0.23%	0.28%
04:00 AM	10	20	30	0.26%	0.38%	0.33%
05:00 AM	10	81	91	0.25%	1.52%	0.98%
06:00 AM	33	238	271	0.84%	4.45%	2.92%
07:00 AM	85	616	701	2.16%	11.53%	7.56%
08:00 AM	137	843	980	3.49%	15.78%	10.58%
09:00 AM	153	607	760	3.90%	11.37%	8.20%
10:00 AM	129	316	445	3.29%	5.91%	4.80%
11:00 AM	109	264	373	2.79%	4.94%	4.03%
12:00 PM	125	251	375	3.18%	4.69%	4.05%
01:00 PM	148	257	405	3.78%	4.81%	4.37%
02:00 PM	169	239	408	4.30%	4.48%	4.40%
03:00 PM	209	244	453	5.32%	4.57%	4.89%
04:00 PM	365	233	598	9.32%	4.35%	6.46%
05:00 PM	500	266	766	12.76%	4.98%	8.27%
06:00 PM	662	260	922	16.89%	4.87%	9.96%
07:00 PM	396	182	578	10.10%	3.41%	6.24%
08:00 PM	225	125	350	5.75%	2.33%	3.78%
09:00 PM	159	93	252	4.05%	1.74%	2.72%
10:00 PM	122	80	202	3.11%	1.49%	2.18%
11:00 PM	76	52	128	1.95%	0.97%	1.39%
12:00 AM	49	36	86	1.26%	0.68%	0.92%
<b>TOTALS</b>	<b>3,919</b>	<b>5,343</b>	<b>9,263</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	4
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	23-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,304	<b>PEAK HOUR</b>	1,035
		<b>PEAK END TIME</b>	8:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	180
		<b>PEAK SB/WB MOVEMENT</b>	855

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	11.12%	<b>D=</b>	82.6%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 4  
**COUNT LOCATION** E. Lake Mary Blvd., South of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	28	11	39	0.70%	0.21%	0.42%
02:00 AM	14	8	22	0.35%	0.15%	0.24%
03:00 AM	11	13	24	0.28%	0.24%	0.26%
04:00 AM	9	25	34	0.23%	0.47%	0.37%
05:00 AM	15	89	104	0.38%	1.67%	1.12%
06:00 AM	43	240	283	1.08%	4.50%	3.04%
07:00 AM	83	616	699	2.09%	11.56%	7.51%
08:00 AM	152	835	987	3.82%	15.67%	10.61%
09:00 AM	165	606	771	4.15%	11.37%	8.29%
10:00 AM	168	339	507	4.23%	6.36%	5.45%
11:00 AM	122	251	373	3.07%	4.71%	4.01%
12:00 PM	132	252	384	3.32%	4.73%	4.13%
01:00 PM	138	251	389	3.47%	4.71%	4.18%
02:00 PM	129	210	339	3.24%	3.94%	3.64%
03:00 PM	195	279	474	4.90%	5.24%	5.09%
04:00 PM	380	237	617	9.56%	4.45%	6.63%
05:00 PM	506	246	752	12.73%	4.62%	8.08%
06:00 PM	675	286	961	16.98%	5.37%	10.33%
07:00 PM	438	201	639	11.02%	3.77%	6.87%
08:00 PM	226	111	337	5.68%	2.08%	3.62%
09:00 PM	146	74	220	3.67%	1.39%	2.36%
10:00 PM	103	72	175	2.59%	1.35%	1.88%
11:00 PM	61	46	107	1.53%	0.86%	1.15%
12:00 AM	37	30	67	0.93%	0.56%	0.72%
<b>TOTALS</b>	<b>3,976</b>	<b>5,328</b>	<b>9,304</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	4
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	24-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	24-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,261	<b>PEAK HOUR</b>	1,008
		<b>PEAK END TIME</b>	8:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	124
		<b>PEAK SB/WB MOVEMENT</b>	884

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.88%	<b>D=</b>	87.7%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	4
COUNT LOCATION	E. Lake Mary Blvd., South of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	18	13	31	0.47%	0.24%	0.33%
02:00 AM	9	15	24	0.23%	0.28%	0.26%
03:00 AM	21	15	36	0.54%	0.28%	0.39%
04:00 AM	11	19	30	0.28%	0.35%	0.32%
05:00 AM	9	70	79	0.23%	1.30%	0.85%
06:00 AM	19	219	238	0.49%	4.06%	2.57%
07:00 AM	86	617	703	2.23%	11.43%	7.59%
08:00 AM	136	869	1,005	3.52%	16.10%	10.85%
09:00 AM	147	622	769	3.81%	11.52%	8.30%
10:00 AM	118	284	402	3.05%	5.26%	4.34%
11:00 AM	89	268	357	2.30%	4.96%	3.85%
12:00 PM	104	257	361	2.69%	4.76%	3.90%
01:00 PM	149	242	391	3.86%	4.48%	4.22%
02:00 PM	180	282	462	4.66%	5.22%	4.99%
03:00 PM	224	242	466	5.80%	4.48%	5.03%
04:00 PM	346	247	593	8.96%	4.58%	6.40%
05:00 PM	506	282	788	13.10%	5.22%	8.51%
06:00 PM	676	233	909	17.50%	4.32%	9.82%
07:00 PM	387	174	561	10.02%	3.22%	6.06%
08:00 PM	222	149	371	5.75%	2.76%	4.01%
09:00 PM	158	104	262	4.09%	1.93%	2.83%
10:00 PM	135	85	220	3.49%	1.57%	2.38%
11:00 PM	69	42	111	1.79%	0.78%	1.20%
12:00 AM	44	48	92	1.14%	0.89%	0.99%
<b>TOTALS</b>	<b>3,863</b>	<b>5,398</b>	<b>9,261</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	4
<b>COUNT LOCATION</b>	E. Lake Mary Blvd., South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	25-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,223	<b>PEAK HOUR</b>	962
		<b>PEAK END TIME</b>	8:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	130
		<b>PEAK SB/WB MOVEMENT</b>	832

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.43%	<b>D=</b>	86.5%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	4
COUNT LOCATION	E. Lake Mary Blvd., South of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	26	20	46	0.66%	0.38%	0.50%
02:00 AM	13	16	29	0.33%	0.30%	0.31%
03:00 AM	8	9	17	0.20%	0.17%	0.18%
04:00 AM	10	17	27	0.26%	0.32%	0.29%
05:00 AM	5	84	89	0.13%	1.58%	0.96%
06:00 AM	37	254	291	0.94%	4.79%	3.16%
07:00 AM	85	615	700	2.17%	11.60%	7.59%
08:00 AM	122	826	948	3.11%	15.57%	10.28%
09:00 AM	146	594	740	3.73%	11.20%	8.02%
10:00 AM	101	324	425	2.58%	6.11%	4.61%
11:00 AM	117	273	390	2.99%	5.15%	4.23%
12:00 PM	138	243	381	3.52%	4.58%	4.13%
01:00 PM	157	278	435	4.01%	5.24%	4.72%
02:00 PM	197	226	423	5.03%	4.26%	4.59%
03:00 PM	207	211	418	5.28%	3.98%	4.53%
04:00 PM	370	214	584	9.44%	4.03%	6.33%
05:00 PM	488	270	758	12.45%	5.09%	8.22%
06:00 PM	635	262	897	16.20%	4.94%	9.73%
07:00 PM	363	172	535	9.26%	3.24%	5.80%
08:00 PM	228	114	342	5.82%	2.15%	3.71%
09:00 PM	172	101	273	4.39%	1.90%	2.96%
10:00 PM	128	82	210	3.27%	1.55%	2.28%
11:00 PM	99	68	167	2.53%	1.28%	1.81%
12:00 AM	67	31	98	1.71%	0.58%	1.06%
<b>TOTALS</b>	<b>3,919</b>	<b>5,304</b>	<b>9,223</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	Richmond Avenue, South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	30-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	244	<b>PEAK HOUR</b>	36
		<b>PEAK END TIME</b>	8:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	15
		<b>PEAK SB/WB MOVEMENT</b>	21

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	14.75%	<b>D=</b>	58.3%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	1
COUNT LOCATION	Richmond Avenue, South of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	0	0	0	0.00%	0.00%	0.00%
02:00 AM	0	1	1	0.00%	0.85%	0.41%
03:00 AM	0	0	0	0.00%	0.00%	0.00%
04:00 AM	0	1	1	0.00%	0.85%	0.41%
05:00 AM	0	0	0	0.00%	0.00%	0.00%
06:00 AM	2	0	2	1.57%	0.00%	0.82%
07:00 AM	4	6	10	3.15%	5.13%	4.10%
08:00 AM	12	21	33	9.45%	17.95%	13.52%
09:00 AM	10	11	21	7.87%	9.40%	8.61%
10:00 AM	9	4	13	7.09%	3.42%	5.33%
11:00 AM	8	9	17	6.30%	7.69%	6.97%
12:00 PM	9	7	16	7.09%	5.98%	6.56%
01:00 PM	7	9	16	5.51%	7.69%	6.56%
02:00 PM	7	8	15	5.51%	6.84%	6.15%
03:00 PM	10	3	13	7.87%	2.56%	5.33%
04:00 PM	14	5	19	11.02%	4.27%	7.79%
05:00 PM	4	7	11	3.15%	5.98%	4.51%
06:00 PM	12	6	18	9.45%	5.13%	7.38%
07:00 PM	8	10	18	6.30%	8.55%	7.38%
08:00 PM	5	3	8	3.94%	2.56%	3.28%
09:00 PM	0	3	3	0.00%	2.56%	1.23%
10:00 PM	4	1	5	3.15%	0.85%	2.05%
11:00 PM	0	0	0	0.00%	0.00%	0.00%
12:00 AM	2	2	4	1.57%	1.71%	1.64%
<b>TOTALS</b>	<b>127</b>	<b>117</b>	<b>244</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Old Geneva(1Hr)                      & SR 46

**Date**                      September 15, 2011

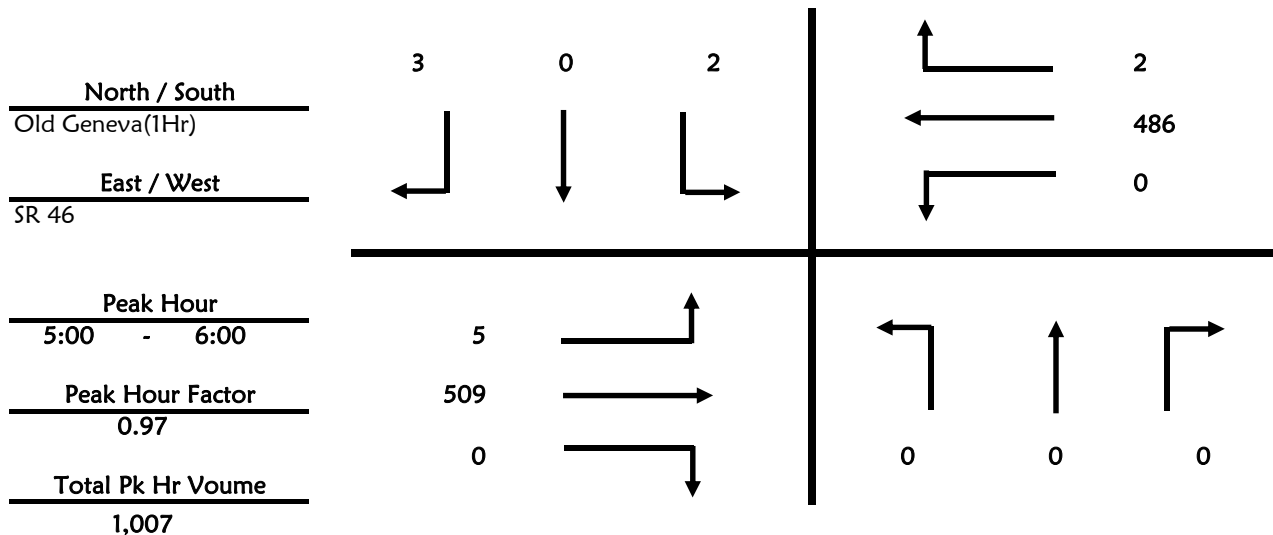
**All Vehicles**

**Time Period**              PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	1	0	2
5:30 - 5:45	0	0	0	1	0	0
5:45 - 6:00	0	0	0	0	0	1
	0	0	0	2	0	3

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	126	0	0	114	1
5:15 - 5:30	2	115	0	0	128	1
5:30 - 5:45	3	134	0	0	122	0
5:45 - 6:00	0	134	0	0	122	0
	5	509	0	0	486	2



# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	6
<b>COUNT LOCATION</b>	Osceola Road, East of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	2,243	<b>PEAK HOUR</b>	198
		<b>PEAK END TIME</b>	4:30 PM
		<b>PEAK NB/EB MOVEMENT</b>	75
		<b>PEAK SB/WB MOVEMENT</b>	123

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	8.81%	<b>D=</b>	62.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 6  
**COUNT LOCATION** Osceola Road, East of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	4	6	9	0.33%	0.49%	0.42%
02:00 AM	6	2	7	0.52%	0.15%	0.33%
03:00 AM	5	3	8	0.46%	0.29%	0.37%
04:00 AM	4	2	6	0.33%	0.20%	0.27%
05:00 AM	9	1	10	0.79%	0.12%	0.45%
06:00 AM	25	7	32	2.31%	0.61%	1.44%
07:00 AM	79	31	110	7.21%	2.73%	4.92%
08:00 AM	104	39	143	9.46%	3.43%	6.38%
09:00 AM	102	46	148	9.34%	4.01%	6.61%
10:00 AM	80	58	138	7.27%	5.06%	6.14%
11:00 AM	82	53	135	7.49%	4.65%	6.03%
12:00 PM	60	59	120	5.51%	5.17%	5.34%
01:00 PM	55	68	122	4.99%	5.90%	5.45%
02:00 PM	67	82	149	6.12%	7.18%	6.66%
03:00 PM	66	86	152	6.03%	7.50%	6.78%
04:00 PM	77	89	166	7.03%	7.79%	7.42%
05:00 PM	74	121	195	6.76%	10.58%	8.71%
06:00 PM	61	110	171	5.60%	9.56%	7.62%
07:00 PM	48	76	124	4.41%	6.60%	5.53%
08:00 PM	40	56	97	3.68%	4.91%	4.31%
09:00 PM	20	57	77	1.86%	4.94%	3.43%
10:00 PM	18	33	51	1.61%	2.91%	2.27%
11:00 PM	8	48	56	0.70%	4.21%	2.50%
12:00 AM	2	12	14	0.18%	1.05%	0.62%
<b>TOTALS</b>	<b>1,095</b>	<b>1,147</b>	<b>2,243</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	6
COUNT LOCATION	Osceola Road, East of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	13-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	2,200	<b>PEAK HOUR</b>	215
		<b>PEAK END TIME</b>	5:15 PM
		<b>PEAK NB/EB MOVEMENT</b>	75
		<b>PEAK SB/WB MOVEMENT</b>	140

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.77%	<b>D=</b>	65.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 6  
 COUNT LOCATION Osceola Road, East of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	2	9	11	0.19%	0.79%	0.50%
02:00 AM	3	1	4	0.28%	0.09%	0.18%
03:00 AM	5	4	9	0.47%	0.35%	0.41%
04:00 AM	5	1	6	0.47%	0.09%	0.27%
05:00 AM	7	1	8	0.66%	0.09%	0.36%
06:00 AM	21	8	29	1.98%	0.70%	1.32%
07:00 AM	78	26	104	7.34%	2.28%	4.73%
08:00 AM	99	40	139	9.32%	3.51%	6.32%
09:00 AM	107	51	158	10.08%	4.48%	7.18%
10:00 AM	85	49	134	8.00%	4.31%	6.09%
11:00 AM	65	60	125	6.12%	5.27%	5.68%
12:00 PM	57	49	106	5.37%	4.31%	4.82%
01:00 PM	71	67	138	6.69%	5.89%	6.27%
02:00 PM	68	85	153	6.40%	7.47%	6.95%
03:00 PM	67	75	142	6.31%	6.59%	6.45%
04:00 PM	75	89	164	7.06%	7.82%	7.45%
05:00 PM	75	132	207	7.06%	11.60%	9.41%
06:00 PM	60	114	174	5.65%	10.02%	7.91%
07:00 PM	43	68	111	4.05%	5.98%	5.05%
08:00 PM	28	58	86	2.64%	5.10%	3.91%
09:00 PM	17	61	78	1.60%	5.36%	3.55%
10:00 PM	20	31	51	1.88%	2.72%	2.32%
11:00 PM	3	43	46	0.28%	3.78%	2.09%
12:00 AM	1	16	17	0.09%	1.41%	0.77%
<b>TOTALS</b>	<b>1,062</b>	<b>1,138</b>	<b>2,200</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	6
<b>COUNT LOCATION</b>	Osceola Road, East of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	14-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	16-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	2,223	<b>PEAK HOUR</b>	207
		<b>PEAK END TIME</b>	4:30 PM
		<b>PEAK NB/EB MOVEMENT</b>	68
		<b>PEAK SB/WB MOVEMENT</b>	139

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.31%	<b>D=</b>	67.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	6
COUNT LOCATION	Osceola Road, East of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	5	5	10	0.44%	0.46%	0.45%
02:00 AM	7	2	9	0.62%	0.18%	0.40%
03:00 AM	4	2	6	0.35%	0.18%	0.27%
04:00 AM	4	1	5	0.35%	0.09%	0.22%
05:00 AM	11	2	13	0.98%	0.18%	0.58%
06:00 AM	29	6	35	2.57%	0.55%	1.57%
07:00 AM	83	30	113	7.36%	2.74%	5.08%
08:00 AM	104	38	142	9.23%	3.47%	6.39%
09:00 AM	111	32	143	9.85%	2.92%	6.43%
10:00 AM	85	67	152	7.54%	6.11%	6.84%
11:00 AM	82	43	125	7.28%	3.92%	5.62%
12:00 PM	57	53	110	5.06%	4.84%	4.95%
01:00 PM	40	67	107	3.55%	6.11%	4.81%
02:00 PM	68	76	144	6.03%	6.93%	6.48%
03:00 PM	70	113	183	6.21%	10.31%	8.23%
04:00 PM	70	85	155	6.21%	7.76%	6.97%
05:00 PM	72	121	193	6.39%	11.04%	8.68%
06:00 PM	58	101	159	5.15%	9.22%	7.15%
07:00 PM	48	68	116	4.26%	6.20%	5.22%
08:00 PM	51	56	107	4.53%	5.11%	4.81%
09:00 PM	26	50	76	2.31%	4.56%	3.42%
10:00 PM	22	27	49	1.95%	2.46%	2.20%
11:00 PM	16	40	56	1.42%	3.65%	2.52%
12:00 AM	4	11	15	0.35%	1.00%	0.67%
<b>TOTALS</b>	<b>1,127</b>	<b>1,096</b>	<b>2,223</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	6
<b>COUNT LOCATION</b>	Osceola Road, East of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	15-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	2,305	<b>PEAK HOUR</b>	198
		<b>PEAK END TIME</b>	4:30 PM
		<b>PEAK NB/EB MOVEMENT</b>	83
		<b>PEAK SB/WB MOVEMENT</b>	115

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	8.59%	<b>D=</b>	58.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	6
COUNT LOCATION	Osceola Road, East of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	4	3	7	0.36%	0.25%	0.30%
02:00 AM	7	2	9	0.64%	0.17%	0.39%
03:00 AM	6	4	10	0.55%	0.33%	0.43%
04:00 AM	2	5	7	0.18%	0.41%	0.30%
05:00 AM	8	1	9	0.73%	0.08%	0.39%
06:00 AM	26	7	33	2.37%	0.58%	1.43%
07:00 AM	76	38	114	6.93%	3.15%	4.95%
08:00 AM	108	40	148	9.85%	3.31%	6.42%
09:00 AM	89	55	144	8.11%	4.55%	6.25%
10:00 AM	69	58	127	6.29%	4.80%	5.51%
11:00 AM	99	57	156	9.02%	4.72%	6.77%
12:00 PM	67	76	143	6.11%	6.29%	6.20%
01:00 PM	53	69	122	4.83%	5.71%	5.29%
02:00 PM	65	86	151	5.93%	7.12%	6.55%
03:00 PM	61	70	131	5.56%	5.79%	5.68%
04:00 PM	86	94	180	7.84%	7.78%	7.81%
05:00 PM	75	111	186	6.84%	9.19%	8.07%
06:00 PM	66	114	180	6.02%	9.44%	7.81%
07:00 PM	54	91	145	4.92%	7.53%	6.29%
08:00 PM	42	55	97	3.83%	4.55%	4.21%
09:00 PM	18	59	77	1.64%	4.88%	3.34%
10:00 PM	11	42	53	1.00%	3.48%	2.30%
11:00 PM	4	62	66	0.36%	5.13%	2.86%
12:00 AM	1	9	10	0.09%	0.75%	0.43%
<b>TOTALS</b>	<b>1,097</b>	<b>1,208</b>	<b>2,305</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	7
<b>COUNT LOCATION</b>	Mullet Lake Park Road, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	693	<b>PEAK HOUR</b>	60
		<b>PEAK END TIME</b>	7:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	37
		<b>PEAK SB/WB MOVEMENT</b>	23

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	8.70%	<b>D=</b>	61.3%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 7  
**COUNT LOCATION** Mullet Lake Park Road, North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	3	4	7	0.79%	1.13%	0.96%
02:00 AM	3	1	4	0.79%	0.38%	0.58%
03:00 AM	1	0	1	0.30%	0.09%	0.19%
04:00 AM	0	0	0	0.10%	0.00%	0.05%
05:00 AM	0	3	3	0.00%	0.75%	0.38%
06:00 AM	0	10	10	0.10%	2.82%	1.49%
07:00 AM	8	27	35	2.26%	7.71%	5.05%
08:00 AM	13	31	44	3.84%	8.65%	6.30%
09:00 AM	22	37	59	6.50%	10.34%	8.46%
10:00 AM	12	27	39	3.64%	7.61%	5.67%
11:00 AM	15	18	33	4.53%	5.08%	4.81%
12:00 PM	15	17	32	4.43%	4.89%	4.66%
01:00 PM	19	20	40	5.71%	5.73%	5.72%
02:00 PM	12	15	28	3.64%	4.32%	3.99%
03:00 PM	22	20	43	6.59%	5.73%	6.15%
04:00 PM	24	18	42	7.19%	5.08%	6.11%
05:00 PM	25	19	44	7.48%	5.36%	6.39%
06:00 PM	29	17	46	8.56%	4.70%	6.59%
07:00 PM	37	23	60	10.93%	6.58%	8.70%
08:00 PM	26	17	43	7.68%	4.79%	6.20%
09:00 PM	23	12	35	6.79%	3.29%	5.00%
10:00 PM	14	8	23	4.23%	2.35%	3.27%
11:00 PM	8	7	15	2.36%	1.88%	2.12%
12:00 AM	5	3	8	1.57%	0.75%	1.15%
<b>TOTALS</b>	<b>339</b>	<b>355</b>	<b>693</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	7
<b>COUNT LOCATION</b>	Mullet Lake Park Road, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	23-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	682	<b>PEAK HOUR</b>	62
		<b>PEAK END TIME</b>	9:00 AM
		<b>PEAK NB/EB MOVEMENT</b>	24
		<b>PEAK SB/WB MOVEMENT</b>	38

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.09%	<b>D=</b>	61.3%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	7
COUNT LOCATION	Mullet Lake Park Road, North of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	3	2	5	0.90%	0.57%	0.73%
02:00 AM	3	2	5	0.90%	0.57%	0.73%
03:00 AM	2	0	2	0.60%	0.00%	0.29%
04:00 AM	0	0	0	0.00%	0.00%	0.00%
05:00 AM	0	2	2	0.00%	0.57%	0.29%
06:00 AM	0	10	10	0.00%	2.86%	1.47%
07:00 AM	8	34	42	2.41%	9.71%	6.16%
08:00 AM	13	34	47	3.92%	9.71%	6.89%
09:00 AM	24	38	62	7.23%	10.86%	9.09%
10:00 AM	14	24	38	4.22%	6.86%	5.57%
11:00 AM	13	22	35	3.92%	6.29%	5.13%
12:00 PM	17	20	37	5.12%	5.71%	5.43%
01:00 PM	18	22	40	5.42%	6.29%	5.87%
02:00 PM	20	14	34	6.02%	4.00%	4.99%
03:00 PM	13	15	28	3.92%	4.29%	4.11%
04:00 PM	24	20	44	7.23%	5.71%	6.45%
05:00 PM	27	18	45	8.13%	5.14%	6.60%
06:00 PM	31	14	45	9.34%	4.00%	6.60%
07:00 PM	33	21	54	9.94%	6.00%	7.92%
08:00 PM	28	13	41	8.43%	3.71%	6.01%
09:00 PM	23	10	33	6.93%	2.86%	4.84%
10:00 PM	12	9	21	3.61%	2.57%	3.08%
11:00 PM	4	5	9	1.20%	1.43%	1.32%
12:00 AM	2	1	3	0.60%	0.29%	0.44%
<b>TOTALS</b>	<b>332</b>	<b>350</b>	<b>682</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	7
<b>COUNT LOCATION</b>	Mullet Lake Park Road, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	24-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	24-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	733	<b>PEAK HOUR</b>	68
		<b>PEAK END TIME</b>	7:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	40
		<b>PEAK SB/WB MOVEMENT</b>	28

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.28%	<b>D=</b>	58.8%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	7
COUNT LOCATION	Mullet Lake Park Road, North of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	0	0	0	0.00%	0.00%	0.00%
02:00 AM	2	0	2	0.54%	0.00%	0.27%
03:00 AM	1	1	2	0.27%	0.28%	0.27%
04:00 AM	0	0	0	0.00%	0.00%	0.00%
05:00 AM	0	2	2	0.00%	0.55%	0.27%
06:00 AM	1	11	12	0.27%	3.04%	1.64%
07:00 AM	9	26	35	2.43%	7.18%	4.77%
08:00 AM	13	25	38	3.50%	6.91%	5.18%
09:00 AM	20	42	62	5.39%	11.60%	8.46%
10:00 AM	8	27	35	2.16%	7.46%	4.77%
11:00 AM	25	18	43	6.74%	4.97%	5.87%
12:00 PM	18	14	32	4.85%	3.87%	4.37%
01:00 PM	21	22	43	5.66%	6.08%	5.87%
02:00 PM	12	20	32	3.23%	5.52%	4.37%
03:00 PM	33	20	53	8.89%	5.52%	7.23%
04:00 PM	26	11	37	7.01%	3.04%	5.05%
05:00 PM	29	18	47	7.82%	4.97%	6.41%
06:00 PM	24	20	44	6.47%	5.52%	6.00%
07:00 PM	40	28	68	10.78%	7.73%	9.28%
08:00 PM	28	25	53	7.55%	6.91%	7.23%
09:00 PM	30	12	42	8.09%	3.31%	5.73%
10:00 PM	16	10	26	4.31%	2.76%	3.55%
11:00 PM	7	5	12	1.89%	1.38%	1.64%
12:00 AM	8	5	13	2.16%	1.38%	1.77%
<b>TOTALS</b>	<b>371</b>	<b>362</b>	<b>733</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	7
<b>COUNT LOCATION</b>	Mullet Lake Park Road, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	25-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	665	<b>PEAK HOUR</b>	63
		<b>PEAK END TIME</b>	6:45 PM
		<b>PEAK NB/EB MOVEMENT</b>	39
		<b>PEAK SB/WB MOVEMENT</b>	24

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.47%	<b>D=</b>	61.9%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT	SR 46
LOCATION CODE	7
COUNT LOCATION	Mullet Lake Park Road, North of SR 46
GMB PROJECT NO.	11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	5	10	15	1.60%	2.84%	2.26%
02:00 AM	3	2	5	0.96%	0.57%	0.75%
03:00 AM	0	0	0	0.00%	0.00%	0.00%
04:00 AM	1	0	1	0.32%	0.00%	0.15%
05:00 AM	0	4	4	0.00%	1.14%	0.60%
06:00 AM	0	9	9	0.00%	2.56%	1.35%
07:00 AM	6	22	28	1.92%	6.25%	4.21%
08:00 AM	13	33	46	4.15%	9.38%	6.92%
09:00 AM	22	30	52	7.03%	8.52%	7.82%
10:00 AM	15	30	45	4.79%	8.52%	6.77%
11:00 AM	8	14	22	2.56%	3.98%	3.31%
12:00 PM	10	18	28	3.19%	5.11%	4.21%
01:00 PM	19	17	36	6.07%	4.83%	5.41%
02:00 PM	5	12	17	1.60%	3.41%	2.56%
03:00 PM	21	26	47	6.71%	7.39%	7.07%
04:00 PM	23	23	46	7.35%	6.53%	6.92%
05:00 PM	20	21	41	6.39%	5.97%	6.17%
06:00 PM	32	16	48	10.22%	4.55%	7.22%
07:00 PM	38	21	59	12.14%	5.97%	8.87%
08:00 PM	22	13	35	7.03%	3.69%	5.26%
09:00 PM	16	13	29	5.11%	3.69%	4.36%
10:00 PM	15	6	21	4.79%	1.70%	3.16%
11:00 PM	13	10	23	4.15%	2.84%	3.46%
12:00 AM	6	2	8	1.92%	0.57%	1.20%
<b>TOTALS</b>	<b>313</b>	<b>352</b>	<b>665</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	3
COUNT LOCATION	Ridge Road, East of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	285	<b>PEAK HOUR</b>	30
		<b>PEAK END TIME</b>	9:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	10
		<b>PEAK SB/WB MOVEMENT</b>	20

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.53%	<b>D=</b>	66.7%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 3  
 COUNT LOCATION Ridge Road, East of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	2	0	2	1.60%	0.00%	0.70%
02:00 AM	0	0	0	0.00%	0.00%	0.00%
03:00 AM	1	1	2	0.80%	0.63%	0.70%
04:00 AM	0	1	1	0.00%	0.63%	0.35%
05:00 AM	0	2	2	0.00%	1.25%	0.70%
06:00 AM	0	2	2	0.00%	1.25%	0.70%
07:00 AM	6	9	15	4.80%	5.63%	5.26%
08:00 AM	5	14	19	4.00%	8.75%	6.67%
09:00 AM	6	15	21	4.80%	9.38%	7.37%
10:00 AM	8	18	26	6.40%	11.25%	9.12%
11:00 AM	3	9	12	2.40%	5.63%	4.21%
12:00 PM	6	4	10	4.80%	2.50%	3.51%
01:00 PM	5	12	17	4.00%	7.50%	5.96%
02:00 PM	7	11	18	5.60%	6.88%	6.32%
03:00 PM	8	6	14	6.40%	3.75%	4.91%
04:00 PM	8	15	23	6.40%	9.38%	8.07%
05:00 PM	11	6	17	8.80%	3.75%	5.96%
06:00 PM	12	17	29	9.60%	10.63%	10.18%
07:00 PM	16	4	20	12.80%	2.50%	7.02%
08:00 PM	10	5	15	8.00%	3.13%	5.26%
09:00 PM	3	1	4	2.40%	0.63%	1.40%
10:00 PM	5	6	11	4.00%	3.75%	3.86%
11:00 PM	3	2	5	2.40%	1.25%	1.75%
12:00 AM	0	0	0	0.00%	0.00%	0.00%
<b>TOTALS</b>	<b>125</b>	<b>160</b>	<b>285</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** Cochran Rd & SR 46

**Date** August 23, 2011

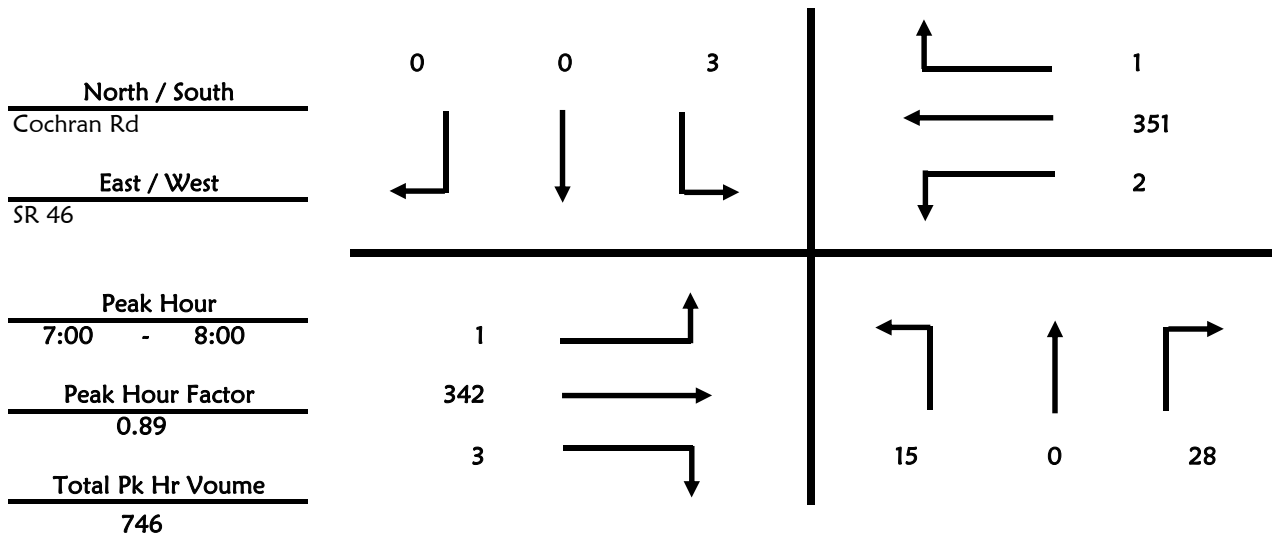
**All Vehicles**

**Time Period** AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	0	5	2	0	0
7:15 - 7:30	4	0	9	0	0	0
7:30 - 7:45	6	0	7	0	0	0
7:45 - 8:00	2	0	7	1	0	0
8:00 - 8:15	4	0	6	0	0	0
8:15 - 8:30	5	0	8	0	0	0
8:30 - 8:45	2	1	5	0	1	0
8:45 - 9:00	4	0	4	0	0	0
	30	1	51	3	1	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	91	0	1	75	0
7:15 - 7:30	0	78	2	1	88	0
7:30 - 7:45	1	88	0	0	107	1
7:45 - 8:00	0	85	1	0	81	0
8:00 - 8:15	0	69	1	2	71	0
8:15 - 8:30	1	78	3	7	82	1
8:30 - 8:45	1	71	2	3	67	0
8:45 - 9:00	0	59	2	4	39	1
	3	619	11	18	610	3



# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	5
<b>COUNT LOCATION</b>	Cochran Road, West of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
 24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	757	<b>PEAK HOUR</b>	82
		<b>PEAK END TIME</b>	8:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	64
		<b>PEAK SB/WB MOVEMENT</b>	18

**MEASURED TRAVEL CHARACTERISTICS:**  
 "Peak to Daily Ratio"

<b>K=</b>	10.83%	<b>D=</b>	78.0%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 5  
 COUNT LOCATION Cochran Road, West of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	2	7	9	0.49%	2.01%	1.19%
02:00 AM	0	0	0	0.00%	0.00%	0.00%
03:00 AM	2	0	2	0.49%	0.00%	0.26%
04:00 AM	1	0	1	0.24%	0.00%	0.13%
05:00 AM	2	1	3	0.49%	0.29%	0.40%
06:00 AM	10	1	11	2.44%	0.29%	1.45%
07:00 AM	27	5	32	6.60%	1.44%	4.23%
08:00 AM	50	16	66	12.22%	4.60%	8.72%
09:00 AM	53	22	75	12.96%	6.32%	9.91%
10:00 AM	40	19	59	9.78%	5.46%	7.79%
11:00 AM	24	15	39	5.87%	4.31%	5.15%
12:00 PM	20	21	41	4.89%	6.03%	5.42%
01:00 PM	25	13	38	6.11%	3.74%	5.02%
02:00 PM	15	16	31	3.67%	4.60%	4.10%
03:00 PM	25	26	51	6.11%	7.47%	6.74%
04:00 PM	20	33	53	4.89%	9.48%	7.00%
05:00 PM	19	20	39	4.65%	5.75%	5.15%
06:00 PM	28	44	72	6.85%	12.64%	9.51%
07:00 PM	12	25	37	2.93%	7.18%	4.89%
08:00 PM	10	24	34	2.44%	6.90%	4.49%
09:00 PM	8	22	30	1.96%	6.32%	3.96%
10:00 PM	11	11	22	2.69%	3.16%	2.91%
11:00 PM	3	6	9	0.73%	1.72%	1.19%
12:00 AM	2	1	3	0.49%	0.29%	0.40%
<b>TOTALS</b>	<b>409</b>	<b>348</b>	<b>757</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	1
<b>COUNT LOCATION</b>	Avenue C, South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b> 8/23/2011 (EB)	<b>Start Time</b> 12:00 AM
8/30/2011 (WB)	<b>End Time</b> 12:00 AM

**VOLUMES:**

<b>ADT</b>	1,693	<b>PEAK HOUR</b>	189
		<b>PEAK END TIME</b>	8:45 AM
		<b>PEAK NB/EB MOVEMENT</b>	100
		<b>PEAK SB/WB MOVEMENT</b>	89

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	11.16%	<b>D=</b>	52.9%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 1  
 COUNT LOCATION Avenue C, South of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	8	1	9	0.93%	0.12%	0.53%
02:00 AM	1	3	4	0.12%	0.36%	0.24%
03:00 AM	3	2	5	0.35%	0.24%	0.30%
04:00 AM	2	5	7	0.23%	0.60%	0.41%
05:00 AM	4	3	7	0.47%	0.36%	0.41%
06:00 AM	16	17	33	1.86%	2.04%	1.95%
07:00 AM	40	35	75	4.66%	4.20%	4.43%
08:00 AM	59	43	102	6.87%	5.16%	6.02%
09:00 AM	92	87	179	10.71%	10.43%	10.57%
10:00 AM	47	33	80	5.47%	3.96%	4.73%
11:00 AM	39	52	91	4.54%	6.24%	5.38%
12:00 PM	41	46	87	4.77%	5.52%	5.14%
01:00 PM	52	45	97	6.05%	5.40%	5.73%
02:00 PM	46	43	89	5.36%	5.16%	5.26%
03:00 PM	51	56	107	5.94%	6.71%	6.32%
04:00 PM	63	65	128	7.33%	7.79%	7.56%
05:00 PM	65	56	121	7.57%	6.71%	7.15%
06:00 PM	75	77	152	8.73%	9.23%	8.98%
07:00 PM	58	55	113	6.75%	6.59%	6.67%
08:00 PM	36	45	81	4.19%	5.40%	4.78%
09:00 PM	27	21	48	3.14%	2.52%	2.84%
10:00 PM	21	20	41	2.44%	2.40%	2.42%
11:00 PM	6	19	25	0.70%	2.28%	1.48%
12:00 AM	7	5	12	0.81%	0.60%	0.71%
<b>TOTALS</b>	<b>859</b>	<b>834</b>	<b>1,693</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	7
COUNT LOCATION	Woodridge, West of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	238	<b>PEAK HOUR</b>	31
		<b>PEAK END TIME</b>	9:15 AM
		<b>PEAK NB/EB MOVEMENT</b>	22
		<b>PEAK SB/WB MOVEMENT</b>	9

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	13.03%	<b>D=</b>	71.0%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 7  
**COUNT LOCATION** Woodridge, West of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	1	0	1	0.83%	0.00%	0.42%
02:00 AM	0	2	2	0.00%	1.69%	0.84%
03:00 AM	0	0	0	0.00%	0.00%	0.00%
04:00 AM	0	0	0	0.00%	0.00%	0.00%
05:00 AM	0	0	0	0.00%	0.00%	0.00%
06:00 AM	1	0	1	0.83%	0.00%	0.42%
07:00 AM	4	2	6	3.33%	1.69%	2.52%
08:00 AM	12	0	12	10.00%	0.00%	5.04%
09:00 AM	21	9	30	17.50%	7.63%	12.61%
10:00 AM	8	4	12	6.67%	3.39%	5.04%
11:00 AM	6	1	7	5.00%	0.85%	2.94%
12:00 PM	7	7	14	5.83%	5.93%	5.88%
01:00 PM	8	12	20	6.67%	10.17%	8.40%
02:00 PM	7	4	11	5.83%	3.39%	4.62%
03:00 PM	8	7	15	6.67%	5.93%	6.30%
04:00 PM	4	11	15	3.33%	9.32%	6.30%
05:00 PM	2	14	16	1.67%	11.86%	6.72%
06:00 PM	8	8	16	6.67%	6.78%	6.72%
07:00 PM	6	6	12	5.00%	5.08%	5.04%
08:00 PM	7	14	21	5.83%	11.86%	8.82%
09:00 PM	6	7	13	5.00%	5.93%	5.46%
10:00 PM	1	4	5	0.83%	3.39%	2.10%
11:00 PM	2	4	6	1.67%	3.39%	2.52%
12:00 AM	1	2	3	0.83%	1.69%	1.26%
<b>TOTALS</b>	<b>120</b>	<b>118</b>	<b>238</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# Roadway Count Summary

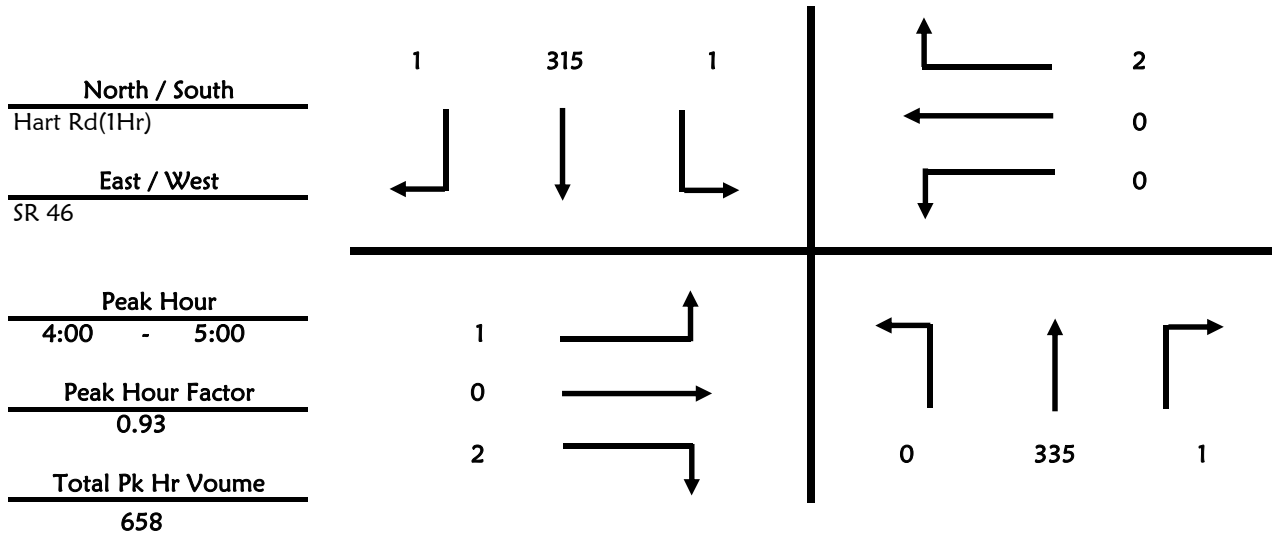
GMB Engineers & Planners, Inc.

Intersection Hart Rd(1Hr) & SR 46  
 Date September 15, 2011  
 Time Period PM Peak Hour  
 All Vehicles

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	71	0	0	83	0
4:15 - 4:30	0	102	0	1	68	0
4:30 - 4:45	0	79	0	0	96	0
4:45 - 5:00	0	83	1	0	68	1
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0
	0	335	1	1	315	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	1	0	1	0	0	0
4:30 - 4:45	0	0	0	0	0	2
4:45 - 5:00	0	0	1	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0
	1	0	2	0	0	2



# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	10
COUNT LOCATION	3rd Street, North of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
24 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
		<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	89	<b>PEAK HOUR</b>	10
		<b>PEAK END TIME</b>	5:00 PM
		<b>PEAK NB/EB MOVEMENT</b>	3
		<b>PEAK SB/WB MOVEMENT</b>	7

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	11.24%	<b>D=</b>	70.0%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 10  
 COUNT LOCATION 3rd Street, North of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	0	1	1	0.00%	2.33%	1.12%
02:00 AM	0	1	1	0.00%	2.33%	1.12%
03:00 AM	1	1	2	2.17%	2.33%	2.25%
04:00 AM	1	0	1	2.17%	0.00%	1.12%
05:00 AM	0	0	0	0.00%	0.00%	0.00%
06:00 AM	0	2	2	0.00%	4.65%	2.25%
07:00 AM	0	0	0	0.00%	0.00%	0.00%
08:00 AM	1	2	3	2.17%	4.65%	3.37%
09:00 AM	1	0	1	2.17%	0.00%	1.12%
10:00 AM	3	1	4	6.52%	2.33%	4.49%
11:00 AM	3	4	7	6.52%	9.30%	7.87%
12:00 PM	3	3	6	6.52%	6.98%	6.74%
01:00 PM	4	3	7	8.70%	6.98%	7.87%
02:00 PM	4	3	7	8.70%	6.98%	7.87%
03:00 PM	0	1	1	0.00%	2.33%	1.12%
04:00 PM	4	3	7	8.70%	6.98%	7.87%
05:00 PM	3	7	10	6.52%	16.28%	11.24%
06:00 PM	2	1	3	4.35%	2.33%	3.37%
07:00 PM	4	4	8	8.70%	9.30%	8.99%
08:00 PM	3	3	6	6.52%	6.98%	6.74%
09:00 PM	3	1	4	6.52%	2.33%	4.49%
10:00 PM	4	0	4	8.70%	0.00%	4.49%
11:00 PM	2	2	4	4.35%	4.65%	4.49%
12:00 AM	0	0	0	0.00%	0.00%	0.00%
<b>TOTALS</b>	<b>46</b>	<b>43</b>	<b>89</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	9
<b>COUNT LOCATION</b>	1st Street, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11 (Average)	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	3,922	<b>PEAK HOUR</b>	421
		<b>PEAK END TIME</b>	9:00 AM
		<b>PEAK NB/EB MOVEMENT</b>	172
		<b>PEAK SB/WB MOVEMENT</b>	249

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.74%	<b>D=</b>	59.2%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 9  
**COUNT LOCATION** 1st Street, North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	12	4	15	0.59%	0.19%	0.39%
02:00 AM	6	3	9	0.32%	0.14%	0.23%
03:00 AM	5	3	8	0.25%	0.14%	0.20%
04:00 AM	2	3	5	0.10%	0.16%	0.13%
05:00 AM	2	12	14	0.10%	0.64%	0.37%
06:00 AM	9	32	40	0.44%	1.64%	1.03%
07:00 AM	27	114	141	1.34%	5.93%	3.60%
08:00 AM	83	196	279	4.15%	10.16%	7.11%
09:00 AM	172	249	421	8.63%	12.92%	10.74%
10:00 AM	70	112	182	3.51%	5.80%	4.64%
11:00 AM	86	108	194	4.30%	5.61%	4.95%
12:00 PM	95	107	202	4.77%	5.56%	5.16%
01:00 PM	93	83	176	4.65%	4.30%	4.48%
02:00 PM	108	97	205	5.40%	5.04%	5.23%
03:00 PM	142	114	256	7.11%	5.91%	6.52%
04:00 PM	158	149	307	7.93%	7.74%	7.84%
05:00 PM	173	132	305	8.67%	6.86%	7.78%
06:00 PM	207	120	327	10.41%	6.20%	8.34%
07:00 PM	180	101	280	9.02%	5.22%	7.15%
08:00 PM	133	78	211	6.68%	4.06%	5.39%
09:00 PM	108	57	165	5.44%	2.95%	4.22%
10:00 PM	68	37	105	3.41%	1.90%	2.67%
11:00 PM	39	13	52	1.96%	0.67%	1.33%
12:00 AM	17	5	22	0.84%	0.26%	0.55%
<b>TOTALS</b>	<b>1,992</b>	<b>1,930</b>	<b>3,922</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	9
<b>COUNT LOCATION</b>	1st Street, North of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	13-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	13-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	3,818	<b>PEAK HOUR</b>	435
		<b>PEAK END TIME</b>	9:00 AM
		<b>PEAK NB/EB MOVEMENT</b>	188
		<b>PEAK SB/WB MOVEMENT</b>	247

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	11.39%	<b>D=</b>	56.8%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 9  
 COUNT LOCATION 1st Street, North of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	11	2	13	0.57%	0.11%	0.34%
02:00 AM	4	4	8	0.21%	0.21%	0.21%
03:00 AM	7	3	10	0.36%	0.16%	0.26%
04:00 AM	2	3	5	0.10%	0.16%	0.13%
05:00 AM	2	13	15	0.10%	0.69%	0.39%
06:00 AM	9	29	38	0.46%	1.54%	1.00%
07:00 AM	29	119	148	1.50%	6.32%	3.88%
08:00 AM	72	186	258	3.72%	9.88%	6.76%
09:00 AM	188	247	435	9.71%	13.12%	11.39%
10:00 AM	67	122	189	3.46%	6.48%	4.95%
11:00 AM	77	100	177	3.98%	5.31%	4.64%
12:00 PM	77	106	183	3.98%	5.63%	4.79%
01:00 PM	89	88	177	4.60%	4.68%	4.64%
02:00 PM	76	78	154	3.93%	4.14%	4.03%
03:00 PM	138	86	224	7.13%	4.57%	5.87%
04:00 PM	179	183	362	9.25%	9.72%	9.48%
05:00 PM	172	122	294	8.88%	6.48%	7.70%
06:00 PM	218	130	348	11.26%	6.91%	9.11%
07:00 PM	180	108	288	9.30%	5.74%	7.54%
08:00 PM	125	62	187	6.46%	3.29%	4.90%
09:00 PM	101	47	148	5.22%	2.50%	3.88%
10:00 PM	68	24	92	3.51%	1.28%	2.41%
11:00 PM	33	15	48	1.70%	0.80%	1.26%
12:00 AM	12	5	17	0.62%	0.27%	0.45%
<b>TOTALS</b>	<b>1,936</b>	<b>1,882</b>	<b>3,818</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	9
COUNT LOCATION	1st Street, North of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	14-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	14-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	3,871	<b>PEAK HOUR</b>	402
		<b>PEAK END TIME</b>	9:00 AM
		<b>PEAK NB/EB MOVEMENT</b>	162
		<b>PEAK SB/WB MOVEMENT</b>	240

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.38%	<b>D=</b>	59.7%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 9  
**COUNT LOCATION** 1st Street, North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	15	5	20	0.76%	0.26%	0.52%
02:00 AM	7	2	9	0.36%	0.11%	0.23%
03:00 AM	5	2	7	0.25%	0.11%	0.18%
04:00 AM	1	2	3	0.05%	0.11%	0.08%
05:00 AM	1	7	8	0.05%	0.37%	0.21%
06:00 AM	10	31	41	0.51%	1.63%	1.06%
07:00 AM	25	105	130	1.27%	5.52%	3.36%
08:00 AM	87	191	278	4.42%	10.04%	7.18%
09:00 AM	162	240	402	8.23%	12.62%	10.38%
10:00 AM	77	118	195	3.91%	6.20%	5.04%
11:00 AM	95	113	208	4.82%	5.94%	5.37%
12:00 PM	116	92	208	5.89%	4.84%	5.37%
01:00 PM	95	74	169	4.82%	3.89%	4.37%
02:00 PM	127	127	254	6.45%	6.68%	6.56%
03:00 PM	143	162	305	7.26%	8.52%	7.88%
04:00 PM	119	94	213	6.04%	4.94%	5.50%
05:00 PM	154	126	280	7.82%	6.62%	7.23%
06:00 PM	208	116	324	10.56%	6.10%	8.37%
07:00 PM	165	108	273	8.38%	5.68%	7.05%
08:00 PM	138	69	207	7.01%	3.63%	5.35%
09:00 PM	96	72	168	4.88%	3.79%	4.34%
10:00 PM	63	32	95	3.20%	1.68%	2.45%
11:00 PM	43	11	54	2.18%	0.58%	1.39%
12:00 AM	17	3	20	0.86%	0.16%	0.52%
<b>TOTALS</b>	<b>1,969</b>	<b>1,902</b>	<b>3,871</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	9
COUNT LOCATION	1st Street, North of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	15-Sep-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	15-Sep-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	4,077	<b>PEAK HOUR</b>	427
		<b>PEAK END TIME</b>	9:00 AM
		<b>PEAK NB/EB MOVEMENT</b>	166
		<b>PEAK SB/WB MOVEMENT</b>	261

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	10.47%	<b>D=</b>	61.1%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

**PROJECT** SR 46  
**LOCATION CODE** 9  
**COUNT LOCATION** 1st Street, North of SR 46  
**GMB PROJECT NO.** 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	9	4	13	0.43%	0.20%	0.32%
02:00 AM	8	2	10	0.39%	0.10%	0.25%
03:00 AM	3	3	6	0.14%	0.15%	0.15%
04:00 AM	3	4	7	0.14%	0.20%	0.17%
05:00 AM	3	17	20	0.14%	0.85%	0.49%
06:00 AM	7	35	42	0.34%	1.75%	1.03%
07:00 AM	26	119	145	1.25%	5.94%	3.56%
08:00 AM	89	211	300	4.30%	10.52%	7.36%
09:00 AM	166	261	427	8.01%	13.02%	10.47%
10:00 AM	66	96	162	3.19%	4.79%	3.97%
11:00 AM	85	112	197	4.10%	5.59%	4.83%
12:00 PM	92	124	216	4.44%	6.18%	5.30%
01:00 PM	94	87	181	4.54%	4.34%	4.44%
02:00 PM	120	87	207	5.79%	4.34%	5.08%
03:00 PM	144	94	238	6.95%	4.69%	5.84%
04:00 PM	176	171	347	8.49%	8.53%	8.51%
05:00 PM	192	149	341	9.27%	7.43%	8.36%
06:00 PM	196	113	309	9.46%	5.64%	7.58%
07:00 PM	194	86	280	9.36%	4.29%	6.87%
08:00 PM	136	104	240	6.56%	5.19%	5.89%
09:00 PM	128	52	180	6.18%	2.59%	4.42%
10:00 PM	73	54	127	3.52%	2.69%	3.12%
11:00 PM	41	13	54	1.98%	0.65%	1.32%
12:00 AM	21	7	28	1.01%	0.35%	0.69%
<b>TOTALS</b>	<b>2,072</b>	<b>2,005</b>	<b>4,077</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

<b>PROJECT</b>	SR 46
<b>LOCATION CODE</b>	8
<b>COUNT LOCATION</b>	CR 426 South of SR 46
<b>GMB PROJECT NO.</b>	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM
	(Average)		

**VOLUMES:**

<b>ADT</b>	8,742	<b>PEAK HOUR</b>	832
		<b>PEAK END TIME</b>	8:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	313
		<b>PEAK SB/WB MOVEMENT</b>	519

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.52%	<b>D=</b>	62.4%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 8  
 COUNT LOCATION CR 426 South of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	31	14	45	0.68%	0.33%	0.51%
02:00 AM	15	7	22	0.32%	0.17%	0.25%
03:00 AM	11	7	18	0.24%	0.17%	0.21%
04:00 AM	8	8	16	0.18%	0.19%	0.18%
05:00 AM	18	30	48	0.40%	0.72%	0.55%
06:00 AM	51	131	182	1.12%	3.13%	2.09%
07:00 AM	151	409	560	3.33%	9.74%	6.41%
08:00 AM	268	509	777	5.89%	12.14%	8.89%
09:00 AM	278	491	769	6.11%	11.71%	8.80%
10:00 AM	192	259	451	4.23%	6.17%	5.16%
11:00 AM	192	211	403	4.23%	5.02%	4.61%
12:00 PM	188	184	372	4.14%	4.38%	4.25%
01:00 PM	200	197	396	4.39%	4.69%	4.53%
02:00 PM	229	186	414	5.03%	4.43%	4.74%
03:00 PM	289	222	511	6.36%	5.29%	5.85%
04:00 PM	352	280	632	7.74%	6.67%	7.23%
05:00 PM	454	268	723	9.99%	6.40%	8.27%
06:00 PM	507	287	794	11.16%	6.83%	9.08%
07:00 PM	380	187	567	8.36%	4.46%	6.49%
08:00 PM	249	111	360	5.48%	2.64%	4.11%
09:00 PM	220	76	295	4.83%	1.80%	3.38%
10:00 PM	134	62	197	2.95%	1.49%	2.25%
11:00 PM	83	39	122	1.83%	0.93%	1.40%
12:00 AM	46	21	67	1.01%	0.50%	0.77%
<b>TOTALS</b>	<b>4,546</b>	<b>4,196</b>	<b>8,742</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	8
COUNT LOCATION	CR 426 South of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	23-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	23-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	8,627	<b>PEAK HOUR</b>	842
		<b>PEAK END TIME</b>	8:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	309
		<b>PEAK SB/WB MOVEMENT</b>	533

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.76%	<b>D=</b>	63.3%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 8  
 COUNT LOCATION CR 426 South of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	25	22	47	0.57%	0.52%	0.54%
02:00 AM	10	11	21	0.23%	0.26%	0.24%
03:00 AM	7	6	13	0.16%	0.14%	0.15%
04:00 AM	8	12	20	0.18%	0.28%	0.23%
05:00 AM	17	35	52	0.39%	0.83%	0.60%
06:00 AM	38	130	168	0.86%	3.07%	1.95%
07:00 AM	159	417	576	3.62%	9.86%	6.68%
08:00 AM	277	526	803	6.30%	12.43%	9.31%
09:00 AM	269	492	761	6.12%	11.63%	8.82%
10:00 AM	185	267	452	4.21%	6.31%	5.24%
11:00 AM	179	217	396	4.07%	5.13%	4.59%
12:00 PM	199	181	380	4.53%	4.28%	4.40%
01:00 PM	203	187	390	4.62%	4.42%	4.52%
02:00 PM	200	188	388	4.55%	4.44%	4.50%
03:00 PM	289	198	487	6.57%	4.68%	5.65%
04:00 PM	323	304	627	7.35%	7.19%	7.27%
05:00 PM	445	295	740	10.12%	6.97%	8.58%
06:00 PM	503	295	798	11.44%	6.97%	9.25%
07:00 PM	359	167	526	8.17%	3.95%	6.10%
08:00 PM	234	114	348	5.32%	2.69%	4.03%
09:00 PM	226	73	299	5.14%	1.73%	3.47%
10:00 PM	132	46	178	3.00%	1.09%	2.06%
11:00 PM	72	28	100	1.64%	0.66%	1.16%
12:00 AM	37	20	57	0.84%	0.47%	0.66%
<b>TOTALS</b>	<b>4,396</b>	<b>4,231</b>	<b>8,627</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	8
COUNT LOCATION	CR 426 South of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	24-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	24-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	9,008	<b>PEAK HOUR</b>	864
		<b>PEAK END TIME</b>	8:30 AM
		<b>PEAK NB/EB MOVEMENT</b>	327
		<b>PEAK SB/WB MOVEMENT</b>	537

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.59%	<b>D=</b>	62.2%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 8  
 COUNT LOCATION CR 426 South of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	32	3	35	0.68%	0.07%	0.39%
02:00 AM	16	7	23	0.34%	0.16%	0.26%
03:00 AM	13	9	22	0.28%	0.21%	0.24%
04:00 AM	5	7	12	0.11%	0.16%	0.13%
05:00 AM	12	33	45	0.25%	0.77%	0.50%
06:00 AM	62	134	196	1.32%	3.12%	2.18%
07:00 AM	154	405	559	3.27%	9.42%	6.21%
08:00 AM	260	511	771	5.52%	11.89%	8.56%
09:00 AM	295	510	805	6.26%	11.86%	8.94%
10:00 AM	216	267	483	4.59%	6.21%	5.36%
11:00 AM	216	217	433	4.59%	5.05%	4.81%
12:00 PM	181	189	370	3.84%	4.40%	4.11%
01:00 PM	200	204	404	4.25%	4.75%	4.48%
02:00 PM	294	195	489	6.24%	4.54%	5.43%
03:00 PM	289	264	553	6.14%	6.14%	6.14%
04:00 PM	346	266	612	7.35%	6.19%	6.79%
05:00 PM	448	247	695	9.51%	5.75%	7.72%
06:00 PM	499	299	798	10.60%	6.96%	8.86%
07:00 PM	373	215	588	7.92%	5.00%	6.53%
08:00 PM	285	102	387	6.05%	2.37%	4.30%
09:00 PM	221	82	303	4.69%	1.91%	3.36%
10:00 PM	145	76	221	3.08%	1.77%	2.45%
11:00 PM	92	42	134	1.95%	0.98%	1.49%
12:00 AM	55	15	70	1.17%	0.35%	0.78%
<b>TOTALS</b>	<b>4,709</b>	<b>4,299</b>	<b>9,008</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# TRAFFIC COUNT DATA

PROJECT	SR 46
LOCATION CODE	8
COUNT LOCATION	CR 426 South of SR 46
GMB PROJECT NO.	11-014.01

**TYPE OF COUNT:**  
72 HOUR APPROACH VOLUME COUNT

**TIME OF COUNT:**

<b>Start Date</b>	25-Aug-11	<b>Start Time</b>	12:00 AM
<b>End Date</b>	25-Aug-11	<b>End Time</b>	12:00 AM

**VOLUMES:**

<b>ADT</b>	8,591	<b>PEAK HOUR</b>	795
		<b>PEAK END TIME</b>	8:45 AM
		<b>PEAK NB/EB MOVEMENT</b>	287
		<b>PEAK SB/WB MOVEMENT</b>	508

**MEASURED TRAVEL CHARACTERISTICS:**  
"Peak to Daily Ratio"

<b>K=</b>	9.25%	<b>D=</b>	63.9%
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## HOURLY DISTRIBUTION OF TRAFFIC VOLUMES

PROJECT SR 46  
 LOCATION CODE 8  
 COUNT LOCATION CR 426 South of SR 46  
 GMB PROJECT NO. 11-014.01

HOUR END AT	HOURLY VOLUME DIRECTION (NB/EB)	HOURLY VOLUME DIRECTION (SB/WB)	TOTAL VOLUMES BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB/EB)	DISTRIBUTION PERCENT DIRECTION (SB/WB)	TOTAL PERCENT BOTH DIRECTIONS
01:00 AM	36	17	53	0.79%	0.42%	0.62%
02:00 AM	18	4	22	0.40%	0.10%	0.26%
03:00 AM	13	7	20	0.29%	0.17%	0.23%
04:00 AM	11	5	16	0.24%	0.12%	0.19%
05:00 AM	26	22	48	0.57%	0.54%	0.56%
06:00 AM	53	130	183	1.17%	3.20%	2.13%
07:00 AM	141	404	545	3.11%	9.96%	6.34%
08:00 AM	266	491	757	5.87%	12.10%	8.81%
09:00 AM	269	472	741	5.93%	11.63%	8.63%
10:00 AM	176	243	419	3.88%	5.99%	4.88%
11:00 AM	182	198	380	4.01%	4.88%	4.42%
12:00 PM	184	181	365	4.06%	4.46%	4.25%
01:00 PM	196	199	395	4.32%	4.91%	4.60%
02:00 PM	192	174	366	4.23%	4.29%	4.26%
03:00 PM	289	204	493	6.37%	5.03%	5.74%
04:00 PM	386	270	656	8.51%	6.66%	7.64%
05:00 PM	470	263	733	10.37%	6.48%	8.53%
06:00 PM	520	266	786	11.47%	6.56%	9.15%
07:00 PM	408	179	587	9.00%	4.41%	6.83%
08:00 PM	228	116	344	5.03%	2.86%	4.00%
09:00 PM	212	72	284	4.68%	1.77%	3.31%
10:00 PM	126	65	191	2.78%	1.60%	2.22%
11:00 PM	86	47	133	1.90%	1.16%	1.55%
12:00 AM	46	28	74	1.01%	0.69%	0.86%
<b>TOTALS</b>	<b>4,534</b>	<b>4,057</b>	<b>8,591</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** CR 415 & SR 46

**Date** August 23, 2011

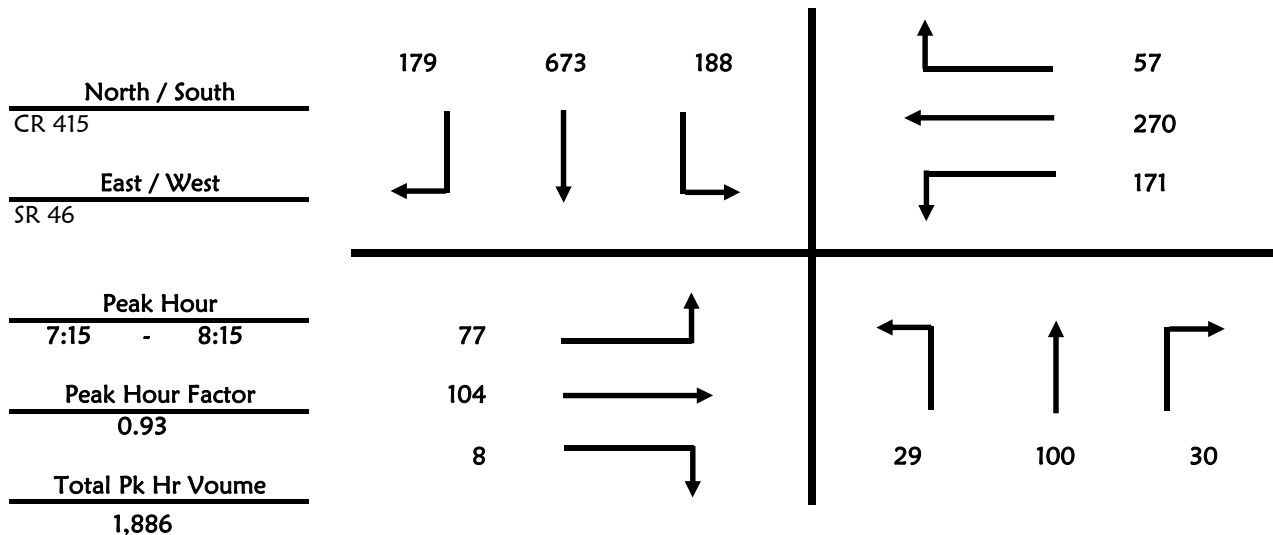
**All Vehicles**

**Time Period** AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	17	11	60	122	44
7:15 - 7:30	9	29	9	42	162	38
7:30 - 7:45	9	25	8	45	201	46
7:45 - 8:00	3	20	9	57	175	47
8:00 - 8:15	8	26	4	44	135	48
8:15 - 8:30	9	30	10	35	119	57
8:30 - 8:45	4	17	2	11	74	20
8:45 - 9:00	2	15	3	9	62	24
	47	179	56	303	1,050	324

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	21	29	1	31	31	12
7:15 - 7:30	20	31	3	41	60	9
7:30 - 7:45	12	24	1	48	75	14
7:45 - 8:00	21	30	3	46	74	17
8:00 - 8:15	24	19	1	36	61	17
8:15 - 8:30	22	29	3	33	67	13
8:30 - 8:45	16	12	4	27	33	14
8:45 - 9:00	14	28	3	15	23	8
	150	202	19	277	424	104



# Roadway Count Summary

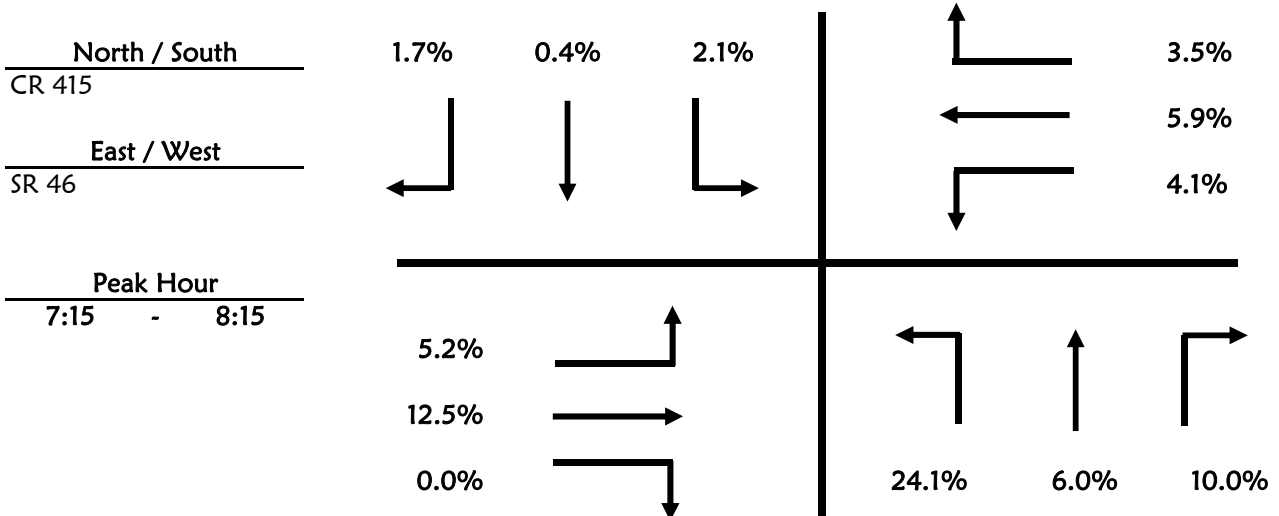
GMB Engineers & Planners, Inc.

Intersection          CR 415                                  & SR 46  
 Date                      August 23, 2011  
 Time Period              AM Peak Hour          Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	1	2	0	0	0
7:15 - 7:30	2	3	2	3	1	0
7:30 - 7:45	2	0	0	0	0	3
7:45 - 8:00	1	2	1	0	1	0
8:00 - 8:15	2	1	0	1	1	0
8:15 - 8:30	1	1	3	1	3	1
8:30 - 8:45	1	0	0	0	2	1
8:45 - 9:00	0	2	0	0	2	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	4	0	2	0	0
7:15 - 7:30	2	2	0	2	5	0
7:30 - 7:45	0	1	0	1	3	1
7:45 - 8:00	0	7	0	0	4	1
8:00 - 8:15	2	3	0	4	4	0
8:15 - 8:30	1	3	1	1	3	0
8:30 - 8:45	0	2	2	0	0	0
8:45 - 9:00	0	0	0	0	2	0





# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection CR 415 & SR 46

Date August 23, 2011

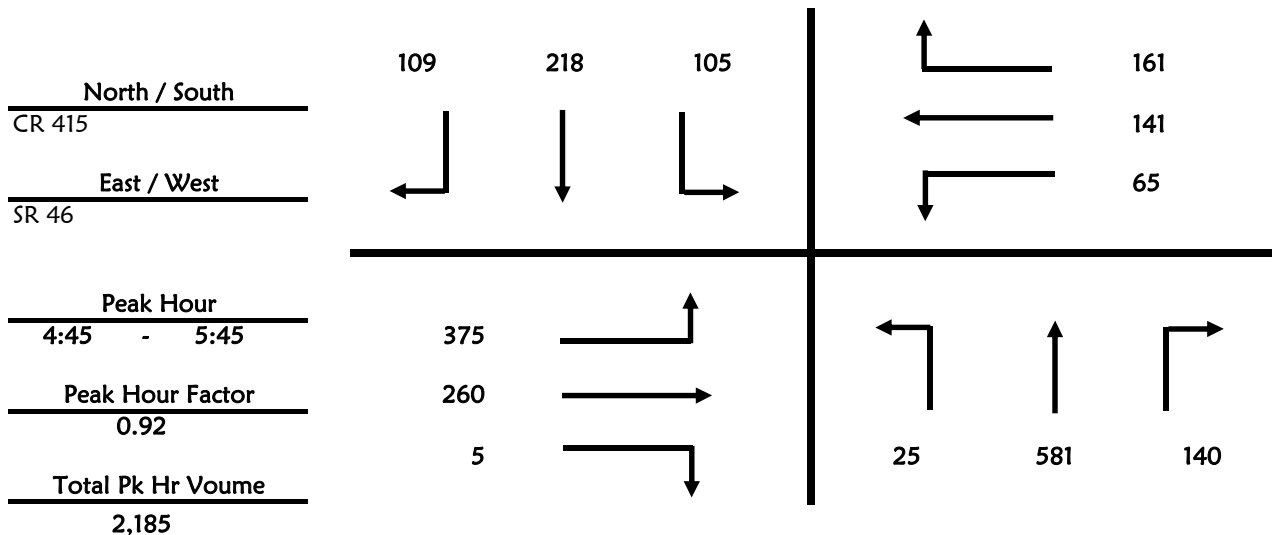
All Vehicles

Time Period PM Peak Hour

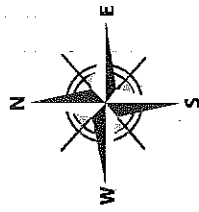
GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	3	79	28	12	30	19
4:15 - 4:30	6	114	29	25	36	35
4:30 - 4:45	8	134	39	17	50	31
4:45 - 5:00	4	114	30	23	40	26
5:00 - 5:15	8	138	32	27	67	35
5:15 - 5:30	8	179	35	30	60	21
5:30 - 5:45	5	150	43	25	51	27
5:45 - 6:00	4	131	24	26	43	17
	46	1,039	260	185	377	211

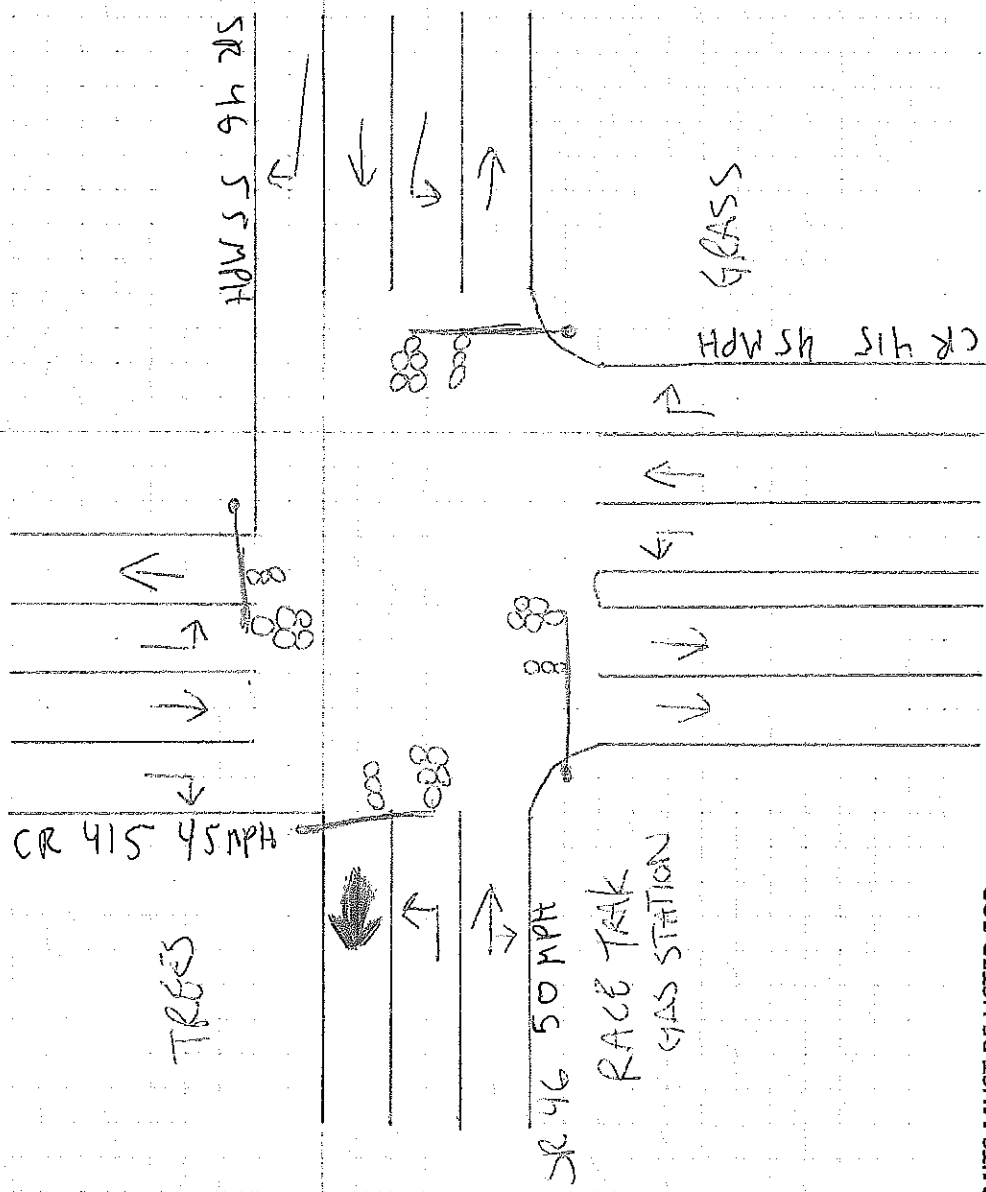
Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	51	58	3	20	27	43
4:15 - 4:30	77	69	2	16	39	32
4:30 - 4:45	65	61	3	29	28	47
4:45 - 5:00	92	61	3	18	32	40
5:00 - 5:15	83	61	1	17	38	41
5:15 - 5:30	96	77	0	16	36	37
5:30 - 5:45	104	61	1	14	35	43
5:45 - 6:00	74	43	2	11	40	27
	642	491	15	141	275	310



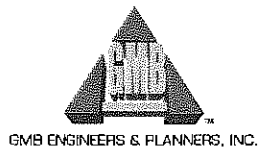




Intersection Sketch



\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: 8/23/11  
 Project: 11-014.01  
 Name: 01860







# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Osceola Road                      &   SR 46

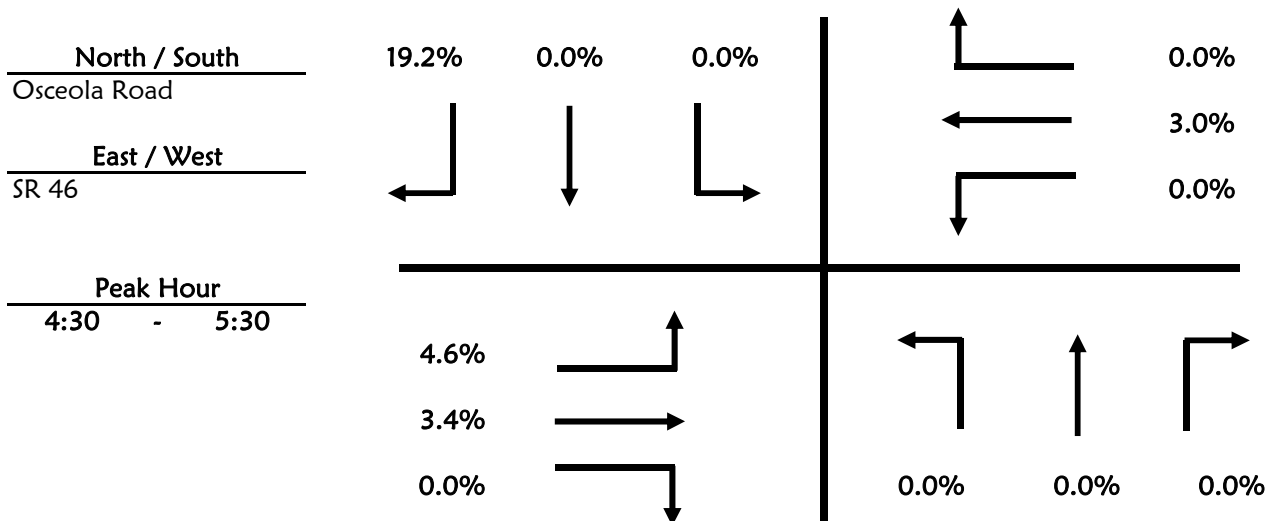
**Date**                      August 23, 2011

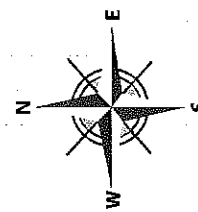
**Time Period**            PM Peak Hour            Trucks

GMB Project #: 11-014.01

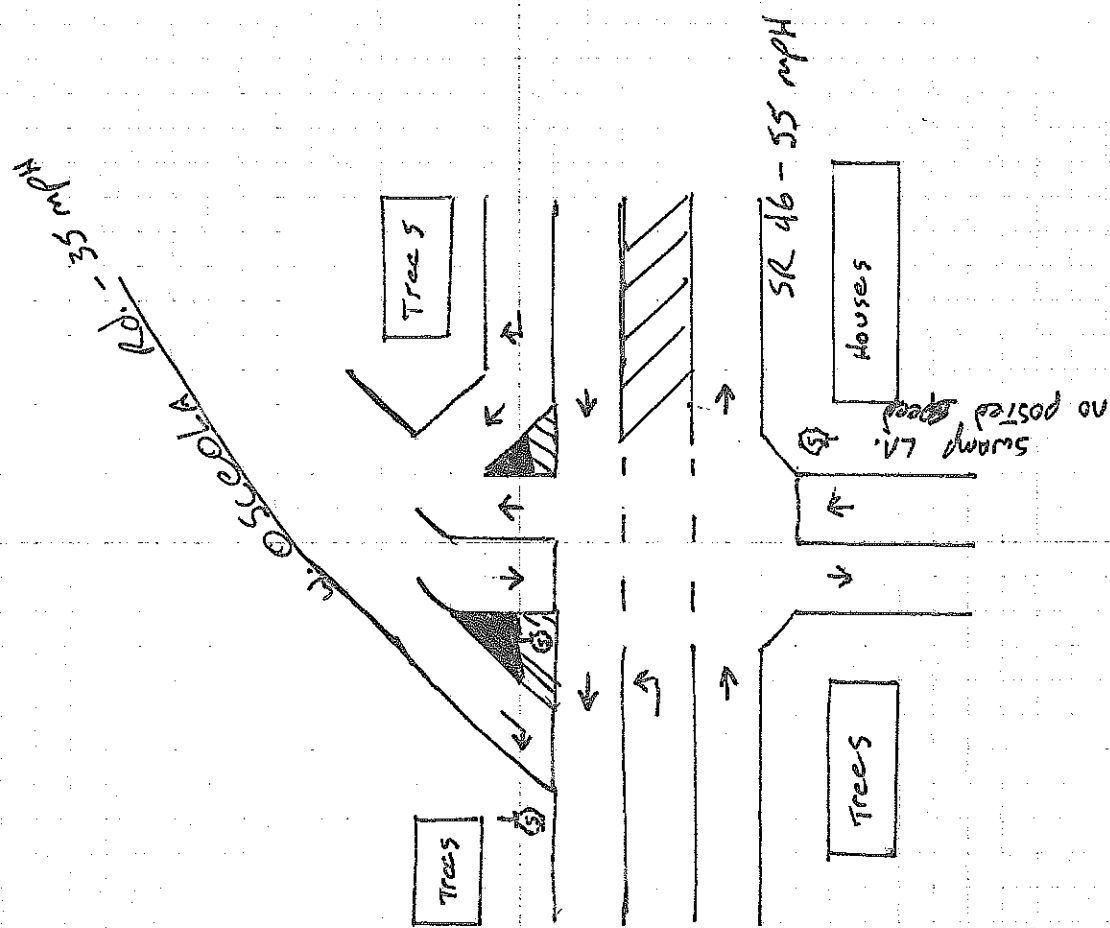
Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	1
4:15 - 4:30	0	0	0	1	0	2
4:30 - 4:45	0	0	0	0	0	5
4:45 - 5:00	0	0	0	0	0	1
5:00 - 5:15	0	0	0	0	0	3
5:15 - 5:30	0	0	0	0	0	1
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	4	5	0	0	2	0
4:15 - 4:30	3	3	0	0	4	0
4:30 - 4:45	2	3	0	0	3	0
4:45 - 5:00	1	5	0	0	1	0
5:00 - 5:15	1	3	0	0	4	0
5:15 - 5:30	1	3	0	0	3	0
5:30 - 5:45	2	0	0	0	6	0
5:45 - 6:00	3	1	0	0	2	0





Intersection Sketch



\*SPEED LIMITS MUST BE LISTED FOR FOR TRAFFIC ENTERING INTERSECTION



GMB ENGINEERS & PLANNERS, INC.

Additional Notes & Observations:

Date: Aug 23-2011

Project: 11-014.01

Name: Gary



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Mullet Lake Park                      & SR 46

**Date**                      August 23, 2011

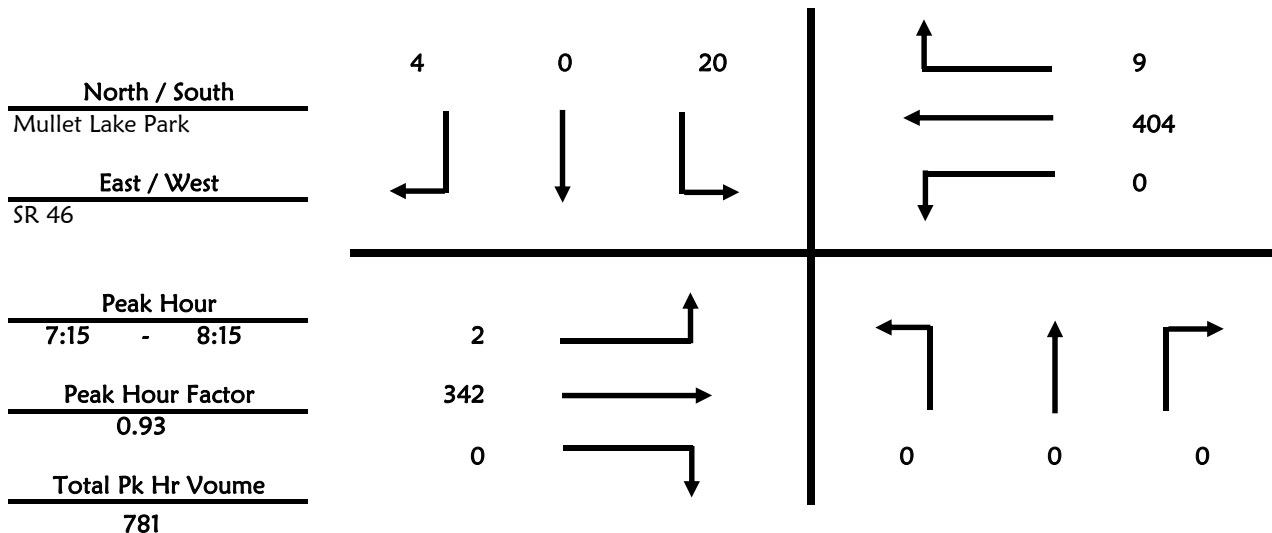
**All Vehicles**

**Time Period**              AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	7	0	1
7:15 - 7:30	0	0	0	6	0	0
7:30 - 7:45	0	0	0	1	0	0
7:45 - 8:00	0	0	0	4	0	2
8:00 - 8:15	0	0	0	9	0	2
8:15 - 8:30	0	0	0	10	0	2
8:30 - 8:45	0	0	0	7	0	2
8:45 - 9:00	0	0	0	6	0	0
	0	0	0	50	0	9

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	89	0	0	75	2
7:15 - 7:30	1	80	0	0	96	2
7:30 - 7:45	1	93	0	0	112	2
7:45 - 8:00	0	92	0	0	105	3
8:00 - 8:15	0	77	0	0	91	2
8:15 - 8:30	0	70	0	0	98	5
8:30 - 8:45	0	69	0	0	71	8
8:45 - 9:00	0	53	0	1	62	1
	2	623	0	1	710	25



# Roadway Count Summary

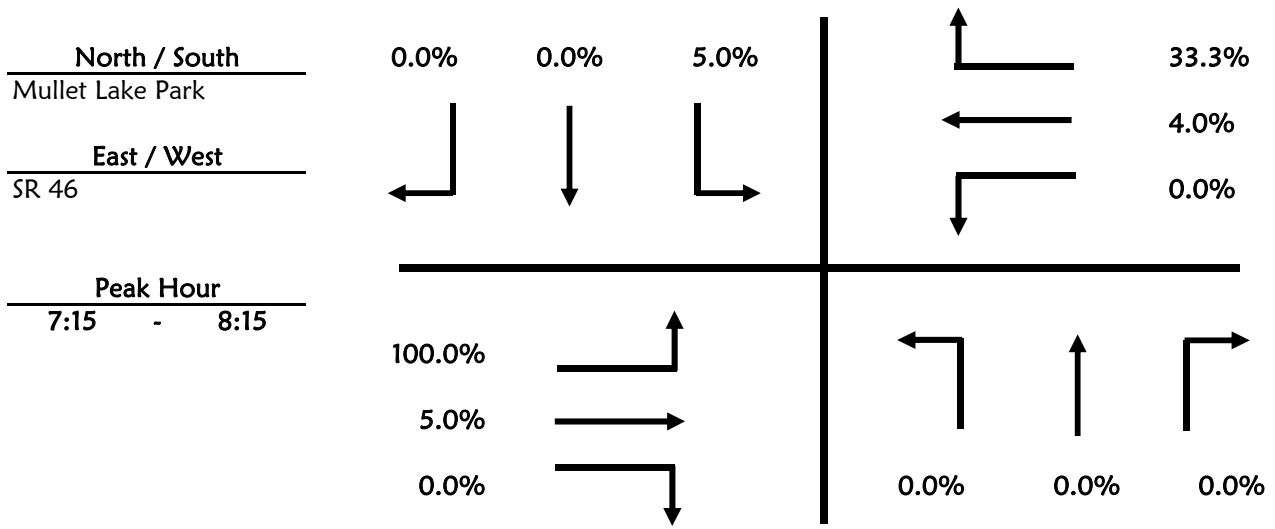
*GMB Engineers & Planners, Inc.*

**Intersection**      Mullet Lake Park                      & SR 46  
**Date**                      August 23, 2011  
**Time Period**            AM Peak Hour            Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	1	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	1	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	2	0	0	3	1
7:15 - 7:30	1	1	0	0	2	1
7:30 - 7:45	1	2	0	0	5	1
7:45 - 8:00	0	7	0	0	7	1
8:00 - 8:15	0	7	0	0	2	0
8:15 - 8:30	0	2	0	0	1	0
8:30 - 8:45	0	4	0	0	1	3
8:45 - 9:00	0	1	0	0	2	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Mullet Lake Park                      & SR 46

**Date**                      August 23, 2011

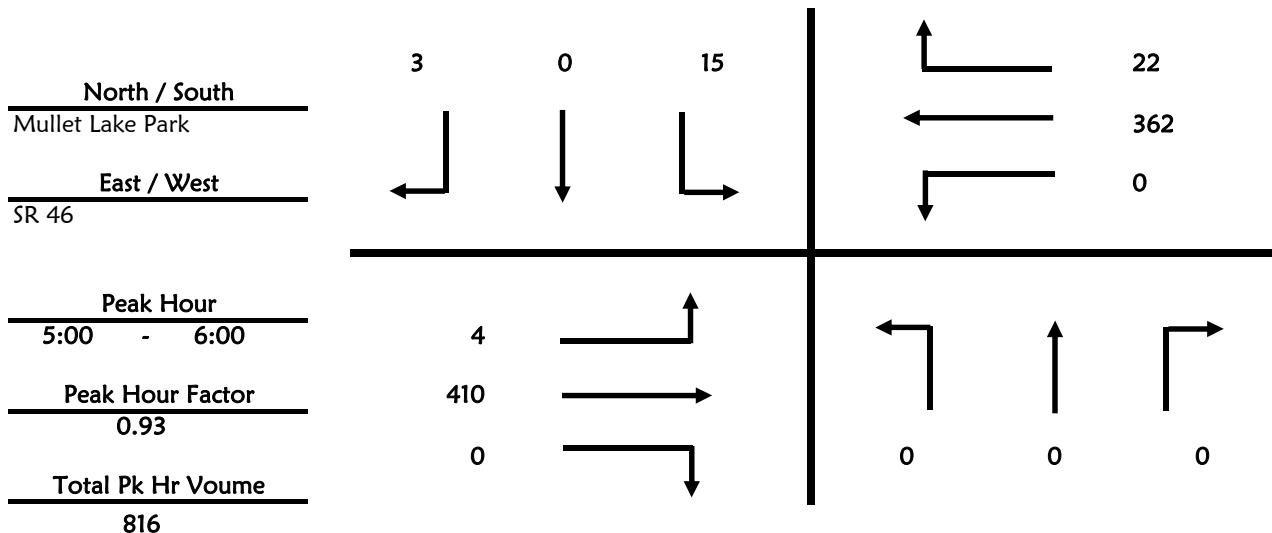
**All Vehicles**

**Time Period**              PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	5	0	1
4:15 - 4:30	0	0	0	3	0	0
4:30 - 4:45	0	0	0	2	0	2
4:45 - 5:00	0	0	0	5	0	0
5:00 - 5:15	0	0	0	4	0	2
5:15 - 5:30	0	0	0	3	0	1
5:30 - 5:45	0	0	0	5	0	0
5:45 - 6:00	0	0	0	3	0	0
	0	0	0	30	0	6

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	1	72	0	0	100	5
4:15 - 4:30	1	80	0	0	66	4
4:30 - 4:45	1	79	0	0	79	12
4:45 - 5:00	3	109	0	0	91	5
5:00 - 5:15	1	92	0	0	83	2
5:15 - 5:30	1	116	0	0	90	8
5:30 - 5:45	2	106	0	0	83	2
5:45 - 6:00	0	96	0	0	106	10
	10	750	0	0	698	48



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Mullet Lake Park                      &   SR 46

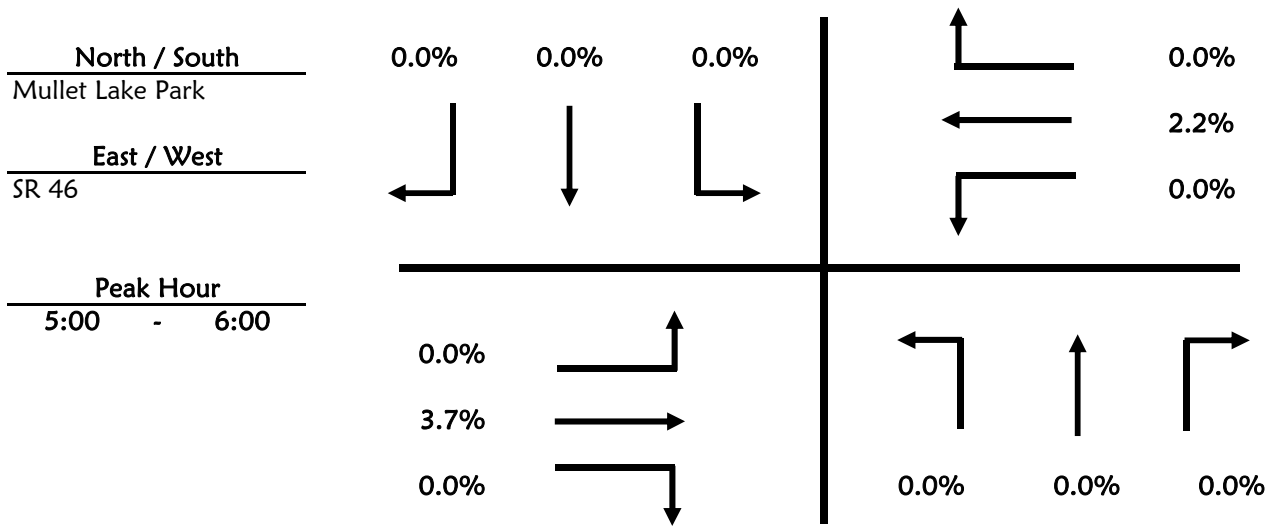
**Date**                      August 23, 2011

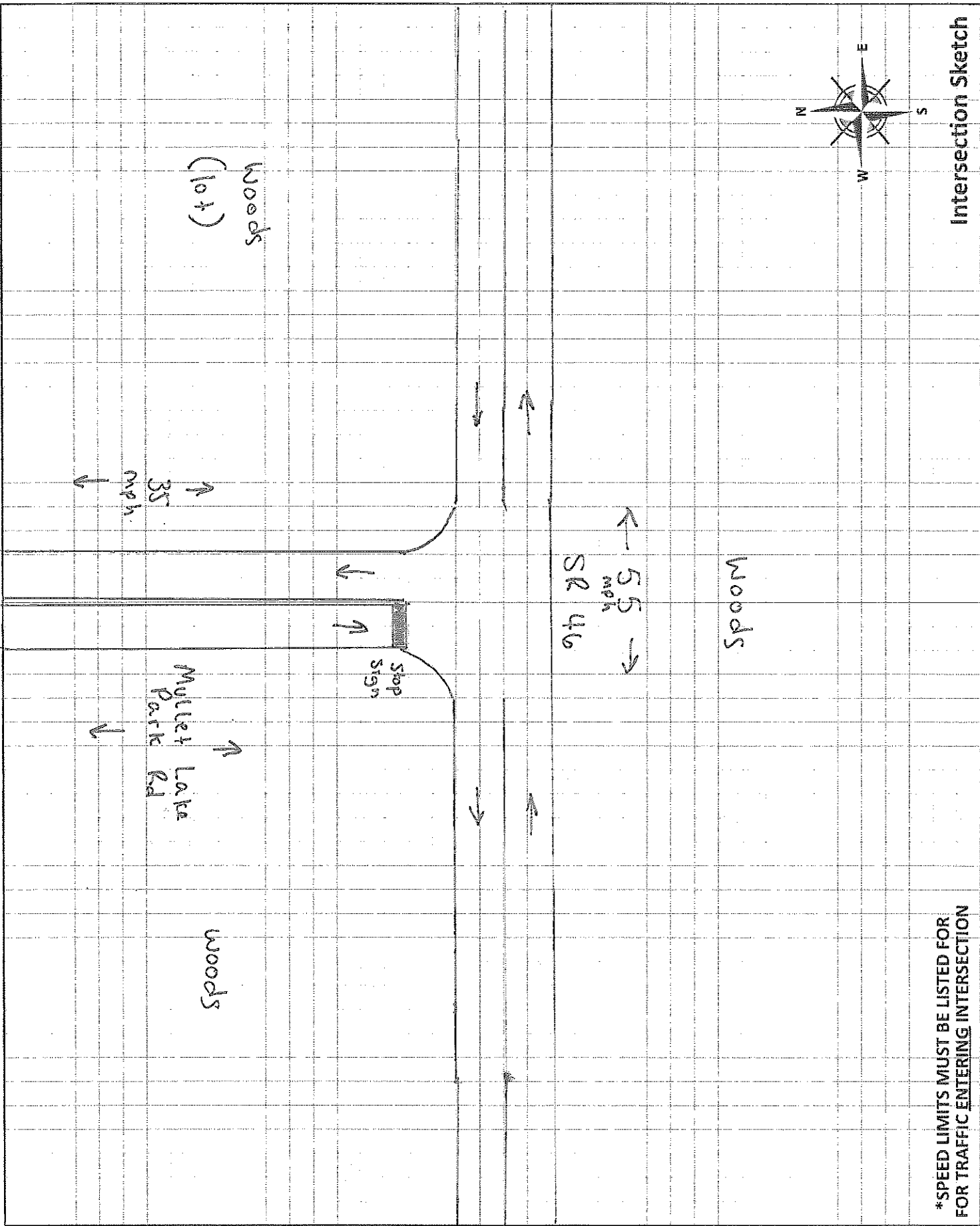
**Time Period**              PM Peak Hour              Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	3	0	0	3	0
4:15 - 4:30	0	4	0	0	10	0
4:30 - 4:45	0	4	0	0	3	1
4:45 - 5:00	0	3	0	0	4	0
5:00 - 5:15	0	3	0	0	2	0
5:15 - 5:30	0	5	0	0	1	0
5:30 - 5:45	0	3	0	0	3	0
5:45 - 6:00	0	4	0	0	2	0





Intersection Sketch

\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: Josh  
 Project: 11-044.01  
 Name: 08/24/11 C-132

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** Woodbridge Rd & SR 46

**Date** August 23, 2011

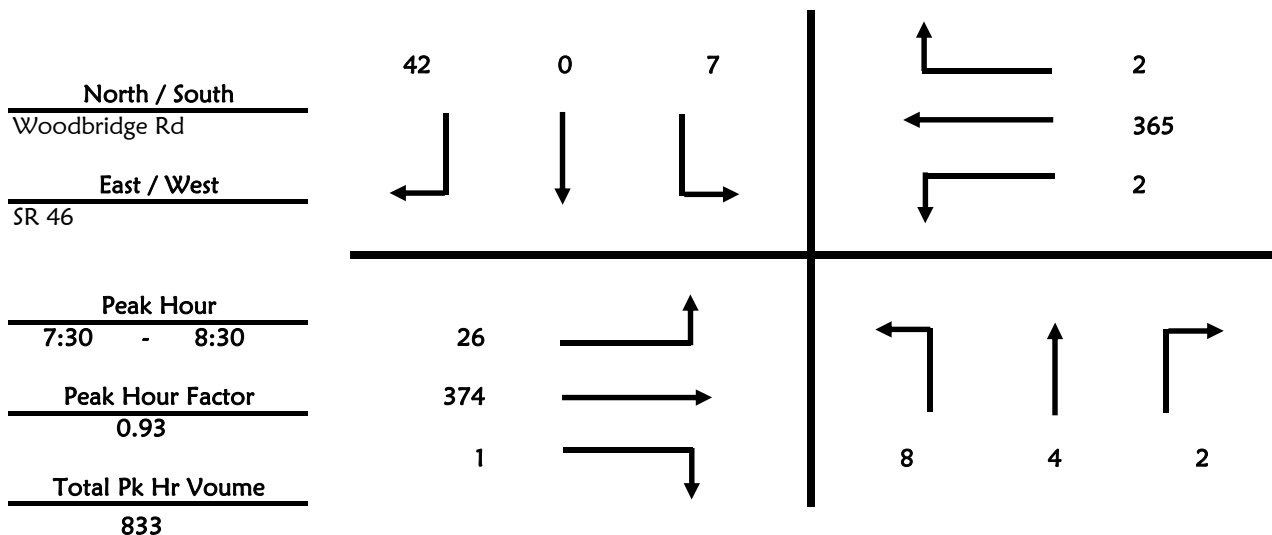
**All Vehicles**

**Time Period** AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	0	1	0	0	7
7:15 - 7:30	1	0	1	4	0	5
7:30 - 7:45	2	1	0	2	0	3
7:45 - 8:00	1	0	1	0	0	12
8:00 - 8:15	1	0	0	1	0	9
8:15 - 8:30	4	3	1	4	0	18
8:30 - 8:45	1	2	0	1	0	13
8:45 - 9:00	2	1	1	2	0	5
	13	7	5	14	0	72

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	2	90	0	0	73	0
7:15 - 7:30	7	92	0	0	85	1
7:30 - 7:45	2	107	0	0	108	0
7:45 - 8:00	6	88	0	0	91	1
8:00 - 8:15	7	91	0	0	82	0
8:15 - 8:30	11	88	1	2	84	1
8:30 - 8:45	2	77	0	1	85	0
8:45 - 9:00	5	66	1	0	60	0
	42	699	2	3	668	3



# Roadway Count Summary

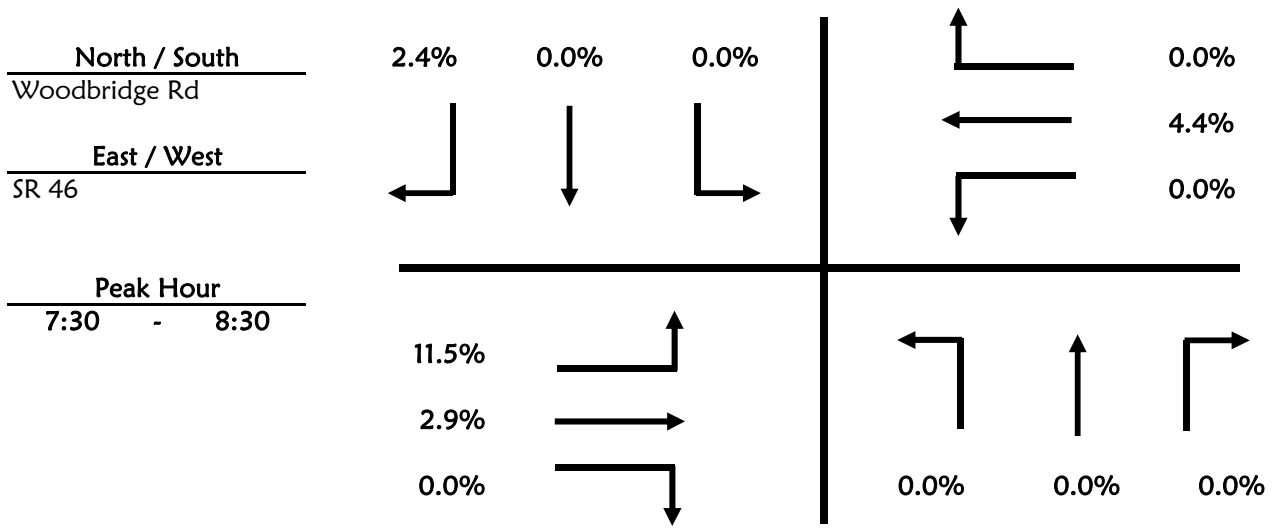
*GMB Engineers & Planners, Inc.*

**Intersection**      Woodbridge Rd                      &   SR 46  
**Date**                      August 23, 2011  
**Time Period**            AM Peak Hour            Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	1
8:30 - 8:45	0	0	0	0	0	2
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	2	0	0	4	0
7:15 - 7:30	0	1	0	0	3	0
7:30 - 7:45	0	1	0	0	6	0
7:45 - 8:00	1	3	0	0	7	0
8:00 - 8:15	2	5	0	0	2	0
8:15 - 8:30	0	2	0	0	1	0
8:30 - 8:45	0	6	0	0	3	0
8:45 - 9:00	0	1	0	0	2	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** WoodBridge Rd & SR 46

**Date** August 23, 2011

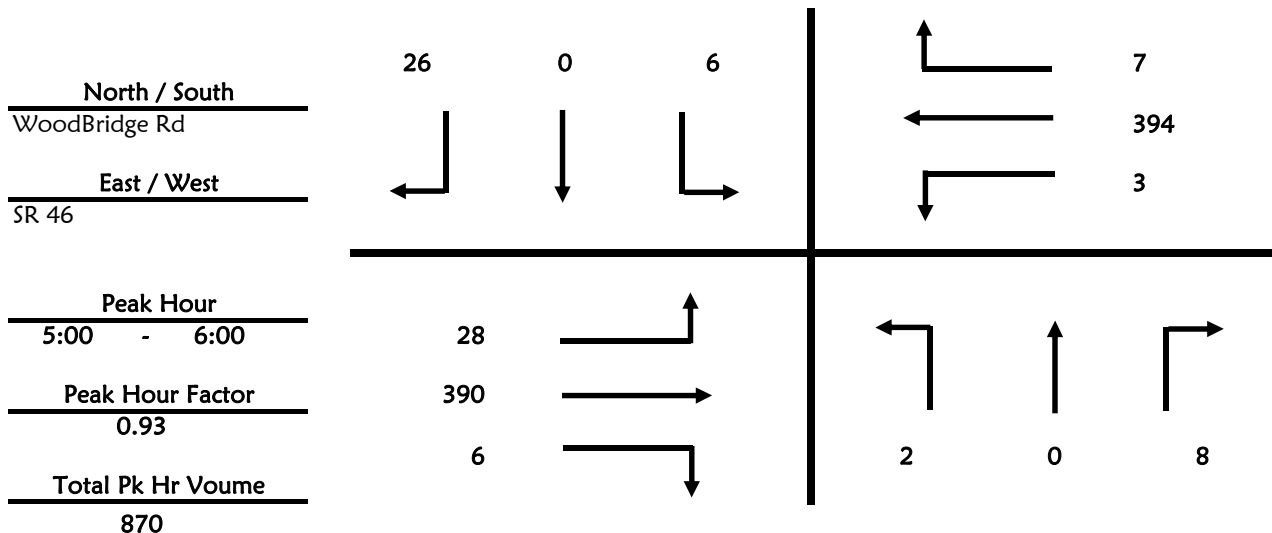
**All Vehicles**

**Time Period** PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	1	2	0	2
4:15 - 4:30	0	0	0	0	0	5
4:30 - 4:45	0	0	0	0	0	1
4:45 - 5:00	1	0	3	0	0	2
5:00 - 5:15	0	0	4	0	0	5
5:15 - 5:30	0	0	1	3	0	5
5:30 - 5:45	1	0	2	2	0	5
5:45 - 6:00	1	0	1	1	0	11
	3	0	12	8	0	36

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	2	63	1	0	101	2
4:15 - 4:30	4	73	0	0	75	0
4:30 - 4:45	13	81	0	1	88	2
4:45 - 5:00	6	85	1	1	102	0
5:00 - 5:15	5	92	0	0	95	2
5:15 - 5:30	7	100	0	0	97	1
5:30 - 5:45	10	102	1	2	91	2
5:45 - 6:00	6	96	5	1	111	2
	53	692	8	5	760	11





# Roadway Count Summary

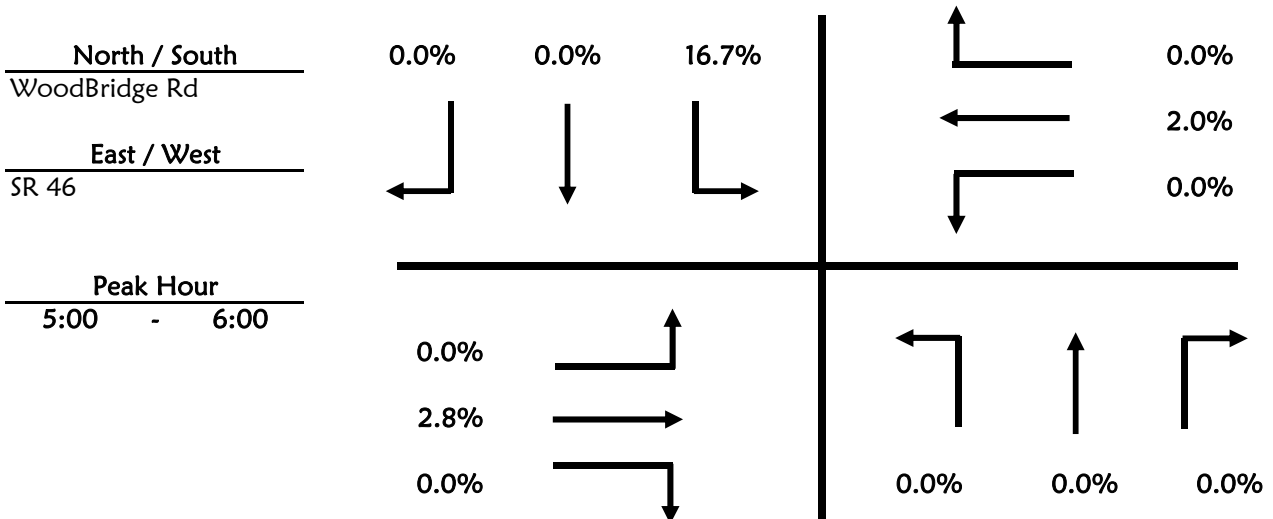
*GMB Engineers & Planners, Inc.*

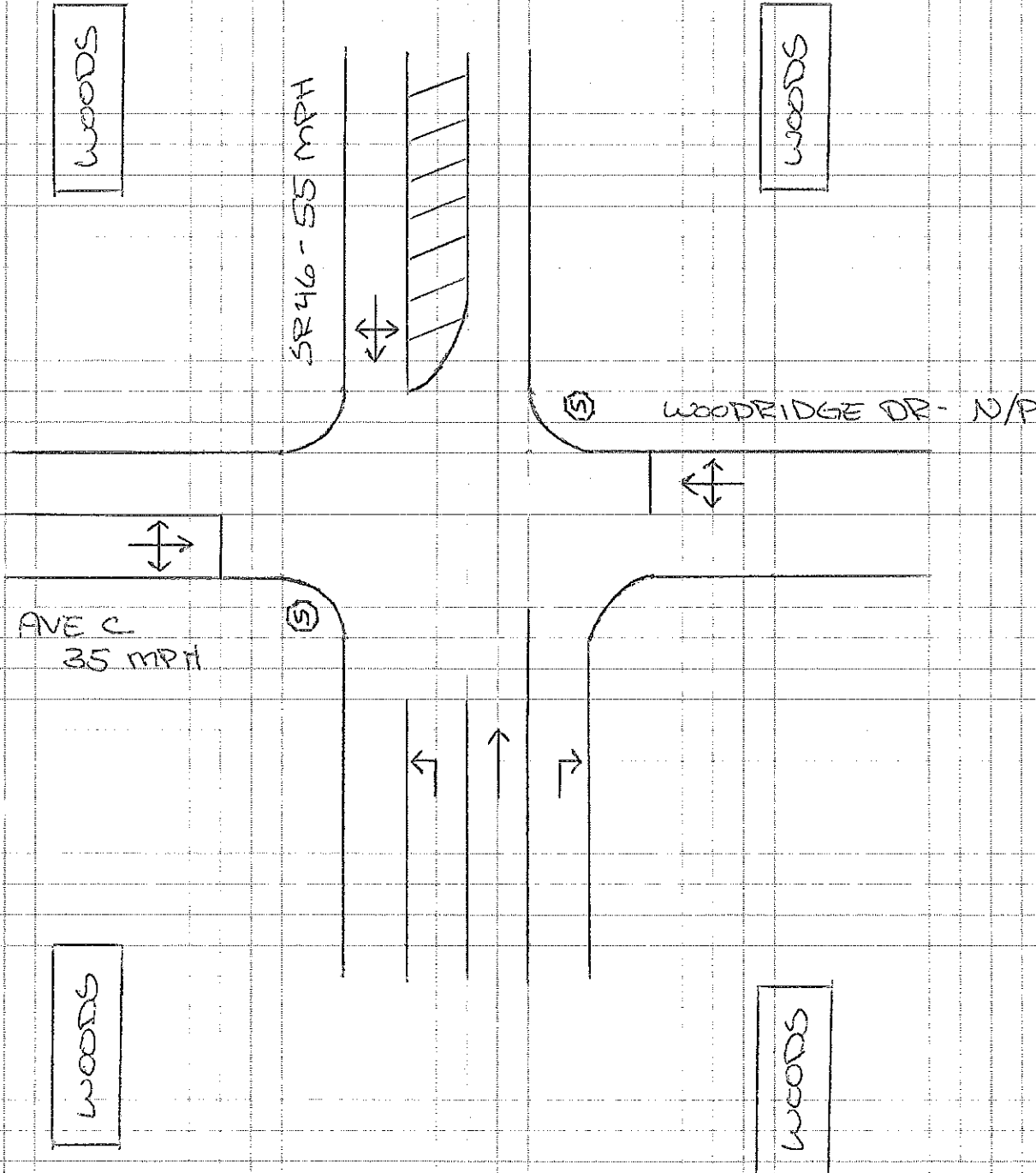
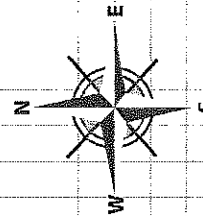
**Intersection**      WoodBridge Rd                      &   SR 46  
**Date**                      August 23, 2011  
**Time Period**              PM Peak Hour              Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	1
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	1	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	2	0	0	3	1
4:15 - 4:30	0	4	0	0	7	0
4:30 - 4:45	0	4	0	0	2	0
4:45 - 5:00	0	0	0	0	3	0
5:00 - 5:15	0	5	0	0	1	0
5:15 - 5:30	0	1	0	0	1	0
5:30 - 5:45	0	3	0	0	5	0
5:45 - 6:00	0	2	0	0	1	0





\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: 8/24/11

Project: 11-014.01

Name: JUSTIA-137

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** Cochran Rd & SR 46

**Date** August 23, 2011

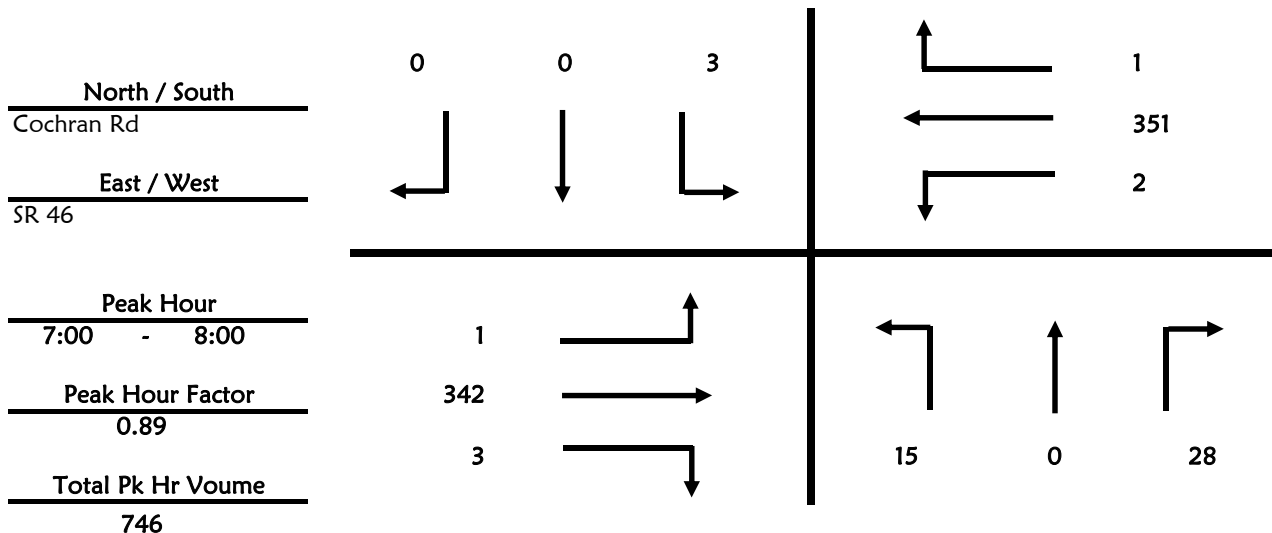
**All Vehicles**

**Time Period** AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	0	5	2	0	0
7:15 - 7:30	4	0	9	0	0	0
7:30 - 7:45	6	0	7	0	0	0
7:45 - 8:00	2	0	7	1	0	0
8:00 - 8:15	4	0	6	0	0	0
8:15 - 8:30	5	0	8	0	0	0
8:30 - 8:45	2	1	5	0	1	0
8:45 - 9:00	4	0	4	0	0	0
	30	1	51	3	1	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	91	0	1	75	0
7:15 - 7:30	0	78	2	1	88	0
7:30 - 7:45	1	88	0	0	107	1
7:45 - 8:00	0	85	1	0	81	0
8:00 - 8:15	0	69	1	2	71	0
8:15 - 8:30	1	78	3	7	82	1
8:30 - 8:45	1	71	2	3	67	0
8:45 - 9:00	0	59	2	4	39	1
	3	619	11	18	610	3



# Roadway Count Summary

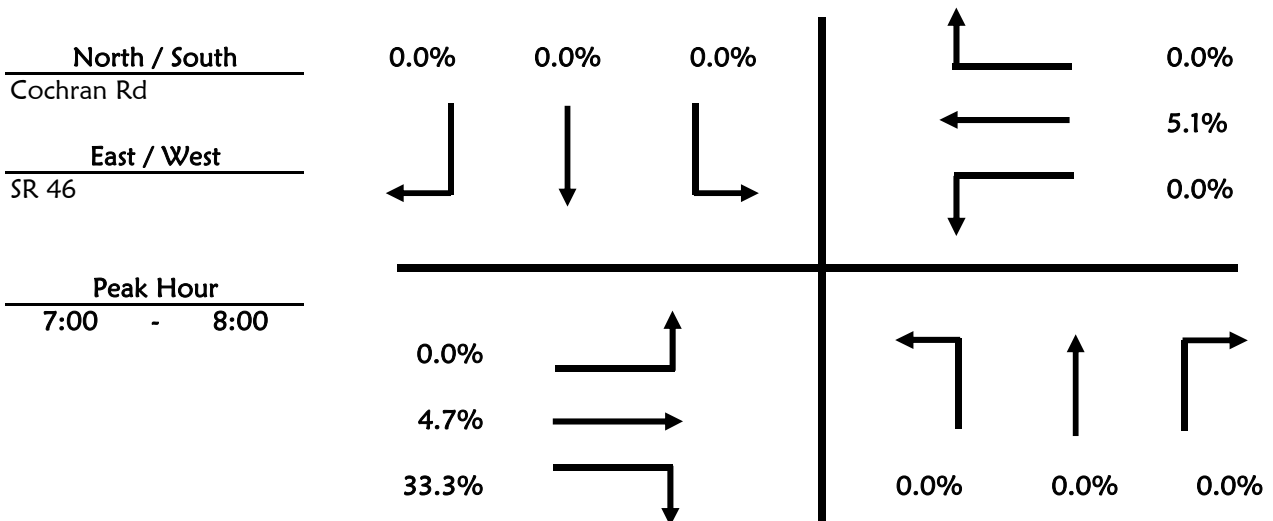
*GMB Engineers & Planners, Inc.*

**Intersection** Cochran Rd & SR 46  
**Date** August 23, 2011  
**Time Period** AM Peak Hour Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	1	0	0	0
8:15 - 8:30	0	0	1	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	3	0	0	3	0
7:15 - 7:30	0	2	0	0	3	0
7:30 - 7:45	0	3	0	0	6	0
7:45 - 8:00	0	8	1	0	6	0
8:00 - 8:15	0	4	1	0	0	0
8:15 - 8:30	0	0	1	1	0	0
8:30 - 8:45	0	3	0	0	2	0
8:45 - 9:00	0	1	0	1	0	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** Cochran Rd & SR 46

**Date** August 23, 2011

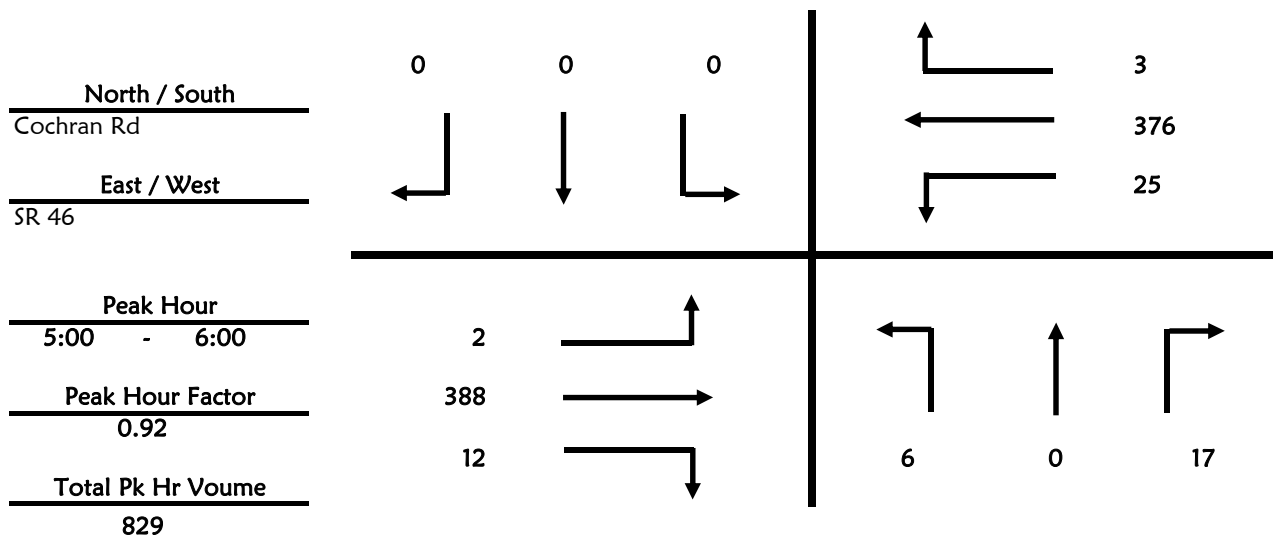
**All Vehicles**

**Time Period** PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	1	0	3	0	0	0
4:15 - 4:30	1	0	1	0	1	0
4:30 - 4:45	2	0	4	1	0	0
4:45 - 5:00	1	0	2	0	0	0
5:00 - 5:15	2	0	3	0	0	0
5:15 - 5:30	1	0	5	0	0	0
5:30 - 5:45	1	0	4	0	0	0
5:45 - 6:00	2	0	5	0	0	0
	11	0	27	1	1	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	1	65	1	4	94	0
4:15 - 4:30	0	75	1	1	65	0
4:30 - 4:45	2	64	1	6	75	0
4:45 - 5:00	0	90	3	9	86	1
5:00 - 5:15	0	83	3	6	82	0
5:15 - 5:30	1	99	3	7	90	0
5:30 - 5:45	1	104	2	8	98	1
5:45 - 6:00	0	102	4	4	106	2
	5	682	18	45	696	4



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection**      Cochran Rd                      &   SR 46

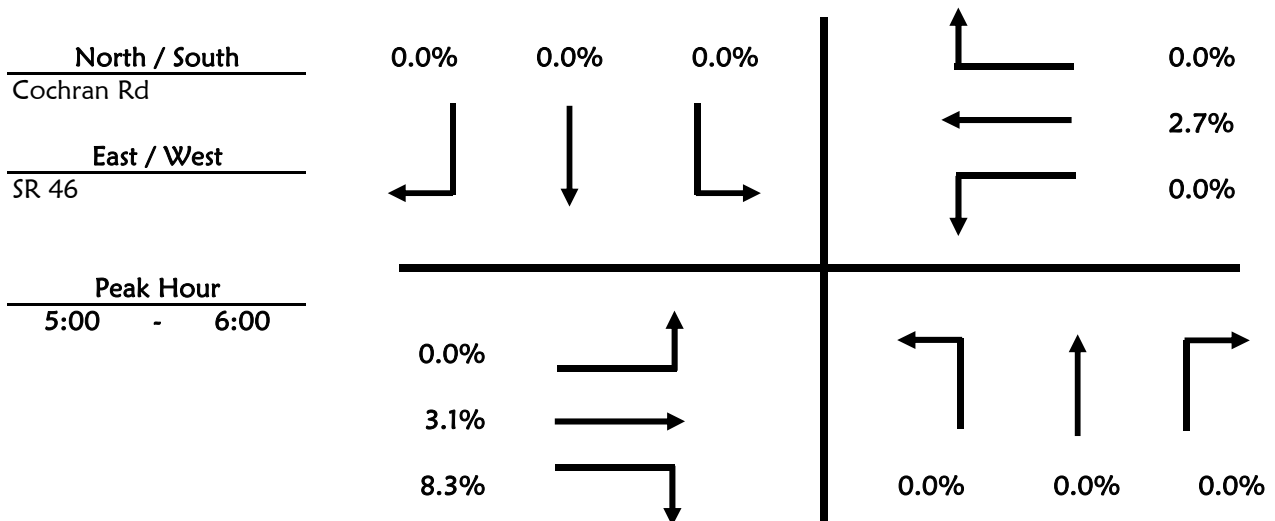
**Date**                      August 23, 2011

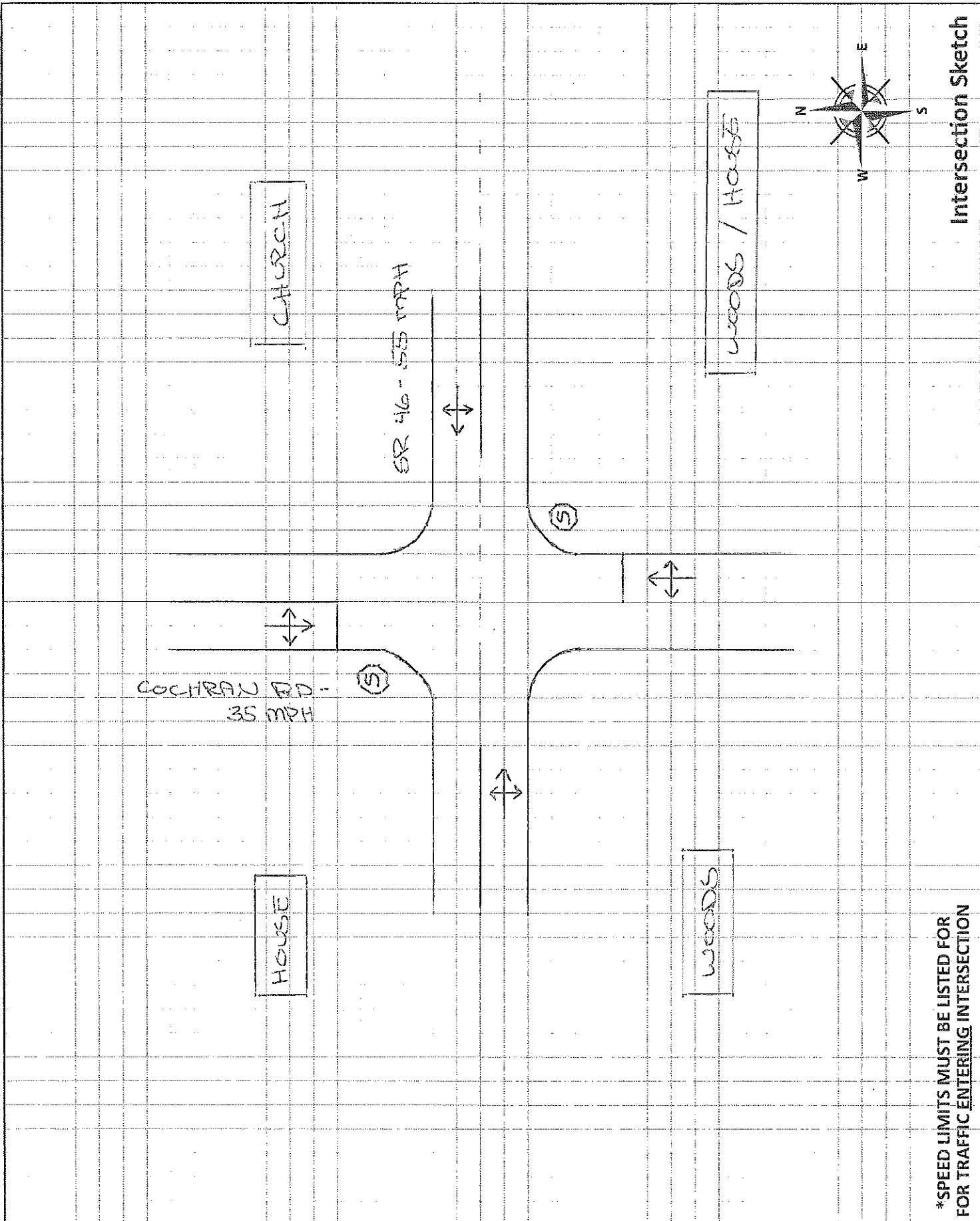
**Time Period**            PM Peak Hour            Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	2	0	0	5	0
4:15 - 4:30	0	3	0	0	7	0
4:30 - 4:45	0	5	0	0	2	0
4:45 - 5:00	0	1	0	0	3	0
5:00 - 5:15	0	3	1	0	2	0
5:15 - 5:30	0	2	0	0	1	0
5:30 - 5:45	0	4	0	0	4	0
5:45 - 6:00	0	3	0	0	3	0





Intersection Sketch

\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: 8/24/11  
 Project: 11-014-01  
 Name: Justin C-142

# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection	3rd St	& SR 46
Date	August 23, 2011	
Time Period	AM Peak Hour	All Vehicles

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	1	0	0
7:15 - 7:30	0	0	0	1	0	1
7:30 - 7:45	0	0	0	1	0	1
7:45 - 8:00	0	0	0	1	0	0
8:00 - 8:15	0	0	0	1	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	1	0	0
	0	0	0	6	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	103	0	0	71	0
7:15 - 7:30	1	97	0	0	95	1
7:30 - 7:45	2	103	0	0	98	2
7:45 - 8:00	1	91	0	0	84	0
8:00 - 8:15	0	91	0	0	86	0
8:15 - 8:30	0	94	0	0	83	0
8:30 - 8:45	0	80	0	0	74	0
8:45 - 9:00	0	63	0	0	55	0
	4	722	0	0	646	3

North / South	2	0	4		↑	3
3rd St	↓	↓	↓		←	363
East / West	←	↓	→		↓	0
SR 46				—		
Peak Hour						
7:15 - 8:15	4	→	↑		←	↑
Peak Hour Factor	382	→	→		↑	↓
0.92	0	→	↓		0	0
Total Pk Hr Voume					0	0
758					0	0



# Roadway Count Summary

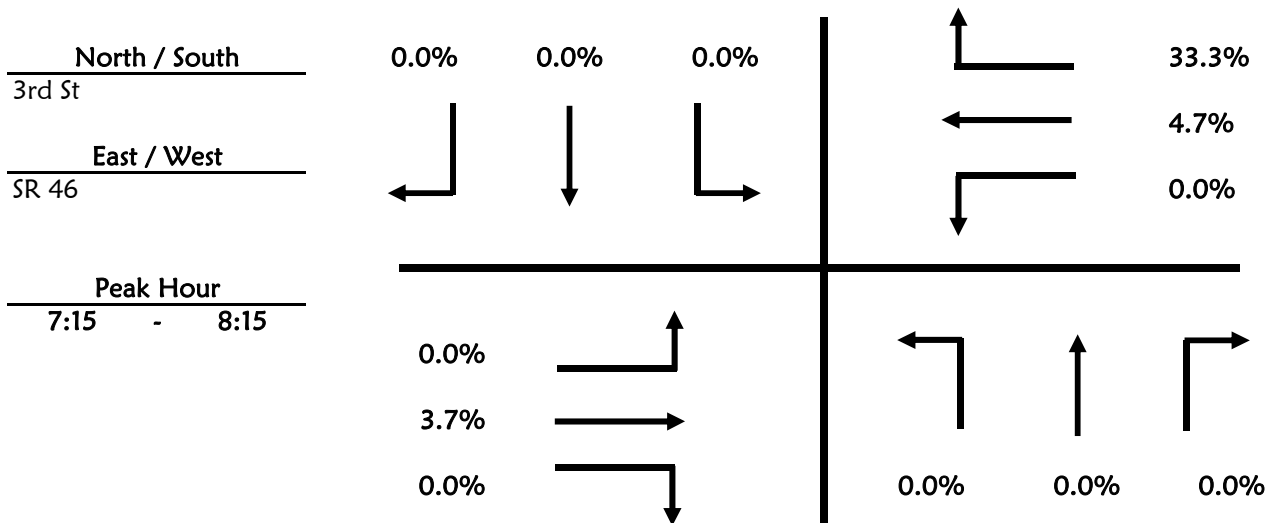
*GMB Engineers & Planners, Inc.*

**Intersection**      3rd St                              & SR 46  
**Date**                     August 23, 2011  
**Time Period**            AM Peak Hour          Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	3	0	0	4	0
7:15 - 7:30	0	1	0	0	2	0
7:30 - 7:45	0	3	0	0	6	1
7:45 - 8:00	0	3	0	0	6	0
8:00 - 8:15	0	7	0	0	3	0
8:15 - 8:30	0	3	0	0	0	0
8:30 - 8:45	0	6	0	0	4	0
8:45 - 9:00	0	2	0	0	3	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection 3rd St & SR 46

Date August 23, 2011

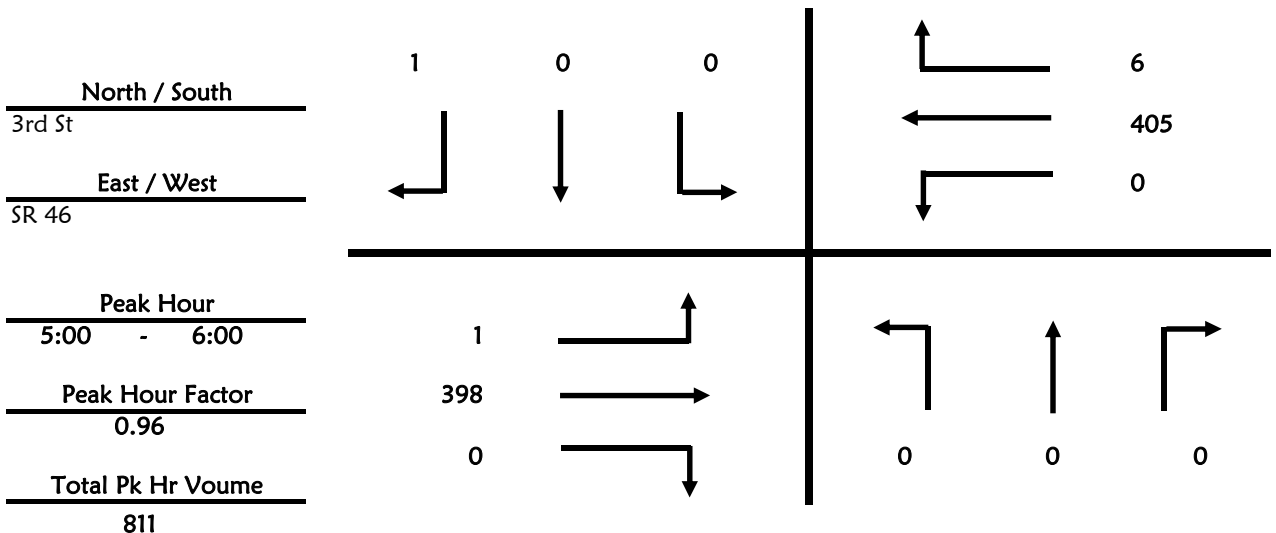
All Vehicles

Time Period PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	1	0	0
4:15 - 4:30	0	0	1	0	0	0
4:30 - 4:45	0	0	0	1	0	1
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	1
	0	0	1	2	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	65	0	0	102	0
4:15 - 4:30	0	76	0	0	66	1
4:30 - 4:45	0	72	0	0	95	1
4:45 - 5:00	0	99	0	0	97	3
5:00 - 5:15	0	98	0	0	101	1
5:15 - 5:30	0	97	0	0	100	4
5:30 - 5:45	0	104	0	0	93	1
5:45 - 6:00	1	99	0	0	111	0
	1	710	0	0	765	11



# Roadway Count Summary

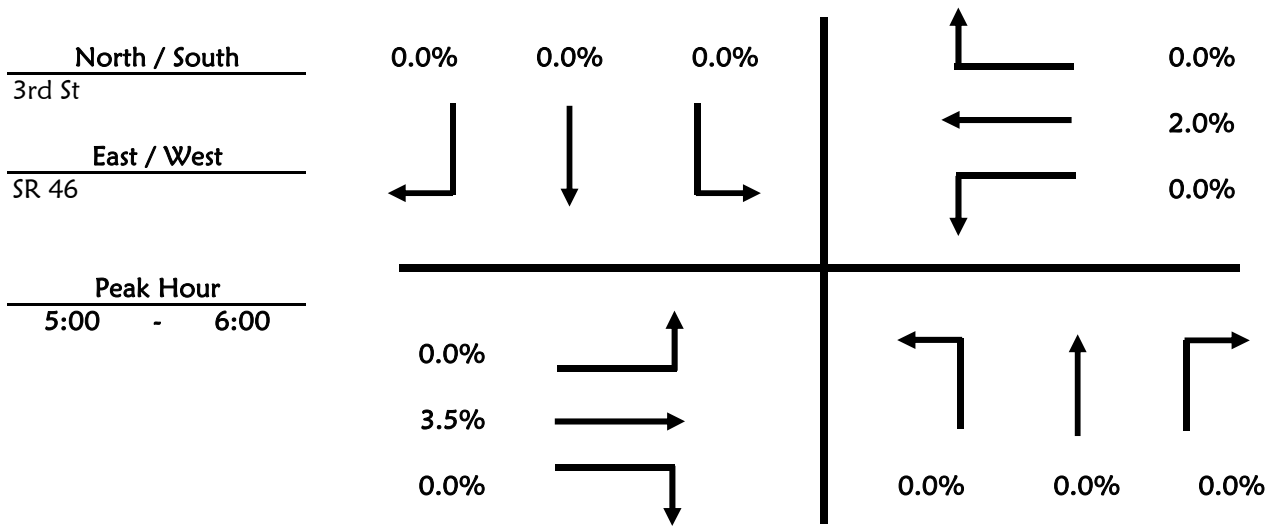
*GMB Engineers & Planners, Inc.*

Intersection      3rd St                                  & SR 46  
 Date                                  August 23, 2011  
 Time Period                          PM Peak Hour                          Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	2	0	0	7	0
4:15 - 4:30	0	3	0	0	5	0
4:30 - 4:45	0	4	0	0	4	0
4:45 - 5:00	0	1	0	0	2	0
5:00 - 5:15	0	5	0	0	3	0
5:15 - 5:30	0	4	0	0	1	0
5:30 - 5:45	0	4	0	0	2	0
5:45 - 6:00	0	1	0	0	2	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection **Oak** & SR 46

Date **August 23, 2011**

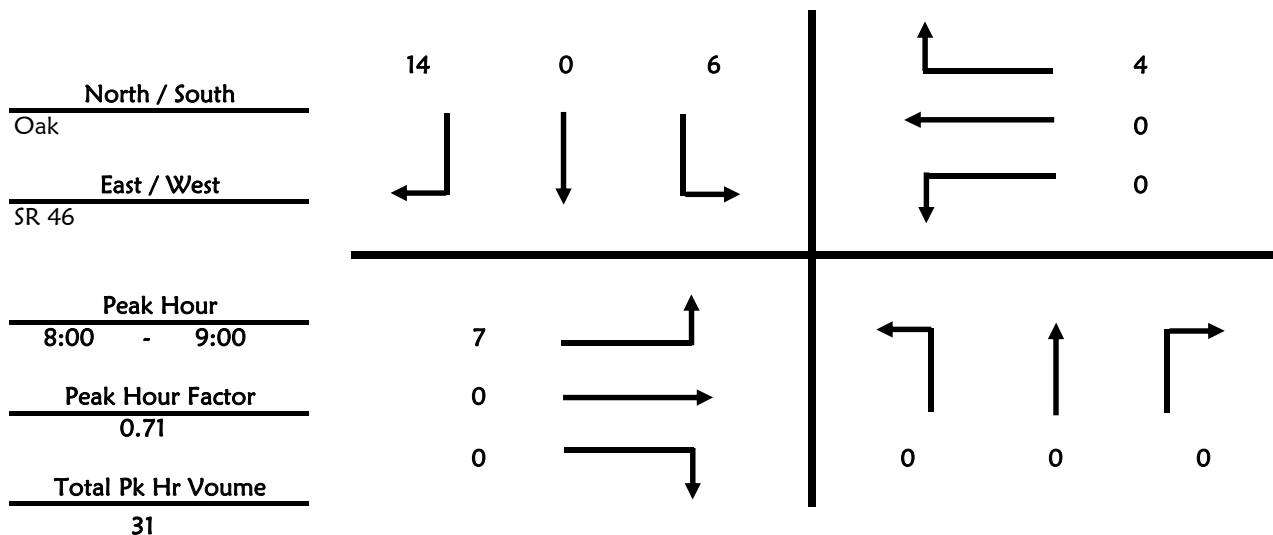
**All Vehicles**

Time Period **AM Peak Hour**

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	2	0	0
7:15 - 7:30	0	0	0	4	0	2
7:30 - 7:45	0	0	0	1	0	0
7:45 - 8:00	0	0	0	0	0	2
8:00 - 8:15	0	0	0	1	0	5
8:15 - 8:30	0	0	0	1	0	9
8:30 - 8:45	0	0	0	1	0	0
8:45 - 9:00	0	0	0	3	0	0
	0	0	0	13	0	18

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	2
7:30 - 7:45	2	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	2	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	1
8:30 - 8:45	3	0	0	0	0	1
8:45 - 9:00	2	0	0	0	0	2
	10	0	0	0	0	6



# Roadway Count Summary

## *GMB Engineers & Planners, Inc.*

**Intersection**      Oak    &   SR 46

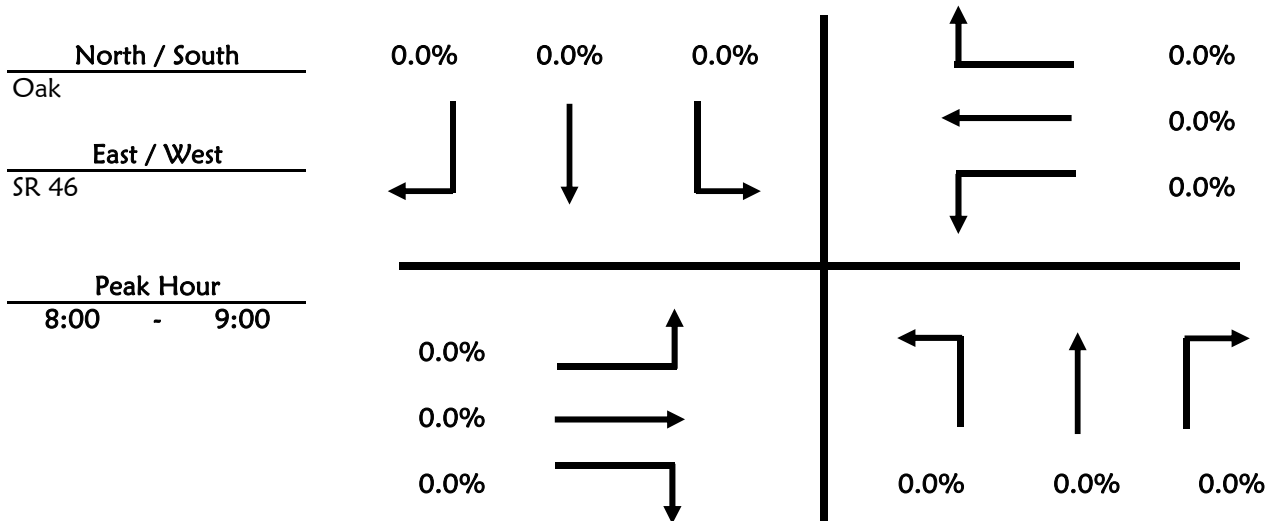
**Date**                      August 23, 2011

**Time Period**        AM Peak Hour      Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** Oak St & SR 46

**Date** August 23, 2011

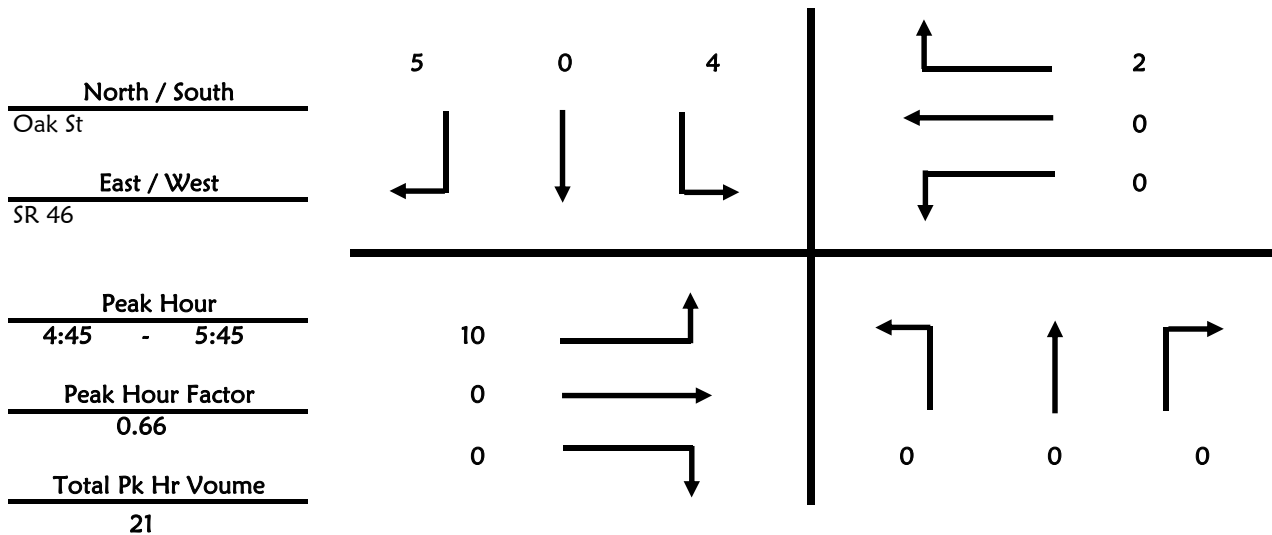
**All Vehicles**

**Time Period** PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	1	0	2
4:15 - 4:30	0	0	0	3	0	2
4:30 - 4:45	0	0	0	2	0	0
4:45 - 5:00	0	0	0	1	0	2
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	1	0	2
5:30 - 5:45	0	0	0	2	0	1
5:45 - 6:00	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>9</b>

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	2	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	1	0	0	0	0	1
4:45 - 5:00	2	0	0	0	0	1
5:00 - 5:15	1	0	0	0	0	0
5:15 - 5:30	3	0	0	0	0	0
5:30 - 5:45	4	0	0	0	0	1
5:45 - 6:00	2	0	0	0	0	0
<b>Total</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection      Oak St                              & SR 46

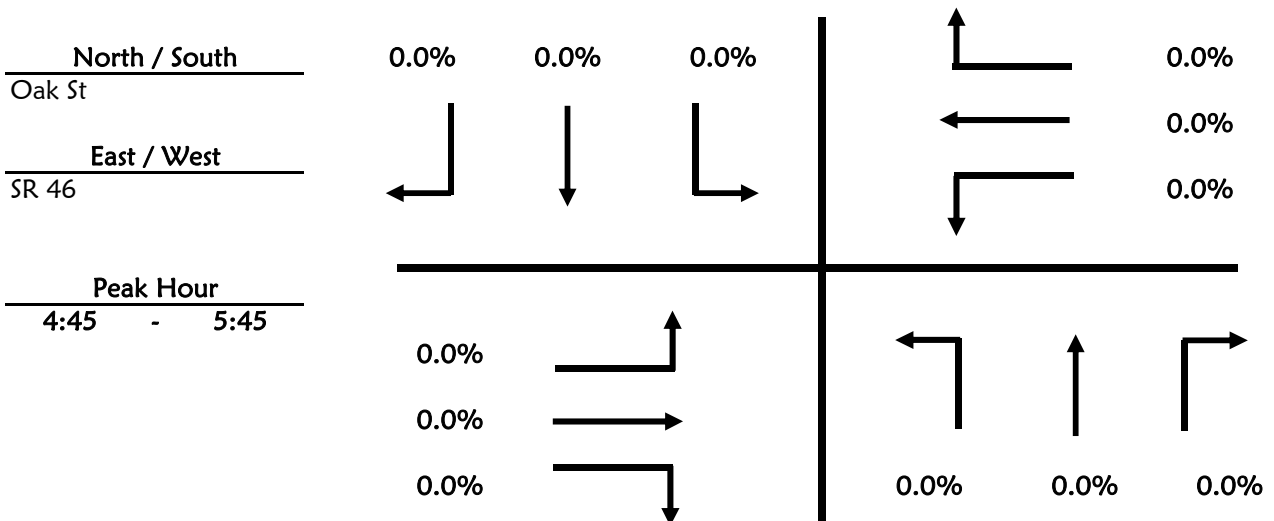
Date                      August 23, 2011

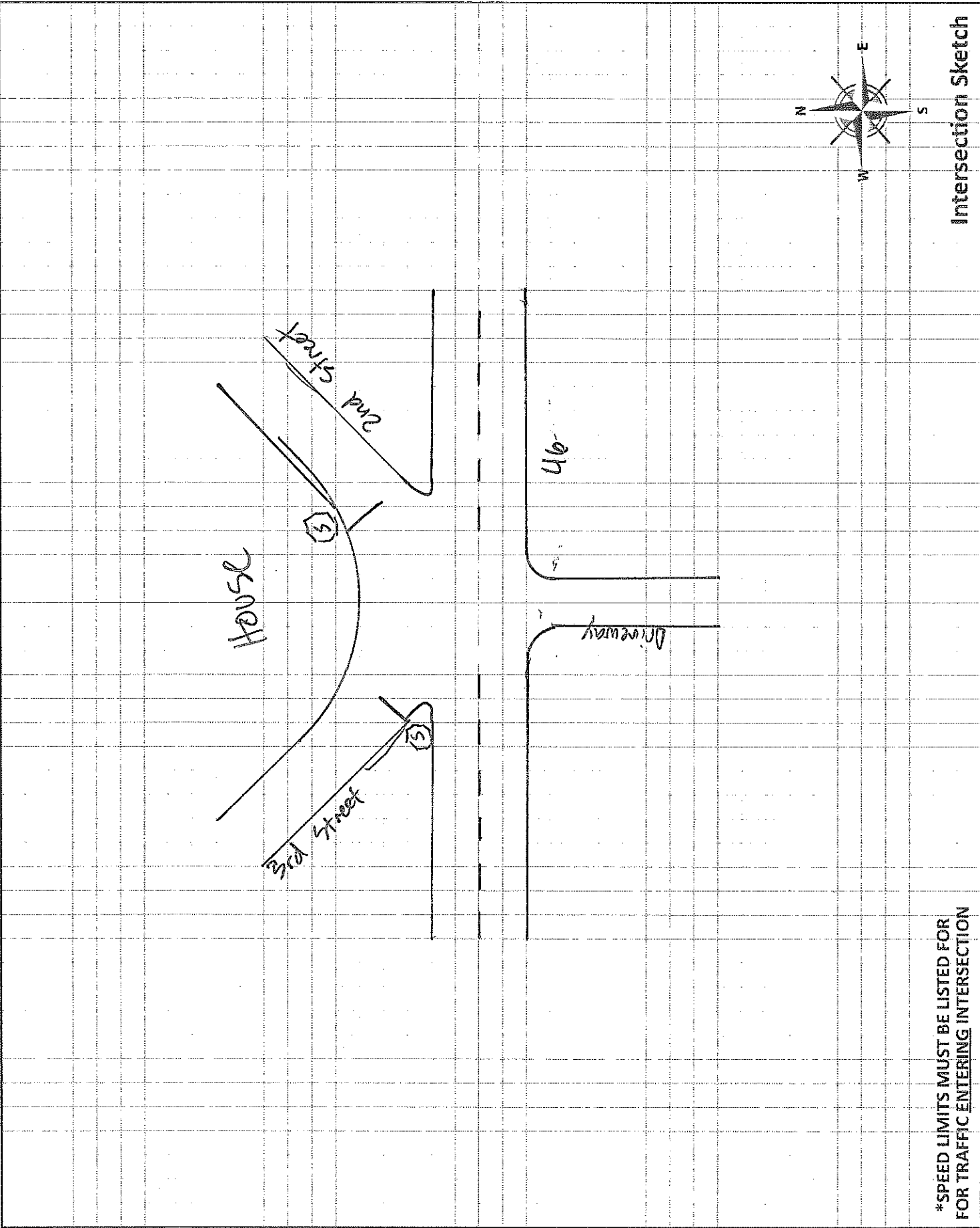
Time Period              PM Peak Hour              Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	0	0	0	0	0	0
4:15 - 4:30	0	0	0	0	0	0
4:30 - 4:45	0	0	0	0	0	0
4:45 - 5:00	0	0	0	0	0	0
5:00 - 5:15	0	0	0	0	0	0
5:15 - 5:30	0	0	0	0	0	0
5:30 - 5:45	0	0	0	0	0	0
5:45 - 6:00	0	0	0	0	0	0





Intersection Sketch

\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: 8/24/11  
 Project: 11-014.01  
 Name: Adam C-151



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

**Intersection** CR 426 & SR 46

**Date** August 23, 2011

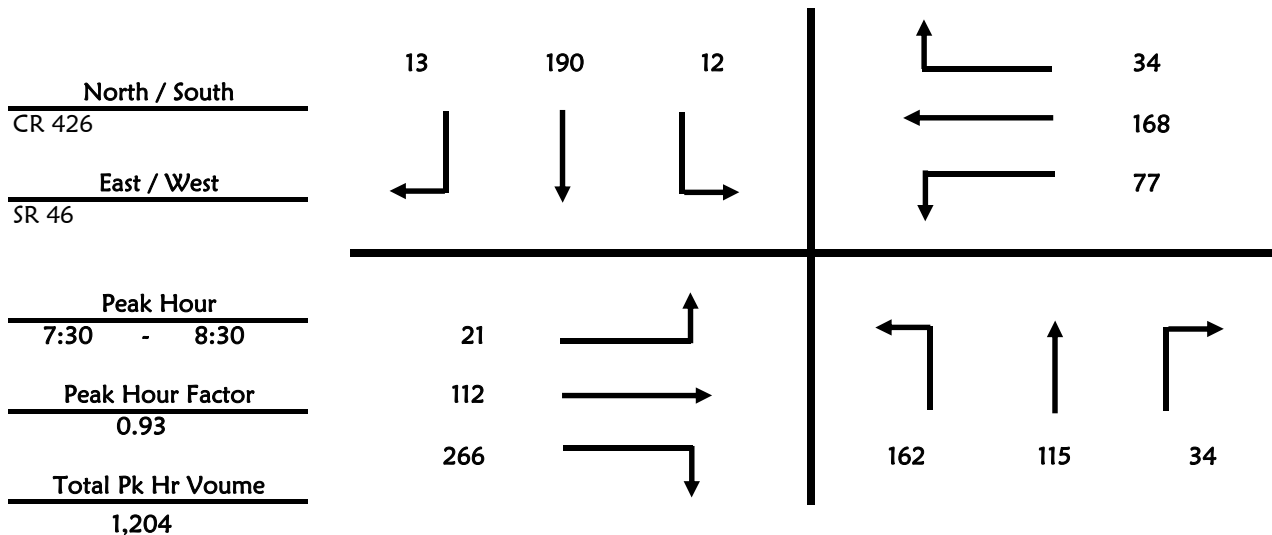
**All Vehicles**

**Time Period** AM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	32	18	4	2	43	4
7:15 - 7:30	39	18	5	3	39	0
7:30 - 7:45	43	16	9	2	34	1
7:45 - 8:00	35	24	9	2	43	2
8:00 - 8:15	41	39	7	4	46	6
8:15 - 8:30	43	36	9	4	67	4
8:30 - 8:45	26	18	8	4	60	16
8:45 - 9:00	28	8	7	1	20	4
	287	177	58	22	352	37

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	34	66	33	26	11
7:15 - 7:30	2	37	53	15	48	6
7:30 - 7:45	2	30	86	25	50	9
7:45 - 8:00	3	27	57	16	43	3
8:00 - 8:15	7	27	70	14	37	10
8:15 - 8:30	9	28	53	22	38	12
8:30 - 8:45	3	34	47	18	30	4
8:45 - 9:00	2	26	47	19	26	1
	29	243	479	162	298	56



# Roadway Count Summary

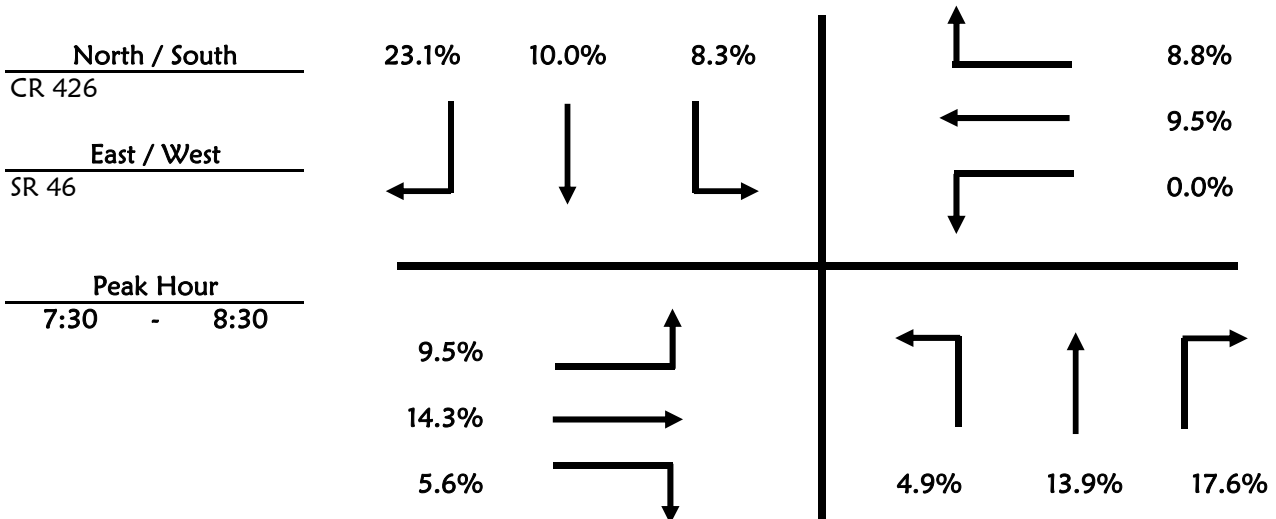
*GMB Engineers & Planners, Inc.*

**Intersection** CR 426 & SR 46  
**Date** August 23, 2011  
**Time Period** AM Peak Hour Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	5	2	0	0	3	1
7:15 - 7:30	3	3	1	0	3	0
7:30 - 7:45	4	3	2	0	4	0
7:45 - 8:00	3	3	0	0	5	1
8:00 - 8:15	0	8	1	0	6	2
8:15 - 8:30	1	2	3	1	4	0
8:30 - 8:45	0	1	0	0	2	2
8:45 - 9:00	3	0	1	0	4	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	5	3	1	0	0
7:15 - 7:30	0	1	3	0	2	2
7:30 - 7:45	0	4	5	0	6	0
7:45 - 8:00	0	6	3	0	6	0
8:00 - 8:15	1	4	5	0	3	2
8:15 - 8:30	1	2	2	0	1	1
8:30 - 8:45	0	5	3	1	2	0
8:45 - 9:00	0	1	3	1	1	0



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection CR 426 & SR 46

Date August 23, 2011

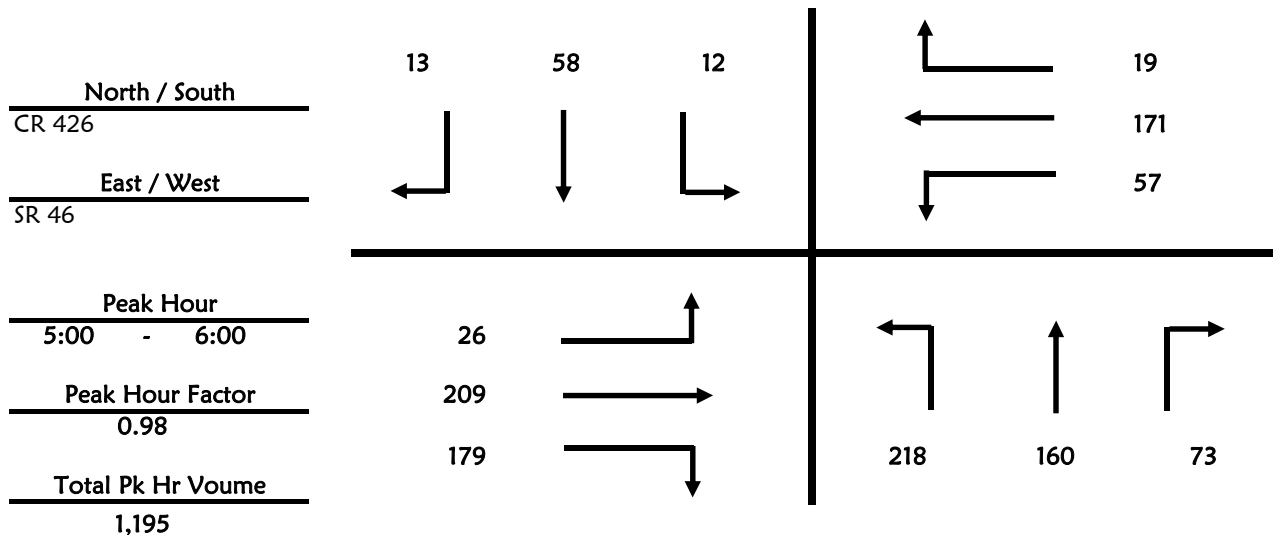
All Vehicles

Time Period PM Peak Hour

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	56	28	16	2	19	3
4:15 - 4:30	36	29	7	2	20	0
4:30 - 4:45	61	23	12	2	27	6
4:45 - 5:00	58	26	17	2	16	3
5:00 - 5:15	54	38	18	0	15	3
5:15 - 5:30	60	37	17	2	13	3
5:30 - 5:45	50	44	19	5	19	6
5:45 - 6:00	54	41	19	5	11	1
	429	266	125	20	140	25

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	3	34	29	7	35	5
4:15 - 4:30	0	45	33	8	33	0
4:30 - 4:45	5	37	35	7	26	6
4:45 - 5:00	7	46	52	12	42	5
5:00 - 5:15	5	55	41	16	44	3
5:15 - 5:30	6	52	41	13	41	8
5:30 - 5:45	10	52	47	12	38	2
5:45 - 6:00	5	50	50	16	48	6
	41	371	328	91	307	35



# Roadway Count Summary

*GMB Engineers & Planners, Inc.*

Intersection      CR 426                                  &   SR 46

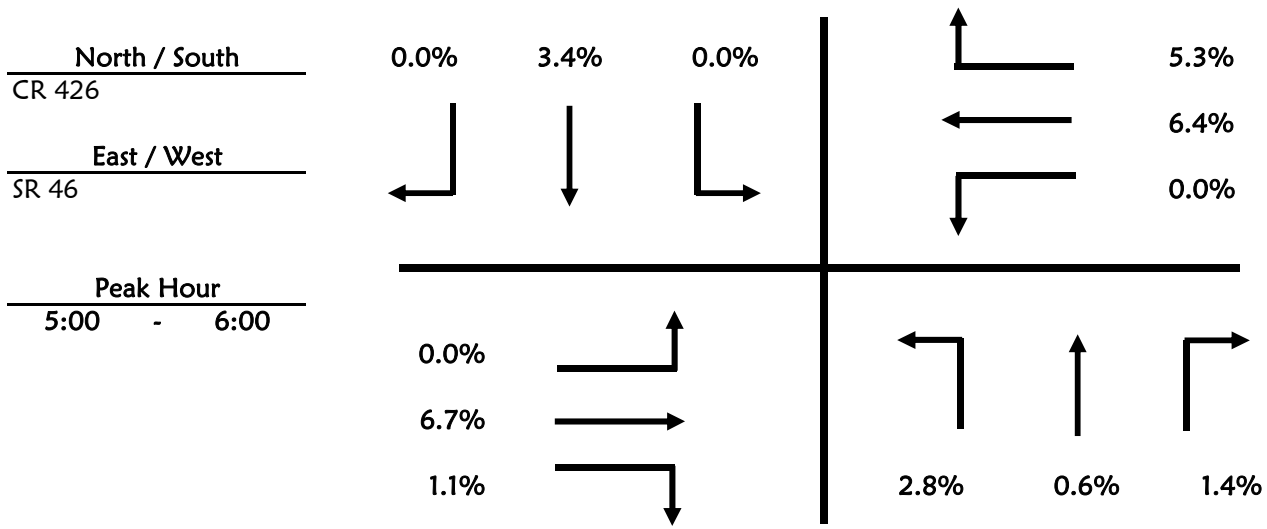
Date                                  August 23, 2011

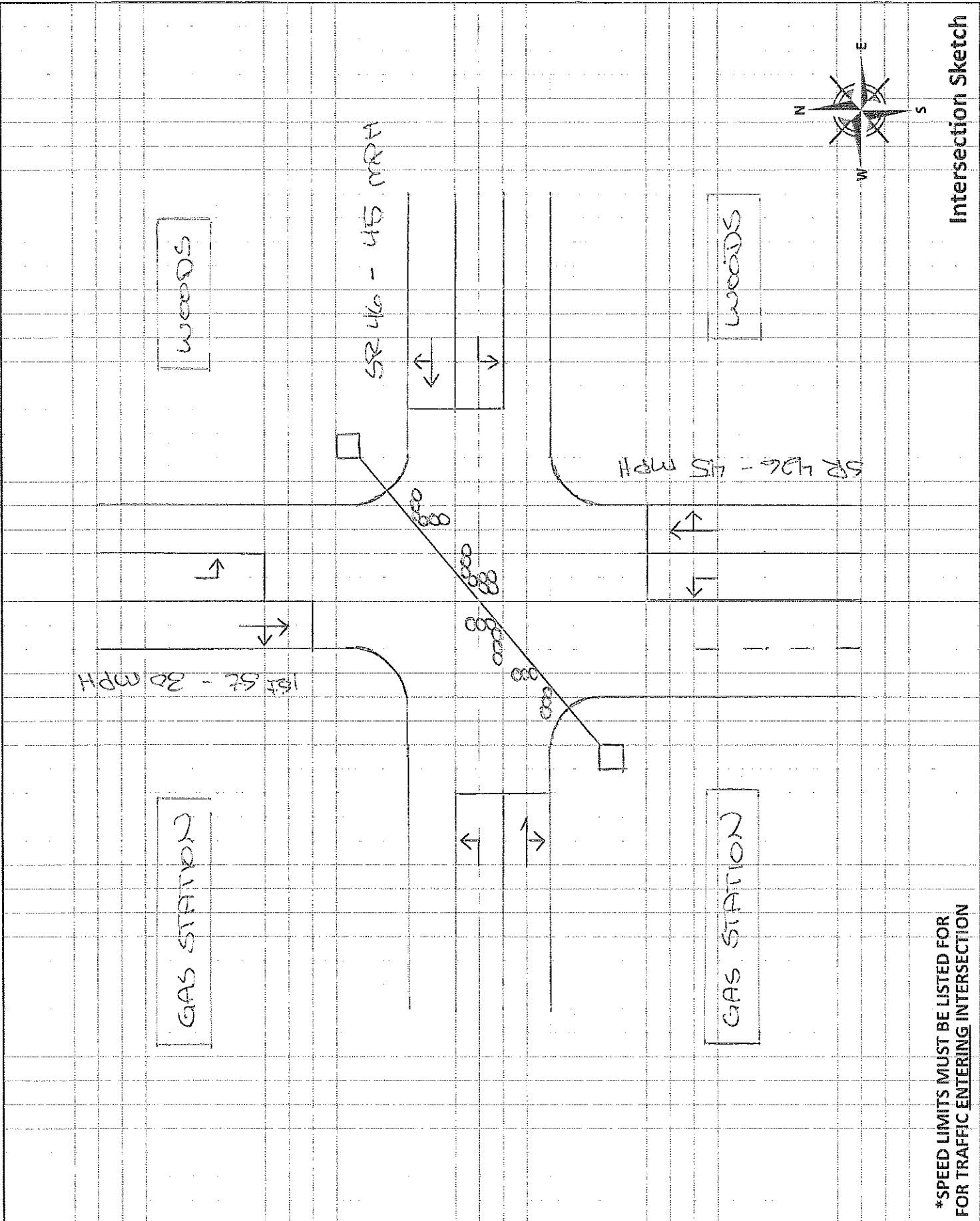
Time Period              PM Peak Hour              Trucks

GMB Project #: 11-014.01

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	8	0	1	0	0	0
4:15 - 4:30	2	0	0	0	0	0
4:30 - 4:45	3	0	0	1	2	0
4:45 - 5:00	1	1	1	0	0	0
5:00 - 5:15	1	0	0	0	0	0
5:15 - 5:30	2	0	0	0	0	0
5:30 - 5:45	1	0	1	0	0	0
5:45 - 6:00	2	1	0	0	2	0

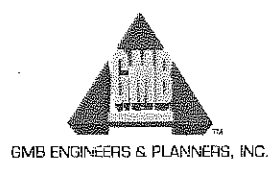
Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
4:00 - 4:15	1	1	2	0	1	0
4:15 - 4:30	0	4	1	0	3	0
4:30 - 4:45	0	3	0	0	3	1
4:45 - 5:00	0	0	0	0	3	0
5:00 - 5:15	0	5	0	0	4	0
5:15 - 5:30	0	2	1	0	0	0
5:30 - 5:45	0	5	0	0	3	0
5:45 - 6:00	0	2	1	0	4	1





Intersection Sketch

\*SPEED LIMITS MUST BE LISTED FOR TRAFFIC ENTERING INTERSECTION



Additional Notes & Observations:

Date: 8/24/11  
 Project: 11-014.01  
 Name: JUSTIN G-156

# Appendix D

## FDOT Counts and Seasonal & Axle Factors for 2010

Florida Department of Transportation  
 Transportation Statistics Office  
 2010 Historical AADT Report

County: 77 - SEMINOLE

Site: 0299 - SR-46 0.4 MI W OF ST. JOHNS RIVER BRG SEMINOLE CO

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2010	10495 C	E 5252	W 5243	10.03	52.91	10.10
2009	9800 F	E 0	W 0	10.61	54.56	12.20
2008	10435 C	E 5194	W 5241	10.61	54.56	12.20
2007	11215 C	E 5622	W 5593	10.49	52.35	12.20
2006	11261 C	E 5643	W 5618	10.26	52.00	12.70
2005	11081 C	E 5557	W 5524	10.40	51.10	12.20
2004	11085 C	E 5550	W 5535	10.10	51.30	11.40
2003	10845 C	E 5437	W 5408	9.90	53.50	7.90
2002	11086 C	E 5564	W 5522	10.00	52.70	11.40
2001	10963 C	E 5499	W 5464	10.00	52.00	6.40
2000	10699 C	E 5387	W 5312	10.00	54.20	6.20
1999	10423 C	E 5228	W 5195	9.70	52.90	7.10
1998	10238 C	E 5186	W 5052	9.90	52.20	7.40
1997	10177 C	E 5163	W 5014	9.90	53.00	7.00
1996	10088 C	E 5119	W 4969	9.80	52.10	6.90
1995	9809 C	E 4984	W 4825	9.80	53.00	7.00

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate  
 S = Second Year Estimate; T = Third Year Estimate; X = Unknown

Florida Department of Transportation  
 Transportation Statistics Office  
 2010 Historical AADT Report

County: 77 - SEMINOLE

Site: 0174 - ON SR-46, 0.1 MI. W OF CR-426 (RCLP)

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2010	8900 C	E 4500	W 4400	8.82	51.95	11.00
2009	8000 C	E 4000	W 4000	8.69	51.56	12.50
2008	9100 C	E 4600	W 4500	8.73	52.75	13.10
2007	9200 C	E 4600	W 4600	9.09	52.41	13.90
2006	9400 C	E 4700	W 4700	9.00	52.16	12.80
2005	8700 C	E 4400	W 4300	9.10	52.10	12.20
2004	9000 C	E 4500	W 4500	9.00	52.50	12.30
2003	8800 C	E 4500	W 4300	8.80	54.00	9.60
2002	9200 C	E	W	8.70	54.40	10.40
2001	8800 C	E	W	8.90	54.00	6.40
2000	9500 C	E	W	9.30	56.80	6.20
1999	8500 C	E	W	9.20	54.40	7.10
1998	8800 C	E	W	9.00	54.10	7.40
1997	8100 C	E	W	8.90	55.20	7.00
1996	8100 C	E	W	9.20	54.20	6.90
1995	7600 C	E	W	9.20	54.80	7.00

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate  
 S = Second Year Estimate; T = Third Year Estimate; X = Unknown



Florida Department of Transportation  
 Transportation Statistics Office  
 2010 Historical AADT Report

County: 77 - SEMINOLE

Site: 0279 - ON SR-415, 0.18 MI. N OF SR-46 (RC)

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2010	14200 C	N 7100	S 7100	8.82	51.95	5.80
2009	14100 C	N 7000	S 7100	8.69	51.56	6.70
2008	15400 C	N 7700	S 7700	8.73	52.75	15.20
2007	15800 C	N 8200	S 7600	9.09	52.41	5.50
2006	14900 C	N 7400	S 7500	9.00	52.16	10.80
2005	15400 C	N 7700	S 7700	9.10	52.10	5.90
2004	16200 C	N 8100	S 8100	9.00	52.50	5.90
2003	14800 C	N 7400	S 7400	8.80	54.00	6.60
2002	16200 C	N 8000	S 8200	8.70	54.40	7.50
2001	14800 C	N 7500	S 7300	8.90	54.00	5.30
2000	14900 C	N 7400	S 7500	9.30	56.80	8.50
1999	14300 C	N 7200	S 7100	9.20	54.40	4.40
1998	14000 C	N 7000	S 7000	9.00	54.10	5.70
1997	12300 C	N 6000	S 6300	8.90	55.20	4.90
1996	10900 C	N 5300	S 5600	9.20	54.20	3.70
1995	11500 C	N 5800	S 5700	9.20	54.80	4.20

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate  
 S = Second Year Estimate; T = Third Year Estimate; X = Unknown

MOCF: 0.98

Week	Dates	SF	PSCF
1	01/01/2010 - 01/02/2010	1.02	1.04
2	01/03/2010 - 01/09/2010	1.02	1.04
3	01/10/2010 - 01/16/2010	1.02	1.04
4	01/17/2010 - 01/23/2010	1.01	1.03
5	01/24/2010 - 01/30/2010	1.00	1.02
* 6	01/31/2010 - 02/06/2010	0.98	1.00
* 7	02/07/2010 - 02/13/2010	0.97	0.99
* 8	02/14/2010 - 02/20/2010	0.96	0.98
* 9	02/21/2010 - 02/27/2010	0.96	0.98
*10	02/28/2010 - 03/06/2010	0.97	0.99
*11	03/07/2010 - 03/13/2010	0.97	0.99
*12	03/14/2010 - 03/20/2010	0.97	0.99
*13	03/21/2010 - 03/27/2010	0.98	1.00
*14	03/28/2010 - 04/03/2010	0.98	1.00
*15	04/04/2010 - 04/10/2010	0.99	1.01
*16	04/11/2010 - 04/17/2010	0.99	1.01
*17	04/18/2010 - 04/24/2010	0.99	1.01
*18	04/25/2010 - 05/01/2010	0.99	1.01
19	05/02/2010 - 05/08/2010	0.99	1.01
20	05/09/2010 - 05/15/2010	1.00	1.02
21	05/16/2010 - 05/22/2010	1.00	1.02
22	05/23/2010 - 05/29/2010	1.00	1.02
23	05/30/2010 - 06/05/2010	1.00	1.02
24	06/06/2010 - 06/12/2010	1.00	1.02
25	06/13/2010 - 06/19/2010	1.00	1.02
26	06/20/2010 - 06/26/2010	1.01	1.03
27	06/27/2010 - 07/03/2010	1.02	1.04
28	07/04/2010 - 07/10/2010	1.03	1.05
29	07/11/2010 - 07/17/2010	1.04	1.06
30	07/18/2010 - 07/24/2010	1.03	1.05
31	07/25/2010 - 07/31/2010	1.03	1.05
32	08/01/2010 - 08/07/2010	1.02	1.04
33	08/08/2010 - 08/14/2010	1.02	1.04
34	08/15/2010 - 08/21/2010	1.01	1.03
35	08/22/2010 - 08/28/2010	1.01	1.03
36	08/29/2010 - 09/04/2010	1.01	1.03
37	09/05/2010 - 09/11/2010	1.01	1.03
38	09/12/2010 - 09/18/2010	1.00	1.02
39	09/19/2010 - 09/25/2010	1.00	1.02
40	09/26/2010 - 10/02/2010	0.99	1.01
41	10/03/2010 - 10/09/2010	0.98	1.00
42	10/10/2010 - 10/16/2010	0.98	1.00
43	10/17/2010 - 10/23/2010	0.98	1.00
44	10/24/2010 - 10/30/2010	0.99	1.01
45	10/31/2010 - 11/06/2010	1.00	1.02
46	11/07/2010 - 11/13/2010	1.01	1.03
47	11/14/2010 - 11/20/2010	1.01	1.03
48	11/21/2010 - 11/27/2010	1.02	1.04
49	11/28/2010 - 12/04/2010	1.02	1.04
50	12/05/2010 - 12/11/2010	1.02	1.04
51	12/12/2010 - 12/18/2010	1.02	1.04
52	12/19/2010 - 12/25/2010	1.02	1.04
53	12/26/2010 - 12/31/2010	1.02	1.04

\* Peak Season

County: 77 - SEMINOLE

Week	Dates	7701 SEMINOLE RURAL	7702 SEMINOLE URBAN	7703 SR46, LAKE CO-US17/92	I4	7704
1	01/01/2010 - 01/02/2010	0.96	0.99	0.95		0.95
2	01/03/2010 - 01/09/2010	0.96	0.94	0.95		0.94
3	01/10/2010 - 01/16/2010	0.96	0.90	0.95		0.94
4	01/17/2010 - 01/23/2010	0.96	0.91	0.95		0.94
5	01/24/2010 - 01/30/2010	0.97	0.93	0.95		0.94
6	01/31/2010 - 02/06/2010	0.97	0.94	0.95		0.94
7	02/07/2010 - 02/13/2010	0.98	0.96	0.95		0.95
8	02/14/2010 - 02/20/2010	0.98	0.97	0.95		0.95
9	02/21/2010 - 02/27/2010	0.98	0.98	0.95		0.95
10	02/28/2010 - 03/06/2010	0.98	0.98	0.95		0.94
11	03/07/2010 - 03/13/2010	0.98	0.99	0.95		0.94
12	03/14/2010 - 03/20/2010	0.98	0.99	0.95		0.94
13	03/21/2010 - 03/27/2010	0.98	0.99	0.95		0.94
14	03/28/2010 - 04/03/2010	0.98	0.99	0.95		0.94
15	04/04/2010 - 04/10/2010	0.98	0.99	0.95		0.95
16	04/11/2010 - 04/17/2010	0.98	0.99	0.95		0.95
17	04/18/2010 - 04/24/2010	0.98	0.99	0.95		0.95
18	04/25/2010 - 05/01/2010	0.98	0.99	0.95		0.95
19	05/02/2010 - 05/08/2010	0.98	0.99	0.95		0.95
20	05/09/2010 - 05/15/2010	0.97	0.99	0.95		0.95
21	05/16/2010 - 05/22/2010	0.97	0.99	0.95		0.95
22	05/23/2010 - 05/29/2010	0.97	0.99	0.95		0.95
23	05/30/2010 - 06/05/2010	0.97	0.99	0.95		0.95
24	06/06/2010 - 06/12/2010	0.97	0.99	0.95		0.95
25	06/13/2010 - 06/19/2010	0.97	0.99	0.95		0.95
26	06/20/2010 - 06/26/2010	0.97	0.99	0.95		0.95
27	06/27/2010 - 07/03/2010	0.97	0.99	0.95		0.95
28	07/04/2010 - 07/10/2010	0.97	0.99	0.95		0.95
29	07/11/2010 - 07/17/2010	0.97	0.99	0.95		0.95
30	07/18/2010 - 07/24/2010	0.97	0.99	0.95		0.95
31	07/25/2010 - 07/31/2010	0.97	0.99	0.95		0.95
32	08/01/2010 - 08/07/2010	0.97	0.99	0.95		0.95
33	08/08/2010 - 08/14/2010	0.97	0.99	0.95		0.95
34	08/15/2010 - 08/21/2010	0.97	0.99	0.95		0.95
35	08/22/2010 - 08/28/2010	0.97	0.99	0.95		0.95
36	08/29/2010 - 09/04/2010	0.97	0.99	0.95		0.94
37	09/05/2010 - 09/11/2010	0.97	0.99	0.95		0.94
38	09/12/2010 - 09/18/2010	0.97	0.99	0.95		0.94
39	09/19/2010 - 09/25/2010	0.97	0.99	0.95		0.94
40	09/26/2010 - 10/02/2010	0.97	0.99	0.95		0.94
41	10/03/2010 - 10/09/2010	0.97	0.99	0.95		0.95
42	10/10/2010 - 10/16/2010	0.96	0.99	0.95		0.95
43	10/17/2010 - 10/23/2010	0.96	0.99	0.95		0.95
44	10/24/2010 - 10/30/2010	0.96	0.99	0.95		0.95
45	10/31/2010 - 11/06/2010	0.96	0.99	0.95		0.95
46	11/07/2010 - 11/13/2010	0.96	0.99	0.95		0.95
47	11/14/2010 - 11/20/2010	0.96	0.99	0.95		0.95
48	11/21/2010 - 11/27/2010	0.96	0.99	0.95		0.95
49	11/28/2010 - 12/04/2010	0.96	0.99	0.95		0.95
50	12/05/2010 - 12/11/2010	0.96	0.99	0.95		0.95
51	12/12/2010 - 12/18/2010	0.96	0.99	0.95		0.95
52	12/19/2010 - 12/25/2010	0.96	0.94	0.95		0.94
53	12/26/2010 - 12/31/2010	0.96	0.90	0.95		0.94

County: 77 - SEMINOLE

Week	Dates	7709 SR419/434 TO SR417	7710 US17/92	7711 SR46,EAST OF US17/92	7712 SR426
1	01/01/2010 - 01/02/2010	0.99	0.99	0.96	0.97
2	01/03/2010 - 01/09/2010	0.99	0.99	0.96	0.97
3	01/10/2010 - 01/16/2010	0.99	0.99	0.96	0.97
4	01/17/2010 - 01/23/2010	0.98	0.99	0.95	0.97
5	01/24/2010 - 01/30/2010	0.98	0.99	0.95	0.97
6	01/31/2010 - 02/06/2010	0.97	0.99	0.94	0.97
7	02/07/2010 - 02/13/2010	0.97	0.99	0.94	0.97
8	02/14/2010 - 02/20/2010	0.96	0.99	0.93	0.97
9	02/21/2010 - 02/27/2010	0.96	0.99	0.94	0.97
10	02/28/2010 - 03/06/2010	0.97	0.99	0.94	0.97
11	03/07/2010 - 03/13/2010	0.97	0.99	0.95	0.97
12	03/14/2010 - 03/20/2010	0.97	1.00	0.96	0.97
13	03/21/2010 - 03/27/2010	0.97	0.99	0.96	0.97
14	03/28/2010 - 04/03/2010	0.97	0.99	0.96	0.97
15	04/04/2010 - 04/10/2010	0.97	0.99	0.96	0.97
16	04/11/2010 - 04/17/2010	0.97	0.99	0.96	0.97
17	04/18/2010 - 04/24/2010	0.97	0.99	0.96	0.97
18	04/25/2010 - 05/01/2010	0.97	0.99	0.96	0.97
19	05/02/2010 - 05/08/2010	0.98	0.99	0.96	0.97
20	05/09/2010 - 05/15/2010	0.98	0.99	0.96	0.97
21	05/16/2010 - 05/22/2010	0.98	0.99	0.96	0.97
22	05/23/2010 - 05/29/2010	0.98	0.99	0.96	0.97
23	05/30/2010 - 06/05/2010	0.98	0.99	0.96	0.97
24	06/06/2010 - 06/12/2010	0.98	0.99	0.96	0.97
25	06/13/2010 - 06/19/2010	0.98	0.99	0.96	0.97
26	06/20/2010 - 06/26/2010	0.98	0.99	0.96	0.97
27	06/27/2010 - 07/03/2010	0.98	0.99	0.96	0.97
28	07/04/2010 - 07/10/2010	0.98	0.99	0.96	0.97
29	07/11/2010 - 07/17/2010	0.98	0.99	0.96	0.97
30	07/18/2010 - 07/24/2010	0.98	0.99	0.96	0.97
31	07/25/2010 - 07/31/2010	0.98	0.99	0.96	0.97
32	08/01/2010 - 08/07/2010	0.98	0.99	0.96	0.97
33	08/08/2010 - 08/14/2010	0.98	0.99	0.96	0.97
34	08/15/2010 - 08/21/2010	0.98	0.99	0.96	0.97
35	08/22/2010 - 08/28/2010	0.98	0.99	0.96	0.97
36	08/29/2010 - 09/04/2010	0.98	0.99	0.96	0.97
37	09/05/2010 - 09/11/2010	0.98	0.99	0.96	0.97
38	09/12/2010 - 09/18/2010	0.98	0.99	0.96	0.97
39	09/19/2010 - 09/25/2010	0.99	0.99	0.96	0.97
40	09/26/2010 - 10/02/2010	0.99	0.99	0.96	0.97
41	10/03/2010 - 10/09/2010	0.99	0.99	0.96	0.97
42	10/10/2010 - 10/16/2010	0.99	0.99	0.96	0.97
43	10/17/2010 - 10/23/2010	0.99	0.99	0.96	0.97
44	10/24/2010 - 10/30/2010	0.99	0.98	0.96	0.97
45	10/31/2010 - 11/06/2010	0.99	0.98	0.96	0.97
46	11/07/2010 - 11/13/2010	0.99	0.97	0.96	0.97
47	11/14/2010 - 11/20/2010	0.99	0.97	0.96	0.97
48	11/21/2010 - 11/27/2010	0.99	0.98	0.96	0.97
49	11/28/2010 - 12/04/2010	0.99	0.98	0.96	0.97
50	12/05/2010 - 12/11/2010	0.99	0.99	0.96	0.97
51	12/12/2010 - 12/18/2010	0.99	0.99	0.96	0.97
52	12/19/2010 - 12/25/2010	0.99	0.99	0.96	0.97
53	12/26/2010 - 12/31/2010	0.99	0.99	0.96	0.97

County: 77 - SEMINOLE

Week	Dates	SR415	7713	SR-414	7714	7715	SEMINOLE COUNTY SIS
1	01/01/2010 - 01/02/2010		0.98		1.00		0.92
2	01/03/2010 - 01/09/2010		0.98		1.00		0.92
3	01/10/2010 - 01/16/2010		0.98		1.00		0.92
4	01/17/2010 - 01/23/2010		0.98		1.00		0.92
5	01/24/2010 - 01/30/2010		0.98		1.00		0.92
6	01/31/2010 - 02/06/2010		0.98		0.99		0.92
7	02/07/2010 - 02/13/2010		0.98		0.99		0.92
8	02/14/2010 - 02/20/2010		0.98		0.99		0.92
9	02/21/2010 - 02/27/2010		0.98		0.99		0.92
10	02/28/2010 - 03/06/2010		0.98		0.99		0.92
11	03/07/2010 - 03/13/2010		0.98		0.99		0.92
12	03/14/2010 - 03/20/2010		0.98		0.99		0.92
13	03/21/2010 - 03/27/2010		0.98		0.99		0.92
14	03/28/2010 - 04/03/2010		0.98		0.99		0.92
15	04/04/2010 - 04/10/2010		0.98		0.99		0.92
16	04/11/2010 - 04/17/2010		0.98		0.99		0.92
17	04/18/2010 - 04/24/2010		0.98		0.99		0.92
18	04/25/2010 - 05/01/2010		0.98		0.99		0.92
19	05/02/2010 - 05/08/2010		0.98		0.99		0.92
20	05/09/2010 - 05/15/2010		0.98		0.99		0.92
21	05/16/2010 - 05/22/2010		0.98		0.99		0.92
22	05/23/2010 - 05/29/2010		0.98		0.99		0.92
23	05/30/2010 - 06/05/2010		0.98		0.99		0.92
24	06/06/2010 - 06/12/2010		0.98		0.99		0.92
25	06/13/2010 - 06/19/2010		0.98		0.99		0.92
26	06/20/2010 - 06/26/2010		0.98		0.99		0.92
27	06/27/2010 - 07/03/2010		0.98		0.99		0.92
28	07/04/2010 - 07/10/2010		0.98		0.99		0.92
29	07/11/2010 - 07/17/2010		0.98		0.99		0.92
30	07/18/2010 - 07/24/2010		0.98		0.99		0.92
31	07/25/2010 - 07/31/2010		0.98		1.00		0.92
32	08/01/2010 - 08/07/2010		0.98		1.00		0.92
33	08/08/2010 - 08/14/2010		0.98		1.00		0.92
34	08/15/2010 - 08/21/2010		0.98		1.00		0.92
35	08/22/2010 - 08/28/2010		0.98		1.00		0.92
36	08/29/2010 - 09/04/2010		0.98		1.00		0.92
37	09/05/2010 - 09/11/2010		0.98		1.00		0.92
38	09/12/2010 - 09/18/2010		0.98		1.00		0.92
39	09/19/2010 - 09/25/2010		0.98		1.00		0.92
40	09/26/2010 - 10/02/2010		0.98		1.00		0.92
41	10/03/2010 - 10/09/2010		0.98		1.00		0.92
42	10/10/2010 - 10/16/2010		0.98		1.00		0.92
43	10/17/2010 - 10/23/2010		0.98		1.00		0.92
44	10/24/2010 - 10/30/2010		0.98		1.00		0.92
45	10/31/2010 - 11/06/2010		0.98		1.00		0.92
46	11/07/2010 - 11/13/2010		0.98		1.00		0.92
47	11/14/2010 - 11/20/2010		0.98		1.00		0.92
48	11/21/2010 - 11/27/2010		0.98		1.00		0.92
49	11/28/2010 - 12/04/2010		0.98		1.00		0.92
50	12/05/2010 - 12/11/2010		0.98		1.00		0.92
51	12/12/2010 - 12/18/2010		0.98		1.00		0.92
52	12/19/2010 - 12/25/2010		0.98		1.00		0.92
53	12/26/2010 - 12/31/2010		0.98		1.00		0.92

# Appendix E

## Signal Timings & SYNCHRO Intersection Analysis Outputs for Year 2011



Coordination Programming

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 1																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 2																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 3																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 4																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 5																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 6																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 7																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 8																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 9																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 10																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 11																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 12																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 13																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 14																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 15																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 16																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA





Pattern Table

Alt Plans

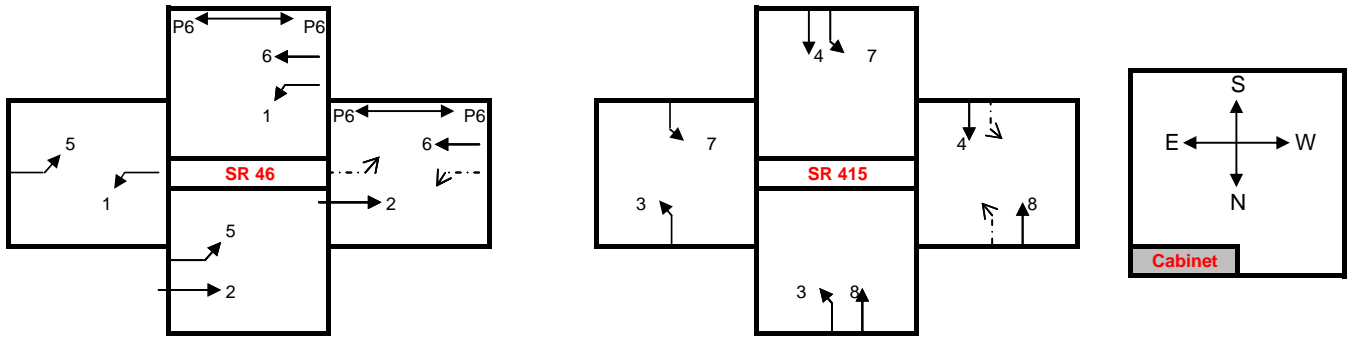
Time of Day - Day Plans

C	O	SP	Seq	TM	OPT	Det	C.I.R.	Mx2	Day Plan 1																	
									Day Of Week=	Sun	Mon	Tue	Wed	Thu	Fri	Sat	1	2	3	4	5	6	7	8	9	10
Pattern #1									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #2									Hr																	
Pattern #3									Min																	
Pattern #4									Act	99																
Pattern #5									Day Plan 2	Day Of Week= Mon																
Pattern #6									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #7									Hr		6	7	8	9	15	18										
Pattern #8									Min						30	30										
Pattern #9									Act	99	46	47	46	99	48	99										
Pattern #10									Day Plan 3	Day Of Week= Tue																
Pattern #11									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #12									Hr		6	7	8	9	15	18										
Pattern #13									Min						30	30										
Pattern #14									Act	99	46	47	46	99	48	99										
Pattern #15									Day Plan 4	Day Of Week= Wed																
Pattern #16									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #17									Hr		6	7	8	9	15	18										
Pattern #18									Min						30	30										
Pattern #19									Act	99	46	47	46	99	48	99										
Pattern #20									Day Plan 5	Day Of Week= Thu																
Pattern #21									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #22									Hr		6	7	8	9	15	18										
Pattern #23									Min						30	30										
Pattern #24									Act	99	46	47	46	99	48	99										
Pattern #25									Day Plan 6	Day Of Week= Fri																
Pattern #26									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #27									Hr		6	7	8	9	15	18										
Pattern #28									Min						30	30										
Pattern #29									Act	99	46	47	46	99	48	99										
Pattern #30									Day Plan 7	Day Of Week= Sat																
Pattern #31									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #32									Hr																	
Pattern #33									Min																	
Pattern #34									Act	99																
Pattern #35									Day Plan 8	Day Of Week=																
Pattern #36									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #37									Hr																	
Pattern #38									Min																	
Pattern #39									Act																	
Pattern #40									Day Plan 9	Day Of Week=																
Pattern #41									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #42									Hr																	
Pattern #43									Min																	
Pattern #44									Act																	
Pattern #45									Day Plan 10	Day Of Week=																
Pattern #46				1	1				Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Pattern #47				1	2				Hr																	
Pattern #48				1	3				Min																	
Act#99=P#254	Free			1		Act#100=P#255	Flash		Act																	

Det	Call	Sw	Dly	Lck	Src	Det	Call	Sw	Dly	Lck	Src	Det	Call	Sw	Dly	Lck	Src	Det	Call	Sw	Dly	Lck	Src	
1	1	2	1.5			17						33						49						9
2	2		0.5			18						34						50						10
3	2					19						35						51						11
4	2					20						36						52						12
5	3	8	1.5			21						37						53						13
6	4					22						38						54						14
7	4		15			23						39						55						15
8	5	6	1.5			24						40						56						16
9	6					25						41					1	57						17
10	6					26						42					2	58						18
11	7	4				27						43					3	59						19
12	8					28						44					4	60						20
13	8		12			29						45					5	61						21
14						30						46					6	62						22
15						31						47					7	63						23
16						32						48					8	64						24

	Enbl	Track Phase	Trk Grn	Track Overlap	Dwell Phase				Min Dwl	Dwell Overlap		Exit Phase	
Pre Run 1													
Pre Run 2													
Pre Run 3													
Pre Run 4													
Pre Run 5	ON				2	5			5		2	6	
Pre Run 6	ON				1	6			5		2	6	

Intersection Notes	T.O.D Notes
<p>Intersection set up with concurrent sides.            All LT's are 5-section heads and are Det. Switched.            Patterns 46, 47, &amp; 48 are used to run alternate timing plans</p>	<p>Intersection runs FREE all the time.</p>



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

### Seminole County Traffic Engineering Timing Sheet - Intersection: SR 46 @ 19-CR 426 #2576

Name	SR 46	SR 426	SR 46	SR 426													IP_	Mask	0.0.0.0	
Direction	ET	NL	ST	WT	NT												Host	0.0.0.0	Port #	
Channel #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Gtwy	0.0.0.0	Com ID #	1725
Phase/OL #	1	2	3	4	5	6	7	8	1	2	3	4	2	4	6	8	Ph Mode	STD8	Node #	2576
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	Date	28-Mar-11	Done By	dmcginnis

Timing Plan 1

Alt Timing Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Assign
Min Grn		15	8	8		15		8									Min Grn
Passage		4.5	4	3		4.5		4									Passage
Max 1		60	25	30		60		30									Max 1
Max 2		60	25	30		60		30									Max 2
Yel Clr		4.5	4.5	4.5		4.5		4.5									Yel Clr
Red Clr		2	2	2		2		2									Red Clr
Walk																	Walk
Ped Clr																	Ped Clr
Red Rvrt		2	2	2		2		2									Red Rvrt
Added Initial			4					4									Assign
Max Initial			12					16									Min Grn
Max3 Limit																	Passage
Max3 Step																	Max 1
Time B-4 Reduc																	Max 2
Cars B-4 Reduc																	Yel Clr
Time to Reduce																	Red Clr
Reduce By																	Walk
Min Gap																	Ped Clr

AM and PM Peak Hour


Alt Timing Plan 2

Alt Timing Plan 3

Assign																
Min Grn																
Passage																
Max 1																
Max 2																
Yel Clr																
Red Clr																
Walk																
Ped Clr																

Alt Timing Plan 4


Alt Timing Plan 5


Phase Options

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Assign
Phase On		On	On	On		On		On									Soft @
Min @		On				On											R-N-W
Max @																	Cond Serv
Ped @																	Assign
Soft @																	Soft @
Lock Call		On				On											R-N-W
Flash Ent				On				On									Cond Serv
Flash Exit		On				On											Assign
Dual Entry		On		On		On		On									Soft @
Sim Gap		On		On		On		On									R-N-W
Cond service																	Cond Serv
Reservice																	
Cnf Phase																	

Alt Phase Opt 1

	2					6											
	On					On											

Alt Phase Opt 2


Alt Phase Opt 3


Type	1
OL A=	2
OL B=	3
OL C=	4
OL D=	5
OL E=	6
OL F=	7
OL G=	8
OL H=	9
OL I=	10
OL J=	11
OL K=	12
OL L=	13
OL M=	14
OL N=	15
OL O=	16

Included Phase


Modifier Phase


Grn																	
Yel																	
Red																	

Coordination Programming

Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 1																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 2																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 3																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 4																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 5																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 6																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 7																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 8																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 9																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 10																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 11																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 12																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 13																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 14																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 15																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA
Phase	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	1+2=	9=	13=	R1=	Cycle
Split 16																		5+6=	10=	14=	R2=	
Coord Ph																		3+4=	11=	15=	R3=	NA
Mode																		7+8=	12=	16=	R4=	NA



Pattern Table

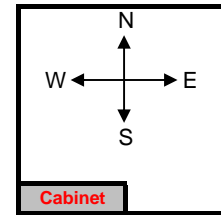
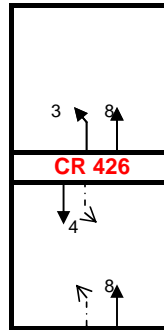
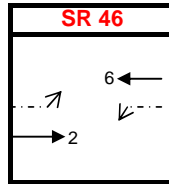
Alt Plans

Time of Day - Day Plans

C	O	SP	Seq	TM	OPT	Det	C.I.R.	Mx2	Day Plan 1																
									Day Of Week= Sun																
Pattern #1									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #2									Hr																
Pattern #3									Min																
Pattern #4									Act	99															
Pattern #5									Day Plan 2							Day Of Week= Mon									
Pattern #6									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #7									Hr																
Pattern #8									Min																
Pattern #9									Act	99															
Pattern #10									Day Plan 3							Day Of Week= Tue									
Pattern #11									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #12									Hr																
Pattern #13									Min																
Pattern #14									Act	99															
Pattern #15									Day Plan 4							Day Of Week= Wed									
Pattern #16									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #17									Hr																
Pattern #18									Min																
Pattern #19									Act	99															
Pattern #20									Day Plan 5							Day Of Week= Thu									
Pattern #21									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #22									Hr																
Pattern #23									Min																
Pattern #24									Act	99															
Pattern #25									Day Plan 6							Day Of Week= Fri									
Pattern #26									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #27									Hr																
Pattern #28									Min																
Pattern #29									Act	99															
Pattern #30									Day Plan 7							Day Of Week= Sat									
Pattern #31									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #32									Hr																
Pattern #33									Min																
Pattern #34									Act	99															
Pattern #35									Day Plan 8							Day Of Week= Sun									
Pattern #36									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #37									Hr																
Pattern #38									Min																
Pattern #39									Act																
Pattern #40									Day Plan 9							Day Of Week= Mon									
Pattern #41									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #42									Hr																
Pattern #43									Min																
Pattern #44									Act																
Pattern #45									Day Plan 10							Day Of Week= Tue									
Pattern #46									Evnt	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pattern #47									Hr																
Pattern #48									Min																
Act#99=P#254	Free					1	Act#100=P#255	Flash	Act																

Det	Call	Swt	Dly	Lck	Src	Det	Call	Swt	Dly	Lck	Src	Det	Call	Swt	Dly	Lck	Src	Det	Call	Swt	Dly	Lck	Src	
1	6					17	8				4	33						49						9
2	2					18						34						50						10
3	2					19						35						51						11
4	3					20						36						52						12
5	4					21						37						53						13
6	2					22						38						54						14
7	6					23						39						55						15
8	6					24						40						56						16
9	4					25						41					1	57						17
10	8					26						42					2	58						18
11	3					27						43					3	59						19
12	8					28						44					4	60						20
13						29						45					5	61						21
14						30						46					6	62						22
15						31						47					7	63						23
16						32						48					8	64						24

	Enbl	Track Phase			Trk Grn	Track Overlap			Dwell Phase				Min Dwl	Dwell Overlap			Exit Phase		
Pre Run 1																			
Pre Run 2																			
Pre Run 3	ON								3	8			5				2	6	
Pre Run 4	ON								4				5				2	6	
Pre Run 5	ON								2				5				2	6	
Pre Run 6	ON								6				5				2	6	
Intersection Notes										T.O.D Notes									
Intersection set up with concurrent sides. Added Init on phase 3 and 8. We add 4 sec up to a max init of 12 on phase 3 and 4 sec up to a max init of 16 on phase 8.										Intersection runs FREE all the time.									



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



HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2011 AM Peak Hour  
12/12/2011



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	105	8	173	273	58	29	101	30	190	680	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5		6.5	7.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1677		1736	1792	1553	1456	1792	1468	1770	1900	1583
Flt Permitted	0.44	1.00		0.64	1.00	1.00	0.15	1.00	1.00	0.56	1.00	1.00
Satd. Flow (perm)	796	1677		1167	1792	1553	223	1792	1468	1035	1900	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	84	113	9	186	294	62	31	109	32	204	731	195
RTOR Reduction (vph)	0	3	0	0	0	46	0	0	23	0	0	116
Lane Group Flow (vph)	84	119	0	186	294	16	31	109	9	204	731	79
Heavy Vehicles (%)	5%	13%	0%	4%	6%	4%	24%	6%	10%	2%	0%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	28.9	24.2		31.9	25.7	25.7	30.8	27.5	27.5	50.9	41.1	41.1
Effective Green, g (s)	28.9	24.2		31.9	25.7	25.7	30.8	27.5	27.5	50.9	41.1	41.1
Actuated g/C Ratio	0.28	0.24		0.31	0.25	0.25	0.30	0.27	0.27	0.50	0.40	0.40
Clearance Time (s)	6.5	7.5		6.5	7.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0		3.5	5.0	5.0	3.5	3.5	3.5	3.5	8.0	8.0
Lane Grp Cap (vph)	269	399		400	452	392	107	484	397	640	767	639
v/s Ratio Prot	0.01	0.07		c0.03	c0.16		0.01	0.06		c0.05	c0.38	
v/s Ratio Perm	0.07			0.12		0.01	0.08		0.01	0.11		0.05
v/c Ratio	0.31	0.30		0.47	0.65	0.04	0.29	0.23	0.02	0.32	0.95	0.12
Uniform Delay, d1	27.6	31.8		27.3	34.0	28.7	27.6	28.9	27.3	14.6	29.4	19.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.9		1.0	4.5	0.1	1.8	0.3	0.0	0.3	22.9	0.4
Delay (s)	28.4	32.7		28.3	38.5	28.8	29.4	29.2	27.3	15.0	52.3	19.4
Level of Service	C	C		C	D	C	C	C	C	B	D	B
Approach Delay (s)		31.0			33.9			28.9			39.9	
Approach LOS		C			C			C			D	




















Intersection Summary

HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	19.5
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group
















HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2011 AM Peak Hour  
12/12/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (veh/h)	38	340	2	0	441	1	1	0	99	2	0	0
Sign Control		Free			Free		Stop				Stop	
Grade		0%			0%		0%				0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	42	374	2	0	485	1	1	0	109	2	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage (veh)		3			3							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	485			376			942	944	485	943	943	375
vC1, stage 1 conf vol							485	485		458	458	
vC2, stage 2 conf vol							457	459		485	485	
vCu, unblocked vol	485			376			942	944	485	943	943	375
tC, single (s)	4.3			4.1			8.1	6.5	6.3	7.1	6.5	6.2
tC, 2 stage (s)							7.1	5.5		6.1	5.5	
tF (s)	2.4			2.2			4.4	4.0	3.4	3.5	4.0	3.3
p0 queue free %	96			100			100	100	81	99	100	100
cM capacity (veh/h)	986			1194			350	473	572	392	456	676
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2	NE 1					
Volume Total	42	376	485	1	1	109	2					
Volume Left	42	0	0	0	1	0	2					
Volume Right	0	2	0	1	0	109	0					
cSH	986	1700	1700	1700	350	572	392					
Volume to Capacity	0.04	0.22	0.29	0.00	0.00	0.19	0.01					
Queue Length 95th (ft)	3	0	0	0	0	17	0					
Control Delay (s)	8.8	0.0	0.0	0.0	15.3	12.8	14.2					
Lane LOS	A				C	B	B					
Approach Delay (s)	0.9		0.0		12.8		14.2					
Approach LOS					B		B					
<b>Intersection Summary</b>												
Average Delay			1.8									
Intersection Capacity Utilization			46.5%		ICU Level of Service		A					
Analysis Period (min)			15									

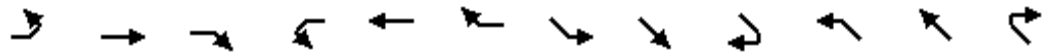
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2011 AM Peak Hour  
 12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	20	0	4	2	345	0	0	408	9
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	0	22	0	4	2	371	0	0	439	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	823	824	371	819	819	444	448			371		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	823	824	371	819	819	444	448			371		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1			2.2		
p0 queue free %	100	100	100	93	100	99	100			100		
cM capacity (veh/h)	290	307	675	290	309	618	742			1188		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	26	373	448									
Volume Left	22	2	0									
Volume Right	4	0	10									
cSH	318	742	1700									
Volume to Capacity	0.08	0.00	0.26									
Queue Length 95th (ft)	7	0	0									
Control Delay (s)	17.3	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	17.3	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			32.0%			ICU Level of Service				A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46



















YR 2011 AM Peak Hour  
 12/12/2011



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	15	0	28	3	0	0	1	345	3	2	355	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	17	0	31	3	0	0	1	388	3	2	399	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	796	796	389	827	797	399	400			391		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	796	796	389	827	797	399	400			391		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	95	99	100	100	100			100		
cM capacity (veh/h)	307	321	663	278	321	655	1170			1179		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	48	3	392	402								
Volume Left	17	3	1	2								
Volume Right	31	0	3	1								
cSH	472	278	1170	1179								
Volume to Capacity	0.10	0.01	0.00	0.00								
Queue Length 95th (ft)	8	1	0	0								
Control Delay (s)	13.5	18.1	0.0	0.1								
Lane LOS	B	C	A	A								
Approach Delay (s)	13.5	18.1	0.0	0.1								
Approach LOS	B	C										
<b>Intersection Summary</b>												
Average Delay			0.9									
Intersection Capacity Utilization			30.2%		ICU Level of Service					A		
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2011 AM Peak Hour  
 2/14/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	8	4	2	7	0	42	26	378	1	2	369	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	9	4	2	8	0	45	28	406	1	2	397	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	910	866	406	869	866	398	399			408		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	910	866	406	869	866	398	399			408		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	96	98	100	97	100	93	97			100		
cM capacity (veh/h)	235	286	649	265	286	652	1107			1162		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1						
Volume Total	15	53	28	406	1	401						
Volume Left	9	8	28	0	0	2						
Volume Right	2	45	0	0	1	2						
cSH	274	539	1107	1700	1700	1162						
Volume to Capacity	0.05	0.10	0.03	0.24	0.00	0.00						
Queue Length 95th (ft)	4	8	2	0	0	0						
Control Delay (s)	18.9	12.4	8.3	0.0	0.0	0.1						
Lane LOS	C	B	A			A						
Approach Delay (s)	18.9	12.4	0.5			0.1						
Approach LOS	C	B										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			36.3%	ICU Level of Service	A							
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

YR 2011 AM Peak Hour  
12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	2	4	386	0	0	367	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	4	0	2	4	420	0	0	399	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	831	830	420	829	829	401	402			420		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	831	830	420	829	829	401	402			420		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	100	100			100		
cM capacity (veh/h)	287	304	634	291	305	654	1167			1140		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	7	424	402									
Volume Left	4	4	0									
Volume Right	2	0	3									
cSH	357	1167	1700									
Volume to Capacity	0.02	0.00	0.24									
Queue Length 95th (ft)	1	0	0									
Control Delay (s)	15.3	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	15.3	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.2									
Intersection Capacity Utilization			36.1%			ICU Level of Service				A		
Analysis Period (min)			15									






















HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46

YR 2011 AM Peak Hour  
 12/12/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	9	4	386	0	0	363	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	7	0	10	4	420	0	0	395	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	834	825	420	824	824	396	397			420		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	834	825	420	824	824	396	397			420		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	98	100	99	100			100		
cM capacity (veh/h)	283	307	634	294	307	658	1173			1150		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	16	424	397									
Volume Left	7	4	0									
Volume Right	10	0	2									
cSH	440	1173	1700									
Volume to Capacity	0.04	0.00	0.23									
Queue Length 95th (ft)	3	0	0									
Control Delay (s)	13.5	0.1	0.0									
Lane LOS	B	A										
Approach Delay (s)	13.5	0.1	0.0									
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			33.5%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2011 AM Peak Hour  
12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	164	116	34	12	192	13	21	113	269	78	170	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flt	1.00	0.97		1.00	0.99		1.00	0.89		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1597		1671	1698		1641	1568		1805	1686	
Flt Permitted	0.41	1.00		0.65	1.00		0.62	1.00		0.36	1.00	
Satd. Flow (perm)	738	1597		1151	1698		1072	1568		678	1686	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	176	125	37	13	206	14	23	122	289	84	183	37
RTOR Reduction (vph)	0	8	0	0	2	0	0	94	0	0	8	0
Lane Group Flow (vph)	176	154	0	13	218	0	23	317	0	84	212	0
Heavy Vehicles (%)	5%	14%	18%	8%	10%	23%	10%	14%	6%	0%	10%	9%
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	3	8			4			2			6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	31.8	31.8		14.5	14.5		21.4	21.4		21.4	21.4	
Effective Green, g (s)	31.8	31.8		14.5	14.5		21.4	21.4		21.4	21.4	
Actuated g/C Ratio	0.48	0.48		0.22	0.22		0.32	0.32		0.32	0.32	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	515	767		252	372		347	507		219	545	
v/s Ratio Prot	c0.06	0.10			c0.13			c0.20			0.13	
v/s Ratio Perm	0.11			0.01			0.02			0.12		
v/c Ratio	0.34	0.20		0.05	0.59		0.07	0.63		0.38	0.39	
Uniform Delay, d1	10.4	9.9		20.4	23.2		15.5	19.0		17.3	17.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.2		0.1	2.3		0.1	3.0		1.9	0.8	
Delay (s)	11.0	10.1		20.5	25.5		15.6	22.0		19.2	18.1	
Level of Service	B	B		C	C		B	C		B	B	
Approach Delay (s)		10.5			25.2			21.7			18.4	
Approach LOS		B			C			C			B	

Intersection Summary

HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	19.5
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2011 PM Peak Hour  
12/12/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	379	263	5	66	142	163	25	587	141	106	220	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5		6.5	7.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1835		1703	1776	1599	1736	1900	1568	1787	1881	1583
Flt Permitted	0.56	1.00		0.48	1.00	1.00	0.61	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	1069	1835		868	1776	1599	1105	1900	1568	209	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	412	286	5	72	154	177	27	638	153	115	239	120
RTOR Reduction (vph)	0	1	0	0	0	139	0	0	80	0	0	71
Lane Group Flow (vph)	412	290	0	72	154	38	27	638	73	115	239	49
Heavy Vehicles (%)	0%	3%	20%	6%	7%	1%	4%	0%	3%	1%	1%	2%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2		2	4		4	8		8
Actuated Green, G (s)	34.1	25.6		26.7	21.9	21.9	42.8	39.3	39.3	47.8	41.8	41.8
Effective Green, g (s)	34.1	25.6		26.7	21.9	21.9	42.8	39.3	39.3	47.8	41.8	41.8
Actuated g/C Ratio	0.33	0.25		0.26	0.21	0.21	0.42	0.38	0.38	0.47	0.41	0.41
Clearance Time (s)	6.5	7.5		6.5	7.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	5.0	5.0		3.5	5.0	5.0	3.5	5.5	5.5	3.5	5.5	5.5
Lane Grp Cap (vph)	416	457		265	379	341	482	727	600	189	766	644
v/s Ratio Prot	c0.08	0.16		0.01	0.09		0.00	c0.34		c0.04	0.13	
v/s Ratio Perm	c0.25			0.06		0.02	0.02		0.05	0.25		0.03
v/c Ratio	0.99	0.64		0.27	0.41	0.11	0.06	0.88	0.12	0.61	0.31	0.08
Uniform Delay, d1	33.5	34.4		29.4	34.8	32.6	17.7	29.5	20.5	21.1	20.7	18.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.6	4.0		0.7	1.5	0.3	0.1	12.7	0.2	5.7	0.6	0.1
Delay (s)	75.1	38.4		30.1	36.3	32.9	17.8	42.2	20.8	26.8	21.3	18.8
Level of Service	E	D		C	D	C	B	D	C	C	C	B
Approach Delay (s)		59.9			33.7			37.4			22.0	
Approach LOS		E			C			D			C	





















Intersection Summary

HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	102.7	Sum of lost time (s)	26.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group
















HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2011 PM Peak Hour  
12/12/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (veh/h)	109	421	5	1	373	0	0	0	53	2	0	1
Sign Control		Free			Free		Stop				Stop	
Grade		0%			0%		0%				0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	116	448	5	1	397	0	0	0	56	2	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage (veh)		3			3							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	397			453			1080	1084	397	1081	1081	451
vC1, stage 1 conf vol							399	399		682	682	
vC2, stage 2 conf vol							681	685		399	399	
vCu, unblocked vol	397			453			1080	1084	397	1081	1081	451
tC, single (s)	4.1			4.1			7.1	6.5	6.4	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.5	3.5	4.0	3.3
p0 queue free %	90			100			100	100	91	99	100	100
cM capacity (veh/h)	1146			1118			381	388	617	355	375	613
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2	NE 1					
Volume Total	116	453	398	0	0	56	3					
Volume Left	116	0	1	0	0	0	2					
Volume Right	0	5	0	0	0	56	1					
cSH	1146	1700	1118	1700	1700	617	413					
Volume to Capacity	0.10	0.27	0.00	0.00	0.00	0.09	0.01					
Queue Length 95th (ft)	8	0	0	0	0	8	1					
Control Delay (s)	8.5	0.0	0.0	0.0	0.0	11.4	13.8					
Lane LOS	A		A		A	B	B					
Approach Delay (s)	1.7		0.0		11.4		13.8					
Approach LOS					B		B					
<b>Intersection Summary</b>												
Average Delay			1.6									
Intersection Capacity Utilization			55.5%		ICU Level of Service		B					
Analysis Period (min)			15									

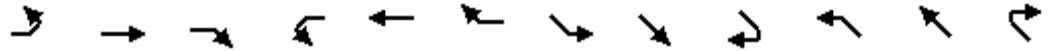
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2011 PM Peak Hour  
 12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	15	0	3	4	414	0	0	366	22
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	0	16	0	3	4	445	0	0	394	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	862	871	445	859	859	405	417			445		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	862	871	445	859	859	405	417			445		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	100	100	100			100		
cM capacity (veh/h)	273	288	613	278	293	650	1153			1115		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	19	449	417									
Volume Left	16	4	0									
Volume Right	3	0	24									
cSH	307	1153	1700									
Volume to Capacity	0.06	0.00	0.25									
Queue Length 95th (ft)	5	0	0									
Control Delay (s)	17.5	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	17.5	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.4									
Intersection Capacity Utilization			35.0%			ICU Level of Service				A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46



















YR 2011 PM Peak Hour  
 12/12/2011



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	6	0	17	0	0	0	2	392	12	25	380	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	18	0	0	0	2	426	13	27	413	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	906	908	433	924	912	415	416			439		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	906	908	433	924	912	415	416			439		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	97	100	100	100	100			98		
cM capacity (veh/h)	254	270	627	240	269	642	1154			1131		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	25	0	441	443								
Volume Left	7	0	2	27								
Volume Right	18	0	13	3								
cSH	453	1700	1154	1131								
Volume to Capacity	0.06	0.00	0.00	0.02								
Queue Length 95th (ft)	4	0	0	2								
Control Delay (s)	13.4	0.0	0.1	0.8								
Lane LOS	B	A	A	A								
Approach Delay (s)	13.4	0.0	0.1	0.8								
Approach LOS	B	A										
<b>Intersection Summary</b>												
Average Delay			0.8									
Intersection Capacity Utilization			48.2%		ICU Level of Service				A			
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2011 PM Peak Hour  
 2/14/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	2	0	8	6	0	26	28	394	6	3	398	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	2	0	9	6	0	28	30	424	6	3	428	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	950	926	424	931	928	432	435			430		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	950	926	424	931	928	432	435			430		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.4	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.5	2.2			2.2		
p0 queue free %	99	100	99	97	100	95	97			100		
cM capacity (veh/h)	225	263	635	241	262	593	1135			1140		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1						
Volume Total	11	34	30	424	6	439						
Volume Left	2	6	30	0	0	3						
Volume Right	9	28	0	0	6	8						
cSH	466	465	1135	1700	1700	1140						
Volume to Capacity	0.02	0.07	0.03	0.25	0.00	0.00						
Queue Length 95th (ft)	2	6	2	0	0	0						
Control Delay (s)	12.9	13.4	8.3	0.0	0.0	0.1						
Lane LOS	B	B	A			A						
Approach Delay (s)	12.9	13.4	0.5			0.1						
Approach LOS	B	B										
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			38.2%	ICU Level of Service	A							
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2011 PM Peak Hour  
 12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	1	1	402	0	0	409	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	0	0	0	1	1	419	0	0	426	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	851	853	419	850	850	429	432			419		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	851	853	419	850	850	429	432			419		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	279	296	634	283	297	630	1138			1151		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	1	420	432									
Volume Left	0	1	0									
Volume Right	1	0	6									
cSH	630	1138	1700									
Volume to Capacity	0.00	0.00	0.25									
Queue Length 95th (ft)	0	0	0									
Control Delay (s)	10.7	0.0	0.0									
Lane LOS	B	A										
Approach Delay (s)	10.7	0.0	0.0									
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.0									
Intersection Capacity Utilization			34.4%			ICU Level of Service				A		
Analysis Period (min)			15									






















HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46

YR 2011 PM Peak Hour  
 12/12/2011

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	0	0	0	3	0	3	10	402	0	0	409	1	
Sign Control		Stop			Stop			Free				Free	
Grade		0%			0%			0%				0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	0	0	0	3	0	3	10	419	0	0	426	1	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None				None	
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	869	867	419	866	866	427	427			419			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	869	867	419	866	866	427	427			419			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2			
p0 queue free %	100	100	100	99	100	100	99			100			
cM capacity (veh/h)	269	288	634	272	289	628	1143			1151			
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>										
Volume Total	6	429	427										
Volume Left	3	10	0										
Volume Right	3	0	1										
cSH	379	1143	1700										
Volume to Capacity	0.02	0.01	0.25										
Queue Length 95th (ft)	1	1	0										
Control Delay (s)	14.7	0.3	0.0										
Lane LOS	B	A											
Approach Delay (s)	14.7	0.3	0.0										
Approach LOS	B												
<b>Intersection Summary</b>													
Average Delay			0.3										
Intersection Capacity Utilization			39.2%			ICU Level of Service				A			
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2011 PM Peak Hour  
12/12/2011

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	220	162	74	12	59	13	26	211	181	58	173	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1792		1805	1805		1805	1697		1805	1768	
Flt Permitted	0.36	1.00		0.61	1.00		0.63	1.00		0.42	1.00	
Satd. Flow (perm)	659	1792		1157	1805		1206	1697		793	1768	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	224	165	76	12	60	13	27	215	185	59	177	19
RTOR Reduction (vph)	0	14	0	0	8	0	0	32	0	0	4	0
Lane Group Flow (vph)	224	227	0	12	65	0	27	368	0	59	192	0
Heavy Vehicles (%)	3%	1%	1%	0%	3%	0%	0%	7%	1%	0%	6%	5%
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4			2			6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	25.0	25.0		6.6	6.6		21.0	21.0		21.0	21.0	
Effective Green, g (s)	25.0	25.0		6.6	6.6		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.42	0.42		0.11	0.11		0.36	0.36		0.36	0.36	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	500	759		129	202		429	604		282	629	
v/s Ratio Prot	c0.09	0.13			0.04			c0.22			0.11	
v/s Ratio Perm	c0.10			0.01			0.02			0.07		
v/c Ratio	0.45	0.30		0.09	0.32		0.06	0.61		0.21	0.31	
Uniform Delay, d1	11.7	11.2		23.5	24.1		12.5	15.6		13.2	13.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.3		0.3	0.9		0.1	2.3		0.6	0.5	
Delay (s)	12.5	11.5		23.8	25.1		12.6	17.9		13.9	14.2	
Level of Service	B	B		C	C		B	B		B	B	
Approach Delay (s)		12.0			24.9			17.6			14.1	
Approach LOS		B			C			B			B	

Intersection Summary

HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



# Appendix F

## 2009 FDOT Quality/Level of Service Handbook Tables

**TABLE 7**

**Generalized Peak Hour Directional Volumes for Florida's Urbanized Areas<sup>1</sup>**

10/4/10

<b>STATE SIGNALIZED ARTERIALS</b>						<b>FREEWAYS</b>					
<b>Class I</b> (>0.00 to 1.99 signalized intersections per mile)						Lanes	B	C	D	E	
Lanes	Median	B	C	D	E	2	2,200	3,020	3,720	4,020	
1	Undivided	510	820	880	***	3	3,300	4,580	5,580	6,200	
2	Divided	1,560	1,890	1,960	***	4	4,400	6,080	7,420	8,400	
3	Divided	2,400	2,860	2,940	***	5	5,500	7,680	9,320	10,580	
4	Divided	3,240	3,830	3,940	***	6	7,560	10,220	12,080	12,780	
<b>Class II</b> (2.00 to 4.50 signalized intersections per mile)						<b>Freeway Adjustments</b>					
Lanes	Median	B	C	D	E	Auxiliary Lanes	Ramp Metering				
1	Undivided	**	560	810	860	+ 1,000	+ 5%				
2	Divided	**	1,330	1,770	1,870						
3	Divided	**	2,080	2,680	2,830						
4	Divided	**	2,830	3,590	3,780						
<b>Class III/IV</b> (more than 4.50 signalized intersections per mile)						<b>UNINTERRUPTED FLOW HIGHWAYS</b>					
Lanes	Median	B	C	D	E	Lanes	Median	B	C	D	E
1	Undivided	**	270	630	790	1	Undivided	400	800	1,140	1,440
2	Divided	**	670	1,500	1,700	2	Divided	1,770	2,560	3,320	3,760
3	Divided	**	1,050	2,330	2,570	3	Divided	2,660	3,840	4,980	5,650
4	Divided	**	1,440	3,170	3,450	<b>Uninterrupted Flow Highway Adjustments</b>					
						Lanes	Median	Exclusive left lanes	Adjustment factors		
						2	Divided	Yes	+5%		
						Multi	Undivided	Yes	-5%		
						Multi	Undivided	No	-25%		
<b>Non-State Signalized Roadway Adjustments</b> (Alter corresponding state volumes by the indicated percent.)						<b>BICYCLE MODE<sup>2</sup></b> (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)					
Major City/County Roadways - 10%						Paved Shoulder/ Bicycle Lane					
Other Signalized Roadways - 35%						Coverage	B	C	D	E	
						0-49%	**	170	650	>650	
						50-84%	130	200	>200	***	
						85-100%	340	>340	***	***	
<b>State &amp; Non-State Signalized Roadway Adjustments</b> (Alter corresponding state volumes by the indicated percent.)						<b>PEDESTRIAN MODE<sup>2</sup></b> (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)					
<b>Divided/Undivided &amp; Turn Lane Adjustments</b>						Sidewalk Coverage					
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors		B	C	D	E		
2	Divided	Yes	No	+5%		0-49%	**	**	270	770	
2	Undivided	No	No	-20%		50-84%	**	100	600	1000	
Multi	Undivided	Yes	No	-5%		85-100%	**	610	1000	>1000	
Multi	Undivided	No	No	-25%		<b>BUS MODE (Scheduled Fixed Route)<sup>3</sup></b> (Buses in peak hour in peak direction)					
-	-	-	Yes	+ 5%		Sidewalk Coverage	B	C	D	E	
						0-84%	>5	≥4	≥3	≥2	
						85-100%	>4	≥3	≥2	≥1	
<b>One-Way Facility Adjustment</b> Multiply the corresponding volumes in this table by 1.20.											

<sup>1</sup> Values shown are presented as hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. 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, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

<sup>2</sup> 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.

<sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

\*\* Cannot be achieved using table input value defaults.

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

Source:  
Florida Department of Transportation  
Systems Planning Office  
605 Suwannee Street, MS 19  
Tallahassee, FL 32399-0450

Generalized **Peak Hour Directional** Volumes for Florida's  
**Rural Undeveloped Areas and Cities** OR  
**Developed Areas Less Than 5,000 Population**<sup>1</sup>

**TABLE 9**

10/4/10

Rural Undeveloped Areas						Cities or Rural Developed Areas Less Than 5000					
<b>FREEWAYS</b>						<b>FREEWAYS</b>					
Lanes	B	C	D	E		Lanes	B	C	D	E	
2	2,100	2,880	3,400	3,600		2	2,100	2,820	3,360	3,600	
3	3,200	4,320	5,100	5,560		3	3,100	4,220	5,040	5,560	
4	4,260	5,720	6,800	7,520		4	4,160	5,680	6,720	7,520	
<b>Freeway Adjustments</b>						<b>Freeway Adjustments</b>					
Auxiliary Lanes +1,000						Auxiliary Lanes +1,000					
<b>UNINTERRUPTED FLOW TWO-LANE HIGHWAYS</b>						<b>UNINTERRUPTED FLOW HIGHWAYS</b>					
Lanes	Median	B	C	D	E	Lanes	Median	B	C	D	E
1	Undivided	240	430	740	1,480	1	Undivided	420	780	1,100	1,400
						2	Divided	1,300	2,040	2,630	3,000
						3	Divided	1,950	3,060	3,950	4,500
<b>Passing Lane Adjustment</b>						<b>Uninterrupted Flow Highway Adjustments</b>					
Alter LOS B-D volumes in proportion to passing lane length to the highway segment length..						Lanes      Median      Exclusive left lanes      Adjustment factors					
<b>UNINTERRUPTED FLOW MULTILANE HIGHWAYS</b>						<b>STATE SIGNALIZED ARTERIALS</b>					
Lanes	Median	B	C	D	E	Lanes	Median	B	C	D	E
2	Divided	1,410	2,210	2,800	3,180	1	Undivided	**	520	690	740
3	Divided	2,120	3,320	4,200	4,770	2	Divided	**	1,240	1,490	1,590
<b>ISOLATED STATE SIGNALIZED INTERSECTIONS</b>						<b>Non-State Signalized Roadway Adjustments</b>					
Lanes	B	C	D	E	(Alter corresponding volume by the indicated percent.)						
1	**	260	560	660	Major City/County Roadways    - 10%						
2	**	560	1,260	1,380	Other Signalized Roadways      - 35%						
3	**	860	1,940	2,080	<b>State &amp; Non-State Signalized Roadway Adjustments</b>						
<b>BICYCLE MODE<sup>2</sup></b>						<b>Divided/Undivided &amp; Turn Lane Adjustments</b>					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)						(Alter corresponding volume by the indicated percent.)					
Paved Shoulder/ Bicycle Lane		B	C	D	E	Lanes	Median	Exclusive Left Turn Lanes	Exclusive Right Turn Lanes	Adjustment Factors	
Coverage						2	Divided	Yes	No	+5%	
0-49%	**	**	**	**	420	2	Undivided	No	No	-20%	
50-84%	**	**	**	**	760	Multi	Undivided	Yes	No	-5%	
85-100%	**	230	>230	***		Multi	Undivided	No	No	-25%	
<b>BICYCLE MODE<sup>2</sup></b>						<b>PEDESTRIAN MODE<sup>2</sup></b>					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)						(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)					
Paved Shoulder/ Bicycle Lane		B	C	D	E	Sidewalk					
Coverage						Coverage	B	C	D	E	
0-49%	**	150	390	>390		0-49%	**	**	270	770	
50-84%	120	180	700	>700		50-84%	**	**	600	1000	
85-100%	210	>210	***	***		85-100%	**	610	1000	>1000	

<sup>1</sup> Values shown are presented as hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. 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, Bicycle LOS Model and Pedestrian LOS Model, respectively for the automobile/truck, bicycle, and pedestrian modes.

<sup>2</sup> 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  
605 Suwannee Street, MS 19  
Tallahassee, FL 32399-0450

# Appendix G

## Crash Data Analysis Summary Tables

**Table G-1  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>							<b>COUNTY:</b>		<b>SEMINOLE</b>
<b>INTERSECTING ROUTE:</b>		<b>SR 415</b>							<b>ENGINEER:</b>		<b>EY</b>
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>			<b>TO</b>	<b>31-May-11</b>					
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/ NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
1	01/03/06	Tuesday	6:50 AM	REAR END	0	0	\$5,500	NIGHT	WET	CARELESS DRIVING	
2	02/28/06	Tuesday	8:04 PM	LEFT TURN	0	0	\$5,000	NIGHT	DRY	IMPROPER TURN	
3	03/27/06	Monday	6:54 AM	REAR END	0	1	\$9,000	DAY	DRY	CARELESS DRIVING	
4	03/29/06	Wednesday	4:27 PM	REAR END	0	1	\$6,500	DAY	DRY	CARELESS DRIVING	
5	04/22/06	Saturday	5:17 PM	REAR END	0	0	\$3,000	DAY	DRY	CARELESS DRIVING	
6	05/21/06	Sunday	10:00 PM	SIDESWIPE	0	0	\$3,500	NIGHT	DRY	CARELESS DRIVING	
7	06/01/06	Thursday	6:55 AM	REAR END	0	0	\$5,000	DAY	WET	CARELESS DRIVING	
8	06/06/06	Tuesday	7:40 AM	LEFT TURN	0	0	\$1,600	DAY	DRY	CARELESS DRIVING	
9	06/01/06	Thursday	1:00 PM	REAR END	0	0	\$800	DAY	DRY	CARELESS DRIVING	
10	06/15/06	Thursday	6:18 PM	REAR END	0	0	\$4,600	DAY	DRY	CARELESS DRIVING	
11	09/05/06	Tuesday	NA	REAR END	0	0	\$1,000	DAY	DRY	CARELESS DRIVING	
12	10/07/06	Saturday	5:05 PM	ANGLE	0	0	\$6,000	DAY	DRY	IMPROPER TURN	
13	10/09/06	Monday	5:20 PM	REAR END	0	0	\$2,700	DAY	DRY	FOLLOWED TOO CLOSELY	
14	11/23/06	Thursday	3:45 PM	SIDESWIPE	0	0	NA	DAY	DRY	IMPROPER LANE CHANGE	
15	11/27/06	Monday	7:15 AM	ANGLE	0	0	\$23,000	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
16	11/30/06	Thursday	6:14 AM	RAN OFF ROAD	0	0	\$5,000	NIGHT	WET	CARELESS DRIVING	
17	01/23/07	Tuesday	7:00 AM	REAR END	0	0	\$7,500	NIGHT	DRY	CARELESS DRIVING	
18	02/13/07	Tuesday	6:48 AM	REAR END	0	0	\$8,100	NIGHT	DRY	CARELESS DRIVING	
19	02/22/07	Thursday	12:40 PM	ANGLE	0	0	\$13,500	DAY	DRY	IMPROPER TURN	
20	03/11/07	Sunday	9:00 AM	REAR END	0	0	\$1,500	DAY	DRY	CARELESS DRIVING	
21	03/27/07	Tuesday	6:35 AM	LEFT TURN	0	1	\$10,000	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
22	04/04/07	Wednesday	1:50 PM	ANGLE	0	0	\$7,500	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
23	04/05/07	Thursday	7:30 AM	ANGLE	0	2	\$11,500	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
24	04/13/07	Friday	6:54 AM	ANGLE	0	0	\$8,500	DAY	DRY	IMPROPER TURN	
25	04/16/07	Monday	8:11 AM	ANGLE	0	1	\$8,000	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
26	06/09/07	Saturday	9:00 AM	REAR END	0	2	\$6,000	DAY	DRY	CARELESS DRIVING	
27	06/24/07	Sunday	8:20 PM	RIGHT TURN	0	0	\$800	NIGHT	WET	IMPROPER TURN	
28	06/30/07	Saturday	12:50 PM	LEFT TURN	0	8	\$13,000	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	

**Table G-1  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>						<b>COUNTY:</b>		<b>SEMINOLE</b>	
<b>INTERSECTING ROUTE:</b>		<b>SR 415</b>						<b>ENGINEER:</b>		<b>EY</b>	
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>		<b>TO</b>		<b>31-May-11</b>					
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/ NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
29	07/16/07	Monday	5:30 PM	ANGLE	0	0	\$3,000	DAY	DRY	ALL OTHER	
30	07/27/07	Friday	7:11 PM	SIDESWIPE	0	0	\$1,500	DAY	DRY	IMPROPER LANE CHANGE	
31	08/29/07	Wednesday	6:40 PM	LEFT TURN	0	2	\$8,000	DAY	DRY	IMPROPER TURN	
32	08/31/07	Friday	8:50 AM	LEFT TURN	0	0	\$3,200	DAY	DRY	FAILED TO YIELD RIGHT OF WAY	
33	09/24/07	Monday	6:05 PM	REAR END	0	0	\$1,400	DAY	DRY	CARELESS DRIVING	
34	10/09/07	Tuesday	6:30 AM	SIDESWIPE	0	0	\$2,500	NIGHT	DRY	IMPROPER PASSING	
35	10/13/07	Saturday	4:45 PM	HEAD ON	0	2	\$7,500	DAY	DRY	DROVE LEFT OF CENTER	
36	10/21/07	Sunday	9:50:00AM	REAR END	0	1	\$4,000	DAY	DRY	CARELESS DRIVING	
37	10/23/07	Tuesday	7:15:00AM	REAR END	0	0	\$8,500	DAY	DRY	CARELESS DRIVING	
38	11/13/07	Tuesday	6:40:00AM	REAR END	0	0	\$50	DAY	DRY	CARELESS DRIVING	
39	11/26/07	Monday	6:05 PM	RAN OFF ROAD	0	1	\$3,000	NIGHT	DRY	CARELESS DRIVING	
40	12/21/07	Friday	7:53:00AM	REAR END	0	0	\$150	DAY	DRY	CARELESS DRIVING	
41	12/29/07	Saturday	11:36 AM	REAR END	0	1	\$17,000	DAY	DRY	CARELESS DRIVING	
42	02/09/08	Saturday	7:10 PM	LEFT TURN	0	2	\$2,700	NIGHT	DRY	IMPROPER TURN	
43	02/22/08	Friday	11:42 AM	REAR END	0	0	\$1,300	DAY	DRY	CARELESS DRIVING	
44	02/25/08	Monday	6:20 AM	REAR END	0	0	\$8,000	NIGHT	DRY	CARELESS DRIVING	
45	03/05/08	Wednesday	4:50 PM	RAN OFF ROAD	0	1	\$3,500	DAY	DRY	DUI	
46	03/18/08	Tuesday	8:19 AM	REAR END	0	0	\$4,500	DAY	DRY	FOLLOWED TOO CLOSELY	
47	03/21/08	Friday	4:25 PM	ALL OTHER	0	1	\$700	DAY	DRY	IMPROPER LANE CHANGE	
48	04/14/08	Monday	6:30 PM	REAR END	0	0	\$3,000	DAY	DRY	FOLLOWED TOO CLOSELY	
49	05/01/08	Thursday	7:20 AM	REAR END	0	0	\$2,000	DAY	DRY	FOLLOWED TOO CLOSELY	
50	05/05/08	Monday	11:21 AM	OVERTURNED	0	0	\$5,000	DAY	DRY	CARELESS DRIVING	
51	05/13/08	Tuesday	12:13 PM	SIDESWIPE	0	0	\$2,000	DAY	DRY	CARELESS DRIVING	
52	05/13/08	Tuesday	5:25 PM	REAR END	0	0	\$100	DAY	DRY	CARELESS DRIVING	
53	05/18/08	Sunday	5:30 PM	RAN OFF ROAD	0	1	\$2,500	DAY	DRY	ALL OTHER	
54	05/22/08	Thursday	7:45 AM	SIDESWIPE	0	0	\$1,500	DAY	DRY	IMPROPER PASSING	
55	06/02/08	Monday	4:15 PM	REAR END	0	0	\$2,600	DAY	DRY	CARELESS DRIVING	
56	07/10/08	Thursday	6:07 PM	REAR END	0	0	\$3,200	DAY	DRY	CARELESS DRIVING	

**Table G-1  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>							<b>COUNTY:</b>		<b>SEMINOLE</b>
<b>INTERSECTING ROUTE:</b>		<b>SR 415</b>							<b>ENGINEER:</b>		<b>EY</b>
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>			<b>TO</b>		<b>31-May-11</b>				
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/ NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
57	08/24/08	Sunday	4:38 PM	REAR END	0	2	\$8,000	DAY	DRY	CARELESS DRIVING	
58	09/06/08	Saturday	6:30 PM	RIGHT TURN	0	0	\$11,000	DAY	DRY	IMPROPER TURN	
59	10/01/08	Wednesday	5:26 PM	REAR END	0	1	\$0	DAY	DRY	CARELESS DRIVING	
60	10/06/08	Monday	8:20 AM	REAR END	0	0	\$1,500	DAY	DRY	CARELESS DRIVING	
61	10/09/08	Thursday	8:16 AM	LEFT TURN	0	1	\$5,500	DAY	DRY	FAILED TO YIELD RIGHT OF WAY	
62	10/12/08	Sunday	5:35 PM	ANGLE	0	0	\$6,000	DAY	WET	DISREGARDED TRAFFIC SIGNAL	
63	10/13/08	Monday	5:30 PM	SIDESWIPE	0	0	\$1,000	DAY	DRY	IMPROPER LANE CHANGE	
64	12/27/08	Saturday	6:45 PM	REAR END	0	0	\$1,000	NIGHT	DRY	CARELESS DRIVING	
65	01/06/09	Tuesday	6:10 AM	REAR END	0	0	\$2,500	NIGHT	DRY	CARELESS DRIVING	
66	01/09/09	Friday	11:51 AM	REAR END	0	0	\$13,000	DAY	DRY	CARELESS DRIVING	
67	01/20/09	Tuesday	8:00 AM	RIGHT TURN	0	0	\$50	DAY	DRY	IMPROPER TURN	
68	02/02/09	Monday	6:40 AM	REAR END	0	1	\$19,500	NIGHT	DRY	CARELESS DRIVING	
69	02/23/09	Monday	11:54 AM	ANGLE	0	0	\$11,000	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
70	03/11/09	Wednesday	11:30 AM	HEAD ON	0	2	\$10,000	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
71	03/12/09	Thursday	8:48 PM	REAR END	0	0	\$250	NIGHT	DRY	CARELESS DRIVING	
72	03/14/09	Saturday	2:25 AM	REAR END	0	0	\$20,000	NIGHT	DRY	DUI	
73	03/19/09	Thursday	3:59 PM	REAR END	0	0	\$1,000	DAY	DRY	CARELESS DRIVING	
74	03/25/09	Wednesday	11:36 PM	REAR END	0	0	\$1,900	NIGHT	DRY	CARELESS DRIVING	
75	05/04/09	Monday	4:30 PM	REAR END	0	0	\$3,250	DAY	DRY	CARELESS DRIVING	
76	05/17/09	Sunday	7:15 PM	REAR END	0	2	\$8,000	NIGHT	DRY	CARELESS DRIVING	
77	06/10/09	Wednesday	6:35 AM	REAR END	0	5	\$7,300	NIGHT	DRY	CARELESS DRIVING	
78	07/15/09	Wednesday	7:17 PM	REAR END	0	0	\$1,000	NIGHT	WET	CARELESS DRIVING	
79	08/07/09	Friday	8:52 PM	LEFT TURN	0	4	\$15,000	NIGHT	DRY	FAILED TO YIELD RIGHT OF WAY	
80	08/08/09	Saturday	6:17 PM	RIGHT TURN	0	0	\$1,000	DAY	DRY	IMPROPER TURN	
81	09/04/09	Friday	4:41 PM	REAR END	0	0	\$7,000	DAY	DRY	CARELESS DRIVING	
82	09/08/09	Tuesday	9:23 AM	REAR END	0	0	\$2	DAY	DRY	CARELESS DRIVING	
83	10/09/09	Friday	2:58 PM	REAR END	0	0	\$3,000	DAY	DRY	CARELESS DRIVING	
84	10/09/09	Friday	4:53 PM	REAR END	0	0	\$0	DAY	DRY	CARELESS DRIVING	

**Table G-1  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>							<b>COUNTY:</b>		<b>SEMINOLE</b>
<b>INTERSECTING ROUTE:</b>		<b>SR 415</b>							<b>ENGINEER:</b>		<b>EY</b>
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>			<b>TO</b>	<b>31-May-11</b>					
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/ NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
85	11/10/09	Tuesday	7:35 AM	REAR END	0	2	\$17,100	DAY	DRY	CARELESS DRIVING	
86	11/21/09	Saturday	10:22 AM	REAR END	0	0	\$5,000	DAY	DRY	CARELESS DRIVING	
87	01/02/10	Saturday	4:33 PM	REAR END	0	0	\$5,000	DAY	DRY	CARELESS DRIVING	
88	01/02/10	Saturday	7:38 PM	LEFT TURN	0	0	\$1,500	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
89	01/31/10	Sunday	2:00 PM	SIDESWIPE	0	0	\$2,200	DAY	DRY	IMPROPER LANE CHANGE	
90	02/06/10	Saturday	8:08 PM	COLLISION WITH MOVEABLE OBJECT ON ROAD	0	1	\$1,000	NIGHT	DRY	NO IMPROPER DRIVING/ACTION	
91	02/09/10	Tuesday	3:19 PM	REAR END	0	0	\$6,500	DAY	WET	CARELESS DRIVING	
92	02/12/10	Friday	3:23 PM	SIDESWIPE	0	0	\$6,300	DAY	WET	CARELESS DRIVING	
93	03/09/10	Tuesday	6:20 AM	REAR END	0	3	\$6,000	DAY	DRY	CARELESS DRIVING	
94	03/30/10	Tuesday	6:31 PM	ANGLE	0	0	\$3,000	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
95	05/31/10	Monday	3:55 PM	REAR END	0	3	\$7,500	DAY	WET	EXCEEDED SAFE SPEED LIMIT	
96	06/29/10	Tuesday	5:43 PM	REAR END	0	0	\$75	DAY	DRY	CARELESS DRIVING	
97	06/16/10	Wednesday	4:30 PM	REAR END	0	0	\$1,200	DAY	DRY	CARELESS DRIVING	
98	06/17/10	Thursday	5:36 PM	REAR END	0	0	NA	DAY	WET	CARELESS DRIVING	
99	07/03/10	Saturday	8:00 AM	REAR END	0	0	\$3,000	DAY	DRY	CARELESS DRIVING	
100	07/09/10	Friday	4:00 PM	REAR END	0	0	NA	DAY	DRY	CARELESS DRIVING	
101	07/15/10	Thursday	9:46 AM	ANGLE	0	3	\$20,500	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
102	07/23/10	Friday	12:45 PM	REAR END	0	0	\$6,000	DAY	DRY	CARELESS DRIVING	
103	08/03/10	Tuesday	1:10 PM	ANGLE	0	0	\$7,900	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
104	08/04/10	Wednesday	8:58 PM	REAR END	0	0	\$10,000	NIGHT	DRY	CARELESS DRIVING	
105	08/24/10	Tuesday	2:45 PM	ANGLE	1	2	\$60,000	DAY	WET	DISREGARDED TRAFFIC SIGNAL	
106	08/25/10	Wednesday	7:17 PM	SIDESWIPE	0	0	\$5,500	DAY	DRY	IMPROPER LANE CHANGE	
107	09/14/10	Tuesday	8:23 AM	REAR END	0	0	\$1,600	DAY	DRY	CARELESS DRIVING	
108	10/28/10	Thursday	6:24 AM	RIGHT TURN	0	0	\$700	NIGHT	DRY	NA	
109	11/02/10	Tuesday	9:12 AM	REAR END	0	0	\$3,600	DAY	DRY	CARELESS DRIVING	
110	12/06/10	Monday	10:42 AM	ANGLE	0	0	\$17,100	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
111	01/07/11	Friday	9:30 AM	SIDESWIPE	0	0	\$2,500	DAY	DRY	IMPROPER LANE CHANGE	



**Table G-1  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		SR 46		<b>INTERSECTING ROUTE:</b>		SR 415		<b>COUNTY:</b>		SEMINOLE	
<b>STUDY PERIOD:</b>		01-Jan-06		TO		31-May-11		<b>ENGINEER:</b>		EY	
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
112	02/24/11	Thursday	10:17 AM	REAR END	0	0	\$1,600	DAY	DRY	CARELESS DRIVING	
113	03/03/11	Thursday	6:19 PM	LEFT TURN	0	0	\$8,000	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
114	03/12/11	Saturday	4:53 PM	LEFT TURN	0	1	\$18,000	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
115	04/01/11	Friday	7:42 AM	SIDESWIPE	0	0	\$2,000	DAY	DRY	CARELESS DRIVING	
116	04/24/11	Sunday	12:15 PM	ANGLE	0	0	\$5,000	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
<b>Total</b>					<b>1</b>	<b>61</b>	<b>\$674,627</b>				
				CRASH TYPE							
TOTAL			PROP.	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
CRASHES	FATAL	INJURY	DAMAGE								
116	1	31	114	0	16	12	5	62	12	4	5
100%	1%	27%	98%	0%	14%	10%	4%	53%	10%	3%	4%
				CONTRIBUTING CAUSE							
TIME		ROAD			NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YEILD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
ONE	OF DAY		CONDITION								
VEHICLE	DAY	NIGHT	WET	DRY							
0	88	28	11	105	0	64	12	7	2	9	22
0%	76%	24%	9%	91%	0%	55%	10%	6%	2%	8%	19%

**Table G-2  
CRASH SUMMARY**

**MAJOR ROUTE:** SR 46  
**INTERSECTING ROUTE:** RICHMOND AVENUE  
**STUDY PERIOD:** 01-Jan-06 TO 31-May-11  
**COUNTY:** SEMINOLE  
**ENGINEER:** VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	02/13/06	Monday	3:45 PM	REAR END	0	0	\$2,000	DAY	DRY	CARELESS DRIVING
2	04/23/06	Sunday	1:20 AM	RAN OFF ROAD	0	4	\$10,000	NIGHT	DRY	EXCEEDED STATED SPEED LIMIT
3	10/07/06	Saturday	6:38 PM	ANGLE	1	3	\$7,000	DAY	DRY	FAILED TO YIELD RIGHT OF WAY
4	03/15/07	Thursday	9:35 AM	SIDESWIPE	0	0	\$2,500	DAY	DRY	CARELESS DRIVING
5	04/20/07	Friday	6:19 PM	ALL OTHER	0	0	\$3,500	DAY	DRY	ALL OTHER
6	12/18/07	Tuesday	1:39 AM	HEAD ON	0	2	\$23,000	NIGHT	DRY	DROVE LEFT OF CENTER
7	01/03/08	Thursday	2:14 PM	REAR END	0	0	\$4,500	DAY	DRY	CARELESS DRIVING
8	05/13/08	Tuesday	6:45 PM	REAR END	0	1	\$6,500	DAY	DRY	CARELESS DRIVING
9	01/12/09	Monday	9:30 AM	REAR END	0	2	\$8,000	DAY	DRY	NA
10	09/11/09	Friday	8:04 AM	REAR END	0	0	\$5,500	DAY	DRY	CARELESS DRIVING
11	09/18/09	Friday	11:24 AM	REAR END	0	1	\$4,200	DAY	DRY	CARELESS DRIVING
12	01/13/10	Wednesday	7:10 AM	OVERTURNED	0	1	\$5,000	NIGHT	DRY	CARELESS DRIVING
13	02/06/10	Saturday	8:00 PM	SIDESWIPE	0	2	\$12,000	NIGHT	DRY	DROVE LEFT OF CENTER
14	04/01/11	Friday	6:40 PM	RAN OFF ROAD	0	0	\$2,000	DAY	DRY	ALL OTHER
<b>Total</b>					<b>1</b>	<b>16</b>	<b>\$95,700</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
14	1	8	14	0	1	0	0	6	2	2	3
100%	7%	57%	100%	0%	7%	0%	0%	43%	14%	14%	21%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	10	4	0	14	0	7	1	0	0	0	6
0%	71%	29%	0%	100%	0%	50%	7%	0%	0%	0%	43%

**Table G-3  
CRASH SUMMARY**

**MAJOR ROUTE:** SR 46  
**INTERSECTING ROUTE:** OLD GENEVA ROAD  
**STUDY PERIOD:** 01-Jan-06 TO 31-May-11  
**COUNTY:** SEMINOLE  
**ENGINEER:** VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	09/14/06	Thursday	5:00 PM	COLLISION WITH WITH MOVABLE OBJ ON ROAD	0	0	\$700	DAY	DRY	CARELESS DRIVING
2	05/15/07	Tuesday	12:15 AM	RAN OFF ROAD	0	1	\$15,000	NIGHT	DRY	CARELESS DRIVING
3	02/09/08	Saturday	9:02 AM	COLLISION WITH PARKED CAR	0	0	\$3,500	DAY	DRY	CARELESS DRIVING
4	03/17/08	Monday	9:15 PM	RAN OFF ROAD	0	0	\$1,800	NIGHT	DRY	ALL OTHER
5	03/17/08	Monday	9:20 PM	REAR END	0	0	\$5,500	NIGHT	DRY	ALL OTHER
6	03/31/08	Monday	1:00 PM	REAR END	0	0	\$500	DAY	WET	CARELESS DRIVING
7	06/09/08	Monday	7:15 AM	ALL OTHER	0	0	\$600	DAY	DRY	CARELESS DRIVING
8	07/28/08	Monday	4:18 PM	REAR END	0	0	\$6,000	DAY	DRY	CARELESS DRIVING
9	09/11/09	Friday	4:36 PM	REAR END	0	5	\$40,000	DAY	DRY	CARELESS DRIVING
10	09/19/09	Saturday	9:20 PM	SIDESWIPE	1	3	\$16,000	NIGHT	DRY	DROVE LEFT OF CENTER
11	11/08/10	Monday	2:40 AM	RAN OFF ROAD	0	0	\$10,200	NIGHT	DRY	CARELESS DRIVING
<b>Total</b>					<b>1</b>	<b>9</b>	<b>\$99,800</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
11	1	3	11	0	0	0	0	4	1	3	3
100%	9%	27%	100%	0%	0%	0%	0%	36%	9%	27%	27%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YEILD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	6	5	1	10	0	8	0	0	0	0	3
0%	55%	45%	9%	91%	0%	73%	0%	0%	0%	0%	27%

**Table G-4  
CRASH SUMMARY**

**MAJOR ROUTE:** SR 46  
**INTERSECTING ROUTE:** OSCEOLA ROAD  
**STUDY PERIOD:** 01-Jan-06 TO 31-May-11  
**COUNTY:** SEMINOLE  
**ENGINEER:** VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	07/19/08	Saturday	5:35 PM	LEFT TURN	0	0	\$7,000	NIGHT	DRY	FAILED TO YIELD RIGHT OF WAY
2	03/25/09	Wednesday	3:10 PM	SIDESWIPE	0	0	\$22,000	DAY	DRY	DROVE LEFT OF CENTER
3	01/22/10	Friday	1:42 PM	REAR END	0	0	\$500	DAY	DRY	CARELESS DRIVING
4	03/06/10	Saturday	8:39 PM	OVERTURNED	0	1	\$9,000	NIGHT	DRY	CARELESS DRIVING
5	03/15/10	Monday	11:56 AM	REAR END	0	0	\$2,300	DAY	DRY	CARELESS DRIVING
6	05/21/10	Friday	5:15 AM	MV HIT TREE	0	1	\$2,000	NIGHT	DRY	CARELESS DRIVING
7	07/20/10	Tuesday	2:40 PM	COLLISION WITH FIXED OBJECT ABOVE ROAD	0	0	\$500	DAY	DRY	CARELESS DRIVING
8	08/29/10	Sunday	11:37 PM	REAR END	0	0	\$50	NIGHT	DRY	CARELESS DRIVING
9	09/24/10	Friday	6:35 AM	RAN OFF ROAD	0	0	\$15,000	NIGHT	WET	CARELESS DRIVING
10	11/08/10	Monday	8:40 PM	ANGLE	0	0	\$3,000	NIGHT	DRY	CARELESS DRIVING
11	11/20/10	Saturday	4:21 AM	RAN OFF ROAD	0	0	\$2,000	NIGHT	DRY	NO IMPROPER DRIVING
12	12/10/10	Friday	3:39 PM	REAR END	0	1	\$2,800	DAY	DRY	CARELESS DRIVING
<b>Total</b>					<b>0</b>	<b>3</b>	<b>\$66,150</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
12	0	3	12	0	1	1	0	4	1	2	3
100%	0%	25%	100%	0%	8%	8%	0%	33%	8%	17%	25%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	5	7	1	11	1	9	1	0	0	0	1
0%	42%	58%	8%	92%	8%	75%	8%	0%	0%	0%	8%

**Table G-5  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		SR 46		<b>COUNTY:</b>		SEMINOLE					
<b>INTERSECTING ROUTE:</b>		CLEKK CIRCLE		<b>ENGINEER:</b>		VV3					
<b>STUDY PERIOD:</b>		01-Jan-06		TO		31-May-11					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	07/21/08	Monday	5:03 PM	SIDESWIPE	0	6	\$7,150	DAY	DRY	CARELESS DRIVING	
<b>Total</b>					<b>0</b>	<b>6</b>	<b>\$7,150</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
1	0	1	1	0	0	0	0	0	1	0	0
100%	0%	100%	100%	0%	0%	0%	0%	0%	100%	0%	0%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YEILD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	1	0	0	1	0	1	0	0	0	0	0
0%	100%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%

**Table G-6  
CRASH SUMMARY**

**MAJOR ROUTE:** SR 46  
**INTERSECTING ROUTE:** MULLET LAKE PARK ROAD  
**STUDY PERIOD:** 01-Jan-06 TO 31-May-11  
**COUNTY:** SEMINOLE  
**ENGINEER:** VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	08/01/07	Wednesday	9:03 PM	RAN OFF ROAD	0	3	\$4,000	NIGHT	WET	NO IMPROPER DRIVING
2	02/06/08	Wednesday	11:30 PM	RAN OFF ROAD	0	0	\$5,500	NIGHT	DRY	CARELESS DRIVING
3	09/11/08	Thursday	1:50 PM	RAN OFF ROAD	0	0	\$200	DAY	DRY	CARELESS DRIVING
4	01/18/09	Sunday	3:30 PM	OTHER	0	1	\$500	DAY	DRY	CARELESS DRIVING
5	01/25/09	Sunday	10:42 PM	RAN OFF ROAD	0	0	\$5,000	NIGHT	DRY	CARELESS DRIVING
6	05/12/10	Wednesday	4:25 PM	RAN OFF ROAD	0	1	\$5,000	DAY	DRY	CARELESS DRIVING
7	10/30/10	Saturday	3:18 AM	RAN OFF ROAD	0	2	\$35,000	NIGHT	DRY	CARELESS DRIVING
8	11/12/10	Friday	6:20 AM	SIDESWIPE	0	2	\$13,500	NIGHT	DRY	CARELESS DRIVING
9	02/18/11	Friday	10:30 AM	OTHER	0	0	\$6,000	DAY	DRY	CARELESS DRIVING
<b>Total</b>					<b>0</b>	<b>9</b>	<b>\$74,700</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
9	0	5	9	0	0	0	0	0	1	6	2
100%	0%	56%	100%	0%	0%	0%	0%	0%	11%	67%	22%

					CONTRIBUTING CAUSE						
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	4	5	1	8	1	8	0	0	0	0	0
0%	44%	56%	11%	0	11%	89%	0%	0%	0%	0%	0%

**Table G-7  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>		<b>COUNTY:</b>		<b>SEMINOLE</b>					
<b>INTERSECTING ROUTE:</b>		<b>TORREN POINT</b>		<b>ENGINEER:</b>		<b>VV</b>					
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>		<b>TO</b>		<b>31-May-11</b>					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	06/01/07	Friday	9:31 PM	REAR END	0	0	\$5,500	NIGHT	WET	CARELESS DRIVING	
2	12/07/10	Tuesday	9:40 AM	REAR END	0	0	\$9,000	DAY	DRY	CARELESS DRIVING	
3	03/29/11	Tuesday	6:10 PM	ALL OTHER	0	0	\$0	DAY	DRY	COLLISION WITH AN ANIMAL	
4	04/20/11	Wednesday	5:20 PM	REAR END	0	0	\$6,500	DAY	DRY	IMPROPER PASSING	
<b>Total</b>					<b>0</b>	<b>0</b>	<b>\$21,000</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
4	0	0	3	0	0	0	0	3	0	0	1
100%	0%	0%	75%	0%	0%	0%	0%	75%	0%	0%	25%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	3	1	1	3	0	2	0	0	0	0	2
0%	75%	25%	25%	75%	0%	50%	0%	0%	0%	0%	50%

Table G-8

CRASH SUMMARY

MAJOR ROUTE: SR 46  
 INTERSECTING ROUTE: MOCKINGBIRD LANE  
 COUNTY: SEMINOLE  
 STUDY PERIOD: 01-Jan-06 TO 31-May-11  
 ENGINEER: VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	05/28/07	Monday	8:15 PM	MV RAN IN TO DITCH	0	1	\$14,000	NIGHT	DRY	NO IMPROPER DRIVING / ACTION
2	11/17/07	Saturday	10:11 AM	MV HIT TREE	0	0	\$3,000	DAY	DRY	CARELESS DRIVING
3	03/31/08	Monday	5:55 PM	CARGO LOSS OR SHIFT	0	0	\$1,925	DAY	DRY	IMPROPER LOAD
4	04/18/08	Friday	7:20 PM	ALL OTHER	0	0	\$5,000	DAY	DRY	IMPROPER LANE CHANGE
5	05/17/08	Saturday	11:54 PM	ALL OTHER	0	0	\$15,000	NIGHT	DRY	CARELESS DRIVING
6	11/05/09	Thursday	4:00 PM	REAR END	0	0	\$0	DAY	DRY	CARELESS DRIVING
7	01/28/11	Friday	3:10 PM	REAR END	0	0	\$7,000	DAY	DRY	CARELESS DRIVING
8	02/18/11	Friday	5:00 PM	NONE	0	0	\$2,200	DAY	DRY	ALL OTHER
<b>Total</b>					<b>0</b>	<b>1</b>	<b>\$48,125</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
8	0	1	7	0	0	0	0	2	0	0	6
100%	0%	13%	88%	0%	0%	0%	0%	25%	0%	0%	75%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	6	2	0	8	0	4	0	1	0	0	3
0%	75%	25%	0%	100%	0%	50%	0%	13%	0%	0%	38%



**Table G-9  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>		<b>INTERSECTING ROUTE:</b>		<b>SONGBIRD TRAIL</b>		<b>COUNTY:</b>		<b>SEMINOLE</b>	
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>		<b>TO</b>		<b>31-May-11</b>		<b>ENGINEER:</b>		<b>VV</b>	
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
1	11/23/07	Friday	5:05 PM	SIDESWIPE	0	1	\$5,000	DAY	DRY	IMPROPER PASSING	
2	06/19/08	Thursday	5:50 PM	RAN OFF ROAD	0	0	\$5,000	DAY	DRY	DUI	
3	03/28/11	Monday	7:07 PM	RAN OFF ROAD	0	2	\$10,000	NIGHT	WET	CARELESS DRIVING	
<b>Total</b>					<b>0</b>	<b>3</b>	<b>\$20,000</b>				
				<b>CRASH TYPE</b>							
<b>TOTAL CRASHES</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROP. DAMAGE</b>	<b>PED / BIKE</b>	<b>ANGLE</b>	<b>LEFT TURN</b>	<b>RIGHT TURN</b>	<b>REAR END</b>	<b>SIDESWIPE</b>	<b>RAN OFF ROAD</b>	<b>OTHER</b>
3	0	2	3	0	0	0	0	0	1	2	0
100%	0%	67%	100%	0%	0%	0%	0%	0%	33%	67%	0%
				<b>CONTRIBUTING CAUSE</b>							
<b>ONE VEHICLE</b>	<b>TIME OF DAY</b>		<b>ROAD CONDITION</b>		<b>NO IMPROPER DRIVING</b>	<b>CARELESS DRIVING</b>	<b>FAILED TO YIELD RIGHT OF WAY</b>	<b>IMPROPER LANE CHANGE</b>	<b>DUI</b>	<b>DISREGARDED TRAFFIC SIGNAL</b>	<b>OTHER</b>
	<b>DAY</b>	<b>NIGHT</b>	<b>WET</b>	<b>DRY</b>							
0	2	1	1	2	0	1	0	0	1	0	1
0%	67%	33%	33%	67%	0%	33%	0%	0%	33%	0%	33%

**Table G-10  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		SR 46						<b>COUNTY:</b>		SEMINOLE	
<b>INTERSECTING ROUTE:</b>		RIDGE ROAD						<b>ENGINEER:</b>		VV	
<b>STUDY PERIOD:</b>		01-Jan-06		TO		31-May-11					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	08/21/06	Monday	3:14 PM	COLLISON WITH MOVEABLE OBJECT ON ROAD	0	0	\$500	DAY	DRY	NO IMPROPER DRIVING	
<b>Total</b>					<b>0</b>	<b>0</b>	<b>\$500</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
1	0	0	1	0	0	0	0	0	0	0	1
100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	1	0	0	1	1	0	0	0	0	0	0
0%	100%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%

**Table G-11  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		SR 46		<b>COUNTY:</b>		SEMINOLE					
<b>INTERSECTING ROUTE:</b>		COCHRAN ROAD		<b>ENGINEER:</b>		VV					
<b>STUDY PERIOD:</b>		01-Jan-06		TO		31-May-11					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	02/25/08	Monday	7:55 PM	SIDESWIPE	0	0	\$2,000	NIGHT	DRY	DROVE LEFT OF CENTER	
2	03/08/08	Saturday	4:40 PM	RIGHT TURN	0	0	\$3,000	NIGHT	DRY	CARELESS DRIVING	
3	04/11/09	Saturday	2:00 AM	OVERTURNED	0	0	\$4,150	NIGHT	DRY	CARELESS DRIVING	
4	11/27/09	Friday	10:49 PM	COLLISION WITH ANIMAL	0	0	\$2,000	NIGHT	DRY	NO IMPROPER DRIVING	
5	03/07/10	Sunday	11:08 AM	OVERTURNED	1	0	\$5,000	DAY	DRY	CARELESS DRIVING	
<b>Total</b>					<b>1</b>	<b>0</b>	<b>\$16,150</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
5	1	0	5	0	0	0	1	0	1	0	3
100%	20%	0%	100%	0%	0%	0%	20%	0%	20%	0%	60%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	1	4	0	5	1	3	0	0	0	0	1
0%	20%	80%	0%	100%	20%	60%	0%	0%	0%	0%	20%

**Table G-12  
CRASH SUMMARY**

**MAJOR ROUTE:** SR 46  
**INTERSECTING ROUTE:** WOODRIDGE DRIVE  
**STUDY PERIOD:** 01-Jan-06 TO 31-May-11  
**COUNTY:** SEMINOLE  
**ENGINEER:** VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
1	02/17/06	Friday	10:00 PM	REAR END	0	1	\$2,000	NIGHT	DRY	DUI
2	10/12/06	Thursday	9:12 PM	COLLISON WITH ANIMAL	0	0	\$2,000	NIGHT	DRY	NO IMPROPER DRIVING
3	12/06/06	Wednesday	12:00 PM	REAR END	0	0	\$0	DAY	DRY	CARELESS DRIVING
4	05/06/07	Sunday	9:20 PM	SIDESWIPE	0	0	\$1,800	NIGHT	WET	DROVE LEFT OG CENTER
5	06/17/07	Sunday	9:00 PM	SIDESWIPE	0	0	\$4,500	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY
6	04/12/11	Tuesday	10:54 AM	BACKED INTO	0	0	\$2,500	DAY	DRY	IMPROPER BACKING
<b>Total</b>					<b>0</b>	<b>1</b>	<b>\$12,800</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
6	0	1	5	0	0	0	0	2	2	0	2
100%	0%	17%	83%	0%	0%	0%	0%	33%	33%	0%	33%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YEILD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	2	4	1	5	1	1	1	0	1	0	2
0%	33%	67%	17%	83%	17%	17%	17%	0%	17%	0%	33%

**Table G-13  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		SR 46		<b>COUNTY:</b>		SEMINOLE					
<b>INTERSECTING ROUTE:</b>		HART ROAD		<b>ENGINEER:</b>		VV					
<b>STUDY PERIOD:</b>		01-Jan-06		TO		31-May-11					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	01/16/09	Friday	6:00 PM	ANGLE	0	0	\$2,400	NIGHT	DRY	IMPROPER TURN	
2	01/05/11	Wednesday	2:25 PM	REAR END	0	0	\$15,000	DAY	DRY	CARELESS DRIVING	
3	01/08/11	Saturday	10:45 PM	REAR END	0	0	\$1,000	NIGHT	DRY	CARELESS DRIVING	
<b>Total</b>					<b>0</b>	<b>0</b>	<b>\$18,400</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
3	0	0	3	0	1	0	0	2	0	0	0
100%	0%	0%	100%	0%	33%	0%	0%	67%	0%	0%	0%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	1	2	0	3	0	2	0	0	0	0	1
0%	33%	67%	0%	100%	0%	67%	0%	0%	0%	0%	33%

**Table G-14  
CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>		<b>INTERSECTING ROUTE:</b>		<b>OAK STREET</b>		<b>COUNTY:</b>		<b>SEMINOLE</b>	
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>		<b>TO</b>		<b>31-May-11</b>		<b>ENGINEER:</b>		<b>VV</b>	
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	10/16/07	Tuesday	4:14 PM	RAN OFF ROAD	0	0	\$500	DAY	DRY	CARELESS DRIVING	
2	02/26/10	Friday	1:52 AM	REAR END	0	1	\$25,000	NIGHT	DRY	CARELESS DRIVING	
3	03/05/11	Saturday	7:12 PM	REAR END	2	1	\$20,200	NIGHT	DRY	CARELESS DRIVING	
<b>Total</b>					<b>2</b>	<b>2</b>	<b>\$45,700</b>				
				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
3	1	2	3	0	0	0	0	2	0	1	0
100%	33%	67%	100%	0%	0%	0%	0%	67%	0%	33%	0%
				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	1	2	0	3	0	3	0	0	0	0	0
0%	33%	67%	0%	100%	0%	100%	0%	0%	0%	0%	0%

**Table G-15**

**CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>						<b>COUNTY:</b>		<b>SEMINOLE</b>	
<b>INTERSECTING ROUTE:</b>		<b>CR 426</b>						<b>ENGINEER:</b>		<b>VV</b>	
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>		<b>TO</b>		<b>31-May-11</b>					
CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE	
1	01/19/06	Thursday	6:18 PM	LEFT-TURN	0	1	\$9,000	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
2	01/25/06	Wednesday	3:15 PM	ANGLE	0	0	\$600	DAY	DRY	IMPROPER TURN	
3	02/08/06	Wednesday	5:00 PM	REAR END	0	0	\$0	DAY	DRY	CARELESS DRIVING	
4	04/19/06	Wednesday	12:57 PM	REAR END	0	0	\$1,500	DAY	DRY	CARELESS DRIVING	
5	05/27/06	Saturday	10:00 AM	ANGLE	0	0	\$4,000	DAY	DRY	DISREGARDED TRAFFIC SIGNAL	
6	05/27/06	Saturday	12:15 PM	REAR END	0	0	\$5,500	DAY	DRY	CARELESS DRIVING	
7	07/26/06	Wednesday	8:58 PM	LEFT-TURN	0	3	\$13,500	NIGHT	WET	FAILED TO YEILD RIGHT OF WAY	
8	09/21/06	Thursday	4:29 PM	REAR END	0	0	\$4,200	DAY	DRY	CARELESS DRIVING	
9	10/31/06	Tuesday	6:50 AM	ANGLE	0	0	\$2,000	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
10	11/15/06	Wednesday	9:45 AM	ANGLE	0	0	\$4,900	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
11	11/22/06	Wednesday	8:35 PM	REAR END	0	0	\$4,500	NIGHT	DRY	CARELESS DRIVING	
12	03/12/07	Monday	10:29 PM	LEFT-TURN	0	0	\$5,340	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
13	05/17/07	Thursday	2:30 PM	CARGO LOSS OR SHIFT	0	0	\$1,500	DAY	DRY	ALL OTHER	
14	08/21/07	Tuesday	5:00 PM	REAR END	0	0	\$0	DAY	DRY	CARELESS DRIVING	

**Table G-15**

**CRASH SUMMARY**

<b>MAJOR ROUTE:</b>		<b>SR 46</b>						<b>COUNTY:</b>		<b>SEMINOLE</b>	
<b>INTERSECTING ROUTE:</b>		<b>CR 426</b>						<b>ENGINEER:</b>		<b>VV</b>	
<b>STUDY PERIOD:</b>		<b>01-Jan-06</b>			<b>TO</b>	<b>31-May-11</b>					
<b>CRASH REF. NO.</b>	<b>DATE</b>	<b>DAY</b>	<b>TIME</b>	<b>CRASH TYPE</b>	<b>FATAL</b>	<b>INJURY</b>	<b>PROPERTY DAMAGE</b>	<b>DAY/NIGHT</b>	<b>WET DRY</b>	<b>CONTRIBUTING CAUSE</b>	
15	10/16/07	Tuesday	9:00 AM	SIDESWIPE	0	0	\$0	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
16	11/26/07	Monday	7:10 AM	ANGLE	0	0	\$0	DAY	DRY	CARELESS DRIVING	
17	01/06/08	Sunday	2:25 PM	REAR END	0	0	\$3,500	DAY	DRY	CARELESS DRIVING	
18	04/14/08	Monday	6:15 AM	RIGHT TURN	0	0	\$0	NIGHT	DRY	FAILED TO YEILD RIGHT OF WAY	
19	04/21/08	Monday	10:01 AM	REAR END	0	1	\$31,000	DAY	DRY	CARELESS DRIVING	
20	04/27/08	Sunday	7:45 PM	BACKED INTO	0	0	\$3,500	NIGHT	DRY	IMPROPER BACKING	
21	05/16/08	Friday	4:30 PM	MV HIT TREE	0	1	\$80,000	DAY	DRY	ALL OTHER	
22	05/30/08	Friday	3:00 PM	REAR END	0	0	\$2,200	DAY	DRY	FOLLOWED TOO CLOSELY	
23	09/05/08	Friday	9:47 PM	REAR END	0	0	\$600	NIGHT	DRY	CARELESS DRIVING	
24	09/28/08	Sunday	4:05 PM	RAN OFF ROAD	0	1	\$5,800	DAY	DRY	NO IMPROPER DRIVING	
25	11/11/08	Tuesday	4:00 AM	RAN OFF ROAD	0	0	\$20,500	NIGHT	DRY	CARELESS DRIVING	
26	02/24/09	Tuesday	2:30 PM	REAR END	0	1	\$500	DAY	DRY	FOLLOWED TOO CLOSELY	
27	03/18/09	Wednesday	4:43 PM	REAR END	0	0	\$10,000	DAY	DRY	CARELESS DRIVING	
28	05/07/09	Thursday	8:30 AM	REAR END	0	0	\$3,500	DAY	DRY	CARELESS DRIVING	
29	07/06/09	Monday	4:46 PM	REAR END	0	4	\$13,000	DAY	DRY	ALL OTHER	
30	12/09/09	Wednesday	3:00 PM	HEAD ON	0	5	\$6,500	DAY	DRY	FAILED TO YEILD RIGHT OF WAY	
31	03/09/10	Tuesday	9:36 AM	REAR END	0	0	\$10,000	DAY	DRY	CARELESS DRIVING	
32	08/21/10	Saturday	6:41 PM	REAR END	0	0	\$18,000	DAY	WET	CARELESS DRIVING	
33	10/17/10	Sunday	1:20 PM	SIDESWIPE	0	0	\$5,000	DAY	DRY	IMPROPER LANE CHANGE	
34	12/12/10	Sunday	12:17 AM	REAR END	0	0	\$1,500	NIGHT	DRY	CARELESS DRIVING	



Table G-15

CRASH SUMMARY

MAJOR ROUTE: SR 46  
 INTERSECTING ROUTE: CR 426  
 COUNTY: SEMINOLE  
 STUDY PERIOD: 01-Jan-06 TO 31-May-11  
 ENGINEER: VV

CRASH REF. NO.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	DAY/NIGHT	WET DRY	CONTRIBUTING CAUSE
35	12/24/10	Friday	6:09 PM	ALL OTHER	0	0	\$3,250	NIGHT	DRY	CARELESS DRIVING
36	03/13/11	Sunday	3:15 PM	RAN OFF ROAD	0	0	\$5,300	DAY	DRY	CARELESS DRIVING
37	04/06/11	Wednesday	7:57 AM	REAR END	0	0	\$900	DAY	DRY	CARELESS DRIVING
38	05/17/11	Tuesday	8:20 AM	REAR END	0	0	\$800	DAY	DRY	CARELESS DRIVING
39	06/03/11	Friday	5:10 PM	ANGLE	0	0	\$12,500	DAY	DRY	FAILED TO YEILD RIGHT OF WAY
<b>Total</b>					<b>0</b>	<b>17</b>	<b>\$294,390</b>			

				CRASH TYPE							
TOTAL CRASHES	FATAL	INJURY	PROP. DAMAGE	PED / BIKE	ANGLE	LEFT TURN	RIGHT TURN	REAR END	SIDESWIPE	RAN OFF ROAD	OTHER
39	0	8	34	0	6	0	1	19	2	3	8
100%	0%	21%	87%	0%	15%	0%	3%	49%	5%	8%	21%

				CONTRIBUTING CAUSE							
ONE VEHICLE	TIME OF DAY		ROAD CONDITION		NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YEILD RIGHT OF WAY	IMPROPER LANE CHANGE	DUI	DISREGARDED TRAFFIC SIGNAL	OTHER
	DAY	NIGHT	WET	DRY							
0	29	10	2	37	1	20	9	1	0	1	7
0%	74%	26%	5%	95%	3%	51%	23%	3%	0%	3%	18%

# Appendix H

## Programmed / Planned Improvement Documentation

MetroPlan Orlando  
 Transportation Improvement Program  
FDOT - State Highway Projects  
 Seminole County

(TBD = To be determined)

FDOT Financial Management Number	Project Name or Designation	Project Description				Funding Prior to 2011/12 (\$000's)	Project Status and Cost (\$000's)					Funding Sources	Project Phases	Est. Funding After 2015/16 (\$000's)	Total Funding (\$000's)	Map Ref. #
		From	To	Length (Miles)	Work Description		2011/12	2012/13	2013/14	2014/15	2015/16					
2401671	SR 434/Alafaya Tr.	McCulloch Rd.	W of Mitchell Hammock Rd.	3.22	Widen to 6 Lanes	28 1,288 TBD	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	DDR SA Total	ROW ROW	0	TBD	
2401961	SR 15/600/US 17/92	Shepard Rd.	Lake Mary Blvd.	3.65	Widen to 6 Lanes(1)	1 0 3,161 80 0 0 TBD	0 750 93 0 0 0	0 0 40 0 0 0	0 0 133 0 38,030 0 484	0 0 0 0 0 0	0 0 0 0	DIH EB ROW DIH DDR DIH Total	PE PE ROW ROW CST CST	0	TBD	1-19
2401962	SR 15/600/US 17/92	at Soldiers Creek PL.		0.10	Drainage Improvements	2,700 2 TBD	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	DDR DIH Total	CST CST	0	TBD	
2402001	SR 46	Lake/Seminole Co. Line	I-4	4.94	Project Development and Environment Study	45 29 TBD	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	DIH DS Total	PD&E PD&E	0	TBD	
2402162	SR 46	Mellonville Ave.	SR 415	2.64	Widen to 4 Lanes(1)	7 7 TBD	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	DIH Total	PE	TBD	TBD	
2402163	SR 46	Mellonville Ave.	SR 415	2.64	ROW for Future Capacity(1)	524 2,700 495 168 5 2,251 2,017 TBD	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	ACSA CM DDR DIH DS SA SU Total	ROW ROW ROW ROW ROW ROW	0	TBD	
2402164	SR 46	SR 415	CR 426	7.39	Widen to 4 Lanes(1)	25 0 0 TBD	0 0 0	0 0 0	0 6,000 50 6,050	0 0 0	0 0 0	DIH DDR DIH Total	PD&E PE PE	TBD	TBD	
2402166	SR 46	Mellonville Ave.	SR 415	2.64	Widen to 4 Lanes(1) (Amendment - Sept. 2011)	0 0	0 0	0 0	0 0	4,000 4,000	0 0	SU Total	CST	TBD	TBD	

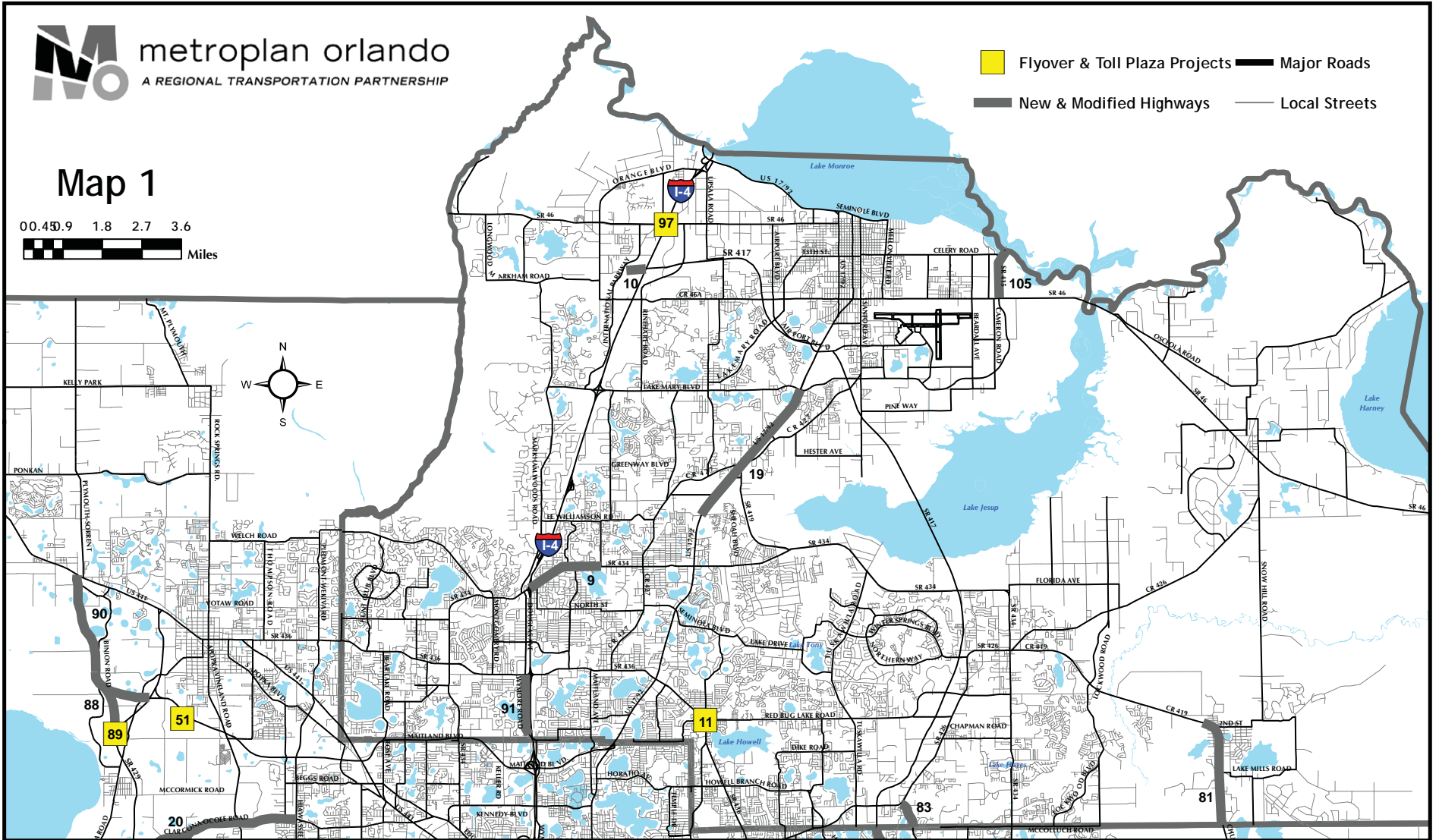
(1) This project is included in MetroPlan Orlando's 2030 Long Range Transportation Plan - Technical Report #3 - page 11.



metroplan orlando  
A REGIONAL TRANSPORTATION PARTNERSHIP

- Flyover & Toll Plaza Projects
- Major Roads
- New & Modified Highways
- Local Streets

# Map 1





## 2030 Long Range Transportation Plan

### Prioritized Project List Costs by Plan Year

The yellow boxes below highlight the time period in which a project can be funded. Time periods are noted in five-year increments. Projects that do not contain highlighted areas cannot be funded by the year 2030.

Priority Project No./Project Name	Budget Allocation by Year (\$000's)				
	2008	2015	2020	2025	2030
1. SR 15/600/US 17/92 (Shepard Rd. to Lake Mary Blvd.)	53,470.0	68,441.6	-	-	-
2. SR 15/600/US 17/92 (Int. @ SR 436)	96,540.0	123,571.2	139,017.6	-	-
3. SR 50 (SR 429/Western Expy. To Good Homes Rd.)	68,940.0	88,243.2	99,273.6	-	-
4. Sand Lake Rd.@John Young Pkwy, SR 482/Sand Lake Rd to Presidents Dr.	85,550.0	109,504.0	123,192.0	-	-
5. SR 15/Narcoossee Rd./Hoffner Ave. (Lee Vista Blvd. to Conway Rd.)	91,470.0	117,081.6	131,716.8	154,584.3	-
6. SR 46 (Mellonville Ave. to E of SR 415)	51,170.0	65,497.6	73,684.8	86,477.3	-
7. SR 423/John Young Pkwy. (Shader Rd. to Edgewater Dr.)	76,420.0	97,817.6	110,044.8	129,149.8	-
8. SR 434/Forest City Rd., SR 423/John Young Pkwy.	31,940.0	40,883.2	45,993.6	53,978.6	-
9. SR 500/600/US 17/92 (Poinciana Blvd. to S of CR 535)	15,600.0	19,968.0	22,464.0	26,364.0	31,044.0
10. SR 434 (Montgomery Rd. to CR 427)	74,500.0	95,360.0	107,280.0	125,905.0	148,255.0
11. SR 436 (Int. @ Red Bug Lake Rd.)*	0.0	0.0	-	-	-
12. SR 500/US 192 (Aeronautical Blvd. to Buddinger, Eastern Ave to CR 532)	73,940.0	94,643.2	106,473.6	124,958.6	147,140.6
13. US 17/92 (Polk/Osceola Co. Line to Poinciana Blvd.)	27,820.0	35,609.6	40,060.8	47,015.8	55,361.8
14. SR 438/Silver Star Rd. (Dillard St. to SR 429/Western Expy.)	29,000.0	37,120.0	41,760.0	49,010.0	57,710.0
15. SR 415 (SR 46 to Seminole/Volusia Co. Line)	14,070.0	18,009.6	20,260.8	23,778.3	27,999.3
16. SR 414/Maitland Blvd. (Maitland Concourse Pkwy. To Maitland Ave.)	2,500.0	3,200.0	3,600.0	4,225.0	4,975.0
17. SR 426/CR 419 (Pine Ave. to Lockwood Blvd.)	44,150.0	56,512.0	63,576.0	74,613.5	87,858.5
18. SR 50 (E. Old Cheney Hwy. to SR 520)	22,300.0	28,544.0	32,112.0	37,687.0	44,377.0
19. SR 15/600/US 17/92 & Lee Rd. Extension	16,000.0	20,480.0	23,040.0	27,040.0	31,840.0
20. SR 46 (SR 415 to Seminole/Volusia Co. Line)	65,000.0	83,200.0	93,600.0	109,850.0	129,350.0
21. John Young Pkwy. (Pleasant Hill Rd. to Portage St.)	40,470.0	51,801.6	58,276.8	68,394.3	80,535.3

\*Project 11 is being funded by the 2001 sales tax referendum and TRIP funds

#### Inflation Rates

1.28                      1.44                      1.69                      1.99

<b>Year of Expenditure (YOE) Total Cost</b>	980,850.0	1,255,488.0	1,335,427.2	1,143,031.5	846,446.5
<b>Budget</b>		119,945.0	356,585.0	396,090.0	422,735.0
<b>Budget + Carry Forward</b>		119,945.0	408,088.4	442,695.2	441,240.2
<b>Project Cost</b>		68,441.6	361,483.2	424,190.0	439,511.4
<b>Remaining Budget</b>		51,503.4	46,605.2	18,505.2	1,728.8

#### Total Cost of Completion in 2030

\$1,544,956.4

#### Total Project Cost

\$1,293,626.2



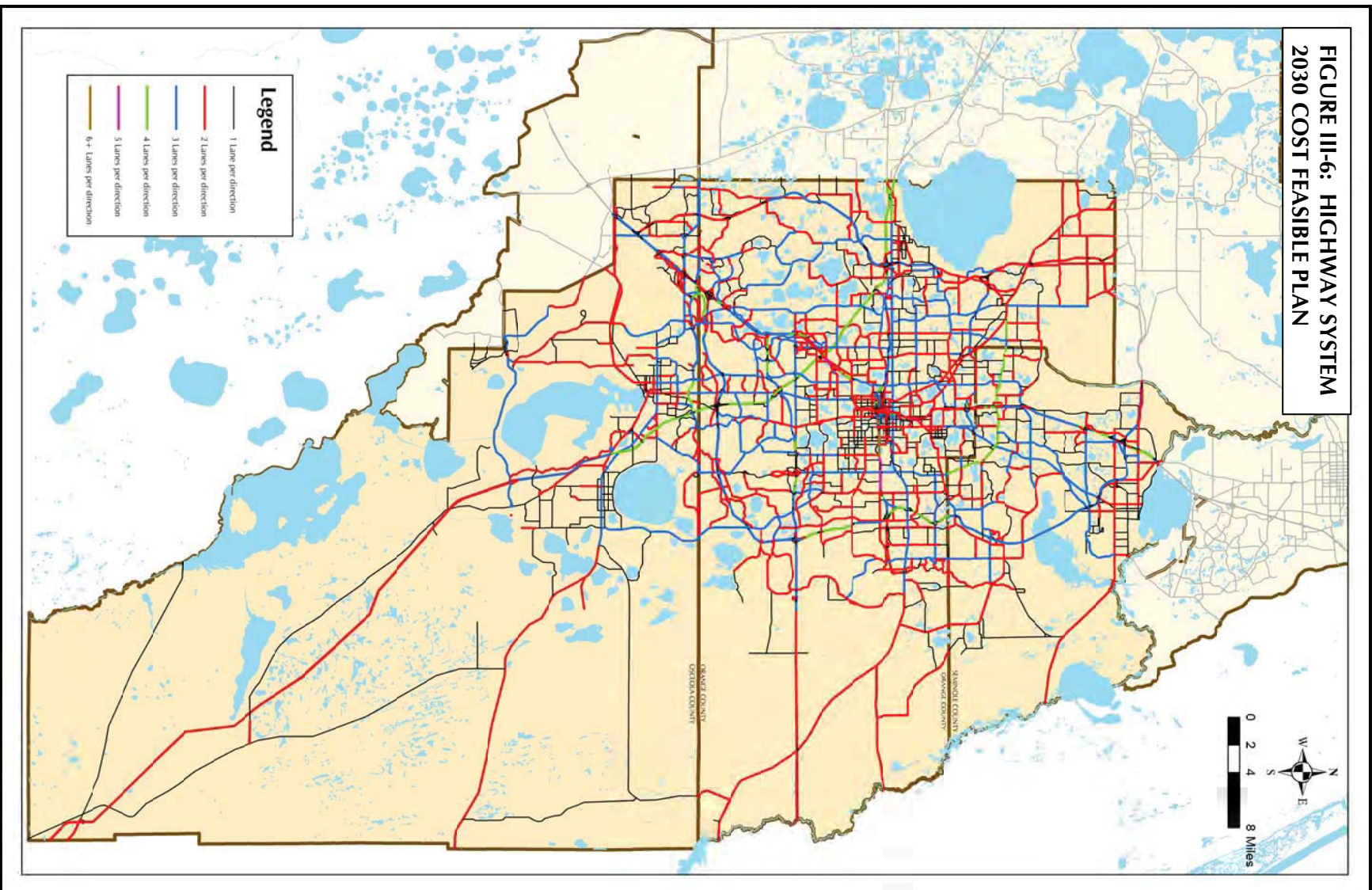
## 2030 Long Range Transportation Plan

### Seminole County Local Project Costs by Plan Year (Tier 3 Funding)

Jurisdiction	Priority	Project Name	Improvement	Budget Allocation by Year (\$000's)				
				2008	2015	2020	2025	2030
County	Project List	C.R. 427 (SR 434 to Longwood-Lake Mary Rd.)	Widen 4-6	24,500.0	31,360.0	-	-	-
County		C.R. 419 [Chuluota Bypass (Snowhill Rd.) to Orange County Line]	Widen 2-4	21,000.0	26,880.0	-	-	-
County		Lake Mary Boulevard (Rinehart Road to Country Club Road)	Widen 4-6	21,000.0	26,880.0	-	-	-
County		Seminola Boulevard (U.S. 17/92 to Lake Drive)	Widen 4-6	24,500.0	31,360.0	-	-	-
County		Dean Rd. (SR 426 to the Orange County Line)	Widen 2-4	14,000.0	17,920.0	-	-	-
County		Sand Lake Rd. (SR 434 to West Lake Brantley Rd)	Widen 2-4	15,000.0	19,200.0	-	-	-
County		Howell Branch Rd. (Orange County Line to SR 436)	Widen 4-6	3,000.0	3,840.0	-	-	-
County		Airport Blvd. Extension (SR 46 to C-15/Monroe Rd.)	New 4 lanes	28,000.0	35,840.0	-	-	-
County		CR 46A (International Pkwy. to Rinehart Rd.)	Widen 4-6	2,600.0	3,328.0	-	-	-
County		Lake Mary Boulevard (Country Club Rd. to SR 46)	Widen 4-6	34,000.0	43,520.0	-	-	-
City of Oviedo		Mitchell Hammock Road (SR 426 to SR 434)	Widen 4-6	15,400.0	19,712.0	-	-	-
City of Oviedo		Mitchell Hammock Road Extension (Lockwood Blvd. to CR 419)	New 4 lanes	3,500.0	4,480.0	-	-	-
City of Oviedo		Lockwood Boulevard (CR 419 to CR 426)	Widen 2-4	25,200.0	32,256.0	-	-	-
County	Needs List - County and City	Airport Blvd (US 17-92 to Mellonville Ave)	Widen 2-4	12,694.1	16,248.4	-	-	-
County		CR 419 (CR 426 to 0.30 Miles West of Lockwood Blvd)	Widen 2-4	13,188.7	16,881.5	18,991.7	-	-
County		CR 427 (SR 436 to North St)	Widen 4-6	14,118.7	18,071.9	20,330.9	-	-
County		CR 427 (North St to Seminole Blvd/Dog Track Rd)	Widen 4-6	1,033.1	1,322.4	1,487.7	-	-
County		CR 427 (Seminole Blvd/Dog Track Rd to SR 434)	Widen 4-6	7,748.1	9,917.6	11,157.3	-	-
County		CR 427 (Longwood Lake Mary Blvd to SR 419)	Widen 4-6	12,138.7	15,537.5	17,479.7	-	-
County		CR 427 (SR 419 to US 17-92)	Widen 4-6	2,238.3	2,865.0	3,223.2	-	-
County		CR 427 (US 17-92 to County Home Rd)	Widen 4-6	7,748.1	9,917.6	11,157.3	-	-
County		CR 427 (County Home Rd to Lake Mary Blvd)	Widen 4-6	20,403.3	26,116.2	29,380.8	-	-
County		Rinehart Rd (CR 46A to SR 46)	Widen 4-6	19,112.0	24,463.4	27,521.3	-	-
County		Tuskawilla Rd (SR 426 to Dike Rd)	Widen 4-6	10,158.6	13,003.0	14,628.4	-	-
County		Tuskawilla Rd (Red Bug Lake Rd to Eagle Blvd)	Widen 4-6	7,231.6	9,256.4	10,413.5	-	-
County		Tuskawilla Rd (Eagle Blvd to Lake Dr)	Widen 4-6	2,668.8	3,416.1	3,843.1	-	-
City of Casselberry		Winter Park Dr (Seminola Blvd to SR 434)	Widen 2-4	13,106.2	16,775.9	18,872.9	-	-
City of Lake Mary		Rinehart Rd (Lake Mary Blvd to Timacuan Blvd)	Widen 4-6	15,237.9	19,504.5	21,942.6	-	-
City of Oviedo		Mitchell Hammock Rd (SR 434 to Lockwood Blvd)	Widen 4-6	15,151.8	19,394.3	21,818.6	-	-
State		Needs List - State and Federal	SR 46 (Orange Ave/Wekiwa Pkwy to Orange Blvd)	Widen 2-4	2,720.2	3,481.9	3,917.1	-
State	SR 46 (SR 415 to CR 426)		Widen 2-4	60,255.7	77,127.3	86,768.2	-	-
State	SR 46 (CR 426 to Volusia Co. Line)		Widen 2-4	40,802.4	52,227.1	58,755.5	68,956.1	-
State	SR 415 (SR 46 to CR 415)		Widen 2-4	6,759.2	8,651.8	9,733.2	11,423.0	-
State	SR 415 (CR 415 to Volusia Co. Line)		Widen 2-4	2,225.6	2,848.8	3,204.9	3,761.3	-
State	SR 419 (SR 434 to Edgemon Ave)		Widen 2-4	7,171.3	9,179.3	10,326.7	12,119.5	-
State	SR 419 (Edgemon Ave to US 17-92)		Widen 2-4	13,435.9	17,198.0	19,347.7	22,706.7	-
State	SR 426 (Orange Co. Line/Old Howell Branch Rd to Tuskawilla Rd)		Widen 4-6	7,920.3	10,138.0	11,405.2	13,385.3	-
State	SR 426 (Tuskawilla Rd to SR 417 (Greenway))		Widen 4-6	3,529.7	4,518.0	5,082.8	5,965.2	-
State	SR 426 (Pine Ave to SR 434)		Widen 2-4	6,182.2	7,913.2	8,902.4	10,447.9	-
State	SR 426 (SR 434 to CR 426)		Widen 2-4	329.7	422.0	474.8	557.2	-
State	SR 434 (SR 419 to Edgemon Ave)		Widen 4-6	9,814.2	12,562.2	14,132.4	16,586.0	-
State	SR 434 (Edgemon Ave to US 17-92)		Widen 4-6	9,125.5	11,680.6	13,140.7	15,422.1	-
State	SR 434 (SR 417 to DeLeon St)		Widen 2-4	7,830.8	10,023.4	11,276.4	13,234.1	-



**FIGURE III-6: HIGHWAY SYSTEM  
2030 COST FEASIBLE PLAN**



# Appendix I

## Trend Analysis Summary Sheets

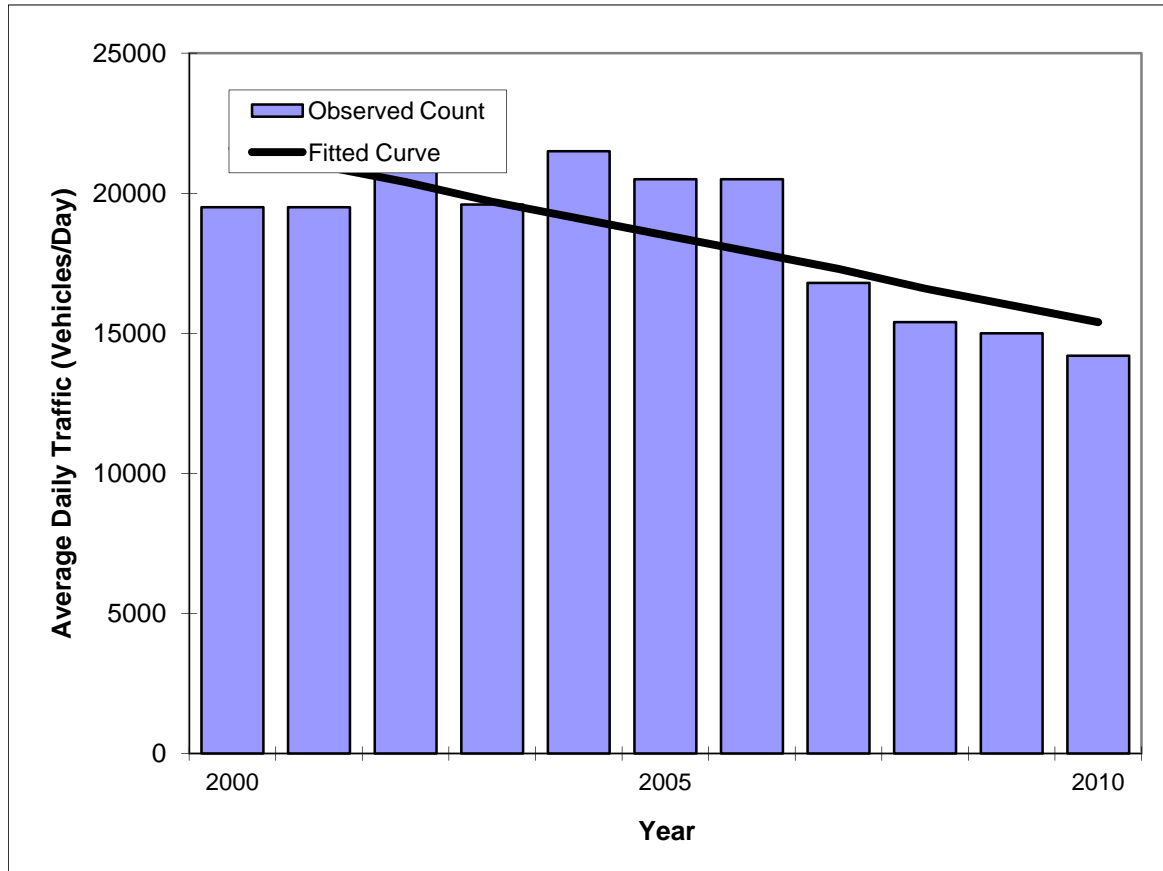


## Traffic Trends - V2.0

### SR 46 -- West of SR 415

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0028
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	19500	21600
2001	19500	21000
2002	21000	20400
2003	19600	19700
2004	21500	19100
2005	20500	18500
2006	20500	17900
2007	16800	17300
2008	15400	16600
2009	15000	16000
2010	14200	15400
<b>2015 Opening Year Trend</b>		
2015	N/A	12300
<b>2025 Mid-Year Trend</b>		
2025	N/A	6200
<b>2035 Design Year Trend</b>		
2035	N/A	0
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-617
Trend R-squared:	60.13%
Trend Annual Historic Growth Rate:	-2.87%
Trend Growth Rate (2010 to Design Year):	-4.00%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

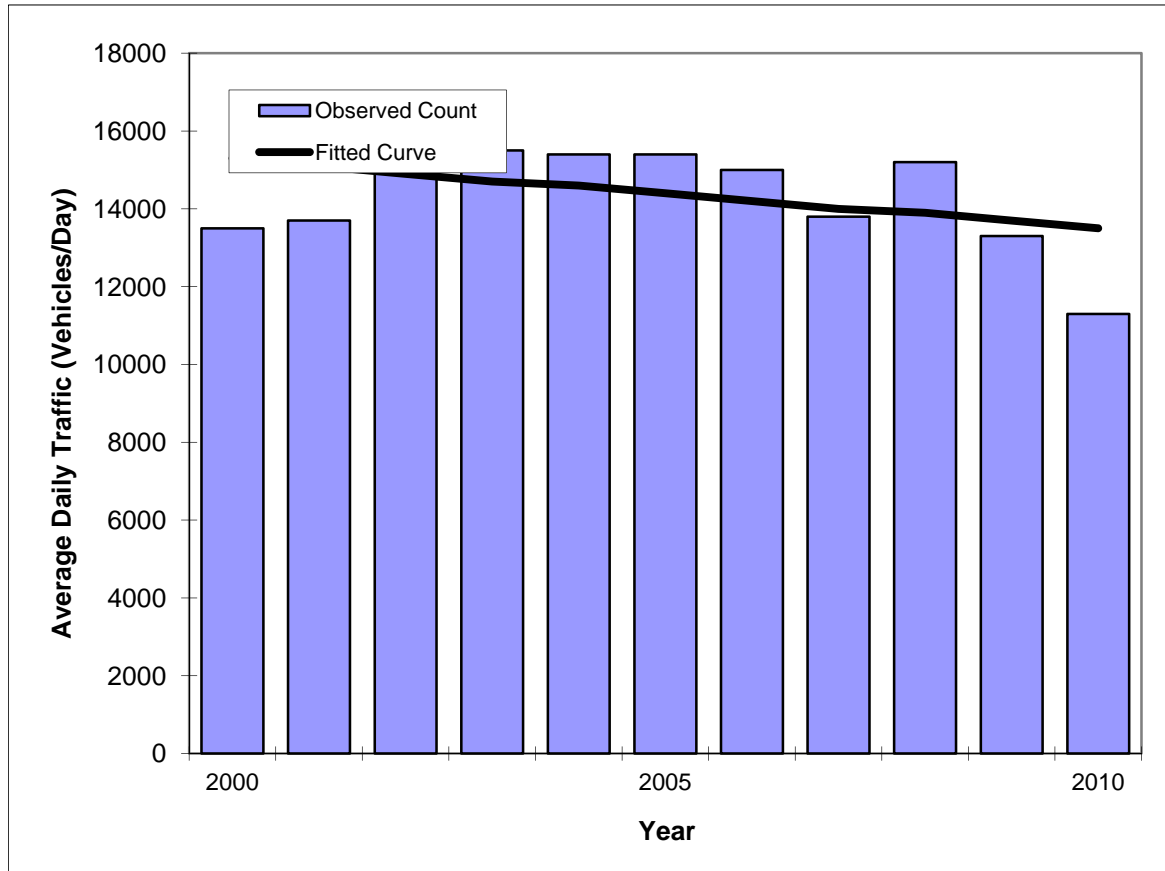
\*Axle-Adjusted

## Traffic Trends - V2.0

### SR 46 - SR 415 to Osceola Road

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	13500	15300
2001	13700	15100
2002	16100	14900
2003	15500	14700
2004	15400	14600
2005	15400	14400
2006	15000	14200
2007	13800	14000
2008	15200	13900
2009	13300	13700
2010	11300	13500
<b>2015 Opening Year Trend</b>		
2015	N/A	12600
<b>2025 Mid-Year Trend</b>		
2025	N/A	10900
<b>2035 Design Year Trend</b>		
2035	N/A	9200
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-174
Trend R-squared:	16.94%
Trend Annual Historic Growth Rate:	-1.18%
Trend Growth Rate (2010 to Design Year):	-1.27%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

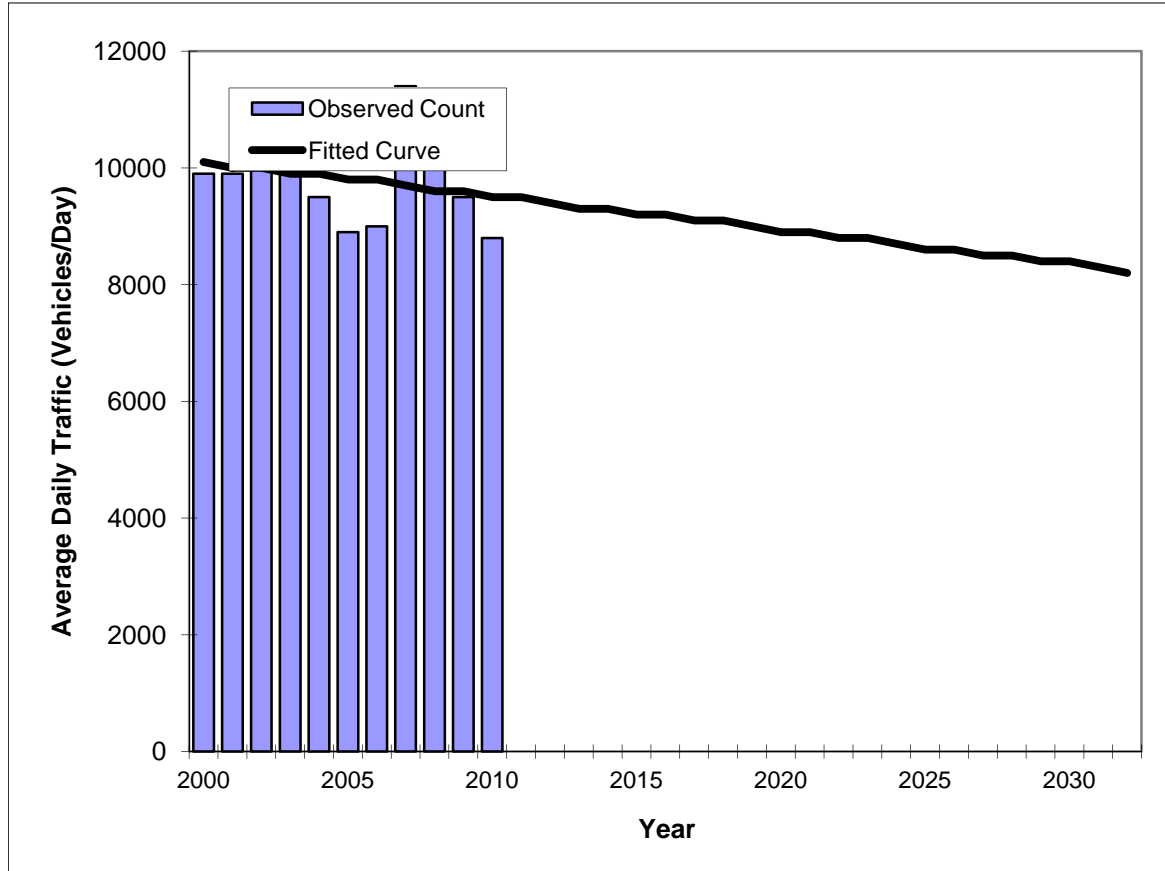
\*Axle-Adjusted

# Traffic Trends - V2.0

SR 46 -- Osceola Road to CR 426

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	9900	10100
2001	9900	10000
2002	10600	10000
2003	10200	9900
2004	9500	9900
2005	8900	9800
2006	9000	9800
2007	11400	9700
2008	10200	9600
2009	9500	9600
2010	8800	9500
2015 Opening Year Trend		
2015	N/A	9200
2025 Mid-Year Trend		
2025	N/A	8600
2035 Design Year Trend		
2035	N/A	8100
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-58
Trend R-squared:	6.04%
Trend Annual Historic Growth Rate:	-0.59%
Trend Growth Rate (2010 to Design Year):	-0.59%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

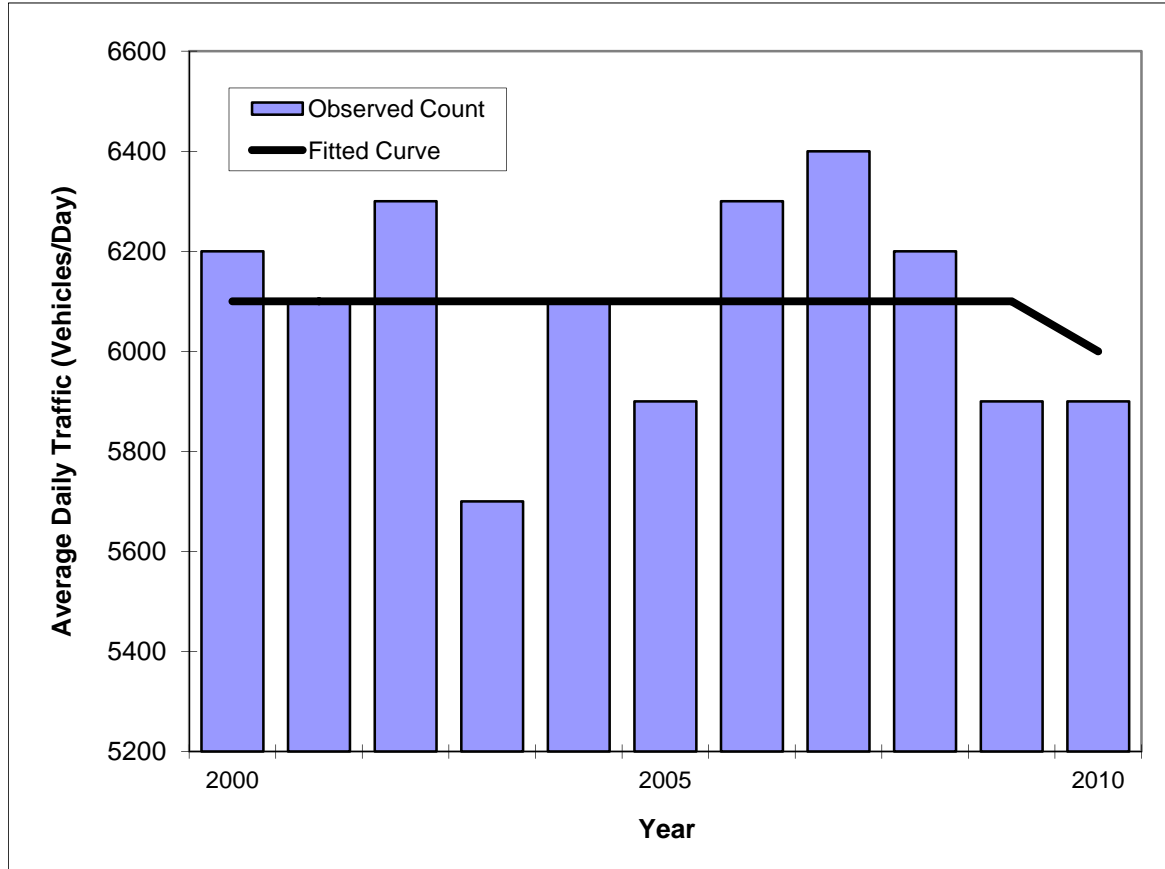
\*Axle-Adjusted

## Traffic Trends - V2.0

### SR 46 -- East of CR 426

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0168
Highway:	SR 46



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	6200	6100
2001	6100	6100
2002	6300	6100
2003	5700	6100
2004	6100	6100
2005	5900	6100
2006	6300	6100
2007	6400	6100
2008	6200	6100
2009	5900	6100
2010	5900	6000
<b>2015 Opening Year Trend</b>		
2015	N/A	6000
<b>2025 Mid-Year Trend</b>		
2025	N/A	5900
<b>2035 Design Year Trend</b>		
2035	N/A	5800
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-9
Trend R-squared:	1.94%
Trend Annual Historic Growth Rate:	-0.16%
Trend Growth Rate (2010 to Design Year):	-0.13%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

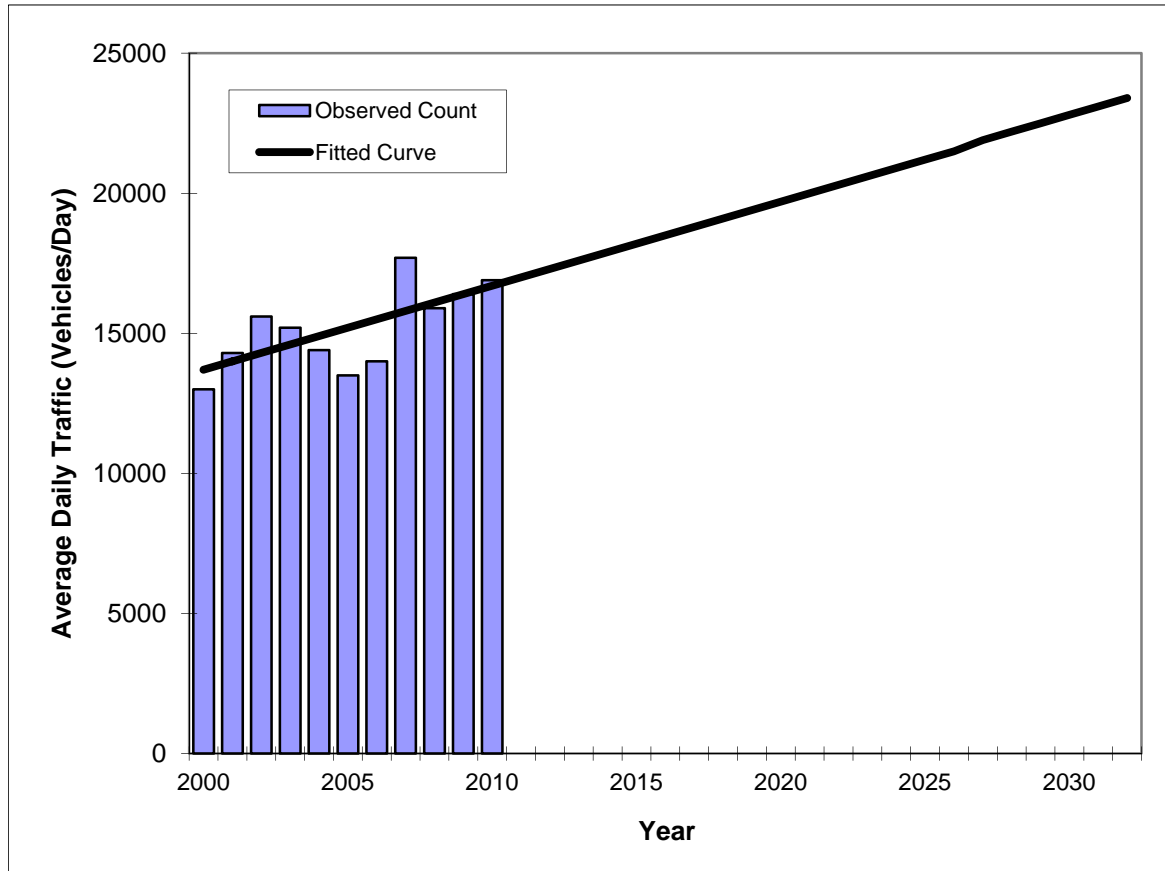
\*Axle-Adjusted

## Traffic Trends - V2.0

### SR 415 -- Celery Ave to SR 46

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0
Highway:	SR 415



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	13000	13700
2001	14300	14000
2002	15600	14300
2003	15200	14600
2004	14400	14900
2005	13500	15200
2006	14000	15500
2007	17700	15800
2008	15900	16100
2009	16400	16400
2010	16900	16700
<b>2015 Opening Year Trend</b>		
2015	N/A	18200
<b>2025 Mid-Year Trend</b>		
2025	N/A	21200
<b>2035 Design Year Trend</b>		
2035	N/A	24300
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	304
Trend R-squared:	46.43%
Trend Annual Historic Growth Rate:	2.19%
Trend Growth Rate (2010 to Design Year):	1.82%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

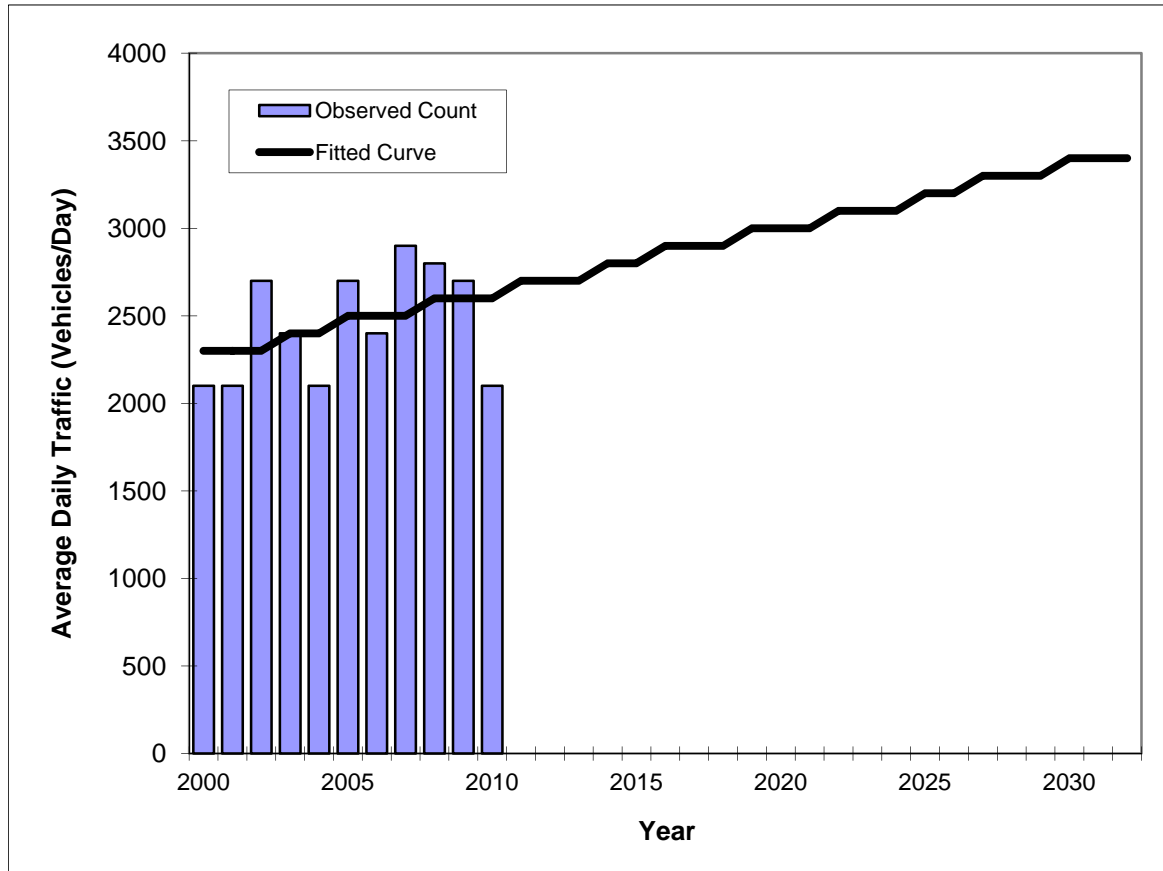
\*Axle-Adjusted

## Traffic Trends - V2.0

### Osceola Rd -- N. of SR 46

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0
Highway:	Osceola Rd



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	2100	2300
2001	2100	2300
2002	2700	2300
2003	2400	2400
2004	2100	2400
2005	2700	2500
2006	2400	2500
2007	2900	2500
2008	2800	2600
2009	2700	2600
2010	2100	2600
<b>2015 Opening Year Trend</b>		
2015	N/A	2800
<b>2025 Mid-Year Trend</b>		
2025	N/A	3200
<b>2035 Design Year Trend</b>		
2035	N/A	3500
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	36
Trend R-squared:	14.44%
Trend Annual Historic Growth Rate:	1.30%
Trend Growth Rate (2010 to Design Year):	1.38%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

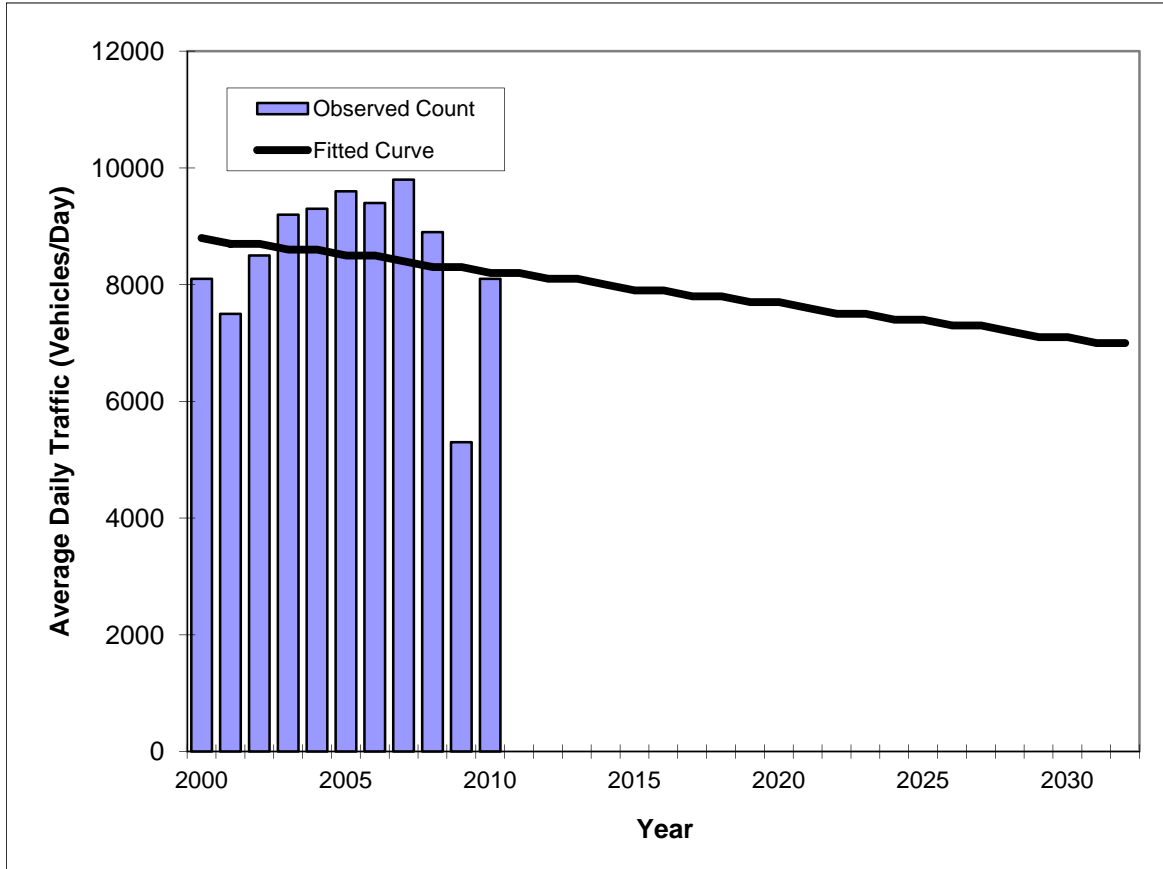
\*Axle-Adjusted

## Traffic Trends - V2.0

### CR 426 -- Old Mims Rd to SR 46

FIN#	973215-1
Location	1

County:	Seminole (77)
Station #:	0
Highway:	CR 426



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2000	8100	8800
2001	7500	8700
2002	8500	8700
2003	9200	8600
2004	9300	8600
2005	9600	8500
2006	9400	8500
2007	9800	8400
2008	8900	8300
2009	5300	8300
2010	8100	8200
<b>2015 Opening Year Trend</b>		
2015	N/A	7900
<b>2025 Mid-Year Trend</b>		
2025	N/A	7400
<b>2035 Design Year Trend</b>		
2035	N/A	6800
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	-57
Trend R-squared:	2.18%
Trend Annual Historic Growth Rate:	-0.68%
Trend Growth Rate (2010 to Design Year):	-0.68%
Printed:	17-Oct-11
<b>Straight Line Growth Option</b>	

\*Axle-Adjusted

# Appendix J

## BEBR Population Projection Data



**Projections of Florida Population by County, 2010-2040**

County and State	Census April 1, 2010	Projections, April 1					
		2015	2020	2025	2030	2035	2040
SARASOTA	379,448						
Low		385,200	391,700	395,800	396,900	395,000	390,600
Medium		400,100	424,700	448,600	470,700	490,700	509,000
High		417,300	459,900	503,700	548,100	592,500	637,300
SEMINOLE	422,718						
Low		428,700	435,500	439,500	440,300	437,900	432,600
Medium		445,300	472,200	498,200	522,300	544,000	563,800
High		464,400	511,200	559,400	608,100	656,800	705,800
SUMTER	93,420						
Low		105,300	116,000	124,500	130,600	134,300	135,600
Medium		111,000	130,900	150,800	170,300	189,000	207,100
High		118,800	147,600	179,100	213,100	249,400	288,200
SUWANNEE	41,551						
Low		44,600	45,500	46,100	46,300	46,200	45,700
Medium		46,300	49,300	52,200	54,900	57,300	59,600
High		48,300	53,400	58,600	63,900	69,300	74,600
TAYLOR	22,570						
Low		22,300	21,900	21,500	21,000	20,400	19,800
Medium		23,100	23,800	24,300	24,900	25,400	25,900
High		24,100	25,700	27,300	29,000	30,600	32,300
UNION	15,535						
Low		15,500	15,500	15,400	15,200	15,000	14,700
Medium		16,100	16,800	17,400	18,100	18,700	19,200
High		16,800	18,200	19,600	21,000	22,500	24,000
VOLUSIA	494,593						
Low		498,900	504,400	507,700	508,400	506,400	502,200
Medium		513,300	535,700	556,900	576,100	593,100	608,300
High		529,800	568,800	608,100	647,000	685,100	722,700
WAKULLA	30,776						
Low		32,100	33,400	34,500	35,300	35,800	36,000
Medium		33,300	36,200	39,100	41,800	44,300	46,700
High		34,800	39,300	44,000	48,800	53,700	58,700
WALTON	55,043						
Low		58,400	61,700	64,100	65,700	66,400	66,200
Medium		61,200	68,200	75,100	81,600	87,600	93,100
High		64,600	75,400	86,800	98,600	110,600	123,000
WASHINGTON	24,896						
Low		25,400	25,600	25,600	25,500	25,200	24,900
Medium		26,400	27,700	29,000	30,200	31,400	32,400
High		27,500	30,000	32,600	35,200	37,900	40,600
FLORIDA	18,801,310						
Low		19,421,200	20,216,600	21,018,800	21,793,100	22,521,600	23,223,300
Medium		19,974,400	21,326,800	22,641,300	23,877,900	25,017,100	26,081,800
High		20,482,400	22,342,400	24,202,200	26,023,500	27,789,900	29,529,800

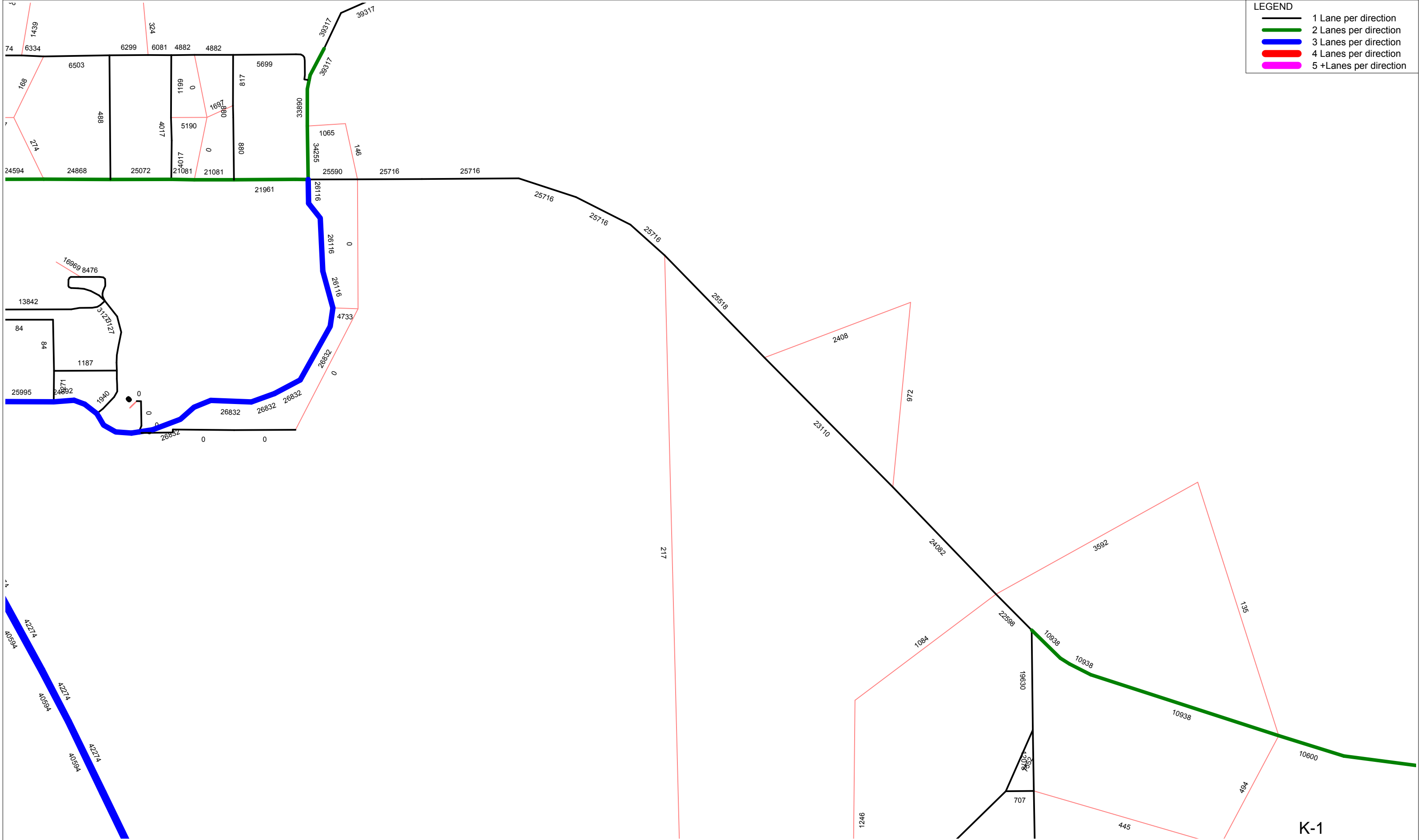
# Appendix K

## OUATS and CFRPM Model Plots

Year 2030 (CF 2030) OUATS  
 Total Traffic Volumes (No Build Scenario)

**LEGEND**

- 1 Lane per direction
- 2 Lanes per direction
- 3 Lanes per direction
- 4 Lanes per direction
- 5 +Lanes per direction

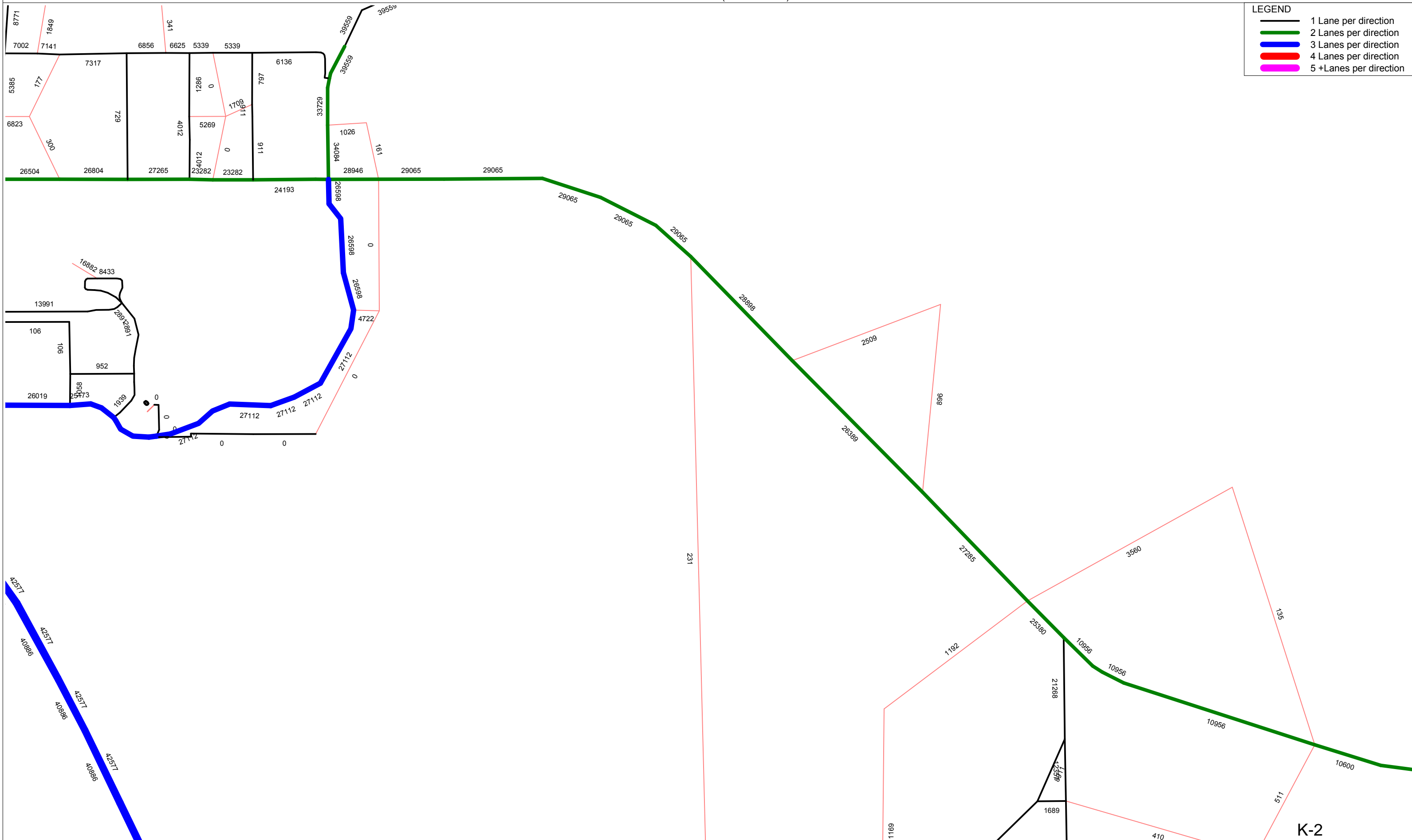


K-1

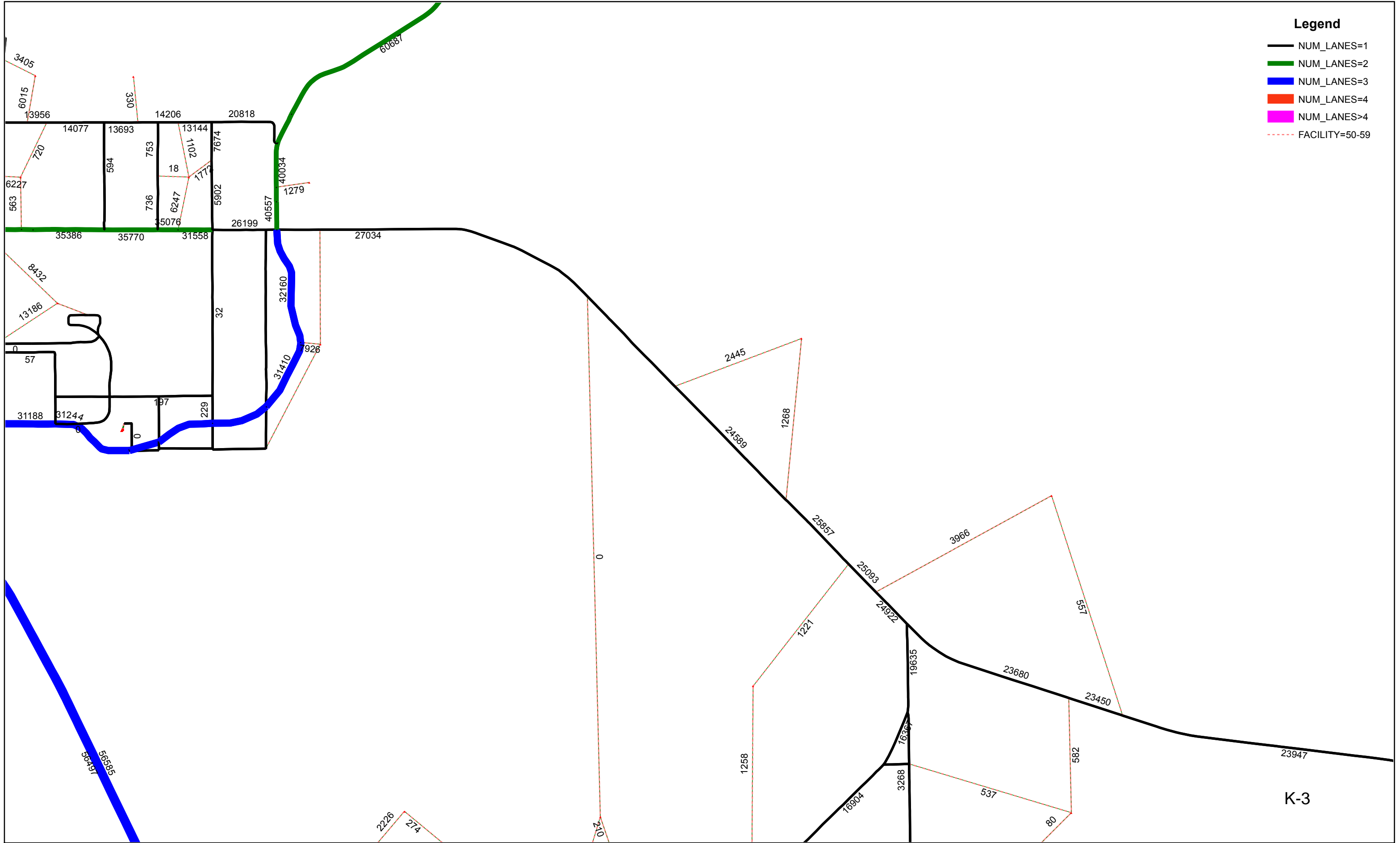
Year 2030 (CF 2030) OUATS  
Total Traffic Volumes (Build Scenario)

**LEGEND**

- 1 Lane per direction
- 2 Lanes per direction
- 3 Lanes per direction
- 4 Lanes per direction
- 5 +Lanes per direction

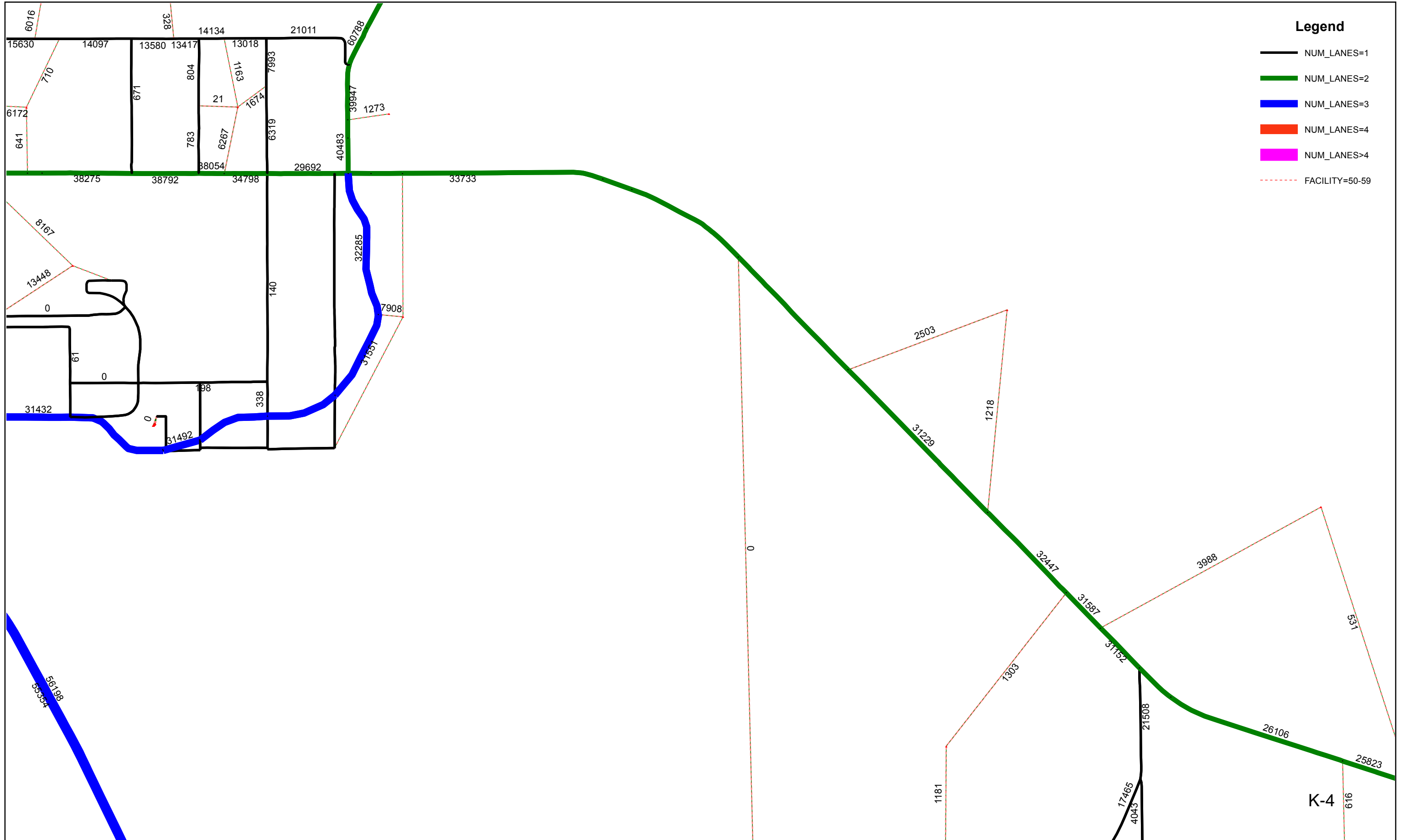


# Year 2035 CFRPM5.0 Model Total Traffic Volumes (No Build Scenario)



K-3

Year 2035 CFRPM5.0 (CF 2035) Model  
Total Traffic Volumes (Build Scenario)



# Appendix L

## URNS5 Sheets

## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** SR 415  
**From:** SR 415  
**To:** CR 426 (AM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Yes  
 No

**K Factors**  
 Mainline: 9.00%  
 Sidestreet: 9.00%

**D Factors**  
 Mainline: 53.0% Westbound (WB)  
 47.0% Eastbound (EB)  
 Sidestreet: 32.9% Northbound (NB)  
 67.1% Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**  
 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**  
 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base: 2011
Opening: 2015
Mid: 2025
Design: 2035
Model: 2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	10500	10500	15500	9300	45800
2035	31000	31000	34500	24400	120900

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	41%	41
(EB THRU)	West-to-East	55%	55
(EB RT)	West-to-South	4%	4
(WB LT)	East-to-South	34%	34
(WB THRU)	East-to-West	54%	54
(WB RT)	East-to-North	12%	12
(SB LT)	North-to-East	18%	18
(SB THRU)	North-to-South	65%	65
(SB RT)	North-to-West	17%	17
(NB LT)	South-to-West	18%	18
(NB THRU)	South-to-North	63%	63
(NB RT)	South-to-East	19%	19

(must be done manually)

Desired Closure: 0.01



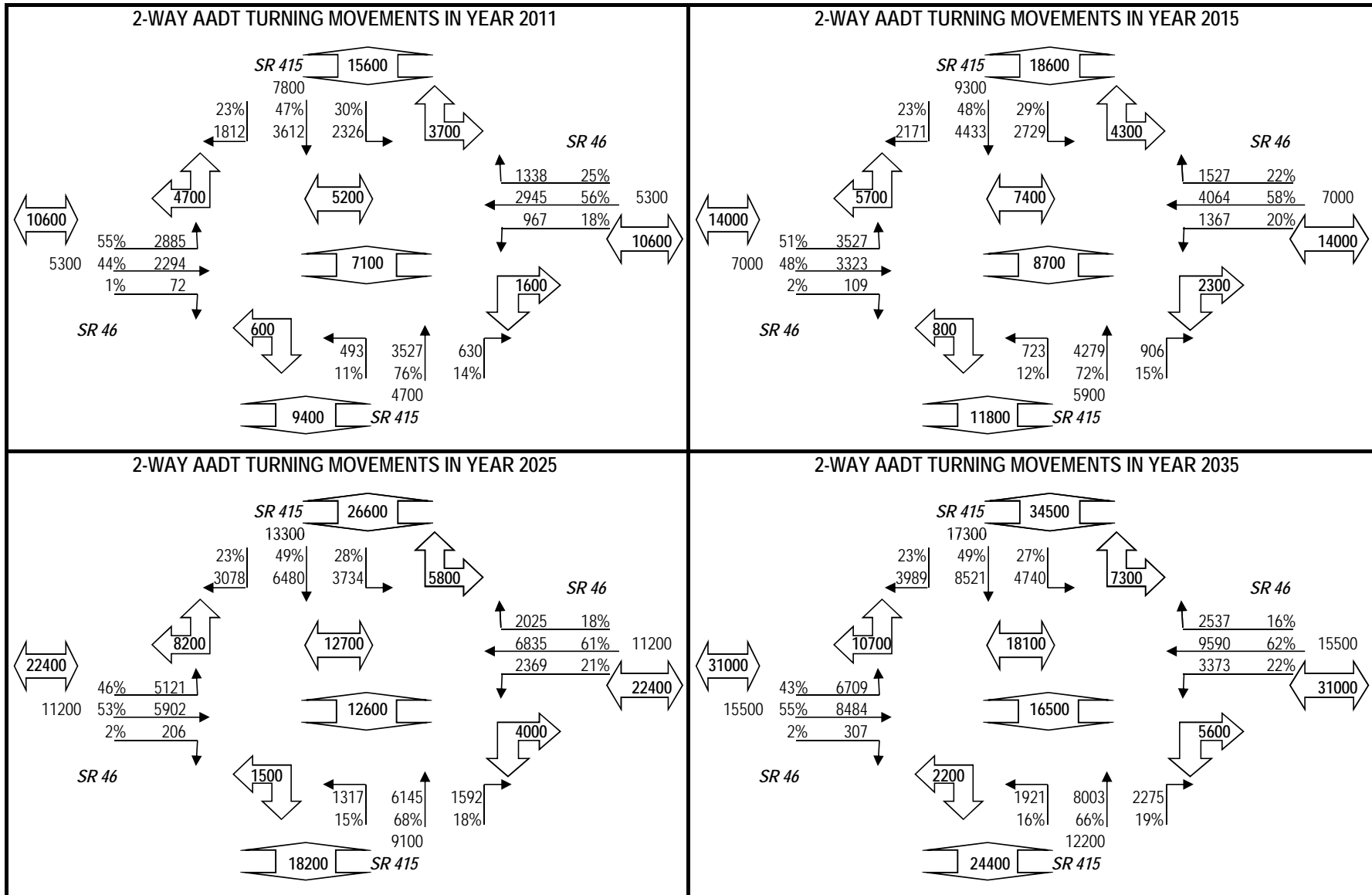
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	SR 415	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

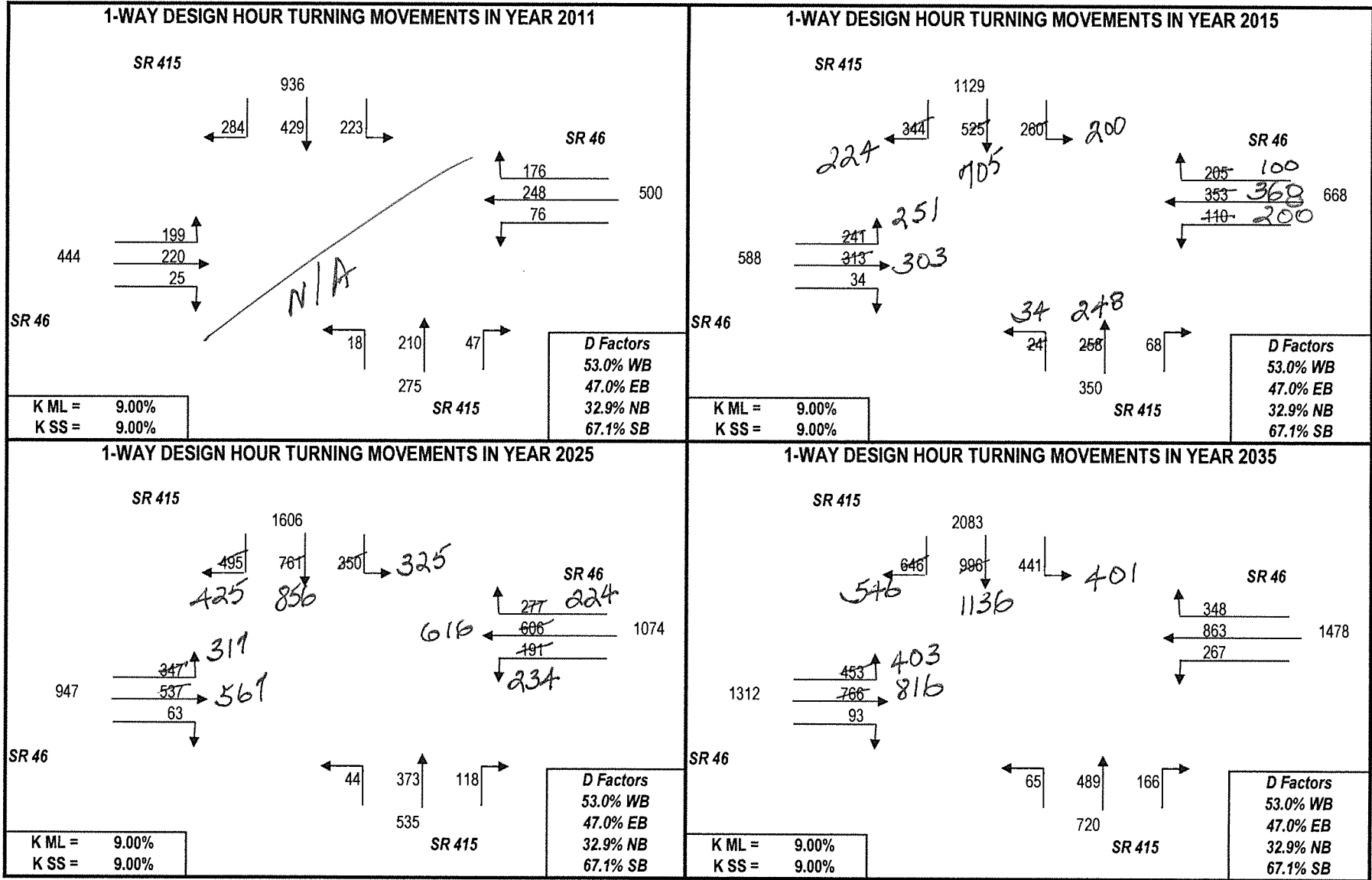
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.41	0.549	2900	0.507	3500	0.456	5100	0.433	6700
West-To-East (Thru)	0.55	0.437	2300	0.478	3300	0.526	5900	0.547	8500
West-To-South (RT)	0.04	0.014	100	0.016	100	0.018	200	0.020	300
<b>Total Flow From West:</b>			<b>5300</b>		<b>6900</b>		<b>11200</b>		<b>15500</b>
East-To-South (LT)	0.34	0.184	1000	0.196	1400	0.211	2400	0.218	3400
East-To-West (Thru)	0.54	0.561	2900	0.584	4100	0.609	6800	0.619	9600
East-To-North (RT)	0.12	0.255	1300	0.219	1500	0.180	2000	0.164	2500
<b>Total Flow From East:</b>			<b>5200</b>		<b>7000</b>		<b>11200</b>		<b>15500</b>
North-To-East (LT)	0.18	0.300	2300	0.292	2700	0.281	3700	0.275	4700
North-To-South (Thru)	0.65	0.466	3600	0.475	4400	0.487	6500	0.494	8500
North-To-West (RT)	0.17	0.234	1800	0.233	2200	0.232	3100	0.231	4000
<b>Total Flow From North:</b>			<b>7700</b>		<b>9300</b>		<b>13300</b>		<b>17200</b>
South-To-West (LT)	0.18	0.106	500	0.122	700	0.145	1300	0.157	1900
South-To-North (Thru)	0.63	0.758	3500	0.724	4300	0.679	6100	0.656	8000
South-To-East (RT)	0.19	0.136	600	0.153	900	0.176	1600	0.187	2300
<b>Total Flow From South:</b>			<b>4600</b>		<b>5900</b>		<b>9000</b>		<b>12200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

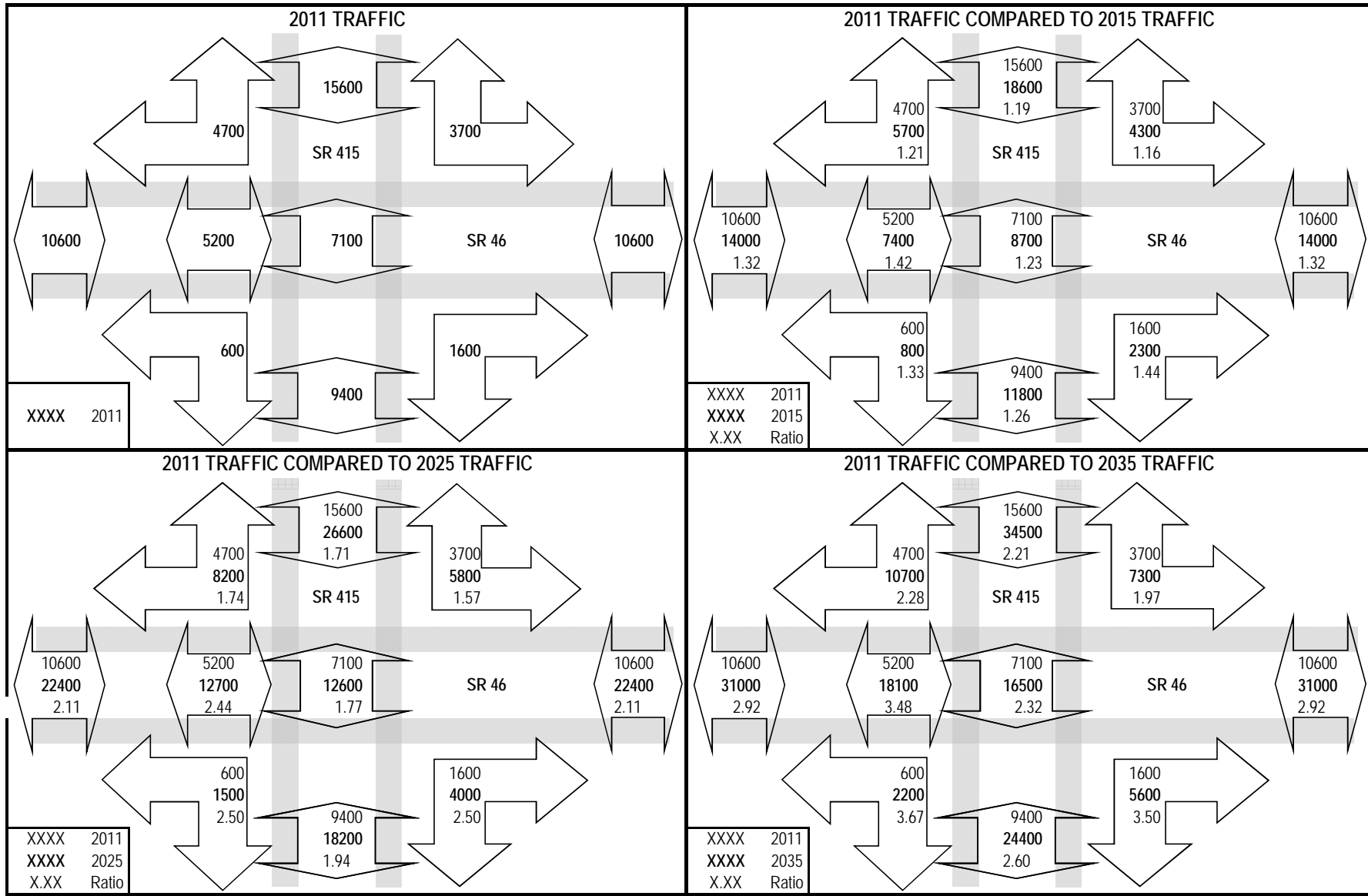
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - No Build)



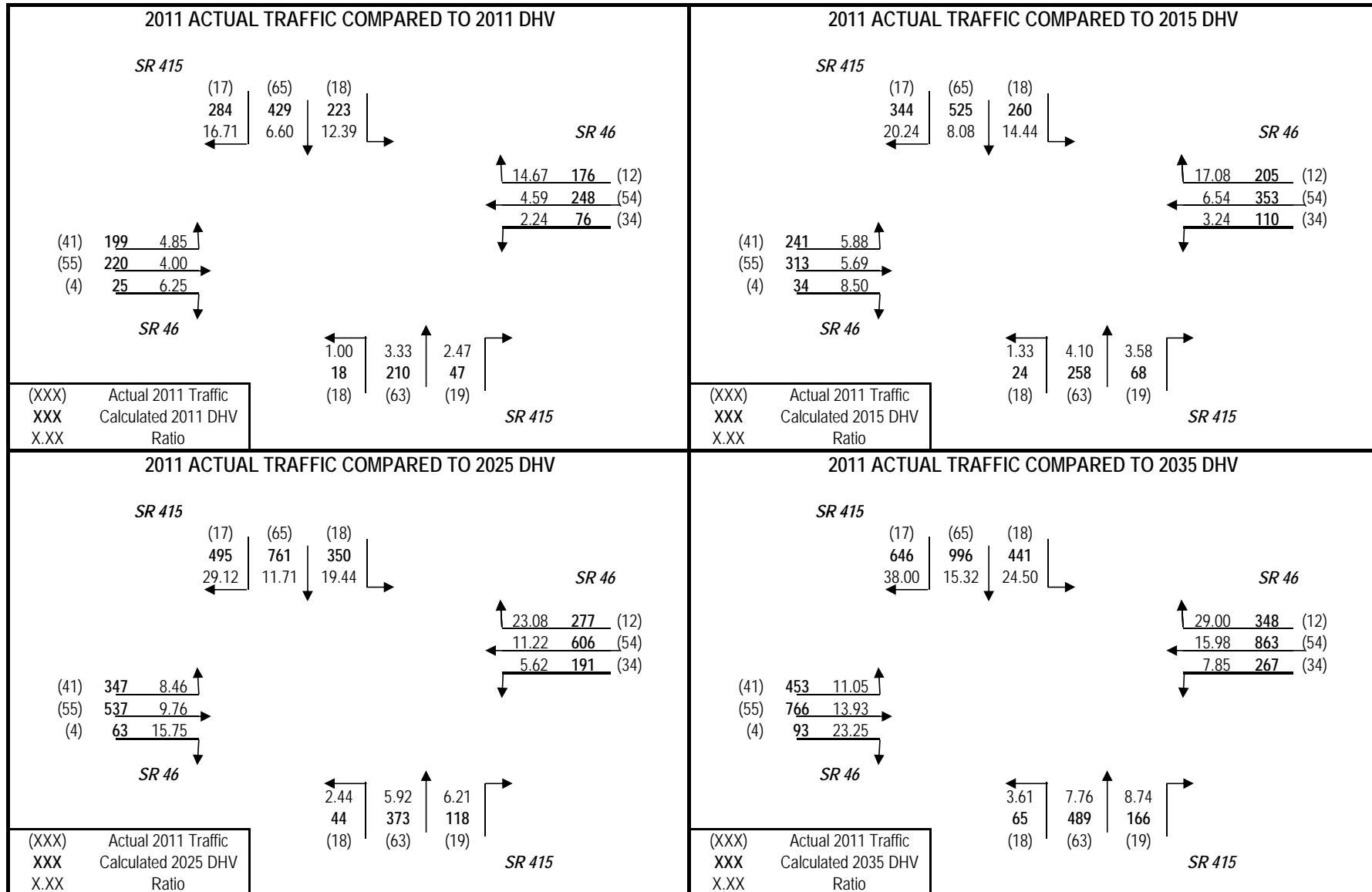
PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Osceola Road  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			37.9%	Northbound (NB)
			62.1%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Yes  No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function  
 Linear  
 Exponential  
 Decaying

Side Street Growth Function  
 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	10800	8600	2200	0	21600
2035	28800	25500	3300	0	57600

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	10%	10
(EB THRU)	West-to-East	90%	90
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	100%	100
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

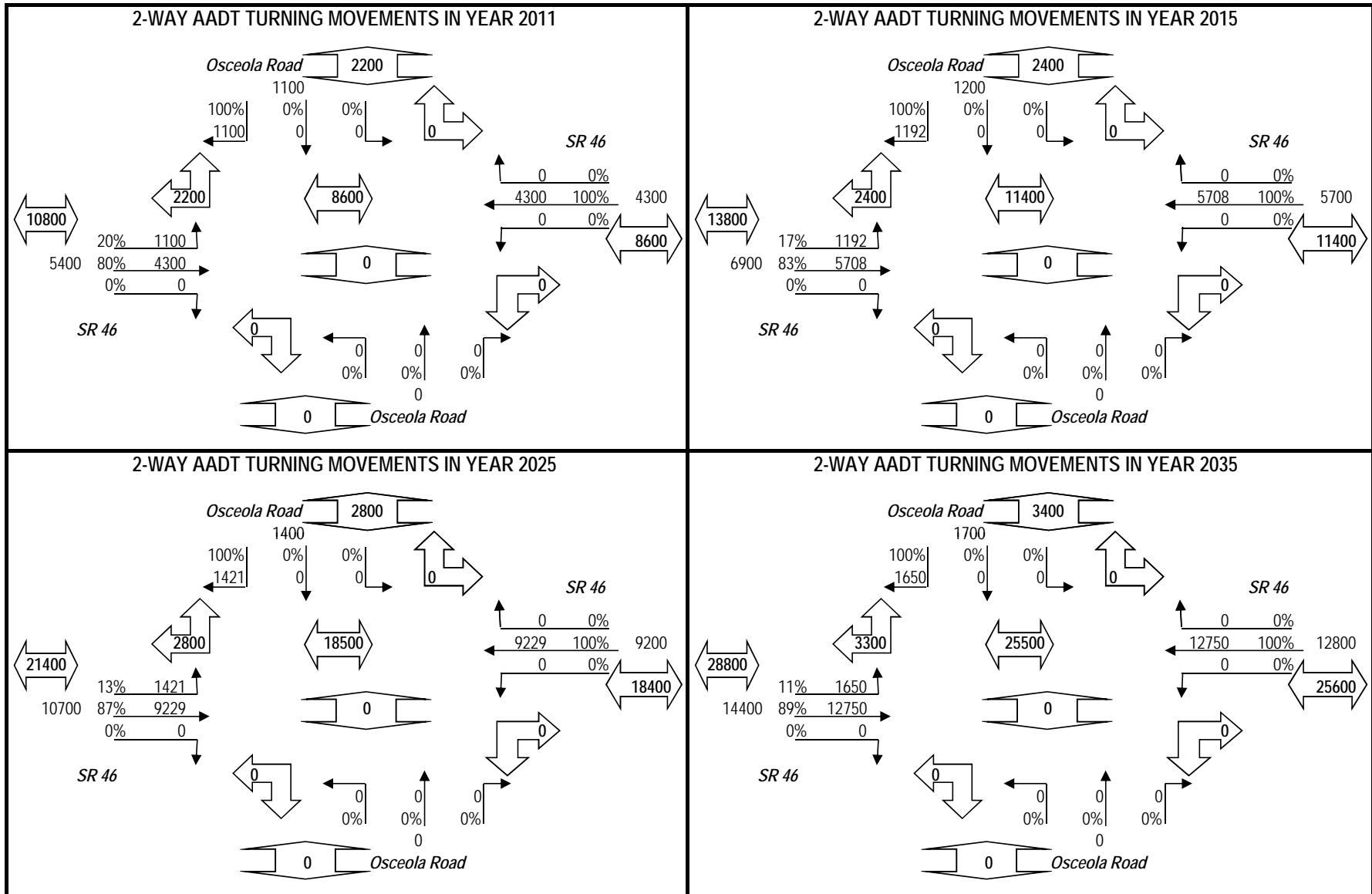
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Osceola Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.10	0.204	1100	0.173	1200	0.133	1400	0.115	1700
West-To-East (Thru)	0.90	0.796	4300	0.827	5700	0.867	9200	0.885	12800
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>5400</b>		<b>6900</b>		<b>10600</b>		<b>14500</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	1.00	1.000	4300	1.000	5700	1.000	9200	1.000	12800
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>5700</b>		<b>9200</b>		<b>12800</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	1100	1.000	1200	1.000	1400	1.000	1700
<b>Total Flow From North:</b>			<b>1100</b>		<b>1200</b>		<b>1400</b>		<b>1700</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

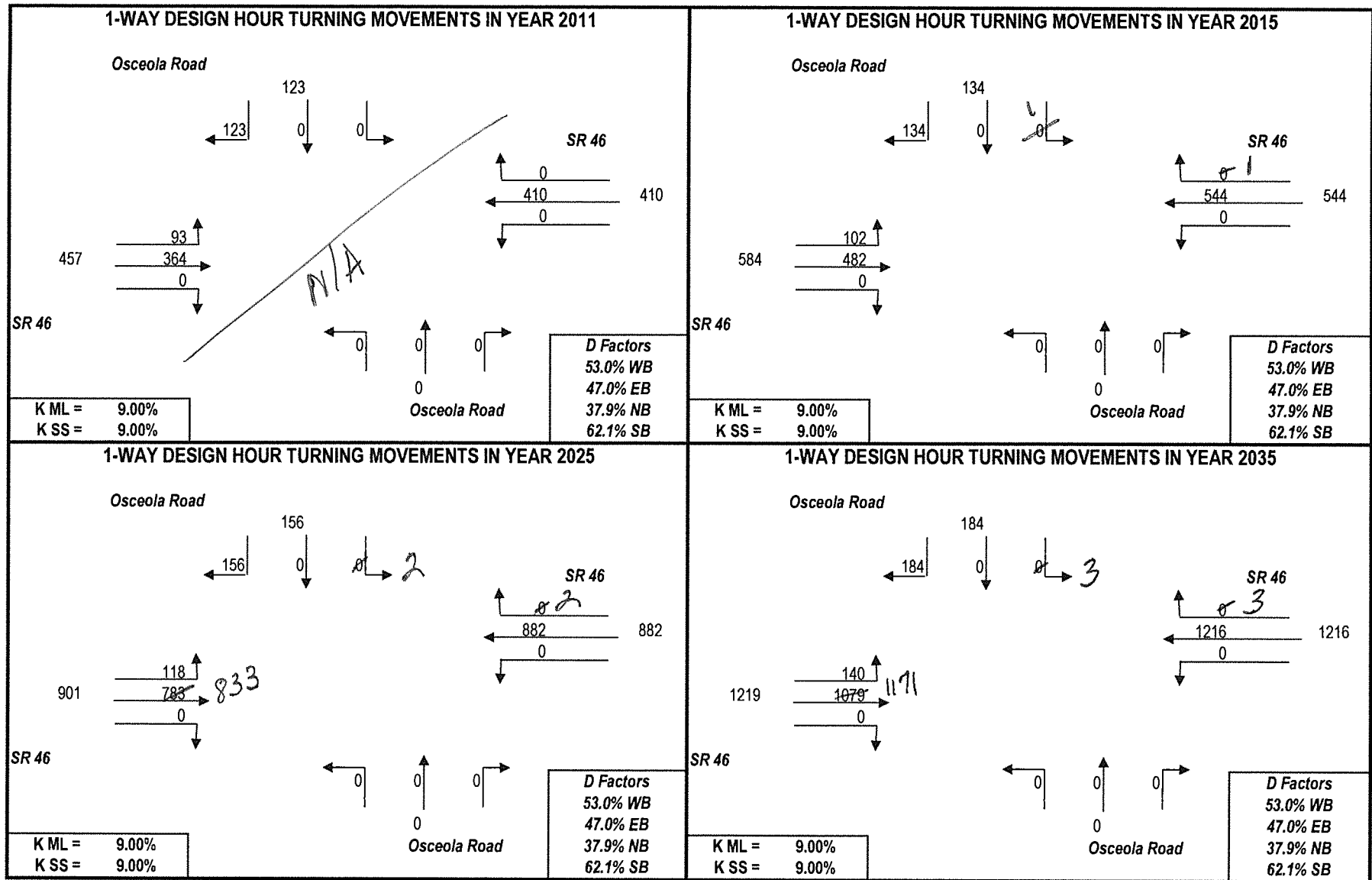
PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - No Build)



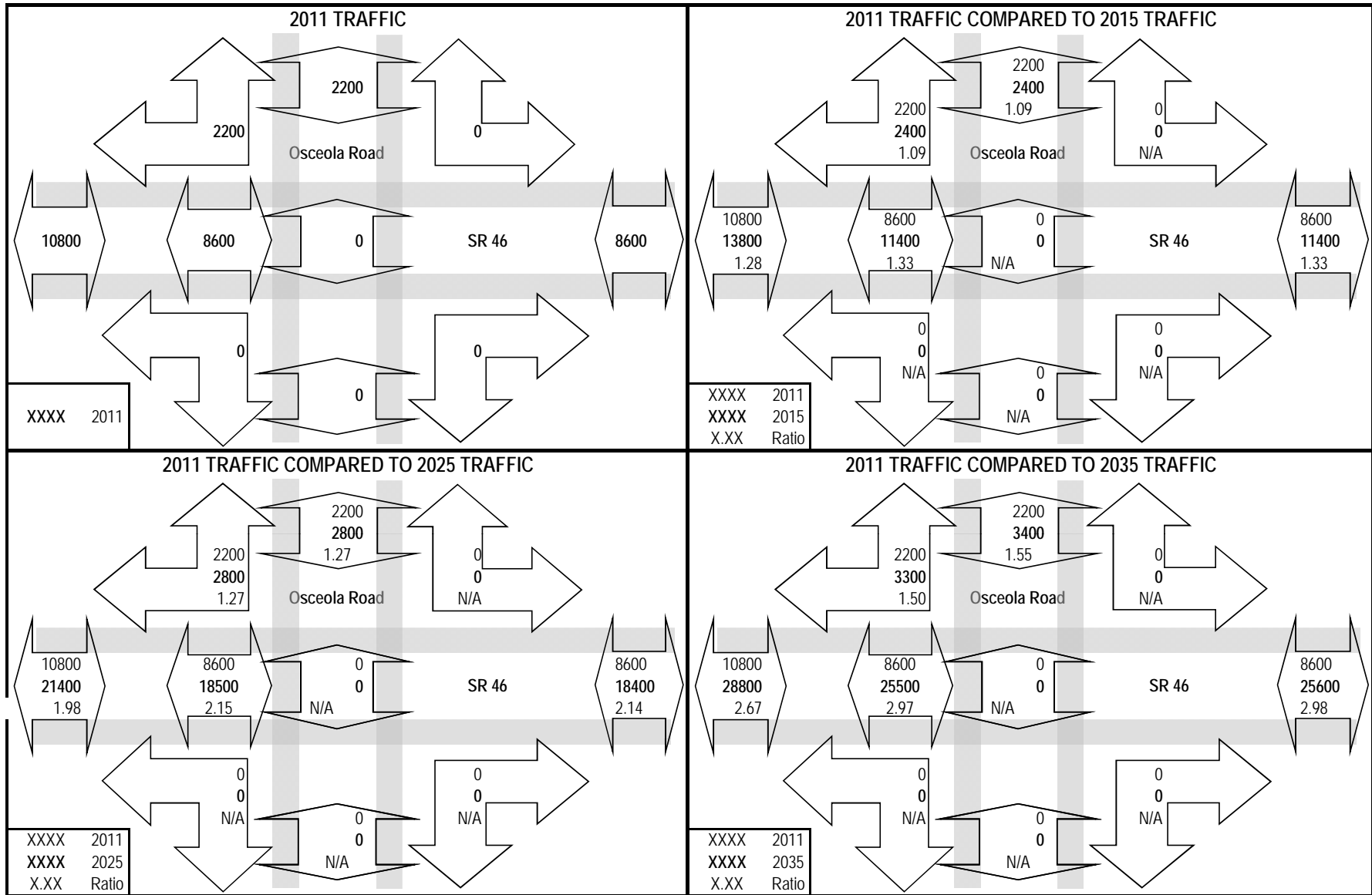


3 ✓

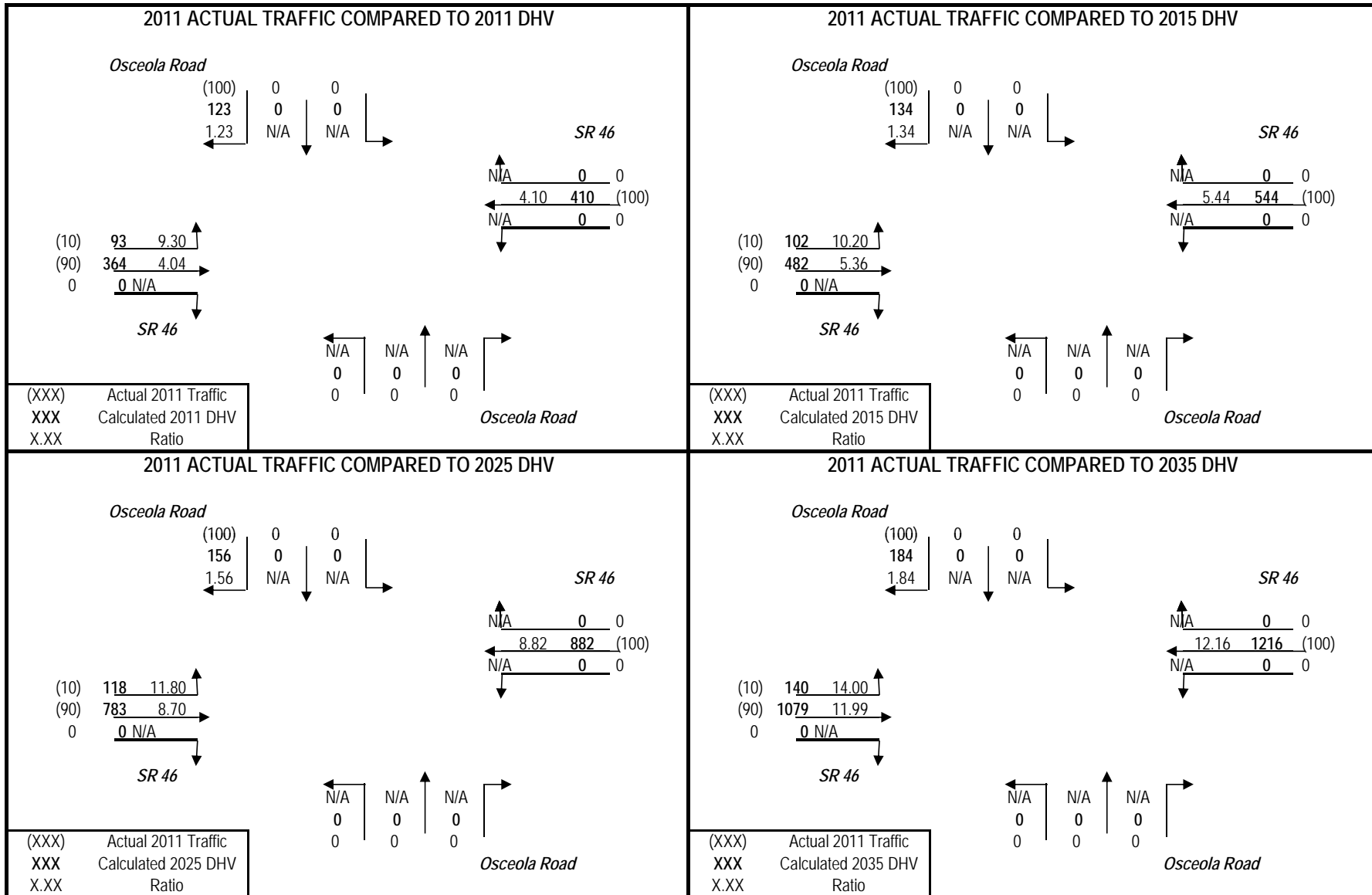
PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Mullet Lake Park Road  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			38.7%	Northbound (NB)
			61.3%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

Linear  Exponential  Decaying

**Side Street Growth Function**

Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	8600	9000	700	0	18300
2035	25500	26500	1200	0	53200

		1st Guess	Actual/Counted	
		Turning %'s for Traffic AADT Balancing for 2011		
(EB LT)	West-to-North	1%	1	
(EB THRU)	West-to-East	99%	99	
(EB RT)	West-to-South	0%	0	
(WB LT)	East-to-South	0%	0	(must be done manually)
(WB THRU)	East-to-West	98%	98	
(WB RT)	East-to-North	2%	2	
(SB LT)	North-to-East	83%	83	
(SB THRU)	North-to-South	0%	0	
(SB RT)	North-to-West	17%	17	
(NB LT)	South-to-West	0%	0	
(NB THRU)	South-to-North	100%	0	
(NB RT)	South-to-East	0%	0	
Desired Closure:		0.01		

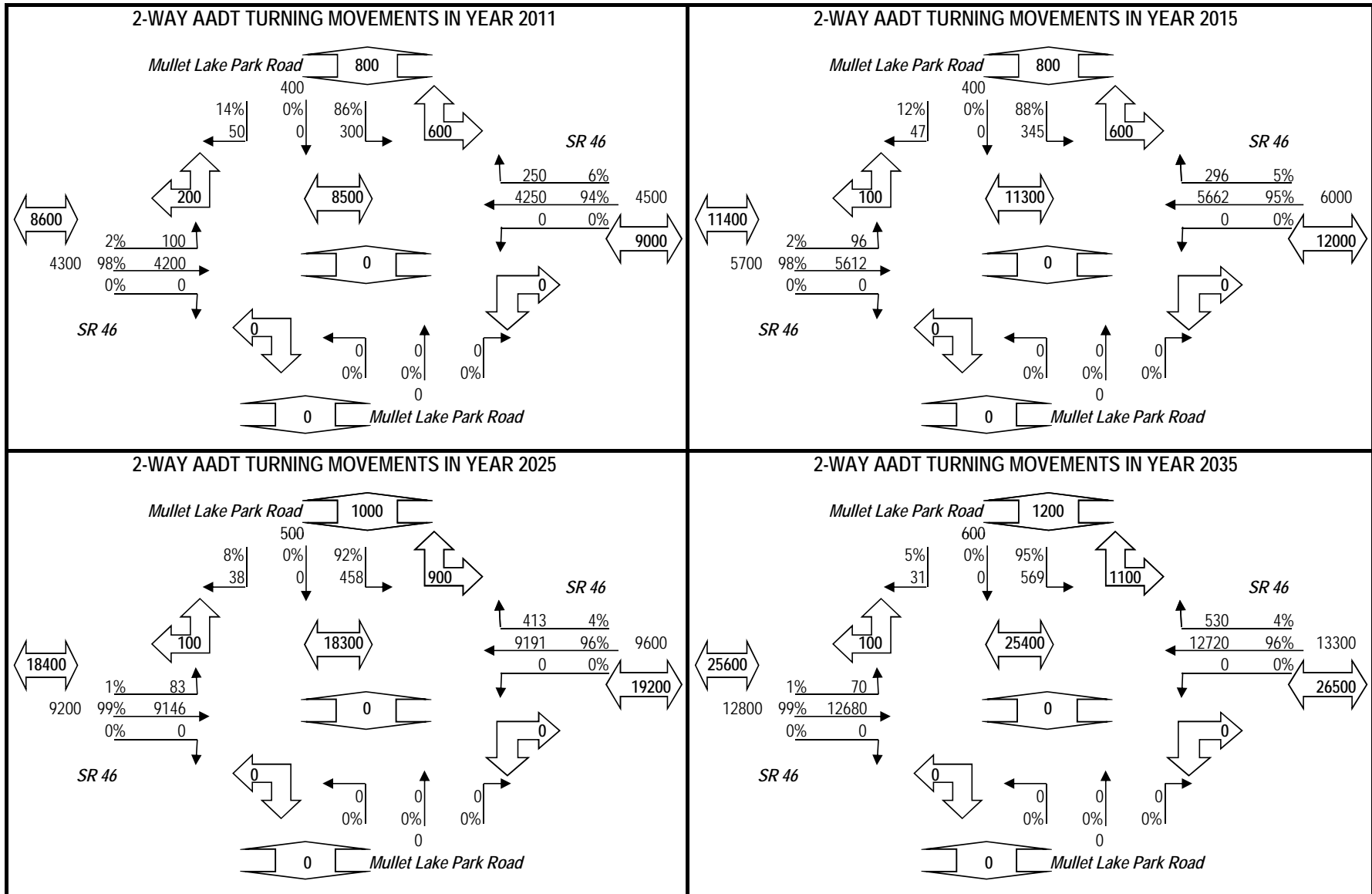
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Mullet Lake Park Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

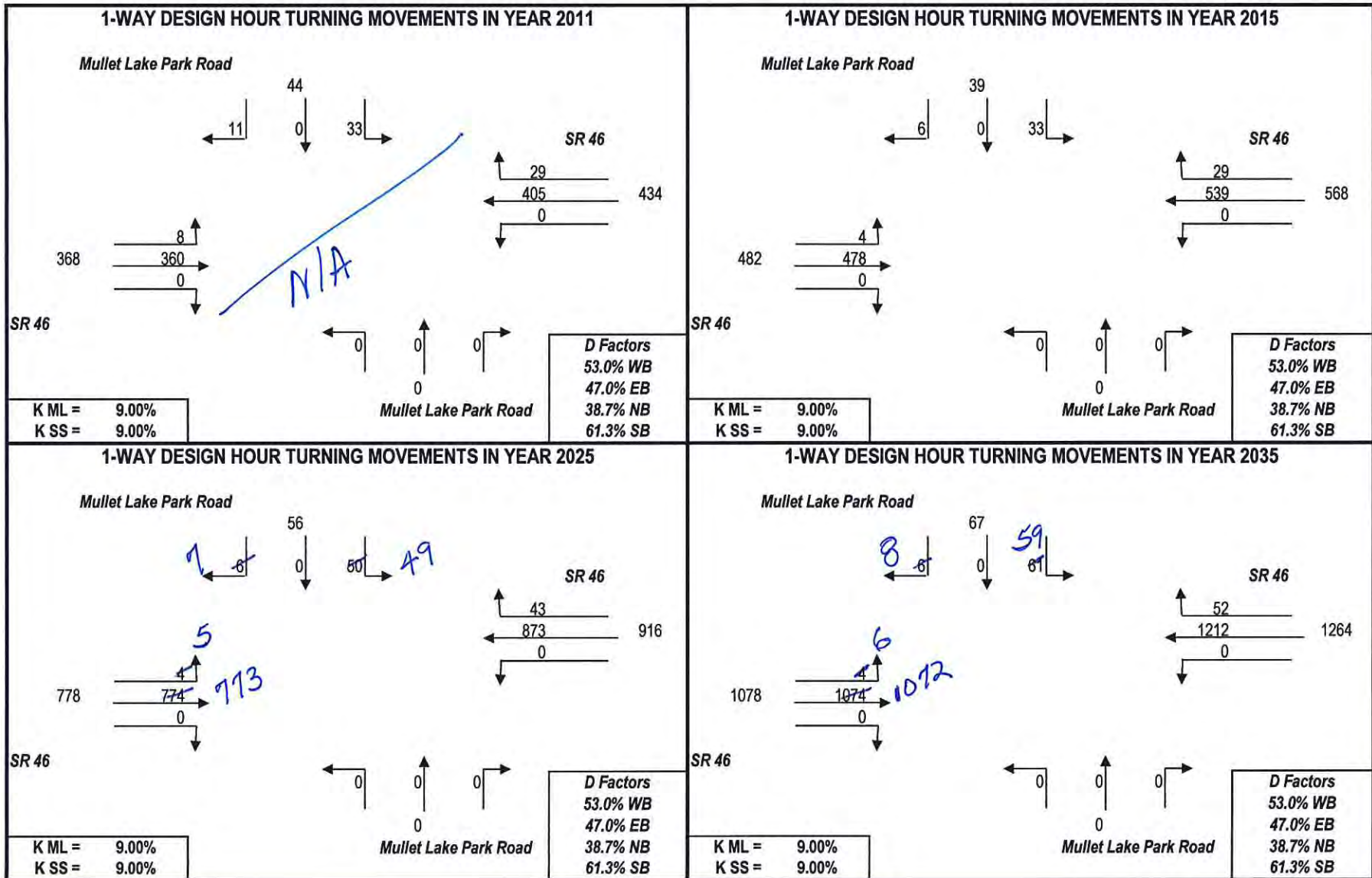
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.023	100	0.017	100	0.009	100	0.005	100
West-To-East (Thru)	0.99	0.977	4200	0.983	5600	0.991	9100	0.995	12700
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>5700</b>		<b>9200</b>		<b>12800</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.98	0.945	4300	0.950	5700	0.957	9200	0.960	12700
East-To-North (RT)	0.02	0.055	200	0.050	300	0.043	400	0.040	500
<b>Total Flow From East:</b>			<b>4500</b>		<b>6000</b>		<b>9600</b>		<b>13200</b>
North-To-East (LT)	0.83	0.856	300	0.881	300	0.922	500	0.948	600
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.17	0.144	100	0.119	0	0.078	0	0.052	0
<b>Total Flow From North:</b>			<b>400</b>		<b>300</b>		<b>500</b>		<b>600</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

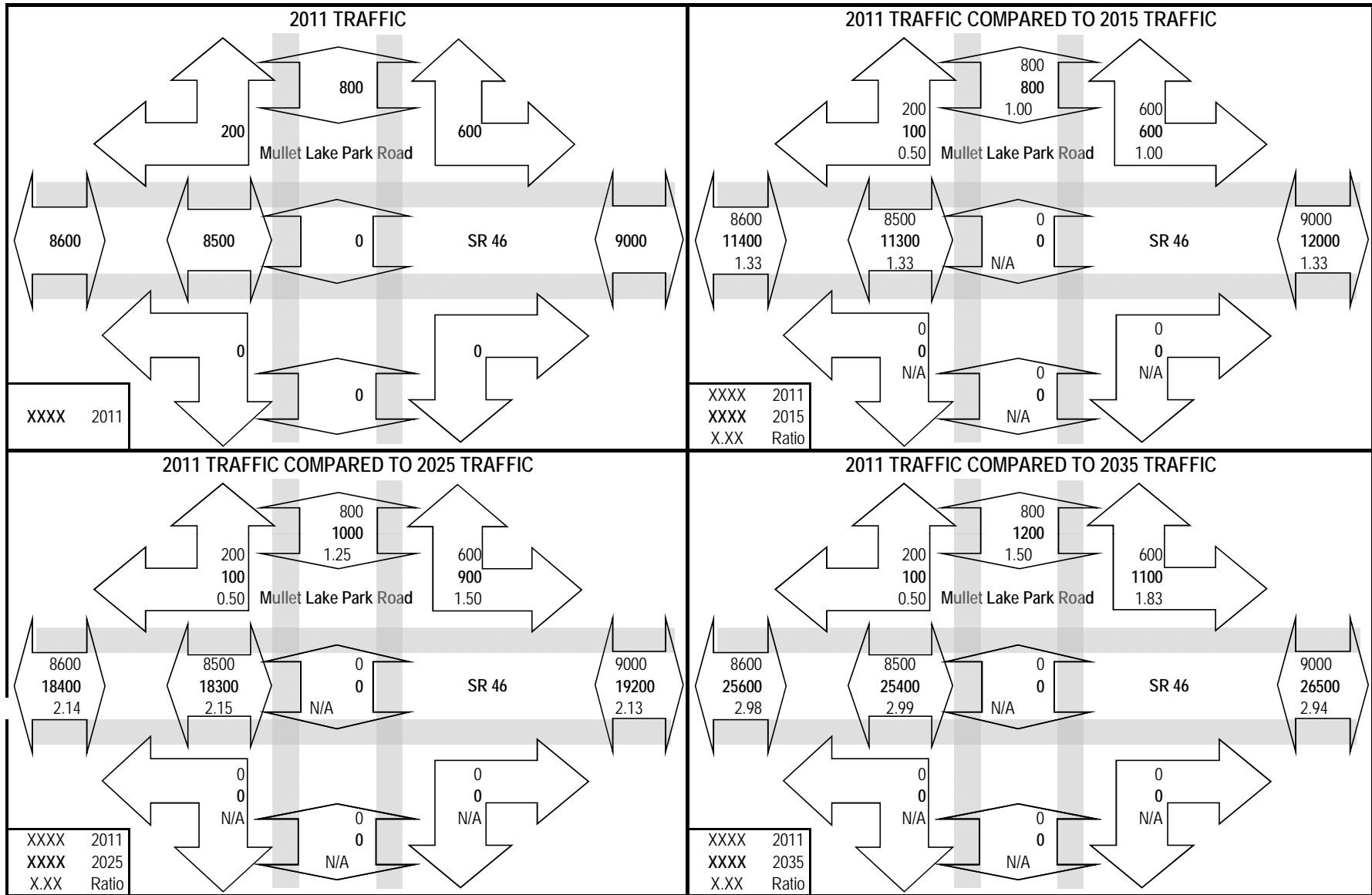
# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - No Build)

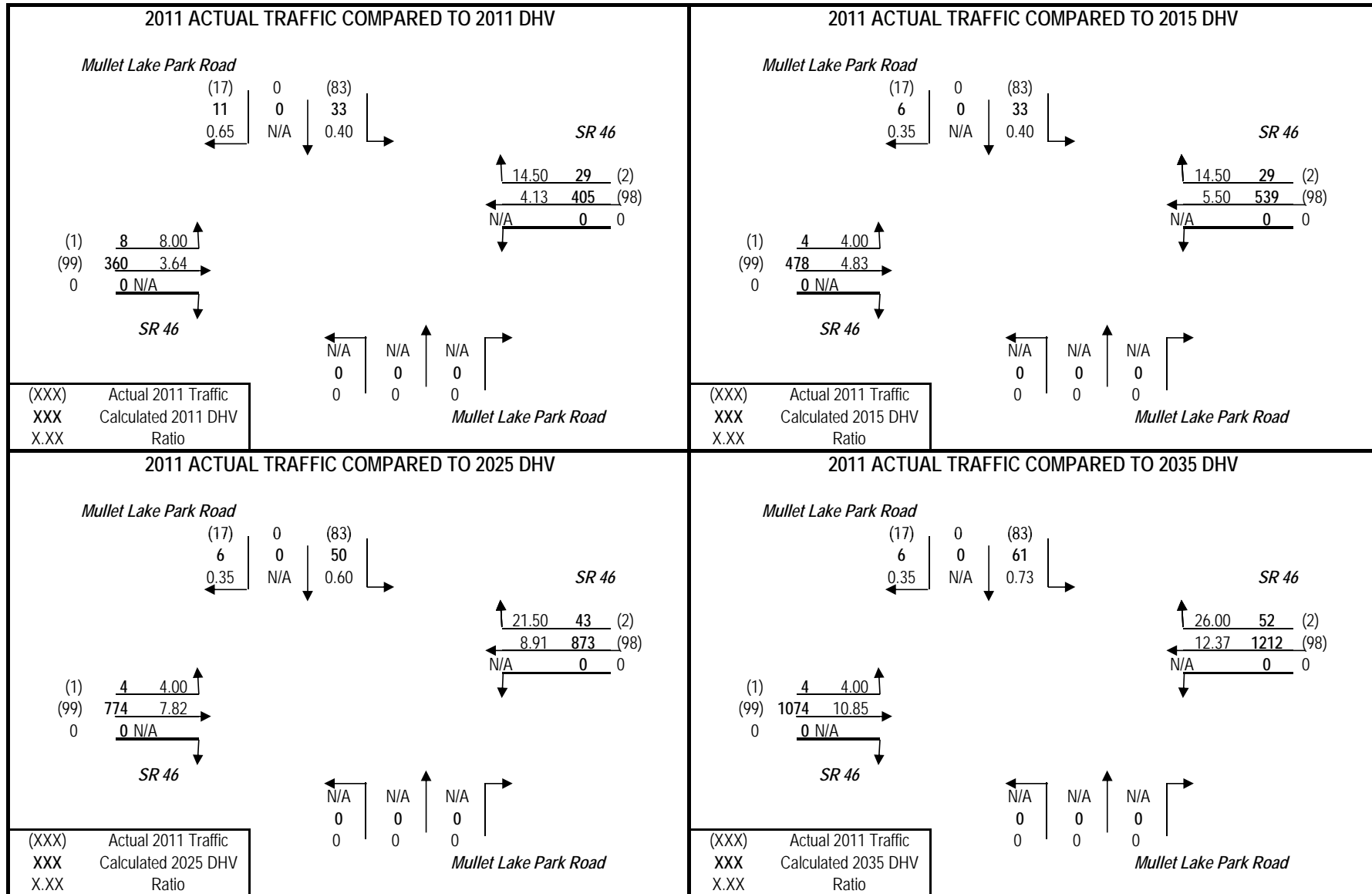


# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - No Build)





## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - No Build)



## TURNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Cochran Road  
**From:** SR 415  
**To:** CR 426 (AM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			69.0%	Northbound (NB)
			31.0%	Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

2011  
 2015  
 2025  
 2035  
 2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	9000	8700	0	750	18450
2035	26500	25500	0	1100	53100

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	99%	99
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	100%	0
(SB RT)	North-to-West	0%	0
(NB LT)	South-to-West	35%	35
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	65%	65

(must be done manually)

Desired Closure:

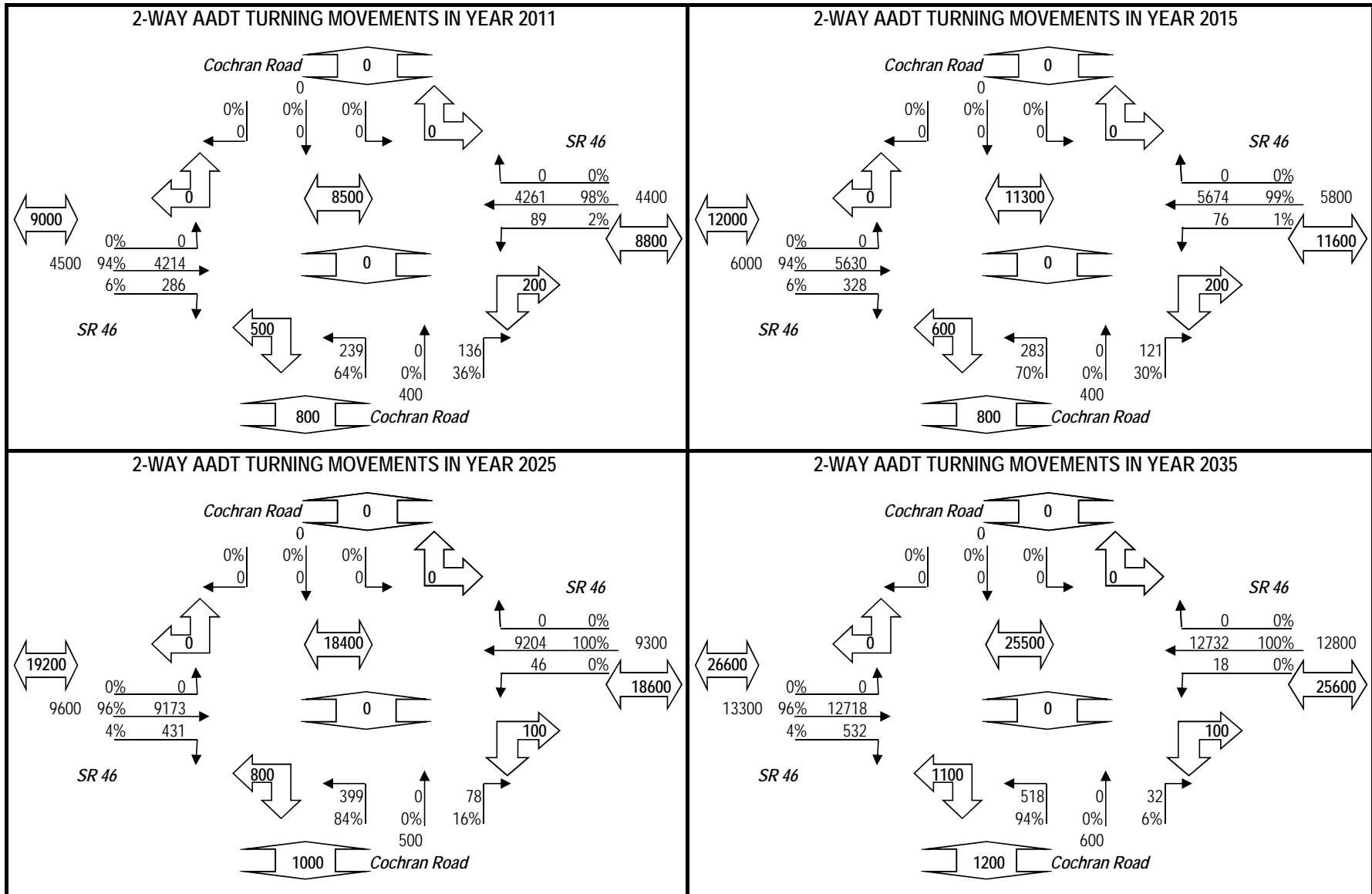
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Cochran Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

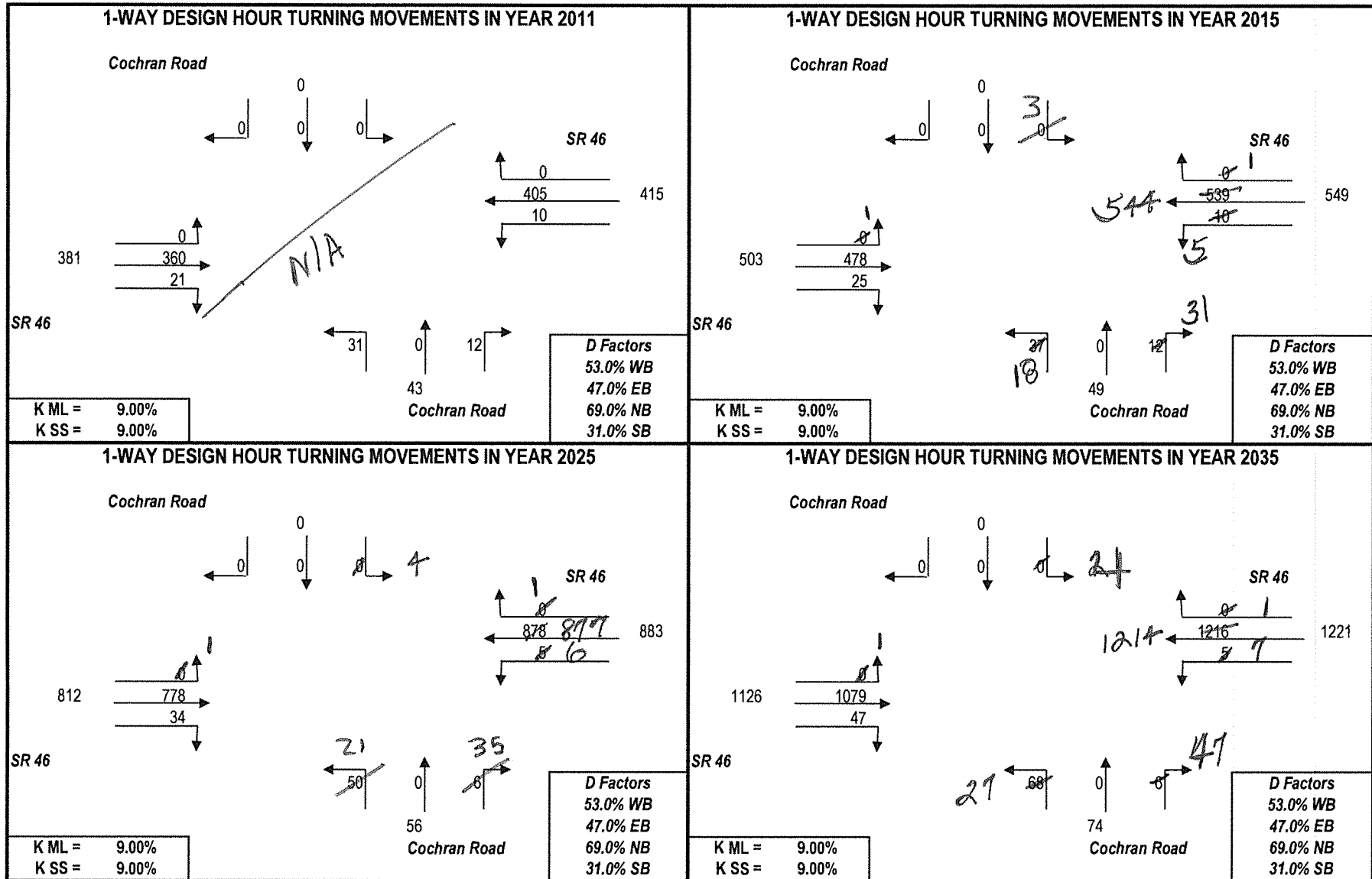
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.99	0.936	4200	0.945	5600	0.955	9200	0.960	12700
West-To-South (RT)	0.01	0.064	300	0.055	300	0.045	400	0.040	500
<b>Total Flow From West:</b>			<b>4500</b>		<b>5900</b>		<b>9600</b>		<b>13200</b>
East-To-South (LT)	0.01	0.020	100	0.013	100	0.005	0	0.001	0
East-To-West (Thru)	0.99	0.980	4300	0.987	5700	0.995	9200	0.999	12700
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4400</b>		<b>5800</b>		<b>9200</b>		<b>12700</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.35	0.636	200	0.701	300	0.837	400	0.941	500
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.65	0.364	100	0.299	100	0.163	100	0.059	0
<b>Total Flow From South:</b>			<b>300</b>		<b>400</b>		<b>500</b>		<b>500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

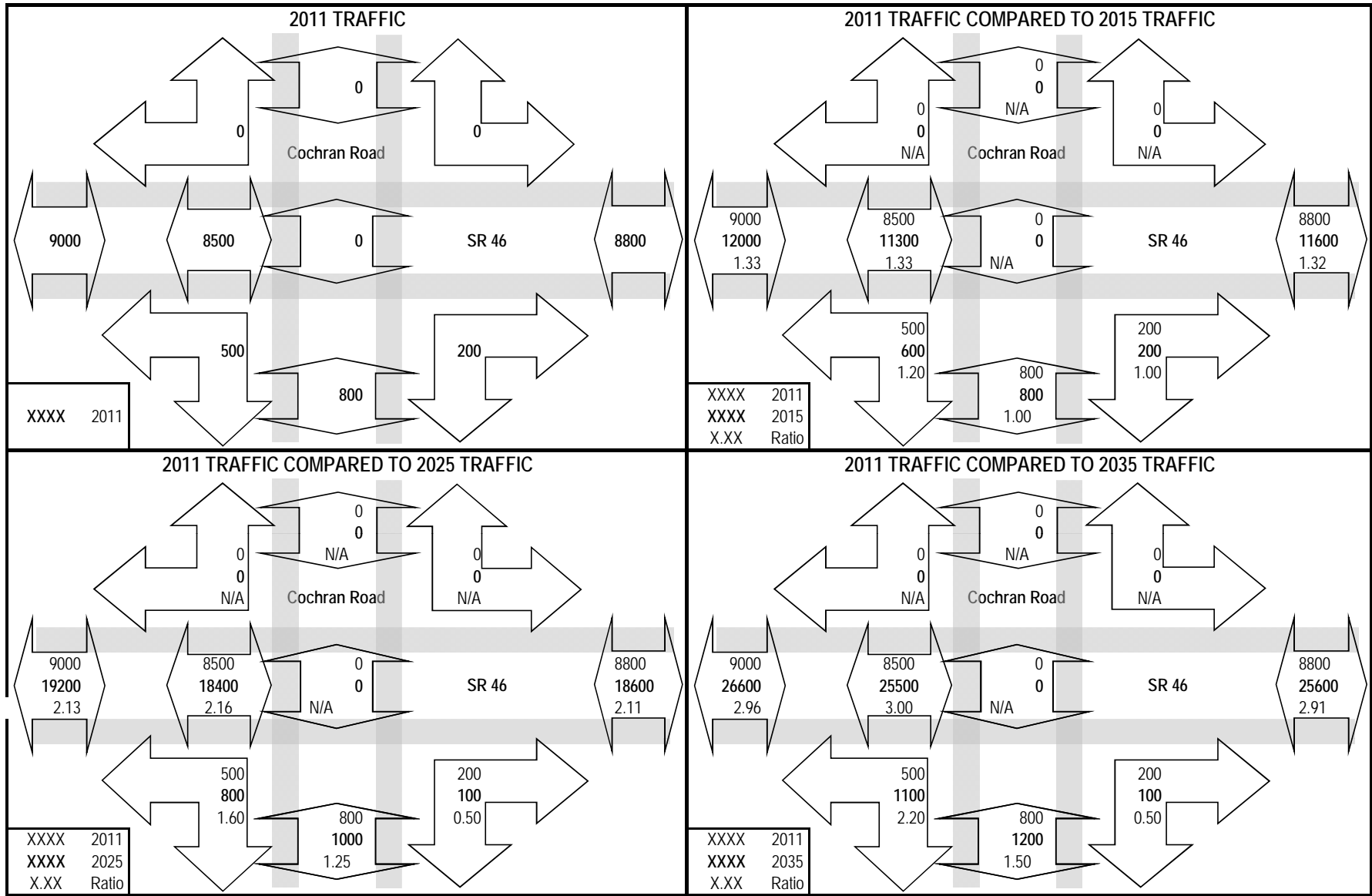
PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - No Build)



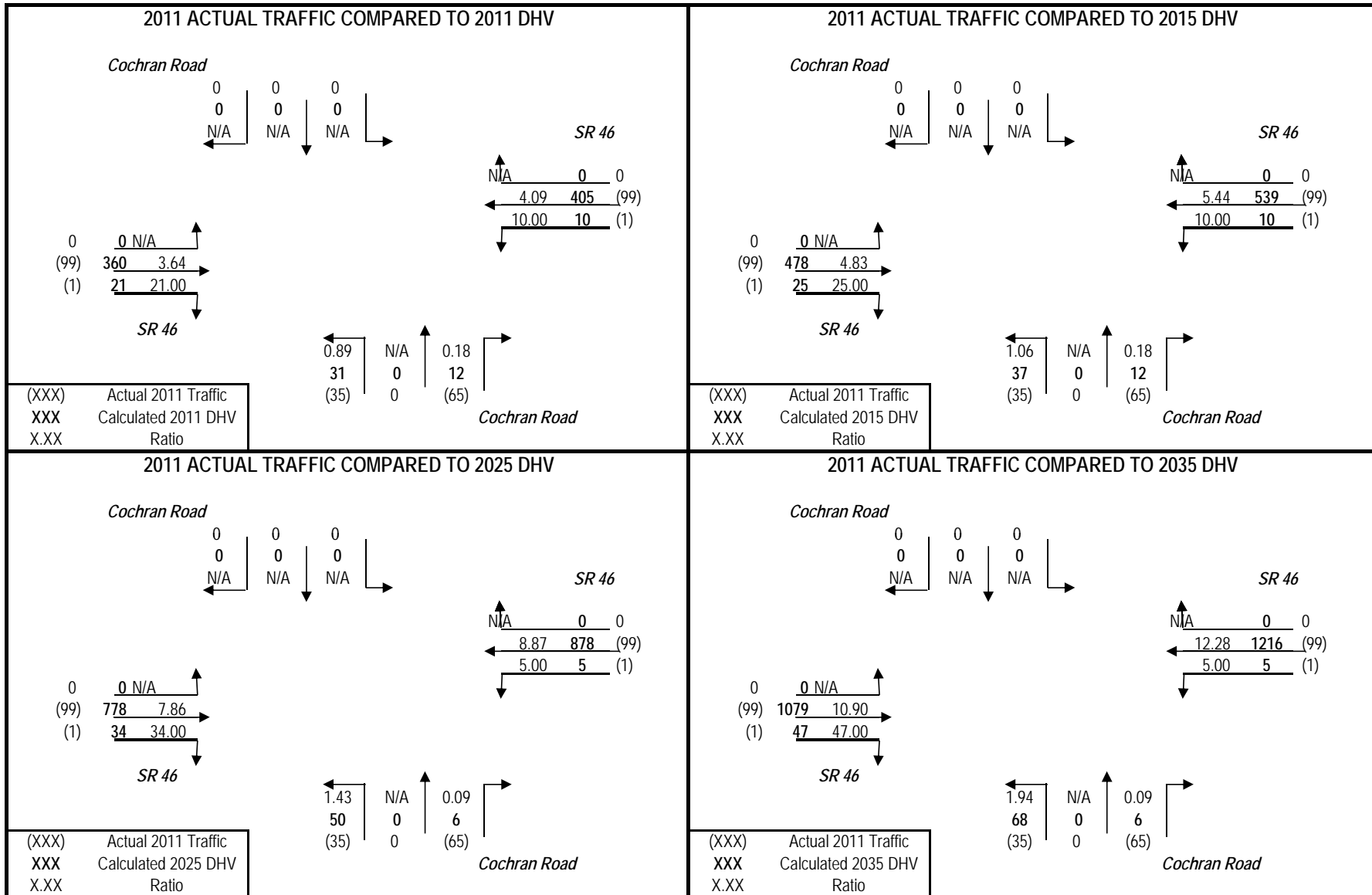
PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - No Build)



**URNS5 ANALYSIS SHEET - INPUT**

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Woodbridge Dr/Avenue C  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			38.1%	Northbound (NB)
			61.9%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

If "Yes" go to cell C47      If "No" go to cell C31

Enter Yes or No  
 Yes  
 No

**Enter Year and Growth Rates from Base Year:**

	Year	Rate (1.0% = 0.01)	
Base		Mainline	Side Street
Opening			
Mid			
Design			

Mainline Growth Function  
 Linear  
 Exponential  
 Decaying

Side Street Growth Function  
 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	
EB Approach	WB Approach	SB Approach	NB Approach	<b>TOTAL</b>
0	0	0	0	0

**Enter Project and Model Years**

	Year
Base	2011
Opening	2015
Mid	2025
Design	2035
Model	2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	
	EB Approach	WB Approach	SB Approach	NB Approach	<b>TOTAL</b>
2011	9000	8700	1700	250	19650
2035	26500	25500	2500	350	54850

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	6%	6
(EB THRU)	West-to-East	93%	93
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	98%	98
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	14%	14
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	86%	86
(NB LT)	South-to-West	57%	57
(NB THRU)	South-to-North	29%	29
(NB RT)	South-to-East	14%	14

Desired Closure: 0.01

(must be done manually)



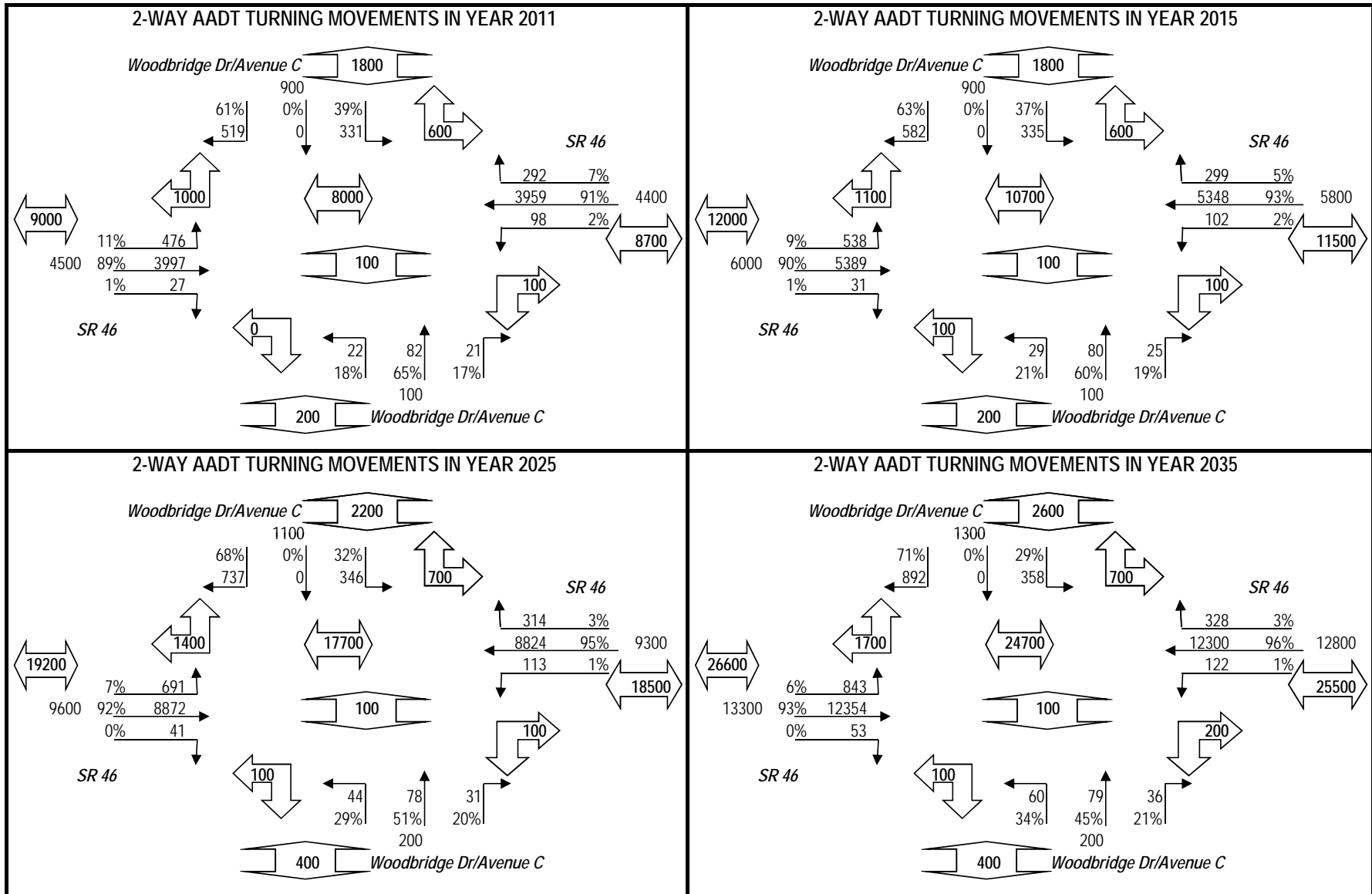
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Woodbridge Dr/Avenue C	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

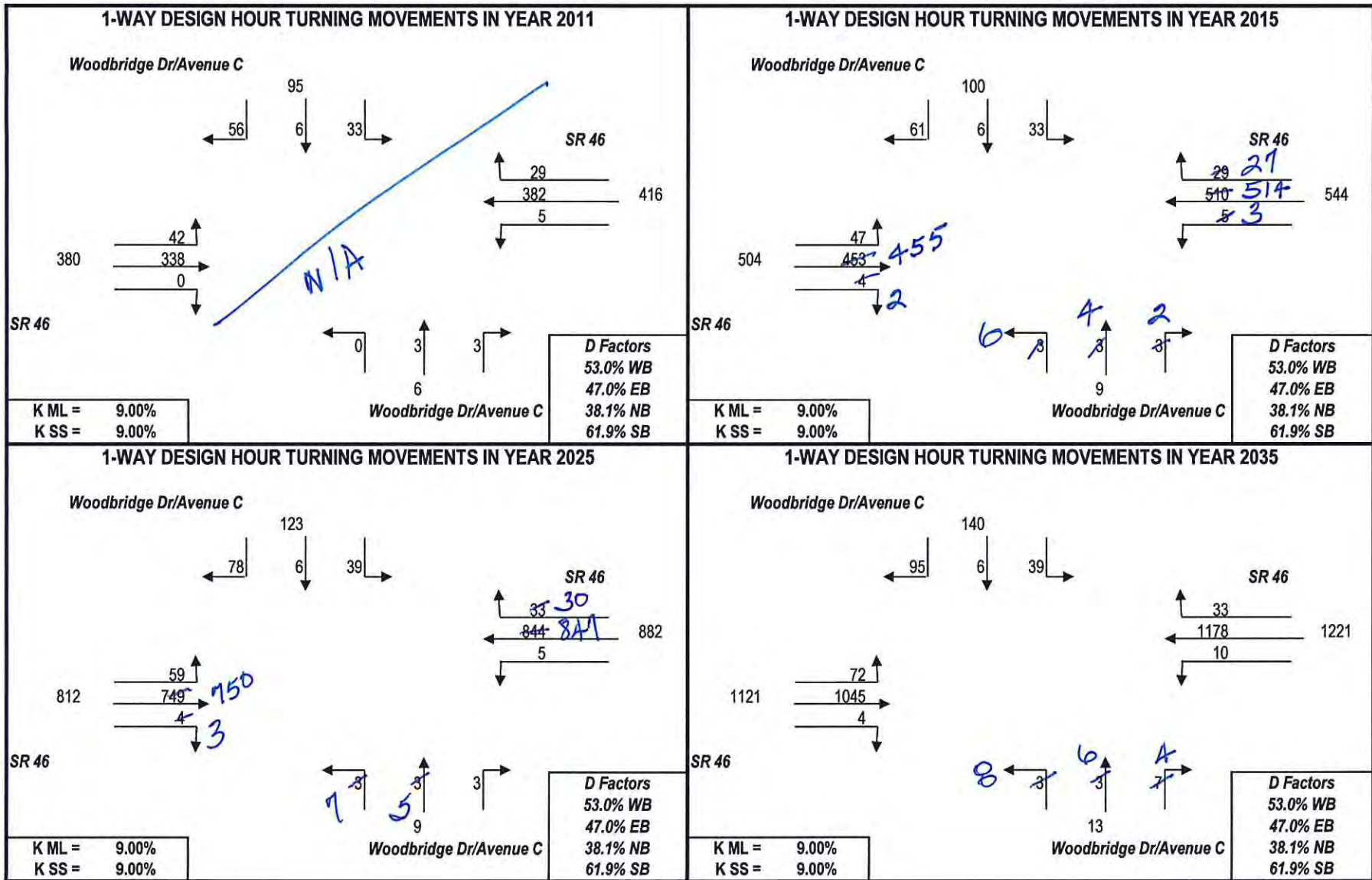
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.06	0.106	500	0.090	500	0.072	700	0.064	800
West-To-East (Thru)	0.93	0.888	4000	0.905	5400	0.924	8900	0.932	12400
West-To-South (RT)	0.01	0.006	0	0.005	0	0.004	0	0.004	100
<b>Total Flow From West:</b>			<b>4500</b>		<b>5900</b>		<b>9600</b>		<b>13300</b>
East-To-South (LT)	0.01	0.023	100	0.018	100	0.012	100	0.010	100
East-To-West (Thru)	0.98	0.910	4000	0.930	5300	0.954	8800	0.965	12300
East-To-North (RT)	0.01	0.067	300	0.052	300	0.034	300	0.026	300
<b>Total Flow From East:</b>			<b>4400</b>		<b>5700</b>		<b>9200</b>		<b>12700</b>
North-To-East (LT)	0.14	0.389	300	0.366	300	0.320	300	0.287	400
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.86	0.611	500	0.634	600	0.680	700	0.713	900
<b>Total Flow From North:</b>			<b>800</b>		<b>900</b>		<b>1000</b>		<b>1300</b>
South-To-West (LT)	0.57	0.177	0	0.215	0	0.287	0	0.341	100
South-To-North (Thru)	0.29	0.652	100	0.599	100	0.509	100	0.453	100
South-To-East (RT)	0.14	0.171	0	0.187	0	0.204	0	0.207	0
<b>Total Flow From South:</b>			<b>100</b>		<b>100</b>		<b>100</b>		<b>200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

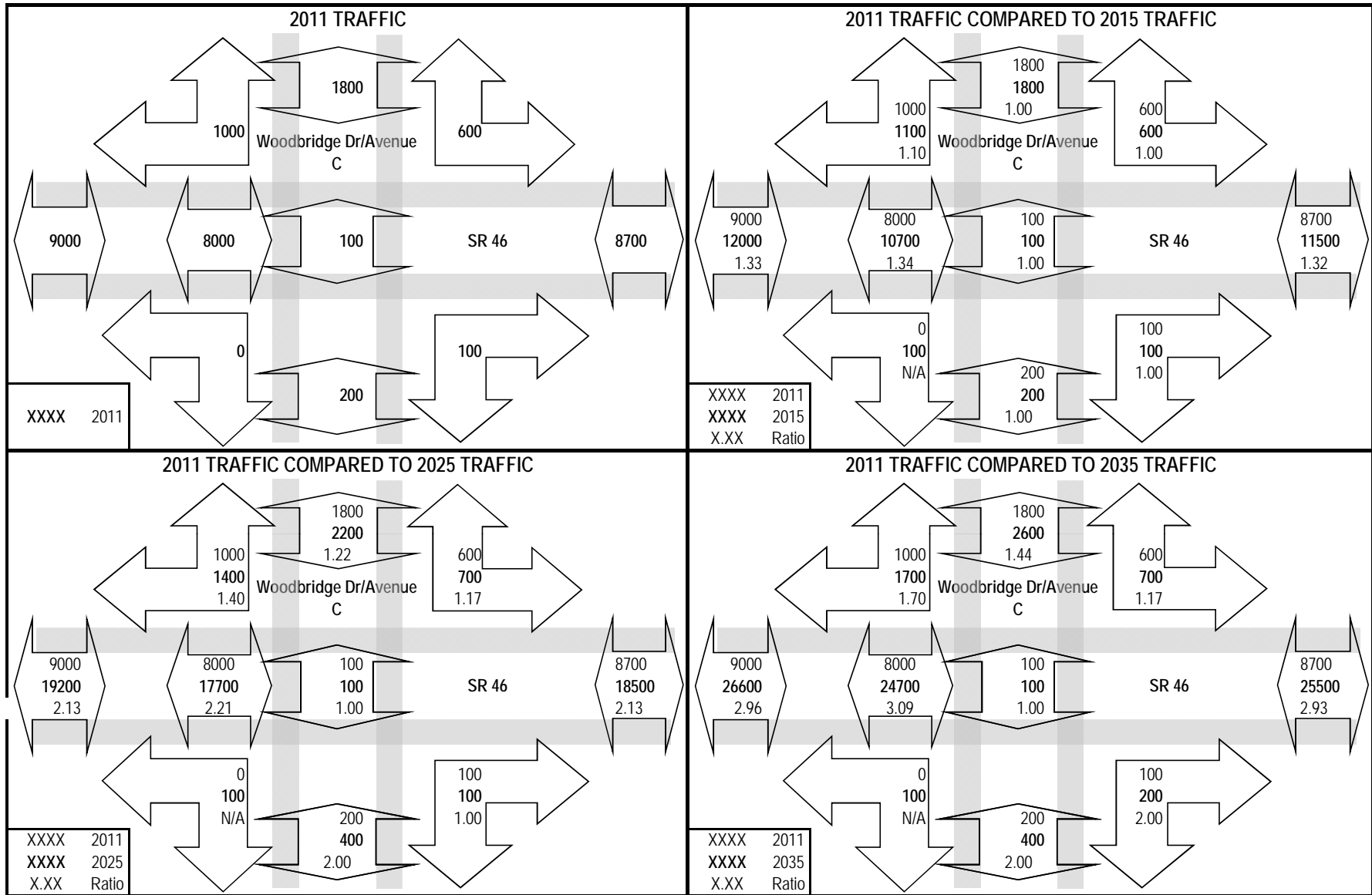
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - No Build)



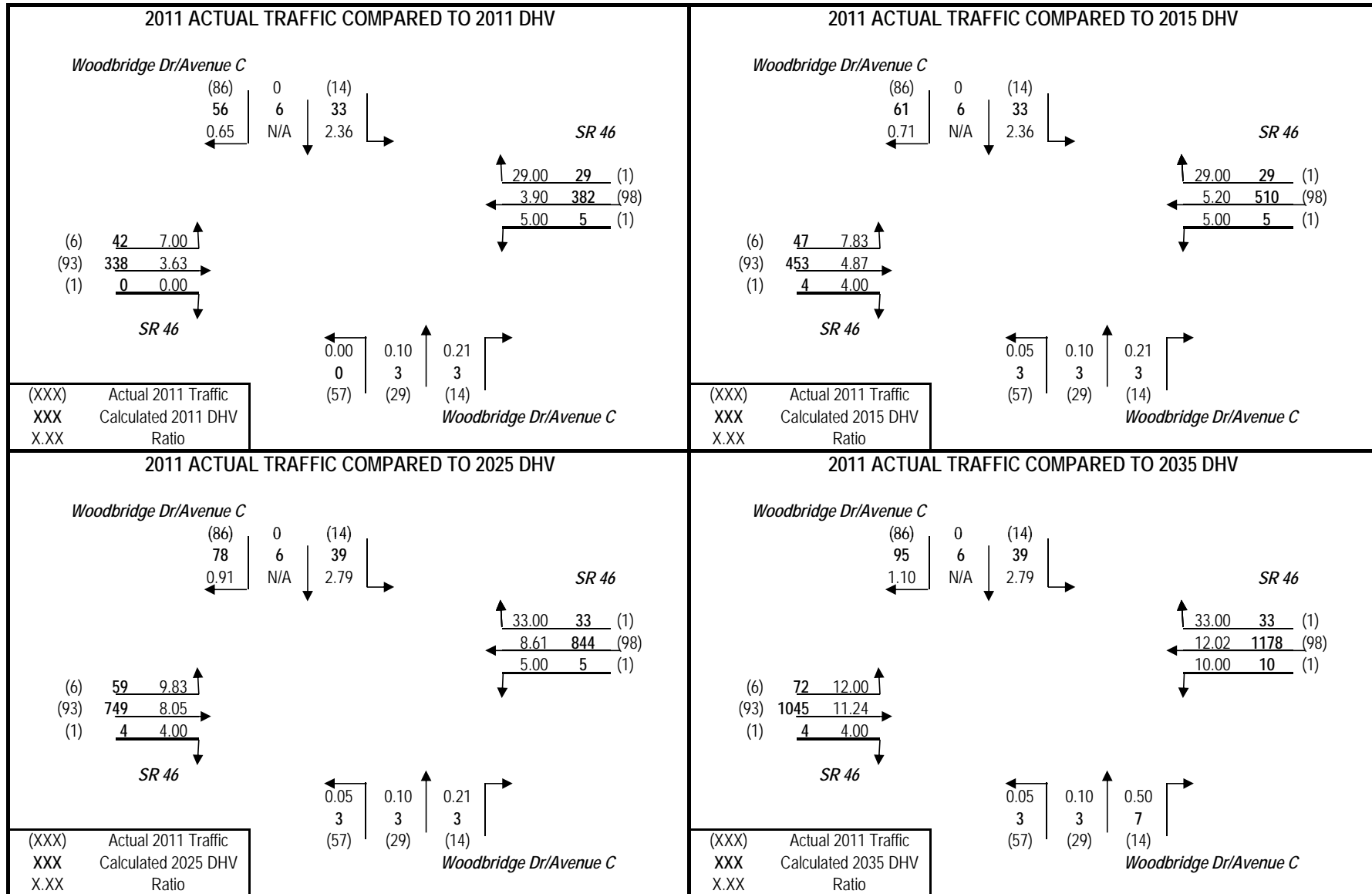
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: 3rd Street  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			70.0%	Northbound (NB)
			30.0%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function:  Linear  Exponential  Decaying

Side Street Growth Function:  Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	8700	90	0	17490
2035	25500	25500	150	0	51150

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	1%	1
(EB THRU)	West-to-East	99%	99
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	67%	67
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	33%	33
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0
Desired Closure:		0.01	

(must be done manually)

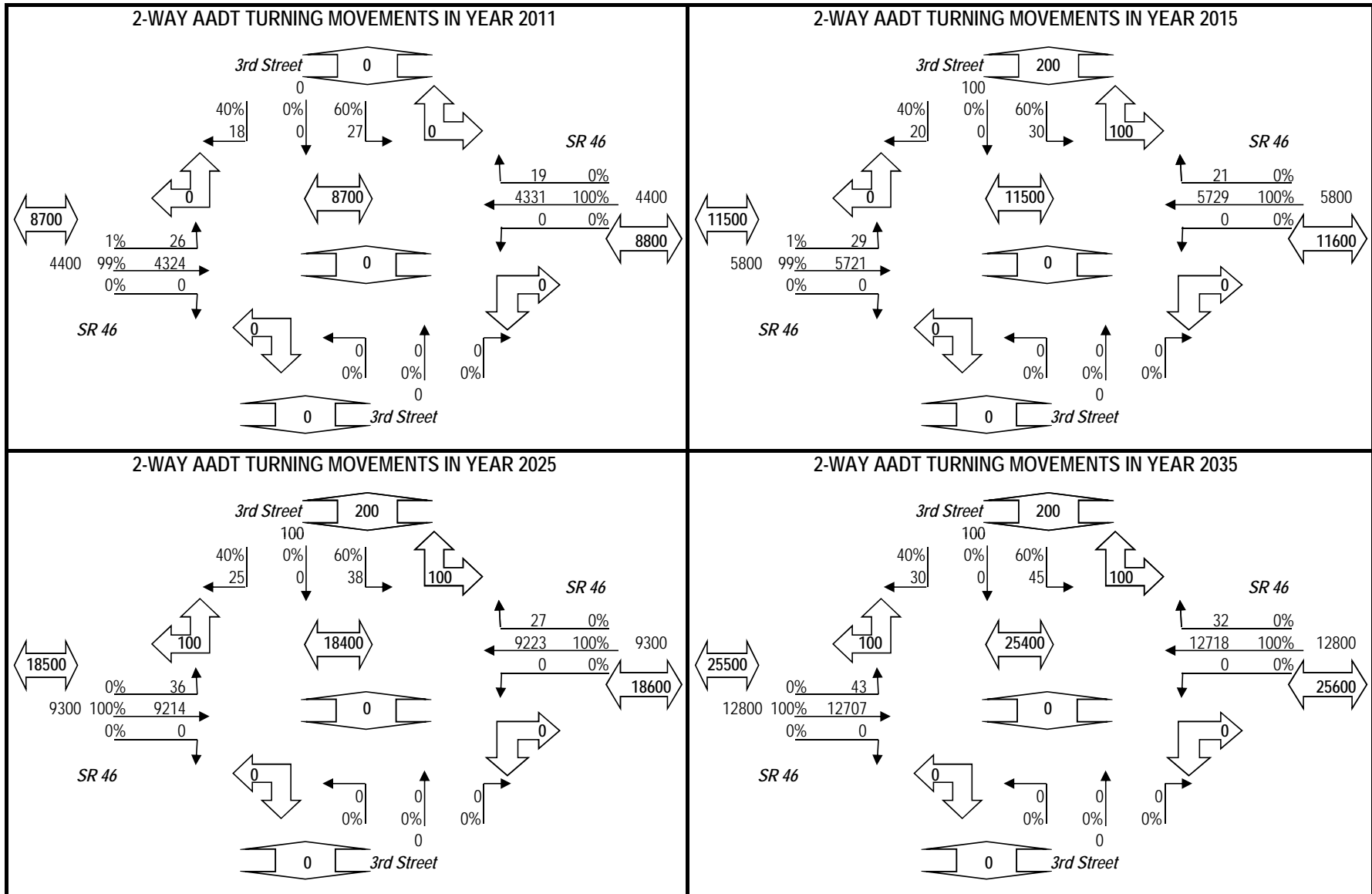
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	3rd Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.006	0	0.005	0	0.004	0	0.003	0
West-To-East (Thru)	0.99	0.994	4300	0.995	5700	0.996	9200	0.997	12700
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>5700</b>		<b>9200</b>		<b>12700</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.996	4300	0.996	5700	0.997	9200	0.998	12700
East-To-North (RT)	0.01	0.004	0	0.004	0	0.003	0	0.002	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>5700</b>		<b>9200</b>		<b>12700</b>
North-To-East (LT)	0.67	0.596	0	0.597	0	0.597	0	0.597	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.33	0.404	0	0.403	0	0.403	0	0.403	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

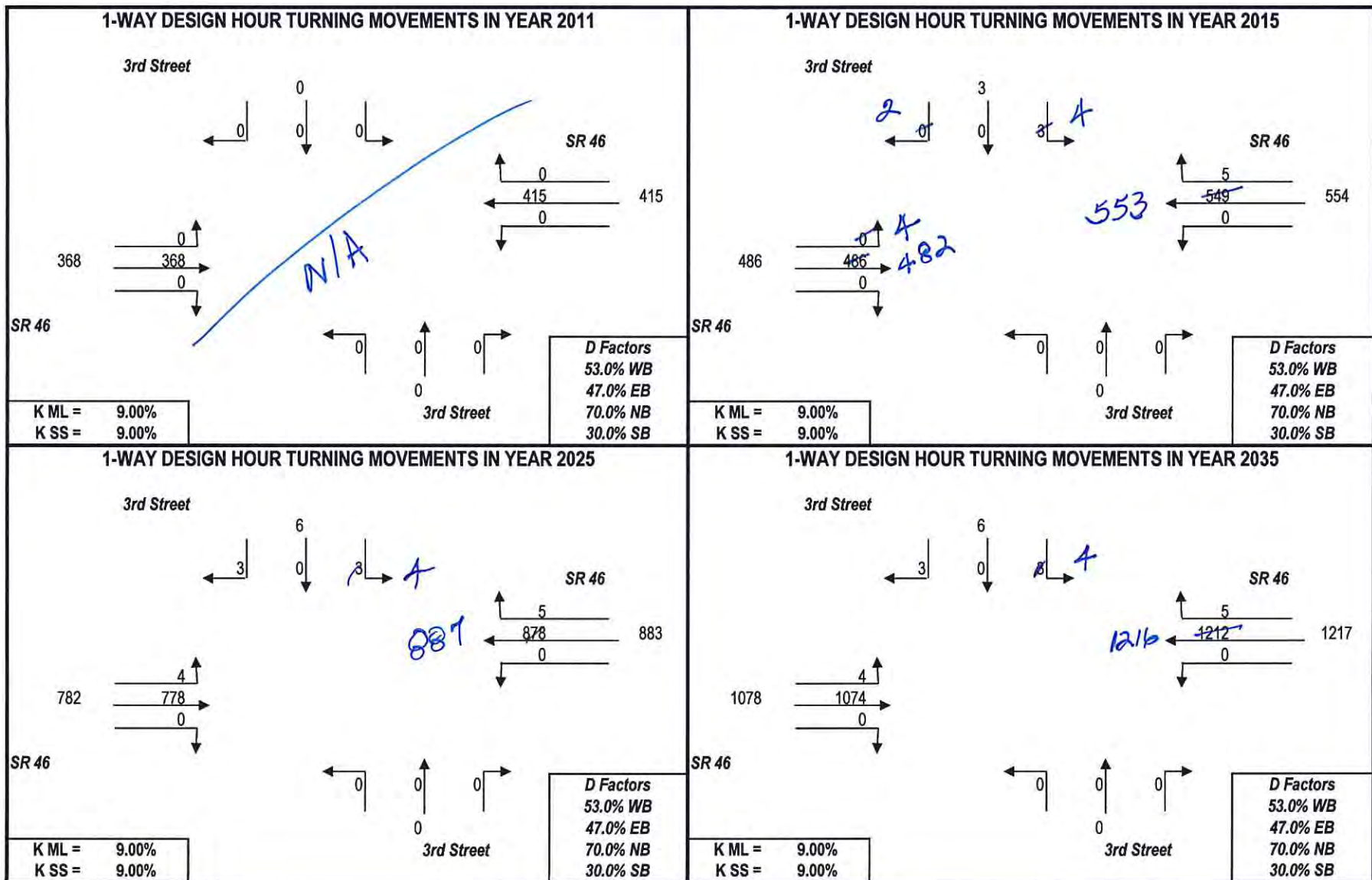
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - No Build)

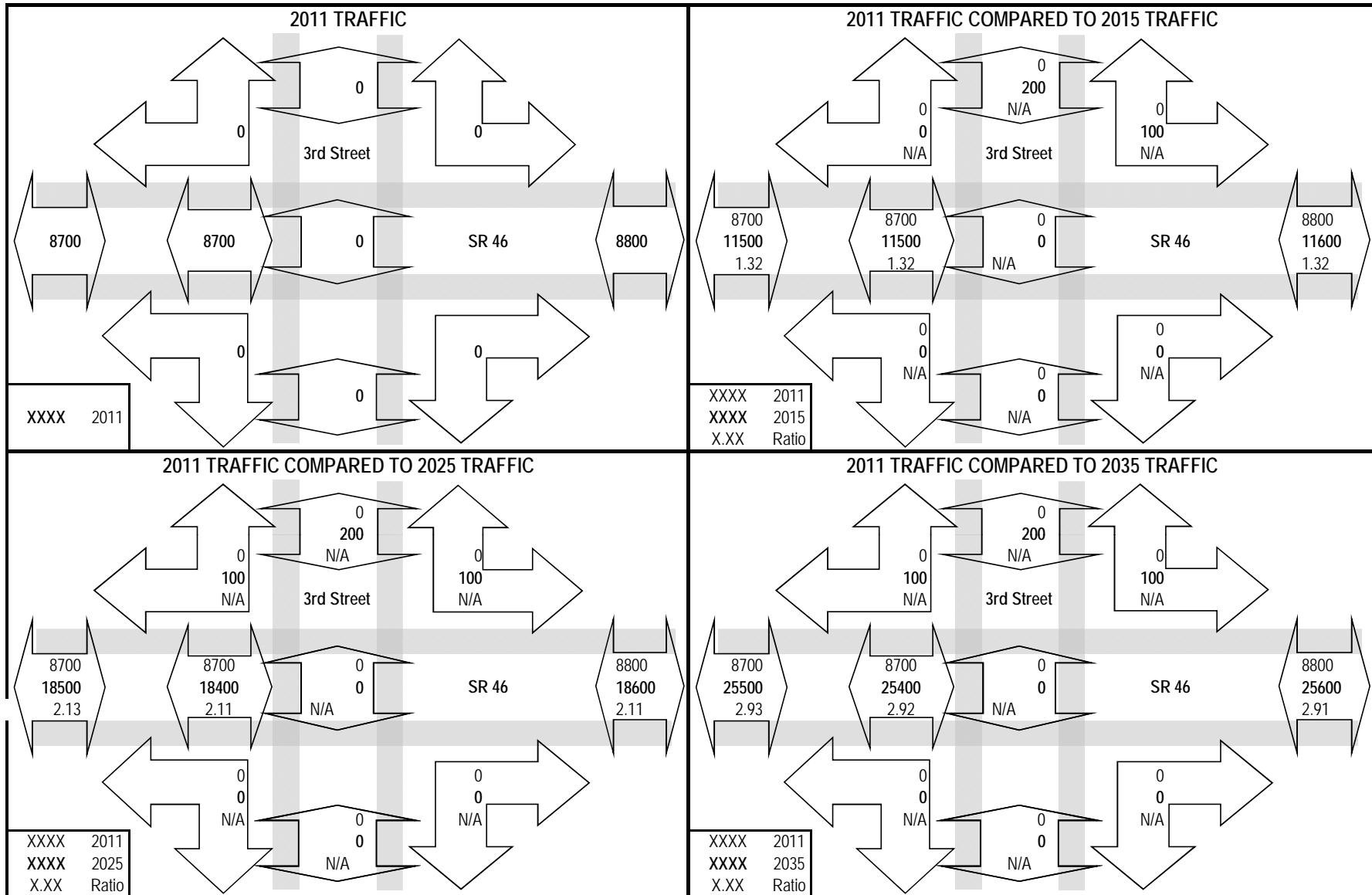




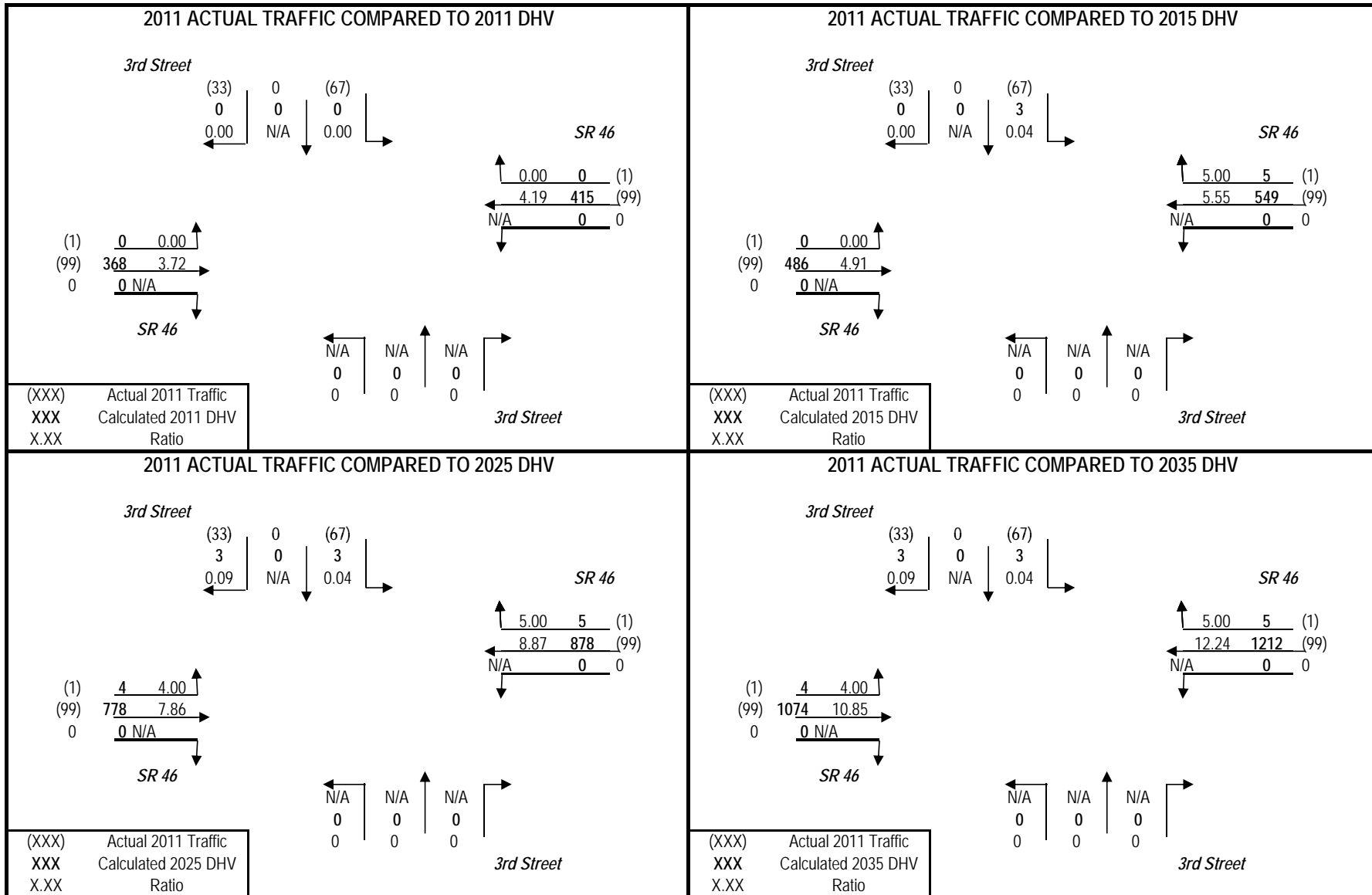
## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Oak Street  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  
 Yes  
 No

**K Factors**

Mainline	9.00%
Sidestreet	9.00%

**D Factors**

Mainline	53.0%	Westbound (WB)
	47.0%	Eastbound (EB)
Sidestreet	70.0%	Northbound (NB)
	30.0%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function  
 Linear  
 Exponential  
 Decaying

Side Street Growth Function  
 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year	
Base	2011
Opening	2015
Mid	2025
Design	2035
Model	2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	8700	8700	220	0	17620
2035	25500	25500	330	0	51330

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	2%	2
(EB THRU)	West-to-East	98%	98
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	30%	30
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	70%	70
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

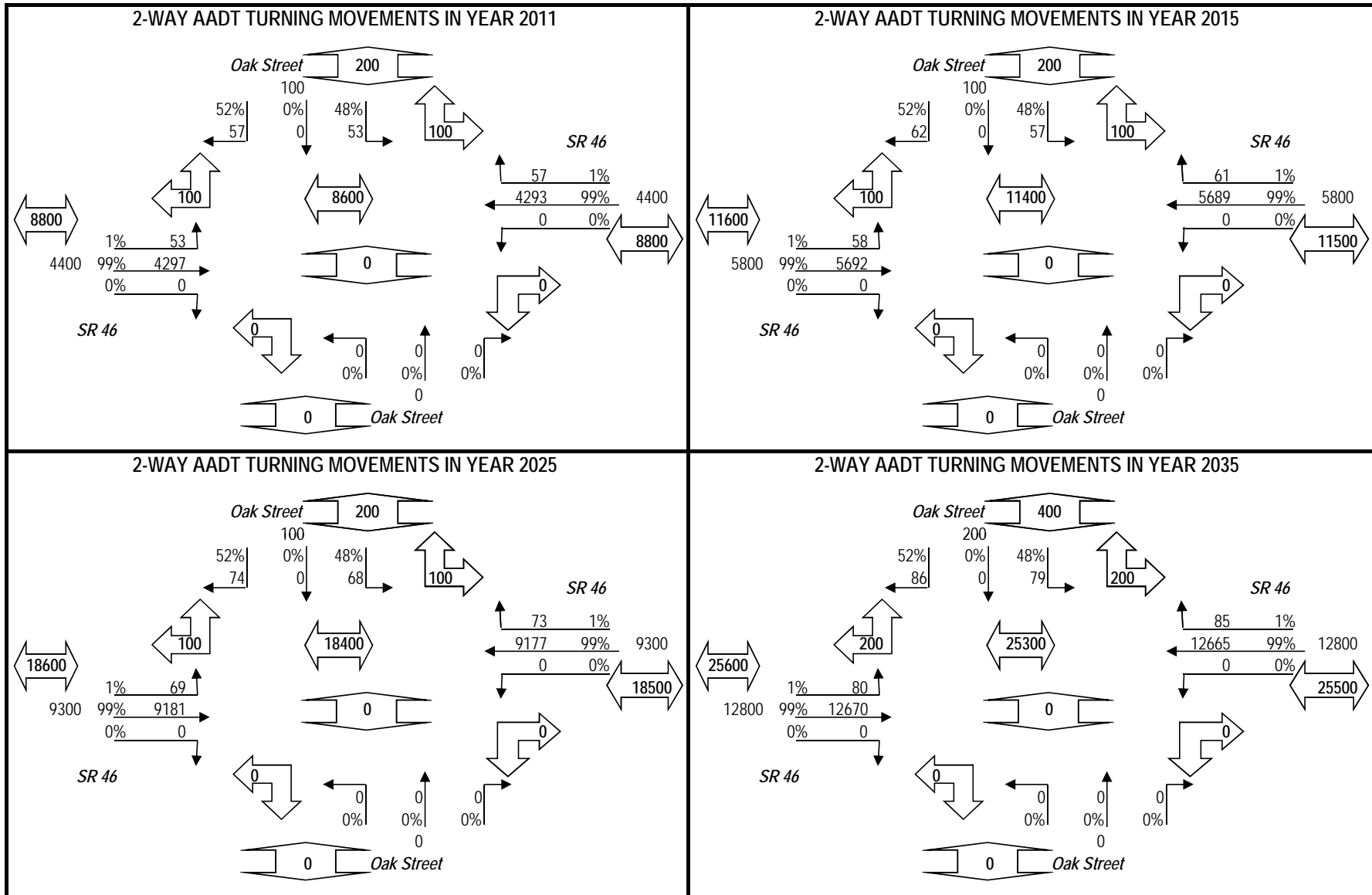
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Oak Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.02	0.012	100	0.010	100	0.007	100	0.006	100
West-To-East (Thru)	0.98	0.988	4300	0.990	5700	0.993	9200	0.994	12700
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.987	4300	0.989	5700	0.992	9200	0.993	12700
East-To-North (RT)	0.01	0.013	100	0.011	100	0.008	100	0.007	100
<b>Total Flow From East:</b>			<b>4400</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
North-To-East (LT)	0.30	0.479	100	0.479	100	0.479	100	0.479	100
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.70	0.521	100	0.521	100	0.521	100	0.521	100
<b>Total Flow From North:</b>			<b>200</b>		<b>200</b>		<b>200</b>		<b>200</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

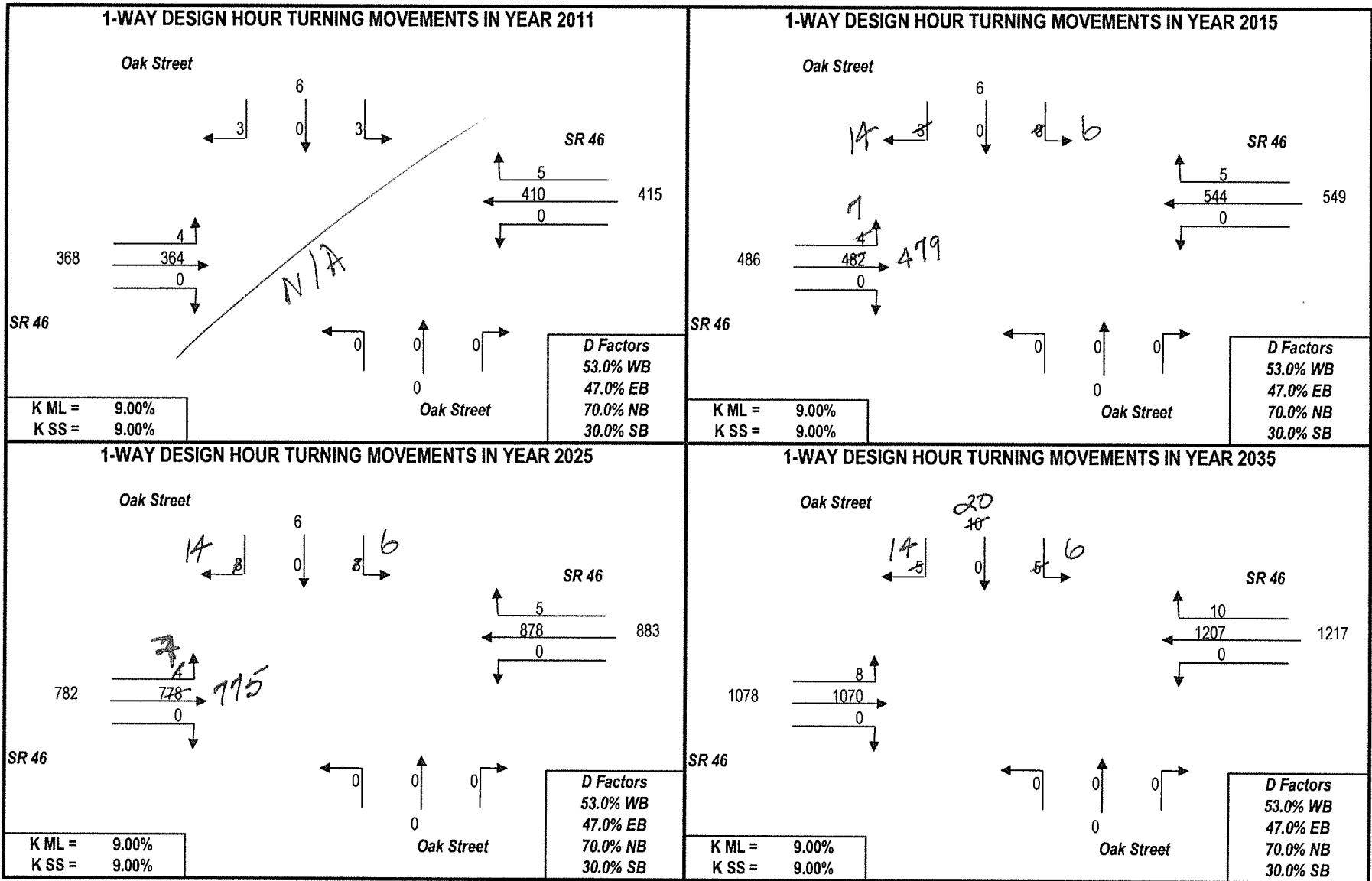
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - No Build)

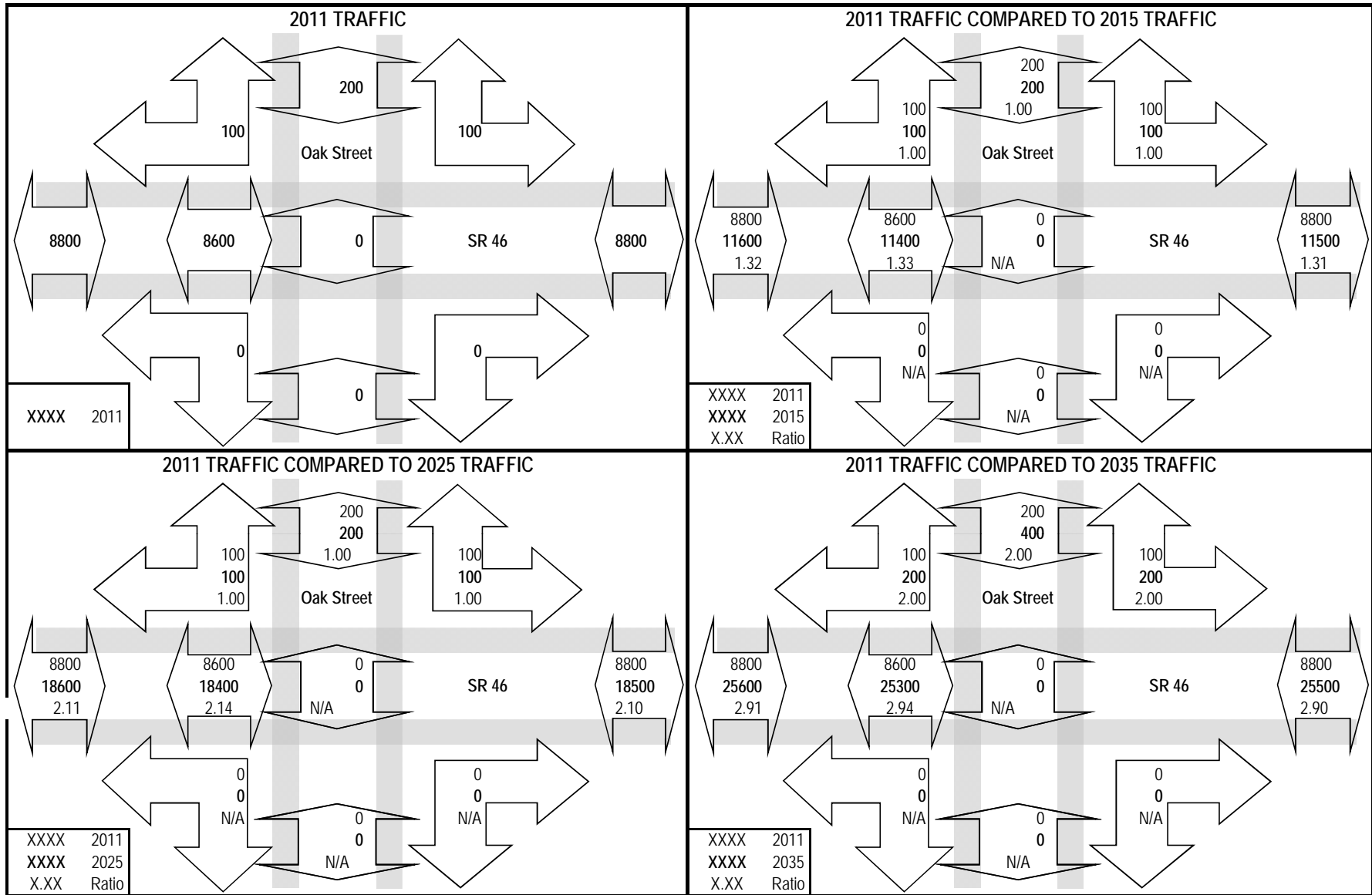


(13) ✓

### PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - No Build)

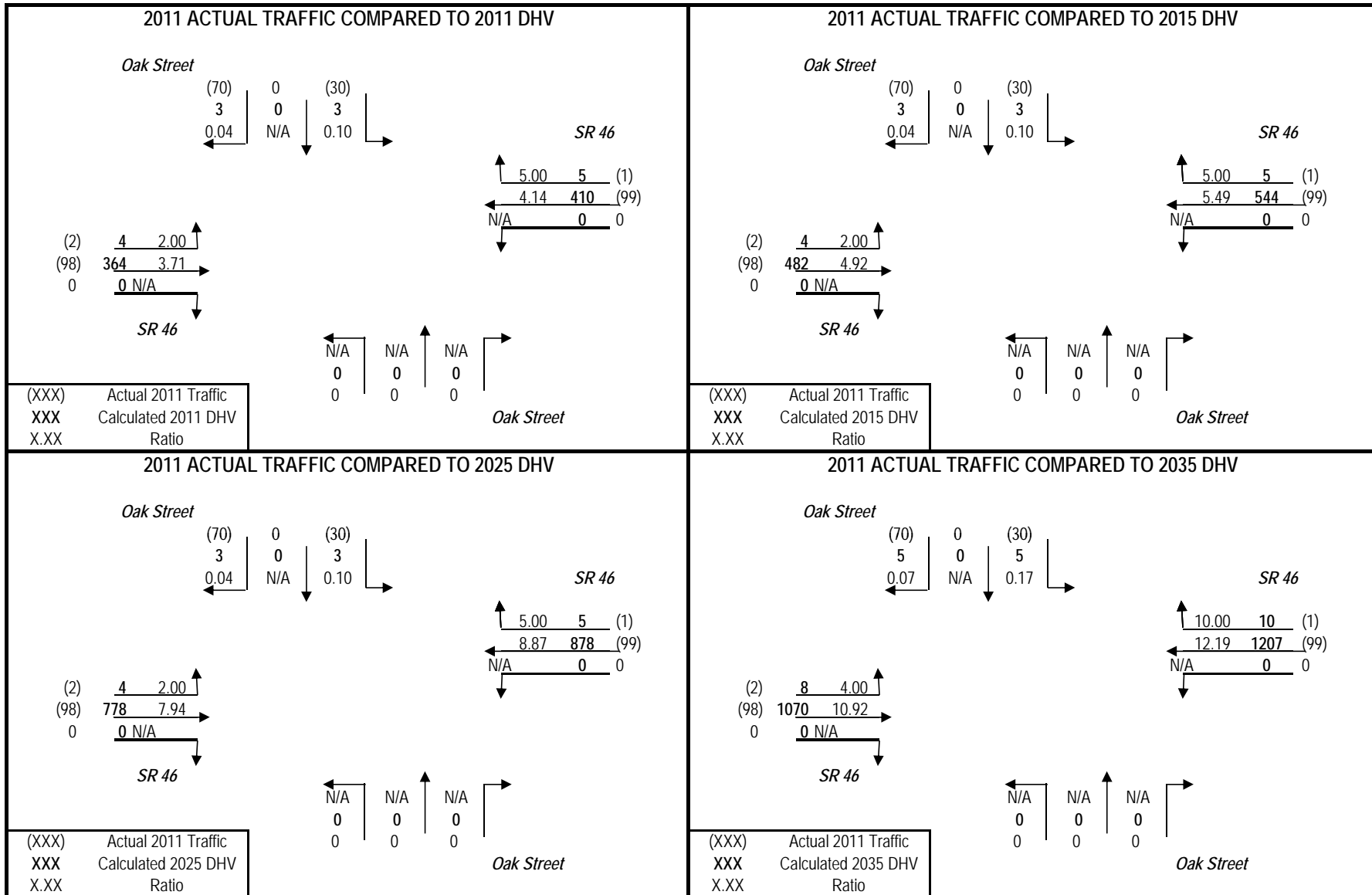


PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - No Build)





## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: CR 426/1st Street  
 From: SR 415  
 To: CR 426 (AM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			39.2%	Northbound (NB)
			60.8%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

	Year	Rate (1.0% = 0.01)	
Base		Mainline	Side Street
Opening			
Mid			
Design			

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	
EB Approach	WB Approach	SB Approach	NB Approach	<b>TOTAL</b>
0	0	0	0	0

**Enter Project and Model Years**

	Year
Base	2011
Opening	2015
Mid	2025
Design	2035
Model	2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	
	EB Approach	WB Approach	SB Approach	NB Approach	<b>TOTAL</b>
2011	8700	5800	3800	8600	26900
2035	25500	17000	5600	19000	67100

<b>1st Guess Actual/Counted</b>			
<b>Turning %'s for Traffic AADT Balancing for 2011</b>			
(EB LT)	West-to-North	5%	5
(EB THRU)	West-to-East	28%	28
(EB RT)	West-to-South	67%	67
(WB LT)	East-to-South	28%	28
(WB THRU)	East-to-West	60%	60
(WB RT)	East-to-North	12%	12
(SB LT)	North-to-East	6%	6
(SB THRU)	North-to-South	88%	88
(SB RT)	North-to-West	6%	6
(NB LT)	South-to-West	52%	52
(NB THRU)	South-to-North	37%	37
(NB RT)	South-to-East	11%	11
Desired Closure:		0.01	

(must be done manually)

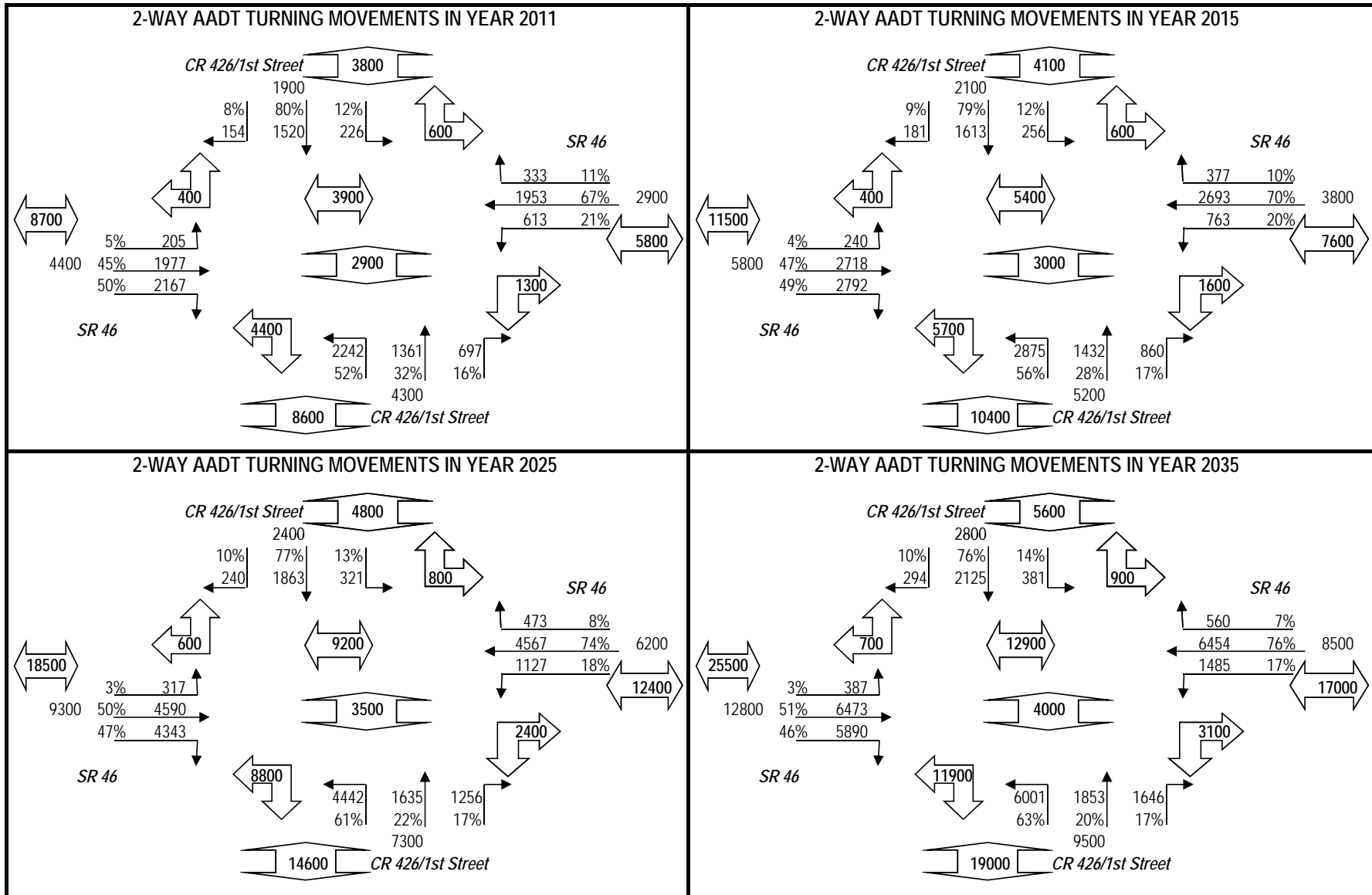
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	CR 426/1st Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - No Build)		

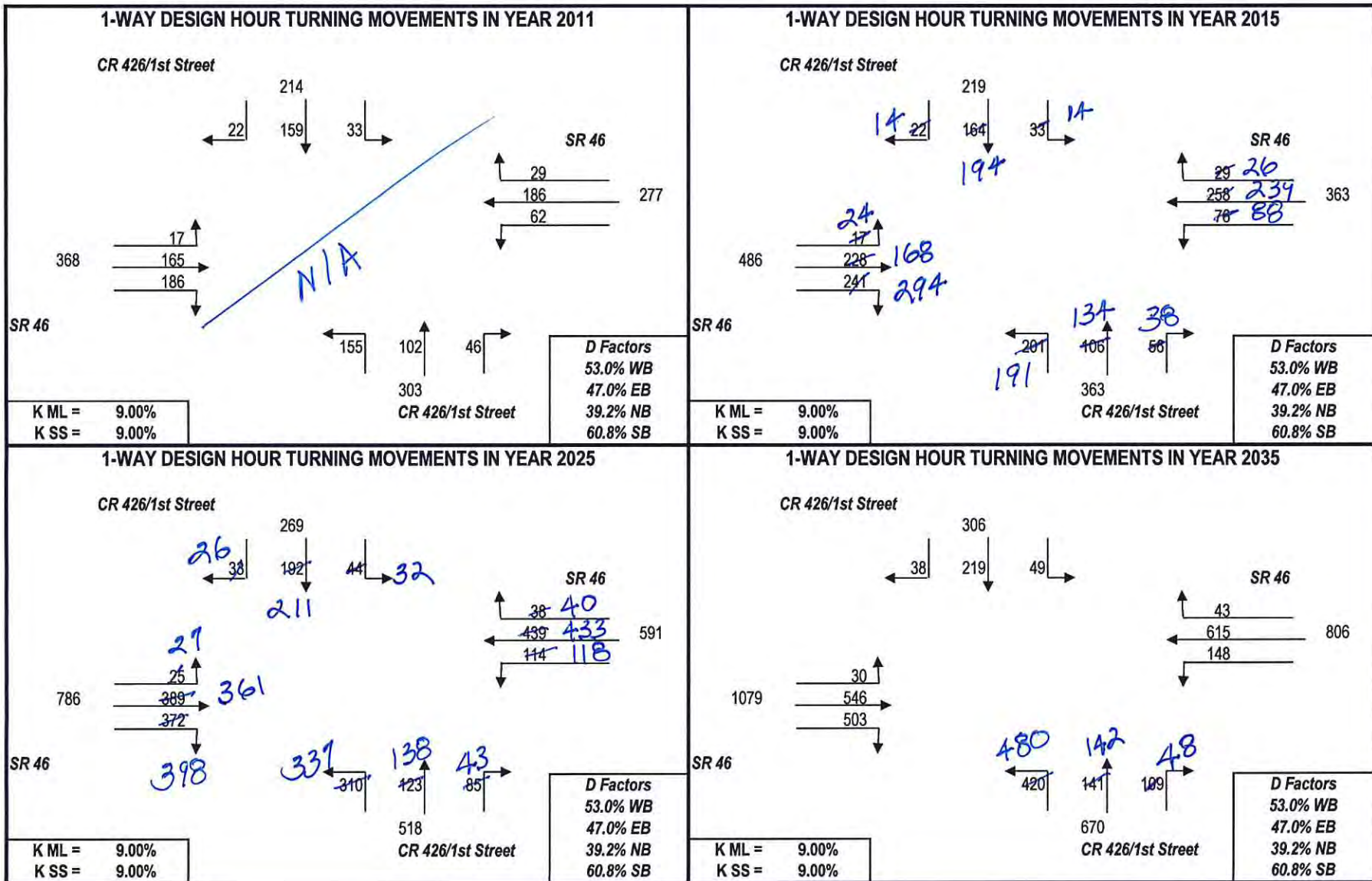
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.05	0.047	200	0.042	200	0.034	300	0.030	400
West-To-East (Thru)	0.28	0.455	2000	0.473	2700	0.496	4600	0.508	6500
West-To-South (RT)	0.67	0.498	2200	0.486	2800	0.470	4300	0.462	5900
<b>Total Flow From West:</b>			<b>4400</b>		<b>5700</b>		<b>9200</b>		<b>12800</b>
East-To-South (LT)	0.28	0.212	600	0.199	800	0.183	1100	0.175	1500
East-To-West (Thru)	0.60	0.674	2000	0.703	2700	0.741	4600	0.759	6500
East-To-North (RT)	0.12	0.115	300	0.098	400	0.077	500	0.066	600
<b>Total Flow From East:</b>			<b>2900</b>		<b>3900</b>		<b>6200</b>		<b>8600</b>
North-To-East (LT)	0.06	0.119	200	0.125	300	0.132	300	0.136	400
North-To-South (Thru)	0.88	0.800	1500	0.787	1600	0.768	1900	0.759	2100
North-To-West (RT)	0.06	0.081	200	0.088	200	0.099	200	0.105	300
<b>Total Flow From North:</b>			<b>1900</b>		<b>2100</b>		<b>2400</b>		<b>2800</b>
South-To-West (LT)	0.52	0.521	2200	0.556	2900	0.606	4400	0.632	6000
South-To-North (Thru)	0.37	0.317	1400	0.277	1400	0.223	1600	0.195	1900
South-To-East (RT)	0.11	0.162	700	0.166	900	0.171	1300	0.173	1600
<b>Total Flow From South:</b>			<b>4300</b>		<b>5200</b>		<b>7300</b>		<b>9500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

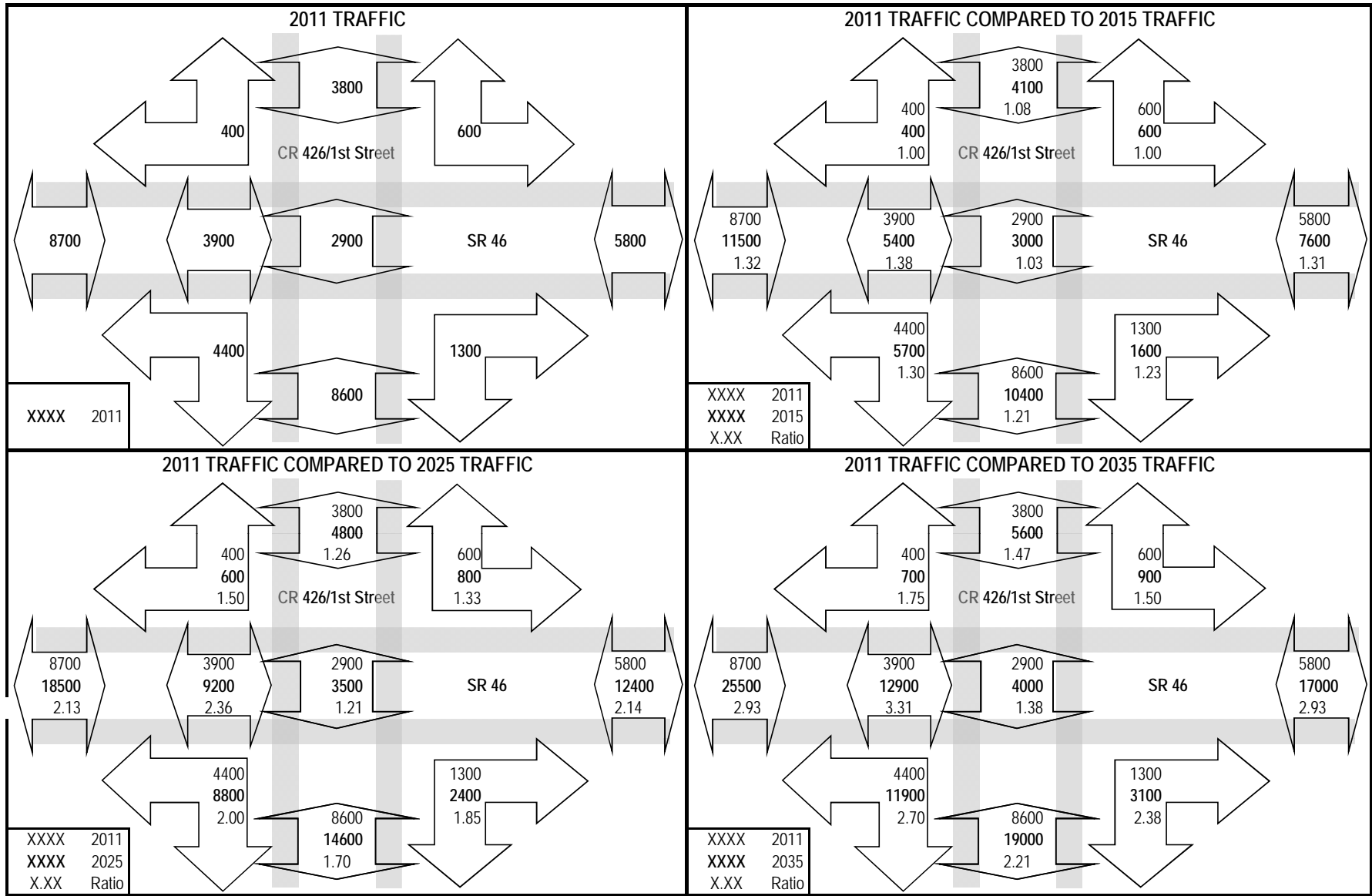
## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - No Build)



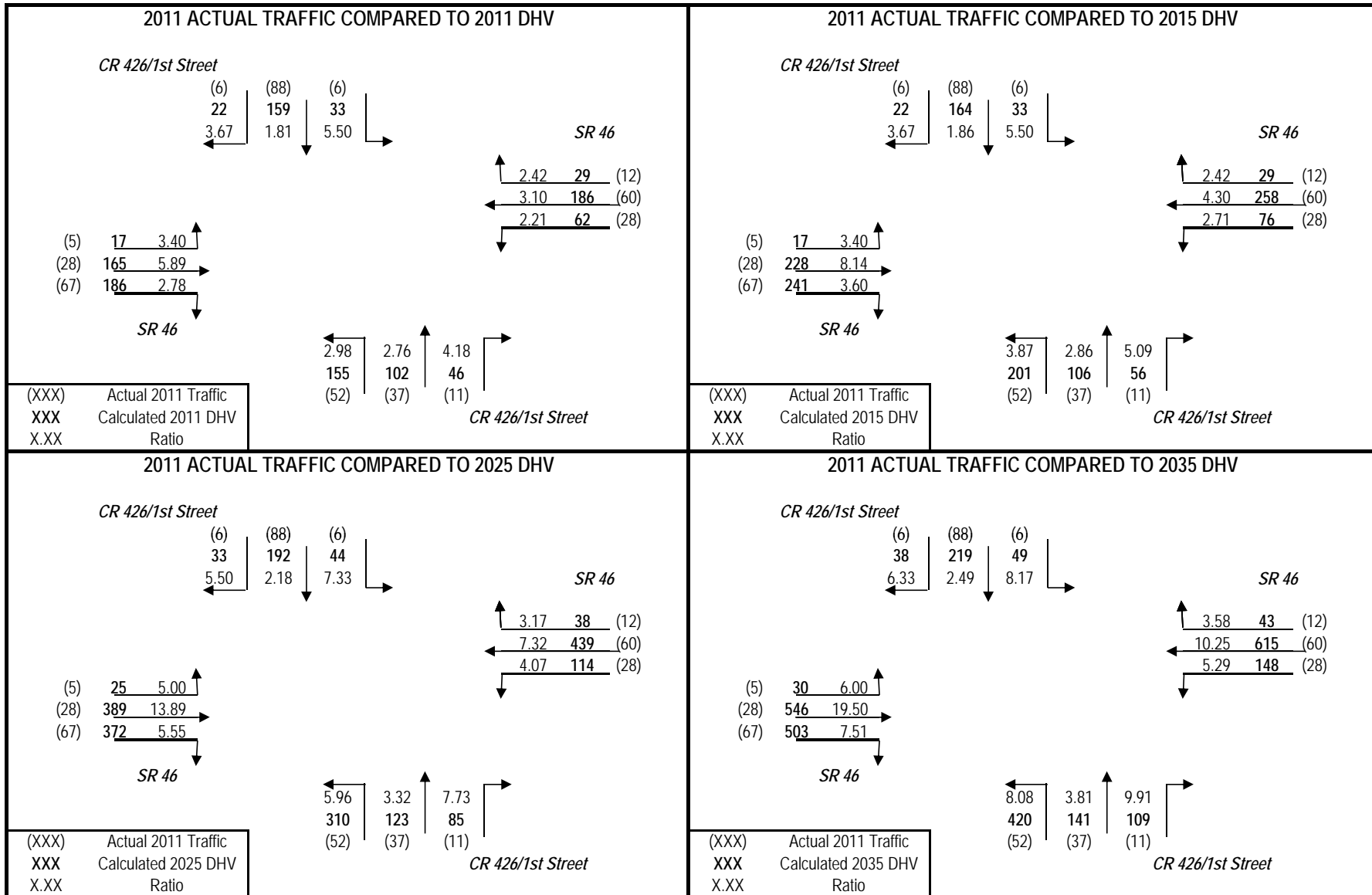
## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** SR 415  
**From:** SR 415  
**To:** CR 426 (PM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			67.1%
			42.9%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	10500	10500	15500	9300	45800
2035	31000	31000	34500	24400	120900

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	59%	59
(EB THRU)	West-to-East	40%	40
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	18%	18
(WB THRU)	East-to-West	38%	38
(WB RT)	East-to-North	44%	44
(SB LT)	North-to-East	24%	24
(SB THRU)	North-to-South	51%	51
(SB RT)	North-to-West	25%	25
(NB LT)	South-to-West	3%	3
(NB THRU)	South-to-North	78%	78
(NB RT)	South-to-East	19%	19

(must be done manually)

Desired Closure:



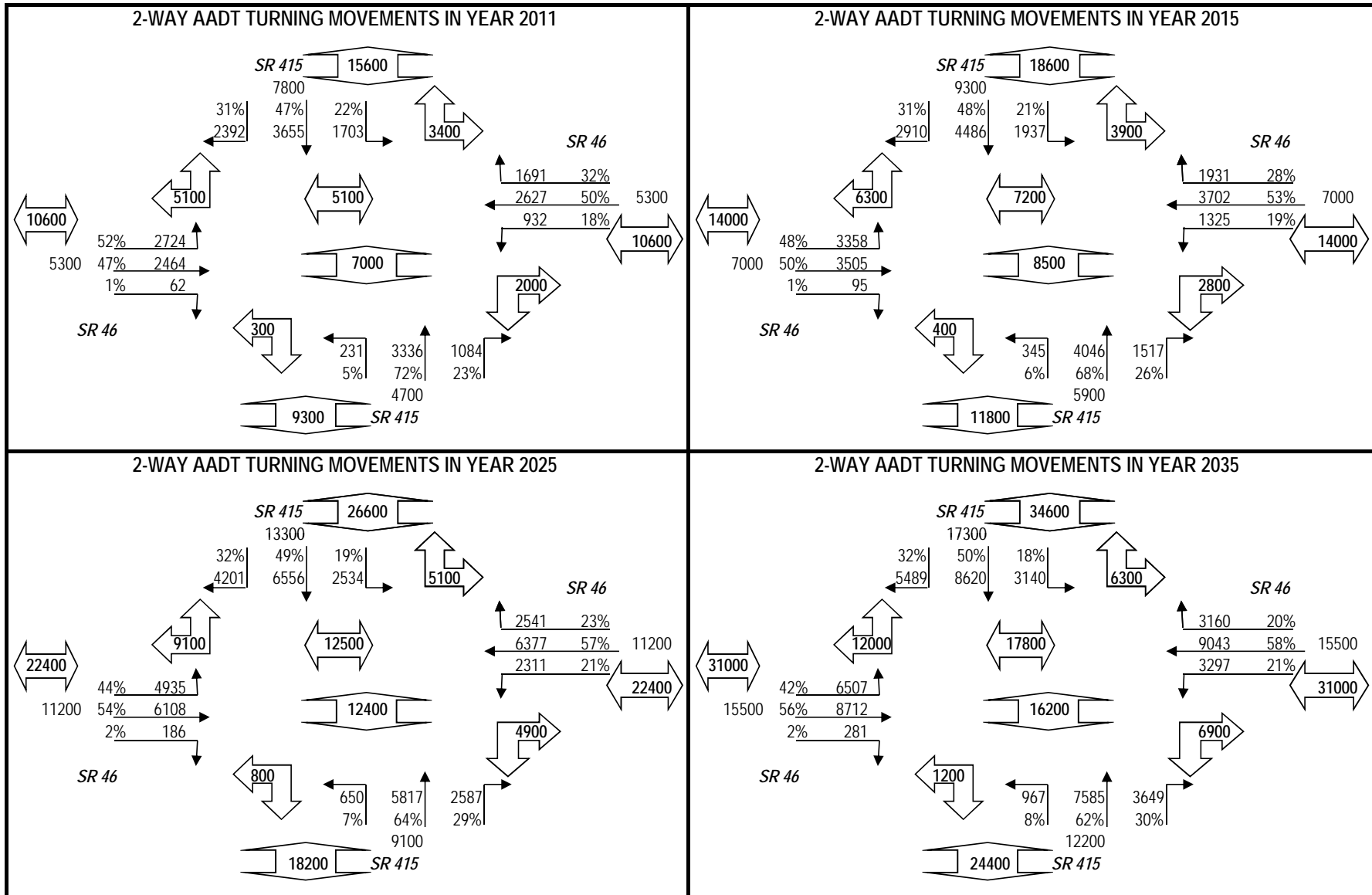
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	SR 415	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

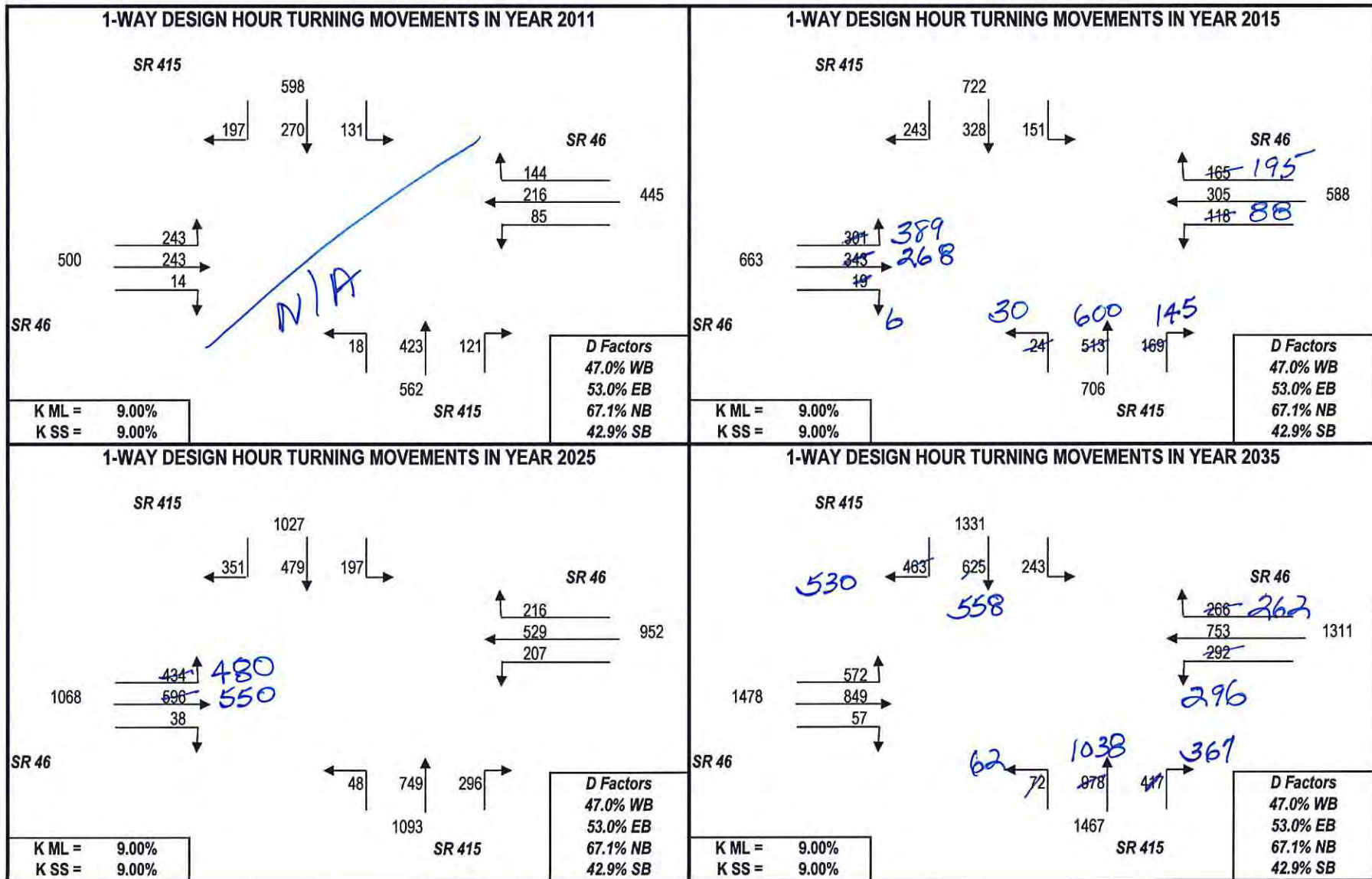
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.59	0.519	2700	0.483	3400	0.439	4900	0.420	6500
West-To-East (Thru)	0.40	0.469	2500	0.504	3500	0.544	6100	0.562	8700
West-To-South (RT)	0.01	0.012	100	0.014	100	0.017	200	0.018	300
<b>Total Flow From West:</b>			<b>5300</b>		<b>7000</b>		<b>11200</b>		<b>15500</b>
East-To-South (LT)	0.18	0.178	900	0.190	1300	0.206	2300	0.213	3300
East-To-West (Thru)	0.38	0.500	2600	0.532	3700	0.568	6400	0.583	9000
East-To-North (RT)	0.44	0.322	1700	0.277	1900	0.226	2500	0.204	3200
<b>Total Flow From East:</b>			<b>5200</b>		<b>6900</b>		<b>11200</b>		<b>15500</b>
North-To-East (LT)	0.24	0.220	1700	0.208	1900	0.191	2500	0.182	3100
North-To-South (Thru)	0.51	0.472	3700	0.481	4500	0.493	6600	0.500	8600
North-To-West (RT)	0.25	0.309	2400	0.312	2900	0.316	4200	0.318	5500
<b>Total Flow From North:</b>			<b>7800</b>		<b>9300</b>		<b>13300</b>		<b>17200</b>
South-To-West (LT)	0.03	0.050	200	0.058	300	0.072	700	0.079	1000
South-To-North (Thru)	0.78	0.717	3300	0.685	4000	0.642	5800	0.622	7600
South-To-East (RT)	0.19	0.233	1100	0.257	1500	0.286	2600	0.299	3600
<b>Total Flow From South:</b>			<b>4600</b>		<b>5800</b>		<b>9100</b>		<b>12200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

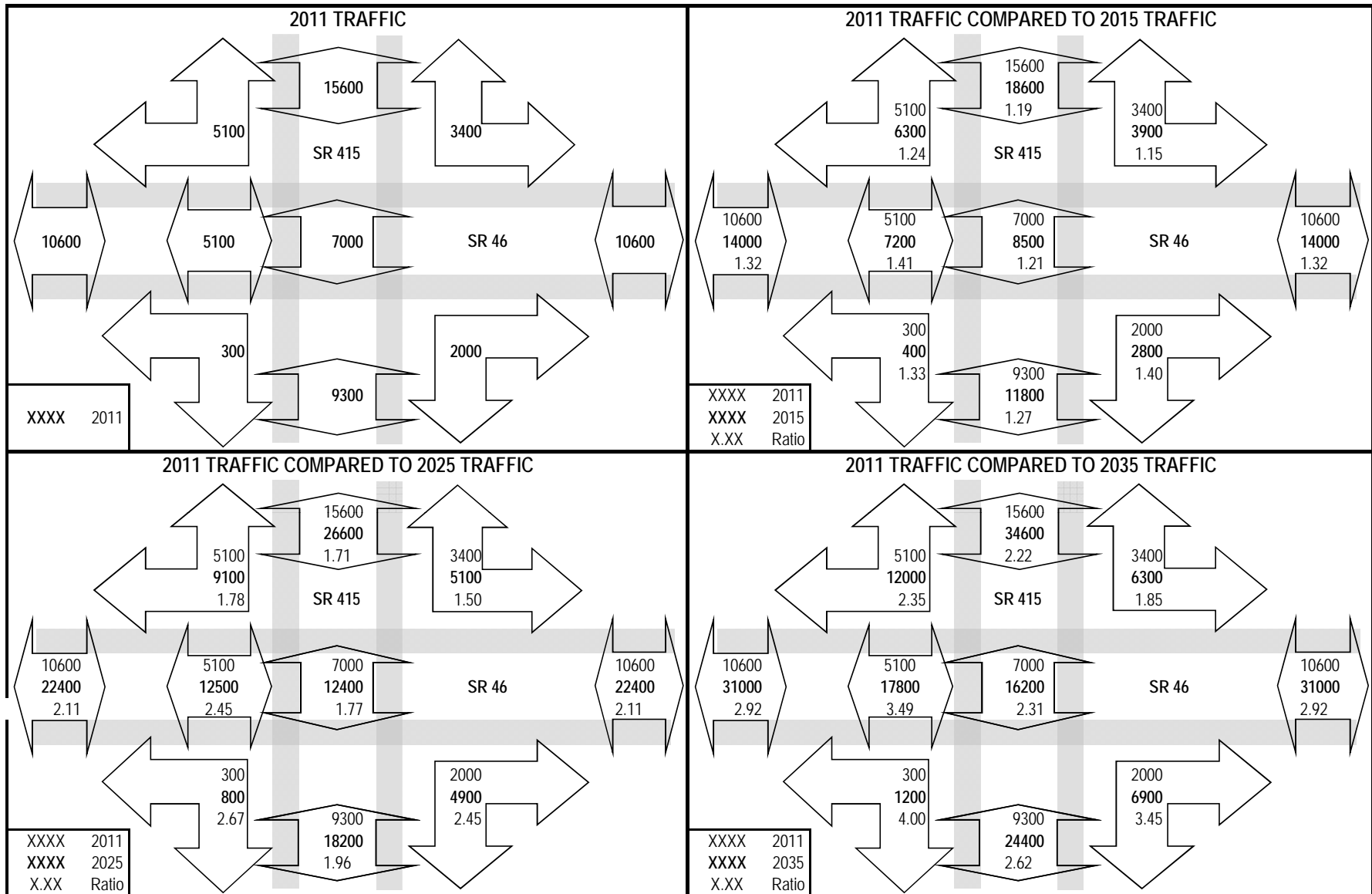
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - No Build)



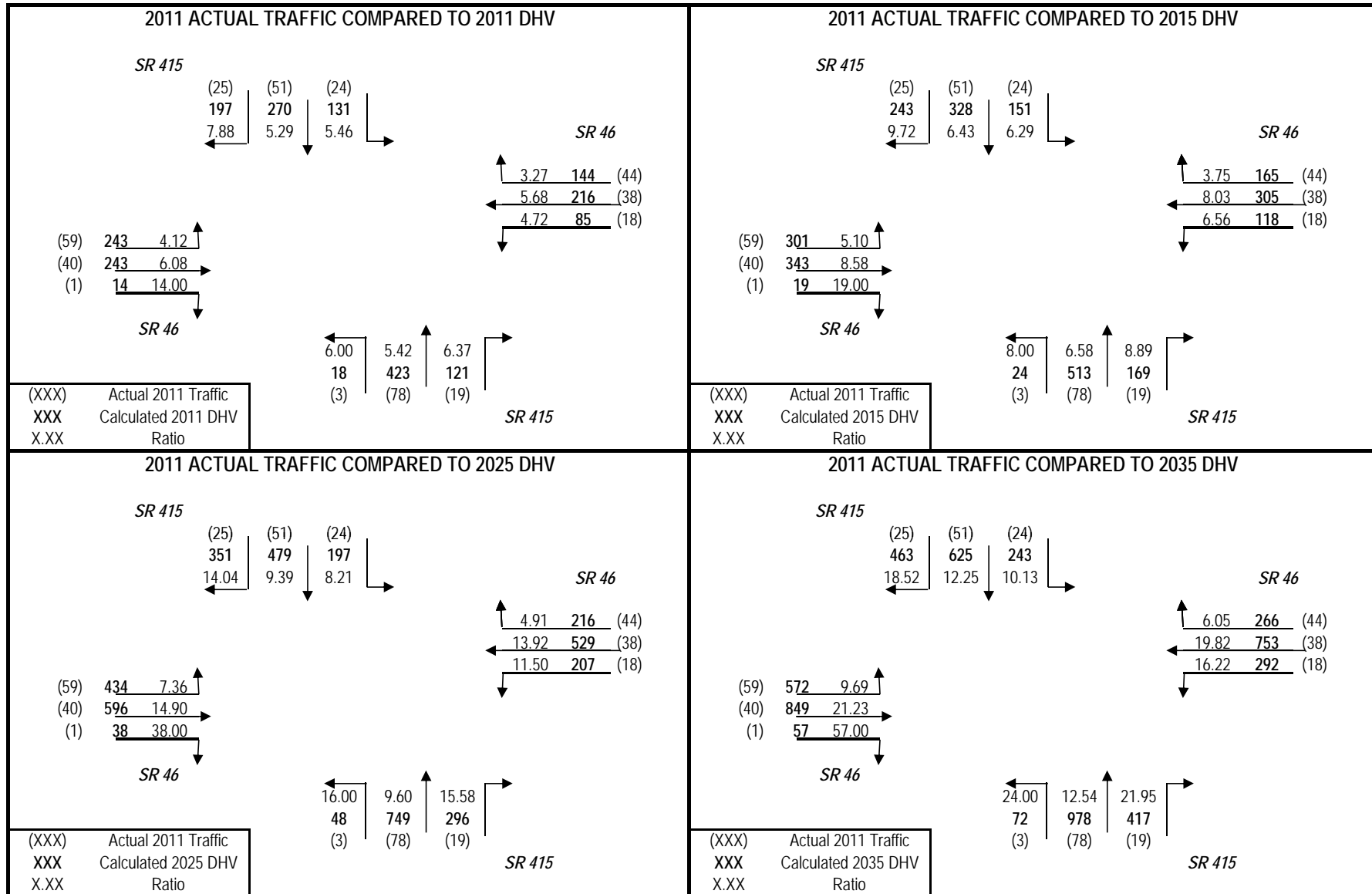
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - No Build)



### PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Osceola Road  
 From: SR 415  
 To: CR 426 (PM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			62.1%	Northbound (NB)
			47.9%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
2011
Opening
2015
Mid
2025
Design
2035
Model
2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	10800	8600	2200	0	21600
2035	28800	25500	3300	0	57600

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	20%	20
(EB THRU)	West-to-East	79%	79
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	100%	100
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

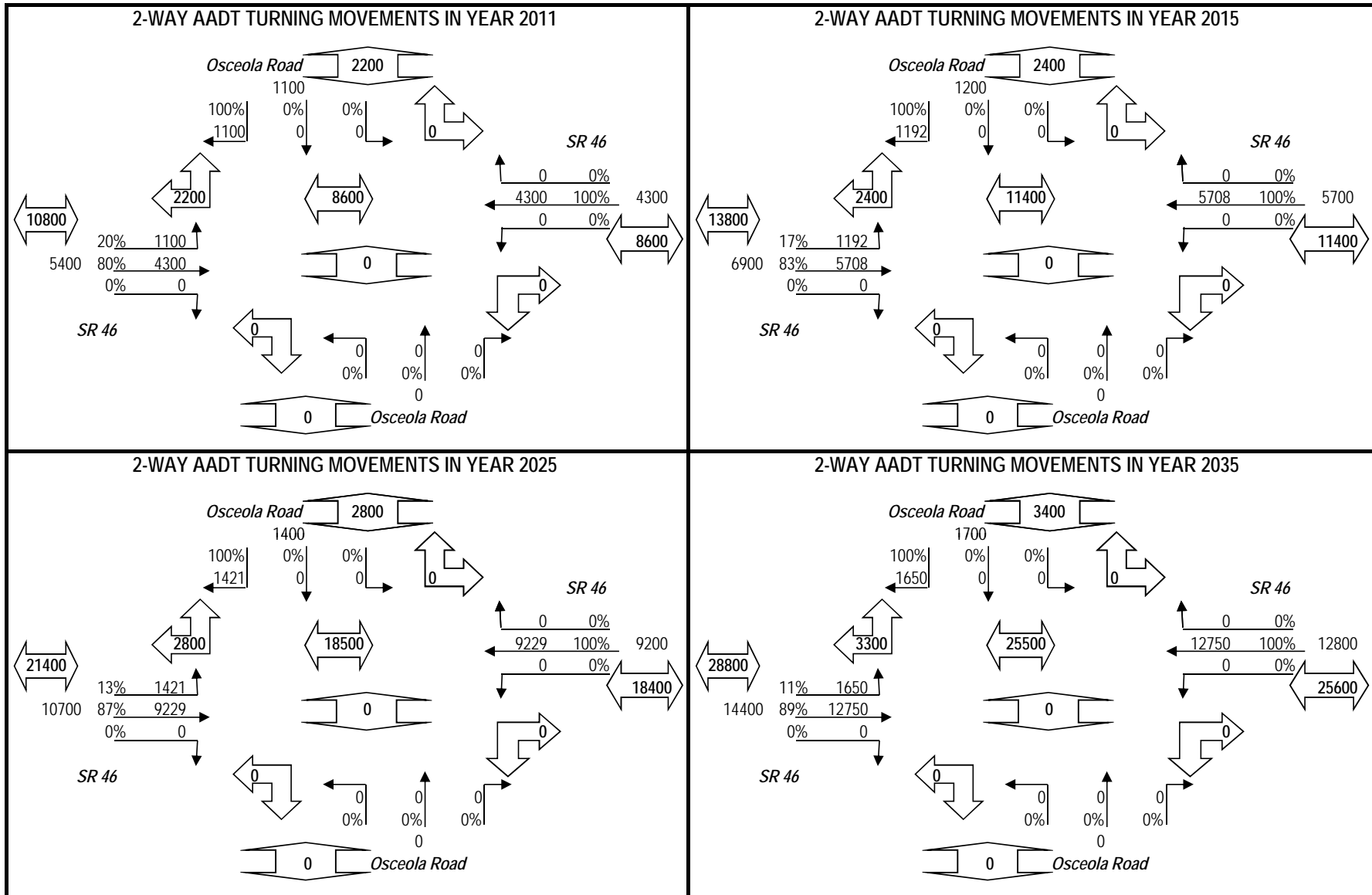
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Osceola Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.20	0.204	1100	0.173	1200	0.133	1400	0.115	1700
West-To-East (Thru)	0.79	0.796	4300	0.827	5700	0.867	9200	0.885	12800
West-To-South (RT)	0.01	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>5400</b>		<b>6900</b>		<b>10600</b>		<b>14500</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	1.00	1.000	4300	1.000	5700	1.000	9200	1.000	12800
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>5700</b>		<b>9200</b>		<b>12800</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	1100	1.000	1200	1.000	1400	1.000	1700
<b>Total Flow From North:</b>			<b>1100</b>		<b>1200</b>		<b>1400</b>		<b>1700</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

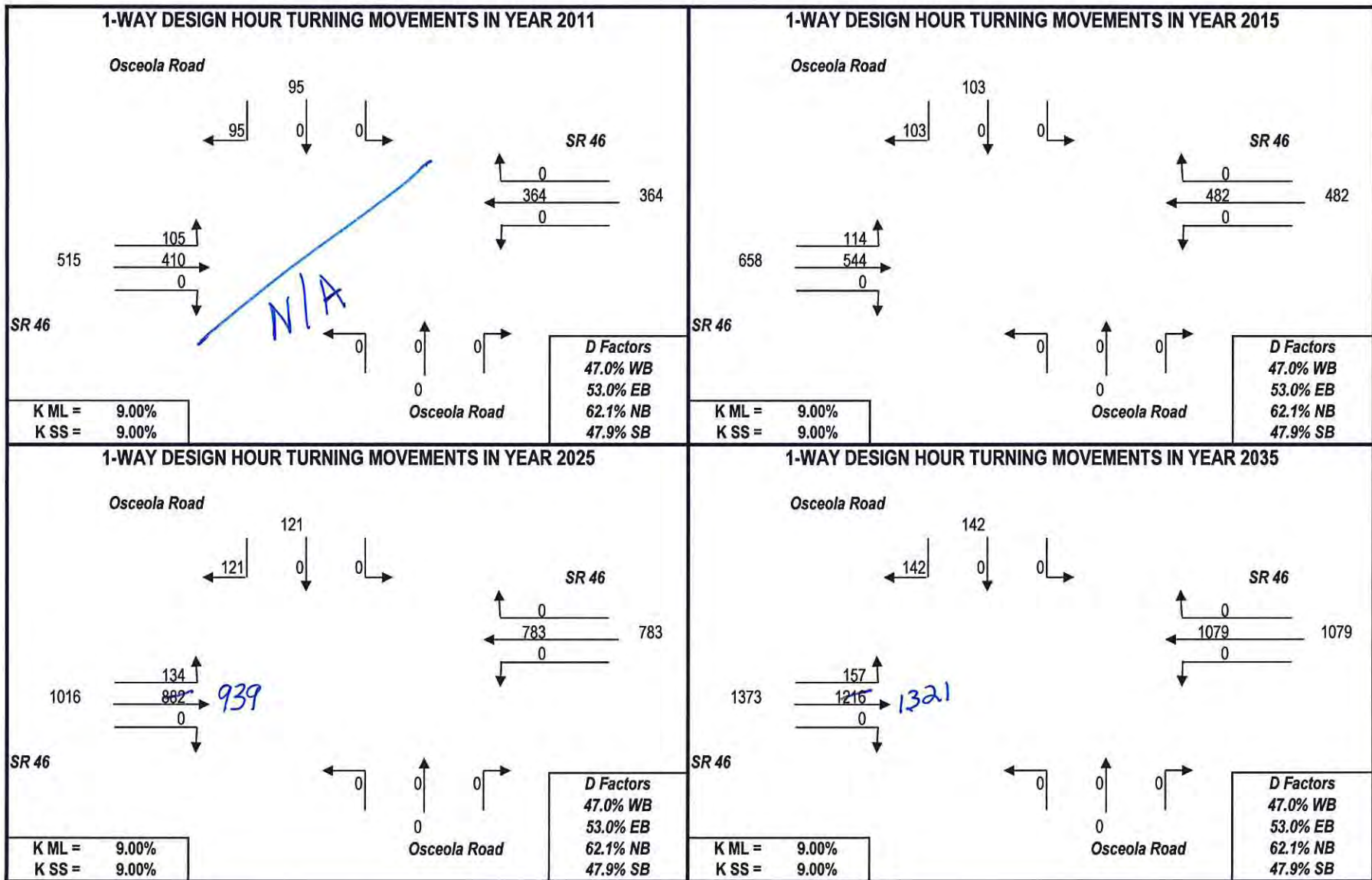
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - No Build)

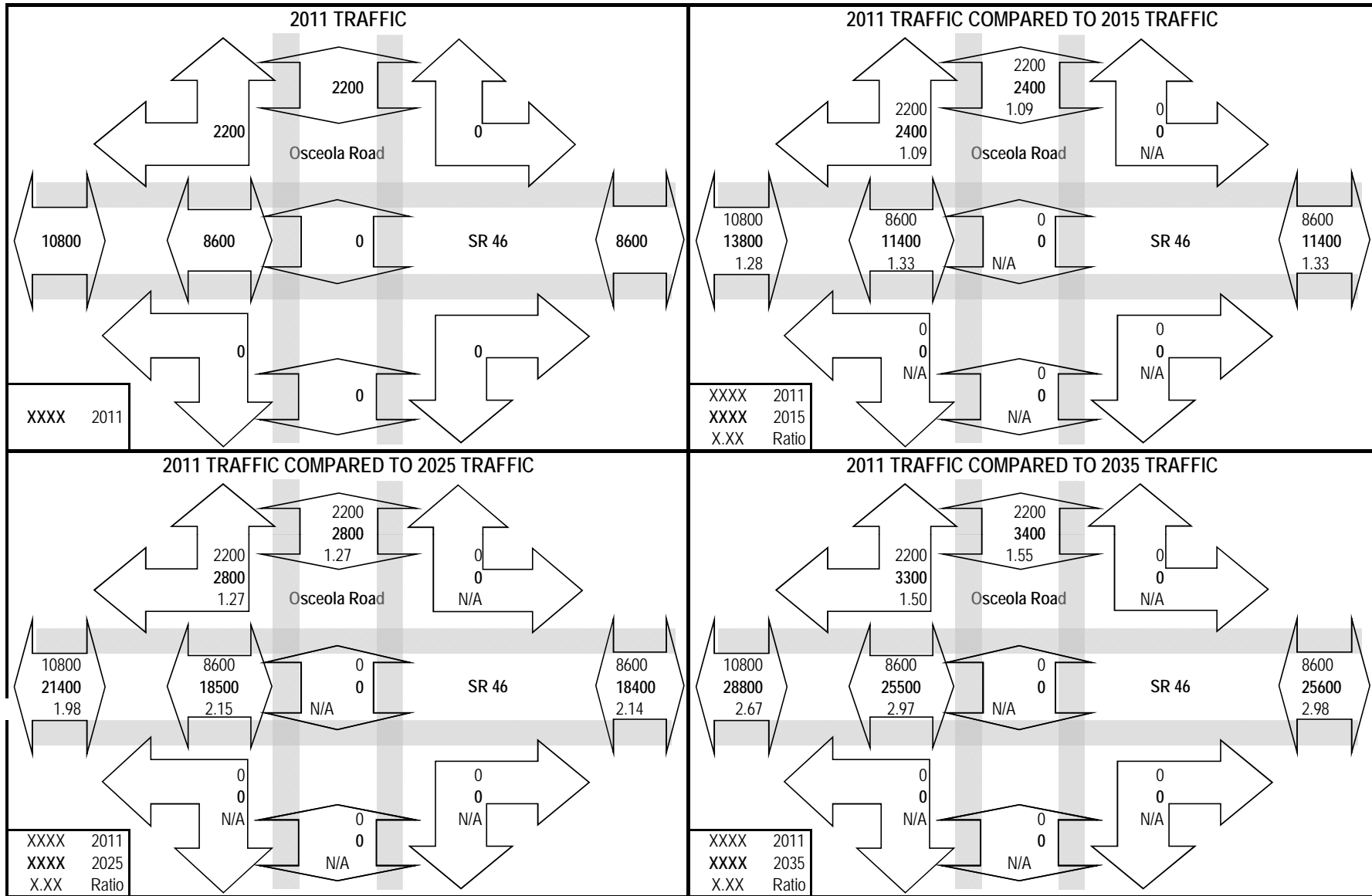




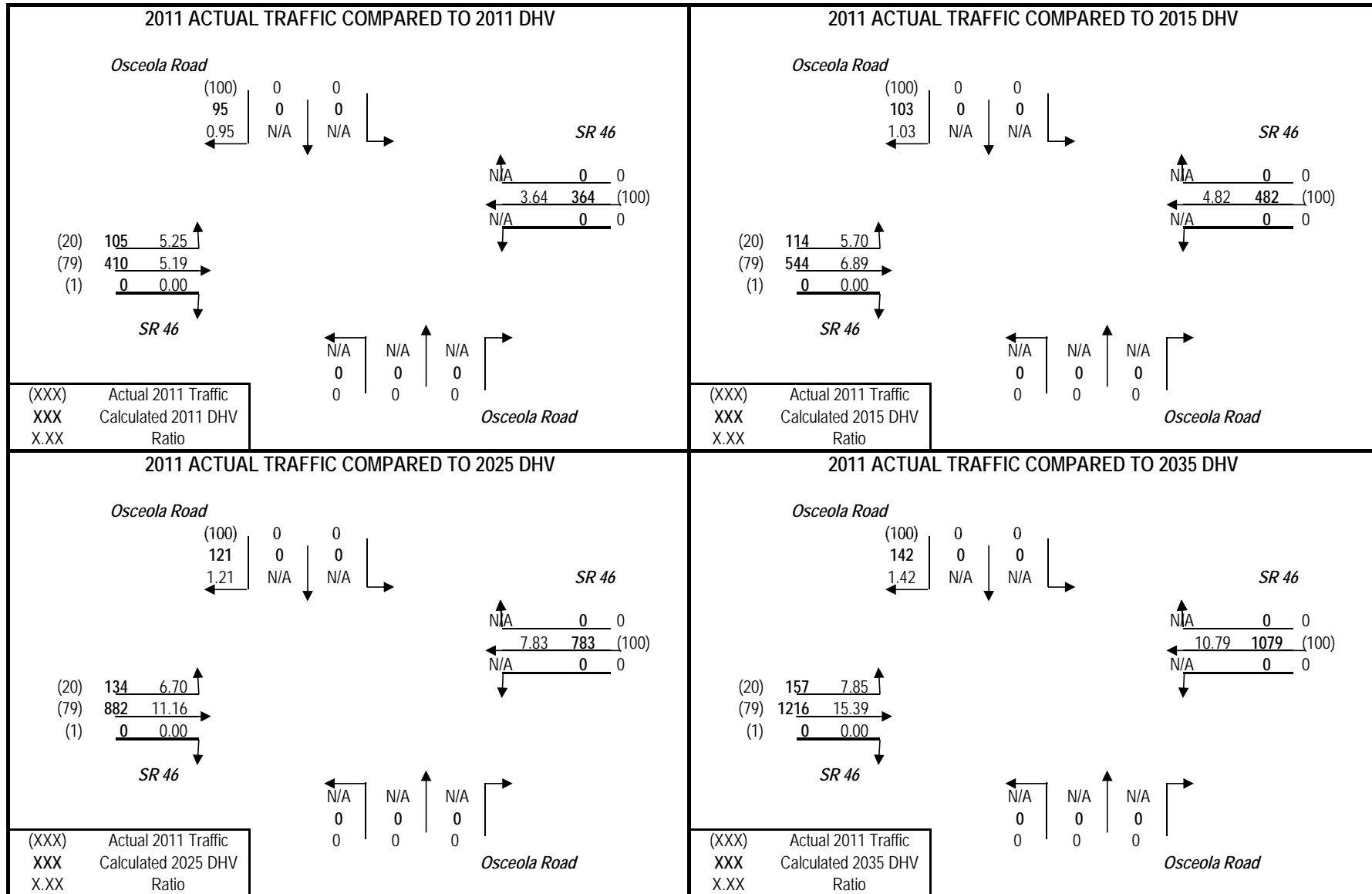
**PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - No Build)**



## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst:   
 Date:   
 Highway:   
 Intersection:   
 From:   
 To:   
 County:

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	<input type="text" value="9.00%"/>		<input type="text" value="47.0%"/>	Westbound (WB)
	Sidestreet		<input type="text" value="53.0%"/>	Eastbound (EB)
	<input type="text" value="9.00%"/>		Sidestreet	
			<input type="text" value="61.3%"/>	Northbound (NB)
			<input type="text" value="38.7%"/>	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base	<input type="text"/>	<input type="text"/>
Opening	<input type="text"/>	<input type="text"/>
Mid	<input type="text"/>	<input type="text"/>
Design	<input type="text"/>	<input type="text"/>

Mainline Growth Function:  Linear  Exponential  Decaying

Side Street Growth Function:  Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

**Enter Project and Model Years**

Year	
Base	<input type="text" value="2011"/>
Opening	<input type="text" value="2015"/>
Mid	<input type="text" value="2025"/>
Design	<input type="text" value="2035"/>
Model	<input type="text" value="2035"/>

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	<input type="text" value="8600"/>	<input type="text" value="9000"/>	<input type="text" value="700"/>	<input type="text" value="0"/>	<input type="text" value="18300"/>
2035	<input type="text" value="25500"/>	<input type="text" value="26500"/>	<input type="text" value="1200"/>	<input type="text" value="0"/>	<input type="text" value="53200"/>

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	<input type="text" value="1%"/>	<input type="text" value="1"/>
(EB THRU)	West-to-East	<input type="text" value="99%"/>	<input type="text" value="99"/>
(EB RT)	West-to-South	<input type="text" value="0%"/>	<input type="text" value="0"/>
(WB LT)	East-to-South	<input type="text" value="0%"/>	<input type="text" value="0"/>
(WB THRU)	East-to-West	<input type="text" value="94%"/>	<input type="text" value="94"/>
(WB RT)	East-to-North	<input type="text" value="6%"/>	<input type="text" value="6"/>
(SB LT)	North-to-East	<input type="text" value="83%"/>	<input type="text" value="83"/>
(SB THRU)	North-to-South	<input type="text" value="0%"/>	<input type="text" value="0"/>
(SB RT)	North-to-West	<input type="text" value="17%"/>	<input type="text" value="17"/>
(NB LT)	South-to-West	<input type="text" value="0%"/>	<input type="text" value="0"/>
(NB THRU)	South-to-North	<input type="text" value="100%"/>	<input type="text" value="0"/>
(NB RT)	South-to-East	<input type="text" value="0%"/>	<input type="text" value="0"/>

Desired Closure:

(must be done manually)

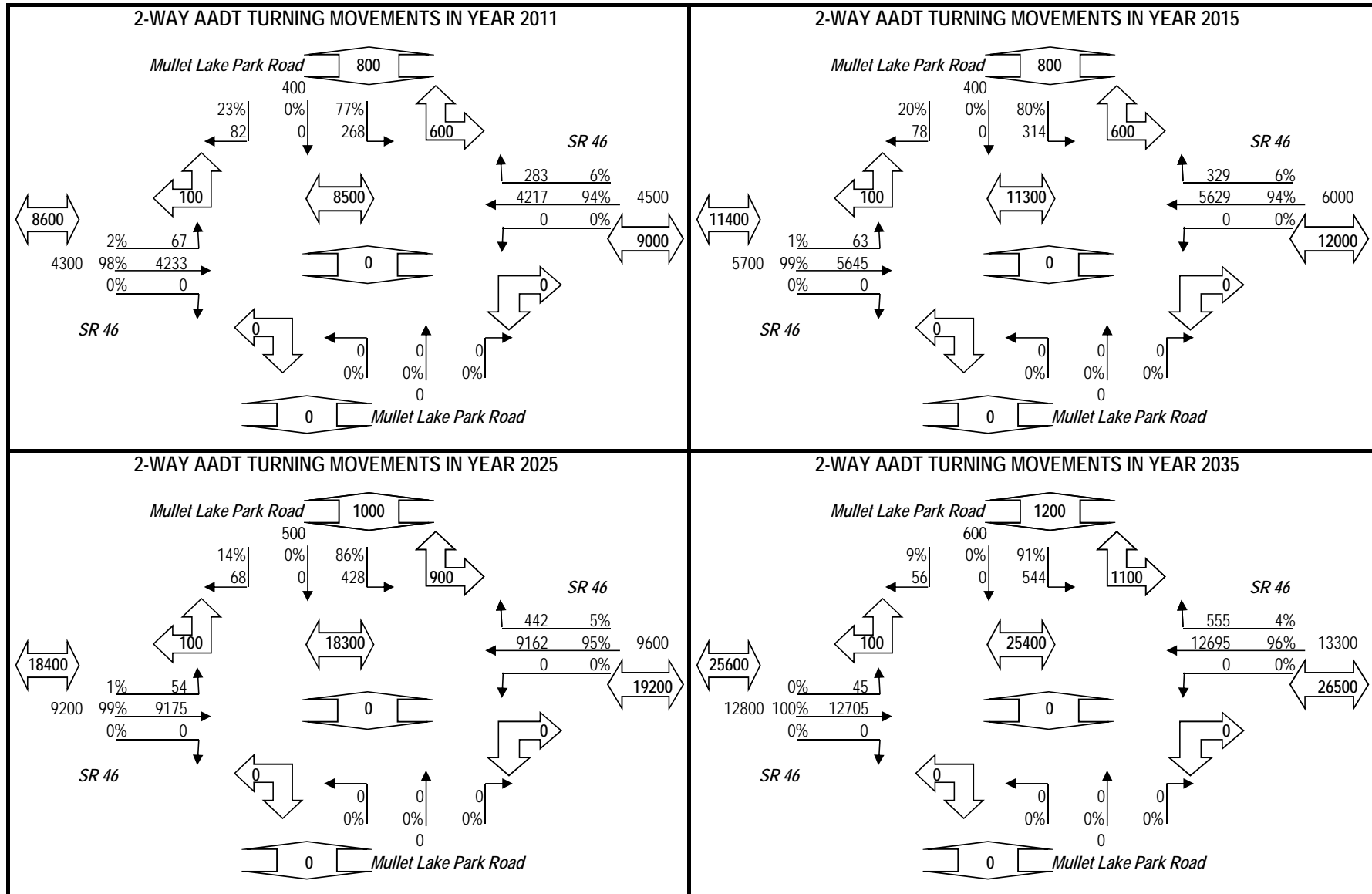
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Mullet Lake Park Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

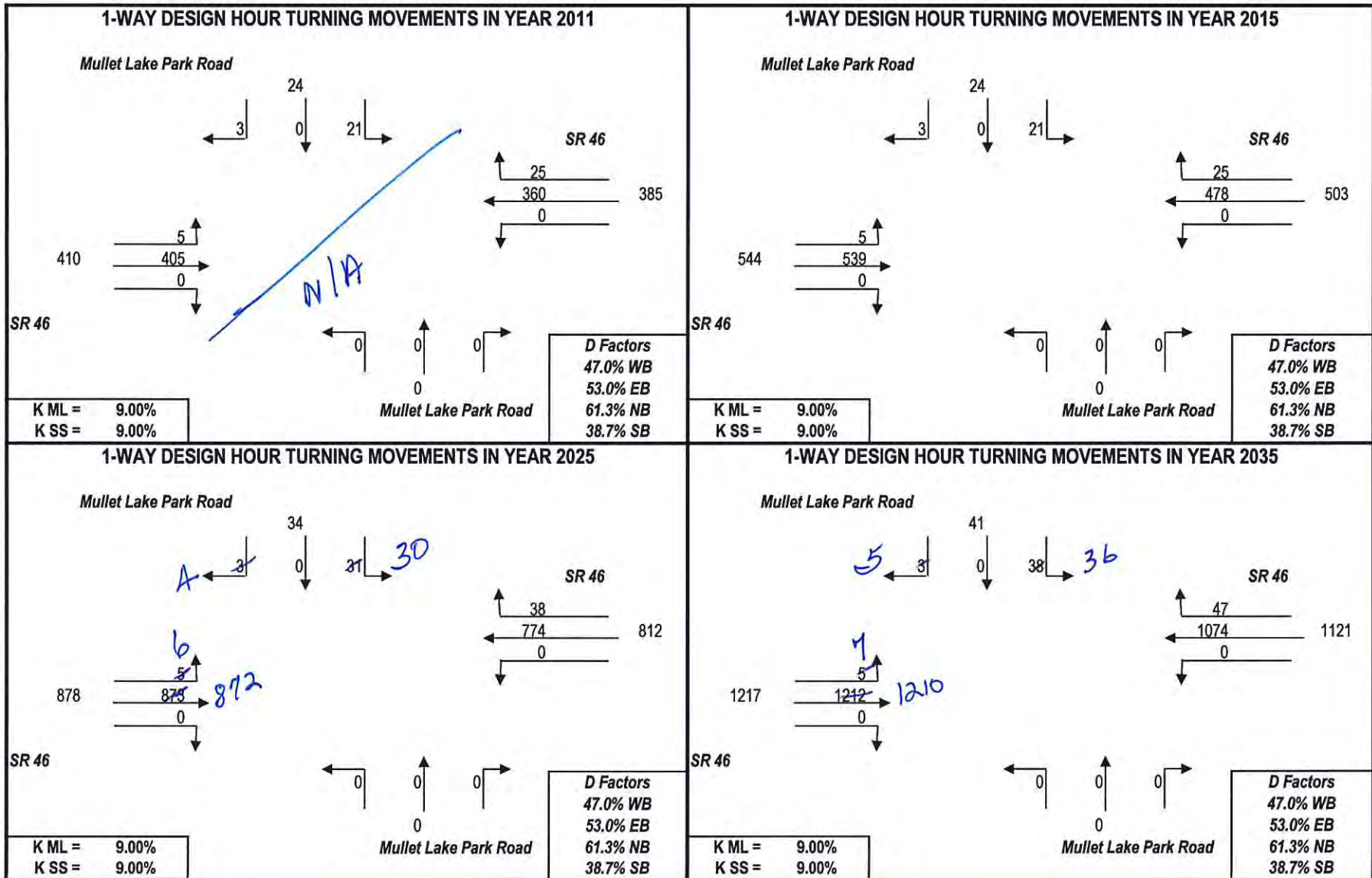
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.016	100	0.011	100	0.006	100	0.004	0
West-To-East (Thru)	0.99	0.984	4200	0.989	5600	0.994	9200	0.996	12700
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>5700</b>		<b>9300</b>		<b>12700</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.94	0.937	4200	0.945	5600	0.954	9200	0.958	12700
East-To-North (RT)	0.06	0.063	300	0.055	300	0.046	400	0.042	600
<b>Total Flow From East:</b>			<b>4500</b>		<b>5900</b>		<b>9600</b>		<b>13300</b>
North-To-East (LT)	0.83	0.766	300	0.801	300	0.863	400	0.906	500
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.17	0.234	100	0.199	100	0.137	100	0.094	100
<b>Total Flow From North:</b>			<b>400</b>		<b>400</b>		<b>500</b>		<b>600</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

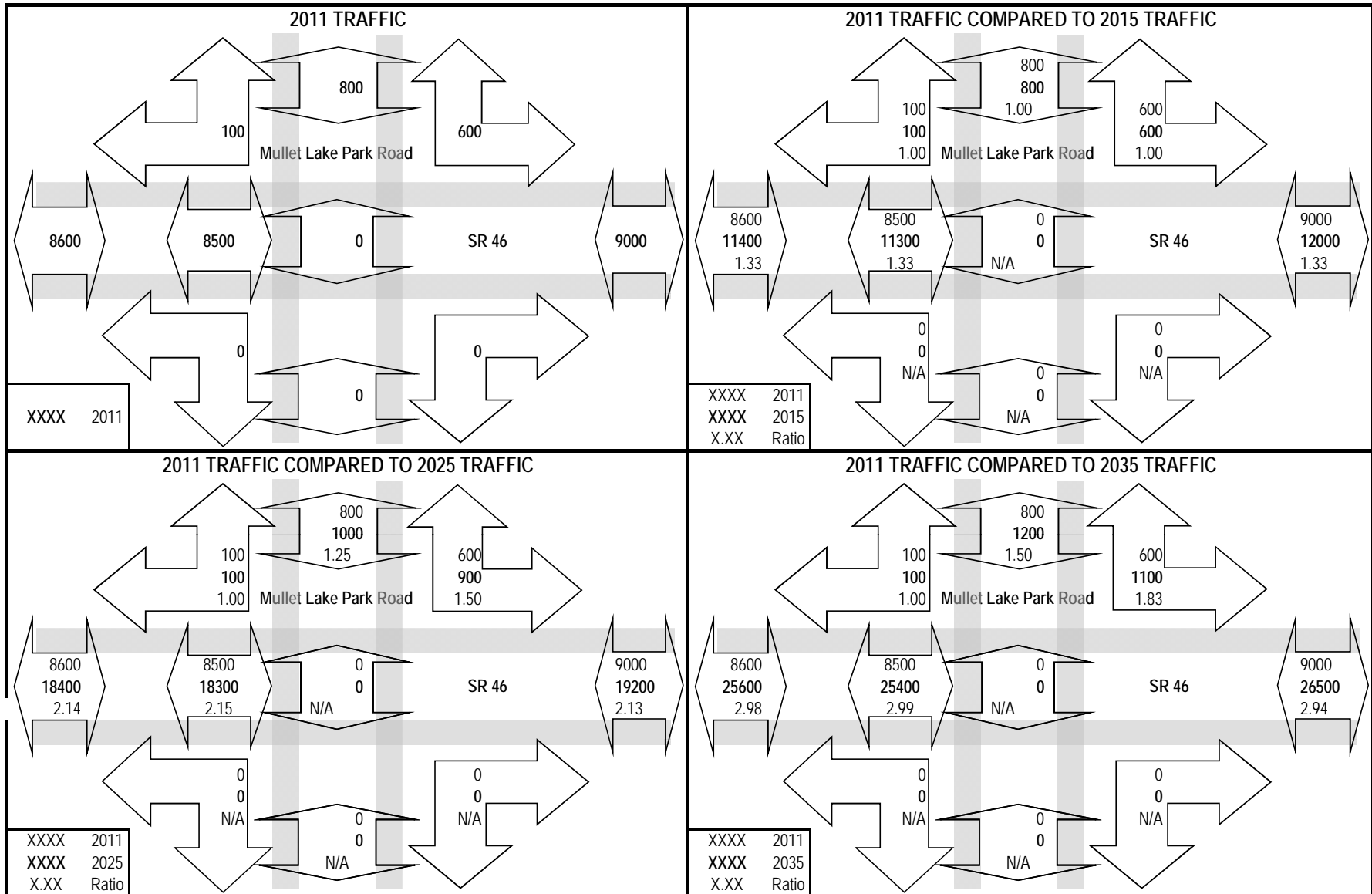
# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - No Build)



# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - No Build)

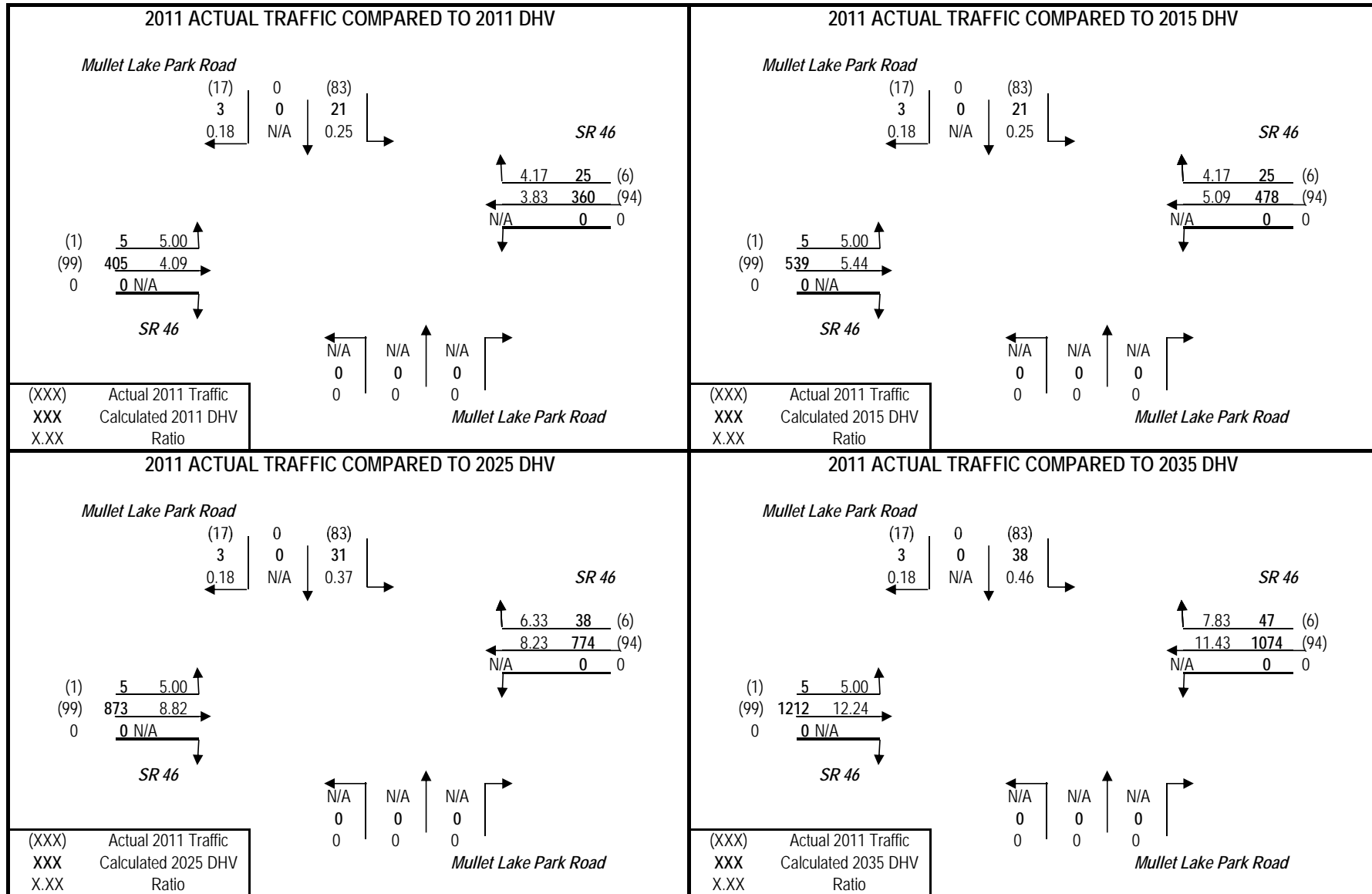


# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - No Build)





## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Cochran Road  
**From:** SR 415  
**To:** CR 426 (PM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			31.0%	Northbound (NB)
			69.0%	Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Enter Base Year AADTs for Volume Comparison:**  
*(growth rates are used to calculate other project years)*

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Project and Model Years**

Year	
Base	2011
Opening	2015
Mid	2025
Design	2035
Model	2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
*(volumes for other project years are calculated by interpolation)*

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	9000	8700	0	750	18450
2035	26500	25500	0	1100	53100

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

		1st Guess	Actual/Counted
(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	97%	97
(EB RT)	West-to-South	3%	3
(WB LT)	East-to-South	6%	6
(WB THRU)	East-to-West	93%	93
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	100%	0
(SB RT)	North-to-West	0%	0
(NB LT)	South-to-West	26%	26
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	74%	74

(must be done manually)

Desired Closure:

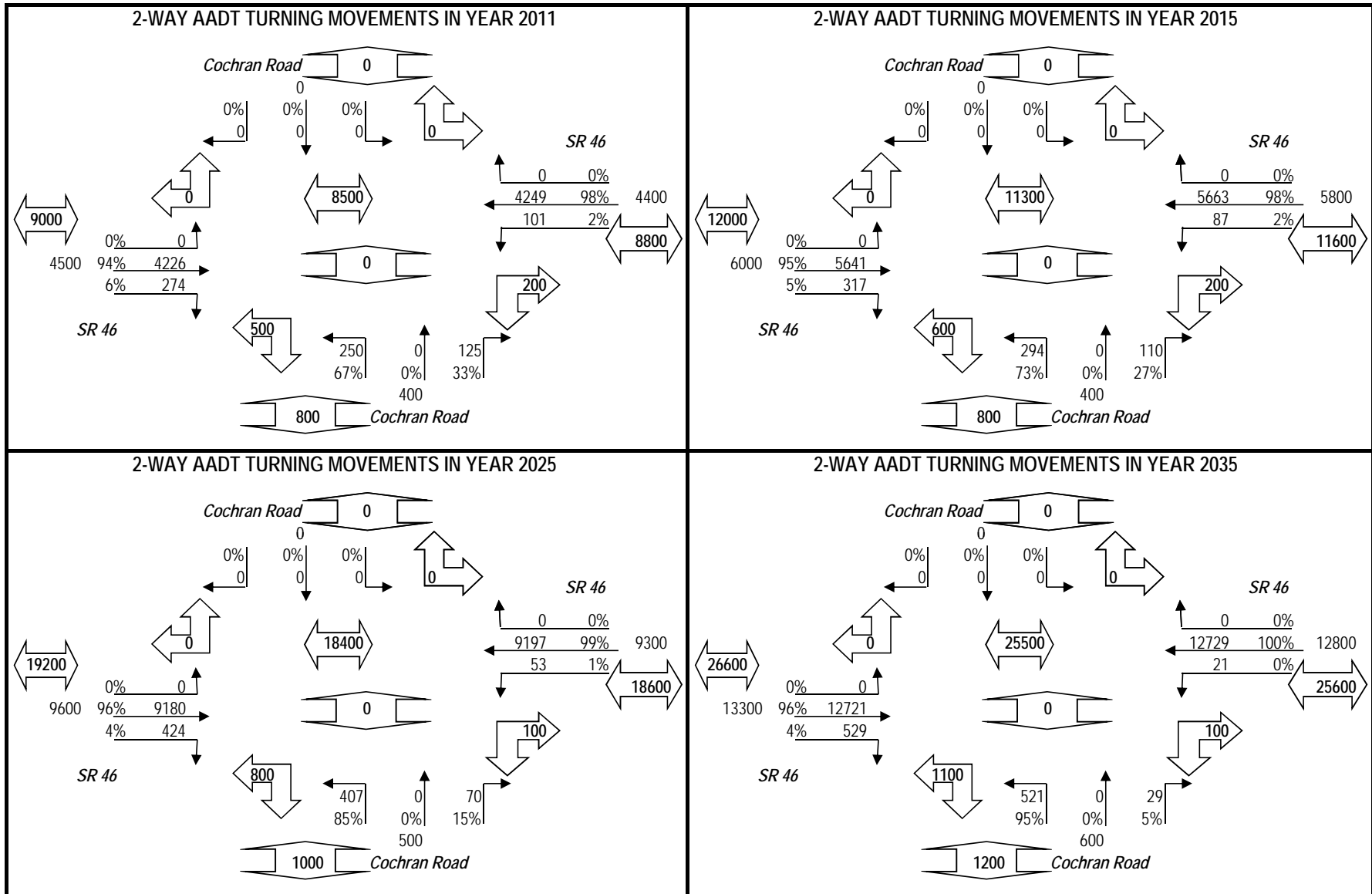
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Cochran Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

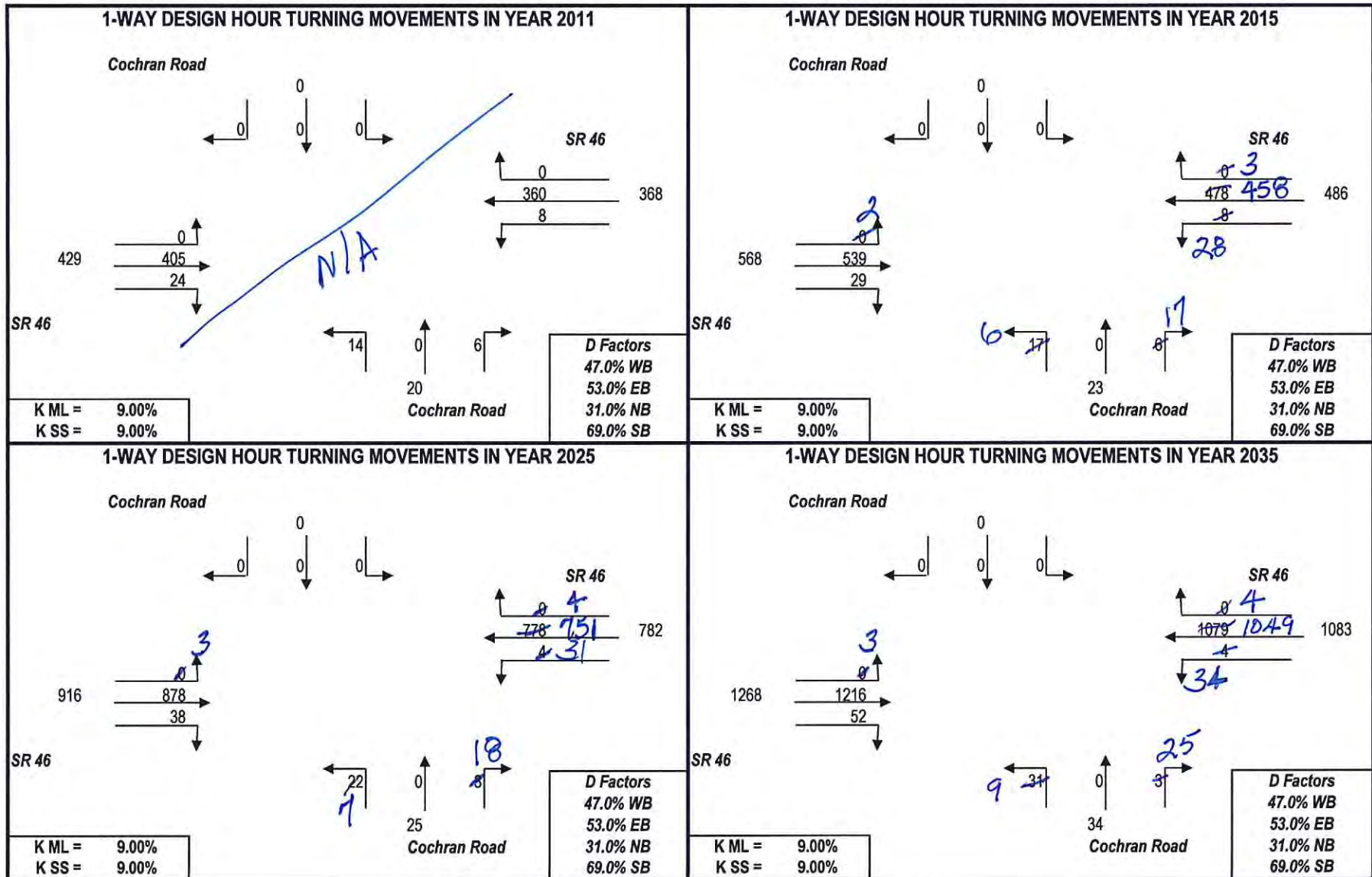
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.97	0.939	4200	0.947	5600	0.956	9200	0.960	12700
West-To-South (RT)	0.03	0.061	300	0.053	300	0.044	400	0.040	500
<b>Total Flow From West:</b>			<b>4500</b>		<b>5900</b>		<b>9600</b>		<b>13200</b>
East-To-South (LT)	0.06	0.023	100	0.015	100	0.006	100	0.002	0
East-To-West (Thru)	0.93	0.977	4200	0.985	5700	0.994	9200	0.998	12700
East-To-North (RT)	0.01	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>5800</b>		<b>9300</b>		<b>12700</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.26	0.668	300	0.729	300	0.853	400	0.948	500
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.74	0.332	100	0.271	100	0.147	100	0.052	0
<b>Total Flow From South:</b>			<b>400</b>		<b>400</b>		<b>500</b>		<b>500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

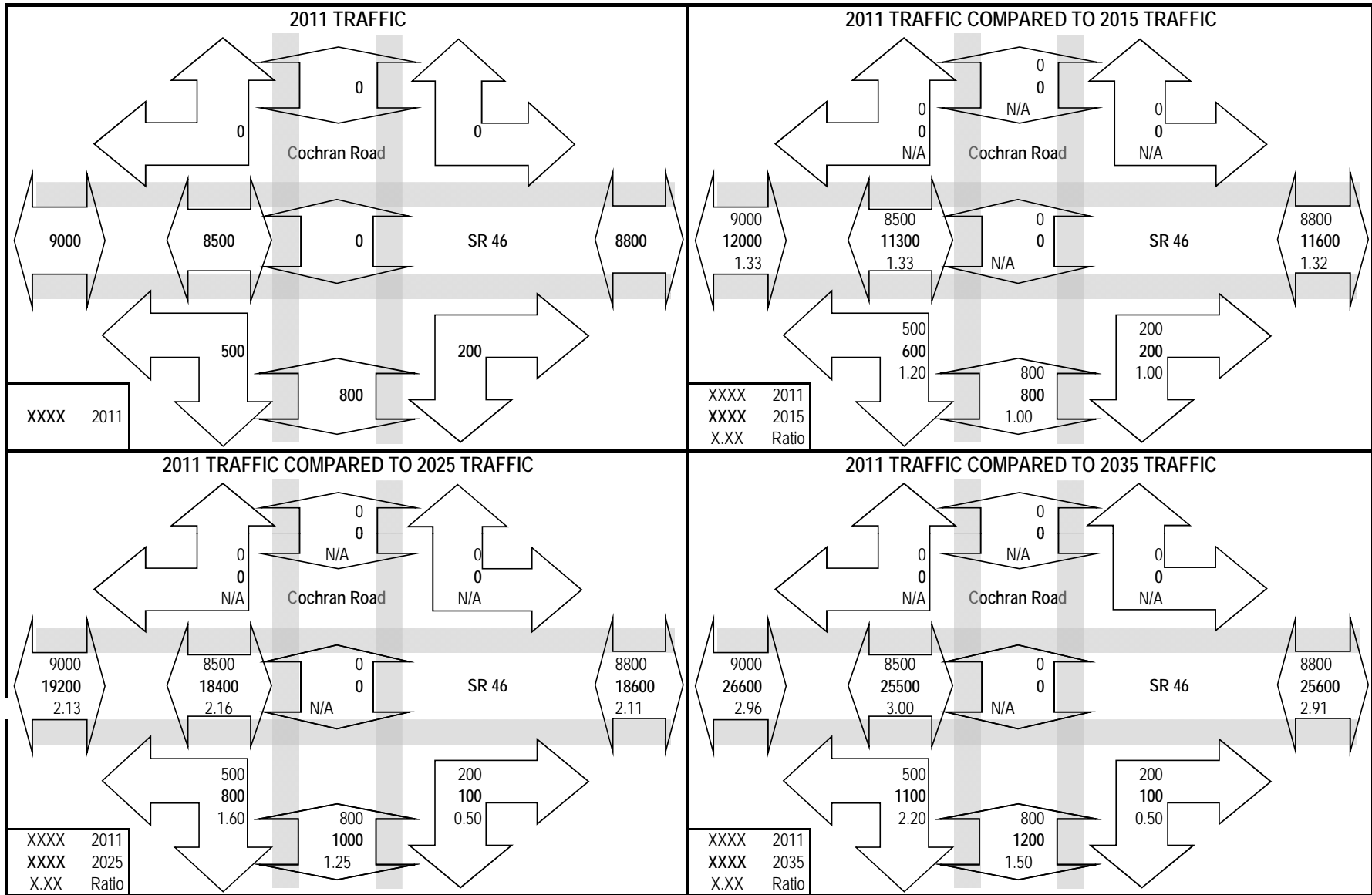
PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - No Build)



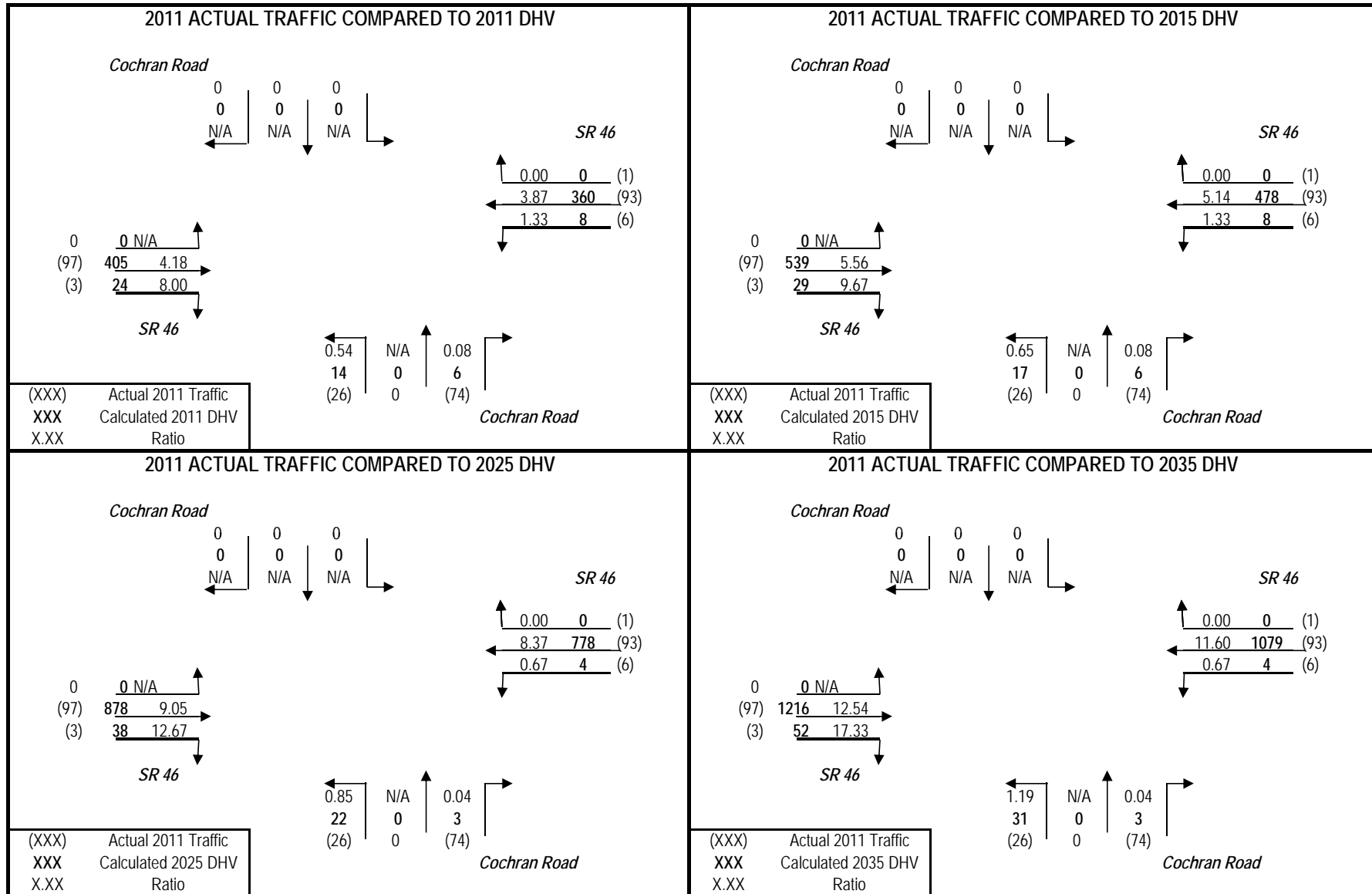
# PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Woodbridge Dr/Avenue C  
**From:** SR 415  
**To:** CR 426 (PM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			61.9%
			38.1%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	9000	8700	1700	250	19650
2035	26500	25500	2500	350	54850

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	7%	7
(EB THRU)	West-to-East	92%	92
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	98%	98
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	19%	19
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	81%	81
(NB LT)	South-to-West	20%	20
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	80%	80

(must be done manually)

Desired Closure:



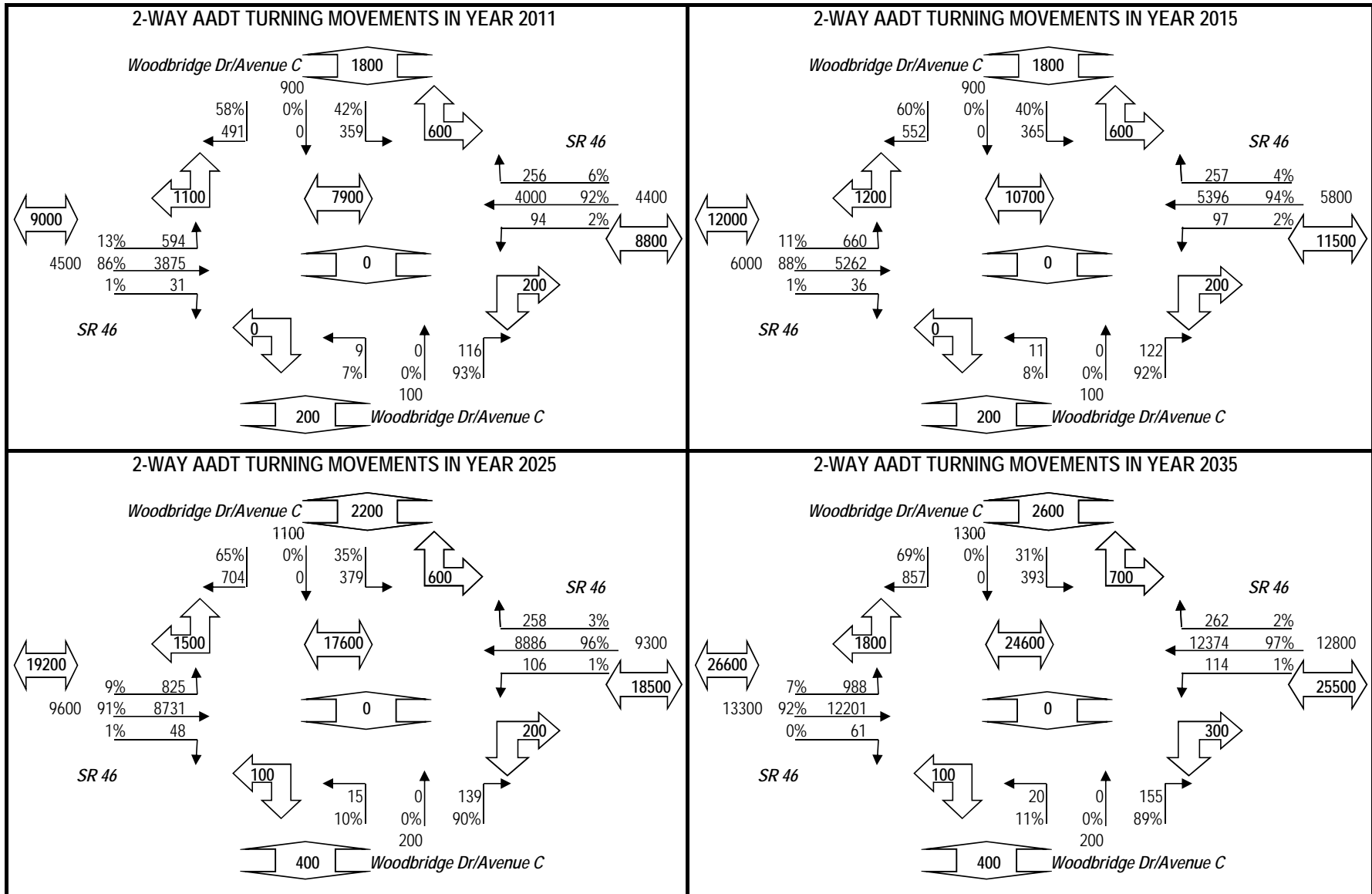
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Woodbridge Dr/Avenue C	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

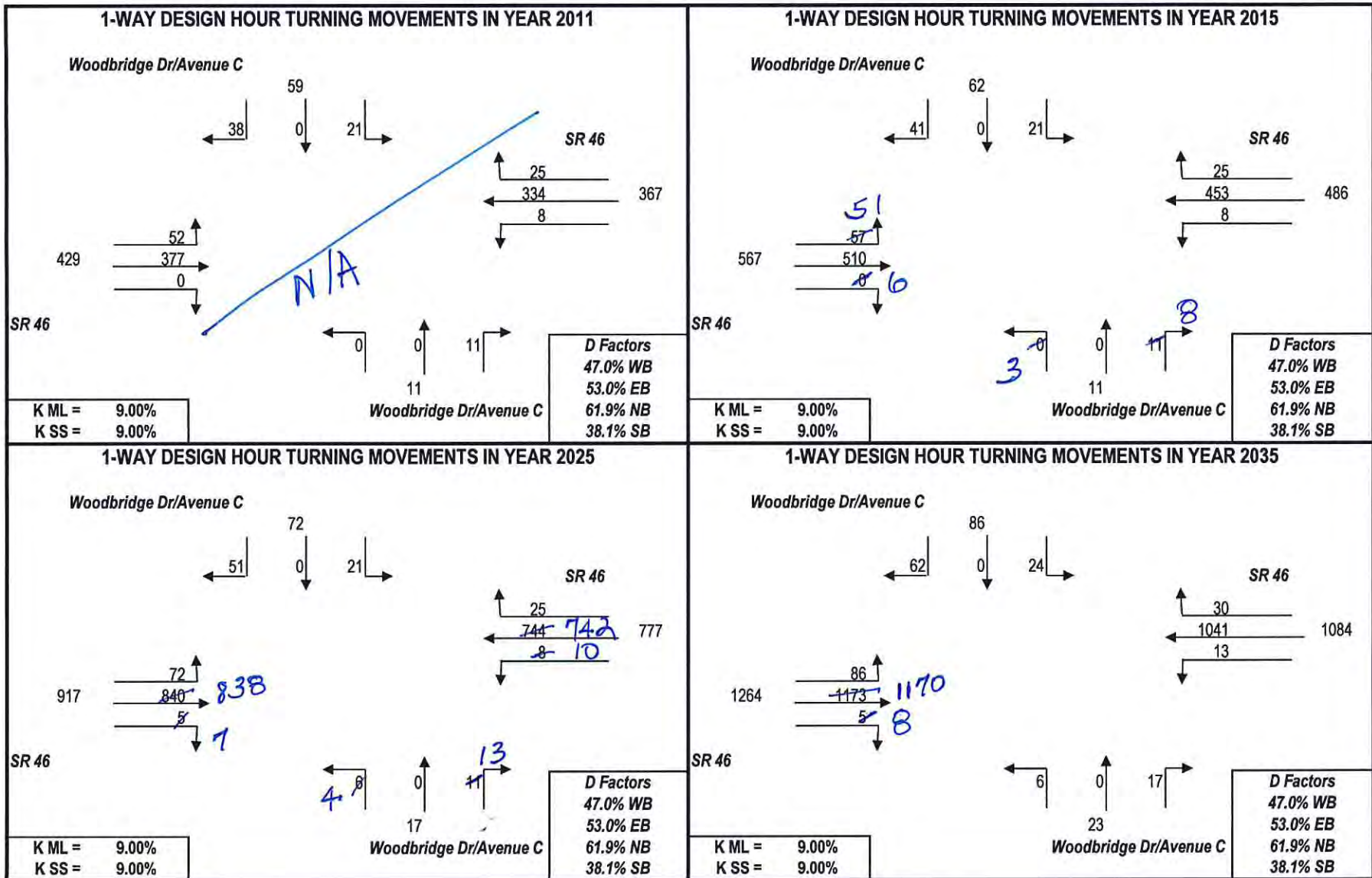
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.07	0.132	600	0.111	700	0.086	800	0.075	1000
West-To-East (Thru)	0.92	0.861	3900	0.883	5300	0.909	8700	0.921	12200
West-To-South (RT)	0.01	0.007	0	0.006	0	0.005	0	0.005	100
<b>Total Flow From West:</b>			<b>4500</b>		<b>6000</b>		<b>9500</b>		<b>13300</b>
East-To-South (LT)	0.01	0.022	100	0.017	100	0.011	100	0.009	100
East-To-West (Thru)	0.98	0.920	4000	0.938	5400	0.961	8900	0.971	12400
East-To-North (RT)	0.01	0.059	300	0.045	300	0.028	300	0.021	300
<b>Total Flow From East:</b>			<b>4400</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
North-To-East (LT)	0.19	0.422	400	0.399	400	0.350	400	0.314	400
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.81	0.578	500	0.601	600	0.650	700	0.686	900
<b>Total Flow From North:</b>			<b>900</b>		<b>1000</b>		<b>1100</b>		<b>1300</b>
South-To-West (LT)	0.20	0.074	0	0.081	0	0.098	0	0.113	0
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.80	0.926	100	0.919	100	0.902	100	0.887	200
<b>Total Flow From South:</b>			<b>100</b>		<b>100</b>		<b>100</b>		<b>200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

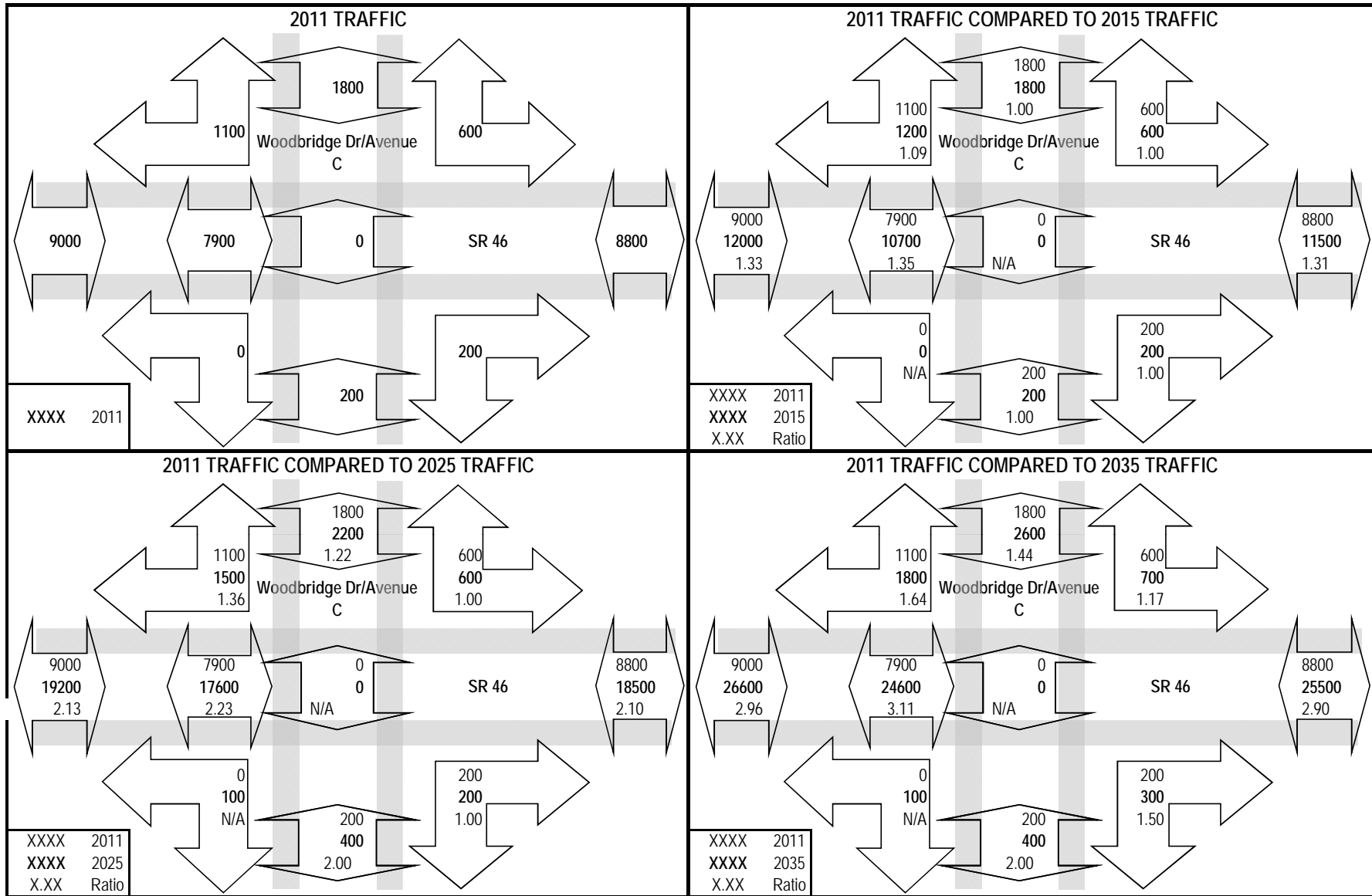
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - No Build)



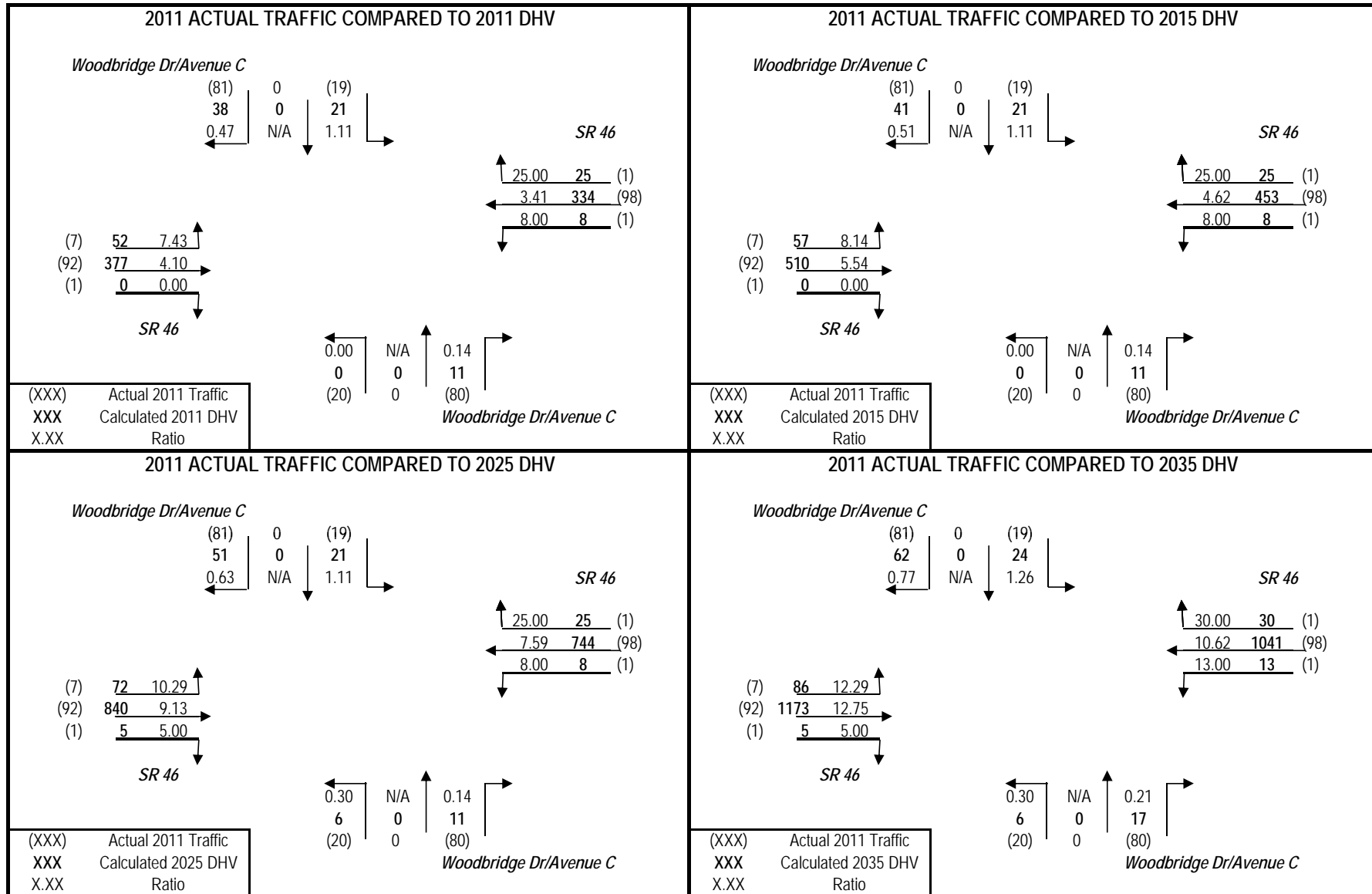
**PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - No Build)**



PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** 3rd Street  
**From:** SR 415  
**To:** CR 426 (PM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			30.0%
			70.0%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	8700	90	0	17490
2035	25500	25500	150	0	51150

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	100%	100
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

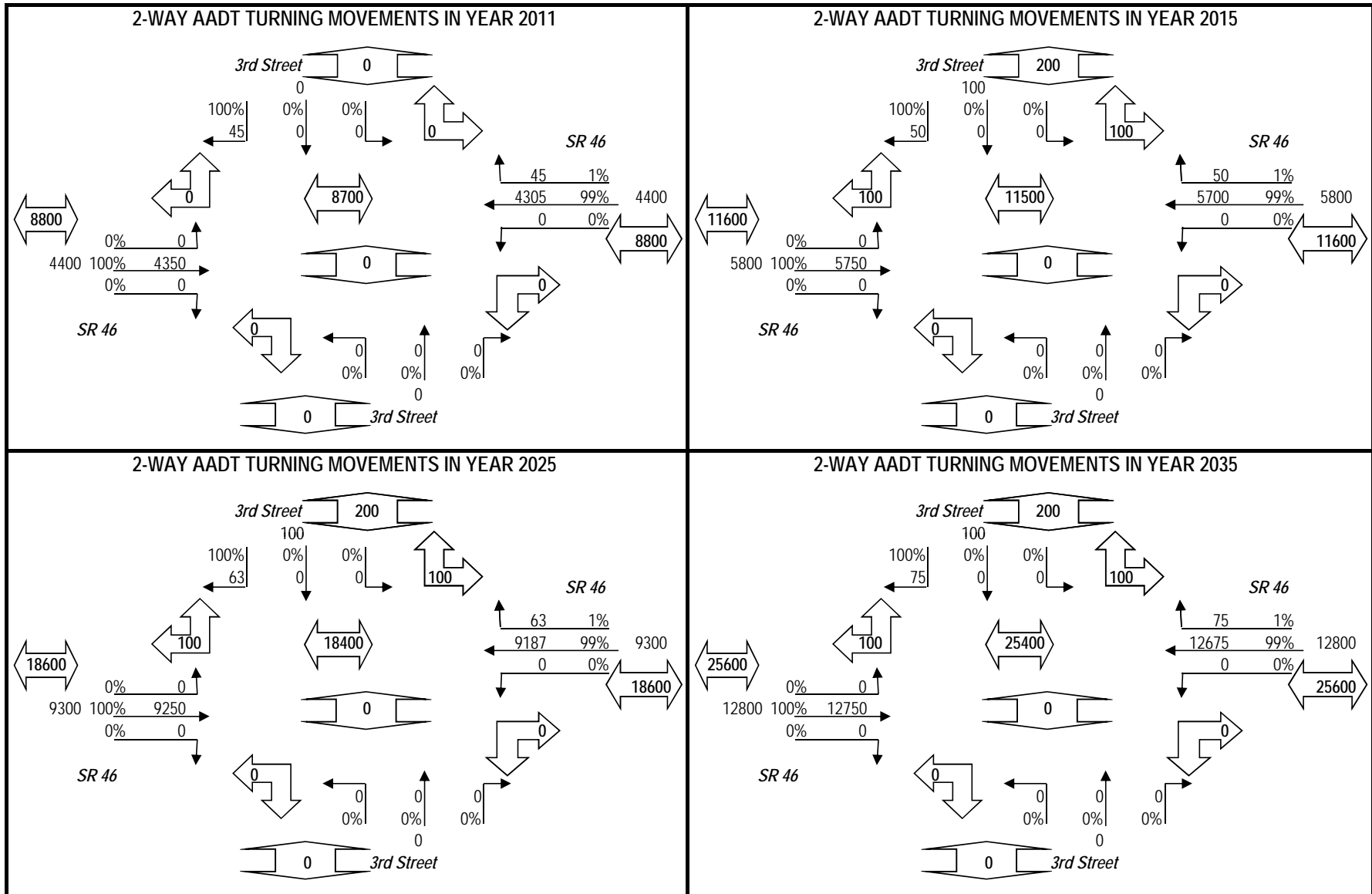
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	3rd Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	1.00	1.000	4400	1.000	5800	1.000	9300	1.000	12800
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.990	4300	0.991	5700	0.993	9200	0.994	12700
East-To-North (RT)	0.01	0.010	0	0.009	100	0.007	100	0.006	100
<b>Total Flow From East:</b>			<b>4300</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	0	1.000	100	1.000	100	1.000	100
<b>Total Flow From North:</b>			<b>0</b>		<b>100</b>		<b>100</b>		<b>100</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

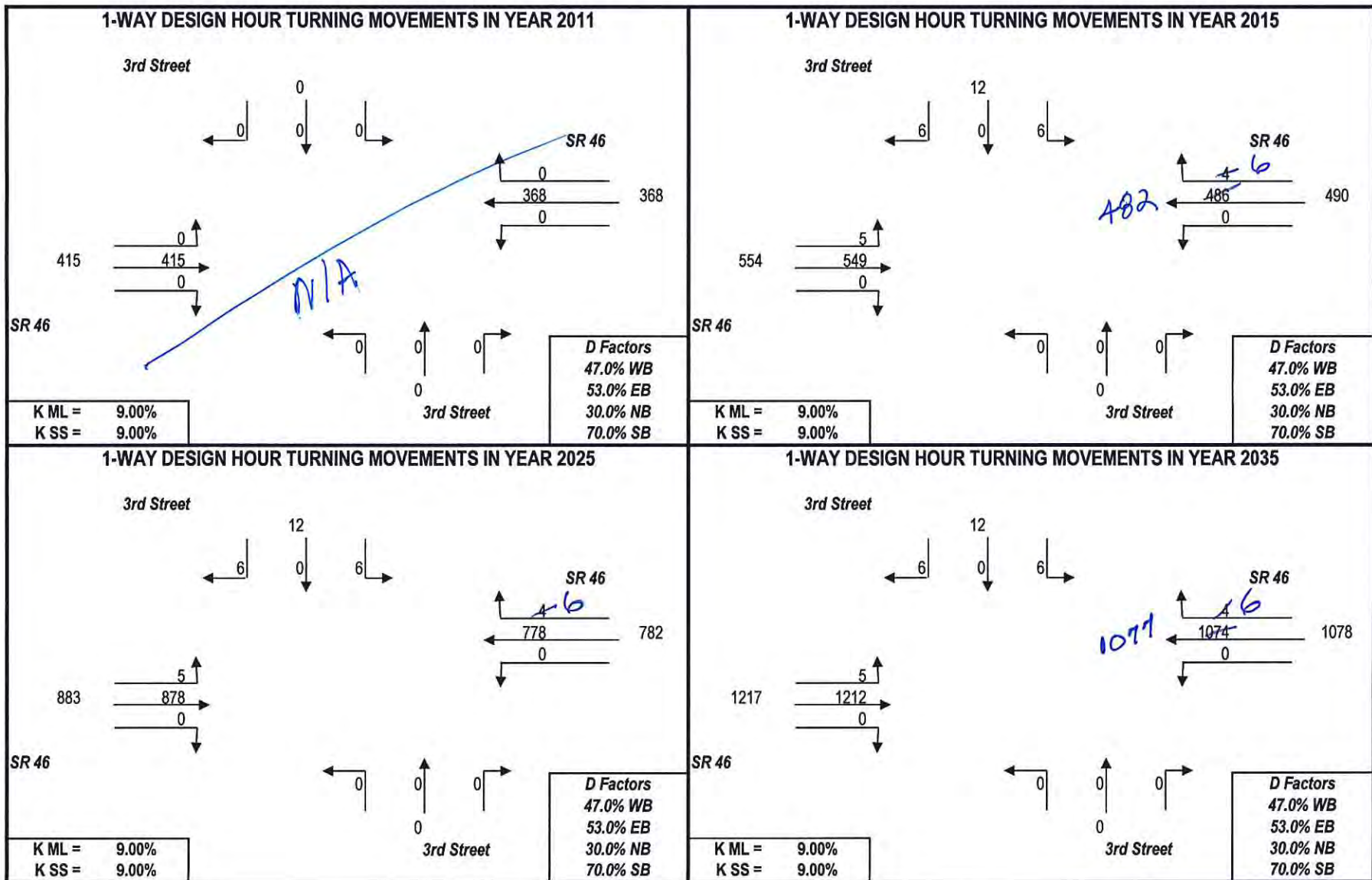
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - No Build)

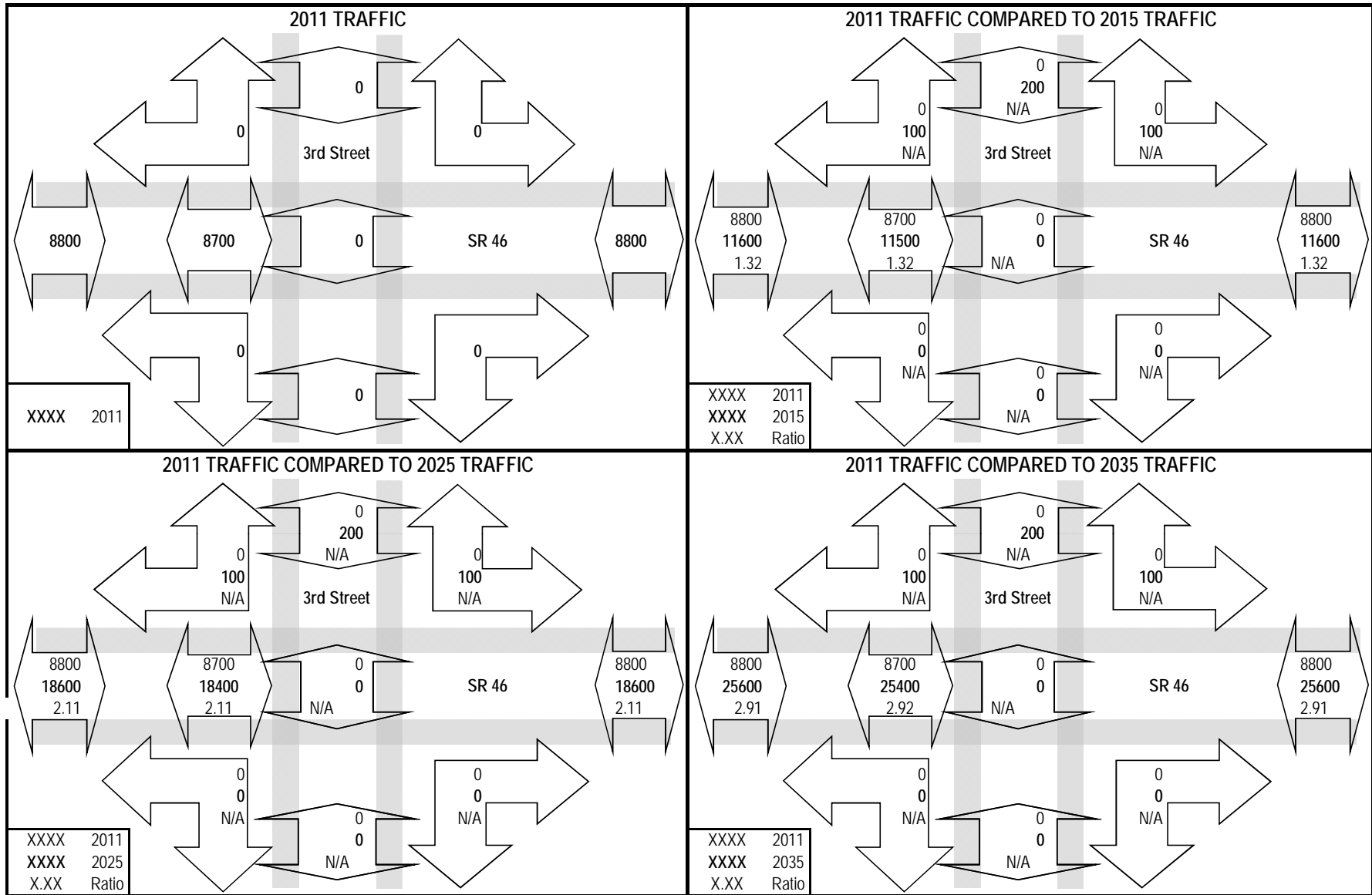




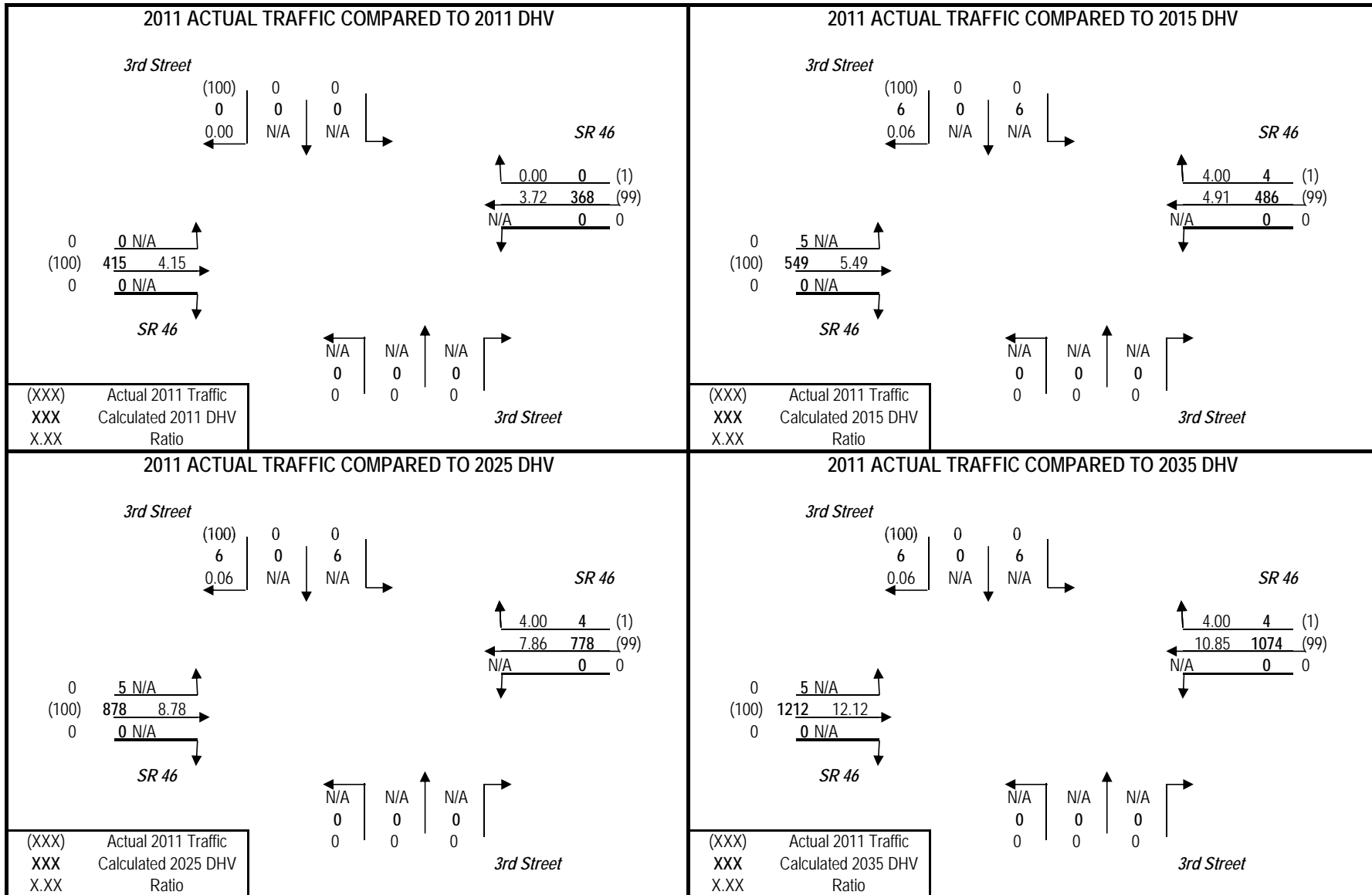
## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Oak Street  
**From:** SR 415  
**To:** CR 426 (PM Peak - No Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

K Factors	Mainline	D Factors	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			30.0%
			70.0%
			Westbound (WB)
			Eastbound (EB)
			Northbound (NB)
			Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	8700	8700	220	0	17620
2035	25500	25500	330	0	51330

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	2%	2
(EB THRU)	West-to-East	98%	98
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	44%	44
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	56%	56
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0
Desired Closure:		0.01	

(must be done manually)

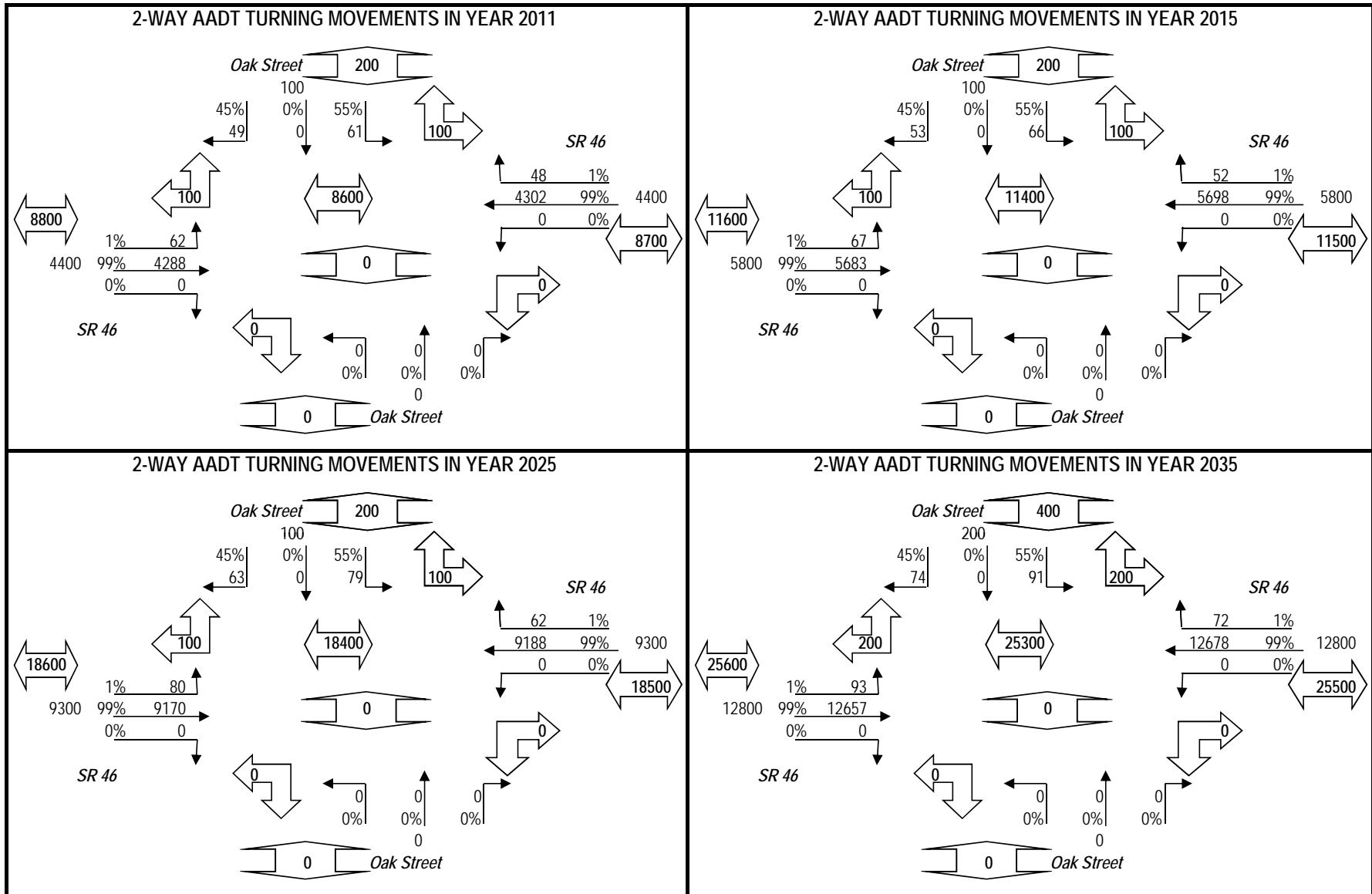
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Oak Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

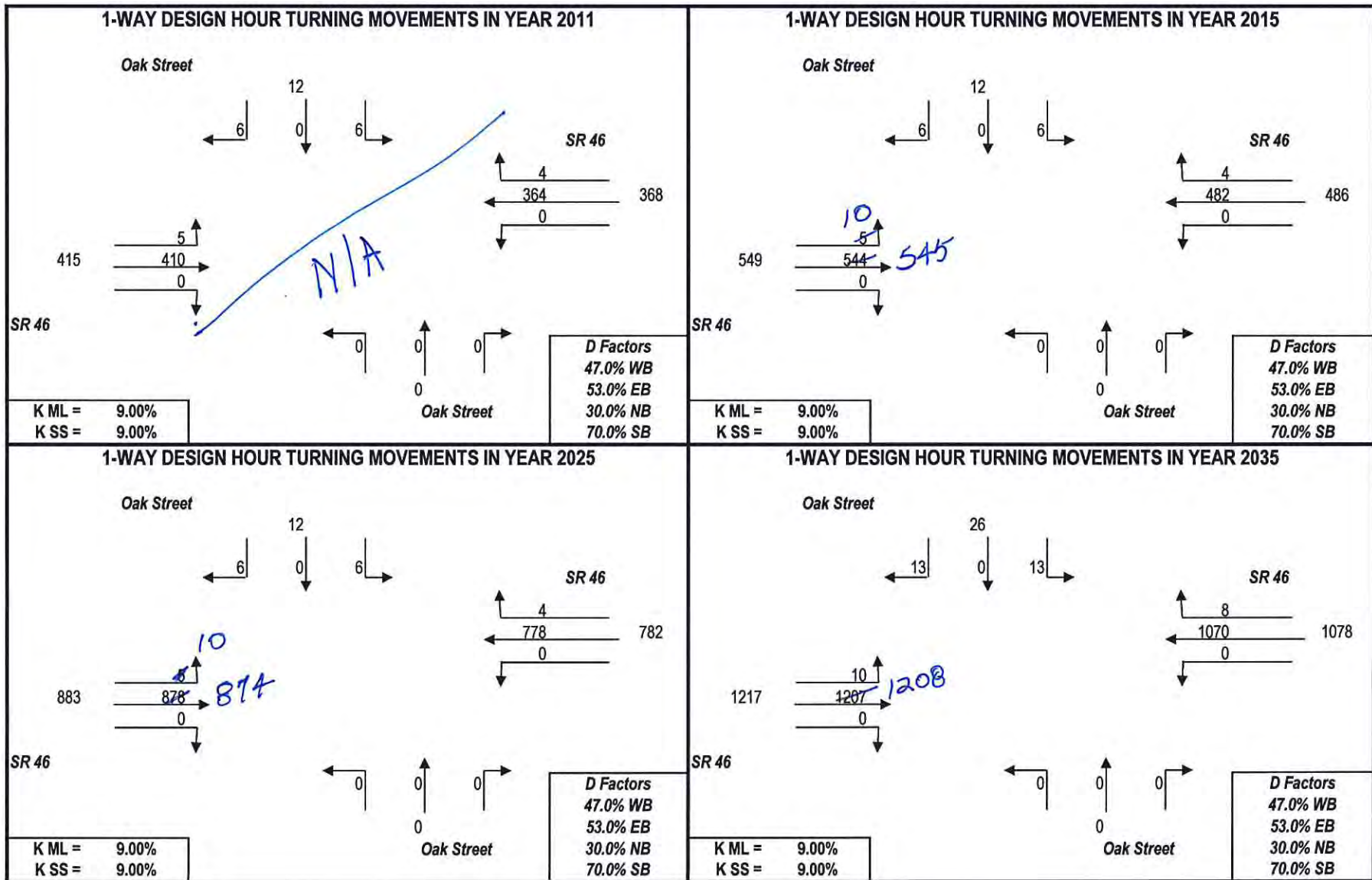
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.02	0.014	100	0.012	100	0.009	100	0.007	100
West-To-East (Thru)	0.98	0.986	4300	0.988	5700	0.991	9200	0.993	12700
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.989	4300	0.991	5700	0.993	9200	0.994	12700
East-To-North (RT)	0.01	0.011	0	0.009	100	0.007	100	0.006	100
<b>Total Flow From East:</b>			<b>4300</b>		<b>5800</b>		<b>9300</b>		<b>12800</b>
North-To-East (LT)	0.44	0.554	100	0.554	100	0.553	100	0.553	100
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.56	0.446	0	0.446	100	0.447	100	0.447	100
<b>Total Flow From North:</b>			<b>100</b>		<b>200</b>		<b>200</b>		<b>200</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

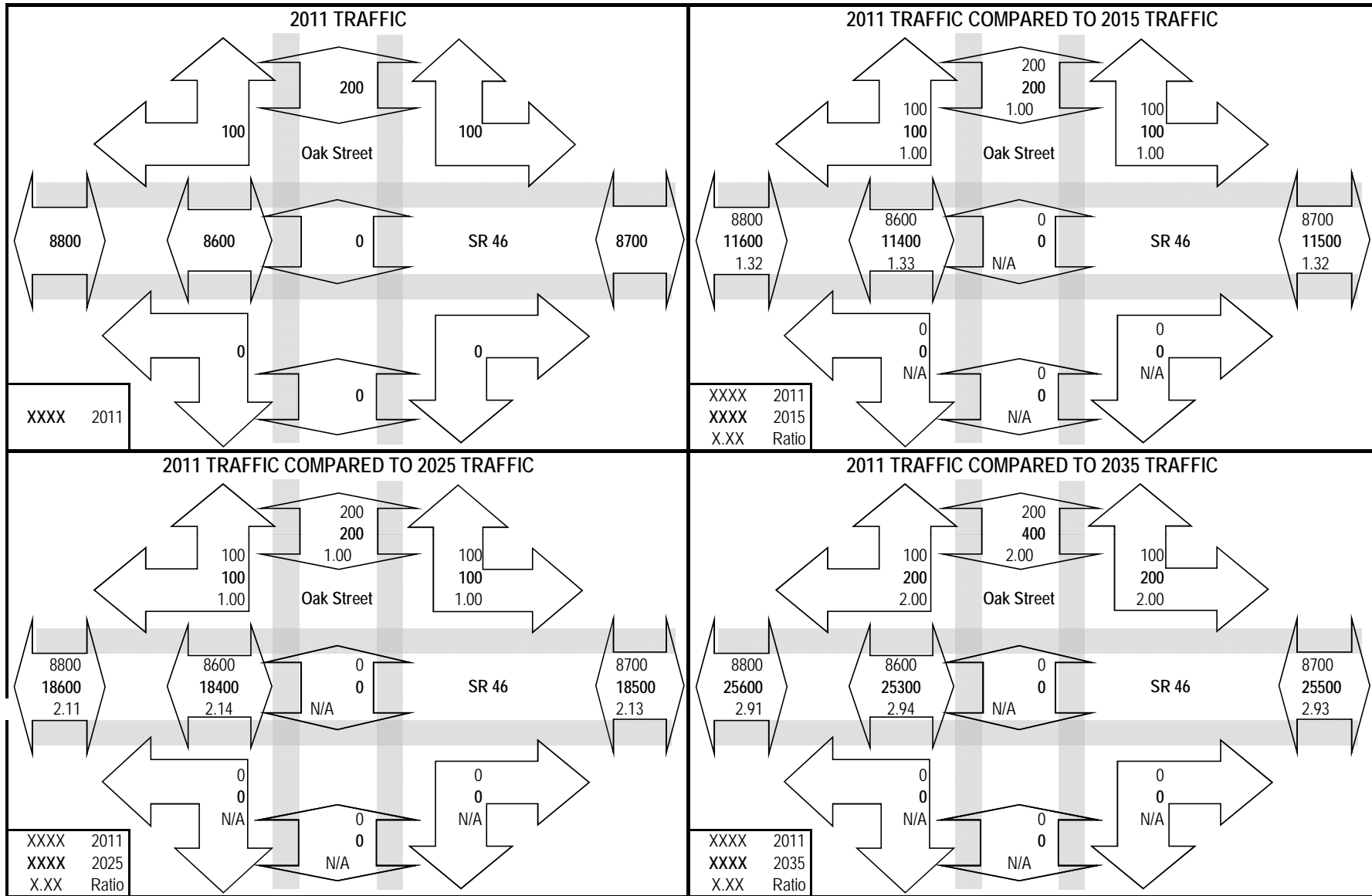
## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - No Build)

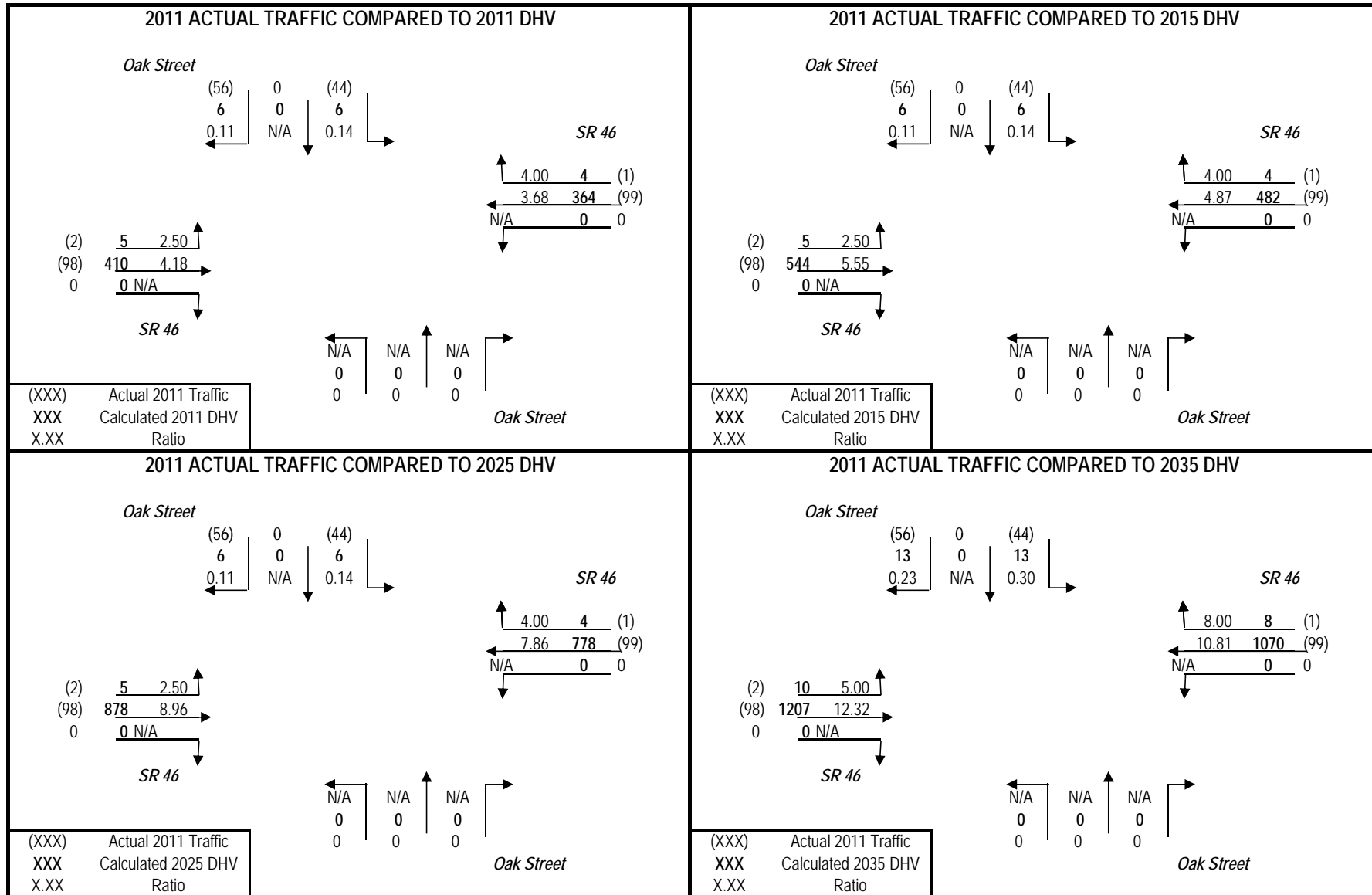


## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - No Build)





## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: CR 426/1st Street  
 From: SR 415  
 To: CR 426 (PM Peak - No Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

K Factors	Mainline	D Factors	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			60.8%	Northbound (NB)
			39.2%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  Yes  No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function  Linear  Exponential  Decaying

Side Street Growth Function  Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base 2011
Opening 2015
Mid 2025
Design 2035
Model 2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	5800	3800	8600	26900
2035	25500	17000	5600	19000	67100

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	6%	6
(EB THRU)	West-to-East	51%	51
(EB RT)	West-to-South	43%	43
(WB LT)	East-to-South	23%	23
(WB THRU)	East-to-West	69%	69
(WB RT)	East-to-North	8%	8
(SB LT)	North-to-East	14%	14
(SB THRU)	North-to-South	71%	71
(SB RT)	North-to-West	15%	15
(NB LT)	South-to-West	48%	48
(NB THRU)	South-to-North	36%	36
(NB RT)	South-to-East	16%	16

(must be done manually)

Desired Closure: 0.01

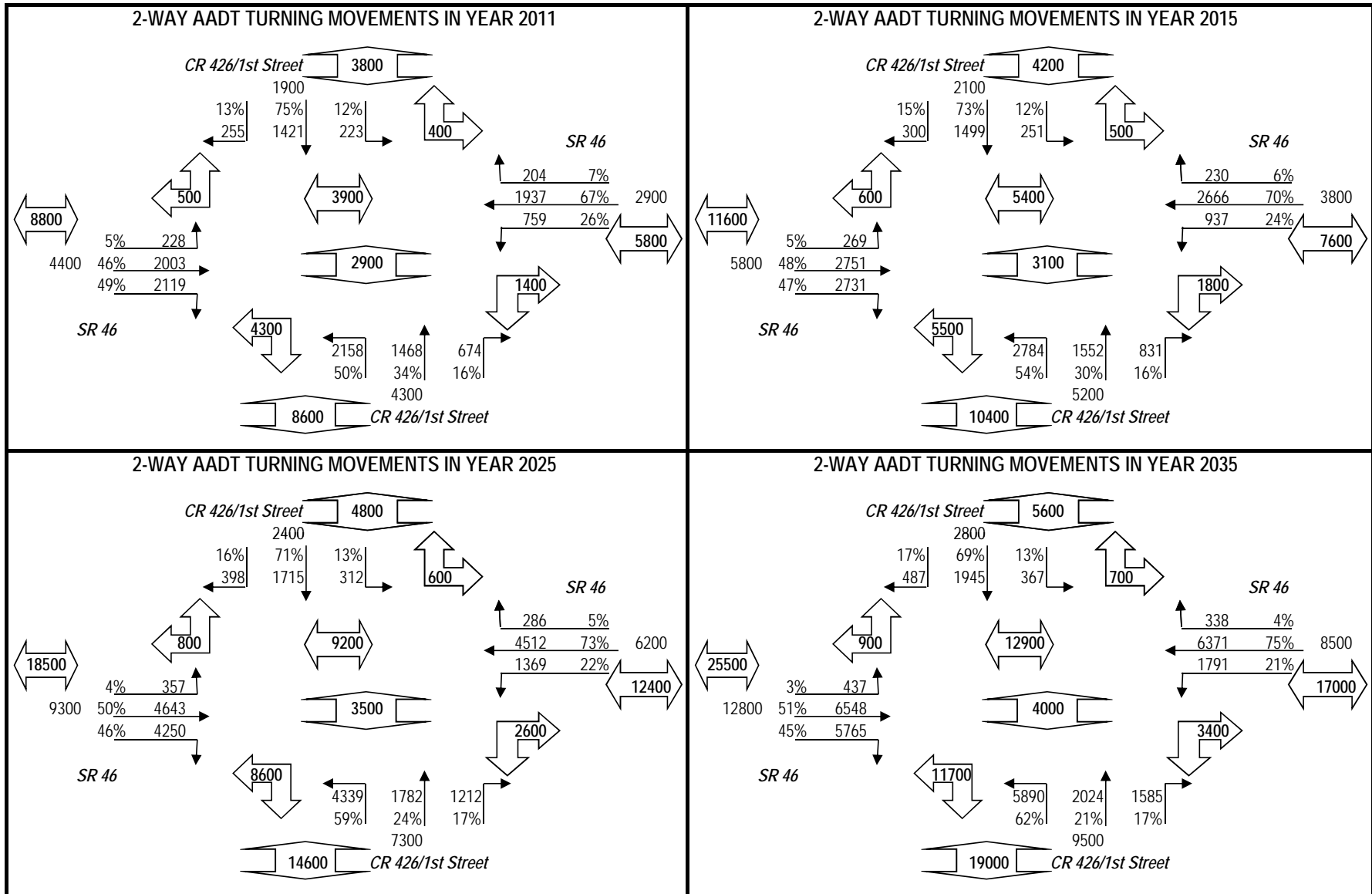
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	CR 426/1st Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - No Build)		

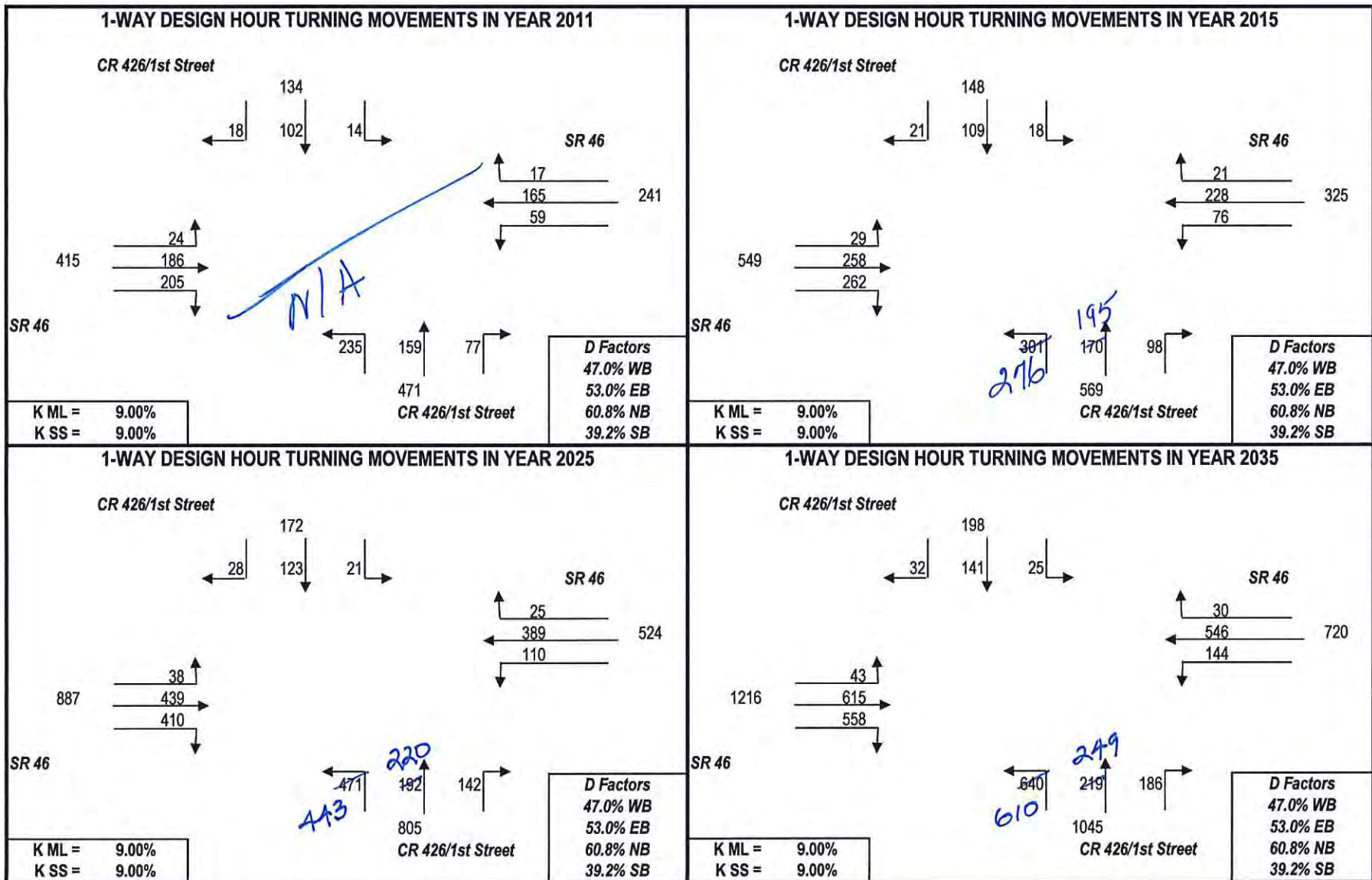
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.06	0.052	200	0.047	300	0.039	400	0.034	400
West-To-East (Thru)	0.51	0.460	2000	0.478	2800	0.502	4600	0.514	6500
West-To-South (RT)	0.43	0.487	2100	0.475	2700	0.459	4200	0.452	5800
<b>Total Flow From West:</b>			<b>4300</b>		<b>5800</b>		<b>9200</b>		<b>12700</b>
East-To-South (LT)	0.23	0.262	800	0.244	900	0.222	1400	0.211	1800
East-To-West (Thru)	0.69	0.668	1900	0.696	2700	0.732	4500	0.750	6400
East-To-North (RT)	0.08	0.070	200	0.060	200	0.046	300	0.040	300
<b>Total Flow From East:</b>			<b>2900</b>		<b>3800</b>		<b>6200</b>		<b>8500</b>
North-To-East (LT)	0.14	0.118	200	0.122	300	0.128	300	0.131	400
North-To-South (Thru)	0.71	0.748	1400	0.731	1500	0.707	1700	0.695	1900
North-To-West (RT)	0.15	0.134	300	0.146	300	0.164	400	0.174	500
<b>Total Flow From North:</b>			<b>1900</b>		<b>2100</b>		<b>2400</b>		<b>2800</b>
South-To-West (LT)	0.48	0.502	2200	0.539	2800	0.592	4300	0.620	5900
South-To-North (Thru)	0.36	0.341	1500	0.300	1600	0.243	1800	0.213	2000
South-To-East (RT)	0.16	0.157	700	0.161	800	0.165	1200	0.167	1600
<b>Total Flow From South:</b>			<b>4400</b>		<b>5200</b>		<b>7300</b>		<b>9500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

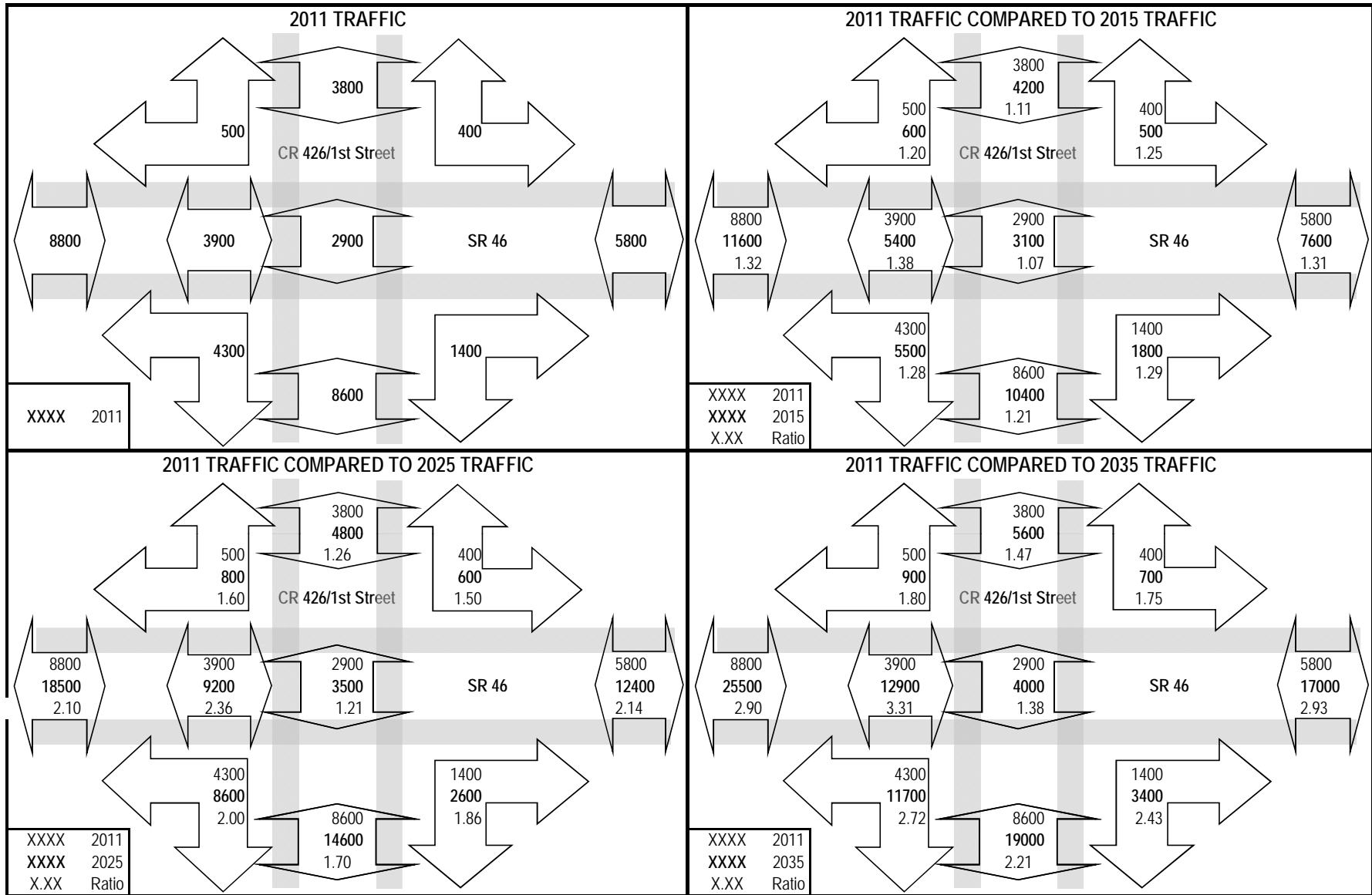
PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - No Build)



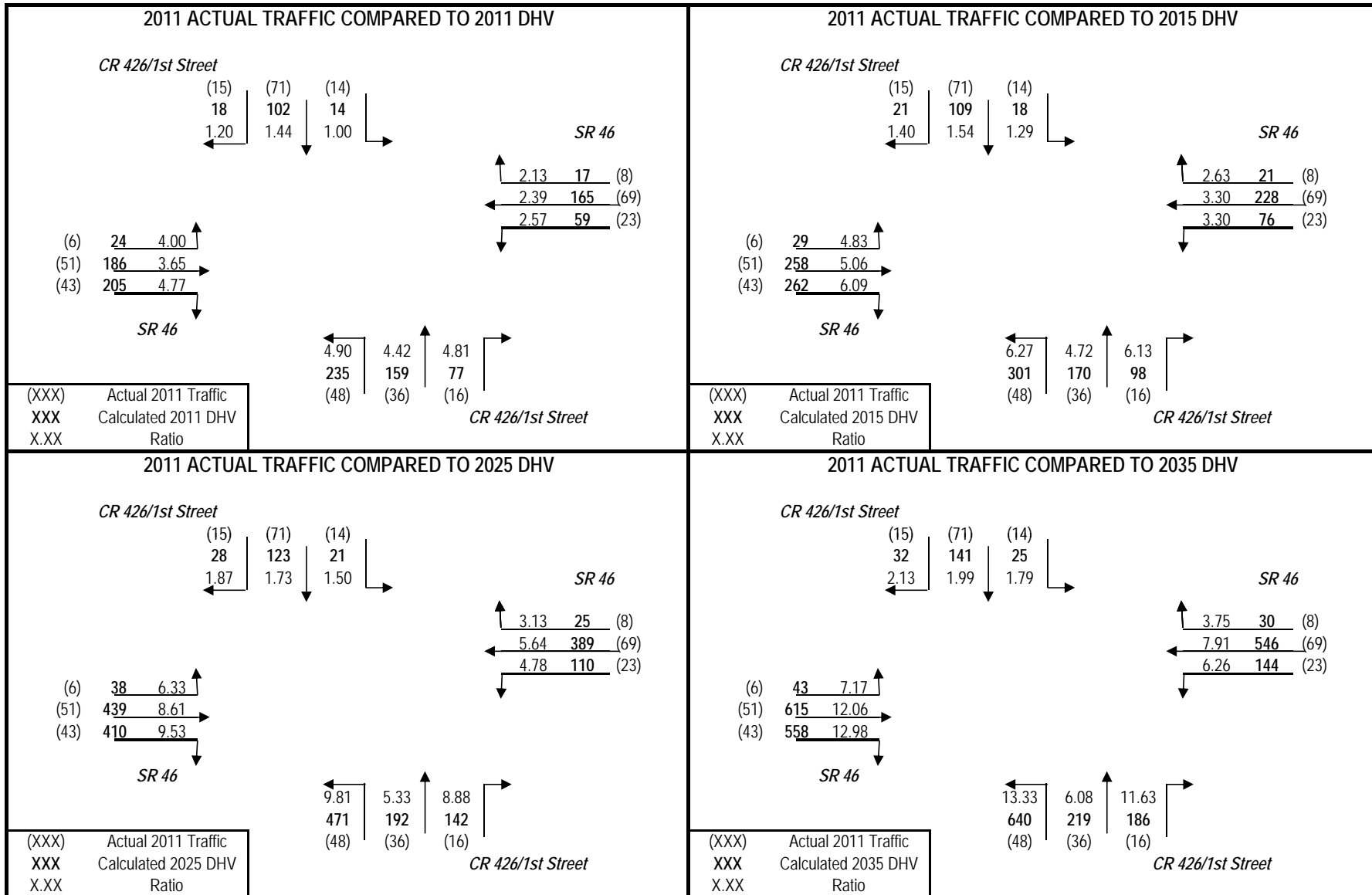
# PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - No Build)



PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - No Build)



## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - No Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** SR 415  
**From:** SR 415  
**To:** CR 426 (AM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

**K Factors**  
 Mainline: 9.00%  
 Sidestreet: 9.00%

**D Factors**  
 Mainline: 53.0% Westbound (WB)  
 47.0% Eastbound (EB)  
 Sidestreet: 32.9% Northbound (NB)  
 67.1% Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base: 2011
Opening: 2015
Mid: 2025
Design: 2035
Model: 2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	10500	10500	15500	9300	45800
2035	36500	36500	34500	24400	131900

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	41%	41
(EB THRU)	West-to-East	55%	55
(EB RT)	West-to-South	4%	4
(WB LT)	East-to-South	34%	34
(WB THRU)	East-to-West	54%	54
(WB RT)	East-to-North	12%	12
(SB LT)	North-to-East	18%	18
(SB THRU)	North-to-South	65%	65
(SB RT)	North-to-West	17%	17
(NB LT)	South-to-West	18%	18
(NB THRU)	South-to-North	63%	63
(NB RT)	South-to-East	19%	19

(must be done manually)

Desired Closure: 0.01



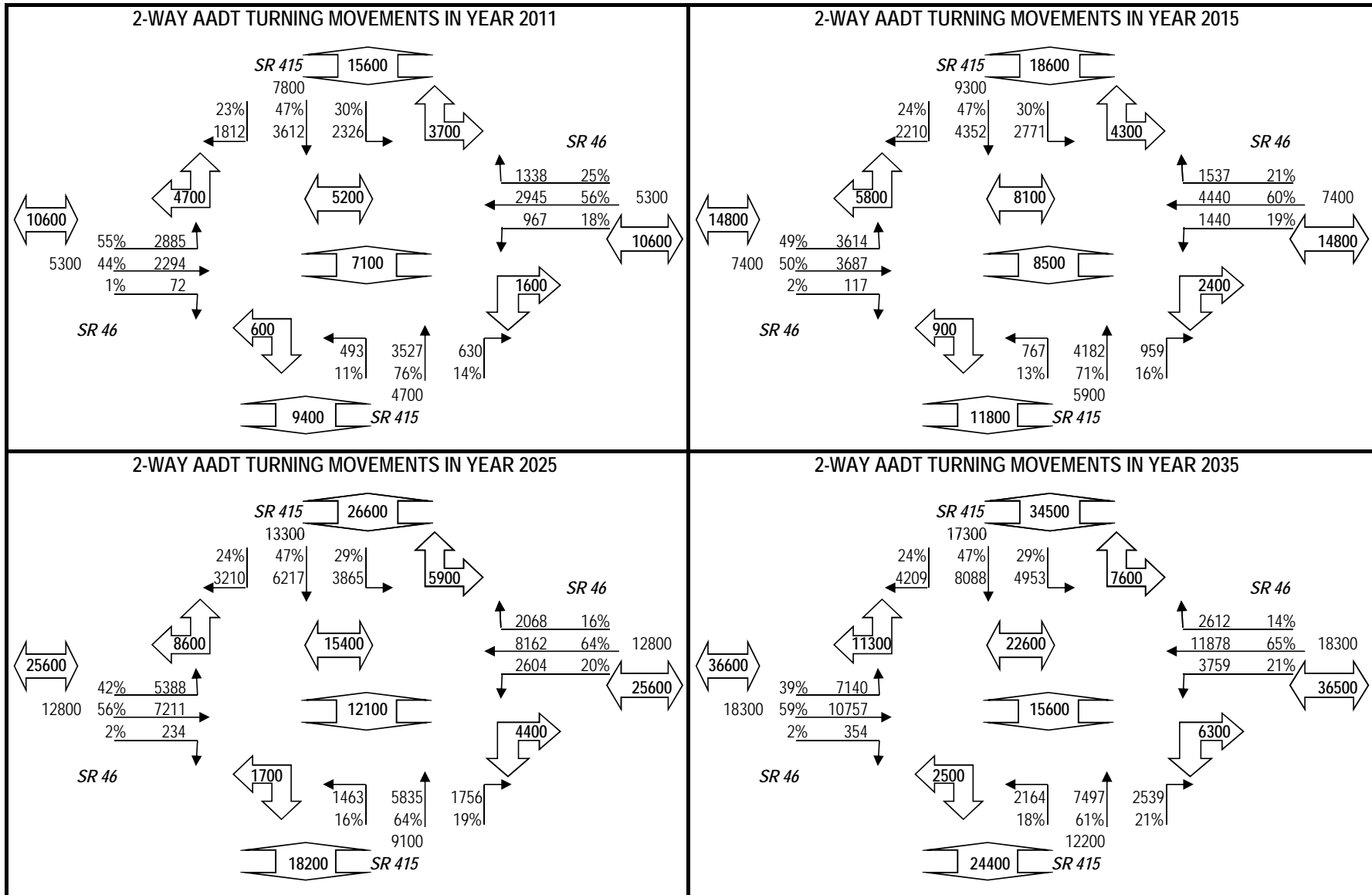
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	SR 415	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

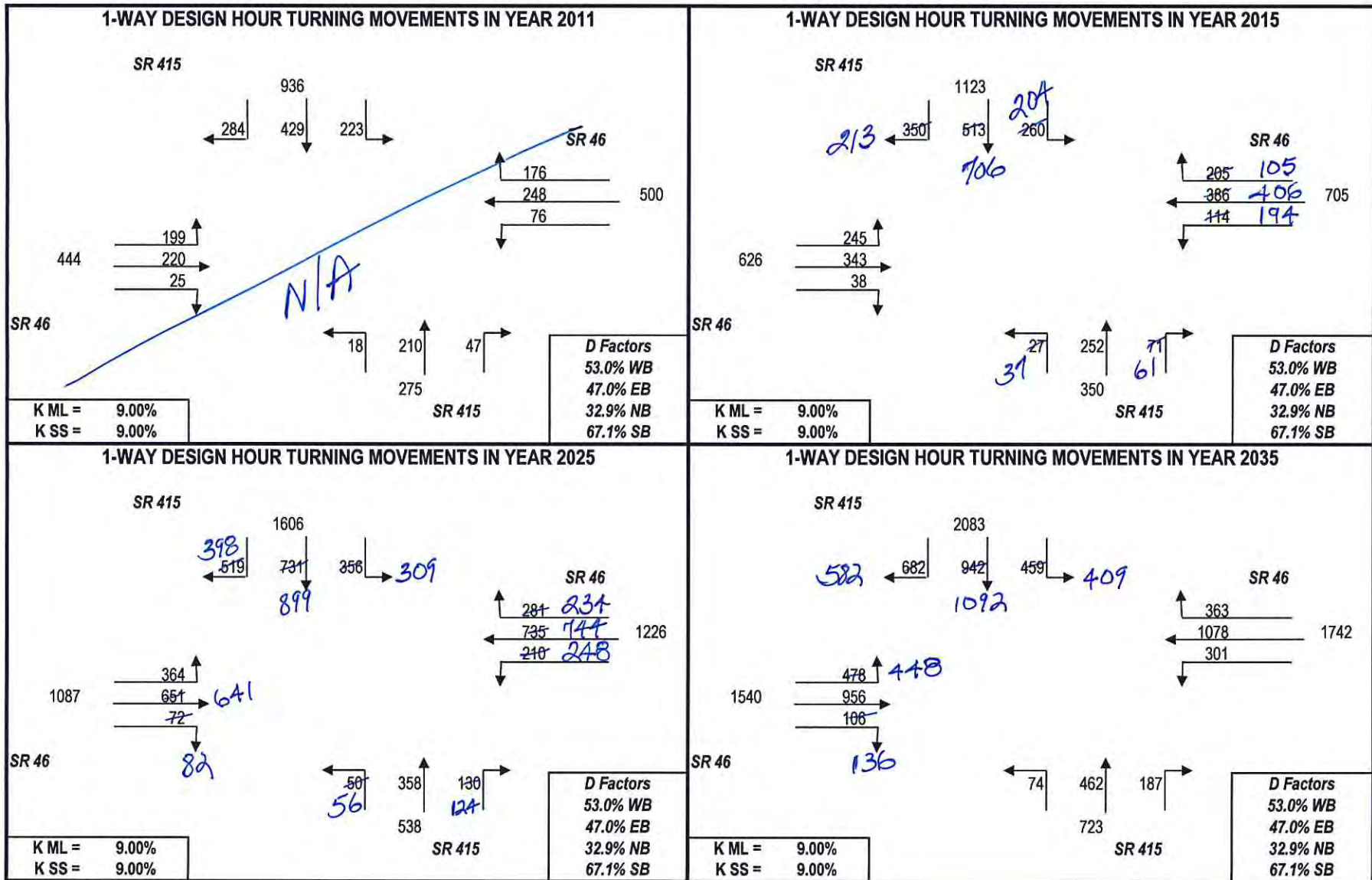
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.41	0.549	2900	0.487	3600	0.420	5400	0.391	7100
West-To-East (Thru)	0.55	0.437	2300	0.497	3700	0.562	7200	0.589	10800
West-To-South (RT)	0.04	0.014	100	0.016	100	0.018	200	0.019	400
<b>Total Flow From West:</b>			<b>5300</b>		<b>7400</b>		<b>12800</b>		<b>18300</b>
East-To-South (LT)	0.34	0.184	1000	0.194	1400	0.203	2600	0.206	3800
East-To-West (Thru)	0.54	0.561	2900	0.599	4400	0.636	8200	0.651	11900
East-To-North (RT)	0.12	0.255	1300	0.207	1500	0.161	2100	0.143	2600
<b>Total Flow From East:</b>			<b>5200</b>		<b>7300</b>		<b>12900</b>		<b>18300</b>
North-To-East (LT)	0.18	0.300	2300	0.297	2800	0.291	3900	0.287	5000
North-To-South (Thru)	0.65	0.466	3600	0.466	4400	0.468	6200	0.469	8100
North-To-West (RT)	0.17	0.234	1800	0.237	2200	0.241	3200	0.244	4200
<b>Total Flow From North:</b>			<b>7700</b>		<b>9400</b>		<b>13300</b>		<b>17300</b>
South-To-West (LT)	0.18	0.106	500	0.130	800	0.162	1500	0.177	2200
South-To-North (Thru)	0.63	0.758	3500	0.708	4200	0.645	5800	0.614	7500
South-To-East (RT)	0.19	0.136	600	0.162	1000	0.194	1800	0.208	2500
<b>Total Flow From South:</b>			<b>4600</b>		<b>6000</b>		<b>9100</b>		<b>12200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

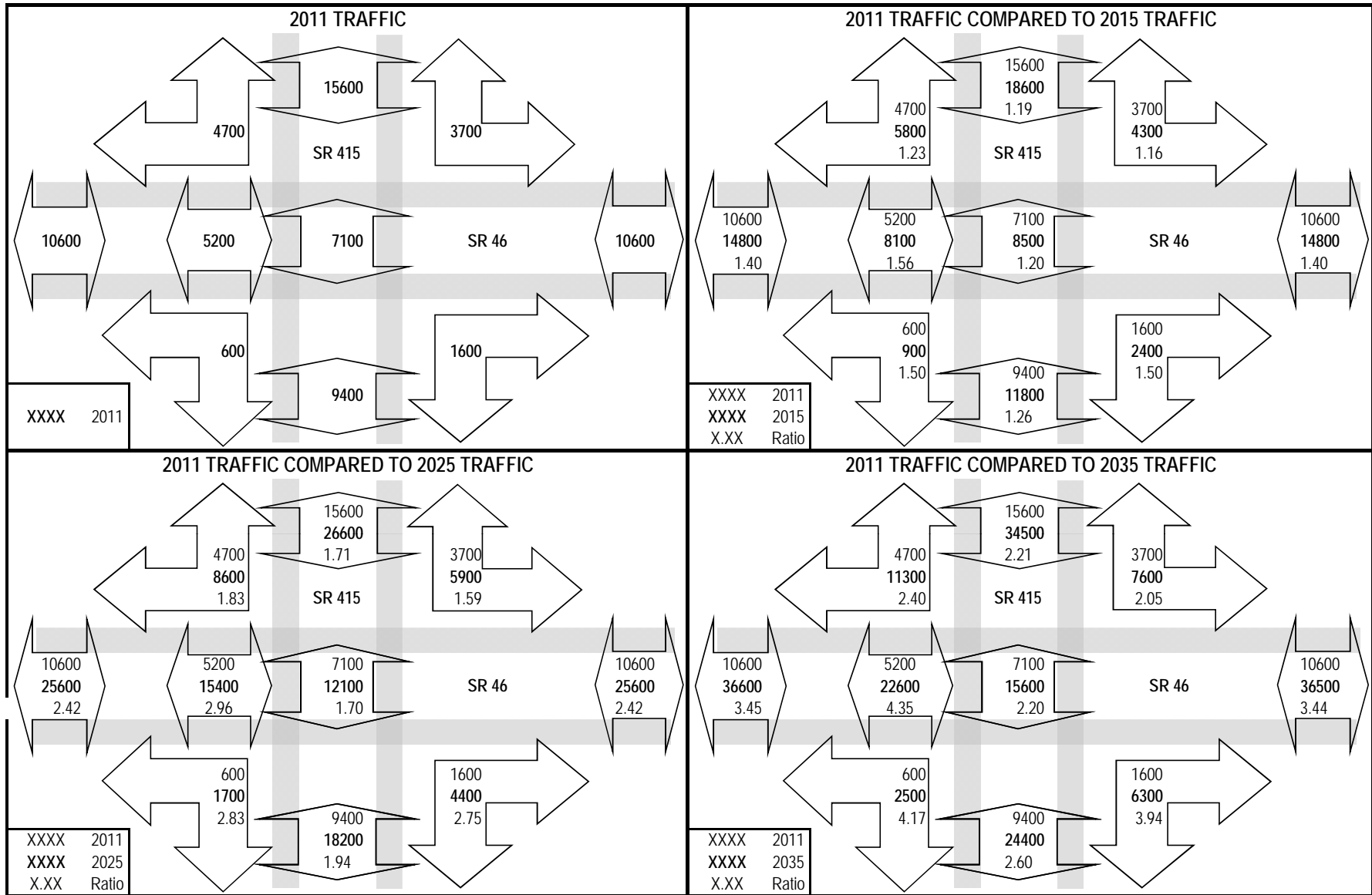
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - Build)



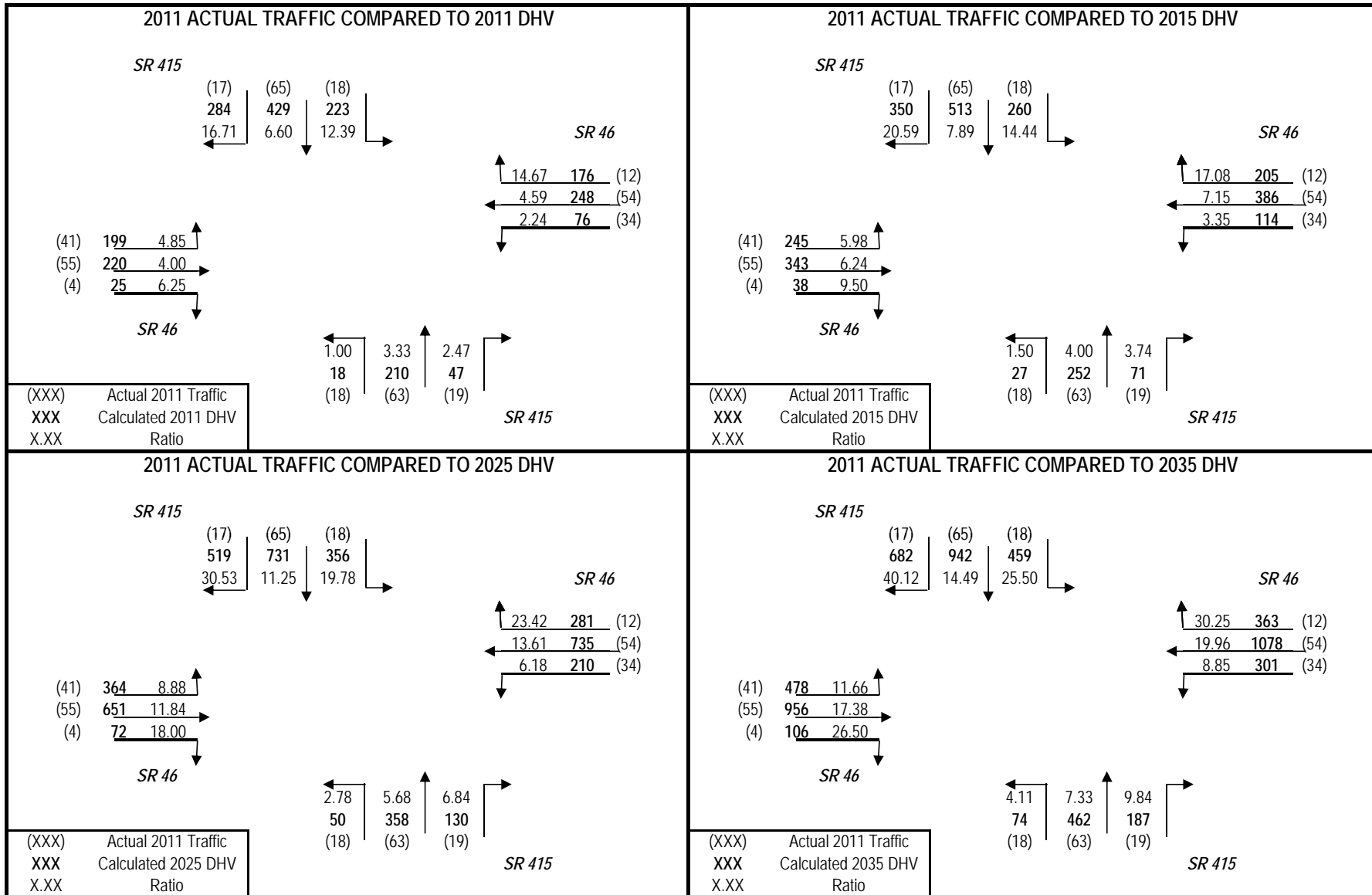
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - Build)



### PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Osceola Road  
 From: SR 415  
 To: CR 426 (AM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			37.9%	Northbound (NB)
			62.1%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Yes  No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
2011
Opening
2015
Mid
2025
Design
2035
Model
2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	10800	8600	2200	0	21600
2035	33300	30000	3300	0	66600

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	10%	10
(EB THRU)	West-to-East	90%	90
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	100%	100
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

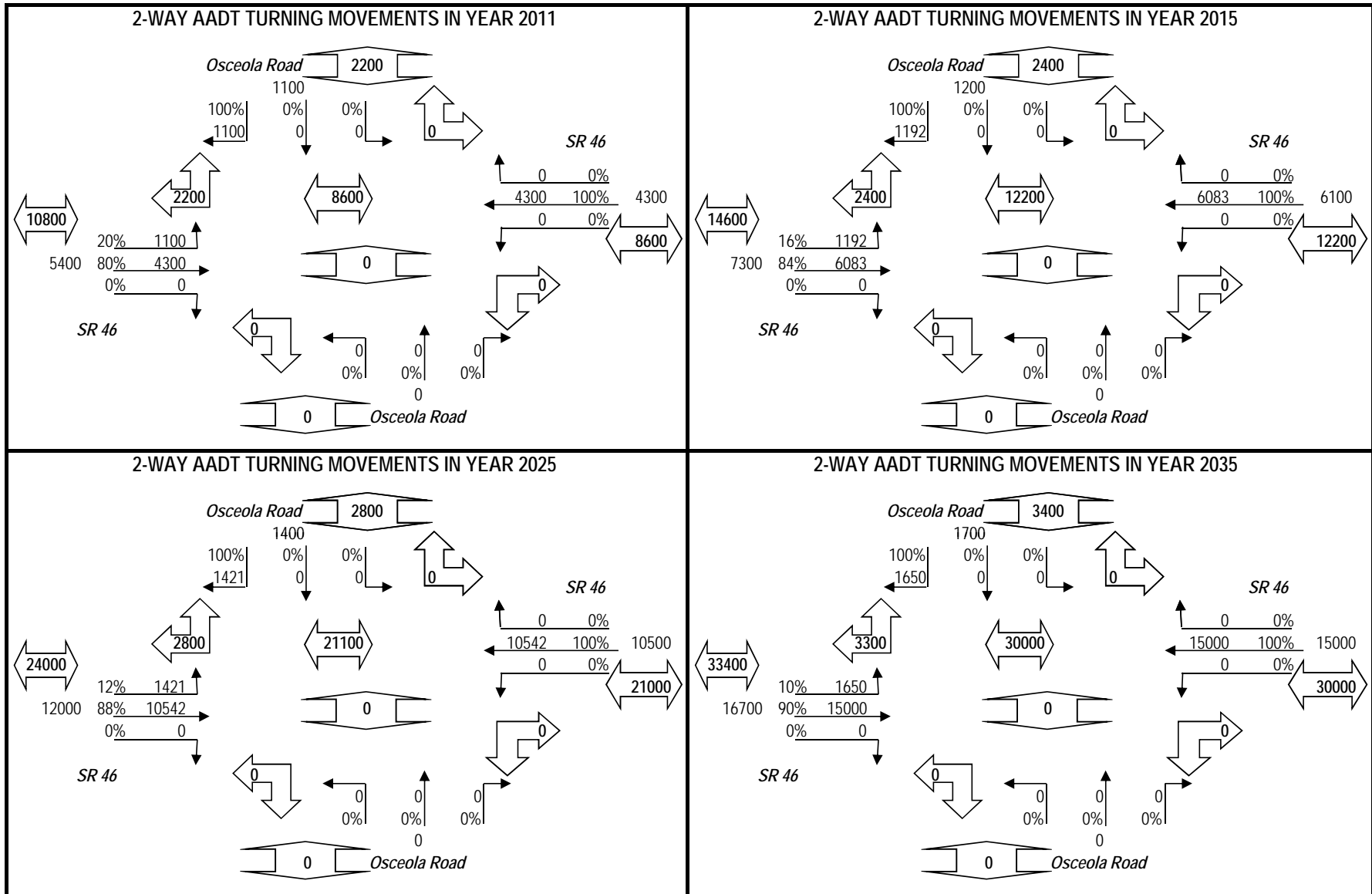
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Osceola Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.10	0.204	1100	0.164	1200	0.119	1400	0.099	1700
West-To-East (Thru)	0.90	0.796	4300	0.836	6100	0.881	10500	0.901	15000
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>5400</b>		<b>7300</b>		<b>11900</b>		<b>16700</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	1.00	1.000	4300	1.000	6100	1.000	10500	1.000	15000
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>6100</b>		<b>10500</b>		<b>15000</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	1100	1.000	1200	1.000	1400	1.000	1700
<b>Total Flow From North:</b>			<b>1100</b>		<b>1200</b>		<b>1400</b>		<b>1700</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

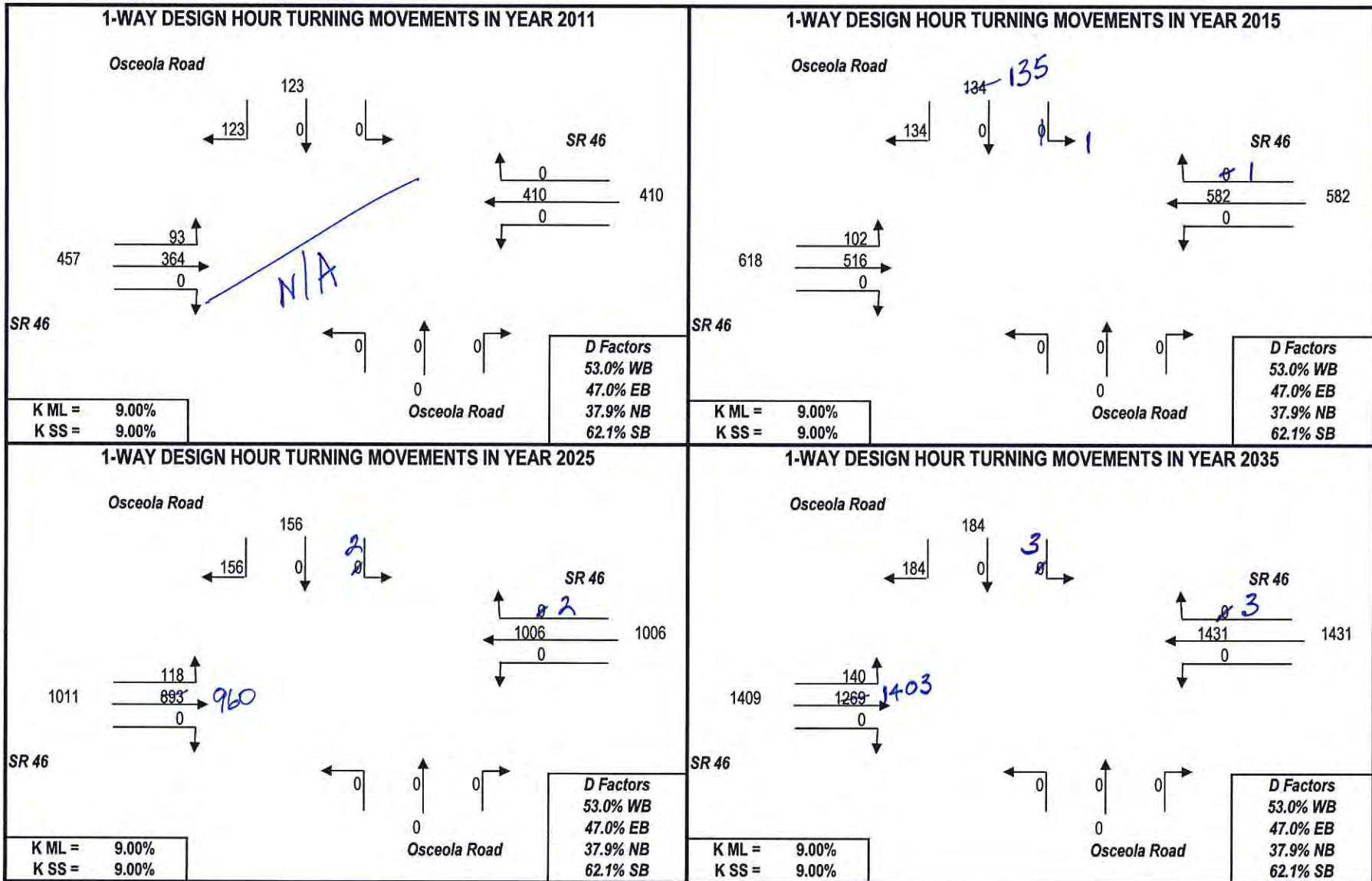
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - Build)

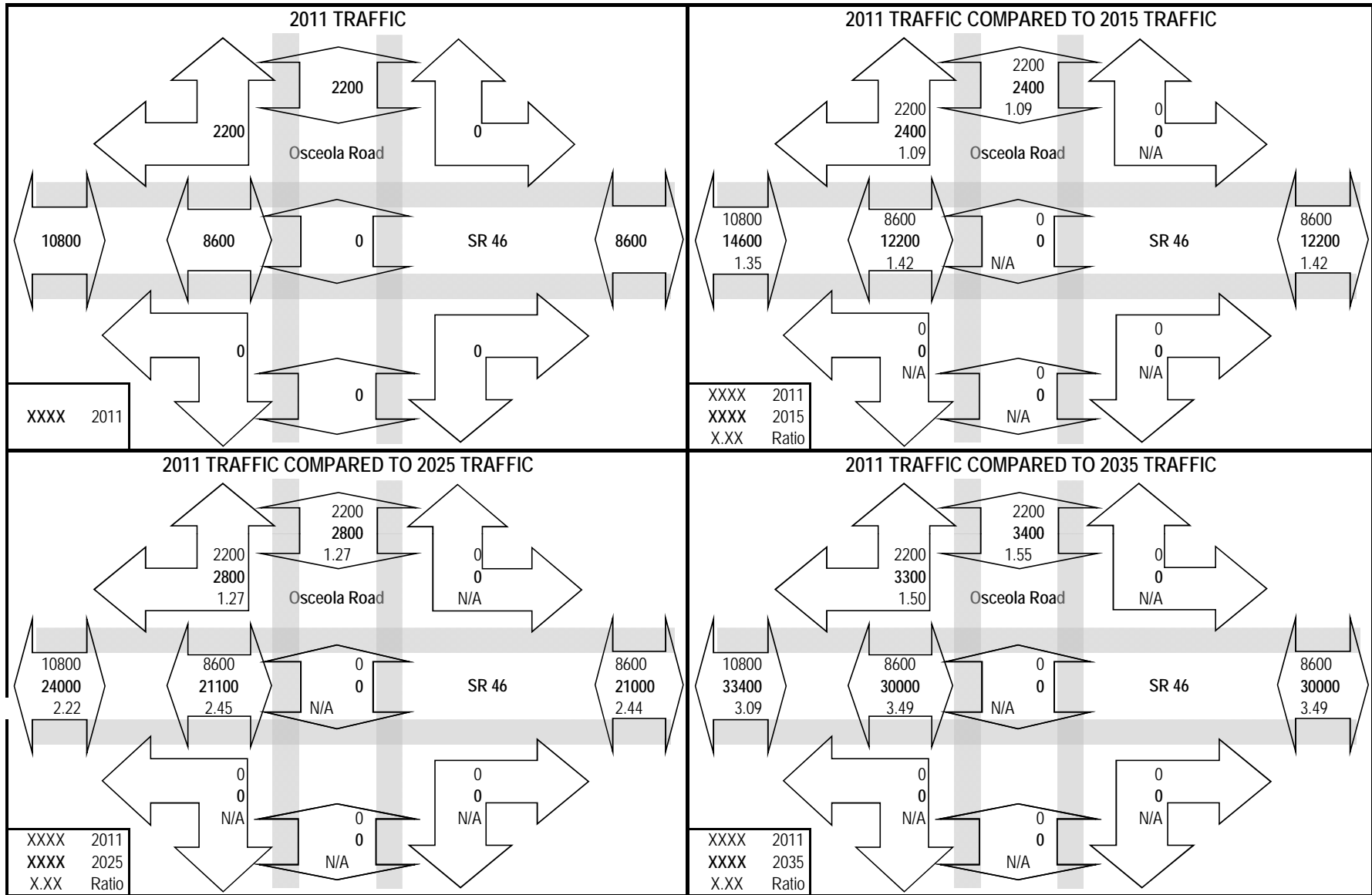




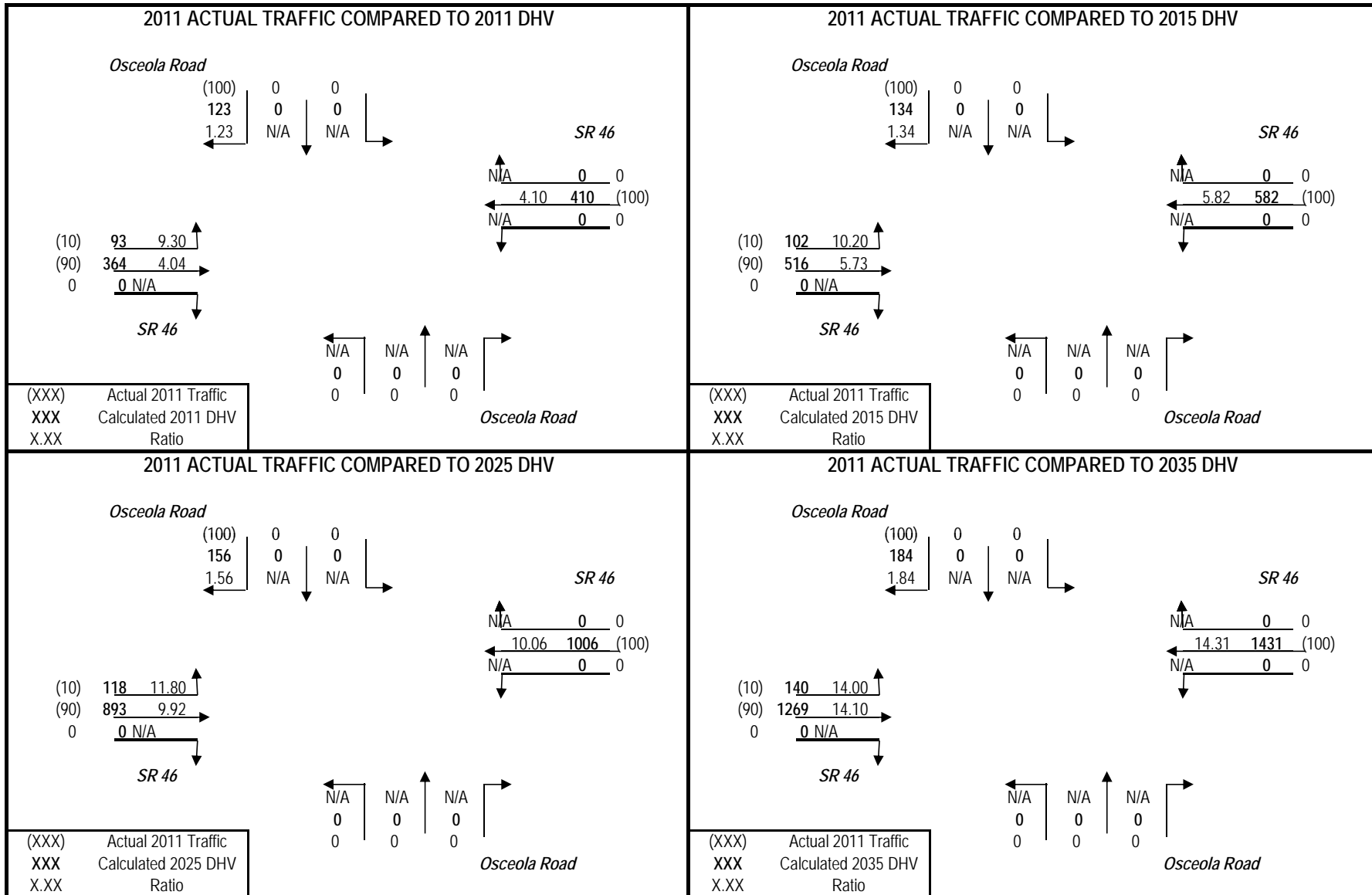
## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - Build)



PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Mullet Lake Park Road  
 From: SR 415  
 To: CR 426 (AM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

K Factors	Mainline	D Factors	Mainline
	9.00%		53.0%
	Sidestreet		47.0%
	9.00%		38.7%
			61.3%
			Westbound (WB)
			Eastbound (EB)
			Northbound (NB)
			Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47

If "No" go to cell C31

### Enter Year and Growth Rates from Base Year:

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

### Mainline Growth Function

Linear  
 Exponential  
 Decaying

### Side Street Growth Function

Linear  
 Exponential  
 Decaying

### Enter Base Year AADTs for Volume Comparison:

(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

### Enter Project and Model Years

Year
Base
2011
Opening
2015
Mid
2025
Design
2035
Model
2035

### Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8600	9000	700	0	18300
2035	30000	31000	1200	0	62200

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	1%	1
(EB THRU)	West-to-East	99%	99
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	98%	98
(WB RT)	East-to-North	2%	2
(SB LT)	North-to-East	83%	83
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	17%	17
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0
Desired Closure:		0.01	

(must be done manually)

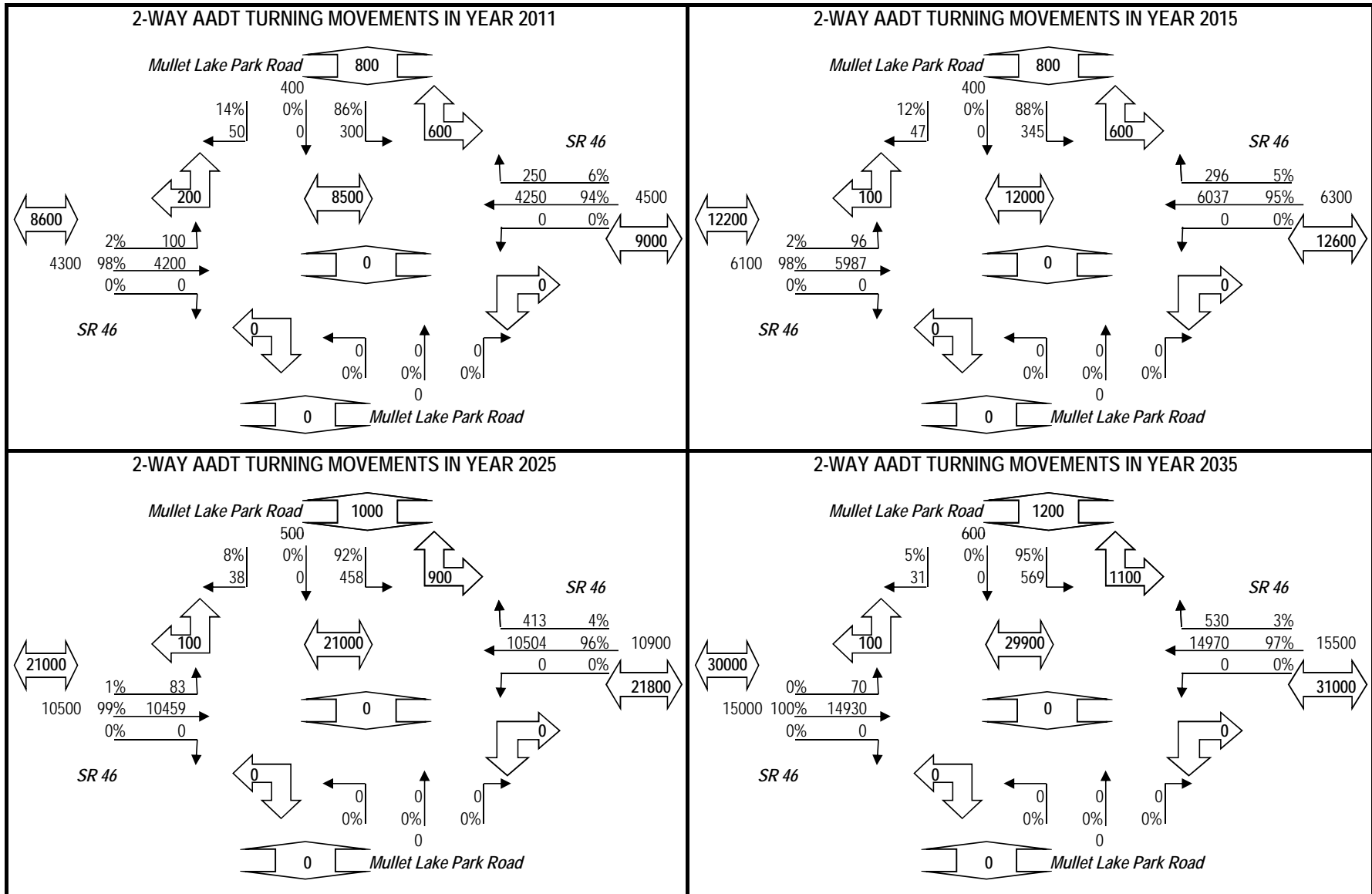
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Mullet Lake Park Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

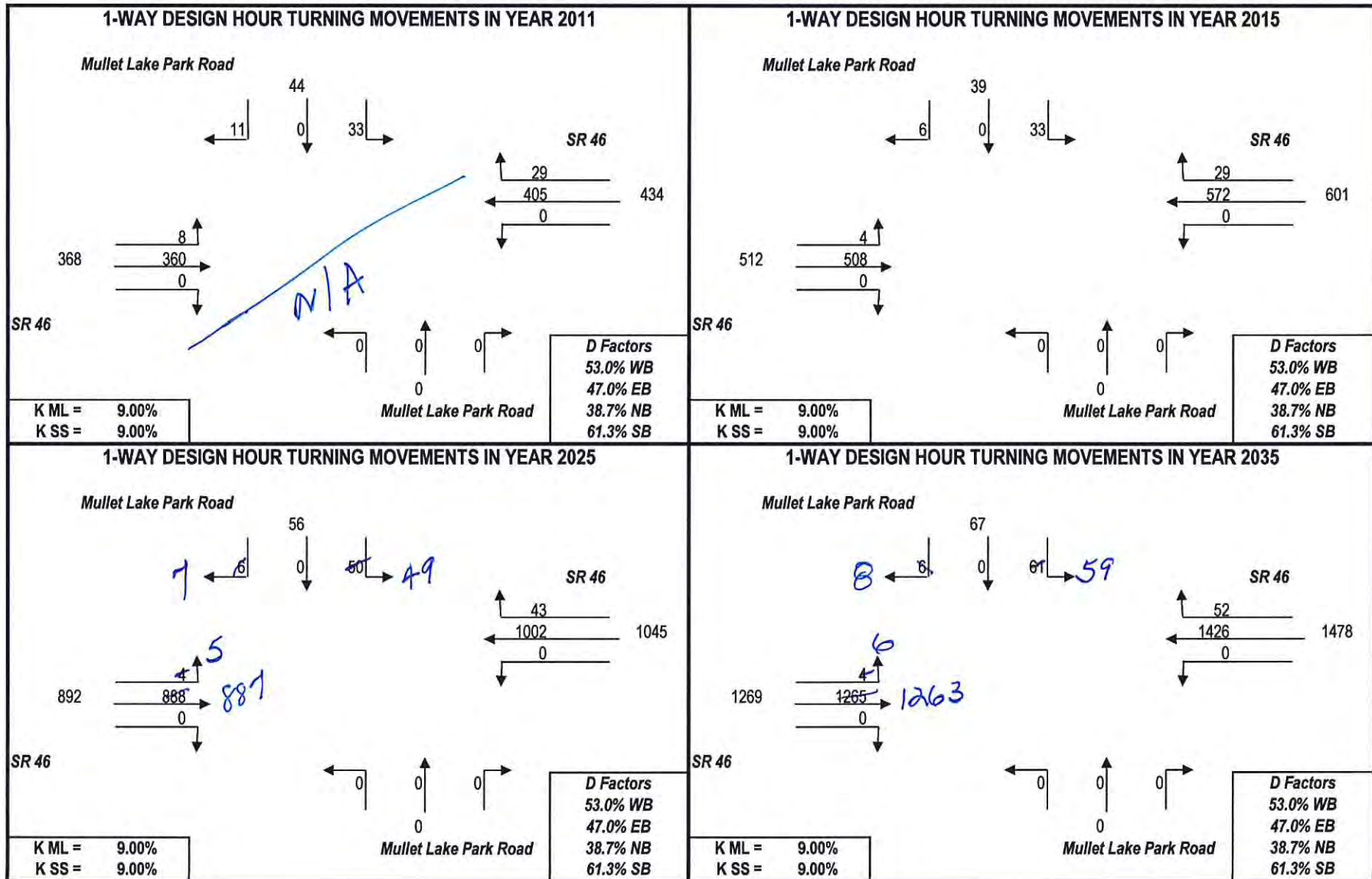
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.023	100	0.016	100	0.008	100	0.005	100
West-To-East (Thru)	0.99	0.977	4200	0.984	6000	0.992	10500	0.995	14900
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>6100</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.98	0.945	4300	0.953	6000	0.962	10500	0.966	15000
East-To-North (RT)	0.02	0.055	200	0.047	300	0.038	400	0.034	500
<b>Total Flow From East:</b>			<b>4500</b>		<b>6300</b>		<b>10900</b>		<b>15500</b>
North-To-East (LT)	0.83	0.856	300	0.881	300	0.922	500	0.948	600
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.17	0.144	100	0.119	0	0.078	0	0.052	0
<b>Total Flow From North:</b>			<b>400</b>		<b>300</b>		<b>500</b>		<b>600</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

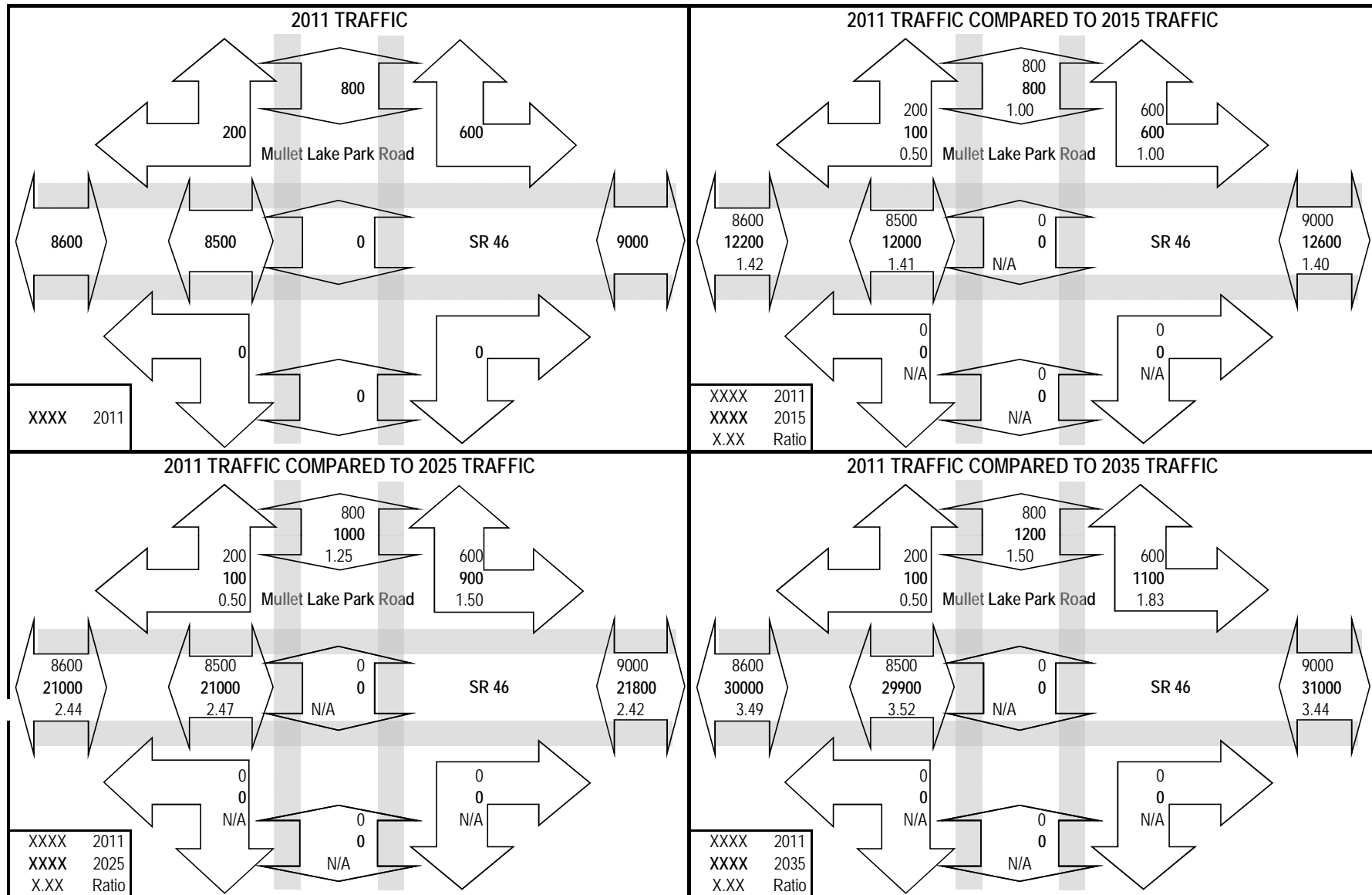
## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - Build)



# PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - Build)

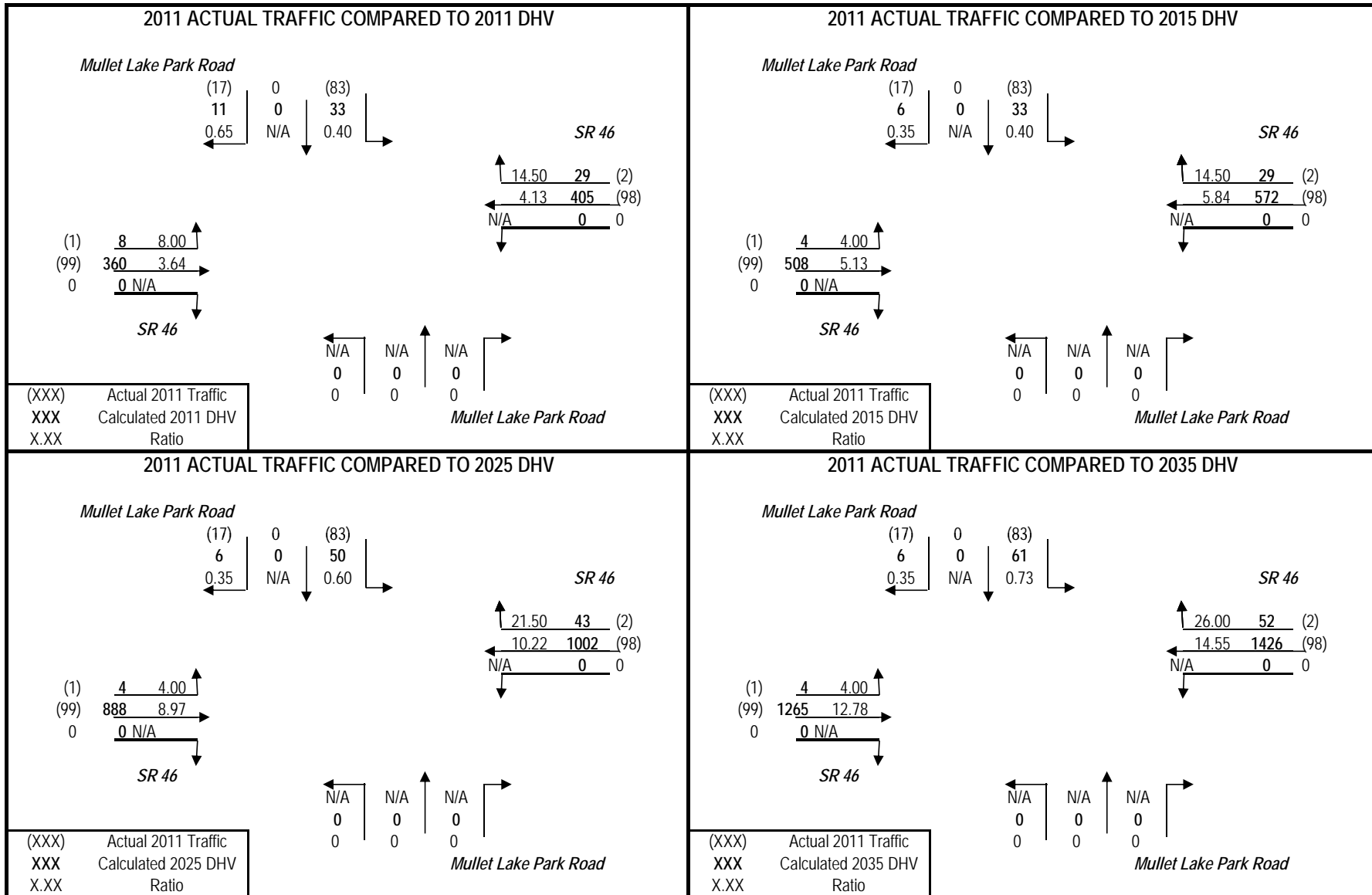


## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - Build)





## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Cochran Road  
**From:** SR 415  
**To:** CR 426 (AM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			69.0%	Northbound (NB)
			31.0%	Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	9000	8700	0	750	18450
2035	31000	30000	0	1100	62100

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	99%	99
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	100%	0
(SB RT)	North-to-West	0%	0
(NB LT)	South-to-West	35%	35
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	65%	65
Desired Closure:		0.01	

(must be done manually)

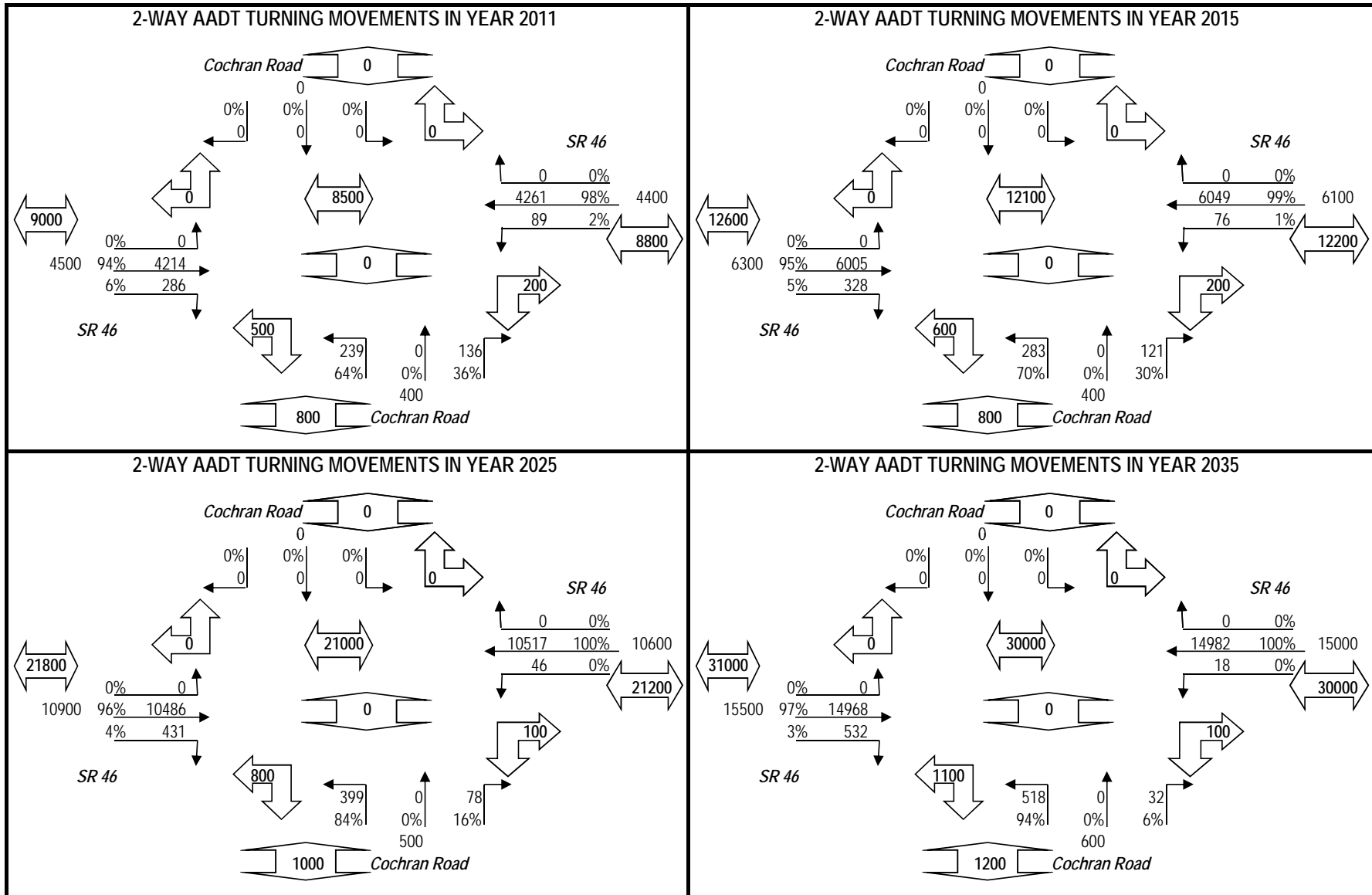
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Cochran Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

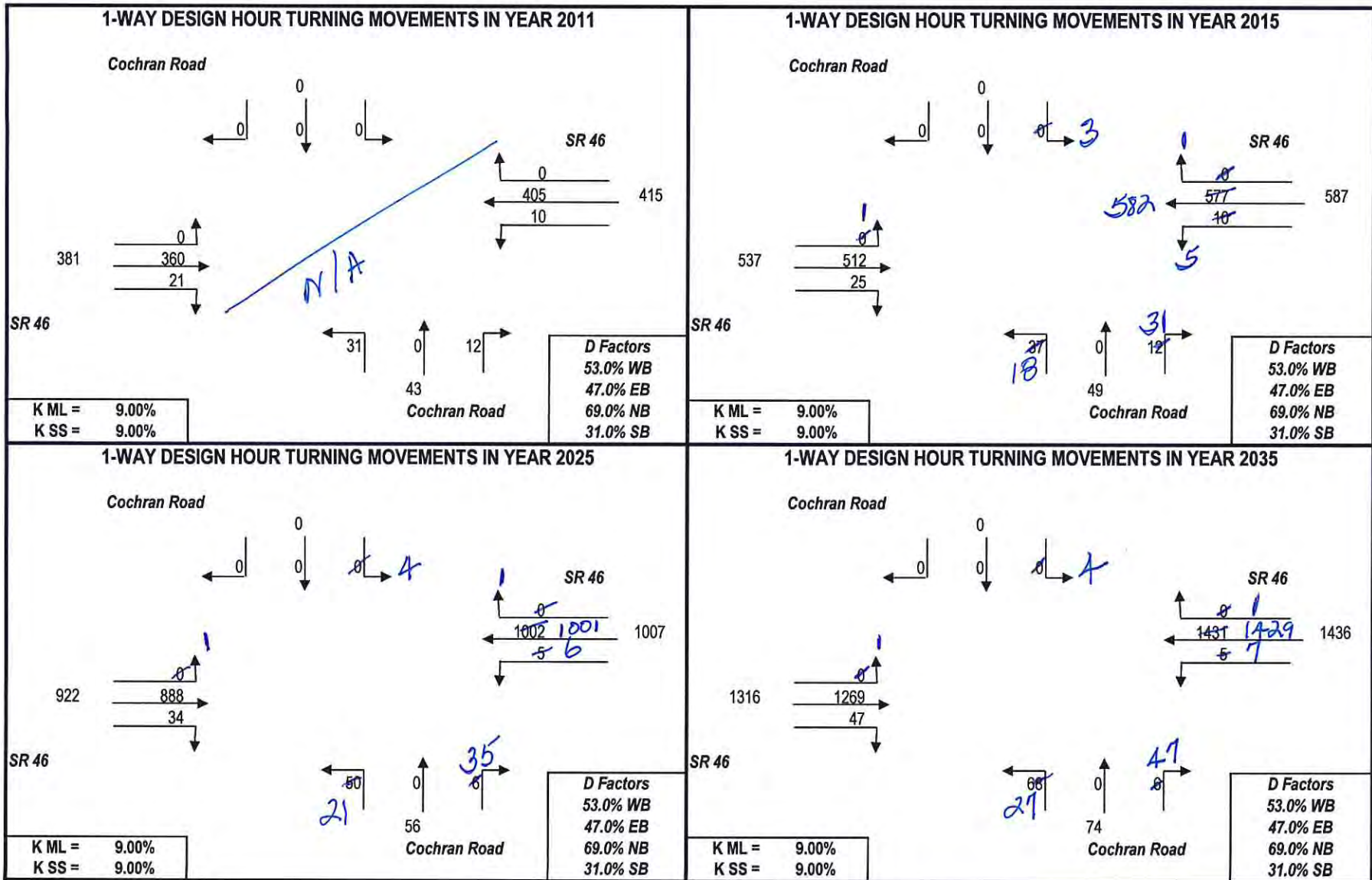
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.99	0.936	4200	0.948	6000	0.960	10500	0.966	15000
West-To-South (RT)	0.01	0.064	300	0.052	300	0.040	400	0.034	500
<b>Total Flow From West:</b>			<b>4500</b>		<b>6300</b>		<b>10900</b>		<b>15500</b>
East-To-South (LT)	0.01	0.020	100	0.012	100	0.004	0	0.001	0
East-To-West (Thru)	0.99	0.980	4300	0.988	6000	0.996	10500	0.999	15000
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4400</b>		<b>6100</b>		<b>10500</b>		<b>15000</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.35	0.636	200	0.701	300	0.837	400	0.941	500
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.65	0.364	100	0.299	100	0.163	100	0.059	0
<b>Total Flow From South:</b>			<b>300</b>		<b>400</b>		<b>500</b>		<b>500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

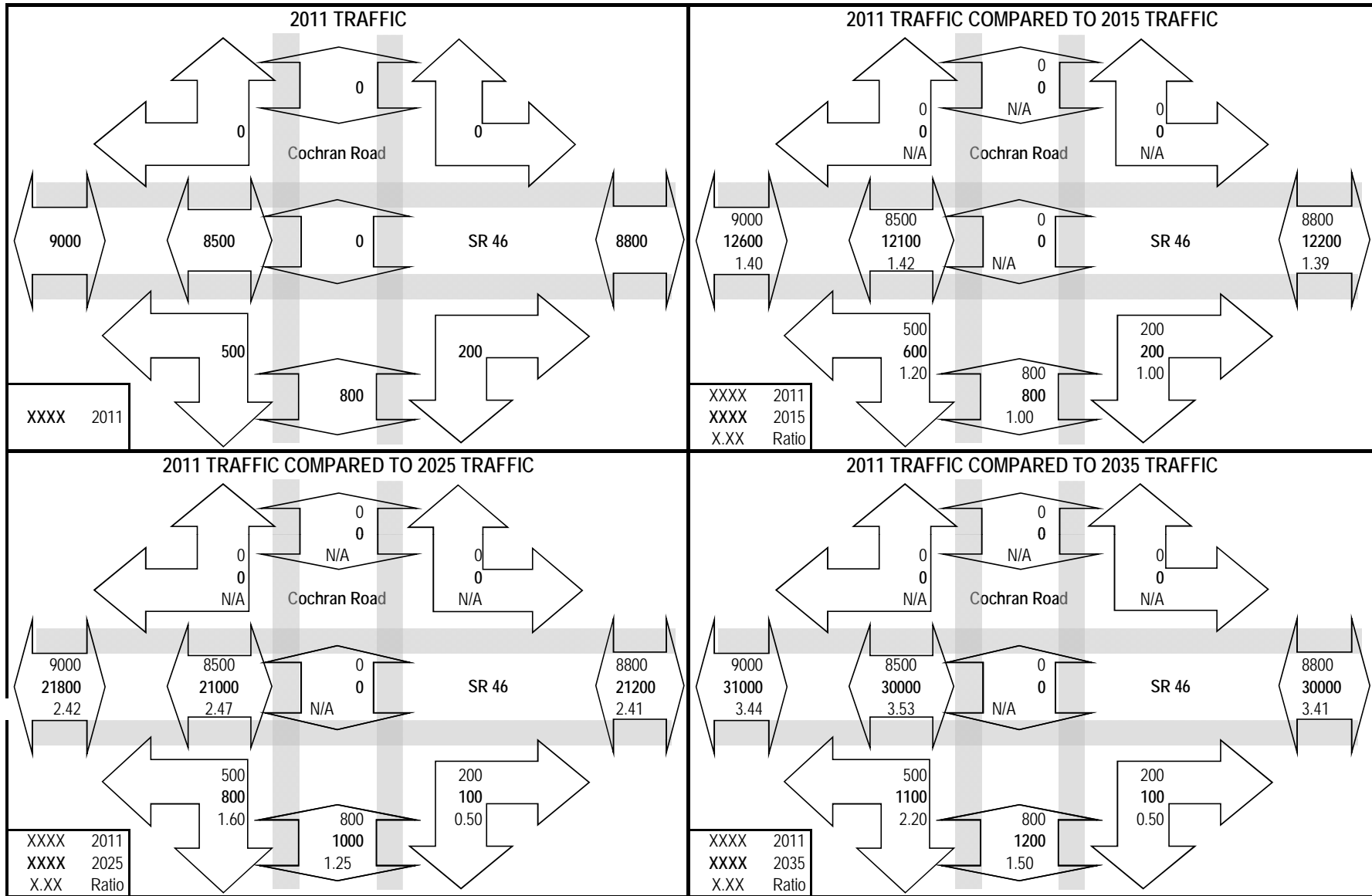
## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - Build)



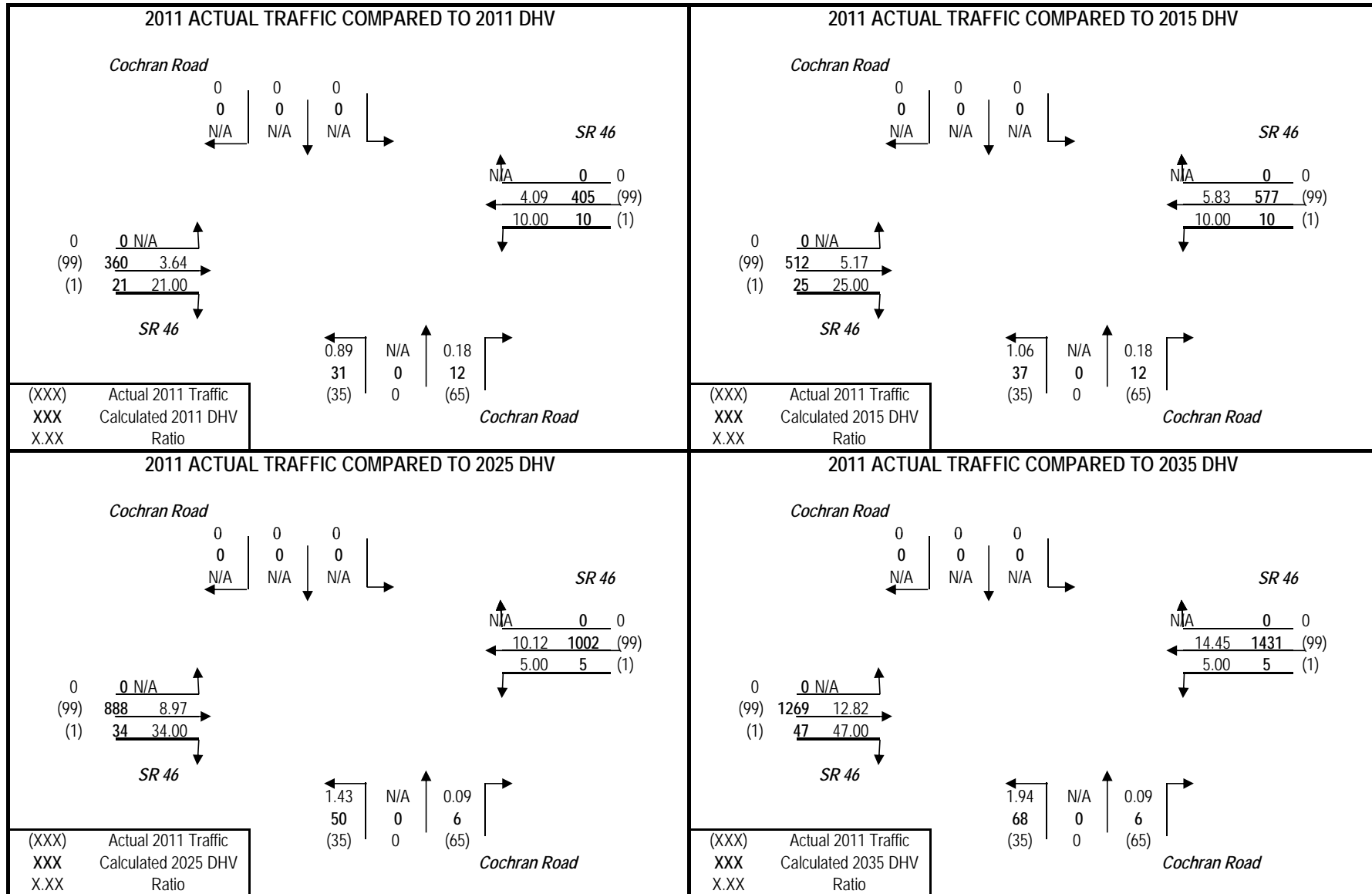
### PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Woodbridge Dr/Avenue C  
 From: SR 415  
 To: CR 426 (AM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			38.1%	Northbound (NB)
			61.9%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
2011
Opening
2015
Mid
2025
Design
2035
Model
2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	9000	8700	1700	250	19650
2035	31000	30000	2500	350	63850

**1st Guess Actual/Counted  
 Turning %'s for Traffic  
 AADT Balancing for 2011**

(EB LT)	West-to-North	6%	6
(EB THRU)	West-to-East	93%	93
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	98%	98
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	14%	14
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	86%	86
(NB LT)	South-to-West	57%	57
(NB THRU)	South-to-North	29%	29
(NB RT)	South-to-East	14%	14

(must be done manually)

Desired Closure: 0.01



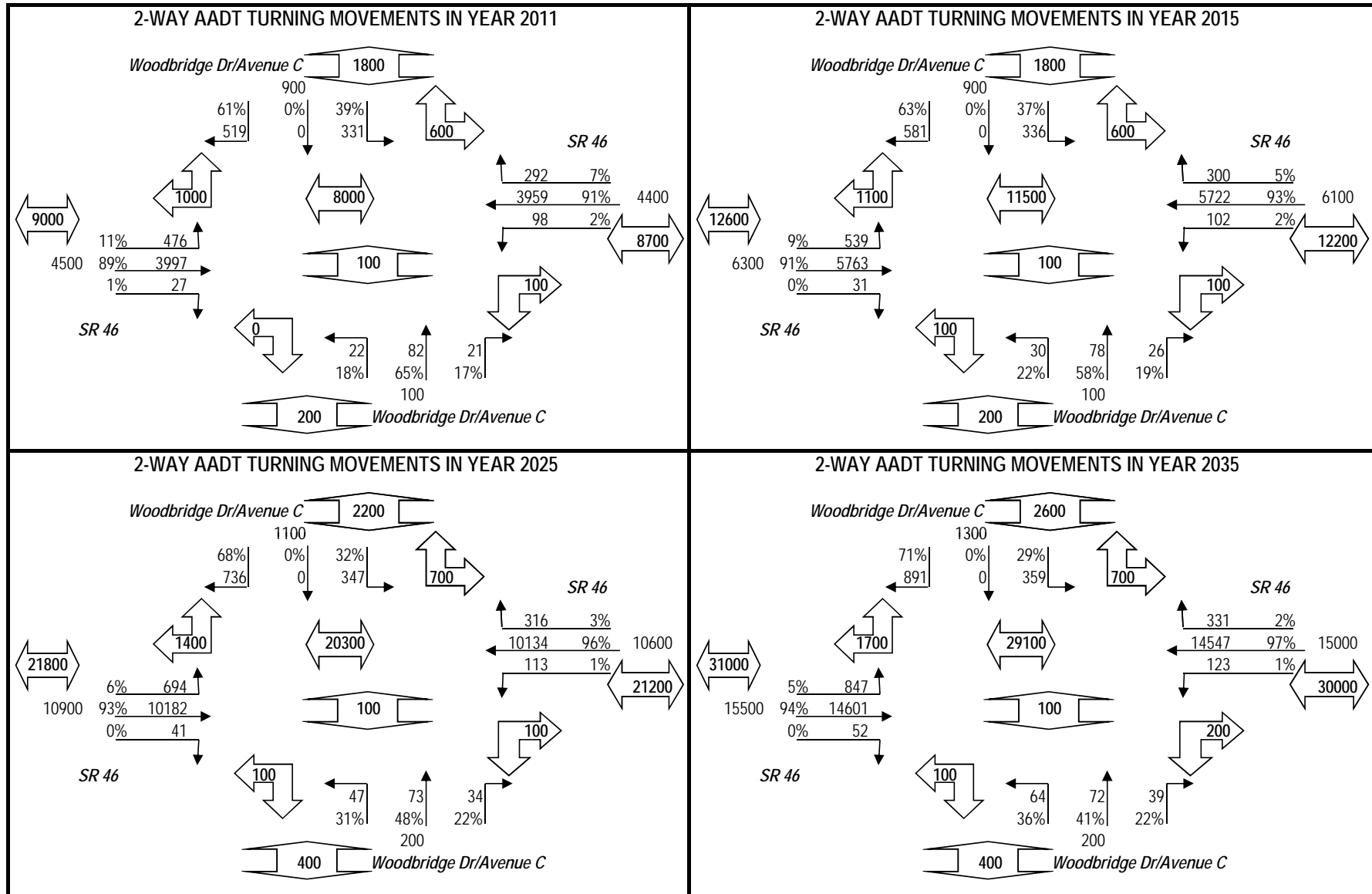
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Woodbridge Dr/Avenue C	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

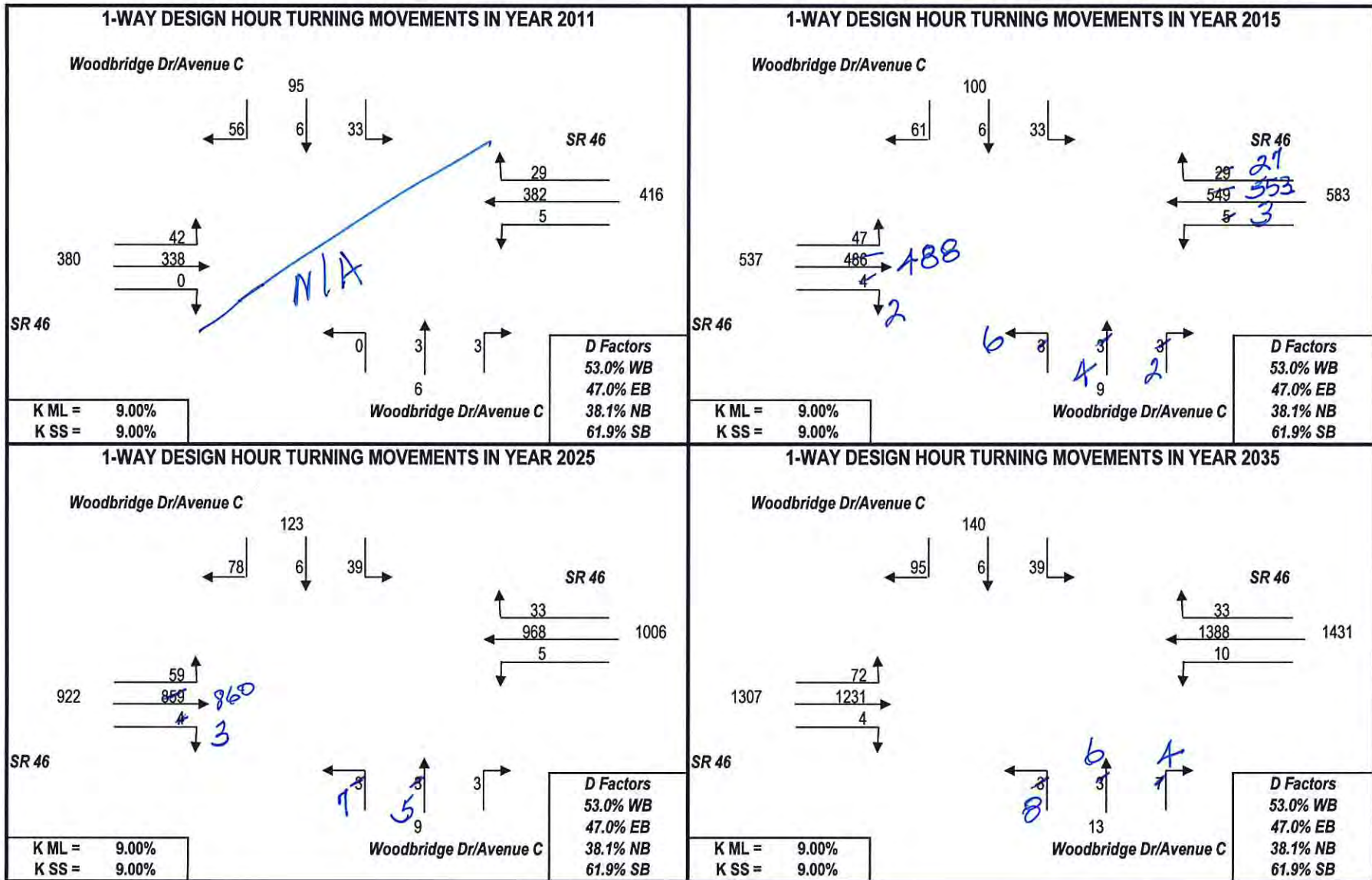
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.06	0.106	500	0.085	500	0.064	700	0.055	800
West-To-East (Thru)	0.93	0.888	4000	0.910	5800	0.933	10200	0.942	14600
West-To-South (RT)	0.01	0.006	0	0.005	0	0.004	0	0.003	100
<b>Total Flow From West:</b>			<b>4500</b>		<b>6300</b>		<b>10900</b>		<b>15500</b>
East-To-South (LT)	0.01	0.023	100	0.017	100	0.011	100	0.008	100
East-To-West (Thru)	0.98	0.910	4000	0.934	5700	0.959	10100	0.970	14500
East-To-North (RT)	0.01	0.067	300	0.049	300	0.030	300	0.022	300
<b>Total Flow From East:</b>			<b>4400</b>		<b>6100</b>		<b>10500</b>		<b>14900</b>
North-To-East (LT)	0.14	0.389	300	0.366	300	0.320	300	0.287	400
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.86	0.611	500	0.634	600	0.680	700	0.713	900
<b>Total Flow From North:</b>			<b>800</b>		<b>900</b>		<b>1000</b>		<b>1300</b>
South-To-West (LT)	0.57	0.177	0	0.223	0	0.306	0	0.365	100
South-To-North (Thru)	0.29	0.652	100	0.583	100	0.476	100	0.413	100
South-To-East (RT)	0.14	0.171	0	0.194	0	0.218	0	0.222	0
<b>Total Flow From South:</b>			<b>100</b>		<b>100</b>		<b>100</b>		<b>200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

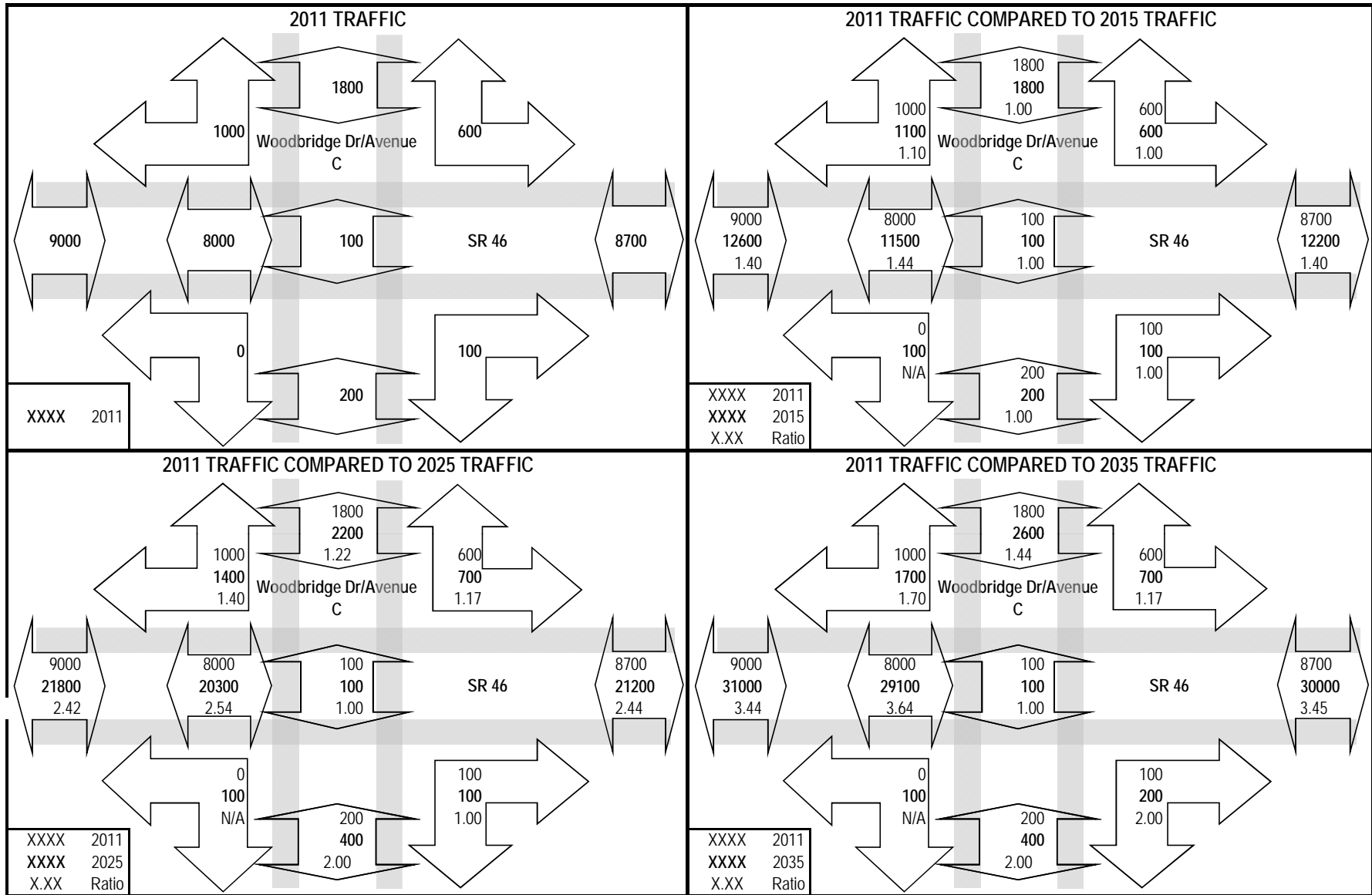
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - Build)



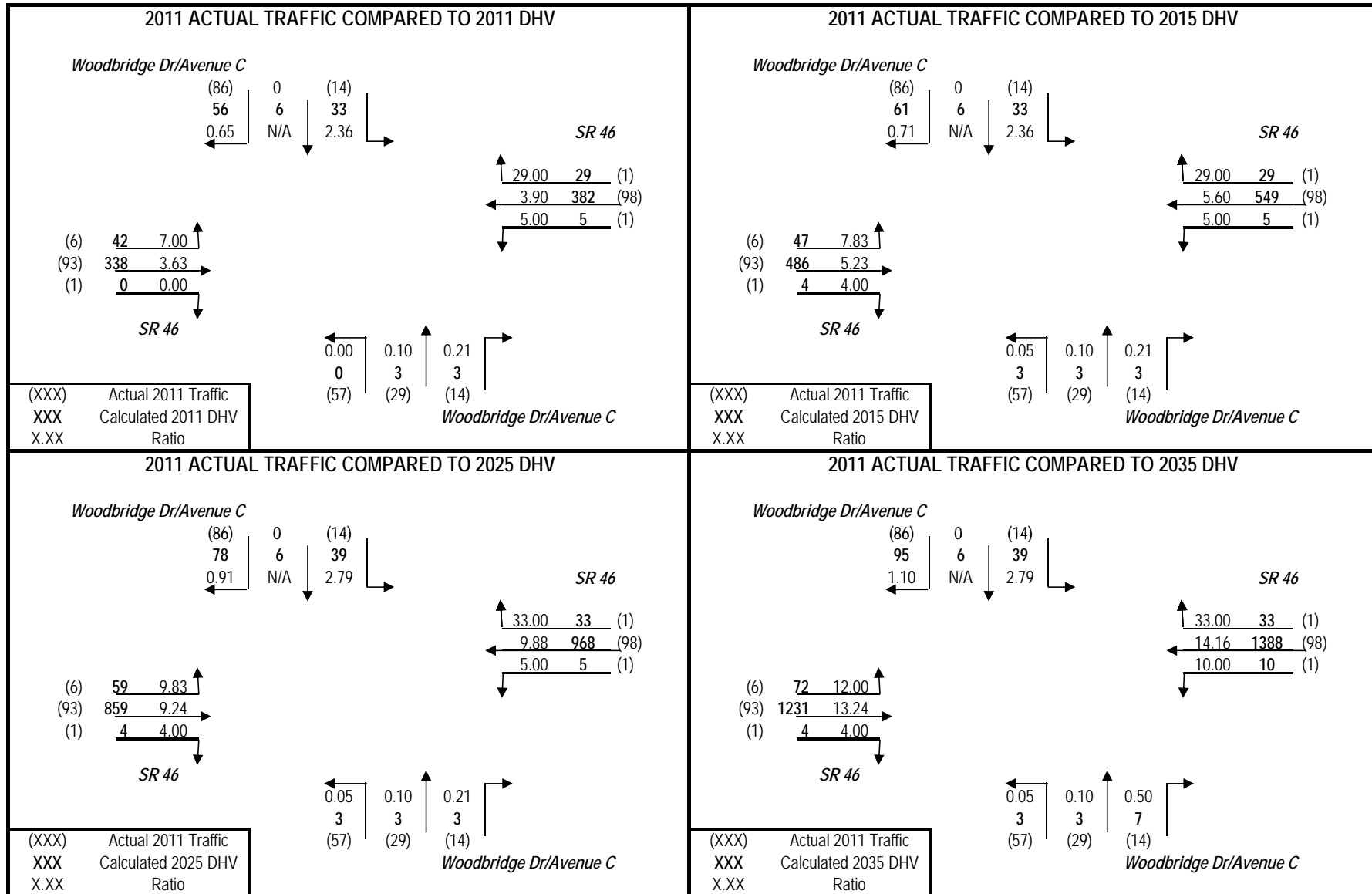
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - Build)



# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** 3rd Street  
**From:** SR 415  
**To:** CR 426 (AM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		53.0%	Westbound (WB)
	Sidestreet		47.0%	Eastbound (EB)
	9.00%		Sidestreet	
			70.0%	Northbound (NB)
			30.0%	Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying  


---

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	8700	90	0	17490
2035	30000	30000	150	0	60150

		1st Guess	Actual/Counted	
		Turning %'s for Traffic AADT Balancing for 2011		
(EB LT)	West-to-North	1%	1	
(EB THRU)	West-to-East	99%	99	
(EB RT)	West-to-South	0%	0	
(WB LT)	East-to-South	0%	0	(must be done manually)
(WB THRU)	East-to-West	99%	99	
(WB RT)	East-to-North	1%	1	
(SB LT)	North-to-East	67%	67	
(SB THRU)	North-to-South	0%	0	
(SB RT)	North-to-West	33%	33	
(NB LT)	South-to-West	0%	0	
(NB THRU)	South-to-North	100%	0	
(NB RT)	South-to-East	0%	0	
Desired Closure:		0.01		

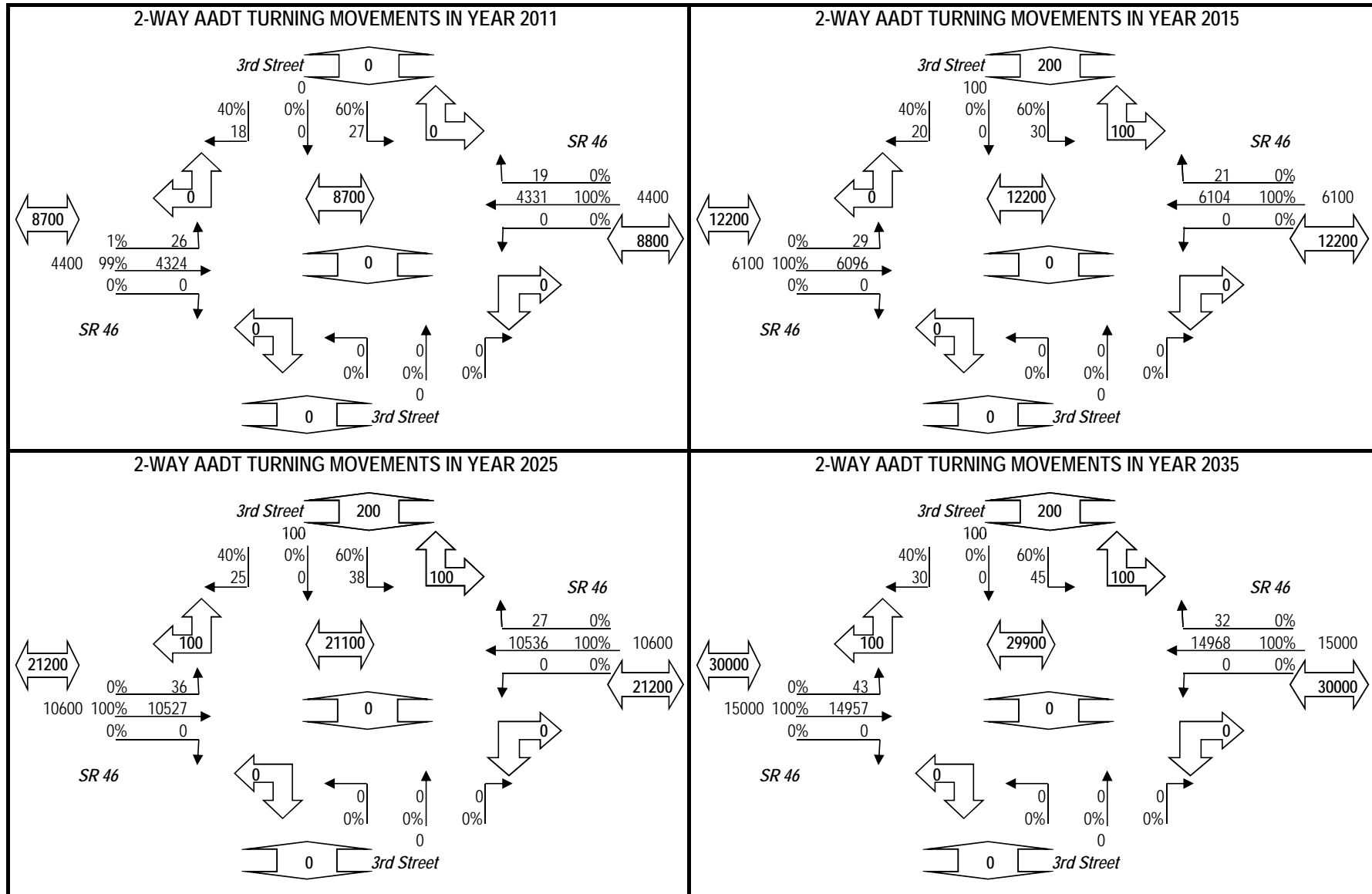
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	3rd Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.006	0	0.005	0	0.003	0	0.003	0
West-To-East (Thru)	0.99	0.994	4300	0.995	6100	0.997	10500	0.997	15000
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>6100</b>		<b>10500</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.996	4300	0.997	6100	0.997	10500	0.998	15000
East-To-North (RT)	0.01	0.004	0	0.003	0	0.003	0	0.002	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>6100</b>		<b>10500</b>		<b>15000</b>
North-To-East (LT)	0.67	0.596	0	0.597	0	0.597	0	0.597	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.33	0.404	0	0.403	0	0.403	0	0.403	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

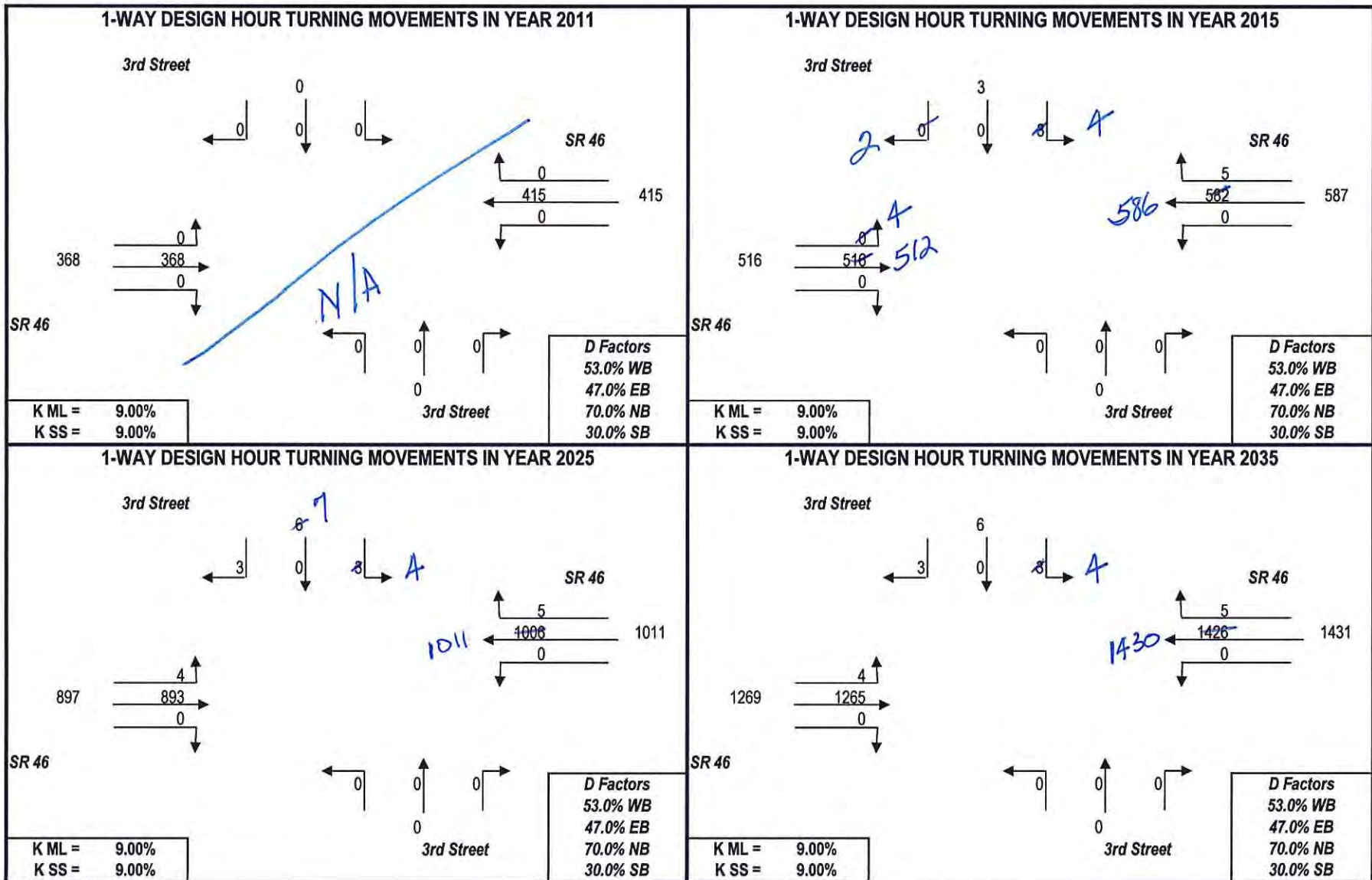
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - Build)

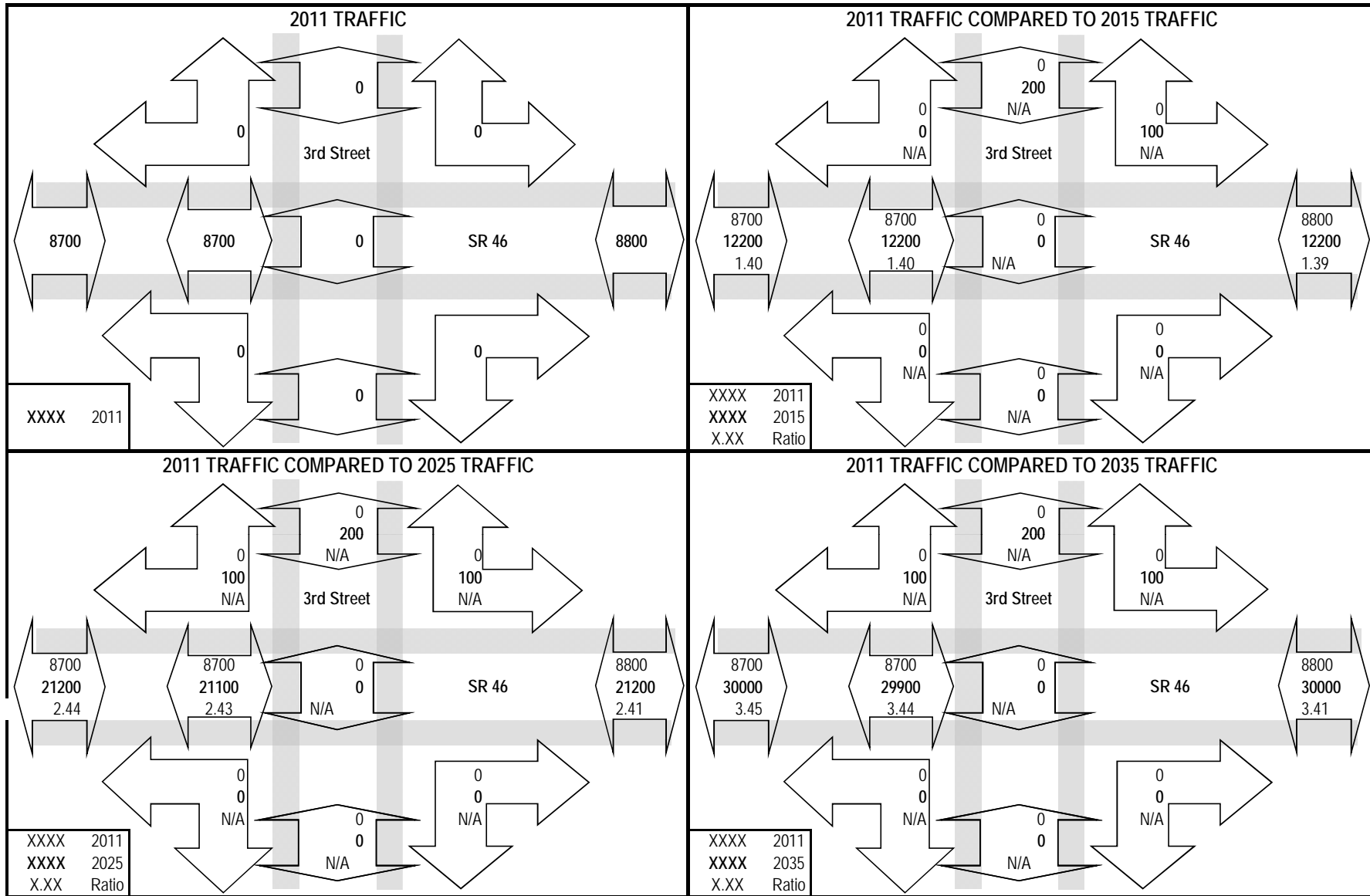




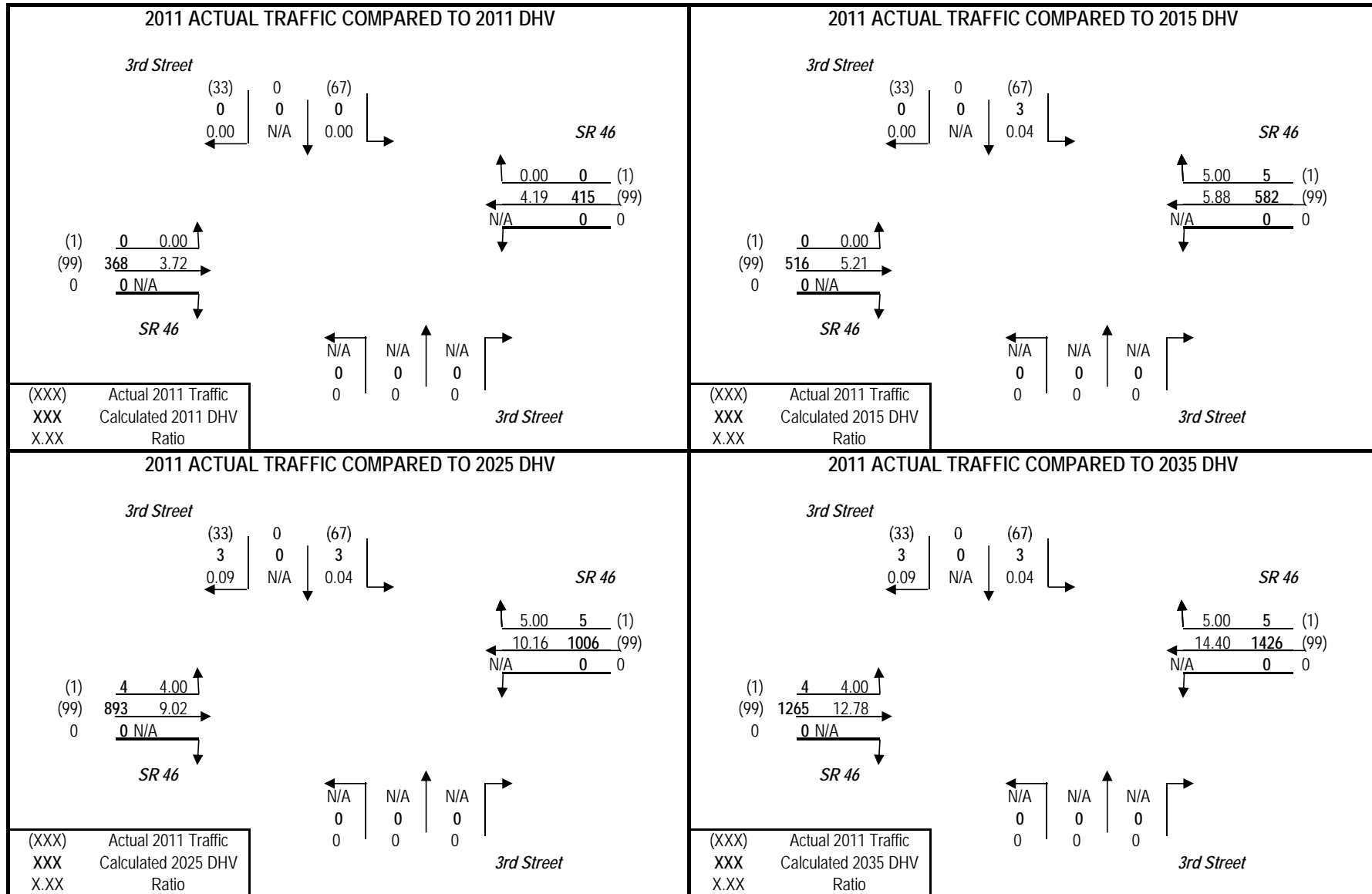
## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Oak Street  
**From:** SR 415  
**To:** CR 426 (AM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

**K Factors**  
 Mainline: 9.00%  
 Sidestreet: 9.00%

**D Factors**  
 Mainline: 53.0% Westbound (WB)  
 47.0% Eastbound (EB)  
 Sidestreet: 70.0% Northbound (NB)  
 30.0% Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**  
 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**  
 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
0	0	0	0	0

**Enter Project and Model Years**

Year
Base: 2011
Opening: 2015
Mid: 2025
Design: 2035
Model: 2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West: EB Approach	From East: WB Approach	From North: SB Approach	From South: NB Approach	TOTAL
2011	8700	8700	220	0	17620
2035	30000	30000	330	0	60330

**1st Guess Actual/Counted  
Turning %'s for Traffic  
AADT Balancing for 2011**

(EB LT)	West-to-North	2%	2
(EB THRU)	West-to-East	98%	98
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	30%	30
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	70%	70
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

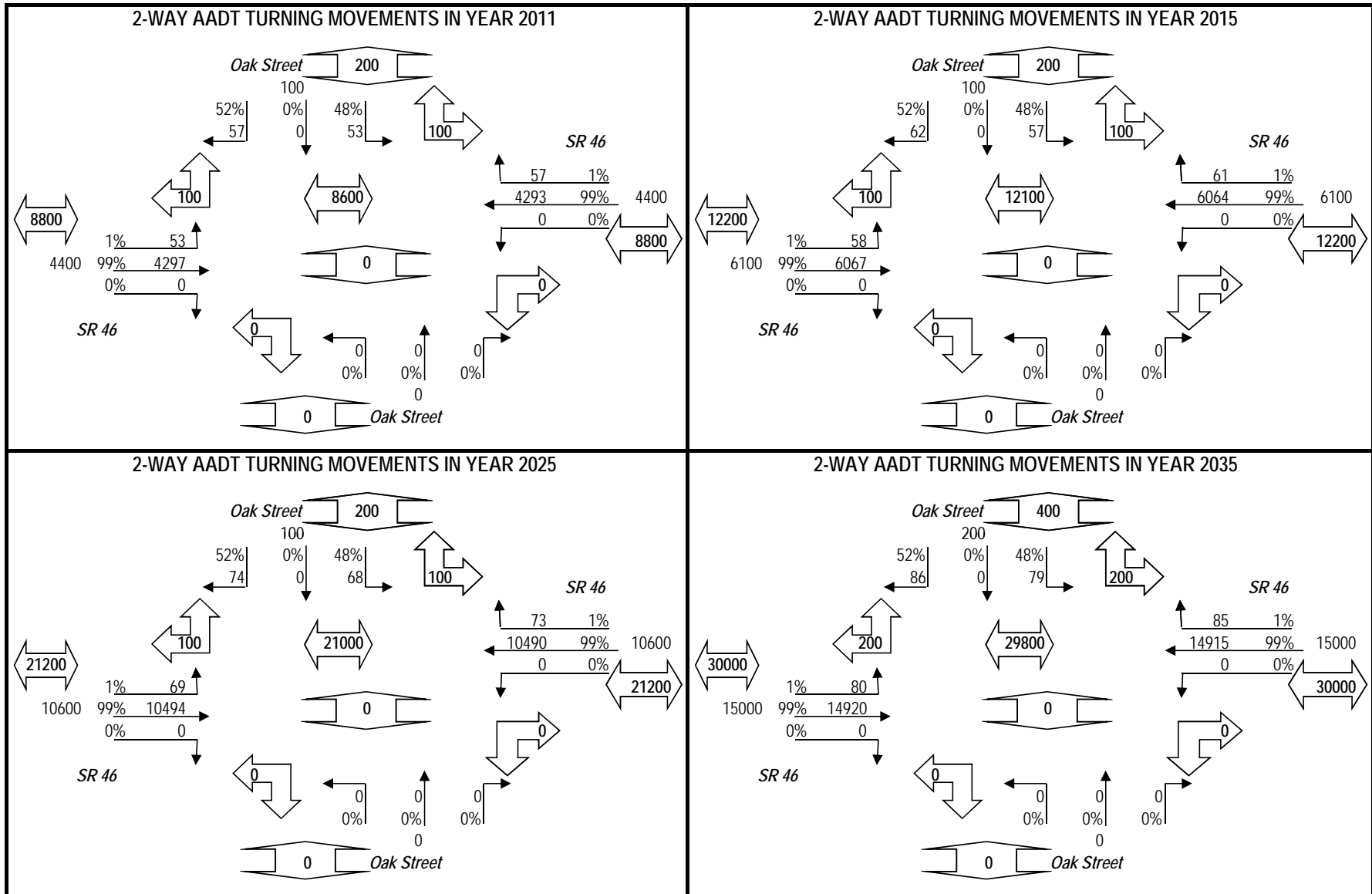
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Oak Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

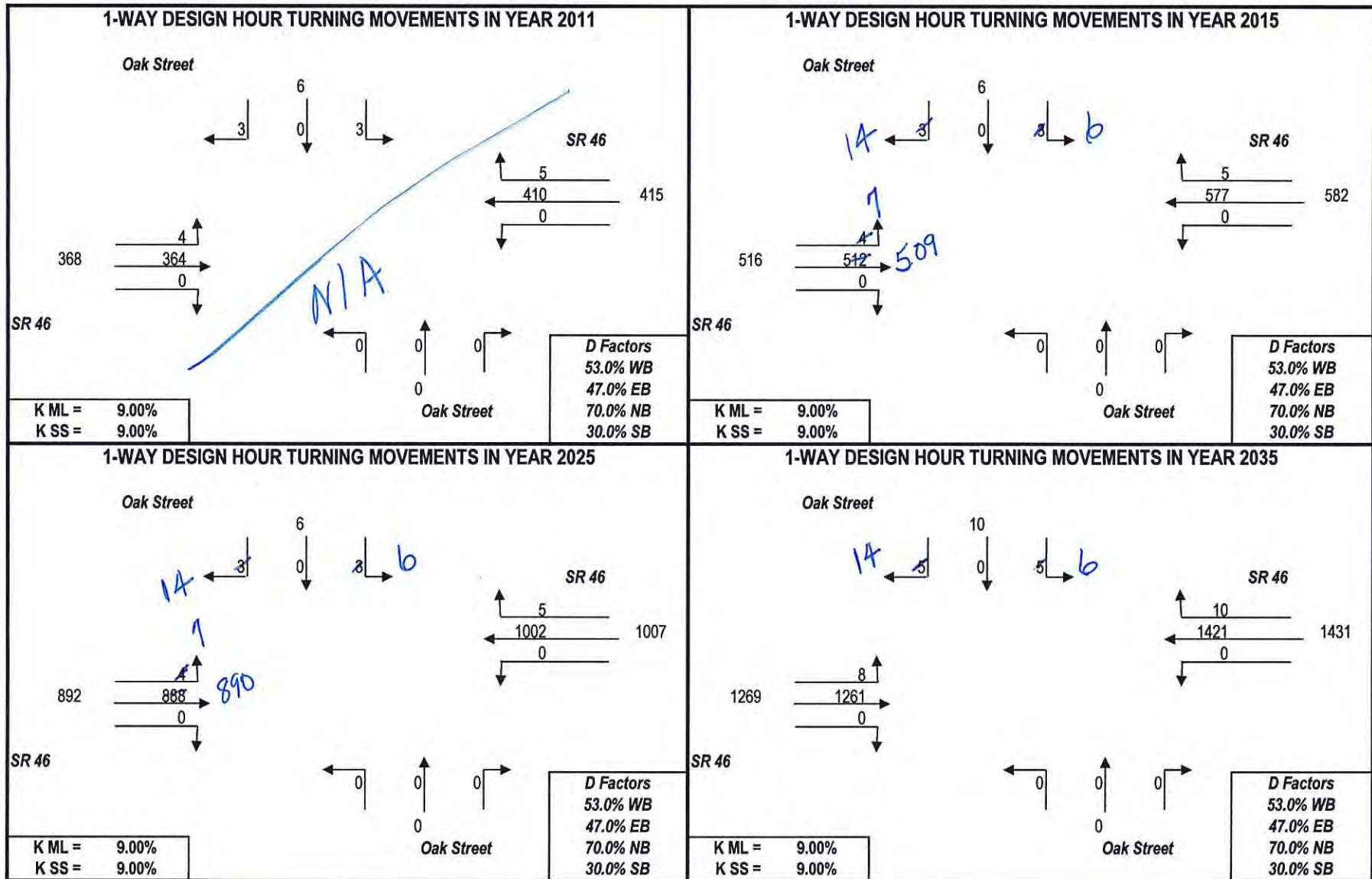
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.02	0.012	100	0.009	100	0.007	100	0.005	100
West-To-East (Thru)	0.98	0.988	4300	0.991	6100	0.993	10500	0.995	14900
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.987	4300	0.990	6100	0.993	10500	0.994	14900
East-To-North (RT)	0.01	0.013	100	0.010	100	0.007	100	0.006	100
<b>Total Flow From East:</b>			<b>4400</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
North-To-East (LT)	0.30	0.479	100	0.479	100	0.479	100	0.478	100
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.70	0.521	100	0.521	100	0.521	100	0.522	100
<b>Total Flow From North:</b>			<b>200</b>		<b>200</b>		<b>200</b>		<b>200</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

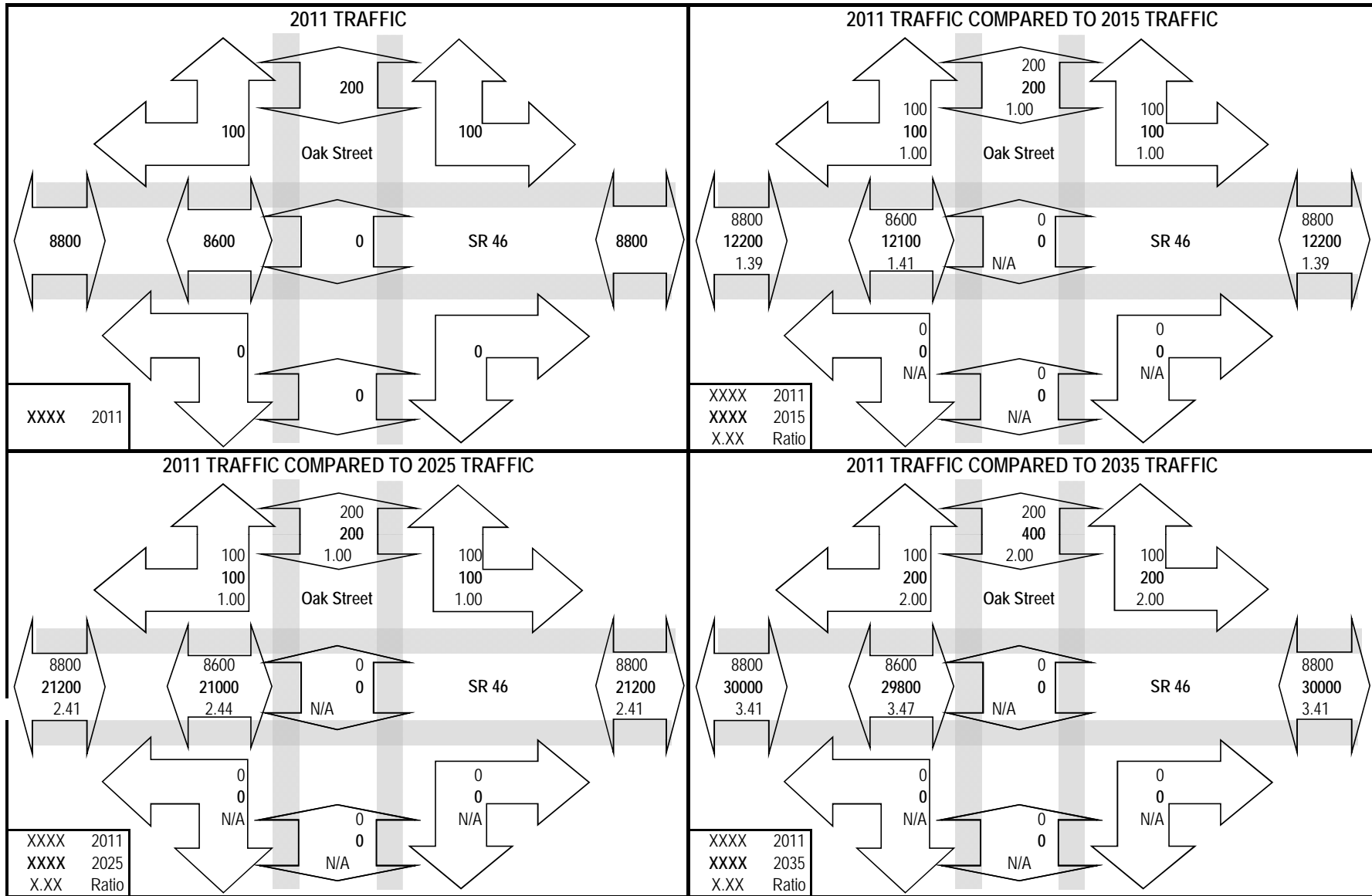
## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - Build)



# PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - Build)

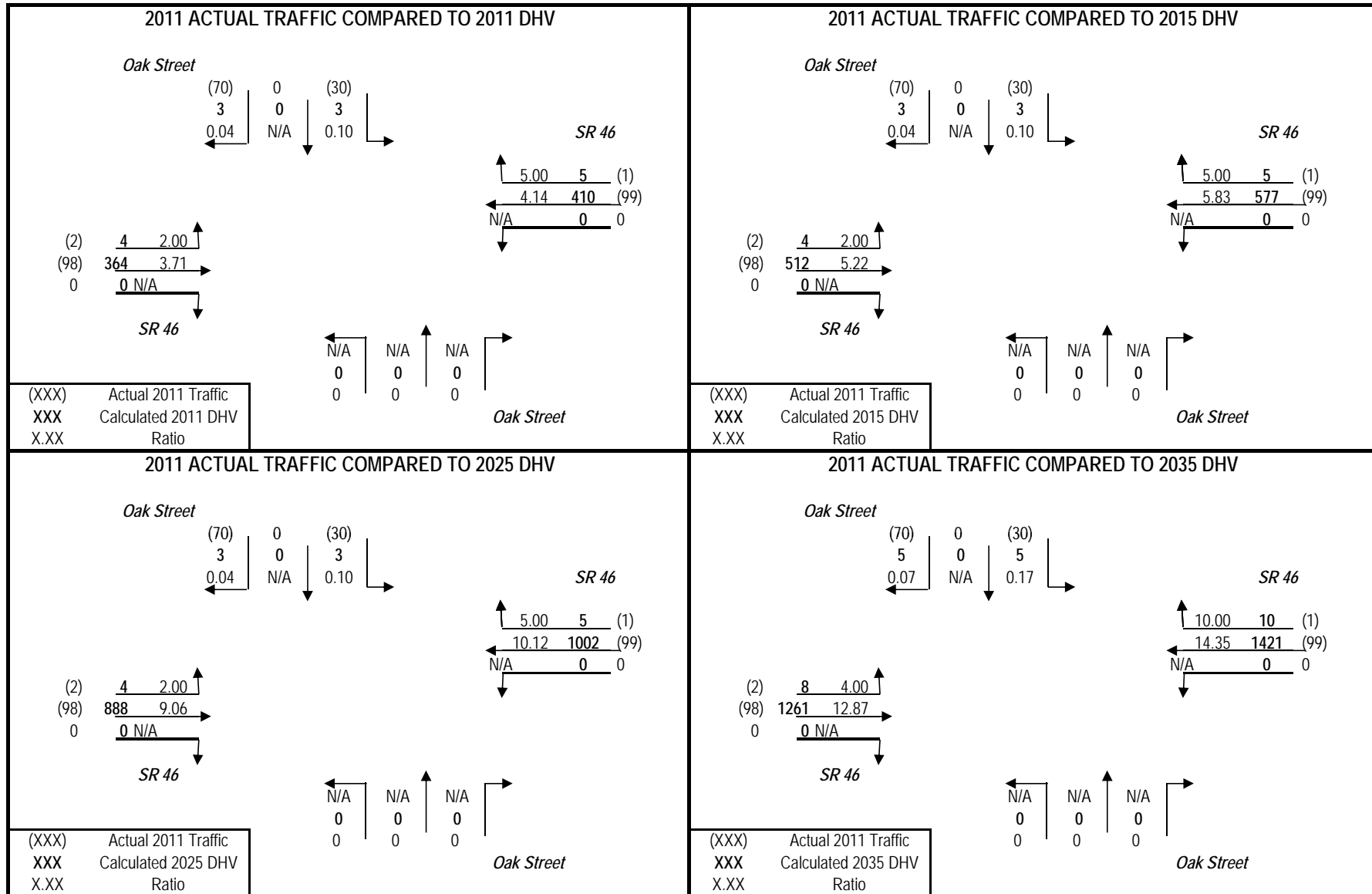


### PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - Build)





## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** CR 426/1st Street  
**From:** SR 415  
**To:** CR 426 (AM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		53.0%
	Sidestreet		47.0%
	9.00%		Sidestreet
			39.2%
			60.8%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

2011  
 2015  
 2025  
 2035  
 2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	5800	3800	8600	26900
2035	30000	20000	5600	21000	76600

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	5%	5
(EB THRU)	West-to-East	28%	28
(EB RT)	West-to-South	67%	67
(WB LT)	East-to-South	28%	28
(WB THRU)	East-to-West	60%	60
(WB RT)	East-to-North	12%	12
(SB LT)	North-to-East	6%	6
(SB THRU)	North-to-South	88%	88
(SB RT)	North-to-West	6%	6
(NB LT)	South-to-West	52%	52
(NB THRU)	South-to-North	37%	37
(NB RT)	South-to-East	11%	11

(must be done manually)

Desired Closure: 0.01

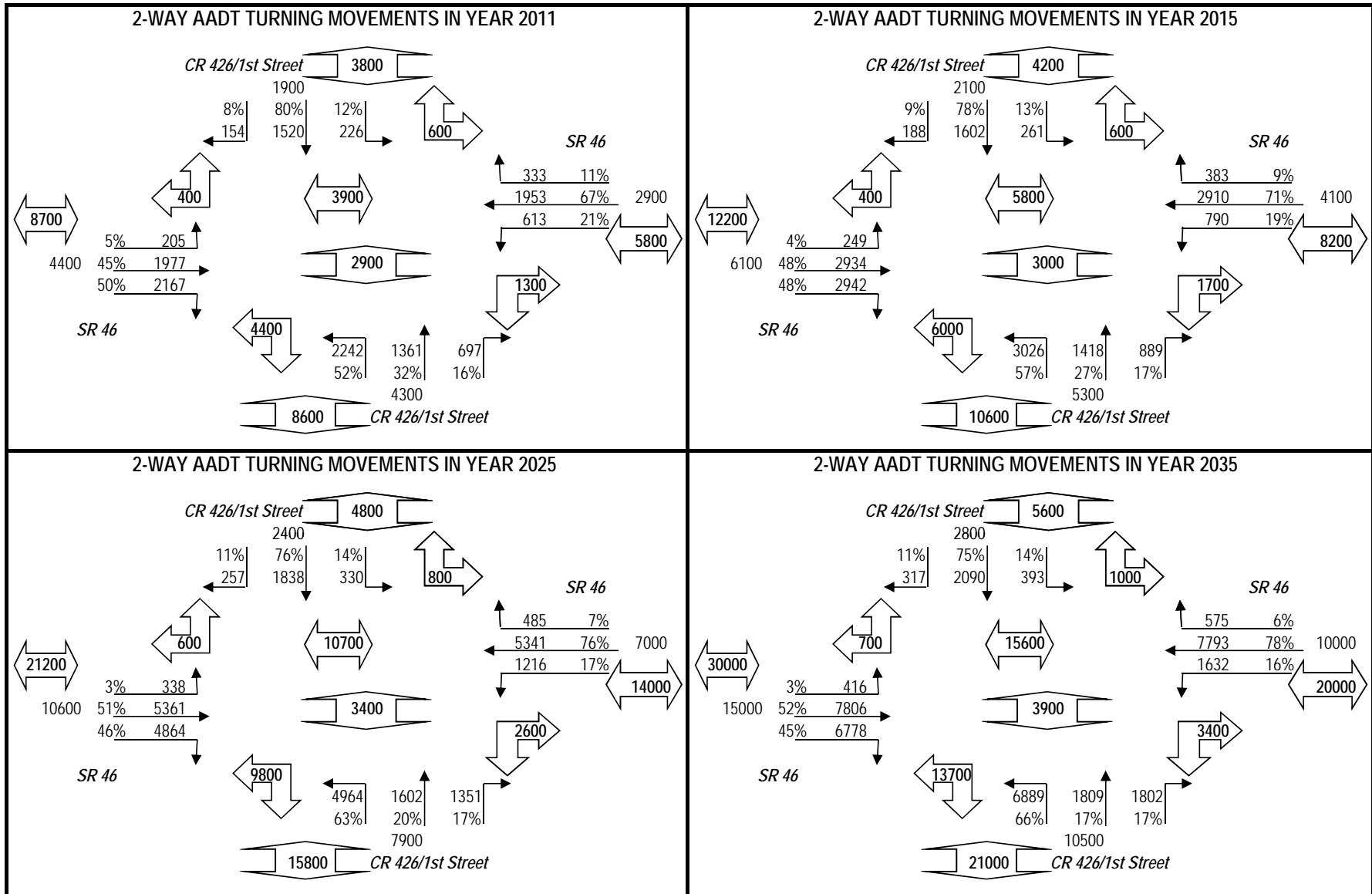
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	CR 426/1st Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (AM Peak - Build)		

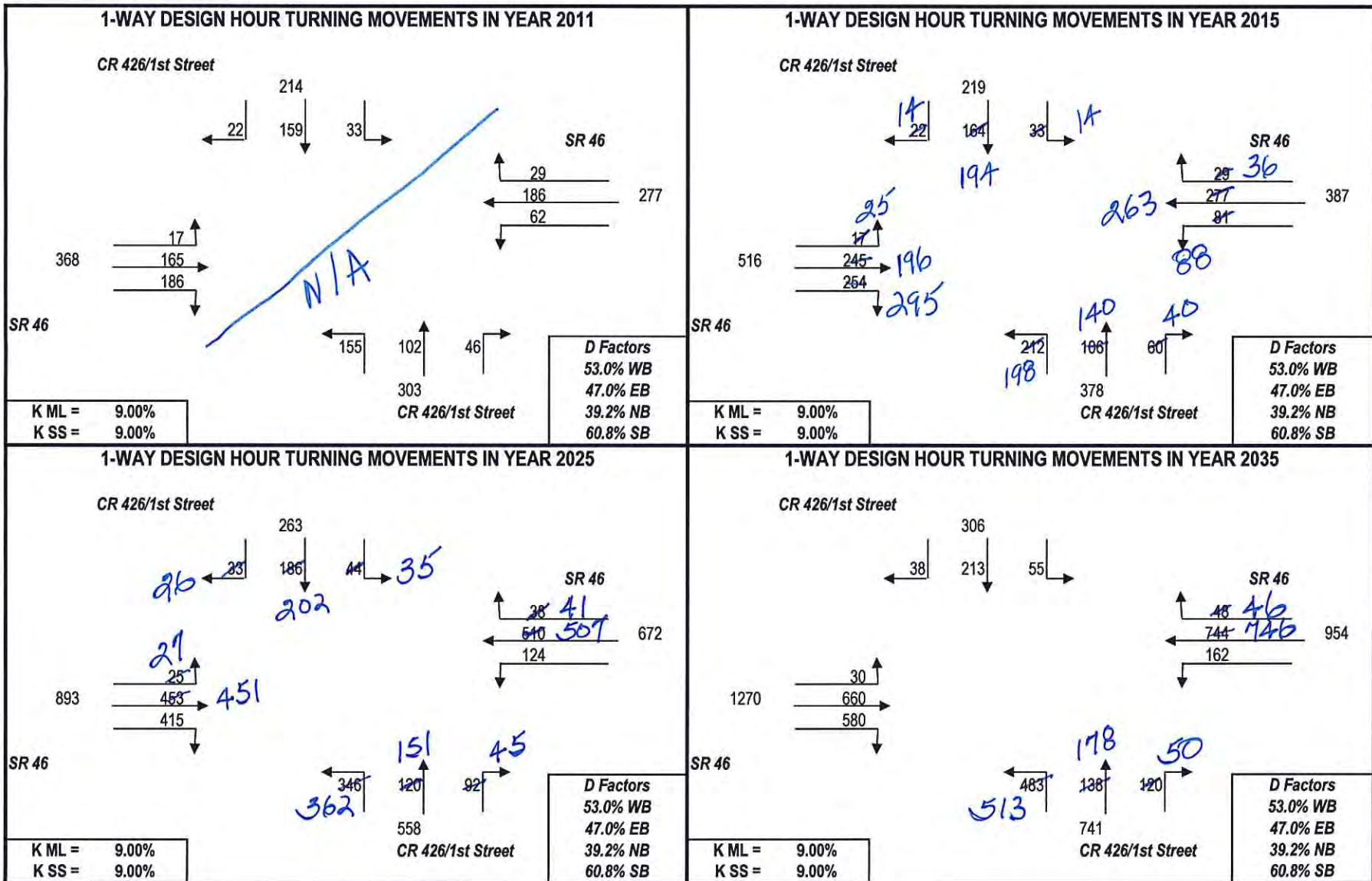
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.05	0.047	200	0.041	200	0.032	300	0.028	400
West-To-East (Thru)	0.28	0.455	2000	0.479	2900	0.508	5400	0.520	7800
West-To-South (RT)	0.67	0.498	2200	0.480	2900	0.460	4900	0.452	6800
<b>Total Flow From West:</b>			<b>4400</b>		<b>6000</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.28	0.212	600	0.193	800	0.173	1200	0.163	1600
East-To-West (Thru)	0.60	0.674	2000	0.713	2900	0.759	5300	0.779	7800
East-To-North (RT)	0.12	0.115	300	0.094	400	0.069	500	0.058	600
<b>Total Flow From East:</b>			<b>2900</b>		<b>4100</b>		<b>7000</b>		<b>10000</b>
North-To-East (LT)	0.06	0.119	200	0.127	300	0.136	300	0.140	400
North-To-South (Thru)	0.88	0.800	1500	0.781	1600	0.758	1800	0.746	2100
North-To-West (RT)	0.06	0.081	200	0.092	200	0.106	300	0.113	300
<b>Total Flow From North:</b>			<b>1900</b>		<b>2100</b>		<b>2400</b>		<b>2800</b>
South-To-West (LT)	0.52	0.521	2200	0.567	3000	0.627	5000	0.656	6900
South-To-North (Thru)	0.37	0.317	1400	0.266	1400	0.202	1600	0.172	1800
South-To-East (RT)	0.11	0.162	700	0.167	900	0.171	1400	0.172	1800
<b>Total Flow From South:</b>			<b>4300</b>		<b>5300</b>		<b>8000</b>		<b>10500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

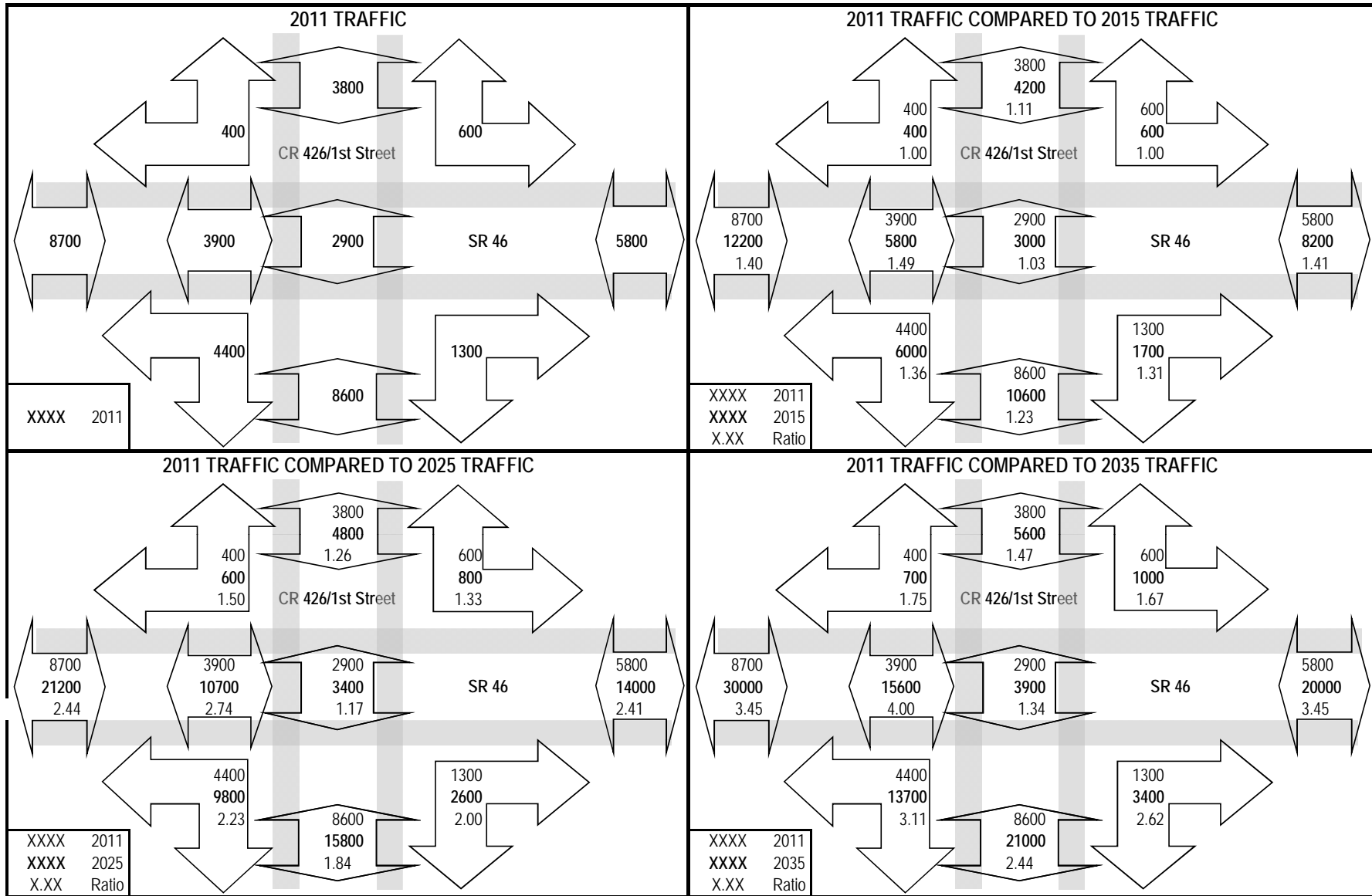
PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - Build)



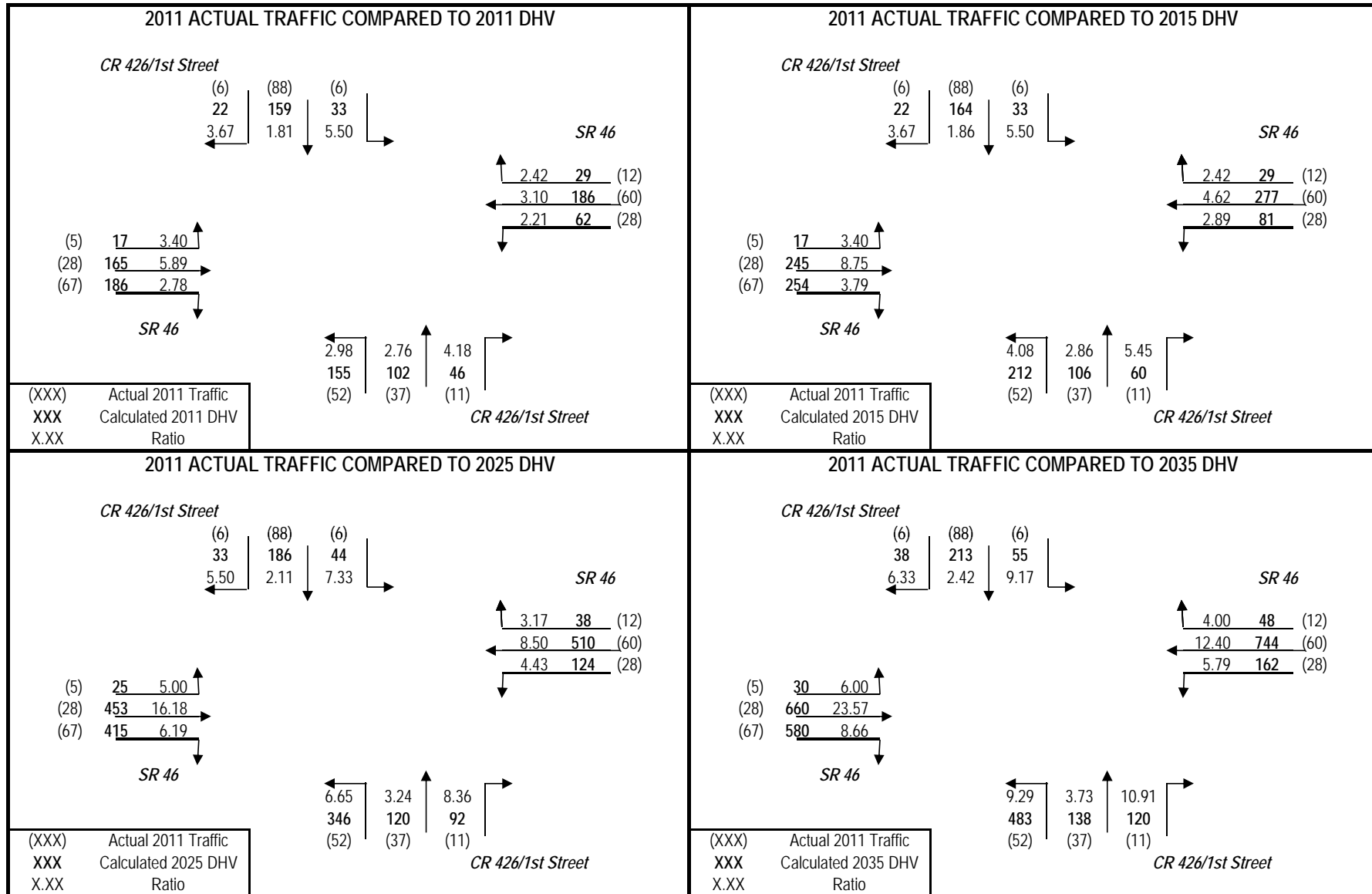
## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (AM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: SR 415  
 From: SR 415  
 To: CR 426 (PM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			67.1%	Northbound (NB)
			42.9%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)

Yes  No

If "Yes" go to cell C47

If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function

Linear  
 Exponential  
 Decaying

Side Street Growth Function

Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**

(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
2011
Opening
2015
Mid
2025
Design
2035
Model
2035

**Enter Base and Model Year AADTs for Volume Comparison:**

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	10500	10500	15500	9300	45800
2035	36500	36500	34500	24400	131900

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	59%	59
(EB THRU)	West-to-East	40%	40
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	18%	18
(WB THRU)	East-to-West	38%	38
(WB RT)	East-to-North	44%	44
(SB LT)	North-to-East	24%	24
(SB THRU)	North-to-South	51%	51
(SB RT)	North-to-West	25%	25
(NB LT)	South-to-West	3%	3
(NB THRU)	South-to-North	78%	78
(NB RT)	South-to-East	19%	19
Desired Closure:		0.01	

(must be done manually)



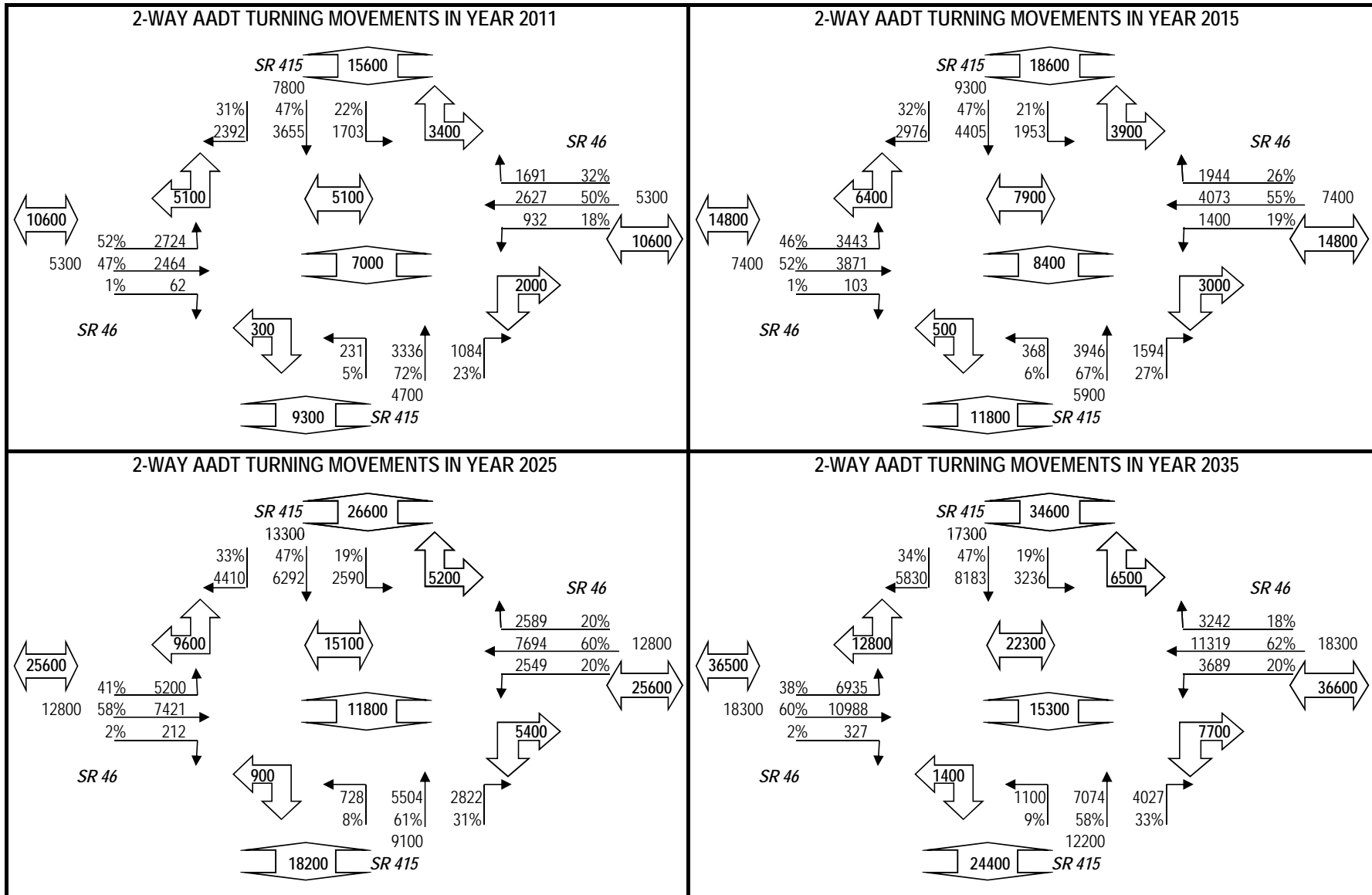
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	SR 415	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

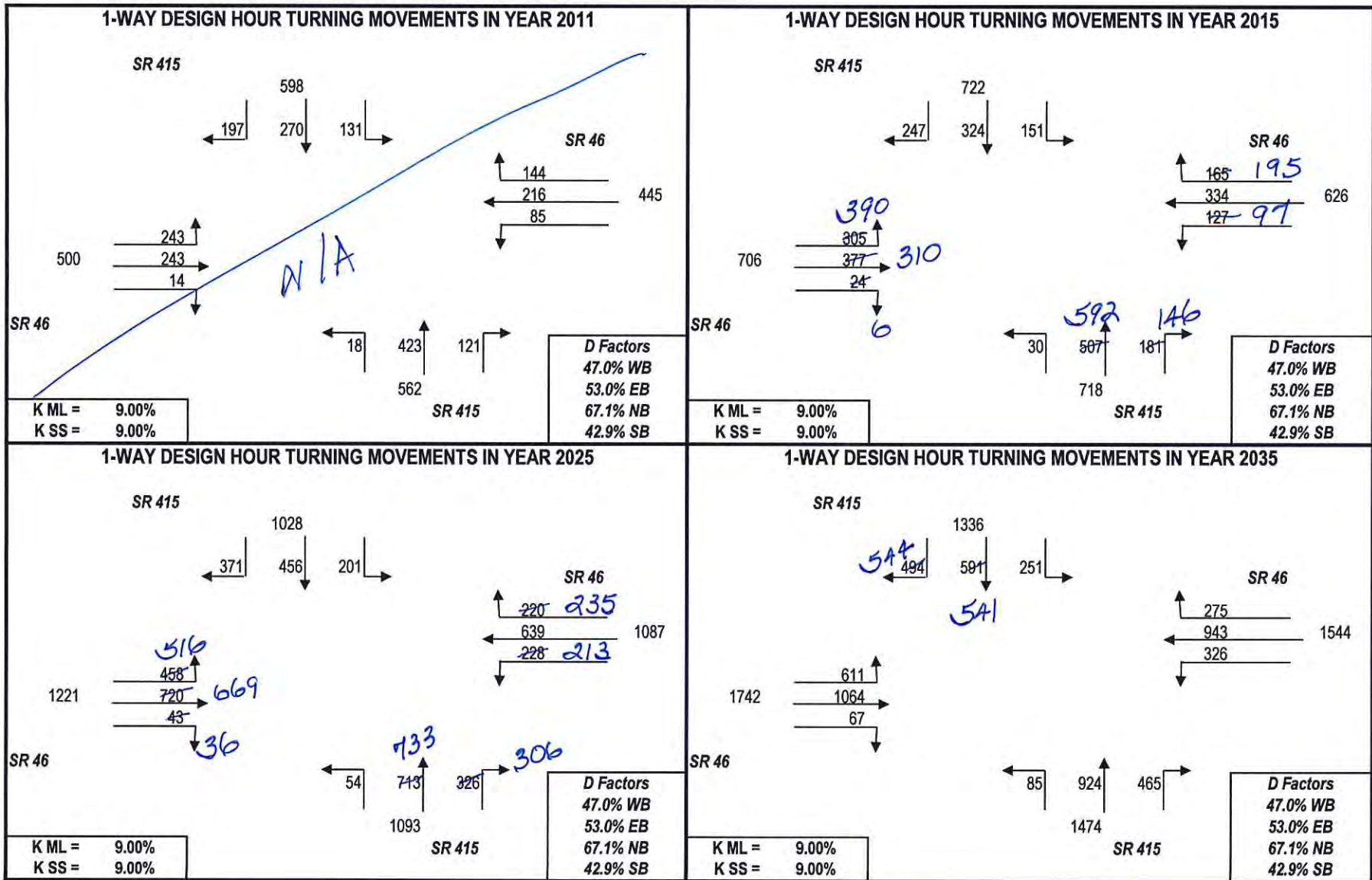
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.59	0.519	2700	0.464	3400	0.405	5200	0.380	6900
West-To-East (Thru)	0.40	0.469	2500	0.522	3900	0.578	7400	0.602	11000
West-To-South (RT)	0.01	0.012	100	0.014	100	0.017	200	0.018	300
<b>Total Flow From West:</b>			<b>5300</b>		<b>7400</b>		<b>12800</b>		<b>18200</b>
East-To-South (LT)	0.18	0.178	900	0.189	1400	0.199	2500	0.202	3700
East-To-West (Thru)	0.38	0.500	2600	0.549	4100	0.600	7700	0.620	11300
East-To-North (RT)	0.44	0.322	1700	0.262	1900	0.202	2600	0.178	3200
<b>Total Flow From East:</b>			<b>5200</b>		<b>7400</b>		<b>12800</b>		<b>18200</b>
North-To-East (LT)	0.24	0.220	1700	0.209	2000	0.195	2600	0.188	3200
North-To-South (Thru)	0.51	0.472	3700	0.472	4400	0.473	6300	0.474	8200
North-To-West (RT)	0.25	0.309	2400	0.319	3000	0.332	4400	0.338	5800
<b>Total Flow From North:</b>			<b>7800</b>		<b>9400</b>		<b>13300</b>		<b>17200</b>
South-To-West (LT)	0.03	0.050	200	0.062	400	0.080	700	0.090	1100
South-To-North (Thru)	0.78	0.717	3300	0.668	3900	0.608	5500	0.580	7100
South-To-East (RT)	0.19	0.233	1100	0.270	1600	0.312	2800	0.330	4000
<b>Total Flow From South:</b>			<b>4600</b>		<b>5900</b>		<b>9000</b>		<b>12200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

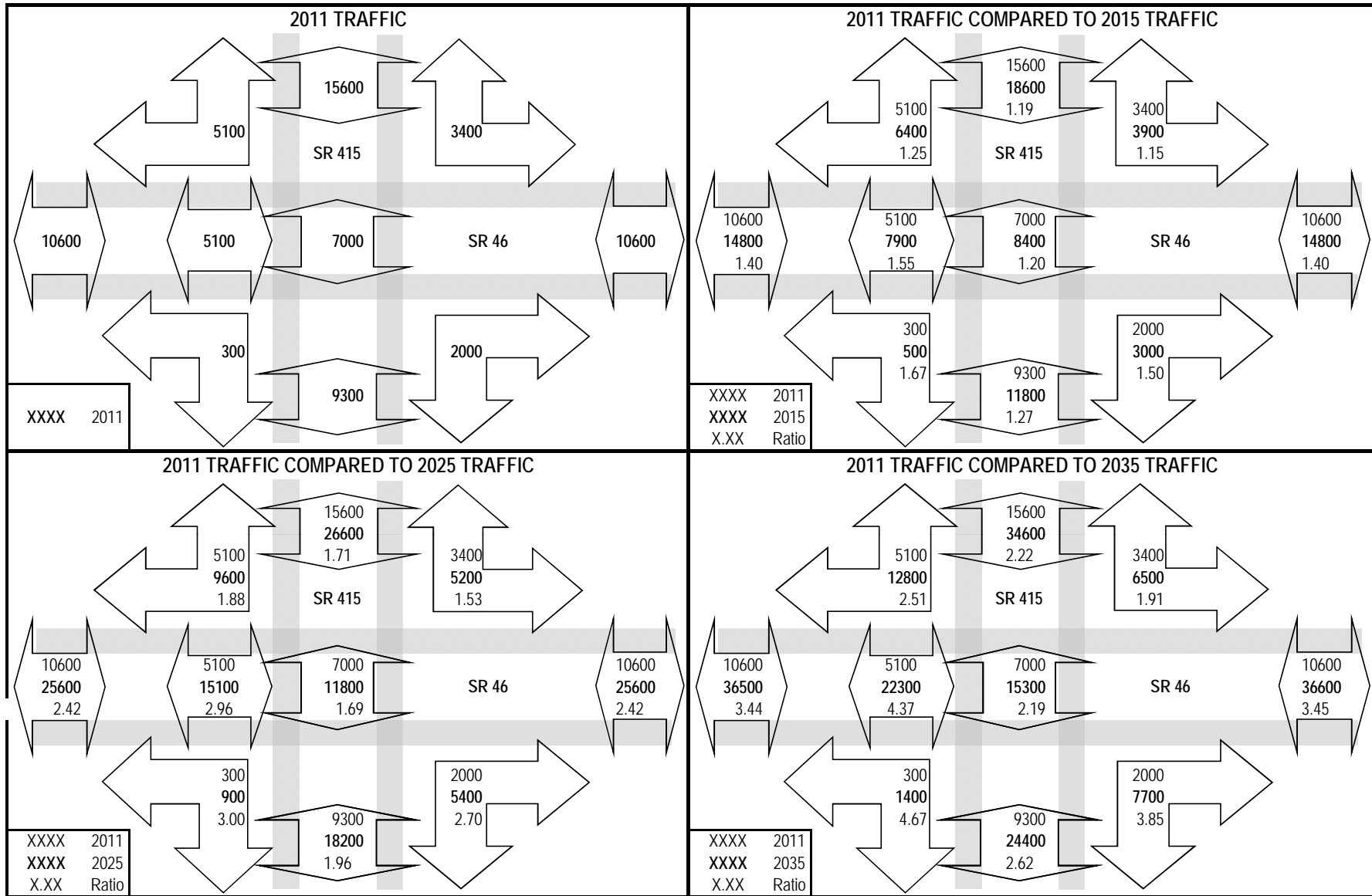
## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - Build)



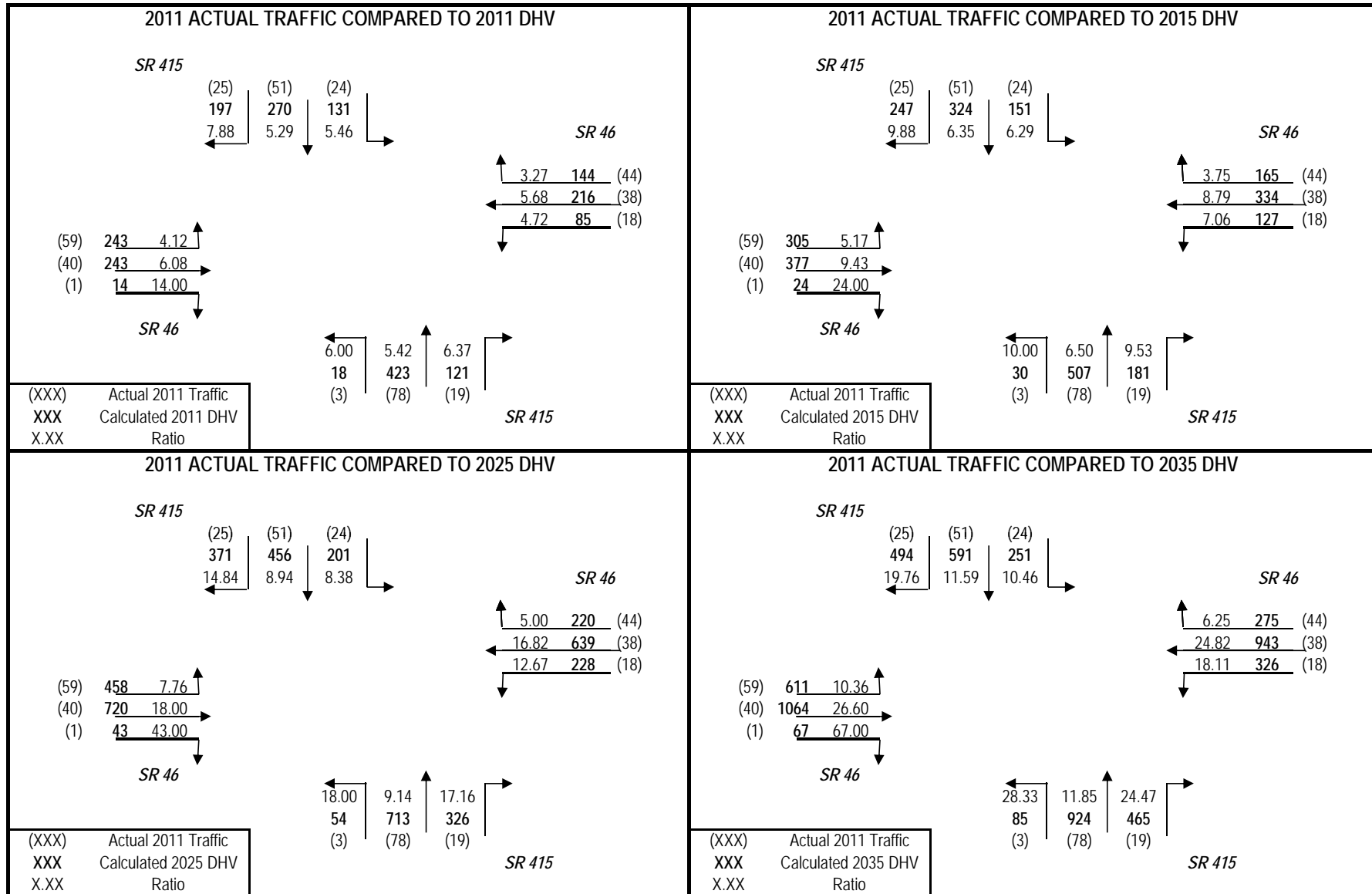
PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT SR 415: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Osceola Road  
**From:** SR 415  
**To:** CR 426 (PM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			62.1%
			47.9%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**  
 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	10800	8600	2200	0	21600
2035	33300	30000	3300	0	66600

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	20%	20
(EB THRU)	West-to-East	79%	79
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	100%	100
(WB RT)	East-to-North	0%	0
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

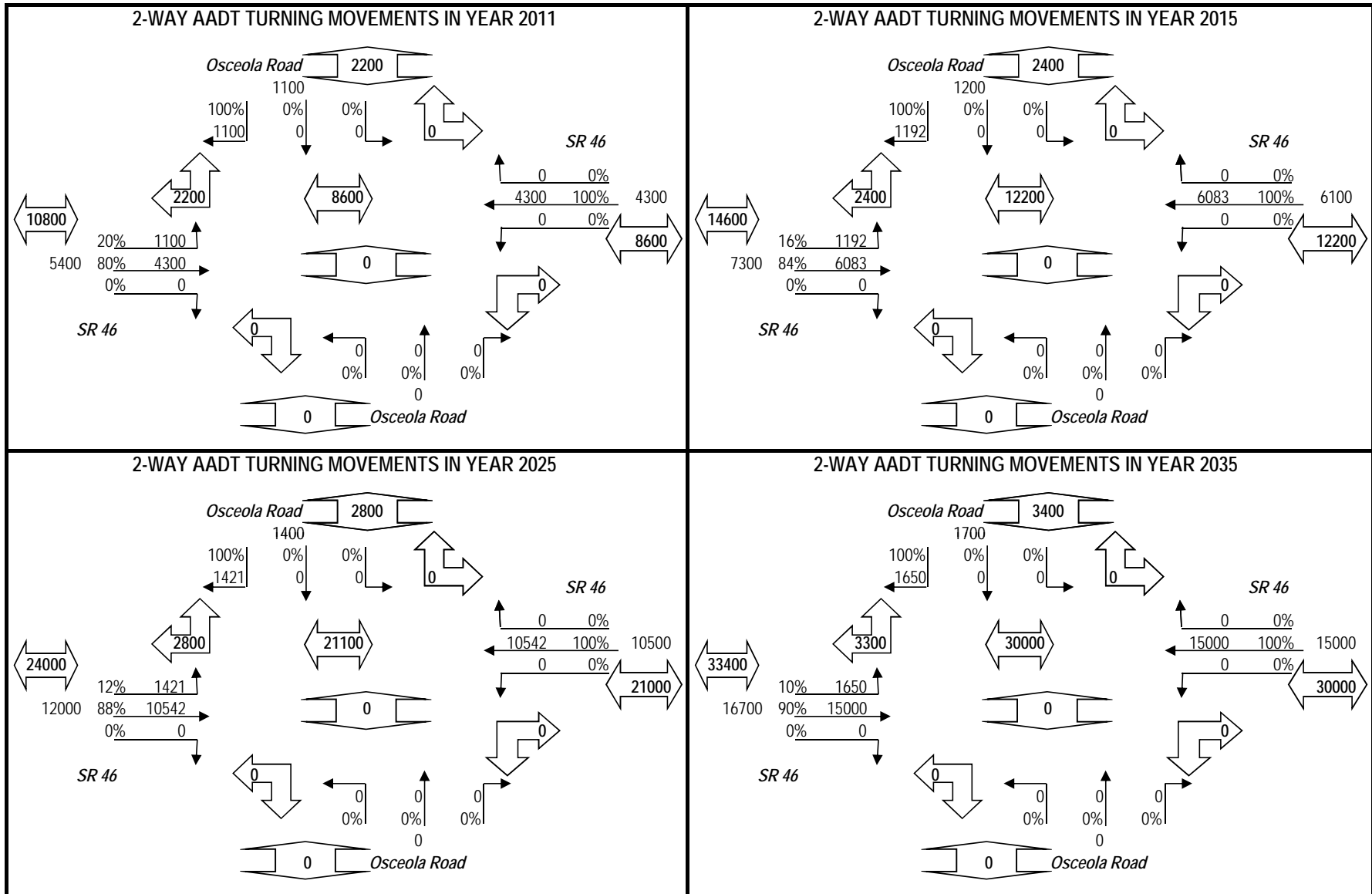
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Osceola Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.20	0.204	1100	0.164	1200	0.119	1400	0.099	1700
West-To-East (Thru)	0.79	0.796	4300	0.836	6100	0.881	10500	0.901	15000
West-To-South (RT)	0.01	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>5400</b>		<b>7300</b>		<b>11900</b>		<b>16700</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	1.00	1.000	4300	1.000	6100	1.000	10500	1.000	15000
East-To-North (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>6100</b>		<b>10500</b>		<b>15000</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	1100	1.000	1200	1.000	1400	1.000	1700
<b>Total Flow From North:</b>			<b>1100</b>		<b>1200</b>		<b>1400</b>		<b>1700</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

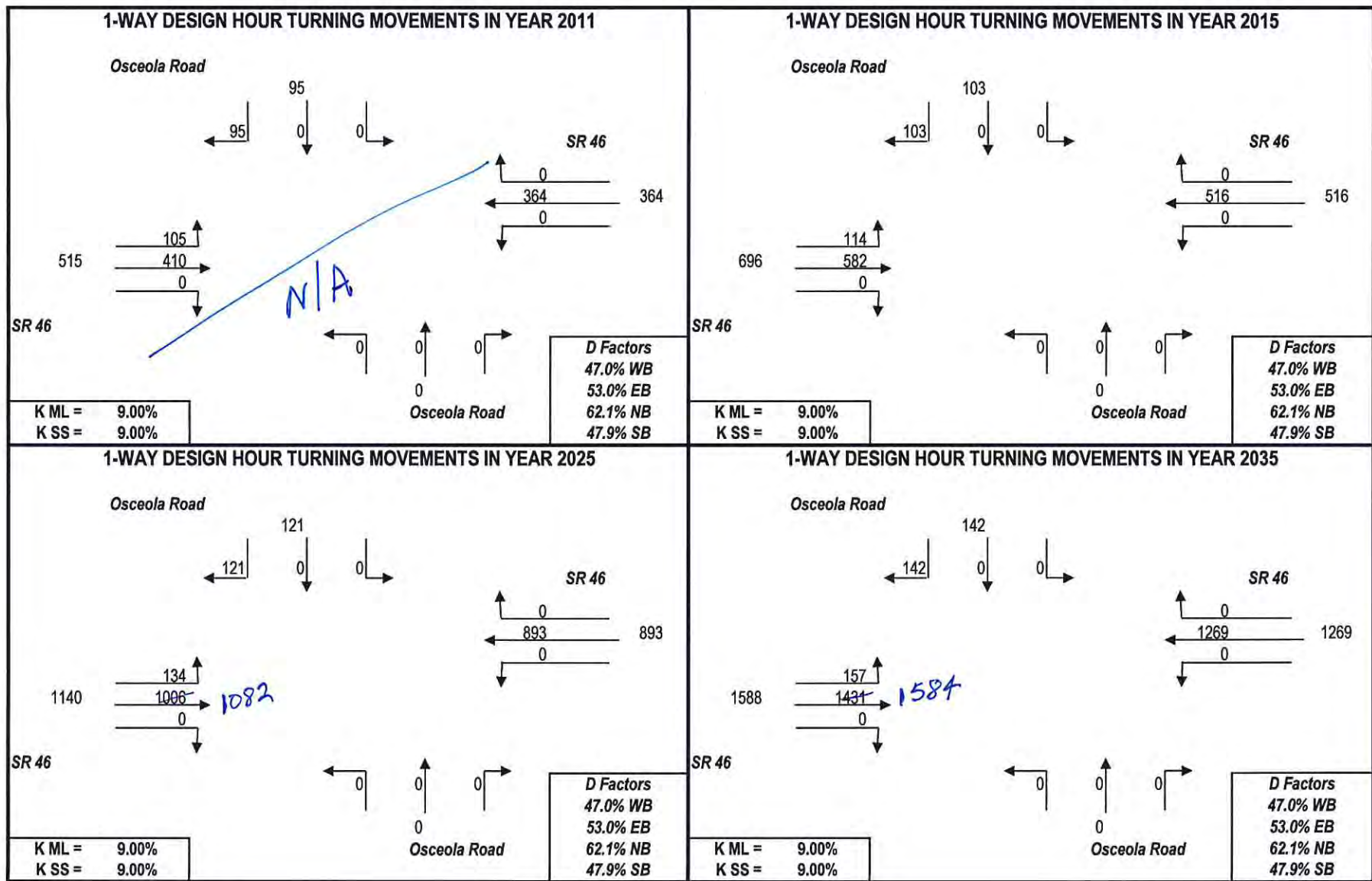
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - Build)

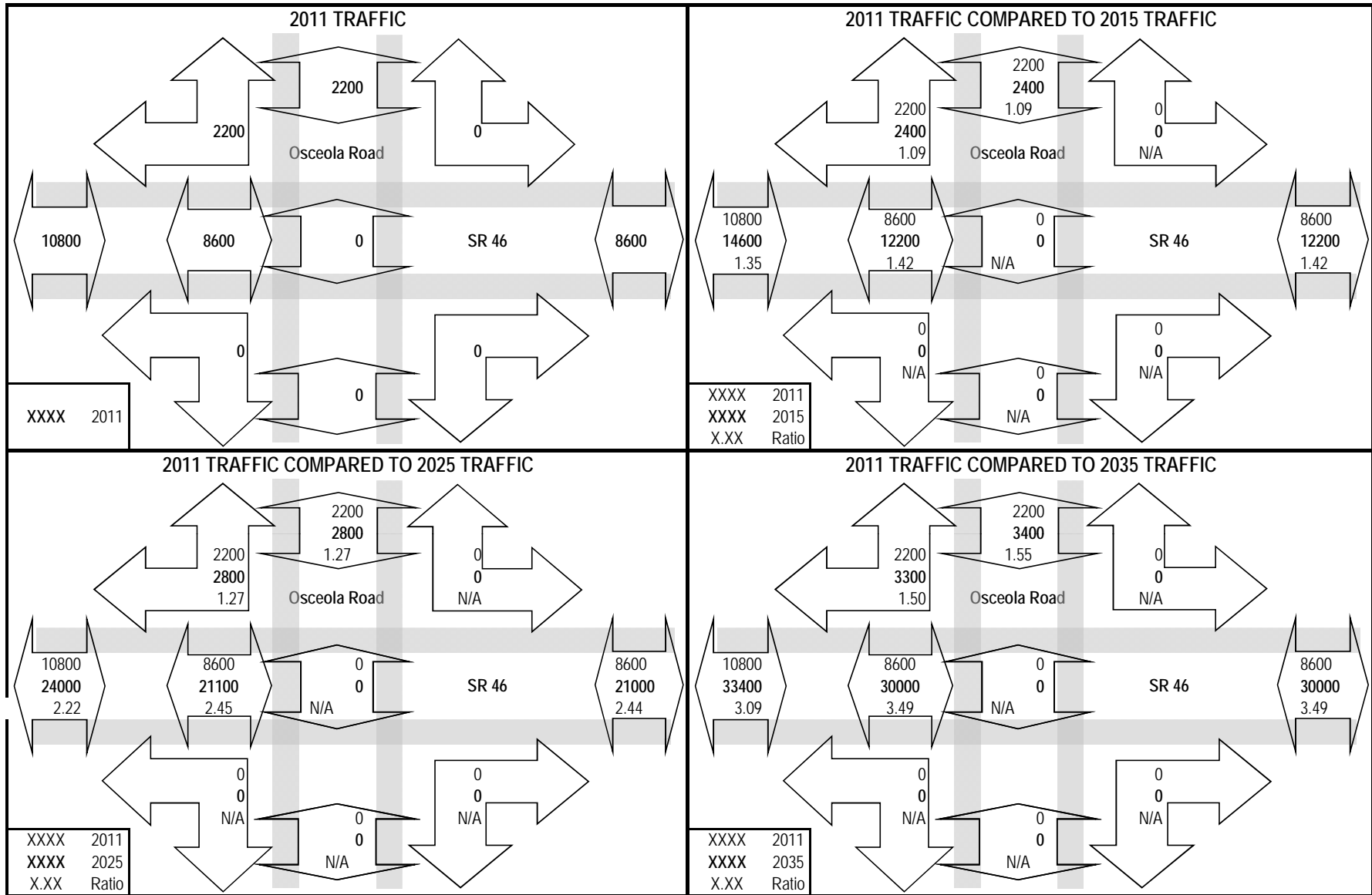




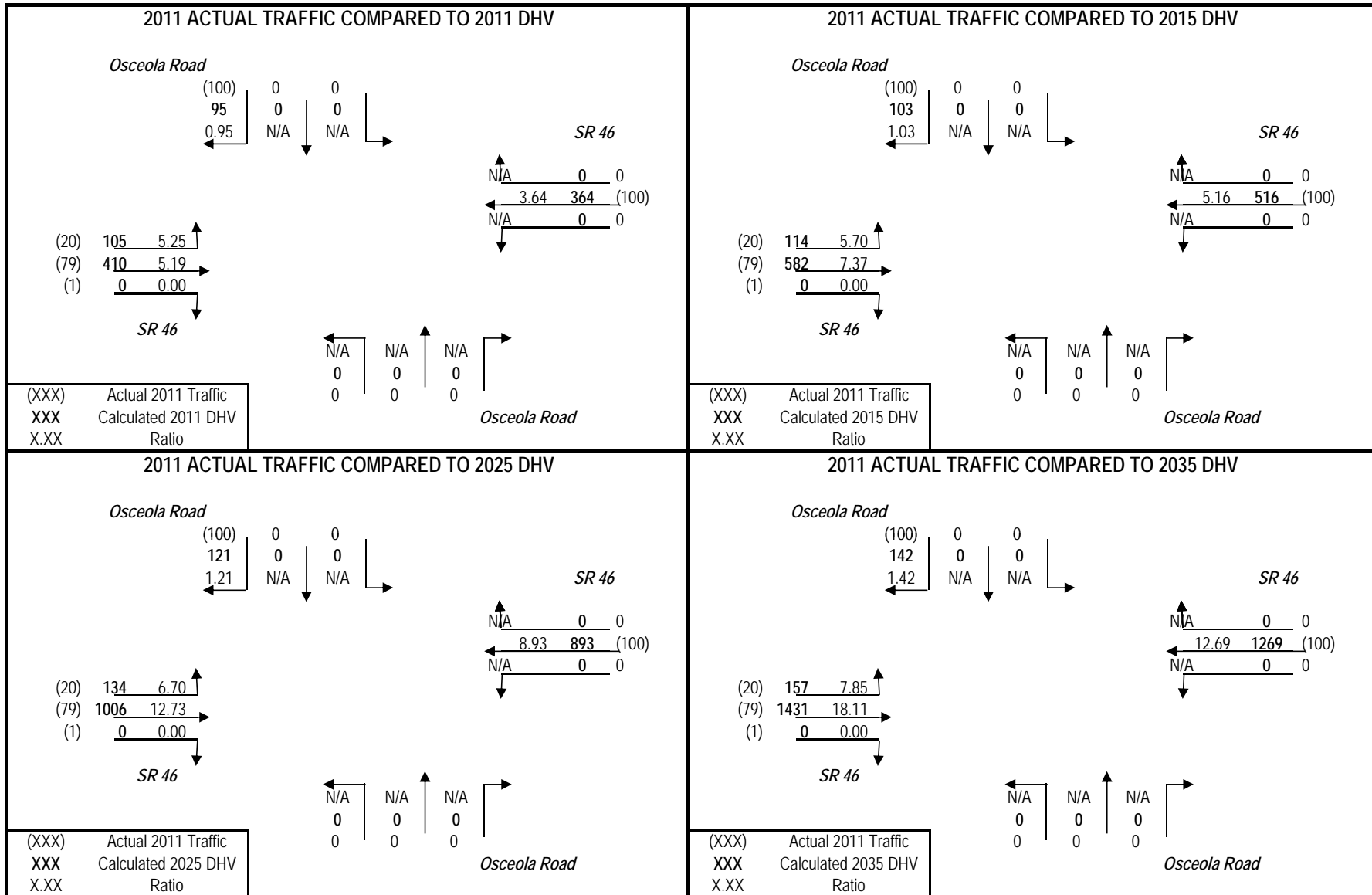
## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - Build)



PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Osceola Road: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Mullet Lake Park Road  
 From: SR 415  
 To: CR 426 (PM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			61.3%	Northbound (NB)
			38.7%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function:  Linear  Exponential  Decaying

Side Street Growth Function:  Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**  
*(growth rates are used to calculate other project years)*

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
*(volumes for other project years are calculated by interpolation)*

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8600	9000	700	0	18300
2035	30000	31000	1200	0	62200

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	1%	1
(EB THRU)	West-to-East	99%	99
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	94%	94
(WB RT)	East-to-North	6%	6
(SB LT)	North-to-East	83%	83
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	17%	17
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

(must be done manually)

Desired Closure: 0.01

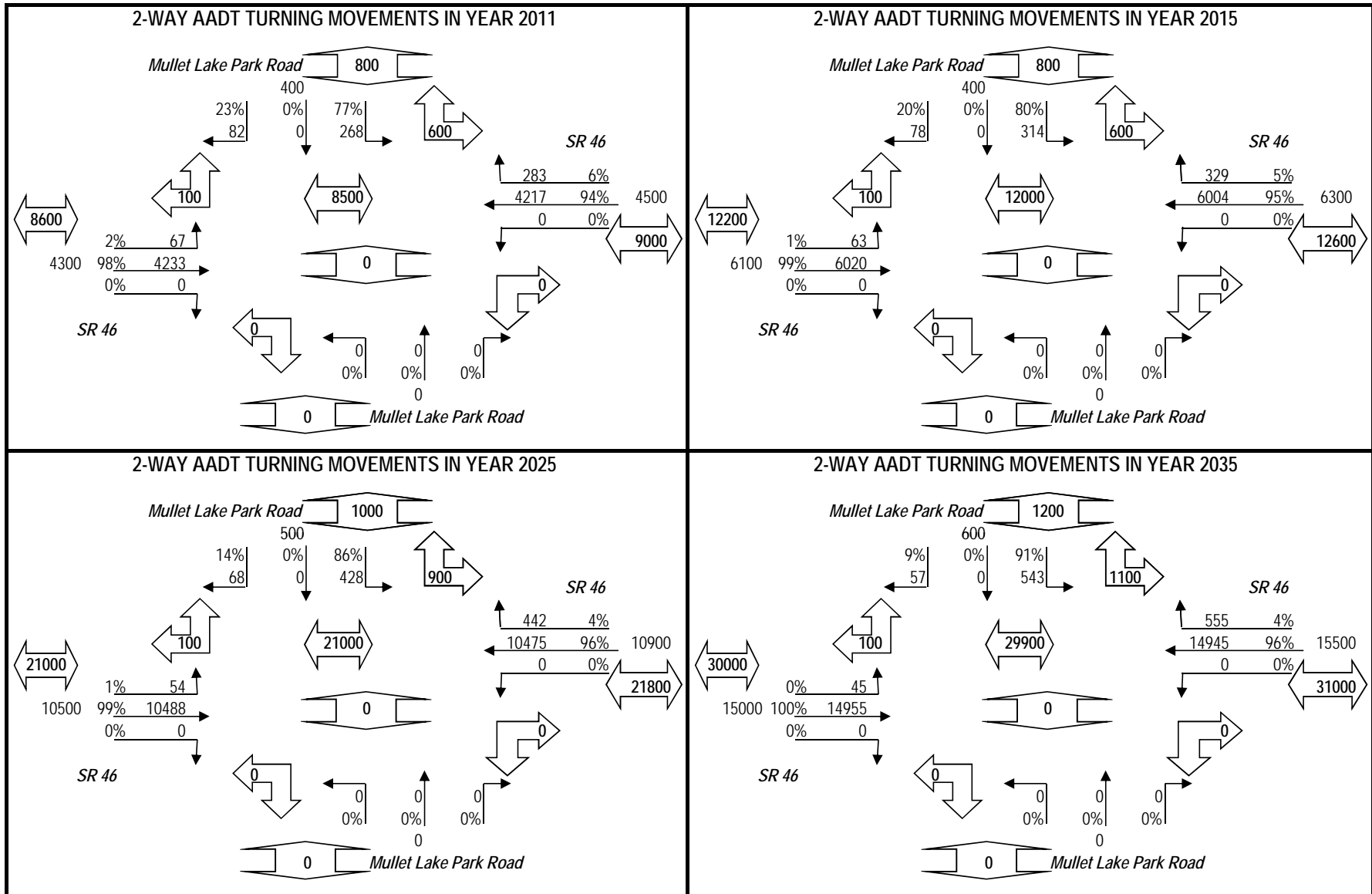
## TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Mullet Lake Park Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

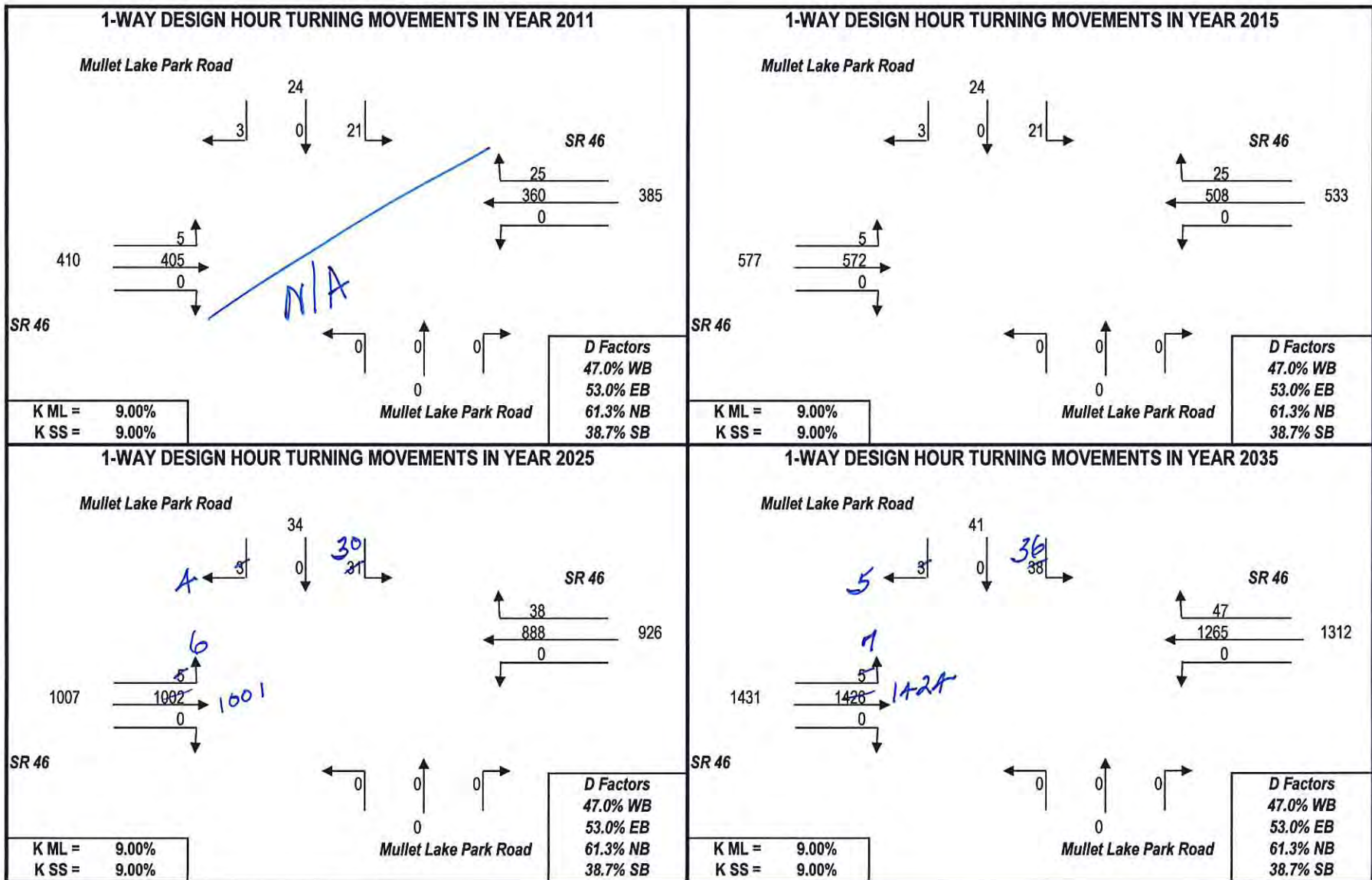
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.01	0.016	100	0.010	100	0.005	100	0.003	0
West-To-East (Thru)	0.99	0.984	4200	0.990	6000	0.995	10500	0.997	15000
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4300</b>		<b>6100</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.94	0.937	4200	0.948	6000	0.960	10500	0.964	14900
East-To-North (RT)	0.06	0.063	300	0.052	300	0.040	400	0.036	600
<b>Total Flow From East:</b>			<b>4500</b>		<b>6300</b>		<b>10900</b>		<b>15500</b>
North-To-East (LT)	0.83	0.766	300	0.801	300	0.863	400	0.906	500
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.17	0.234	100	0.199	100	0.137	100	0.094	100
<b>Total Flow From North:</b>			<b>400</b>		<b>400</b>		<b>500</b>		<b>600</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

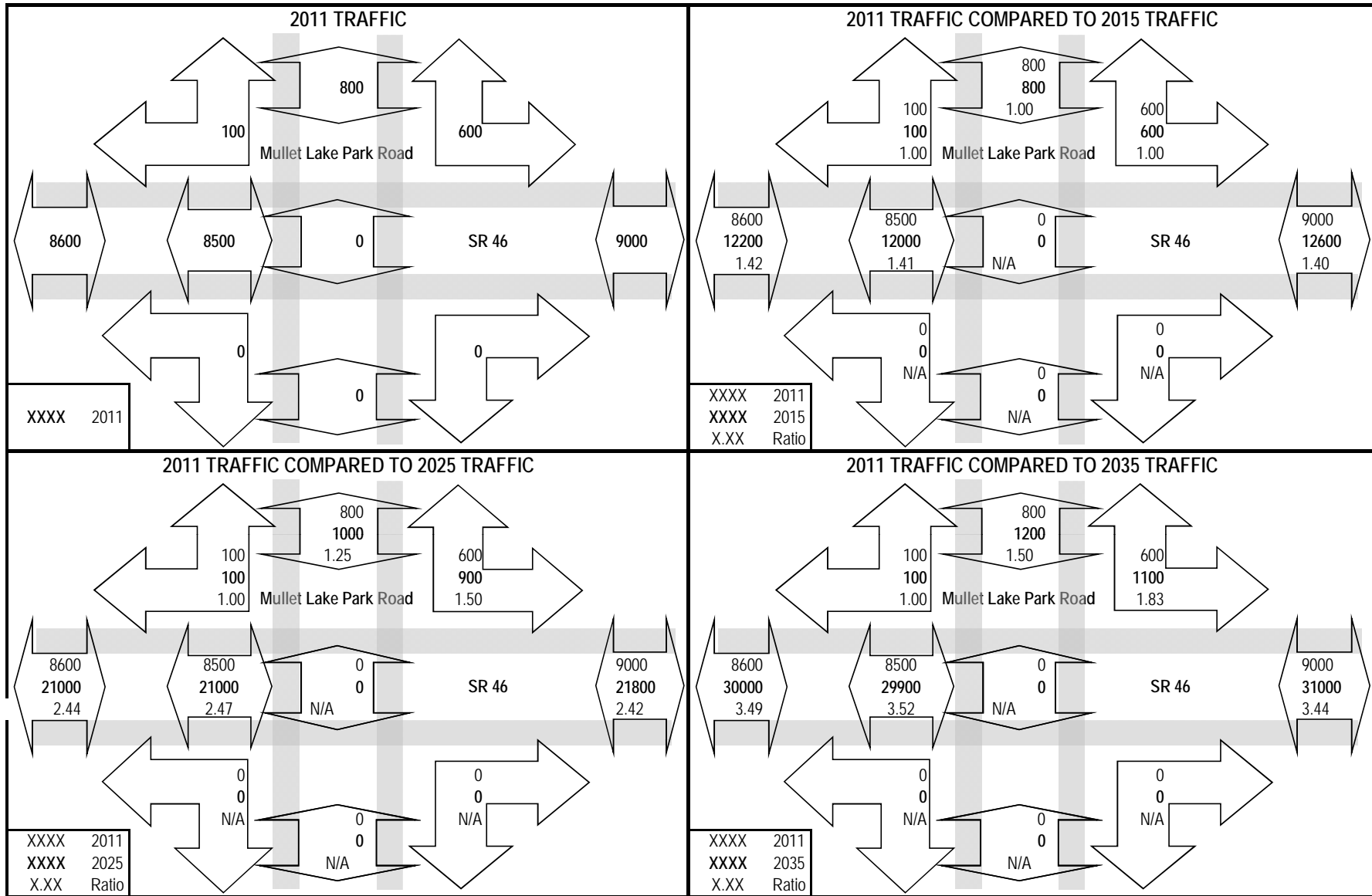
PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - Build)

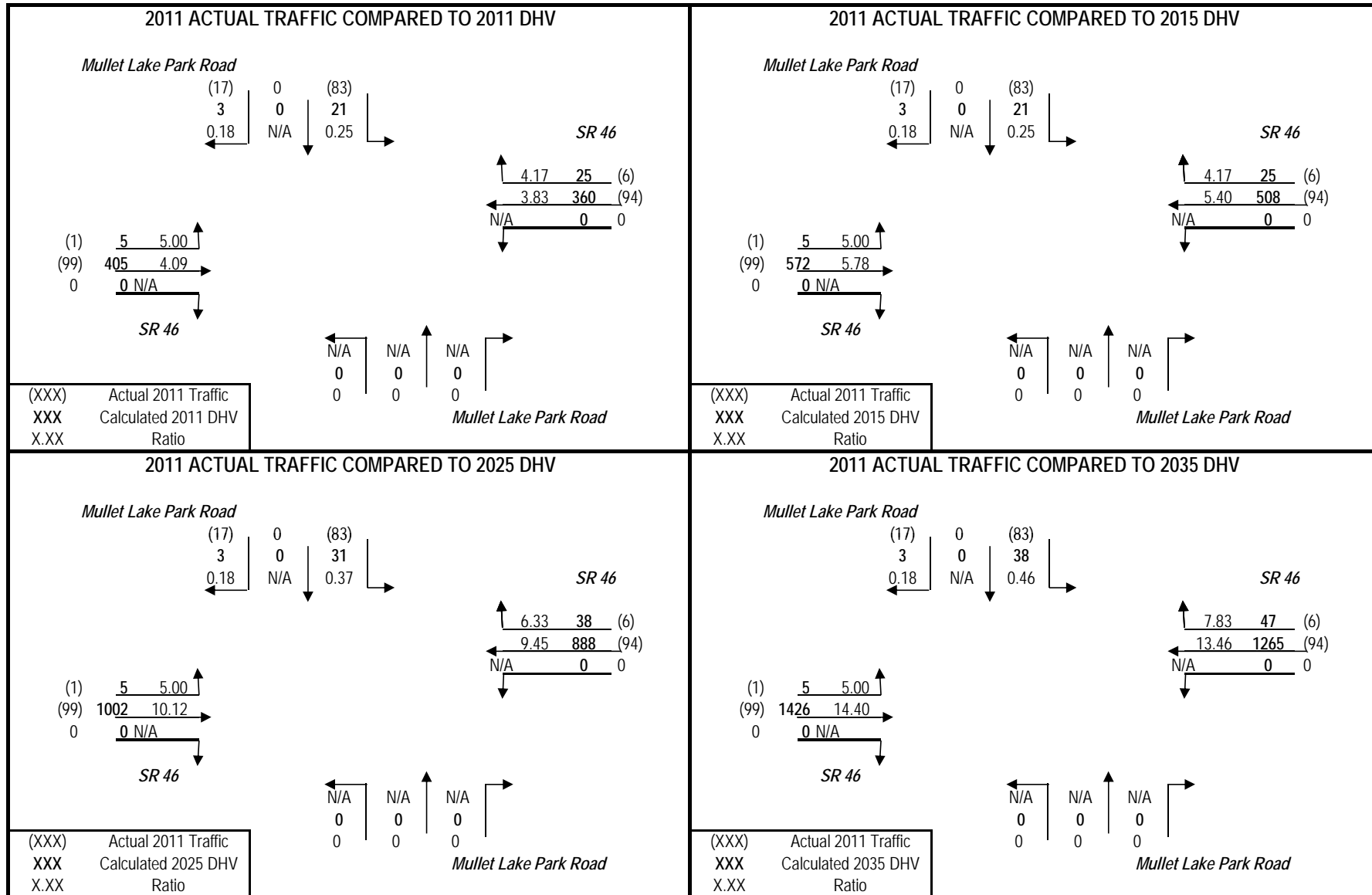


## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - Build)





## PROJECT TRAFFIC FOR SR 46 AT Mullet Lake Park Road: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Cochran Road  
**From:** SR 415  
**To:** CR 426 (PM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0% Westbound (WB)
	Sidestreet		53.0% Eastbound (EB)
	9.00%		Sidestreet
			31.0% Northbound (NB)
			69.0% Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

 Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
*(growth rates are used to calculate other project years)*

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
*(volumes for other project years are calculated by interpolation)*

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	9000	8700	0	750	18450
2035	31000	30000	0	1100	62100

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	97%	97
(EB RT)	West-to-South	3%	3
(WB LT)	East-to-South	6%	6
(WB THRU)	East-to-West	93%	93
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	100%	0
(SB RT)	North-to-West	0%	0
(NB LT)	South-to-West	26%	26
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	74%	74

(must be done manually)

Desired Closure: 0.01

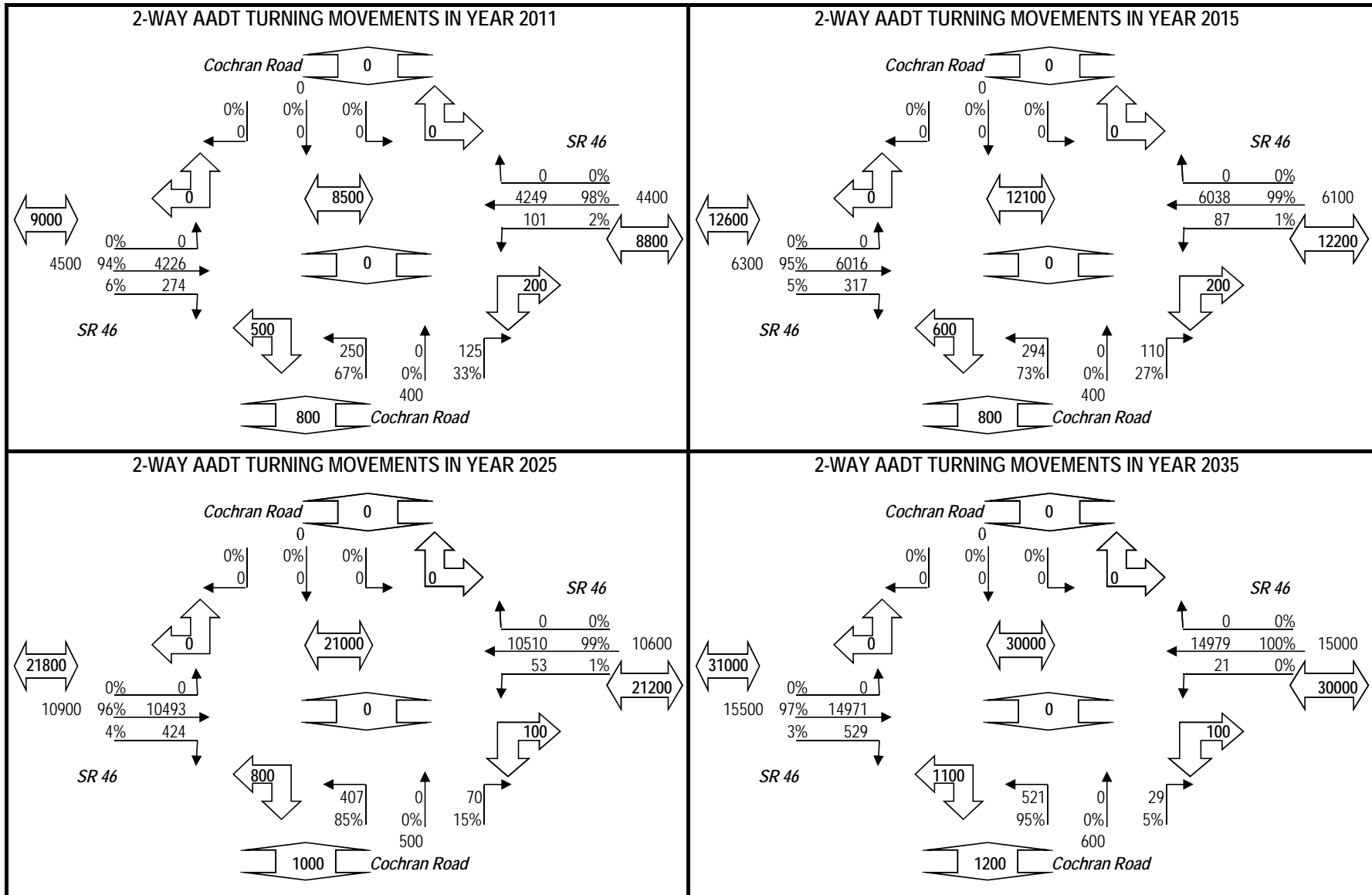
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Cochran Road	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

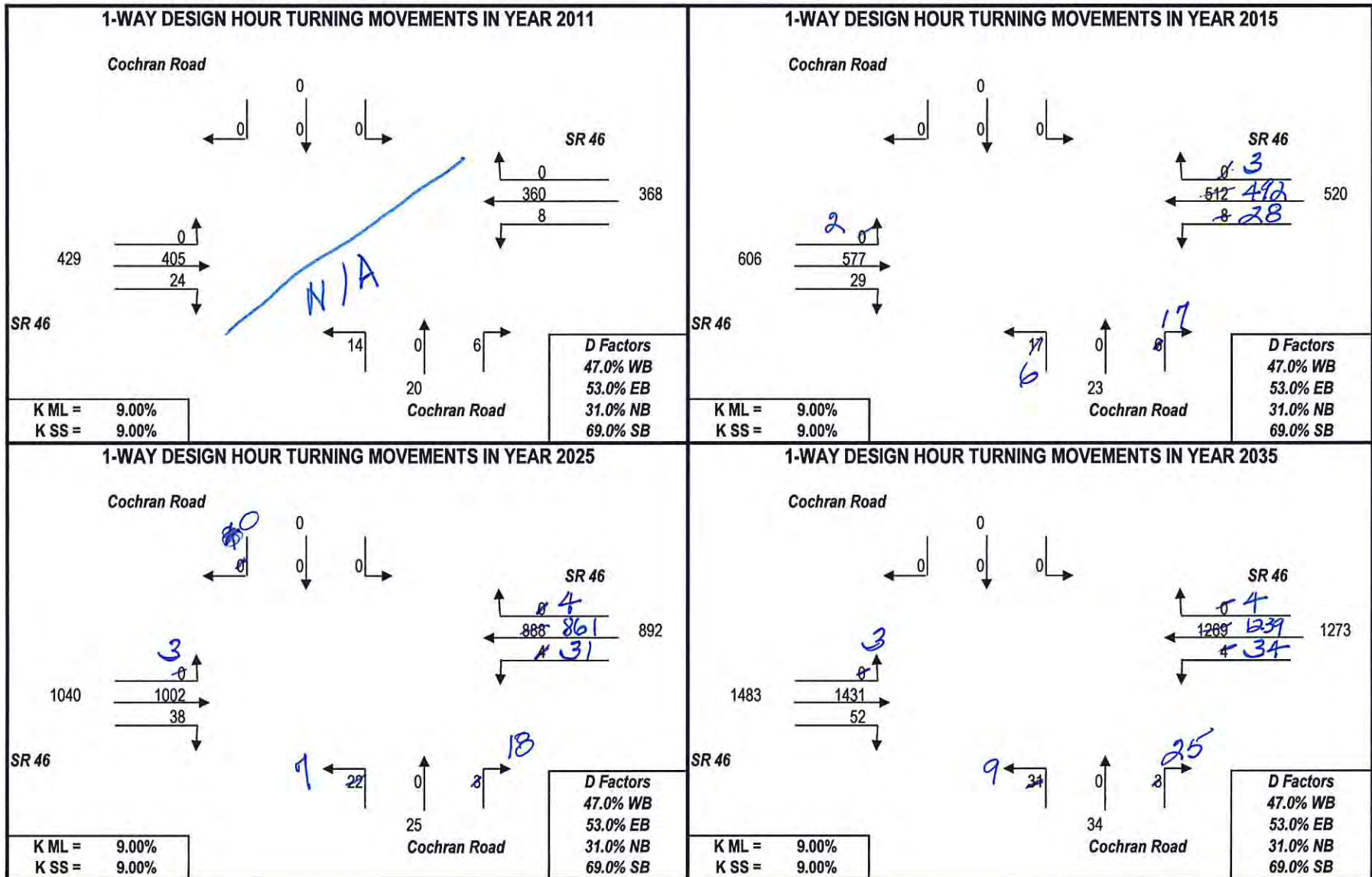
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.97	0.939	4200	0.950	6000	0.961	10500	0.966	15000
West-To-South (RT)	0.03	0.061	300	0.050	300	0.039	400	0.034	500
<b>Total Flow From West:</b>			<b>4500</b>		<b>6300</b>		<b>10900</b>		<b>15500</b>
East-To-South (LT)	0.06	0.023	100	0.014	100	0.005	100	0.001	0
East-To-West (Thru)	0.93	0.977	4200	0.986	6000	0.995	10500	0.999	15000
East-To-North (RT)	0.01	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From East:</b>			<b>4300</b>		<b>6100</b>		<b>10600</b>		<b>15000</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From North:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>
South-To-West (LT)	0.26	0.668	300	0.729	300	0.853	400	0.948	500
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.74	0.332	100	0.271	100	0.147	100	0.052	0
<b>Total Flow From South:</b>			<b>400</b>		<b>400</b>		<b>500</b>		<b>500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

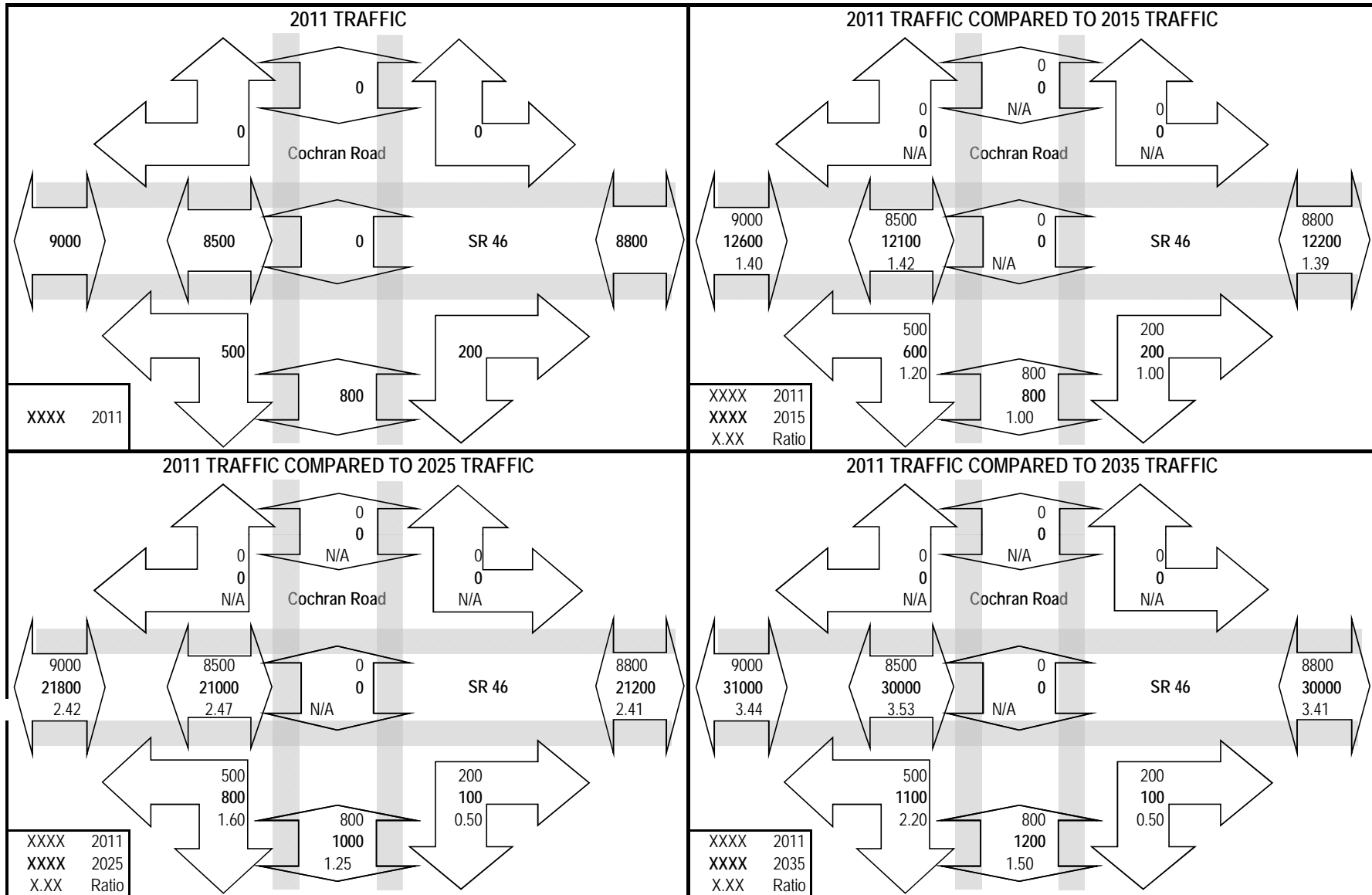
## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - Build)



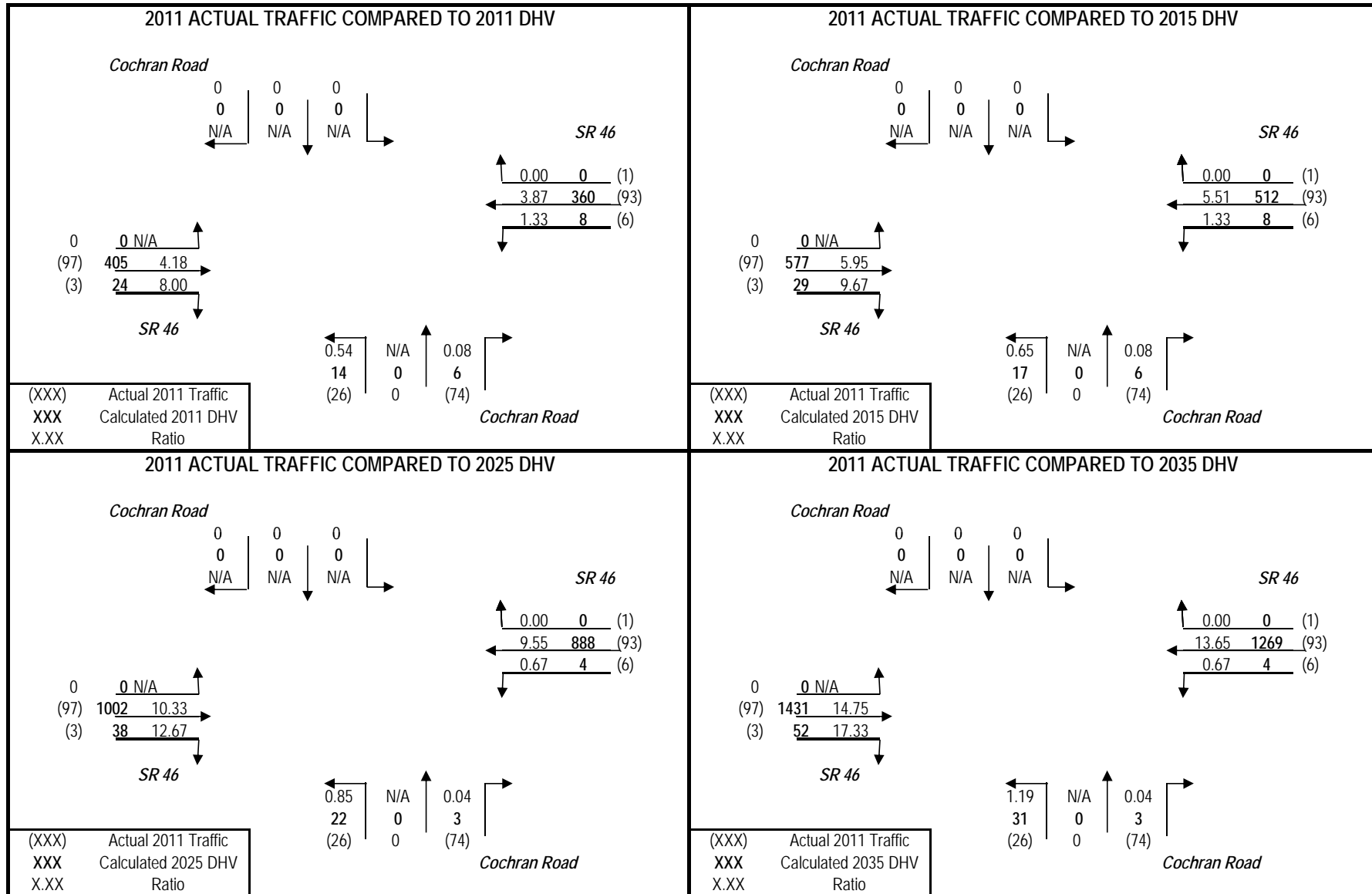
PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Cochran Road: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: Woodbridge Dr/Avenue C  
 From: SR 415  
 To: CR 426 (PM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

K Factors	Mainline	D Factors	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			61.9%	Northbound (NB)
			38.1%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

Enter Year and Growth Rates from Base Year:

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function:  Linear  Exponential  Decaying

Side Street Growth Function:  Linear  Exponential  Decaying

Enter Base Year AADTs for Volume Comparison: (growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	9000	8700	1700	250	19650
2035	31000	30000	2500	350	63850

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	7%	7
(EB THRU)	West-to-East	92%	92
(EB RT)	West-to-South	1%	1
(WB LT)	East-to-South	1%	1
(WB THRU)	East-to-West	98%	98
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	19%	19
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	81%	81
(NB LT)	South-to-West	20%	20
(NB THRU)	South-to-North	0%	0
(NB RT)	South-to-East	80%	80
Desired Closure:		0.01	

(must be done manually)



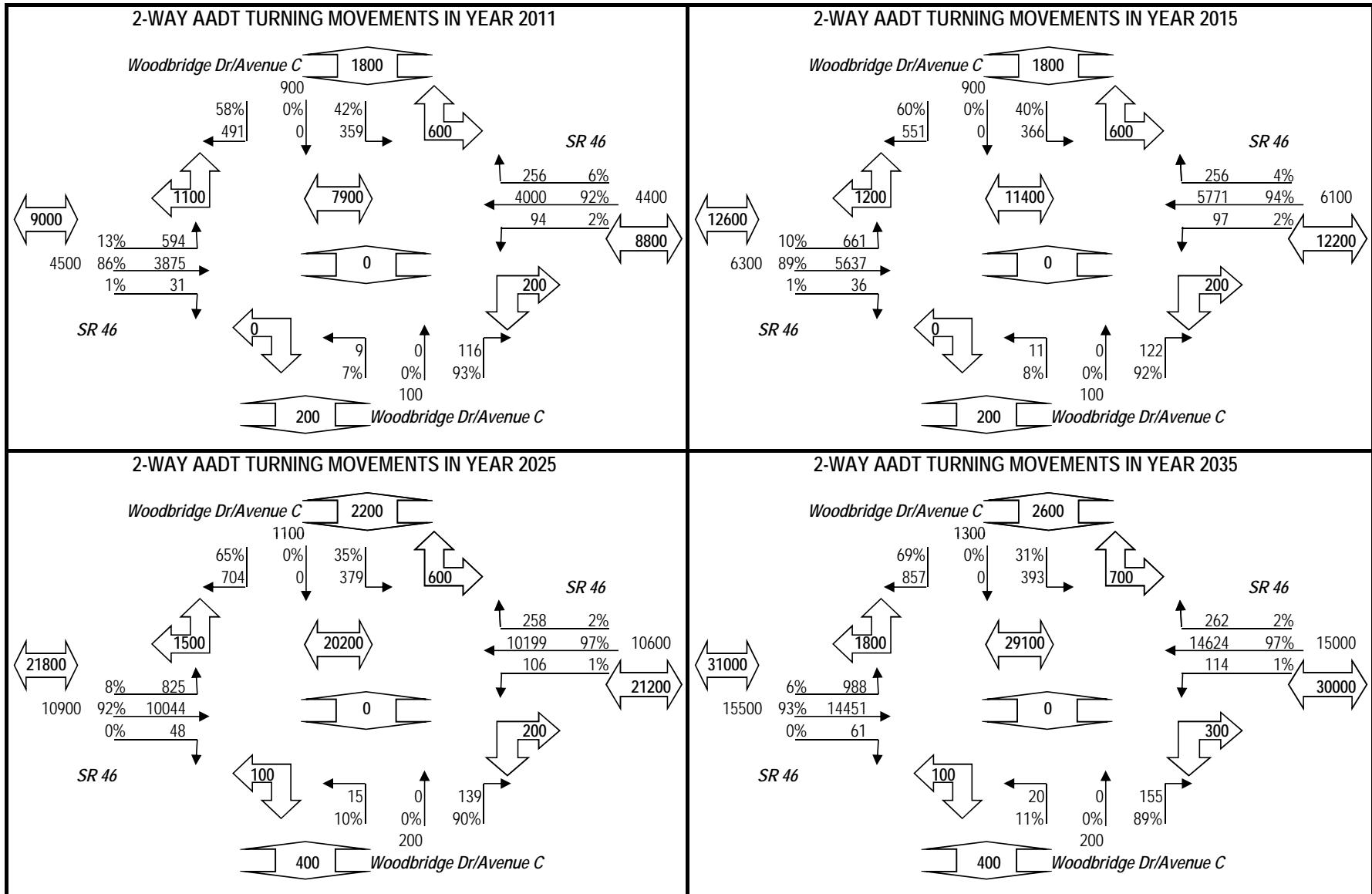
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Woodbridge Dr/Avenue C	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

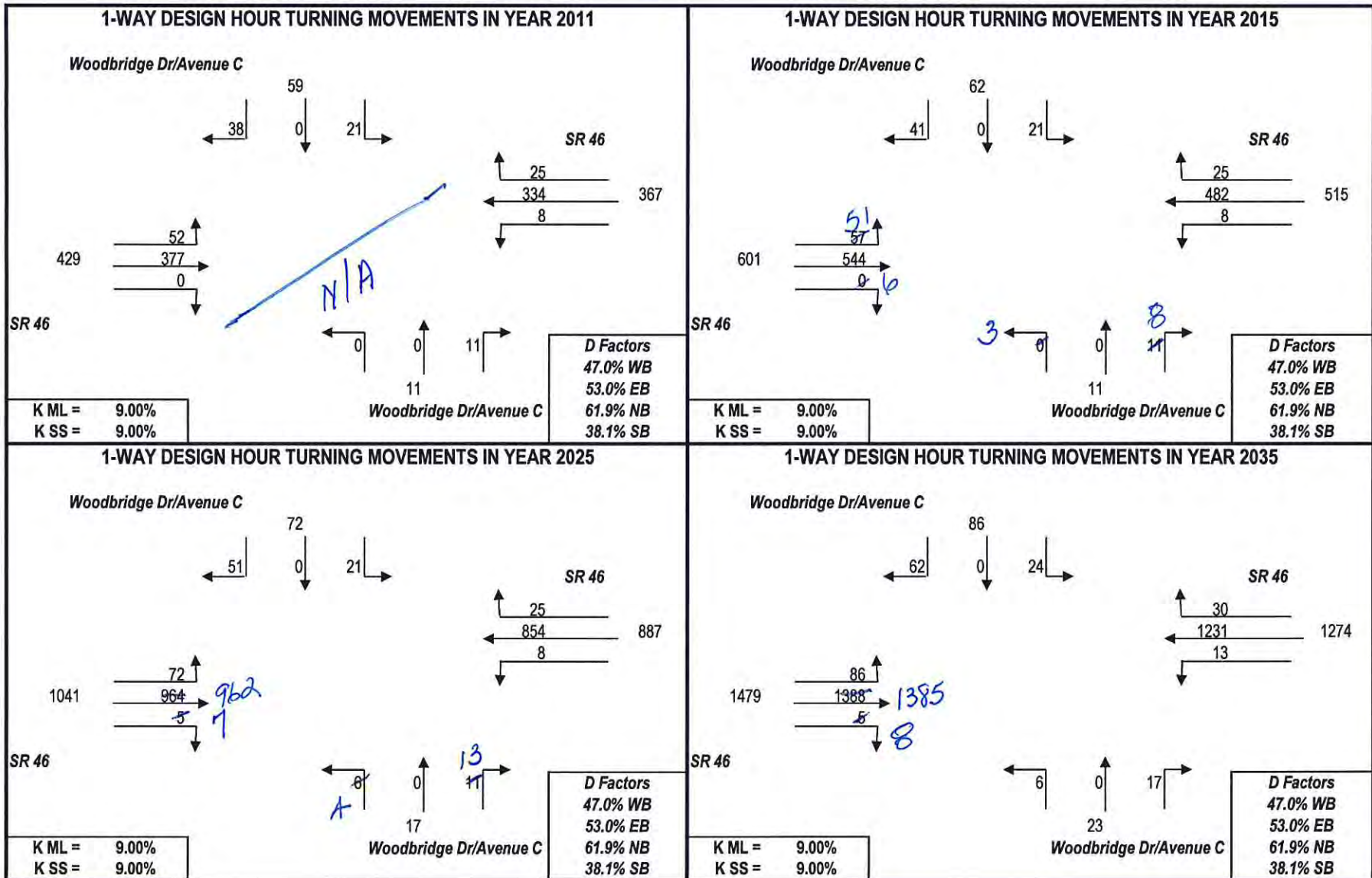
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.07	0.132	600	0.104	700	0.076	800	0.064	1000
West-To-East (Thru)	0.92	0.861	3900	0.890	5600	0.920	10000	0.932	14500
West-To-South (RT)	0.01	0.007	0	0.006	0	0.004	0	0.004	100
<b>Total Flow From West:</b>			<b>4500</b>		<b>6300</b>		<b>10800</b>		<b>15600</b>
East-To-South (LT)	0.01	0.022	100	0.016	100	0.010	100	0.008	100
East-To-West (Thru)	0.98	0.920	4000	0.942	5800	0.966	10200	0.975	14600
East-To-North (RT)	0.01	0.059	300	0.042	300	0.024	300	0.017	300
<b>Total Flow From East:</b>			<b>4400</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
North-To-East (LT)	0.19	0.422	400	0.399	400	0.350	400	0.314	400
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.81	0.578	500	0.601	600	0.650	700	0.686	900
<b>Total Flow From North:</b>			<b>900</b>		<b>1000</b>		<b>1100</b>		<b>1300</b>
South-To-West (LT)	0.20	0.074	0	0.081	0	0.098	0	0.113	0
South-To-North (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.80	0.926	100	0.919	100	0.902	100	0.887	200
<b>Total Flow From South:</b>			<b>100</b>		<b>100</b>		<b>100</b>		<b>200</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

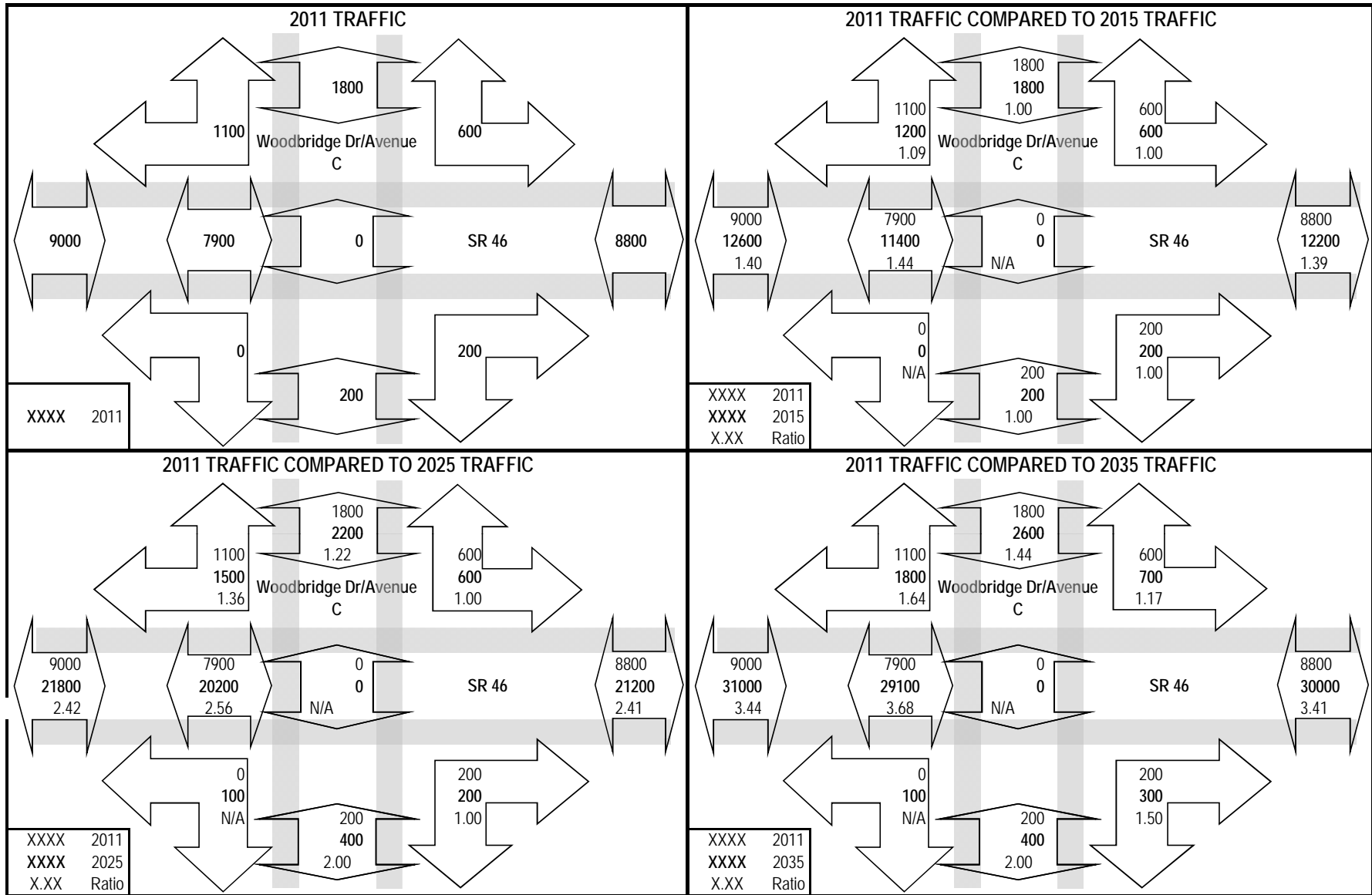
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - Build)



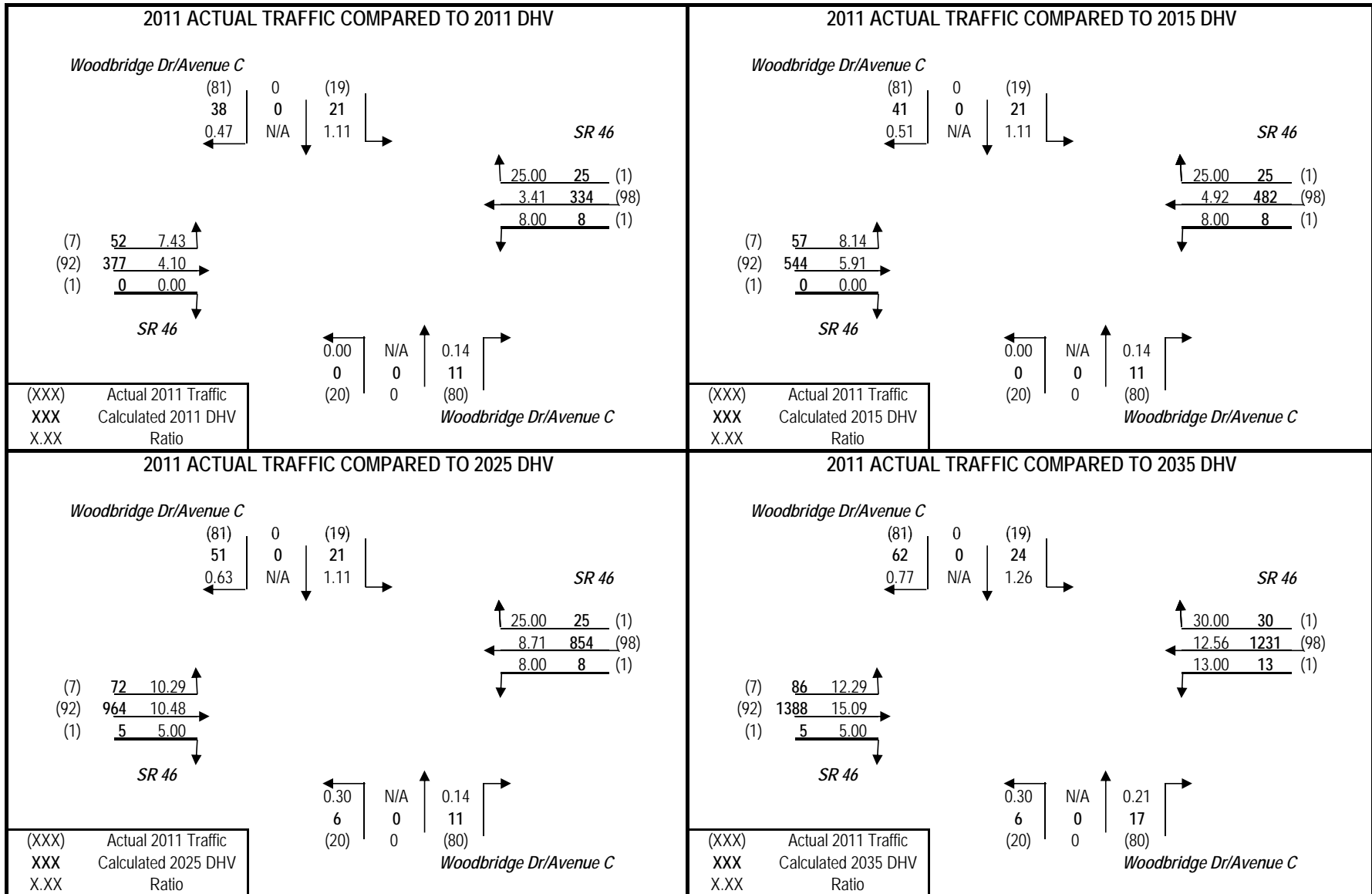
# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - Build)



# PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT Woodbridge Dr/Avenue C: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** 3rd Street  
**From:** SR 415  
**To:** CR 426 (PM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?** Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			30.0%	Northbound (NB)
			70.0%	Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)** Enter Yes or No  
 Yes  
 No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

	Year	Rate (1.0% = 0.01)	
		Mainline	Side Street
Base			
Opening			
Mid			
Design			

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	
EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
0	0	0	0	0

**Mainline Growth Function**

Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

Linear  
 Exponential  
 Decaying

**Enter Project and Model Years**

	Year
Base	2011
Opening	2015
Mid	2025
Design	2035
Model	2035

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	
	EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
2011	8700	8700	90	0	17490
2035	30000	30000	150	0	60150

**1st Guess Actual/Counted**

**Turning %'s for Traffic AADT Balancing for 2011**

(EB LT)	West-to-North	0%	0
(EB THRU)	West-to-East	100%	100
(EB RT)	West-to-South	0%	0
(must be done manually)			
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	0%	0
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	100%	100
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0

Desired Closure: 0.01

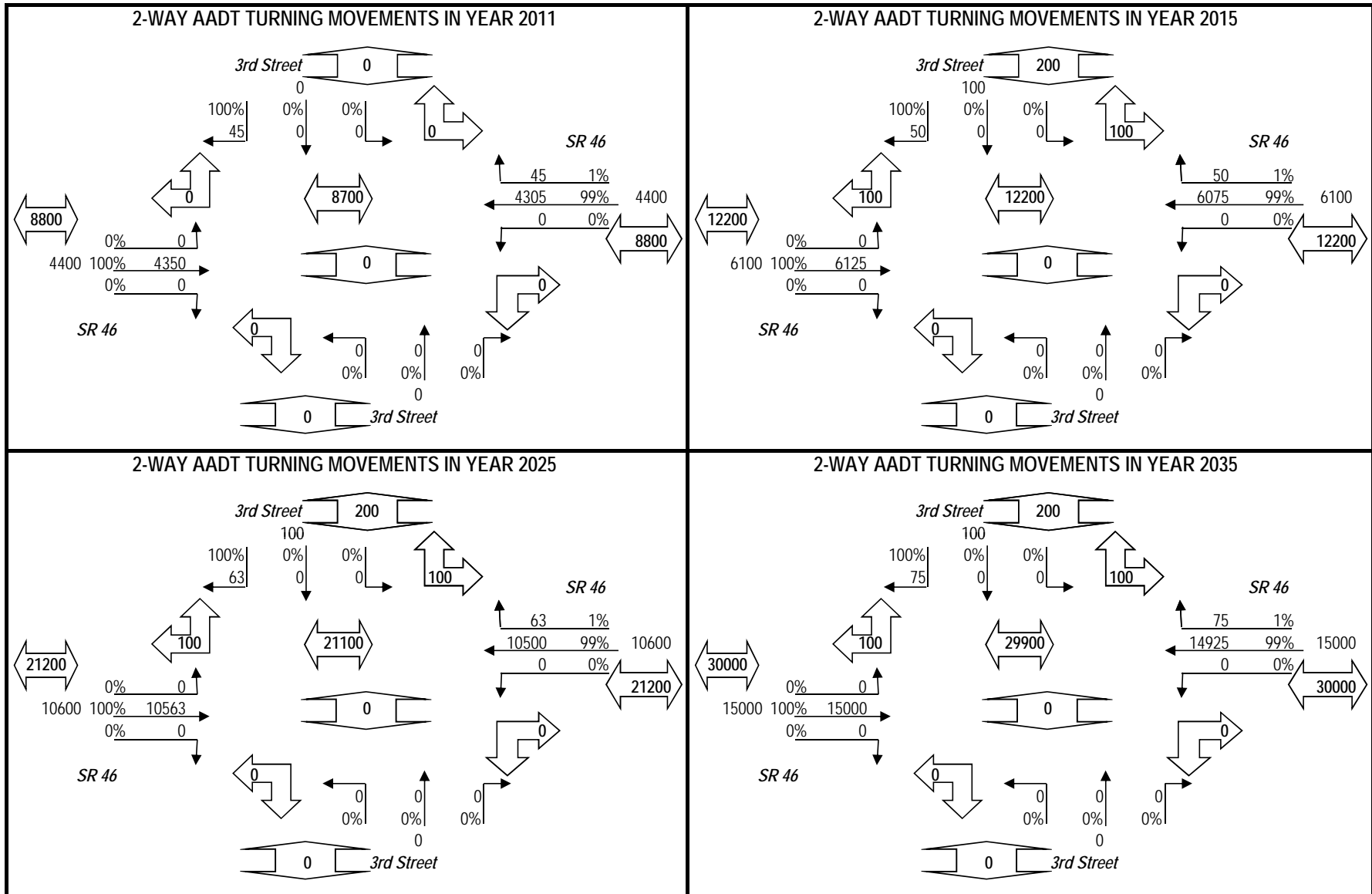
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	3rd Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	1.00	1.000	4400	1.000	6100	1.000	10600	1.000	15000
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>6100</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.990	4300	0.992	6100	0.994	10500	0.995	14900
East-To-North (RT)	0.01	0.010	0	0.008	100	0.006	100	0.005	100
<b>Total Flow From East:</b>			<b>4300</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
North-To-East (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	1.00	1.000	0	1.000	100	1.000	100	1.000	100
<b>Total Flow From North:</b>			<b>0</b>		<b>100</b>		<b>100</b>		<b>100</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

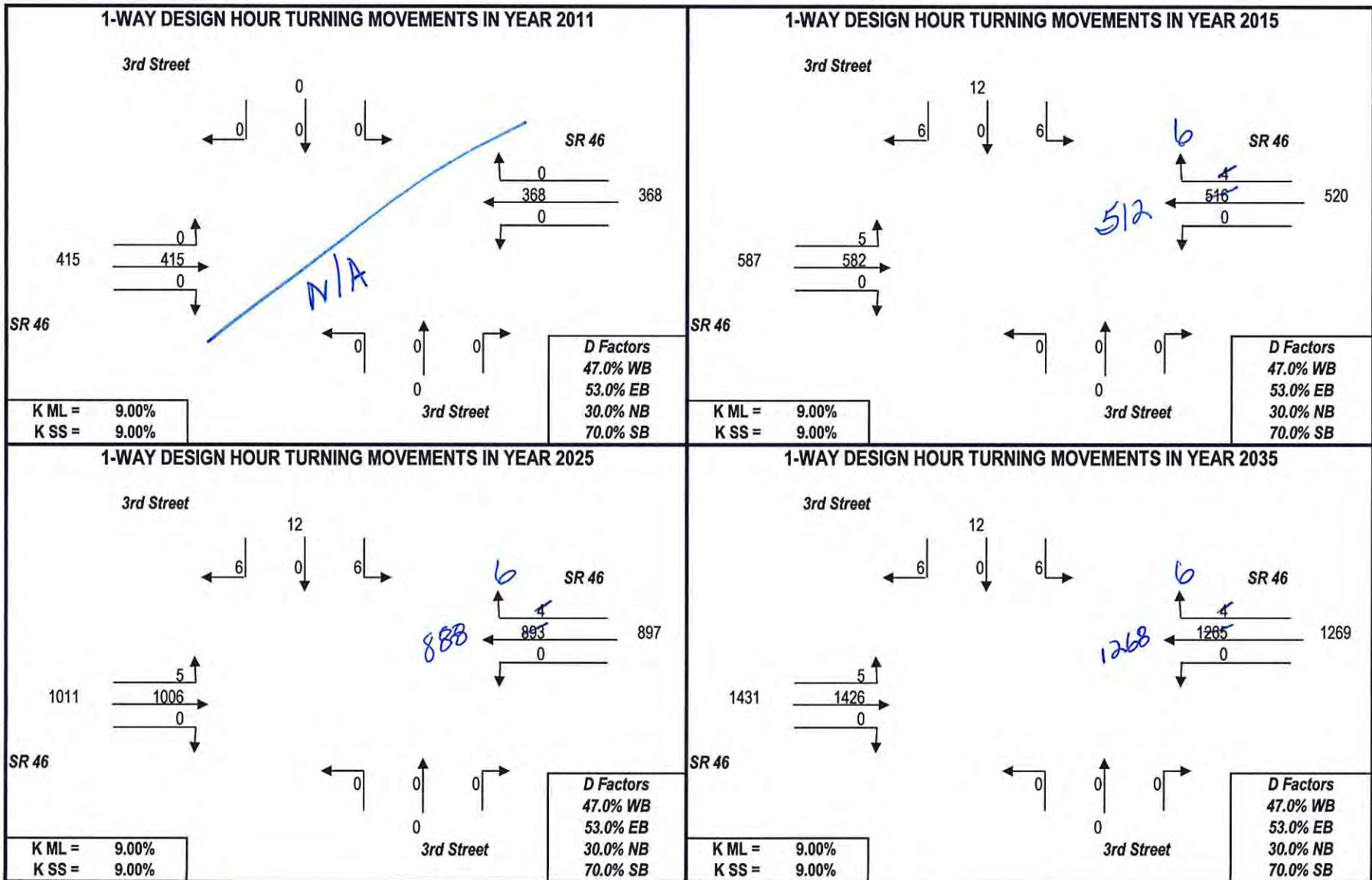
PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - Build)

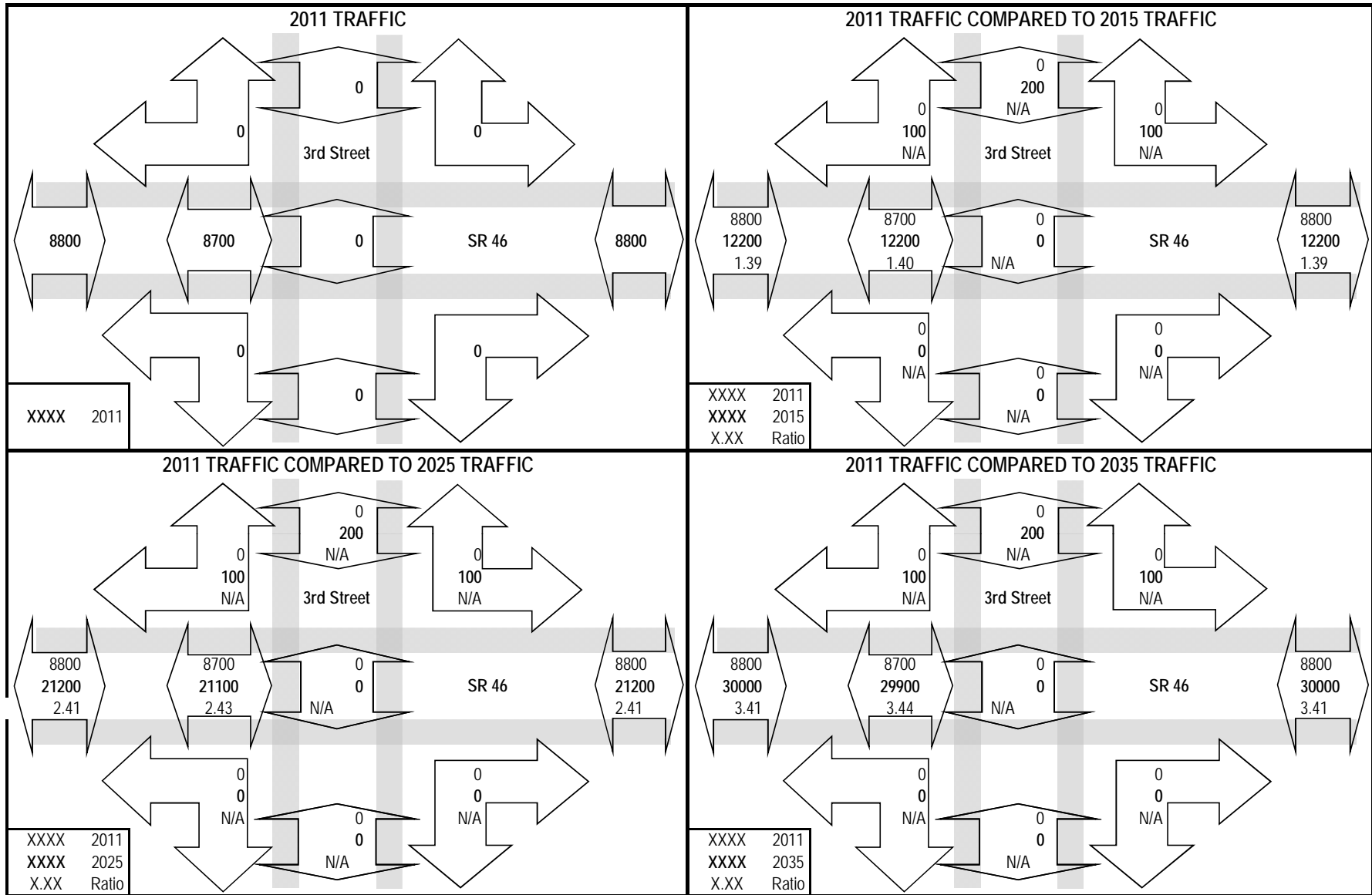




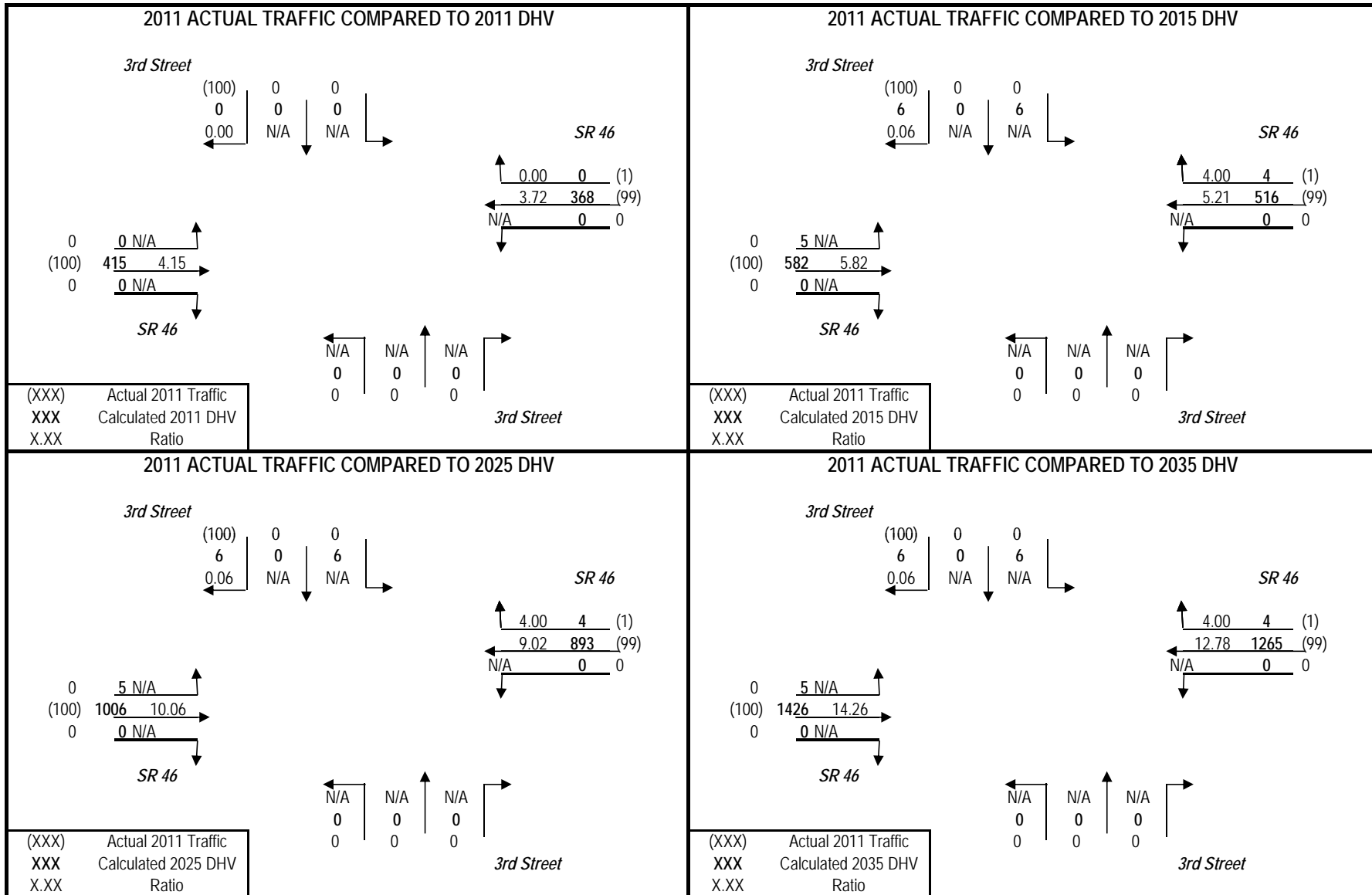
## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - Build)



PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT 3rd Street: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

**Analyst:** JT  
**Date:** 18-Apr-12  
**Highway:** SR 46  
**Intersection:** Oak Street  
**From:** SR 415  
**To:** CR 426 (PM Peak - Build)  
**County:** Seminole

**Is the Mainline Oriented North/South?**  
 Enter Yes or No  
 Yes  
 No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline
	9.00%		47.0%
	Sidestreet		53.0%
	9.00%		Sidestreet
			30.0%
			70.0%

Westbound (WB)  
 Eastbound (EB)  
 Northbound (NB)  
 Southbound (SB)

**Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)**

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

**Mainline Growth Function**

 Linear  
 Exponential  
 Decaying

**Side Street Growth Function**

 Linear  
 Exponential  
 Decaying

**Enter Base Year AADTs for Volume Comparison:**  
(growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	8700	220	0	17620
2035	30000	30000	330	0	60330

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	2%	2
(EB THRU)	West-to-East	98%	98
(EB RT)	West-to-South	0%	0
(WB LT)	East-to-South	0%	0
(WB THRU)	East-to-West	99%	99
(WB RT)	East-to-North	1%	1
(SB LT)	North-to-East	44%	44
(SB THRU)	North-to-South	0%	0
(SB RT)	North-to-West	56%	56
(NB LT)	South-to-West	0%	0
(NB THRU)	South-to-North	100%	0
(NB RT)	South-to-East	0%	0
Desired Closure:		0.01	

(must be done manually)

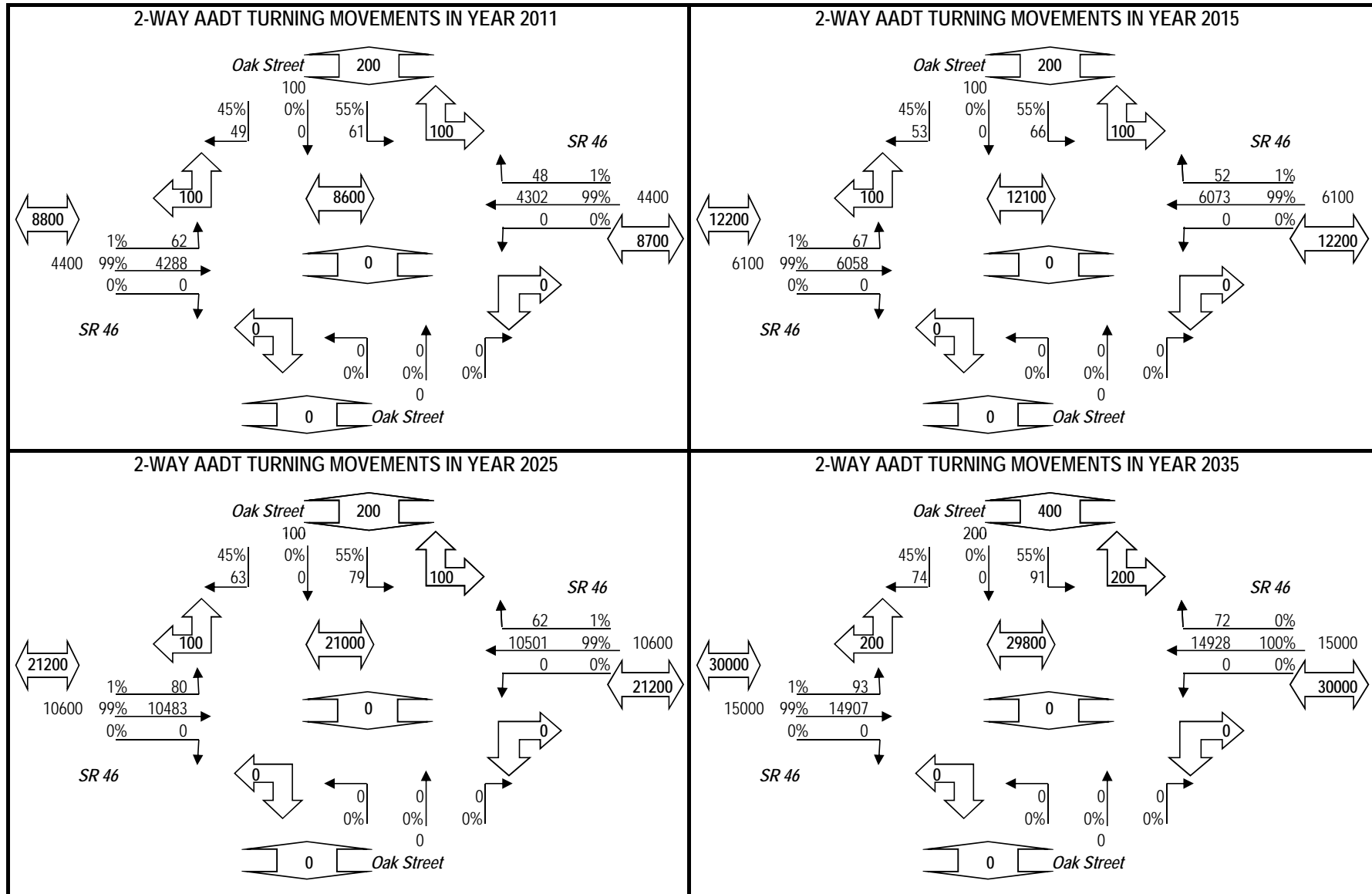
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	Oak Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

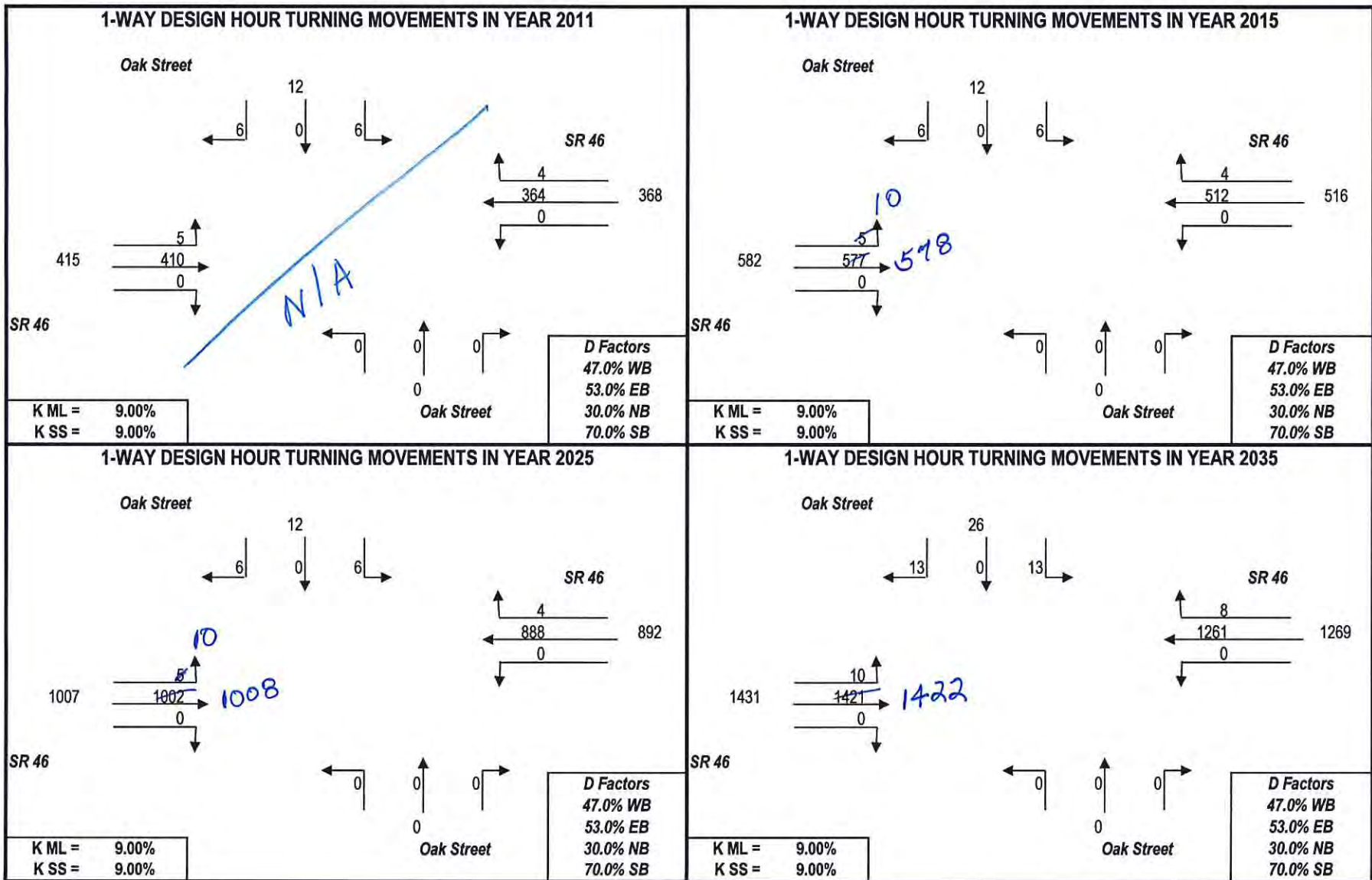
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.02	0.014	100	0.011	100	0.008	100	0.006	100
West-To-East (Thru)	0.98	0.986	4300	0.989	6100	0.992	10500	0.994	14900
West-To-South (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From West:</b>			<b>4400</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
East-To-West (Thru)	0.99	0.989	4300	0.991	6100	0.994	10500	0.995	14900
East-To-North (RT)	0.01	0.011	0	0.009	100	0.006	100	0.005	100
<b>Total Flow From East:</b>			<b>4300</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
North-To-East (LT)	0.44	0.554	100	0.554	100	0.553	100	0.553	100
North-To-South (Thru)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
North-To-West (RT)	0.56	0.446	0	0.446	100	0.447	100	0.447	100
<b>Total Flow From North:</b>			<b>100</b>		<b>200</b>		<b>200</b>		<b>200</b>
South-To-West (LT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	1.00	0.000	0	0.000	0	0.000	0	0.000	0
South-To-East (RT)	0.00	0.000	0	0.000	0	0.000	0	0.000	0
<b>Total Flow From South:</b>			<b>0</b>		<b>0</b>		<b>0</b>		<b>0</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

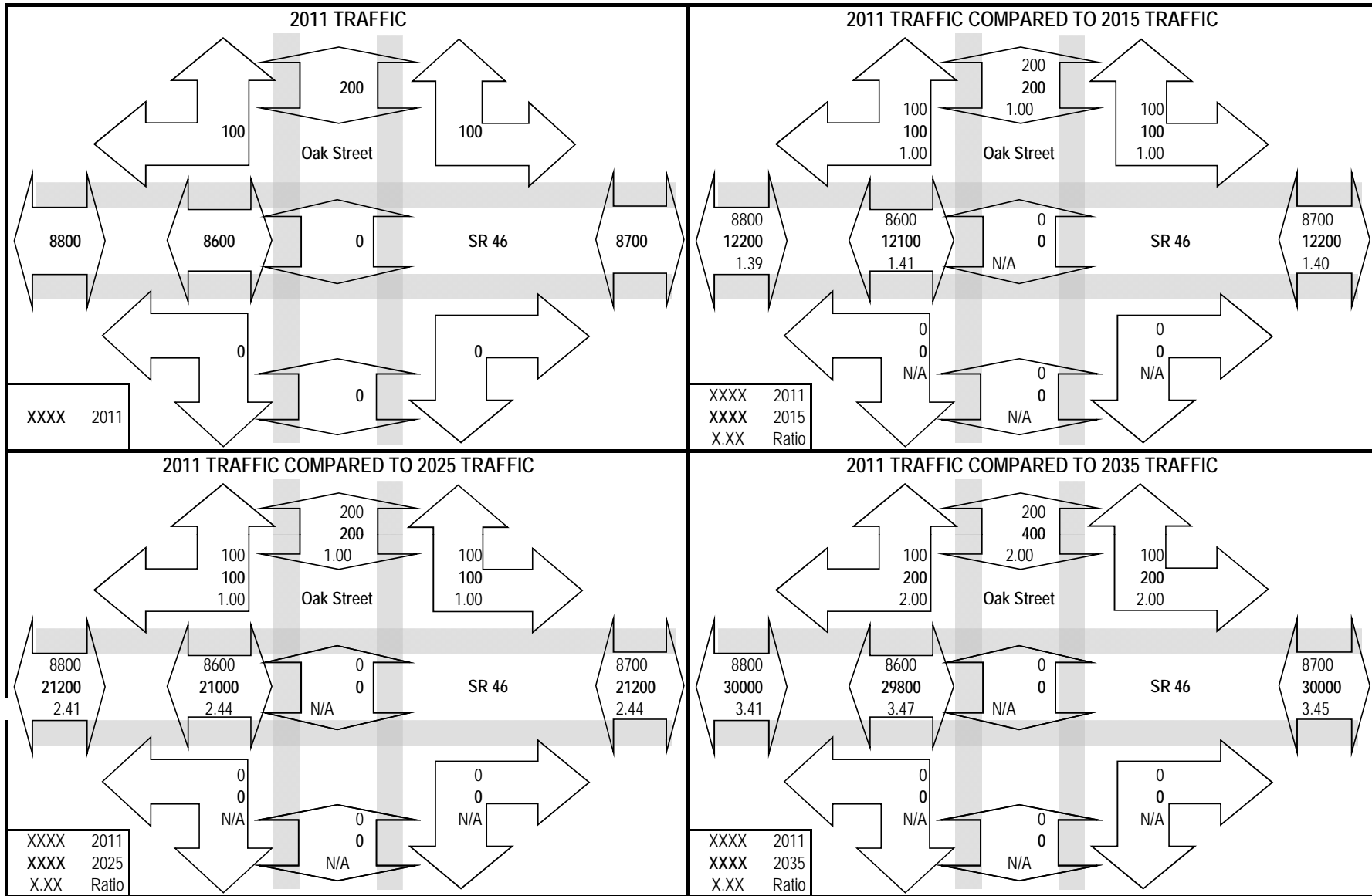
## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - Build)



PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - Build)

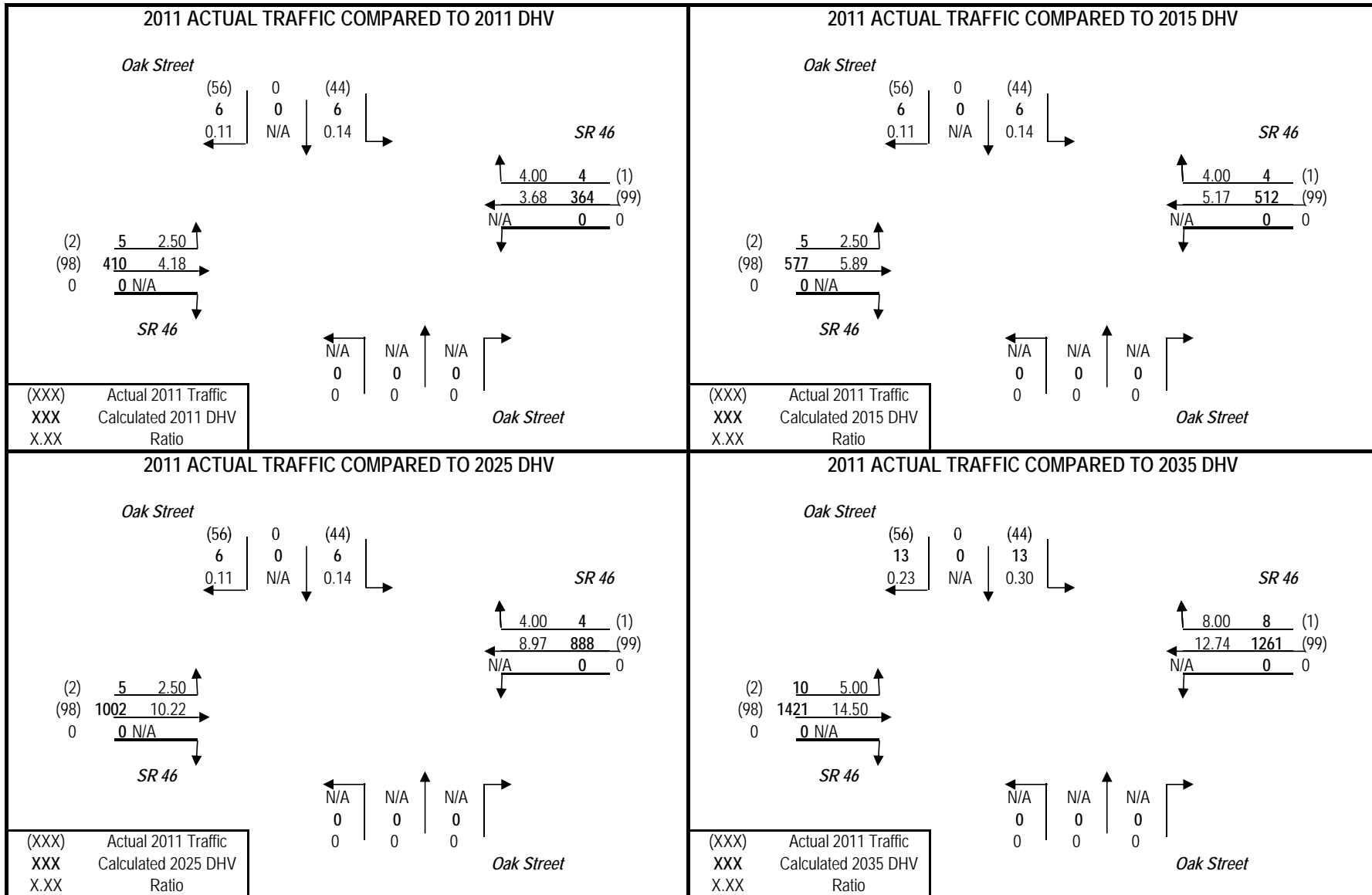


### PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - Build)





## PROJECT TRAFFIC FOR SR 46 AT Oak Street: SR 415 TO CR 426 (PM Peak - Build)



## URNS5 ANALYSIS SHEET - INPUT

Analyst: JT  
 Date: 18-Apr-12  
 Highway: SR 46  
 Intersection: CR 426/1st Street  
 From: SR 415  
 To: CR 426 (PM Peak - Build)  
 County: Seminole

Is the Mainline Oriented North/South?  Yes  No

<b>K Factors</b>	Mainline	<b>D Factors</b>	Mainline	
	9.00%		47.0%	Westbound (WB)
	Sidestreet		53.0%	Eastbound (EB)
	9.00%		Sidestreet	
			60.8%	Northbound (NB)
			39.2%	Southbound (SB)

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)  Yes  No

If "Yes" go to cell C47 If "No" go to cell C31

**Enter Year and Growth Rates from Base Year:**

Year	Rate (1.0% = 0.01)	
	Mainline	Side Street
Base		
Opening		
Mid		
Design		

Mainline Growth Function:  Linear  Exponential  Decaying

Side Street Growth Function:  Linear  Exponential  Decaying

**Enter Base Year AADTs for Volume Comparison:**  
 (growth rates are used to calculate other project years)

From West:	From East:	From North:	From South:	TOTAL
EB Approach	WB Approach	SB Approach	NB Approach	
0	0	0	0	0

**Enter Project and Model Years**

Year
Base
Opening
Mid
Design
Model

**Enter Base and Model Year AADTs for Volume Comparison:**  
 (volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	TOTAL
	EB Approach	WB Approach	SB Approach	NB Approach	
2011	8700	5800	3800	8600	26900
2035	30000	20000	5600	21000	76600

		1st Guess	Actual/Counted
		Turning %'s for Traffic AADT Balancing for 2011	
(EB LT)	West-to-North	6%	6
(EB THRU)	West-to-East	51%	51
(EB RT)	West-to-South	43%	43
(must be done manually)			
(WB LT)	East-to-South	23%	23
(WB THRU)	East-to-West	69%	69
(WB RT)	East-to-North	8%	8
(SB LT)	North-to-East	14%	14
(SB THRU)	North-to-South	71%	71
(SB RT)	North-to-West	15%	15
(NB LT)	South-to-West	48%	48
(NB THRU)	South-to-North	36%	36
(NB RT)	South-to-East	16%	16
Desired Closure:		0.01	

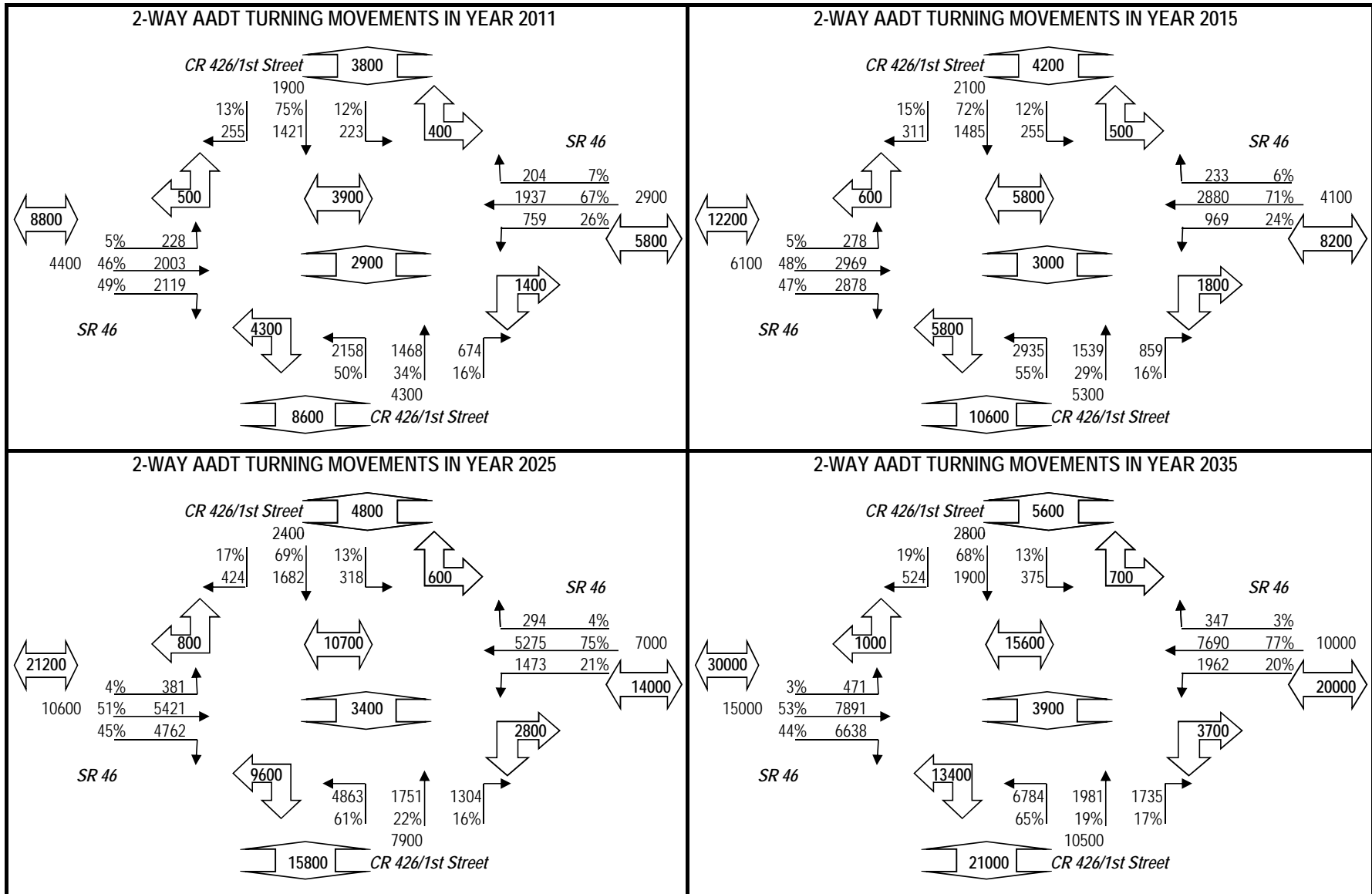
# TURNS5 INITIAL TURNING VOLUME SUMMARY

<b>Highway:</b>	SR 46	<b>County:</b>	Seminole
<b>Intersection:</b>	CR 426/1st Street	<b>Analyst:</b>	JT
<b>From:</b>	SR 415	<b>Date:</b>	18-Apr-12
<b>To:</b>	CR 426 (PM Peak - Build)		

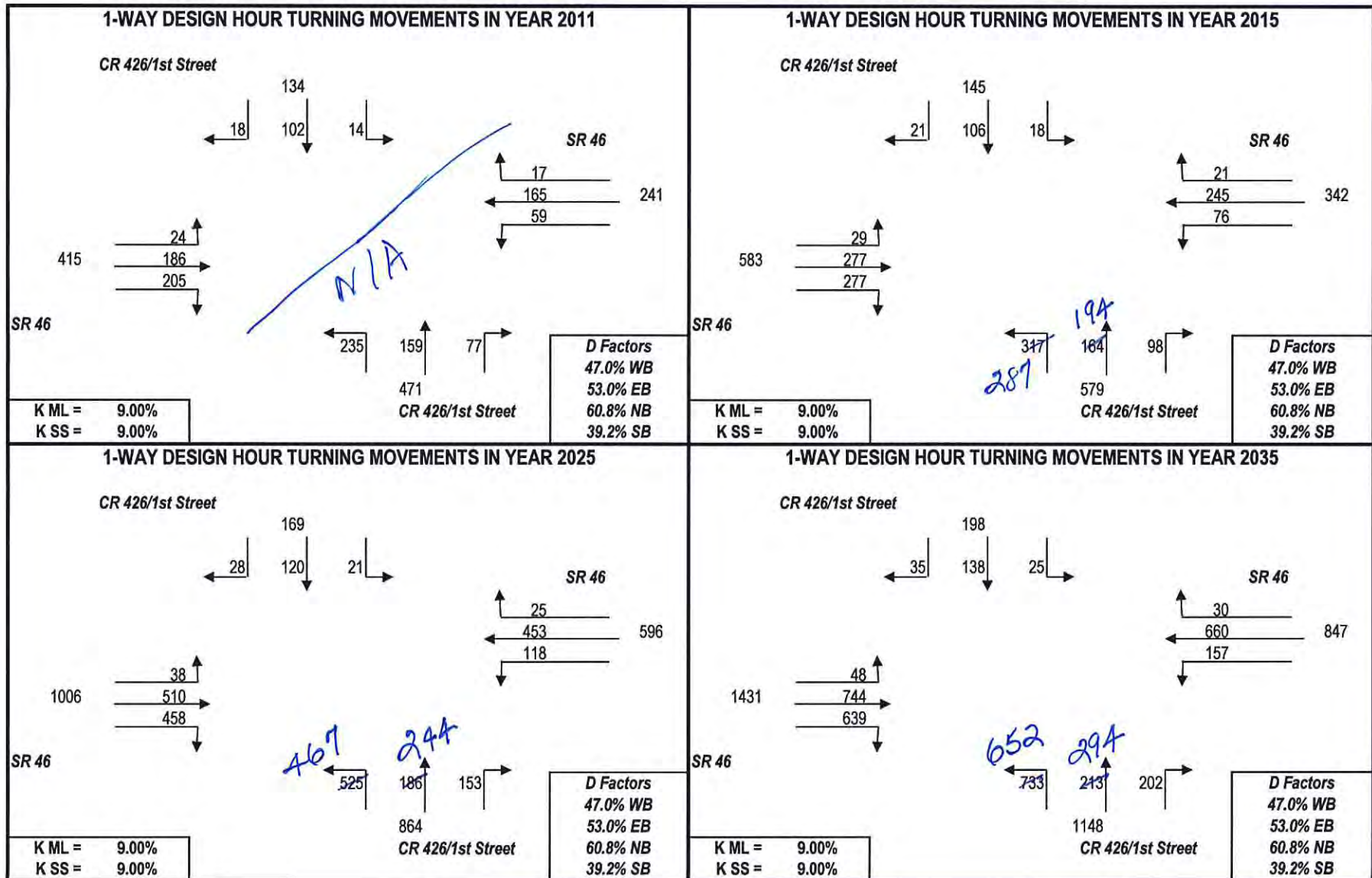
Approach-To-Approach	2011	2011		2015		2025		2035	
	Initial Estimate	Final Estimate	Turning Volume	Final Estimate	Calculated Volume	Final Estimate	Turning Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.06	0.052	200	0.045	300	0.036	400	0.031	500
West-To-East (Thru)	0.51	0.460	2000	0.485	3000	0.513	5400	0.526	7900
West-To-South (RT)	0.43	0.487	2100	0.470	2900	0.451	4800	0.443	6600
<b>Total Flow From West:</b>			<b>4300</b>		<b>6200</b>		<b>10600</b>		<b>15000</b>
East-To-South (LT)	0.23	0.262	800	0.237	1000	0.209	1500	0.196	2000
East-To-West (Thru)	0.69	0.668	1900	0.705	2900	0.749	5300	0.769	7700
East-To-North (RT)	0.08	0.070	200	0.057	200	0.042	300	0.035	300
<b>Total Flow From East:</b>			<b>2900</b>		<b>4100</b>		<b>7100</b>		<b>10000</b>
North-To-East (LT)	0.14	0.118	200	0.124	300	0.131	300	0.134	400
North-To-South (Thru)	0.71	0.748	1400	0.724	1500	0.694	1700	0.679	1900
North-To-West (RT)	0.15	0.134	300	0.152	300	0.175	400	0.187	500
<b>Total Flow From North:</b>			<b>1900</b>		<b>2100</b>		<b>2400</b>		<b>2800</b>
South-To-West (LT)	0.48	0.502	2200	0.550	2900	0.614	4900	0.646	6800
South-To-North (Thru)	0.36	0.341	1500	0.289	1500	0.221	1800	0.189	2000
South-To-East (RT)	0.16	0.157	700	0.161	900	0.165	1300	0.165	1700
<b>Total Flow From South:</b>			<b>4400</b>		<b>5300</b>		<b>8000</b>		<b>10500</b>

PLEASE NOTE: These are the Initial Balanced Turning Movements. They are directional.  
 The volumes as shown in the the output Turning Movement Diagrams have been smoothed to reflect two-way flow.

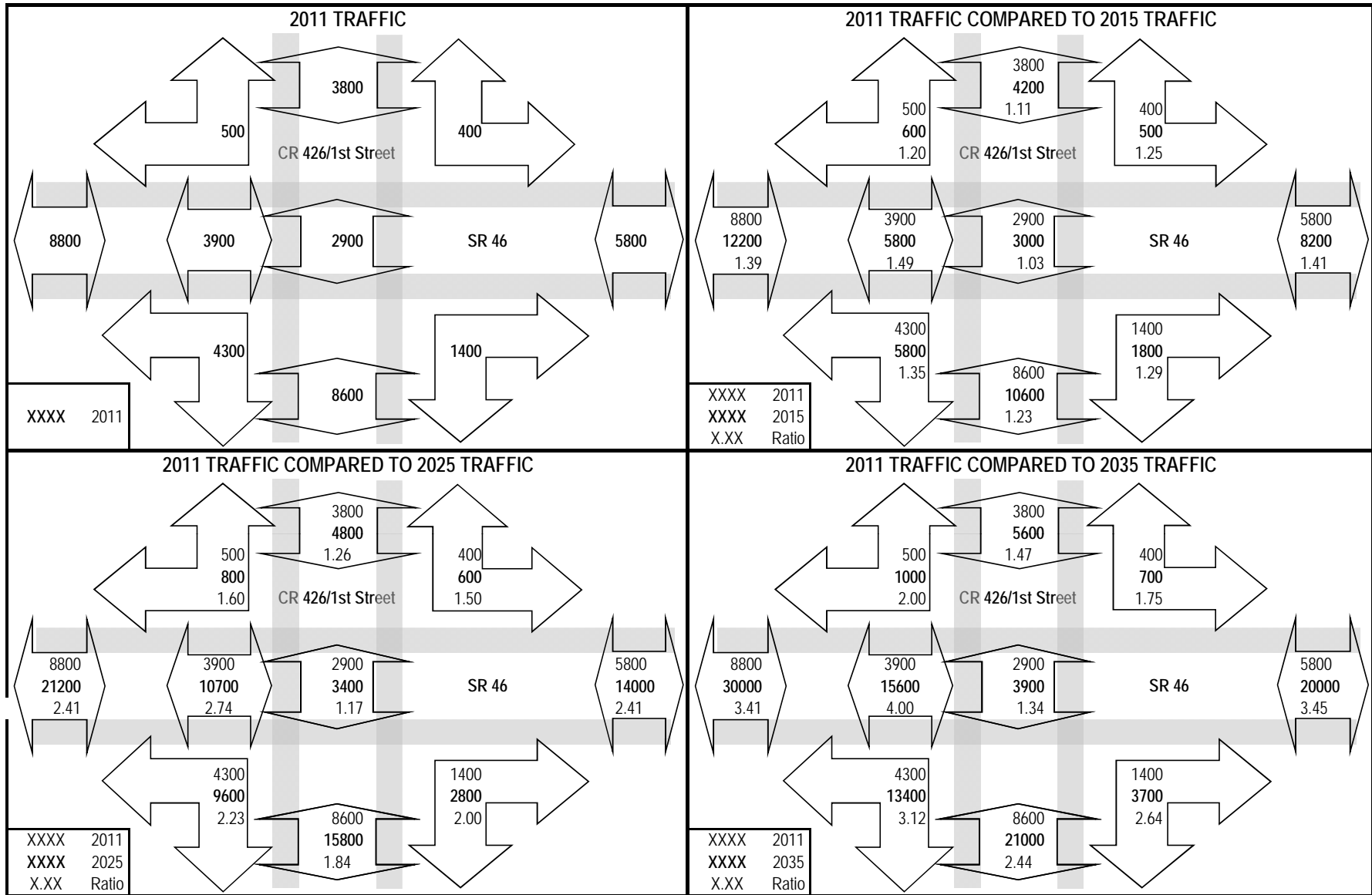
## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - Build)



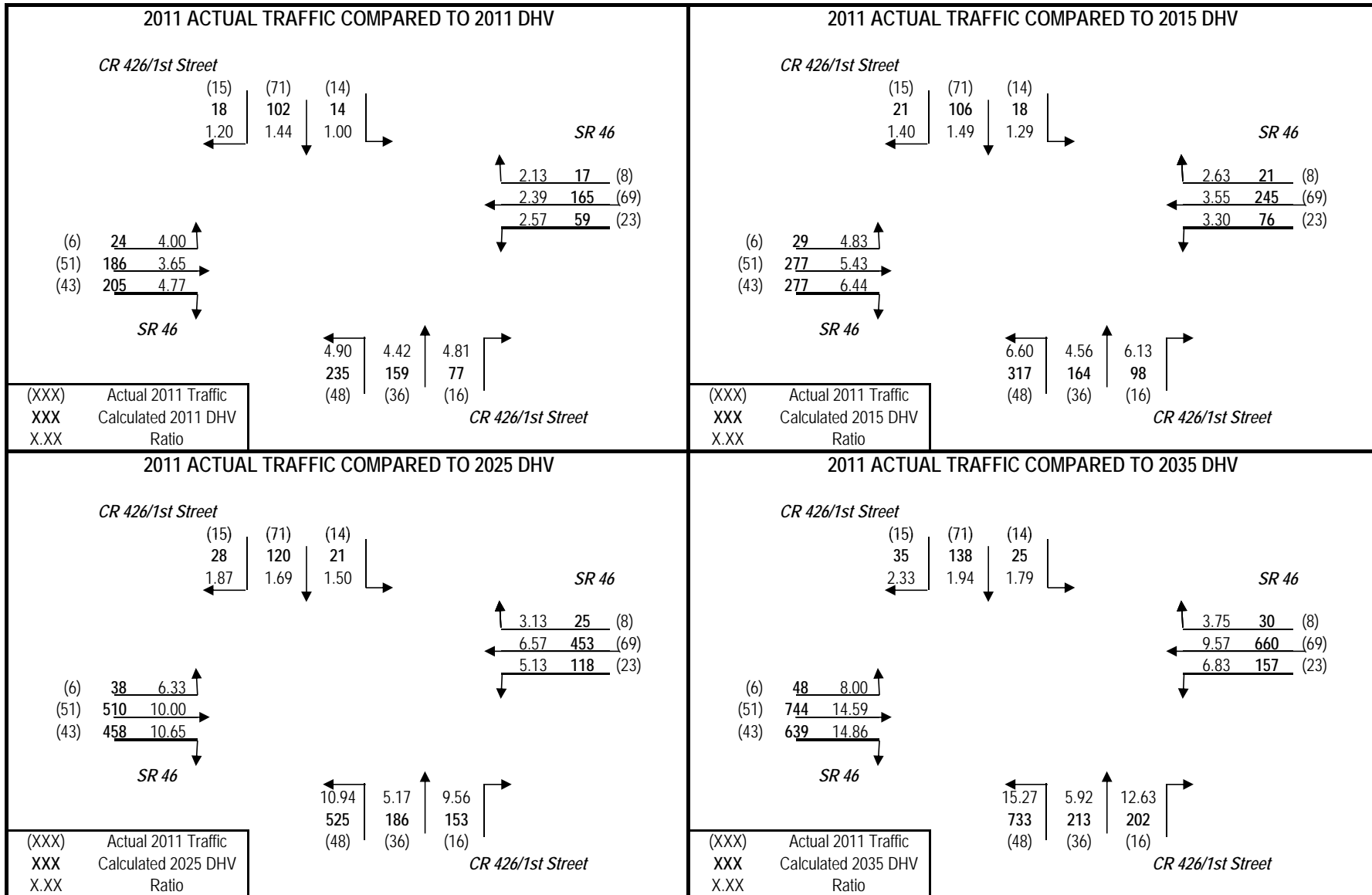
## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - Build)



PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - Build)



## PROJECT TRAFFIC FOR SR 46 AT CR 426/1st Street: SR 415 TO CR 426 (PM Peak - Build)



# Appendix M

## Signal Warrant Analysis Worksheets



# Signal Warrant Analysis Worksheets – No Build Alternative

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2015 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

*Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.*

Satisfied:  Yes  No

*Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.*

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours								
					6-7 AM	7-8 AM	8-9 AM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	
	Approach Lanes	1	2 or more	Volume Level	100%	70%	100%	70%					
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	306	500	508	312	369	452	512	400	
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	77	83	64	70	81	98	114	71	

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

*Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.*

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					6-7 AM	7-8 AM	8-9 AM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
	Approach Lanes	1	2 or more	Volume Level	100%	70%	100%	70%				
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	306	500	508	312	369	452	512	400
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	77	83	64	70	81	98	114	71

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2025 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

*Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.*

Satisfied:  Yes  No

*Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.*

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					6-7 AM	7-8 AM	8-9 AM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
	Approach Lanes	1		2 or more								
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	492	804	818	502	593	726	824	644
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	124	133	103	112	131	158	183	114

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

*Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.*

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					6-7 AM	7-8 AM	8-9 AM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
	Approach Lanes	1		2 or more								
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	492	804	818	502	593	726	824	644
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	124	133	103	112	131	158	183	114

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2035 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

*Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.*

Satisfied:  Yes  No

*Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.*

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	678	1,109	1,127	692	818	1,001	1,135	888
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	171	183	142	155	180	218	253	157

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

*Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.*

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	678	1,109	1,127	692	818	1,001	1,135	888
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	171	183	142	155	180	218	253	157

*Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.*

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Mullet Lake Road  
 Comments: Design Year 2035 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,378	2,104	2,052	1,423	1,254	1,407	2,067	1,915
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	39	44	53	39	29	29	27	34

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,378	2,104	2,052	1,423	1,254	1,407	2,067	1,915
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	39	44	53	39	29	29	27	34

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Cochran Rd  
 Comments: Design Year 2035 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,454	2,098	1,916	1,393	1,358	1,192	1,404	2,487
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	39	73	77	58	35	36	36	41

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,454	2,098	1,916	1,393	1,358	1,192	1,404	2,487
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	39	73	77	58	35	36	36	41

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Woodbridge Rd  
 Comments: Design Year 2035 - No Build

Lanes: 1 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours								
					8-9 AM	10-11 AM	11-12 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	
	Approach Lanes	1		2 or more									
Volume Level	100%	70%	100%	70%									
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,916	1,358	1,209	1,404	1,698	2,196	2,487	1,825	
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	128	77	68	83	96	83	114	81	

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours								
					8-9 AM	10-11 AM	11-12 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	
	Approach Lanes	1		2 or more									
Volume Level	100%	70%	100%	70%									
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,916	1,358	1,209	1,404	1,698	2,196	2,487	1,825	
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	128	77	68	83	96	83	114	81	

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: 3rd Street/ Oak Street  
 Comments: Design Year 2035 - No Build

Lanes: 1 Critical Approach Speed: 45  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		8-9 AM	10-11 AM	11-12 PM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,919	1,276	1,173	1,380	1,655	2,103	2,412	1,618
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	8	5	4	5	6	5	7	5

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		8-9 AM	10-11 AM	11-12 PM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,919	1,276	1,173	1,380	1,655	2,103	2,412	1,618
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	8	5	4	5	6	5	7	5

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.



# Signal Warrant Analysis Worksheets – Build Alternative

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2015 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					Approach Lanes		Volume Level		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	1	2 or more	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	319	522	530	326	385	471	534	418
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	83	89	68	75	87	106	122	76

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					Approach Lanes		Volume Level		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	1	2 or more	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	319	522	530	326	385	471	534	418
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	83	89	68	75	87	106	122	76

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2025 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					Approach Lanes		Volume Level		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	1	2 or more	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	558	913	928	570	674	825	935	731
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	140	151	116	127	148	179	208	129

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					Approach Lanes		Volume Level		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	1	2 or more	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	558	913	928	570	674	825	935	731
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	140	151	116	127	148	179	208	129

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Osceola Rd  
 Comments: Design Year 2035 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	798	1,304	1,326	815	962	1,178	1,336	1,045
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	201	216	167	182	212	257	297	185

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	798	1,304	1,326	815	962	1,178	1,336	1,045
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	201	216	167	182	212	257	297	185

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Mullet Lake Road  
 Comments: Design Year 2035 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,617	2,468	2,406	1,670	1,471	1,650	2,424	2,247
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	39	44	53	39	29	29	27	34

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,617	2,468	2,406	1,670	1,471	1,650	2,424	2,247
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	39	44	53	39	29	29	27	34

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Cochran Rd  
 Comments: Design Year 2035 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	1,706	2,461	2,247	1,633	1,592	1,398	1,646	2,918
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	39	73	77	58	35	36	36	41

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		6-7 AM	7-8 AM	8-9 AM	9-10 AM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	1,706	2,461	2,247	1,633	1,592	1,398	1,646	2,918
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	39	73	77	58	35	36	36	41

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: Woodbridge Rd  
 Comments: Design Year 2035 - Build

Lanes: 2 Critical Approach Speed: 55  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		8-9 AM	10-11 AM	11-12 PM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	2,247	1,592	1,418	1,646	1,993	2,576	2,918	2,141
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	128	77	68	83	96	83	114	81

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					1		2 or more		8-9 AM	10-11 AM	11-12 PM	2-3 PM
	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	2,247	1,592	1,418	1,646	1,993	2,576	2,918	2,141
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	128	77	68	83	96	83	114	81

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

## TRAFFIC SIGNAL WARRANT SUMMARY

City: \_\_\_\_\_  
 County: Seminole

Engineer: JT  
 Date: February 12, 2012

Major Street: SR 46  
 Minor Street: 3rd Street/ Oak Street  
 Comments: Design Year 2035 - Build

Lanes: 2 Critical Approach Speed: 45  
 Lanes: 1

### Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ?  Yes  No  
 2. Is the intersection in a built-up area of isolated community of <10,000 population?  Yes  No
- If Question 1 or 2 above is answered "Yes", then use "70%" volume level  70%  100%

### WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable:  Yes  No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.

Satisfied:  Yes  No

Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied for major streets 40 mph or less, or "56%" satisfied for major streets greater than 40 mph.

#### Condition A - Minimum Vehicular Volume

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					8-9 AM	10-11 AM	11-12 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
	Approach Lanes	1		2 or more								
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400) [280]	350	600 (480) [336]	420	2,257	1,501	1,380	1,624	1,948	2,473	2,838	1,904
Highest Approach on Minor Street	150 (120) [84]	105	200 (160) [112]	140	8	5	4	5	6	5	7	5

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.

#### Condition B - Interruption of Continuous Traffic

Applicable:  Yes  No

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay.

Excessive Delay:  Yes  No

100% (70%) Satisfied:  Yes  No

56% or 80% Satisfied:  Yes  No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
					8-9 AM	10-11 AM	11-12 PM	2-3 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
	Approach Lanes	1		2 or more								
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600) [420]	525	900 (720) [504]	630	2,257	1,501	1,380	1,624	1,948	2,473	2,838	1,904
Highest Approach on Minor Street	75 (60) [42]	53	100 (80) [56]	70	8	5	4	5	6	5	7	5

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours. Condition is 80% satisfied if (parenthetical) volumes are met for eight hours. Condition is 56% satisfied if [bracketed] volumes are met for eight hours.



























# Appendix N

## SYNCHRO Intersection Analysis Outputs for No Build Alternative

# Year 2015 AM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2015 AM Peak Hour  
No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	303	34	200	368	100	34	248	68	200	705	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3458		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.30	1.00		0.40	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	560	3458		736	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	264	319	36	211	387	105	36	261	72	211	742	236
RTOR Reduction (vph)	0	0	27	0	0	69	0	17	0	0	0	130
Lane Group Flow (vph)	264	319	9	211	387	36	36	316	0	211	742	106
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	13.1	17.9	24.0	14.9	19.7	33.1	29.0	22.9		42.8	30.2	43.3
Effective Green, g (s)	13.1	17.9	24.0	14.9	19.7	33.1	29.0	22.9		42.8	30.2	43.3
Actuated g/C Ratio	0.14	0.19	0.25	0.16	0.20	0.34	0.30	0.24		0.45	0.31	0.45
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	438	617	370	498	679	510	247	824		467	1091	700
v/s Ratio Prot	c0.08	0.10	0.00	0.07	c0.12	0.01	0.01	0.09		c0.06	c0.21	0.02
v/s Ratio Perm			0.00			0.01	0.03			0.14		0.05
v/c Ratio	0.60	0.52	0.02	0.42	0.57	0.07	0.15	0.38		0.45	0.68	0.15
Uniform Delay, d1	39.1	35.2	27.2	36.7	34.4	21.2	24.0	30.7		17.2	28.7	15.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.5	1.5	0.0	0.7	1.8	0.1	0.3	0.4		0.8	1.8	0.1
Delay (s)	41.5	36.7	27.2	37.4	36.2	21.2	24.3	31.0		18.1	30.6	15.7
Level of Service	D	D	C	D	D	C	C	C		B	C	B
Approach Delay (s)		38.2			34.3			30.4			25.4	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2015 AM Peak Hour  
No Build Alternative


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (veh/h)	102	482	0	0	544	1	1	0	134	0	0
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	107	507	0	0	573	1	1	0	141	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		Raised			Raised						
Median storage (veh)		3			3						
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	573			507			1295	1295	573	1295	507
vC1, stage 1 conf vol							573	573		722	
vC2, stage 2 conf vol							722	722		573	
vCu, unblocked vol	573			507			1295	1295	573	1295	507
tC, single (s)	4.2			4.1			7.2	6.5	6.3	6.5	6.2
tC, 2 stage (s)							6.2	5.5		5.5	
tF (s)	2.3			2.2			3.6	4.0	3.4	4.0	3.3
p0 queue free %	89			100			100	100	72	100	100
cM capacity (veh/h)	966			1068			331	354	504	329	569

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2	NE 1
Volume Total	107	507	573	1	1	141	0
Volume Left	107	0	0	0	1	0	0
Volume Right	0	0	0	1	0	141	0
cSH	966	1700	1700	1700	331	504	1700
Volume to Capacity	0.11	0.30	0.34	0.00	0.00	0.28	0.00
Queue Length 95th (ft)	9	0	0	0	0	28	0
Control Delay (s)	9.2	0.0	0.0	0.0	15.9	14.9	0.0
Lane LOS	A				C	B	A
Approach Delay (s)	1.6		0.0		14.9		0.0
Approach LOS					B		A

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	47.6%		ICU Level of Service A
Analysis Period (min)		15	

















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2015 AM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	33	0	6	4	478	0	0	539	29
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	35	0	6	4	503	0	0	567	31
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1101	1109	503	1094	1094	583	598			503		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1101	1109	503	1094	1094	583	598			503		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	82	100	99	100			100		
cM capacity (veh/h)	188	210	572	192	214	514	945			1072		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	41	507	598									
Volume Left	35	4	0									
Volume Right	6	0	31									
cSH	212	945	1700									
Volume to Capacity	0.19	0.00	0.35									
Queue Length 95th (ft)	17	0	0									
Control Delay (s)	26.0	0.1	0.0									
Lane LOS	D	A										
Approach Delay (s)	26.0	0.1	0.0									
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			1.0									
Intersection Capacity Utilization			40.1%		ICU Level of Service					A		
Analysis Period (min)			15									



















HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2015 AM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	18	0	31	3	0	0	1	478	25	5	544	1
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	19	0	33	3	0	0	1	503	26	5	573	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1102	1103	516	1135	1115	573	574				529	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1102	1103	516	1135	1115	573	574				529	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2				4.2	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3				2.3	
p0 queue free %	90	100	94	98	100	100	100				99	
cM capacity (veh/h)	189	211	561	169	207	521	965				1003	
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	52	3	531	579								
Volume Left	19	3	1	5								
Volume Right	33	0	26	1								
cSH	325	169	965	1003								
Volume to Capacity	0.16	0.02	0.00	0.01								
Queue Length 95th (ft)	14	1	0	0								
Control Delay (s)	18.1	26.7	0.0	0.1								
Lane LOS	C	D	A	A								
Approach Delay (s)	18.1	26.7	0.0	0.1								
Approach LOS	C	D										
<b>Intersection Summary</b>												
Average Delay			1.0									
Intersection Capacity Utilization			42.5%		ICU Level of Service				A			
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2015 AM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	6	4	2	33	6	61	47	455	2	3	514	27
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	4	2	35	6	64	49	479	2	3	541	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1207	1154	479	1144	1142	555	569			481		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1207	1154	479	1144	1142	555	569			481		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	95	98	100	79	97	88	95			100		
cM capacity (veh/h)	132	187	589	167	190	533	969			1046		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1						
Volume Total	13	105	49	479	2	573						
Volume Left	6	35	49	0	0	3						
Volume Right	2	64	0	0	2	28						
cSH	171	291	969	1700	1700	1046						
Volume to Capacity	0.07	0.36	0.05	0.28	0.00	0.00						
Queue Length 95th (ft)	6	40	4	0	0	0						
Control Delay (s)	27.7	24.2	8.9	0.0	0.0	0.1						
Lane LOS	D	C	A			A						
Approach Delay (s)	27.7	24.2	0.8			0.1						
Approach LOS	D	C										
Intersection Summary												
Average Delay			2.8									
Intersection Capacity Utilization			49.3%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

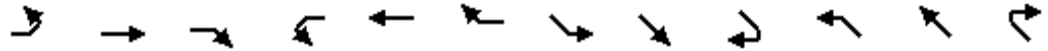
YR 2015 AM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	2	4	482	0	0	553	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	2	4	507	0	0	582	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1103	1103	507	1101	1101	585	587			507		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1103	1103	507	1101	1101	585	587			507		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	98	100	100	100			100		
cM capacity (veh/h)	179	211	567	190	212	513	954			1022		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	6	512	587									
Volume Left	4	4	0									
Volume Right	2	0	5									
cSH	240	954	1700									
Volume to Capacity	0.03	0.00	0.35									
Queue Length 95th (ft)	2	0	0									
Control Delay (s)	20.4	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	20.4	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.2									
Intersection Capacity Utilization			39.4%			ICU Level of Service				A		
Analysis Period (min)			15									



HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46






















YR 2015 AM Peak Hour  
 No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↑			↑	
Volume (veh/h)	0	0	0	6	0	14	7	479	0	0	544	5
Sign Control		Stop				Stop		Free			Free	
Grade		0%				0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	15	7	504	0	0	573	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1109	1097	504	1094	1094	575	578			504		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1109	1097	504	1094	1094	575	578			504		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1			2.3		
p0 queue free %	100	100	100	97	100	97	99			100		
cM capacity (veh/h)	181	212	570	191	212	519	653			1025		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	21	512	578									
Volume Left	6	7	0									
Volume Right	15	0	5									
cSH	342	653	1700									
Volume to Capacity	0.06	0.01	0.34									
Queue Length 95th (ft)	5	1	0									
Control Delay (s)	16.2	0.3	0.0									
Lane LOS	C	A										
Approach Delay (s)	16.2	0.3	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.5									
Intersection Capacity Utilization			40.8%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2015 AM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	191	134	38	14	194	14	24	168	294	88	239	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Fr <sub>t</sub>	1.00	0.97		1.00	0.99		1.00	0.90		1.00	0.98	
Fl <sub>t</sub> Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1819		1787	1862		1656	1577		1656	1709	
Fl <sub>t</sub> Permitted	0.38	1.00		0.64	1.00		0.53	1.00		0.30	1.00	
Satd. Flow (perm)	724	1819		1210	1862		924	1577		517	1709	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	201	141	40	15	204	15	25	177	309	93	252	38
RTOR Reduction (vph)	0	8	0	0	2	0	0	64	0	0	6	0
Lane Group Flow (vph)	201	173	0	15	217	0	25	422	0	93	284	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4		2	2				6
Permitted Phases	8			4		2				6		
Actuated Green, G (s)	33.8	33.8		15.1	15.1		27.7	27.7		27.7	27.7	
Effective Green, g (s)	33.8	33.8		15.1	15.1		27.7	27.7		27.7	27.7	
Actuated g/C Ratio	0.45	0.45		0.20	0.20		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	503	825		245	377		344	586		192	635	
v/s Ratio Prot	c0.07	0.10			c0.12			c0.27			0.17	
v/s Ratio Perm	0.12			0.01		0.03				0.18		
v/c Ratio	0.40	0.21		0.06	0.57		0.07	0.72		0.48	0.45	
Uniform Delay, d <sub>1</sub>	13.1	12.3		24.0	26.8		15.1	20.1		17.9	17.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d <sub>2</sub>	0.7	0.2		0.1	2.1		0.2	4.9		3.3	0.9	
Delay (s)	13.8	12.5		24.1	28.9		15.3	25.0		21.2	18.5	
Level of Service	B	B		C	C		B	C		C	B	
Approach Delay (s)		13.2			28.6			24.5			19.2	
Approach LOS		B			C			C			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			20.9	HCM Level of Service		C						
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			74.5	Sum of lost time (s)		19.5						
Intersection Capacity Utilization			82.7%	ICU Level of Service		E						
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2025 AM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2025 AM Peak Hour  
No Build Alternative

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	317	567	63	234	616	224	44	373	118	325	856	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3446		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.23	1.00		0.24	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	441	3446		430	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	334	597	66	246	648	236	46	393	124	342	901	447
RTOR Reduction (vph)	0	0	45	0	0	98	0	21	0	0	0	118
Lane Group Flow (vph)	334	597	21	246	648	138	46	496	0	342	901	329
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	13.9	30.4	36.9	17.0	33.5	55.1	34.9	28.4		56.5	43.5	57.4
Effective Green, g (s)	13.9	30.4	36.9	17.0	33.5	55.1	34.9	28.4		56.5	43.5	57.4
Actuated g/C Ratio	0.11	0.24	0.30	0.14	0.27	0.44	0.28	0.23		0.45	0.35	0.46
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	359	809	440	439	892	656	194	787		422	1214	717
v/s Ratio Prot	c0.10	0.18	0.00	c0.08	c0.20	0.04	0.01	0.14		c0.14	0.26	0.05
v/s Ratio Perm			0.01			0.06	0.05			c0.23		0.16
v/c Ratio	0.93	0.74	0.05	0.56	0.73	0.21	0.24	0.63		0.81	0.74	0.46
Uniform Delay, d1	54.8	43.3	31.2	50.2	41.3	21.3	33.3	43.3		25.1	35.5	22.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	30.6	4.3	0.1	1.8	3.6	0.2	0.7	1.7		11.5	2.6	0.6
Delay (s)	85.4	47.6	31.3	52.0	44.9	21.5	34.0	45.0		36.6	38.1	23.4
Level of Service	F	D	C	D	D	C	C	D		D	D	C
Approach Delay (s)		59.2			41.6			44.1			33.9	
Approach LOS		E			D			D			C	

Intersection Summary

HCM Average Control Delay	42.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	124.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2025 AM Peak Hour  
No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	118	833	0	0	882	2	2	0	156	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1656	1743			1743	1482	1641		1468		
Flt Permitted	0.14	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	249	1743			1743	1482	1641		1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	877	0	0	928	2	2	0	164	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	145	0	0
Lane Group Flow (vph)	124	877	0	0	928	1	2	0	19	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt			Perm			Perm				
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	45.2	45.2			38.2	38.2	7.1		7.1		
Effective Green, g (s)	45.2	45.2			38.2	38.2	7.1		7.1		
Actuated g/C Ratio	0.75	0.75			0.63	0.63	0.12		0.12		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	257	1307			1104	939	193		173		
v/s Ratio Prot	0.02	c0.50			c0.53		0.00				
v/s Ratio Perm	0.34					0.00			c0.01		
v/c Ratio	0.48	0.67			0.84	0.00	0.01		0.11		
Uniform Delay, d1	7.9	3.8			8.7	4.1	23.5		23.8		
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Incremental Delay, d2	1.4	1.4			5.9	0.0	0.0		0.3		
Delay (s)	9.4	5.2			14.6	4.1	23.5		24.1		
Level of Service	A	A			B	A	C		C		
Approach Delay (s)		5.7			14.5		24.1			0.0	
Approach LOS		A			B		C			A	

Intersection Summary
















HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2025 AM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	49	0	7	5	773	0	0	873	43
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	52	0	7	5	814	0	0	919	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1773	1788	814	1766	1766	942	964			814		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1773	1788	814	1766	1766	942	964			814		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	21	100	98	99			100		
cM capacity (veh/h)	63	81	381	65	84	320	687			822		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	59	819	964									
Volume Left	52	5	0									
Volume Right	7	0	45									
cSH	73	687	1700									
Volume to Capacity	0.81	0.01	0.57									
Queue Length 95th (ft)	98	1	0									
Control Delay (s)	153.4	0.2	0.0									
Lane LOS	F	A										
Approach Delay (s)	153.4	0.2	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			5.0									
Intersection Capacity Utilization			58.6%			ICU Level of Service				B		
Analysis Period (min)			15									




















HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2025 AM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	21	0	35	4	0	0	1	778	34	6	877	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	0	37	4	0	0	1	819	36	6	923	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1775	1776	837	1812	1793	924	924			855		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1775	1776	837	1812	1793	924	924			855		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	66	100	90	92	100	100	100			99		
cM capacity (veh/h)	64	82	368	54	80	328	711			756		
Direction, Lane #	EB 1	WB 1	SE 1	NW 1								
Volume Total	59	4	856	931								
Volume Left	22	4	1	6								
Volume Right	37	0	36	1								
cSH	133	54	711	756								
Volume to Capacity	0.44	0.08	0.00	0.01								
Queue Length 95th (ft)	49	6	0	1								
Control Delay (s)	52.2	76.5	0.0	0.2								
Lane LOS	F	F	A	A								
Approach Delay (s)	52.2	76.5	0.0	0.2								
Approach LOS	F	F										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			60.8%	ICU Level of Service							B	
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46
















YR 2025 AM Peak Hour  
 No Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	7	5	3	39	6	78	59	750	3	5	847	30	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	7	5	3	41	6	82	62	789	3	5	892	32	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None			None		
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	1917	1847	789	1837	1835	907	923			793			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1917	1847	789	1837	1835	907	923			793			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	78	92	99	19	91	76	91			99			
cM capacity (veh/h)	34	68	392	51	69	335	712			798			
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1							
Volume Total	16	129	62	789	3	928							
Volume Left	7	41	62	0	0	5							
Volume Right	3	82	0	0	3	32							
cSH	52	113	712	1700	1700	798							
Volume to Capacity	0.30	1.14	0.09	0.46	0.00	0.01							
Queue Length 95th (ft)	27	202	7	0	0	0							
Control Delay (s)	102.5	201.4	10.5	0.0	0.0	0.2							
Lane LOS	F	F	B			A							
Approach Delay (s)	102.5	201.4	0.8			0.2							
Approach LOS	F	F											
Intersection Summary													
Average Delay			14.8										
Intersection Capacity Utilization			67.3%	ICU Level of Service		C							
Analysis Period (min)			15										



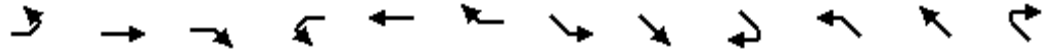
HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2025 AM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	3	4	778	0	0	887	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	3	4	819	0	0	934	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1767	1766	819	1764	1764	936	939			819		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1767	1766	819	1764	1764	936	939			819		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	94	100	99	99			100		
cM capacity (veh/h)	61	84	377	66	84	323	702			780		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	7	823	939									
Volume Left	4	4	0									
Volume Right	3	0	5									
cSH	100	702	1700									
Volume to Capacity	0.07	0.01	0.55									
Queue Length 95th (ft)	6	0	0									
Control Delay (s)	44.0	0.2	0.0									
Lane LOS	E	A										
Approach Delay (s)	44.0	0.2	0.0									
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			57.0%			ICU Level of Service				B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46






















YR 2025 AM Peak Hour  
 No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↑			↑	
Volume (veh/h)	0	0	0	6	0	14	7	775	0	0	878	5
Sign Control		Stop				Stop			Free			Free
Grade		0%				0%			0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	15	7	816	0	0	924	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1772	1760	816	1757	1757	927	929			816		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1772	1760	816	1757	1757	927	929			816		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1			2.3		
p0 queue free %	100	100	100	90	100	95	98			100		
cM capacity (veh/h)	61	84	379	66	84	327	454			782		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	21	823	929									
Volume Left	6	7	0									
Volume Right	15	0	5									
cSH	149	454	1700									
Volume to Capacity	0.14	0.02	0.55									
Queue Length 95th (ft)	12	1	0									
Control Delay (s)	33.0	0.5	0.0									
Lane LOS	D	A										
Approach Delay (s)	33.0	0.5	0.0									
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			56.5%	ICU Level of Service								B
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46
























YR 2025 AM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	337	138	43	32	211	26	27	361	398	118	433	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.92		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1814		1787	1851		1656	1606		1656	1721	
Flt Permitted	0.26	1.00		0.64	1.00		0.35	1.00		0.10	1.00	
Satd. Flow (perm)	484	1814		1200	1851		602	1606		177	1721	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	355	145	45	34	222	27	28	380	419	124	456	42
RTOR Reduction (vph)	0	10	0	0	4	0	0	33	0	0	3	0
Lane Group Flow (vph)	355	180	0	34	245	0	28	766	0	124	495	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4		2	2				6
Permitted Phases	8			4		2				6		
Actuated Green, G (s)	43.6	43.6		19.0	19.0		53.6	53.6		53.6	53.6	
Effective Green, g (s)	43.6	43.6		19.0	19.0		53.6	53.6		53.6	53.6	
Actuated g/C Ratio	0.40	0.40		0.17	0.17		0.49	0.49		0.49	0.49	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	406	718		207	319		293	781		86	837	
v/s Ratio Prot	c0.14	0.10			0.13			0.48				0.29
v/s Ratio Perm	c0.20			0.03			0.05			c0.70		
v/c Ratio	0.87	0.25		0.16	0.77		0.10	0.98		1.44	0.59	
Uniform Delay, d1	26.5	22.3		38.8	43.5		15.2	27.8		28.3	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.9	0.3		0.4	10.6		0.2	27.4		252.6	1.5	
Delay (s)	45.4	22.6		39.2	54.1		15.5	55.2		280.9	21.9	
Level of Service	D	C		D	D		B	E		F	C	
Approach Delay (s)		37.5			52.3			53.8			73.6	
Approach LOS		D			D			D			E	
<b>Intersection Summary</b>												
HCM Average Control Delay			55.1	HCM Level of Service				E				
HCM Volume to Capacity ratio			1.16									
Actuated Cycle Length (s)			110.2	Sum of lost time (s)				13.0				
Intersection Capacity Utilization			108.9%	ICU Level of Service				G				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2035 AM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2035 AM Peak Hour  
No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	403	816	93	267	863	348	65	489	166	401	1136	546
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3439		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.10	1.00		0.17	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	187	3439		313	3471	1553
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	411	833	95	272	881	355	66	499	169	409	1159	557
RTOR Reduction (vph)	0	0	23	0	0	59	0	22	0	0	0	71
Lane Group Flow (vph)	411	833	72	272	881	296	66	646	0	409	1159	486
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	12.6	36.7	46.0	21.1	45.2	71.9	50.3	41.0		74.2	58.4	71.0
Effective Green, g (s)	12.6	36.7	46.0	21.1	45.2	71.9	50.3	41.0		74.2	58.4	71.0
Actuated g/C Ratio	0.08	0.24	0.30	0.14	0.30	0.47	0.33	0.27		0.49	0.38	0.47
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	265	797	447	445	982	699	159	925		401	1329	723
v/s Ratio Prot	c0.13	c0.25	0.01	c0.08	0.27	0.07	0.03	0.19		c0.18	0.33	0.06
v/s Ratio Perm			0.04			0.13	0.11			c0.32		0.26
v/c Ratio	1.55	1.05	0.16	0.61	0.90	0.42	0.42	0.70		1.02	0.87	0.67
Uniform Delay, d1	70.0	57.9	39.1	61.8	51.4	26.6	37.8	50.2		38.2	43.6	31.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	265.8	44.3	0.2	2.6	11.4	0.5	2.1	2.4		50.1	6.7	2.6
Delay (s)	335.7	102.2	39.3	64.4	62.8	27.1	39.9	52.6		88.3	50.3	34.3
Level of Service	F	F	D	E	E	C	D	D		F	D	C
Approach Delay (s)		169.4			54.7			51.5			53.4	
Approach LOS		F			D			D			D	

Intersection Summary

HCM Average Control Delay	80.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	152.5	Sum of lost time (s)	27.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2035 AM Peak Hour  
No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	140	1171	0	0	1216	3	3	0	184	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1656	1743			1743	1482	1641		1468		
Flt Permitted	0.06	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	105	1743			1743	1482	1641		1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1233	0	0	1280	3	3	0	194	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	154	0	0
Lane Group Flow (vph)	147	1233	0	0	1280	2	3	0	40	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt			Perm			Perm				
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	96.1	96.1			86.1	86.1	9.1		9.1		
Effective Green, g (s)	96.1	96.1			86.1	86.1	9.1		9.1		
Actuated g/C Ratio	0.85	0.85			0.76	0.76	0.08		0.08		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	171	1480			1326	1127	132		118		
v/s Ratio Prot	0.05	c0.71			c0.73		0.00				
v/s Ratio Perm	0.69					0.00			c0.03		
v/c Ratio	0.86	0.83			0.97	0.00	0.02		0.34		
Uniform Delay, d1	35.3	4.4			12.2	3.2	48.0		49.2		
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Incremental Delay, d2	32.4	4.2			17.0	0.0	0.1		1.7		
Delay (s)	67.7	8.6			29.2	3.2	48.0		51.0		
Level of Service	E	A			C	A	D		D		
Approach Delay (s)		14.9			29.1		50.9			0.0	
Approach LOS		B			C		D			A	

Intersection Summary
















HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	113.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

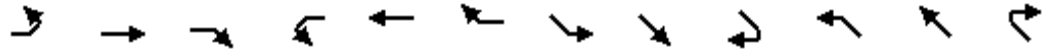
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 AM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	59	0	8	6	1072	0	0	1212	52
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	62	0	8	6	1128	0	0	1276	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2453	2472	1128	2444	2444	1303	1331			1128		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2453	2472	1128	2444	2444	1303	1331			1128		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	0	100	96	99			100		
cM capacity (veh/h)	20	30	251	21	31	197	496			626		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	71	1135	1331									
Volume Left	62	6	0									
Volume Right	8	0	55									
cSH	24	496	1700									
Volume to Capacity	2.95	0.01	0.78									
Queue Length 95th (ft)	221	1	0									
Control Delay (s)	1221.3	0.5	0.0									
Lane LOS	F	A										
Approach Delay (s)	1221.3	0.5	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			34.2									
Intersection Capacity Utilization			77.4%			ICU Level of Service				D		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2035 AM Peak Hour  
 No Build Alternative






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	27	0	47	4	0	0	1	1079	47	7	1214	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	28	0	49	4	0	0	1	1136	49	7	1278	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2456	2456	1161	2505	2481	1278	1279			1185		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2456	2456	1161	2505	2481	1278	1279			1185		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	0	100	79	72	100	100	100			99		
cM capacity (veh/h)	21	30	239	15	29	204	520			565		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	78	4	1186	1286								
Volume Left	28	4	1	7								
Volume Right	49	0	49	1								
cSH	50	15	520	565								
Volume to Capacity	1.57	0.28	0.00	0.01								
Queue Length 95th (ft)	186	19	0	1								
Control Delay (s)	464.1	314.1	0.1	0.7								
Lane LOS	F	F	A	A								
Approach Delay (s)	464.1	314.1	0.1	0.7								
Approach LOS	F	F										
<b>Intersection Summary</b>												
Average Delay			15.0									
Intersection Capacity Utilization			80.0%		ICU Level of Service					D		
Analysis Period (min)			15									


















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 AM Peak Hour  
No Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	8	6	4	39	6	95	72	1045	4	10	1178	33	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	8	6	4	41	6	100	76	1100	4	11	1240	35	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None			None		
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2633	2547	1100	2537	2534	1257	1275			1104			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	2633	2547	1100	2537	2534	1257	1275			1104			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	0	72	98	0	73	52	85			98			
cM capacity (veh/h)	6	23	259	13	23	210	522			607			
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1							
Volume Total	19	147	76	1100	4	1285							
Volume Left	8	41	76	0	0	11							
Volume Right	4	100	0	0	4	35							
cSH	11	37	522	1700	1700	607							
Volume to Capacity	1.76	4.01	0.15	0.65	0.00	0.02							
Queue Length 95th (ft)	81	Err	13	0	0	1							
Control Delay (s)	1055.2	Err	13.1	0.0	0.0	0.8							
Lane LOS	F	F	B			A							
Approach Delay (s)	1055.2	Err	0.8			0.8							
Approach LOS	F	F											
Intersection Summary													
Average Delay			568.3										
Intersection Capacity Utilization			88.0%	ICU Level of Service	E								
Analysis Period (min)			15										

















HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2035 AM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	3	4	1074	0	0	1216	5
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	3	4	1131	0	0	1280	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2425	2424	1131	2422	2422	1283	1285			1131		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2425	2424	1131	2422	2422	1283	1285			1131		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	81	100	98	99			100		
cM capacity (veh/h)	20	32	249	22	32	203	517			593		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	7	1135	1285									
Volume Left	4	4	0									
Volume Right	3	0	5									
cSH	36	517	1700									
Volume to Capacity	0.20	0.01	0.76									
Queue Length 95th (ft)	16	1	0									
Control Delay (s)	129.2	0.3	0.0									
Lane LOS	F	A										
Approach Delay (s)	129.2	0.3	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			0.5									
Intersection Capacity Utilization			74.3%			ICU Level of Service				D		
Analysis Period (min)			15									






















HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46

YR 2035 AM Peak Hour  
 No Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	0	0	0	6	0	14	8	1070	0	0	1207	10	
Sign Control		Stop			Stop			Free				Free	
Grade		0%			0%			0%				0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	0	0	0	6	0	15	8	1126	0	0	1271	11	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None				None	
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2434	2424	1126	2419	2419	1276	1281				1126		
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	2434	2424	1126	2419	2419	1276	1281				1126		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1				4.2		
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1				2.3		
p0 queue free %	100	100	100	71	100	93	97				100		
cM capacity (veh/h)	20	32	250	22	32	205	314				595		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>										
Volume Total	21	1135	1281										
Volume Left	6	8	0										
Volume Right	15	0	11										
cSH	59	314	1700										
Volume to Capacity	0.36	0.03	0.75										
Queue Length 95th (ft)	33	2	0										
Control Delay (s)	97.3	1.4	0.0										
Lane LOS	F	A											
Approach Delay (s)	97.3	1.4	0.0										
Approach LOS	F												
<b>Intersection Summary</b>													
Average Delay			1.5										
Intersection Capacity Utilization			74.1%			ICU Level of Service					D		
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46






























YR 2035 AM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	480	142	48	49	219	38	30	546	503	148	615	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1809		1787	1840		1656	1618		1656	1726	
Flt Permitted	0.23	1.00		0.63	1.00		0.18	1.00		0.07	1.00	
Satd. Flow (perm)	432	1809		1189	1840		312	1618		130	1726	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	505	149	51	52	231	40	32	575	529	156	647	45
RTOR Reduction (vph)	0	11	0	0	6	0	0	28	0	0	2	0
Lane Group Flow (vph)	505	189	0	52	265	0	32	1076	0	156	690	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4			2				6
Permitted Phases	8				4			2				6
Actuated Green, G (s)	45.0	45.0		20.0	20.0		53.6	53.6		53.6	53.6	
Effective Green, g (s)	45.0	45.0		20.0	20.0		53.6	53.6		53.6	53.6	
Actuated g/C Ratio	0.40	0.40		0.18	0.18		0.48	0.48		0.48	0.48	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	399	729		213	330		150	777		62	829	
v/s Ratio Prot	c0.21	0.10			0.14			0.67			0.40	
v/s Ratio Perm	c0.30			0.04			0.10			c1.20		
v/c Ratio	1.27	0.26		0.24	0.80		0.21	1.38		2.52	0.83	
Uniform Delay, d1	27.9	22.2		39.3	43.9		16.8	29.0		29.0	25.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	138.1	0.3		0.6	13.2		1.2	181.1		727.4	7.8	
Delay (s)	166.1	22.4		39.9	57.1		18.0	210.1		756.4	32.9	
Level of Service	F	C		D	E		B	F		F	C	
Approach Delay (s)		125.3			54.4			204.7			166.0	
Approach LOS		F			D			F			F	
<b>Intersection Summary</b>												
HCM Average Control Delay			159.1	HCM Level of Service				F				
HCM Volume to Capacity ratio			1.90									
Actuated Cycle Length (s)			111.6	Sum of lost time (s)				13.0				
Intersection Capacity Utilization			134.1%	ICU Level of Service				H				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2015 PM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2015 PM Peak Hour  
No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			 	
Volume (vph)	389	268	6	88	305	195	30	600	145	151	328	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3470		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.54	1.00		0.17	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	1024	3470		306	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	409	282	6	93	321	205	32	632	153	159	345	256
RTOR Reduction (vph)	0	0	5	0	0	45	0	13	0	0	0	125
Lane Group Flow (vph)	409	282	1	93	321	160	32	772	0	159	345	131
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	12.7	17.3	21.6	13.8	18.4	29.6	36.9	32.6		50.3	39.5	52.2
Effective Green, g (s)	12.7	17.3	21.6	13.8	18.4	29.6	36.9	32.6		50.3	39.5	52.2
Actuated g/C Ratio	0.12	0.17	0.21	0.14	0.18	0.29	0.36	0.32		0.49	0.39	0.51
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	400	562	314	435	598	430	403	1110		308	1345	796
v/s Ratio Prot	c0.13	0.09	0.00	0.03	c0.10	0.04	0.00	c0.22		c0.06	0.10	0.02
v/s Ratio Perm			0.00			0.07	0.03			0.20		0.06
v/c Ratio	1.02	0.50	0.00	0.21	0.54	0.37	0.08	0.70		0.52	0.26	0.16
Uniform Delay, d1	44.6	38.4	31.7	39.2	37.9	28.8	21.1	30.3		17.2	21.2	13.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	50.8	1.5	0.0	0.3	1.7	0.6	0.1	2.0		1.7	0.1	0.1
Delay (s)	95.4	39.9	31.7	39.5	39.6	29.4	21.2	32.3		18.8	21.3	13.4
Level of Service	F	D	C	D	D	C	C	C		B	C	B
Approach Delay (s)		72.4			36.2			31.9			18.1	
Approach LOS		E			D			C			B	

Intersection Summary

HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	101.9	Sum of lost time (s)	27.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2015 PM Peak Hour  
No Build Alternative


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (veh/h)	114	544	0	0	482	0	0	0	103	0	0
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	120	573	0	0	507	0	0	0	108	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		Raised			Raised						
Median storage veh		3			3						
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	507			573			1320	1320	507	1320	573
vC1, stage 1 conf vol							507	507		813	
vC2, stage 2 conf vol							813	813		507	
vCu, unblocked vol	507			573			1320	1320	507	1320	573
tC, single (s)	4.2			4.1			7.2	6.5	6.3	6.5	6.2
tC, 2 stage (s)							6.2	5.5		5.5	
tF (s)	2.3			2.2			3.6	4.0	3.4	4.0	3.3
p0 queue free %	88			100			100	100	80	100	100
cM capacity (veh/h)	1022			1010			304	331	550	315	523

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2	NE 1
Volume Total	120	573	507	0	0	108	0
Volume Left	120	0	0	0	0	0	0
Volume Right	0	0	0	0	0	108	0
cSH	1022	1700	1700	1700	1700	550	1700
Volume to Capacity	0.12	0.34	0.30	0.00	0.00	0.20	0.00
Queue Length 95th (ft)	10	0	0	0	0	18	0
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	13.2	0.0
Lane LOS	A				A	B	A
Approach Delay (s)	1.6		0.0		13.2		0.0
Approach LOS					B		A

Intersection Summary		
Average Delay		1.9
Intersection Capacity Utilization	38.4%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

















YR 2015 PM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	21	0	3	5	539	0	0	478	25
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	22	0	3	5	567	0	0	503	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1097	1107	567	1094	1094	516	529				567	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1097	1107	567	1094	1094	516	529				567	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3				2.2	
p0 queue free %	100	100	100	88	100	99	99				100	
cM capacity (veh/h)	190	211	527	191	214	561	1003				1015	
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	25	573	529									
Volume Left	22	5	0									
Volume Right	3	0	26									
cSH	209	1003	1700									
Volume to Capacity	0.12	0.01	0.31									
Queue Length 95th (ft)	10	0	0									
Control Delay (s)	24.6	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	24.6	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			42.4%			ICU Level of Service					A	
Analysis Period (min)			15									





















HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2015 PM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	6	0	17	0	0	0	2	539	29	28	458	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	0	18	0	0	0	2	567	31	29	482	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1129	1131	583	1147	1145	484	485			598		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1129	1131	583	1147	1145	484	485			598		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	96	100	97	100	100	100	100			97		
cM capacity (veh/h)	177	197	514	166	194	585	1042			945		
Direction, Lane #	EB 1	WB 1	SE 1	NW 1								
Volume Total	24	0	600	515								
Volume Left	6	0	2	29								
Volume Right	18	0	31	3								
cSH	344	1700	1042	945								
Volume to Capacity	0.07	0.00	0.00	0.03								
Queue Length 95th (ft)	6	0	0	2								
Control Delay (s)	16.3	0.0	0.1	0.9								
Lane LOS	C	A	A	A								
Approach Delay (s)	16.3	0.0	0.1	0.9								
Approach LOS	C	A										
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			55.2%		ICU Level of Service					B		
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2015 PM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	3	0	8	21	0	41	51	510	6	8	453	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	0	8	22	0	43	54	537	6	8	477	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1194	1164	537	1159	1157	490	503			543		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1194	1164	537	1159	1157	490	503			543		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	98	100	98	86	100	93	95			99		
cM capacity (veh/h)	145	183	546	163	185	580	1026			991		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1						
Volume Total	12	65	54	537	6	512						
Volume Left	3	22	54	0	0	8						
Volume Right	8	43	0	0	6	26						
cSH	311	311	1026	1700	1700	991						
Volume to Capacity	0.04	0.21	0.05	0.32	0.00	0.01						
Queue Length 95th (ft)	3	19	4	0	0	1						
Control Delay (s)	17.0	19.6	8.7	0.0	0.0	0.2						
Lane LOS	C	C	A			A						
Approach Delay (s)	17.0	19.6	0.8			0.2						
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			46.0%	ICU Level of Service	A							
Analysis Period (min)			15									

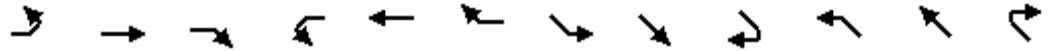
HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2015 PM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	549	0	0	482	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	578	0	0	507	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1105	1102	578	1099	1099	511	514			578		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1105	1102	578	1099	1099	511	514			578		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	97	100	99	99			100		
cM capacity (veh/h)	177	211	518	190	212	565	1017			962		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	13	583	514									
Volume Left	6	5	0									
Volume Right	6	0	6									
cSH	284	1017	1700									
Volume to Capacity	0.04	0.01	0.30									
Queue Length 95th (ft)	3	0	0									
Control Delay (s)	18.2	0.1	0.0									
Lane LOS	C	A										
Approach Delay (s)	18.2	0.1	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			42.9%			ICU Level of Service				A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46






















YR 2015 PM Peak Hour  
 No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↑			↑	
Volume (veh/h)	0	0	0	6	0	6	10	545	0	0	482	4
Sign Control		Stop				Stop		Free				Free
Grade		0%				0%		0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	11	574	0	0	507	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1111	1106	574	1104	1104	509	512				574	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1111	1106	574	1104	1104	509	512				574	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1				4.2	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1				2.3	
p0 queue free %	100	100	100	97	100	99	98				100	
cM capacity (veh/h)	183	208	520	187	209	566	698				965	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	13	584	512									
Volume Left	6	11	0									
Volume Right	6	0	4									
cSH	281	698	1700									
Volume to Capacity	0.04	0.02	0.30									
Queue Length 95th (ft)	4	1	0									
Control Delay (s)	18.4	0.4	0.0									
Lane LOS	C	A										
Approach Delay (s)	18.4	0.4	0.0									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.4									
Intersection Capacity Utilization			46.7%	ICU Level of Service								A
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46
























YR 2015 PM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	276	195	98	18	109	21	29	258	262	76	258	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.92		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1787		1787	1836		1656	1611		1656	1716	
Flt Permitted	0.44	1.00		0.57	1.00		0.52	1.00		0.26	1.00	
Satd. Flow (perm)	822	1787		1078	1836		913	1611		459	1716	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	291	205	103	19	115	22	31	272	276	80	272	31
RTOR Reduction (vph)	0	16	0	0	7	0	0	35	0	0	4	0
Lane Group Flow (vph)	291	292	0	19	130	0	31	513	0	80	299	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4		2	2			6	6
Permitted Phases	8			4		2				6		
Actuated Green, G (s)	33.6	33.6		12.2	12.2		32.6	32.6		32.6	32.6	
Effective Green, g (s)	33.6	33.6		12.2	12.2		32.6	32.6		32.6	32.6	
Actuated g/C Ratio	0.42	0.42		0.15	0.15		0.41	0.41		0.41	0.41	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	530	758		166	283		376	663		189	706	
v/s Ratio Prot	c0.10	0.16			0.07			c0.32			0.17	
v/s Ratio Perm	c0.13			0.02			0.03			0.17		
v/c Ratio	0.55	0.39		0.11	0.46		0.08	0.77		0.42	0.42	
Uniform Delay, d1	16.0	15.7		28.8	30.5		14.2	20.1		16.6	16.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.4		0.3	1.2		0.2	6.3		2.6	0.7	
Delay (s)	17.5	16.1		29.2	31.7		14.4	26.4		19.2	17.3	
Level of Service	B	B		C	C		B	C		B	B	
Approach Delay (s)		16.8			31.4			25.8			17.7	
Approach LOS		B			C			C			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			21.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			79.2			Sum of lost time (s)		13.0				
Intersection Capacity Utilization			86.7%			ICU Level of Service		E				
Analysis Period (min)			15									
c	Critical Lane Group											

# Year 2025 PM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2025 PM Peak Hour  
No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	550	38	207	529	216	48	749	296	197	479	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3422		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.47	1.00		0.07	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	878	3422		122	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	505	579	40	218	557	227	51	788	312	207	504	369
RTOR Reduction (vph)	0	0	29	0	0	20	0	24	0	0	0	118
Lane Group Flow (vph)	505	579	11	218	557	207	51	1076	0	207	504	251
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	15.0	32.1	38.7	16.1	33.2	51.6	59.8	53.2		78.1	65.0	80.0
Effective Green, g (s)	15.0	32.1	38.7	16.1	33.2	51.6	59.8	53.2		78.1	65.0	80.0
Actuated g/C Ratio	0.10	0.22	0.26	0.11	0.23	0.35	0.41	0.36		0.53	0.44	0.54
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	328	724	391	352	749	521	399	1240		267	1537	846
v/s Ratio Prot	c0.16	c0.17	0.00	0.07	0.17	0.05	0.01	c0.31		c0.10	0.15	0.03
v/s Ratio Perm			0.01			0.09	0.05			0.31		0.13
v/c Ratio	1.54	0.80	0.03	0.62	0.74	0.40	0.13	0.87		0.78	0.33	0.30
Uniform Delay, d1	65.9	54.3	40.1	62.4	52.8	35.9	26.5	43.5		41.8	26.7	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	257.6	7.1	0.0	3.4	4.8	0.6	0.2	6.8		13.5	0.1	0.2
Delay (s)	323.5	61.4	40.1	65.8	57.7	36.5	26.7	50.4		55.3	26.8	18.4
Level of Service	F	E	D	E	E	D	C	D		E	C	B
Approach Delay (s)		178.4			54.6			49.3			29.4	
Approach LOS		F			D			D			C	

Intersection Summary

HCM Average Control Delay	78.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	146.8	Sum of lost time (s)	27.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2025 PM Peak Hour  
No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	134	939	0	0	783	0	0	0	121	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0		
Lane Util. Factor	1.00	1.00			1.00				1.00		
Frt	1.00	1.00			1.00				0.85		
Flt Protected	0.95	1.00			1.00				1.00		
Satd. Flow (prot)	1656	1743			1743				1468		
Flt Permitted	0.17	1.00			1.00				1.00		
Satd. Flow (perm)	300	1743			1743				1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	141	988	0	0	824	0	0	0	127	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	113	0	0
Lane Group Flow (vph)	141	988	0	0	824	0	0	0	14	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt					Perm			Perm		
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	36.9	36.9			29.9				5.7		
Effective Green, g (s)	36.9	36.9			29.9				5.7		
Actuated g/C Ratio	0.73	0.73			0.59				0.11		
Clearance Time (s)	4.0	4.0			4.0				4.0		
Vehicle Extension (s)	3.0	3.0			3.0				3.0		
Lane Grp Cap (vph)	299	1271			1030				165		
v/s Ratio Prot	0.03	c0.57			0.47						
v/s Ratio Perm	0.32								c0.01		
v/c Ratio	0.47	0.78			0.80				0.09		
Uniform Delay, d1	5.9	4.3			8.0				20.1		
Progression Factor	1.00	1.00			1.00				1.00		
Incremental Delay, d2	1.2	3.1			4.5				0.2		
Delay (s)	7.1	7.3			12.6				20.3		
Level of Service	A	A			B				C		
Approach Delay (s)		7.3			12.6		20.3			0.0	
Approach LOS		A			B		C			A	

Intersection Summary

HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
















! Phase conflict between lane groups.

c Critical Lane Group



















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2025 PM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	30	0	4	6	872	0	0	774	38
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	32	0	4	6	918	0	0	815	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1769	1785	918	1765	1765	835	855			918		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1769	1785	918	1765	1765	835	855			918		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	52	100	99	99			100		
cM capacity (veh/h)	65	82	332	65	84	369	756			752		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	36	924	855									
Volume Left	32	6	0									
Volume Right	4	0	40									
cSH	72	756	1700									
Volume to Capacity	0.49	0.01	0.50									
Queue Length 95th (ft)	51	1	0									
Control Delay (s)	95.9	0.2	0.0									
Lane LOS	F	A										
Approach Delay (s)	95.9	0.2	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			2.0									
Intersection Capacity Utilization			60.7%			ICU Level of Service				B		
Analysis Period (min)			15									




















HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2025 PM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	7	0	18	0	0	0	3	878	38	31	751	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	0	19	0	0	0	3	924	40	33	791	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1808	1811	944	1827	1828	793	795			964		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1808	1811	944	1827	1828	793	795			964		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	88	100	94	100	100	100	100			95		
cM capacity (veh/h)	59	75	319	54	73	390	797			687		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	26	0	967	827								
Volume Left	7	0	3	33								
Volume Right	19	0	40	4								
cSH	143	1700	797	687								
Volume to Capacity	0.18	0.00	0.00	0.05								
Queue Length 95th (ft)	16	0	0	4								
Control Delay (s)	35.8	0.0	0.1	1.3								
Lane LOS	E	A	A	A								
Approach Delay (s)	35.8	0.0	0.1	1.3								
Approach LOS	E	A										
<b>Intersection Summary</b>												
Average Delay			1.2									
Intersection Capacity Utilization			72.8%		ICU Level of Service					C		
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2025 PM Peak Hour  
 No Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	4	0	13	21	0	51	72	838	7	10	742	25	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	4	0	14	22	0	54	76	882	7	11	781	26	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None			None		
Median storage veh													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	1903	1862	882	1863	1856	794	807			889			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1903	1862	882	1863	1856	794	807			889			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	90	100	96	55	100	86	90			99			
cM capacity (veh/h)	42	65	347	49	66	390	788			733			
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1							
Volume Total	18	76	76	882	7	818							
Volume Left	4	22	76	0	0	11							
Volume Right	14	54	0	0	7	26							
cSH	127	130	788	1700	1700	733							
Volume to Capacity	0.14	0.58	0.10	0.52	0.00	0.01							
Queue Length 95th (ft)	12	74	8	0	0	1							
Control Delay (s)	37.9	66.0	10.1	0.0	0.0	0.4							
Lane LOS	E	F	B			A							
Approach Delay (s)	37.9	66.0	0.8			0.4							
Approach LOS	E	F											
Intersection Summary													
Average Delay			3.6										
Intersection Capacity Utilization			63.1%	ICU Level of Service	B								
Analysis Period (min)			15										

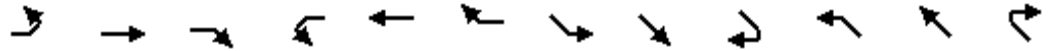
HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2025 PM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	878	0	0	784	6
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	924	0	0	825	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1769	1766	924	1763	1763	828	832			924		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1769	1766	924	1763	1763	828	832			924		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	90	100	98	99			100		
cM capacity (veh/h)	60	84	328	66	84	372	771			711		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	13	929	832									
Volume Left	6	5	0									
Volume Right	6	0	6									
cSH	112	771	1700									
Volume to Capacity	0.11	0.01	0.49									
Queue Length 95th (ft)	9	1	0									
Control Delay (s)	41.3	0.2	0.0									
Lane LOS	E	A										
Approach Delay (s)	41.3	0.2	0.0									
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.4									
Intersection Capacity Utilization			60.2%			ICU Level of Service				B		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46






















YR 2025 PM Peak Hour  
 No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↑			↑	
Volume (veh/h)	0	0	0	6	0	6	10	884	0	0	778	4
Sign Control		Stop				Stop		Free			Free	
Grade		0%				0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	11	931	0	0	819	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1779	1775	931	1773	1773	821	823			931		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1779	1775	931	1773	1773	821	823			931		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1			2.3		
p0 queue free %	100	100	100	90	100	98	98			100		
cM capacity (veh/h)	62	81	325	64	82	376	507			707		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	13	941	823									
Volume Left	6	11	0									
Volume Right	6	0	4									
cSH	109	507	1700									
Volume to Capacity	0.12	0.02	0.48									
Queue Length 95th (ft)	9	2	0									
Control Delay (s)	42.2	0.7	0.0									
Lane LOS	E	A										
Approach Delay (s)	42.2	0.7	0.0									
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.7									
Intersection Capacity Utilization			64.5%		ICU Level of Service					C		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46






























YR 2025 PM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	443	220	142	21	123	28	38	439	410	110	389	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1771		1787	1829		1656	1617		1656	1727	
Flt Permitted	0.37	1.00		0.54	1.00		0.41	1.00		0.07	1.00	
Satd. Flow (perm)	702	1771		1008	1829		722	1617		130	1727	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	466	232	149	22	129	29	40	462	432	116	409	26
RTOR Reduction (vph)	0	22	0	0	8	0	0	27	0	0	2	0
Lane Group Flow (vph)	466	359	0	22	150	0	40	867	0	116	433	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm		Perm		Perm		Perm			
Protected Phases	3	8			4		2		2			6
Permitted Phases	8			4		2		6				
Actuated Green, G (s)	38.9	38.9		13.9	13.9		53.6	53.6		53.6	53.6	
Effective Green, g (s)	38.9	38.9		13.9	13.9		53.6	53.6		53.6	53.6	
Actuated g/C Ratio	0.37	0.37		0.13	0.13		0.51	0.51		0.51	0.51	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	449	653		133	241		367	822		66	877	
v/s Ratio Prot	c0.18	0.20			0.08			0.54				0.25
v/s Ratio Perm	c0.20			0.02			0.06			c0.89		
v/c Ratio	1.04	0.55		0.17	0.62		0.11	1.05		1.76	0.49	
Uniform Delay, d1	30.3	26.4		40.7	43.3		13.5	25.9		25.9	17.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	52.6	1.2		0.6	4.9		0.2	46.8		395.5	0.8	
Delay (s)	82.9	27.6		41.2	48.3		13.7	72.8		421.4	17.8	
Level of Service	F	C		D	D		B	E		F	B	
Approach Delay (s)		58.0			47.4			70.2			102.8	
Approach LOS		E			D			E			F	
<b>Intersection Summary</b>												
HCM Average Control Delay			71.6			HCM Level of Service				E		
HCM Volume to Capacity ratio			1.43									
Actuated Cycle Length (s)			105.5			Sum of lost time (s)		13.0				
Intersection Capacity Utilization			115.1%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2035 PM Peak Hour SYNCHRO Intersection Analysis Outputs – No Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2035 PM Peak Hour  
No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 			 	
Volume (vph)	572	849	57	296	753	262	62	1038	367	243	558	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3434		1736	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.44	1.00		0.07	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	824	3434		124	3471	1553
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	584	866	58	302	768	267	63	1059	374	248	569	541
RTOR Reduction (vph)	0	0	31	0	0	5	0	21	0	0	0	102
Lane Group Flow (vph)	584	866	27	302	768	262	63	1412	0	248	569	439
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	1	6	7	5	2	3	7	4		3	8	1
Permitted Phases			6			2	4			8		8
Actuated Green, G (s)	13.6	36.6	45.4	19.9	42.9	65.3	61.4	52.6		81.5	66.2	79.8
Effective Green, g (s)	13.6	36.6	45.4	19.9	42.9	65.3	61.4	52.6		81.5	66.2	79.8
Actuated g/C Ratio	0.09	0.23	0.29	0.13	0.27	0.41	0.39	0.33		0.51	0.42	0.50
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5		3.5	3.5	3.5
Lane Grp Cap (vph)	276	765	424	403	896	611	373	1140		292	1450	782
v/s Ratio Prot	c0.18	c0.26	0.00	c0.09	0.23	0.06	0.01	c0.41		c0.12	0.16	0.05
v/s Ratio Perm			0.01			0.12	0.06			0.32		0.23
v/c Ratio	2.12	1.13	0.06	0.75	0.86	0.43	0.17	1.24		0.85	0.39	0.56
Uniform Delay, d1	72.5	61.0	41.1	66.9	54.9	33.3	30.8	53.0		49.7	32.1	27.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	514.2	75.3	0.1	7.7	8.9	0.6	0.3	115.1		20.4	0.2	1.0
Delay (s)	586.7	136.3	41.2	74.6	63.8	33.8	31.1	168.1		70.1	32.4	28.3
Level of Service	F	F	D	E	E	C	C	F		E	C	C
Approach Delay (s)		307.1			60.2			162.3			37.6	
Approach LOS		F			E			F			D	

Intersection Summary

HCM Average Control Delay	147.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	158.5	Sum of lost time (s)	33.5
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2035 PM Peak Hour  
No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER	
Lane Configurations												
Volume (vph)	157	1321	0	0	1079	0	0	0	142	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0			4.0				4.0			
Lane Util. Factor	1.00	1.00			1.00				1.00			
Frt	1.00	1.00			1.00				0.85			
Flt Protected	0.95	1.00			1.00				1.00			
Satd. Flow (prot)	1656	1743			1743				1468			
Flt Permitted	0.07	1.00			1.00				1.00			
Satd. Flow (perm)	126	1743			1743				1468			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	165	1391	0	0	1136	0	0	0	149	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	127	0	0	
Lane Group Flow (vph)	165	1391	0	0	1136	0	0	0	22	0	0	
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%	
Turn Type	pm+pt				Perm				Perm			
Protected Phases	7	4			8		6!			2!		
Permitted Phases	4					8			6			
Actuated Green, G (s)	86.0	86.0			76.0				16.0			
Effective Green, g (s)	86.0	86.0			76.0				16.0			
Actuated g/C Ratio	0.78	0.78			0.69				0.15			
Clearance Time (s)	4.0	4.0			4.0				4.0			
Vehicle Extension (s)	3.0	3.0			3.0				3.0			
Lane Grp Cap (vph)	182	1363			1204				214			
v/s Ratio Prot	0.05	c0.80			0.65							
v/s Ratio Perm	0.66								c0.01			
v/c Ratio	0.91	1.02			0.94				0.10			
Uniform Delay, d1	30.7	12.0			15.1				40.8			
Progression Factor	1.00	1.00			1.00				1.00			
Incremental Delay, d2	40.9	29.7			14.4				0.9			
Delay (s)	71.6	41.7			29.5				41.7			
Level of Service	E	D			C				D			
Approach Delay (s)		44.8			29.5		41.7			0.0		
Approach LOS		D			C		D			A		

Intersection Summary
















HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 PM Peak Hour  
 No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	5	7	1210	0	0	1074	47
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	38	0	5	7	1274	0	0	1131	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None				None
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2449	2468	1274	2444	2444	1155	1180			1274		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2449	2468	1274	2444	2444	1155	1180			1274		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	0	100	98	99			100		
cM capacity (veh/h)	21	30	206	21	31	241	568			552		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	43	1281	1180									
Volume Left	38	7	0									
Volume Right	5	0	49									
cSH	24	568	1700									
Volume to Capacity	1.80	0.01	0.69									
Queue Length 95th (ft)	135	1	0									
Control Delay (s)	724.8	0.7	0.0									
Lane LOS	F	A										
Approach Delay (s)	724.8	0.7	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			12.8									
Intersection Capacity Utilization			79.2%			ICU Level of Service				D		
Analysis Period (min)			15									





















HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2035 PM Peak Hour  
 No Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	9	0	25	0	0	0	3	1216	52	34	1049	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	9	0	26	0	0	0	3	1280	55	36	1104	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2492	2494	1307	2518	2519	1106	1108			1335		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2492	2494	1307	2518	2519	1106	1108			1335		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	49	100	87	100	100	100	99			93		
cM capacity (veh/h)	19	27	196	16	26	257	605			495		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>								
Volume Total	36	0	1338	1144								
Volume Left	9	0	3	36								
Volume Right	26	0	55	4								
cSH	56	1700	605	495								
Volume to Capacity	0.64	0.00	0.01	0.07								
Queue Length 95th (ft)	65	0	0	6								
Control Delay (s)	146.6	0.0	0.3	3.0								
Lane LOS	F	A	A	A								
Approach Delay (s)	146.6	0.0	0.3	3.0								
Approach LOS	F	A										
<b>Intersection Summary</b>												
Average Delay			3.6									
Intersection Capacity Utilization			91.2%		ICU Level of Service				F			
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2035 PM Peak Hour  
 No Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	6	0	17	24	0	62	86	1170	8	13	1041	30	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	6	0	18	25	0	65	91	1232	8	14	1096	32	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								None			None		
Median storage (veh)													
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2617	2567	1232	2569	2560	1112	1127			1240			
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	2617	2567	1232	2569	2560	1112	1127			1240			
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.2			
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	39	100	92	0	100	74	85			97			
cM capacity (veh/h)	10	22	217	14	22	255	595			538			
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	NW 1							
Volume Total	24	91	91	1232	8	1141							
Volume Left	6	25	91	0	0	14							
Volume Right	18	65	0	0	8	32							
cSH	35	44	595	1700	1700	538							
Volume to Capacity	0.69	2.07	0.15	0.72	0.00	0.03							
Queue Length 95th (ft)	60	236	13	0	0	2							
Control Delay (s)	228.6	695.9	12.1	0.0	0.0	1.0							
Lane LOS	F	F	B			A							
Approach Delay (s)	228.6	695.9	0.8			1.0							
Approach LOS	F	F											
Intersection Summary													
Average Delay			27.4										
Intersection Capacity Utilization			80.7%	ICU Level of Service	D								
Analysis Period (min)			15										

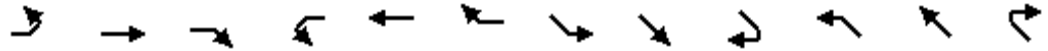
HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

YR 2035 PM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	1212	0	0	1077	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	1276	0	0	1134	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2429	2426	1276	2423	2423	1137	1140			1276		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2429	2426	1276	2423	2423	1137	1140			1276		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.2			4.2		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	72	100	97	99			100		
cM capacity (veh/h)	20	32	205	22	32	247	588			521		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	13	1281	1140									
Volume Left	6	5	0									
Volume Right	6	0	6									
cSH	41	588	1700									
Volume to Capacity	0.31	0.01	0.67									
Queue Length 95th (ft)	26	1	0									
Control Delay (s)	129.1	0.4	0.0									
Lane LOS	F	A										
Approach Delay (s)	129.1	0.4	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			0.9									
Intersection Capacity Utilization			77.8%			ICU Level of Service				D		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46






















YR 2035 PM Peak Hour  
 No Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↑			↑	
Volume (veh/h)	0	0	0	13	0	13	10	1208	0	0	1070	8
Sign Control		Stop				Stop			Free			Free
Grade		0%				0%			0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	14	0	14	11	1272	0	0	1126	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2437	2427	1272	2423	2423	1131	1135				1272	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2437	2427	1272	2423	2423	1131	1135				1272	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1				4.2	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1				2.3	
p0 queue free %	100	100	100	37	100	95	97				100	
cM capacity (veh/h)	20	31	206	22	32	249	366				523	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>NW 1</b>									
Volume Total	27	1282	1135									
Volume Left	14	11	0									
Volume Right	14	0	8									
cSH	40	366	1700									
Volume to Capacity	0.68	0.03	0.67									
Queue Length 95th (ft)	63	2	0									
Control Delay (s)	203.6	1.8	0.0									
Lane LOS	F	A										
Approach Delay (s)	203.6	1.8	0.0									
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			3.2									
Intersection Capacity Utilization			81.5%	ICU Level of Service								D
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2035 PM Peak Hour  
No Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	610	249	186	25	141	32	43	615	558	144	546	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.93		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1760		1787	1828		1656	1619		1656	1729	
Flt Permitted	0.34	1.00		0.50	1.00		0.27	1.00		0.07	1.00	
Satd. Flow (perm)	640	1760		939	1828		466	1619		130	1729	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	642	262	196	26	148	34	45	647	587	152	575	32
RTOR Reduction (vph)	0	25	0	0	8	0	0	26	0	0	1	0
Lane Group Flow (vph)	642	433	0	26	174	0	45	1208	0	152	606	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	pm+pt		Perm			Perm			Perm			
Protected Phases	3	8			4		2		2			6
Permitted Phases	8			4		2				6		
Actuated Green, G (s)	40.4	40.4		15.4	15.4		53.6	53.6		53.6	53.6	
Effective Green, g (s)	40.4	40.4		15.4	15.4		53.6	53.6		53.6	53.6	
Actuated g/C Ratio	0.38	0.38		0.14	0.14		0.50	0.50		0.50	0.50	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	4.0	4.0		3.0	3.0		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	440	665		135	263		233	811		65	866	
v/s Ratio Prot	c0.25	0.25			0.10			0.75			0.35	
v/s Ratio Perm	c0.30			0.03			0.10			c1.17		
v/c Ratio	1.46	0.65		0.19	0.66		0.19	1.49		2.34	0.70	
Uniform Delay, d1	29.9	27.5		40.3	43.3		14.8	26.7		26.7	20.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	218.9	2.5		0.7	6.2		0.7	226.6		647.3	2.9	
Delay (s)	248.8	30.0		41.0	49.5		15.5	253.3		674.0	23.4	
Level of Service	F	C		D	D		B	F		F	C	
Approach Delay (s)		157.7			48.4			244.9			153.7	
Approach LOS		F			D			F			F	
<b>Intersection Summary</b>												
HCM Average Control Delay			183.3	HCM Level of Service				F				
HCM Volume to Capacity ratio			1.92									
Actuated Cycle Length (s)			107.0	Sum of lost time (s)				13.0				
Intersection Capacity Utilization			143.8%	ICU Level of Service				H				
Analysis Period (min)			15									
c Critical Lane Group												

# Appendix O
































## SYNCHRO Intersection Analysis Outputs for Build Alternative



# Year 2015 AM Peak Hour SYNCHRO Intersection Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2015 AM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 		 	 	
Volume (vph)	245	343	38	194	406	105	37	252	61	204	706	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	258	361	40	204	427	111	39	265	64	215	743	224
RTOR Reduction (vph)	0	0	30	0	0	78	0	0	37	0	0	118
Lane Group Flow (vph)	258	361	10	204	427	33	39	265	27	215	743	106
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	1
Permitted Phases			6			2			4			8
Actuated Green, G (s)	11.7	18.4	22.9	13.5	20.2	26.9	4.5	25.2	38.7	6.7	27.4	39.1
Effective Green, g (s)	11.7	18.4	22.9	13.5	20.2	26.9	4.5	25.2	38.7	6.7	27.4	39.1
Actuated g/C Ratio	0.13	0.20	0.25	0.15	0.22	0.30	0.05	0.28	0.43	0.07	0.30	0.43
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	414	671	374	478	737	439	89	992	682	248	1047	669
v/s Ratio Prot	c0.08	0.11	0.00	0.06	c0.13	0.01	0.02	0.07	0.01	c0.06	c0.21	0.02
v/s Ratio Perm			0.01			0.02			0.01			0.05
v/c Ratio	0.62	0.54	0.03	0.43	0.58	0.07	0.44	0.27	0.04	0.87	0.71	0.16
Uniform Delay, d1	37.5	32.4	25.6	35.1	31.5	23.0	41.9	25.6	15.2	41.6	28.2	15.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	1.5	0.0	0.7	1.8	0.1	4.0	0.2	0.0	26.2	2.3	0.1
Delay (s)	40.5	33.9	25.6	35.9	33.3	23.1	46.0	25.8	15.2	67.8	30.5	15.9
Level of Service	D	C	C	D	C	C	D	C	B	E	C	B
Approach Delay (s)		36.0			32.5			26.1			34.5	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	20.5
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2015 AM Peak Hour  
Build Alternative


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (veh/h)	102	516	0	0	582	1	1	0	134	0	0
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	107	543	0	0	613	1	1	0	141	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		Raised			Raised						
Median storage (veh)		3			3						
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	613			543			1099	1371	306	1371	272
vC1, stage 1 conf vol							613	613		758	
vC2, stage 2 conf vol							486	758		613	
vCu, unblocked vol	613			543			1099	1371	306	1371	272
tC, single (s)	4.3			4.1			7.7	6.5	7.1	6.5	6.9
tC, 2 stage (s)							6.7	5.5		5.5	
tF (s)	2.3			2.2			3.6	4.0	3.4	4.0	3.3
p0 queue free %	88			100			100	100	79	100	100
cM capacity (veh/h)	916			1036			362	337	666	311	732

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2	NE 1
Volume Total	107	362	181	306	306	1	1	141	0
Volume Left	107	0	0	0	0	0	1	0	0
Volume Right	0	0	0	0	0	1	0	141	0
cSH	916	1700	1700	1700	1700	1700	362	666	1700
Volume to Capacity	0.12	0.21	0.11	0.18	0.18	0.00	0.00	0.21	0.00
Queue Length 95th (ft)	10	0	0	0	0	0	0	20	0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	0.0	15.0	11.8	0.0
Lane LOS	A						B	B	A
Approach Delay (s)	1.6			0.0			11.9		0.0
Approach LOS							B		A

Intersection Summary		
Average Delay		1.9
Intersection Capacity Utilization	35.1%	ICU Level of Service
Analysis Period (min)		15

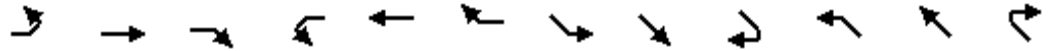
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2015 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	33	0	6	4	508	0	0	572	29
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	35	0	6	4	535	0	0	602	31
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	851	1176	267	893	1161	316	633			535		
vC1, stage 1 conf vol	543	543		617	617							
vC2, stage 2 conf vol	307	633		276	543							
vCu, unblocked vol	851	1176	267	893	1161	316	633			535		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	90	100	99	100			100		
cM capacity (veh/h)	371	313	737	348	316	682	900			1043		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	41	182	356	401	231							
Volume Left	35	4	0	0	0							
Volume Right	6	0	0	0	31							
cSH	377	900	1700	1700	1700							
Volume to Capacity	0.11	0.00	0.21	0.24	0.14							
Queue Length 95th (ft)	9	0	0	0	0							
Control Delay (s)	15.7	0.3	0.0	0.0	0.0							
Lane LOS	C	A										
Approach Delay (s)	15.7	0.1		0.0								
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			26.8%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46




















YR 2015 AM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	18	0	31	3	0	0	1	512	25	5	582	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	19	0	33	3	0	0	1	539	26	5	613	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	871	1178	283	928	1191	307	614			565		
vC1, stage 1 conf vol	554	554		624	624							
vC2, stage 2 conf vol	317	624		304	567							
vCu, unblocked vol	871	1178	283	928	1191	307	614			565		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	95	100	95	99	100	100	100			99		
cM capacity (veh/h)	364	311	717	330	308	692	915			956		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	52	3	271	296	312	307						
Volume Left	19	3	1	0	5	0						
Volume Right	33	0	0	26	0	1						
cSH	529	330	915	1700	956	1700						
Volume to Capacity	0.10	0.01	0.00	0.17	0.01	0.18						
Queue Length 95th (ft)	8	1	0	0	0	0						
Control Delay (s)	12.5	16.0	0.0	0.0	0.2	0.0						
Lane LOS	B	C	A		A							
Approach Delay (s)	12.5	16.0	0.0		0.1							
Approach LOS	B	C										
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			29.6%		ICU Level of Service				A			
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
 1: Woodridge Drive & SR 46

YR 2015 AM Peak Hour  
 Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	6	4	2	33	6	61	47	488	2	3	553	27	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	6	4	2	35	6	64	49	514	2	3	582	28	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								Raised			Raised		
Median storage (veh)								1			1		
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	977	1229	257	963	1217	305	611			516			
vC1, stage 1 conf vol	613	613		603	603								
vC2, stage 2 conf vol	365	617		360	615								
vCu, unblocked vol	977	1229	257	963	1217	305	611			516			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3			
tC, 2 stage (s)	6.5	5.5		6.5	5.5								
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	98	98	100	89	98	91	95			100			
cM capacity (veh/h)	291	279	745	323	292	694	918			999			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>SE 3</b>	<b>SE 4</b>	<b>NW 1</b>	<b>NW 2</b>					
Volume Total	13	105	49	257	257	2	294	319					
Volume Left	6	35	49	0	0	0	3	0					
Volume Right	2	64	0	0	0	2	0	28					
cSH	319	475	918	1700	1700	1700	999	1700					
Volume to Capacity	0.04	0.22	0.05	0.15	0.15	0.00	0.00	0.19					
Queue Length 95th (ft)	3	21	4	0	0	0	0	0					
Control Delay (s)	16.7	14.7	9.1	0.0	0.0	0.0	0.1	0.0					
Lane LOS	C	B	A				A						
Approach Delay (s)	16.7	14.7	0.8				0.1						
Approach LOS	C	B											
<b>Intersection Summary</b>													
Average Delay			1.7										
Intersection Capacity Utilization			46.3%		ICU Level of Service			A					
Analysis Period (min)			15										

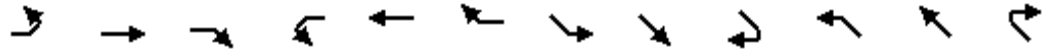
HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

YR 2015 AM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	2	4	512	0	0	586	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	2	4	539	0	0	617	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	858	1169	269	897	1167	311	622			539		
vC1, stage 1 conf vol	547	547		619	619							
vC2, stage 2 conf vol	311	622		278	547							
vCu, unblocked vol	858	1169	269	897	1167	311	622			539		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	99	100	100	100			100		
cM capacity (veh/h)	347	313	731	347	315	688	909			978		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	6	184	359	411	211							
Volume Left	4	4	0	0	0							
Volume Right	2	0	0	0	5							
cSH	416	909	1700	1700	1700							
Volume to Capacity	0.02	0.00	0.21	0.24	0.12							
Queue Length 95th (ft)	1	0	0	0	0							
Control Delay (s)	13.8	0.3	0.0	0.0	0.0							
Lane LOS	B	A										
Approach Delay (s)	13.8	0.1		0.0								
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.1									
Intersection Capacity Utilization			27.0%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46

YR 2015 AM Peak Hour  
 Build Alternative






























Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↕			↕	
Volume (veh/h)	0	0	0	6	0	14	7	509	0	0	577	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	15	7	536	0	0	607	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	869	1163	268	893	1161	306	613			536		
vC1, stage 1 conf vol	551	551		610	610							
vC2, stage 2 conf vol	318	613		283	551							
vCu, unblocked vol	869	1163	268	893	1161	306	613			536		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2			2.3		
p0 queue free %	100	100	100	98	100	98	99			100		
cM capacity (veh/h)	358	312	733	349	315	693	520			981		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	21	186	357	405	208							
Volume Left	6	7	0	0	0							
Volume Right	15	0	0	0	5							
cSH	534	520	1700	1700	1700							
Volume to Capacity	0.04	0.01	0.21	0.24	0.12							
Queue Length 95th (ft)	3	1	0	0	0							
Control Delay (s)	12.0	0.7	0.0	0.0	0.0							
Lane LOS	B	A										
Approach Delay (s)	12.0	0.2		0.0								
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			29.0%		ICU Level of Service				A			
Analysis Period (min)			15									



HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46






























YR 2015 AM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 			 	 			 			 	
Volume (vph)	198	140	40	14	194	14	25	196	295	88	263	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		4.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1818		1787	1862		1656	3312	1333	1656	3252	
Flt Permitted	0.95	1.00		0.95	1.00		0.56	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	3467	1818		1787	1862		977	3312	1333	1085	3252	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	208	147	42	15	204	15	26	206	311	93	277	38
RTOR Reduction (vph)	0	15	0	0	5	0	0	0	228	0	18	0
Lane Group Flow (vph)	208	174	0	15	214	0	26	206	83	93	297	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		Perm		Perm			
Protected Phases	3	8	7	4			2	2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)	11.3	24.6	0.7	11.5			15.3	15.3	15.3	15.3	15.3	
Effective Green, g (s)	11.3	24.6	0.7	11.5			15.3	15.3	15.3	15.3	15.3	
Actuated g/C Ratio	0.20	0.43	0.01	0.20			0.27	0.27	0.27	0.27	0.27	
Clearance Time (s)	6.5	6.5	4.0	6.5			6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	4.0	4.0	3.0	3.0			4.5	4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	680	776	22	372			260	880	354	288	864	
v/s Ratio Prot	c0.06	0.10	0.01	c0.12				0.06			c0.09	
v/s Ratio Perm							0.03		0.06	0.09		
v/c Ratio	0.31	0.22	0.68	0.58			0.10	0.23	0.23	0.32	0.34	
Uniform Delay, d1	19.8	10.5	28.3	20.8			16.0	16.6	16.6	17.0	17.1	
Progression Factor	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.2	62.1	2.2			0.3	0.2	0.6	1.1	0.4	
Delay (s)	20.1	10.7	90.5	23.0			16.2	16.8	17.1	18.1	17.5	
Level of Service	C	B	F	C			B	B	B	B	B	
Approach Delay (s)		15.6		27.3				17.0			17.6	
Approach LOS		B		C				B			B	
<b>Intersection Summary</b>												
HCM Average Control Delay			18.3	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.40									
Actuated Cycle Length (s)			57.6	Sum of lost time (s)				19.5				
Intersection Capacity Utilization			64.4%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2025 AM Peak Hour SYNCHRO Intersection Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2025 AM Peak Hour  
Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 		 	 			 		 			
Volume (vph)	364	641	82	248	744	234	56	358	124	309	899	398	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3199	3471	1553	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3199	3471	1553	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	383	675	86	261	783	246	59	377	131	325	946	419	
RTOR Reduction (vph)	0	0	26	0	0	65	0	0	30	0	0	33	
Lane Group Flow (vph)	383	675	60	261	783	181	59	377	101	325	946	386	
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%	
Parking (#/hr)	0												
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	1	
Permitted Phases			6			2			4			8	
Actuated Green, G (s)	19.4	35.5	42.7	21.1	37.2	54.1	7.2	32.0	53.1	16.9	41.7	61.1	
Effective Green, g (s)	19.4	35.5	42.7	21.1	37.2	54.1	7.2	32.0	53.1	16.9	41.7	61.1	
Actuated g/C Ratio	0.15	0.27	0.32	0.16	0.28	0.41	0.05	0.24	0.40	0.13	0.31	0.46	
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
Lane Grp Cap (vph)	470	887	478	512	930	605	97	863	641	408	1092	716	
v/s Ratio Prot	c0.12	0.20	0.01	0.08	c0.24	0.04	0.03	0.11	0.03	c0.10	c0.27	0.08	
v/s Ratio Perm			0.03			0.08			0.04			0.17	
v/c Ratio	0.81	0.76	0.13	0.51	0.84	0.30	0.61	0.44	0.16	0.80	0.87	0.54	
Uniform Delay, d1	54.8	44.6	31.7	51.0	44.9	26.4	61.3	42.6	25.4	56.1	42.8	25.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.7	4.6	0.1	0.9	7.7	0.3	10.9	0.4	0.1	10.6	7.6	0.9	
Delay (s)	65.5	49.2	31.9	51.9	52.6	26.7	72.1	43.0	25.5	66.7	50.3	26.5	
Level of Service	E	D	C	D	D	C	E	D	C	E	D	C	
Approach Delay (s)		53.3			47.5			42.0			47.6		
Approach LOS		D			D			D			D		
<b>Intersection Summary</b>													
HCM Average Control Delay	48.3		HCM Level of Service					D					
HCM Volume to Capacity ratio	0.87												
Actuated Cycle Length (s)	132.5					Sum of lost time (s)			27.0				
Intersection Capacity Utilization	83.3%					ICU Level of Service			E				
Analysis Period (min)	15												
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2025 AM Peak Hour  
Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	118	960	0	0	1006	2	2	0	156	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1656	3312			3312	1482	1641		1468		
Flt Permitted	0.18	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	310	3312			3312	1482	1641		1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	124	1011	0	0	1059	2	2	0	164	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	136	0	0
Lane Group Flow (vph)	124	1011	0	0	1059	1	2	0	28	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt			Perm			Perm				
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	25.4	25.4			18.5	18.5	6.9		6.9		
Effective Green, g (s)	25.4	25.4			18.5	18.5	6.9		6.9		
Actuated g/C Ratio	0.63	0.63			0.46	0.46	0.17		0.17		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	292	2087			1520	680	281		251		
v/s Ratio Prot	0.03	c0.31			c0.32		0.00				
v/s Ratio Perm	0.24					0.00			c0.02		
v/c Ratio	0.42	0.48			0.70	0.00	0.01		0.11		
Uniform Delay, d1	4.5	4.0			8.7	5.9	13.9		14.1		
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Incremental Delay, d2	1.0	0.2			1.4	0.0	0.0		0.2		
Delay (s)	5.5	4.1			10.1	5.9	13.9		14.3		
Level of Service	A	A			B	A	B		B		
Approach Delay (s)		4.3			10.1		14.3			0.0	
Approach LOS		A			B		B			A	

Intersection Summary
















HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

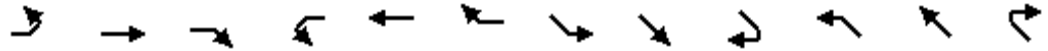
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2025 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	49	0	7	5	887	0	0	1002	43
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	52	0	7	5	934	0	0	1055	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1479	2044	467	1555	2022	550	1100			934		
vC1, stage 1 conf vol	944	944		1077	1077							
vC2, stage 2 conf vol	535	1100		477	944							
vCu, unblocked vol	1479	2044	467	1555	2022	550	1100			934		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	71	100	98	99			100		
cM capacity (veh/h)	200	167	548	178	170	481	591			741		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	59	316	622	703	397							
Volume Left	52	5	0	0	0							
Volume Right	7	0	0	0	45							
cSH	193	591	1700	1700	1700							
Volume to Capacity	0.31	0.01	0.37	0.41	0.23							
Queue Length 95th (ft)	31	1	0	0	0							
Control Delay (s)	31.7	0.3	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	31.7	0.1		0.0								
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.9									
Intersection Capacity Utilization			39.1%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46




















YR 2025 AM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	0	35	4	0	0	1	888	34	6	1001	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	0	37	4	0	0	1	935	36	6	1054	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1494	2022	485	1573	2039	527	1055			971		
vC1, stage 1 conf vol	955	955		1067	1067							
vC2, stage 2 conf vol	539	1067		506	973							
vCu, unblocked vol	1494	2022	485	1573	2039	527	1055			971		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	89	100	93	98	100	100	100			99		
cM capacity (veh/h)	198	170	530	171	167	498	616			665		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	59	4	468	503	533	528						
Volume Left	22	4	1	0	6	0						
Volume Right	37	0	0	36	0	1						
cSH	325	171	616	1700	665	1700						
Volume to Capacity	0.18	0.02	0.00	0.30	0.01	0.31						
Queue Length 95th (ft)	16	2	0	0	1	0						
Control Delay (s)	18.5	26.5	0.0	0.0	0.3	0.0						
Lane LOS	C	D	A		A							
Approach Delay (s)	18.5	26.5	0.0		0.1							
Approach LOS	C	D										
<b>Intersection Summary</b>												
Average Delay			0.7									
Intersection Capacity Utilization			41.9%		ICU Level of Service				A			
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2025 AM Peak Hour  
Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	7	5	3	39	6	78	59	860	3	5	968	33	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	7	5	3	41	6	82	62	905	3	5	1019	35	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								Raised			Raised		
Median storage (veh)								1			1		
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	1635	2094	453	1629	2079	527	1054				908		
vC1, stage 1 conf vol	1029	1029		1047	1047								
vC2, stage 2 conf vol	605	1064		583	1033								
vCu, unblocked vol	1635	2094	453	1629	2079	527	1054				908		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3				4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5								
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3				2.3		
p0 queue free %	95	96	99	75	96	84	90				99		
cM capacity (veh/h)	141	138	557	164	153	498	616				703		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2					
Volume Total	16	129	62	453	453	3	515	544					
Volume Left	7	41	62	0	0	0	5	0					
Volume Right	3	82	0	0	0	3	0	35					
cSH	164	284	616	1700	1700	1700	703	1700					
Volume to Capacity	0.10	0.46	0.10	0.27	0.27	0.00	0.01	0.32					
Queue Length 95th (ft)	8	56	8	0	0	0	1	0					
Control Delay (s)	29.2	27.9	11.5	0.0	0.0	0.0	0.2	0.0					
Lane LOS	D	D	B				A						
Approach Delay (s)	29.2	27.9	0.7				0.1						
Approach LOS	D	D											
Intersection Summary													
Average Delay			2.2										
Intersection Capacity Utilization			63.9%	ICU Level of Service							B		
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

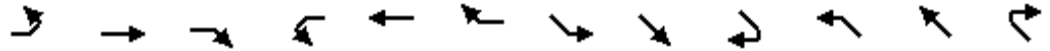
YR 2025 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	3	4	893	0	0	1011	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	3	4	940	0	0	1064	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1484	2018	470	1545	2015	535	1069			940		
vC1, stage 1 conf vol	948	948		1067	1067							
vC2, stage 2 conf vol	535	1069		478	948							
vCu, unblocked vol	1484	2018	470	1545	2015	535	1069			940		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	98	100	99	99			100		
cM capacity (veh/h)	184	170	543	180	171	493	608			683		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	7	318	627	709	360							
Volume Left	4	4	0	0	0							
Volume Right	3	0	0	0	5							
cSH	247	608	1700	1700	1700							
Volume to Capacity	0.03	0.01	0.37	0.42	0.21							
Queue Length 95th (ft)	2	1	0	0	0							
Control Delay (s)	20.0	0.2	0.0	0.0	0.0							
Lane LOS	C	A										
Approach Delay (s)	20.0	0.1		0.0								
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.1									
Intersection Capacity Utilization			38.1%		ICU Level of Service					A		
Analysis Period (min)			15									



HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46




























YR 2025 AM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↕			↕			↕	
Volume (veh/h)	0	0	0	6	0	14	7	890	0	0	1002	5
Sign Control		Stop				Stop		Free			Free	
Grade		0%				0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	15	7	937	0	0	1055	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							Raised			Raised		
Median storage (veh)							1			1		
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1494	2012	468	1541	2009	530	1060				937	
vC1, stage 1 conf vol	952	952		1057	1057							
vC2, stage 2 conf vol	542	1060		483	952							
vCu, unblocked vol	1494	2012	468	1541	2009	530	1060				937	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1				4.3	
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2				2.3	
p0 queue free %	100	100	100	97	100	97	97				100	
cM capacity (veh/h)	192	168	544	181	170	496	290				685	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	21	320	625	703	357							
Volume Left	6	7	0	0	0							
Volume Right	15	0	0	0	5							
cSH	325	290	1700	1700	1700							
Volume to Capacity	0.06	0.03	0.37	0.41	0.21							
Queue Length 95th (ft)	5	2	0	0	0							
Control Delay (s)	16.8	0.9	0.0	0.0	0.0							
Lane LOS	C	A										
Approach Delay (s)	16.8	0.3										
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			39.5%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46
































YR 2025 AM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 			 	 			 			 	
Volume (vph)	362	151	45	35	202	26	27	451	415	124	507	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		4.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1817		1787	1849		1656	3312	1333	1656	3275	
Flt Permitted	0.95	1.00		0.95	1.00		0.38	1.00	1.00	0.47	1.00	
Satd. Flow (perm)	3467	1817		1787	1849		656	3312	1333	818	3275	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	381	159	47	37	213	27	28	475	437	131	534	43
RTOR Reduction (vph)	0	17	0	0	8	0	0	0	210	0	9	0
Lane Group Flow (vph)	381	189	0	37	232	0	28	475	227	131	568	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		pm+ov	Perm				
Protected Phases	3	8	7	4			2	3			6	
Permitted Phases							2	2	6			
Actuated Green, G (s)	11.0	23.6	1.9	12.0	15.8	15.8	26.8	15.8	15.8			
Effective Green, g (s)	11.0	23.6	1.9	12.0	15.8	15.8	26.8	15.8	15.8			
Actuated g/C Ratio	0.19	0.40	0.03	0.21	0.27	0.27	0.46	0.27	0.27			
Clearance Time (s)	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5			
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.5	4.5	4.0	4.5	4.5			
Lane Grp Cap (vph)	654	736	58	381	178	898	761	222	888			
v/s Ratio Prot	c0.11	0.10	0.02	c0.13			0.14	0.06	c0.17			
v/s Ratio Perm					0.04		0.11	0.16				
v/c Ratio	0.58	0.26	0.64	0.61	0.16	0.53	0.30	0.59	0.64			
Uniform Delay, d1	21.6	11.5	27.9	21.0	16.2	18.1	9.9	18.4	18.7			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.6	0.3	20.8	2.8	0.7	0.9	0.3	5.5	1.9			
Delay (s)	23.1	11.8	48.6	23.8	16.9	19.0	10.2	24.0	20.6			
Level of Service	C	B	D	C	B	B	B	C	C			
Approach Delay (s)		19.1		27.1		14.8		21.3				
Approach LOS		B		C		B		C				
<b>Intersection Summary</b>												
HCM Average Control Delay			19.0	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			58.3	Sum of lost time (s)				19.5				
Intersection Capacity Utilization			72.0%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2035 AM Peak Hour SYNCHRO Intersection Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2035 AM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 		 	 	
Volume (vph)	448	956	136	301	1078	363	74	462	187	409	1092	582
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	7.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	215	3574	1599	3367	3471	1553
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	457	976	139	307	1100	370	76	471	191	417	1114	594
RTOR Reduction (vph)	0	0	74	0	0	32	0	0	13	0	0	24
Lane Group Flow (vph)	457	976	65	307	1100	338	76	471	178	417	1114	570
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	1	6		5	2	3	7	4	5	3	8	1
Permitted Phases			6			2	4		4			8
Actuated Green, G (s)	19.9	48.7	48.7	17.2	46.0	63.1	41.0	35.0	52.2	17.1	46.1	66.0
Effective Green, g (s)	19.9	48.7	48.7	17.2	46.0	63.1	41.0	35.0	52.2	17.1	46.1	66.0
Actuated g/C Ratio	0.14	0.34	0.34	0.12	0.32	0.44	0.28	0.24	0.36	0.12	0.32	0.46
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	5.0	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	441	1112	498	381	1051	645	126	863	576	397	1104	777
v/s Ratio Prot	0.14	c0.29		0.10	c0.33	0.06	0.02	0.13	0.04	c0.12	c0.32	0.10
v/s Ratio Perm			0.04			0.17	0.15		0.07			0.27
v/c Ratio	1.04	0.88	0.13	0.81	1.05	0.52	0.60	0.55	0.31	1.05	1.01	0.73
Uniform Delay, d1	62.5	45.3	33.4	62.3	49.5	30.0	42.3	48.1	33.4	64.0	49.5	32.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	52.5	8.7	0.2	12.1	40.8	0.9	8.3	0.8	0.4	59.0	29.3	3.7
Delay (s)	115.1	54.0	33.7	74.3	90.3	30.9	50.6	48.8	33.8	122.9	78.8	36.0
Level of Service	F	D	C	E	F	C	D	D	C	F	E	D
Approach Delay (s)		70.0			75.1			45.1			75.5	
Approach LOS		E			E			D			E	

Intersection Summary

HCM Average Control Delay	70.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2035 AM Peak Hour  
Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	140	1403	0	0	1431	3	3	0	184	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1656	3312			3312	1482	1641		1468		
Flt Permitted	0.13	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	223	3312			3312	1482	1641		1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1477	0	0	1506	3	3	0	194	0	0
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	124	0	0
Lane Group Flow (vph)	147	1477	0	0	1506	2	3	0	70	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt					Perm			Perm		
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	34.3	34.3			27.3	27.3	8.0		8.0		
Effective Green, g (s)	34.3	34.3			27.3	27.3	8.0		8.0		
Actuated g/C Ratio	0.68	0.68			0.54	0.54	0.16		0.16		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0		
Lane Grp Cap (vph)	238	2258			1798	804	261		233		
v/s Ratio Prot	0.04	c0.45			c0.45		0.00				
v/s Ratio Perm	0.39					0.00			c0.05		
v/c Ratio	0.62	0.65			0.84	0.00	0.01		0.30		
Uniform Delay, d1	7.3	4.6			9.6	5.3	17.8		18.7		
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00		
Incremental Delay, d2	4.7	0.7			3.6	0.0	0.0		0.7		
Delay (s)	12.0	5.3			13.2	5.3	17.8		19.4		
Level of Service	B	A			B	A	B		B		
Approach Delay (s)		5.9			13.2		19.4			0.0	
Approach LOS		A			B		B			A	

Intersection Summary
















HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	50.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

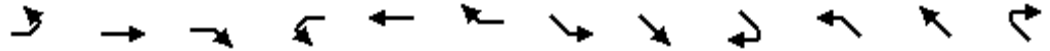
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	59	0	8	6	1263	0	0	1426	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	62	0	8	6	1329	0	0	1501	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2101	2898	665	2206	2871	778	1556			1329		
vC1, stage 1 conf vol	1342	1342		1528	1528							
vC2, stage 2 conf vol	759	1556		677	1342							
vCu, unblocked vol	2101	2898	665	2206	2871	778	1556			1329		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	34	100	98	98			100		
cM capacity (veh/h)	112	94	407	94	97	341	389			526		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	71	449	886	1001	555							
Volume Left	62	6	0	0	0							
Volume Right	8	0	0	0	55							
cSH	103	389	1700	1700	1700							
Volume to Capacity	0.68	0.02	0.52	0.59	0.33							
Queue Length 95th (ft)	87	1	0	0	0							
Control Delay (s)	94.4	0.5	0.0	0.0	0.0							
Lane LOS	F	A										
Approach Delay (s)	94.4	0.2		0.0								
Approach LOS	F											
<b>Intersection Summary</b>												
Average Delay			2.3									
Intersection Capacity Utilization			51.5%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46



















YR 2035 AM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	27	0	47	4	0	0	1	1269	47	7	1429	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	28	0	49	4	0	0	1	1336	49	7	1504	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2129	2883	693	2239	2907	753	1505			1385		
vC1, stage 1 conf vol	1363	1363		1519	1519							
vC2, stage 2 conf vol	767	1520		719	1387							
vCu, unblocked vol	2129	2883	693	2239	2907	753	1505			1385		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	74	100	87	95	100	100	100			98		
cM capacity (veh/h)	110	96	388	89	93	355	408			456		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	78	4	669	717	759	753						
Volume Left	28	4	1	0	7	0						
Volume Right	49	0	0	49	0	1						
cSH	202	89	408	1700	456	1700						
Volume to Capacity	0.39	0.05	0.00	0.42	0.02	0.44						
Queue Length 95th (ft)	42	4	0	0	1	0						
Control Delay (s)	33.6	47.4	0.1	0.0	0.5	0.0						
Lane LOS	D	E	A		A							
Approach Delay (s)	33.6	47.4	0.0		0.3							
Approach LOS	D	E										
<b>Intersection Summary</b>												
Average Delay			1.1									
Intersection Capacity Utilization			55.0%		ICU Level of Service				B			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46
















YR 2035 AM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	8	6	4	39	6	95	72	1231	4	10	1388	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	6	4	41	6	100	76	1296	4	11	1461	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2302	2964	648	2306	2951	748	1496			1300		
vC1, stage 1 conf vol	1447	1447		1499	1499							
vC2, stage 2 conf vol	855	1517		807	1452							
vCu, unblocked vol	2302	2964	648	2306	2951	748	1496			1300		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	87	90	99	51	92	72	82			98		
cM capacity (veh/h)	63	62	415	84	80	357	412			493		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2				
Volume Total	19	147	76	648	648	4	741	765				
Volume Left	8	41	76	0	0	0	11	0				
Volume Right	4	100	0	0	0	4	0	35				
cSH	77	173	412	1700	1700	1700	493	1700				
Volume to Capacity	0.25	0.85	0.18	0.38	0.38	0.00	0.02	0.45				
Queue Length 95th (ft)	22	150	17	0	0	0	2	0				
Control Delay (s)	66.2	87.2	15.7	0.0	0.0	0.0	0.6	0.0				
Lane LOS	F	F	C				A					
Approach Delay (s)	66.2	87.2	0.9				0.3					
Approach LOS	F	F										
Intersection Summary												
Average Delay			5.2									
Intersection Capacity Utilization			75.8%	ICU Level of Service	D							
Analysis Period (min)			15									



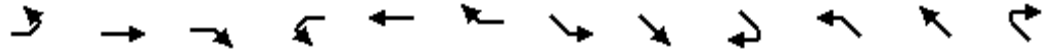
HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2035 AM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	4	0	3	4	1265	0	0	1430	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	4	0	3	4	1332	0	0	1505	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2096	2851	666	2182	2848	755	1511			1332		
vC1, stage 1 conf vol	1340	1340		1508	1508							
vC2, stage 2 conf vol	756	1511		674	1340							
vCu, unblocked vol	2096	2851	666	2182	2848	755	1511			1332		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	96	100	99	99			100		
cM capacity (veh/h)	103	98	404	97	99	353	406			479		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	7	448	888	1004	507							
Volume Left	4	4	0	0	0							
Volume Right	3	0	0	0	5							
cSH	141	406	1700	1700	1700							
Volume to Capacity	0.05	0.01	0.52	0.59	0.30							
Queue Length 95th (ft)	4	1	0	0	0							
Control Delay (s)	32.0	0.3	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	32.0	0.1		0.0								
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.1									
Intersection Capacity Utilization			49.7%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46























YR 2035 AM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↕			↕	
Volume (veh/h)	0	0	0	6	0	14	8	1261	0	0	1421	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	15	8	1327	0	0	1496	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2107	2851	664	2182	2845	753	1506			1327		
vC1, stage 1 conf vol	1344	1344		1501	1501							
vC2, stage 2 conf vol	763	1506		681	1344							
vCu, unblocked vol	2107	2851	664	2182	2845	753	1506			1327		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2			2.3		
p0 queue free %	100	100	100	93	100	96	95			100		
cM capacity (veh/h)	107	94	406	96	97	354	161			480		
<b>Direction, Lane #</b>												
	WB 1	SE 1	SE 2	NW 1	NW 2							
Volume Total	21	451	885	997	509							
Volume Left	6	8	0	0	0							
Volume Right	15	0	0	0	11							
cSH	197	161	1700	1700	1700							
Volume to Capacity	0.11	0.05	0.52	0.59	0.30							
Queue Length 95th (ft)	9	4	0	0	0							
Control Delay (s)	25.5	2.5	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	25.5	0.9										
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			50.4%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2035 AM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	513	178	50	55	213	38	30	660	580	162	746	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1819		1787	1838		1656	3312	1333	1656	3283	
Flt Permitted	0.95	1.00		0.95	1.00		0.24	1.00	1.00	0.32	1.00	
Satd. Flow (perm)	3467	1819		1787	1838		419	3312	1333	553	3283	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	540	187	53	58	224	40	32	695	611	171	785	48
RTOR Reduction (vph)	0	12	0	0	8	0	0	0	376	0	6	0
Lane Group Flow (vph)	540	228	0	58	256	0	32	695	235	171	827	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		Perm		Perm			
Protected Phases	3	8	7	4			2	2			6	
Permitted Phases							2		2		6	
Actuated Green, G (s)	15.1	25.7	3.3	13.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	
Effective Green, g (s)	15.1	25.7	3.3	13.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	
Actuated g/C Ratio	0.20	0.34	0.04	0.19	0.39	0.39	0.39	0.39	0.39	0.39	0.39	
Clearance Time (s)	4.0	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	4.0	3.0	3.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	700	625	79	342	161	1275	513	213	1264			
v/s Ratio Prot	c0.16	0.13	0.03	c0.14			0.21		0.25			
v/s Ratio Perm					0.08		0.18		c0.31			
v/c Ratio	0.77	0.37	0.73	0.75	0.20	0.55	0.46	0.80	0.65			
Uniform Delay, d1	28.2	18.4	35.3	28.8	15.3	17.9	17.2	20.5	18.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.3	0.5	29.4	8.7	1.1	0.7	1.1	21.1	1.5			
Delay (s)	33.5	18.9	64.7	37.5	16.4	18.6	18.3	41.6	20.4			
Level of Service	C	B	E	D	B	B	B	D	C			
Approach Delay (s)		29.0		42.4		18.4		24.0				
Approach LOS		C		D		B		C				
<b>Intersection Summary</b>												
HCM Average Control Delay			24.7	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			74.8	Sum of lost time (s)				17.0				
Intersection Capacity Utilization			82.3%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

Year 2015 PM Peak Hour SYNCHRO Intersection  
Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2015 PM Peak Hour  
Build Alternative

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	310	6	97	334	195	30	592	146	151	324	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	411	326	6	102	352	205	32	623	154	159	341	260
RTOR Reduction (vph)	0	0	4	0	0	38	0	0	89	0	0	158
Lane Group Flow (vph)	411	326	2	102	352	167	32	623	65	159	341	102
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	1
Permitted Phases			6			2			4			8
Actuated Green, G (s)	11.6	16.7	24.6	12.2	17.3	23.3	7.9	23.8	36.0	6.0	21.9	33.5
Effective Green, g (s)	11.6	16.7	24.6	12.2	17.3	23.3	7.9	23.8	36.0	6.0	21.9	33.5
Actuated g/C Ratio	0.14	0.19	0.29	0.14	0.20	0.27	0.09	0.28	0.42	0.07	0.26	0.39
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	435	645	538	457	669	403	165	993	672	236	887	725
v/s Ratio Prot	c0.13	0.10	0.00	0.03	c0.11	0.03	0.02	c0.17	0.01	c0.05	0.10	0.02
v/s Ratio Perm			0.00			0.08			0.03			0.05
v/c Ratio	0.94	0.51	0.00	0.22	0.53	0.41	0.19	0.63	0.10	0.67	0.38	0.14
Uniform Delay, d1	36.7	30.8	21.8	32.6	30.5	25.6	36.0	27.1	15.0	38.9	26.3	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.6	1.3	0.0	0.3	1.4	0.8	0.7	1.3	0.1	7.7	0.3	0.1
Delay (s)	66.3	32.1	21.8	32.8	32.0	26.4	36.6	28.4	15.1	46.6	26.7	16.9
Level of Service	E	C	C	C	C	C	D	C	B	D	C	B
Approach Delay (s)		51.0			30.4			26.2			27.5	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	27.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2015 PM Peak Hour  
Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (veh/h)	114	582	0	0	516	0	0	0	103	0	0
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	120	613	0	0	543	0	0	0	108	0	0
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		Raised			Raised						
Median storage (veh)		3			3						
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	543			613			1089	1396	272	1396	306
vC1, stage 1 conf vol							543	543		853	
vC2, stage 2 conf vol							546	853		543	
vCu, unblocked vol	543			613			1089	1396	272	1396	306
tC, single (s)	4.3			4.1			7.7	6.5	7.1	6.5	6.9
tC, 2 stage (s)							6.7	5.5		5.5	
tF (s)	2.3			2.2			3.6	4.0	3.4	4.0	3.3
p0 queue free %	88			100			100	100	85	100	100
cM capacity (veh/h)	975			976			361	315	703	298	696
















Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1	SB 2	NE 1
Volume Total	120	408	204	272	272	0	0	108	0
Volume Left	120	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	108	0
cSH	975	1700	1700	1700	1700	1700	1700	703	1700
Volume to Capacity	0.12	0.24	0.12	0.16	0.16	0.00	0.00	0.15	0.00
Queue Length 95th (ft)	10	0	0	0	0	0	0	14	0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0
Lane LOS	A						A	B	A
Approach Delay (s)	1.5			0.0			11.1		0.0
Approach LOS							B		A

Intersection Summary

Average Delay	1.7
Intersection Capacity Utilization	27.3%
ICU Level of Service	A
Analysis Period (min)	15

















HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2015 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	21	0	3	5	572	0	0	508	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	22	0	3	5	602	0	0	535	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	883	1174	301	859	1161	281	561			602		
vC1, stage 1 conf vol	613	613		548	548							
vC2, stage 2 conf vol	271	561		312	613							
vCu, unblocked vol	883	1174	301	859	1161	281	561			602		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	94	100	100	99			100		
cM capacity (veh/h)	352	314	701	368	316	720	959			985		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	25	206	401	356	205							
Volume Left	22	5	0	0	0							
Volume Right	3	0	0	0	26							
cSH	392	959	1700	1700	1700							
Volume to Capacity	0.06	0.01	0.24	0.21	0.12							
Queue Length 95th (ft)	5	0	0	0	0							
Control Delay (s)	14.8	0.3	0.0	0.0	0.0							
Lane LOS	B	A										
Approach Delay (s)	14.8	0.1		0.0								
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.4									
Intersection Capacity Utilization			29.3%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46



















YR 2015 PM Peak Hour  
 Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	6	0	17	0	0	0	2	577	29	28	492	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	0	18	0	0	0	2	607	31	29	518	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	945	1207	319	904	1221	261	521			638		
vC1, stage 1 conf vol	627	627		578	578							
vC2, stage 2 conf vol	318	580		326	642							
vCu, unblocked vol	945	1207	319	904	1221	261	521			638		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	98	100	97	100	100	100	100			97		
cM capacity (veh/h)	330	299	680	336	289	741	994			896		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	NW 1	NW 2						
Volume Total	24	0	306	334	288	262						
Volume Left	6	0	2	0	29	0						
Volume Right	18	0	0	31	0	3						
cSH	532	1700	994	1700	896	1700						
Volume to Capacity	0.05	0.00	0.00	0.20	0.03	0.15						
Queue Length 95th (ft)	4	0	0	0	3	0						
Control Delay (s)	12.1	0.0	0.1	0.0	1.3	0.0						
Lane LOS	B	A	A		A							
Approach Delay (s)	12.1	0.0	0.0		0.7							
Approach LOS	B	A										
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			44.6%	ICU Level of Service	A							
Analysis Period (min)			15									


















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2015 PM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	3	0	8	21	0	41	51	544	6	8	482	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	0	8	22	0	43	54	573	6	8	507	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	994	1231	286	939	1224	267	534				579	
vC1, stage 1 conf vol	680	680		537	537							
vC2, stage 2 conf vol	314	551		402	686							
vCu, unblocked vol	994	1231	286	939	1224	267	534				579	
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3				4.3	
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3				2.3	
p0 queue free %	99	100	99	93	100	94	95				99	
cM capacity (veh/h)	288	277	713	332	286	734	983				944	
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2				
Volume Total	12	65	54	286	286	6	262	280				
Volume Left	3	22	54	0	0	0	8	0				
Volume Right	8	43	0	0	0	6	0	26				
cSH	509	520	983	1700	1700	1700	944	1700				
Volume to Capacity	0.02	0.13	0.05	0.17	0.17	0.00	0.01	0.16				
Queue Length 95th (ft)	2	11	4	0	0	0	1	0				
Control Delay (s)	12.2	12.9	8.9	0.0	0.0	0.0	0.4	0.0				
Lane LOS	B	B	A				A					
Approach Delay (s)	12.2	12.9	0.8				0.2					
Approach LOS	B	B										
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			44.7%	ICU Level of Service	A							
Analysis Period (min)			15									

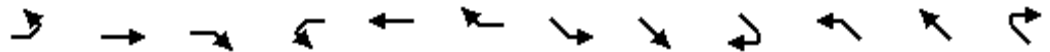
HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

YR 2015 PM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	582	0	0	512	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	613	0	0	539	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	899	1168	306	859	1165	273	545			613		
vC1, stage 1 conf vol	623	623		542	542							
vC2, stage 2 conf vol	276	545		317	623							
vCu, unblocked vol	899	1168	306	859	1165	273	545			613		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	98	100	99	99			100		
cM capacity (veh/h)	323	313	693	369	315	728	973			916		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	13	209	408	359	186							
Volume Left	6	5	0	0	0							
Volume Right	6	0	0	0	6							
cSH	490	973	1700	1700	1700							
Volume to Capacity	0.03	0.01	0.24	0.21	0.11							
Queue Length 95th (ft)	2	0	0	0	0							
Control Delay (s)	12.5	0.3	0.0	0.0	0.0							
Lane LOS	B	A										
Approach Delay (s)	12.5	0.1		0.0								
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.2									
Intersection Capacity Utilization			29.6%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
10: Oak Street & SR 46




























YR 2015 PM Peak Hour  
Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↕			↕	
Volume (veh/h)	0	0	0	6	0	6	10	578	0	0	512	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	11	608	0	0	539	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							Raised			Raised		
Median storage (veh)							1			1		
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	905	1173	304	866	1171	272	543			608		
vC1, stage 1 conf vol	629	629		541	541							
vC2, stage 2 conf vol	276	543		325	629							
vCu, unblocked vol	905	1173	304	866	1171	272	543			608		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2			2.3		
p0 queue free %	100	100	100	98	100	99	98			100		
cM capacity (veh/h)	337	308	695	365	311	729	568			920		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	13	213	406	359	184							
Volume Left	6	11	0	0	0							
Volume Right	6	0	0	0	4							
cSH	487	568	1700	1700	1700							
Volume to Capacity	0.03	0.02	0.24	0.21	0.11							
Queue Length 95th (ft)	2	1	0	0	0							
Control Delay (s)	12.6	0.8	0.0	0.0	0.0							
Lane LOS	B	A										
Approach Delay (s)	12.6	0.3										
Approach LOS	B											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			33.1%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46
































YR 2015 PM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 			 	 			 			 	
Volume (vph)	287	194	98	18	106	21	29	277	277	76	245	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		4.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1787		1787	1835		1656	3312	1333	1656	3273	
Flt Permitted	0.95	1.00		0.95	1.00		0.58	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	3467	1787		1787	1835		1011	3312	1333	999	3273	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	302	204	103	19	112	22	31	292	292	80	258	22
RTOR Reduction (vph)	0	31	0	0	13	0	0	0	158	0	10	0
Lane Group Flow (vph)	302	276	0	19	121	0	31	292	134	80	270	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		pm+ov		Perm			
Protected Phases	3	8	7	4			2	3			6	
Permitted Phases							2	2		6		
Actuated Green, G (s)	8.6	19.3	0.7	8.9	15.6	15.6	24.2	15.6	15.6			
Effective Green, g (s)	8.6	19.3	0.7	8.9	15.6	15.6	24.2	15.6	15.6			
Actuated g/C Ratio	0.16	0.37	0.01	0.17	0.30	0.30	0.46	0.30	0.30			
Clearance Time (s)	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5			
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.5	4.5	4.0	4.5	4.5			
Lane Grp Cap (vph)	567	656	24	310	300	982	778	296	971			
v/s Ratio Prot	c0.09	c0.15	0.01	0.07			c0.09	0.03	0.08			
v/s Ratio Perm					0.03	0.07	0.08					
v/c Ratio	0.53	0.42	0.79	0.39	0.10	0.30	0.17	0.27	0.28			
Uniform Delay, d1	20.2	12.5	25.9	19.4	13.4	14.3	8.3	14.1	14.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.2	0.6	94.5	0.8	0.3	0.3	0.1	0.9	0.3			
Delay (s)	21.4	13.1	120.4	20.2	13.7	14.6	8.5	15.0	14.5			
Level of Service	C	B	F	C	B	B	A	B	B			
Approach Delay (s)		17.2		32.7		11.6		14.6				
Approach LOS		B		C		B		B				
<b>Intersection Summary</b>												
HCM Average Control Delay			16.0	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.35									
Actuated Cycle Length (s)			52.6	Sum of lost time (s)				13.0				
Intersection Capacity Utilization			64.1%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2025 PM Peak Hour SYNCHRO Intersection Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2025 PM Peak Hour  
Build Alternative




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 		 	 	
Volume (vph)	516	669	36	213	639	235	54	733	306	201	456	371
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	543	704	38	224	673	247	57	772	322	212	480	391
RTOR Reduction (vph)	0	0	26	0	0	15	0	0	25	0	0	42
Lane Group Flow (vph)	543	704	12	224	673	232	57	772	297	212	480	349
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	1
Permitted Phases			6			2			4			8
Actuated Green, G (s)	21.1	33.0	38.4	18.5	30.4	38.9	5.4	32.6	51.1	8.5	35.7	56.8
Effective Green, g (s)	21.1	33.0	38.4	18.5	30.4	38.9	5.4	32.6	51.1	8.5	35.7	56.8
Actuated g/C Ratio	0.18	0.28	0.32	0.15	0.25	0.33	0.05	0.27	0.43	0.07	0.30	0.47
Clearance Time (s)	6.5	7.5	6.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	3.5	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	567	914	476	497	842	482	81	974	683	239	1036	738
v/s Ratio Prot	c0.17	c0.21	0.00	0.07	0.20	0.03	0.03	c0.22	0.07	c0.06	0.14	c0.08
v/s Ratio Perm			0.01			0.12			0.12			0.14
v/c Ratio	0.96	0.77	0.03	0.45	0.80	0.48	0.70	0.79	0.43	0.89	0.46	0.47
Uniform Delay, d1	48.8	39.8	27.8	45.9	41.7	32.3	56.3	40.4	24.1	55.1	34.2	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.4	4.7	0.0	0.8	6.1	0.9	24.9	4.6	0.5	30.6	0.4	0.6
Delay (s)	76.2	44.5	27.8	46.7	47.9	33.2	81.2	45.0	24.6	85.6	34.5	21.8
Level of Service	E	D	C	D	D	C	F	D	C	F	C	C
Approach Delay (s)		57.4			44.5			41.1			40.0	
Approach LOS		E			D			D			D	

Intersection Summary		
HCM Average Control Delay	46.2	HCM Level of Service D
HCM Volume to Capacity ratio	0.92	
Actuated Cycle Length (s)	119.6	Sum of lost time (s) 33.5
Intersection Capacity Utilization	80.9%	ICU Level of Service D
Analysis Period (min)	15	

c Critical Lane Group
















HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2025 PM Peak Hour  
Build Alternative

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	134	1082	0	0	893	0	0	0	121	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0		
Lane Util. Factor	1.00	0.95			0.95				1.00		
Frt	1.00	1.00			1.00				0.85		
Flt Protected	0.95	1.00			1.00				1.00		
Satd. Flow (prot)	1656	3312			3312				1468		
Flt Permitted	0.19	1.00			1.00				1.00		
Satd. Flow (perm)	330	3312			3312				1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	141	1139	0	0	940	0	0	0	127	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	108	0	0
Lane Group Flow (vph)	141	1139	0	0	940	0	0	0	19	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt					Perm			Perm		
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	24.8	24.8			17.1				5.7		
Effective Green, g (s)	24.8	24.8			17.1				5.7		
Actuated g/C Ratio	0.64	0.64			0.44				0.15		
Clearance Time (s)	4.0	4.0			4.0				4.0		
Vehicle Extension (s)	3.0	3.0			3.0				3.0		
Lane Grp Cap (vph)	340	2133			1471				217		
v/s Ratio Prot	0.04	c0.34			c0.28						
v/s Ratio Perm	0.23								c0.01		
v/c Ratio	0.41	0.53			0.64				0.09		
Uniform Delay, d1	3.8	3.7			8.3				14.2		
Progression Factor	1.00	1.00			1.00				1.00		
Incremental Delay, d2	0.8	0.3			0.9				0.2		
Delay (s)	4.6	4.0			9.2				14.3		
Level of Service	A	A			A				B		
Approach Delay (s)		4.0			9.2		14.3			0.0	
Approach LOS		A			A		B			A	
<b>Intersection Summary</b>											
HCM Average Control Delay			6.7			HCM Level of Service				A	
HCM Volume to Capacity ratio			0.54								
Actuated Cycle Length (s)			38.5			Sum of lost time (s)				12.0	
Intersection Capacity Utilization			38.8%			ICU Level of Service				A	
Analysis Period (min)			15								
! Phase conflict between lane groups.											
c Critical Lane Group											

HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

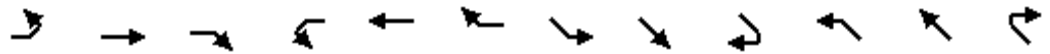
YR 2025 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	30	0	4	6	1001	0	0	888	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	32	0	4	6	1054	0	0	935	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1538	2041	527	1494	2021	487	975			1054		
vC1, stage 1 conf vol	1066	1066		955	955							
vC2, stage 2 conf vol	472	975		539	1066							
vCu, unblocked vol	1538	2041	527	1494	2021	487	975			1054		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	84	100	99	99			100		
cM capacity (veh/h)	180	168	501	198	170	529	662			668		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	36	358	702	623	352							
Volume Left	32	6	0	0	0							
Volume Right	4	0	0	0	40							
cSH	214	662	1700	1700	1700							
Volume to Capacity	0.17	0.01	0.41	0.37	0.21							
Queue Length 95th (ft)	15	1	0	0	0							
Control Delay (s)	25.2	0.3	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	25.2	0.1		0.0								
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.5									
Intersection Capacity Utilization			41.9%		ICU Level of Service					A		
Analysis Period (min)			15									



HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46



















YR 2025 PM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	0	18	0	0	0	3	1002	38	31	861	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	0	19	0	0	0	3	1055	40	33	906	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1599	2057	547	1526	2075	455	911			1095		
vC1, stage 1 conf vol	1081	1081		974	974							
vC2, stage 2 conf vol	518	976		553	1101							
vCu, unblocked vol	1599	2057	547	1526	2075	455	911			1095		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	96	100	96	100	100	100	100			95		
cM capacity (veh/h)	170	161	483	179	151	555	702			594		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>						
Volume Total	26	0	531	567	486	457						
Volume Left	7	0	3	0	33	0						
Volume Right	19	0	0	40	0	4						
cSH	319	1700	702	1700	594	1700						
Volume to Capacity	0.08	0.00	0.00	0.33	0.05	0.27						
Queue Length 95th (ft)	7	0	0	0	4	0						
Control Delay (s)	17.3	0.0	0.1	0.0	1.6	0.0						
Lane LOS	C	A	A		A							
Approach Delay (s)	17.3	0.0	0.1		0.8							
Approach LOS	C	A										
<b>Intersection Summary</b>												
Average Delay			0.6									
Intersection Capacity Utilization			56.5%		ICU Level of Service					B		
Analysis Period (min)			15									
















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2025 PM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	4	0	13	21	0	51	72	962	7	8	854	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	4	0	14	22	0	54	76	1013	7	8	899	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1684	2106	506	1601	2101	463	925			1020		
vC1, stage 1 conf vol	1164	1164		929	929							
vC2, stage 2 conf vol	520	942		672	1172							
vCu, unblocked vol	1684	2106	506	1601	2101	463	925			1020		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	97	100	97	87	100	90	89			99		
cM capacity (veh/h)	133	135	514	172	145	549	692			635		
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2				
Volume Total	18	76	76	506	506	7	458	476				
Volume Left	4	22	76	0	0	0	8	0				
Volume Right	14	54	0	0	0	7	0	26				
cSH	308	335	692	1700	1700	1700	635	1700				
Volume to Capacity	0.06	0.23	0.11	0.30	0.30	0.00	0.01	0.28				
Queue Length 95th (ft)	5	21	9	0	0	0	1	0				
Control Delay (s)	17.4	18.9	10.8	0.0	0.0	0.0	0.4	0.0				
Lane LOS	C	C	B				A					
Approach Delay (s)	17.4	18.9	0.7				0.2					
Approach LOS	C	C										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			67.5%	ICU Level of Service	C							
Analysis Period (min)			15									

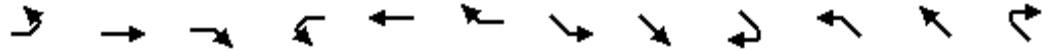
HCM Unsignalized Intersection Capacity Analysis  
9: 3rd Street & SR 46

YR 2025 PM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	1006	0	0	888	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	1059	0	0	935	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1543	2011	529	1478	2007	471	941			1059		
vC1, stage 1 conf vol	1069	1069		938	938							
vC2, stage 2 conf vol	474	941		540	1069							
vCu, unblocked vol	1543	2011	529	1478	2007	471	941			1059		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	97	100	99	99			100		
cM capacity (veh/h)	164	170	496	202	172	542	682			613		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	13	358	706	623	318							
Volume Left	6	5	0	0	0							
Volume Right	6	0	0	0	6							
cSH	294	682	1700	1700	1700							
Volume to Capacity	0.04	0.01	0.42	0.37	0.19							
Queue Length 95th (ft)	3	1	0	0	0							
Control Delay (s)	17.8	0.3	0.0	0.0	0.0							
Lane LOS	C	A										
Approach Delay (s)	17.8	0.1		0.0								
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.2									
Intersection Capacity Utilization			41.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46




























YR 2025 PM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↕			↕	
Volume (veh/h)	0	0	0	6	0	9	10	1008	0	0	888	4
Sign Control		Stop				Stop		Free			Free	
Grade		0%				0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	9	11	1061	0	0	935	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1559	2021	531	1488	2019	469	939			1061		
vC1, stage 1 conf vol	1082	1082		937	937							
vC2, stage 2 conf vol	477	939		552	1082							
vCu, unblocked vol	1559	2021	531	1488	2019	469	939			1061		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2			2.3		
p0 queue free %	100	100	100	97	100	98	97			100		
cM capacity (veh/h)	171	166	496	199	168	543	340			612		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	16	364	707	623	316							
Volume Left	6	11	0	0	0							
Volume Right	9	0	0	0	4							
cSH	321	340	1700	1700	1700							
Volume to Capacity	0.05	0.03	0.42	0.37	0.19							
Queue Length 95th (ft)	4	2	0	0	0							
Control Delay (s)	16.8	1.1	0.0	0.0	0.0							
Lane LOS	C	A										
Approach Delay (s)	16.8	0.4		0.0								
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			0.3									
Intersection Capacity Utilization			44.9%			ICU Level of Service			A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46
































YR 2025 PM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 			 	 			 			 	
Volume (vph)	467	244	153	21	120	28	38	510	458	118	453	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		4.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1773		1787	1828		1656	3312	1333	1656	3286	
Flt Permitted	0.95	1.00		0.95	1.00		0.46	1.00	1.00	0.43	1.00	
Satd. Flow (perm)	3467	1773		1787	1828		808	3312	1333	756	3286	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	492	257	161	22	126	29	40	537	482	124	477	26
RTOR Reduction (vph)	0	38	0	0	16	0	0	0	241	0	6	0
Lane Group Flow (vph)	492	380	0	22	139	0	40	537	241	124	497	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		pm+ov	Perm				
Protected Phases	3	8	7	4			2	3			6	
Permitted Phases							2	2	6			
Actuated Green, G (s)	11.2	20.7	0.7	7.7	15.9	15.9	27.1	15.9	15.9			
Effective Green, g (s)	11.2	20.7	0.7	7.7	15.9	15.9	27.1	15.9	15.9			
Actuated g/C Ratio	0.21	0.38	0.01	0.14	0.29	0.29	0.50	0.29	0.29			
Clearance Time (s)	6.5	6.5	4.0	6.5	6.5	6.5	6.5	6.5	6.5			
Vehicle Extension (s)	4.0	4.0	3.0	3.0	4.5	4.5	4.0	4.5	4.5			
Lane Grp Cap (vph)	715	676	23	259	237	970	825	221	962			
v/s Ratio Prot	0.14	c0.21	0.01	c0.08			0.16	0.06	0.15			
v/s Ratio Perm					0.05		0.12	c0.16				
v/c Ratio	0.69	0.56	0.96	0.54	0.17	0.55	0.29	0.56	0.52			
Uniform Delay, d1	19.9	13.2	26.8	21.6	14.3	16.2	8.0	16.2	16.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.0	1.3	166.5	2.1	0.6	1.0	0.3	4.6	0.8			
Delay (s)	22.9	14.5	193.3	23.8	14.9	17.2	8.2	20.8	16.8			
Level of Service	C	B	F	C	B	B	A	C	B			
Approach Delay (s)		19.1		44.8		13.0			17.6			
Approach LOS		B		D		B			B			
<b>Intersection Summary</b>												
HCM Average Control Delay			18.1	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			54.3	Sum of lost time (s)				19.5				
Intersection Capacity Utilization			71.7%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

# Year 2035 PM Peak Hour SYNCHRO Intersection Analysis Outputs – Build Alternative

HCM Signalized Intersection Capacity Analysis  
20: SR 46 & SR 415

YR 2035 PM Peak Hour  
Build Alternative

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			 		 	 	
Volume (vph)	611	1064	67	326	943	275	85	924	465	251	541	544
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	7.5	7.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	3213	3312	1482	1787	3574	1599	3367	3471	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.34	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	3213	3312	1482	644	3574	1599	3367	3471	1553
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	623	1086	68	333	962	281	87	943	474	256	552	555
RTOR Reduction (vph)	0	0	33	0	0	6	0	0	11	0	0	48
Lane Group Flow (vph)	623	1086	35	333	962	275	87	943	463	256	552	507
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	1%	1%	1%	4%	4%	4%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	Prot		pm+ov
Protected Phases	1	6		5	2	3	7	4	5	3	8	1
Permitted Phases			6			2	4		4			8
Actuated Green, G (s)	27.6	52.2	52.2	16.9	41.5	53.1	44.2	37.3	54.2	11.6	42.0	69.6
Effective Green, g (s)	27.6	52.2	52.2	16.9	41.5	53.1	44.2	37.3	54.2	11.6	42.0	69.6
Actuated g/C Ratio	0.19	0.36	0.36	0.12	0.29	0.37	0.30	0.26	0.37	0.08	0.29	0.48
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Vehicle Extension (s)	3.5	5.0	5.0	3.5	5.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Lane Grp Cap (vph)	612	1192	534	374	948	543	251	919	598	269	1005	815
v/s Ratio Prot	0.19	c0.33		0.10	c0.29	0.04	0.02	c0.26	0.09	c0.08	0.16	c0.12
v/s Ratio Perm			0.02			0.15	0.09		0.20			0.21
v/c Ratio	1.02	0.91	0.07	0.89	1.01	0.51	0.35	1.03	0.77	0.95	0.55	0.62
Uniform Delay, d1	58.7	44.2	30.4	63.1	51.8	35.8	37.1	53.9	40.0	66.4	43.5	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.0	11.0	0.1	22.6	33.0	0.9	1.0	36.5	6.4	41.9	0.7	1.6
Delay (s)	99.7	55.2	30.5	85.8	84.7	36.6	38.1	90.4	46.4	108.3	44.2	29.5
Level of Service	F	E	C	F	F	D	D	F	D	F	D	C
Approach Delay (s)		69.9			76.4			73.5			50.3	
Approach LOS		E			E			E			D	

Intersection Summary

HCM Average Control Delay	68.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	34.5
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
7: SR 46 & Osceola Road

YR 2035 PM Peak Hour  
Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL	NER
Lane Configurations											
Volume (vph)	157	1584	0	0	1269	0	0	0	142	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0				4.0		
Lane Util. Factor	1.00	0.95			0.95				1.00		
Frt	1.00	1.00			1.00				0.85		
Flt Protected	0.95	1.00			1.00				1.00		
Satd. Flow (prot)	1656	3312			3312				1468		
Flt Permitted	0.14	1.00			1.00				1.00		
Satd. Flow (perm)	240	3312			3312				1468		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	165	1667	0	0	1336	0	0	0	149	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	128	0	0
Lane Group Flow (vph)	165	1667	0	0	1336	0	0	0	21	0	0
Heavy Vehicles (%)	9%	9%	0%	0%	9%	9%	10%	0%	10%	0%	0%
Turn Type	pm+pt					Perm			Perm		
Protected Phases	7	4			8		6!			2!	
Permitted Phases	4					8			6		
Actuated Green, G (s)	33.0	33.0			25.0				6.7		
Effective Green, g (s)	33.0	33.0			25.0				6.7		
Actuated g/C Ratio	0.69	0.69			0.52				0.14		
Clearance Time (s)	4.0	4.0			4.0				4.0		
Vehicle Extension (s)	3.0	3.0			3.0				3.0		
Lane Grp Cap (vph)	285	2291			1736				206		
v/s Ratio Prot	0.05	c0.50			0.40						
v/s Ratio Perm	0.35								c0.01		
v/c Ratio	0.58	0.73			0.77				0.10		
Uniform Delay, d1	5.9	4.6			9.1				17.9		
Progression Factor	1.00	1.00			1.00				1.00		
Incremental Delay, d2	2.8	1.2			2.1				0.2		
Delay (s)	8.7	5.7			11.2				18.1		
Level of Service	A	A			B				B		
Approach Delay (s)		6.0			11.2		18.1			0.0	
Approach LOS		A			B		B			A	

Intersection Summary

HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	47.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
















! Phase conflict between lane groups.

c Critical Lane Group



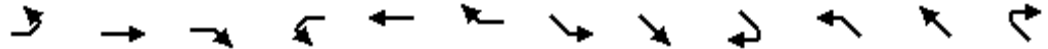
HCM Unsignalized Intersection Capacity Analysis  
 15: Mullet Lake Park & SR 46

YR 2035 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	36	0	5	7	1424	0	0	1265	47
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	38	0	5	7	1499	0	0	1332	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2185	2895	749	2121	2870	691	1381			1499		
vC1, stage 1 conf vol	1514	1514		1356	1356							
vC2, stage 2 conf vol	671	1381		764	1514							
vCu, unblocked vol	2185	2895	749	2121	2870	691	1381			1499		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	100	100	100	66	100	99	98			100		
cM capacity (veh/h)	96	95	359	111	97	390	457			453		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	43	507	999	888	493							
Volume Left	38	7	0	0	0							
Volume Right	5	0	0	0	49							
cSH	122	457	1700	1700	1700							
Volume to Capacity	0.35	0.02	0.59	0.52	0.29							
Queue Length 95th (ft)	36	1	0	0	0							
Control Delay (s)	50.0	0.5	0.0	0.0	0.0							
Lane LOS	E	A										
Approach Delay (s)	50.0	0.2		0.0								
Approach LOS	E											
<b>Intersection Summary</b>												
Average Delay			0.8									
Intersection Capacity Utilization			54.2%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 12: Cochran Road & SR 46

YR 2035 PM Peak Hour  
 Build Alternative






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	9	0	25	0	0	0	3	1431	52	34	1239	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	9	0	26	0	0	0	3	1506	55	36	1304	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2264	2920	781	2164	2945	654	1308			1561		
vC1, stage 1 conf vol	1540	1540		1378	1378							
vC2, stage 2 conf vol	724	1380		786	1567							
vCu, unblocked vol	2264	2920	781	2164	2945	654	1308			1561		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	89	100	92	100	100	100	99			91		
cM capacity (veh/h)	89	89	340	95	78	412	489			388		

Direction, Lane #	EB 1	WB 1	SE 1	SE 2	NW 1	NW 2
Volume Total	36	0	756	808	688	656
Volume Left	9	0	3	0	36	0
Volume Right	26	0	0	55	0	4
cSH	195	1700	489	1700	388	1700
Volume to Capacity	0.18	0.00	0.01	0.48	0.09	0.39
Queue Length 95th (ft)	16	0	0	0	8	0
Control Delay (s)	27.6	0.0	0.2	0.0	3.0	0.0
Lane LOS	D	A	A		A	
Approach Delay (s)	27.6	0.0	0.1		1.5	
Approach LOS	D	A				

Intersection Summary		
Average Delay		1.1
Intersection Capacity Utilization	68.9%	ICU Level of Service
Analysis Period (min)		15
		C
















HCM Unsignalized Intersection Capacity Analysis  
1: Woodridge Drive & SR 46

YR 2035 PM Peak Hour  
Build Alternative

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Volume (veh/h)	6	0	17	24	0	62	86	1385	8	13	1231	30	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Hourly flow rate (vph)	6	0	18	25	0	65	91	1458	8	14	1296	32	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type								Raised			Raised		
Median storage (veh)								1			1		
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	2379	2994	729	2267	2986	664	1327			1466			
vC1, stage 1 conf vol	1639	1639		1339	1339								
vC2, stage 2 conf vol	741	1355		928	1647								
vCu, unblocked vol	2379	2994	729	2267	2986	664	1327			1466			
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.3			4.3			
tC, 2 stage (s)	6.5	5.5		6.5	5.5								
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.3			
p0 queue free %	90	100	95	72	100	84	81			97			
cM capacity (veh/h)	61	62	368	90	72	406	480			423			
Direction, Lane #	EB 1	WB 1	SE 1	SE 2	SE 3	SE 4	NW 1	NW 2					
Volume Total	24	91	91	729	729	8	662	679					
Volume Left	6	25	91	0	0	0	14	0					
Volume Right	18	65	0	0	0	8	0	32					
cSH	158	205	480	1700	1700	1700	423	1700					
Volume to Capacity	0.15	0.44	0.19	0.43	0.43	0.00	0.03	0.40					
Queue Length 95th (ft)	13	52	17	0	0	0	3	0					
Control Delay (s)	31.8	35.7	14.2	0.0	0.0	0.0	1.0	0.0					
Lane LOS	D	E	B				A						
Approach Delay (s)	31.8	35.7	0.8				0.5						
Approach LOS	D	E											
Intersection Summary													
Average Delay			2.0										
Intersection Capacity Utilization			85.2%	ICU Level of Service	E								
Analysis Period (min)			15										

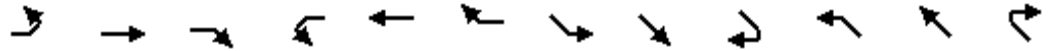
HCM Unsignalized Intersection Capacity Analysis  
 9: 3rd Street & SR 46

YR 2035 PM Peak Hour  
 Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	0	0	0	6	0	6	5	1426	0	0	1268	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	6	0	6	5	1501	0	0	1335	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2185	2853	751	2099	2849	671	1341			1501		
vC1, stage 1 conf vol	1512	1512		1338	1338							
vC2, stage 2 conf vol	674	1341		761	1512							
vCu, unblocked vol	2185	2853	751	2099	2849	671	1341			1501		
tC, single (s)	7.7	6.5	6.9	7.5	6.5	6.9	4.3			4.3		
tC, 2 stage (s)	6.7	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.3			2.3		
p0 queue free %	100	100	100	94	100	98	99			100		
cM capacity (veh/h)	86	97	356	114	99	402	474			410		
<b>Direction, Lane #</b>	<b>SB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	13	506	1001	890	451							
Volume Left	6	5	0	0	0							
Volume Right	6	0	0	0	6							
cSH	177	474	1700	1700	1700							
Volume to Capacity	0.07	0.01	0.59	0.52	0.27							
Queue Length 95th (ft)	6	1	0	0	0							
Control Delay (s)	26.8	0.3	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	26.8	0.1		0.0								
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.2									
Intersection Capacity Utilization			52.9%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
 10: Oak Street & SR 46





























YR 2035 PM Peak Hour  
 Build Alternative



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations					↔			↕			↕	
Volume (veh/h)	0	0	0	13	0	13	10	1422	0	0	1261	8
Sign Control		Stop				Stop		Free			Free	
Grade		0%				0%		0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	14	0	14	11	1497	0	0	1327	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2195	2854	748	2101	2849	668	1336			1497		
vC1, stage 1 conf vol	1518	1518		1332	1332							
vC2, stage 2 conf vol	677	1336		769	1518							
vCu, unblocked vol	2195	2854	748	2101	2849	668	1336			1497		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	6.1			4.3		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.2			2.3		
p0 queue free %	100	100	100	88	100	97	95			100		
cM capacity (veh/h)	91	94	357	113	96	403	202			411		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>SE 1</b>	<b>SE 2</b>	<b>NW 1</b>	<b>NW 2</b>							
Volume Total	27	509	998	885	451							
Volume Left	14	11	0	0	0							
Volume Right	14	0	0	0	8							
cSH	176	202	1700	1700	1700							
Volume to Capacity	0.16	0.05	0.59	0.52	0.27							
Queue Length 95th (ft)	13	4	0	0	0							
Control Delay (s)	29.2	2.2	0.0	0.0	0.0							
Lane LOS	D	A										
Approach Delay (s)	29.2	0.7		0.0								
Approach LOS	D											
<b>Intersection Summary</b>												
Average Delay			0.7									
Intersection Capacity Utilization			56.3%		ICU Level of Service					B		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
2: CR 426 & SR 46

YR 2035 PM Peak Hour  
Build Alternative

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 			 	 			 			 	 
Volume (vph)	652	294	202	25	138	35	48	744	639	157	660	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5		4.0	6.5		6.5	6.5	4.0	6.5	6.5	
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	1766		1787	1824		1656	3312	1333	1656	3290	
Flt Permitted	0.95	1.00		0.95	1.00		0.29	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	3467	1766		1787	1824		513	3312	1333	460	3290	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	686	309	213	26	145	37	51	783	673	165	695	32
RTOR Reduction (vph)	0	25	0	0	10	0	0	0	134	0	4	0
Lane Group Flow (vph)	686	497	0	26	172	0	51	783	539	165	723	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Turn Type	Prot		Prot		Perm		pm+ov		Perm			
Protected Phases	3	8	7	4			2	3			6	
Permitted Phases							2	2		6		
Actuated Green, G (s)	21.0	32.2	1.4	12.6	33.1	33.1	54.1	33.1	33.1	33.1		
Effective Green, g (s)	21.0	32.2	1.4	12.6	33.1	33.1	54.1	33.1	33.1	33.1		
Actuated g/C Ratio	0.25	0.38	0.02	0.15	0.40	0.40	0.65	0.40	0.40	0.40		
Clearance Time (s)	4.0	6.5	4.0	6.5	6.5	6.5	4.0	6.5	6.5	6.5		
Vehicle Extension (s)	3.0	4.0	3.0	3.0	4.5	4.5	3.0	4.5	4.5	4.5		
Lane Grp Cap (vph)	870	679	30	275	203	1310	925	182	1301			
v/s Ratio Prot	c0.20	c0.28	0.01	c0.09		0.24	0.15	0.22				
v/s Ratio Perm					0.10	0.26	c0.36					
v/c Ratio	0.79	0.73	0.87	0.62	0.25	0.60	0.58	0.91	0.56			
Uniform Delay, d1	29.3	22.1	41.1	33.3	17.0	20.0	8.4	23.8	19.6			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	4.8	4.3	108.1	4.4	1.1	1.0	0.9	42.2	0.8			
Delay (s)	34.1	26.4	149.1	37.7	18.1	21.0	9.3	66.0	20.4			
Level of Service	C	C	F	D	B	C	A	E	C			
Approach Delay (s)		30.7		51.6		15.7		28.8				
Approach LOS		C		D		B		C				
<b>Intersection Summary</b>												
HCM Average Control Delay			25.5	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			83.7	Sum of lost time (s)				23.5				
Intersection Capacity Utilization			83.8%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

# Appendix P

## Recommended Queue Length of Turn Lanes for Signalized Intersections – Build Alternative

**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**Recommended Queue Length of Turn Lanes for Signalized Intersections - Build Alternative (Year 2035 AM Peak Hour)**

Turning Movement	Turning Volume (Veh/Hr)	G/C Ratio	Total Cycle Length (Sec)	Number of Turn Lanes	Per Lane Volume (VPHPL)	Percent Trucks	Adjust. Factor	Calc'd Queue Length (ft)	Rec'd Queue Length (ft)
<b>INTERSECTION:</b>		<b>SR 46 and SR 415/Lake Mary Boulevard</b>							
EB Left	448	0.14	145	2	224	8.5%	1.25	263	275
EB Right	136	0.34	145	1	136	8.5%	1.25	123	<b>125</b>
WB Left	301	0.12	145	2	151	8.5%	1.25	181	<b>200</b>
WB Right	363	0.44	145	1	363	8.5%	1.25	278	<b>300</b>
NB Left	74	0.28	145	1	74	1.0%	1.25	68	<b>100</b>
NB Right	187	0.36	145	1	187	1.0%	2.25	274	275
SB Left	409	0.12	145	2	205	4.4%	1.25	236	<b>250</b>
SB Right	582	0.46	145	1	582	4.4%	1.25	413	<b>425</b>
<b>INTERSECTION:</b>		<b>SR 46 and Osceola Road</b>							
EB Left	140	0.68	60	1	140	8.5%	1.25	25	<b>100</b>
WB Right	3	0.54	60	1	3	8.5%	1.25	1	<b>100</b>
SB Left	3	0.16	60	1	3	10.0%	1.25	1	<b>100</b>
SB Right	184	0.16	60	1	184	10.0%	1.25	89	<b>100</b>
<b>INTERSECTION:</b>		<b>SR 46 and CR 426/1st Street</b>							
EB Left	30	0.39	90	1	30	8.5%	1.25	16	<b>100</b>
EB Right	580	0.39	90	1	580	8.5%	1.25	300	300
WB Left	162	0.39	90	1	162	8.5%	1.25	84	<b>100</b>
NB Left	513	0.20	90	2	257	1.0%	1.25	162	175
SB Left	55	0.04	90	1	55	1.0%	1.25	42	<b>100</b>

Notes:

1. Queue Lengths are calculated based on the following formula:  $L = (A) (DHV) (1-G/C) (T+1) (F) / (3600/C) / (N)$

where:

L = Queue length

DHV = design hour volume, in vph

G/C = ratio of green time to cycle length

T = percent of heavy vehicles

F = adjustment factor (1.25 to 2)

C = cycle length

N = # of lanes

A = Assumed 25 feet for automobile

2. Recommended queue lengths are shown in yellow shade and bold letters.

3. A minimum queue length of 100 feet is assumed as the recommended length for calculated lengths of less than 100 feet.



**SR 46 from SR 415/Lake Mary Boulevard to CR 426 - Design Traffic Report**  
**Recommended Queue Length of Turn Lanes for Signalized Intersections - Build Alternative (Year 2035 PM Peak Hour)**

Turning Movement	Turning Volume (Veh/Hr)	G/C Ratio	Total Cycle Length (Sec)	Number of Turn Lanes	Per Lane Volume (VPHPL)	Percent Trucks	Adjust. Factor	Calc'd Queue Length (ft)	Rec'd Queue Length (ft)
<b>INTERSECTION:</b>		<b>SR 46 and SR 415/Lake Mary Boulevard</b>							
EB Left	611	0.19	145	2	306	8.5%	1.25	338	<b>350</b>
EB Right	67	0.36	145	1	67	8.5%	1.25	59	100
WB Left	326	0.12	145	2	163	8.5%	1.25	196	<b>200</b>
WB Right	275	0.37	145	1	275	8.5%	1.25	237	250
NB Left	85	0.30	145	1	85	1.0%	1.25	76	<b>100</b>
NB Right	465	0.37	145	1	465	1.0%	2.25	670	<b>675</b>
SB Left	251	0.08	145	2	126	4.4%	1.25	152	175
SB Right	544	0.48	145	1	544	4.4%	1.25	372	375
<b>INTERSECTION:</b>		<b>SR 46 and Osceola Road</b>							
EB Left	157	0.69	60	1	157	8.5%	1.25	28	<b>100</b>
WB Right	0	0.53	60	1	0	8.5%	1.25	0	<b>100</b>
SB Left	0	0.14	60	1	0	10.0%	1.25	0	<b>100</b>
SB Right	142	0.14	60	1	142	10.0%	1.25	70	<b>100</b>
<b>INTERSECTION:</b>		<b>SR 46 and CR 426/1st Street</b>							
EB Left	48	0.40	90	1	48	8.5%	1.25	24	<b>100</b>
EB Right	639	0.40	90	1	639	8.5%	1.25	325	<b>325</b>
WB Left	157	0.40	90	1	157	8.5%	1.25	80	<b>100</b>
NB Left	652	0.25	90	2	326	1.0%	1.25	193	<b>200</b>
SB Left	25	0.02	90	1	25	1.0%	1.25	19	<b>100</b>

Notes:

1. Queue Lengths are calculated based on the following formula:  $L = (A) (DHV) (1-G/C) (T+1) (F) / (3600/C) / (N)$

where:

L = Queue length

DHV = design hour volume, in vph

G/C = ratio of green time to cycle length

T = percent of heavy vehicles

F = adjustment factor (1.25 to 2)

C = cycle length

N = # of lanes

A = Assumed 25 feet for automobile

2. Recommended queue lengths are shown in yellow shade and bold letters.

3. A minimum queue length of 100 feet is assumed as the recommended length for calculated lengths of less than 100 feet.

# Appendix Q

## ESAL Calculations

**ESAL Location 1 - Analysis Information/Factors**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS**

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

**FIN #:** 240216-4-28-01  
**COUNTY:** Seminole County  
**ROADWAY ID:** 77040000  
**PROJECT DESCRIPTION:** SR 46 Design Traffic Technical Memorandum

**LOCATION DESCRIPTION:** \_\_\_\_\_ **LOCATION #:** 1  
 SR 46 between SR 415 and Richmond Avenue

**GROWTH RATE FORMULA**

A: Interpolation  
 B: Enter Growth Rate  
 C: Enter All AADTs  
 D: New Facility

Choose A, B, C, or D here: C

Linear Growth Rate \_\_\_\_\_ %  
 Compounded Growth Rate \_\_\_\_\_ %  
 Decaying Growth Rate \_\_\_\_\_ %  
 (select one)

If "A" select an interpolation function  
 If "B" enter rate as decimals (1%=1.01)  
 If "C", or "D" continue to next section

**DESIGN INFORMATION**

Existing Year	<u>2011</u>	AADT	<u>10500</u>	Daily Direction Split	<u>50%</u>
Opening Year	<u>2015</u>			(50% or 100%)	
Mid-Design Year	<u>2025</u>			Lanes in One Direction	<u>2</u>
Design Year	<u>2035</u>			<b>T24 values</b>	
				Existing to Opening Year	<u>12.30%</u>
				Opening to Mid-Year	<u>12.30%</u>
				Mid-Year to Design-Year	<u>12.30%</u>

Note: AADT values have been rounded to the nearest 100

**1995 EQUIVALENCY FACTORS [u(1)]**

(selected with an X)	FLEXIBLE PAVEMENT	RIGID PAVEMENT
	SN = 5/THICK	SN = 12/THICK
RURAL FREEWAY:	1.050 _____	1.600 _____
URBAN FREEWAY:	0.900 _____	1.270 _____
RURAL HIGHWAY:	0.960 _____	1.350 _____
URBAN HIGHWAY:	0.890 <u>X</u>	1.220 <u>X</u>
OTHER (Enter Factor and X):	_____	_____

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.  
 Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm  
 \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Signature Date 2/17/2012

Reviewed by: \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Title Org. Unit or Firm  
 \_\_\_\_\_  
 Signature Date

Flexible Pavement 18 KIP ESAL Analysis - Location 1

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 1**

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2011 to 2035

SECTION #: 77040000

COUNTY: Seminole County

FIN #: 240216-4-28-01

FLEXIBLE PAVEMENT URBAN HIGHWAY 0.890

SN=5/THICK

SR 46 Design Traffic Technical Memorandum

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	10500	181	0	0.5	12.30%	0.859	0.890
2012	11600	198	0	0.5	12.30%	0.851	0.890
2013	12700	215	0	0.5	12.30%	0.844	0.890
2014	13800	231	0	0.5	12.30%	0.837	0.890
2015	15000	249	249	0.5	12.30%	0.830	0.890
2016	16000	264	513	0.5	12.30%	0.825	0.890
2017	17100	280	793	0.5	12.30%	0.819	0.890
2018	18100	295	1088	0.5	12.30%	0.814	0.890
2019	19200	311	1399	0.5	12.30%	0.810	0.890
2020	20200	326	1725	0.5	12.30%	0.805	0.890
2021	21300	341	2066	0.5	12.30%	0.801	0.890
2022	22300	356	2422	0.5	12.30%	0.797	0.890
2023	23400	371	2793	0.5	12.30%	0.793	0.890
2024	24400	386	3179	0.5	12.30%	0.790	0.890
2025	25500	401	3580	0.5	12.30%	0.786	0.890
2026	26600	416	3996	0.5	12.30%	0.783	0.890
2027	27700	432	4428	0.5	12.30%	0.779	0.890
2028	28800	447	4875	0.5	12.30%	0.776	0.890
2029	29900	462	5337	0.5	12.30%	0.773	0.890
2030	31000	477	5814	0.5	12.30%	0.770	0.890
2031	32100	492	6306	0.5	12.30%	0.767	0.890
2032	33200	507	6813	0.5	12.30%	0.764	0.890
2033	34300	522	7335	0.5	12.30%	0.762	0.890
2034	35400	537	7872	0.5	12.30%	0.759	0.890
2035	36500	552	8424	0.5	12.30%	0.757	0.890

Opening to Mid-Design Year ESAL Accumulation (1000s):	3331
Opening to Design Year ESAL Accumulation (1000s):	8175

<p>I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.</p>	
<p>Prepared by: <u>GMB Engineers &amp; Planners, Inc.</u>                  2602 E. Livingston Street, Orlando, FL - 32803                  Org. Unit or Firm                    Name                    _____                  Signature Date 2/17/2012</p>	<p>Reviewed by: _____                  Name                    _____                  Title Org. Unit or Firm                    _____                  Signature Date</p>

## Rigid Pavement 18 KIP ESAL Analysis - Location 1

### 18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 1

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2011 to 2035

SECTION #: 77040000

LOCATION #: 1

FIN #: 240216-4-28-01

RIGID PAVEMENT URBAN HIGHWAY 1.220

SN=12/THICK

SR 46 Design Traffic Technical Memorandum

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF	
2011	10500	248	0	0.5	12.30%	0.859	1.220	
2012	11600	271	0	0.5	12.30%	0.851	1.220	
2013	12700	294	0	0.5	12.30%	0.844	1.220	
2014	13800	317	0	0.5	12.30%	0.837	1.220	
2015	15000	341	341	0.5	12.30%	0.830	1.220	
2016	16000	362	703	0.5	12.30%	0.825	1.220	
2017	17100	384	1087	0.5	12.30%	0.819	1.220	
2018	18100	404	1491	0.5	12.30%	0.814	1.220	
2019	19200	426	1917	0.5	12.30%	0.810	1.220	
2020	20200	446	2363	0.5	12.30%	0.805	1.220	
2021	21300	468	2831	0.5	12.30%	0.801	1.220	
2022	22300	487	3318	0.5	12.30%	0.797	1.220	
2023	23400	509	3827	0.5	12.30%	0.793	1.220	
2024	24400	528	4355	0.5	12.30%	0.790	1.220	
2025	25500	550	4905	0.5	12.30%	0.786	1.220	
2026	26600	571	5476	0.5	12.30%	0.783	1.220	
2027	27700	592	6068	0.5	12.30%	0.779	1.220	
2028	28800	613	6681	0.5	12.30%	0.776	1.220	
2029	29900	633	7314	0.5	12.30%	0.773	1.220	
2030	31000	654	7968	0.5	12.30%	0.770	1.220	
2031	32100	675	8643	0.5	12.30%	0.767	1.220	
2032	33200	695	9338	0.5	12.30%	0.764	1.220	
2033	34300	716	10054	0.5	12.30%	0.762	1.220	
2034	35400	736	10790	0.5	12.30%	0.759	1.220	
2035	36500	757	11547	0.5	12.30%	0.757	1.220	

Opening to Mid-Design Year ESAL Accumulation (1000s):	4564
Opening to Design Year ESAL Accumulation (1000s):	11206

<p>I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.</p> <p>Prepared by: <u>GMB Engineers &amp; Planners, Inc.</u>                  2602 E. Livingston Street, Orlando, FL - 32803                  Org. Unit or Firm</p> <p>Name _____</p> <p style="text-align: right;">2/17/2012</p> <p>Signature _____ Date _____</p>	<p>Reviewed by: _____</p> <p>Name _____</p> <p>Title _____ Org. Unit or Firm _____</p> <p>Signature _____ Date _____</p>
--	--

**ESAL Location 2 - Analysis Information/Factors**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS**

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

**FIN #:** 240216-4-28-01  
**COUNTY:** Seminole County  
**ROADWAY ID:** 77040000  
**PROJECT DESCRIPTION:** SR 46 Design Traffic Technical Memorandum

**LOCATION DESCRIPTION:** \_\_\_\_\_ **LOCATION #:** 2  
 SR 46 between Richmond Avenue and Osceola Road

**GROWTH RATE FORMULA**

A: Interpolation  
 B: Enter Growth Rate  
 C: Enter All AADTs  
 D: New Facility

Choose A, B, C, or D here: C

Linear Growth Rate \_\_\_\_\_ %  
 Compounded Growth Rate \_\_\_\_\_ %  
 Decaying Growth Rate \_\_\_\_\_ %  
 (select one)

If "A" select an interpolation function  
 If "B" enter rate as decimals (1%=1.01)  
 If "C", or "D" continue to next section

**DESIGN INFORMATION**

Existing Year	<u>2011</u>	AADT	<u>10500</u>	Daily Direction Split	<u>50%</u>
Opening Year	<u>2015</u>		<u>15000</u>	(50% or 100%)	
Mid-Design Year	<u>2025</u>		<u>25500</u>	Lanes in One Direction	<u>2</u>
Design Year	<u>2035</u>		<u>36500</u>	<b>T24 values</b>	
Note: AADT values have been rounded to the nearest 100				Existing to Opening Year	<u>12.30%</u>
				Opening to Mid-Year	<u>12.30%</u>
				Mid-Year to Design-Year	<u>12.30%</u>

**1995 EQUIVALENCY FACTORS [u(1)]**

(selected with an X)	FLEXIBLE PAVEMENT	RIGID PAVEMENT
	SN = 5/THICK	SN = 12/THICK
RURAL FREEWAY:	1.050	1.600
URBAN FREEWAY:	0.900	1.270
RURAL HIGHWAY:	0.960 <u>X</u>	1.350 <u>X</u>
URBAN HIGHWAY:	0.890	1.220
OTHER (Enter Factor and X):	_____	_____

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.  
 Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm  
 \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Date 2/17/2012  
 Signature \_\_\_\_\_ Date \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Title \_\_\_\_\_ Org. Unit or Firm  
 \_\_\_\_\_  
 Signature \_\_\_\_\_ Date \_\_\_\_\_

Flexible Pavement 18 KIP ESAL Analysis - Location 2

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 2**

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2011 to 2035

SECTION #: 77040000

COUNTY: Seminole County

FIN #: 240216-4-28-01

FLEXIBLE PAVEMENT RURAL HIGHWAY 0.960

SN=5/THICK

SR 46 Design Traffic Technical Memorandum

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	10500	195	0	0.5	12.30%	0.859	0.960
2012	11600	213	0	0.5	12.30%	0.851	0.960
2013	12700	231	0	0.5	12.30%	0.844	0.960
2014	13800	249	0	0.5	12.30%	0.837	0.960
2015	15000	269	269	0.5	12.30%	0.830	0.960
2016	16000	285	554	0.5	12.30%	0.825	0.960
2017	17100	302	856	0.5	12.30%	0.819	0.960
2018	18100	318	1174	0.5	12.30%	0.814	0.960
2019	19200	335	1509	0.5	12.30%	0.810	0.960
2020	20200	351	1860	0.5	12.30%	0.805	0.960
2021	21300	368	2228	0.5	12.30%	0.801	0.960
2022	22300	384	2612	0.5	12.30%	0.797	0.960
2023	23400	401	3013	0.5	12.30%	0.793	0.960
2024	24400	416	3429	0.5	12.30%	0.790	0.960
2025	25500	433	3862	0.5	12.30%	0.786	0.960
2026	26600	449	4311	0.5	12.30%	0.783	0.960
2027	27700	466	4777	0.5	12.30%	0.779	0.960
2028	28800	482	5259	0.5	12.30%	0.776	0.960
2029	29900	499	5758	0.5	12.30%	0.773	0.960
2030	31000	515	6273	0.5	12.30%	0.770	0.960
2031	32100	531	6804	0.5	12.30%	0.767	0.960
2032	33200	547	7351	0.5	12.30%	0.764	0.960
2033	34300	563	7914	0.5	12.30%	0.762	0.960
2034	35400	580	8494	0.5	12.30%	0.759	0.960
2035	36500	596	9090	0.5	12.30%	0.757	0.960

Opening to Mid-Design Year ESAL Accumulation (1000s): 3593

Opening to Design Year ESAL Accumulation (1000s): 8821

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
Org. Unit or Firm

Name

2/17/2012

Signature

Date

Reviewed by: \_\_\_\_\_  
Name

Title                      Org. Unit or Firm

Signature

Date

## Rigid Pavement 18 KIP ESAL Analysis - Location 2

### 18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 2

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2011 to 2035

SECTION #: 77040000

LOCATION #: 2

FIN #: 240216-4-28-01

RIGID PAVEMENT RURAL HIGHWAY 1.350

SN=12/THICK

SR 46 Design Traffic Technical Memorandum

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	10500	274	0	0.5	12.30%	0.859	1.350
2012	11600	300	0	0.5	12.30%	0.851	1.350
2013	12700	325	0	0.5	12.30%	0.844	1.350
2014	13800	350	0	0.5	12.30%	0.837	1.350
2015	15000	378	378	0.5	12.30%	0.830	1.350
2016	16000	400	778	0.5	12.30%	0.825	1.350
2017	17100	425	1203	0.5	12.30%	0.819	1.350
2018	18100	447	1650	0.5	12.30%	0.814	1.350
2019	19200	472	2122	0.5	12.30%	0.810	1.350
2020	20200	494	2616	0.5	12.30%	0.805	1.350
2021	21300	518	3134	0.5	12.30%	0.801	1.350
2022	22300	539	3673	0.5	12.30%	0.797	1.350
2023	23400	563	4236	0.5	12.30%	0.793	1.350
2024	24400	584	4820	0.5	12.30%	0.790	1.350
2025	25500	608	5428	0.5	12.30%	0.786	1.350
2026	26600	631	6059	0.5	12.30%	0.783	1.350
2027	27700	655	6714	0.5	12.30%	0.779	1.350
2028	28800	678	7392	0.5	12.30%	0.776	1.350
2029	29900	701	8093	0.5	12.30%	0.773	1.350
2030	31000	724	8817	0.5	12.30%	0.770	1.350
2031	32100	747	9564	0.5	12.30%	0.767	1.350
2032	33200	770	10334	0.5	12.30%	0.764	1.350
2033	34300	792	11126	0.5	12.30%	0.762	1.350
2034	35400	815	11941	0.5	12.30%	0.759	1.350
2035	36500	837	12778	0.5	12.30%	0.757	1.350

Opening to Mid-Design Year ESAL Accumulation (1000s): 5050

Opening to Design Year ESAL Accumulation (1000s): 12400

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
Org. Unit or Firm

Name

2/17/2012

Signature

Date

Reviewed by: \_\_\_\_\_

Name

Title

Org. Unit or Firm

Signature

Date



## ESAL Location 3 - Analysis Information/Factors

### 18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

**FIN #:** 240216-4-28-01  
**COUNTY:** Seminole County  
**ROADWAY ID:** 77040000  
**PROJECT DESCRIPTION:** SR 46 Design Traffic Technical Memorandum

**LOCATION DESCRIPTION:** \_\_\_\_\_ **LOCATION #:** 3  
 SR 46 between Osceola Road and CR 426

#### GROWTH RATE FORMULA

A: Interpolation  
 B: Enter Growth Rate  
 C: Enter All AADTs  
 D: New Facility

Choose A, B, C, or D here: C

Linear Growth Rate \_\_\_\_\_ %  
 Compounded Growth Rate \_\_\_\_\_ %  
 Decaying Growth Rate \_\_\_\_\_ %  
 (select one)

If "A" select an interpolation function  
 If "B" enter rate as decimals (1%=1.01)  
 If "C", or "D" continue to next section

#### DESIGN INFORMATION

	AADT	
Existing Year <u>2011</u>	<u>9000</u>	Daily Direction Split (50% or 100%) <u>50%</u>
Opening Year <u>2015</u>	<u>12500</u>	Lanes in One Direction <u>2</u>
Mid-Design Year <u>2025</u>	<u>22000</u>	<b>T24 values</b>
Design Year <u>2035</u>	<u>31000</u>	Existing to Opening Year <u>12.30%</u>
Note: AADT values have been rounded to the nearest 100		Opening to Mid-Year <u>12.30%</u>
		Mid-Year to Design-Year <u>12.30%</u>

#### 1995 EQUIVALENCY FACTORS [u(1)]

(selected with an X)	FLEXIBLE PAVEMENT SN = 5/THICK	RIGID PAVEMENT SN = 12/THICK
RURAL FREEWAY:	1.050 _____	1.600 _____
URBAN FREEWAY:	0.900 _____	1.270 _____
RURAL HIGHWAY:	0.960 <u>X</u> _____	1.350 <u>X</u> _____
URBAN HIGHWAY:	0.890 _____	1.220 _____
OTHER (Enter Factor and X):	_____	_____

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.  
Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm  
 \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Signature Date  
2/17/2012

Reviewed by: \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Title Org. Unit or Firm  
 \_\_\_\_\_  
 Signature Date  
 \_\_\_\_\_

**Flexible Pavement 18 KIP ESAL Analysis - Location 3**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 3**

*PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS*

**YEARS: 2011 to 2035**

**SECTION #:** 77040000

**COUNTY:** Seminole County

**FIN #:** 240216-4-28-01

**FLEXIBLE PAVEMENT RURAL HIGHWAY 0.960**

**SN=5/THICK**

**SR 46 Design Traffic Technical Memorandum**

**C**

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	9000	170	0	0.5	12.30%	0.872	0.960
2012	9800	183	0	0.5	12.30%	0.865	0.960
2013	10700	198	0	0.5	12.30%	0.858	0.960
2014	11600	213	0	0.5	12.30%	0.851	0.960
2015	12500	228	228	0.5	12.30%	0.845	0.960
2016	13400	243	471	0.5	12.30%	0.839	0.960
2017	14400	259	730	0.5	12.30%	0.833	0.960
2018	15300	274	1004	0.5	12.30%	0.828	0.960
2019	16300	290	1294	0.5	12.30%	0.823	0.960
2020	17200	304	1598	0.5	12.30%	0.819	0.960
2021	18200	320	1918	0.5	12.30%	0.814	0.960
2022	19100	334	2252	0.5	12.30%	0.810	0.960
2023	20100	350	2602	0.5	12.30%	0.806	0.960
2024	21000	364	2966	0.5	12.30%	0.802	0.960
2025	22000	379	3345	0.5	12.30%	0.798	0.960
2026	22900	393	3738	0.5	12.30%	0.795	0.960
2027	23800	407	4145	0.5	12.30%	0.792	0.960
2028	24700	420	4565	0.5	12.30%	0.789	0.960
2029	25600	434	4999	0.5	12.30%	0.786	0.960
2030	26500	448	5447	0.5	12.30%	0.783	0.960
2031	27400	461	5908	0.5	12.30%	0.780	0.960
2032	28300	475	6383	0.5	12.30%	0.778	0.960
2033	29200	488	6871	0.5	12.30%	0.775	0.960
2034	30100	502	7373	0.5	12.30%	0.772	0.960
2035	31000	515	7888	0.5	12.30%	0.770	0.960

Opening to Mid-Design Year ESAL Accumulation (1000s): 3117

Opening to Design Year ESAL Accumulation (1000s): 7660

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm

Name

2/17/2012

Signature

Date

Reviewed by: \_\_\_\_\_  
 Name

Title                      Org. Unit or Firm

Signature

Date

**Rigid Pavement 18 KIP ESAL Analysis - Location 3**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 3**

*PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS*

**YEARS: 2011 to 2035**

**SECTION #:** 77040000

**LOCATION #:** 3

**FIN #:** 240216-4-28-01

**RIGID PAVEMENT RURAL HIGHWAY 1.350**

**SN=12/THICK**

**SR 46 Design Traffic Technical Memorandum**

**C**

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	9000	238	0	0.5	12.30%	0.872	1.350
2012	9800	257	0	0.5	12.30%	0.865	1.350
2013	10700	279	0	0.5	12.30%	0.858	1.350
2014	11600	300	0	0.5	12.30%	0.851	1.350
2015	12500	321	321	0.5	12.30%	0.845	1.350
2016	13400	341	662	0.5	12.30%	0.839	1.350
2017	14400	364	1026	0.5	12.30%	0.833	1.350
2018	15300	385	1411	0.5	12.30%	0.828	1.350
2019	16300	407	1818	0.5	12.30%	0.823	1.350
2020	17200	427	2245	0.5	12.30%	0.819	1.350
2021	18200	449	2694	0.5	12.30%	0.814	1.350
2022	19100	469	3163	0.5	12.30%	0.810	1.350
2023	20100	491	3654	0.5	12.30%	0.806	1.350
2024	21000	511	4165	0.5	12.30%	0.802	1.350
2025	22000	533	4698	0.5	12.30%	0.798	1.350
2026	22900	552	5250	0.5	12.30%	0.795	1.350
2027	23800	572	5822	0.5	12.30%	0.792	1.350
2028	24700	591	6413	0.5	12.30%	0.789	1.350
2029	25600	610	7023	0.5	12.30%	0.786	1.350
2030	26500	629	7652	0.5	12.30%	0.783	1.350
2031	27400	648	8300	0.5	12.30%	0.780	1.350
2032	28300	667	8967	0.5	12.30%	0.778	1.350
2033	29200	686	9653	0.5	12.30%	0.775	1.350
2034	30100	705	10358	0.5	12.30%	0.772	1.350
2035	31000	724	11082	0.5	12.30%	0.770	1.350

Opening to Mid-Design Year ESAL Accumulation (1000s): 4377  
 Opening to Design Year ESAL Accumulation (1000s): 10761

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm

Name \_\_\_\_\_

2/17/2012  
 Signature \_\_\_\_\_ Date \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
 Name \_\_\_\_\_

Title \_\_\_\_\_ Org. Unit or Firm \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

**ESAL Location 4 - Analysis Information/Factors**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS**

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

**FIN #:** 240216-4-28-01  
**COUNTY:** Seminole County  
**ROADWAY ID:** 77040000  
**PROJECT DESCRIPTION:** SR 46 Design Traffic Technical Memorandum

**LOCATION DESCRIPTION:** \_\_\_\_\_ **LOCATION #:** 4  
 SR 46 east of CR 426

**GROWTH RATE FORMULA**

A: Interpolation  
 B: Enter Growth Rate  
 C: Enter All AADTs  
 D: New Facility

Choose A, B, C, or D here: C

Linear Growth Rate \_\_\_\_\_ %  
 Compounded Growth Rate \_\_\_\_\_ %  
 Decaying Growth Rate \_\_\_\_\_ %  
 (select one)

If "A" select an interpolation function  
 If "B" enter rate as decimals (1%=1.01)  
 If "C", or "D" continue to next section

**DESIGN INFORMATION**

Existing Year	<u>2011</u>	AADT	<u>5800</u>	Daily Direction Split	<u>50%</u>
Opening Year	<u>2015</u>		<u>8200</u>	(50% or 100%)	
Mid-Design Year	<u>2025</u>		<u>14000</u>	Lanes in One Direction	<u>2</u>
Design Year	<u>2035</u>		<u>20000</u>	<b>T24 values</b>	
				Existing to Opening Year	<u>12.30%</u>
				Opening to Mid-Year	<u>12.30%</u>
				Mid-Year to Design-Year	<u>12.30%</u>

Note: AADT values have been rounded to the nearest 100

**1995 EQUIVALENCY FACTORS [u(1)]**

(selected with an X)	FLEXIBLE PAVEMENT	RIGID PAVEMENT
	SN = 5/THICK	SN = 12/THICK
RURAL FREEWAY:	1.050	1.600
URBAN FREEWAY:	0.900	1.270
RURAL HIGHWAY:	0.960 <u>X</u>	1.350 <u>X</u>
URBAN HIGHWAY:	0.890	1.220
OTHER (Enter Factor and X):	_____	_____

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.  
 Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm  
 \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Signature Date 2/20/2012

Reviewed by: \_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Title Org. Unit or Firm  
 \_\_\_\_\_  
 Signature Date

**Flexible Pavement 18 KIP ESAL Analysis - Location 4**

**18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 4**

*PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS*

**YEARS: 2011 to 2035**

**SECTION #:** 77040000

**COUNTY:** Seminole County

**FIN #:** 240216-4-28-01

**FLEXIBLE PAVEMENT RURAL HIGHWAY 0.960**

**SN=5/THICK**

**SR 46 Design Traffic Technical Memorandum**

**C**

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	5800	114	0	0.5	12.30%	0.908	0.960
2012	6400	125	0	0.5	12.30%	0.900	0.960
2013	7000	135	0	0.5	12.30%	0.893	0.960
2014	7600	146	0	0.5	12.30%	0.886	0.960
2015	8200	156	156	0.5	12.30%	0.880	0.960
2016	8700	165	321	0.5	12.30%	0.875	0.960
2017	9300	175	496	0.5	12.30%	0.869	0.960
2018	9900	185	681	0.5	12.30%	0.864	0.960
2019	10500	195	876	0.5	12.30%	0.859	0.960
2020	11100	205	1081	0.5	12.30%	0.855	0.960
2021	11600	213	1294	0.5	12.30%	0.851	0.960
2022	12200	223	1517	0.5	12.30%	0.847	0.960
2023	12800	233	1750	0.5	12.30%	0.843	0.960
2024	13400	243	1993	0.5	12.30%	0.839	0.960
2025	14000	253	2246	0.5	12.30%	0.836	0.960
2026	14600	262	2508	0.5	12.30%	0.832	0.960
2027	15200	272	2780	0.5	12.30%	0.829	0.960
2028	15800	282	3062	0.5	12.30%	0.826	0.960
2029	16400	291	3353	0.5	12.30%	0.823	0.960
2030	17000	301	3654	0.5	12.30%	0.820	0.960
2031	17600	310	3964	0.5	12.30%	0.817	0.960
2032	18200	320	4284	0.5	12.30%	0.814	0.960
2033	18800	329	4613	0.5	12.30%	0.811	0.960
2034	19400	339	4952	0.5	12.30%	0.809	0.960
2035	20000	348	5300	0.5	12.30%	0.806	0.960


Opening to Mid-Design Year ESAL Accumulation (1000s): 2090  
 Opening to Design Year ESAL Accumulation (1000s): 5144

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.	
Prepared by: <u>GMB Engineers &amp; Planners, Inc.</u> 2602 E. Livingston Street, Orlando, FL - 32803 Org. Unit or Firm _____ Name _____ Signature <span style="float:right">2/20/2012</span> _____ Date	Reviewed by: _____ Name _____ Title <span style="float:right">Org. Unit or Firm</span> _____ Signature <span style="float:right">Date</span> _____

## Rigid Pavement 18 KIP ESAL Analysis - Location 4

### 18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 4

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2011 to 2035

SECTION #: 77040000

LOCATION #: 4

FIN #: 240216-4-28-01

RIGID PAVEMENT RURAL HIGHWAY 1.350

SN=12/THICK

SR 46 Design Traffic Technical Memorandum

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2011	5800	160	0	0.5	12.30%	0.908	1.350
2012	6400	175	0	0.5	12.30%	0.900	1.350
2013	7000	190	0	0.5	12.30%	0.893	1.350
2014	7600	205	0	0.5	12.30%	0.886	1.350
2015	8200	219	219	0.5	12.30%	0.880	1.350
2016	8700	231	450	0.5	12.30%	0.875	1.350
2017	9300	246	696	0.5	12.30%	0.869	1.350
2018	9900	260	956	0.5	12.30%	0.864	1.350
2019	10500	274	1230	0.5	12.30%	0.859	1.350
2020	11100	288	1518	0.5	12.30%	0.855	1.350
2021	11600	300	1818	0.5	12.30%	0.851	1.350
2022	12200	314	2132	0.5	12.30%	0.847	1.350
2023	12800	328	2460	0.5	12.30%	0.843	1.350
2024	13400	341	2801	0.5	12.30%	0.839	1.350
2025	14000	355	3156	0.5	12.30%	0.836	1.350
2026	14600	369	3525	0.5	12.30%	0.832	1.350
2027	15200	382	3907	0.5	12.30%	0.829	1.350
2028	15800	396	4303	0.5	12.30%	0.826	1.350
2029	16400	409	4712	0.5	12.30%	0.823	1.350
2030	17000	423	5135	0.5	12.30%	0.820	1.350
2031	17600	436	5571	0.5	12.30%	0.817	1.350
2032	18200	449	6020	0.5	12.30%	0.814	1.350
2033	18800	463	6483	0.5	12.30%	0.811	1.350
2034	19400	476	6959	0.5	12.30%	0.809	1.350
2035	20000	489	7448	0.5	12.30%	0.806	1.350

Opening to Mid-Design Year ESAL Accumulation (1000s): 2937

Opening to Design Year ESAL Accumulation (1000s): 7229

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: GMB Engineers & Planners, Inc.  
2602 E. Livingston Street, Orlando, FL - 32803  
 Org. Unit or Firm

Name

2/20/2012

Signature

Date

Reviewed by:

\_\_\_\_\_

Name

\_\_\_\_\_

Title

\_\_\_\_\_

Org. Unit or Firm

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

# Appendix R

## Figure 5-1 Project Traffic Assumption Summary

<b>Traffic forecast for the project was developed using:</b>	
<input type="checkbox"/> Travel Demand Model	<input type="checkbox"/> Growth Rates
<b>Type of Travel Demand Model Used:</b> <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>
<b>Is the travel demand model based on the latest adopted Long Range Transportation Plan?</b>	
<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): _____	
<b>Traffic Data and Factors</b>	
Standard K = _____ D Factor = _____ T <sub>Daily</sub> = _____	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**