TRAFFIC IMPACT STATEMENT

For

84 Lumber

In

The City of Ft. Pierce

Prepared for

84 LUMBER COMPANY, LP

Prepared By

Culpepper & Terpening, Inc.
2980 South 25th Street
Ft. Pierce, FL 34981

April 2007

Stefan K. Matthes, P.E.
Florida Reg. No. 38723

84 Lumber – Traffic Impact Study
Executive Summary

Project Description

- Location: North of Bell Avenue on Enterprise Drive
- Size: a 57,600 SF truss plant
- Major Area on Influence Boundaries: Edwards Road, South 25th Street, Midway Road, US Highway No. 1
- Significant Roads: Edwards Road, Bell Avenue, Oleander Avenue, Sunrise Boulevard
- Significant Intersections: Oleander Avenue & Edwards Road, Oleander Avenue & Bell Avenue, Sunrise Boulevard & Bell Avenue, Sunrise Boulevard & Edwards Road

Project Traffic

- Trip Generation: "ITE Manual - Code 140" 57,600 SF
  - ADT = 203 Vehicles/day
  - AM Peak Hour = 30 Vehicles/peak hour
  - PM Peak Hour = 39 Vehicles/peak hour
- AM Peak Hour Directional %(Ingress/egress): 68% entering (20 vph)/32% exiting (10 vph).
- PM Peak Hour Directional %(Ingress/egress): 52% entering (20 vph)/48% exiting (19 vph).
- Traffic Count Factors Applied: 3% annual growth to 2013 build-out.
- Internal Capture: none
- Pass-by Capture: 0% (new trips = 100%)

Findings

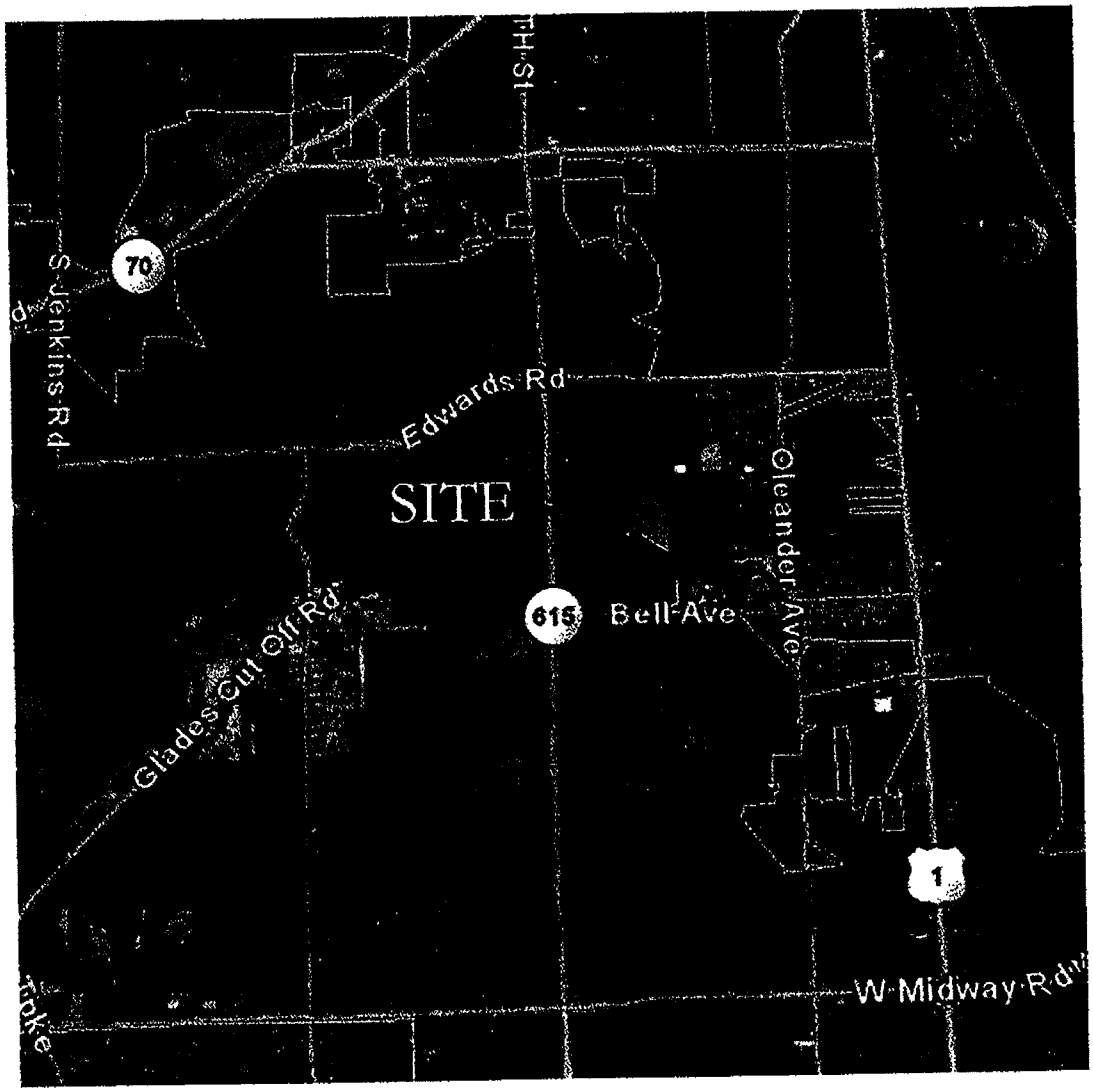
- The traffic impact of the proposed 84 Lumber truss plant will have a minimal effect on the levels of service within the project impact area. This report shows that the changes in the Level of Services are a function of the growth the study area will encounter through the 2013 horizon year and not a result of project traffic.
- Project impact will result in less than 2% impact on all links within the study area.
- The links on US Highway No. 1 south of Virginia Avenue, north and south of Midway Road will decrease in level of service when analyzed in 2013.
- In the PM Peak Directional condition, east of Sunrise Boulevard (east & west of the site) on Bell Avenue the level of service will decrease from C to D.
- The intersection of Sunrise Boulevard and Bell Avenue during the P.M. Peak Hour decreases in an overall Level of Service from B to C.

Table of Contents

Project Description

The proposed project, 84 Lumber, is located northwest of Enterprise Road and Bell Avenue. The site can be accessed via Digiorgio Road off of Oleander Boulevard or Enterprise Road off of Bell Avenue. The sole project entrance will be along Enterprise Road. The project resides in an industrial area in St. Lucie County, Florida (See Figure No. 1, Location Map). The parcel ID number for the project is 2428-421-0002-000-7 and the proposed site contains approximately 13.84 acres. The site is located in Section 28, Township 35 South, Range 40 East, St. Lucie County, Florida. The proposed design calls for a 57,600 square foot truss plant.

In developing the Scope and Methodology of this report, it was determined that the impacts of project development will be analyzed in 2013 a forecast of 5 years after build-out condition.



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84 Lumber

Location Map

Study Methodology

Section A – Definition of Study Area

The study area as defined by the City of Fort Pierce Chapter 22.217.*f*.2 shall be according to the table below:

Table I

Size of Project	Trips Generated	Study Area
Minimal Scale	Trips 9-50	1.0 Mile Radius
Small Scale	Trips 51-100	1.5 Mile Radius
Intermediate Scale	Trips 101-500	2.0 Mile Radius
Medium Scale	Trips 501-1000	3.0 Mile Radius
Large Scale	Trips 1000-Up	5.0 Mile Radius

The Study Area includes all major roadways and intersections within the zone of influence. From the data collected in Table IV it has been determined that the 84 Lumber truss plant is an Intermediate Scale project. The study area shall include the following intersections:

- Sunrise Boulevard and Edwards Road
- Sunrise Boulevard and Bell Avenue
- Oleander Avenue and Edwards Road
- Oleander Avenue and Bell Avenue

Section B – Inventory of Existing Facilities

Roadways:

Edwards Road

The Edwards Road Corridor located in the study area consists of a 4-lane divided roadway section containing two (2) 12' lanes in both the east and westbound directions. The existing right-of-way of Edwards Road is from 100' to 120' in width.

This corridor is classified as a State Two-Way Class I Arterial and is under the jurisdiction of the St. Lucie County. Edwards Road currently operates at a LOS B, based upon the Average Daily Volume as provided in the St. Lucie Urban Area Metropolitan Planning Organization Spring, 2005 Traffic Counts, applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1.

Bell Avenue

Bell Avenue consists of a 2-lane undivided rural roadway consisting of one (1) 10' lane eastbound and one (1) 10' lane westbound. The existing right-of-way of Bell Avenue is approximately 75' in width.

Bell Avenue is classified as an Other County Road under the jurisdiction of St. Lucie County. Bell Avenue corridor currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

Weatherbee Road

The portion of Weatherbee Road located in the study area consists of a 2-lane undivided rural roadway section containing one (1) 12' lane eastbound and one (1) 12' lane westbound. The existing right-of-way of Weatherbee Road within the study area is from 60' to 80' in width. The Weatherbee Road corridor is classified as a Major City/County Road and is under the jurisdiction of St. Lucie County. Weatherbee Road currently operates at a LOS C.

Midway Road

The Midway Road Corridor within the defined study area in its existing condition consists of a 2-lane undivided roadway. Improvements will be made to the corresponding links and for the purpose of this study will be analyzed as a 4-lane divided corridor containing two (2) 12' lanes eastbound and two (2) 12' lanes westbound. On Midway Road additional right and left turn lanes are located at the intersection with U.S. Highway No. 1. The existing right-of-way of Midway Road is 65' to 86' in width.

This corridor is classified as a State Two-Way Class I Arterial and the portion of which is within the study area is under the jurisdiction of the FDOT. Midway Road currently operates at a LOS F west of Oleander Avenue, however this link is in the FDOT 5 year CIP and has approximately 12 million dollars budgeted for improvements as can be found in Appendix C. Midway Road east of U.S. Highway No. 1 has an existing LOS B.

25th Street

25th Street is classified as a State Two-Way Arterial Interrupted Flow Class I roadway. The portion of 25th St, which is located within the study area, is currently under construction and will become a 4-lane divided rural roadway. All of the travel lanes will be 12 feet in width. The existing right-of-way varies from 80 to 120 foot in width.

25th Street is maintained by St. Lucie County and currently operates at LOS F south of Edwards Road. The LOS is based on the Annual Average Daily Traffic volumes as established in the "St. Lucie Urban Area Metropolitan Planning Organization Spring, 2005 Traffic Counts" and applied to the FDOT Generalized Daily Level of Service tables. Construction in the study area is approximately 50% complete.

Sunrise Boulevard

Sunrise Boulevard located within the study area and consists of a 2-lane undivided rural roadway consisting of one (1) 10' lane northbound and one (1) 10' lane soundbound. The existing right-of-way of Sunrise is approximately 60' in width.

Sunrise Boulevard is classified as a Major City/County Road and is under the jurisdiction of St. Lucie County. The Sunrise Boulevard corridor currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

Oleander Avenue

The portion of Oleander Avenue located in the study area consists of a 2-lane undivided rural roadway section containing one (1) 12' lane northbound and one (1) 12' lane southbound. The existing right-of-way of Oleander Avenue within the study area is from 66' to 100' in width.

The Oleander Avenue corridor is classified as a State Two-Way Class I – Interrupted Flow Arterial and is under the jurisdiction of St. Lucie County. Oleander Avenue currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

US Highway No. 1

US Highway No. 1 within the defined study area currently consists of a 5-lane undivided roadway section containing two (2) 12' lanes northbound, two (2) 12' lanes southbound and a continuous common turn lane. For the purpose of this study US Highway No. 1 will be analyzed as a 6-lane divided roadway. The FDOT is reconstructing this roadway, as well as has budgeted another 12 million dollars in additional improvements from N. of Midway to N. of Edwards Road as can be found in Appendix C. The existing right-of-way of US Highway No. 1 is 80' to 150' in width. This roadway is classified as a State Two-Way Class I – Interrupted Flow Arterial and a Class II - Interrupted Flow Arterial and is under the jurisdiction of the FDOT. US Highway No. 1 in its existing condition operates at a LOS F.

TABLE 4 - 1
GENERALIZED ANNUAL AVERAGE DAILY VOLUMES FOR FLORIDA'S URBANIZED AREAS*

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	2,000	7,000	13,800	19,600	27,000
4	Divided	20,400	33,000	47,800	61,800	70,200
6	Divided	30,500	49,500	71,600	92,700	105,400

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	4,200	13,800	16,400	18,900
4	Divided	4,800	29,300	34,700	35,700	***
6	Divided	7,300	44,700	52,100	53,500	***
8	Divided	9,400	58,000	66,100	67,800	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	1,900	11,200	15,400	16,300
4	Divided	**	4,100	26,000	32,700	34,500
6	Divided	**	6,500	40,300	49,200	51,800
8	Divided	**	8,500	53,300	63,800	67,000

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,300	12,600	15,500
4	Divided	**	**	12,400	28,900	32,800
6	Divided	**	**	19,500	44,700	49,300
8	Divided	**	**	25,800	58,700	63,800

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,200	13,700	15,000
4	Divided	**	**	12,300	30,300	31,700
6	Divided	**	**	19,100	45,800	47,600
8	Divided	**	**	25,900	59,900	62,200

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	9,100	14,600	15,600
4	Divided	**	**	21,400	31,100	32,900
6	Divided	**	**	33,400	46,800	49,300

Other Signalized Roadways
(signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	4,800	10,000	12,600
4	Divided	**	**	11,100	21,700	25,200

Source: Florida Department of Transportation
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

02/22/02

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	23,800	39,600	55,200	67,100	74,600
6	36,900	61,100	85,300	103,600	115,300
8	49,900	82,700	115,300	140,200	156,000
10	63,000	104,200	145,500	176,900	196,400
12	75,900	125,800	175,500	213,500	237,100

Interchange spacing < 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	22,000	36,000	52,000	67,200	76,500
6	34,800	56,500	81,700	105,800	120,200
8	47,500	77,000	111,400	144,300	163,900
10	60,200	97,500	141,200	182,600	207,600
12	72,900	118,100	170,900	221,100	251,200

BICYCLE MODE

(Note: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	**	3,200	13,800	>13,800
50-84%	**	2,500	4,100	>4,100	***
85-100%	3,100	7,200	>7,200	***	***

PEDESTRIAN MODE

(Note: Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	6,400	15,500
50-84%	**	**	**	9,900	19,000
85-100%	**	2,200	11,300	>11,300	***

BUS MODE (Scheduled Fixed Route)

(Buses per hour)

(Note: Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED

(alter corresponding volume by the indicated percent)

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

ONE-WAY FACILITIES

Decrease corresponding two-directional volumes in this table by 40% to obtain the equivalent one directional volume for one-way facilities.

*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. Values shown are two-way annual average daily volumes (based on K_{100} factors) for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. The table's input value defaults and level of service criteria appear on the following page. 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.

**Cannot be achieved using table input value defaults.

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

TABLE 4 - 7
GENERALIZED **PEAK HOUR DIRECTIONAL** VOLUMES FOR FLORIDA'S **URBANIZED AREAS***

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	100	340	670	950	1,300
2	Divided	1,060	1,720	2,500	3,230	3,670
3	Divided	1,600	2,590	3,740	4,840	5,500

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	220	720	860	890
2	Divided	250	1,530	1,810	1,860	***
3	Divided	380	2,330	2,720	2,790	***
4	Divided	490	3,030	3,460	3,540	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	100	590	810	850
2	Divided	**	220	1,360	1,710	1,800
3	Divided	**	340	2,110	2,570	2,710
4	Divided	**	440	2,790	3,330	3,500

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	280	660	810
2	Divided	**	**	650	1,510	1,720
3	Divided	**	**	1,020	2,330	2,580
4	Divided	**	**	1,350	3,070	3,330

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	270	720	780
2	Divided	**	**	650	1,580	1,660
3	Divided	**	**	1,000	2,390	2,490
4	Divided	**	**	1,350	3,130	3,250

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	480	760	810
2	Divided	**	**	1,120	1,620	1,720
3	Divided	**	**	1,740	2,450	2,580

Other Signalized Roadways
(signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	250	530	660
2	Divided	**	**	580	1,140	1,320

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	Level of Service A	B	C	D	E
2	1,270	2,110	2,940	3,580	3,980
3	1,970	3,260	4,550	5,530	6,150
4	2,660	4,410	6,150	7,480	8,320
5	3,360	5,560	7,760	9,440	10,480
6	4,050	6,710	9,360	11,390	12,650

Interchange spacing < 2 mi. apart

Lanes	Level of Service A	B	C	D	E
2	1,130	1,840	2,660	3,440	3,910
3	1,780	2,890	4,180	5,410	6,150
4	2,340	3,940	5,700	7,380	8,380
5	3,080	4,990	7,220	9,340	10,620
6	3,730	6,040	8,740	11,310	12,850

BICYCLE MODE

(Note: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	**	170	720	>720
50-84%	**	130	210	>210	***
85-100%	160	380	>380	***	***

PEDESTRIAN MODE

(Note: Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not the number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	330	810
50-84%	**	**	**	520	990
85-100%	**	120	590	>590	***

BUS MODE (Scheduled Fixed Route)

(Buses per hour)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED

(alter corresponding volumes by the indicated percent)

Lanes	Median	Left Turns Lanes	Adjustment Factors
1	Divided	Yes	+5%
1	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

ONE WAY FACILITIES

Increase corresponding volume 20%

*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. Values shown are hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. The table's input value defaults and level of service criteria appear on the following page. 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.

**Cannot be achieved using table input value defaults.

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

Intersections:

Oleander Avenue and Edwards Road

The intersection of Oleander Avenue and Edwards Road is signalized. The intersection geometry is as follows:

Eastbound	1 Lane	Left	Westbound	1 Lane	Left
	2 Lanes	Thru		1 Lanes	Thru
	1 Lane	Thru		1 Lane	Thru
Southbound	1 Lane	Left	Northbound	1 Lane	Left
	1 Lane	Thru/Rt		1 Lane	Thru/Rt

Oleander Avenue & Bell Avenue

The intersection of Oleander Avenue and Bell Avenue is an unsignalized "T" intersection with Bell Avenue being the leg of the "T". Bell Avenue is required to stop upon entering the intersection while traffic on Oleander Avenue is unrestricted. The intersection geometry is as follows:

Northbound	1 Lane	Lt/Thru	Southbound	1 Lane	Thru/Rt
Westbound	1 Lane	Left/Rt			

Sunrise Boulevard and Bell Avenue

The intersection of Sunrise Boulevard and Bell Avenue has mast arms installed with flashing red beacons and is currently used as a four way stop. The intersection geometry is as follows:

Eastbound	1 Lane	Lt/Th/Rt	Westbound	1 Lane	Lt/Th/Rt
Southbound	1 Lane	Lt/Th/Rt	Northbound	1 Lane	Lt/Thru
				1 Lane	Right

Sunrise Boulevard and Edwards Road

The intersection of Oleander Avenue and Edwards Road is signalized. The intersection geometry is as follows:

Eastbound	1 Lane	Left	Westbound	1 Lane	Left
	1 Lane	Thru		1 Lane	Thru
	1 Lane	Thru/Rt		1 Lane	Thru/Rt
Southbound	1 Lane	Left	Northbound	1 Lane	Left
	1 Lane	Thru		1 Lane	Thru
	1 Lane	Thru/Rt		1 Lane	Right

Existing Traffic Conditions

The Peak Season Average Daily Traffic Volume for the roadway of the project area were obtained from the Spring 2005, St. Lucie Urban Area Metropolitan Planning Organization Counts, and augmented by Culpepper & Terpening, Inc. These counts include the committed trips as provided in the MPO data sheets.

Table II
Existing Traffic Conditions

Roadway	Station Number		Classification		LOS Capacity	ADT	Committed Trips	Total /LOS	
	Map MPO	IDs	Type	Lanes					
Edwards Road									
W. of US Hwy No. 1	173	E	CI	4 ln	35,700	9,000	-	9,000	B
W. of Oleander Ave	502	D	CI	4 ln	35,700	13,200	-	13,200	B
W. of Sunrise Blvd.	108	C	CI	4 ln	35,700	19,100	-	19,100	B
Bell Avenue									
E. of Sunrise Blvd. (E. of site)	102	K	OCR	2 ln	10,000	3,700	-	3,700	C
E. of Sunrise Blvd. (W. of site)	102	J	OCR	2 ln	10,000	3,700	-	3,700	C
W. of Sunrise Blvd.	104	I	OCR	2 ln	10,000	3,000	-	3,000	C
Weatherbee Road									
E. of US Hwy No.1 (W. of US hwy No. 1)	158	Q	Mc/Mc	2 ln	14,600	4,700	-	4,700	C
Midway Road									
W. of Oleander Ave	128	U	CI	4 ln	35,700	18,600	44	18,644	B
W. of Sunrise Blvd.	130	T	CI	4 ln	35,700	19,100	44	19,144	B
W. of 25th Street	132	S	CI	4 ln	35,700	13,900	88	13,988	B
W. of Selvitz Road	134	-	CI	4 ln	35,700	16,900	66	16,966	B
25th Street									
S. of Virginia Ave	21	A	CI	4 ln	35,700	19,400	-	19,400	B
N. of Midway Rd (N. of Bell Avenue)	171	B	CI	4 ln	35,700	16,100	-	16,100	B
N. of Midway Rd (S. of Bell Avenue)	171	N	CI	4 ln	35,700	16,100	-	16,100	B
S. of Midway Rd	172	R	CI	4 ln	35,700	15,400	-	15,400	B
N. of Airoso Blvd	345	-	CI	4 ln	35,700	17,200	-	17,200	B

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Executive Summary

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- Traffic Count Factors Applied: 3% annual growth to 2013 build-out.
- Internal Capture: none
- Pass-by Capture: 0% (new trips = 100%)

Findings

- The traffic impact of the proposed 84 Lumber truss plant will have a minimal effect on the levels of service within the project impact area. This report shows that the changes in the Level of Services are a function of the growth the study area will encounter through the 2013 horizon year and not a result of project traffic.
- Project impact will result in less than 2% impact on all links within the study area.
- The links on US Highway No. 1 south of Virginia Avenue, north and south of Midway Road will decrease in level of service when analyzed in 2013.
- In the PM Peak Directional condition, east of Sunrise Boulevard (east & west of the site) on Bell Avenue the level of service will decrease from C to D.
- The intersection of Sunrise Boulevard and Bell Avenue during the P.M. Peak Hour decreases in an overall Level of Service from B to C.

TRAFFIC IMPACT STATEMENT

For

84 Lumber

In

The City of Ft. Pierce

Prepared for

84 LUMBER COMPANY, LP

Prepared By

Culpepper & Terpening, Inc.
2980 South 25th Street
Ft. Pierce, FL 34981

April 2007

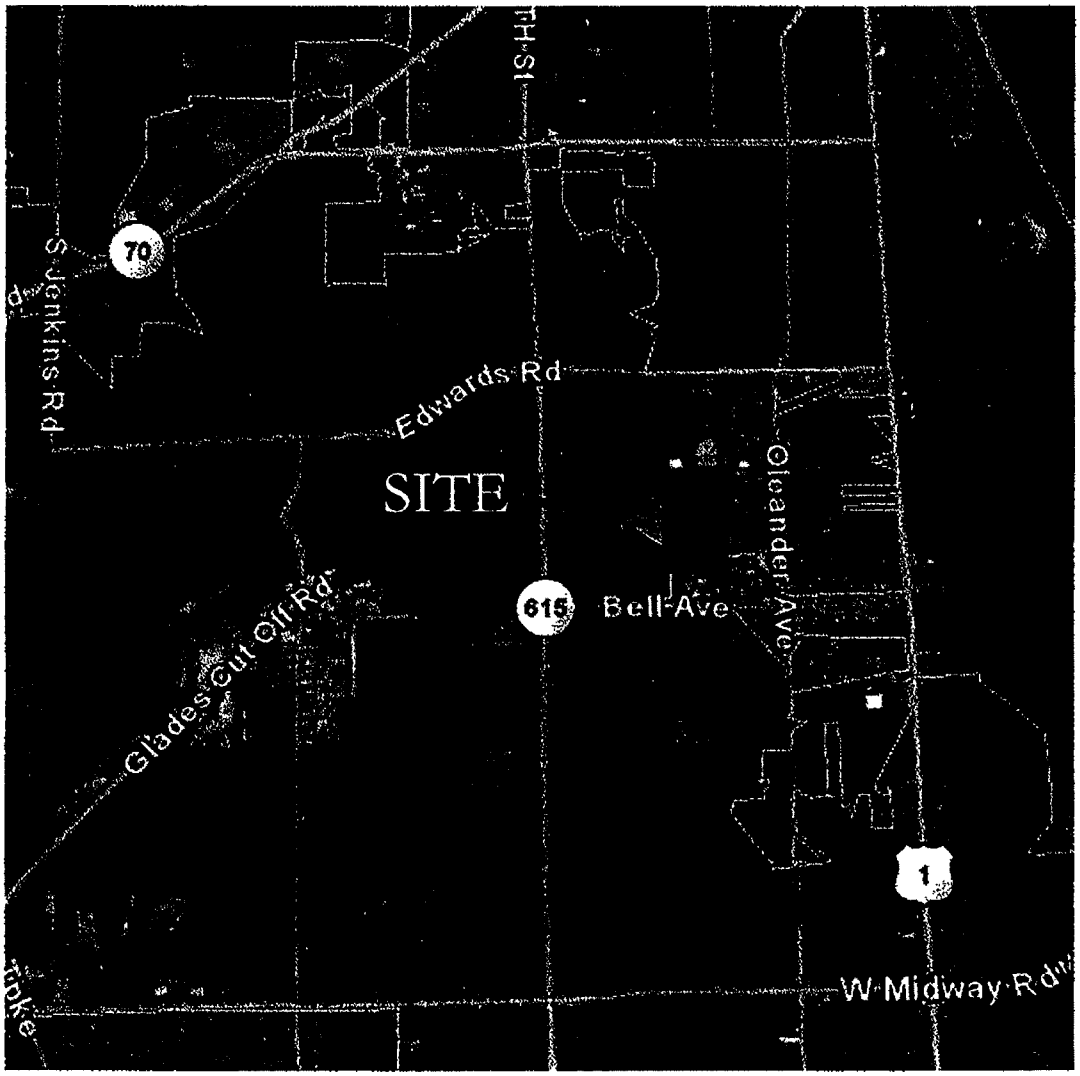
Stefan K. Matthes, P.E.
Florida Reg. No. 38723

Table of Contents

Project Description

The proposed project, 84 Lumber, is located northwest of Enterprise Road and Bell Avenue. The site can be accessed via Digiorgio Road off of Oleander Boulevard or Enterprise Road off of Bell Avenue. The sole project entrance will be along Enterprise Road. The project resides in an industrial area in St. Lucie County, Florida (See Figure No. 1, Location Map). The parcel ID number for the project is 2428-421-0002-000-7 and the proposed site contains approximately 13.84 acres. The site is located in Section 28, Township 35 South, Range 40 East, St. Lucie County, Florida. The proposed design calls for a 57,600 square foot truss plant.

In developing the Scope and Methodology of this report, it was determined that the impacts of project development will be analyzed in 2013 a forecast of 5 years after build-out condition.



CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

84 Lumber

Location Map

Study Methodology

Section A – Definition of Study Area

The study area as defined by the City of Fort Pierce Chapter 22.217.*f*.2 shall be according to the table below:

Table I		
Size of Project	**Trips Generated**	**Study Area**
Minimal Scale	Trips 9-50	1.0 Mile Radius
Small Scale	Trips 51-100	1.5 Mile Radius
Intermediate Scale	Trips 101-500	2.0 Mile Radius
Medium Scale	Trips 501-1000	3.0 Mile Radius
Large Scale	Trips 1000-Up	5.0 Mile Radius

The Study Area includes all major roadways and intersections within the zone of influence. From the data collected in Table IV it has been determined that the 84 Lumber truss plant is an Intermediate Scale project. The study area shall include the following intersections:

- Sunrise Boulevard and Edwards Road
- Sunrise Boulevard and Bell Avenue
- Oleander Avenue and Edwards Road
- Oleander Avenue and Bell Avenue

Section B – Inventory of Existing Facilities

Roadways:

Edwards Road

The Edwards Road Corridor located in the study area consists of a 4-lane divided roadway section containing two (2) 12' lanes in both the east and westbound directions. The existing right-of-way of Edwards Road is from 100' to 120' in width.

This corridor is classified as a State Two-Way Class I Arterial and is under the jurisdiction of the St. Lucie County. Edwards Road currently operates at a LOS B, based upon the Average Daily Volume as provided in the St. Lucie Urban Area Metropolitan Planning Organization Spring, 2005 Traffic Counts, applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1.

Bell Avenue

Bell Avenue consists of a 2-lane undivided rural roadway consisting of one (1) 10' lane eastbound and one (1) 10' lane westbound. The existing right-of-way of Bell Avenue is approximately 75' in width.

Bell Avenue is classified as an Other County Road under the jurisdiction of St. Lucie County. Bell Avenue corridor currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

Weatherbee Road

The portion of Weatherbee Road located in the study area consists of a 2-lane undivided rural roadway section containing one (1) 12' lane eastbound and one (1) 12' lane westbound. The existing right-of-way of Weatherbee Road within the study area is from 60' to 80' in width. The Weatherbee Road corridor is classified as a Major City/County Road and is under the jurisdiction of St. Lucie County. Weatherbee Road currently operates at a LOS C.

Midway Road

The Midway Road Corridor within the defined study area in its existing condition consists of a 2-lane undivided roadway. Improvements will be made to the corresponding links and for the purpose of this study will be analyzed as a 4-lane divided corridor containing two (2) 12' lanes eastbound and two (2) 12' lanes westbound. On Midway Road additional right and left turn lanes are located at the intersection with U.S. Highway No. 1. The existing right-of-way of Midway Road is 65' to 86' in width.

This corridor is classified as a State Two-Way Class I Arterial and the portion of which is within the study area is under the jurisdiction of the FDOT. Midway Road currently operates at a LOS F west of Oleander Avenue, however this link is in the FDOT 5 year CIP and has approximately 12 million dollars budgeted for improvements as can be found in Appendix C. Midway Road east of U.S. Highway No. 1 has an existing LOS B.

25th Street

25th Street is classified as a State Two-Way Arterial Interrupted Flow Class I roadway. The portion of 25th St, which is located within the study area, is currently under construction and will become a 4-lane divided rural roadway. All of the travel lanes will be 12 feet in width. The existing right-of-way varies from 80 to 120 foot in width.

25th Street is maintained by St. Lucie County and currently operates at LOS F south of Edwards Road. The LOS is based on the Annual Average Daily Traffic volumes as established in the "St. Lucie Urban Area Metropolitan Planning Organization Spring, 2005 Traffic Counts" and applied to the FDOT Generalized Daily Level of Service tables. Construction in the study area is approximately 50% complete.

Sunrise Boulevard

Sunrise Boulevard located within the study area and consists of a 2-lane undivided rural roadway consisting of one (1) 10' lane northbound and one (1) 10' lane soundbound. The existing right-of-way of Sunrise is approximately 60' in width.

Sunrise Boulevard is classified as a Major City/County Road and is under the jurisdiction of St. Lucie County. The Sunrise Boulevard corridor currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

Oleander Avenue

The portion of Oleander Avenue located in the study area consists of a 2-lane undivided rural roadway section containing one (1) 12' lane northbound and one (1) 12' lane southbound. The existing right-of-way of Oleander Avenue within the study area is from 66' to 100' in width.

The Oleander Avenue corridor is classified as a State Two-Way Class I – Interrupted Flow Arterial and is under the jurisdiction of St. Lucie County. Oleander Avenue currently operates at a LOS C based upon the Average Daily Volume applied to the generalized daily Level of Service maximum volumes for the Florida FDOT 2002 Quality / Level of Service Handbook as shown on Table 4-1 and upon the Spring 2005 Traffic Volumes as established by the St. Lucie Urban Area MPO.

US Highway No. 1

US Highway No. 1 within the defined study area currently consists of a 5-lane undivided roadway section containing two (2) 12' lanes northbound, two (2) 12' lanes southbound and a continuous common turn lane. For the purpose of this study US Highway No. 1 will be analyzed as a 6-lane divided roadway. The FDOT is reconstructing this roadway, as well as has budgeted another 12 million dollars in additional improvements from N. of Midway to N. of Edwards Road as can be found in Appendix C. The existing right-of-way of US Highway No. 1 is 80' to 150' in width. This roadway is classified as a State Two-Way Class I – Interrupted Flow Arterial and a Class II - Interrupted Flow Arterial and is under the jurisdiction of the FDOT. US Highway No. 1 in its existing condition operates at a LOS F.

TABLE 4 - 1
GENERALIZED ANNUAL AVERAGE DAILY VOLUMES FOR FLORIDA'S URBANIZED AREAS*

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	2,000	7,000	13,800	19,600	27,000
4	Divided	20,400	33,000	47,800	61,800	70,200
6	Divided	30,500	49,500	71,600	92,700	105,400

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	4,200	13,800	16,400	16,900
4	Divided	4,800	29,300	34,700	35,700	***
6	Divided	7,300	44,700	52,100	53,500	***
8	Divided	9,400	58,000	66,100	67,200	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	1,900	11,200	15,400	16,300
4	Divided	**	4,100	26,000	32,700	34,500
6	Divided	**	6,500	40,300	49,200	51,800
8	Divided	**	8,500	53,300	63,800	67,000

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,300	12,600	15,500
4	Divided	**	**	12,400	28,900	32,800
6	Divided	**	**	19,500	44,700	49,300
8	Divided	**	**	25,800	58,700	63,800

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	5,200	13,700	15,000
4	Divided	**	**	12,300	30,300	31,700
6	Divided	**	**	19,100	45,800	47,600
8	Divided	**	**	25,900	59,900	62,200

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	9,100	14,600	15,600
4	Divided	**	**	21,400	31,100	32,900
6	Divided	**	**	33,400	46,800	49,300

Other Signalized Roadways
(signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
2	Undivided	**	**	4,800	10,000	12,600
4	Divided	**	**	11,100	21,700	25,200

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	23,800	39,600	55,200	67,100	74,600
6	36,900	61,100	85,300	103,600	115,300
8	49,900	82,700	115,300	140,200	156,000
10	63,000	104,200	145,500	176,900	196,400
12	75,900	125,800	175,500	213,500	237,100

Interchange spacing < 2 mi. apart

Lanes	Level of Service A	B	C	D	E
4	22,000	36,000	52,000	67,200	76,500
6	34,800	56,500	81,700	105,800	120,200
8	47,500	77,000	111,400	144,300	163,900
10	60,200	97,500	141,200	182,600	207,600
12	72,900	118,100	170,900	221,100	251,200

BICYCLE MODE

(Note: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	**	3,200	13,800	>13,800
50-84%	**	2,500	4,100	>4,100	***
85-100%	3,100	7,200	>7,200	***	***

PEDESTRIAN MODE

(Note: Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	6,400	15,500
50-84%	**	**	**	9,900	19,000
85-100%	**	2,200	11,300	>11,300	***

BUS MODE (Scheduled Fixed Route)

(Buses per hour)

(Note: Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED

(alter corresponding volume by the indicated percent)

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

ONE-WAY FACILITIES

Decrease corresponding two-directional volumes in this table by 40% to obtain the equivalent one directional volume for one-way facilities.

*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. Values shown are two-way annual average daily volumes (based on K_{100} factors) for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. The table's input value defaults and level of service criteria appear on the following page. 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.

**Cannot be achieved using table input value defaults.

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

TABLE 4 - 7
GENERALIZED **PEAK HOUR DIRECTIONAL** VOLUMES FOR FLORIDA'S **URBANIZED AREAS***

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	100	340	670	950	1,300
2	Divided	1,060	1,720	2,500	3,230	3,670
3	Divided	1,600	2,590	3,740	4,840	5,500

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	220	720	860	890
2	Divided	250	1,530	1,810	1,860	***
3	Divided	380	2,330	2,720	2,790	***
4	Divided	490	3,030	3,460	3,540	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	100	590	810	850
2	Divided	**	220	1,360	1,710	1,800
3	Divided	**	340	2,110	2,570	2,710
4	Divided	**	440	2,790	3,330	3,500

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	280	660	810
2	Divided	**	**	650	1,510	1,720
3	Divided	**	**	1,020	2,330	2,580
4	Divided	**	**	1,350	3,070	3,330

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	270	720	780
2	Divided	**	**	650	1,580	1,660
3	Divided	**	**	1,000	2,390	2,490
4	Divided	**	**	1,350	3,130	3,250

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	480	760	810
2	Divided	**	**	1,120	1,620	1,720
3	Divided	**	**	1,740	2,450	2,580

Other Signalized Roadways (signalized intersection analysis)

Lanes	Divided	Level of Service A	B	C	D	E
1	Undivided	**	**	250	530	660
2	Divided	**	**	580	1,140	1,320

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	Level of Service A	B	C	D	E
2	1,270	2,110	2,940	3,580	3,980
3	1,970	3,260	4,550	5,530	6,150
4	2,660	4,410	6,150	7,480	8,320
5	3,360	5,560	7,760	9,440	10,480
6	4,050	6,710	9,360	11,390	12,650

Interchange spacing < 2 mi. apart

Lanes	Level of Service A	B	C	D	E
2	1,130	1,840	2,660	3,440	3,910
3	1,780	2,890	4,180	5,410	6,150
4	2,340	3,940	5,700	7,380	8,380
5	3,080	4,990	7,220	9,340	10,620
6	3,730	6,040	8,740	11,310	12,850

BICYCLE MODE

(Note: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	Level of Service A	B	C	D	E
0-49%	**	**	170	720	>720
50-84%	**	130	210	>210	***
85-100%	160	380	>380	***	***

PEDESTRIAN MODE

(Note: Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not the number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-49%	**	**	**	330	810
50-84%	**	**	**	520	990
85-100%	**	120	590	>590	***

BUS MODE (Scheduled Fixed Route)

(Buses per hour)

Sidewalk Coverage	Level of Service A	B	C	D	E
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS

DIVIDED/UNDIVIDED

(alter corresponding volumes by the indicated percent)

Lanes	Median	Left Turns Lanes	Adjustment Factors
1	Divided	Yes	+5%
1	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

ONE WAY FACILITIES

Increase corresponding volume 20%

*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. Values shown are hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. The table's input value defaults and level of service criteria appear on the following page. 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.

**Cannot be achieved using table input value defaults.

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

Intersections:

Oleander Avenue and Edwards Road

The intersection of Oleander Avenue and Edwards Road is signalized. The intersection geometry is as follows:

Eastbound	1	Lane	Left	Westbound	1	Lane	Left
	2	Lanes	Thru		1	Lanes	Thru
	1	Lane	Thru		1	Lane	Thru
Southbound	1	Lane	Left	Northbound	1	Lane	Left
	1	Lane	Thru/Rt		1	Lane	Thru/Rt

Oleander Avenue & Bell Avenue

The intersection of Oleander Avenue and Bell Avenue is an unsignalized "T" intersection with Bell Avenue being the leg of the "T". Bell Avenue is required to stop upon entering the intersection while traffic on Oleander Avenue is unrestricted. The intersection geometry is as follows:

Northbound	1	Lane	Lt/Thru	Southbound	1	Lane	Thru/Rt
Westbound	1	Lane	Left/Rt				

Sunrise Boulevard and Bell Avenue

The intersection of Sunrise Boulevard and Bell Avenue has mast arms installed with flashing red beacons and is currently used as a four way stop. The intersection geometry is as follows:

Eastbound	1	Lane	Lt/Th/Rt	Westbound	1	Lane	Lt/Th/Rt
Southbound	1	Lane	Lt/Th/Rt	Northbound	1	Lane	Lt/Thru
					1	Lane	Right

Sunrise Boulevard and Edwards Road

The intersection of Oleander Avenue and Edwards Road is signalized. The intersection geometry is as follows:

Eastbound	1	Lane	Left	Westbound	1	Lane	Left
	1	Lane	Thru		1	Lane	Thru
	1	Lane	Thru/Rt		1	Lane	Thru/Rt
Southbound	1	Lane	Left	Northbound	1	Lane	Left
	1	Lane	Thru		1	Lane	Thru
	1	Lane	Thru/Rt		1	Lane	Right

Existing Traffic Conditions

The Peak Season Average Daily Traffic Volume for the roadway of the project area were obtained from the Spring 2005, St. Lucie Urban Area Metropolitan Planning Organization Counts, and augmented by Culpepper & Terpening, Inc. These counts include the committed trips as provided in the MPO data sheets.

Table II
Existing Traffic Conditions

Roadway	Station Number		Classification		LOS Capacity	ADT	Committed Trips	Total /LOS	
	Map MPO	IDs	Type	Lanes					
Edwards Road									
W. of US Hwy No. 1	173	E	CI	4 ln	35,700	9,000	-	9,000	B
W. of Oleander Ave	502	D	CI	4 ln	35,700	13,200	-	13,200	B
W. of Sunrise Blvd.	108	C	CI	4 ln	35,700	19,100	-	19,100	B
Bell Avenue									
E. of Sunrise Blvd. (E. of site)	102	K	OCR	2 ln	10,000	3,700	-	3,700	C
E. of Sunrise Blvd. (W. of site)	102	J	OCR	2 ln	10,000	3,700	-	3,700	C
W. of Sunrise Blvd.	104	I	OCR	2 ln	10,000	3,000	-	3,000	C
Weatherbee Road									
E. of US Hwy No.1 (W. of US hwy No. 1)	158	Q	Mc/Mc	2 ln	14,600	4,700	-	4,700	C
Midway Road									
W. of Oleander Ave	128	U	CI	4 ln	35,700	18,600	44	18,644	B
W. of Sunrise Blvd.	130	T	CI	4 ln	35,700	19,100	44	19,144	B
W. of 25th Street	132	S	CI	4 ln	35,700	13,900	88	13,988	B
W. of Selvitz Road	134	-	CI	4 ln	35,700	16,900	66	16,966	B
25th Street									
S. of Virginia Ave	21	A	CI	4 ln	35,700	19,400	-	19,400	B
N. of Midway Rd (N. of Bell Avenue)	171	B	CI	4 ln	35,700	16,100	-	16,100	B
N. of Midway Rd (S. of Bell Avenue)	171	N	CI	4 ln	35,700	16,100	-	16,100	B
S. of Midway Rd	172	R	CI	4 ln	35,700	15,400	-	15,400	B
N. of Airoso Blvd	345	-	CI	4 ln	35,700	17,200	-	17,200	B

Table II (Continued)
Existing Traffic Conditions

Roadway	Station Number		Classification		LOS Capacity	ADT	Committed Trips	Total /LOS	
	Map MPO	IDs	Type	Lanes					
Sunrise Blvd									
N. of Edwards Rd	513	-	Mc/Mc	2 ln	14,600	4,400	-	4,400	C
S. of Edwards Rd	153	G	Mc/Mc	2 ln	14,600	5,700	-	5,700	C
S. of Bell Ave	155	L	Mc/Mc	2 ln	14,600	3,400	-	3,400	C
N. of Midway Rd	157	M	Mc/Mc	2 ln	14,600	2,700	-	2,700	C
Oleander Blvd									
N. of Edwards Rd	507	-	CI	2 ln	16,400	9,300	-	9,300	C
N. of Midway Rd (S. of Edwards Rd)	139	H	CI	2 ln	16,400	9,900	-	9,900	C
N. of Midway Rd (N. of Weatherbee Rd)	139	O	CI	2 ln	16,400	9,900	-	9,900	C
N. of Midway Rd	139	P	CI	2 ln	16,400	9,900	-	9,900	C
US Hwy No. 1									
S. of Virginia Ave	5002	F	CII	6 ln	49,200	35,600	-	35,600	C
N. of Midway Rd	20	X	CI	6 ln	53,500	37,900	22	37,922	C
S. of Midway Rd	5156	W	CI	6 ln	53,500	41,300	22	41,322	C

Legend - Roadway Classification Type

OCR	Other County Roadway
Mc/Mc	Major City/ County Roadway
CI-I	State Two-Way Arterial- Interrupted Flow Class I
CI-II	State Two-Way Arterial- Interrupted Flow Class II

The PM Peak Hour Directional Volume for the roadways located within the study area were obtained by using the Spring 2005 St. Lucie County MPO Traffic Counts and applying the ***K*** (.092) and ***D*** (.568) values and are tabulated as follows:

Table III
Existing Traffic Conditions

Roadway	Map IDs	Classification		ADT LOS Capacity	ADT Committed /LOS		PM Peak Hr/LOS Capacity	PM PK Hr Directional Volumes/LOS	
		Type	Lanes						
Edwards Road									
W. of US Hwy No. 1	E	CI	4 ln	35,700	9,000	B	1,860	470	B
W. of Oleander Ave	D	CI	4 ln	35,700	13,200	B	1,860	690	B
W. of Sunrise Blvd.	C	CI	4 ln	35,700	19,100	B	1,860	998	B
Bell Avenue									
E. of Sunrise Blvd. (E. of site)	K	OCR	2 ln	10,000	3,700	C	530	193	C
E. of Sunrise Blvd. (W. of site)	J	OCR	2 ln	10,000	3,700	C	530	193	C
W. of Sunrise Blvd.	I	OCR	2 ln	10,000	3,000	C	530	157	C
Weatherbee Road									
E. of US Hwy No.1 (W. of US hwy No. 1)	Q	Mc/Mc	2 ln	14,600	4,700	C	760	246	C
Midway Road									
W. of Oleander Ave	U	CI	4 ln	35,700	18,644	B	1,860	974	B
W. of Sunrise Blvd.	T	CI	4 ln	35,700	19,144	B	1,860	1,000	B
W. of 25th Street	S	CI	4 ln	35,700	13,988	B	1,860	731	B
W. of Selvitz Road	-	CI	4 ln	35,700	16,966	B	1,860	887	B
25th Street									
S. of Virginia Ave	A	CI	4 ln	35,700	19,400	B	1,860	1,014	B
N. of Midway Rd (N. of Bell Avenue)	B	CI	4 ln	35,700	16,100	B	1,860	841	B
N. of Midway Rd (S. of Bell Avenue)	N	CI	4 ln	35,700	16,100	B	1,860	841	B
S. of Midway Rd	R	CI	4 ln	35,700	15,400	B	1,860	805	B
N. of Airoso Blvd	-	CI	4 ln	35,700	17,200	B	1,860	899	B

Table III (Continued)
Existing Traffic Conditions

Roadway	Map IDs	Classification		ADT LOS Capacity	ADT Committed /LOS		PM Peak Hr/LOS Capacity	PM PK Hr Directional Volumes/LOS	
		Type	Lanes						
Sunrise Blvd									
N. of Edwards Rd	-	Mc/Mc	2 ln	14,600	4,400	C	760	230	C
S. of Edwards Rd	G	Mc/Mc	2 ln	14,600	5,700	C	760	298	C
S. of Bell Ave	L	Mc/Mc	2 ln	14,600	3,400	C	760	178	C
N. of Midway Rd	M	Mc/Mc	2 ln	14,600	2,700	C	760	141	C
Oleander Blvd									
N. of Edwards Rd	-	CI	2 ln	16,400	9,300	C	860	486	C
N. of Midway Rd (S. of Edwards Rd)	H	CI	2 ln	16,400	9,900	C	860	517	C
N. of Midway Rd (N. of Weatherbee Rd)	O	CI	2 ln	16,400	9,900	C	860	517	C
N. of Midway Rd	P	CI	2 ln	16,400	9,900	C	860	517	C
US Hwy No. 1									
S. of Virginia Ave	F	CII	6 ln	49,200	35,600	C	2,570	1,860	C
N. of Midway Rd	X	CI	6 ln	53,500	37,922	B	2,790	1,982	B
S. of Midway Rd	W	CI	6 ln	53,500	41,322	B	2,790	2,159	B

Legend - Roadway Classification Type

OCR	Other County Roadway
Mc/Mc	Major City/ County Roadway
CI-I	State Two-Way Arterial- Interrupted Flow Class I
CI-II	State Two-Way Arterial- Interrupted Flow Class II

Trip Generation

The Trip Generation for the proposed 84 Lumber truss plant was developed by utilizing the "Institute of Transportation Engineers Trip Generation Manual, Seventh Edition" which established the Trip Generation Rates for the proposed facility.

In developing the Trip Generation Rates, the ITE Manual was utilized for both the AADT volumes and the P.M. Peak Hour Movements. The following Tables have been provided to depict the Trip Generation Rates for this development. Table 1 depicts the 24-Hour Daily Volumes and Table II depicts the P.M. Peak Hour Volumes:

The Land Use Code 140 "Manufacturing" was determined the most appropriate description of the project. Both ADT and PM Peak Hour trip generation is provided in the following tables:

Trip Generation

Table IV
Average Daily Traffic

Land Use	ITE Code	Units/Size	ADT Rates	ADT
Manufacturing	140	57,600 SF	3.88(x)-20.70	203 vpd

Table V
AM Peak Hour Traffic

Land Use	Units/Size	Peak Hour Avg. Rate	Directional Distribution		Directional Volumes	
			Enter	Exit	Enter	Exit
Manufacturing	57,600 SF	0.83(x)-17.71	.68%	.32%	20 vph	10 vph

Table VI
PM Peak Hour Traffic

Land Use	Units/Size	Peak Hour Avg. Rate	Directional Distribution		Directional Volumes	
			Enter	Exit	Enter	Exit
Manufacturing	57,600 SF	0.76(x)-5.15	52%	48%	20 vph	19 vph

Trip Distribution

The Trip Distribution from the site onto local streets was derived based upon the surrounding developments as well as the existing Transportation Network. The Distribution onto the surrounding links was then derived and is portrayed as Figure No. 2.

A summary of the Major Trip Assignments were estimated as follows:

Table VII
Trip Distribution

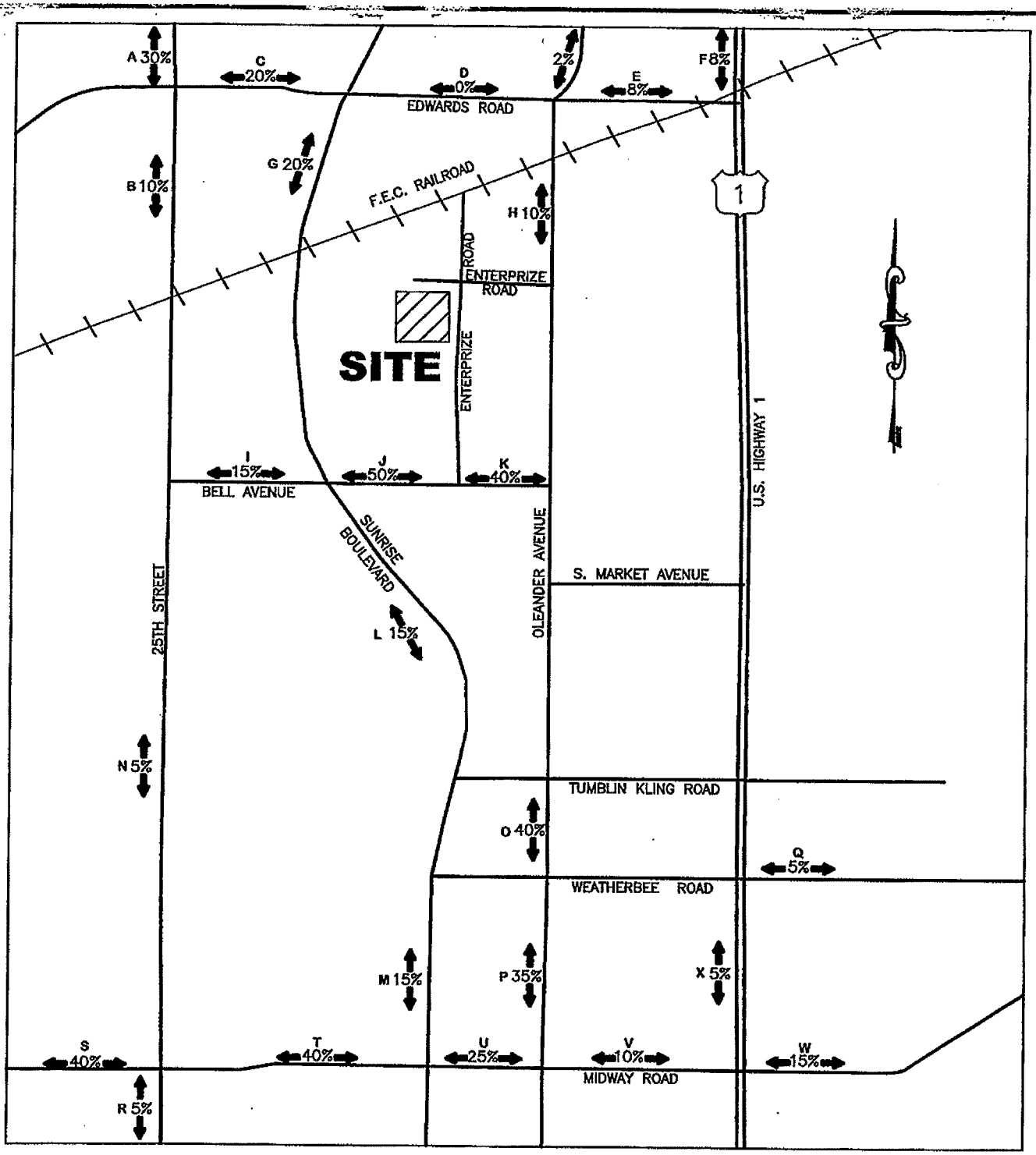
Link	Map IDs	%	ADT	PM Peak Hr. Dir.
Edwards Road				
W. of US Hwy No. 1	E	8%	16	2
W. of Oleander Ave	D	0%	0	0
W. of Sunrise Blvd.	C	20%	41	4
Bell Avenue				
E. of Sunrise Blvd. (E. of site)	K	50%	102	10
E. of Sunrise Blvd. (W. of site)	J	40%	81	8
W. of Sunrise Blvd.	I	15%	30	3
Weatherbee Road				
E. of US Hwy No.1 (W. of US hwy No. 1)	Q	5%	10	1
Midway Road				
W. of Oleander Ave	U	25%	51	5
W. of Sunrise Blvd.	T	40%	81	8
W. of 25th Street	S	40%	81	8
W. of Selvitz Road	-	40%	81	8
25th Street				
S. of Virginia Ave	A	30%	61	6
N. of Midway Rd (N. of Bell Avenue)	B	10%	20	2
N. of Midway Rd (S. of Bell Avenue)	N	5%	10	1

Table VII (Continued)
Trip Distribution

Link	Map IDs	%	ADT	PM Peak Hr. Dir.
Sunrise Blvd				
N. of Edwards Rd	-	0%	0	0
S. of Edwards Rd	G	20%	41	4
S. of Bell Ave	L	15%	30	3
N. of Midway Rd	M	15%	30	3
Oleander Blvd				
N. of Edwards Rd	-	2%	4	0
N. of Midway Rd (S. of Edwards Rd)	H	40%	81	8
N. of Midway Rd (N. of Weatherbee Rd)	O	40%	81	8
N. of Midway Rd	P	35%	71	7
US Hwy No. 1				
S. of Virginia Ave	F	8%	16	2
N. of Midway Rd	X	5%	10	1
S. of Midway Rd	W	15%	30	3

A complete trip assignment by percentage is shown on Figure No. 2.

The Trip Assignments for the Peak Hour Movements were derived based upon the distributions and associated turning movements as shown in Figure No. 5-12. The Exit/Enter splits as well as the volumes are shown in Table VI for the P.M. Peak Hour. The Assignments, based upon the directional movements were then made on the studied intersection and these volumes are also shown in Figure No. 5-12.



4-13-07
07-048 TRAF.DWG

FIGURE 2

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STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

84 LUMBER

TRIP DISTRIBUTION BY PERCENT

Capacity Analysis

Arterial Analysis:

The Trip Assignment Volumes calculated in the previous sections were added to the existing volumes and background trips assigned to the roadway links within the study area. Volume distribution onto the surrounding links was then derived and is portrayed as Figure No. 2. The local developments within the study area have been taken into account for this study and appear as *Other Projects' Traffic* (this includes Shadow Oaks, SLC County Cancer Center, and Ravania). The existing traffic volumes provided in the St. Lucie MPO Spring 2005 count data were increased by 3% per year to account for growth through the 2013 forecasting year.

Level of Service, Table 4-1, of the Florida FDOT 2002 Quality / Level of Service Handbook was used for both the existing (Pre-Development, including background) and Post-Development Levels of Service. The following is a summary of the results.

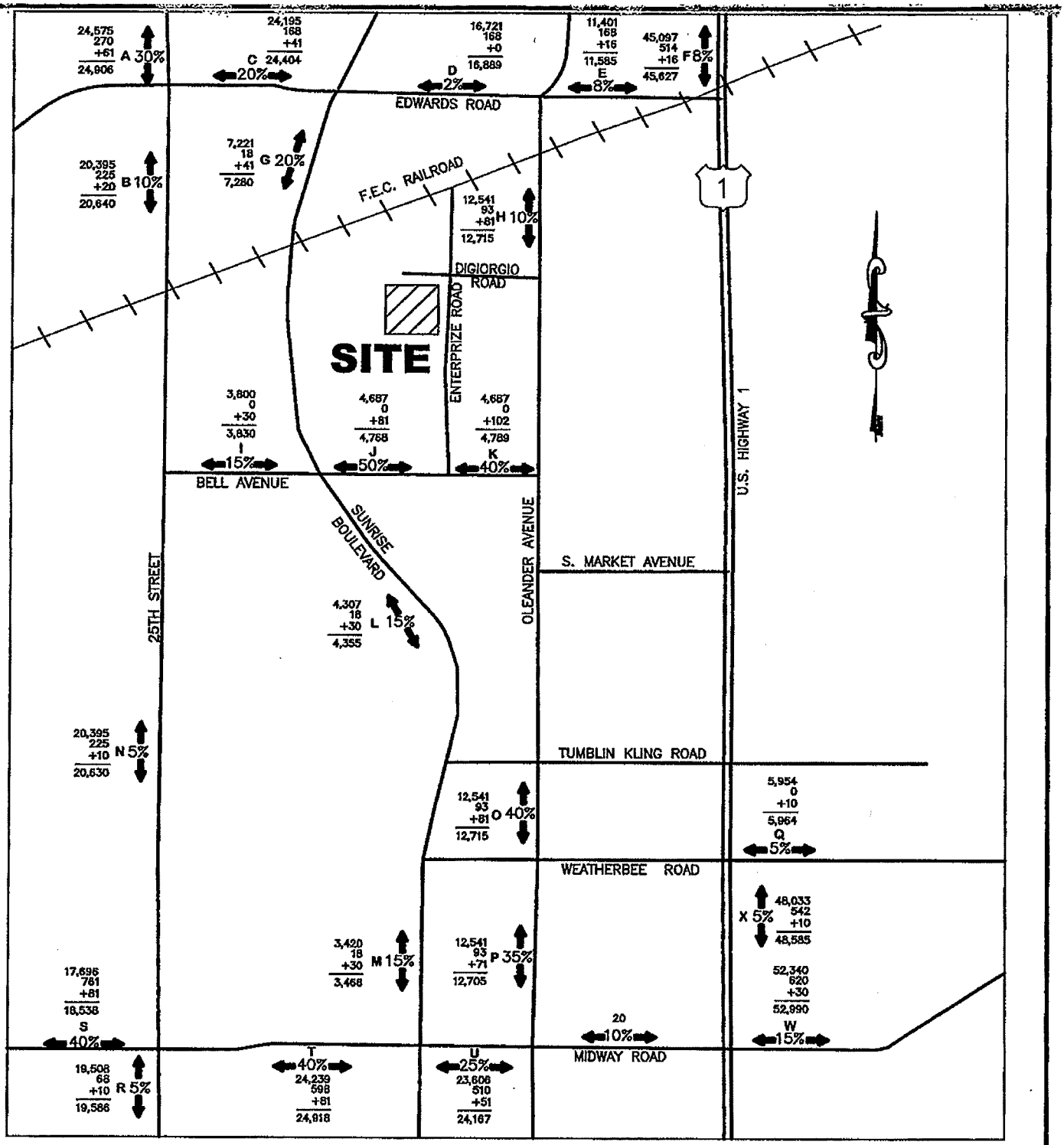
Table VIII
Local Roadway Network by ADT

Roadway	Map ID	LOS Capacity	Existing Conditions		Growth (2013)*	Other Projects' Traffic	Pre-Development Conditions		Project Traffic	Post-Development Conditions	
					3%						
Edwards Road											
W. of US Hwy No. 1	E	35,700	9,000	B	2,401	168	11,569	B	16	11,585	B
W. of Oleander Ave	D	35,700	13,200	B	3,521	168	16,889	B	0	16,889	B
W. of Sunrise Blvd.	C	35,700	19,100	B	5,095	168	24,363	B	41	24,404	B
Bell Avenue											
E. of Sunrise Blvd. (E. of site)	K	10,000	3,700	C	987	-	4,687	C	102	4,789	C
E. of Sunrise Blvd. (W. of site)	J	10,000	3,700	C	987	-	4,687	C	81	4,768	C
W. of Sunrise Blvd.	I	10,000	3,000	C	800	-	3,800	C	30	3,830	C
Weatherbee Road											
E. of US Hwy No.1 (W. of US hwy No. 1)	Q	14,600	4,700	C	1,254	-	5,954	C	10	5,964	C
Midway Road											
W. of Oleander Ave	U	35,700	18,644	B	4,962	510	24,116	B	51	24,167	B
W. of Sunrise Blvd.	T	35,700	19,144	B	5,095	598	24,837	B	81	24,918	B
W. of 25th Street	S	35,700	13,988	B	3,708	761	18,457	B	81	18,538	B
W. of Selvitz Road	-	35,700	16,966	B	4,508	589	22,063	B	81	22,144	B

Table VIII (Continued)
Local Roadway Network by ADT

Roadway	Map ID	LOS Capacity	Existing Conditions		Growth (2013)*	Other Projects' Traffic	Pre-Development Conditions		Project Traffic	Post-Development Conditions	
					3%						
25th Street											
S. of Virginia Ave	A	35,700	19,400	B	5,175	270	24,845	B	61	24,906	B
N. of Midway Rd (N. of Bell Avenue)	B	35,700	16,100	B	4,295	225	20,620	B	20	20,640	B
N. of Midway Rd (S. of Bell Avenue)	N	35,700	16,100	B	4,295	225	20,620	B	10	20,630	B
S. of Midway Rd	R	35,700	15,400	B	4,108	68	19,576	B	10	19,586	B
N. of Airoso Blvd	-	35,700	17,200	B	4,588	68	21,856	B	10	21,866	B
Sunrise Blvd											
N. of Edwards Rd	-	14,600	4,400	C	1,174	-	5,574	C	0	5,574	C
S. of Edwards Rd	G	14,600	5,700	C	1,521	18	7,239	C	41	7,280	C
S. of Bell Ave	L	14,600	3,400	C	907	18	4,325	C	30	4,355	C
N. of Midway Rd	M	14,600	2,700	C	720	18	3,438	C	30	3,468	C
Oleander Blvd											
N. of Edwards Rd	-	16,400	9,300	C	2,481	75	11,856	C	4	11,860	C
N. of Midway Rd (S. of Edwards Rd)	H	16,400	9,900	C	2,641	93	12,634	C	81	12,715	C
N. of Midway Rd (N. of Weatherbee Rd)	O	16,400	9,900	C	2,641	93	12,634	C	81	12,715	C
N. of Midway Rd	P	16,400	9,900	C	2,641	93	12,634	C	71	12,705	C
US Hwy No. 1											
S. of Virginia Ave	F	49,200	35,600	C	9,497	514	45,611	D	16	45,627	D
N. of Midway Rd	X	53,500	37,922	B	10,111	542	48,575	C	10	48,585	C
S. of Midway Rd	W	53,500	41,322	B	11,018	620	52,960	D	30	52,990	D

*Grown Trips do not include the MPO Committed Trips.
A complete trip assignment by AADT volumes is shown graphically in Figure No. 3.



LEGEND	
XXX	PRE DEVELOPMENT
XXX	COMMITTED
XXX	PROJECT TRIPS
XXX	TOTAL

4-13-07
07-048 TRAF.DWG

FIGURE 3

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STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4386

84 LUMBER

TRIP DISTRIBUTION BY AVERAGE DAILY TRAFFIC

Table IX
Impact on Local Roadway Network (ADT)

Roadway	Map ID	ADT LOS Capacity	Project Traffic	ADT Post-Development Conditions		ADT % Impact	Remaining Capacity
Edwards Road							
W. of US Hwy No. 1	E	35,700	16	11,585	B	0.05%	24,115
W. of Oleander Ave	D	35,700	0	16,889	B	0.00%	18,811
W. of Sunrise Blvd.	C	35,700	41	24,404	B	0.11%	11,296
Bell Avenue							
E. of Sunrise Blvd. (E. of site)	K	10,000	102	4,789	C	1.02%	5,211
E. of Sunrise Blvd. (W. of site)	J	10,000	81	4,768	C	0.81%	5,232
W. of Sunrise Blvd.	I	10,000	30	3,830	C	0.30%	6,170
Weatherbee Road							
E. of US Hwy No.1 (W. of US hwy No. 1)	Q	14,600	10	5,964	C	0.07%	8,636
Midway Road							
W. of Oleander Ave	U	35,700	51	24,167	B	0.14%	11,533
W. of Sunrise Blvd.	T	35,700	81	24,918	B	0.23%	10,782
W. of 25th Street	S	35,700	81	18,538	B	0.23%	17,162
W. of Selvitz Road	-	35,700	81	22,144	B	0.23%	13,556
25th Street							
S. of Virginia Ave	A	35,700	61	24,906	B	0.17%	10,794
N. of Midway Rd (N. of Bell Avenue)	B	35,700	20	20,640	B	0.06%	15,060
N. of Midway Rd (S. of Bell Avenue)	N	35,700	10	20,630	B	0.03%	15,070
S. of Midway Rd	R	35,700	10	19,586	B	0.03%	16,114
N. of Airoso Blvd	-	35,700	10	21,866	B	0.03%	13,834

Table IX (Continued)
Impact on Local Roadway Network (ADT)

Roadway	Map ID	ADT LOS Capacity	Project Traffic	ADT Post-Development Conditions		ADT % Impact	Remaining Capacity
Sunrise Blvd							
N. of Edwards Rd	-	14,600	0	5,574	C	0.00%	9,026
S. of Edwards Rd	G	14,600	41	7,280	C	0.28%	7,320
S. of Bell Ave	L	14,600	30	4,355	C	0.21%	10,245
N. of Midway Rd	M	14,600	30	3,468	C	0.21%	11,132
Oleander Blvd							
N. of Edwards Rd	-	16,400	4	11,860	C	0.02%	4,540
N. of Midway Rd (S. of Edwards Rd)	H	16,400	81	12,715	C	0.50%	3,685
N. of Midway Rd (N. of Weatherbee Rd)	O	16,400	81	12,715	C	0.50%	3,685
N. of Midway Rd	P	16,400	71	12,705	C	0.43%	3,695
US Hwy No. 1							
S. of Virginia Ave	F	49,200	16	45,627	D	0.03%	3,573
N. of Midway Rd	X	53,500	10	48,585	C	0.02%	4,915
S. of Midway Rd	W	53,500	30	52,990	D	0.06%	510

Table X
Local Roadway Network & Impact (PM Peak Hour Directional)

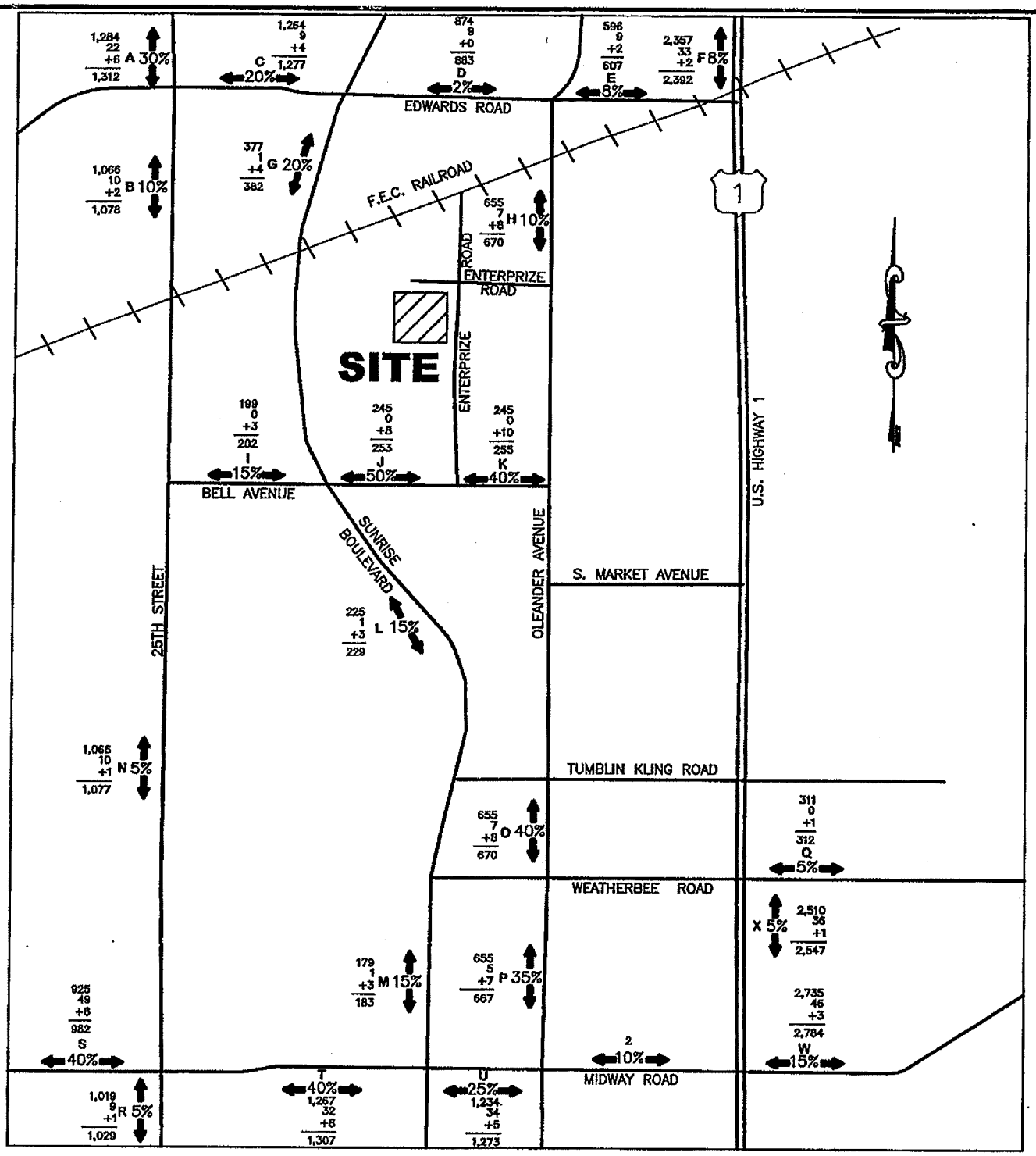
Roadway	Map ID	PM Peak LOS Capacity	PM Peak Pre-Development			Project Traffic	PM Peak Post-Development Conditions		% Impact	Remaining Capacity
			Other Projects' Traffic	Pre /Total LOS*						
Edwards Road				2013						
W. of US Hwy No. 1	E	1,860	9	596	B	2	607	B	0.11%	1,253
W. of Oleander Ave	D	1,860	9	874	B	0	883	B	0.00%	977
W. of Sunrise Blvd.	C	1,860	9	1,264	B	4	1,277	B	0.22%	583
Bell Avenue										
E. of Sunrise Blvd. (E. of site)	K	530	-	245	C	10	255	D	1.89%	275
E. of Sunrise Blvd. (W. of site)	J	530	-	245	C	8	253	D	1.51%	277
W. of Sunrise Blvd.	I	530	-	199	C	3	202	C	0.57%	328
Weatherbee Road										
E. of US Hwy No.1 (W. of US hwy No. 1)	Q	760	-	311	C	1	312	C	0.13%	448
Midway Road										
W. of Oleander Ave	U	1,860	34	1,234	B	5	1,273	B	0.27%	587
W. of Sunrise Blvd.	T	1,860	32	1,267	B	8	1,307	B	0.43%	553
W. of 25th Street	S	1,860	49	925	B	8	982	B	0.43%	878
W. of Selvitz Road	-	1,860	38	1,122	B	8	1,168	B	0.43%	692
25th Street										
S. of Virginia Ave	A	1,860	22	1,284	B	6	1,312	B	0.32%	548
N. of Midway Rd (N. of Bell Avenue)	B	1,860	10	1,066	B	2	1,078	B	0.11%	782
N. of Midway Rd (S. of Bell Avenue)	N	1,860	10	1,066	B	1	1,077	B	0.05%	783
S. of Midway Rd	R	1,860	9	1,019	B	1	1,029	B	0.05%	831
N. of Airoso Blvd	-	1,860	9	1,139	B	1	607	B	0.05%	711

* LOS Value includes Other Projects' Traffic

Table X (Continued)
Local Roadway Network & Impact (PM Peak Hour Directional)

Roadway	Map ID	PM Peak LOS Capacity	PM Peak Pre-Development			Project Traffic	PM Peak Post-Development Conditions		% Impact	Remaining Capacity
			Other Projects' Traffic	Pre /Total LOS*						
				2013						
Sunrise Blvd										
N. of Edwards Rd	-	760	-	291	C	0	291	C	0.00%	469
S. of Edwards Rd	G	760	1	377	C	4	382	C	0.53%	378
S. of Bell Ave	L	760	1	225	C	3	229	C	0.39%	531
N. of Midway Rd	M	760	1	179	C	3	183	C	0.39%	577
Oleander Blvd										
N. of Edwards Rd	-	860	5	616	C	0	621	C	0.00%	239
N. of Midway Rd (S. of Edwards Rd)	H	860	7	655	C	8	670	C	0.93%	190
N. of Midway Rd (N. of Weatherbee Rd)	O	860	7	655	C	8	670	C	0.93%	190
N. of Midway Rd	P	860	5	655	C	7	667	C	0.81%	193
US Hwy No. 1										
S. of Virginia Ave	F	2,570	33	2,357	D	2	2,392	D	0.08%	178
N. of Midway Rd	X	2,790	36	2,510	C	1	2,547	C	0.04%	243
S. of Midway Rd	W	2,790	46	2,735	D	3	2,784	D	0.11%	6

* LOS Value includes Other Projects' Traffic
A complete trip assignment by PM Peak Hour Directional volumes is shown graphically in Figure No. 4.



LEGEND	
XXX	PRE DEVELOPMENT
XXX	COMMITTED
XXX	PROJECT TRIPS
XXX	TOTAL

4-13-07
07-048 TRAF.DWG

FIGURE 4

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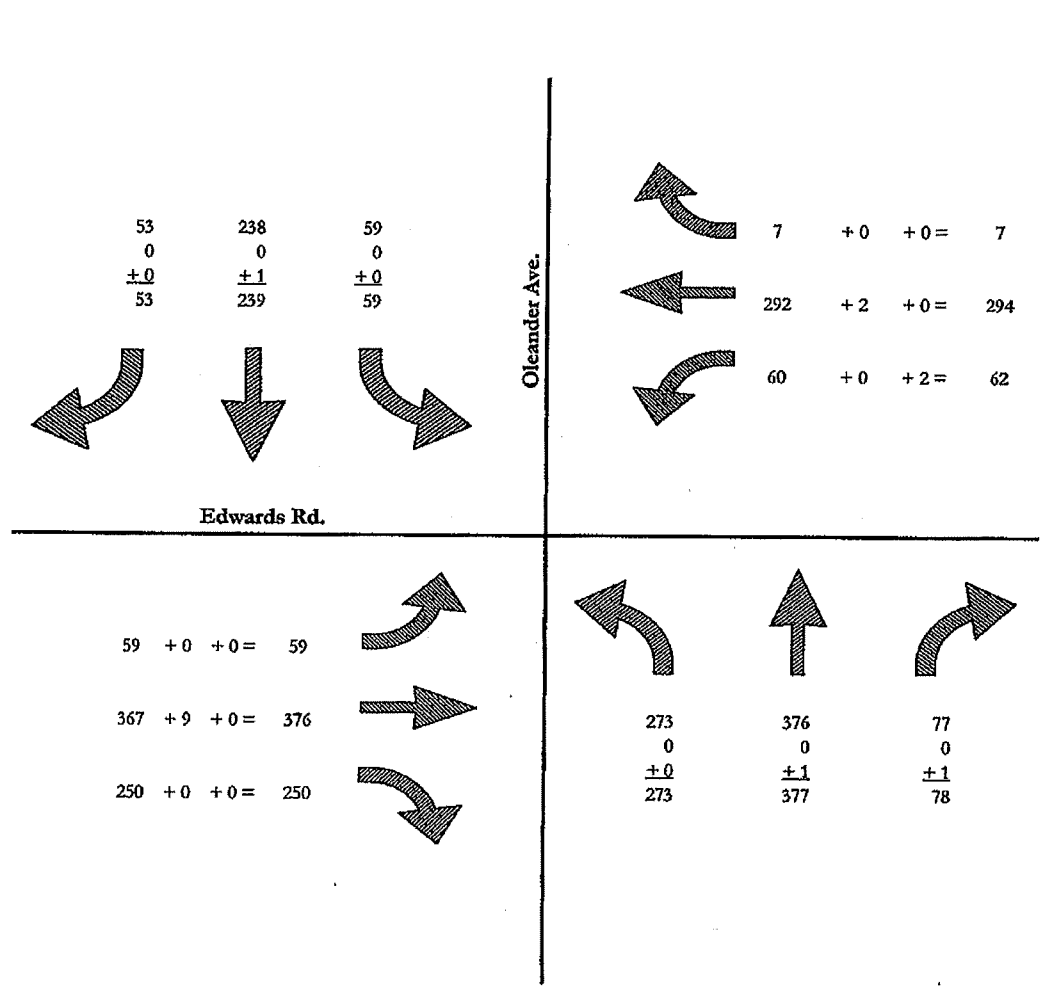
84 LUMBER

TRIP DISTRIBUTION BY PEAK HOUR DIRECTIONAL

Intersection Analysis

In order to determine what the project's impact is on the intersecting roadways, analysis has been conducted during the time periods that experience the most traffic volumes within any hour of the weekday. The AM and PM Peak Hour Traffic conditions typically experience the highest traffic volumes during the weekday. The Peak Hour Volumes produced by the project as well as The Exit/Enter splits can be found in Tables IV and VI. The Peak Hour Volumes were applied to the Trip Assignments for the Peak Hour Movements, which have been derived based upon the distributions and associated turning movements as shown in Figure No. 2.

The Pre-Development and Post-Development AM and PM Peak Hour turning movements for the project intersections are depicted in Figures No. 5-12. The pre-development volumes are based upon traffic counts taken by Culpepper & Terpening, Inc. and background traffic from other projects. The Appendices provide the respective data.



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 5

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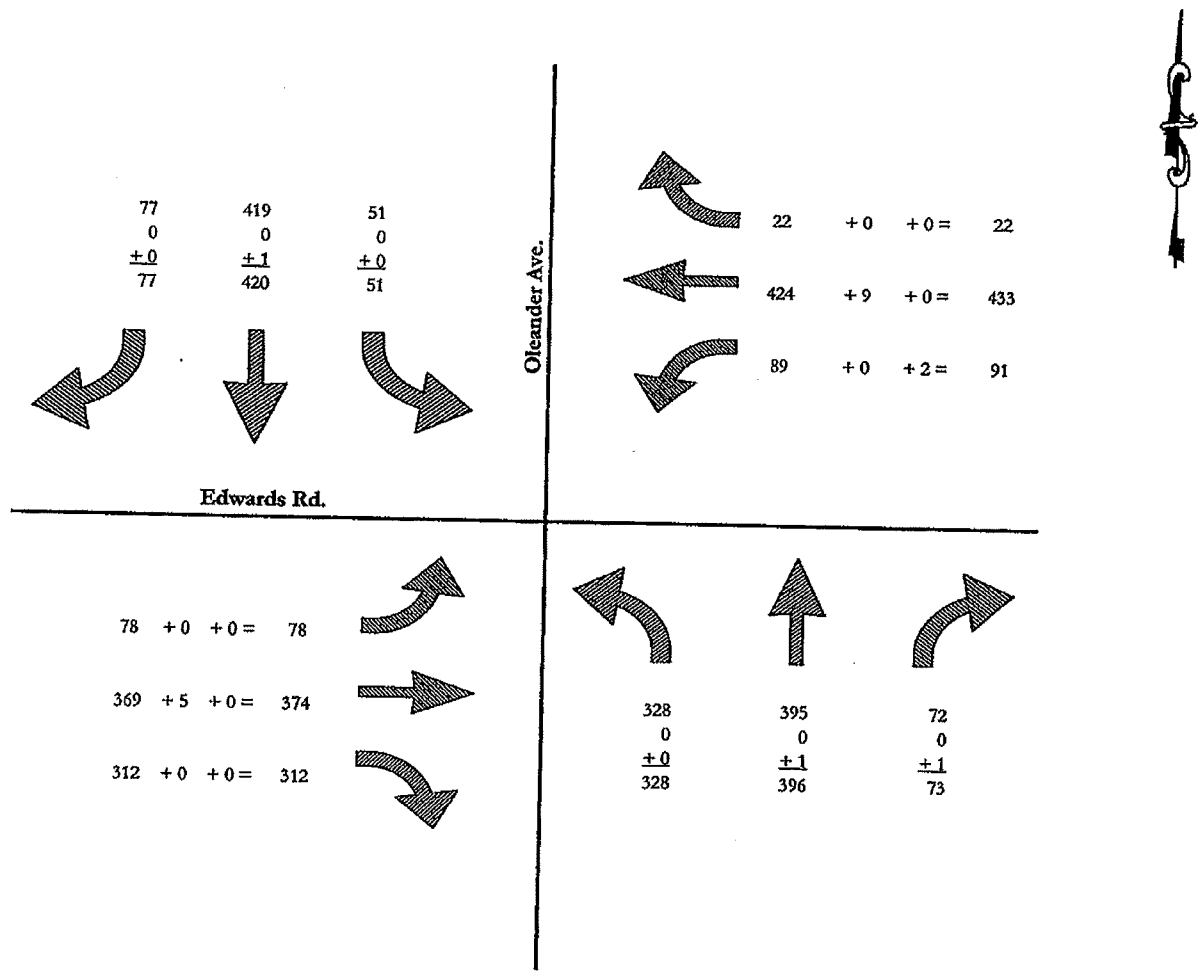
AM PEAK HOUR TURNING MOVEMENTS
Oleander Ave. & Edwards Rd.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 6

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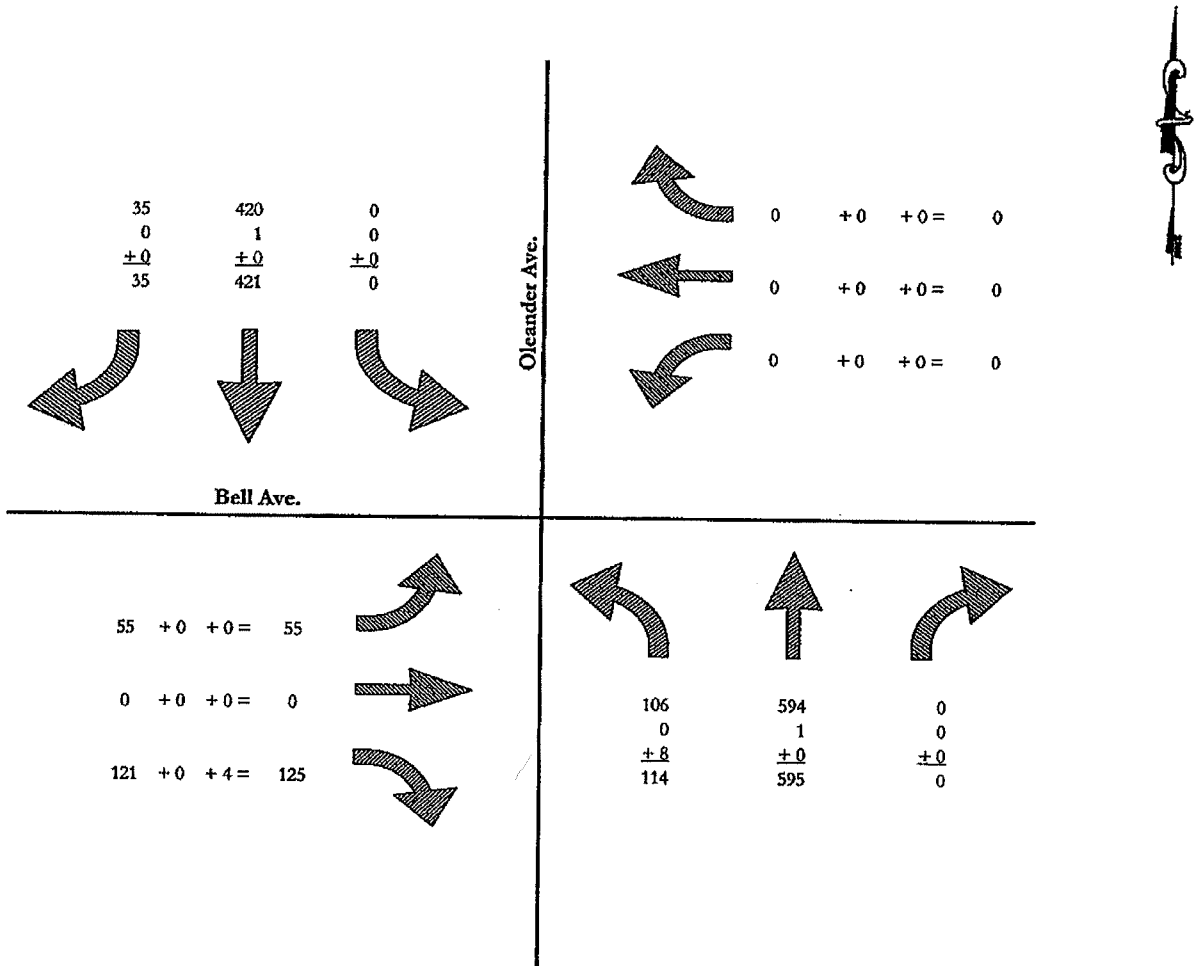
PM PEAK HOUR TURNING MOVEMENTS
Oleander Ave. & Edwards Rd.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

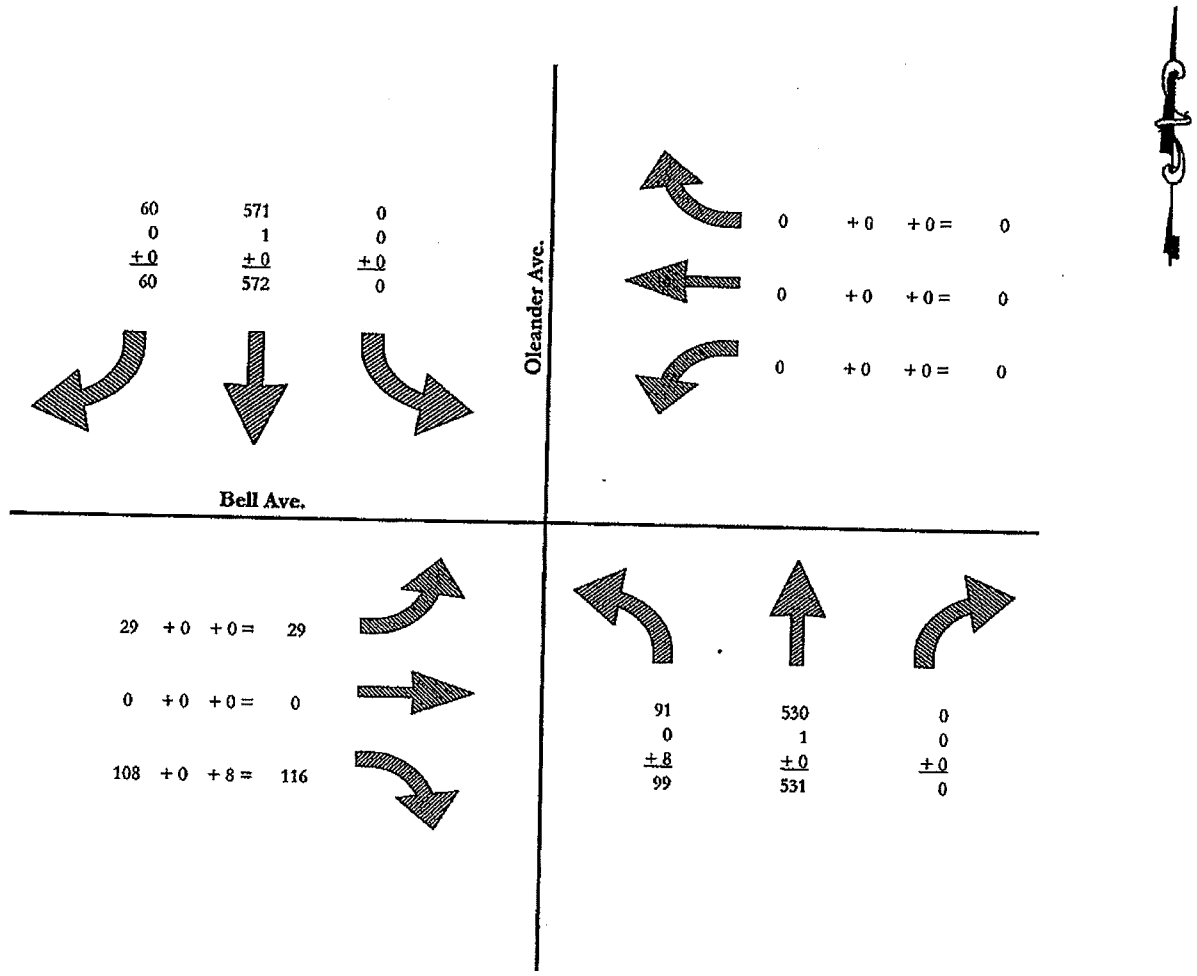
Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 7

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

AM PEAK HOUR TURNING MOVEMENTS
Oleander Ave. & Bell Ave.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

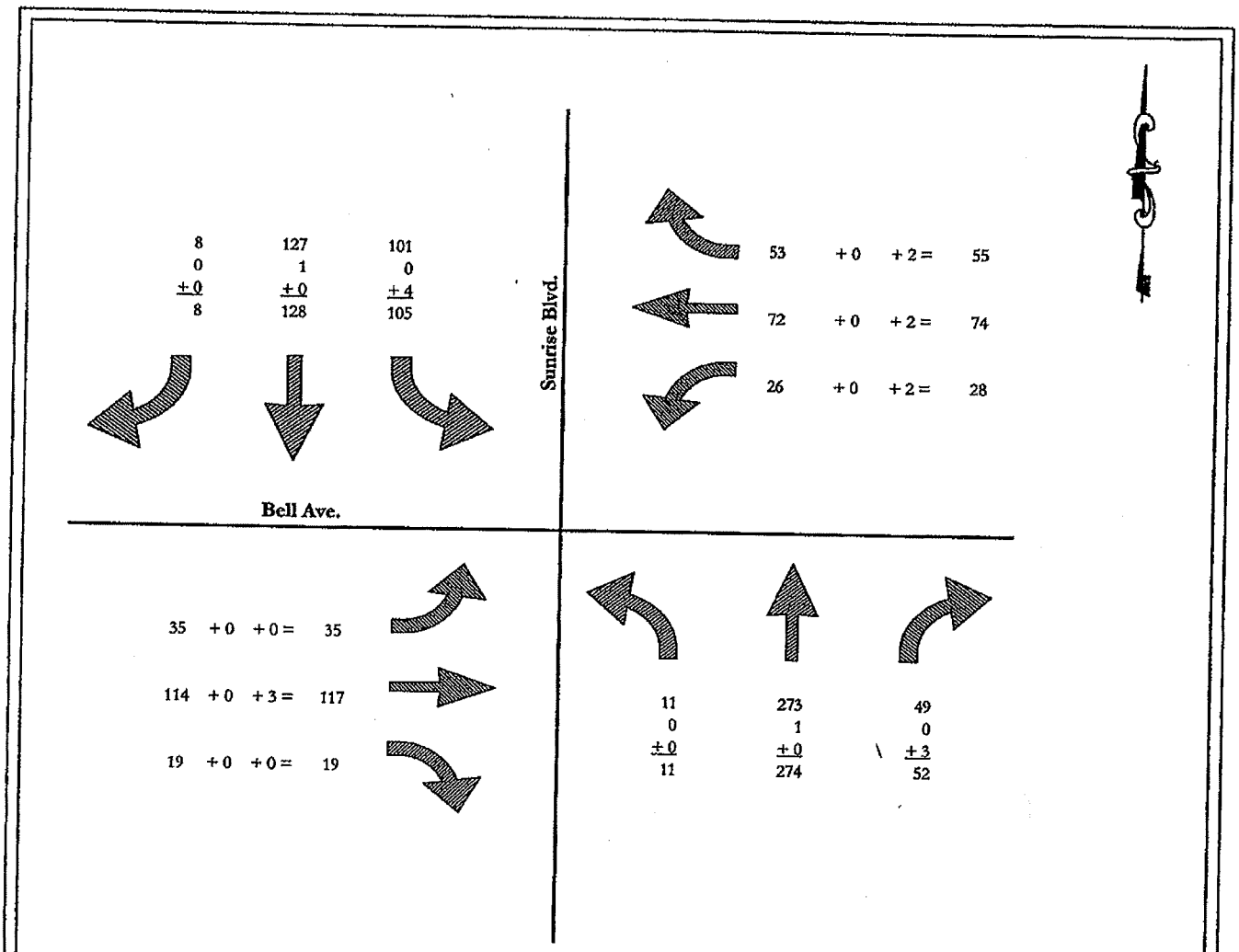
Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 8

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

PM PEAK HOUR TURNING MOVEMENTS
Oleander Ave. & Bell Ave.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

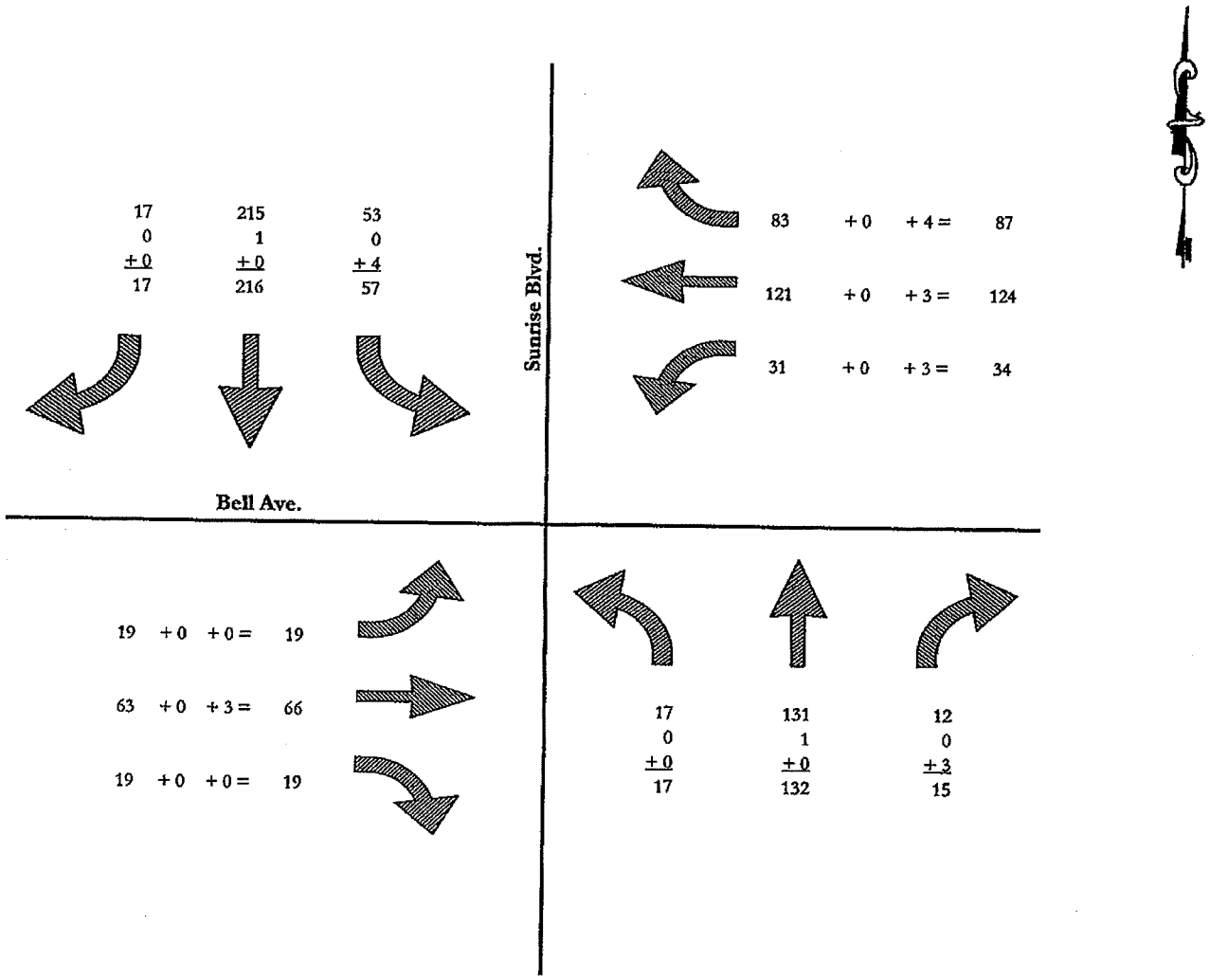
Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 9

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4258

AM PEAK HOUR TURNING MOVEMENTS
Sunrise Blvd. & Bell Ave.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

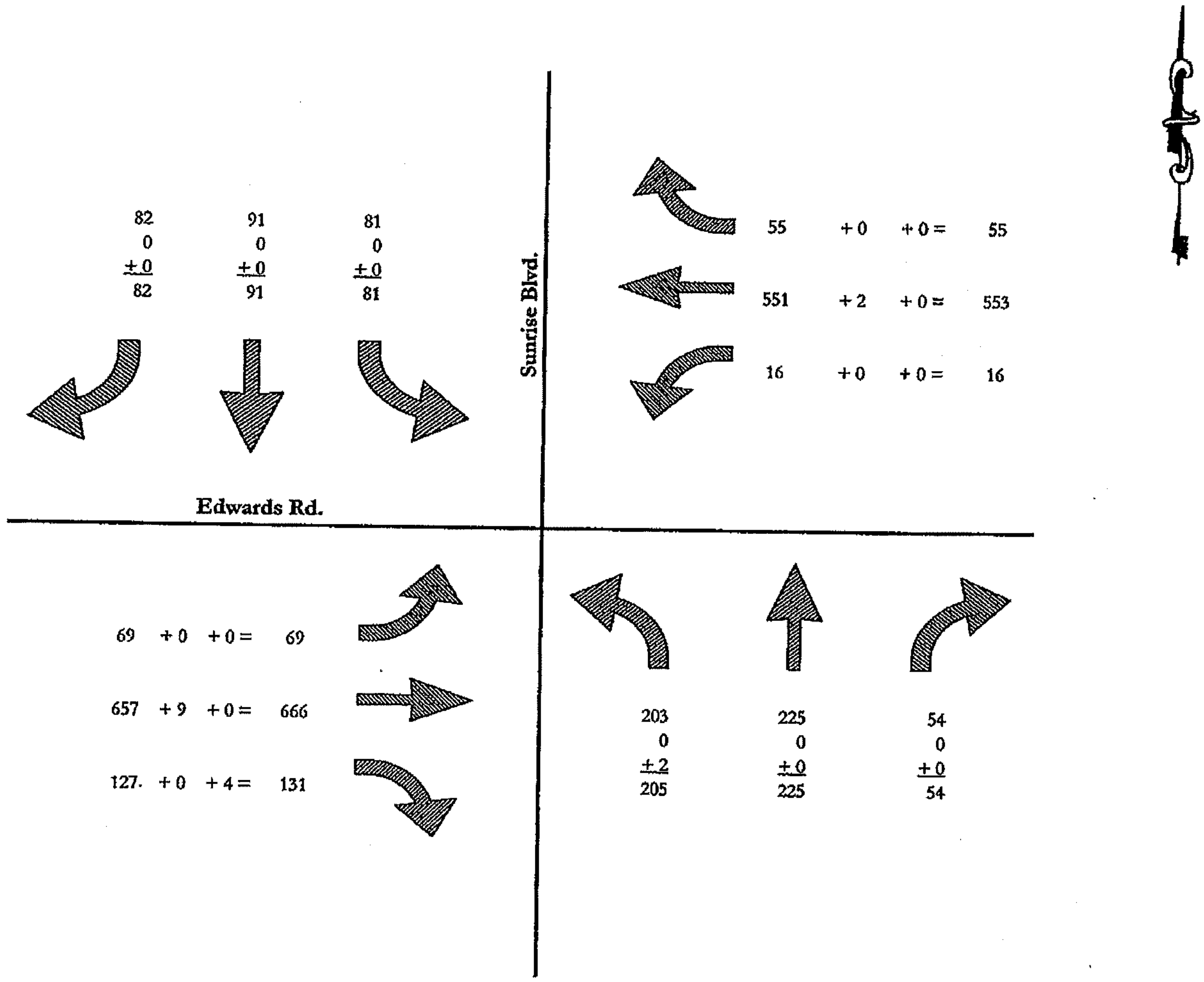
Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 10

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

PM PEAK HOUR TURNING MOVEMENTS
Sunrise Blvd. & Bell Ave.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

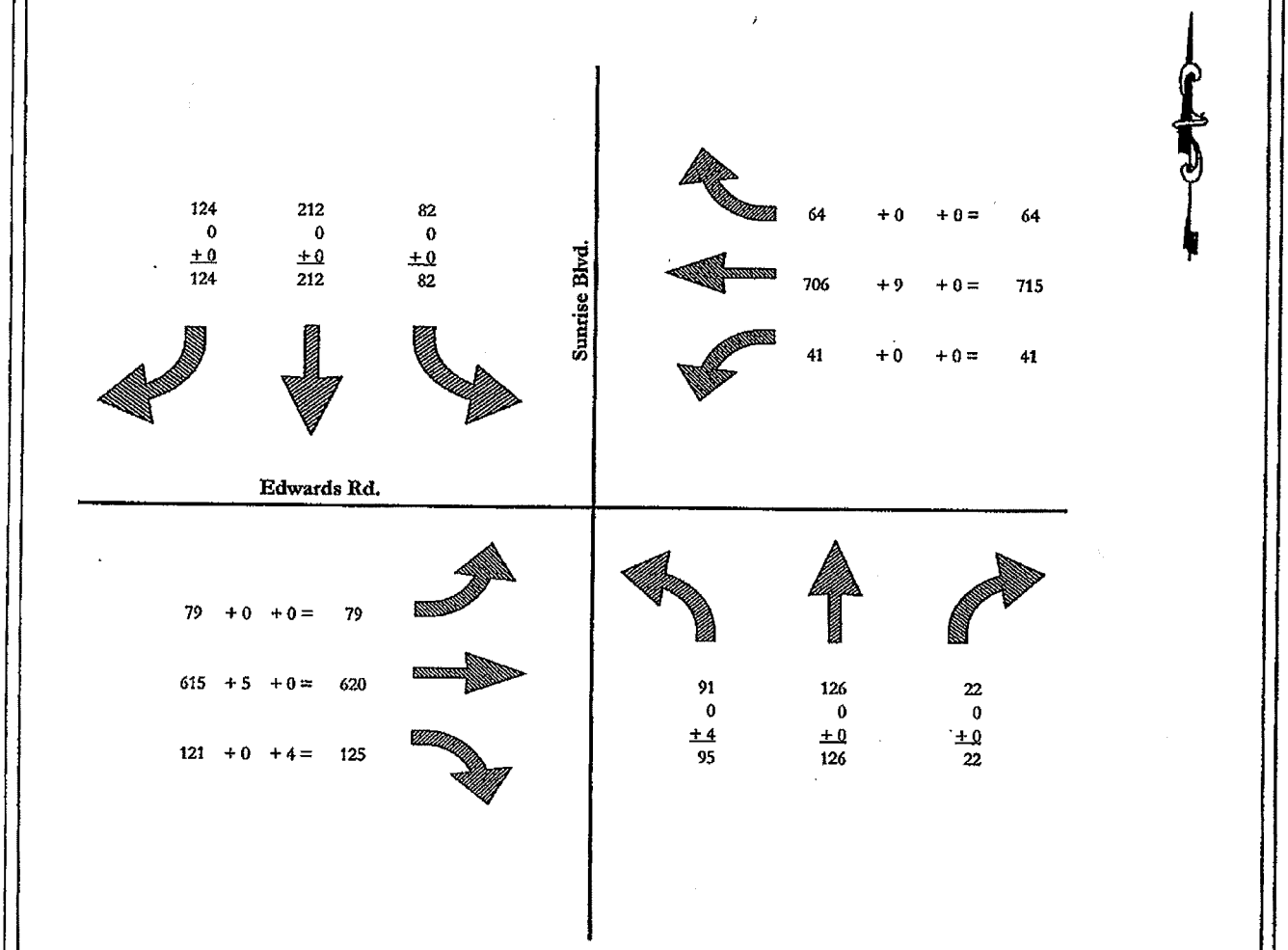
Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 11

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4286

AM PEAK HOUR TURNING MOVEMENTS
Sunrise Blvd. & Edwards Rd.

84 Lumber



LEGEND

XXX EXISTING TRAFFIC
XXX BACKGROUND
XXX PROJECT

XXX TOTAL TRAFFIC

Background Traffic Includes: Shadow Oaks, St. Lucie County Cancer Center, and Ravinia

FIGURE 12

CULPEPPER & TERPENING, INC
CONSULTING ENGINEERS | LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

PM PEAK HOUR TURNING MOVEMENTS
Sunrise Blvd. & Edwards Rd.

84 Lumber

The following is a summary of the results of the Levels of Service for each approach and the overall intersection. A detailed analysis of each lane group in a graphical representation of the lane geometry for the each of the studied intersections can be found in the attached Appendix A for the Pre-Development conditions and Appendix B for the Post-Development Conditions. A summary of the intersection capacity is a follows:

Oleander Avenue and Edwards Road

A.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	C	C
Southbound	B	C
Eastbound	C	C
Westbound	C	C
Intersection	C	C

Oleander Avenue and Edwards Road

P.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	C	C
Southbound	C	C
Eastbound	C	C
Westbound	D	D
Intersection	C	C

Oleander Avenue and Bell Avenue

A.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	A	A
Southbound	A	A
Eastbound	C	C
Intersection	C	C

Oleander Avenue and Bell Avenue

A.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	A	A
Southbound	A	A
Eastbound	C	C
Intersection	C	C

Sunrise Boulevard and Bell Avenue

A.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	C	C
Southbound	C	C
Eastbound	B	B
Westbound	B	B
Intersection	C	C

Sunrise Boulevard and Bell Avenue

P.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	B	B
Southbound	C	C
Eastbound	B	B
Westbound	C	C
Intersection	B	C

Sunrise Boulevard and Edwards Road

A.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	C	C
Southbound	C	C
Eastbound	C	C
Westbound	B	B
Intersection	C	C

Sunrise Boulevard and Edwards Road

P.M. Peak Hour

Approach	W/ committed Pre-Development	Post-Development
Northbound	C	C
Southbound	C	C
Eastbound	B	B
Westbound	B	B
Intersection	C	C

Conclusion

The traffic impact of the proposed 84 Lumber truss plant will have a minimal effect on the levels of service within the project impact area. This report shows that the changes in the Level of Services are a function of the growth the study area will encounter through the 2013 horizon year and not a result of project traffic.

1. 84 Lumber will result in less than 2% impact on all links within the study area.

2. The following links will decrease in level of service from 2005 existing conditions to 2013 pre-development conditions as follows:

US Hwy No. 1	LOS Capacity	Existing Conditions		Pre-Development Conditions		Post-Development Conditions	
S. of Virginia Ave	49,200	35,600	C	45,611	D	45,627	D
N. of Midway Rd	53,500	37,922	B	48,575	C	48,585	C
S. of Midway Rd	53,500	41,322	B	52,960	D	52,990	D

3. The following links will decrease in the PM Peak Hour Directional level of service:

Bell Avenue	Pre-Development	Post-Development
E. of Sunrise Blvd. (E. of site)	C	D
E. of Sunrise Blvd. (W. of site)	C	D

4. The intersection of Sunrise Boulevard and Bell Avenue during the P.M. Peak Hour decreases in an overall Level of Service from B to C.

Submitted By:

Stefan K. Matthes, P.E.
Florida Reg. No. 38723

References

1. State of Florida Department of Transportation, Quality/Level of Service Handbook, 2002.

2. Transportation Engineers, Trip Generation, Seventh Edition, 2003.

3. St. Lucie Urban Area Metropolitan Planning Organization Traffic Counts, Spring 2005.

4. HCS + Highway Capacity Software.

5. Shadow Oaks, St. Lucie County, Traffic Impact Study, 2003.

6. Ravania, Pinder Troutman Consulting, Inc., Traffic Impact Studies, 2005.

7. St. Lucie County Cancer Center, Pinder Troutman Consulting, Inc., Traffic Impact Studies, 2004-2006.

Appendix A

Capacity Analysis Pre-Development

FULL REPORT

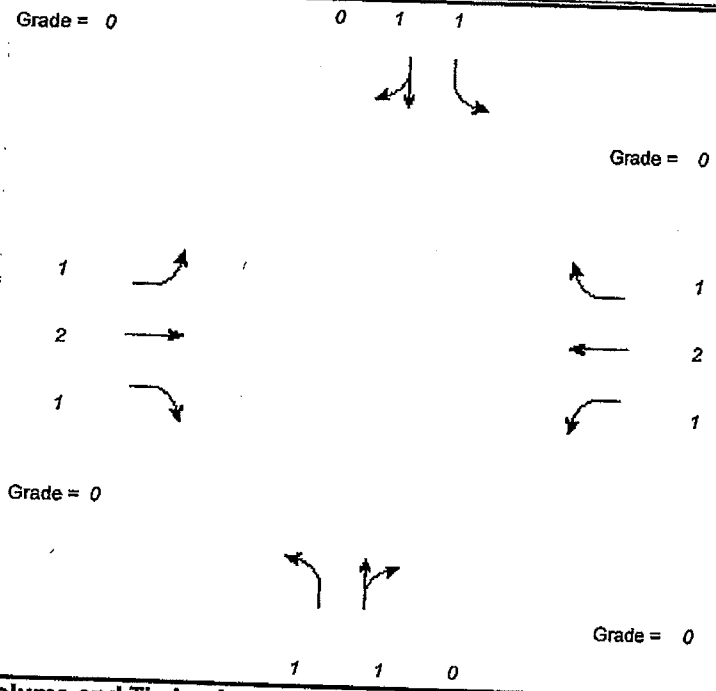
General Information

Analyst	KT
Agency or Co.	Ft. Pierce
Date Performed	4/12/2007
Time Period	AM Peak Hour

Site Information

Intersection	Oleander Ave & Edwards Rd
Area Type	CBD or Similar
Jurisdiction	FDOT
Analysis Year	2013

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	59	376	250	60	294	7	273	376	77	59	238	53
% Heavy Veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93	0.91	0.91	0.91
Actuated (P/A)	P	P	P	P	P	P	P	P	P	P	P	P
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival Type	3	3	3	3	3	3	3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	20	0	0	7	0	0	20	0	0	20
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking (Y or N)	N		N	N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0	0	0	0	0	0	0		0	0	
Pedestrian Timing	3.2			3.2			3.2			3.2		

	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 5.0	G = 15.7	G =	G =	G = 5.0	G = 34.3	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 80.0

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *84 Lumber AM Pre- Development*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	59	376	250	60	294	7	273	376	77	59	238	53
PHF	0.83	0.83	0.83	0.89	0.89	0.89	0.93	0.93	0.93	0.91	0.91	0.91
Adjusted Flow Rate	71	453	277	67	330	0	294	404	61	65	262	36
Lane Group	L	T	R	L	T	R	L	TR		L	TR	
Adjusted Flow Rate	71	453	277	67	330	0	294	465		65	298	
Proportion of LT or RT	1.000	–	1.000	1.000	–	1.000	1.000	–	0.131	1.000	–	0.121

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900		1900	1900	
Number of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
w	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
f_{HV}	0.952	0.952	0.952	0.952	0.952	0.952	0.952	0.952		0.952	0.952	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
f_a	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900		0.900	0.900	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	1.000		1.000	1.000	
f_{LT}	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–
Secondary f_{LT}	0.370	0.370	–	0.259	0.259	–	0.445	0.445	–	0.295	0.295	–
f_{RT}	–	1.000	0.850	–	1.000	0.850	–	0.980		–	0.982	
f_{Lpb}	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–
f_{Rpb}	–	1.000	1.000	–	1.000	1.000	–	1.000		–	1.000	
Adjusted Satflow	1547	3101	1384	1547	3101	1384	1547	1597		1547	1599	
Secondary Adjusted Satflow	602	1147	–	421	802	–	724	710	–	481	472	–

CAPACITY AND LOS WORKSHEET

General Information

Project Description *84 Lumber AM Pre- Development*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	TR		L	TR	
Adjusted Flow Rate	71	453	277	67	330	0	294	465		65	298	
Satflow Rate	1547	3101	1384	1547	3101	1384	1547	1597		1547	1599	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Green Ratio	0.32	0.20	0.81	0.32	0.20	0.81	0.55	0.43		0.55	0.43	
Lane Group Capacity	253	609	1125	206	609	1125	453	685		333	686	
v/c Ratio	0.28	0.74	0.25	0.33	0.54	0.00	0.65	0.68		0.20	0.43	
Flow Ratio	0.05	0.15	0.20	0.04	0.11	0.00	0.06	0.29		0.04	0.19	
Critical Lane Group	Y	Y	N	N	N	N	Y	Y		N	N	
Sum Flow Ratios	0.55											
Lost Time/Cycle	20.00											
Critical v/c Ratio	0.73											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	TR		L	TR	
Adjusted Flow Rate	71	453	277	67	330	0	294	465		65	298	
Lane Group Capacity	253	609	1125	206	609	1125	453	685		333	686	
v/c Ratio	0.28	0.74	0.25	0.33	0.54	0.00	0.65	0.68		0.20	0.43	
Green Ratio	0.32	0.20	0.81	0.32	0.20	0.81	0.55	0.43		0.55	0.43	
Uniform Delay d_1	19.6	30.3	1.8	19.9	28.9	1.4	15.5	18.4		10.0	16.0	
Delay Factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		0.50	0.50	
Incremental Delay d_2	2.2	6.5	0.4	3.3	2.8	0.0	5.7	4.3		1.0	1.6	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control Delay	21.8	36.8	2.2	23.2	31.7	1.4	21.2	22.7		11.1	17.6	
Lane Group LOS	C	D	A	C	C	A	C	C		B	B	
Approach Delay	23.5			30.3			22.1			16.5		
Approach LOS	C			C			C			B		
Intersection Delay	23.1			Intersection LOS						C		

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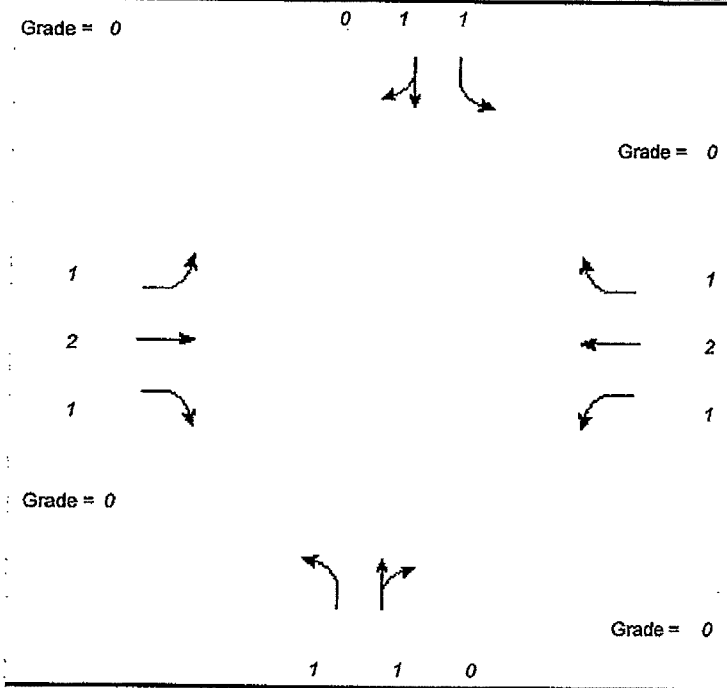
FULL REPORT

General Information		Site Information	
Analyst	KT	Intersection	Oleander Ave & Edwards Rd
Agency or Co.	Ft. Pierce	Area Type	CBD or Similar
Date Performed	4/12/2007	Jurisdiction	FDOT
Time Period	PM Peak Hour	Analysis Year	2013

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	78	374	312	89	433	22	328	395	72	51	419	77
% Heavy Veh	5	5	5	5	5	5	5	5	5	5	5	5
PHF	0.88	0.88	0.88	0.85	0.85	0.85	0.94	0.94	0.94	0.91	0.91	0.91
Actuated (P/A)	A	P	P	A	P	P	A	A	A	A	A	A
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival Type	3	3	3	3	3	3	3	3		3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	20	0	0	7	0	0	20	0	0	20
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking (Y or N)	N		N	N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0	0	0	0	0	0	0		0	0	
Pedestrian Timing	3.2			3.2			3.2			3.2		

	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 5.0	G = 20.0	G =	G =	G = 12.0	G = 43.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 100.0		