

March 27, 2015



Mr. Steve Peterie
 O'Reilly Automotive Stores, Inc.
 233 S. Patterson
 Springfield, MO 65802

Cardno
 12481 Telecom Drive
 Tampa, FL 33637
 USA
 Phone: +1 813 221 0048
 www.cardno.com

RE: Fort Pierce Traffic Analysis – Okeechobee Road and S. 27th Street

Dear Mr. Peterie:

Cardno has revised the traffic analysis for the O'Reilly Auto Parts store proposed at the northeast corner of Okeechobee Road and S. 27th Street in Ft. Pierce, Florida based on reviewers' comments. The 7,941 square foot store has a build-out year of 2015. The traffic analysis based on the site plan that includes three driveways; two on Okeechobee Road and one on S. 27th Street is as follows:

TRIP GENERATION ANALYSIS

The trip generation analysis was conducted utilizing the equations found in the Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition for land use code (LUC) 843: Automobile Parts Sales. It is anticipated that 493 daily trips, 18 AM peak-hour trips (9 inbound, 9 outbound) and 48 PM peak-hour trips (24 inbound, 24 outbound) will be generated by the project. A summary of the daily, AM and PM peak-hour trip generation is included in **Table 1**. The ITE Trip Generation information is provided in **Appendix A**.

Table 1 O'Reilly Auto Parts Trip Generation										
LUC	Land Use Type	Size	Units	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
843	Automobile Parts Sales	7,941	SF	493	18	9	9	48	24	24

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The previous land use at this site included a 4,800 square foot printing services building. Based on ITE land use code 920, Copy Print and Express Ship Store, 12 AM peak hour and 36 PM peak hour trips would have been generated for this land use. These trips account for approximately 67% and 75% of the AM/PM peak hour trips to be generated with the O'Reilly store.

SITE ACCESS

Access/egress for the site is proposed via three driveways; two full-access and one right-in, right-out driveway. The full access driveway on Okeechobee Road is proposed at the median opening east of S. 27th Street and will include the provision of a new eastbound left-turn lane into the site. The right-in, right-out driveway is located closer to the intersection with a raised median and the full access driveway on S. 27th Street is offset from the driveway on the west side of S. 27th Street.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution and project assignment utilized in the study were determined based upon the existing travel patterns within the study area. A review of available existing annual average daily traffic (AADT) information from the St. Lucie Transportation Planning Organization *Traffic Counts and Level of Service (LOS) Report for Fall 2014* provided data for Okeechobee Road and the surrounding roadways of 25th Street, 33rd Street, 35th Street and Georgia Avenue for the half-mile radius area of influence between 35th Street and 21st Street. Additionally, traffic counts were conducted for S. 27th Street to determine the percent distribution expected for that driveway access. The proposed trip distribution and project trips assigned to the three driveways and surrounding roadway for the AM and PM peak periods are shown in **Figures 1 and 2**, respectively. The traffic data is included in **Appendix B**.

ROADWAY CAPACITY ANALYSIS

Per the latest Comprehensive Plan, *the County wishes to maintain a LOS D or better for all Non-SIS roadways but recognizes that allowing a LOS E for non-state arterial roadways allows development to proceed while a minimum of LOS D might cause severe constraints on private development. Therefore, the County has adopted a minimum LOS E for all non-state arterial roadways.* The following summarizes the 2014 AM/PM Peak Hour Peak Direction LOS for the surrounding roadways as provided in the Level of Service Report from the St Lucie TPO:

- Okeechobee Road – 35th Street to 33rd Street: C/C
- Okeechobee Road – 33rd Street to 25th Street: C/C
- Okeechobee Road – 25th Street to Georgia Avenue: D/C
- Okeechobee Road – Georgia Avenue to Delaware Avenue: D/C
- Georgia Avenue – 25th Street to Okeechobee Road: C/C
- 25th Street – Nebraska Avenue to Okeechobee Road: C/C
- 25th Street – Okeechobee Road to Georgia Avenue: D/D
- 33rd Street – Okeechobee Road to Delaware Avenue: D/C
- 35th Street – Virginia Avenue to Okeechobee Road: C/C

Based on the traffic counts collected on November 13, 2014, the 24-hour volume on S. 27th Street is 2,397 vehicles per day at LOS B. The AM and PM peak hour volumes are 234 and 315 vehicles per hour, respectively. S. 27th Street is expected to continue to operate at LOS B with the additional 4 project trips during the AM peak hour and 10 during the PM peak hour.

Okeechobee Road is a four-lane divided roadway in the vicinity of the project site and primarily operates at LOS C during the AM and PM peak hours based on the latest traffic counts provided by St. Lucie County Transportation Planning Organization. The section of Okeechobee Road east of 25th Street operates at LOS D during the AM peak hour and the project is expected to generate 1 eastbound trip and 1 westbound trip in this section. In consideration of the prior land use at this site and the O'Reilly trips of 14 AM peak hour trips and 38 PM peak hour trips added to Okeechobee Road, the roadways within the area of influence are expected to experience minimal impact with this project. The impacts do not warrant further analysis.

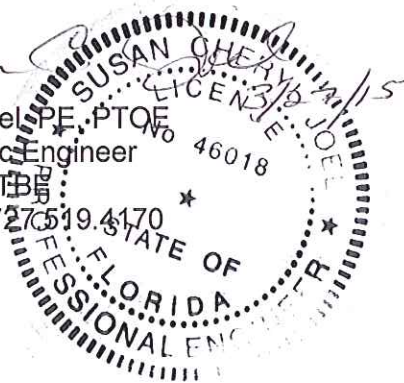
CONCLUSION

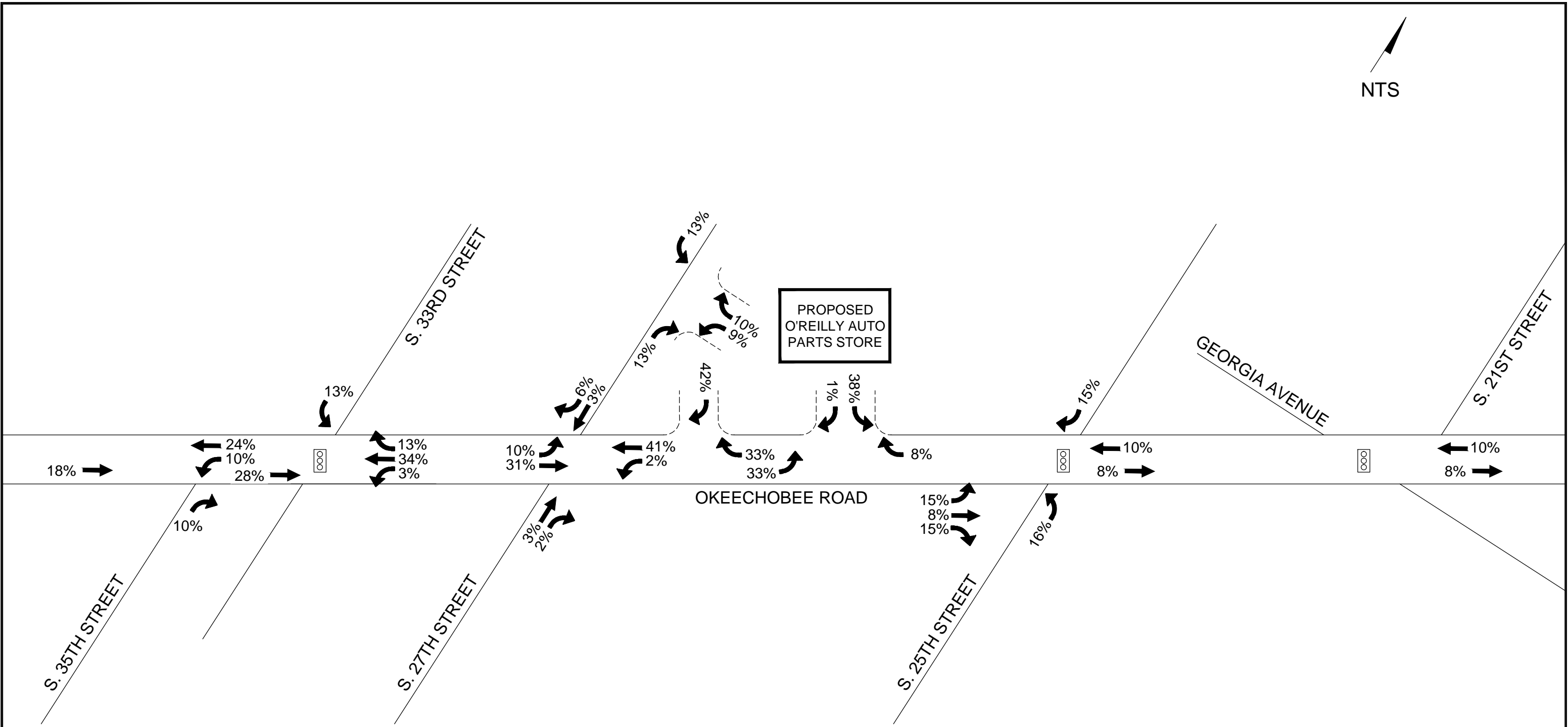
Based on the data collected and analysis, the proposed development is expected to result in minimal impact to the surrounding roadway network and meet the County's LOS standards as adopted in the latest Comprehensive Plan.

Sincerely,



Susan C. Joel
Senior Traffic Engineer
For Cardno
Direct Line 727-519-4170





PROJECT: O'REILLY AUTO PARTS
CITY, COUNTY: FT. PIERCE, ST. LUCIE COUNTY

PERCENT PROJECT DISTRIBUTION

FIGURE 1

FILE: J:\JOB\100334\10033400146\ACAD\Vicinity.dwg LAST SAVED: Fri, 03/27/15-2:11p PLOTTED: Fri, 03/27/15-2:45p BY: Howard.Holley

APPENDIX A TRIP GENERATION

O'Reilly Auto Parts
 Location: Okeechobee Road and S 27th Street
 Fort Pierce, Florida

ITE Trip Generation (9th edition)

LUC 843 pg. 1604

Auto Parts Sales

Size: 7941 SF

Average Vehicle Trip Ends per 1,000 SF Gross Floor Area (ITE 9th Edition)

LUC 843 Daily :

Avg. Rate = 61.91	491.6273 Trips	
Eqn: T=81.02(X)-150.75	492.6298 Trips	493

AM Peak Hour:

Avg. Rate = 2.21	17.54961 Trips	
Eqn: T=2.76(X)-4.34	17.57716 Trips	18

PM Peak Hour:

Avg. Rate = 5.98	47.48718 Trips	
Eqn: T=7.87(X)-14.86	47.63567 Trips	48

PM Peak Hour :		
49% Entering	23.52	24
51% Exiting	24.48	24
	48	48

AM Peak Hour :		
51% Entering	9.18	9
49% Entering	8.82	9
	18	18

APPENDIX B
TRAFFIC COUNT DATA



Traffic Counts and Level of Service Report Fall 2014

Roadway Name	Location	AADT	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
				Volume	LOS	V/C	Volume	LOS	V/C
25TH ST	BELL AVE to EDWARDS RD	19,518	2,100	1,152	C	0.573	1,078	C	0.536
25TH ST	EDWARDS RD to CORTEZ BLVD	21,685	2,000	1,382	C	0.724	1,378	C	0.721
25TH ST	CORTEZ BLVD to VIRGINIA AVE	21,500	2,000	1,193	C	0.625	1,332	C	0.697
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	21,603	2,000	1,239	C	0.649	1,110	C	0.581
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	21,603	2,000	1,239	C	0.649	1,110	C	0.581
25TH ST	OKEECHOBEE RD to GEORGIA AVE	19,500	1,630	972	D	0.596	952	D	0.584
25TH ST	GEORGIA AVE to DELAWARE AVE	19,500	1,630	972	D	0.596	952	D	0.584
25TH ST	DELAWARE AVE to ORANGE AVE	19,013	1,630	990	D	0.607	984	D	0.604
25TH ST	ORANGE AVE to AVENUE D	15,000	1,630	701	C	0.960	682	C	0.934
25TH ST	AVENUE D to AVENUE Q	14,989	1,630	789	D	0.484	767	D	0.471
25TH ST	AVENUE Q to JUANITA AVE	13,026	2,000	736	C	0.385	674	C	0.353
25TH ST	JUANITA AVE to ST LUCIE BLVD	12,563	2,100	681	C	0.339	639	C	0.318
25TH ST	ST LUCIE BLVD to US 1	5,382	2,100	309	C	0.154	345	C	0.172
33RD ST	OKEECHOBEE RD to DELAWARE AVE	5,467	640	351	D	0.548	293	C	0.916
33RD ST	DELAWARE AVE to ORANGE AVE	8,000	710	0	B	0.000	0	B	0.000
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	6,600	510	370	D	0.725	399	D	0.782
35TH ST	CORTEZ BLVD to VIRGINIA AVE	6,600	710	370	D	0.521	399	D	0.562
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	4,267	640	274	C	0.856	278	C	0.869
53RD ST	ANGLE RD to JUANITA AVE	2,333	510	131	C	0.524	134	C	0.536
AE BACKUS AVE	7TH ST to US 1	800	640	61	C	0.191	72	C	0.225
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	16,500	1,890	874	C	0.486	824	C	0.458
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	16,500	1,890	874	C	0.486	824	C	0.458
AIROSO BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	14,000	1,890	710	C	0.394	707	C	0.393
AIROSO BLVD	PRIMA VISTA BLVD to FLORESTA DR	12,000	1,800	648	C	0.377	699	C	0.406
AIROSO BLVD	FLORESTA DR to ST JAMES DR	17,000	1,890	1,045	C	0.581	929	C	0.516
ANGLE RD	ORANGE AVE to AVENUE D	8,300	710	482	D	0.679	442	D	0.623
ANGLE RD	AVENUE D to AVENUE Q	8,300	510	482	D	0.945	442	D	0.867
ANGLE RD	AVENUE Q to 53RD ST	6,200	510	410	D	0.804	337	D	0.661
ANGLE RD	53RD ST to KEEN RD	4,033	590	264	C	0.471	237	C	0.423

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic

Traffic Counts and Level of Service Report Fall 2014

Roadway Name	Location	AADT	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
				Volume	LOS	V/C	Volume	LOS	V/C
GATLIN BLVD	SAVAGE BLVD to ROSSER BLVD	39,000	2,850	2,935	F	1.030	2,392	C	0.860
GATLIN BLVD	ROSSER BLVD to SAVONA BLVD	39,000	2,850	2,935	F	1.030	2,392	C	0.860
GATLIN BLVD	SAVONA BLVD to PORT ST LUCIE BLVD	39,000	2,850	2,935	F	1.030	2,392	C	0.860
GEORGIA AVE	25TH ST to OKEECHOBEE RD	4,167	510	230	C	0.920	228	C	0.912
GEORGIA AVE	OKEECHOBEE RD to 17TH ST	4,167	640	230	C	0.719	228	C	0.713
GEORGIA AVE	17TH ST to 13TH ST	4,350	510	257	D	0.504	242	C	0.968
GEORGIA AVE	13TH ST to 7TH ST	1,825	510	106	C	0.424	119	C	0.476
GEORGIA AVE	7TH ST to US 1	1,964	510	119	C	0.476	123	C	0.492
GILSON RD	MARTIN C.L. to BECKER RD	9,200	640	833	F	1.225	849	F	1.249
GILSON RD	BECKER RD to LAKERIDGE DR	9,200	510	833	F	1.543	849	F	1.572
GLADES CUT-OFF RD	RANGE LINE RD to RESERVE BLVD	2,100	800	176	B	0.629	195	B	0.696
GLADES CUT-OFF RD	RESERVE BLVD to COMMERCE CENTER DR	2,768	1,020	375	C	0.521	325	B	0.903
GLADES CUT-OFF RD	CARLTON RD to RANGE LINE RD	2,100	290	176	C	0.607	195	C	0.672
GLADES CUT-OFF RD	COMMERCE CENTER DR to MIDWAY RD	2,290	830	174	C	0.223	159	C	0.204
GLADES CUT-OFF RD	MIDWAY RD to JENKINS RD	6,652	710	445	D	0.627	397	D	0.559
GLADES CUT-OFF RD	JENKINS RD to SELVITZ RD	4,913	830	301	C	0.386	272	C	0.349
GRAHAM RD	KINGS HWY to JENKINS RD	3,500	590	241	C	0.430	210	C	0.375
GREEN RIVER PKWY	MARTIN C.L. to CHARLESTON DR	3,635	800	253	B	0.904	231	B	0.825
GREEN RIVER PKWY	CHARLESTON DR to MELALEUCA BLVD	3,635	800	253	B	0.904	231	B	0.825
GREEN RIVER PKWY	MELALEUCA BLVD to WALTON RD	3,635	800	253	B	0.904	231	B	0.825
HARTMAN RD	OKEECHOBEE RD to PETERSON RD	5,900	640	433	D	0.677	374	D	0.584
HARTMAN RD	PETERSON RD to DELAWARE AVE	5,900	510	433	D	0.849	374	D	0.733
HARTMAN RD	DELAWARE AVE to ORANGE AVE	5,900	710	433	D	0.610	374	D	0.527
HEADER CANAL RD	OKEECHOBEE RD to ORANGE AVE	450	500	32	B	0.200	30	B	0.188
HILLMOOR DR	US 1 to LENNARD RD	3,350	710	213	C	0.609	250	C	0.714
I-95	GATLIN BLVD to ST LUCIE WEST BLVD	72,983	4,580	3,737	C	0.816	3,376	C	0.737
I-95	ST LUCIE WEST BLVD to MIDWAY RD	54,912	4,580	3,088	B	0.919	2,663	B	0.793
I-95	MIDWAY RD to OKEECHOBEE RD	65,849	4,580	3,975	C	0.868	3,227	B	0.960
I-95	OKEECHOBEE RD to ORANGE AVE	45,500	7,320	1,822	B	0.405	1,894	B	0.421

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic

Traffic Counts and Level of Service Report Fall 2014

Roadway Name	Location	AADT	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
				Volume	LOS	V/C	Volume	LOS	V/C
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	21,378	4,170	966	C	0.232	1,019	C	0.244
OKEECHOBEE RD	CROSSROADS PKWY to I-95	20,245	4,170	875	C	0.210	894	C	0.214
OKEECHOBEE RD	I-95 to JENKINS RD	29,342	4,240	1,917	C	0.460	1,658	C	0.398
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	29,342	4,040	1,917	C	0.483	1,658	C	0.418
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	31,097	3,170	1,702	C	0.551	1,776	C	0.575
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	10,167	1,890	547	C	0.304	604	C	0.336
OKEECHOBEE RD	HARTMAN RD to 35TH ST	10,167	1,470	547	C	0.829	604	C	0.915
OKEECHOBEE RD	35TH ST to 33RD ST	9,667	1,470	520	C	0.788	540	C	0.818
OKEECHOBEE RD	33RD ST to 25TH ST	9,667	1,470	520	C	0.788	540	C	0.818
OKEECHOBEE RD	25TH ST to GEORGIA AVE	11,667	1,470	720	D	0.490	653	C	0.989
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	11,667	1,540	720	D	0.468	653	C	0.946
OLD DIXIE HWY	US 1 to SR A1A NORTH	4,500	710	337	C	0.963	340	C	0.971
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	2,700	640	0	B	0.000	0	B	0.000
OLD DIXIE HWY	ST LUCIE BLVD to INDRIIO RD	1,842	710	137	C	0.391	101	C	0.289
OLD DIXIE HWY	INDRIIO RD to INDIAN RIVER C.L.	1,400	780	0	B	0.000	0	B	0.000
OLEANDER AVE	BEACH AVE to KITTERMAN RD	2,600	510	134	C	0.536	167	C	0.668
OLEANDER AVE	KITTERMAN RD to MIDWAY RD	5,200	640	379	D	0.592	341	D	0.533
OLEANDER AVE	MIDWAY RD to WEATHERBEE RD	7,689	640	460	D	0.719	464	D	0.725
OLEANDER AVE	WEATHERBEE RD to BELL AVE	7,689	510	460	D	0.902	464	D	0.910
OLEANDER AVE	BELL AVE to FARMER'S MARKET RD	6,713	510	338	D	0.663	351	D	0.688
OLEANDER AVE	FARMER'S MARKET RD to EDWARDS RD	6,713	640	338	D	0.528	351	D	0.548
OLEANDER AVE	EDWARDS RD to WISTERIA AVE	9,378	640	512	D	0.800	465	D	0.727
OLEANDER AVE	WISTERIA AVE to GARDENIA AVE	9,378	510	512	E	0.948	465	D	0.912
OLEANDER AVE	GARDENIA AVE to VIRGINIA AVE	9,378	710	512	D	0.721	465	D	0.655
OLEANDER AVE	VIRGINIA AVE to SUNRISE BLVD	3,864	510	215	C	0.860	218	C	0.872
ORANGE AVE	OKEECHOBEE C.L. to SNEED RD	4,637	290	280	C	0.966	266	C	0.917
ORANGE AVE	SNEED RD to HEADER CANAL RD	4,637	290	280	C	0.966	266	C	0.917
ORANGE AVE	SHINN RD to CAMPBELL RD	2,297	280	0	B	0.000	0	B	0.000
ORANGE AVE	CAMPBELL RD to KINGS HWY	2,297	1,020	0	B	0.000	0	B	0.000

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic

Traffic Survey Specialists, Inc. 624 Gardenia Terrace
 Delray Beach, Florida 33444 Phone (561) 272-3255
 Volume Report with 24 Hour Totals

 Data File : D1113001.PRN
 Station : 000000111101
 Identification : 000210521008 Interval : 15 minutes
 Start date : Nov 13, 14 Start time : 00:00
 Stop date : Nov 13, 14 Stop time : 24:00
 City/Town : Ft Pierce, Florida County : St Lucie
 Location : S 27 Street North of Okeechobee Road

Nov 13 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	3	1	0	0	0	6	15	21	7	14	7
30	3	0	1	0	0	1	7	33	36	11	5	9
45	0	0	1	1	0	3	12	19	16	8	13	12
00	0	1	0	0	4	4	16	19	26	13	11	8
Hr Total	6	4	3	1	4	8	41	86	99	39	43	36

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	6	21	16	8	18	28	21	14	8	4	2	3
30	9	8	13	17	26	30	26	9	9	10	5	2
45	11	13	14	22	37	26	17	7	3	8	2	5
00	9	14	11	26	30	32	11	12	4	2	1	2
Hr Total	35	56	54	73	111	116	75	42	24	24	10	12

24 Hour Total : 1002
 AM peak hour begins : 08:00 AM peak volume : 99 Peak hour factor : 0.69
 PM peak hour begins : 16:30 PM peak volume : 125 Peak hour factor : 0.84

Nov 13 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	1	1	0	3	9	26	20	23	13	10
30	1	2	0	1	0	5	20	31	32	14	19	13
45	0	0	1	0	4	4	23	45	48	11	11	6
00	0	0	0	1	4	10	22	35	35	19	12	23
Hr Total	3	3	2	3	8	22	74	137	135	67	55	52

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	15	21	17	15	31	52	26	12	9	5	4	5
30	10	17	8	26	32	49	19	5	11	5	3	0
45	14	10	20	29	47	55	19	11	9	6	1	2
00	15	19	20	43	42	37	12	12	6	4	3	1
Hr Total	54	67	65	113	152	193	76	40	35	20	11	8

24 Hour Total : 1395
 AM peak hour begins : 08:15 AM peak volume : 138 Peak hour factor : 0.72
 PM peak hour begins : 16:45 PM peak volume : 198 Peak hour factor : 0.90

Traffic Survey Specialists, Inc. 624 Gardenia Terrace
 Delray Beach, Florida 33444 Phone (561) 272-3255
 Volume Report with 24 Hour Totals

Data File : D1113001.PRN
 Station : 000000111101
 Identification : 000210521008 Interval : 15 minutes
 Start date : Nov 13, 14 Start time : 00:00
 Stop date : Nov 13, 14 Stop time : 24:00
 City/Town : Ft Pierce, Florida County : St Lucie
 Location : S 27 Street North of Okeechobee Road

Nov 13 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	4	2	1	0	3	15	41	41	30	27	17
30	4	2	1	1	0	6	27	64	68	25	24	22
45	0	0	2	1	4	7	35	64	64	19	24	18
00	0	1	0	1	8	14	38	54	61	32	23	31
Hr Total	9	7	5	4	12	30	115	223	234	106	98	88

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	21	42	33	23	49	80	47	26	17	9	6	8
30	19	25	21	43	58	79	45	14	20	15	8	2
45	25	23	34	51	84	81	36	18	12	14	3	7
00	24	33	31	69	72	69	23	24	10	6	4	3
Hr Total	89	123	119	186	263	309	151	82	59	44	21	20

24 Hour Total : 2397
 AM peak hour begins : 08:00 AM peak volume : 234 Peak hour factor : 0.86
 PM peak hour begins : 16:30 PM peak volume : 315 Peak hour factor : 0.94
