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January 5, 2015

VIA E-MAIL

Mr. Chuck Borysiak, Development Manager
The Hutton Company
736 Cherry Street
Chattanooga, TN 37402

RE: **Family Dollar Fort Pierce Traffic Analysis**
McMahon Project No. N13565.01

PRINCIPALS
Joseph W. McMahon, P.E.
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ASSOCIATES
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Matthew M. Kozsuch, P.E.

Dear Mr. Borysiak:

McMahon Associates, Inc. (McMahon) has completed a traffic analysis for De minimis exemption for a parcel of land located at 1210 S. 25th Street, in Fort Pierce. The site is currently vacant. The proposed development, with an anticipated buildout year of 2014, will include an 8,320 square-foot Family Dollar. The De minimis impact analysis is per Section 22-218(b)(2) of the City Code.

Trip Generation Analysis

Using trip generation information obtained from the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 9th Edition, trip generation estimates were developed for the proposed development. A pass-by rate was not available from ITE for Land Use 814 Variety Store. Therefore, the pass-by capture rate for the proposed land use was based on the pass-by rate for Land Use 815 Free Standing Discount Store. The trip generation analysis, summarized in **Table 1**, indicates that the proposed development is anticipated to result in 442 new daily trips, 27 new AM peak hour trips and 47 new PM peak hour trips. Excerpts from ITE are attached in **Appendix A**.

Site Access

Access to the site is proposed via one (1) full access driveway connection to each of the following roadways: S. 25th Street, Mississippi Avenue and Ormond Avenue.

Project Distribution and Assignment

The project trip distribution for the proposed development, graphically depicted on **Figure 1**, was based on a review of the surrounding roadway network volumes and land uses. Driveway volumes, shown on Figure 1, were assigned to the driveway connections based on the trip generation and trip distribution analyses.

TABLE 1
TRIP GENERATION ANALYSIS
FAMILY DOLLAR FORT PIERCE TRAFFIC ANALYSIS

DAILY													
LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS		PASS-BY ⁽²⁾	NEW TRIPS				
						IN	OUT		IN	OUT	TOTAL		
PROPOSED USE	814	SF	T = 64.03 (X)	50%	50%	267	266	533	91	17.00%	221	221	442
Variety Store ⁽³⁾													
AM PEAK HOUR													
LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS		PASS-BY ⁽²⁾	NEW TRIPS				
						IN	OUT		IN	OUT	TOTAL		
PROPOSED USE	814	SF	T = 3.81 (X)	50%	50%	16	16	32	5	17.00%	14	13	27
Variety Store ⁽³⁾													
PM PEAK HOUR													
LAND USE	ITE CODE	INTENSITY	TRIP GENERATION RATE ⁽¹⁾	IN	OUT	TOTAL TRIPS		PASS-BY ⁽²⁾	NEW TRIPS				
						IN	OUT		IN	OUT	TOTAL		
PROPOSED USE	814	SF	T = 6.82 (X)	50%	50%	29	28	57	10	17.00%	24	23	47
Variety Store ⁽³⁾													



(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 9th Edition.
(2) Pass-by rate for LU 814 based on Pass-by rate for LU 815 since no information is provided for LU 814.
(3) IN/OUT split for AM and PM peak hours based on daily IN/OUT split since no information is provided for the peak hours.

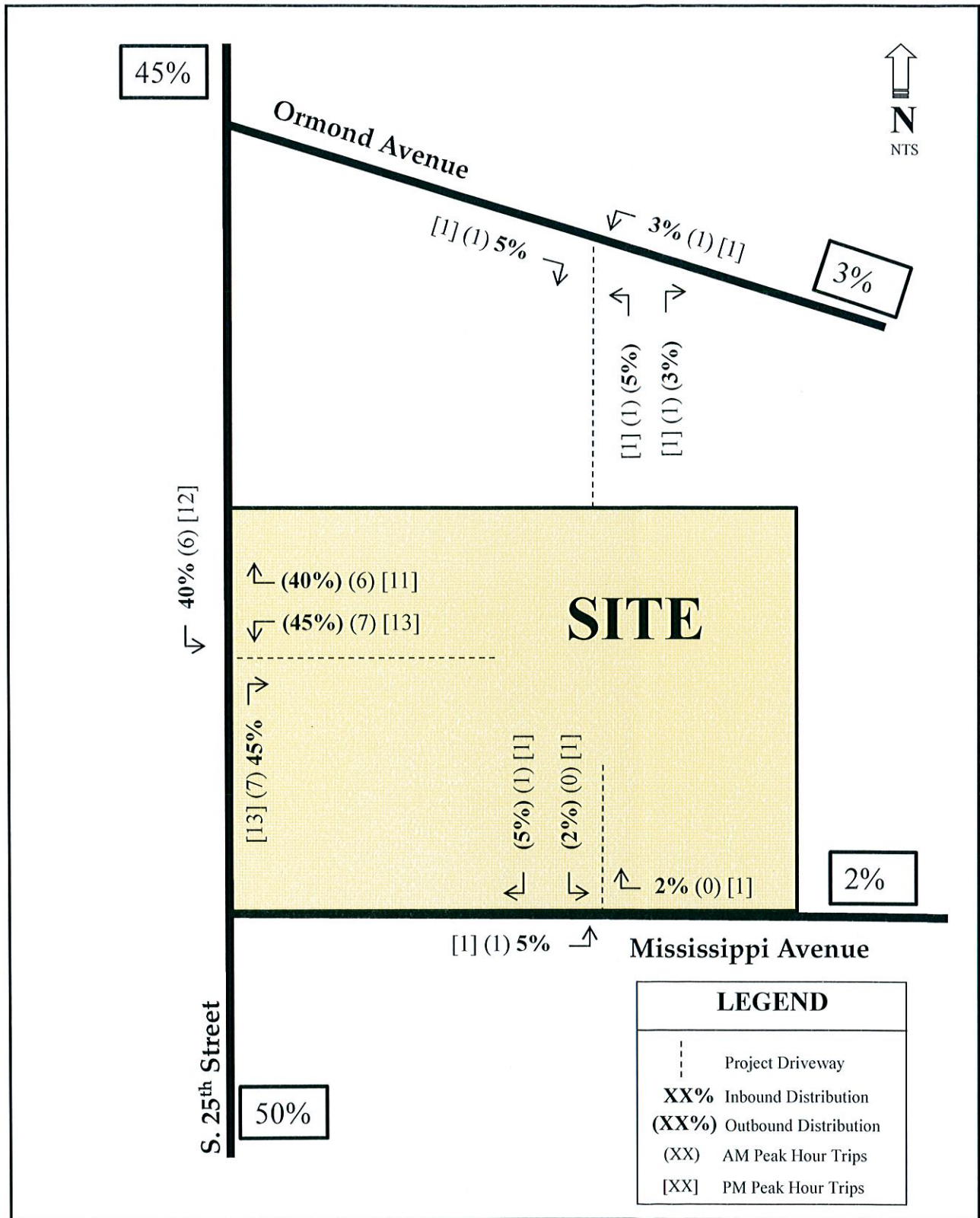


Figure 1
 Project Distribution and Driveway Traffic Volumes
Family Dollar Fort Pierce Traffic Analysis
 Fort Pierce, Florida

Significance Analysis

S. 25th Street is a four-lane, undivided roadway with a center two-way, left-turn lane. The peak-hour, peak-direction, service capacity for S. 25th Street between Nebraska Avenue and Okeechobee Road is 1,770 based on the *Traffic Counts and Level of Service Report Fall 2013*, obtained from the St. Lucie Transportation Planning Organization (TPO). Based on the trip generation and project distribution analyses, the maximum peak-hour, peak-direction project trips is 13 vehicles. This equates to a significance of 0.7 percent (13/1,770). Therefore, the project would not affect more than one percent of the maximum volume at the adopted level of service, thereby meeting the requirement under Section 22-218(b)(2)a of the City Code. Excerpts from the St. Lucie TPO are attached in **Appendix B**.

Roadway Capacity Analysis

S. 25th Street between Nebraska Avenue and Okeechobee Road currently operates at Level of Service C during both the AM and PM peak hours based on the *Traffic Counts and Level of Service Report Fall 2013*, obtained from the St. Lucie TPO. With the addition of project trips, S. 25th Street will continue to operate at an acceptable level of service. Therefore, the existing plus project volumes are not expected to exceed 110 percent of the maximum volume at the adopted level of service, thereby meeting the requirement under Section 22-218(b)(2)b of the City Code.

Hurricane Evacuation Route

S. 25th Street is not designated as a Hurricane Evacuation Route on the *Hurricane Surge Zones and Evacuation Routes* map obtained from the City of Fort Pierce. Therefore, the requirement under Section 22-218(b)(2)c of the City Code is met.

Conclusion

Based on the analysis contained herein, the proposed development meets all the requirements listed under Section 22-218(b)(2) for a De minimis impact exemption.



State of Florida, Board of Professional Engineers
Certificate of Authorization No. 4908

Attachments

APPENDIX A

TRIP GENERATION INFORMATION

Variety Store (814)

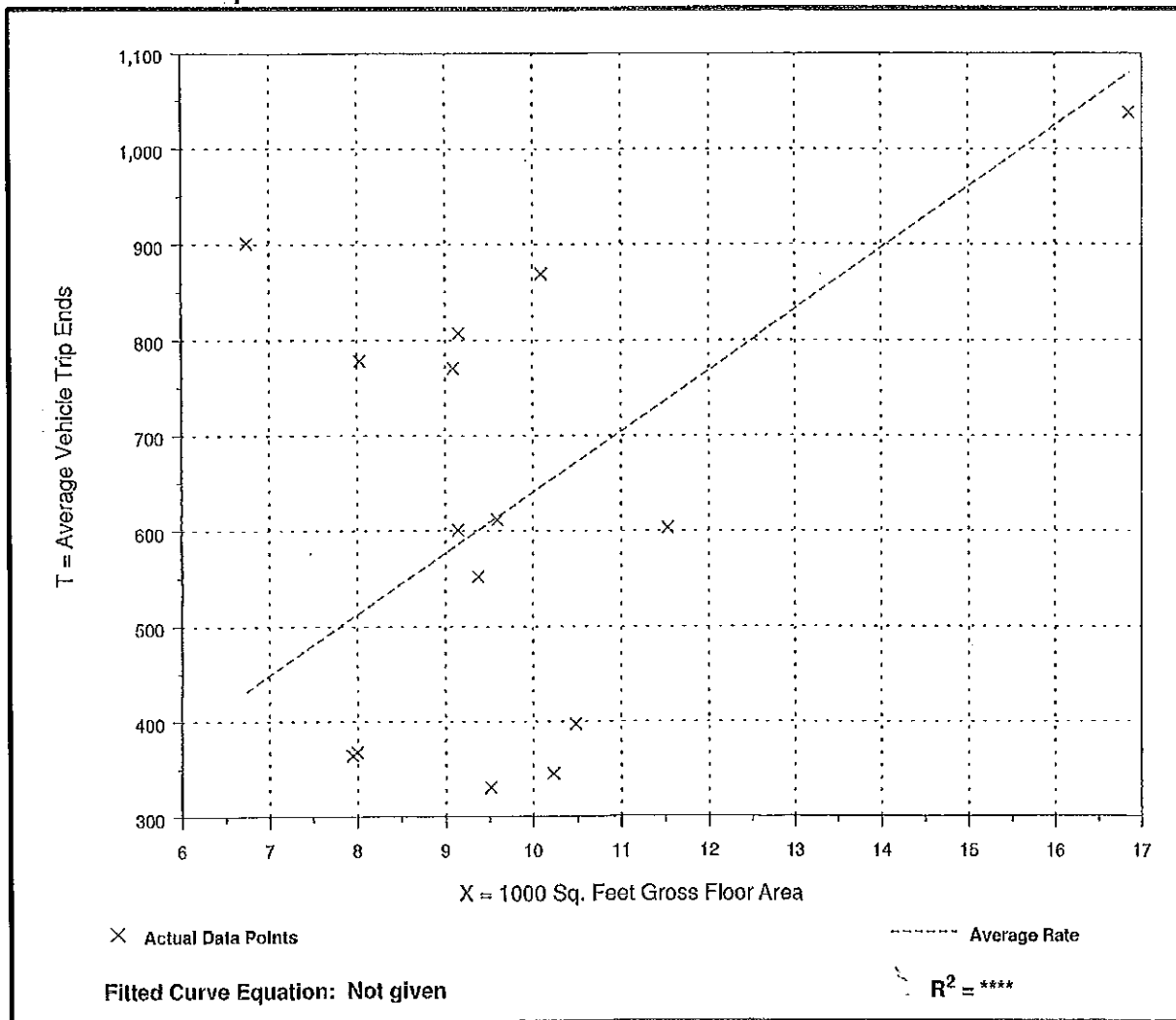
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday

Number of Studies: 15
Average 1000 Sq. Feet GFA: 10
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
64.03	33.73 - 133.60	25.69

Data Plot and Equation



Variety Store (814)

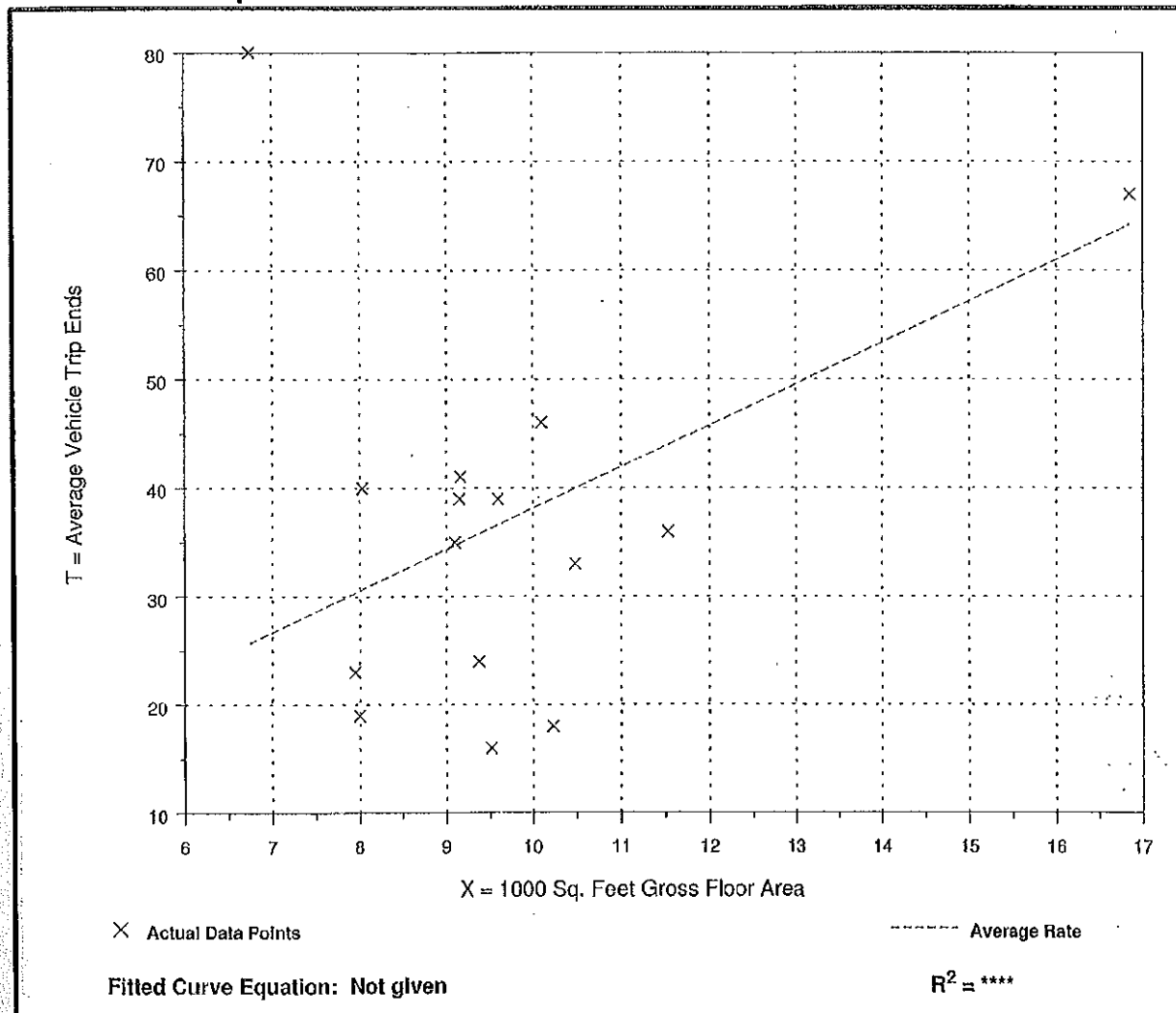
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

Number of Studies: 15
 Average 1000 Sq. Feet GFA: 10
 Directional Distribution: Not available

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
3.81	1.68 - 11.86	2.74

Data Plot and Equation



Variety Store (814)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

Number of Studies: 15
 Average 1000 Sq. Feet GFA: 10
 Directional Distribution: Not available

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
6.82	3.15 - 13.94	3.80

Data Plot and Equation

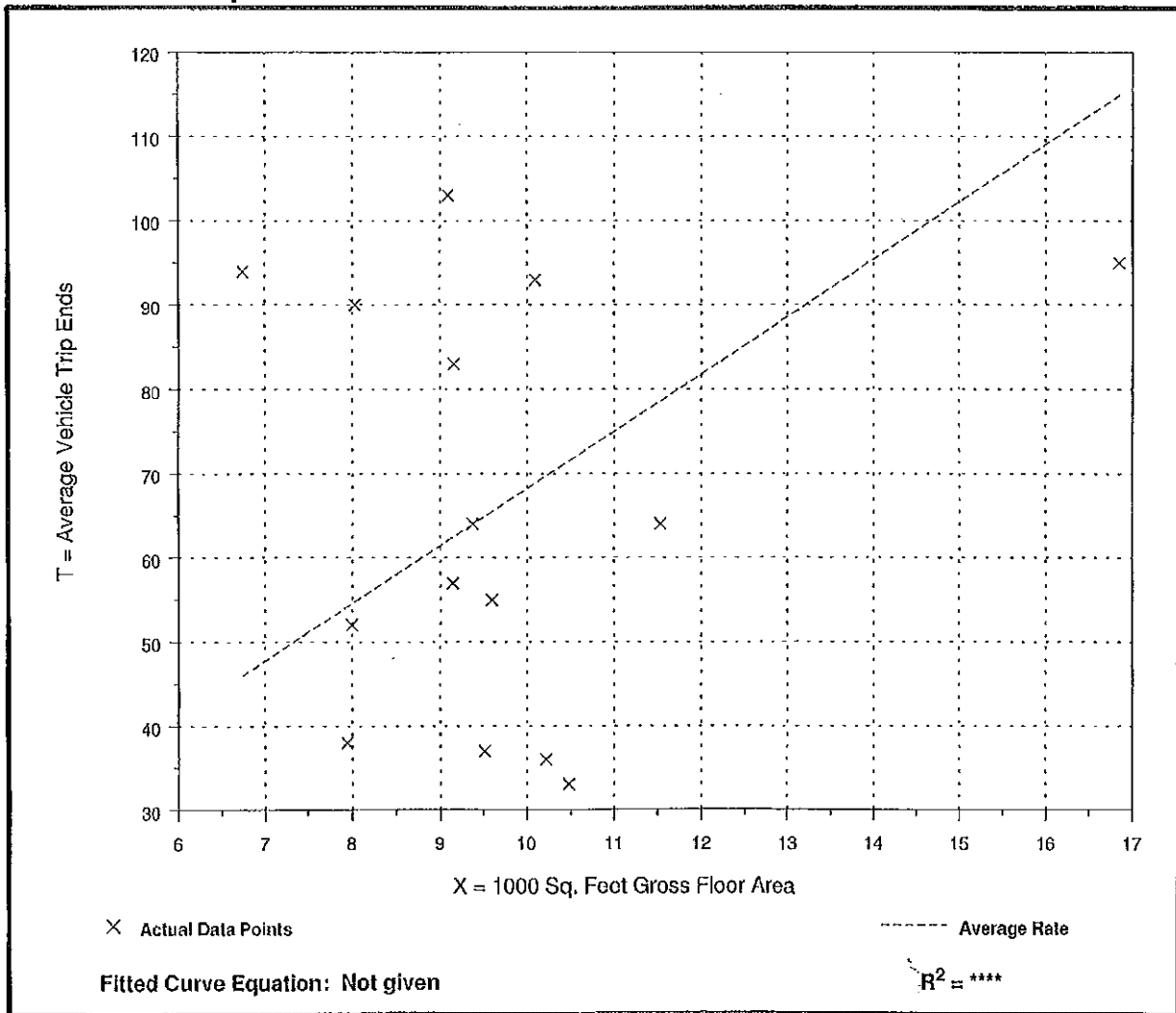


Table 5.3
Pass-By Trips and Diverted Linked Trips
Weekday, p.m. Peak Period
Land Use 815—Free-Standing Discount Store

SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PRIMARY TRIP (%)	NON-PASS- BY TRIP (%)	DIVERTED LINKED TRIP (%)	PASS-BY TRIP (%)	ADJ. STREET PEAK-HOUR VOLUME	SOURCE
116	Auburn, NY	Nov. 1994	80	4:00-6:00 p.m.	33.8	—	37.4	28.8	1,490	Bergmann Associates
116	Fredonia, NY	Nov. 1994	80	4:00-6:00 p.m.	46.3	—	30.0	23.7	1,620	Bergmann Associates
122	Marlton, NJ	Nov. 1994	73	4:15-5:15 p.m.	50.7	—	27.4	21.9	1,360	Raymond Keyes Assoc.
127	Marlton, NJ	Nov. 1994	28	4:00-5:00 p.m.	21.8	—	39.1	39.1	1,410	Raymond Keyes Assoc.
127	Toms River, NJ	Nov. 1994	137	4:00-5:00 p.m.	46.0	—	40.9	13.1	1,430	Raymond Keyes Assoc.
128	Toms River, NJ	Nov. 1994	89	4:00-5:00 p.m.	60.7	—	32.6	6.7	1,290	Raymond Keyes Assoc.
128	Brick, NJ	Nov. 1994	48	4:15-5:15 p.m.	41.7	—	50.0	8.3	2,560	Raymond Keyes Assoc.
128	Brick, NJ	Nov. 1994	56	4:00-5:00 p.m.	46.4	—	39.3	14.3	2,550	Raymond Keyes Assoc.
126	Berlin, NJ	Feb. 1994	45	4:30-5:30 p.m.	75.5	—	17.8	6.7	1,230	Raymond Keyes Assoc.
126	Berlin, NJ	Feb. 1994	95	4:00-5:00 p.m.	61.0	—	37.9	1.1	1,430	Raymond Keyes Assoc.
133	Mays Landing, NJ	Feb. 1994	22	4:00-5:00 p.m.	81.8	—	9.1	9.1	3,640	Raymond Keyes Assoc.
133	Mays Landing, NJ	Feb. 1994	40	4:00-5:00 p.m.	55.0	—	42.5	2.5	3,700	Raymond Keyes Assoc.
127	Toms River, NJ	Sept. 1994	58	4:00-5:00 p.m.	65.5	—	20.7	13.8	1,380	Raymond Keyes Assoc.
127	Toms River, NJ	Sept. 1994	83	4:15-5:15 p.m.	57.8	—	28.9	13.3	1,390	Raymond Keyes Assoc.
128	Brick, NJ	Sept. 1994	117	4:30-5:30 p.m.	47.0	—	26.5	26.5	2,640	Raymond Keyes Assoc.
128	Brick, NJ	Sept. 1994	98	4:00-5:00 p.m.	49.0	—	21.4	29.6	2,640	Raymond Keyes Assoc.
127	Berlin, NJ	Sept. 1994	35	4:00-5:00 p.m.	71.4	—	20.0	8.6	1,240	Raymond Keyes Assoc.
88	Omaha, NE	n/a	n/a	4:00-6:00 p.m.	26.0	—	51.0	23.0	n/a	University of Nebraska—Lincoln
100	Omaha, NE	n/a	n/a	4:00-6:00 p.m.	32.0	—	46.0	22.0	n/a	University of Nebraska—Lincoln
100	Omaha, NE	n/a	n/a	4:00-6:00 p.m.	22.0	—	49.0	29.0	n/a	University of Nebraska—Lincoln
88	Omaha, NE	n/a	n/a	4:00-6:00 p.m.	33.0	—	48.0	19.0	n/a	University of Nebraska—Lincoln
66	Omaha, NE	n/a	n/a	4:00-6:00 p.m.	21.0	—	60.0	19.0	n/a	University of Nebraska—Lincoln

Average Pass-By Trip Percentage: 17

APPENDIX B

**ST. LUCIE TPO TRAFFIC COUNTS AND LEVEL
OF SERVICE REPORT, FALL 2013**



St. Lucie
Transportation
Planning
Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report Fall 2013

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 STREET	BELL AVE to EDWARDS RD	15,000	1,860	885	C	0.632	829	C	0.592
25TH STREET	EDWARDS RD to CORTEZ BLVD	20,361	1,770	1,298	C	0.976	1,293	C	0.972
25TH STREET	CORTEZ BLVD to VIRGINIA AVE	24,801	1,770	1,598	D	0.903	1,597	D	0.902
25TH STREET	VIRGINIA AVE to NEBRASKA AVE	22,264	1,960	1,277	B	0.819	1,144	B	0.733
25TH STREET	NEBRASKA AVE to OKEECHOBEE RD	22,264	1,770	1,277	C	0.960	1,144	C	0.860
25TH STREET	OKEECHOBEE RD to GEORGIA AVE	17,750	1,960	852	B	0.546	849	B	0.544
25TH STREET	GEORGIA AVE to DELAWARE AVE	17,750	1,770	852	C	0.641	849	C	0.638
25TH STREET	DELAWARE AVE to ORANGE AVE	19,239	1,770	1,002	C	0.753	996	C	0.749
25TH STREET	ORANGE AVE to AVENUE D	15,000	1,770	701	C	0.527	682	C	0.513
25TH STREET	AVENUE D to AVENUE Q	15,211	1,770	801	C	0.602	778	C	0.585
25TH STREET	AVENUE Q to JUANITA AVE	13,019	1,770	736	C	0.553	674	C	0.507
25TH STREET	JUANITA AVE to ST LUCIE BLVD	13,383	2,060	725	B	0.442	681	B	0.415
25TH STREET	ST LUCIE BLVD to US 1	5,165	2,060	296	B	0.180	331	B	0.202
33RD STREET	OKEECHOBEE RD to DELAWARE AVE	5,500	790	353	B	0.767	295	B	0.641
35TH STREET	KIRBY LOOP RD to CORTEZ BLVD	6,300	460	353	C	0.821	381	C	0.886
35TH STREET	CORTEZ BLVD to VIRGINIA AVE	6,300	550	353	C	0.929	381	D	0.693
35TH STREET	VIRGINIA AVE to OKEECHOBEE RD	4,200	570	270	B	0.818	274	B	0.830
53RD STREET	ANGLE RD to JUANITA AVE	2,300	460	129	B	0.478	132	B	0.489
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	17,862	1,850	1,105	B	0.752	926	B	0.630
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	17,862	1,850	1,105	B	0.752	926	B	0.630
AIROSO BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	10,211	1,850	544	B	0.370	534	B	0.363
AIROSO BLVD	PRIMA VISTA BLVD to FLORESTA DR	14,127	1,760	709	B	0.506	727	B	0.519
AIROSO BLVD	FLORESTA DR to ST JAMES DR	21,247	1,850	1,116	B	0.759	1,101	B	0.749
ANGLE RD	ORANGE AVE to AVENUE D	8,756	830	497	C	0.645	545	C	0.708
ANGLE RD	Q AVENUE to D AVENUE	8,756	630	497	C	0.842	545	C	0.924
ANGLE RD	AVENUE Q to 53RD STREET	6,200	630	410	C	0.695	337	B	0.911
ANGLE RD	53RD STREET to KEEN RD	4,000	630	262	B	0.708	235	B	0.635
ANGLE RD	KEEN RD to KINGS HWY	4,000	720	262	B	0.624	235	B	0.560
ANGLE RD	JOHNSTON RD to KINGS HWY	2,800	1,120	194	B	0.462	158	B	0.376

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic