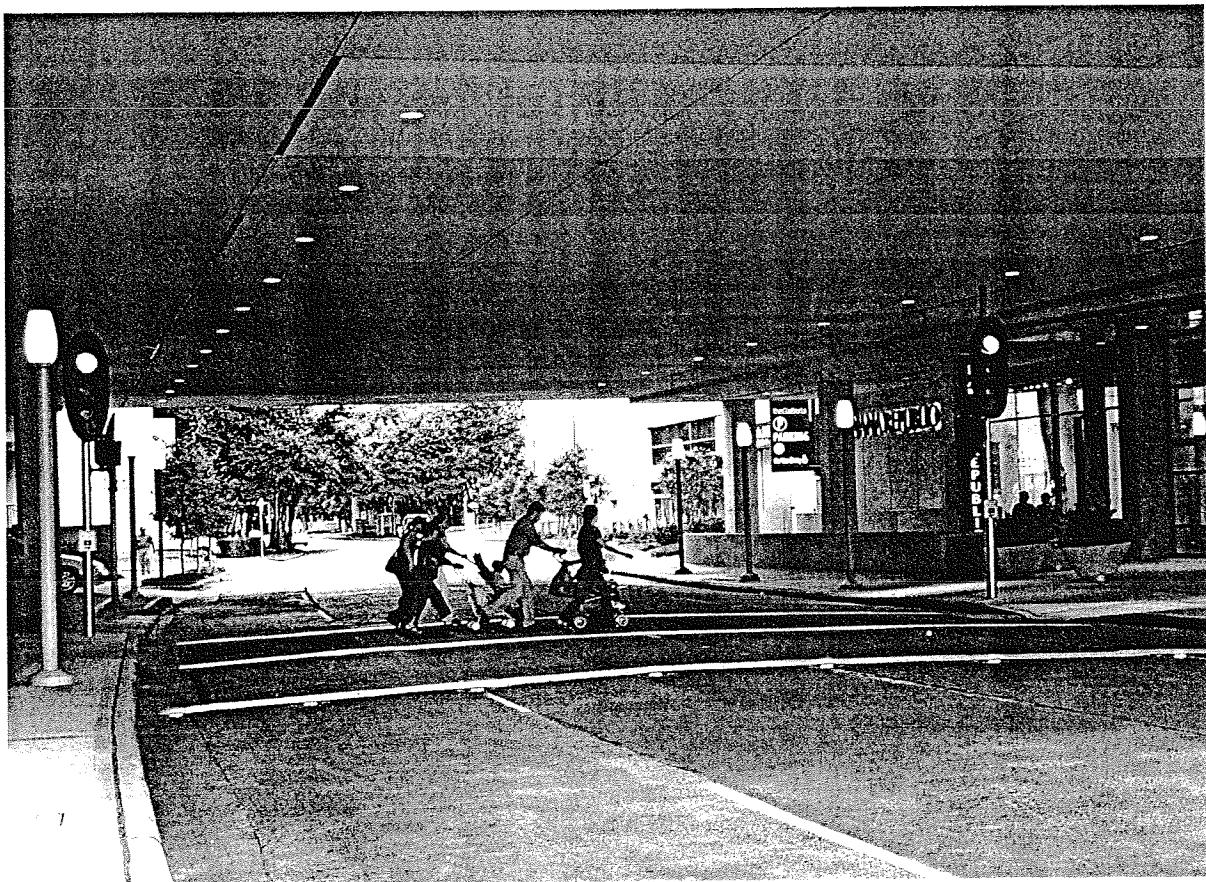


TRAFFIC ENGINEERING STUDY BEFORE AND AFTER

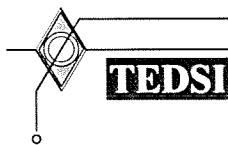
MID-BLOCK PEDESTRIAN CROSSWALK
ON WEST ALABAMA

FINAL
“AFTER REPORT”
NO. 2



PREPARED FOR:

UPTOWN DEVELOPMENT AUTHORITY



TEDSI INFRASTRUCTURE GROUP

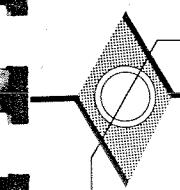
Consulting Engineers

10260 Westheimer ♦ Suite 460 ♦ Houston, Texas 77042

Tel: 713-975-TEDSI (8337)

Fax: 713-975-7194

OCTOBER 2004



TEDSI INFRASTRUCTURE GROUP

Consulting Engineers

10260 Westheimer ♦ Suite 460 ♦ Houston, Texas 77042

October 29, 2004

Mr. Robert N. Taube
Uptown Houston
1980 Post Oak Boulevard
Suite 1580
Houston, Texas 77056

**Re: Before and After Traffic Engineering Study
Mid-Block Pedestrian Crosswalk on West Alabama
"AFTER" Results – Final Report
TEDSI Project No. 23706**

Dear Mr. Taube:

We are pleased to present the "AFTER" Results – Final Report for the in-roadway lights installed on the stop line at the mid-block traffic signal on West Alabama between Sage Road and McCue Street. The data contained in the attached report provides a summary of findings since the activation of the in-roadway lights in June 2003.

Thank you, and please contact us if you should have any questions or require additional information.

Sincerely
TEDSI INFRASTRUCTURE GROUP

Hari
Harish Narayanappa, P.E., PTOE
Senior Project Manager



Hari

10/29/04

REPORT

Before and After Traffic Engineering Study – Mid-block Pedestrian Crosswalk / Signal Across West Alabama Street

INTRODUCTION

The purpose of this study is to test the experimental use of in-pavement light emitting diode (LED) lights installed at the stop bar of a new pedestrian-actuated signalized mid-block crosswalk. The effectiveness of the LED lights is determined based on the changes in motorists' behavior at the stop bar as a result of these lights.

The pedestrian-actuated signalized mid-block crosswalk is located on West Alabama Street between Sage Road and McCue Road in the fashionable Uptown District of the City of Houston (COH). COH installed this pedestrian crosswalk / signal in March 2003 under the 270-foot wide canopy of an overhead pedestrian mall that connects the new Galleria Mall IV with the old Galleria I Mall.

Several factors relating to the alignment of West Alabama Street and the decorative lighting in the vicinity of the crosswalk / signal seem to reduce visibility of the pedestrian signals. Advance warning signals, installed per the TMUTCD criteria, seem inadequate in warning motorists of the impending crosswalk. To improve pedestrian safety, it was necessary to provide additional traffic systems to draw motorists' attention to the mid-block pedestrian crosswalk signal. Hence, installation of in-roadway lights was proposed.

ROADWAY

Existing Conditions

The study crosswalk is located on West Alabama Street between Sage Road and McCue Road underneath the 270-foot wide pedestrian mall that links Galleria IV with Galleria I. Galleria IV Shopping Mall was constructed recently on the south side of West Alabama Street from across the existing Galleria I Mall / Westin Galleria Hotel.

West Alabama Street lies within a 60-foot right-of-way (ROW). It is a 40-foot wide, four-lane, one-way eastbound concrete curb and gutter roadway with sidewalks on both sides. Posted speed limit on West Alabama Street in the vicinity of the study area is 35 miles per hour (mph). Mature Oak trees line the street on both sides.

East of McCue Road is Post Oak Boulevard, which is a major street. Sage Road is located about 2,000 feet west of Post Oak Boulevard and is signalized. McCue Street is located at about 800 feet west of Post Oak Boulevard.

Before and After Traffic Engineering Study – Mid-block Pedestrian Crosswalk / Signal Across West Alabama Street

In-Roadway LED lights

In-roadway LED lights, manufactured by LightGuard Systems, Inc. of Santa Rosa, California, were installed in June 2003 at the study location. The In-Roadway Lights at this location are placed at the stop-line on the approach side of the traffic flow direction. The operation of the In-Roadway Lights is as follows. Upon activation of the pedestrian signal push button, the In-Roadway Lights flash yellow during the yellow clearance phase of the traffic signal, and solid red during the red phase of the traffic signal. The In-Roadway Lights are not illuminated during the green phase of the traffic signal. A total of nine lights are installed along the stop bar, one each in the middle of the lane (for a total of 4), one each at the lane lines (for a total of 3) and one each at the curbs (for a total of 2).

"Before" Traffic Data

The location of the first vehicle in each lane in relation to the stop bar, and pedestrian counts at the crosswalk, were recorded at 15-minute intervals on the following days prior to the installation of the LED lights: Thursday, April 24; Saturday, April 26; Sunday, April 25 and Tuesday, April 29. Traffic data was collected during the Galleria Mall hours of 10:00 AM to 9:00 PM (Monday through Saturday) and 11:00 AM to 7:00 PM (Sunday).

"After" Traffic Data

According to FHWA experimental procedures, the "after" data should be collected on two separate occasions (i.e., at 6 months and at 12 months from the time of installation of LED lights).

The first batch of "after" data was collected on the following days: Thursday, December 24; Saturday, December 26; Sunday, December 27 and Tuesday, December 29 of 2003. A summary of the "before" and the first batch of "after" data, along with the percent change is shown in **Table 1**.

The second batch of "after" data was collected on the following days: Tuesday, June 2; Thursday, June 4; Saturday, June 5 and Sunday, June 6 of 2004. A summary of the "before" and the second batch of "after" data, along with the percent change is shown in **Table 2**.

Please see **Appendix** for detailed "Before" and "After" traffic counts.

Before and After Traffic Engineering Study – Mid-block Pedestrian Crosswalk / Signal Across West Alabama Street

FINDINGS

Following are the findings on traffic flow patterns on West Alabama Street after the installation of in-roadway LED lights at the subject crosswalk. The findings below are encouraging since it confirms recognition of the in-roadway LED lights as traffic control devices worth complying with, and that the lights aid motorists to stop at an appropriate distance behind the stop bar:

April 2003 v/s December 2003

1. During the four days of data collection in December 2003, total pedestrian activity increased by 838 crossings (from 5,172 to 6,010) compared to the corresponding total pedestrian activity in April. This could be attributed to Christmas shopping.
2. At the same time, total vehicular volume decreased by 467 vehicles (from 5,002 to 4,535) compared to the corresponding total vehicular activity in April.
3. Traffic volume for December was therefore adjusted by a factor of 1.103 to level the field for comparison.
4. During those four days, overall compliance with the pedestrian signal went up 17% (or 484 vehicles, from 2,891 to 3,375). As a result non-compliance by motorists decreased 23% (i.e., down from 2,111 to 1,627 vehicles).
5. Greatest impact of in-roadway LED lights has been on the number of motorists that run the red light. This number reduced from 807 violations to 179 (i.e., 351% increase in compliance).
6. The number of motorists that stopped over the stop bar reduced 6% (or 57 vehicles).
7. The number of motorists stopping between 0 and 6 feet behind the stop bar increased about 4% (or 95 vehicles).
8. The number of motorists stopping 6 or more feet behind the stop bar increased 82% (or 389 vehicles).
9. By the same token, motorists that stopped so far behind showed a tendency to creep over the stop bar. As a result, creep over violations increased 81% (or 201 vehicles).

April 2003 v/s June 2004

1. During the four days of data collection in June 2004, total pedestrian activity decreased by 1,427 crossings (from 5,172 to 3,475) compared to the corresponding total pedestrian activity in April. This could be attributed to summer holidays.
2. At the same time, total vehicular volume decreased by 1,879 vehicles (from 5,002 to 3,123) compared to the corresponding total vehicular activity in April.
3. Traffic volume for June was therefore adjusted by a factor of 1.602 to level the field for comparison.

Before and After Traffic Engineering Study – Mid-block Pedestrian Crosswalk / Signal Across West Alabama Street

4. During those four days, overall compliance with the pedestrian signal went up 19% (or 536 vehicles, from 2,891 to 3,427). As a result non-compliance by motorists decreased 25% (i.e., down from 2,111 to 1,575 vehicles).
5. Greatest impact of in-roadway LED lights has been on the number of motorists that run the red light. This number reduced from 807 violations to 396 (i.e., 104% increase in compliance).
6. The number of motorists that stopped over the stop bar reduced 26% (or 216 vehicles).
7. The number of motorists stopping between 0 and 6 feet behind the stop bar increased about 19% (or 454 vehicles).
8. The number of motorists stopping 6 or more feet behind the stop bar increased 17% (or 82 vehicles).
9. By the same token, motorists that stopped so far behind showed a tendency to creep over the stop bar. As a result, creep over violations increased 37% (or 91 vehicles).

Summary of Findings

From the results of the two "after" data collection efforts, it is confirmed that vehicular and pedestrian traffic safety has improved dramatically after the installation of the in-roadway LED lights.

Following are the advantages:

Advantage	From April 2003 to:	
	December 2003	June 2004
Overall compliance with the pedestrian signal has increased :	+17%	+19%
Non-compliance with the pedestrian signal has decreased :	-23%	-25%
"Running The Red Light" violations have decreased dramatically; and as a result, compliance has increased :	+104%	+351%
"Stop Over The Stop Bar" violations have decreased :	-6%	-26%
Stopping 0 - 6 feet behind the stop bar has increased :	+4%	+19%
Stopping 6 or more feet behind the stop bar increased :	+17%	+82%

Following is the disadvantage:

1. Motorists that stopped a significant distance behind the stop bar showed a tendency to creep over the stop bar. As a result, creep over violations increased 37% from April 2003 to December 2003, and 81% from April 2003 to June 2004.

TABLE 1
Results of West Alabama Pedestrian Crosswalk "Before & After" Installation Study
All Week

BEFORE AND AFTER COMPARISON		TUESDAY												
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
4/29/2003	101	9.35%	86	7.98%	102	9.44%	105	9.72%	253	23.43%	259	23.98%	100	9.26%
12/16/2003	114	10.78%	96	9.07%	92	8.70%	145	13.71%	280	25.47%	151	14.27%	58	5.48%
CHANGE:	13			36		6		-13		-108		21		-16
BEFORE AND AFTER COMPARISON		THURSDAY												
TIME		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
4/24/2003	113	9.32%	94	7.75%	91	7.51%	122	10.07%	237	19.55%	270	22.28%	76	6.27%
12/11/2003	139	18.51%	146	13.58%	132	12.28%	127	11.31%	194	18.05%	150	13.95%	63	5.88%
CHANGE:	86			52		41		5		-43		-120		-13
BEFORE AND AFTER COMPARISON		SATURDAY												
TIME		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
4/26/2003	173	9.95%	165	9.49%	227	13.65%	207	11.91%	221	12.72%	380	21.88%	40	2.10%
12/13/2003	263	17.62%	174	11.65%	102	8.83%	127	8.50%	326	21.82%	338	23.96%	116	18.70%
CHANGE:	90			9		-125		-40		-105		-22		-76
BEFORE AND AFTER COMPARISON		SUNDAY												
TIME		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
4/27/2003	85	8.74%	104	10.70%	117	12.04%	99	10.19%	189	19.44%	146	15.02%	33	3.41%
12/14/2003	205	22.58%	127	13.59%	108	11.83%	123	13.55%	138	15.20%	117	12.69%	78	8.58%
CHANGE:	120			23		-9		-24		-51		-29		-45
BEFORE AND AFTER COMPARISON		ALL WEEK												
TIME		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
4/27/2003	472	9.44%	449	8.98%	537	10.74%	533	10.65%	900	17.98%	1055	21.09%	249	1.98%
Dec-03	781	17.22%	569	12.55%	438	9.66%	469	10.34%	803	17.71%	905	19.96%	408	9.00%
CHANGE:	309			179		-54		-99		-64		-150		-159
BEFORE AND AFTER COMPARISON		ADJUSTMENT TO DECEMBER TRAFFIC VOLUME												
TIME		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												
TIME		>6 FEET		>3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		
TIME		#	%	#	%	#	%	#	%	#	%	#	%	
DATE														
Apr-03	472	9.44%	449	8.98%	537	10.74%	533	10.65%	900	17.98%	1055	21.09%	249	1.98%
Dec-03	861	17.21%	628	12.53%	483	9.66%	517	10.34%	816	17.71%	988	19.95%	450	9.00%
CHANGE:	389			179		-54		-16		-14		-57		-201
INCREASE IN COMPLIANCE:		ADJUSTMENT TO TRAFFIC VOLUME												
DECEMBER TRAFFIC VOLUME		FACTOR APPLIED TO DECEMBER TRAFFIC VOLUMES												
APRIL TRAFFIC VOLUME		5002												
DECEMBER TRAFFIC VOLUME		4555												
FACTOR APPLIED TO DECEMBER TRAFFIC VOLUMES		1,103												

FINDINGS

- In December 2003, pedestrian activity increased by 838 crossings (from 5172 to 6010) compared to April. This could be attributed to holiday shopping.
- Overall compliance with the pedestrian signal went up 17%. As a result non-compliance decreased 23%.
- Greatest impact of in-pavement lights has been on the number of motorists that run the red light. This number reduced from 807 violations to 179 (i.e., 351% increase in compliance).
- The number of motorists that stopped over the stop bar reduced 6%.
- The number of motorists stopping 3 or more feet behind the stop bar increased 40%. The number of motorists stopping 6 or more feet behind the stop bar increased 81%.
- By the same token, motorists that stopped so far behind showed a tendency to creep over the stop bar. As a result, creep over violations increased 23%.

TABLE 2
Results of West Alabama Pedestrian Crosswalk "Before & After" Installation Study
All Week

BEFORE AND AFTER COMPARISON		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY		SUNDAY		ALL WEEK		
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE		0-1 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		TOTAL		
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
10 AM TO 9 PM														10 AM TO 9 PM		
DATE														From North	From South	
4/29/2003	101	9.35%	86	7.98%	102	9.44%	105	9.72%	253	23.43%	259	23.88%	100	9.26%	74	6.85%
6/1/2004	183	22.76%	82	10.20%	77	9.88%	88	10.05%	137	17.04%	110	13.68%	54	6.77%	73	9.08%
CHANGE:	82	-4	-25	-4	-25	-17	-16	-149	-149	-46	-1	-1	-1	-160	-64	
BEFORE AND AFTER COMPARISON																
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
10 AM TO 9 PM														10 AM TO 9 PM		
DATE														From North	From South	
4/24/2003	113	9.32%	94	7.78%	91	7.51%	122	10.07%	237	19.55%	270	22.28%	76	6.27%	209	17.24%
6/3/2004	67	9.63%	51	7.37%	85	12.28%	107	15.46%	170	24.57%	128	18.50%	53	7.66%	31	4.43%
CHANGE:	-46	-43	-6	-15	-6	-67	-142	-23	-178	-23	-178	-23	-178	-139	-65	
BEFORE AND AFTER COMPARISON																
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
10 AM TO 9 PM														10 AM TO 9 PM		
DATE														From North	From South	
4/26/2003	173	9.98%	165	9.19%	227	13.08%	207	11.91%	221	12.72%	380	21.88%	40	2.30%	325	18.70%
6/5/2004	52	4.90%	78	7.35%	126	11.88%	205	19.32%	245	23.09%	168	15.93%	68	6.41%	119	11.22%
CHANGE:	-121	-37	-101	-2	-24	-212	-212	-28	-206	-28	-206	-28	-206	-73	-132	
BEFORE AND AFTER COMPARISON																
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
11 AM TO 7 PM														11 AM TO 7 PM		
DATE														From North	From South	
4/27/2003	85	8.74%	104	10.70%	117	12.04%	99	10.13%	159	19.44%	145	15.02%	33	3.40%	199	20.47%
6/6/2004	44	7.77%	25	4.42%	53	13.07%	191	33.75%	118	20.45%	37	6.54%	24	4.24%	56	10.74%
CHANGE:	-41	-79	-64	-25	-2	-157	-25	-2	-175	-4	-175	-4	-175	-207	-157	
BEFORE AND AFTER COMPARISON																
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
10 AM TO 9 PM														10 AM TO 9 PM		
DATE														From North	From South	
4/27/2003	472	9.44%	449	8.98%	537	10.74%	533	10.66%	900	17.98%	1055	21.09%	249	4.98%	807	16.15%
Jun-04	346	11.08%	236	7.56%	341	10.92%	474	15.19%	743	23.79%	524	16.78%	212	6.79%	247	7.91%
CHANGE:	-126	-213	-196	-59	-59	-157	-531	-37	-560	-41	-560	-41	-560	-751	-128	
BEFORE AND AFTER COMPARISON																
TIME	>6 FEET	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
10 AM TO 9 PM														10 AM TO 9 PM		
DATE														From North	From South	
Apr-03	472	9.44%	449	8.98%	537	10.74%	533	10.66%	900	17.98%	1055	21.09%	249	4.98%	807	16.15%
Jun-04	554	11.08%	378	7.56%	546	10.92%	759	15.17%	1190	23.75%	839	16.77%	340	6.00%	306	7.92%
INCREASE IN COMPLIANCE:	82	-213	-71	-9	-25	-25	-30%	-26%	-26%	-24%	-26%	-26%	-26%	-411	-104%	
ADJUSTMENT TO TRAFFIC VOLUME																
APRIL TRAFFIC VOLUME																
JUNE TRAFFIC VOLUME																
FACTOR APPLIED TO JUNE TRAFFIC VOLUMES																

FINDINGS:

- In June 2004, pedestrian activity decreased by 1427 crossings (from 5172 to 3745) compared to April. This could be attributed to Summer holidays/vacation season.
- Overall compliance with the pedestrian signal went up 19%. As a result non-compliance decreased 25%.
- Greatest impact of in-pavement lights has been on the number of motorists that run the red light. This number reduced from 807 violations to 306 (i.e., 104% increase in compliance).
- The number of motorists that stopped over the stop bar reduced 26%.
- The number of motorists stopping 3 or more feet behind the stop bar reduced 16%. Naturally, the number of motorists stopping between 3 and 0 feet behind the stop bar went up.
- At the same time the number of motorists stopping 6 or more feet behind the stop bar increased 17%.
- By the same token, motorists that stopped behind showed a tendency to creep over the stop bar. As a result, creep over violations increased 37%.

APPENDIX

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Tuesdays

Distance First Car in Queue Stopped Behind Stop Line											Distance First Car in Queue Stopped Behind Stop Line																													
TIME			>6 FEET			>3 FEET			0-1 FEET			OVER			CREEP OVER			RAN RED			TIME			PEDESTRIANS			TOTAL													
PERIOD		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South	PERIOD	From North	From South	PERIOD	From North	From South										
10 AM to 11 AM	7	13.73%	8	15.69%	5	9.80%	9	17.65%	9	17.65%	13	11.21%	12	9.38%	13	10.18%	22	18.91%	28	24.14%	20	17.24%	7	6.03%	51	5.88%	51	38	13	25%										
11 AM to 12 Noon	5	4.31%	8	9.60%	13	11.21%	12	9.38%	13	10.18%	22	18.91%	17	14.05%	12	9.92%	22	23.48%	33	25.00%	10	7.58%	8	6.25%	55	5.5%	55	61	13	63										
12 Noon to 1 PM	9	7.03%	3	2.34%	12	9.03%	8	6.06%	31	23.48%	33	25.00%	17	34.35%	44	31.38%	17	13.38%	8	6.25%	128	59	46%	69	54%	69	55	13	90											
1 PM to 2 PM	15	11.36%	16	12.12%	12	9.03%	17	14.05%	12	9.92%	22	23.48%	25	20.66%	12	9.66%	17	9.58%	7	5.30%	132	82	62%	50	35%	50	55	13	123											
2 PM to 3 PM	16	13.22%	5	4.13%	17	14.05%	12	9.92%	22	23.48%	13	14.29%	16	16.89%	23	29.81%	7	9.09%	6	7.79%	121	77	64%	44	36%	44	48	13	114											
3 PM to 4 PM	7	9.09%	5	5.19%	6	5.19%	6	7.79%	11	14.29%	16	16.89%	29	27.62%	30	28.57%	14	13.33%	5	7.76%	105	41	41%	53	36%	53	47	13	84											
4 PM to 5 PM	5	4.76%	5	4.76%	8	7.62%	9	8.57%	5	6.45%	37	16.45%	30	27.57%	14	13.33%	5	4.76%	105	56	53%	49	47%	49	47%	13	77													
5 PM to 6 PM	10	10.75%	11	11.83%	5	6.38%	6	6.45%	10	9.01%	30	27.03%	27	24.78%	12	9.01%	3	3.23%	9	9.58%	93	69	74%	24	26%	24	26%	13	76											
6 PM to 7 PM	4	3.60%	9	8.11%	14	12.61%	10	9.01%	30	27.03%	27	24.78%	7	6.51%	10	9.01%	11	6.01%	11	6.01%	65	67	60%	44	40%	44	40%	13	37											
7 PM to 8 PM	9	13.85%	11	16.92%	3	4.32%	6	9.23%	15	23.08%	13	20.00%	2	3.08%	6	9.23%	6	4.08%	6	7.41%	81	53	65%	21	32%	21	32%	13	101											
8 PM to 9 PM	14	17.28%	6	7.41%	7	8.54%	3	9.88%	18	22.22%	17	20.99%	5	6.17%	6	7.41%	100	23.98%	74	6.65%	1080	647	60%	433	40%	433	40%	13	99											
GRAND TOTAL:	101	9.35%	86	7.96%	102	9.44%	105	9.72%	253	23.43%	259	23.98%	100	9.26%	74	6.65%	105	23.98%	1058	647	60%	433	40%	433	40%	13	124													
Date: 12/16/2003	Direction: Eastbound											Distance First Car in Queue Stopped Behind Stop Line											TIME			PEDESTRIANS			TOTAL											
TIME			>6 FEET			>3 FEET			0-1 FEET			OVER			CREEP OVER			RAN RED			TIME			PEDESTRIANS			TOTAL													
PERIOD		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South	PERIOD	From North	From South	PERIOD	From North	From South										
10 AM to 11 AM	8	14.81%	6	11.11%	2	3.10%	2	3.70%	12	22.22%	14	25.93%	10	18.52%	0	0.00%	54	30	56%	24	30	53%	39	47%	39	50%	13	56												
11 AM to 12 Noon	8	9.64%	16	19.28%	8	9.64%	4	8.82%	8	9.64%	23	21.71%	11	13.25%	5	6.02%	33	44	53%	39	44	50%	54	50%	54	50%	13	36												
12 Noon to 1 PM	17	15.74%	11	10.19%	4	3.70%	15	13.99%	15	13.99%	34	21.48%	14	5.76%	6	5.76%	108	54	50%	54	54	50%	54	50%	54	50%	13	36												
1 PM to 2 PM	11	8.33%	10	7.58%	16	12.12%	9	6.82%	15	11.36%	37	28.03%	21	15.91%	13	9.85%	132	61	46%	71	61	46%	71	61	46%	71	61	46%	13	26										
2 PM to 3 PM	13	10.72%	12	9.62%	9	7.43%	12	9.92%	18	14.88%	26	21.49%	19	15.70%	12	9.92%	121	64	53%	57	64	53%	57	64	53%	57	64	53%	13	27										
3 PM to 4 PM	16	13.58%	22	18.84%	10	8.47%	12	10.77%	8	6.18%	30	25.12%	16	13.58%	12	3.39%	118	68	58%	50	62	42%	62	68	58%	62	68	58%	13	24										
4 PM to 5 PM	7	7.00%	10	10.00%	6	6.00%	7	7.00%	14	14.00%	33	33.00%	20	20.00%	3	3.00%	100	44	44%	56	44	44%	56	44	44%	56	44	44%	13	15										
5 PM to 6 PM	14	13.73%	15	14.71%	11	10.78%	13	12.5%	8	7.84%	27	26.47%	11	10.78%	3	2.94%	102	61	60%	41	61	60%	41	61	60%	41	61	60%	13	39										
6 PM to 7 PM	7	8.05%	9	10.34%	10	10.34%	14	14.43%	9	9.28%	18	18.65%	19	19.59%	14	14.43%	87	61	70%	26	61	70%	26	61	70%	26	61	70%	13	46										
7 PM to 8 PM	6	6.19%	10	10.31%	7	12.50%	1	1.19%	2	3.57%	9	16.67%	21	31.50%	151	14.29%	2	3.57%	56	25	45%	31	25	45%	31	25	45%	13	26											
8 PM to 9 PM	7	11.53%	122	9.07%	92	8.10%	145	13.71%	280	26.47%	151	14.29%	58	5.48%	1058	569	54%	489	489	46%	489	569	54%	489	569	54%	489	569	54%	13	36									
BEFORE AND AFTER COMPARISON	Distance First Car in Queue Stopped Behind Stop Line											Distance First Car in Queue Stopped Behind Stop Line											TIME			PEDESTRIANS			TOTAL											
TIME		>6 FEET			>3 FEET			0-1 FEET			OVER			CREEP OVER			RAN RED			TIME			PEDESTRIANS			TOTAL														
DATE		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South	PERIOD	From North	From South	PERIOD	From North	From South												
4/29/2003	101	9%	86	8%	102	9%	105	10%	253	23%	259	24%	100	9%	74	7%	1080	647	60%	433	433	40%	433	647	60%	433	647	60%	433	647	60%	13	1024							
12/16/2003	114	11%	122	12%	96	9%	145	14%	280	26%	151	14%	100	9%	58	5%	1058	569	54%	489	489	46%	489	569	54%	489	569	54%	489	569	54%	13	124							
CHANGE:	13	36	-6	-13	-108	-21	-16	-51	-16	-16	-51	-16	-16	-16	-16	-16	-16	-16	-16	CHANGES:	-83	-6%	-11	-83	-6%	-11	-94	-94	-94	-94	-94	-94	-94	-94	-94	-94	-94	-94	-94	-94

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Thursdays

Date: 4/24/2003		Direction: Eastbound																PEDESTRIANS		
TIME		>6 FEET		>3 FEET		2-3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		TIME		PEDESTRIANS		
PERIOD		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South
10 AM to 11 AM	14	16.8%	8	9.6%	4	16.37%	12	14.46%	6	7.23%	10	12.05%	11	13.25%	8	9.64%	83	26	35%	10 AM to 11 AM
11 AM to 12 Noon	5	4.67%	12	11.2%	9	8.41%	6	5.61%	11	10.23%	26	24.33%	15	14.02%	23	21.50%	107	43	40%	11 AM to 12 Noon
12 Noon to 1 PM	7	5.69%	13	10.5%	5	4.207%	9	7.322%	17	13.82%	21	17.07%	30	24.39%	123	51	41%	12 Noon to 1 PM		
1 PM to 2 PM	16	11.35%	6	4.22%	12	8.51%	13	9.22%	30	21.25%	32	22.70%	12	8.51%	20	14.18%	141	77	55%	1 PM to 2 PM
2 PM to 3 PM	11	8.15%	10	7.4%	6	4.44%	8	5.93%	39	26.61%	31	22.98%	4	2.96%	29	21.48%	135	64	47%	2 PM to 3 PM
3 PM to 4 PM	15	9.20%	14	8.59%	12	7.38%	18	11.04%	39	23.93%	33	20.23%	4	2.45%	26	17.18%	163	99	60%	3 PM to 4 PM
4 PM to 5 PM	13	13.54%	5	5.2%	7	7.29%	16	16.67%	19	19.75%	17	17.71%	0	0.00%	19	19.79%	96	60	63%	4 PM to 5 PM
5 PM to 6 PM	12	9.30%	13	10.08%	16	12.40%	13	10.08%	23	17.83%	29	22.44%	1	0.78%	22	17.05%	129	77	80%	5 PM to 6 PM
6 PM to 7 PM	10	7.75%	9	4.16%	15	4.165%	15	11.63%	28	21.7%	40	31.07%	5	3.68%	16	12.40%	129	68	53%	6 PM to 7 PM
7 PM to 8 PM	5	8.47%	4	6.78%	0	0.00%	8	13.56%	14	23.73%	24	40.63%	2	3.39%	59	3.33%	59	31	53%	7 PM to 8 PM
8 PM to 9 PM	5	10.64%	0	0.00%	4	8.51%	4	8.51%	14	29.75%	7	14.83%	1	2.13%	12	25.55%	47	27	57%	8 PM to 9 PM
GRAND TOTAL:	113	9.32%	94	7.76%	91	7.51%	122	10.07%	237	19.53%	270	22.29%	76	6.27%	219	17.24%	1212	657	54%	GRAND TOTAL:
Date: 12/1/2003		Direction: Eastbound																PEDESTRIANS		
TIME		>6 FEET		>3 FEET		2-3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		TIME		PEDESTRIANS		
PERIOD		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South
10 AM to 11 AM	11	17.19%	12	18.75%	4	6.21%	4	6.25%	9	14.06%	17	26.50%	5	7.81%	2	3.13%	64	40	63%	10 AM to 11 AM
11 AM to 12 Noon	17	18.28%	14	15.05%	10	10.75%	9	8.45%	13	9.68%	13	13.98%	10	10.75%	7	7.53%	93	63	68%	11 AM to 12 Noon
12 Noon to 1 PM	26	18.31%	19	13.83%	12	8.45%	16	11.23%	23	16.20%	27	19.01%	7	8.45%	12	9.32%	142	96	46%	12 Noon to 1 PM
1 PM to 2 PM	24	20.00%	14	11.67%	15	12.50%	19	15.83%	23	19.17%	11	9.17%	7	5.83%	120	95	79%	1 PM to 2 PM		
2 PM to 3 PM	10	7.14%	12	8.57%	20	14.29%	16	11.43%	24	17.14%	32	22.86%	13	9.23%	140	82	58%	2 PM to 3 PM		
3 PM to 4 PM	14	13.53%	16	15.24%	10	5.52%	12	11.43%	27	25.71%	12	11.43%	7	6.61%	105	79	75%	3 PM to 4 PM		
4 PM to 5 PM	27	26.73%	10	9.90%	14	13.88%	11	19.80%	20	19.80%	12	11.88%	2	1.98%	5	4.95%	101	82	81%	4 PM to 5 PM
5 PM to 6 PM	21	22.83%	18	19.57%	16	17.38%	10	10.87%	13	14.13%	6	6.52%	5	5.45%	3	3.26%	92	78	85%	5 PM to 6 PM
6 PM to 7 PM	27	22.69%	19	15.97%	12	10.08%	16	13.56%	26	21.85%	11	9.24%	4	3.36%	119	100	84%	6 PM to 7 PM		
7 PM to 8 PM	12	20.00%	8	13.33%	12	20.00%	8	13.33%	12	20.00%	3	5.00%	1	1.67%	60	52	87%	7 PM to 8 PM		
8 PM to 9 PM	10	25.64%	4	10.26%	7	17.98%	6	15.38%	4	10.26%	6	5.15%	0	0.00%	39	31	79%	8 PM to 9 PM		
GRAND TOTAL:	199	18.51%	146	13.58%	132	12.28%	127	11.81%	194	18.05%	150	13.95%	63	5.88%	64	5.95%	1075	798	74%	GRAND TOTAL:
BEFORE AND AFTER COMPARISON		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE														COMPLIANT		NON-COMPLIANT		
TIME		>6 FEET		>3 FEET		2-3 FEET		0-1 FEET		OVER		CREEP OVER		RAN RED		COMPLIANT		NON-COMPLIANT		
10 AM TO 9 PM		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS	TOTAL	
DATE		113	9%	94	8%	91	8%	122	10%	237	20%	270	22%	76	6%	209	17%	1212	657	
4/24/2003		113	9%	146	14%	132	12%	127	12%	194	18%	150	14%	63	6%	1075	798	74%	46%	
12/1/2003		159	19%	52	41	41	3	-120	-13	-145	-20%	-120	-13	-1075	-798	-74%	-20%	-20%	9	
CHANGE:		86	86	52	41	41	3	-120	-13	-145	-20%	-120	-13	-1075	-798	-74%	-20%	-20%	9	

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Saturdays

Date: 4/26/2003

Direction: Eastbound													
DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE													
TIME		>6 FEET			2-3 FEET			0-1 FEET			OVER		
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	
10 AM to 11 AM	5	6.33%	7	8.86%	11	13.92%	8	10.13%	9	11.59%	17	21.32%	
11 AM to 12 Noon	16	10.53%	14	9.21%	13	8.55%	19	12.50%	13	8.55%	30	19.74%	
12 Noon to 1 PM	17	9.08%	18	9.63%	20	10.0%	21	11.23%	22	11.76%	50	26.74%	
1 PM to 2 PM	15	9.62%	11	7.05%	15	9.62%	20	12.32%	43	1.53%	38	20.32%	
2 PM to 3 PM	20	11.45%	15	8.57%	28	16.00%	23	13.14%	16	9.14%	44	25.14%	
3 PM to 4 PM	25	13.02%	14	7.29%	28	14.58%	23	11.89%	29	15.10%	45	23.44%	
4 PM to 5 PM	20	10.36%	25	12.85%	20	10.36%	16	8.29%	33	17.10%	36	18.55%	
5 PM to 6 PM	22	11.22%	32	16.33%	31	15.82%	24	12.24%	19	9.99%	36	18.37%	
6 PM to 7 PM	17	9.04%	14	7.45%	21	11.17%	27	14.38%	25	13.30%	46	24.47%	
7 PM to 8 PM	12	9.38%	9	7.03%	22	17.19%	17	18.48%	11	11.94%	24	18.75%	
8 PM to 9 PM	4	4.33%	6	6.52%	18	15.57%	17	18.48%	11	11.94%	20	18.30%	
GRAND TOTAL:	173	9.98%	165	9.49%	227	13.06%	207	11.91%	221	12.72%	390	21.66%	
												40	2.30%
												325	18.70%
												1738	43%
												993	57%
												745	43%
												868	2109

Date: 12/13/2003

Direction: Eastbound													
DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE													
TIME		>6 FEET			2-3 FEET			0-1 FEET			OVER		
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	
10 AM to 11 AM	20	26.32%	17	22.37%	5	6.38%	1	1.32%	21	27.63%	4	5.26%	
11 AM to 12 Noon	26	22.03%	21	17.80%	13	11.02%	6	5.08%	26	22.93%	20	16.55%	
12 Noon to 1 PM	28	20.44%	22	16.09%	12	8.76%	15	10.65%	38	27.74%	11	8.03%	
1 PM to 2 PM	19	15.08%	11	8.73%	7	5.56%	9	7.14%	47	37.30%	21	9.52%	
2 PM to 3 PM	21	13.64%	26	16.88%	10	6.49%	15	9.74%	15	9.74%	42	27.27%	
3 PM to 4 PM	23	11.79%	19	9.74%	13	6.67%	26	13.33%	41	21.03%	59	30.66%	
4 PM to 5 PM	25	12.50%	11	5.50%	7	5.26%	5	2.50%	101	50.50%	14	7.01%	
5 PM to 6 PM	37	24.34%	8	5.26%	2	1.32%	7	4.61%	43	28.29%	34	22.37%	
6 PM to 7 PM	22	16.08%	17	12.41%	22	16.06%	15	10.95%	28	20.44%	23	16.79%	
7 PM to 8 PM	19	16.38%	11	9.48%	6	5.17%	18	15.52%	26	22.41%	27	23.88%	
8 PM to 9 PM	23	27.77%	11	13.25%	5	6.02%	10	12.05%	10	12.05%	16	19.38%	
GRAND TOTAL:	263	17.60%	174	11.65%	102	6.83%	127	8.50%	326	21.82%	358	23.36%	
												116	7.76%
												28	1.87%
												1738	43%
												993	57%
												745	43%
												868	2109

BEFORE AND AFTER COMPARISON												
TIME		>6 FEET			2-3 FEET			0-1 FEET			OVER	
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%
10 AM TO 9 PM												
DATE	4/26/2003		173	10%	165	9%	227	13%	207	12%	102	12%
CHANGE:	90		174	18%	102	7%	105	8%	105	8%	76	-2%

TIME												
PEDESTRIANS		MOTORISTS			PEDESTRIANS			MOTORISTS			TOTAL	
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%
10 AM TO 11 AM	29	25	49	51	74	51	118	88	200	51%	54	49%
11 AM TO 12 Noon	28	24	50	52	73	52	110	84	190	48%	64	42%
12 Noon to 1 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
1 PM to 2 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
2 PM to 3 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
3 PM to 4 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
4 PM to 5 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
5 PM to 6 PM	28	24	50	52	73	52	110	84	190	48%	64	42%
6 PM to 7 PM	22	16	48	52	55	52	104	71	158	32%	117	31%
7 PM to 8 PM	19	16	38	38	51	38	96	36	133	24%	119	30.3
8 PM to 9 PM	23	17	57	52	59	52	104	71	163	25%	125	19.6%
GRAND TOTAL:	1620	1026	379	158	868	2109	1026	2646	537	54%		

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Sundays

Date:		Direction: Eastbound												Direction: Westbound																										
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE																				
		>6 FEET			>3 FEET			2-3 FEET			1-2 FEET			0-1 FEET			>6 FEET			>3 FEET			2-3 FEET			1-2 FEET			0-1 FEET											
TIME	PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%											
	11 AM to 12 Noon	4	6.78%	11	18.6%	14	23.73%	7	11.86%	5	8.47%	1	1.69%	11	18.84%	59	42	71%	17	29%	11 AM to 12 Noon	23	29%	12 Noon to 1 PM	29	33%	1 PM to 2 PM	93	39%	2 PM to 3 PM	108	39%								
	12 Noon to 1 PM	7	10.00%	9	12.88%	6	8.57%	8	11.43%	17	24.9%	6	8.57%	1	1.43%	16	22.86%	70	47	67%	23	33%	12 Noon to 1 PM	29	26%	1 PM to 2 PM	93	67%	2 PM to 3 PM	108	67%									
	1 PM to 2 PM	16	10.60%	15	9.93%	23	15.33%	14	9.22%	24	15.89%	16	9.53%	6	3.97%	38	25.17%	151	92	61%	59	39%	11 AM to 12 Noon	23	29%	12 Noon to 1 PM	29	26%	1 PM to 2 PM	93	67%	2 PM to 3 PM	108	39%						
	2 PM to 3 PM	19	10.92%	21	12.07%	14	8.05%	16	9.20%	37	21.28%	26	14.84%	5	2.87%	36	20.59%	174	107	61%	67	39%	11 AM to 12 Noon	23	29%	12 Noon to 1 PM	29	26%	1 PM to 2 PM	93	67%	2 PM to 3 PM	108	39%						
	3 PM to 4 PM	10	6.31%	13	8.28%	15	9.55%	7	4.46%	21	13.82%	31	19.75%	39	24.84%	6	3.82%	36	22.93%	157	76	48%	81	32%	11 AM to 12 Noon	130	99%	12 Noon to 1 PM	130	99%	1 PM to 2 PM	130	99%	2 PM to 3 PM	130	99%				
	4 PM to 5 PM	13	8.55%	13	8.55%	24	15.79%	21	13.82%	29	19.08%	25	16.45%	6	3.95%	21	13.82%	152	100	66%	52	34%	11 AM to 12 Noon	132	92%	12 Noon to 1 PM	110	92%	1 PM to 2 PM	132	92%	2 PM to 3 PM	132	92%						
	5 PM to 6 PM	14	10.83%	17	13.13%	13	10.08%	16	12.40%	22	17.05%	14	10.85%	2	1.55%	31	24.03%	129	82	64%	47	36%	11 AM to 12 Noon	132	92%	12 Noon to 1 PM	67	74%	1 PM to 2 PM	132	92%	2 PM to 3 PM	132	92%						
	6 PM to 7 PM	2	2.50%	5	6.25%	8	10.00%	10	12.50%	23	28.75%	16	20.00%	6	7.50%	10	12.50%	80	48	60%	32	40%	11 AM to 12 Noon	132	92%	12 Noon to 1 PM	34	47%	1 PM to 2 PM	132	92%	2 PM to 3 PM	132	92%						
	GRAND TOTAL:	85	8.74%	104	10.70%	117	12.04%	99	10.19%	189	19.44%	146	15.02%	33	3.40%	199	20.47%	972	594	61%	378	39%	11 AM to 12 Noon	23	29%	12 Noon to 1 PM	29	26%	1 PM to 2 PM	93	67%	2 PM to 3 PM	108	39%						
	Date: 12/14/2003	Direction: Eastbound																									GRAND TOTAL:													
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE												DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE																										
TIME	PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%													
	11 AM to 12 Noon	15	21.74%	13	18.84%	12	17.39%	15	21.74%	11	15.94%	0	0.00%	3	4.35%	0	0.00%	69	69	96%	66	96%	11 AM to 12 Noon	50	38%	12 Noon to 1 PM	62	57%	1 PM to 2 PM	114	4%	2 PM to 3 PM	114	4%						
	12 Noon to 1 PM	19	19.58%	15	15.46%	11	11.34%	16	16.49%	12	12.37%	8	8.25%	16	16.49%	0	0.00%	97	73	75%	24	25%	11 AM to 12 Noon	50	38%	12 Noon to 1 PM	62	57%	1 PM to 2 PM	114	4%	2 PM to 3 PM	114	4%						
	1 PM to 2 PM	20	17.70%	21	18.58%	15	13.27%	11	9.73%	11	9.73%	12	24.78%	12	20.52%	4	3.54%	2	17.7%	113	95	84%	18	16%	11 AM to 12 Noon	127	106%	12 Noon to 1 PM	127	106%	1 PM to 2 PM	127	106%	2 PM to 3 PM	127	106%				
	2 PM to 3 PM	38	24.00%	18	12.00%	18	12.00%	15	10.00%	15	14.00%	21	14.00%	29	19.33%	12	8.00%	1	0.67%	150	108	72%	42	28%	11 AM to 12 Noon	133	103%	12 Noon to 1 PM	133	103%	1 PM to 2 PM	133	103%	2 PM to 3 PM	133	103%				
	3 PM to 4 PM	31	19.75%	24	15.29%	14	8.92%	22	14.01%	27	17.20%	28	17.33%	10	6.37%	1	0.64%	157	118	75%	41	32%	11 AM to 12 Noon	132	102%	12 Noon to 1 PM	173	132%	1 PM to 2 PM	173	132%	2 PM to 3 PM	173	132%						
	4 PM to 5 PM	38	29.69%	15	11.72%	13	10.16%	10	7.81%	11	8.59%	21	16.41%	20	15.63%	0	0.00%	128	87	68%	23	20%	11 AM to 12 Noon	132	102%	12 Noon to 1 PM	104	67%	1 PM to 2 PM	104	67%	2 PM to 3 PM	104	67%						
	5 PM to 6 PM	29	25.00%	11	9.48%	17	14.66%	23	19.83%	13	11.21%	12	10.34%	8	6.90%	3	2.59%	116	93	80%	23	20%	11 AM to 12 Noon	132	102%	12 Noon to 1 PM	50	54%	1 PM to 2 PM	50	54%	2 PM to 3 PM	50	54%						
	6 PM to 7 PM	17	21.73%	10	12.82%	8	10.66%	11	14.10%	15	19.23%	7	8.97%	5	6.41%	5	6.41%	78	61	78%	17	22%	11 AM to 12 Noon	701	707%	12 Noon to 1 PM	701	707%	1 PM to 2 PM	701	707%	2 PM to 3 PM	701	707%						
	GRAND TOTAL:	205	22.58%	127	13.99%	108	11.89%	123	13.55%	138	15.20%	117	12.89%	78	8.59%	12	1.32%	908	613	647	207	23%	11 AM to 12 Noon	132	102%	12 Noon to 1 PM	132	102%	1 PM to 2 PM	132	102%	2 PM to 3 PM	132	102%						
BEFORE AND AFTER COMPARISON																																								
TIME	PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%													
	11 AM to 7 PM	85	9%	104	11%	117	12%	99	10%	189	19%	146	15%	33	3%	199	20%	972	594	61%	378	39%	11 AM to 7 PM	207	23%	DATE	701	707%	1 PM to 7 PM	701	707%	2 PM to 7 PM	701	707%						
	4/27/2003	205	23%	127	14%	108	12%	123	14%	138	15%	117	13%	78	9%	12	1%	-187	-1%	16%	16%	16%	DATE	701	707%	1 PM to 7 PM	219	167%	2 PM to 7 PM	219	167%	3 PM to 7 PM	219	167%						
	12/14/2003	120	23%	23	-9	24	-51	-51	-29	-45	-45	-29	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	-187	DATE	219	167%	1 PM to 7 PM	219	167%	2 PM to 7 PM	219	167%	3 PM to 7 PM	219	167%	
	CHANGE:																												DATE	219	167%	1 PM to 7 PM	219	167%	2 PM to 7 PM	219	167%	3 PM to 7 PM	219	167%

		PEDESTRIANS		TOTAL
TIME	PERIOD	From North	From South	
10:00 AM	10-12 Noon	4	4	18
10:15 AM	9	9	13	13
10:30 AM	13	3	16	16
10:45 AM	14	2	16	16
10 AM to 11 AM	50	13	63	63
11:00 AM	10	10	20	20
11:15 AM	10	12	22	22
11:30 AM	20	7	27	27
11:45 AM	15	6	21	21
11 AM to 12:30 Noon	55	35	90	90
12:30 PM	24	10	34	34
1:15 PM	11	8	23	23
2:30 PM	18	10	28	28
2:45 PM	26	6	32	32
12 Noon to 1 PM	79	44	123	123
1:00 PM	14	7	21	21
1:15 PM	22	7	29	29
1:30 PM	23	15	40	40
1:45 PM	14	10	24	24
1 PM to 2 PM	73	41	114	114
2:00 PM	16	14	30	30
2:15 PM	16	6	24	24
2:30 PM	5	9	14	14
2:45 PM	9	7	16	16
2 PM to 3 PM	48	36	84	84
3:00 PM	22	5	27	27
3:15 PM	8	13	21	21
3:30 PM	7	5	12	12
3:45 PM	10	7	17	17
3 PM to 4 PM	47	30	77	77
4:00 PM	16	7	23	23
4:15 PM	9	6	15	15
4:30 PM	10	12	22	22
4:45 PM	12	2	14	14
4 PM to 5 PM	47	29	76	76
5:00 PM	12	17	29	29
5:15 PM	8	5	13	13
5:30 PM	11	9	20	20
5:45 PM	5	6	11	11
5 PM to 6 PM	36	37	73	73
6:00 PM	36	8	44	44
6:15 PM	13	6	19	19
6:30 PM	7	11	18	18
6:45 PM	28	22	50	50
6 PM to 7 PM	54	47	101	101
7:00 PM	13	13	26	26
7:15 PM	15	9	24	24
7:30 PM	11	12	23	23
7:45 PM	21	5	26	26
7 PM to 8 PM	60	39	99	99
8:00 PM	20	20	37	37
8:15 PM	22	10	32	32
8:30 PM	10	9	19	19
8:45 PM	12	24	36	36
8 PM to 9 PM	63	14	74	74
GRAND TOTAL:	610	414	1024	1024
		PEDESTRIANS		TOTAL
TIME	PERIOD	From North	From South	
10 AM to 11:15 AM	13	12	25	25
11 AM to 12:30 Noon	36	17	53	53
12 Noon to 1 PM	44	35	76	76
1 PM to 2 PM	41	16	59	59
2 PM to 3 PM	43	24	67	67
3 PM to 4 PM	45	49	94	94
4 PM to 5 PM	52	38	90	90
5 PM to 6 PM	50	44	94	94
6 PM to 7 PM	43	51	94	94
7 PM to 8 PM	65	39	104	104
8 PM to 9 PM	21	23	44	44
GRAND TOTAL:	450	350	800	800
		PEDESTRIANS		TOTAL
TIME	PERIOD	From North	From South	
10 AM to 9 PM	Front South			
DATE				
4/29/2003	610	414	1024	1024
6/17/2004	450	350	800	800
CHANGE	160	64	224	224

Compliant Motorists		Non-Compliant Motorists		Compliant Motorists		Non-Compliant Motorists	
#	%	#	%	#	%	#	%
11	75%	3	21%	12	60%	8	40%
6	67%	3	33%	46	75%	15	25%
10	83%	2	17%	63	78%	17	21%
11	69%	5	31%	43	62%	26	38%
38	75%	13	58%	59	58%	26	38%
13	42%	18	58%	19	34%	10	34%
19	66%	13	45%	16	55%	13	45%
15	48%	14	47%	13	53%	11	41%
61	53%	55	47%	12	41%	30	59%
20	54%	17	48%	12	47%	20	63%
15	50%	15	50%	22	62%	50	38%
12	41%	17	53%	26	67%	13	38%
59	46%	69	54%	24	67%	12	32%
12	46%	14	54%	15	68%	13	34%
25	65%	26	68%	26	68%	12	35%
23	65%	11	35%	8	73%	3	22%
82	62%	50	38%	41	53%	36	47%
26	67%	13	39%	16	46%	19	54%
15	68%	7	32%	77	64%	44	38%
11	46%	15	45%	11	59%	11	41%
16	53%	18	55%	20	65%	11	35%
56	49	13	54%	56	40%	12	40%
18	60%	7	22%	14	61%	9	39%
21	88%	3	13%	16	100%	0	0%
69	74%	24	28%	18	69%	8	31%
13	54%	11	46%	15	57%	17	53%
21	72%	8	28%	67	60%	44	40%
11	50%	11	50%	13	72%	5	28%
53	65%	26	35%	647	66%	433	40%
647	66%	433	40%				

TENS Infrastructure Grain
CHARGE:

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study

Date: 4/24/2003		Direction: Eastbound						Distance First Car In Queue Stopped Behind Stop Line						Time						TOTAL						
		>6 FEET			>3 FEET			0-1 FEET			OVER			CREEP OVER			RAN RED			PEDESTRIANS						
TIME	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South			
10 AM to 11 AM	14	16.87%	8	9.64%	14	16.87%	12	14.46%	6	7.23%	10	12.05%	11	13.25%	8	9.64%	83	54	65%	29	35%	10 AM to 11 AM	26	52		
11 AM to 12 Noon	5	4.67%	12	11.22%	9	8.41%	6	5.6%	11	10.25%	26	24.30%	15	14.02%	23	21.50%	107	43	40%	41	60%	11 AM to 12 Noon	42	65		
12 Noon to 1 PM	7	5.69%	13	10.51%	5	4.07%	9	7.32%	17	13.82%	21	17.07%	21	17.07%	30	24.39%	123	51	41%	55%	59%	12 Noon to 1 PM	53	90		
1 PM to 2 PM	16	11.35%	6	4.25%	12	8.51%	13	9.22%	30	21.25%	32	22.70%	12	8.51%	20	14.18%	141	77	55%	64	45%	1 PM to 2 PM	53	95		
2 PM to 3 PM	11	8.15%	10	7.41%	6	4.44%	8	5.93%	18	11.04%	39	23.9%	33	20.23%	4	2.96%	29	21.48%	135	71	53%	64	47%	2 PM to 3 PM	61	90
3 PM to 4 PM	15	9.20%	14	8.59%	12	7.36%	12	7.36%	18	16.67%	19	19.75%	17	17.71%	0	0.00%	19	19.75%	163	98	66%	65	40%	3 PM to 4 PM	41	88
4 PM to 5 PM	13	13.54%	5	5.21%	7	7.99%	23	10.08%	23	17.83%	29	22.43%	1	0.78%	22	17.05%	129	77	66%	52	40%	4 PM to 5 PM	51	102		
5 PM to 6 PM	12	9.30%	13	10.08%	16	12.45%	13	10.08%	23	17.83%	28	21.17%	40	31.01%	5	3.88%	16	12.46%	129	68	53%	61	41%	5 PM to 6 PM	55	91
6 PM to 7 PM	10	7.75%	9	6.98%	6	4.65%	15	11.33%	14	23.73%	24	40.68%	2	3.39%	59	31	53%	28	41%	7 PM to 8 PM	52	88				
7 PM to 8 PM	5	8.47%	4	6.78%	0	0.00%	8	8.51%	14	29.75%	7	14.89%	2	2.13%	12	25.53%	47	27	57%	20	43%	8 PM to 9 PM	21	47		
8 PM to 9 PM	5	10.64%	0	0.00%	4	8.51%	4	8.51%	14	29.75%	270	22.23%	76	6.27%	209	17.24%	1212	657	53%	555	48%	GRAND TOTAL:	537	965		
GRAND TOTAL:	113	9.32%	94	7.76%	91	7.51%	122	10.07%	237	19.55%	270	22.23%	76	6.27%	209	17.24%	1212	657	53%	555	48%	GRAND TOTAL:	537	965		
Date: 6/3/2004		Direction: Eastbound						Distance First Car In Queue Stopped Behind Stop Line						Time						TOTAL						
TIME	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South			
>6 FEET	2	10.00%	3	15.00%	5	25.00%	0	0.00%	5	25.00%	0	0.00%	1	5.00%	20	5.00%	20	18	90%	2	10%	10 AM to 11 AM	15	26		
2-3 FEET	7	7.27%	6	10.91%	13	23.44%	8	14.55%	5	11.25%	11	20.00%	4	7.23%	1	1.82%	55	39	71%	16	29%	11 AM to 12 Noon	35	64		
2-1 FEET	8	9.41%	10	11.76%	10	11.76%	24	28.24%	20	23.53%	0	0.00%	3	3.53%	85	62	73%	23	27%	12 Noon to 1 PM	33	53				
1-2 FEET	10	11.76%	12	13.25%	12	14.65%	25	30.12%	15	12.05%	14	16.81%	0	0.00%	83	59	71%	24	29%	1 PM to 2 PM	50	90				
1-1 FEET	7	8.49%	4	4.62%	11	13.25%	9	10.98%	19	23.17%	15	18.29%	9	10.98%	6	7.32%	82	52	63%	30	37%	2 PM to 3 PM	47	93		
0-1 FEET	11	13.41%	7	8.54%	6	7.32%	9	10.98%	7	13.21%	12	22.64%	11	20.75%	3	3.33%	53	37	70%	16	30%	3 PM to 4 PM	48	76		
0-0 FEET	4	7.55%	5	9.43%	9	16.98%	7	13.21%	12	22.64%	11	20.75%	3	3.33%	90	60	67%	30	33%	4 PM to 5 PM	28	59				
>3 FEET	7	7.78%	8	8.99%	15	16.67%	14	15.86%	16	17.78%	23	25.65%	4	4.44%	3	4.88%	82	56	71%	24	29%	5 PM to 6 PM	86	22		
2-2 FEET	6	7.32%	4	4.88%	7	8.54%	16	19.51%	25	30.49%	16	19.51%	4	4.88%	21	3.51%	82	56	67%	21	33%	6 PM to 7 PM	37	58		
2-1 FEET	5	8.20%	4	6.56%	5	8.20%	8	13.11%	19	31.15%	8	13.11%	7	11.48%	4	8.20%	61	41	59%	20	40%	7 PM to 8 PM	21	45		
1-2 FEET	5	8.20%	3	6.12%	6	16.33%	8	16.33%	10	20.41%	11	22.45%	4	8.16%	49	30	61%	19	39%	8 PM to 9 PM	20	40				
1-1 FEET	5	15.63%	2	6.05%	5	15.63%	7	21.88%	3	9.38%	3	9.38%	2	6.25%	32	24	75%	8	25%	9 PM to 10 PM	212	363				
0-0 FEET	67	9.68%	51	7.37%	85	12.28%	107	15.46%	170	24.57%	128	18.50%	53	7.66%	31	4.48%	692	480	69%	212	31%	GRAND TOTAL:	398	761		
BEFORE AND AFTER COMPARISON		Distance First Car In Queue Stopped Behind Stop Line						Time						PEDESTRIANS						TOTAL						
TIME	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PERIOD	From North	From South			
10 AM to 9 PM	113	9.9%	94	8.8%	91	8%	122	10%	237	20%	270	22%	76	6%	209	17%	1212	657	53%	537	428	4 PM to 9 PM	537	965		
DATE	4/24/2003		6/3/2004		67	10%	51	7%	85	12%	107	15%	-6	-15	-67	-142	-178	-480	-15%	-15%	4/24/2003	6/3/2004	363	761		
CHANGE:	-46	-4.3%																		CHANGE:	-159	-65%	-204			

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Saturdays

Date: 4/26/2003 Direction: Eastbound

DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE										
TIME	>6 FEET	>3 FEET	0-1 FEET	OVER	CREEP OVER	RAN RED	TOTAL	PEDESTRIANS	TIME	TOTAL
PERIOD	#	%	#	%	#	%	#	MOTORISTS	PERIOD	
10 AM to 11 AM	5	6.33%	7	8.86%	11	15.92%	3	10.13%	9	11.39%
11 AM to 12 Noon	16	10.53%	14	9.21%	13	8.55%	19	12.50%	13	11.23%
12 Noon to 1 PM	17	9.09%	18	9.63%	20	10.70%	21	11.23%	22	11.76%
1 PM to 2 PM	15	9.62%	11	7.05%	15	9.62%	20	12.82%	43	27.52%
2 PM to 3 PM	20	11.43%	15	8.57%	23	13.14%	16	9.14%	44	25.56%
3 PM to 4 PM	25	13.02%	14	7.29%	28	14.58%	23	11.98%	29	15.10%
4 PM to 5 PM	20	10.36%	25	12.85%	20	10.36%	16	8.29%	33	17.10%
5 PM to 6 PM	22	11.22%	32	16.33%	31	15.82%	24	12.24%	19	9.89%
6 PM to 7 PM	17	9.04%	14	7.45%	21	11.17%	27	14.86%	25	13.80%
7 PM to 8 PM	12	9.38%	9	7.03%	22	17.19%	14	10.84%	24	18.75%
8 PM to 9 PM	4	4.38%	6	6.52%	18	19.57%	17	18.48%	11	11.96%
GRAND TOTAL:	173	9.98%	165	9.49%	227	13.05%	207	11.91%	221	12.72%
										1738
										993
										79
										118
										39
										GRAND TOTAL:
										1241
										868
										2109

Date: 6/5/2004 Direction: Eastbound

DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE										
TIME	>6 FEET	>3 FEET	0-1 FEET	OVER	CREEP OVER	RAN RED	TOTAL	PEDESTRIANS	TIME	TOTAL
PERIOD	#	%	#	%	#	%	#	MOTORISTS	PERIOD	
10 AM to 11 AM	7	12.86%	3	5.66%	11	12.96%	7	12.96%	3	7.44%
11 AM to 12 Noon	6	8.82%	4	5.68%	12	17.63%	16	23.53%	12	17.65%
12 Noon to 1 PM	3	2.94%	10	9.80%	12	11.76%	13	22.59%	18	25.49%
1 PM to 2 PM	5	5.88%	2	2.05%	10	11.78%	18	21.81%	19	22.35%
2 PM to 3 PM	1	0.74%	9	6.57%	24	17.78%	31	22.96%	36	26.67%
3 PM to 4 PM	8	6.50%	12	9.76%	11	8.94%	18	14.63%	21	15.56%
4 PM to 5 PM	2	1.96%	6	5.88%	5	4.90%	16	15.67%	23	25.20%
5 PM to 6 PM	3	2.10%	15	10.49%	20	13.93%	27	18.89%	36	22.57%
6 PM to 7 PM	6	5.68%	7	6.48%	14	12.96%	24	22.22%	26	24.07%
7 PM to 8 PM	7	8.14%	8	9.30%	4	4.65%	23	26.74%	17	19.77%
8 PM to 9 PM	4	7.27%	2	3.64%	3	5.45%	12	21.82%	19	34.55%
GRAND TOTAL:	52	4.89%	78	7.35%	125	11.88%	205	19.32%	245	23.09%
										1061
										706
										67%
										355
										33%
										773
										589
										1382

DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE										
TIME	>6 FEET	>3 FEET	0-1 FEET	OVER	CREEP OVER	RAN RED	TOTAL	PEDESTRIANS	TIME	TOTAL
PERIOD	#	%	#	%	#	%	#	MOTORISTS	PERIOD	
10 AM to 11 AM	165	10%	227	9%	207	13%	221	13%	380	23%
11 AM to 12 Noon	78	7%	126	12%	205	19%	245	23%	168	15%
12 Noon to 1 PM	-87	-121	-101	-2	24	24	-212	28	-206	-206
1 PM to 2 PM										
2 PM to 3 PM										
3 PM to 4 PM										
4 PM to 5 PM										
5 PM to 6 PM										
6 PM to 7 PM										
7 PM to 8 PM										
8 PM to 9 PM										
GRAND TOTAL:	173	10%	52	5%	-87	-121	-101	-2	24	-206
										-747

BEFORE AND AFTER COMPARISON										
TIME	>6 FEET	>3 FEET	0-1 FEET	OVER	CREEP OVER	RAN RED	TOTAL	PEDESTRIANS	TIME	TOTAL
DATE	#	%	#	%	#	%	#	MOTORISTS	DATE	
4/26/2003	165	10%	227	9%	207	13%	221	13%	380	23%
6/5/2004	52	5%	-87	-121	-101	-2	24	-24	-206	-747
CHANGE:	-121	-121	-87	-87	-101	-2	24	-24	-206	-747

Results of West Alabama Pedestrian Crosswalk "Before After" Installation Study
Sundays

Date:		Direction: Eastbound												Direction: Eastbound											
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						OVER						CREEP OVER						RAN RED					
TIME		>6 FEET			>3 FEET			0-1 FEET			0-1 FEET			0-1 FEET			0-1 FEET			0-1 FEET			0-1 FEET		
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	TOTAL
11 AM to 12 Noon	4	6.78%	11	18.64%	14	25.33%	6	10.17%	5	8.47%	1	1.69%	11	18.64%	59	42	7.1%	17	29%	11 AM to 12 Noon	23	17	40		
12 Noon to 1 PM	7	10.00%	13	22.86%	6	5.57%	8	11.43%	17	24.29%	6	8.57%	1	1.43%	16	22.86%	70	47	61%	12 Noon to 1 PM	29	23	55		
1 PM to 2 PM	16	10.60%	15	9.93%	23	15.23%	14	9.27%	24	15.89%	15	9.33%	6	3.97%	38	25.17%	151	92	61%	1 PM to 2 PM	53	33%	160		
2 PM to 3 PM	19	12.07%	21	12.07%	14	6.05%	16	9.20%	37	21.36%	26	14.84%	5	2.87%	36	20.63%	174	107	61%	2 PM to 3 PM	108	58	166		
3 PM to 4 PM	10	6.37%	13	8.28%	15	5.55%	7	4.48%	31	19.75%	39	24.84%	6	3.82%	36	22.93%	157	76	48%	3 PM to 4 PM	130	99	229		
4 PM to 5 PM	13	8.55%	13	8.55%	24	15.79%	21	13.82%	29	19.08%	25	16.45%	6	3.95%	21	13.82%	152	100	68%	4 PM to 5 PM	52	34%	202		
5 PM to 6 PM	14	10.85%	17	13.18%	13	10.08%	16	12.40%	22	17.05%	14	10.85%	2	1.55%	31	24.03%	129	82	64%	5 PM to 6 PM	67	74	141		
6 PM to 7 PM	2	2.50%	8	10.00%	10	12.50%	23	28.75%	16	20.00%	6	12.50%	80	48	60%	32	40%	6 PM to 7 PM	34	81	81				
GRAND TOTAL:	85	8.74%	104	10.70%	117	12.04%	99	10.19%	189	19.44%	146	15.02%	33	3.40%	199	20.47%	972	594	61%	GRAND TOTAL:	594	480	1074		
Date:	6/6/2004	Direction: Eastbound																							
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						OVER						CREEP OVER						RAN RED					
TIME	>6 FEET	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	TOTAL
PERIOD	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS
11 AM to 12 Noon	2	6.67%	1	3.33%	4	13.33%	6	20.00%	5	16.67%	6	20.00%	3	10.00%	30	10.00%	30	18	60%	12	40%	11 AM to 12 Noon	19	14	33
12 Noon to 1 PM	9	15.79%	6	10.53%	9	15.93%	7	12.28%	10	17.55%	9	15.79%	5	8.77%	2	3.51%	57	41	72%	12 Noon to 1 PM	34	15	49		
1 PM to 2 PM	3	3.23%	5	5.38%	10	10.75%	9	9.68%	31	33.33%	19	20.43%	8	8.60%	93	8.60%	93	58	62%	1 PM to 2 PM	35	38%	110		
2 PM to 3 PM	9	9.78%	3	3.28%	6	6.62%	9	9.78%	36	39.15%	20	21.74%	6	6.52%	3	3.28%	29	63	68%	2 PM to 3 PM	97	46	143		
3 PM to 4 PM	6	6.00%	4	4.00%	13	13.00%	6	6.00%	35	35.00%	28	28.00%	6	6.00%	2	2.00%	100	64	64%	3 PM to 4 PM	111	49	160		
4 PM to 5 PM	3	3.85%	2	2.66%	6	7.69%	19	24.36%	30	38.46%	12	15.38%	4	5.13%	78	60	77%	4 PM to 5 PM	89	56	123				
5 PM to 6 PM	9	12.33%	3	4.11%	12	16.44%	25	34.28%	18	24.68%	3	4.11%	0	0.00%	73	52	71%	5 PM to 6 PM	21	29%	146				
6 PM to 7 PM	3	6.98%	1	2.33%	2	4.45%	6	13.95%	19	44.15%	6	13.95%	4	9.30%	2	4.65%	43	31	72%	6 PM to 7 PM	25	28%	58		
GRAND TOTAL:	44	7.77%	25	4.42%	53	9.36%	74	13.07%	191	33.75%	118	20.85%	37	6.54%	24	4.24%	566	387	68%	GRAND TOTAL:	499	323	822		
BEFORE AND AFTER COMPARISON																									
		DISTANCE FIRST CAR IN QUEUE STOPPED BEHIND STOP LINE						OVER						CREEP OVER						RAN RED					
TIME	>6 FEET	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	NON-COMPLIANT MOTORISTS
11 AM to 7 PM	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	PEDESTRIANS
DATE	4/27/2003	65	9%	104	11%	117	12%	99	10%	189	19%	146	15%	33	3%	198	20%	972	594	61%	4/27/2003	534	480	1074	
6/6/2004	44	8%	25	4%	53	9%	74	13%	191	34%	118	21%	37	7%	24	4%	566	387	68%	6/6/2004	499	323	822		
CHANGE:	-41	-7.9%	-25	-4.2%	-64	-2.4%	-25	-2%	-2	-28	-28	-2%	-25	-2%	-4	-1%	-175	-76	-7%	CHANGE:	-95	-157	-252		