URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : FTHAME~1
Site Code : 00001102
Start Date : 3/1/2011
Page No : 3

	Ft Hamer South Bound					Golf Course Rd West Bound					Ft Hamer North Bound					East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:30 AM to 12:45 PM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	18	83	0	0	101	90	0	22	0	112	0	147	82	0	229	0	0	0	0	0	442
Percent	17.8	82.2	0.0	0.0		80.4	0.0	19.6	0.0		0.0	64.2	35.8	0.0		0.0	0.0	0.0	0.0		
08:00 Volume	3	31	0	0	34	33	0	7	0	40	0	43	18	0	61	0	0	0	0	0	135
Peak Factor																					0.819
High Int.	08:00 AM					08:00 AM					08:15 AM					7:15:00 AM					
Volume	3	31	0	0	34	33	0	7	0	40	0	56	28	0	84						
Peak Factor					0.743					0.700					0.682						
Peak Hour From 01:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	15	80	0	0	95	63	0	20	1	84	0	66	67	0	133	0	0	0	0	0	312
Percent	15.8	84.2	0.0	0.0		75.0	0.0	23.8	1.2		0.0	49.6	50.4	0.0		0.0	0.0	0.0	0.0		
04:15 Volume	6	22	0	0	28	17	0	6	0	23	0	18	15	0	33	0	0	0	0	0	84
Peak Factor																					0.929
High Int.	04:15 PM					04:45 PM					04:00 PM										
Volume	6	22	0	0	28	15	0	9	0	24	0	15	21	0	36						
Peak Factor					0.848					0.875					0.924						

No.2 Ft Hamer @ Golf Course

Heavy Vehicle Percentages

Interval 7:00 to 7:15 am

	Trucks	School Buses
NBT	1	1
NBR		
SBT		
SBL		
WBL		1
WBR		

Heavy Vehicle Percentages

Interval 7:15 to 7:30 am

	Trucks	School Buses
NBT		
NBR		
SBT		1
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 7:30 to 7:45 am

	Trucks	School Buses
NBT		1
NBR		
SBT		
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 7:45 to 8:00 am

	Trucks	School Buses
NBT		
NBR	1	
SBT		1
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 8:00 to 8:15 am

	Trucks	School Buses
NBT		1
NBR		
SBT		
SBL		
WBL		1
WBR		

Heavy Vehicle Percentages

Interval 8:15 to 8:30 am

	Trucks	School Buses
NBT		
NBR		
SBT		
SBL	2	
WBL		
WBR		

Heavy Vehicle Percentages

Interval 8:30 to 8:45 am

	Trucks	School Buses
NBT		
NBR	1	
SBT	1	
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 8:45 to 9:00 am

	Trucks	School Buses
NBT		
NBR	1	
SBT		
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 4:00 to 4:15 pm

	Trucks	School Buses
NBT		
NBR		
SBT		
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 4:15 to 4:30 pm

	Trucks	School Buses
NBT	1	2
NBR		1
SBT		
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 4:30 to 4:45 pm

	Trucks	School Buses
NBT	1	
NBR	1	
SBT		1
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 4:45 to 5:00 pm

	Trucks	School Buses
NBT	1	
NBR		
SBT	1	1
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 5:00 to 5:15 pm

	Trucks	School Buses
NBT		
NBR		1
SBT		
SBL		
WBL		1
WBR		

Heavy Vehicle Percentages

Interval 5:15 to 5:30 pm

	Trucks	School Buses
NBT		1
NBR		
SBT		
SBL		
WBL		
WBR		

Heavy Vehicle Percentages

Interval 5:30 to 5:45 pm

	Trucks	School Buses
NBT	1	
NBR		
SBT		
SBL		
WBL	1	
WBR		

Heavy Vehicle Percentages

Interval 5:45 to 6:00 pm

	Trucks	School Buses
NBT		
NBR		
SBT		
SBL		
WBL		
WBR		

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 0899
Counted By: URS
Weather: Sunny
Other:

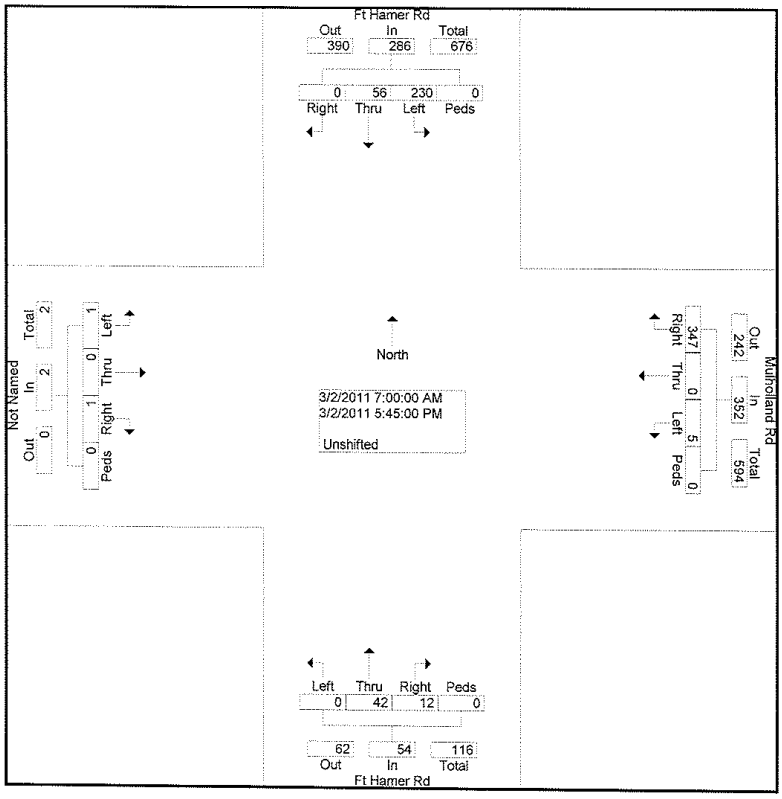
File Name : ft hamer_mulholland
Site Code : 00000899
Start Date : 3/2/2011
Page No : 1

Groups Printed- Unshifted

	Ft Hamer Rd South Bound				Mulholland Rd West Bound				Ft Hamer Rd North Bound				East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	2	0	0	0	0	27	0	0	2	0	0	0	0	0	0	31
07:15 AM	3	1	0	0	0	0	25	0	0	1	0	0	0	0	0	0	30
07:30 AM	4	4	0	0	0	0	38	0	0	1	0	0	0	0	0	0	47
07:45 AM	8	2	0	0	0	0	31	0	0	0	0	0	0	0	0	0	41
Total	15	9	0	0	0	0	121	0	0	4	0	0	0	0	0	0	149
08:00 AM	14	2	0	0	0	0	53	0	0	5	0	0	0	0	0	0	74
08:15 AM	14	4	0	0	0	0	31	0	0	2	0	0	0	0	0	0	51
08:30 AM	6	0	0	0	1	0	20	0	0	7	0	0	0	0	0	0	34
08:45 AM	8	5	0	0	0	0	19	0	0	1	0	0	0	0	0	0	33
Total	42	11	0	0	1	0	123	0	0	15	0	0	0	0	0	0	192
04:00 PM	15	3	0	0	0	0	14	0	0	3	3	0	1	0	1	0	40
04:15 PM	17	2	0	0	0	0	10	0	0	1	0	0	0	0	0	0	30
04:30 PM	21	2	0	0	1	0	10	0	0	3	2	0	0	0	0	0	39
04:45 PM	28	7	0	0	1	0	10	0	0	2	0	0	0	0	0	0	48
Total	81	14	0	0	2	0	44	0	0	9	5	0	1	0	1	0	157
05:00 PM	21	3	0	0	1	0	7	0	0	5	1	0	0	0	0	0	38
05:15 PM	26	7	0	0	0	0	22	0	0	5	2	0	0	0	0	0	62
05:30 PM	27	5	0	0	1	0	16	0	0	2	2	0	0	0	0	0	53
05:45 PM	18	7	0	0	0	0	14	0	0	2	2	0	0	0	0	0	43
Total	92	22	0	0	2	0	59	0	0	14	7	0	0	0	0	0	196
Grand Total	230	56	0	0	5	0	347	0	0	42	12	0	1	0	1	0	694
Apprch %	80.4	19.6	0.0	0.0	1.4	0.0	98.6	0.0	0.0	77.8	22.2	0.0	50.0	0.0	50.0	0.0	
Total %	33.1	8.1	0.0	0.0	0.7	0.0	50.0	0.0	0.0	6.1	1.7	0.0	0.1	0.0	0.1	0.0	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_mulholland
Site Code : 00000899
Start Date : 3/2/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_mulholland
Site Code : 00000899
Start Date : 3/2/2011
Page No : 3

	Ft Hamer Rd South Bound					Mulholland Rd West Bound					Ft Hamer Rd North Bound					East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	40	12	0	0	52	0	0	153	0	153	0	8	0	0	8	0	0	0	0	0	213
Percent	76.9	23.1	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
08:00 Volume	14	2	0	0	16	0	0	53	0	53	0	5	0	0	5	0	0	0	0	0	74
Peak Factor																					0.720
High Int.	08:15 AM					08:00 AM					08:00 AM					6:45:00 AM					
Volume	14	4	0	0	18	0	0	53	0	53	0	5	0	0	5						
Peak Factor	2	1			0.722			1		0.722		1			0.400						
	5.0	8.33						0.65				12.5									
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	102	22	0	0	124	3	0	55	0	58	0	14	5	0	19	0	0	0	0	0	201
Percent	82.3	17.7	0.0	0.0		5.2	0.0	94.8	0.0		0.0	73.7	26.3	0.0		0.0	0.0	0.0	0.0		
05:15 Volume	26	7	0	0	33	0	0	22	0	22	0	5	2	0	7	0	0	0	0	0	62
Peak Factor																					0.810
High Int.	04:45 PM					05:15 PM					05:15 PM										
Volume	28	7	0	0	35	0	0	22	0	22	0	5	2	0	7						
Peak Factor					0.886					0.659					0.679						
PM HV Vol	1	3						2				1									
PM %HV	0.98	13.63						3.63				7.14									

4. Ft. Hamer @ Mulholland Rd

Heavy Vehicle Percentages

Interval 7:00 to 7:15 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		1
SBT		
SBL		

Heavy Vehicle Percentages

Interval 7:15 to 7:30 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		2
SBT		
SBL		1

Heavy Vehicle Percentages

Interval 7:30 to 7:45 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		
SBT		
SBL		2

Heavy Vehicle Percentages

Interval 7:45 to 8:00 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		
SBT		
SBL		

Heavy Vehicle Percentages

Interval 8:00 to 8:15 am

	Trucks	School Buses
NBT	1	
NBR		
WBL		
WBR		
SBT		
SBL		

Heavy Vehicle Percentages

Interval 8:15 to 8:30 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		1
SBT		1
SBL		

Heavy Vehicle Percentages

Interval 8:30 to 8:45 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR	1	
SBT		
SBL		

Heavy Vehicle Percentages

Interval 8:45 to 9:00 am

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		
SBT		
SBL	1	

Heavy Vehicle Percentages

Interval 4:00 to 4:15 pm

	Trucks	School Buses
NBT	1	
NBR		
WBL		
WBR		1
SBT		
SBL		

Heavy Vehicle Percentages

Interval 4:15 to 4:30 pm

	Trucks	School Buses
NBT	1	
NBR		
WBL		
WBR		
SBT		
SBL	1	

Heavy Vehicle Percentages

Interval 4:30 to 4:45 pm

	Trucks	School Buses
NBT	1	
NBR		
WBL		
WBR		
SBT		
SBL		

Heavy Vehicle Percentages

Interval 4:45 to 5:00 pm

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		
SBT	1	
SBL		

Heavy Vehicle Percentages

Interval 5:00 to 5:15 pm

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		
SBT	2	
SBL		1

Heavy Vehicle Percentages

Interval 5:15 to 5:30 pm

	Trucks	School Buses
NBT	1	
NBR		
WBL		
WBR		
SBT		
SBL		1

Heavy Vehicle Percentages

Interval 5:30 to 5:45 pm

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		2
SBT		
SBL		

Heavy Vehicle Percentages

Interval 5:45 to 6:00 pm

	Trucks	School Buses
NBT		
NBR		
WBL		
WBR		1
SBT	1	
SBL		

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 0869
Counted By: URS
Weather: Sunny
Other:

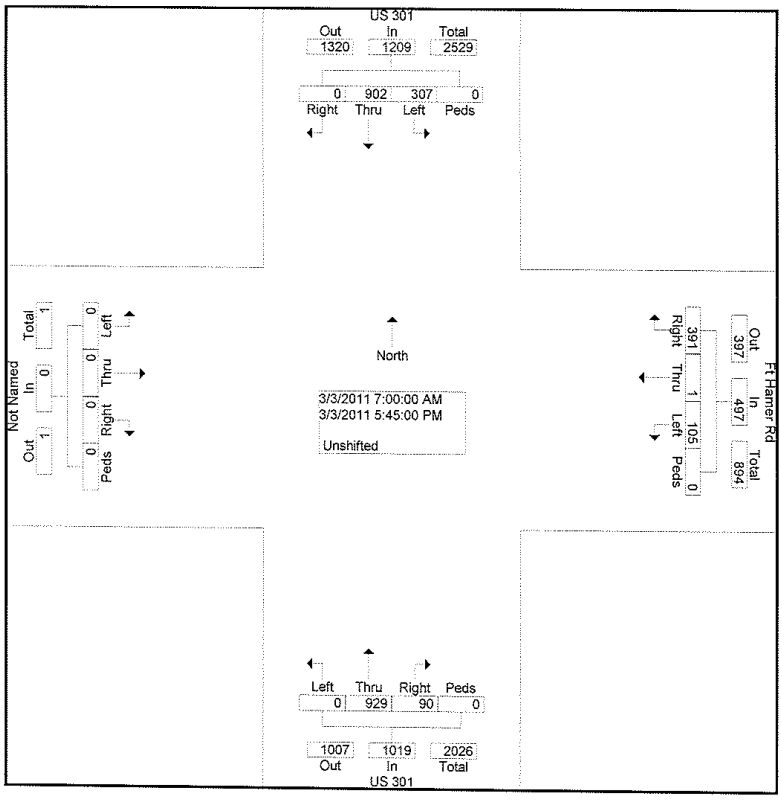
File Name : ft hamer_us 301
Site Code : 00000869
Start Date : 3/3/2011
Page No : 1

Groups Printed- Unshifted

	US 301 South Bound				Ft Hamer Rd West Bound				US 301 North Bound				East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	8	52	0	0	7	0	30	0	0	67	2	0	0	0	0	0	166
07:15 AM	13	66	0	0	8	0	34	0	0	52	5	0	0	0	0	0	178
07:30 AM	13	50	0	0	7	0	23	0	0	47	5	0	0	0	0	0	145
07:45 AM	21	50	0	0	6	0	37	0	0	55	1	0	0	0	0	0	170
Total	55	218	0	0	28	0	124	0	0	221	13	0	0	0	0	0	659
08:00 AM	28	45	0	0	7	0	36	0	0	55	10	0	0	0	0	0	181
08:15 AM	13	41	0	0	16	0	48	0	0	44	3	0	0	0	0	0	165
08:30 AM	13	59	0	0	9	0	30	0	0	51	5	0	0	0	0	0	167
08:45 AM	10	44	0	0	6	0	14	0	0	44	5	0	0	0	0	0	123
Total	64	189	0	0	38	0	128	0	0	194	23	0	0	0	0	0	636
04:00 PM	25	68	0	0	7	0	20	0	0	67	8	0	0	0	0	0	195
04:15 PM	22	54	0	0	4	0	11	0	0	58	5	0	0	0	0	0	154
04:30 PM	17	59	0	0	2	0	20	0	0	76	8	0	0	0	0	0	182
04:45 PM	24	56	0	0	8	1	12	0	0	48	7	0	0	0	0	0	156
Total	88	237	0	0	21	1	63	0	0	249	28	0	0	0	0	0	687
05:00 PM	23	62	0	0	5	0	22	0	0	72	8	0	0	0	0	0	192
05:15 PM	25	54	0	0	4	0	16	0	0	69	8	0	0	0	0	0	176
05:30 PM	21	79	0	0	5	0	17	0	0	64	4	0	0	0	0	0	190
05:45 PM	31	63	0	0	4	0	21	0	0	60	6	0	0	0	0	0	185
Total	100	258	0	0	18	0	76	0	0	265	26	0	0	0	0	0	743
Grand Total	307	902	0	0	105	1	391	0	0	929	90	0	0	0	0	0	2725
Apprch %	25.4	74.6	0.0	0.0	21.1	0.2	78.7	0.0	0.0	91.2	8.8	0.0	0.0	0.0	0.0	0.0	
Total %	11.3	33.1	0.0	0.0	3.9	0.0	14.3	0.0	0.0	34.1	3.3	0.0	0.0	0.0	0.0	0.0	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_us 301
Site Code : 00000869
Start Date : 3/3/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_us 301
Site Code : 00000869
Start Date : 3/3/2011
Page No : 3

	US 301 South Bound					Ft Hamer Rd West Bound					US 301 North Bound					East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	75	195	0	0	270	38	0	151	0	189	0	205	19	0	224	0	0	0	0	0	683
Percent	27.8	72.2	0.0	0.0		20.1	0.0	79.9	0.0		0.0	91.5	8.5	0.0		0.0	0.0	0.0	0.0		
08:00 Volume	28	45	0	0	73	7	0	36	0	43	0	55	10	0	65	0	0	0	0	0	181
Peak Factor																					0.943
High Int.	08:00 AM					08:15 AM					08:00 AM					6:45:00 AM					
Volume	28	45	0	0	73	16	0	48	0	64	0	55	10	0	65						
Peak Factor					0.925					0.738					0.862						
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	100	258	0	0	358	18	0	76	0	94	0	265	26	0	291	0	0	0	0	0	743
Percent	27.9	72.1	0.0	0.0		19.1	0.0	80.9	0.0		0.0	91.1	8.9	0.0		0.0	0.0	0.0	0.0		
05:00 Volume	23	62	0	0	85	5	0	22	0	27	0	72	8	0	80	0	0	0	0	0	192
Peak Factor																					0.967
High Int.	05:30 PM					05:00 PM					05:00 PM										
Volume	21	79	0	0	100	5	0	22	0	27	0	72	8	0	80						
Peak Factor					0.895					0.870					0.909						

No.1 Ft Hamer @ US 301

Heavy Vehicle Percentages

Interval 7:00 to 7:15 am

	Trucks	School Buses
EBT	1	
EBR		
WBT		5
WBL		1
NBL	1	
NBR		

Heavy Vehicle Percentages

Interval 7:15 to 7:30 am

	Trucks	School Buses
EBT	6	1
EBR		
WBT	5	3
WBL		
NBL	1	
NBR		

Heavy Vehicle Percentages

Interval 7:30 to 7:45 am

	Trucks	School Buses
EBT	2	
EBR		
WBT		
WBL		
NBL		
NBR		1

Heavy Vehicle Percentages

Interval 7:45 to 8:00 am

	Trucks	School Buses
EBT	6	
EBR		
WBT	4	2
WBL		1
NBL		
NBR		

Heavy Vehicle Percentages

Interval 8:00 to 8:15 am

	Trucks	School Buses
EBT	3	
EBR		
WBT	5	1
WBL		
NBL		
NBR		1

Heavy Vehicle Percentages

Interval 8:15 to 8:30 am

	Trucks	School Buses
EBT	1	
EBR		
WBT	2	
WBL		
NBL		
NBR		

Heavy Vehicle Percentages

Interval 8:30 to 8:45 am

	Trucks	School Buses	
EBT	3		13
EBR			
WBT	5		19
WBL	1		2
NBL		1	1
NBR	1	1	3

Heavy Vehicle Percentages

Interval 8:45 to 9:00 am

	Trucks	School Buses
EBT	2	
EBR		
WBT	1	
WBL	1	1
NBL		
NBR		

Heavy Vehicle Percentages

Interval 4:00 to 4:15 pm

	Trucks	School Buses
EBT	3	1
EBR		
WBT		2
WBL		
NBL		
NBR		1

Heavy Vehicle Percentages

Interval 4:15 to 4:30 pm

	Trucks	School Buses
EBT	5	
EBR		
WBT	1	
WBL		
NBL		
NBR		1

Heavy Vehicle Percentages

Interval 4:30 to 4:45 pm

	Trucks	School Buses
EBT	2	1
EBR		1
WBT	1	2
WBL	1	
NBL		1
NBR	1	

Heavy Vehicle Percentages

Interval 4:45 to 5:00 pm

	Trucks	School Buses
EBT		
EBR	1	
WBT		
WBL		
NBL		
NBR		

Heavy Vehicle Percentages

Interval 5:00 to 5:15 pm

	Trucks	School Buses
EBT	1	
EBL		
WBT		2
WBR		
NBL		
NBR	1	

Heavy Vehicle Percentages

Interval 5:15 to 5:30 pm

	Trucks	School Buses
EBT		
EBL		
WBT		
WBR		
NBL	1	
NBR	1	

Heavy Vehicle Percentages

Interval 5:30 to 5:45 pm

	Trucks	School Buses
EBT	1	
EBL		
WBT	1	
WBR		
NBL		
NBR		

Heavy Vehicle Percentages

Interval 5:45 to 6:00 pm

	Trucks	School Buses	
EBT	3		5
EBL			
WBT			3
WBR			
NBL			1
NBR			2

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 1102
Counted By: URS
Weather: Cloudy
Other:

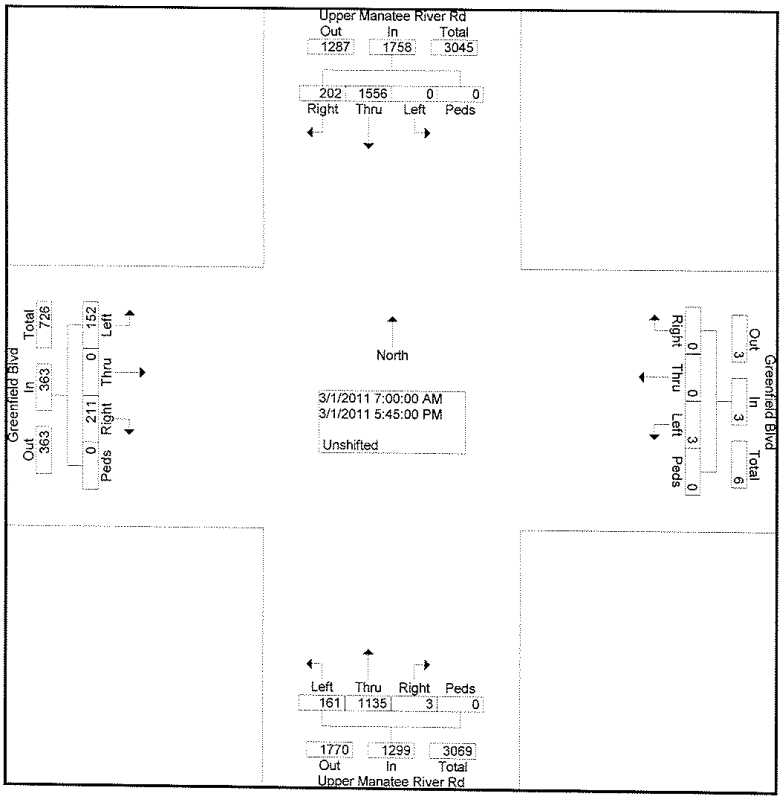
File Name : umrr_greenfield
Site Code : 00001122
Start Date : 3/1/2011
Page No : 1

Groups Printed- Unshifted

	Upper Manatee River Rd South Bound				Greenfield Blvd West Bound				Upper Manatee River Rd North Bound				Greenfield Blvd East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	158	10	0	0	0	0	0	5	18	0	0	1	0	10	0	202
07:15 AM	0	177	12	0	0	0	0	0	3	25	0	0	3	0	21	0	241
07:30 AM	0	137	11	0	0	0	0	0	4	43	1	0	3	0	19	0	218
07:45 AM	0	132	28	0	1	0	0	0	6	30	0	0	5	0	5	0	207
Total	0	604	61	0	1	0	0	0	18	116	1	0	12	0	55	0	868
08:00 AM	0	123	26	0	1	0	0	0	3	39	0	0	7	0	20	0	219
08:15 AM	0	83	17	0	0	0	0	0	12	46	0	0	9	0	11	0	178
08:30 AM	0	107	21	0	0	0	0	0	5	49	0	0	6	0	10	0	198
08:45 AM	0	80	20	0	0	0	0	0	5	48	0	0	12	0	12	0	177
Total	0	393	84	0	1	0	0	0	25	182	0	0	34	0	53	0	772
04:00 PM	0	64	11	0	0	0	0	0	12	99	1	0	22	0	13	0	222
04:15 PM	0	70	7	0	1	0	0	0	18	101	0	0	13	0	14	0	224
04:30 PM	0	66	10	0	0	0	0	0	12	95	0	0	6	0	10	0	199
04:45 PM	0	71	5	0	0	0	0	0	15	99	0	0	12	0	11	0	213
Total	0	271	33	0	1	0	0	0	57	394	1	0	53	0	48	0	858
05:00 PM	0	66	9	0	0	0	0	0	21	110	0	0	11	0	13	0	230
05:15 PM	0	72	7	0	0	0	0	0	18	111	1	0	18	0	17	0	244
05:30 PM	0	71	5	0	0	0	0	0	12	111	0	0	13	0	13	0	225
05:45 PM	0	79	3	0	0	0	0	0	10	111	0	0	11	0	12	0	226
Total	0	288	24	0	0	0	0	0	61	443	1	0	53	0	55	0	925
Grand Total	0	1556	202	0	3	0	0	0	161	1135	3	0	152	0	211	0	3423
Apprch %	0.0	88.5	11.5	0.0	100.0	0.0	0.0	0.0	12.4	87.4	0.2	0.0	41.9	0.0	58.1	0.0	
Total %	0.0	45.5	5.9	0.0	0.1	0.0	0.0	0.0	4.7	33.2	0.1	0.0	4.4	0.0	6.2	0.0	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : umrr_greenfield
Site Code : 00001122
Start Date : 3/1/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : umrr_greenfield
Site Code : 00001122
Start Date : 3/1/2011
Page No : 3

	Upper Manatee River Rd South Bound					Greenfield Blvd West Bound					Upper Manatee River Rd North Bound					Greenfield Blvd East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection 07:15 AM																					
Volume	0	569	77	0	646	2	0	0	0	2	16	137	1	0	154	18	0	65	0	83	885
Percent	0.0	88.1	11.9	0.0		100.0	0.0	0.0	0.0		10.4	89.0	0.6	0.0		21.7	0.0	78.3	0.0		
07:15 Volume	0	177	12	0	189	0	0	0	0	0	3	25	0	0	28	3	0	21	0	24	241
Peak Factor																					0.918
High Int.	07:15 AM					07:45 AM					07:30 AM					08:00 AM					
Volume	0	177	12	0	189	1	0	0	0	1	4	43	1	0	48	7	0	20	0	27	
Peak Factor		3	2		0.854	0		0		0.500	0	8			0.802			1		0.769	
		0.53	2.60									5.80						1.5			
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	0	288	24	0	312	0	0	0	0	0	61	443	1	0	505	53	0	55	0	108	925
Percent	0.0	92.3	7.7	0.0		0.0	0.0	0.0	0.0		12.1	87.7	0.2	0.0		49.1	0.0	50.9	0.0		
05:15 Volume	0	72	7	0	79	0	0	0	0	0	18	111	1	0	130	18	0	17	0	35	244
Peak Factor																					0.948
High Int.	05:45 PM										05:00 PM					05:15 PM					
Volume	0	79	3	0	82	0	0	0	0	0	21	110	0	0	131	18	0	17	0	35	
Peak Factor					0.951										0.964					0.771	
PM HV Vol		1										1									
PM % HV		0.35										0.23									

No.5 UMRR @ Greenfield Boulevard

Heavy Vehicle Percentages

Interval 7:00 to 7:15 am

	Trucks	School Buses
NBL		
NBT		
SBR		1
SBT		1
EBL		
EBR		

Heavy Vehicle Percentages

Interval 7:15 to 7:30 am

	Trucks	School Buses
NBL		
NBT		2
SBR		
SBT	1	1
EBL		
EBR		1

Heavy Vehicle Percentages

Interval 7:30 to 7:45 am

	Trucks	School Buses
NBL		
NBT		2
SBR		
SBT		1
EBL		
EBR		

Heavy Vehicle Percentages

Interval 7:45 to 8:00 am

	Trucks	School Buses
NBL		
NBT	1	
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 8:00 to 8:15 am

	Trucks	School Buses
NBL		
NBT		3
SBR		2
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 8:15 to 8:30 am

	Trucks	School Buses
NBL		
NBT	1	
SBR		1
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 8:30 to 8:45 am

	Trucks	School Buses
NBL		
NBT	1	
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 8:45 to 9:00 am

	Trucks	School Buses
NBL		
NBT		
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 4:00 to 4:15 pm

	Trucks	School Buses
NBL		
NBT		2
SBR		
SBT		2
EBL		
EBR		

Heavy Vehicle Percentages

Interval 4:15 to 4:30 pm

	Trucks	School Buses
NBL		
NBT	1	
SBR		1
SBT	1	
EBL		
EBR		

Heavy Vehicle Percentages

Interval 4:30 to 4:45 pm

	Trucks	School Buses
NBL		
NBT	1	
SBR		2
SBT	1	
EBL		
EBR		

Heavy Vehicle Percentages

Interval 4:45 to 5:00 pm

	Trucks	School Buses
NBL		
NBT		
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 5:00 to 5:15 pm

	Trucks	School Buses
NBL		
NBT		
SBR		
SBT		1
EBL		
EBR		

Heavy Vehicle Percentages

Interval 5:15 to 5:30 pm

	Trucks	School Buses
NBL		
NBT	1	
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 5:30 to 5:45 pm

	Trucks	School Buses
NBL		
NBT		
SBR		
SBT		
EBL		
EBR		

Heavy Vehicle Percentages

Interval 5:45 to 6:00 pm

	Trucks	School Buses
NBL		
NBT		
SBR		
SBT		
EBL		
EBR		

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 0379
Counted By: URS
Weather: Sunny
Other:

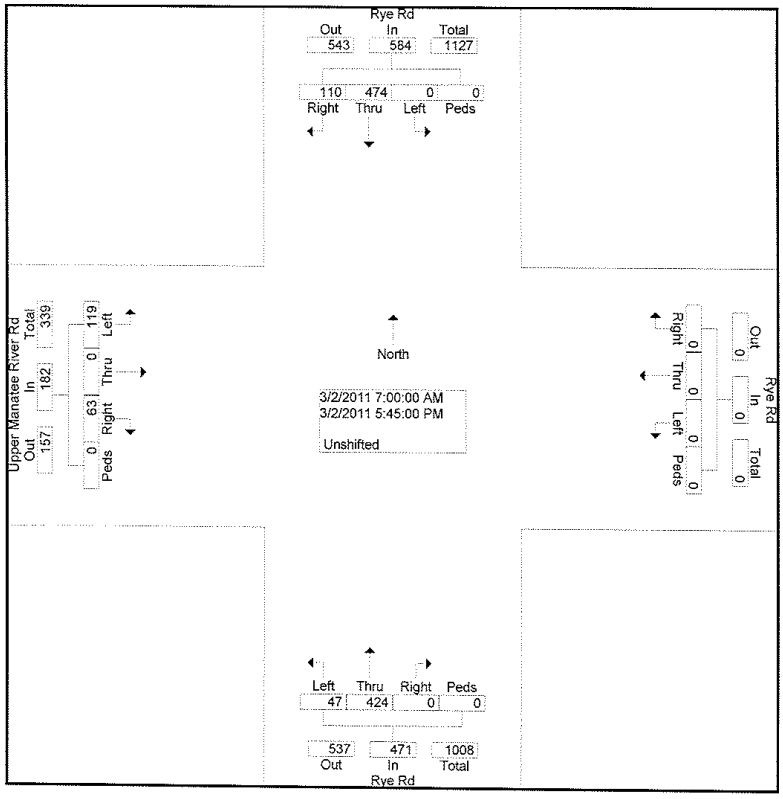
File Name : ummrr_Rye Rd
Site Code : 00000379
Start Date : 3/2/2011
Page No : 1

Groups Printed- Unshifted

	Rye Rd South Bound				Rye Rd West Bound				Rye Rd North Bound				Upper Manatee River Rd East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	49	12	0	0	0	0	0	2	9	0	0	6	0	3	0	81
07:15 AM	0	49	4	0	0	0	0	0	3	14	0	0	3	0	5	0	78
07:30 AM	0	45	4	0	0	0	0	0	1	15	0	0	5	0	5	0	75
07:45 AM	0	49	12	0	0	0	0	0	3	15	0	0	11	0	9	0	99
Total	0	192	32	0	0	0	0	0	9	53	0	0	25	0	22	0	333
08:00 AM	0	42	10	0	0	0	0	0	2	18	0	0	6	0	8	0	86
08:15 AM	0	41	6	0	0	0	0	0	6	25	0	0	7	0	9	0	94
08:30 AM	0	21	7	0	0	0	0	0	4	21	0	0	8	0	0	0	61
08:45 AM	0	23	5	0	0	0	0	0	3	21	0	0	7	0	0	0	59
Total	0	127	28	0	0	0	0	0	15	85	0	0	28	0	17	0	300
04:00 PM	0	19	8	0	0	0	0	0	2	36	0	0	9	0	1	0	75
04:15 PM	0	11	3	0	0	0	0	0	3	30	0	0	7	0	4	0	58
04:30 PM	0	19	5	0	0	0	0	0	2	26	0	0	11	0	0	0	63
04:45 PM	0	11	5	0	0	0	0	0	4	32	0	0	8	0	5	0	65
Total	0	60	21	0	0	0	0	0	11	124	0	0	35	0	10	0	261
05:00 PM	0	22	10	0	0	0	0	0	1	40	0	0	11	0	3	0	87
05:15 PM	0	29	5	0	0	0	0	0	4	45	0	0	8	0	4	0	95
05:30 PM	0	20	7	0	0	0	0	0	4	47	0	0	7	0	2	0	87
05:45 PM	0	24	7	0	0	0	0	0	3	30	0	0	5	0	5	0	74
Total	0	95	29	0	0	0	0	0	12	162	0	0	31	0	14	0	343
Grand Total	0	474	110	0	0	0	0	0	47	424	0	0	119	0	63	0	1237
Apprch %	0.0	81.2	18.8	0.0	0.0	0.0	0.0	0.0	10.0	90.0	0.0	0.0	65.4	0.0	34.6	0.0	
Total %	0.0	38.3	8.9	0.0	0.0	0.0	0.0	0.0	3.8	34.3	0.0	0.0	9.6	0.0	5.1	0.0	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ummrr_Rye Rd
Site Code : 00000379
Start Date : 3/2/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ummrr_Rye Rd
Site Code : 00000379
Start Date : 3/2/2011
Page No : 3

	Rye Rd South Bound					Rye Rd West Bound					Rye Rd North Bound					Upper Manatee River Rd East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection 07:30 AM																					
Volume	0	177	32	0	209	0	0	0	0	0	12	73	0	0	85	29	0	31	0	60	354
Percent	0.0	84.7	15.3	0.0		0.0	0.0	0.0	0.0		14.1	85.9	0.0	0.0		48.3	0.0	51.7	0.0		
07:45 Volume	0	49	12	0	61	0	0	0	0	0	3	15	0	0	18	11	0	9	0	20	99
Peak Factor																					0.894
High Int.	07:45 AM					6:45:00 AM					08:15 AM					07:45 AM					
Volume	0	49	12	0	61	0	0	0	0	0	6	25	0	0	31	11	0	9	0	20	
Peak Factor		4	1		0.857						6	5			0.685	0		1		0.750	
		2.2	3.1								5.0	6.8						3.2			
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	0	95	29	0	124	0	0	0	0	0	12	162	0	0	174	31	0	14	0	45	343
Percent	0.0	76.6	23.4	0.0		0.0	0.0	0.0	0.0		6.9	93.1	0.0	0.0		68.9	0.0	31.1	0.0		
05:15 Volume	0	29	5	0	34	0	0	0	0	0	4	45	0	0	49	8	0	4	0	12	95
Peak Factor																					0.903
High Int.	05:15 PM										05:30 PM					05:00 PM					
Volume	0	29	5	0	34	0	0	0	0	0	4	47	0	0	51	11	0	3	0	14	
Peak Factor					0.912										0.853					0.804	

Pm HV Vol 1
Pm %HV 1.05

1 1
8.33 .006

3
9.68

2
4.44

No. 8 UMRR @ Rye

Heavy Vehicle Percentages
Interval 7:00 to 7:15 am

	Trucks	School Buses
NBL		
NBT	1	
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 7:15 to 7:30 am

	Trucks	School Buses
NBL		
NBT	2	1
SBT		1
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 7:30 to 7:45 am

	Trucks	School Buses
NBL		
NBT	2	
SBT	1	
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 7:45 to 8:00 am

	Trucks	School Buses
NBL	1	1
NBT	1	
SBT	3	
SBR		
EBL		
EBR		1

Heavy Vehicle Percentages
Interval 8:00 to 8:15 am

	Trucks	School Buses
NBL	2	
NBT	1	
SBT		
SBR	1	
EBL		
EBR		

Heavy Vehicle Percentages
Interval 8:15 to 8:30 am

	Trucks	School Buses
NBL	2	
NBT	1	
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 8:30 to 8:45 am

	Trucks	School Buses
NBL		
NBT		
SBT	1	
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 8:45 to 9:00 am

	Trucks	School Buses
NBL		
NBT	2	
SBT	1	
SBR		
EBL	1	
EBR	2	

Heavy Vehicle Percentages
Interval 4:00 to 4:15 pm

	Trucks	School Buses
NBL		
NBT		1
SBT		
SBR		
EBL		
EBR		1

Heavy Vehicle Percentages
Interval 4:15 to 4:30 pm

	Trucks	School Buses
NBL		
NBT		
SBT	1	1
SBR		
EBL		
EBR	1	

Heavy Vehicle Percentages
Interval 4:30 to 4:45 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 4:45 to 5:00 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 5:00 to 5:15 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 5:15 to 5:30 pm

	Trucks	School Buses
NBL	1	
NBT	1	
SBT	1	
SBR		
EBL	3	
EBR	2	

Heavy Vehicle Percentages
Interval 5:30 to 5:45 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 5:45 to 6:00 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 0869/0378
Counted By: URS
Weather: Cloudy
Other:

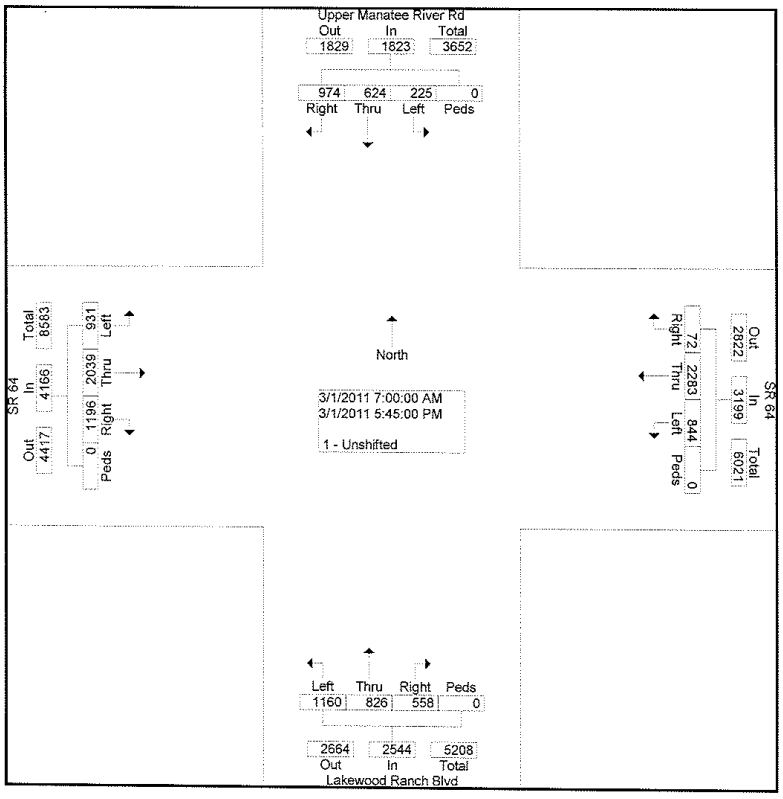
File Name : ummrr_SR 64
Site Code : 00000869
Start Date : 3/1/2011
Page No : 1

Groups Printed- 1 - Unshifted

	Upper Manatee River Rd South Bound				SR 64 West Bound				Lakewood Ranch Blvd North Bound				SR 64 East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	11	29	109	0	59	205	2	0	25	25	21	0	13	57	40	0	596
07:15 AM	13	86	100	0	69	206	2	0	52	28	22	0	18	83	77	0	756
07:30 AM	11	46	102	0	71	201	1	0	58	34	24	0	16	99	76	0	739
07:45 AM	15	49	88	0	82	195	3	0	58	35	17	0	53	118	85	0	798
Total	50	210	399	0	281	807	8	0	193	122	84	0	100	357	278	0	2889
08:00 AM	18	66	70	0	78	201	6	0	68	36	21	0	42	88	86	0	780
08:15 AM	17	47	57	0	75	155	8	0	85	38	32	0	74	98	67	0	753
08:30 AM	18	31	53	0	36	125	11	0	81	33	32	0	33	105	43	0	601
08:45 AM	17	36	62	0	65	100	6	0	75	48	13	0	35	84	69	0	610
Total	70	180	242	0	254	581	31	0	309	155	98	0	184	375	265	0	2744
04:00 PM	11	14	50	0	26	118	6	0	59	85	28	0	57	156	58	0	668
04:15 PM	16	38	38	0	33	123	6	0	60	64	36	0	66	144	88	0	712
04:30 PM	11	21	38	0	34	122	3	0	78	74	40	0	82	119	65	0	687
04:45 PM	16	35	41	0	36	125	6	0	87	54	33	0	69	145	87	0	734
Total	54	108	167	0	129	488	21	0	284	277	137	0	274	564	298	0	2801
05:00 PM	6	40	32	0	40	119	5	0	128	76	57	0	100	201	77	0	881
05:15 PM	16	31	44	0	44	118	4	0	97	67	63	0	97	180	81	0	842
05:30 PM	13	23	50	0	44	87	1	0	73	72	62	0	75	183	107	0	790
05:45 PM	16	32	40	0	52	83	2	0	76	57	57	0	101	179	90	0	785
Total	51	126	166	0	180	407	12	0	374	272	239	0	373	743	355	0	3298
Grand Total	225	624	974	0	844	2283	72	0	1160	826	558	0	931	2039	1196	0	11732
Apprch %	12.3	34.2	53.4	0.0	26.4	71.4	2.3	0.0	45.6	32.5	21.9	0.0	22.3	48.9	28.7	0.0	
Total %	1.9	5.3	8.3	0.0	7.2	19.5	0.6	0.0	9.9	7.0	4.8	0.0	7.9	17.4	10.2	0.0	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ummrr_SR 64
Site Code : 00000869
Start Date : 3/1/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ummrr_SR 64
Site Code : 00000869
Start Date : 3/1/2011
Page No : 3

	Upper Manatee River Rd South Bound					SR 64 West Bound					Lakewood Ranch Blvd North Bound					SR 64 East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	57	247	360	0	664	300	803	12	0	1115	236	133	84	0	453	129	388	324	0	841	3073
Percent	8.6	37.2	54.2	0.0		26.9	72.0	1.1	0.0		52.1	29.4	18.5	0.0		15.3	46.1	38.5	0.0		
07:45 Volume	15	49	88	0	152	82	195	3	0	280	58	35	17	0	110	53	118	85	0	256	798
Peak Factor																					0.963
High Int.	07:15 AM					08:00 AM					08:00 AM					07:45 AM					
Volume	13	86	100	0	199	78	201	6	0	285	68	36	21	0	125	53	118	85	0	256	
Peak Factor					0.834					0.978					0.906					0.821	
		1.166					6.99	78				12.36	54				4.87	41			
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	51	126	166	0	343	180	407	12	0	599	374	272	239	0	885	373	743	355	0	1471	3298
Percent	14.9	36.7	48.4	0.0		30.1	67.9	2.0	0.0		42.3	30.7	27.0	0.0		25.4	50.5	24.1	0.0		
05:00 Volume	6	40	32	0	78	40	119	5	0	164	128	76	57	0	261	100	201	77	0	378	881
Peak Factor																					0.936
High Int.	05:15 PM					05:15 PM					05:00 PM					05:00 PM					
Volume	16	31	44	0	91	44	118	4	0	166	128	76	57	0	261	100	201	77	0	378	
Peak Factor					0.942					0.902					0.848					0.973	
#V Vol		1					22					10					7				
%HV		0.29					3.67					1.13					1.48				

6. UMRR @ SR 64

Heavy Vehicle Percentages
Interval 7:00am-7:15pm

	Trucks	School Buses
WBL	7	
WBT	13	2
WBR		
NBL	5	8
NBT	3	
NBR	8	5
EB	9	7
SB		

Heavy Vehicle Percentages
Interval 7:15am-7:30am

	Trucks	School Buses
WBL	8	
WBT	19	4
WBR		
NBL	9	6
NBT		2
NBR	3	4
EB	15	3
SB	4	

Heavy Vehicle Percentages
Interval 7:30am-7:45am

	Trucks	School Buses
WBL	1	
WBT	10	2
WBR		
NBL	6	5
NBT		
NBR	4	4
EB	5	1
SB	2	2

Heavy Vehicle Percentages
Interval 7:45am-8:00am

	Trucks	School Buses	
WBL	4		20
WBT	5	1	56
WBR			0
NBL	4		43
NBT	1		6
NBR	2	1	31
EB	5	3	48
SB	1	2	11

Heavy Vehicle Percentages
Interval 8:00am-8:15am

	Trucks	School Buses
WBL	2	5
WBT	6	9
WBR	2	
NBL	3	
NBT		
NBR	2	
EB	5	4
SB		

Heavy Vehicle Percentages
Interval 8:15am-8:30am

	Trucks	School Buses
WBL	2	4
WBT	4	8
WBR		
NBL	2	
NBT	0	
NBR	1	
EB	15	3
SB		1

Heavy Vehicle Percentages
Interval 8:30am-8:45am

	Trucks	School Buses
WBL	1	2
WBT	3	2
WBR		
NBL	2	
NBT		
NBR	1	
EB	12	1
SB	2	2

Heavy Vehicle Percentages
Interval 8:45am-9:00am

	Trucks	School Buses	
WBL	1		17
WBT	3		35
WBR			2
NBL	0		7
NBT			0
NBR	1		5
EB	15		55
SB	3		8

Heavy Vehicle Percentages
Interval 4:00pm-4:15pm

	Trucks	School Buses
WBL	9	
WBT	10	4
WBR		
NBL	7	1
NBT	2	
NBR	6	2
EB	5	5
SB	1	

Heavy Vehicle Percentages
Interval 4:15pm-4:30pm

	Trucks	School Buses
WBL	10	
WBT	15	5
WBR		
NBL	5	2
NBT		
NBR	5	2
EB		4
SB		2

Heavy Vehicle Percentages
Interval 4:30pm-4:45pm

	Trucks	School Buses
WBL	2	
WBT	8	3
WBR		
NBL	5	2
NBT		
NBR	3	2
EB	5	
SB		

Heavy Vehicle Percentages
Interval 4:45pm-5:00pm

	Trucks	School Buses	
WBL	6		27
WBT	6	2	53
WBR			0
NBL	3		25
NBT	1		3
NBR	2	1	23
EB	5		24
SB	2		5

Heavy Vehicle Percentages
Interval 5:00pm-5:15pm

	Trucks	School Buses
WBL	2	
WBT	4	1
WBR	1	1
NBL	2	
NBT		
NBR	2	
EB	4	1
SB		

Heavy Vehicle Percentages
Interval 5:15pm-5:30pm

	Trucks	School Buses
WBL	3	
WBT	3	
WBR		
NBL	1	
NBT	1	
NBR	1	
EB	1	
SB		1

Heavy Vehicle Percentages
Interval 5:30pm-5:45pm

	Trucks	School Buses
WBL	2	
WBT	2	
WBR		
NBL	1	
NBT		
NBR	1	
EB		
SB		

Heavy Vehicle Percentages
Interval 5:45pm-6:00pm

	Trucks	School Buses	
WBL	1		8
WBT	2		12
WBR			2
NBL	0		4
NBT			1
NBR	1		5
EB	1		7
SB			1

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

Counter: 0869
Counted By: URS
Weather: Sunny
Other:

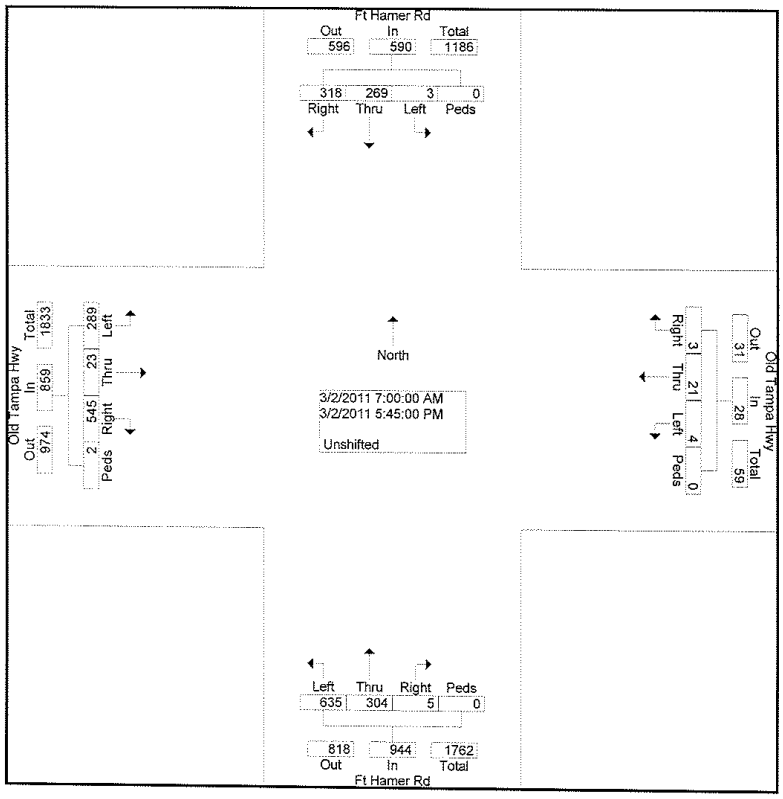
File Name : ft hamer_old tampa
Site Code : 00008691
Start Date : 3/2/2011
Page No : 1

Groups Printed- Unshifted

	Ft Hamer Rd South Bound				Old Tampa Hwy West Bound				Ft Hamer Rd North Bound				Old Tampa Hwy East Bound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	4	15	0	0	0	0	0	38	13	0	0	14	2	13	0	99
07:15 AM	0	10	17	0	0	0	0	0	43	12	1	0	12	1	20	0	116
07:30 AM	0	12	19	0	0	0	0	0	45	16	0	0	12	2	26	0	132
07:45 AM	0	44	20	0	0	1	1	0	53	29	1	0	19	1	56	0	225
Total	0	70	71	0	0	1	1	0	179	70	2	0	57	6	115	0	572
08:00 AM	0	45	20	0	1	2	0	0	117	56	0	0	18	0	70	0	329
08:15 AM	0	41	18	0	1	0	0	0	87	66	1	0	44	1	46	0	305
08:30 AM	0	5	15	0	0	2	0	0	35	15	0	0	12	2	10	0	96
08:45 AM	0	12	21	0	0	1	0	0	16	12	0	0	13	0	12	0	87
Total	0	103	74	0	2	5	0	0	255	149	1	0	87	3	138	0	817
04:00 PM	0	8	20	0	0	3	0	0	17	12	0	0	17	3	29	0	109
04:15 PM	1	7	20	0	0	1	0	0	23	3	0	0	17	3	30	0	105
04:30 PM	0	7	21	0	0	1	0	0	29	5	0	0	19	0	31	0	113
04:45 PM	0	20	22	0	1	1	0	0	19	13	0	0	21	0	38	0	135
Total	1	42	83	0	1	6	0	0	88	33	0	0	74	6	128	0	462
05:00 PM	0	15	26	0	0	4	0	0	23	12	0	0	14	2	22	2	120
05:15 PM	2	15	27	0	0	3	1	0	35	8	0	0	18	1	68	0	178
05:30 PM	0	15	22	0	0	0	0	0	31	15	1	0	14	1	38	0	137
05:45 PM	0	9	15	0	1	2	1	0	24	17	1	0	25	4	36	0	135
Total	2	54	90	0	1	9	2	0	113	52	2	0	71	8	164	2	570
Grand Total	3	269	318	0	4	21	3	0	635	304	5	0	289	23	545	2	2421
Apprch %	0.5	45.6	53.9	0.0	14.3	75.0	10.7	0.0	67.3	32.2	0.5	0.0	33.6	2.7	63.4	0.2	
Total %	0.1	11.1	13.1	0.0	0.2	0.9	0.1	0.0	26.2	12.6	0.2	0.0	11.9	1.0	22.5	0.1	

URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_old tampa
Site Code : 00008691
Start Date : 3/2/2011
Page No : 2



URS Corporation
7650 W. Courtney Campbell Cswy
Tampa, Fl 33607 813-286-1711

File Name : ft hamer_old tampa
Site Code : 00008691
Start Date : 3/2/2011
Page No : 3

	Ft Hamer Rd South Bound					Old Tampa Hwy West Bound					Ft Hamer Rd North Bound					Old Tampa Hwy East Bound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																					
Intersection 07:30 AM																					
Volume	0	142	77	0	219	2	3	1	0	6	302	167	2	0	471	93	4	198	0	295	991
Percent	0.0	64.8	35.2	0.0		33.3	50.0	16.7	0.0		64.1	35.5	0.4	0.0		31.5	1.4	67.1	0.0		
08:00 Volume	0	45	20	0	65	1	2	0	0	3	117	56	0	0	173	18	0	70	0	88	329
Peak Factor																					0.753
High Int.	08:00 AM					08:00 AM					08:00 AM					08:15 AM					
Volume	0	45	20	0	65	1	2	0	0	3	117	56	0	0	173	44	1	46	0	91	
HV Vol Peak Factor	0	3	1		0.842	0	0	0		0.500	4	3	0		0.681	2	0	4		0.810	
		2.11	1.30								1.32	1.80				2.15		2.02			
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																					
Intersection 04:45 PM																					
Volume	2	65	97	0	164	1	8	1	0	10	108	48	1	0	157	67	4	166	2	239	570
Percent	1.2	39.6	59.1	0.0		10.0	80.0	10.0	0.0		68.8	30.6	0.6	0.0		28.0	1.7	69.5	0.8		
05:15 Volume	2	15	27	0	44	0	3	1	0	4	35	8	0	0	43	18	1	68	0	87	178
Peak Factor																					0.801
High Int.	05:15 PM					05:00 PM					05:30 PM					05:15 PM					
Volume	2	15	27	0	44	0	4	0	0	4	31	15	1	0	47	18	1	68	0	87	
Peak Factor					0.932					0.625					0.835					0.687	
Pm HV Vol		1	1								3	2						2			
Pm %HV		1.54	1.03								2.78	4.17						1.20			

No.3 Ft Hamer @ Old Tampa

Heavy Vehicle Percentages

Interval 7:00 to 7:15 am

	Trucks	School Buses
EBL	1	
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 7:15 to 7:30 am

	Trucks	School Buses
EBL		
EBT		
EBR	1	2
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR	1	

Heavy Vehicle Percentages

Interval 7:30 to 7:45 am

	Trucks	School Buses
EBL		
EBT		
EBR		2
WBL		
WBT		
WBR		
NBL		2
NBT		1
NBR		
SBL		
SBT		1
SBR		

Heavy Vehicle Percentages

Interval 7:45 to 8:00 am

	Trucks	School Buses
EBL		
EBT		
EBR	2	
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 8:00 to 8:15 am

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		1
NBT		
NBR		
SBL		
SBT		1
SBR		

Heavy Vehicle Percentages

Interval 8:15 to 8:30 am

	Trucks	School Buses
EBL		2
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		1
NBT		2
NBR		
SBL		1
SBT		1
SBR		

Heavy Vehicle Percentages

Interval 8:30 to 8:45 am

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT	1	
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 8:45 to 9:00 am

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL	1	
NBT		
NBR		
SBL		
SBT		
SBR	2	

Heavy Vehicle Percentages

Interval 4:00 to 4:15 pm

	Trucks	School Buses
EBL	1	
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 4:15 to 4:30 pm

	Trucks	School Buses
EBL	1	
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR		1

Heavy Vehicle Percentages

Interval 4:30 to 4:45 pm

	Trucks	School Buses
EBL		
EBT		
EBR	1	
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR	2	1

Heavy Vehicle Percentages

Interval 4:45 to 5:00 pm

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL	3	
NBT		
NBR		
SBL		
SBT		
SBR	1	

Heavy Vehicle Percentages

Interval 5:00 to 5:15 pm

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT	1	
SBR		

Heavy Vehicle Percentages

Interval 5:15 to 5:30 pm

	Trucks	School Buses
EBL		
EBT		
EBR		1
WBL		
WBT		
WBR		
NBL		
NBT	1	1
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 5:30 to 5:45 pm

	Trucks	School Buses
EBL		
EBT		
EBR		1
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR		

Heavy Vehicle Percentages

Interval 5:45 to 6:00 pm

	Trucks	School Buses
EBL		
EBT		
EBR		
WBL		
WBT		
WBR		
NBL		
NBT		
NBR		
SBL		
SBT		
SBR	1	

JAMAR Technologies, Inc.
151 Keith Valley Road
Horsham, PA 19044
Change These In PREFERENCES

Counter: 1102
Counted By: URS
Weather: Sunny
Other:

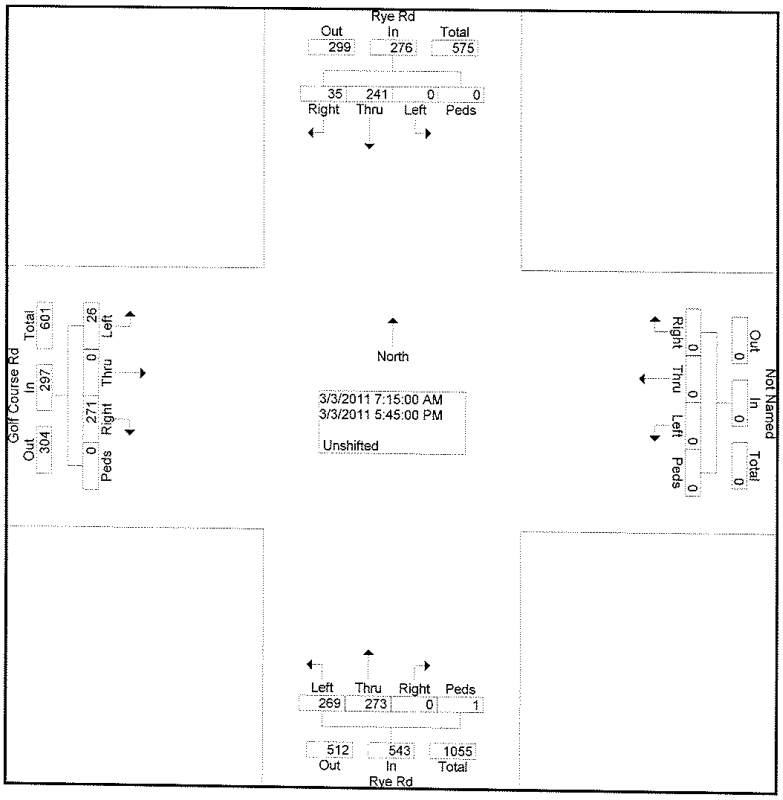
File Name : RYE_GO~1
Site Code : 00001102
Start Date : 3/3/2011
Page No : 1

Groups Printed- Unshifted

	Rye Rd From North				From East				Rye Rd From South				Golf Course Rd From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:15 AM	1	18	0	0	0	0	0	0	0	10	6	0	13	0	2	0	50
07:30 AM	3	29	0	0	0	0	0	0	0	15	9	0	29	0	1	0	86
07:45 AM	3	25	0	0	0	0	0	0	0	4	8	0	30	0	2	0	72
Total	7	72	0	0	0	0	0	0	0	29	23	0	72	0	5	0	208
08:00 AM	2	25	0	0	0	0	0	0	0	24	17	0	34	0	2	0	104
08:15 AM	3	12	0	0	0	0	0	0	0	18	20	0	18	0	1	0	72
08:30 AM	1	11	0	0	0	0	0	0	0	9	10	0	23	0	2	0	56
08:45 AM	2	8	0	0	0	0	0	0	0	12	8	0	9	0	2	0	41
Total	8	56	0	0	0	0	0	0	0	63	55	0	84	0	7	0	273
09:00 AM	1	14	0	0	0	0	0	0	0	15	14	0	15	0	1	0	60
Total	1	14	0	0	0	0	0	0	0	15	14	0	15	0	1	0	60
04:00 PM	2	12	0	0	0	0	0	0	0	15	17	1	13	0	1	0	61
04:15 PM	4	18	0	0	0	0	0	0	0	22	23	0	7	0	1	0	75
04:30 PM	0	11	0	0	0	0	0	0	0	20	16	0	11	0	1	0	59
04:45 PM	4	13	0	0	0	0	0	0	0	20	25	0	18	0	2	0	82
Total	10	54	0	0	0	0	0	0	0	77	81	1	49	0	5	0	277
05:00 PM	1	13	0	0	0	0	0	0	0	18	18	0	14	0	0	0	64
05:15 PM	2	5	0	0	0	0	0	0	0	15	22	0	10	0	3	0	57
05:30 PM	3	14	0	0	0	0	0	0	0	24	27	0	16	0	3	0	87
05:45 PM	3	13	0	0	0	0	0	0	0	32	29	0	11	0	2	0	90
Total	9	45	0	0	0	0	0	0	0	89	96	0	51	0	8	0	298
Grand Total	35	241	0	0	0	0	0	0	0	273	269	1	271	0	26	0	1116
Apprch %	12.7	87.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.3	49.5	0.2	91.2	0.0	8.8	0.0	
Total %	3.1	21.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.5	24.1	0.1	24.3	0.0	2.3	0.0	

JAMAR Technologies, Inc.
151 Keith Valley Road
Horsham, PA 19044
Change These In PREFERENCES

File Name : RYE_GO~1
Site Code : 00001102
Start Date : 3/3/2011
Page No : 2



JAMAR Technologies, Inc.
151 Keith Valley Road
Horsham, PA 19044
Change These In PREFERENCES

File Name : RYE_GO~1
Site Code : 00001102
Start Date : 3/3/2011
Page No : 3

	Rye Rd ~~From North~~ Southbound					From East					Rye Rd Northbound ~~From South~~					Golf Course Rd From ~~West~~ Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 12:45 PM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	11	91	0	0	102	0	0	0	0	0	0	61	54	0	115	111	0	6	0	117	334
Percent	10.8	89.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	53.0	47.0	0.0		94.9	0.0	5.1	0.0		
08:00 Volume	2	25	0	0	27	0	0	0	0	0	0	24	17	0	41	34	0	2	0	36	104
Peak Factor																					0.803
High Int.	07:30 AM					7:00:00 AM					08:00 AM					08:00 AM					
Volume	3	29	0	0	32	0	0	0	0	0	0	24	17	0	41	34	0	2	0	36	
Peak Factor					0.797										0.701					0.813	
Peak Hour From 01:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	9	45	0	0	54	0	0	0	0	0	0	89	96	0	185	51	0	8	0	59	298
Percent	16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	48.1	51.9	0.0		86.4	0.0	13.6	0.0		
05:45 Volume	3	13	0	0	16	0	0	0	0	0	0	32	29	0	61	11	0	2	0	13	90
Peak Factor																					0.828
High Int.	05:30 PM										05:45 PM					05:30 PM					
Volume	3	14	0	0	17	0	0	0	0	0	0	32	29	0	61	16	0	3	0	19	
Peak Factor					0.794										0.758					0.776	

No. 9 Rye @ Golf Course

Heavy Vehicle Percentages
Interval 7:00 to 7:15 am

	Trucks	School Buses
NBL		2
NBT		
SBT		
SBR		2
EBL		
EBR		

Heavy Vehicle Percentages
Interval 7:15 to 7:30 am

	Trucks	School Buses
NBL	1	
NBT		
SBT		
SBR	1	
EBL		
EBR	1	

Heavy Vehicle Percentages
Interval 7:30 to 7:45 am

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR	1	
EBL		
EBR		

Heavy Vehicle Percentages
Interval 7:45 to 8:00 am

	Trucks	School Buses
NBL	1	1
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 8:00 to 8:15 am

	Trucks	School Buses
NBL	1	
NBT	1	
SBT		
SBR	1	
EBL		
EBR		1

Heavy Vehicle Percentages
Interval 8:15 to 8:30 am

	Trucks	School Buses
NBL		
NBT		1
SBT		
SBR	1	
EBL		
EBR	1	

3 2 2 0 2 0 2

Heavy Vehicle Percentages
Interval 8:30 to 8:45 am

	Trucks	School Buses
NBL		
NBT		
SBT	1	
SBR	1	
EBL		
EBR		

Heavy Vehicle Percentages
Interval 8:45 to 9:00 am

	Trucks	School Buses
NBL		
NBT		
SBT	1	
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 4:00 to 4:15 pm

	Trucks	School Buses
NBL		1
NBT		1
SBT		1
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 4:15 to 4:30 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR	1	
EBL		1
EBR		

Heavy Vehicle Percentages
Interval 4:30 to 4:45 pm

	Trucks	School Buses
NBL	1	
NBT	2	
SBT	1	
SBR		
EBL		
EBR	1	1

Heavy Vehicle Percentages
Interval 4:45 to 5:00 pm

	Trucks	School Buses
NBL		1
NBT		
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 5:00 to 5:15 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR	2	1

Heavy Vehicle Percentages
Interval 5:15 to 5:30 pm

	Trucks	School Buses
NBL		
NBT		1
SBT		
SBR		
EBL		
EBR		

Heavy Vehicle Percentages
Interval 5:30 to 5:45 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR		
EBL		
EBR		1

Heavy Vehicle Percentages
Interval 5:45 to 6:00 pm

	Trucks	School Buses
NBL		
NBT		
SBT		
SBR	1	
EBL		
EBR		

1 1 4

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

SR 64
West of UMMR

Site Code: 000000000021
Station ID: 000000000021
Latitude: 27' 29.126 North
Longitude: 82' 26.438 West
SR 64 WEST OF UMMR

Start	01-Mar-11	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		11	161			13	235				
12:15		15	155			7	186				
12:30		10	175			5	216				
12:45		5	183	41	674	7	201	32	838	73	1512
01:00		11	190			8	174				
01:15		8	146			4	171				
01:30		7	220			12	161				
01:45		3	200	29	756	2	176	26	682	55	1438
02:00		4	185			6	181				
02:15		2	195			4	190				
02:30		8	222			0	236				
02:45		6	230	20	832	4	246	14	853	34	1685
03:00		11	220			3	198				
03:15		8	248			5	256				
03:30		6	246			10	226				
03:45		9	278	34	992	14	212	32	892	66	1884
04:00		9	263			9	193				
04:15		5	285			15	221				
04:30		14	221			22	238				
04:45		17	284	45	1053	29	216	75	868	120	1921
05:00		21	327			29	279				
05:15		26	349			48	213				
05:30		26	325			64	210				
05:45		28	310	101	1311	86	199	227	901	328	2212
06:00		42	299			90	201				
06:15		52	202			148	178				
06:30		76	235			224	179				
06:45		108	215	278	951	242	138	704	696	982	1647
07:00		128	172			336	149				
07:15		195	187			353	113				
07:30		259	154			357	95				
07:45		295	122	877	635	313	98	1359	455	2236	1090
08:00		241	101	992		331	64	1354		2346	
08:15		205	124			355	87				
08:30		181	116			293	68				
08:45		218	119	845	460	237	66	1216	285	2061	745
09:00		176	84			242	70				
09:15		130	94			220	76				
09:30		151	89			191	54				
09:45		177	72	634	339	198	48	851	248	1485	587
10:00		149	67			212	39				
10:15		161	62			200	15				
10:30		158	41			220	29				
10:45		190	48	658	218	179	18	811	101	1469	319
11:00		150	23			204	26				
11:15		172	26			228	18				
11:30		177	36			202	25				
11:45		200	13	699	98	230	8	864	77	1563	175
Total		4261	8319			6211	6896			10472	15215
Percent		33.9%	66.1%			47.4%	52.6%			40.8%	59.2%

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

SR 64
West of UMMR

Site Code: 000000000021
Station ID: 000000000021
Latitude: 27' 29.126 North
Longitude: 82' 26.438 West
SR 64 WEST OF UMMR

Start Time	02-Mar-11 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		20	202			10	205				
12:15		17	177			4	235				
12:30		12	222			5	228				
12:45		10	231	59	832	6	198	25	866	84	1698
01:00		9	219			8	217				
01:15		2	213			4	204				
01:30		12	202			8	233				
01:45		7	193	30	827	3	213	23	867	53	1694
02:00		7	246			3	196				
02:15		3	238			1	186				
02:30		0	219			0	226				
02:45		10	229	20	932	4	203	8	811	28	1743
03:00		3	211			5	229				
03:15		8	242			1	239				
03:30		5	237			6	241				
03:45		5	248	21	938	2	204	14	913	35	1851
04:00		14	242			15	206				
04:15		11	229			14	212				
04:30		15	265			15	258				
04:45		17	299	57	1035	27	198	71	874	128	1909
05:00		18	294			23	250				
05:15		26	366			43	258				
05:30		32	320			65	203				
05:45		40	259	116	1239	67	212	198	923	314	2162
06:00		39	339			102	170				
06:15		49	325			164	189				
06:30		90	232			202	175				
06:45		138	266	316	1162	252	135	720	669	1036	1831
07:00		144	152			315	155				
07:15		201	186			358	135				
07:30		253	163			315	99				
07:45		260	142	858	643	338	87	1326	476	2184	1119
08:00		243	139	957		357	93	1368		2325	
08:15		233	138			324	101				
08:30		220	146			291	134				
08:45		192	113	888	536	246	96	1218	424	2106	960
09:00		209	133			242	94				
09:15		161	86			244	54				
09:30		153	88			201	68				
09:45		173	64	696	371	219	45	906	261	1602	632
10:00		143	63			217	53				
10:15		148	50			184	23				
10:30		164	43			189	26				
10:45		190	49	645	205	224	29	814	131	1459	336
11:00		159	28			202	31				
11:15		172	23			224	22				
11:30		181	22			232	12				
11:45		203	20	715	93	158	9	816	74	1531	167
Total		4421	8813			6139	7289			10560	16102
Percent		33.4%	66.6%			45.7%	54.3%			39.6%	60.4%
Grand Total		8682	17132			12350	14185			21032	31317
Percent		33.6%	66.4%			46.5%	53.5%			40.2%	59.8%

ADT ADT 26,174 AADT 26,174

SF = .87

AADT = 22,771

Avg P-to-D = 0.086

P-to-D

AM (Avg x Adj)
EB = 847
WB = 1184
2031

.089

PM (Avg x Adj)
EB = 1109
WB = 793
1902

.083

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Ft Hamer Rd
Between Mulholland And Old Tampa

Site Code: 000000000025
Station ID: 000000000025
Latitude: 27' 32.485 North
Longitude: 82' 25.525 West
RYE RD 01_CLASS_VOL

Start Time	01-Mar-11 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	19			0	23				
12:15		0	26			1	21				
12:30		0	17			2	19				
12:45		0	19	0	81	0	20	3	83	3	164
01:00		2	17			1	24				
01:15		1	16			0	14				
01:30		0	16			1	24				
01:45		2	22	5	71	0	22	2	84	7	155
02:00		1	15			0	20				
02:15		0	17			0	14				
02:30		1	23			0	18				
02:45		1	32	3	87	0	25	0	77	3	164
03:00		2	33			0	42				
03:15		0	27			1	41				
03:30		1	16			0	28				
03:45		1	27	4	103	0	31	1	142	5	245
04:00		1	14			0	43				
04:15		3	28			1	39				
04:30		0	21			2	41				
04:45		5	20	9	83	0	37	3	160	12	243
05:00		3	18			0	40				
05:15		9	17			2	47				
05:30		14	35			2	59				
05:45		8	37	34	107	1	59	5	205	39	312
06:00		19	25		114	1	47		242		326
06:15		14	28			4	31				
06:30		33	18			4	35				
06:45		38	23	104	94	5	38	14	151	118	245
07:00		47	13			5	35				
07:15		58	14			5	22				
07:30		44	3			14	28				
07:45		53	9	202	39	13	29	37	114	239	153
08:00		71	10	226		16	23	48		274	
08:15		46	9			25	20				
08:30		34	10			12	18				
08:45		35	10	186	39	11	23	64	84	250	123
09:00		21	7			22	12				
09:15		22	1			16	22				
09:30		26	6			14	9				
09:45		12	3	81	17	17	7	69	50	150	67
10:00		20	3			13	9				
10:15		26	1			11	9				
10:30		26	4			12	8				
10:45		18	3	90	11	19	7	55	33	145	44
11:00		21	1			13	8				
11:15		23	0			16	5				
11:30		18	0			25	5				
11:45		25	1	87	2	12	4	66	22	153	24
Total		805	734			319	1205			1124	1939
Percent		52.3%	47.7%			20.9%	79.1%			36.7%	63.3%

5:15 6:15P

7:15 8:15A

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Ft Hamer Rd
Between Mulholland And Old Tampa

Site Code: 000000000025
Station ID: 000000000025
Latitude: 27' 32.485 North
Longitude: 82' 25.525 West
RYE RD 01_CLASS_VOL

Start Time	02-Mar-11 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	17			3	23				
12:15		0	16			2	23				
12:30		0	22			5	26				
12:45		0	28	1	83	1	20	11	92	12	175
01:00		0	40			0	22				
01:15		0	30			0	48				
01:30		0	21			2	32				
01:45		0	32	0	123	0	33	2	135	2	258
02:00		1	25			0	31				
02:15		0	17			0	28				
02:30		0	19			0	31				
02:45		0	18	1	79	0	26	0	116	1	195
03:00		1	23			0	27				
03:15		1	28			0	38				
03:30		1	33			0	44				
03:45		3	23	6	107	0	32	0	141	6	248
04:00		0	21			0	34				
04:15		1	17			1	27				
04:30		2	27			0	35				
04:45		4	14	7	79	0	52	1	148	8	227
05:00		6	17			0	34				
05:15		13	29			1	57				
05:30		13	25			4	40				
05:45		9	34	41	105	1	42	6	173	47	278
06:00		19	37		125	3	40		179		304
06:15		20	41			4	38				
06:30		24	20			6	27				
06:45		35	13	98	111	3	31	16	136	114	247
07:00		48	14			6	38				
07:15		43	2			6	26				
07:30		57	11			8	18				
07:45		55	2	203	29	12	23	32	105	235	134
08:00		81	9			19	24				
08:15		54	4	247		28	20	67		314	
08:30		42	6			14	23				
08:45		27	4	204	23	19	29	80	96	284	119
09:00		26	10			24	13				
09:15		16	7			16	21				
09:30		23	2			20	9				
09:45		29	7	94	26	12	10	72	53	166	79
10:00		16	2			17	18				
10:15		21	3			9	11				
10:30		19	1			17	6				
10:45		22	2	78	8	10	3	53	38	131	46
11:00		12	3			11	10				
11:15		23	4			21	7				
11:30		20	2			23	5				
11:45		27	1	82	10	26	3	81	25	163	35
Total		815	783			354	1258			1169	2041
Percent		51.0%	49.0%			22.0%	78.0%			36.4%	63.6%
Grand Total		1620	1517			673	2463			2293	3980
Percent		51.6%	48.4%			21.5%	78.5%			36.6%	63.4%

ADT ADT 3,136 AADT 3,136

SF = 0.87

AADT = 2,728

Avg P-to-D = 0.097

AM (Avg + SF)
NB = 206 / .805
SB = 50 / 19.5
256

P-to-D .094

PM (Avg + SF)
NB = 103 37.8
SB = 170 / .622
273

.100

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Ft Hamer Rd
Between Mulholland And Old Tampa

Site Code: 000000000025
Station ID: 000000000025
Latitude: 27' 32.485 North
Longitude: 82' 25.525 West
RYE RD 01_CLASS

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
3/1/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
05:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15	0	6	2	1	0	0	0	0	0	0	0	0	0	0	0	9
05:30	0	12	0	1	1	0	0	0	0	0	0	0	0	0	0	14
05:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
	0	27	4	2	1	0	0	0	0	0	0	0	0	0	0	34
06:00	0	12	5	1	1	0	0	0	0	0	0	0	0	0	0	19
06:15	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
06:30	1	28	3	1	0	0	0	0	0	0	0	0	0	0	0	33
06:45	0	30	7	0	0	1	0	0	0	0	0	0	0	0	0	38
	1	79	20	2	1	1	0	0	0	0	0	0	0	0	0	104
07:00	1	38	8	0	0	0	0	0	0	0	0	0	0	0	0	47
07:15	0	50	7	0	0	1	0	0	0	0	0	0	0	0	0	58
07:30	0	36	5	2	1	0	0	0	0	0	0	0	0	0	0	44
07:45	0	46	4	1	0	0	0	0	1	1	0	0	0	0	0	53
	1	170	24	3	1	1	0	0	1	1	0	0	0	0	0	202
08:00	1	59	9	0	1	0	0	1	0	0	0	0	0	0	0	71
08:15	1	38	6	1	0	0	0	0	0	0	0	0	0	0	0	46
08:30	0	32	2	0	0	0	0	0	0	0	0	0	0	0	0	34
08:45	0	28	6	0	1	0	0	0	0	0	0	0	0	0	0	35
	2	157	23	1	2	0	0	1	0	0	0	0	0	0	0	186
09:00	0	20	1	0	0	0	0	0	0	0	0	0	0	0	0	21
09:15	0	18	4	0	0	0	0	0	0	0	0	0	0	0	0	22
09:30	0	24	2	0	0	0	0	0	0	0	0	0	0	0	0	26
09:45	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
	0	69	12	0	0	0	0	0	0	0	0	0	0	0	0	81
10:00	0	18	2	0	0	0	0	0	0	0	0	0	0	0	0	20
10:15	0	21	5	0	0	0	0	0	0	0	0	0	0	0	0	26
10:30	0	18	6	0	1	0	0	1	0	0	0	0	0	0	0	26
10:45	0	11	3	0	1	1	0	2	0	0	0	0	0	0	0	18
	0	68	16	0	2	1	0	3	0	0	0	0	0	0	0	90
11:00	0	16	4	0	1	0	0	0	0	0	0	0	0	0	0	21
11:15	0	17	4	0	2	0	0	0	0	0	0	0	0	0	0	23
11:30	1	13	4	0	0	0	0	0	0	0	0	0	0	0	0	18
11:45	0	19	5	0	1	0	0	0	0	0	0	0	0	0	0	25
	1	65	17	0	4	0	0	0	0	0	0	0	0	0	0	87
Total	5	653	119	8	11	3	0	4	1	1	0	0	0	0	0	805
Percent	0.6%	81.1%	14.8%	1.0%	1.4%	0.4%	0.0%	0.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Ft Hamer Rd
Between Mulholland And Old Tampa

Site Code: 000000000025
Station ID: 000000000025
Latitude: 27' 32.485 North
Longitude: 82' 25.525 West
RYE RD 01_CLASS

Northbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
12 PM	0	15	1	0	1	0	0	0	0	0	0	0	0	0	0	17
12:15	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
12:30	0	16	3	0	2	0	0	1	0	0	0	0	0	0	0	22
12:45	0	16	11	0	1	0	0	0	0	0	0	0	0	0	0	28
	0	60	18	0	4	0	0	1	0	0	0	0	0	0	0	83
13:00	0	33	4	1	2	0	0	0	0	0	0	0	0	0	0	40
13:15	0	23	3	1	2	0	0	1	0	0	0	0	0	0	0	30
13:30	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
13:45	0	26	3	2	0	1	0	0	0	0	0	0	0	0	0	32
	0	99	14	4	4	1	0	1	0	0	0	0	0	0	0	123
14:00	0	19	3	0	3	0	0	0	0	0	0	0	0	0	0	25
14:15	0	9	7	0	1	0	0	0	0	0	0	0	0	0	0	17
14:30	0	14	4	1	0	0	0	0	0	0	0	0	0	0	0	19
14:45	2	13	3	0	0	0	0	0	0	0	0	0	0	0	0	18
	2	55	17	1	4	0	0	0	0	0	0	0	0	0	0	79
15:00	0	16	5	1	1	0	0	0	0	0	0	0	0	0	0	23
15:15	0	21	7	0	0	0	0	0	0	0	0	0	0	0	0	28
15:30	0	26	5	0	2	0	0	0	0	0	0	0	0	0	0	33
15:45	0	17	4	1	0	0	0	1	0	0	0	0	0	0	0	23
	0	80	21	2	3	0	0	1	0	0	0	0	0	0	0	107
16:00	0	19	0	0	2	0	0	0	0	0	0	0	0	0	0	21
16:15	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	17
16:30	0	22	3	0	1	0	0	1	0	0	0	0	0	0	0	27
16:45	0	8	5	0	1	0	0	0	0	0	0	0	0	0	0	14
	0	61	13	0	4	0	0	1	0	0	0	0	0	0	0	79
17:00	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
17:15	0	25	2	1	1	0	0	0	0	0	0	0	0	0	0	29
17:30	0	23	2	0	0	0	0	0	0	0	0	0	0	0	0	25
17:45	0	27	6	0	0	0	0	0	0	1	0	0	0	0	0	34
	0	89	13	1	1	0	0	0	0	1	0	0	0	0	0	105
18:00	0	30	5	0	0	0	0	2	0	0	0	0	0	0	0	37
18:15	1	31	8	0	0	0	1	0	0	0	0	0	0	0	0	41
18:30	0	15	4	0	1	0	0	0	0	0	0	0	0	0	0	20
18:45	1	11	1	0	0	0	0	0	0	0	0	0	0	0	0	13
	2	87	18	0	1	0	1	2	0	0	0	0	0	0	0	111
19:00	1	9	4	0	0	0	0	0	0	0	0	0	0	0	0	14
19:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
19:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
19:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	1	22	6	0	0	0	0	0	0	0	0	0	0	0	0	29
20:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
20:15	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4
20:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
20:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0	23
21:00	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	10
21:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
21:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	1	23	2	0	0	0	0	0	0	0	0	0	0	0	0	26
22:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
22:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
22:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
22:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	5	2	0	0	0	0	1	0	0	0	0	0	0	0	8
23:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
23:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
23:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
23:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	6	605	133	8	21	1	1	7	0	1	0	0	0	0	0	783
Percent	0.8%	77.3%	17.0%	1.0%	2.7%	0.1%	0.1%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	21	2491	486	32	63	14	1	24	3	2	0	0	0	0	0	3137
Percent	0.7%	79.4%	15.5%	1.0%	2.0%	0.4%	0.0%	0.8%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Avg 1499 95.6% | 16 1.0% | 55 3.4% | 1568

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Ft Hamer Rd
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Site Code: 000000000025
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Longitude: 82' 25.525 West
RYE RD 01_CLASS

Southbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
3/1/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:30	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
05:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	5
06:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:15	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:30	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	4
06:45	0	2	2	0	0	0	0	1	0	0	0	0	0	0	0	5
	1	7	2	2	0	0	0	2	0	0	0	0	0	0	0	14
07:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
07:30	0	8	1	3	2	0	0	0	0	0	0	0	0	0	0	14
07:45	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13
	0	29	3	3	2	0	0	0	0	0	0	0	0	0	0	37
08:00	0	13	2	0	1	0	0	0	0	0	0	0	0	0	0	16
08:15	0	20	1	1	2	0	0	1	0	0	0	0	0	0	0	25
08:30	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
08:45	0	7	3	0	0	1	0	0	0	0	0	0	0	0	0	11
	0	48	10	1	3	1	0	1	0	0	0	0	0	0	0	64
09:00	0	17	5	0	0	0	0	0	0	0	0	0	0	0	0	22
09:15	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
09:30	0	9	3	0	1	0	0	0	1	0	0	0	0	0	0	14
09:45	0	10	5	0	0	1	1	0	0	0	0	0	0	0	0	17
	0	49	16	0	1	1	1	0	1	0	0	0	0	0	0	69
10:00	0	9	2	0	1	0	0	1	0	0	0	0	0	0	0	13
10:15	0	9	1	0	0	0	0	1	0	0	0	0	0	0	0	11
10:30	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
10:45	0	9	8	0	1	0	0	1	0	0	0	0	0	0	0	19
	0	39	11	0	2	0	0	3	0	0	0	0	0	0	0	55
11:00	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	13
11:15	0	13	2	0	1	0	0	0	0	0	0	0	0	0	0	16
11:30	0	17	6	0	2	0	0	0	0	0	0	0	0	0	0	25
11:45	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
	0	47	16	0	3	0	0	0	0	0	0	0	0	0	0	66
Total	1	231	58	8	11	2	1	6	1	0	0	0	0	0	0	319
Percent	0.3%	72.4%	18.2%	2.5%	3.4%	0.6%	0.3%	1.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Site Code: 000000000025
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Longitude: 82' 25.525 West
RYE RD 01_CLASS

Southbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
12 PM	0	17	5	0	1	0	0	0	0	0	0	0	0	0	0	23
12:15	1	17	3	0	0	0	0	0	0	0	0	0	0	0	0	21
12:30	1	16	1	0	0	0	0	1	0	0	0	0	0	0	0	19
12:45	0	15	4	0	0	0	0	1	0	0	0	0	0	0	0	20
	2	65	13	0	1	0	0	2	0	0	0	0	0	0	0	83
13:00	0	18	5	0	0	0	0	1	0	0	0	0	0	0	0	24
13:15	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
13:30	0	18	5	0	1	0	0	0	0	0	0	0	0	0	0	24
13:45	0	14	7	0	1	0	0	0	0	0	0	0	0	0	0	22
	0	63	18	0	2	0	0	1	0	0	0	0	0	0	0	84
14:00	0	16	2	1	0	0	0	1	0	0	0	0	0	0	0	20
14:15	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
14:30	0	15	2	0	1	0	0	0	0	0	0	0	0	0	0	18
14:45	0	18	5	1	0	0	0	1	0	0	0	0	0	0	0	25
	0	62	10	2	1	0	0	2	0	0	0	0	0	0	0	77
15:00	0	33	4	2	2	0	0	1	0	0	0	0	0	0	0	42
15:15	0	33	5	1	1	0	0	1	0	0	0	0	0	0	0	41
15:30	0	19	8	0	0	0	1	0	0	0	0	0	0	0	0	28
15:45	1	25	3	1	0	0	0	1	0	0	0	0	0	0	0	31
	1	110	20	4	3	0	1	3	0	0	0	0	0	0	0	142
16:00	0	33	8	0	2	0	0	0	0	0	0	0	0	0	0	43
16:15	0	32	5	2	0	0	0	0	0	0	0	0	0	0	0	39
16:30	0	27	12	0	2	0	0	0	0	0	0	0	0	0	0	41
16:45	1	33	2	0	0	0	1	0	0	0	0	0	0	0	0	37
	1	125	27	2	4	0	1	0	0	0	0	0	0	0	0	160
17:00	0	33	4	0	2	0	0	1	0	0	0	0	0	0	0	40
17:15	0	42	4	0	0	0	0	1	0	0	0	0	0	0	0	47
17:30	0	53	4	0	1	0	0	1	0	0	0	0	0	0	0	59
17:45	0	53	5	0	1	0	0	0	0	0	0	0	0	0	0	59
	0	181	17	0	4	0	0	3	0	0	0	0	0	0	0	205
18:00	0	38	9	0	0	0	0	0	0	0	0	0	0	0	0	47
18:15	0	23	8	0	0	0	0	0	0	0	0	0	0	0	0	31
18:30	0	30	5	0	0	0	0	0	0	0	0	0	0	0	0	35
18:45	0	34	4	0	0	0	0	0	0	0	0	0	0	0	0	38
	0	125	26	0	0	0	0	0	0	0	0	0	0	0	0	151
19:00	1	27	7	0	0	0	0	0	0	0	0	0	0	0	0	35
19:15	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	22
19:30	0	25	3	0	0	0	0	0	0	0	0	0	0	0	0	28
19:45	0	25	4	0	0	0	0	0	0	0	0	0	0	0	0	29
	1	97	16	0	0	0	0	0	0	0	0	0	0	0	0	114
20:00	0	21	2	0	0	0	0	0	0	0	0	0	0	0	0	23
20:15	1	16	3	0	0	0	0	0	0	0	0	0	0	0	0	20
20:30	1	13	3	0	1	0	0	0	0	0	0	0	0	0	0	18
20:45	0	15	8	0	0	0	0	0	0	0	0	0	0	0	0	23
	2	65	16	0	1	0	0	0	0	0	0	0	0	0	0	84
21:00	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
21:15	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	22
21:30	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
21:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	0	46	4	0	0	0	0	0	0	0	0	0	0	0	0	50
22:00	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
22:15	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
22:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
22:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
	0	27	6	0	0	0	0	0	0	0	0	0	0	0	0	33
23:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
23:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
23:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	21	1	0	0	0	0	0	0	0	0	0	0	0	0	22
Total	7	987	174	8	16	0	2	11	0	0	0	0	0	0	0	1205
Percent	0.6%	81.9%	14.4%	0.7%	1.3%	0.0%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Site Code: 000000000025
Station ID: 000000000025
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RYE RD 01_CLASS

Southbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
3/2/11	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:15	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
00:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	9	1	0	0	1	0	0	0	0	0	0	0	0	0	11
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4
05:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	6
06:00	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
06:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:30	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	6
06:45	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
	1	10	3	2	0	0	0	0	0	0	0	0	0	0	0	16
07:00	0	3	2	0	0	0	1	0	0	0	0	0	0	0	0	6
07:15	0	3	1	1	1	0	0	0	0	0	0	0	0	0	0	6
07:30	0	5	0	2	0	0	1	0	0	0	0	0	0	0	0	8
07:45	0	9	2	0	0	0	0	1	0	0	0	0	0	0	0	12
	0	20	5	3	1	0	2	1	0	0	0	0	0	0	0	32
08:00	0	17	0	0	1	0	0	1	0	0	0	0	0	0	0	19
08:15	0	25	2	0	1	0	0	0	0	0	0	0	0	0	0	28
08:30	0	11	2	0	1	0	0	0	0	0	0	0	0	0	0	14
08:45	0	14	5	0	0	0	0	0	0	0	0	0	0	0	0	19
	0	67	9	0	3	0	0	1	0	0	0	0	0	0	0	80
09:00	0	17	6	0	1	0	0	0	0	0	0	0	0	0	0	24
09:15	0	13	1	0	1	1	0	0	0	0	0	0	0	0	0	16
09:30	0	15	4	0	1	0	0	0	0	0	0	0	0	0	0	20
09:45	0	8	3	0	1	0	0	0	0	0	0	0	0	0	0	12
	0	53	14	0	4	1	0	0	0	0	0	0	0	0	0	72
10:00	0	11	5	0	1	0	0	0	0	0	0	0	0	0	0	17
10:15	0	5	2	0	1	0	0	1	0	0	0	0	0	0	0	9
10:30	0	11	5	0	0	0	0	1	0	0	0	0	0	0	0	17
10:45	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
	0	33	16	0	2	0	0	2	0	0	0	0	0	0	0	53
11:00	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	11
11:15	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	21
11:30	0	18	5	0	0	0	0	0	0	0	0	0	0	0	0	23
11:45	0	22	3	0	0	1	0	0	0	0	0	0	0	0	0	26
	0	63	16	0	0	1	1	0	0	0	0	0	0	0	0	81
Total	1	262	64	7	10	3	3	4	0	0	0	0	0	0	0	354
Percent	0.3%	74.0%	18.1%	2.0%	2.8%	0.8%	0.8%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Ft Hamer Rd
Between Mulholland And Old Tampa

Site Code: 000000000025
Station ID: 000000000025
Latitude: 27' 32.485 North
Longitude: 82' 25.525 West
RYE RD 01_CLASS

Southbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Class 15	Total
12 PM	0	18	3	0	0	0	0	2	0	0	0	0	0	0	0	23
12:15	1	18	2	0	2	0	0	0	0	0	0	0	0	0	0	23
12:30	0	15	10	0	1	0	0	0	0	0	0	0	0	0	0	26
12:45	0	17	3	0	0	0	0	0	0	0	0	0	0	0	0	20
	1	68	18	0	3	0	0	2	0	0	0	0	0	0	0	92
13:00	0	15	3	2	2	0	0	0	0	0	0	0	0	0	0	22
13:15	0	39	8	0	1	0	0	0	0	0	0	0	0	0	0	48
13:30	0	27	3	1	1	0	0	0	0	0	0	0	0	0	0	32
13:45	2	22	6	1	1	1	0	0	0	0	0	0	0	0	0	33
	2	103	20	4	5	1	0	0	0	0	0	0	0	0	0	135
14:00	0	22	7	0	1	0	0	1	0	0	0	0	0	0	0	31
14:15	0	19	6	1	2	0	0	0	0	0	0	0	0	0	0	28
14:30	0	24	7	0	0	0	0	0	0	0	0	0	0	0	0	31
14:45	0	17	7	1	1	0	0	0	0	0	0	0	0	0	0	26
	0	82	27	2	4	0	0	1	0	0	0	0	0	0	0	116
15:00	0	24	3	0	0	0	0	0	0	0	0	0	0	0	0	27
15:15	0	31	5	0	1	0	1	0	0	0	0	0	0	0	0	38
15:30	0	30	10	0	1	1	0	2	0	0	0	0	0	0	0	44
15:45	1	27	2	1	0	0	0	1	0	0	0	0	0	0	0	32
	1	112	20	1	2	1	1	3	0	0	0	0	0	0	0	141
16:00	0	26	6	0	0	0	1	1	0	0	0	0	0	0	0	34
16:15	0	23	3	0	1	0	0	0	0	0	0	0	0	0	0	27
16:30	1	30	4	0	0	0	0	0	0	0	0	0	0	0	0	35
16:45	1	39	10	0	1	1	0	0	0	0	0	0	0	0	0	52
	2	118	23	0	2	1	1	1	0	0	0	0	0	0	0	148
17:00	0	25	6	1	1	0	0	1	0	0	0	0	0	0	0	34
17:15	0	51	5	0	0	0	1	0	0	0	0	0	0	0	0	57
17:30	1	34	5	0	0	0	0	0	0	0	0	0	0	0	0	40
17:45	0	35	6	0	0	0	0	1	0	0	0	0	0	0	0	42
	1	145	22	1	1	0	1	2	0	0	0	0	0	0	0	173
18:00	0	30	10	0	0	0	0	0	0	0	0	0	0	0	0	40
18:15	0	33	4	0	1	0	0	0	0	0	0	0	0	0	0	38
18:30	0	21	5	0	0	0	0	1	0	0	0	0	0	0	0	27
18:45	0	27	4	0	0	0	0	0	0	0	0	0	0	0	0	31
	0	111	23	0	1	0	0	1	0	0	0	0	0	0	0	136
19:00	1	30	7	0	0	0	0	0	0	0	0	0	0	0	0	38
19:15	0	25	1	0	0	0	0	0	0	0	0	0	0	0	0	26
19:30	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	18
19:45	0	19	4	0	0	0	0	0	0	0	0	0	0	0	0	23
	1	91	13	0	0	0	0	0	0	0	0	0	0	0	0	105
20:00	0	19	5	0	0	0	0	0	0	0	0	0	0	0	0	24
20:15	0	16	4	0	0	0	0	0	0	0	0	0	0	0	0	20
20:30	0	19	4	0	0	0	0	0	0	0	0	0	0	0	0	23
20:45	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
	0	78	18	0	0	0	0	0	0	0	0	0	0	0	0	96
21:00	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
21:15	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
21:30	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
21:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
	0	46	7	0	0	0	0	0	0	0	0	0	0	0	0	53
22:00	1	16	1	0	0	0	0	0	0	0	0	0	0	0	0	18
22:15	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	11
22:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
22:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	2	35	1	0	0	0	0	0	0	0	0	0	0	0	0	38
23:00	1	8	1	0	0	0	0	0	0	0	0	0	0	0	0	10
23:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	1	22	2	0	0	0	0	0	0	0	0	0	0	0	0	25
Total	11	1011	194	8	18	3	3	10	0	0	0	0	0	0	0	1258
Percent	0.9%	80.4%	15.4%	0.6%	1.4%	0.2%	0.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	20	2491	490	31	55	8	9	31	1	0	0	0	0	0	0	3136
Percent	0.6%	79.4%	15.6%	1.0%	1.8%	0.3%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Avg 1,500 95.7 | 16 1.0 | 52 3.3% | 1568

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED_VOL

Start Time	01-Mar-11 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	19			1	20				
12:15		1	25			1	21				
12:30		2	14			1	18				
12:45		4	21	8	79	0	23	3	82	11	161
01:00		1	20			2	15				
01:15		0	17			0	14				
01:30		0	14			1	25				
01:45		0	16	1	67	0	25	3	79	4	146
02:00		0	16			1	25				
02:15		0	22			0	33				
02:30		1	27			2	22				
02:45		0	22	1	87	0	25	3	105	4	192
03:00		1	36			0	27				
03:15		1	39			1	20				
03:30		0	26			1	33				
03:45		1	29	3	130	0	23	2	103	5	233
04:00		0	38			2	21				
04:15		0	60			2	26				
04:30		0	30			2	28				
04:45		0	39	0	167	4	29	10	104	10	271
05:00		0	50		179	1	22		105		284
05:15		1	46			3	15				
05:30		1	52			9	21				
05:45		2	42	4	190	8	15	21	73	25	263
06:00		1	45			15	25				
06:15		7	34			24	23				
06:30		3	40			25	21				
06:45		7	22	18	141	38	19	102	88	120	229
07:00		10	25			52	14				
07:15		15	14			73	13				
07:30		26	18			50	10				
07:45		17	20	68	77	70	3	245	40	313	117
08:00		23	19			61	9				
08:15		23	19	89		73	8	254		343	
08:30		17	16			35	7				
08:45		23	21	86	75	18	1	187	25	273	100
09:00		19	19			22	8				
09:15		18	14			24	3				
09:30		14	7			24	0				
09:45		14	14	65	54	23	5	93	16	158	70
10:00		13	10			22	5				
10:15		18	14			18	0				
10:30		15	3			12	4				
10:45		12	3	58	30	14	2	66	11	124	41
11:00		26	2			12	2				
11:15		10	0			17	0				
11:30		14	1			20	1				
11:45		15	2	65	5	18	0	67	3	132	8
Total		377	1102			802	729			1179	1831
Percent		25.5%	74.5%			52.4%	47.6%			39.2%	60.8%

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED_VOL

Start Time	02-Mar-11 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	19			0	21				
12:15		4	21			1	26				
12:30		0	18			1	27				
12:45		1	25	7	83	1	27	3	101	10	184
01:00		0	28			0	28				
01:15		1	34			0	33				
01:30		0	25			0	27				
01:45		0	27	1	114	0	20	0	108	1	222
02:00		0	26			0	15				
02:15		0	23			0	26				
02:30		0	29			0	20				
02:45		0	40	0	118	1	25	1	86	1	204
03:00		0	22			1	24				
03:15		1	34			1	20				
03:30		4	29			0	18				
03:45		0	36	5	121	1	20	3	82	8	203
04:00		1	41			2	19				
04:15		0	33			2	23				
04:30		0	33			2	24				
04:45		0	41	1	148	6	22	12	88	13	236
05:00		0	47			2	16				
05:15		2	52			5	44				
05:30		1	52			5	25				
05:45		2	38	5	189	7	30	19	115	24	304
06:00		2	35			15	36				
06:15		6	42			32	29				
06:30		7	31			31	18				
06:45		8	26	23	134	31	21	109	104	132	238
07:00		9	17			50	7				
07:15		19	20			68	7				
07:30		15	24			45	8				
07:45		23	16	66	77	72	7	235	29	301	106
08:00		30	20			71	8				
08:15		31	35	99		63	12	251		350	
08:30		30	24			30	6				
08:45		32	28	123	107	29	4	193	30	316	137
09:00		16	24			29	5				
09:15		29	13			27	3				
09:30		18	10			23	3				
09:45		23	7	86	54	26	6	105	17	191	71
10:00		11	4			21	2				
10:15		12	9			15	4				
10:30		26	3			21	1				
10:45		11	2	60	18	22	2	79	9	139	27
11:00		14	3			12	1				
11:15		19	4			26	0				
11:30		17	1			27	2				
11:45		9	3	59	11	18	2	83	5	142	16
Total		436	1174			842	774			1278	1948
Percent		27.1%	72.9%			52.1%	47.9%			39.6%	60.4%
Grand Total		813	2276			1644	1503			2457	3779
Percent		26.3%	73.7%			52.2%	47.8%			39.4%	60.6%

ADT

ADT 3,118

AADT 3,118

SF 0.87

AADT = 2713

Avg P-to-D = .102

	Am (avg + SF)	Pm (avg + SF)
NB =	82	160
SB =	220	96
	302	256
P-to-D	.111	.094

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Rutland Rd & Golf Course Rd

Site Code: 000000000015
Station ID: 000000000055
Latitude: 27' 33.382 North
Longitude: 82' 22.118 West
RYE RD 02

Start Time	01-Mar-11 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	6			0	18				
12:15		1	17			1	7				
12:30		1	12			1	13				
12:45		0	8	2	43	1	14	3	52	5	95
01:00		0	10			0	7				
01:15		0	11			0	11				
01:30		0	10			0	16				
01:45		1	13	1	44	0	16	0	50	1	94
02:00		0	4			0	15				
02:15		0	16			0	12				
02:30		1	13			0	13				
02:45		0	21	1	54	0	11	0	51	1	105
03:00		0	16			0	7				
03:15		0	27			0	15				
03:30		0	17			0	18				
03:45		0	15	0	75	1	23	1	63	1	138
04:00		1	30			0	12				
04:15		0	22			2	14				
04:30		2	19			2	19				
04:45		0	14	3	85	2	16	6	61	9	146
05:00		0	19			1	13				
05:15		0	27			2	24				
05:30		4	28			4	10				
05:45		5	18	9	92	8	13	15	60	24	152
06:00		2	27		100	10	14		61		161
06:15		5	18			12	9				
06:30		5	16			18	14				
06:45		12	12	24	73	16	16	56	53	80	126
07:00		11	14			28	10				
07:15		12	7			19	5				
07:30		17	7			30	3				
07:45		14	16	54	44	37	3	114	21	168	65
08:00		12	9			29	3				
08:15		23	15	66		26	5	122		188	
08:30		15	5			13	5				
08:45		12	10	62	39	10	4	78	17	140	56
09:00		14	9			16	3				
09:15		19	7			14	0				
09:30		17	6			10	1				
09:45		13	2	63	24	12	2	52	6	115	30
10:00		11	5			17	0				
10:15		7	1			10	0				
10:30		11	0			9	2				
10:45		3	2	32	8	8	1	44	3	76	11
11:00		11	3			12	0				
11:15		17	0			12	2				
11:30		7	0			9	1				
11:45		16	0	51	3	4	0	37	3	88	6
Total		302	584			406	440			708	1024
Percent		34.1%	65.9%			48.0%	52.0%			40.9%	59.1%

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Rutland Rd & Golf Course Rd

Site Code: 000000000015
Station ID: 000000000055
Latitude: 27' 33.382 North
Longitude: 82' 22.118 West
RYE RD 02

Start Time	02-Mar-11 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		5	8			1	8				
12:15		1	8			1	17				
12:30		2	14			0	19				
12:45		0	10	8	40	0	14	2	58	10	98
01:00		0	10			0	13				
01:15		0	15			0	14				
01:30		1	16			0	10				
01:45		0	21	1	62	0	7	0	44	1	106
02:00		0	16			0	10				
02:15		0	15			0	7				
02:30		0	16			0	6				
02:45		1	14	1	61	1	15	1	38	2	99
03:00		0	17			0	13				
03:15		0	18			1	9				
03:30		0	16			0	11				
03:45		0	20	0	71	1	15	2	48	2	119
04:00		1	22			1	16				
04:15		0	24			1	13				
04:30		0	27			1	13				
04:45		0	18	1	91	3	4	6	46	7	137
05:00		0	25			1	13				
05:15		2	36			2	23				
05:30		5	28			4	23				
05:45		3	27	10	116	3	22	10	81	20	197
06:00		2	19			11	17				
06:15		7	23			19	19				
06:30		7	20			19	9				
06:45		8	15	24	77	19	8	68	53	92	130
07:00		10	9			36	5				
07:15		15	8			27	10				
07:30		19	8			21	9				
07:45		13	8	57	33	34	6	118	30	175	63
08:00		14	10			29	10				
08:15		18	12			21	5				
08:30		18	9			13	6				
08:45		15	12	65	43	10	5	73	26	138	69
09:00		9	10			15	1				
09:15		13	5			17	4				
09:30		16	4			21	0				
09:45		19	5	57	24	10	2	63	7	120	31
10:00		11	5			13	1				
10:15		4	1			5	2				
10:30		19	2			5	0				
10:45		14	0	48	8	12	0	35	3	83	11
11:00		12	1			11	0				
11:15		9	1			12	2				
11:30		10	0			11	0				
11:45		4	1	35	3	7	0	41	2	76	5
Total		307	629			419	436			726	1065
Percent		32.8%	67.2%			49.0%	51.0%			40.5%	59.5%
Grand Total		609	1213			825	876			1434	2089
Percent		33.4%	66.6%			48.5%	51.5%			40.7%	59.3%

ADT ADT 1,762 AADT 1,762

500
600

700
800

SF = .87
AADT = 1633
Avg P-to-D = .102

AM (Avg+Adj)
NB = 53
SB = 104
157

PM (Avg/Adj)
NB = 94
SB = 62
156

P-to-D .102 .102

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Golf Course Rd and UMMR

Site Code: 000000000003
Station ID: 000000000003
Latitude: 27' 30.953 North
Longitude: 82' 21.974 West
RYE RD 03

Start Time	01-Mar-11 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	17			0	23				
12:15		1	23			2	21				
12:30		2	15			0	25				
12:45		0	19	4	74	2	23	4	92	8	166
01:00		0	24			1	19				
01:15		0	18			0	24				
01:30		0	20			0	24				
01:45		1	18	1	80	0	24	1	91	2	171
02:00		1	23			0	26				
02:15		0	21			0	32				
02:30		1	37			1	19				
02:45		0	30	2	111	0	34	1	111	3	222
03:00		0	30			0	23				
03:15		0	40			1	26				
03:30		0	34			1	33				
03:45		0	37	0	141	0	26	2	108	2	249
04:00		0	34			1	19				
04:15		0	51			2	29				
04:30		1	33			4	21				
04:45		0	38	1	156	3	33	10	102	11	258
05:00		0	42			2	18				
05:15		1	52			1	26				
05:30		3	49			8	23				
05:45		3	39	7	182	8	17	19	84	26	266
06:00		1	49		189	15	28		94		283
06:15		4	35			22	20				
06:30		5	32			28	18				
06:45		11	28	21	144	32	17	97	83	118	227
07:00		12	25			52	17				
07:15		17	14			60	14				
07:30		24	14			53	4				
07:45		23	18	76	71	67	3	232	38	308	109
08:00		26	20			62	4				
08:15		21	18	94		55	7	237		331	
08:30		19	14			29	9				
08:45		27	21	93	73	20	5	166	25	259	98
09:00		25	16			31	3				
09:15		25	17			28	4				
09:30		17	7			29	1				
09:45		19	11	86	51	21	4	109	12	195	63
10:00		18	8			26	4				
10:15		13	6			21	0				
10:30		17	3			17	4				
10:45		10	3	58	20	14	2	78	10	136	30
11:00		29	3			14	1				
11:15		12	0			18	2				
11:30		25	1			22	2				
11:45		21	0	87	4	15	0	69	5	156	9
Total		436	1107			788	761			1224	1868
Percent		28.3%	71.7%			50.9%	49.1%			39.6%	60.4%

5:15
6:15

7:30
8:30

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Golf Course Rd and UMMR

Site Code: 000000000003
Station ID: 000000000003
Latitude: 27' 30.953 North
Longitude: 82' 21.974 West
RYE RD 03

Start Time	02-Mar-11 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	21			0	23				
12:15		2	20			1	23				
12:30		2	22			1	22				
12:45		1	27	6	90	0	25	2	93	8	183
01:00		0	27			0	23				
01:15		1	32			0	31				
01:30		0	25			0	29				
01:45		0	32	1	116	0	20	0	103	1	219
02:00		0	29			0	16				
02:15		0	29			0	25				
02:30		0	35			0	23				
02:45		0	37	0	130	1	25	1	89	1	219
03:00		0	25			1	27				
03:15		0	29			1	23				
03:30		1	32			0	21				
03:45		1	33	2	119	0	21	2	92	4	211
04:00		1	46			2	24				
04:15		0	34			1	22				
04:30		0	37			2	21				
04:45		0	42	1	159	6	19	11	86	12	245
05:00		1	50			3	27				
05:15		2	60			3	35				
05:30		4	48			5	26				
05:45		2	42	9	200	5	25	16	113	25	313
06:00		1	45			15	33				
06:15		6	28			28	32				
06:30		6	37			32	19				
06:45		8	26	21	136	33	15	108	99	129	235
07:00		9	15			61	7				
07:15		18	21			57	7				
07:30		16	22			44	8				
07:45		28	17	71	75	69	12	231	34	302	109
08:00		25	17			63	13				
08:15		26	29	95		50	9	226		321	
08:30		31	22			34	9				
08:45		28	27	110	95	27	5	174	36	284	131
09:00		24	21			30	6				
09:15		27	13			23	4				
09:30		27	10			29	3				
09:45		22	6	100	50	18	4	100	17	200	67
10:00		19	5			26	1				
10:15		17	7			13	2				
10:30		23	5			33	0				
10:45		27	1	86	18	14	2	86	5	172	23
11:00		25	2			13	0				
11:15		19	2			31	0				
11:30		15	0			23	2				
11:45		9	1	68	5	23	0	90	2	158	7
Total		475	1193			821	769			1296	1962
Percent		28.5%	71.5%			51.6%	48.4%			39.8%	60.2%
Grand Total		911	2300			1609	1530			2520	3830
Percent		28.4%	71.6%			51.3%	48.7%			39.7%	60.3%

ADT ADT 3,175 AADT 3,175

SF = .87
AADT = 2762
Avg P-to-D = 0.098

P-to-D

Am (Avg + Adj)
NB = 82
SB = 201
283
.102

Pm (Avg + Adj)
NB = 169
SB = 90
259
.094

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Waterline & SR 64

Site Code: 000000000020
Station ID: 000000000002
Latitude: 27' 28.957 North
Longitude: 82' 24.261 West
RYE RD 05

Start Time	01-Mar-11 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	43			2	31				
12:15		1	40			2	36				
12:30		1	35			0	40				
12:45		3	43	8	161	0	43	4	150	12	311
01:00		1	32			1	35				
01:15		1	48			1	36				
01:30		1	40			1	33				
01:45		1	33	4	153	1	54	4	158	8	311
02:00		0	40			0	39				
02:15		0	49			0	45				
02:30		1	87			1	36				
02:45		0	72	1	248	3	43	4	163	5	411
03:00		0	70			1	63				
03:15		1	74			1	78				
03:30		0	61			3	64				
03:45		0	63	1	268	3	50	8	255	9	523
04:00		0	93			1	44				
04:15		1	88			7	47				
04:30		0	69			6	43				
04:45		0	80	1	330	8	49	22	183	23	513
05:00		2	80			8	54				
05:15		0	104			9	50				
05:30		4	89			16	60				
05:45		2	86	8	359	20	45	53	209	61	568
06:00		5	97		326	30	42		192		573
06:15		17	78			52	35				
06:30		10	78			62	39				
06:45		17	66	49	319	75	35	219	151	268	470
07:00		16	57			120	29				
07:15		78	35			165	24				
07:30		37	38			106	15				
07:45		50	48	181	178	124	8	515	76	696	254
08:00		109	35	274		165	16	560		834	
08:15		53	38			145	13				
08:30		24	44			87	13				
08:45		39	47	225	164	59	6	456	48	681	212
09:00		47	42			41	11				
09:15		28	21			41	9				
09:30		35	32			41	2				
09:45		19	18	129	113	47	9	170	31	299	144
10:00		24	25			42	6				
10:15		28	18			40	2				
10:30		28	6			39	4				
10:45		30	6	110	55	30	4	151	16	261	71
11:00		39	8			33	4				
11:15		28	3			39	2				
11:30		25	7			40	6				
11:45		28	5	120	23	39	0	151	12	271	35
Total		837	2371			1757	1452			2594	3823
Percent		26.1%	73.9%			54.8%	45.2%			40.4%	59.6%

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between Waterline & SR 64

Site Code: 000000000020
Station ID: 000000000002
Latitude: 27' 28.957 North
Longitude: 82' 24.261 West
RYE RD 05

Start Time	02-Mar-11 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	41			1	31				
12:15		5	43			1	47				
12:30		0	57			1	47				
12:45		2	93	11	234	0	43	3	168	14	402
01:00		2	84			1	39				
01:15		1	59			0	92				
01:30		0	41			0	72				
01:45		0	61	3	245	1	38	2	241	5	486
02:00		0	42			1	47				
02:15		0	59			0	52				
02:30		0	69			1	36				
02:45		0	63	0	233	1	44	3	179	3	412
03:00		0	62			1	52				
03:15		0	50			1	48				
03:30		2	53			1	42				
03:45		1	82	3	247	0	36	3	178	6	425
04:00		1	76			4	43				
04:15		2	66			5	52				
04:30		0	72			8	44				
04:45		0	77	3	291	10	46	27	185	30	476
05:00		1	105			8	52				
05:15		2	109			9	63				
05:30		3	104			14	50				
05:45		3	77	9	395	19	52	50	217	59	612
06:00		6	85		375	30	56		221		596
06:15		16	85			55	47				
06:30		13	52			58	38				
06:45		16	54	51	276	70	33	213	174	264	450
07:00		24	44			119	20				
07:15		50	59			154	13				
07:30		47	47			95	19				
07:45		55	34	176	184	138	9	506	61	682	245
08:00		70	43	222		145	12	532		754	
08:15		71	64			138	15				
08:30		42	74			67	10				
08:45		37	39	220	220	74	8	424	45	644	265
09:00		41	38			63	4				
09:15		47	24			60	8				
09:30		29	22			42	9				
09:45		34	21	151	105	41	7	206	28	357	133
10:00		16	14			45	6				
10:15		29	14			37	4				
10:30		36	9			35	1				
10:45		32	6	113	43	33	3	150	14	263	57
11:00		36	9			30	6				
11:15		35	7			45	3				
11:30		35	4			56	3				
11:45		37	5	143	25	45	1	176	13	319	38
Total		883	2498			1763	1503			2646	4001
Percent		26.1%	73.9%			54.0%	46.0%			39.8%	60.2%
Grand Total		1720	4869			3520	2955			5240	7824
Percent		26.1%	73.9%			54.4%	45.6%			40.1%	59.9%

5:15
6:15

7:15
8:15

ADT | ADT 6,532 | AADT 6,532

SF = .87
AADT = 5683
Avg P-to-D = .105

	AM (Avg + Adj)	PM (Avg + Adj)
NB =	215	327
SB =	475	182
	690	509
P-to-D	.121	.089

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

speeds

Northbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
3/1/11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
00:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
00:30	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
00:45	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	4
	0	0	0	0	0	1	0	1	5	1	0	0	0	0	0	8
01:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
03:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
05:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
05:45	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	4
06:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
06:15	0	0	0	0	0	2	3	0	1	1	0	0	0	0	0	7
06:30	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3
06:45	0	0	0	0	0	0	1	1	2	3	0	0	0	0	0	7
	0	0	0	0	0	2	4	4	3	5	0	0	0	0	0	18
07:00	0	0	0	0	0	0	1	6	2	1	0	0	0	0	0	10
07:15	0	0	0	0	0	0	2	6	2	5	0	0	0	0	0	15
07:30	1	0	0	0	1	12	6	5	1	0	0	0	0	0	0	26
07:45	0	0	0	0	1	7	6	2	0	1	0	0	0	0	0	17
	1	0	0	0	2	19	15	19	5	7	0	0	0	0	0	68
08:00	0	0	0	0	1	8	9	3	2	0	0	0	0	0	0	23
08:15	0	0	1	1	0	8	9	4	0	0	0	0	0	0	0	23
08:30	0	0	0	0	0	5	6	1	3	1	1	0	0	0	0	17
08:45	0	0	0	0	2	8	3	4	6	0	0	0	0	0	0	23
	0	0	1	1	3	29	27	12	11	1	1	0	0	0	0	86
09:00	0	1	0	0	0	1	6	5	2	4	0	0	0	0	0	19
09:15	0	0	0	0	0	0	3	3	8	3	1	0	0	0	0	18
09:30	0	0	0	0	1	0	2	3	5	3	0	0	0	0	0	14
09:45	0	0	0	0	0	0	6	3	2	3	0	0	0	0	0	14
	0	1	0	0	1	1	17	14	17	13	1	0	0	0	0	65
10:00	0	0	0	0	0	1	2	7	2	0	1	0	0	0	0	13
10:15	0	0	0	0	0	2	4	4	6	2	0	0	0	0	0	18
10:30	0	0	0	0	0	0	0	7	4	3	1	0	0	0	0	15
10:45	1	0	0	0	0	5	0	2	4	0	0	0	0	0	0	12
	1	0	0	0	0	8	6	20	16	5	2	0	0	0	0	58
11:00	0	0	0	1	0	2	6	6	5	4	1	1	0	0	0	26
11:15	0	0	0	0	0	1	0	4	2	1	2	0	0	0	0	10
11:30	0	0	0	0	0	0	0	4	7	3	0	0	0	0	0	14
11:45	0	0	0	0	0	0	6	2	7	0	0	0	0	0	0	15
	0	0	0	1	0	3	12	16	21	8	3	1	0	0	0	65
Total	2	1	1	2	6	63	85	86	80	43	7	1	0	0	0	377

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Northbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
12 PM	0	0	1	0	0	0	4	5	7	2	0	0	0	0	0	19
12:15	0	0	0	0	0	1	9	5	7	3	0	0	0	0	0	25
12:30	0	0	0	0	0	1	0	6	6	0	1	0	0	0	0	14
12:45	0	0	0	0	0	1	4	6	7	2	1	0	0	0	0	21
	0	0	1	0	0	3	17	22	27	7	2	0	0	0	0	79
13:00	0	0	0	0	1	1	2	3	8	4	1	0	0	0	0	20
13:15	0	0	0	0	0	1	2	3	5	5	1	0	0	0	0	17
13:30	0	0	0	0	0	0	1	9	2	1	0	1	0	0	0	14
13:45	0	0	0	0	0	2	3	2	6	2	0	1	0	0	0	16
	0	0	0	0	1	4	8	17	21	12	2	2	0	0	0	67
14:00	0	1	0	0	0	3	2	1	7	2	0	0	0	0	0	16
14:15	0	0	0	0	1	0	2	7	9	2	1	0	0	0	0	22
14:30	0	0	0	0	0	6	5	10	5	1	0	0	0	0	0	27
14:45	0	0	0	0	0	0	14	6	1	0	0	1	0	0	0	22
	0	1	0	0	1	9	23	24	22	5	1	1	0	0	0	87
15:00	0	0	0	2	1	11	12	5	4	0	0	1	0	0	0	36
15:15	0	0	1	0	2	12	13	8	3	0	0	0	0	0	0	39
15:30	0	0	0	0	0	2	6	9	6	2	1	0	0	0	0	26
15:45	0	0	0	0	0	0	3	11	11	3	1	0	0	0	0	29
	0	0	1	2	3	25	34	33	24	5	2	1	0	0	0	130
16:00	0	0	0	0	0	3	7	16	4	7	1	0	0	0	0	38
16:15	0	0	0	0	0	0	8	18	17	16	1	0	0	0	0	60
16:30	0	0	0	0	0	1	3	4	15	6	1	0	0	0	0	30
16:45	0	0	0	0	0	0	4	11	15	9	0	0	0	0	0	39
	0	0	0	0	0	4	22	49	51	38	3	0	0	0	0	167
17:00	0	0	0	0	0	1	4	11	21	11	2	0	0	0	0	50
17:15	0	0	0	0	1	0	0	8	22	14	1	0	0	0	0	46
17:30	0	0	1	0	3	0	5	9	24	8	2	0	0	0	0	52
17:45	0	0	0	0	0	0	3	5	18	15	1	0	0	0	0	42
	0	0	1	0	4	1	12	33	85	48	6	0	0	0	0	190
18:00	0	0	0	0	0	0	0	15	16	13	1	0	0	0	0	45
18:15	0	0	0	0	0	1	1	16	11	4	1	0	0	0	0	34
18:30	0	0	0	0	0	0	3	7	20	8	1	0	0	1	0	40
18:45	0	0	0	0	0	0	0	7	8	6	1	0	0	0	0	22
	0	0	0	0	0	1	4	45	55	31	4	0	0	1	0	141
19:00	0	0	0	0	0	1	1	4	6	11	2	0	0	0	0	25
19:15	0	0	0	0	0	0	0	2	9	1	2	0	0	0	0	14
19:30	0	0	0	0	0	2	4	4	5	2	0	0	0	0	1	18
19:45	0	0	0	0	0	0	1	5	5	7	2	0	0	0	0	20
	0	0	0	0	0	3	6	15	25	21	6	0	0	0	1	77
20:00	0	0	0	0	0	1	0	4	7	5	1	1	0	0	0	19
20:15	0	0	0	0	0	2	0	2	7	5	3	0	0	0	0	19
20:30	0	0	0	0	0	0	0	5	5	5	0	0	1	0	0	16
20:45	0	0	0	0	0	0	5	3	10	2	0	1	0	0	0	21
	0	0	0	0	0	3	5	14	29	17	4	2	1	0	0	75
21:00	0	0	0	0	0	0	1	2	9	6	0	1	0	0	0	19
21:15	0	0	0	0	0	1	1	4	5	2	1	0	0	0	0	14
21:30	0	0	0	0	0	0	0	2	3	0	2	0	0	0	0	7
21:45	0	0	0	0	0	0	1	5	4	4	0	0	0	0	0	14
	0	0	0	0	0	1	3	13	21	12	3	1	0	0	0	54
22:00	0	0	0	0	0	0	1	2	5	1	0	0	0	0	1	10
22:15	0	0	0	0	0	0	1	1	5	3	2	1	0	0	1	14
22:30	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
22:45	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
	0	0	0	0	0	0	2	4	12	7	2	1	0	0	2	30
23:00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
23:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	1	2	1	0	1	0	0	0	0	5
Total	0	1	3	2	9	54	137	271	373	203	36	8	1	1	3	1102

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Northbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
3/2/11	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
00:15	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	0	0	0	0	0	0	0	2	1	4	0	0	0	0	0	7
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	5
04:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
05:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	5
06:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
06:15	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6
06:30	0	0	0	1	0	1	1	1	2	0	1	0	0	0	0	7
06:45	0	0	0	0	0	1	1	0	2	3	1	0	0	0	0	8
	0	0	0	1	0	2	2	3	8	5	2	0	0	0	0	23
07:00	0	0	0	0	0	0	1	3	2	3	0	0	0	0	0	9
07:15	0	0	0	0	0	1	2	6	7	3	0	0	0	0	0	19
07:30	0	0	0	0	2	4	3	5	1	0	0	0	0	0	0	15
07:45	0	0	0	0	2	10	5	3	2	0	1	0	0	0	0	23
	0	0	0	0	4	15	11	17	12	6	1	0	0	0	0	66
08:00	0	0	1	1	3	10	9	6	0	0	0	0	0	0	0	30
08:15	0	0	0	0	3	7	15	5	1	0	0	0	0	0	0	31
08:30	0	0	0	0	1	6	16	5	0	2	0	0	0	0	0	30
08:45	0	0	0	3	1	7	14	3	2	1	1	0	0	0	0	32
	0	0	1	4	8	30	54	19	3	3	1	0	0	0	0	123
09:00	0	0	0	0	0	1	7	2	3	3	0	0	0	0	0	16
09:15	0	0	0	0	0	3	13	6	3	3	0	1	0	0	0	29
09:30	0	0	0	0	0	0	3	9	4	2	0	0	0	0	0	18
09:45	0	0	0	0	0	1	4	11	3	4	0	0	0	0	0	23
	0	0	0	0	0	5	27	28	13	12	0	1	0	0	0	86
10:00	0	0	0	0	0	1	0	3	5	1	1	0	0	0	0	11
10:15	0	0	0	0	0	1	1	3	5	1	1	0	0	0	0	12
10:30	0	0	0	0	0	5	8	7	3	3	0	0	0	0	0	26
10:45	0	0	0	0	1	1	1	2	4	2	0	0	0	0	0	11
	0	0	0	0	1	8	10	15	17	7	2	0	0	0	0	60
11:00	0	0	0	0	1	2	3	3	3	2	0	0	0	0	0	14
11:15	0	0	0	0	0	0	4	3	10	2	0	0	0	0	0	19
11:30	0	0	0	1	0	1	2	5	4	4	0	0	0	0	0	17
11:45	0	0	0	0	0	0	1	5	2	1	0	0	0	0	0	9
	0	0	0	1	1	3	10	16	19	9	0	0	0	0	0	59
Total	0	0	1	6	15	63	117	105	75	47	6	1	0	0	0	436

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Northbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
12 PM	0	0	0	0	0	2	2	5	5	4	0	0	0	0	1	19
12:15	0	0	1	0	0	2	7	5	3	3	0	0	0	0	0	21
12:30	0	0	0	0	0	0	7	4	5	2	0	0	0	0	0	18
12:45	0	0	0	2	4	8	5	3	2	1	0	0	0	0	0	25
	0	0	1	2	4	12	21	17	15	10	0	0	0	0	1	83
13:00	1	0	0	0	2	12	8	4	1	0	0	0	0	0	0	28
13:15	0	0	0	0	4	10	11	8	0	1	0	0	0	0	0	34
13:30	0	0	0	0	2	11	5	6	1	0	0	0	0	0	0	25
13:45	0	0	0	0	0	4	0	5	13	5	0	0	0	0	0	27
	1	0	0	0	8	37	24	23	15	6	0	0	0	0	0	114
14:00	0	0	0	0	1	1	4	7	11	2	0	0	0	0	0	26
14:15	0	0	0	0	0	2	4	9	7	0	1	0	0	0	0	23
14:30	0	0	0	1	0	1	2	6	10	7	1	1	0	0	0	29
14:45	0	0	0	2	2	2	8	12	10	2	1	0	1	0	0	40
	0	0	0	3	3	6	18	34	38	11	3	1	1	0	0	118
15:00	0	0	0	0	0	0	1	7	7	5	1	0	0	0	1	22
15:15	0	0	0	0	0	2	7	13	7	5	0	0	0	0	0	34
15:30	0	0	0	0	0	1	6	8	10	4	0	0	0	0	0	29
15:45	0	0	0	0	0	0	4	5	15	12	0	0	0	0	0	36
	0	0	0	0	0	3	18	33	39	26	1	0	0	0	1	121
16:00	0	0	0	0	0	0	3	15	15	7	1	0	0	0	0	41
16:15	0	0	0	0	0	1	3	9	13	5	2	0	0	0	0	33
16:30	0	0	0	0	1	1	3	10	17	0	0	0	0	1	0	33
16:45	0	0	0	0	1	1	6	14	16	1	2	0	0	0	0	41
	0	0	0	0	2	3	15	48	61	13	5	0	0	1	0	148
17:00	0	0	0	0	0	1	2	9	19	12	3	1	0	0	0	47
17:15	0	0	0	0	0	0	5	14	27	6	0	0	0	0	0	52
17:30	0	0	0	0	1	0	5	21	12	12	1	0	0	0	0	52
17:45	0	0	0	0	1	3	1	6	15	8	4	0	0	0	0	38
	0	0	0	0	2	4	13	50	73	38	8	1	0	0	0	189
18:00	1	0	0	0	0	0	1	16	12	5	0	0	0	0	0	35
18:15	0	0	0	0	0	0	8	9	21	3	1	0	0	0	0	42
18:30	0	0	0	0	0	0	4	4	15	7	1	0	0	0	0	31
18:45	0	0	0	0	0	1	0	10	8	7	0	0	0	0	0	26
	1	0	0	0	0	1	13	39	56	22	2	0	0	0	0	134
19:00	0	0	0	0	0	1	3	4	5	4	0	0	0	0	0	17
19:15	0	0	0	0	0	0	1	4	7	7	0	0	1	0	0	20
19:30	0	0	0	0	0	0	0	9	8	5	2	0	0	0	0	24
19:45	0	0	0	0	0	0	4	5	4	3	0	0	0	0	0	16
	0	0	0	0	0	1	8	22	24	19	2	0	1	0	0	77
20:00	0	0	0	0	0	0	0	6	9	4	1	0	0	0	0	20
20:15	0	0	0	0	0	0	1	15	16	1	2	0	0	0	0	35
20:30	0	0	0	0	0	0	3	10	9	2	0	0	0	0	0	24
20:45	0	0	0	0	0	3	1	3	11	10	0	0	0	0	0	28
	0	0	0	0	0	3	5	34	45	17	3	0	0	0	0	107
21:00	0	0	0	0	1	0	2	11	4	5	1	0	0	0	0	24
21:15	0	0	0	0	0	0	0	5	2	4	1	1	0	0	0	13
21:30	0	0	0	0	0	0	0	1	1	4	3	1	0	0	0	10
21:45	0	0	0	0	1	0	2	0	0	1	2	1	0	0	0	7
	0	0	0	0	2	0	4	17	7	14	7	3	0	0	0	54
22:00	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4
22:15	0	0	0	0	0	0	2	0	3	1	2	1	0	0	0	9
22:30	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
22:45	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
	0	0	0	0	0	0	4	4	6	1	2	1	0	0	0	18
23:00	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
23:15	0	0	0	0	0	1	0	0	0	2	0	1	0	0	0	4
23:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
23:45	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	3
	0	0	0	0	0	2	0	1	3	3	1	1	0	0	0	11
Total	2	0	1	5	21	72	143	322	382	180	34	7	2	1	2	1174
Total	4	2	6	15	51	252	482	784	910	473	83	17	3	2	5	3089

Stats	
15th Percentile :	47 MPH
50th Percentile :	55 MPH
85th Percentile :	62 MPH
95th Percentile :	65 MPH
Mean Speed(Average) :	55 MPH
10 MPH Pace Speed :	51-60 MPH
Number in Pace :	1694
Percent in Pace :	54.8%
Number of Vehicles > 55 MPH :	1493
Percent of Vehicles > 55 MPH :	48.3%

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Southbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
3/1/11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
00:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
00:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	3
01:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
02:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2
04:00	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
04:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
04:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
04:45	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	4
	0	0	0	0	0	0	2	1	5	2	0	0	0	0	0	10
05:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:15	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	3
05:30	0	0	0	0	0	0	2	0	3	3	1	0	0	0	0	9
05:45	0	0	0	0	0	0	3	1	1	1	1	1	0	0	0	8
	0	0	0	0	1	0	5	1	6	5	2	1	0	0	0	21
06:00	0	0	0	0	0	0	1	6	3	4	1	0	0	0	0	15
06:15	0	0	0	0	0	1	3	4	11	2	3	0	0	0	0	24
06:30	0	0	0	0	0	0	2	5	6	8	2	2	0	0	0	25
06:45	0	0	0	0	0	0	11	8	12	7	0	0	0	0	0	38
	0	0	0	0	0	1	17	23	32	21	6	2	0	0	0	102
07:00	0	0	0	0	0	1	9	11	20	9	0	1	1	0	0	52
07:15	0	0	0	0	0	2	7	23	22	19	0	0	0	0	0	73
07:30	0	0	0	0	1	1	20	16	9	3	0	0	0	0	0	50
07:45	0	0	0	1	2	11	22	23	7	4	0	0	0	0	0	70
	0	0	0	1	3	15	58	73	58	35	0	1	1	0	0	245
08:00	0	0	0	2	2	8	29	15	5	0	0	0	0	0	0	61
08:15	0	0	0	0	12	17	25	16	1	1	0	0	0	0	1	73
08:30	0	0	0	0	0	5	9	14	5	2	0	0	0	0	0	35
08:45	0	0	1	0	2	2	8	1	3	1	0	0	0	0	0	18
	0	0	1	2	16	32	71	46	14	4	0	0	0	0	1	187
09:00	0	0	0	0	0	2	4	8	8	0	0	0	0	0	0	22
09:15	0	0	0	0	0	0	4	13	6	1	0	0	0	0	0	24
09:30	0	0	0	0	2	1	7	8	4	2	0	0	0	0	0	24
09:45	0	0	0	0	0	2	6	10	2	3	0	0	0	0	0	23
	0	0	0	0	2	5	21	39	20	6	0	0	0	0	0	93
10:00	0	0	0	1	1	3	7	6	1	1	1	1	0	0	0	22
10:15	0	0	0	0	0	2	2	6	5	3	0	0	0	0	0	18
10:30	0	0	0	0	0	0	1	5	3	3	0	0	0	0	0	12
10:45	0	0	0	0	0	1	3	6	4	0	0	0	0	0	0	14
	0	0	0	1	1	6	13	23	13	7	1	1	0	0	0	66
11:00	0	0	1	0	0	2	4	4	1	0	0	0	0	0	0	12
11:15	0	0	0	1	0	1	1	9	3	1	1	0	0	0	0	17
11:30	0	0	0	0	0	2	5	6	4	2	1	0	0	0	0	20
11:45	0	0	0	0	1	1	4	7	4	1	0	0	0	0	0	18
	0	0	1	1	1	6	14	26	12	4	2	0	0	0	0	67
Total	0	0	2	5	24	67	204	232	164	85	12	5	1	0	1	802

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Southbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
12 PM	0	0	0	0	1	1	6	9	2	0	0	1	0	0	0	20
12:15	0	0	0	0	1	0	0	12	5	3	0	0	0	0	0	21
12:30	0	0	0	0	0	2	2	7	5	2	0	0	0	0	0	18
12:45	0	0	1	0	0	3	4	6	7	2	0	0	0	0	0	23
	0	0	1	0	2	6	12	34	19	7	0	1	0	0	0	82
13:00	0	0	0	0	0	3	5	5	0	2	0	0	0	0	0	15
13:15	0	0	0	0	0	1	2	6	3	1	1	0	0	0	0	14
13:30	0	0	0	0	0	2	3	15	4	1	0	0	0	0	0	25
13:45	0	0	0	0	1	1	5	9	7	0	1	1	0	0	0	25
	0	0	0	0	1	7	15	35	14	4	2	1	0	0	0	79
14:00	0	0	0	0	0	4	7	11	2	0	1	0	0	0	0	25
14:15	0	0	0	0	0	2	10	16	3	2	0	0	0	0	0	33
14:30	0	0	0	0	1	3	6	4	6	2	0	0	0	0	0	22
14:45	0	0	0	0	2	3	6	9	2	2	0	1	0	0	0	25
	0	0	0	0	3	12	29	40	13	6	1	1	0	0	0	105
15:00	0	0	0	0	2	12	7	6	0	0	0	0	0	0	0	27
15:15	0	0	0	0	1	2	6	5	5	1	0	0	0	0	0	20
15:30	0	1	0	1	4	7	10	6	2	2	0	0	0	0	0	33
15:45	0	0	0	0	0	0	2	13	6	2	0	0	0	0	0	23
	0	1	0	1	7	21	25	30	13	5	0	0	0	0	0	103
16:00	0	0	0	0	0	2	6	8	4	1	0	0	0	0	0	21
16:15	0	0	0	0	0	1	6	10	8	1	0	0	0	0	0	26
16:30	0	0	0	0	0	4	6	6	10	2	0	0	0	0	0	28
16:45	0	0	0	0	0	2	6	5	12	2	1	0	1	0	0	29
	0	0	0	0	0	9	24	29	34	6	1	0	1	0	0	104
17:00	0	0	0	1	1	0	4	7	5	4	0	0	0	0	0	22
17:15	0	0	0	0	0	0	0	4	8	3	0	0	0	0	0	15
17:30	0	0	0	0	0	2	2	5	7	5	0	0	0	0	0	21
17:45	0	0	0	0	0	0	2	2	8	3	0	0	0	0	0	15
	0	0	0	1	1	2	8	18	28	15	0	0	0	0	0	73
18:00	0	0	0	0	0	0	2	11	7	4	1	0	0	0	0	25
18:15	0	0	0	0	0	0	4	8	5	4	2	0	0	0	0	23
18:30	0	0	0	0	0	0	2	8	9	2	0	0	0	0	0	21
18:45	0	0	0	0	1	1	7	5	3	2	0	0	0	0	0	19
	0	0	0	0	1	1	15	32	24	12	3	0	0	0	0	88
19:00	0	0	0	0	0	0	2	6	4	2	0	0	0	0	0	14
19:15	0	0	0	0	0	0	0	6	6	1	0	0	0	0	0	13
19:30	0	0	0	0	0	2	1	2	4	1	0	0	0	0	0	10
19:45	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
	0	0	0	0	0	2	3	14	16	5	0	0	0	0	0	40
20:00	0	0	0	0	0	0	1	5	2	1	0	0	0	0	0	9
20:15	0	0	0	0	0	0	1	1	4	2	0	0	0	0	0	8
20:30	0	0	0	0	0	1	1	5	0	0	0	0	0	0	0	7
20:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	0	0	0	0	0	1	3	12	6	3	0	0	0	0	0	25
21:00	0	0	0	0	0	1	0	4	1	2	0	0	0	0	0	8
21:15	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	5
	0	0	0	0	0	1	0	9	3	3	0	0	0	0	0	16
22:00	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	5
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4
22:45	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	3	4	3	1	0	0	0	0	0	11
23:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	3
Total	0	1	1	2	15	62	137	258	173	69	7	3	1	0	0	729

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Southbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
3/2/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
00:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
00:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
03:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
04:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
04:30	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
04:45	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	6
	0	0	0	0	0	0	1	3	8	0	0	0	0	0	0	12
05:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
05:15	0	0	0	0	0	0	2	1	1	1	0	0	0	0	0	5
05:30	0	0	0	0	0	0	1	1	1	2	0	0	0	0	0	5
05:45	0	0	0	0	0	0	1	3	2	1	0	0	0	0	0	7
	0	0	0	0	0	0	4	5	6	4	0	0	0	0	0	19
06:00	0	0	0	0	0	0	0	8	3	3	1	0	0	0	0	15
06:15	0	0	0	0	0	0	3	8	10	6	2	1	1	0	1	32
06:30	0	0	0	0	0	0	3	4	12	11	0	1	0	0	0	31
06:45	0	0	0	0	0	0	2	11	13	5	0	0	0	0	0	31
	0	0	0	0	0	0	8	31	38	25	3	2	1	0	1	109
07:00	0	0	0	0	1	0	6	19	17	6	1	0	0	0	0	50
07:15	0	0	0	0	0	0	1	24	32	11	0	0	0	0	0	68
07:30	0	0	0	0	0	0	10	19	12	4	0	0	0	0	0	45
07:45	0	0	0	2	4	14	27	23	2	0	0	0	0	0	0	72
	0	0	0	2	5	14	44	85	63	21	1	0	0	0	0	235
08:00	0	0	1	0	8	8	27	17	9	1	0	0	0	0	0	71
08:15	0	0	0	0	2	11	21	20	8	1	0	0	0	0	0	63
08:30	0	0	0	0	0	5	8	9	7	0	1	0	0	0	0	30
08:45	0	0	0	0	1	5	14	8	1	0	0	0	0	0	0	29
	0	0	1	0	11	29	70	54	25	2	1	0	0	0	0	193
09:00	0	0	0	0	0	0	3	6	12	5	1	0	0	2	0	29
09:15	0	0	0	0	1	3	4	9	5	5	0	0	0	0	0	27
09:30	0	0	0	0	0	1	4	11	4	3	0	0	0	0	0	23
09:45	0	0	0	0	1	0	6	13	4	2	0	0	0	0	0	26
	0	0	0	0	2	4	17	39	25	15	1	0	0	2	0	105
10:00	0	0	0	0	0	2	5	7	6	1	0	0	0	0	0	21
10:15	0	0	0	0	0	0	2	5	4	4	0	0	0	0	0	15
10:30	0	0	0	0	0	2	5	6	5	3	0	0	0	0	0	21
10:45	0	0	0	0	0	3	5	5	7	2	0	0	0	0	0	22
	0	0	0	0	0	7	17	23	22	10	0	0	0	0	0	79
11:00	0	0	0	2	1	0	0	6	1	2	0	0	0	0	0	12
11:15	0	0	0	0	0	1	3	9	9	2	2	0	0	0	0	26
11:30	0	0	0	0	0	1	4	12	8	1	0	1	0	0	0	27
11:45	0	0	0	0	0	0	4	1	7	4	1	1	0	0	0	18
	0	0	0	2	1	2	11	28	25	9	3	2	0	0	0	83
Total	0	0	1	4	20	56	174	270	212	88	9	4	1	2	1	842

URS Corporation

7650 W. Courtney Campbell Cswy
Tampa, Fl 33607

Rye Rd
Between UMMR & Waterline Rd

Site Code: 000000000056
Station ID: 000000000006
Latitude: 27' 29.986 North
Longitude: 82' 22.883 West
RYE RD 04_SPEED

Southbound

Start Time	0 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 80	81 85	86 147	Total
12 PM	0	0	0	0	0	0	3	5	7	5	1	0	0	0	0	21
12:15	0	0	0	0	0	1	7	8	7	3	0	0	0	0	0	26
12:30	0	1	0	0	0	5	6	9	5	0	0	1	0	0	0	27
12:45	0	0	1	0	2	9	5	6	4	0	0	0	0	0	0	27
	0	1	1	0	2	15	21	28	23	8	1	1	0	0	0	101
13:00	0	0	0	2	3	4	9	7	3	0	0	0	0	0	0	28
13:15	0	0	0	0	5	16	5	4	2	1	0	0	0	0	0	33
13:30	0	0	0	0	0	3	8	8	6	1	1	0	0	0	0	27
13:45	0	0	0	0	0	1	3	7	8	1	0	0	0	0	0	20
	0	0	0	2	8	24	25	26	19	3	1	0	0	0	0	108
14:00	0	0	0	0	0	1	5	4	4	1	0	0	0	0	0	15
14:15	0	0	0	0	0	3	10	7	3	3	0	0	0	0	0	26
14:30	0	0	0	0	1	0	3	9	4	3	0	0	0	0	0	20
14:45	0	0	0	0	0	0	4	10	7	3	1	0	0	0	0	25
	0	0	0	0	1	4	22	30	18	10	1	0	0	0	0	86
15:00	0	0	0	0	0	0	3	13	5	1	1	0	1	0	0	24
15:15	0	0	0	0	0	1	6	7	4	2	0	0	0	0	0	20
15:30	0	0	1	0	0	2	3	3	7	1	1	0	0	0	0	18
15:45	0	0	1	0	0	1	4	4	8	1	0	1	0	0	0	20
	0	0	2	0	0	4	16	27	24	5	2	1	1	0	0	82
16:00	0	0	0	0	0	0	2	9	7	1	0	0	0	0	0	19
16:15	0	0	0	0	0	1	5	5	8	3	1	0	0	0	0	23
16:30	0	0	1	0	1	1	4	4	7	3	3	0	0	0	0	24
16:45	0	0	0	0	1	1	2	11	4	3	0	0	0	0	0	22
	0	0	1	0	2	3	13	29	26	10	4	0	0	0	0	88
17:00	0	0	0	0	0	0	2	3	5	5	1	0	0	0	0	16
17:15	0	0	0	0	0	2	2	13	16	8	3	0	0	0	0	44
17:30	0	0	0	0	0	0	2	12	7	3	1	0	0	0	0	25
17:45	0	0	0	0	0	2	3	11	12	1	1	0	0	0	0	30
	0	0	0	0	0	4	9	39	40	17	6	0	0	0	0	115
18:00	0	0	0	0	0	1	1	15	13	4	2	0	0	0	0	36
18:15	0	0	0	0	0	0	3	10	12	4	0	0	0	0	0	29
18:30	0	0	0	0	1	2	0	7	5	3	0	0	0	0	0	18
18:45	0	0	0	0	0	1	4	4	6	6	0	0	0	0	0	21
	0	0	0	0	1	4	8	36	36	17	2	0	0	0	0	104
19:00	0	0	0	0	0	1	2	2	2	0	0	0	0	0	0	7
19:15	0	0	0	0	0	1	1	3	1	1	0	0	0	0	0	7
19:30	0	0	0	0	0	0	2	3	3	0	0	0	0	0	0	8
19:45	0	0	0	0	1	2	0	2	0	1	1	0	0	0	0	7
	0	0	0	0	1	4	5	10	6	2	1	0	0	0	0	29
20:00	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	8
20:15	0	0	0	0	0	0	3	3	6	0	0	0	0	0	0	12
20:30	0	0	0	0	0	0	0	0	4	1	1	0	0	0	0	6
20:45	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	4
	0	0	0	0	0	0	4	5	15	5	1	0	0	0	0	30
21:00	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	5
21:15	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	3
21:30	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3
21:45	0	0	0	0	0	0	0	0	5	0	1	0	0	0	0	6
	0	0	0	0	0	0	2	5	8	0	2	0	0	0	0	17
22:00	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
22:15	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4
22:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
22:45	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	9
23:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
23:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	5
Total	0	1	4	2	16	64	127	239	219	78	21	2	1	0	0	774
Total	0	2	8	13	75	249	642	999	768	320	49	14	4	2	2	3147

Stats

15th Percentile :	46 MPH
50th Percentile :	53 MPH
85th Percentile :	60 MPH
95th Percentile :	64 MPH
Mean Speed(Average) :	53 MPH
10 MPH Pace Speed :	51-60 MPH
Number in Pace :	1767
Percent in Pace :	56.1%
Number of Vehicles > 55 MPH :	1159
Percent of Vehicles > 55 MPH :	36.8%

County: 13
Station: 0050
Description: SR 64, EAST OF SR 93/I-75
Start Date: 05/19/2009
Start Time: 0600

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	22	17	14	16	69	13	9	7	8	37	106
0100	12	12	8	6	38	2	16	5	11	34	72
0200	8	10	10	9	37	13	7	13	12	45	82
0300	14	2	5	8	29	11	12	11	19	53	82
0400	3	8	14	12	37	7	11	22	31	71	108
0500	30	22	34	49	135	32	56	64	86	238	373
0600	49	78	127	198	452	124	170	215	276	785	1237
0700	133	195	240	253	821	341	371	354	292	1358	2179
0800	218	213	216	186	833	304	327	296	294	1221	2054
0900	165	179	166	174	684	297	261	227	239	1024	1708
1000	171	174	178	161	684	225	224	226	198	873	1557
1100	175	180	162	186	703	198	230	258	223	909	1612
1200	174	204	231	202	811	204	244	218	188	854	1665
1300	197	194	229	184	804	211	187	201	196	795	1599
1400	205	232	240	217	894	213	243	206	243	905	1799
1500	275	233	283	292	1083	215	265	235	220	935	2018
1600	282	272	263	288	1105	257	225	238	249	969	2074
1700	311	405	332	317	1365	257	275	262	224	1018	2383
1800	287	303	283	234	1107	222	225	179	143	769	1876
1900	192	192	159	155	698	134	122	88	83	427	1125
2000	179	139	144	122	584	92	91	90	95	368	952
2100	123	109	82	96	410	90	80	54	37	261	671
2200	71	81	46	60	258	63	43	37	27	170	428
2300	41	46	46	29	162	36	24	19	15	94	256
24-Hour Totals:					13803					14213	28016

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0730	924	0700	1358	0715	2227
P.M.	1700	1365	1645	1043	1700	2383
Daily	1700	1365	0700	1358	1700	2383

Truck Percentage 7.48 7.30 7.39

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	27	9430	3314	31	417	181	11	214	154	10	0	0	14	0	0	1032	13803
W	32	10073	3071	33	375	174	52	214	159	12	0	0	18	0	0	1037	14213

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Synopsis Report: 130073CL-20090331.syn
Page: 1

County: 13
Station: 0073
Description: SR 64, EAST OF UPPER MANATEE RIVER ROAD
Start Date: 03/31/2009
Start Time: 0000

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	13	11	8	5	37	9	5	3	4	21	58
0100	3	5	5	8	21	3	6	10	4	23	44
0200	5	9	4	8	26	3	9	4	0	16	42
0300	5	5	3	1	14	5	3	8	10	26	40
0400	6	3	3	11	23	6	11	16	20	53	76
0500	15	9	15	13	52	34	28	52	43	157	209
0600	24	38	39	78	179	73	102	159	178	512	691
0700	52	86	91	118	347	228	254	247	141	870	1217
0800	98	87	104	101	390	163	191	173	171	698	1088
0900	105	83	72	84	344	125	134	125	153	537	881
1000	100	92	87	100	379	120	133	136	150	539	918
1100	98	98	92	72	360	141	109	130	131	511	871
1200	104	111	112	126	453	112	148	132	114	506	959
1300	100	114	127	108	449	113	118	120	107	458	907
1400	100	120	203	164	587	138	128	123	126	515	1102
1500	149	166	169	206	690	137	160	138	132	567	1257
1600	168	184	175	187	714	132	111	123	133	499	1213
1700	213	204	208	210	835	174	153	145	123	595	1430
1800	203	187	169	140	699	119	122	99	92	432	1131
1900	160	148	119	136	563	72	66	63	46	247	810
2000	126	114	103	82	425	50	49	39	33	171	596
2100	109	103	95	62	369	46	36	30	23	135	504
2200	65	44	25	29	163	19	22	19	18	78	241
2300	30	28	15	15	88	22	13	15	14	64	152
24-Hour Totals:					8207					8230	16437

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0745	407	0645	907	0700	1217
P.M.	1700	835	1645	605	1700	1430
Daily	1700	835	0645	907	1700	1430

Truck Percentage 7.07 6.89 6.98

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	61	5592	1974	14	239	46	12	128	123	7	1	1	9	0	0	580	8207
W	55	5821	1787	15	203	48	2	130	136	13	0	0	20	0	0	567	8230

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County: 13
Station: 0081
Description: SR 43/US 301, NE OF CHIN ROAD
Start Date: 03/31/2009
Start Time: 0000

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	12	3	2	7	24	6	4	3	3	16	40
0100	3	2	5	2	12	4	1	4	2	11	23
0200	4	1	7	5	17	2	8	7	6	23	40
0300	1	1	3	0	5	3	3	2	6	14	19
0400	3	5	9	9	26	4	7	20	19	50	76
0500	7	13	11	21	52	15	23	32	42	112	164
0600	31	46	62	83	222	49	69	62	78	258	480
0700	74	75	68	98	315	118	148	135	139	540	855
0800	63	77	96	109	345	108	114	119	140	481	826
0900	81	76	69	76	302	119	85	88	102	394	696
1000	64	60	65	76	265	87	87	95	100	369	634
1100	62	73	89	76	300	113	103	98	89	403	703
1200	79	85	82	82	328	94	73	98	88	353	681
1300	81	93	82	88	344	86	85	91	87	349	693
1400	76	87	99	103	365	83	90	97	98	368	733
1500	96	123	96	108	423	82	82	95	111	370	793
1600	108	121	142	140	511	85	94	112	118	409	920
1700	122	153	129	147	551	105	100	112	136	453	1004
1800	138	120	110	111	479	105	78	68	74	325	804
1900	96	103	74	72	345	66	51	53	53	223	568
2000	70	62	71	49	252	68	41	34	32	175	427
2100	60	55	36	36	187	34	17	22	14	87	274
2200	38	35	18	25	116	13	9	14	13	49	165
2300	23	13	13	11	60	12	10	8	4	34	94
24-Hour Totals:					5846					5866	11712

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0815	363	0700	540	0700	855
P.M.	1715	567	1700	453	1715	1020
Daily	1715	567	0700	540	1715	1020

Truck Percentage 8.83 8.06 8.44

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	42	3404	1884	13	256	58	4	120	49	8	0	0	8	0	0	516	5846
W	49	3575	1769	5	231	28	10	128	64	6	0	0	1	0	0	473	5866

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County: 13
Station: 0080
Description: SR 43/US 301, NE OF 100TH AVENUE EAST
Start Date: 03/31/2009
Start Time: 0000

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	16	6	11	6	39	6	4	2	7	19	58
0100	5	6	4	3	18	5	1	6	3	15	33
0200	6	3	9	7	25	2	8	7	6	23	48
0300	1	2	4	3	10	4	4	3	7	18	28
0400	3	7	6	17	33	5	10	25	22	62	95
0500	13	17	16	21	67	27	33	53	60	173	240
0600	33	51	63	82	229	56	93	104	109	362	591
0700	77	81	82	95	335	179	203	202	195	779	1114
0800	67	94	107	131	399	181	158	152	165	656	1055
0900	94	94	84	98	370	134	133	118	123	508	878
1000	77	76	91	98	342	120	125	123	138	506	848
1100	74	103	93	111	381	131	130	141	118	520	901
1200	104	104	102	114	424	114	90	118	131	453	877
1300	111	120	109	112	452	117	111	105	112	445	897
1400	120	119	129	144	512	96	103	123	103	425	937
1500	142	170	135	156	603	104	105	114	114	437	1040
1600	168	173	190	199	730	94	106	127	116	443	1173
1700	173	193	215	185	766	129	104	123	140	496	1262
1800	199	164	153	145	661	125	84	88	91	388	1049
1900	133	132	117	109	491	73	65	52	66	256	747
2000	106	86	90	61	343	65	50	44	29	188	531
2100	95	60	57	52	264	39	21	31	18	109	373
2200	42	49	33	34	158	17	16	31	16	80	238
2300	27	18	18	16	79	20	16	8	5	49	128
24-Hour Totals:					7731					7410	15141

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0815	426	0715	781	0700	1114
P.M.	1715	792	1700	496	1715	1284
Daily	1715	792	0715	781	1715	1284

Truck Percentage 6.22 6.83 6.52

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	52	5062	2136	17	235	37	5	111	75	1	0	0	0	0	0	481	7731
W	52	4705	2147	14	256	31	12	122	64	4	0	0	3	0	0	506	7410

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County: 13
Station: 0014
Description: SR 43/US 301, S OF SR 62/81ST STREET PARRISH
Start Date: 05/19/2009
Start Time: 0000

Time	Direction: N 1st	2nd	3rd	4th	Total	Direction: S 1st	2nd	3rd	4th	Total	Combined Total
0000	8	6	2	1	17	10	1	3	3	17	34
0100	1	4	3	0	8	2	2	2	1	7	15
0200	0	3	4	1	8	9	2	1	6	18	26
0300	2	1	4	4	11	0	3	7	3	13	24
0400	2	6	6	11	25	3	6	18	12	39	64
0500	16	15	25	27	83	5	16	17	23	61	144
0600	50	63	95	89	297	25	30	43	56	154	451
0700	91	90	78	82	341	54	55	62	55	226	567
0800	59	68	46	55	228	62	42	41	43	188	416
0900	56	67	50	63	236	45	55	47	57	204	440
1000	64	46	63	40	213	61	54	63	56	234	447
1100	53	49	54	60	216	45	55	65	59	224	440
1200	65	58	61	52	236	65	62	65	61	253	489
1300	57	58	72	50	237	51	67	40	42	200	437
1400	50	63	60	65	238	50	58	60	66	234	472
1500	60	65	55	54	234	74	55	56	68	253	487
1600	54	76	83	89	302	78	74	95	74	321	623
1700	84	67	78	51	280	94	104	102	115	415	695
1800	68	55	54	44	221	98	82	54	68	302	523
1900	42	25	39	34	140	68	45	36	42	191	331
2000	35	25	22	14	96	29	35	24	19	107	203
2100	23	25	16	18	82	19	18	21	22	80	162
2200	14	15	12	6	47	12	14	18	11	55	102
2300	2	7	7	1	17	16	5	6	4	31	48
24-Hour Totals:					3813					3827	7640

Peak Volume Information

	Direction: N Hour	Volume	Direction: S Hour	Volume	Combined Directions Hour	Volume
A.M.	0630	365	0715	234	0645	575
P.M.	1615	332	1715	419	1700	695
Daily	0630	365	1715	419	1700	695

Truck Percentage 12.12 11.68 11.90

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
N	12	2113	1226	3	175	36	17	106	111	13	0	0	1	0	0	462	3813
S	11	2125	1244	1	152	49	6	123	110	6	0	0	0	0	0	447	3827

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County: 13
Station: 0014
Description: SR 43/US 301, S OF SR 62/81ST STREET PARRISH
Start Date: 05/20/2009
Start Time: 0000

Time	Direction: N 1st	2nd	3rd	4th	Total	Direction: S 1st	2nd	3rd	4th	Total	Combined Total
0000	7	1	3	1	12	3	7	6	0	16	28
0100	1	1	1	0	3	3	3	1	1	8	11
0200	2	1	2	1	6	7	3	1	2	13	19
0300	1	3	4	6	14	2	0	5	7	14	28
0400	3	9	4	12	28	0	9	14	18	41	69
0500	17	7	22	39	85	4	9	21	15	49	134
0600	49	54	100	88	291	24	34	35	51	144	435
0700	93	74	80	90	337	60	60	53	70	243	580
0800	62	75	61	47	245	62	39	68	49	218	463
0900	43	44	60	68	215	49	54	48	54	205	420
1000	40	58	73	38	209	52	57	59	75	243	452
1100	65	40	40	56	201	64	64	53	51	232	433
1200	48	64	74	63	249	57	78	59	65	259	508
1300	67	69	48	65	249	56	55	58	60	229	478
1400	42	64	66	56	228	49	50	56	68	223	451
1500	57	79	56	51	243	54	59	60	73	246	489
1600	89	64	78	82	313	60	97	85	83	325	638
1700	83	93	66	78	320	88	101	115	133	437	757
1800	73	63	57	54	247	86	67	79	68	300	547
1900	42	32	42	42	158	52	50	34	41	177	335
2000	47	22	35	17	121	37	42	32	26	137	258
2100	28	25	23	25	101	18	29	13	13	73	174
2200	12	14	9	10	45	24	21	11	13	69	114
2300	12	9	4	5	30	14	10	7	4	35	65
24-Hour Totals:					3950					3936	7886

Peak Volume Information

	Direction: N Hour	Volume	Direction: S Hour	Volume	Combined Directions Hour	Volume
A.M.	0630	355	0715	245	0700	580
P.M.	1630	336	1700	437	1700	757
Daily	0630	355	1700	437	1700	757

Truck Percentage 11.22 11.84 11.53

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
N	21	2249	1237	2	151	46	9	110	123	2	0	0	0	0	0	443	3950
S	14	2253	1203	2	149	48	2	130	129	6	0	0	0	0	0	466	3936

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Synopsis Report: 130052CL-20090521.syn
Page: 1

County: 13
Station: 0052
Description: SR 43/US 301, WEST OF 18TH ST & E OF SR93/US I-75
Start Date: 05/21/2009
Start Time: 1200

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	30	29	25	30	114	9	11	15	12	47	161
0100	18	23	24	19	84	9	6	8	10	33	117
0200	7	12	14	16	49	9	8	5	9	31	80
0300	12	8	13	9	42	11	15	15	13	54	96
0400	9	8	19	16	52	9	16	33	30	88	140
0500	16	22	18	39	95	55	66	89	114	324	419
0600	35	60	79	109	283	149	194	259	257	859	1142
0700	99	131	123	158	511	401	478	489	430	1798	2309
0800	143	168	154	191	656	405	433	374	304	1516	2172
0900	174	188	186	208	756	275	335	310	280	1200	1956
1000	229	199	231	188	847	314	266	297	274	1151	1998
1100	207	261	260	227	955	281	285	283	302	1151	2106
1200	230	265	229	244	968	252	261	257	302	1072	2040
1300	261	245	226	265	997	231	278	234	282	1025	2022
1400	236	256	256	319	1067	219	257	224	246	946	2013
1500	298	334	299	321	1252	252	218	246	242	958	2210
1600	327	383	364	417	1491	238	230	217	252	937	2428
1700	426	467	398	417	1708	212	239	221	225	897	2605
1800	352	336	262	254	1204	255	250	228	156	889	2093
1900	243	217	202	169	831	170	150	119	104	543	1374
2000	212	211	175	173	771	128	119	92	64	403	1174
2100	155	187	139	139	620	76	62	76	83	297	917
2200	132	99	84	72	387	71	37	41	29	178	565
2300	52	59	50	35	196	28	30	17	12	87	283
24-Hour Totals:					15936					16484	32420

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0915	811	0715	1802	0715	2357
P.M.	1645	1708	1230	1068	1645	2632
Daily	1645	1708	0715	1802	1645	2632

Truck Percentage 5.49 5.34 5.42

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	32	10628	4401	34	438	53	2	196	150	2	0	0	0	0	0	875	15936
W	30	11242	4331	25	469	64	5	218	96	4	0	0	0	0	0	881	16484

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Florida Department of Transportation
Transportation Statistics Office
2009 Historical AADT Report

County: 13 - MANATEE

Site: 0081 - SR 43/US 301, NE OF CHIN ROAD

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2009	10600 C	E 5300	W 5300	9.90	55.60	8.40
2008	9600 C	E 4800	W 4800	10.11	54.86	8.30
2007	9700 C	E 4900	W 4800	9.73	56.20	9.90
2006	9800 C	E 4900	W 4900	9.55	54.19	13.80
2005	9200 C	E 4600	W 4600	9.70	54.40	14.50
2004	8000 C	E 4000	W 4000	9.70	53.90	14.50
2003	6100 F	E 2800	W 3300	9.70	54.30	15.80
2002	5900 C	E 2700	W 3200	10.40	56.10	12.40
2001	6200 C	E 3100	W 3100	10.50	54.00	15.80

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; X = Unknown

County: 13
Station: 0073
Description: SR 64, EAST OF UPPER MANATEE RIVER ROAD
Start Date: 03/31/2009
Start Time: 0000

	Direction: E					Direction: W					Combined
Time	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Total
0000	13	11	8	5	37	9	5	3	4	21	58
0100	3	5	5	8	21	3	6	10	4	23	44
0200	5	9	4	8	26	3	9	4	0	16	42
0300	5	5	3	1	14	5	3	8	10	26	40
0400	6	3	3	11	23	6	11	16	20	53	76
0500	15	9	15	13	52	34	28	52	43	157	209
0600	24	38	39	78	179	73	102	159	178	512	691
0700	52	86	91	118	347	228	254	247	141	870	1217
0800	98	87	104	101	390	163	191	173	171	698	1088
0900	105	83	72	84	344	125	134	125	153	537	881
1000	100	92	87	100	379	120	133	136	150	539	918
1100	98	98	92	72	360	141	109	130	131	511	871
1200	104	111	112	126	453	112	148	132	114	506	959
1300	100	114	127	108	449	113	118	120	107	458	907
1400	100	120	203	164	587	138	128	123	126	515	1102
1500	149	166	169	206	690	137	160	138	132	567	1257
1600	168	184	175	187	714	132	111	123	133	499	1213
1700	213	204	208	210	835	174	153	145	123	595	1430
1800	203	187	169	140	699	119	122	99	92	432	1131
1900	160	148	119	136	563	72	66	63	46	247	810
2000	126	114	103	82	425	50	49	39	33	171	596
2100	109	103	95	62	369	46	36	30	23	135	504
2200	65	44	25	29	163	19	22	19	18	78	241
2300	30	28	15	15	88	22	13	15	14	64	152
24-Hour Totals:					8207					8230	16437

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	0745	407	0645	907	0700	1217
P.M.	1700	835	1645	605	1700	1430
Daily	1700	835	0645	907	1700	1430

Truck Percentage 7.07 6.89 6.98

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	61	5592	1974	14	239	46	12	128	123	7	1	1	9	0	0	580	8207
W	55	5821	1787	15	203	48	2	130	136	13	0	0	20	0	0	567	8230

Generated by SPS 5.0.16

County: 13
Station: 5076
Description: SR 64, WEST OF LORRAINE ROAD
Start Date: 05/20/2009
Start Time: 0000

Time	Direction: E 1st	2nd	3rd	4th	Total	Direction: W 1st	2nd	3rd	4th	Total	Combined Total
0000	6	3	3	4	16	5	4	3	3	15	31
0100	3	2	3	3	11	2	6	6	7	21	32
0200	1	2	3	2	8	4	3	0	4	11	19
0300	5	1	0	4	10	3	4	4	3	14	24
0400	4	7	3	10	24	3	4	6	8	21	45
0500	7	11	28	13	59	8	18	15	24	65	124
0600	15	39	42	62	158	21	23	50	62	156	314
0700	77	91	108	94	370	58	70	59	57	244	614
0800	81	95	71	62	309	71	72	59	57	259	568
0900	54	61	54	57	226	65	58	48	46	217	443
1000	52	50	57	40	199	47	54	70	48	219	418
1100	57	48	48	48	201	56	58	50	64	228	429
1200	56	62	57	67	242	66	61	69	73	269	511
1300	71	83	88	56	298	74	68	63	64	269	567
1400	60	59	66	70	255	57	79	78	86	300	555
1500	71	83	58	55	267	69	93	75	77	314	581
1600	45	52	73	54	224	60	70	68	72	270	494
1700	59	67	62	59	247	85	91	75	62	313	560
1800	71	46	60	59	236	37	57	39	34	167	403
1900	26	43	32	30	131	32	32	35	37	136	267
2000	26	35	40	28	129	29	33	31	38	131	260
2100	28	30	19	14	91	21	26	21	19	87	178
2200	22	20	10	10	62	18	16	14	9	57	119
2300	13	14	11	13	51	9	4	10	2	25	76
24-Hour Totals:					3824					3808	7632

Peak Volume Information

	Direction: E Hour	Volume	Direction: W Hour	Volume	Combined Directions Hour	Volume
A.M.	0730	378	0730	259	0730	637
P.M.	1245	309	1430	326	1430	616
Daily	0730	378	1430	326	0730	637

Truck Percentage 18.20 18.01 18.11

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	10	1873	1245	15	195	105	3	132	243	2	0	0	1	0	0	696	3824
W	13	2006	1103	11	146	62	36	124	299	8	0	0	0	0	0	686	3808

Generated by SPS 5.0.16

County: 13
Station: 5076
Description: SR 64, WEST OF LORRAINE ROAD
Start Date: 05/21/2009
Start Time: 0000

	Direction: E					Direction: W					Combined
Time	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	Total
0000	5	9	5	1	20	8	1	7	2	18	38
0100	8	1	1	1	11	2	1	3	1	7	18
0200	4	0	5	5	14	4	1	3	1	9	23
0300	4	1	1	1	7	2	2	2	0	6	13
0400	3	4	6	6	19	2	2	8	4	16	35
0500	15	12	21	14	62	8	11	14	24	57	119
0600	19	31	29	74	153	27	38	60	69	194	347
0700	72	92	100	90	354	62	78	53	48	241	595
0800	89	79	83	68	319	55	70	54	55	234	553
0900	46	42	51	58	197	56	48	45	61	210	407
1000	62	58	73	32	225	50	68	53	42	213	438
1100	47	48	58	52	205	68	59	65	63	255	460
1200	34	58	60	54	206	60	62	57	67	246	452
1300	59	60	66	54	239	50	56	65	72	243	482
1400	54	56	65	82	257	67	57	81	72	277	534
1500	81	78	62	71	292	61	89	97	72	319	611
1600	68	71	71	79	289	76	72	68	63	279	568
1700	61	65	74	83	283	77	88	85	86	336	619
1800	65	75	44	50	234	75	81	51	41	248	482
1900	47	37	50	42	176	36	40	38	41	155	331
2000	39	46	39	35	159	36	49	28	23	136	295
2100	21	29	26	27	103	30	23	20	22	95	198
2200	14	24	12	13	63	15	17	8	10	50	113
2300	12	10	7	10	39	12	2	8	6	28	67
24-Hour Totals:					3926					3872	7798

Peak Volume Information

	Direction: E		Direction: W		Combined Directions	
	Hour	Volume	Hour	Volume	Hour	Volume
A.M.	0715	371	0630	269	0715	605
P.M.	1430	306	1700	336	1730	624
Daily	0715	371	1700	336	1730	624

Truck Percentage 18.39 17.82 18.11

Classification Summary Database

Dir	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TotTrk	TotVol
E	8	1959	1237	14	193	100	19	132	258	5	0	0	1	0	0	722	3926
W	6	2087	1089	10	119	64	51	125	314	6	0	0	1	0	0	690	3872

Generated by SPS 5.0.16

2009 Peak Season Factor Category Report - Report Type: ALL
Category: 1300 MANATEE COUNTYWIDE

MOCF: 0.89

Week	Dates	SF	PSCF
1	01/01/2009 - 01/03/2009	1.02	1.14
2	01/04/2009 - 01/10/2009	0.99	1.11
3	01/11/2009 - 01/17/2009	0.96	1.07
4	01/18/2009 - 01/24/2009	0.95	1.06
* 5	01/25/2009 - 01/31/2009	0.93	1.04
* 6	02/01/2009 - 02/07/2009	0.92	1.03
* 7	02/08/2009 - 02/14/2009	0.90	1.01
* 8	02/15/2009 - 02/21/2009	0.88	0.99
* 9	02/22/2009 - 02/28/2009	0.88	0.99
*10	03/01/2009 - 03/07/2009	0.87	0.97
*11	03/08/2009 - 03/14/2009	0.87	0.97
*12	03/15/2009 - 03/21/2009	0.86	0.96
*13	03/22/2009 - 03/28/2009	0.87	0.97
*14	03/29/2009 - 04/04/2009	0.89	1.00
*15	04/05/2009 - 04/11/2009	0.90	1.01
*16	04/12/2009 - 04/18/2009	0.91	1.02
*17	04/19/2009 - 04/25/2009	0.93	1.04
18	04/26/2009 - 05/02/2009	0.95	1.06
19	05/03/2009 - 05/09/2009	0.97	1.09
20	05/10/2009 - 05/16/2009	0.98	1.10
21	05/17/2009 - 05/23/2009	1.00	1.12
22	05/24/2009 - 05/30/2009	1.01	1.13
23	05/31/2009 - 06/06/2009	1.03	1.15
24	06/07/2009 - 06/13/2009	1.04	1.16
25	06/14/2009 - 06/20/2009	1.05	1.18
26	06/21/2009 - 06/27/2009	1.07	1.20
27	06/28/2009 - 07/04/2009	1.08	1.21
28	07/05/2009 - 07/11/2009	1.09	1.22
29	07/12/2009 - 07/18/2009	1.11	1.24
30	07/19/2009 - 07/25/2009	1.11	1.24
31	07/26/2009 - 08/01/2009	1.12	1.25
32	08/02/2009 - 08/08/2009	1.12	1.25
33	08/09/2009 - 08/15/2009	1.12	1.25
34	08/16/2009 - 08/22/2009	1.13	1.27
35	08/23/2009 - 08/29/2009	1.13	1.27
36	08/30/2009 - 09/05/2009	1.14	1.28
37	09/06/2009 - 09/12/2009	1.14	1.28
38	09/13/2009 - 09/19/2009	1.15	1.29
39	09/20/2009 - 09/26/2009	1.12	1.25
40	09/27/2009 - 10/03/2009	1.09	1.22
41	10/04/2009 - 10/10/2009	1.07	1.20
42	10/11/2009 - 10/17/2009	1.04	1.16
43	10/18/2009 - 10/24/2009	1.04	1.16
44	10/25/2009 - 10/31/2009	1.03	1.15
45	11/01/2009 - 11/07/2009	1.03	1.15
46	11/08/2009 - 11/14/2009	1.03	1.15
47	11/15/2009 - 11/21/2009	1.03	1.15
48	11/22/2009 - 11/28/2009	1.03	1.15
49	11/29/2009 - 12/05/2009	1.02	1.14
50	12/06/2009 - 12/12/2009	1.02	1.14
51	12/13/2009 - 12/19/2009	1.02	1.14
52	12/20/2009 - 12/26/2009	0.99	1.11
53	12/27/2009 - 12/31/2009	0.96	1.07

* Peak Season

Florida Department of Transportation
Transportation Statistics Office
2009 Historical AADT Report

County: 13 - MANATEE

Site: 0072 - SR 64, EAST OF LENA ROAD

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2009	23000 C	E 11500	W 11500	13.22	60.14	7.40
2008	28000 F	E 14000	W 14000	10.99	59.34	7.80
2007	29000 C	E 14500	W 14500	10.21	55.66	7.80
2006	28000 C	E 14000	W 14000	10.19	54.91	11.00
2005	24500 S	E 12000	W 12500	10.10	53.40	10.90
2004	23500 F	E 11500	W 12000	10.40	56.00	10.90
2003	22500 C	E 11000	W 11500	10.20	55.90	10.90
2002	19800 C	E 9800	W 10000	10.40	56.10	9.60
2001	18000 C	E 8900	W 9100	10.50	54.00	9.70

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; X = Unknown

Florida Department of Transportation
Transportation Statistics Office
2009 Historical AADT Report

County: 13 - MANATEE

Site: 0073 - SR 64, EAST OF UPPER MANATEE RIVER ROAD

Year	AADT	Direction 1	Direction 2	K Factor	D Factor	T Factor
2009	15300 C	E 7600	W 7700	13.22	60.14	7.00
2008	15500 F	E 8000	W 7500	10.99	59.34	12.70
2007	16100 C	E 8300	W 7800	10.21	55.66	12.70
2006	21000 C	E 10500	W 10500	10.19	54.91	12.30
2005	15800 C	E 8000	W 7800	10.10	53.40	10.00
2004	16300 C	E 8100	W 8200	10.40	56.00	10.00
2003	14900 C	E 7400	W 7500	10.20	55.90	13.70
2002	12400 C	E 6200	W 6200	10.40	56.10	14.00
2001	11200 C	E 5300	W 5900	10.50	54.00	10.40

15900

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; X = Unknown

Florida Department of Transportation
Transportation Statistics Office
2009 Historical AADT Report

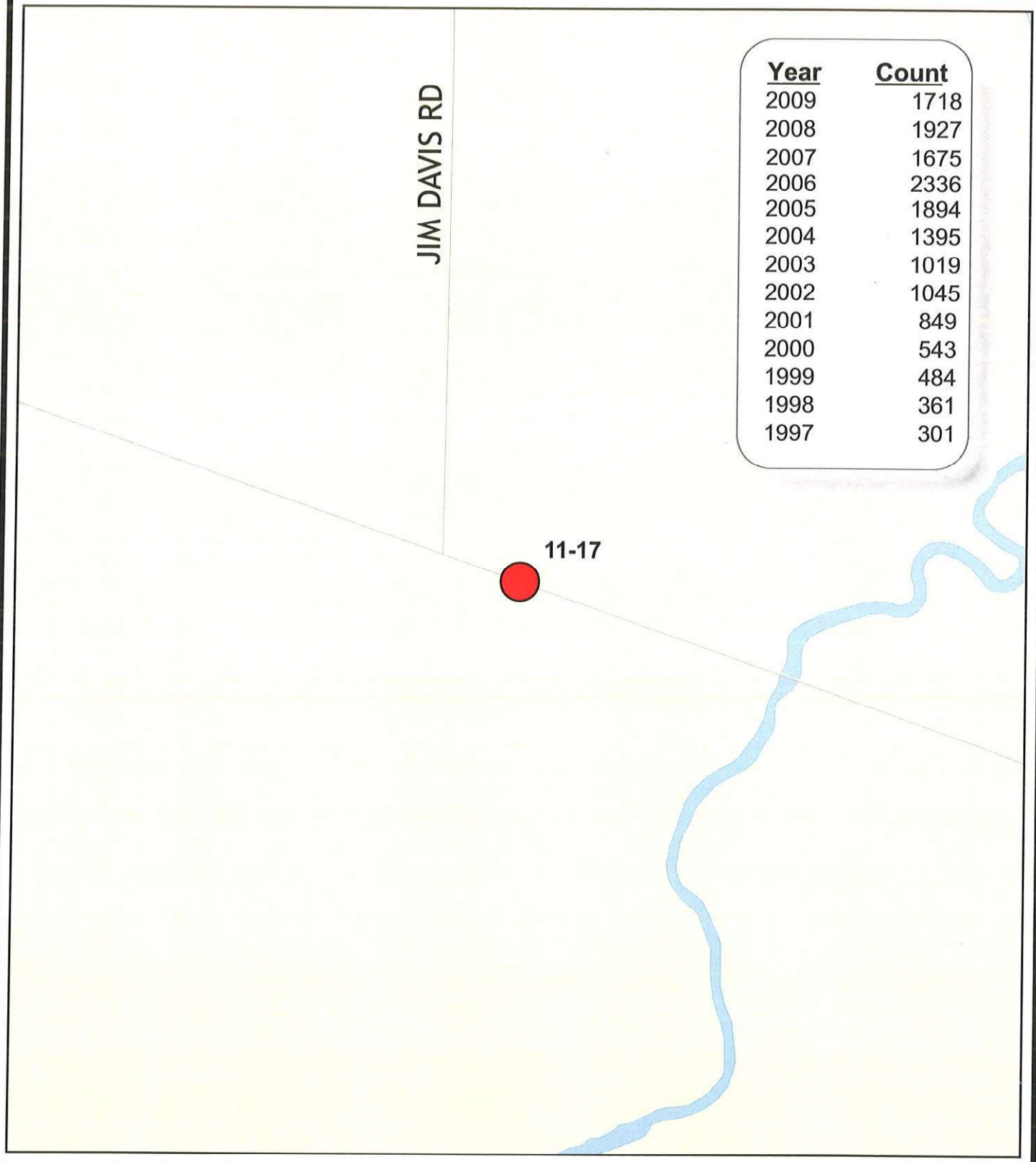
County: 13 - MANATEE

Site: 1102 - FORT HAMMER RD, S OF SR 43/US 301 MC 11-02

Year	AADT	Direction 1		Direction 2		K Factor	D Factor	T Factor
2009	1500 F	N	800	S	700	11.36	61.18	6.90
2008	1500 C	N	800	S	700	14.25	66.71	6.90

AADT Flags: C = Computed; E = Manual Estimate; F = First Year Estimate
S = Second Year Estimate; T = Third Year Estimate; X = Unknown

Traffic Count Station 11-17



Year	Count
2009	1718
2008	1927
2007	1675
2006	2336
2005	1894
2004	1395
2003	1019
2002	1045
2001	849
2000	543
1999	484
1998	361
1997	301

Count Stations

send corrections to gis@mymanatee.org

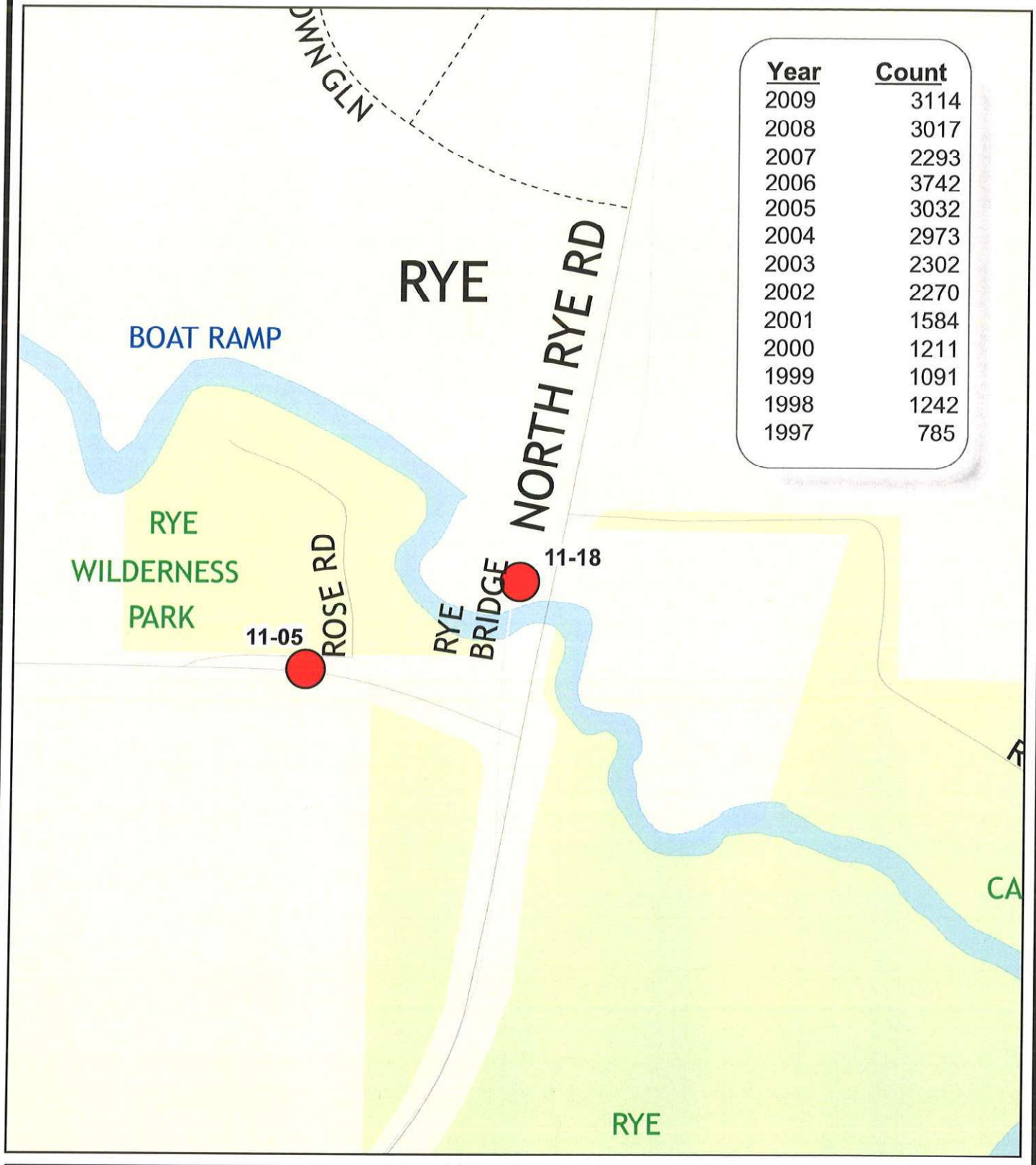
Feet

260 130 0 260

Projection: State Plane Florida West (U.S. Feet)
Coordinate System: Transverse Mercator
Datum: North American 1983
False Easting: 656166.666667
False Northing: 0.000000
Central Meridian: -82.000000
Scale Factor: 0.999941
Latitude of Origin: 24.333333

GIS

Traffic Count Station 11-18



Year	Count
2009	3114
2008	3017
2007	2293
2006	3742
2005	3032
2004	2973
2003	2302
2002	2270
2001	1584
2000	1211
1999	1091
1998	1242
1997	785

Count Stations

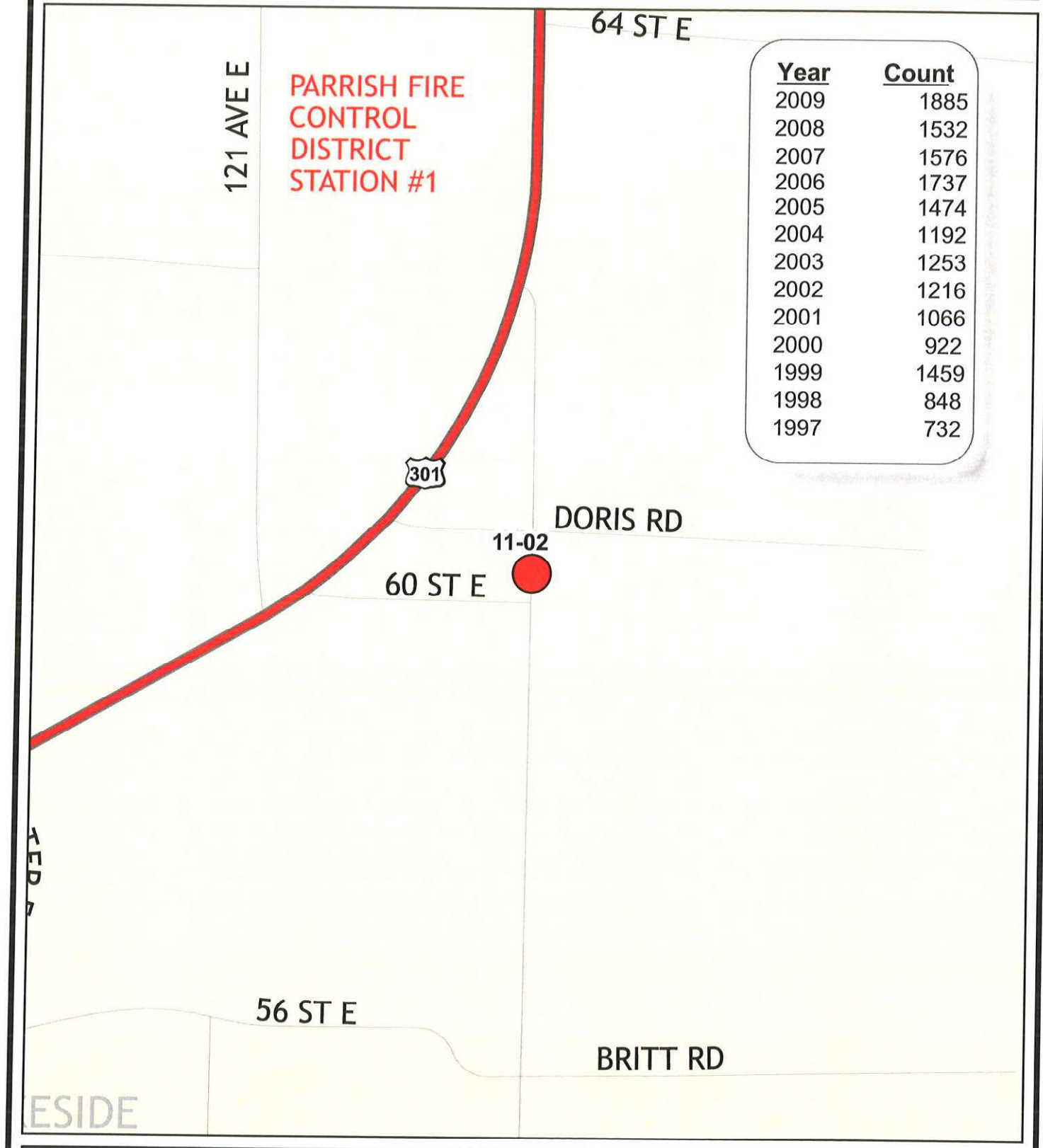
send corrections to gis@mymanatee.org

Feet

260 130 0 260

Projection: State Plane Florida West (U.S. Feet)
Coordinate System: Transverse Mercator
Datum: North American 1983
False Easting: 656166.666667
False Northing: 0.000000
Central Meridian: -82.000000
Scale Factor: 0.999941
Latitude of Origin: 24.333333

Traffic Count Station 11-02



Year	Count
2009	1885
2008	1532
2007	1576
2006	1737
2005	1474
2004	1192
2003	1253
2002	1216
2001	1066
2000	922
1999	1459
1998	848
1997	732

Count Stations

send corrections to gis@mymanatee.org

Feet

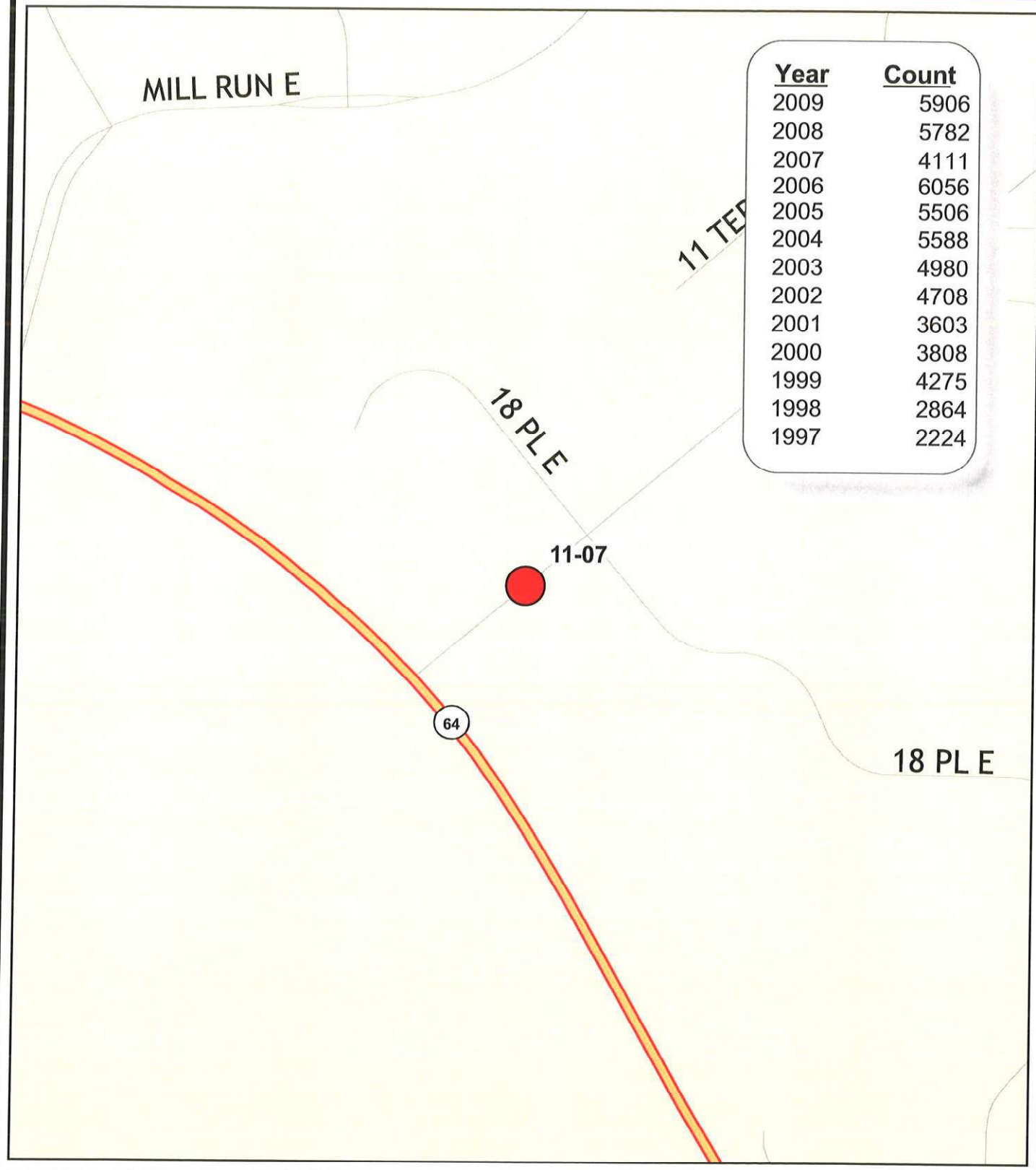
260 130 0 260

This map was developed by the Manatee County Geographic Information Systems Division. It is provided for general reference and is not warranted in any way. Errors from non-coincidence of features from different sources may exist. The Manatee County BOCC shall be held harmless for inappropriate or unintended uses of the information.

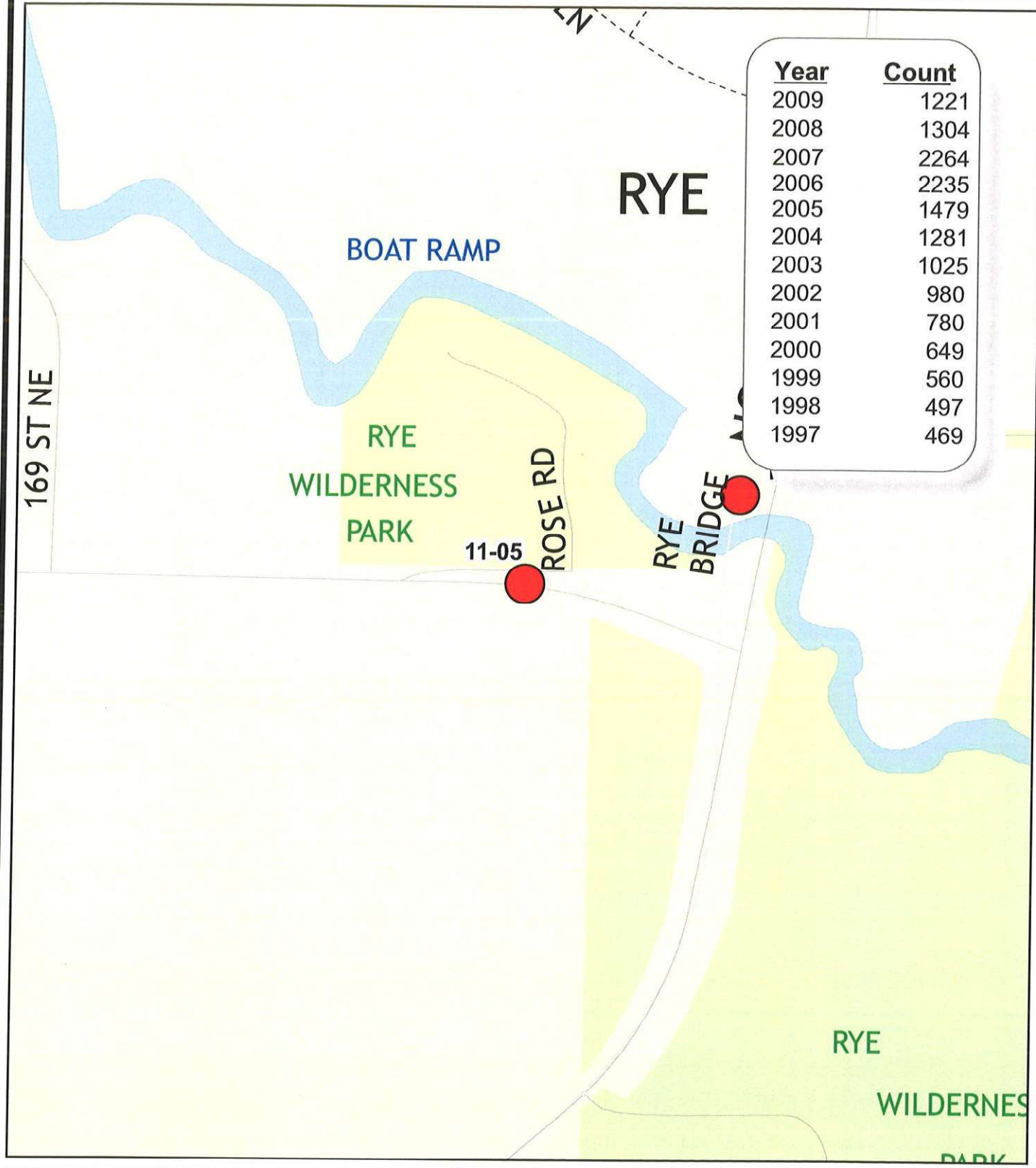
Projection: State Plane Florida West (U.S. Feet)
Coordinate System: Transverse Mercator
Datum: North American 1983
False Easting: 656166.666667
False Northing: 0.000000
Central Meridian: -82.000000
Scale Factor: 0.999941
Latitude of Origin: 24.333333

GIS

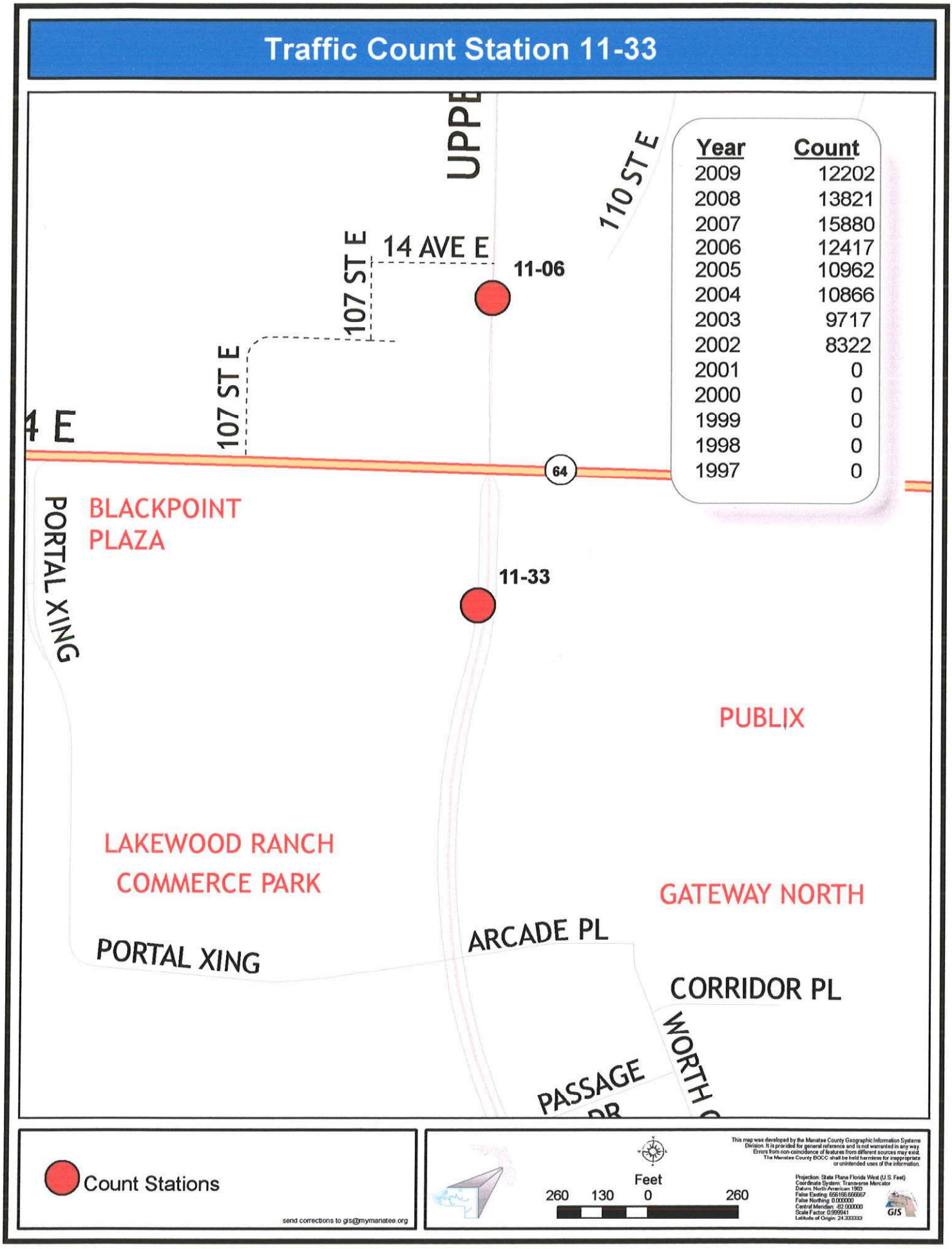
Traffic Count Station 11-07



Traffic Count Station 11-05

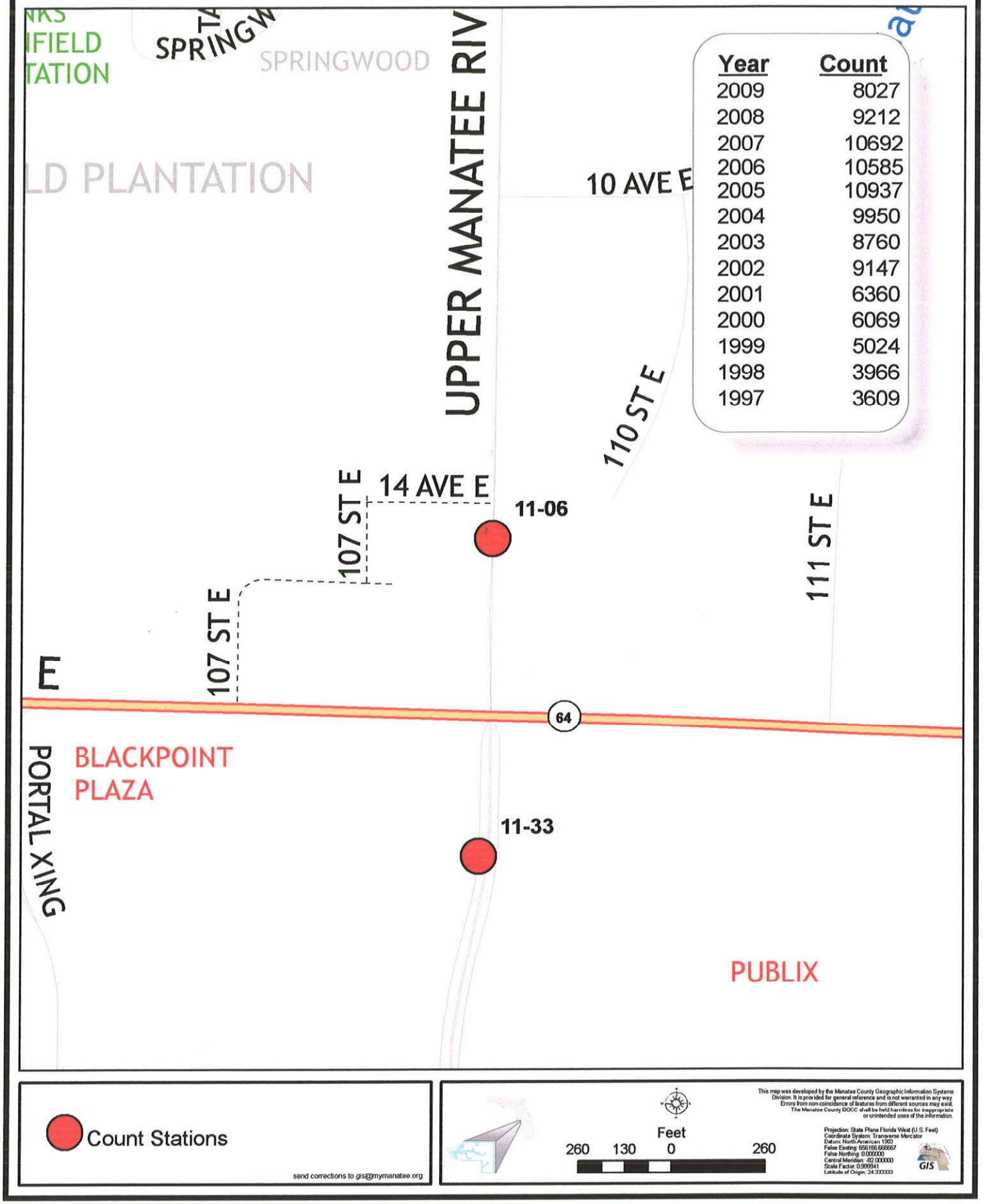


Traffic Count Station 11-33



Year	Count
2009	12202
2008	13821
2007	15880
2006	12417
2005	10962
2004	10866
2003	9717
2002	8322
2001	0
2000	0
1999	0
1998	0
1997	0

Traffic Count Station 11-06



Year	Count
2009	8027
2008	9212
2007	10692
2006	10585
2005	10937
2004	9950
2003	8760
2002	9147
2001	6360
2000	6069
1999	5024
1998	3966
1997	3609

APPENDIX B

Baseline (2011) Analysis of Unsignalized and Signalized Intersections

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/11
Analysis Time Period: AM Peak
Intersection: UMRR/Greeefield Blvd.
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS
East/West Street: GREENFIELD BLVD
North/South Street: UMRR
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	119	1	0	495	67
Peak-Hour Factor, PHF	0.80	0.80	0.80	0.85	0.85	0.85
Hourly Flow Rate, HFR	17	148	1	0	582	78
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						No
Lanes	1	1	0	0	1	1
Configuration	L	TR		LT		R
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	2		0	16		57
Peak Hour Factor, PHF	0.50		0.50	0.77		0.77
Hourly Flow Rate, HFR	4		0	20		74
Percent Heavy Vehicles	0		0	0		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0	1		1
Configuration		LR		L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	LT		LR		L		R
v (vph)	17	0		4		20		74
C(m) (vph)	938	1445		319		413		513
v/c	0.02	0.00		0.01		0.05		0.14
95% queue length	0.06	0.00		0.04		0.15		0.50
Control Delay	8.9	7.5		16.4		14.2		13.2
LOS	A	A		C		B		B
Approach Delay				16.4			13.4	
Approach LOS				C			B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: AM
Intersection: UMRR/Waterlefe Blvd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: Waterlefe Blvd.
North/South Street: Upper Manatee River Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	28	107			463	10
Peak-Hour Factor, PHF	0.63	0.90			0.95	0.95
Hourly Flow Rate, HFR	44	118			487	10
Percent Heavy Vehicles	4	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		99
Peak Hour Factor, PHF				0.95		0.75
Hourly Flow Rate, HFR				2		132
Percent Heavy Vehicles				4		4
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	44					2		132
C(m) (vph)	1057					387		573
v/c	0.04					0.01		0.23
95% queue length	0.13					0.02		0.88
Control Delay	8.6					14.4		13.2
LOS	A					B		B
Approach Delay							13.2	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst: URS
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: AM
Intersection: UMRR/Gates Ck Rd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: Upper Manatee River Rd.
North/South Street: Gates Creek Rd.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	105	4	3	443	1
Peak-Hour Factor, PHF	0.66	0.66	0.66	0.94	0.94	0.94
Hourly Flow Rate, HFR	0	159	6	3	471	1
Percent Heavy Vehicles	4	--	--	4	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1 0		0	1 0	
Configuration	L	TR		LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	5	0	5	1	0	25
Peak Hour Factor, PHF	0.83	0.83	0.83	0.57	0.57	0.57
Hourly Flow Rate, HFR	6	0	6	1	0	43
Percent Heavy Vehicles	4	4	4	4	4	4
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1 0		0	1 0	
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	LTR		LTR			LTR	
v (vph)	0	3		12			44	
C(m) (vph)	1079	1401		495			581	
v/c	0.00	0.00		0.02			0.08	
95% queue length	0.00	0.01		0.07			0.24	
Control Delay	8.3	7.6		12.5			11.7	
LOS	A	A		B			B	
Approach Delay				12.5			11.7	
Approach LOS				B			B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM Peak
Intersection: Mulholland Rd & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS
East/West Street: MULHOLLAND RD
North/South Street: FT HAMER RD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		7	0	35	10	
Peak-Hour Factor, PHF		0.40	0.40	0.72	0.72	
Hourly Flow Rate, HFR		17	0	48	13	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0		133			
Peak Hour Factor, PHF	0.72		0.72			
Hourly Flow Rate, HFR	0		184			
Percent Heavy Vehicles	1		1			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		48		184				
C(m) (vph)		1581		1065				
v/c		0.03		0.17				
95% queue length		0.09		0.62				
Control Delay		7.3		9.1				
LOS		A		A				
Approach Delay				9.1				
Approach LOS				A				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM Peak
Intersection: Golf Course Rd & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS
East/West Street: GOLF COURSE RD
North/South Street: FT HAMER RD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		128	71	16	72	
Peak-Hour Factor, PHF		0.68	0.68	0.74	0.74	
Hourly Flow Rate, HFR		188	104	21	97	
Percent Heavy Vehicles		--	--	1	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1 0		1	1	
Configuration		TR		L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	78		19			
Peak Hour Factor, PHF	0.70		0.70			
Hourly Flow Rate, HFR	111		27			
Percent Heavy Vehicles	1		1			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		21	111		27			
C(m) (vph)		1275	615		801			
v/c		0.02	0.18		0.03			
95% queue length		0.05	0.65		0.10			
Control Delay		7.9	12.1		9.7			
LOS		A	B		A			
Approach Delay				11.7				
Approach LOS				B				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM Peak
Intersection: US 301 & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS Note: US 301 under construction
East/West Street: US 301
North/South Street: FT HAMER RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		178	17	65	170	
Peak-Hour Factor, PHF		0.86	0.86	0.93	0.93	
Hourly Flow Rate, HFR		206	19	69	182	
Percent Heavy Vehicles		--	--	3	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	33		131			
Peak Hour Factor, PHF	0.74		0.74			
Hourly Flow Rate, HFR	44		177			
Percent Heavy Vehicles	3		2			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		69		221				
C(m) (vph)		1338		720				
v/c		0.05		0.31				
95% queue length		0.16		1.30				
Control Delay		7.8		12.2				
LOS		A		B				
Approach Delay				12.2				
Approach LOS				B				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM
Intersection: SR 64/Rye Rd.
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: SR 64
North/South Street: Rye Rd.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	146	296			257	40
Peak-Hour Factor, PHF	0.81	0.81			0.77	0.77
Hourly Flow Rate, HFR	180	365			333	51
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				78		338
Peak Hour Factor, PHF				0.76		0.76
Hourly Flow Rate, HFR				102		444
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	180						546	
C(m) (vph)	1186						690	
v/c	0.15						0.79	
95% queue length	0.53						7.90	
Control Delay	8.6						27.0	
LOS	A						D	
Approach Delay							27.0	
Approach LOS							D	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM
Intersection: Rye Rd/UMRR
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: UMRR
North/South Street: Rye Rd.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	64			154	28
Peak-Hour Factor, PHF	0.69	0.69			0.86	0.86
Hourly Flow Rate, HFR	14	92			179	32
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				25		27
Peak Hour Factor, PHF				0.75		0.75
Hourly Flow Rate, HFR				33		36
Percent Heavy Vehicles				0		3
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	14						69	
C(m) (vph)	1302						754	
v/c	0.01						0.09	
95% queue length	0.03						0.30	
Control Delay	7.8						10.3	
LOS	A						B	
Approach Delay							10.3	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM
Intersection: Rye Rd/Golf Course Rd.
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: Golf Course Rd
North/South Street: Rye Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	47	53			79	10
Peak-Hour Factor, PHF	0.70	0.70			0.80	0.80
Hourly Flow Rate, HFR	67	75			98	12
Percent Heavy Vehicles	6	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5		97
Peak Hour Factor, PHF				0.80		0.80
Hourly Flow Rate, HFR				6		121
Percent Heavy Vehicles				2		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	67						127	
C(m) (vph)	1456						935	
v/c	0.05						0.14	
95% queue length	0.14						0.47	
Control Delay	7.6						9.5	
LOS	A						A	
Approach Delay							9.5	
Approach LOS							A	

Analyst:
Roa20Agency: URS
Date: 3/15/2011
Period: AM PEAK
Project ID: UMRR EIS
E/W St: SR 64

Inter.: SR 64 & Upper Manatee River
Area Type: All other areas
Jurisd: Manatee County
Year : 2011 Existing

N/S St: Upper Manatee River Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	112	338	282	261	669	10	205	116	73	50	215	289
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right	A	A				Right	A	A		
	Peds						Peds				
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right	A	A				Right		A		
	Peds						Peds				
NB	Right	A				EB	Right	A			
SB	Right	A				WB	Right	A			
Green		20.0	30.0					20.0	30.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	556	3338	0.25	0.17	43.7	D		
T	1232	4929	0.33	0.25	37.0	D	27.2	C
R	1025	1538	0.34	0.67	8.8	A		
Westbound								
L	546	3276	0.49	0.17	46.0	D		
T	1209	4837	0.56	0.25	39.9	D	41.3	D
R	1006	1509	0.01	0.67	6.7	A		
Northbound								
L	522	3130	0.43	0.17	45.5	D		
T	1155	4621	0.11	0.25	34.7	C	35.2	D
R	961	1442	0.08	0.67	7.1	A		
Southbound								
L	573	3437	0.10	0.17	42.5	D		
T	1269	5074	0.20	0.25	35.6	D	29.7	C
R	726	1583	0.48	0.46	23.1	C		

Intersection Delay = 33.5 (sec/veh) Intersection LOS = C

Baseline

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM PEAK
Intersection: SR 64 & Upper Manatee River Roa2011 Existing
Area Type: All other areas
Jurisdiction: Manatee County
Analysis Year: 2011 Existing
Project ID: UMRR EIS
E/W St: SR 64 N/S St: Upper Manatee River Road

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	112	338	282	261	669	10	205	116	73	50	215	289
% Heavy Veh	5	5	5	7	7	7	12	12	12	2	2	2
PHF	0.82	0.82	0.82	0.98	0.98	0.98	0.91	0.91	0.91	0.83	0.83	0.83
PK 15 Vol	34	103	86	67	171	3	56	32	20	15	65	87
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	137	412	344	266	683	10	225	127	80	60	259	348
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes		0			0			0			0	
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	3	3	3	3	3	3	3	3	3	3	3	3
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		3.2			3.2			3.2			3.2	

PHASE DATA

Phase Combination 1 2 3 4 | 5 6 7 8

EB	Left	A		NB	Left	A	
	Thru		A		Thru		A
	Right	A	A		Right	A	A
	Peds				Peds		
WB	Left	A		SB	Left	A	
	Thru		A		Thru		A
	Right	A	A		Right		A
	Peds				Peds		
NB	Right	A		EB	Right	A	
SB	Right	A		WB	Right	A	

Green	20.0	30.0	20.0	30.0
Yellow	4.0	4.0	4.0	4.0
All Red	1.0	1.0	1.0	1.0

Cycle Length: 120.0 secs

VOLUME ADJUSTMENT AND SATURATION FLOW WORKSHEET

Volume Adjustment

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V	112	338	282	261	669	10	205	116	73	50	215	289
PHF	0.82	0.82	0.82	0.98	0.98	0.98	0.91	0.91	0.91	0.83	0.83	0.83
Adj flow	137	412	344	266	683	10	225	127	80	60	259	348
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj flow	137	412	344	266	683	10	225	127	80	60	259	348
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs	0.000		1.000	0.000		1.000	0.000		1.000	0.000		1.000

Saturation Flow Rate (see Exhibit 16-7 to determine the adjustment factors)

	Eastbound			Westbound			Northbound			Southbound		
LG	L	T	R	L	T	R	L	T	R	L	T	R
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lanes	2	3	1	2	3	1	2	3	1	2	3	1
fW	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fHV	0.952	0.952	0.952	0.935	0.935	0.935	0.893	0.893	0.893	0.980	0.980	0.980
fG	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fBB	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
fLU	0.971	0.908	1.000	0.971	0.908	1.000	0.971	0.908	1.000	0.971	0.908	1.000
fRT		1.000	0.850		1.000	0.850		1.000	0.850		1.000	0.850
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Sec.												
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
S	3338	4929	1538	3276	4837	1509	3130	4621	1442	3437	5074	1583
Sec.												

CAPACITY AND LOS WORKSHEET

Capacity Analysis and Lane Group Capacity

Appr/ Mvmt	Lane Group	Adj Flow Rate (v)	Adj Sat Flow Rate (s)	Flow Ratio (v/s)	Green Ratio (g/C)	--Lane Group-- Capacity (c)	v/c Ratio
Eastbound							
Prot							

Perm							
Left	L	137	3338	0.04	0.17	556	0.25
Prot							
Perm							
Thru	T	412	4929	0.08	0.25	1232	0.33
Right	R	344	1538	0.22	0.67	1025	0.34
Westbound							
Prot							
Perm							
Left	L	266	3276	0.08	0.17	546	0.49
Prot							
Perm							
Thru	T	683	4837	# 0.14	0.25	1209	0.56
Right	R	10	1509	0.01	0.67	1006	0.01
Northbound							
Prot							
Perm							
Left	L	225	3130	# 0.07	0.17	522	0.43
Prot							
Perm							
Thru	T	127	4621	0.03	0.25	1155	0.11
Right	R	80	1442	0.06	0.67	961	0.08
Southbound							
Prot							
Perm							
Left	L	60	3437	0.02	0.17	573	0.10
Prot							
Perm							
Thru	T	259	5074	0.05	0.25	1269	0.20
Right	R	348	1583	# 0.22	0.46	726	0.48

Sum of flow ratios for critical lane groups, Yc = Sum (v/s) = 0.43
Total lost time per cycle, L = 15.00 sec
Critical flow rate to capacity ratio, Xc = (Yc)(C)/(C-L) = 0.49

Control Delay and LOS Determination

Appr/ Lane	Ratios		Unf Del	Prog Adj	Lane Grp	Incremental Factor	Del	Res Del	Lane Group		Approach	
Grp	v/c	g/C	d1	Fact	Cap	k	d2	d3	Delay	LOS	Delay	LOS
Eastbound												
L	0.25	0.17	43.5	1.000	556	0.11	0.2	0.0	43.7	D		
T	0.33	0.25	36.8	1.000	1232	0.11	0.2	0.0	37.0	D	27.2	C
R	0.34	0.67	8.6	1.000	1025	0.11	0.2	0.0	8.8	A		
Westbound												
L	0.49	0.17	45.3	1.000	546	0.11	0.7	0.0	46.0	D		
T	0.56	0.25	39.3	1.000	1209	0.16	0.6	0.0	39.9	D	41.3	D
R	0.01	0.67	6.7	1.000	1006	0.11	0.0	0.0	6.7	A		
Northbound												
L	0.43	0.17	44.9	1.000	522	0.11	0.6	0.0	45.5	D		
T	0.11	0.25	34.7	1.000	1155	0.11	0.0	0.0	34.7	C	35.2	D
R	0.08	0.67	7.1	1.000	961	0.11	0.0	0.0	7.1	A		
Southbound												
L	0.10	0.17	42.4	1.000	573	0.11	0.1	0.0	42.5	D		
T	0.20	0.25	35.6	1.000	1269	0.11	0.1	0.0	35.6	D	29.7	C
R	0.48	0.46	22.6	1.000	726	0.11	0.5	0.0	23.1	C		

Intersection delay = 33.5 (sec/veh) Intersection LOS = C

SUPPLEMENTAL PERMITTED LT WORKSHEET
for exclusive lefts
Page 4

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 120.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT				
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	0.908	0.908	0.908	0.908
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				
gf=G[exp(- a * (LTC ** b))]-tl, gf<=g				
Opposing platoon ratio, Rpo (refer Exhibit 16-11)				
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]				
gq, (see Exhibit C16-4,5,6,7,8)				
gu=g-gq if gq>=gf, or = g-gf if gq<gf				
n=Max(gq-gf)/2,0)				
PTHo=1-PLTo				
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]				
EL1 (refer to Exhibit C16-3)				
EL2=Max((1-Ptho**n)/Plto, 1.0)				
fmin=2(1+PL)/g or fmin=2(1+Pl)/g				
gdiff=max(gq-gf,0)				
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)				
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)				
or flt=[fm+0.91(N-1)]/N**				
Left-turn adjustment, fLT				

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PERMITTED LT WORKSHEET
for shared lefts

Input

	EB	WB	NB	SB
Opposed by Single(S) or Multiple(M) lane approach				
Cycle length, C 120.0 sec				
Total actual green time for LT lane group, G (s)				
Effective permitted green time for LT lane group, g(s)				
Opposing effective green time, go (s)				
Number of lanes in LT lane group, N				
Number of lanes in opposing approach, No				
Adjusted LT flow rate, VLT (veh/h)				
Proportion of LT in LT lane group, PLT	0.000	0.000	0.000	0.000
Proportion of LT in opposing flow, PLTo				
Adjusted opposing flow rate, Vo (veh/h)				
Lost time for LT lane group, tL				
Computation				
LT volume per cycle, LTC=VLTC/3600				
Opposing lane util. factor, fLUo	0.908	0.908	0.908	0.908
Opposing flow, Volc=VoC/[3600(No)fLUo] (veh/ln/cyc)				

gf=G[exp(- a * (LTC ** b))]-tl, gf<=g
Opposing platoon ratio, Rpo (refer Exhibit 16-11)
Opposing Queue Ratio, qro=Max[1-Rpo(go/C),0]
gq, (see Exhibit C16-4,5,6,7,8)
gu=g-gq if gq>=gf, or = g-gf if gq<gf
n=Max(gq-gf)/2,0)
PTHo=1-PLTo
PL*=PLT[1+(N-1)g/(gf+gu/EL1+4.24)]
EL1 (refer to Exhibit C16-3)
EL2=Max((1-Ptho**n)/Plto, 1.0)
fmin=2(1+PL)/g or fmin=2(1+Pl)/g
gdiff=max(gq-gf,0)
fm=[gf/g]+[gu/g]/[1+PL(EL1-1)], (min=fmin;max=1.00)
flt=fm=[gf/g]+[gu/g]/[1+PL(EL1-1)]+[gdiff/g]/[1+PL(EL2-1)],(fmin<=fm<=1.00)
or flt=[fm+0.91(N-1)]/N**
Left-turn adjustment, fLT

For special case of single-lane approach opposed by multilane approach, see text.
* If Pl>=1 for shared left-turn lanes with N>1, then assume de-facto left-turn lane and redo calculations.
** For permitted left-turns with multiple exclusive left-turn lanes, flt=fm.
For special case of multilane approach opposed by single-lane approach or when gf>gq, see text.

SUPPLEMENTAL PEDESTRIAN-BICYCLE EFFECTS WORKSHEET

Permitted Left Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Pedestrian flow rate, Vpedg (p/h)				
OCCpedg				
Opposing queue clearing green, gq (s)				
Eff. ped. green consumed by opp. veh. queue, gq/gp				
OCCpedu				
Opposing flow rate, Vo (veh/h)				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion of left turns, PLT				
Proportion of left turns using protected phase, PLTA				
Left-turn adjustment, fLpb				

Permitted Right Turns

	EB	WB	NB	SB
Effective pedestrian green time, gp (s)				
Conflicting pedestrian volume, Vped (p/h)				
Conflicting bicycle volume, Vbic (bicycles/h)				
Vpedg				
OCCpedg				
Effective green, g (s)				
Vbicg				
OCCbicg				
OCCr				
Number of cross-street receiving lanes, Nrec				
Number of turning lanes, Nturn				
ApbT				
Proportion right-turns, PRT				
Proportion right-turns using protected phase, PRTA				
Right turn adjustment, fRpb				

SUPPLEMENTAL UNIFORM DELAY WORKSHEET

	EBLT	WBLT	NBLT	SBLT

Cycle length, C 120.0 sec
Adj. LT vol from Vol Adjustment Worksheet, v
v/c ratio from Capacity Worksheet, X
Protected phase effective green interval, g (s)
Opposing queue effective green interval, gq
Unopposed green interval, gu
Red time r=(C-g-gq-gu)
Arrival rate, qa=v/(3600(max[X,1.0]))
Protected ph. departure rate, Sp=s/3600
Permitted ph. departure rate, Ss=s(gq+gu)/(gu*3600)
XPerm
XProt
Case
Queue at beginning of green arrow, Qa
Queue at beginning of unsaturated green, Qu
Residual queue, Qr
Uniform Delay, d1

DELAY/LOS WORKSHEET WITH INITIAL QUEUE

Appr/ Lane Group	Initial Unmet Demand Q veh	Dur. Unmet Demand t hrs.	Uniform Delay Unadj. ds	Uniform Delay Adj. d1 sec	Initial Queue Param. u	Final Unmet Demand Q veh	Initial Queue Delay d3 sec	Lane Group Delay d sec
Eastbound								
L	0.0	0.00	50.0	43.5	0.00	0.0	0.0	43.7
T	0.0	0.00	45.0	36.8	0.00	0.0	0.0	37.0
R	0.0	0.00	20.0	8.6	0.00	0.0	0.0	8.8
Westbound								
L	0.0	0.00	50.0	45.3	0.00	0.0	0.0	46.0
T	0.0	0.00	45.0	39.3	0.00	0.0	0.0	39.9
R	0.0	0.00	20.0	6.7	0.00	0.0	0.0	6.7
Northbound								
L	0.0	0.00	50.0	44.9	0.00	0.0	0.0	45.5
T	0.0	0.00	45.0	34.7	0.00	0.0	0.0	34.7
R	0.0	0.00	20.0	7.1	0.00	0.0	0.0	7.1
Southbound								
L	0.0	0.00	50.0	42.4	0.00	0.0	0.0	42.5
T	0.0	0.00	45.0	35.6	0.00	0.0	0.0	35.6
R	0.0	0.00	32.5	22.6	0.00	0.0	0.0	23.1

Intersection Delay 33.5 sec/veh Intersection LOS C

BACK OF QUEUE WORKSHEET

	Eastbound			Westbound			Northbound			Southbound		
LaneGroup	L	T	R	L	T	R	L	T	R	L	T	R
Init Queue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Rate	70	151	344	136	250	10	115	46	80	30	95	348
So	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
No.Lanes	2	3	1	2	3	1	2	3	1	2	3	1
SL	1719	1809	1538	1687	1775	1509	1612	1696	1442	1770	1862	1583
LnCapacity	286	452	1025	281	443	1006	268	424	961	295	465	726
Flow Ratio	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.2
v/c Ratio	0.24	0.33	0.34	0.48	0.56	0.01	0.43	0.11	0.08	0.10	0.20	0.48
Grn Ratio	0.17	0.25	0.67	0.17	0.25	0.67	0.17	0.25	0.67	0.17	0.25	0.46
I Factor		1.000			1.000			1.000			1.000	
AT or PVG	3	3	3	3	3	3	3	3	3	3	3	3
Pltn Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

PF2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1	2.0	4.1	4.9	4.1	7.3	0.1	3.4	1.2	0.9	0.8	2.5	8.1
kB	0.4	0.5	0.8	0.4	0.5	0.8	0.4	0.5	0.8	0.4	0.5	0.7
Q2	0.1	0.3	0.4	0.4	0.6	0.0	0.3	0.1	0.1	0.0	0.1	0.6
Q Average	2.2	4.4	5.3	4.5	7.9	0.1	3.7	1.2	1.0	0.9	2.6	8.7
Q Spacing	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Q Storage	0	0	0	0	0	0	0	0	0	0	0	0
Q S Ratio												
70th Percentile Output:												
fB%	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
BOQ	2.6	5.2	6.3	5.3	9.4	0.1	4.4	1.5	1.2	1.1	3.1	10.2
QSRatio												
85th Percentile Output:												
fB%	1.6	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5
BOQ	3.4	6.8	8.3	7.0	12.1	0.2	5.8	2.0	1.6	1.4	4.2	13.2
QSRatio												
90th Percentile Output:												
fB%	1.8	1.7	1.7	1.7	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.7
BOQ	3.8	7.5	9.1	7.7	13.2	0.2	6.4	2.2	1.8	1.6	4.6	14.4
QSRatio												
95th Percentile Output:												
fB%	2.0	2.0	1.9	2.0	1.9	2.1	2.0	2.1	2.1	2.1	2.0	1.9
BOQ	4.4	8.6	10.4	8.8	14.9	0.3	7.4	2.6	2.1	1.8	5.3	16.2
QSRatio												
98th Percentile Output:												
fB%	2.5	2.4	2.4	2.4	2.2	2.7	2.5	2.6	2.6	2.6	2.5	2.2
BOQ	5.5	10.6	12.6	10.8	17.8	0.3	9.1	3.2	2.7	2.3	6.6	19.2
QSRatio												

ERROR MESSAGES

No errors to report.

Analyst:
Agency: URS
Date: 03/15/2011
Period: AM PEAK
Project ID: UMRR EIS
E/W St: Old Tampa Rd/Cross Creek Rd.

Inter.: Ft. Hamer Rd. & Old Tampa Rd.
Area Type: All other areas
Jurisd:
Year : 2011 Existing
Note: Flash mode in PM
N/S St: Ft. Hamer Rd.

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	1	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	81	3	172	2	3	1	262	145	2	1	124	67
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A	A			NB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
WB	Left	A	A			SB	Left	A	A		
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds						Peds				
NB	Right	A				EB	Right	A			
SB	Right	A				WB	Right	A			
Green		10.0	15.0					10.0	20.0		
Yellow		3.0	3.0					3.0	3.0		
All Red		2.0	2.0					2.0	2.0		

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	607	1770	0.16	0.40	14.4	B		
T	380	1900	0.01	0.20	24.1	C	15.5	B
R	633	1583	0.33	0.40	15.9	B		
Westbound								
L	621	1805	0.01	0.40	13.5	B		
T	380	1900	0.02	0.20	24.1	C	18.8	B
R	646	1615	0.00	0.40	13.5	B		
Northbound								
L	501	1787	0.77	0.47	25.0	C		
TR	496	1859	0.44	0.27	23.4	C	24.4	C
Southbound								
L	517	1805	0.00	0.47	11.0	B		
TR	472	1771	0.48	0.27	23.9	C	23.9	C

Intersection Delay = 21.8 (sec/veh) Intersection LOS = C

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/16/11
Analysis Time Period: PM Peak
Intersection: UMRR/Greefield Blvd.
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS Note: WB is a driveway to one house
East/West Street: GREENFIELD BLVD.
North/South Street: UMRR
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	53	385	1	0	251	21
Peak-Hour Factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95
Hourly Flow Rate, HFR	55	401	1	0	264	22
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						No
Lanes	1	1	0	0	1	1
Configuration	L	TR		LT	R	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0		0	46		48
Peak Hour Factor, PHF	0.92		0.92	0.77		0.77
Hourly Flow Rate, HFR	0		0	59		62
Percent Heavy Vehicles	0		0	0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0	1		1
Configuration		LR		L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	LT		LR		L		R
v (vph)	55	0		0		59		62
C(m) (vph)	1288	1168				307		780
v/c	0.04	0.00				0.19		0.08
95% queue length	0.13	0.00				0.70		0.26
Control Delay	7.9	8.1				19.5		10.0+
LOS	A	A				C		B
Approach Delay							14.6	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst: URS
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: PM
Intersection: UMRR/Waterlefe Blvd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: Ft. Hamer Bridge
East/West Street: Waterlefe Blvd.
North/South Street: Upper Manatee River Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	99	332			215	1
Peak-Hour Factor, PHF	0.78	0.78			0.85	0.85
Hourly Flow Rate, HFR	126	425			252	1
Percent Heavy Vehicles	4	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				4		57
Peak Hour Factor, PHF				0.86		0.86
Hourly Flow Rate, HFR				4		66
Percent Heavy Vehicles				4		4
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	126					4		66
C(m) (vph)	1301					266		782
v/c	0.10					0.02		0.08
95% queue length	0.32					0.05		0.28
Control Delay	8.1					18.7		10.0+
LOS	A					C		B
Approach Delay							10.5	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst: URS
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: PM
Intersection: UMRR/Gates Ck Rd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: Upper Manatee River Rd
North/South Street: Gates Creek Rd.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	320	2	1	206	3
Peak-Hour Factor, PHF	0.47	0.77	0.77	0.81	0.81	0.81
Hourly Flow Rate, HFR	29	415	2	1	254	3
Percent Heavy Vehicles	4	--	--	4	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1 0		0	1 0	
Configuration	L	TR		LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	1	2	1	0	10
Peak Hour Factor, PHF	0.40	0.40	0.40	0.69	0.69	0.69
Hourly Flow Rate, HFR	0	2	4	1	0	14
Percent Heavy Vehicles	4	4	4	4	4	4
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1 0		0	1 0	
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	LTR		LTR			LTR	
v (vph)	29	1		6			15	
C(m) (vph)	1296	1131		489			712	
v/c	0.02	0.00		0.01			0.02	
95% queue length	0.07	0.00		0.04			0.06	
Control Delay	7.8	8.2		12.5			10.2	
LOS	A	A		B			B	
Approach Delay				12.5			10.2	
Approach LOS				B			B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: AM Peak
Intersection: Mulholland Rd & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS
East/West Street: MULHOLLAND RD
North/South Street: FT HAMER RD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		12	4	89	19	
Peak-Hour Factor, PHF		0.68	0.68	0.89	0.89	
Hourly Flow Rate, HFR		17	5	100	21	
Percent Heavy Vehicles		--	--	6	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		48			
Peak Hour Factor, PHF	0.66		0.66			
Hourly Flow Rate, HFR	4		72			
Percent Heavy Vehicles	6		6			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		100		76				
C(m) (vph)		1568		1019				
v/c		0.06		0.07				
95% queue length		0.20		0.24				
Control Delay		7.5		8.8				
LOS		A		A				
Approach Delay				8.8				
Approach LOS				A				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: PM
Intersection: Ft. Hamer Rd/Old Tampa Rd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS Note: Flash mode in PM
East/West Street: Old Tampa Rd.
North/South Street: Ft. Hamer Rd.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	15	1	2	15	27
Peak-Hour Factor, PHF	0.84	0.84	0.84	0.93	0.93	0.93
Hourly Flow Rate, HFR	36	17	1	2	16	29
Percent Heavy Vehicles	3	--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	4	0	18	1	68
Peak Hour Factor, PHF	0.63	0.63	0.63	0.69	0.69	0.69
Hourly Flow Rate, HFR	0	6	0	26	1	98
Percent Heavy Vehicles	0	0	0	0	0	1
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1	1	1	1	1	1
Configuration	L	T	R	L	T	R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L	L	L	T	R	L	T	R
v (vph)	36	2	0	6	0	26	1	98
C(m) (vph)	1557	1612	705	738	1066	831	751	1047
v/c	0.02	0.00	0.00	0.01	0.00	0.03	0.00	0.09
95% queue length	0.07	0.00	0.00	0.02	0.00	0.10	0.00	0.31
Control Delay	7.4	7.2	10.1	9.9	8.4	9.5	9.8	8.8
LOS	A	A	B	A	A	A	A	A
Approach Delay				9.9			8.9	
Approach LOS				A			A	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: PM Peak
Intersection: Golf Course Rd & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS
East/West Street: GOLF COURSE RD
North/South Street: FT HAMER RD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		57	58	13	70	
Peak-Hour Factor, PHF		0.92	0.92	0.85	0.85	
Hourly Flow Rate, HFR		61	63	15	82	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	1	1	
Configuration			TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	55		17			
Peak Hour Factor, PHF	0.87		0.87			
Hourly Flow Rate, HFR	63		19			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		15	63		19			
C(m) (vph)		1475	781		971			
v/c		0.01	0.08		0.02			
95% queue length		0.03	0.26		0.06			
Control Delay		7.5	10.0+		8.8			
LOS		A	B		A			
Approach Delay				9.7				
Approach LOS				A				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: PM Peak
Intersection: US 301 & Ft Hamer Rd
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2011 Existing
Project ID: UMRR EIS Note: US 301 under construction
East/West Street: US 301
North/South Street: FT HAMER RD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		231	23	87	224	
Peak-Hour Factor, PHF		0.91	0.91	0.87	0.87	
Hourly Flow Rate, HFR		253	25	99	257	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	16		66			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	17		73			
Percent Heavy Vehicles	6		3			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		99		90				
C(m) (vph)		1296		633				
v/c		0.08		0.14				
95% queue length		0.25		0.49				
Control Delay		8.0		11.6				
LOS		A		B				
Approach Delay				11.6				
Approach LOS				B				

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/16/2011
Analysis Time Period: PM
Intersection: SR 64/Rye Rd.
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: SR 64
North/South Street: Rye Rd.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	306	338			300	69
Peak-Hour Factor, PHF	0.90	0.90			0.86	0.86
Hourly Flow Rate, HFR	340	375			348	80
Percent Heavy Vehicles	1	--	--		--	--
Median Type/Storage	TWLTL			/ 1		
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				26		177
Peak Hour Factor, PHF				0.91		0.91
Hourly Flow Rate, HFR				28		194
Percent Heavy Vehicles				23		3
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	340						222	
C(m) (vph)	1135						591	
v/c	0.30						0.38	
95% queue length	1.27						1.74	
Control Delay	9.5						14.7	
LOS	A						B	
Approach Delay							14.7	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: PM
Intersection: UMRR/Rye Rd
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: UMRR
North/South Street: Rye Rd.
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	141			83	25
Peak-Hour Factor, PHF	0.85	0.85			0.91	0.91
Hourly Flow Rate, HFR	11	165			91	27
Percent Heavy Vehicles	8	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				27		12
Peak Hour Factor, PHF				0.80		0.80
Hourly Flow Rate, HFR				33		14
Percent Heavy Vehicles				10		4
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	11						47	
C(m) (vph)	1434						740	
v/c	0.01						0.06	
95% queue length	0.02						0.20	
Control Delay	7.5						10.2	
LOS	A						B	
Approach Delay							10.2	
Approach LOS							B	

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: URS
Date Performed: 3/15/2011
Analysis Time Period: PM
Intersection: Rye Rd/Golf Course Rd.
Jurisdiction: Manatee County
Units: U. S. Customary
Analysis Year: Existing - 2011
Project ID: UMRR EIS
East/West Street: Golf Course Rd
North/South Street: Rye Rd
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	84	77			39	8
Peak-Hour Factor, PHF	0.76	0.76			0.79	0.79
Hourly Flow Rate, HFR	110	101			49	10
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				7		44
Peak Hour Factor, PHF				0.78		0.78
Hourly Flow Rate, HFR				8		56
Percent Heavy Vehicles				5		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	110						64	
C(m) (vph)	1558						930	
v/c	0.07						0.07	
95% queue length	0.23						0.22	
Control Delay	7.5						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS+: Signalized Intersections Release 5.5

Analyst:
Roa20Agency: URS
Date: 3/21/2011
Period: PM PEAK
Project ID: UMRR EIS
E/W St: SR 64

Inter.: SR 64 & Upper Manatee River
Area Type: All other areas
Jurisd: Manatee County
Year : 2011 Existing

N/S St: Upper Manatee River Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	2	3	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	324	646	309	157	354	10	325	237	208	44	110	145
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A			
Thru		A			Thru		A		
Right	A	A			Right	A	A		
Peds					Peds				
WB Left	A				SB Left	A			
Thru		A			Thru		A		
Right	A	A			Right		A		
Peds					Peds				
NB Right	A				EB Right	A			
SB Right	A				WB Right	A			
Green	25.0	30.0				15.0	30.0		
Yellow	4.0	4.0				4.0	4.0		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 120.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	723	3471	0.55	0.21	43.3	D		
T	1281	5124	0.62	0.25	40.8	D	33.7	C
R	1066	1599	0.35	0.67	8.9	A		
Westbound								
L	709	3403	0.23	0.21	39.6	D		
T	1256	5025	0.29	0.25	36.5	D	36.9	D
R	1045	1568	0.01	0.67	6.7	A		
Northbound								
L	434	3471	0.82	0.13	63.3	E		
T	1281	5124	0.20	0.25	35.6	D	39.8	D
R	1066	1599	0.21	0.67	7.9	A		
Southbound								
L	434	3471	0.12	0.13	46.8	D		
T	1281	5124	0.10	0.25	34.7	C	27.8	C
R	800	1599	0.22	0.50	17.0	B		

Intersection Delay = 35.2 (sec/veh) Intersection LOS = D

APPENDIX C

Opening Year (2015) Analysis of Unsignalized Intersections without Improvements

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	442	115	708	546	294	334
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	465	121	745	575	309	352
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			586		2243	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			586		2243	233
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			23		0	54
cM capacity (veh/h)			971		8	763

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	233	233	121	745	287	287	309	352
Volume Left	0	0	0	745	0	0	309	0
Volume Right	0	0	121	0	0	0	0	352
cSH	1700	1700	1700	971	1700	1700	8	763
Volume to Capacity	0.14	0.14	0.07	0.77	0.17	0.17	38.42	0.46
Queue Length 95th (ft)	0	0	0	194	0	0	Err	61
Control Delay (s)	0.0	0.0	0.0	19.8	0.0	0.0	Err	13.7
Lane LOS				C			F	B
Approach Delay (s)	0.0			11.2			4688.3	
Approach LOS							F	

Intersection Summary			
Average Delay	1212.9		
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	89	113	533	105	101	719
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	94	119	561	111	106	757
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1531	561			672	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1531	561			672	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	17	77			88	
cM capacity (veh/h)	112	523			910	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	213	561	111	106	757
Volume Left	94	0	0	106	0
Volume Right	119	0	111	0	0
cSH	255	1700	1700	910	1700
Volume to Capacity	0.83	0.33	0.07	0.12	0.45
Queue Length 95th (ft)	166	0	0	10	0
Control Delay (s)	58.5	0.0	0.0	9.5	0.0
Lane LOS	F			A	
Approach Delay (s)	58.5	0.0		1.2	
Approach LOS	F				

Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	46	135	648	53	117	900
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	48	142	682	56	123	947
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1876	682			738	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1876	682			738	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	27	68			86	
cM capacity (veh/h)	67	446			859	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	191	682	56	123	947
Volume Left	48	0	0	123	0
Volume Right	142	0	56	0	0
cSH	262	1700	1700	859	1700
Volume to Capacity	0.73	0.40	0.03	0.14	0.56
Queue Length 95th (ft)	127	0	0	12	0
Control Delay (s)	49.1	0.0	0.0	9.9	0.0
Lane LOS	E			A	
Approach Delay (s)	49.1	0.0		1.1	
Approach LOS	E				

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	8	49	29	6	14	45	666	46	20	900	49
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	8	52	31	6	15	47	701	48	21	947	52
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1829	1859	973	1865	1861	725	999			749		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1829	1859	973	1865	1861	725	999			749		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	54	87	83	20	90	97	93			98		
cM capacity (veh/h)	48	66	303	38	66	422	685			851		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	22	60	31	21	47	749	21	999
Volume Left	22	0	31	0	47	0	21	0
Volume Right	0	52	0	15	0	48	0	52
cSH	48	201	38	160	685	1700	851	1700
Volume to Capacity	0.46	0.30	0.80	0.13	0.07	0.44	0.02	0.59
Queue Length 95th (ft)	42	30	73	11	6	0	2	0
Control Delay (s)	130.6	30.3	242.8	30.8	10.6	0.0	9.3	0.0
Lane LOS	F	D	F	D	B		A	
Approach Delay (s)	57.3		156.3		0.6		0.2	
Approach LOS	F		F					

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	SBR	SBR2	NEL2	NEL
Lane Configurations						
Volume (veh/h)	23	5	968	10	30	734
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	24	5	1019	11	32	773
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1855	1019			1029	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1855	1019			1029	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	68	98			95	
cM capacity (veh/h)	76	285			667	

Direction, Lane #	EB 1	SB 1	SB 2	NE 1	NE 2
Volume Total	29	1019	11	32	773
Volume Left	24	0	0	32	0
Volume Right	5	0	11	0	0
cSH	93	1700	1700	667	1700
Volume to Capacity	0.32	0.60	0.01	0.05	0.45
Queue Length 95th (ft)	30	0	0	4	0
Control Delay (s)	62.9	0.0	0.0	10.7	0.0
Lane LOS	F			B	
Approach Delay (s)	62.9	0.0		0.4	
Approach LOS	F				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (veh/h)	108	206	558	153	100	873
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	114	217	587	161	105	919
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1717	587			748	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1717	587			748	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	57			88	
cM capacity (veh/h)	86	506			851	

Direction, Lane #	WB 1	WB 2	NE 1	NE 2	SW 1	SW 2
Volume Total	114	217	587	161	105	919
Volume Left	114	0	0	0	105	0
Volume Right	0	217	0	161	0	0
cSH	86	506	1700	1700	851	1700
Volume to Capacity	1.33	0.43	0.35	0.09	0.12	0.54
Queue Length 95th (ft)	213	53	0	0	11	0
Control Delay (s)	295.7	17.4	0.0	0.0	9.8	0.0
Lane LOS	F	C			A	
Approach Delay (s)	113.1		0.0		1.0	
Approach LOS	F					

Intersection Summary			
Average Delay	18.3		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	7	120	105	704	971	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	126	111	741	1022	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1984	1022	1033			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1984	1022	1033			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	56	83			
cM capacity (veh/h)	55	284	665			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	7	126	111	741	1022	11
Volume Left	7	0	111	0	0	0
Volume Right	0	126	0	0	0	11
cSH	55	284	665	1700	1700	1700
Volume to Capacity	0.13	0.44	0.17	0.44	0.60	0.01
Queue Length 95th (ft)	11	54	15	0	0	0
Control Delay (s)	79.6	27.5	11.5	0.0	0.0	0.0
Lane LOS	F	D	B			
Approach Delay (s)	30.3		1.5		0.0	
Approach LOS	D					

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	40	66	81	769	1016	75
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	42	69	85	809	1069	79
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2049	1069	1148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2049	1069	1148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	19	74	86			
cM capacity (veh/h)	52	266	601			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	112	85	809	1069	79
Volume Left	42	85	0	0	0
Volume Right	69	0	0	0	79
cSH	138	601	1700	1700	1700
Volume to Capacity	0.81	0.14	0.48	0.63	0.05
Queue Length 95th (ft)	126	12	0	0	0
Control Delay (s)	88.6	12.0	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	88.6	1.1		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	546	294	334	442	115	708
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	575	309	352	465	121	745
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			884		1511	287
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			884		1511	287
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			53		0	0
cM capacity (veh/h)			748		58	703

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	287	287	309	352	233	233	121	745
Volume Left	0	0	0	352	0	0	121	0
Volume Right	0	0	309	0	0	0	0	745
cSH	1700	1700	1700	748	1700	1700	58	703
Volume to Capacity	0.17	0.17	0.18	0.47	0.14	0.14	2.10	1.06
Queue Length 95th (ft)	0	0	0	63	0	0	294	488
Control Delay (s)	0.0	0.0	0.0	14.0	0.0	0.0	660.2	74.7
Lane LOS				B			F	F
Approach Delay (s)	0.0			6.0			156.5	
Approach LOS							F	

Intersection Summary			
Average Delay	54.7		
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	101	722	89	113	515
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	79	106	760	94	119	542
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1540	760			854	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1540	760			854	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	26	74			85	
cM capacity (veh/h)	106	403			777	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	185	760	94	119	542
Volume Left	79	0	0	119	0
Volume Right	106	0	94	0	0
cSH	250	1700	1700	777	1700
Volume to Capacity	0.74	0.45	0.06	0.15	0.32
Queue Length 95th (ft)	131	0	0	13	0
Control Delay (s)	53.2	0.0	0.0	10.5	0.0
Lane LOS	F			B	
Approach Delay (s)	53.2	0.0		1.9	
Approach LOS	F				

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	53	117	900	67	135	648
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	56	123	947	71	142	682
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1914	947			1018	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1914	947			1018	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	4	61			79	
cM capacity (veh/h)	58	314			674	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	179	947	71	142	682
Volume Left	56	0	0	142	0
Volume Right	123	0	71	0	0
cSH	186	1700	1700	674	1700
Volume to Capacity	0.96	0.56	0.04	0.21	0.40
Queue Length 95th (ft)	194	0	0	20	0
Control Delay (s)	85.5	0.0	0.0	11.8	0.0
Lane LOS	F			B	
Approach Delay (s)	85.5	0.0		2.0	
Approach LOS	F				

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	6	45	46	8	20	49	900	29	14	666	21
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	52	6	47	48	8	21	52	947	31	15	701	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1817	1823	712	1847	1818	963	723			978		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1817	1823	712	1847	1818	963	723			978		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	91	89	0	88	93	94			98		
cM capacity (veh/h)	47	70	429	44	71	307	870			698		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	52	54	48	29	52	978	15	723
Volume Left	52	0	48	0	52	0	15	0
Volume Right	0	47	0	21	0	31	0	22
cSH	47	268	44	157	870	1700	698	1700
Volume to Capacity	1.09	0.20	1.10	0.19	0.06	0.58	0.02	0.43
Queue Length 95th (ft)	117	18	113	17	5	0	2	0
Control Delay (s)	295.7	21.8	310.7	33.1	9.4	0.0	10.3	0.0
Lane LOS	F	C	F	D	A		B	
Approach Delay (s)	156.0		205.6		0.5		0.2	
Approach LOS	F		F					

Intersection Summary			
Average Delay	17.0		
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	SBR	SBR2	NEL2	NEL
Lane Configurations						
Volume (veh/h)	10	30	734	23	5	968
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	32	773	24	5	1019
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1802	773			797	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1802	773			797	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	92			99	
cM capacity (veh/h)	86	396			816	

Direction, Lane #	EB 1	SB 1	SB 2	NE 1	NE 2
Volume Total	42	773	24	5	1019
Volume Left	11	0	0	5	0
Volume Right	32	0	24	0	0
cSH	344	1700	1700	816	1700
Volume to Capacity	0.12	0.45	0.01	0.01	0.60
Queue Length 95th (ft)	10	0	0	0	0
Control Delay (s)	24.3	0.0	0.0	9.4	0.0
Lane LOS	C			A	
Approach Delay (s)	24.3	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (veh/h)	153	100	873	108	206	558
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	161	105	919	114	217	587
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1940	919			1033	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1940	919			1033	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	68			67	
cM capacity (veh/h)	48	326			665	

Direction, Lane #	WB 1	WB 2	NE 1	NE 2	SW 1	SW 2
Volume Total	161	105	919	114	217	587
Volume Left	161	0	0	0	217	0
Volume Right	0	105	0	114	0	0
cSH	48	326	1700	1700	665	1700
Volume to Capacity	3.37	0.32	0.54	0.07	0.33	0.35
Queue Length 95th (ft)	Err	34	0	0	35	0
Control Delay (s)	Err	21.2	0.0	0.0	13.0	0.0
Lane LOS	F	C			B	
Approach Delay (s)	6055.2		0.0		3.5	
Approach LOS	F					

Intersection Summary			
Average Delay	768.1		
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	105	120	971	704	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	111	126	1022	741	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2016	741	748			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2016	741	748			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	73	85			
cM capacity (veh/h)	54	413	851			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	11	111	126	1022	741	7
Volume Left	11	0	126	0	0	0
Volume Right	0	111	0	0	0	7
cSH	54	413	851	1700	1700	1700
Volume to Capacity	0.19	0.27	0.15	0.60	0.44	0.00
Queue Length 95th (ft)	16	27	13	0	0	0
Control Delay (s)	87.0	16.9	10.0	0.0	0.0	0.0
Lane LOS	F	C	A			
Approach Delay (s)	23.0		1.1		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	75	81	66	1016	769	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	79	85	69	1069	809	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2018	809	852			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2018	809	852			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	77	91			
cM capacity (veh/h)	58	377	779			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	164	69	1069	809	42
Volume Left	79	69	0	0	0
Volume Right	85	0	0	0	42
cSH	120	779	1700	1700	1700
Volume to Capacity	1.37	0.09	0.63	0.48	0.02
Queue Length 95th (ft)	277	7	0	0	0
Control Delay (s)	183.7	10.1	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	183.7	0.6		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	14.3		
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	395	141	502	409	167	213
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	416	148	528	431	176	224
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			564		1688	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			564		1688	208
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			47		0	72
cM capacity (veh/h)			990		39	792

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	208	208	148	528	215	215	176	224
Volume Left	0	0	0	528	0	0	176	0
Volume Right	0	0	148	0	0	0	0	224
cSH	1700	1700	1700	990	1700	1700	39	792
Volume to Capacity	0.12	0.12	0.09	0.53	0.13	0.13	4.55	0.28
Queue Length 95th (ft)	0	0	0	81	0	0	Err	29
Control Delay (s)	0.0	0.0	0.0	12.7	0.0	0.0	Err	11.3
Lane LOS				B			F	B
Approach Delay (s)	0.0			7.0			4400.6	
Approach LOS							F	

Intersection Summary			
Average Delay	918.8		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	117	266	114	132	468	175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	123	280	120	139	493	184
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1289	120			259	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1289	120			259	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	70			62	
cM capacity (veh/h)	111	926			1294	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	403	120	139	493	184
Volume Left	123	0	0	493	0
Volume Right	280	0	139	0	0
cSH	362	1700	1700	1294	1700
Volume to Capacity	1.11	0.07	0.08	0.38	0.11
Queue Length 95th (ft)	377	0	0	45	0
Control Delay (s)	66.2	0.0	0.0	9.5	0.0
Lane LOS	F			A	
Approach Delay (s)	66.2	0.0		6.9	
Approach LOS	F				

Intersection Summary			
Average Delay	23.4		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	38	647	432	115	183	144
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	40	681	455	121	193	152
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1223	193	344			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1223	193	344			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	67	19	62			
cM capacity (veh/h)	122	844	1204			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	721	455	121	193	152
Volume Left	40	455	0	0	0
Volume Right	681	0	0	0	152
cSH	893	1204	1700	1700	1700
Volume to Capacity	0.81	0.38	0.07	0.11	0.09
Queue Length 95th (ft)	222	45	0	0	0
Control Delay (s)	25.8	9.8	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	25.8	7.7		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	14.0		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	98	41	58	449	770	62
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	103	43	61	473	811	65
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1405	811	876			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1405	811	876			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	26	89	92			
cM capacity (veh/h)	140	377	762			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	146	61	473	811	65
Volume Left	103	61	0	0	0
Volume Right	43	0	0	0	65
cSH	198	762	1700	1700	1700
Volume to Capacity	0.74	0.08	0.28	0.48	0.04
Queue Length 95th (ft)	121	7	0	0	0
Control Delay (s)	62.1	10.1	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	62.1	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst		Intersection	
Agency/Co.	URS	Jurisdiction	Manatee County
Date Performed	5/12/2011	Analysis Year	2015
Analysis Time Period	AM		

Project Description: *Ft Hamer Bridge & EIS Update*

East/West Street: *SR 64* | North/South Street: *Rye Road*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	380	386			607	127
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	400	406	0	0	638	133
Percent Heavy Vehicles	4	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				97		713
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	102	0	750
Percent Heavy Vehicles	0	0	0	4	0	4
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	400					102		750
C (m) (veh/h)	827					125		714
v/c	0.48					0.82		1.05
95% queue length	2.68					4.91		19.17
Control Delay (s/veh)	13.4					103.3		71.5
LOS	B					F		F
Approach Delay (s/veh)	--	--				75.3		
Approach LOS	--	--				F		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱	↰	↑↑	↰	↱
Volume (veh/h)	409	167	213	395	141	502
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	431	176	224	416	148	528
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			606		1087	215
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			606		1087	215
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			77		6	33
cM capacity (veh/h)			954		159	783

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	215	215	176	224	208	208	148	528
Volume Left	0	0	0	224	0	0	148	0
Volume Right	0	0	176	0	0	0	0	528
cSH	1700	1700	1700	954	1700	1700	159	783
Volume to Capacity	0.13	0.13	0.10	0.23	0.12	0.12	0.94	0.67
Queue Length 95th (ft)	0	0	0	23	0	0	171	133
Control Delay (s)	0.0	0.0	0.0	9.9	0.0	0.0	111.9	18.6
Lane LOS				A			F	C
Approach Delay (s)	0.0			3.5			39.0	
Approach LOS							E	

Intersection Summary			
Average Delay	14.9		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	132	468	175	117	266	114
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	139	493	184	123	280	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	864	184			307	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	864	184			307	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	44	42			77	
cM capacity (veh/h)	249	853			1242	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	632	184	123	280	120
Volume Left	139	0	0	280	0
Volume Right	493	0	123	0	0
cSH	1094	1700	1700	1242	1700
Volume to Capacity	0.58	0.11	0.07	0.23	0.07
Queue Length 95th (ft)	96	0	0	22	0
Control Delay (s)	19.5	0.0	0.0	8.7	0.0
Lane LOS	C			A	
Approach Delay (s)	19.5	0.0		6.1	
Approach LOS	C				

Intersection Summary			
Average Delay	11.0		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	144	432	647	183	115	38
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	152	455	681	193	121	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1676	121	161			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1676	121	161			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	51	52			
cM capacity (veh/h)	53	925	1406			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	606	681	193	121	40
Volume Left	152	681	0	0	0
Volume Right	455	0	0	0	40
cSH	197	1406	1700	1700	1700
Volume to Capacity	3.08	0.48	0.11	0.07	0.02
Queue Length 95th (ft)	Err	68	0	0	0
Control Delay (s)	Err	9.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	Err	7.8		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	3698.4			
Intersection Capacity Utilization	57.2%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	62	58	41	770	449	98
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	65	61	43	811	473	103
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1369	473	576			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1369	473	576			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	57	90	96			
cM capacity (veh/h)	153	587	988			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	126	43	811	473	103
Volume Left	65	43	0	0	0
Volume Right	61	0	0	0	103
cSH	296	988	1700	1700	1700
Volume to Capacity	0.43	0.04	0.48	0.28	0.06
Queue Length 95th (ft)	51	3	0	0	0
Control Delay (s)	29.0	8.8	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	29.0	0.4		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst		Intersection	
Agency/Co.	URS	Jurisdiction	Manatee County
Date Performed	5/12/2011	Analysis Year	2015
Analysis Time Period	PM		

Project Description: *Ft Hamer Bridge & EIS Update*

East/West Street: *SR 64* | North/South Street: *Rye Rd*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	713	607			386	97
Peak-Hour Factor, PHF	0.95	0.95	1.00	1.00	0.95	0.95
Hourly Flow Rate, HFR (veh/h)	750	638	0	0	406	102
Percent Heavy Vehicles	4	--	--	0	--	--
Median Type	Raised curb					
RT Channelized			0			0
Lanes	1	2	0	0	2	1
Configuration	L	T			T	R
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				127		380
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate, HFR (veh/h)	0	0	0	133	0	400
Percent Heavy Vehicles	0	0	0	4	0	4
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	750					133		400
C (m) (veh/h)	1039					28		830
v/c	0.72					4.75		0.48
95% queue length	6.59					16.20		2.66
Control Delay (s/veh)	16.9					1971		13.3
LOS	C					F		B
Approach Delay (s/veh)	--	--				501.7		
Approach LOS	--	--				F		

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APPENDIX D

Opening Year (2015) Analysis of Signalized Intersections

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	442	115	708	546	294	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.22	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	397	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	465	121	745	575	309	352
RTOR Reduction (vph)	0	100	0	0	0	272
Lane Group Flow (vph)	465	21	745	575	309	80
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	15.5	15.5	58.0	58.0	20.2	20.2
Effective Green, g (s)	15.5	15.5	58.0	58.0	20.2	20.2
Actuated g/C Ratio	0.17	0.17	0.65	0.65	0.23	0.23
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	603	270	814	2257	393	352
v/s Ratio Prot	0.13		c0.38	0.17	c0.18	
v/s Ratio Perm		0.01	c0.22			0.05
v/c Ratio	0.77	0.08	0.92	0.25	0.79	0.23
Uniform Delay, d1	35.2	30.9	17.9	6.5	32.5	28.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	0.1	14.7	0.1	10.0	0.3
Delay (s)	41.2	31.0	32.6	6.6	42.4	28.5
Level of Service	D	C	C	A	D	C
Approach Delay (s)	39.1			21.3	35.0	
Approach LOS	D			C	C	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	11.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	9	311	85	18	11	270	458	55	28	621	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1827	1553	1736	1827	1553	1736	1797		1736	1766	
Flt Permitted	0.58	1.00	1.00	0.75	1.00	1.00	0.08	1.00		0.46	1.00	
Satd. Flow (perm)	1052	1827	1553	1373	1827	1553	137	1797		838	1766	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	94	9	327	89	19	12	284	482	58	29	654	185
RTOR Reduction (vph)	0	0	286	0	0	11	0	4	0	0	9	0
Lane Group Flow (vph)	94	9	41	89	19	1	284	536	0	29	830	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	15.1	9.7	9.7	10.7	7.5	7.5	66.8	58.1		50.9	47.7	
Effective Green, g (s)	15.1	9.7	9.7	10.7	7.5	7.5	66.8	58.1		50.9	47.7	
Actuated g/C Ratio	0.16	0.10	0.10	0.11	0.08	0.08	0.69	0.60		0.53	0.50	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	184	157	165	142	121	321	1085		473	876	
v/s Ratio Prot	c0.03	0.00		0.02	0.01		c0.13	0.30		0.00	c0.47	
v/s Ratio Perm	c0.05		0.03	0.04		0.00	0.49			0.03		
v/c Ratio	0.46	0.05	0.26	0.54	0.13	0.01	0.88	0.49		0.06	0.95	
Uniform Delay, d1	36.2	39.1	39.9	40.1	41.3	40.9	29.4	10.8		10.8	23.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.1	0.9	3.4	0.4	0.0	23.8	0.4		0.1	18.7	
Delay (s)	37.8	39.2	40.8	43.5	41.8	40.9	53.3	11.1		10.9	41.8	
Level of Service	D	D	D	D	D	D	D	B		B	D	
Approach Delay (s)		40.1			42.9			25.6			40.7	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	16.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	8	49	29	6	14	45	666	46	20	900	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.89		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1589		1736	1631		1736	1809		1736	1813	
Flt Permitted	0.74	1.00		0.72	1.00		0.20	1.00		0.33	1.00	
Satd. Flow (perm)	1359	1589		1312	1631		361	1809		596	1813	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	8	52	31	6	15	47	701	48	21	947	52
RTOR Reduction (vph)	0	47	0	0	14	0	0	2	0	0	2	0
Lane Group Flow (vph)	22	13	0	31	7	0	47	747	0	21	997	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	5.7	5.7		5.7	5.7		44.4	44.4		44.4	44.4	
Effective Green, g (s)	5.7	5.7		5.7	5.7		44.4	44.4		44.4	44.4	
Actuated g/C Ratio	0.09	0.09		0.09	0.09		0.73	0.73		0.73	0.73	
Clearance Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	127	148		122	152		262	1315		433	1317	
v/s Ratio Prot		0.01			0.00			0.41			c0.55	
v/s Ratio Perm	0.02			c0.02			0.13			0.04		
v/c Ratio	0.17	0.09		0.25	0.05		0.18	0.57		0.05	0.76	
Uniform Delay, d1	25.5	25.3		25.7	25.2		2.6	3.9		2.4	5.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.3		1.1	0.1		0.3	0.6		0.0	2.5	
Delay (s)	26.2	25.6		26.8	25.4		3.0	4.5		2.4	7.6	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		25.7			26.2			4.4			7.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	108	206	558	153	100	873
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1736	1553	1827	1553	1736	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1736	1553	1827	1553	1736	3471
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	217	587	161	105	919
RTOR Reduction (vph)	0	189	0	101	0	0
Lane Group Flow (vph)	114	28	587	60	105	919
Turn Type		Perm		Perm	Split	
Protected Phases	2		4		1	1
Permitted Phases		2		4		
Actuated Green, G (s)	11.3	11.3	32.5	32.5	27.6	27.6
Effective Green, g (s)	11.3	11.3	32.5	32.5	27.6	27.6
Actuated g/C Ratio	0.13	0.13	0.37	0.37	0.31	0.31
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	223	200	676	574	545	1090
v/s Ratio Prot	c0.07		c0.32		0.06	c0.26
v/s Ratio Perm		0.02		0.04		
v/c Ratio	0.51	0.14	0.87	0.10	0.19	0.84
Uniform Delay, d1	35.7	34.0	25.7	18.2	22.0	28.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.3	11.4	0.1	0.2	6.1
Delay (s)	37.7	34.3	37.1	18.2	22.2	34.2
Level of Service	D	C	D	B	C	C
Approach Delay (s)	35.5		33.1			33.0
Approach LOS	D		C			C

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	16.5
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	247	384	365	270	759	204	330	400	240	176	559	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	4988	1553	3367	4988	1553	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	4988	1553	3367	4988	1553	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	260	404	384	284	799	215	347	421	253	185	588	382
RTOR Reduction (vph)	0	0	231	0	0	166	0	0	162	0	0	212
Lane Group Flow (vph)	260	404	153	284	799	49	347	421	91	185	588	170
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.2	24.1	24.1	14.1	25.0	25.0	16.2	40.0	40.0	10.6	34.4	34.4
Effective Green, g (s)	13.2	24.1	24.1	14.1	25.0	25.0	16.2	40.0	40.0	10.6	34.4	34.4
Actuated g/C Ratio	0.12	0.22	0.22	0.13	0.23	0.23	0.15	0.36	0.36	0.10	0.31	0.31
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	401	1085	338	428	1125	350	492	1801	561	322	1549	482
v/s Ratio Prot	0.08	0.08		c0.08	c0.16		c0.10	0.08		0.05	c0.12	
v/s Ratio Perm			0.10			0.03			0.06			0.11
v/c Ratio	0.65	0.37	0.45	0.66	0.71	0.14	0.71	0.23	0.16	0.57	0.38	0.35
Uniform Delay, d1	46.6	36.9	37.6	46.1	39.6	34.3	45.0	24.7	24.0	47.9	29.9	29.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	0.2	1.0	3.9	2.1	0.2	4.6	0.3	0.6	2.5	0.7	2.0
Delay (s)	50.2	37.1	38.6	49.9	41.7	34.5	49.6	25.0	24.7	50.4	30.6	31.6
Level of Service	D	D	D	D	D	C	D	C	C	D	C	C
Approach Delay (s)		40.9			42.3			33.3			34.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	16.5
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	546	294	334	442	115	708
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.25	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	448	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	575	309	352	465	121	745
RTOR Reduction (vph)	0	228	0	0	0	402
Lane Group Flow (vph)	575	81	352	465	121	343
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	18.3	18.3	39.0	39.0	19.7	19.7
Effective Green, g (s)	18.3	18.3	39.0	39.0	19.7	19.7
Actuated g/C Ratio	0.26	0.26	0.56	0.56	0.28	0.28
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	911	408	532	1942	491	439
v/s Ratio Prot	0.17		c0.14	0.13	0.07	
v/s Ratio Perm		0.05	c0.23			c0.22
v/c Ratio	0.63	0.20	0.66	0.24	0.25	0.78
Uniform Delay, d1	22.7	20.0	9.9	7.8	19.3	23.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.2	3.1	0.1	0.3	8.8
Delay (s)	24.2	20.2	13.0	7.9	19.5	31.8
Level of Service	C	C	B	A	B	C
Approach Delay (s)	22.8			10.1	30.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	69.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	18	270	55	9	28	311	621	85	31	458	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1827	1553	1736	1827	1553	1736	1794		1736	1777	
Flt Permitted	0.41	1.00	1.00	0.82	1.00	1.00	0.15	1.00		0.31	1.00	
Satd. Flow (perm)	746	1827	1553	1491	1827	1553	281	1794		558	1777	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	171	19	284	58	9	29	327	654	89	33	482	108
RTOR Reduction (vph)	0	0	252	0	0	27	0	4	0	0	8	0
Lane Group Flow (vph)	171	19	32	58	9	2	327	739	0	33	582	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	18.8	9.8	9.8	9.0	4.9	4.9	55.9	48.2		36.0	33.8	
Effective Green, g (s)	18.8	9.8	9.8	9.0	4.9	4.9	55.9	48.2		36.0	33.8	
Actuated g/C Ratio	0.22	0.11	0.11	0.10	0.06	0.06	0.65	0.56		0.42	0.39	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	266	207	176	167	104	88	462	1002		263	696	
v/s Ratio Prot	c0.07	0.01		0.02	0.00		c0.14	c0.41		0.00	c0.33	
v/s Ratio Perm	c0.07		0.02	0.02		0.00	0.32			0.05		
v/c Ratio	0.64	0.09	0.18	0.35	0.09	0.02	0.71	0.74		0.13	0.84	
Uniform Delay, d1	29.4	34.3	34.6	35.8	38.6	38.4	15.3	14.3		15.2	23.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.2	0.2	0.5	1.3	0.4	0.1	4.9	2.9		0.2	8.6	
Delay (s)	34.7	34.5	35.1	37.1	38.9	38.5	20.2	17.2		15.4	32.4	
Level of Service	C	C	D	D	D	D	C	B		B	C	
Approach Delay (s)		34.9			37.7			18.1			31.5	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	27.5
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	6	45	46	8	20	49	900	29	14	666	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.89		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	1584		1736	1628		1736	1818		1736	1819	
Flt Permitted	0.74	1.00		0.72	1.00		0.28	1.00		0.16	1.00	
Satd. Flow (perm)	1349	1584		1320	1628		506	1818		296	1819	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	6	47	48	8	21	52	947	31	15	701	22
RTOR Reduction (vph)	0	42	0	0	19	0	0	1	0	0	1	0
Lane Group Flow (vph)	52	11	0	48	10	0	52	977	0	15	722	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.9	6.9		6.9	6.9		49.2	46.8		45.6	45.0	
Effective Green, g (s)	6.9	6.9		6.9	6.9		49.2	46.8		45.6	45.0	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.69	0.66		0.64	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	131	154		129	159		393	1202		203	1156	
v/s Ratio Prot		0.01			0.01		c0.00	c0.54		0.00	0.40	
v/s Ratio Perm	c0.04			0.04			0.09			0.05		
v/c Ratio	0.40	0.07		0.37	0.06		0.13	0.81		0.07	0.62	
Uniform Delay, d1	30.0	29.0		29.9	29.0		4.8	8.8		7.8	7.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	0.2		1.8	0.2		0.2	4.3		0.2	1.1	
Delay (s)	32.0	29.2		31.7	29.2		5.0	13.1		8.0	8.9	
Level of Service	C	C		C	C		A	B		A	A	
Approach Delay (s)		30.6			30.8			12.7			8.8	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	153	100	873	108	206	558
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1736	1553	1827	1553	1736	3471
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1736	1553	1827	1553	1736	3471
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	161	105	919	114	217	587
RTOR Reduction (vph)	0	89	0	56	0	0
Lane Group Flow (vph)	161	16	919	58	217	587
Turn Type		Perm		Perm	Split	
Protected Phases	2		8		1	1
Permitted Phases		2		8		
Actuated Green, G (s)	12.8	12.8	43.6	43.6	16.4	16.4
Effective Green, g (s)	12.8	12.8	43.6	43.6	16.4	16.4
Actuated g/C Ratio	0.15	0.15	0.51	0.51	0.19	0.19
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	257	230	923	785	330	660
v/s Ratio Prot	c0.09		c0.50		0.13	c0.17
v/s Ratio Perm		0.01		0.04		
v/c Ratio	0.63	0.07	1.00	0.07	0.66	0.89
Uniform Delay, d1	34.5	31.6	21.3	11.0	32.4	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	0.1	28.4	0.0	4.7	13.9
Delay (s)	39.2	31.7	49.6	11.0	37.0	47.9
Level of Service	D	C	D	B	D	D
Approach Delay (s)	36.3		45.4			45.0
Approach LOS	D		D			D

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	363	759	330	240	384	176	365	559	270	204	400	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	4988	1553	3367	4988	1553	3367	4988	1553	3367	4988	1553
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	4988	1553	3367	4988	1553	3367	4988	1553	3367	4988	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	382	799	347	253	404	185	384	588	284	215	421	260
RTOR Reduction (vph)	0	0	267	0	0	150	0	0	189	0	0	186
Lane Group Flow (vph)	382	799	80	253	404	35	384	588	95	215	421	74
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.7	25.4	25.4	13.3	21.0	21.0	17.7	36.8	36.8	12.0	31.1	31.1
Effective Green, g (s)	17.7	25.4	25.4	13.3	21.0	21.0	17.7	36.8	36.8	12.0	31.1	31.1
Actuated g/C Ratio	0.16	0.23	0.23	0.12	0.19	0.19	0.16	0.34	0.34	0.11	0.28	0.28
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	544	1157	360	409	957	298	544	1676	522	369	1417	441
v/s Ratio Prot	c0.11	c0.16		0.08	0.08		c0.11	c0.12		0.06	0.08	
v/s Ratio Perm			0.05			0.02			0.06			0.05
v/c Ratio	0.70	0.69	0.22	0.62	0.42	0.12	0.71	0.35	0.18	0.58	0.30	0.17
Uniform Delay, d1	43.4	38.5	34.1	45.7	38.9	36.6	43.4	27.4	25.7	46.4	30.7	29.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	1.8	0.3	2.8	0.3	0.2	4.2	0.6	0.8	2.3	0.5	0.8
Delay (s)	47.5	40.3	34.4	48.5	39.2	36.8	47.6	27.9	26.5	48.7	31.2	30.3
Level of Service	D	D	C	D	D	D	D	C	C	D	C	C
Approach Delay (s)		40.7			41.5			33.6			35.1	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	16.5
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	395	141	502	409	167	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.32	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	578	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	148	528	431	176	224
RTOR Reduction (vph)	0	116	0	0	0	152
Lane Group Flow (vph)	416	32	528	431	176	72
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	12.8	12.8	31.7	31.7	19.3	19.3
Effective Green, g (s)	12.8	12.8	31.7	31.7	19.3	19.3
Actuated g/C Ratio	0.21	0.21	0.53	0.53	0.32	0.32
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	740	331	583	1834	558	500
v/s Ratio Prot	0.12		c0.22	0.12	c0.10	
v/s Ratio Perm		0.02	c0.26			0.05
v/c Ratio	0.56	0.10	0.91	0.24	0.32	0.14
Uniform Delay, d1	21.1	19.0	10.4	7.6	15.4	14.5
Progression Factor	1.00	1.00	1.00	1.00	0.91	0.96
Incremental Delay, d2	1.0	0.1	17.6	0.1	1.4	0.6
Delay (s)	22.1	19.1	28.0	7.7	15.5	14.4
Level of Service	C	B	C	A	B	B
Approach Delay (s)	21.3			18.9	14.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	117	266	114	132	468	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1736	1553	1827	1553	1736	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.68	1.00
Satd. Flow (perm)	1736	1553	1827	1553	1242	1827
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	123	280	120	139	493	184
RTOR Reduction (vph)	0	236	0	43	0	0
Lane Group Flow (vph)	123	44	120	96	493	184
Turn Type		Perm		Perm	Perm	
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	9.5	9.5	41.5	41.5	41.5	41.5
Effective Green, g (s)	9.5	9.5	41.5	41.5	41.5	41.5
Actuated g/C Ratio	0.16	0.16	0.69	0.69	0.69	0.69
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	275	246	1264	1074	859	1264
v/s Ratio Prot	c0.07		0.07			0.10
v/s Ratio Perm		0.03		0.06	c0.40	
v/c Ratio	0.45	0.18	0.09	0.09	0.57	0.15
Uniform Delay, d1	22.9	21.9	3.1	3.0	4.7	3.2
Progression Factor	0.74	1.10	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.3	0.1	0.2	2.8	0.2
Delay (s)	17.9	24.5	3.2	3.2	7.5	3.4
Level of Service	B	C	A	A	A	A
Approach Delay (s)	22.5		3.2			6.4
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	38	647	432	115	183	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1736	1827	1827	1553
Flt Permitted	0.95	1.00	0.53	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	966	1827	1827	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	40	681	455	121	193	152
RTOR Reduction (vph)	0	243	0	0	0	52
Lane Group Flow (vph)	40	438	455	121	193	100
Turn Type		pt+ov	pm+pt			pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases			2			
Actuated Green, G (s)	12.6	28.7	38.4	38.4	22.3	39.4
Effective Green, g (s)	12.6	28.7	38.4	38.4	22.3	39.4
Actuated g/C Ratio	0.21	0.48	0.64	0.64	0.37	0.66
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	365	743	767	1169	679	1020
v/s Ratio Prot	0.02	c0.28	0.11	0.07	0.11	0.06
v/s Ratio Perm			c0.26			
v/c Ratio	0.11	0.59	0.59	0.10	0.28	0.10
Uniform Delay, d1	19.2	11.4	5.6	4.2	13.2	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.3	1.2	0.2	1.0	0.0
Delay (s)	19.3	12.6	6.8	4.3	14.3	3.8
Level of Service	B	B	A	A	B	A
Approach Delay (s)	13.0			6.3	9.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.5
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations						
Volume (vph)	607	127	380	386	97	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	*0.95	1.00	1.00	*0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	1736	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	639	134	400	406	102	751
RTOR Reduction (vph)	0	90	0	102	0	19
Lane Group Flow (vph)	639	44	400	304	102	732
Turn Type		Perm		custom		pt+ov
Protected Phases	2		1	6	8	1 8
Permitted Phases		2	1			
Actuated Green, G (s)	32.5	32.5	37.9	74.9	16.1	58.5
Effective Green, g (s)	32.5	32.5	37.9	74.9	16.1	58.5
Actuated g/C Ratio	0.32	0.32	0.38	0.75	0.16	0.58
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1128	505	658	2600	279	909
v/s Ratio Prot	c0.18		0.23	0.09	0.06	c0.47
v/s Ratio Perm		0.03				
v/c Ratio	0.57	0.09	0.61	0.12	0.37	0.81
Uniform Delay, d1	27.9	23.4	25.1	3.5	37.4	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.3	1.6	0.1	0.8	5.3
Delay (s)	30.0	23.8	26.7	3.5	38.2	21.6
Level of Service	C	C	C	A	D	C
Approach Delay (s)	28.9		15.0		23.5	
Approach LOS	C		B		C	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	409	167	213	395	141	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.35	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	633	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	431	176	224	416	148	528
RTOR Reduction (vph)	0	131	0	0	0	412
Lane Group Flow (vph)	431	45	224	416	148	116
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	12.3	12.3	26.7	26.7	10.6	10.6
Effective Green, g (s)	12.3	12.3	26.7	26.7	10.6	10.6
Actuated g/C Ratio	0.25	0.25	0.55	0.55	0.22	0.22
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	884	395	553	1919	381	341
v/s Ratio Prot	c0.12		c0.07	0.12	c0.09	
v/s Ratio Perm		0.03	0.15			0.07
v/c Ratio	0.49	0.11	0.41	0.22	0.39	0.34
Uniform Delay, d1	15.3	13.8	6.0	5.5	16.1	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.5	0.1	0.7	0.6
Delay (s)	15.7	13.9	6.4	5.5	16.7	16.5
Level of Service	B	B	A	A	B	B
Approach Delay (s)	15.2			5.9	16.5	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	16.5
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	144	432	647	183	115	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1736	1553	1736	1827	1827	1553
Flt Permitted	0.95	1.00	0.60	1.00	1.00	1.00
Satd. Flow (perm)	1736	1553	1097	1827	1827	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	152	455	681	193	121	40
RTOR Reduction (vph)	0	250	0	0	0	15
Lane Group Flow (vph)	152	205	681	193	121	25
Turn Type		pt+ov	pm+pt			pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases			2			
Actuated Green, G (s)	13.5	43.3	71.6	71.6	41.8	60.8
Effective Green, g (s)	13.5	43.3	71.6	71.6	41.8	60.8
Actuated g/C Ratio	0.14	0.45	0.75	0.75	0.43	0.63
Clearance Time (s)	5.5		5.5	5.5	5.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	244	700	979	1361	795	983
v/s Ratio Prot	c0.09	0.13	c0.18	0.11	0.07	0.02
v/s Ratio Perm			c0.34			
v/c Ratio	0.62	0.29	0.70	0.14	0.15	0.03
Uniform Delay, d1	38.9	16.7	5.5	3.5	16.4	6.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.2	2.2	0.2	0.4	0.0
Delay (s)	43.8	16.9	7.7	3.7	16.8	6.6
Level of Service	D	B	A	A	B	A
Approach Delay (s)	23.7			6.8	14.3	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	132	468	175	117	266	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1736	1553	1827	1553	1736	1827
Flt Permitted	0.95	1.00	1.00	1.00	0.64	1.00
Satd. Flow (perm)	1736	1553	1827	1553	1172	1827
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	139	493	184	123	280	120
RTOR Reduction (vph)	0	391	0	47	0	0
Lane Group Flow (vph)	139	102	184	76	280	120
Turn Type		Perm		Perm	Perm	
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	10.3	10.3	30.7	30.7	30.7	30.7
Effective Green, g (s)	10.3	10.3	30.7	30.7	30.7	30.7
Actuated g/C Ratio	0.21	0.21	0.61	0.61	0.61	0.61
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	358	320	1122	954	720	1122
v/s Ratio Prot	c0.08		0.10			0.07
v/s Ratio Perm		0.07		0.05	c0.24	
v/c Ratio	0.39	0.32	0.16	0.08	0.39	0.11
Uniform Delay, d1	17.1	16.9	4.1	3.9	4.9	4.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.6	0.3	0.2	1.6	0.2
Delay (s)	17.8	17.4	4.5	4.1	6.5	4.2
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.5		4.3			5.8
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	WB-L	WB-T	EB-L	EB-T	SB-L	SB-R
Movement	NBL	NBR	SEL	SER	SWL	SWR
Lane Configurations						
Volume (vph)	386	97	713	607	127	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	*0.95	1.00	1.00	*0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3471	1553	1736	3471	1736	1553
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3471	1553	1736	3471	1736	1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	406	102	751	639	134	400
RTOR Reduction (vph)	0	83	0	164	0	15
Lane Group Flow (vph)	406	19	751	475	134	385
Turn Type		Perm		custom		pt+ov
Protected Phases	2		1	6	8	1 8
Permitted Phases		2	1			
Actuated Green, G (s)	14.8	14.8	39.9	58.7	12.3	56.2
Effective Green, g (s)	14.8	14.8	39.9	58.7	12.3	56.2
Actuated g/C Ratio	0.19	0.19	0.51	0.74	0.16	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	650	291	877	2579	270	1105
v/s Ratio Prot	c0.12		c0.43	0.14	c0.08	0.25
v/s Ratio Perm		0.01				
v/c Ratio	0.62	0.07	0.86	0.18	0.50	0.35
Uniform Delay, d1	29.5	26.4	17.1	3.0	30.5	4.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	8.2	0.0	1.4	0.2
Delay (s)	31.4	26.5	25.3	3.1	32.0	4.6
Level of Service	C	C	C	A	C	A
Approach Delay (s)	30.4		15.1		11.4	
Approach LOS	C		B		B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX E

Opening Year (2015) Analysis of Arterial Segments

Arterial Level of Service: NB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Hidden Harbour	II	45	71.5	5.9	77.4	0.89	41.6	A
Cross Creek Parkway	II	45	116.2	11.6	127.8	1.45	40.9	A
US 301	II	45	113.4	49.5	162.9	1.42	31.3	B
Total	II		301.1	67.0	368.1	3.76	36.8	A

Arterial Level of Service: SB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Old Tampa Road	II	45	113.4	44.5	157.9	1.42	32.3	B
River Isles	II	45	116.2	9.3	125.5	1.45	41.7	A
UMRR	II	45	71.5	28.5	100.0	0.89	32.2	B
Total	II		301.1	82.3	383.4	3.76	35.4	A

Arterial Level of Service: NE UMRR

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
UMRR	II	45	156.0	4.3	160.3	1.95	43.8	A
Total	II		156.0	4.3	160.3	1.95	43.8	A

Arterial Level of Service: SB UMRR

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Ft. Hamer Road	II	45	42.3	38.8	81.1	0.47	20.6	D
SR 64	II	45	156.0	32.3	188.3	1.95	37.3	A
Total	II		198.3	71.1	269.4	2.41	32.3	B

Arterial Level of Service: NB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Hidden Harbour	II	45	71.1	11.9	83.0	0.89	38.6	A
Cross Creek Parkway	II	45	116.2	17.6	133.8	1.45	39.1	A
US 301	II	45	113.4	20.8	134.2	1.42	38.0	A
Total	II		300.7	50.3	351.0	3.76	38.6	A

Arterial Level of Service: SB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Old Tampa Road	II	45	113.4	37.1	150.5	1.42	33.9	B
River Isles	II	45	116.2	11.1	127.3	1.45	41.1	A
UMRR	II	45	71.1	49.3	120.4	0.89	26.6	C
Total	II		300.7	97.5	398.2	3.76	34.0	B

Arterial Level of Service: NE UMRR

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
UMRR	II	45	156.0	3.1	159.1	1.95	44.1	A
Total	II		156.0	3.1	159.1	1.95	44.1	A

Arterial Level of Service: SB UMRR

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Ft. Hamer Road	II	45	42.4	44.8	87.2	0.47	19.2	D
SR 64	II	45	156.0	33.4	189.4	1.95	37.1	A
Total	II		198.4	78.2	276.6	2.42	31.4	B

Arterial Level of Service: NB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	42.7	3.9	46.6	0.49	37.5	A
US 301	II	45	63.8	16.9	80.7	0.80	35.6	A
Total	II		106.5	20.8	127.3	1.28	36.3	A

Arterial Level of Service: SB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	63.8	5.8	69.6	0.80	41.3	A
Total	II		63.8	5.8	69.6	0.80	41.3	A

Arterial Level of Service: EB Golf Course Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Rye Road	II	45	281.2	23.1	304.3	3.52	41.6	A
Total	II		281.2	23.1	304.3	3.52	41.6	A

Arterial Level of Service: WB Golf Course Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Ft. Hamer Road	II	45	281.2	21.0	302.2	3.52	41.9	A
Total	II		281.2	21.0	302.2	3.52	41.9	A

Arterial Level of Service: NB Rye Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	473.9	5.8	479.7	5.93	44.5	A
Total	II		473.9	5.8	479.7	5.93	44.5	A

Arterial Level of Service: SW Rye Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	26.4	17.0	43.4	0.25	21.0	D
SR64	II	45	473.9	41.7	515.6	5.93	41.4	A
Total	II		500.3	58.7	559.0	6.18	39.8	A

Arterial Level of Service: NB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	24.1	5.8	29.9	0.23	27.9	C
US 301	II	45	63.8	20.6	84.4	0.80	34.0	B
Total	II		87.9	26.4	114.3	1.03	32.4	B

Arterial Level of Service: SB Ft. Hamer Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	63.8	5.7	69.5	0.80	41.3	A
Total	II		63.8	5.7	69.5	0.80	41.3	A

Arterial Level of Service: EB Golf Course Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Rye Road	II	45	281.2	50.5	331.7	3.52	38.2	A
Total	II		281.2	50.5	331.7	3.52	38.2	A

Arterial Level of Service: WB Golf Course Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Ft. Hamer Road	II	45	281.2	18.9	300.1	3.52	42.2	A
Total	II		281.2	18.9	300.1	3.52	42.2	A

Arterial Level of Service: NB Rye Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	473.9	4.2	478.1	5.93	44.6	A
Total	II		473.9	4.2	478.1	5.93	44.6	A

Arterial Level of Service: SW Rye Road

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Golf Course Road	II	45	26.4	21.4	47.8	0.25	19.1	D
SR64	II	45	473.9	42.1	516.0	5.93	41.3	A
Total	II		500.3	63.5	563.8	6.18	39.5	A

APPENDIX F

Opening Year (2015) Storage Lane Lengths
Fort Hamer Alternative

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	465	121	745	575	309	352
v/c Ratio	0.78	0.33	0.92	0.26	0.79	0.57
Control Delay	47.5	9.9	36.3	7.2	49.5	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	9.9	36.3	7.2	49.5	7.4
Queue Length 50th (ft)	148	0	344	69	181	0
Queue Length 95th (ft)	#227	49	#610	100	#287	71
Internal Link Dist (ft)	15213			920	4196	
Turn Bay Length (ft)		500	750		500	
Base Capacity (vph)	659	393	914	2569	489	690
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.31	0.82	0.22	0.63	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	575	309	352	465	121	745
v/c Ratio	0.66	0.50	0.67	0.24	0.25	0.89
Control Delay	31.4	7.2	19.4	10.7	20.8	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	7.2	19.4	10.7	20.8	20.3
Queue Length 50th (ft)	113	0	75	47	41	66
Queue Length 95th (ft)	#263	71	#236	127	84	251
Internal Link Dist (ft)	15213			920	4196	
Turn Bay Length (ft)		500	750		500	
Base Capacity (vph)	1104	704	661	2453	1139	1211
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.44	0.53	0.19	0.11	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	89	113	533	105	101	719
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	94	119	561	111	106	757
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1531	561			672	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1531	561			672	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	17	77			88	
cM capacity (veh/h)	112	523			910	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	213	561	111	106	757
Volume Left	94	0	0	106	0
Volume Right	119	0	111	0	0
cSH	255	1700	1700	910	1700
Volume to Capacity	0.83	0.33	0.07	0.12	0.45
Queue Length 95th (ft)	166	0	0	10	0
Control Delay (s)	58.5	0.0	0.0	9.5	0.0
Lane LOS	F			A	
Approach Delay (s)	58.5	0.0		1.2	
Approach LOS	F				

Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	101	722	89	113	515
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	79	106	760	94	119	542
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1540	760			854	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1540	760			854	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	26	74			85	
cM capacity (veh/h)	106	403			777	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	185	760	94	119	542
Volume Left	79	0	0	119	0
Volume Right	106	0	94	0	0
cSH	250	1700	1700	777	1700
Volume to Capacity	0.74	0.45	0.06	0.15	0.32
Queue Length 95th (ft)	131	0	0	13	0
Control Delay (s)	53.2	0.0	0.0	10.5	0.0
Lane LOS	F			B	
Approach Delay (s)	53.2	0.0		1.9	
Approach LOS	F				

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	46	135	648	53	117	900
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	48	142	682	56	123	947
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1904	710			738	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1904	710			738	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	24	67			86	
cM capacity (veh/h)	64	430			859	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	191	738	123	947
Volume Left	48	0	123	0
Volume Right	142	56	0	0
cSH	252	1700	859	1700
Volume to Capacity	0.76	0.43	0.14	0.56
Queue Length 95th (ft)	136	0	12	0
Control Delay (s)	52.5	0.0	9.9	0.0
Lane LOS	F		A	
Approach Delay (s)	52.5	0.0	1.1	
Approach LOS	F			

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	53	117	900	67	135	648
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	56	123	947	71	142	682
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		12				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1949	983			1018	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1949	983			1018	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	59			79	
cM capacity (veh/h)	55	299			674	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	179	1018	142	682
Volume Left	56	0	142	0
Volume Right	123	71	0	0
cSH	177	1700	674	1700
Volume to Capacity	1.01	0.60	0.21	0.40
Queue Length 95th (ft)	208	0	20	0
Control Delay (s)	93.6	0.0	11.8	0.0
Lane LOS	F		B	
Approach Delay (s)	93.6	0.0	2.0	
Approach LOS	F			

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Group Flow (vph)	114	217	105	919	587	161
v/c Ratio	0.46	0.53	0.29	0.89	0.83	0.22
Control Delay	39.8	10.7	27.9	15.1	33.8	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	10.7	27.9	15.1	33.8	4.4
Queue Length 50th (ft)	46	0	41	11	202	0
Queue Length 95th (ft)	119	63	92	#210	#559	40
Internal Link Dist (ft)	2376		728		1100	
Turn Bay Length (ft)	300		300			300
Base Capacity (vph)	433	550	730	1169	903	886
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.39	0.14	0.79	0.65	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Group Flow (vph)	161	105	217	587	919	114
v/c Ratio	0.62	0.33	0.73	0.78	1.02	0.13
Control Delay	44.8	9.9	49.3	11.4	59.1	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	9.9	49.3	11.4	59.1	3.1
Queue Length 50th (ft)	83	0	111	0	~556	0
Queue Length 95th (ft)	146	43	#208	106	#826	27
Internal Link Dist (ft)	2378		721		1100	
Turn Bay Length (ft)	300		300			300
Base Capacity (vph)	341	390	341	777	900	860
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.27	0.64	0.76	1.02	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX G

Opening Year (2015) Storage Lane Lengths
Rye Road Alternative

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	416	148	528	431	176	224
v/c Ratio	0.56	0.33	0.91	0.24	0.31	0.34
Control Delay	23.8	6.0	32.7	7.6	16.9	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	6.0	32.7	7.6	16.9	4.5
Queue Length 50th (ft)	70	0	115	39	51	0
Queue Length 95th (ft)	102	36	#257	53	106	49
Internal Link Dist (ft)	3927			966	4133	
Turn Bay Length (ft)		500	750		500	
Base Capacity (vph)	926	523	585	2025	560	652
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.28	0.90	0.21	0.31	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	431	176	224	416	148	528
v/c Ratio	0.50	0.34	0.41	0.22	0.39	0.70
Control Delay	18.7	5.6	8.6	6.3	20.6	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	5.6	8.6	6.3	20.6	7.9
Queue Length 50th (ft)	51	0	26	25	35	0
Queue Length 95th (ft)	111	40	74	60	89	66
Internal Link Dist (ft)	3927			966	4133	
Turn Bay Length (ft)		500	750		500	
Base Capacity (vph)	1657	834	780	3199	1522	1427
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.29	0.13	0.10	0.37

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	123	280	120	139	493	184
v/c Ratio	0.45	0.58	0.10	0.12	0.57	0.15
Control Delay	21.0	8.4	3.9	1.2	11.6	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	8.4	3.9	1.2	11.6	5.8
Queue Length 50th (ft)	41	32	11	0	95	22
Queue Length 95th (ft)	m59	55	30	15	m142	m44
Internal Link Dist (ft)	7747		2482			4133
Turn Bay Length (ft)		500		500	500	
Base Capacity (vph)	466	622	1263	1117	859	1263
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.45	0.10	0.12	0.57	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	139	493	184	123	280	120
v/c Ratio	0.39	0.69	0.16	0.12	0.39	0.11
Control Delay	18.9	7.5	5.8	2.1	8.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	7.5	5.8	2.1	8.3	5.7
Queue Length 50th (ft)	36	0	18	0	32	11
Queue Length 95th (ft)	61	51	57	19	107	40
Internal Link Dist (ft)	7747		1143			4133
Turn Bay Length (ft)		500		500	500	
Base Capacity (vph)	608	864	1122	1002	720	1122
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.57	0.16	0.12	0.39	0.11

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	123	280	120	139	493	184
v/c Ratio	0.45	0.58	0.10	0.12	0.57	0.15
Control Delay	21.0	8.4	3.9	1.2	11.6	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	8.4	3.9	1.2	11.6	5.8
Queue Length 50th (ft)	41	32	11	0	95	22
Queue Length 95th (ft)	m59	55	30	15	m142	m44
Internal Link Dist (ft)	7747		2482			4133
Turn Bay Length (ft)		500		500	500	
Base Capacity (vph)	466	622	1263	1117	859	1263
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.45	0.10	0.12	0.57	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	139	493	184	123	280	120
v/c Ratio	0.39	0.69	0.16	0.12	0.39	0.11
Control Delay	18.9	7.5	5.8	2.1	8.3	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	7.5	5.8	2.1	8.3	5.7
Queue Length 50th (ft)	36	0	18	0	32	11
Queue Length 95th (ft)	61	51	57	19	107	40
Internal Link Dist (ft)	7747		1143			4133
Turn Bay Length (ft)		500		500	500	
Base Capacity (vph)	608	864	1122	1002	720	1122
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.57	0.16	0.12	0.39	0.11

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	40	681	455	121	193	152
v/c Ratio	0.11	0.69	0.59	0.10	0.28	0.14
Control Delay	23.1	7.7	10.4	5.8	17.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	7.7	10.4	5.8	17.0	1.1
Queue Length 50th (ft)	15	69	69	15	54	0
Queue Length 95th (ft)	m30	111	150	38	103	14
Internal Link Dist (ft)	5531			8591	1259	
Turn Bay Length (ft)		500	500			500
Base Capacity (vph)	506	998	775	1168	679	1186
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.68	0.59	0.10	0.28	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	152	455	681	193	121	40
v/c Ratio	0.63	0.48	0.70	0.14	0.15	0.04
Control Delay	50.5	2.7	10.0	4.2	21.4	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	2.7	10.0	4.2	21.4	3.8
Queue Length 50th (ft)	89	0	145	28	43	0
Queue Length 95th (ft)	153	37	258	56	107	16
Internal Link Dist (ft)	5531			8591	1259	
Turn Bay Length (ft)		500	500			500
Base Capacity (vph)	317	1201	1134	1362	795	1061
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.38	0.60	0.14	0.15	0.04

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	98	41	58	449	770	62
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	103	43	61	473	811	65
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1405	811	876			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1405	811	876			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	26	89	92			
cM capacity (veh/h)	140	377	762			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	146	61	473	811	65
Volume Left	103	61	0	0	0
Volume Right	43	0	0	0	65
cSH	198	762	1700	1700	1700
Volume to Capacity	0.74	0.08	0.28	0.48	0.04
Queue Length 95th (ft)	121	7	0	0	0
Control Delay (s)	62.1	10.1	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	62.1	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	62	58	41	770	449	98
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	65	61	43	811	473	103
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		20				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1369	473	576			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1369	473	576			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	57	90	96			
cM capacity (veh/h)	153	587	988			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	126	43	811	473	103
Volume Left	65	43	0	0	0
Volume Right	61	0	0	0	103
cSH	296	988	1700	1700	1700
Volume to Capacity	0.43	0.04	0.48	0.28	0.06
Queue Length 95th (ft)	51	3	0	0	0
Control Delay (s)	29.0	8.8	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	29.0	0.4		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

	WB-L	WB-R	EB-L	EB-R	SB-L	SB-R
Lane Group	NBL	NBR	SEL	SER	SWL	SWR
Lane Group Flow (vph)	639	134	400	406	102	751
v/c Ratio	0.57	0.23	0.61	0.15	0.37	0.81
Control Delay	31.9	6.1	28.4	0.5	41.7	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	6.1	28.4	0.5	41.7	22.5
Queue Length 50th (ft)	187	0	188	0	59	297
Queue Length 95th (ft)	254	44	273	10	110	440
Internal Link Dist (ft)	1747		2649		15683	
Turn Bay Length (ft)	500	500	750			500
Base Capacity (vph)	1127	595	755	2702	279	1012
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.23	0.53	0.15	0.37	0.74

Intersection Summary

Lane Group	NBL	NBR	SEL	SER	SWL	SWR
Lane Group Flow (vph)	406	102	751	639	134	400
v/c Ratio	0.64	0.28	0.86	0.23	0.50	0.36
Control Delay	37.7	9.9	29.3	0.5	42.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	9.9	29.3	0.5	42.1	4.7
Queue Length 50th (ft)	100	0	307	0	63	53
Queue Length 95th (ft)	179	45	543	11	139	100
Internal Link Dist (ft)	1747		2649		15683	
Turn Bay Length (ft)	500	500	750			500
Base Capacity (vph)	835	451	1239	3170	371	1347
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.23	0.61	0.20	0.36	0.30

Intersection Summary

APPENDIX H

Design Year (2035) Art Plan Analysis

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	URS	**Arterial Name**	UMRR	**Study Period**	K100
Date Prepared	9/10/2012 9:36:57 AM	**From**	SR 64	**Modal Analysis**	Auto Only
Agency		**To**	UMRR	**Program**	ARTPLAN 2009
Area Type	Other Urbanized	**Peak Direction**	Northbound	**Version Date**	12/12/10
Arterial Class	1				
File Name	C:\Documents and Settings\bob_johnson\Local Settings\Temp\preview.xml				
User Notes	2-Lane Collector Rd.				

Arterial Data

K	0.1	**PHF**	0.925	**Control Type**	Actuated
D	0.6	**% Heavy Vehicles**	2	**Base Sat. Flow Rate**	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to UMRR)	120	0.38	3	1	15	25	Yes	2	470	0.25	Yes	8345	14500	870	1	50	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to UMRR)	564	1339	1.109	89.94	F	0.10	25.84	D

Arterial Length	**1.5805**	**Weighted g/C**	**0.38**	**FFS Delay**	**106.38**	**Threshold Delay**	**0.00**	**Auto Speed**	**###**	**Auto LOS**	**###**

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E

Lanes	Annual Average Daily Traffic				
2	**	11400	14200	***	***
*	**	11400	14200	***	***

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	URS	**Arterial Name**	UMRR	**Study Period**	K100
Date Prepared	9/10/2012 9:36:57 AM	**From**	SR 64	**Modal Analysis**	Auto Only
Agency		**To**	US301	**Program**	ARTPLAN 2009
Area Type	Other Urbanized	**Peak Direction**	Northbound	**Version Date**	12/12/10
Arterial Class	1				
File Name	C:\Documents and Settings\bob_johnson\Local Settings\Temp\preview.xml				
User Notes	2-Lane Collector Rd.				

Arterial Data

K	0.1	**PHF**	0.925	**Control Type**	Actuated
D	0.6	**% Heavy Vehicles**	2	**Base Sat. Flow Rate**	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to UMRR)	90	0.56	3	1	0	11	No				Yes	8375	19500	1170	1	50	None
2 (to Riv Isles)	100	0.7	3	1	5	3	Yes	1	300	0.15	No	3920	17400	1044	1	50	None
3 (to Old Tampa)	101	0.6	3	1	30	8	Yes	1	300	0.15	No	7820	17300	1038	1	50	None
4 (to US301)	100	0.55	3	1	14	45	Yes	1	300	0.25	Yes	7485	14500	870	1	50	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to UMRR)	1126	1666	1.206	113.98	F	0.00	23.20	D
2 (to Riv Isles)	1072	1739	0.881	12.53	B	0.12	35.37	B
3 (to Old Tampa)	786	1689	0.775	16.18	B	#	38.08	B
4 (to US301)	386	840	0.835	25.92	C	0.30	35.70	B

Arterial Length	5.2273	Weighted g/C	##	FFS Delay	228.26	Threshold Delay	0.00	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	**Annual Average Daily Traffic**				
2	8400	16700	17400	***	***
4					
6					
8					
*	8400	16700	17400	***	***

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

DEPARTMENT OF HOMELAND SECURITY
U.S. COAST GUARD FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

PROPOSED NEW BRIDGE ACROSS THE MANATEE RIVER, MILE 15.0,
AT PARRISH, MANATEE COUNTY, FLORIDA

APPENDIX C

CULTURAL RESOURCE ASSESSMENT SURVEY

JUNE 2011

EXECUTIVE SUMMARY

A cultural resource assessment survey (CRAS) was conducted for the Fort Hamer Bridge EIS project in Manatee County, Florida. The purpose was to identify any cultural resources within the project APE and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). This CRAS report was completed in May of 2011 and is based on field survey and data from previous cultural resource assessment surveys within and adjacent to the project APEs (ACI 2001a, 2005a, 2006a, 2007, 2008, 2010a, 2010b). This methodology/compilation of data was discussed and approved by the Review and Compliance Section of the Florida Division of Historic Resources (FDHR) (Kammerer 2011).

The Fort Hamer Bridge EIS project is comprised of two distinct areas of potential effects (APE): the Fort Hamer Bridge APE and the Rye Road APE. The limits of the Fort Hamer Bridge APE extend from approximately 600 feet (ft) north of Waterlefe Boulevard on Upper Manatee River Road to 2,500 ft south of Mulholland Road on Fort Hamer Road and includes pond sites. The limits of the Rye Road APE extend from SR 64 along Rye Road to Golf Course Road, Golf Course Road from Rye Road to Upper Manatee River Road, and Upper Manatee River Road from Golf Course Road to US 301. No final pond sites have been selected for this APE.

Archaeological background research, including a review of the Florida Master Site File (FMSF), the NRHP and previous surveys (ACI 2001a, 2005a, 2006a, 2007, 2008, 2010a, 2010b) indicated that although four archaeological sites were recorded within and immediately adjacent to the respective APEs, the location of only one potentially NRHP-eligible resource, the Fort Hamer Site (8MA315), is recorded partially within the Fort Hamer Bridge APE.

Fort Hamer Bridge APE: As a result of the 2010b archaeological field survey, which included visual reconnaissance and systematic subsurface shovel testing, no evidence of 8MA315 was found. This result is in keeping with five previous Phase I and II archaeological investigations conducted within and adjacent to the archaeological APE (Janus 1998a, 1998b; ACI 2001a, 2005a, 2007); also the 2010 field survey found no new archaeological resources.

Historical background research for the Fort Hamer Bridge APE, including a review of the FMSF and the NRHP, indicated that no historic structures were previously recorded within the APE and none was anticipated. As a result of the field survey, none was found.

Rye Road APE: As a result of background research, previous field surveys (ACI 2001a, 2005a, 2006a, 2007, 2008, 2010a) and a visual reconnaissance in 2011, no NRHP-listed or eligible resources are located in the Rye Road APE. However, there are three previously recorded archaeological sites (8MA715, 8MA1343, 8MA1344) which have been determined not eligible for listing in the NRHP by the State Historic Preservation Office (SHPO) (Gaske 2004). Nonetheless, the historic Mitchellville Cemetery (8MA1343), which based on a historic plat and genealogical records may extend into the Rye Road APE, is of concern. The SHPO wrote that "should construction activities occur within 20 meters of the legal boundaries of 8MA1343, a professional archaeologist should monitor the construction activities since burials often occur outside boundaries of historic cemeteries" (Gaske 2004).

Fifteen historic resources are recorded within the Rye Road APE (ACI 2001a, 2005a, 2006a, 2007, 2008, 2010a). The SHPO determined that 10 of these are not eligible for listing in the NRHP; and five other structures have not been reviewed by the SHPO, but based on the professional opinion of the recorders, none is considered eligible for the NRHP (ACI 2005a).

Based on these results, the proposed undertaking will have no effect on any resources listed, determined eligible, or potentially eligible for listing in the NRHP within the project APEs. However, a portion of the historic Mitchellville Cemetery may be impacted by the proposed undertaking. Finally, no underwater archaeology was conducted in the Manatee River within the Fort Hamer Bridge APE.

TABLE OF CONTENTS

LIST OF FIGURES, TABLES AND PHOTOGRAPHS

Figure

Table

Photo

1.0 INTRODUCTION

1.1 Project Overview

Manatee County (the County) has prepared a Draft Environmental Impact Statement (DEIS), in conjunction with the United States Coast Guard (USCG), to document a study of proposed improvements to north/south traffic movements in eastern Manatee County, Florida, and evaluate the potential impacts associated with those improvements. The project area is shown in Figure 1.1. The objective of the transportation study is to identify the type, conceptual design, and location of improvements necessary to provide additional capacity for the projected north/south travel demand.

1.2 Project Description

The widening and linking of Upper Manatee River Road with Fort Hamer Road, via construction of a new bridge across the Manatee River, will result in improved traffic flow, improved emergency response time and coverage, improved hurricane evacuation flow, increased safety, improved air quality, and provide an alternative to I-75 for north/south travelers. Bicycle lanes and sidewalks will be provided along the corridor and across the river on the bridge to accommodate those forms of transportation. The proposed action is expected to provide some relief to the existing congestion on I-75, particularly between SR 64 and US 301, until such time that separate planned improvements to I-75 can be made. The new bridge will provide county residents an additional emergency evacuation route to the north. A reduction of present congestion on local roads and I-75 will result in a net improvement in localized air quality and a more efficient use of energy resources. The proposed action is consistent with Manatee County's 2025 LRTP and the adopted County Comprehensive Plan.

1.3 Alternatives Considered

For the purposes of this DEIS, there are two (2) build alternatives that are being presented and will be evaluated (Figure 1.1).

- **Fort Hamer Bridge Alternative –** a two-lane, mid-level, fixed span bridge connecting the two-lane Upper Manatee River Road on the south to the two-lane Fort Hamer Road on the north (Figures 1.2 and 1.3). The length of this alternative is approximately 1.2 miles.

- **Rye Road Alternative –** a two lane, low-level, fixed span bridge that would increase the current crossing capacity from two to four lanes. This additional capacity would require the widening of Rye Road from SR 64 to Golf Course Road from two to four lanes, Golf Course Road from Rye Road to Fort Hamer Road from two to four lanes and Fort Hamer Road from two to four lanes from Golf Course Road to US 301 (Figures 1.4 and 1.5). The length of this alternative is approximately 10.2 miles.

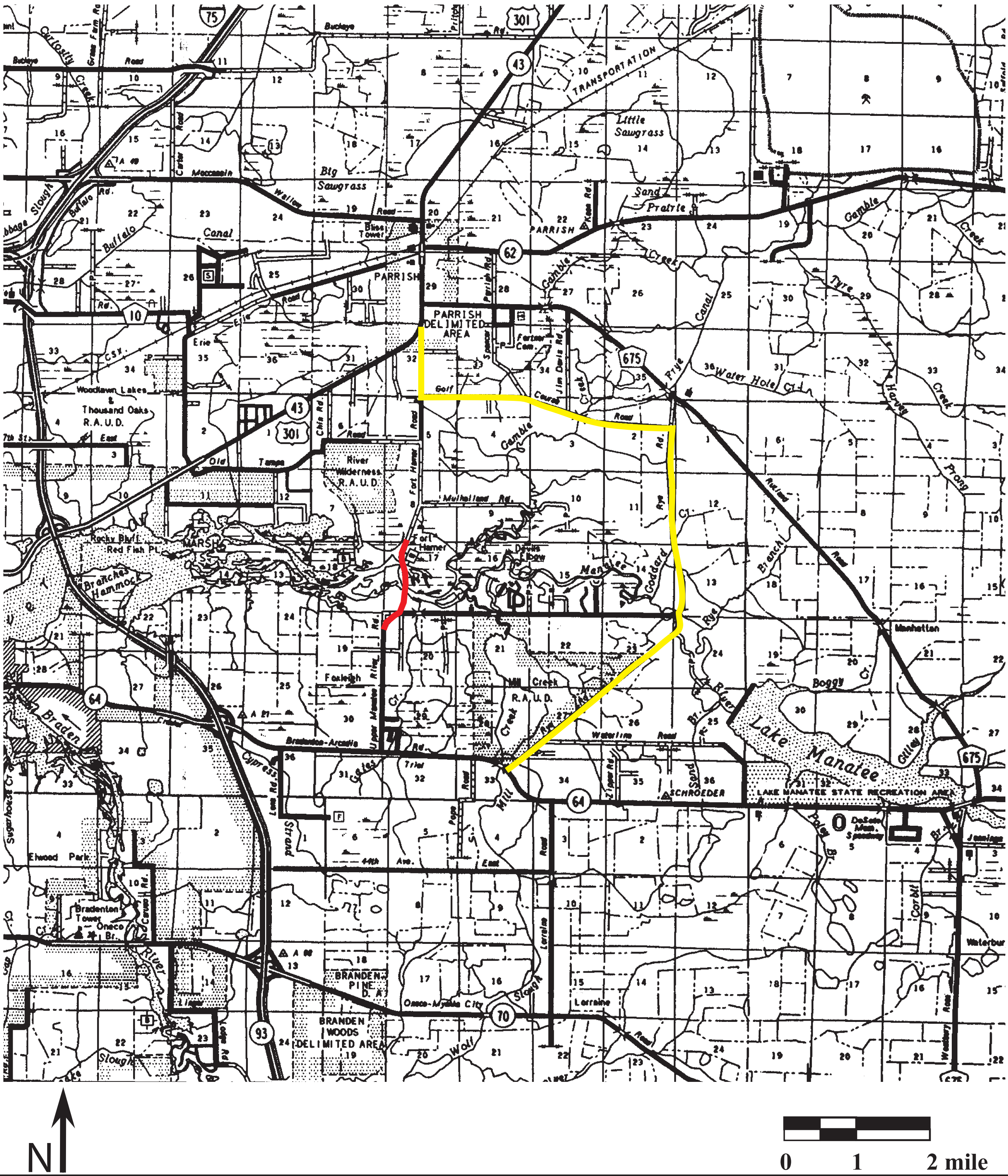


Figure 1.1. Location of the Fort Hamer Bridge EIS project, Townships 33 and 34 South, Range 19 East (State Mapping Office 1989). Red indicates the Fort Hamer Road segment and yellow indicates the Rye Road segment

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

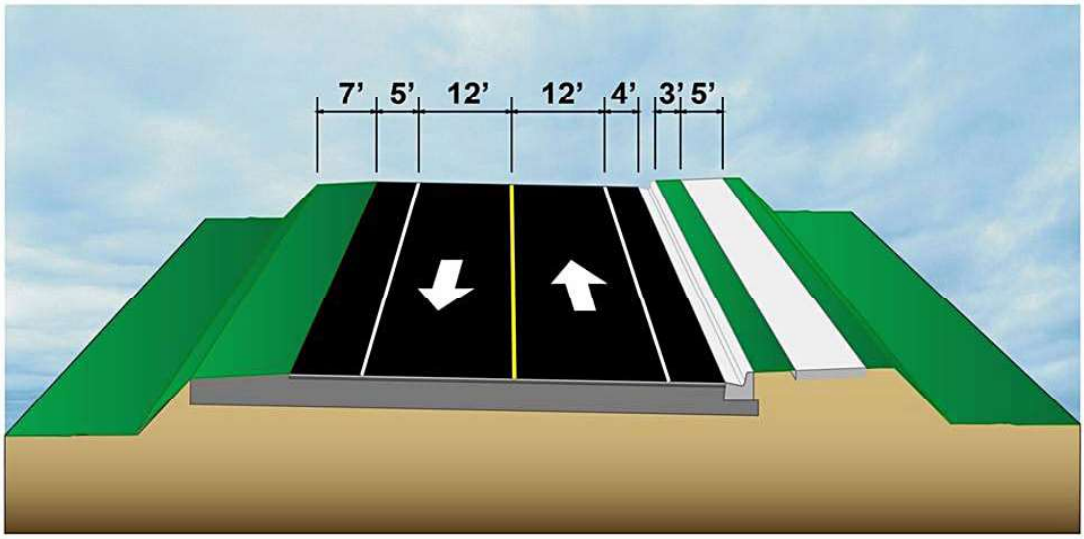


Figure 1.2. Two-lane typical section for Fort Hamer Road.

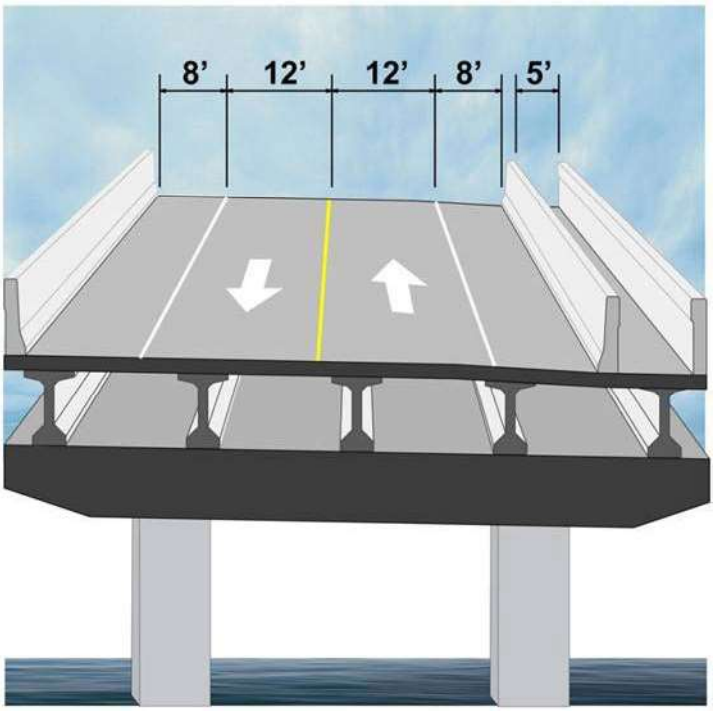


Figure 1.3. Two-lane typical section for the fixed span bridge at Fort Hamer Road.

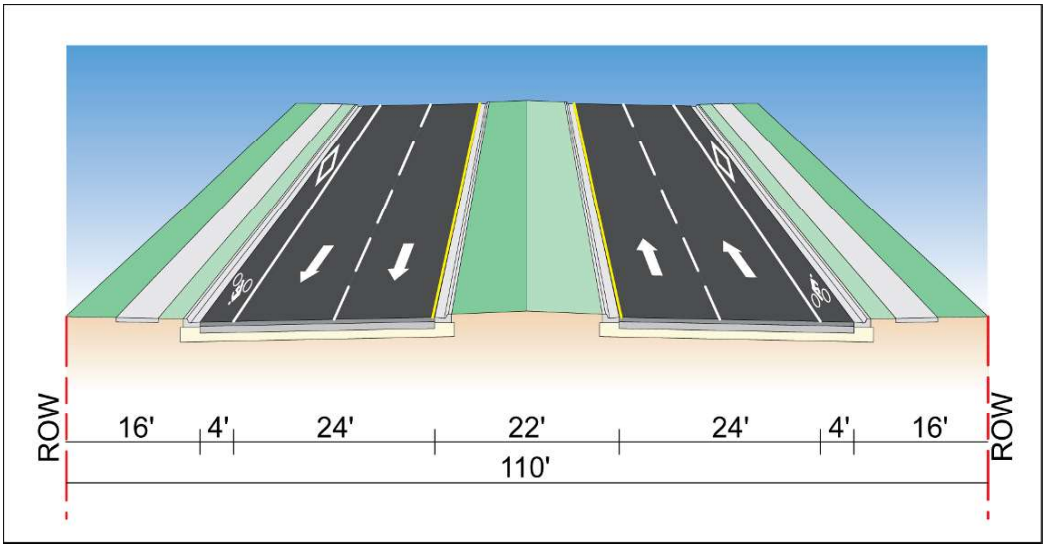


Figure 1.4. Four-lane typical section for Rye Road.

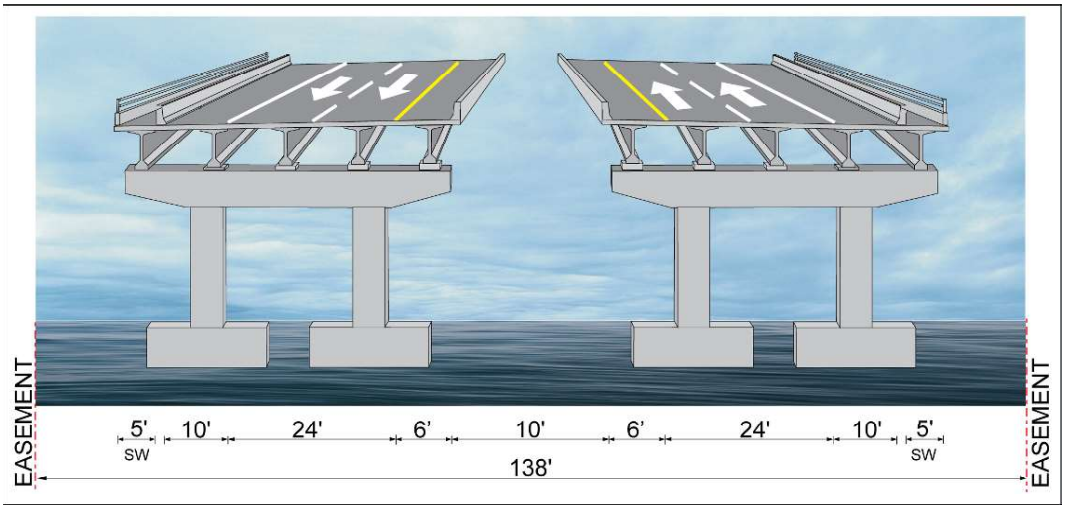


Figure 1.5. Two-lane typical section for the fixed span bridge at Rye Road.

1.4 Purpose

The purpose of the CRAS was to locate and identify any prehistoric and historic period archaeological sites and historic structures located within the project's terrestrial APE, and to assess their significance in terms of eligibility for listing in the NRHP.

The historical/architectural and archaeological surveys for the Fort Hamer APE were conducted in April and May of 2010. Field work for the Rye Road APE was conducted during several previous FDOT projects (ACI 2001, 2005a, 2006a, 2007, 2008, 2010a). All field surveys were preceded by background research which served to provide both an informed set of expectations concerning the kinds of cultural resources which might be anticipated to occur within the project area, as well as a basis for evaluating any new sites discovered.

The Fort Hamer Bridge EIS CRAS survey was initiated in order to comply with Manatee County requirements and the National Environmental Policy Act (NEPA) of 1969, Section 106 of

the National Historic Preservation Act of 1966 (Public Law 89-665), as amended (January 2001 revision); the Archaeological and Historic Preservation Act, as amended by Public Law 93-291; Executive Order 11593; and Chapter 267, *Florida Statutes* (*F.S.*). All work was carried out in conformity with Part 2, Chapter 12 ("Archaeological and Historical Resources") of the Florida Department of Transportation's (FDOT) Project Development and Environment Manual (January 1999 revision), and the standards contained in *Cultural Resources Standards and Operational Manual* (FDHR 2003).

1.5 Area of Potential Effects (APE)

For the Fort Hamer Bridge segment of the project (Figure 1.1), the archaeological and historic APE lies within the USCG approved 0.5 mile (mi) wide buffer or study area, also referred to as the "Affected Environment." The 0.5 mi is situated on either side of the proposed centerline. The archaeological APE consists of the land within the four proposed pond sites and one mitigation area, as well as the existing and additional right-of-way (ROW) on Upper Manatee River Road and Fort Hamer Road (Figure 2.1). South of the river, this additional ROW includes an area approximately 250 meters (m) in width in the vicinity of Upper Manatee River Road, which narrows slightly, and then widens to about 150 m along the south bank of the river. The proposed ROW within the marsh island, in the river, is about 50 m wide. North of the Manatee River, the APE is 200 m wide and narrows to 40 m at the northern terminus of the APE. The historic APE consists of the archaeological APE and immediately adjacent lands.

For the Rye Road segment of the project (Figure 1.1), the limits of the archaeological and historic APE are from SR 64 to US 301. The ROW requirements along this segment is variable and includes the following:

Rye Road from SR 64 north to the River
- no ROW from SR 64 north to Woodview Way
- ROW from Woodview Way to Fire Station on east side
- ROW from Fire Station north approx 1800 ft on both sides
- ROW from that point north to River on west side

Rye Road from the River to Golf Course Road
- ROW from River north approximately 1200 ft from west side
- ROW from that point north to Golf Course Road from east side

Golf Course Road from Rye Road to Fort Hamer Road
- ROW from Rye Road to Gamble Creek from north side
- ROW from Gamble Creek to Golf Course from both sides
- ROW the length of the Golf Course from both sides
- ROW from Golf Course to Fort Hamer Road from south side

Fort Hamer Road from Golf Course Road to US 301
- ROW from Golf Course Road to Britt Road from both sides
- ROW from Britt Road to US 301 from west side

The archaeological APE is the area contained within the ROW; the historical APE included the archaeological APE plus 200 ft from the outer limits of the ROW.

2.0 ENVIRONMENTAL SETTING

The Fort Hamer Bridge EIS project is located in Township 34 South, Range 19 East, and Township 33 South, Range 19 East (U.S. Geological Survey [USGS] 1972, 1973a, 1973b). Specifically, the Ft. Hamer Road APE starts 600 ft north of Waterlefe Boulevard and ends 2,500 ft south of Mulholland Road (Figure 2.1). I-75 is located 3-4 mi to the west. The Rye Road APE lies southeast of US 301, southwest of CR 675, and north of SR 64, approximately 2.3 mi east of I-75.

The project is situated within the Floridian section of the Coastal Plain province and the Coastal Lowlands natural topographic division. The Coastal Lowlands are nearly level plains of low elevation near the Gulf Coast (U.S. Department of Agriculture [USDA] 1958). Geologically, the survey area lies within the Hawthorne Formation with the Bone Valley Formation to the east (Vernon and Puri 1964). Elevation within the survey area ranges from sea level to 40 ft above mean sea level (amsl).

The soils of the project area include five general soil associations: EauGallie-Floridana and Myakka-Wareland-Cassia north of the river, Wabasso-Bradenton-EauGallie south of the river, and the Okeelanta and Delray-Floridana associations, which occur along the Manatee River in the project APE. The former three associations are characterized by nearly level, poorly drained soils of the flatwoods (Photo 2.1) and the latter two are characterized by nearly level, very poorly drained soils of flood plains.

Photo 2.1. Interior view of a proposed pond site within the Fort Hamer Bridge APE on the south side of the Manatee River.

Specific soil types found within the project area are summarized in Table 2.1. Much of the native vegetation in the project area consists of slash pine, longleaf pine, oaks, and an undergrowth of saw palmetto, wire grass, and gallberry. Cabbage palm, magnolia, and wax myrtle vegetate the low lying soils (USDA 1983) and Brazilian pepper has invaded some areas within the APE. Tidal marsh and freshwater swamps lie along the Manatee River where elevations range between 5 ft to 15 ft amsl.

Figure 2.1. Environmental setting of the Fort Hamer Bridge EIS project; Townships 33 and 34 South, Range 19 East, (Parrish, Fla. 1973, PR 1987; Rye, Fla. 1972, PI 1979; Lorraine, Fla. 1973, PR 1987). The Fort Hamer corridor is shown in red, the Rye Road corridor is in yellow, and the pond sites and mitigation site are shown in blue.

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

Table 2.1. Soils in the project area.

Soil Type	Relief & Drainage	Physical Environment
Braden fine sand	Nearly level to very gently sloping, somewhat poorly drained	Stream terraces that are well above normal overflow
Bradenton fine sand	Nearly level, poorly drained	Low-lying ridges and hammocks
Broward variant fine sand	Nearly level, poorly drained	Flatwoods
Canova, Anclote, and Okeelanta soils	Nearly level, very poorly drained	Freshwater swamps and broad poorly defined drainageways
Cassia fine sand	Nearly level, somewhat poorly drained	Low ridges and knolls slightly higher than adjacent flatwoods
Cassia fine sand, moderately well-drained	Nearly level, moderately well-drained	Low ridges and knolls in the uplands
Delray complex	Nearly level, very poorly drained	Flats and moderately broad, low, and grassy sloughs
Delray-EauGallie	Nearly level	Broad, grassy sloughs; poorly defined streams; larger ponds
EauGallie fine sand	Nearly level, poorly drained	Broad areas of flatwoods
Felda-Wabasso assoc., frequently flooded	Nearly level, poorly drained	Floodplains along larger streams
Floridana fine sand	Nearly level, very poorly drained	Low flats drained by ditches and channels in many places
Floridana-Immokalee-Okeelanta assoc.	Nearly level, very poorly and poorly drained	Shallow grassy ponds
Myakka fine sand	Nearly level, poorly drained	Broad flatwoods
Palmetto sand	Nearly level, poorly drained	Flatwoods
Tavares fine sand	Moderately well drained	Ridges and knolls
Wabasso fine sand	Nearly level, poorly drained	Broad flatwoods
Okeelanta muck, tidal	Very poorly drained organic soil	Tidal marsh along Manatee and Braden Rivers

The environmental conditions of the Ft. Hamer Bridge APE are variable. Development, road construction and maintenance, ditching, and utilities installation have contributed to the disturbed nature of several of the pond sites (Photo 2.2). The mitigation area has been plowed and supports a wetland and the marsh island, which supports an oak hammock, has been subjected to erosion due to wave action.

Photo 2.2. Existing pond within the Fort Hamer Bridge APE.

The Rye Road APE includes residential and commercial developments along the Upper Manatee River Road, Rye Road and Golf Course Road, as well as agriculture lands (Photo 2.3). In addition, Rye Wilderness Park is located along Rye Road near the river, and Golf Course Road bisects a golf course.

Photo 2.3. Agricultural lands located along the Rye Road APE.

3.0 CULTURAL HISTORY

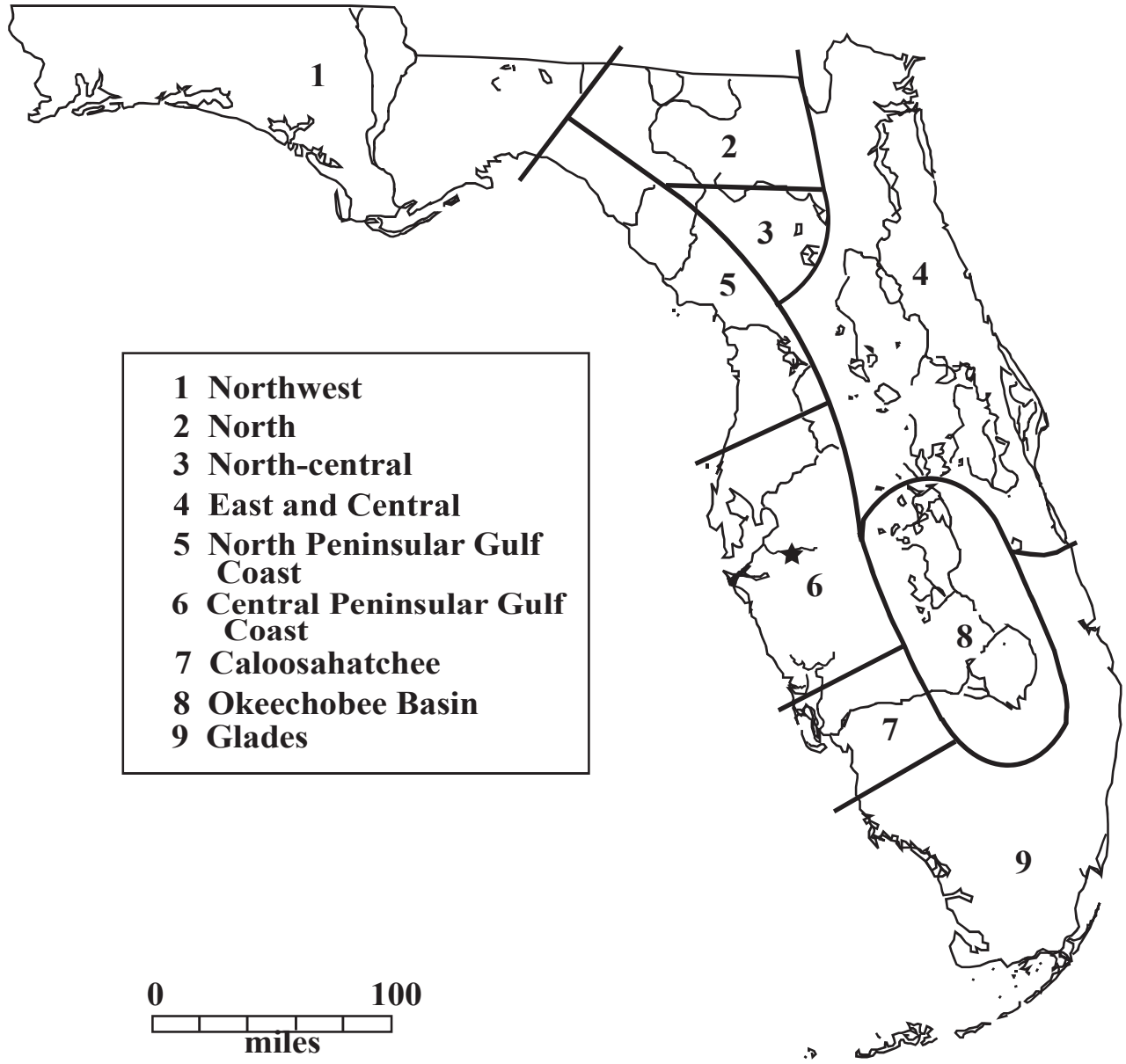
In general, archaeologists summarize the prehistory of a given area (i.e., an archaeological region) by outlining the sequence of archaeological cultures through time. Archaeological cultures are defined largely in geographical terms but also reflect shared environmental and cultural factors.

The project area in Manatee County is located in the Central Peninsula Gulf Coast archaeological region as defined by Milanich and Fairbanks (1980:24-26) and more recently, Milanich (1994). This region extends from just north of Tampa Bay southward to the northern portion of Charlotte Harbor (Figure 3.1). Milanich and Fairbanks have defined the Paleo-Indian, Archaic, Transitional, Formative, Mississippian, and Acculturative stages on the basis of unique sets of material culture traits such as characteristic stone tool forms and ceramics as well as subsistence, settlement, and burial patterns. These broad temporal units are further subdivided into culture phases or periods: Paleo-Indian, Archaic (early, middle, and late), Formative (Manasota/Weeden Island-related), and Mississippian/Acculturative (Safety Harbor). A brief summary of these periods follows.

3.1 Paleo-Indian

The earliest known cultural period in the region is the Paleo-Indian which began with the first human arrivals in Florida at the end of the Pleistocene epoch, ca. 12,000 to 10,000 Before Common Era (B.C.E.) and which terminated about 6500 B.C.E. (Milanich and Fairbanks 1980:38). The Florida peninsula at this time was quite different than today. The climate was drier and cooler and was typified by xerophytic species of plants, with scrub oaks, open grassy prairies, and savannas (Milanich, 1994:38). When human populations were arriving in Florida, the sea levels were still as much as 115 ft below present levels and coastal regions of Florida extended miles beyond present-day shorelines (Milliman and Emery 1968). Thus, Paleo-Indian sites may exist below the waters of the Gulf of Mexico and off the Atlantic coast (Clausen et al. 1979; Ruppe 1980).

Among the Paleo-Indian sites in the Central Peninsula Gulf Coast region which have been the focus of professional excavations are two inland spring sites in Sarasota County, Little Salt Spring, and Warm Mineral Springs (Clausen et al. 1979); and the Harney Flats Site in Hillsborough County. The Harney Flats Site represents one of the best known terrestrial Paleo-Indian resources in the southeastern United States (Daniel and Wisenbaker 1987). Other research in the region has shown that at least portions of the shell deposits bordering now-submerged river channels in Tampa Bay were probably middens deposited during the Paleo-Indian period (Goodyear et al. 1983; Goodyear and Warren 1972). Paleo-Indian sites are most readily identified by the lanceolate shaped stone projectile points they manufactured, such as the Simpson and Suwannee types (Bullen 1975:6).



Post- 500 B.C. regions of precolumbian Florida

Figure 3.1. Florida Archaeological Regions (Milanich 1994:xix). The project area (★) is located in the Central Peninsular Gulf Coast Region.

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

3.2 Archaic

As the Paleo-Indian period gradually came to a close, climatic changes occurred and the Pleistocene megafauna died out. Archaeological evidence suggests a slow cultural change which led toward an increasingly intensive exploitation of localized food resources. These changes may reflect a transition from the late Pleistocene to a more seasonal, modern climate when the pine-dominated forest began to cover the landscapes. With loss of the Ice Age mammals, Archaic populations turned to the hunting of smaller game like deer, raccoon, and opossum as well as a reliance on wild plants and shellfish, where available.

The Early Archaic period, ca. 6500 to 5000 B.C.E., is well documented in Florida and is generally recognized by changes in the artifact assemblages from the Paleo-Indian period. But, because of a lack of excavated collections, our knowledge of the full range of the Early Archaic lithic tool assemblages is uncertain (Milanich 1994:64). According to Bullen's typology of Florida projectile points, diagnostic types include Kirk, Hamilton, Arredondo, Wacissa, Thonotosassa, Hardee Beveled, and Sumter (Bullen 1975:33-41). Discoveries at Little Salt Spring in Sarasota County and the Windover Site in Brevard County indicate that bone and wood tools were also used. The archaeological record suggests a diffuse, yet well-scheduled, pattern of exploiting both coastal and interior resources. Because water sources were much more numerous and larger than in earlier times, the Early Archaic peoples could sustain larger populations, occupy sites for longer periods, and perform activities that required longer occupation at a specific locale (Milanich 1994:67). However, most Early Archaic sites that have been found are small, seasonal campsites.

During the Middle Archaic period, ca. 5000 to 3000 B.C.E., a shift from the dispersed settlement pattern of the preceding period to a system of base camps with numerous, smaller satellite camps has been hypothesized. The changes in settlement pattern resulted in maximizing the use of forest resources and may indicate that larger bands of people were living together part of the year. Artifacts associated with this period include broad bladed, stemmed projectile points such as the Newnan, Marion, and Putnam types. Also, specialized tools such as microliths and burins, large chopping implements, as well as an array of expedient tools, have been found at archaeological sites. A few regional cemetery sites, such as Little Salt Spring in Sarasota County and the Bay West Nursery Site in Collier County with interments, in bogs, springs, and other wetlands, provide some of the first evidence for mortuary ceremonialism during the Middle Archaic.

During the Late Archaic, ca. 3000 to 1200 B.C.E., populations increased and became more sedentary. Broad bladed, stemmed projectile points of the Middle Archaic continued. A greater reliance on marine resources is indicated in coastal areas. Subsistence strategies and technologies reflect the beginnings of an adaptation to these resources. For example, it is during this period that coastal and riverine shell middens began to accumulate. The introduction of fiber-tempered ceramics, the earliest pottery manufactured, also marks the Late or Ceramic Archaic period (Milanich and Fairbanks 1980:60).

3.3 Transitional

Bridging the close of the Archaic stage and the beginning of the Formative is the Florida Transitional period, ca. 1200 to 500 B.C.E., as defined by Bullen (1959). This time is characterized by a continued exploitation of shellfish, fish, and wild plants as well as a continued

reliance on hunting (Bullen et al. 1978; Bullen 1959, 1965). Bullen hypothesized that, during the Florida Transitional period, the diffusion of culture traits resulting from the movements of small groups of people led to the spread of several ceramic and tool traditions.

By the end of the Transitional period, ceramic traditions were clearly regionalized throughout Florida. In the Central Peninsular Gulf Coast region, sand-tempered plain pottery became the dominant ceramic type. In addition, there is evidence of regional interaction with other cultures such as the Poverty Point complex of the lower Mississippi Valley. Further, limited horticulture may have been engaged in at this time (Milanich and Fairbanks 1980:155).

3.4 Formative

The Formative stage in the Central Peninsula Gulf Coast archaeological region is comprised of the Manasota and Weeden Island-related cultures, ca. 500 B.C.E to Common Era (C.E.) 800. The subsistence practices of the earlier Manasota people combined marine and hinterland exploitation. Most Manasota sites are shell middens found on or near the shore. These were the major villages. Small, perhaps seasonal, villages were located 12 to 18 mi inland from the shore. During this long period, sand-tempered pottery became a dominant ceramic type, and burial practices became more elaborate evolving from interments, often in shell middens, to sand burial mounds (Luer and Almy 1982). As currently defined, the Manasota culture is a coastal manifestation which utilized both marine and terrestrial resources.

Gradually, the people of the region were influenced by the Weeden Island culture from the north and became what archaeologists refer to as a Weeden Island-related culture, one of three peninsular Weeden Island-related cultures identified and described by Milanich and Fairbanks (1980). The subsistence and settlement patterns remained fairly consistent. Hunting and gathering of the inland and coastal resources continued. Larger populations are inferred from hypothesized increased dependence on horticulture. These populations seem to have led a fairly sedentary lifestyle, with villages located along the coast as well as at inland areas.

Usually, Weeden Island-related sites are identified by the presence of shell middens or habitation areas and a sand burial mound. Not all villages possessed a mound. It is likely that several communities shared a single, continuous-use mound (Willey 1949). Burial mound customs, artifactual evidence of an extensive trade network, and settlement pattern data suggest a complex socio-religious organization.

3.5 Mississippian/Acculturative

The final aboriginal cultural manifestation in the Central Peninsula Gulf Coast region is Safety Harbor, named for the type site in Pinellas County. The presence of datable European artifacts (largely Spanish) in sites, along with radiocarbon dates from early Safety Harbor contexts associated with Englewood ceramics, provide the basis for dividing the Safety Harbor period into two pre-Columbian phases: Englewood, C.E. 900 to 1100, and Pinellas, C.E. 1100 to 1500; and two colonial period phases: Tatham, C.E. 1500 to 1567, and Bayview, C.E. 1567 to 1725 (Mitchem 1989:557-567).

In general, further influences from the north led to the incorporation of many features of the Mississippian culture by the late Weeden Island-related peoples which became the Safety Harbor culture. Often, Safety Harbor components are located on top of the earlier Weeden Island

deposits. Major Safety Harbor sites remained primarily along the shore with many situated at the same locations as late Manasota sites (Luer and Almy 1981). Large towns or villages often had a temple mound, plaza, midden, and a burial mound associated with them. Previous research (Luer and Almy 1981) supports earlier suggestions that some maize agriculture may have been practiced by the Safety Harbor peoples as they continued marine and terrestrial exploitation of the region's food resources. Although most Safety Harbor sites are located along coastal bays and rivers, inland sites are also known (Willey 1949). The Picnic Mound (Willey 1949), Buck Island (Bullen 1952), and the Parrish Mounds 1, 2, and 3 (Willey 1949) are inland sites in Hillsborough and Manatee Counties dating from this period.

The Timucuan Indians, locally (Tampa Bay area) the Tocobaga, are recognized as the bearers of the Safety Harbor culture. Safety Harbor sites have been found both along the coast and inland in the Central Peninsular Gulf Coast region. The large sites on the coast were probably ceremonial centers with large temple mounds, villages, and burial mounds. Large population centers, dating to the Safety Harbor period, were located primarily north of Tampa Bay; however, several are recorded near the entrance to the Manatee River.

3.6 Contact and Colonial Period

During the political machinations between 1763 and 1819, Native Americans continued to move into the unchartered lands of Florida. These migrating groups became known to English speakers as Seminioles or Seminoles. This term is thought to be either a corruption of the Creek ishti semoli (wild men) or the Spanish cimarron (wild or unruly). Their presence curtailed settlement of the region and hostilities increased. Many Native Americans who escaped death or capture fled to the swamps and uncharted lands in south Florida. The Seminoles formed, at various times, loose confederacies for mutual protection against the new American Nation to the north (Tebeau 1971:72). Escaped slaves from South Carolina and Georgia joined the Seminoles who provided protection to this fugitive population (Porter 1996). The loss of slave labor, particularly in light of the abolitionists' movement in the northeast, coupled with the anxiety of having a free and hostile slave population immediately to the south, caused great concern among plantation owners. This historically underestimated nuance of the Seminole Wars prompted General Thomas S. Jesup to say "This you may be assured is a Negro and not an Indian War" (Knetsch 2003:104).

3.7 American Period and Seminole Conflict

The bloody conflict between the Americans and the Seminoles over Florida first came to a head in 1818, and was subsequently known as the First Seminole War. As a result of the war and the Adams-Onis Treaty of 1819, Florida became a U.S. territory in 1821, but settlement was slow and scattered during the early years. Andrew Jackson, named provisional governor, divided the territory into St. Johns and Escambia Counties. At that time, St. Johns County encompassed all of Florida lying east of the Suwannee River, and Escambia County included the land lying to the west. Although the project area in present-day Manatee County was initially included in St. Johns County, the area transferred to Mosquito County when it was created in 1824 and then to Hillsborough County when it was established in 1834 (Grismer 1946).

Although the First Seminole War was fought in north Florida, the Treaty of Moultrie Creek in 1823, at the end of the war, was to affect the settlement of south Florida. In exchange for occupancy of approximately four million acres of reservation land south of Ocala and north of

Charlotte Harbor, the Seminoles relinquished their claim to the remainder of the peninsula (Mahon 1967:46-50; Covington 1958). The inadequacy of the reservation and the desperate situation of the Seminoles living there, plus the mounting demand of the white settlers for their removal soon produced another conflict. In 1824, Cantonment (later Fort) Brooke was established on the south side of the mouth of the Hillsborough River in what is now downtown Tampa by Colonel George Mercer Brooke for the purpose of overseeing the Seminoles. The migration of families to the Fort Brooke area caused problems for the military as civilian settlements were not in accord with the military Camp Moultrie agreement of 1823 (Guthrie 1974:10). By 1830, the U.S. War Department found it necessary to establish a military reserve around Fort Brooke with boundaries extending 16 miles to the north, west, and east of the fort.

By 1835, the Second Seminole War was underway. As part of the effort to subdue Indian hostilities in southwest Florida, military patrols moved into the unchartered and unmapped wilderness in search of Seminole populations outside the reservation. As the Second Seminole War escalated, attacks on isolated settlers and communities in southwest Florida became more common. To combat this, the combined service units of the U.S. Army and Navy converged on southwest Florida. This joint effort attempted to isolate the southern portion of the Florida peninsula against the Seminoles remaining in the Big Cypress Swamp and Everglades (Covington 1958:7; Tebeau 1966:39). It lasted until 1842 when the federal government decided to end the conflict by withdrawing troops from Florida. Some of the battle weary Seminoles were persuaded to migrate west where the federal government had set aside land for Native American inhabitation. After much political deliberation over the fate of black Seminoles, approximately 500 were allowed to accompany the "red Seminoles" west (Knetsch 2003:126; Porter 1996).

By 1843, 3,824 Native Americans sailed west to New Orleans and traveled up the Mississippi and Red Rivers to portions of Arkansas (present-day Oklahoma). However, those who were adamant about remaining in Florida, approximately 360 people, were allowed to do so, but were pushed further south into the Everglades and Big Cypress Swamps. The reserve established to hold these inhabitants consisted of approximately 4,288,000 acres. Although these Native Americans in Florida are collectively referred to as the Seminoles, two distinct Native American groups remained in south Florida following the war. The Seminoles, led by Holatter Micco, also known as Billy Bowlegs, resided in the vicinity of Charlotte Harbor while the Miccosukees (or Mikasukis), led by Arpeika also known as Sam Jones, were located in the Everglades. The Muskogees (or Maskoki), led by Echoemathlar-Chopco (or simply Chipco), lived near Lake Istokpaga. Although the federal government had resigned to allow the remaining Native Americans to stay in south Florida, this was only temporary and they continued to devise strategies for their peaceful removal (Covington 1993:107, 111-113; Knetsch 2003:141; Missall and Missall 2004:206-207, 209; Mahon 1967:318, 321; Seminole Tribe of Florida 2004; Tebeau 1971:158-168).

3.8 Settlement: Federal Surveys and the Armed Occupation Act

The closing of the war brought renewed interest in the Florida frontier and new settlers began to arrive. Between 1839 and 1841, Josiah Gates, along with his family, settled in Fort Brooke and opened a hotel. In 1841, Gates, along with his brother-in-law, Miles Price, sailed down the Manatee River to select a place to settle, although the land was not technically open for settlement yet. Along the shore, Spanish fishermen who occupied a group of palmetto shacks showed the pair the remains of tabby buildings reportedly constructed by the Spanish. One of the

fishermen led the men to a mineral spring along the south shore of the Manatee, where Gates decided to settle because it was already cleared for farming (Sheppard et al. n.d.:16-17).

The Armed Occupation Act was established following the Second Seminole War in 1842 to entice settlers to move to Florida and protect their own lands from the remaining groups of Native Americans in Florida so the military forces could withdraw. Encouraged by the legislation, many settlers moved south through Florida. The Act made available 200,000 acres outside the already developed regions south of Gainesville to the Peace River, barring coastal lands and those within a 2-mi radius of a fort. The Armed Occupation Act stipulated that any family or single man over 18 able to bear arms could earn title to 160 acres by erecting a habitable dwelling, cultivating at least five acres of land, and living on it for five years. During the nine-month period the law was in effect, 1184 permits were issued totaling some 189,440 acres (Covington 1961a:48; U.S. Congress 1848:7-9; Mahon 1967:313-315; Knetsch 2003:139).

At the same time new settlement was spreading throughout the state, the Federal Government initiated surveys of lands throughout Florida in 1842, and later in 1848; the U.S. Coastal Surveys also started in 1848. These surveys enabled the government to provide land for settlement and development in a uniform manner by dividing it up into Townships, Ranges, Sections, and quarter sections that were 1/2-mi square. The Armed Occupation Act was initiated with the hopes of establishing at least one homestead in each Section, which would provide protection and create a more widespread population throughout the state as opposed to dense concentrations. Since surveys of these lands needed to be conducted before settlement could occur, there was a delay in the publication of the Armed Occupation Act. Although passed by the Federal Government in 1842, the Armed Occupation Act was not published by the U.S. Congress until 1848 (U.S. Congress 1848; Mahon 1967). Native Americans were wary of these surveys and monitored surveyors closely. Samuel Reid, who surveyed present-day Manatee County, reported that one man rode with them for eight miles to be assured they would not cross into the reservation boundaries. He went on to say that he "would feel perfectly secure from violence in the midst of fifty Indians" (U.S. War Department 1844:7).

The first surveys of the Fort Hamer Bridge EIS project area occurred during the 1840s. Samuel Reid platted the exterior lines for Township 34 South, Range 19 East in 1843 and the sections lines in 1846. He depicted the land as primarily 3rd rate pineland with blackjack, saw grass ponds and bay gall (State of Florida 1843, 1846a, and 1846b). Samuel Reid also surveyed the exterior lines for Township 33 South, Range 19 in 1843 and the sections in 1846. He described the land as a mixture of pine woods and cypress swamp with bay gall and saw grass in the project vicinity. His map depicted a trail extending through Sections 30, 20, 17, 9, and 3. This trail, labeled "Trail from Manatee to Fort Brooke," ran southwesterly through present-day Parrish to connect Fort Brooke to the Manatee River, possibly over an old Indian trail (Figure 3.2). The route, although slightly winding, is identical to present-day US 301 north of Parrish, and from Parrish to Ellenton continued in a northeast-southwest line, appearing as a rough trail on Manatee County maps as late as 1951 (State of Florida 1843, 1846a, 1846c; ACI 1990a). The Fort King Trail was also located in the vicinity of what would become Fort Hamer, extending in a north/south direction across the river from the future site, following the exact route of present-day US 301 from Parrish to Bradenton. The Fort King Trail was most likely an earlier Indian trail made permanent by soldiers during the Seminole Wars (Dye 1967:16; Ives 1856; Warner and Warner 1986:134-135). At the site of Parrish, a direct north-south route was established overland departing from the old Fort King Trail, proceeding down the center of Township 33 South, Range 19 East, Sections 29 and 32 and Township 34 South, Range 19 East, Sections 5 and 8 (directly

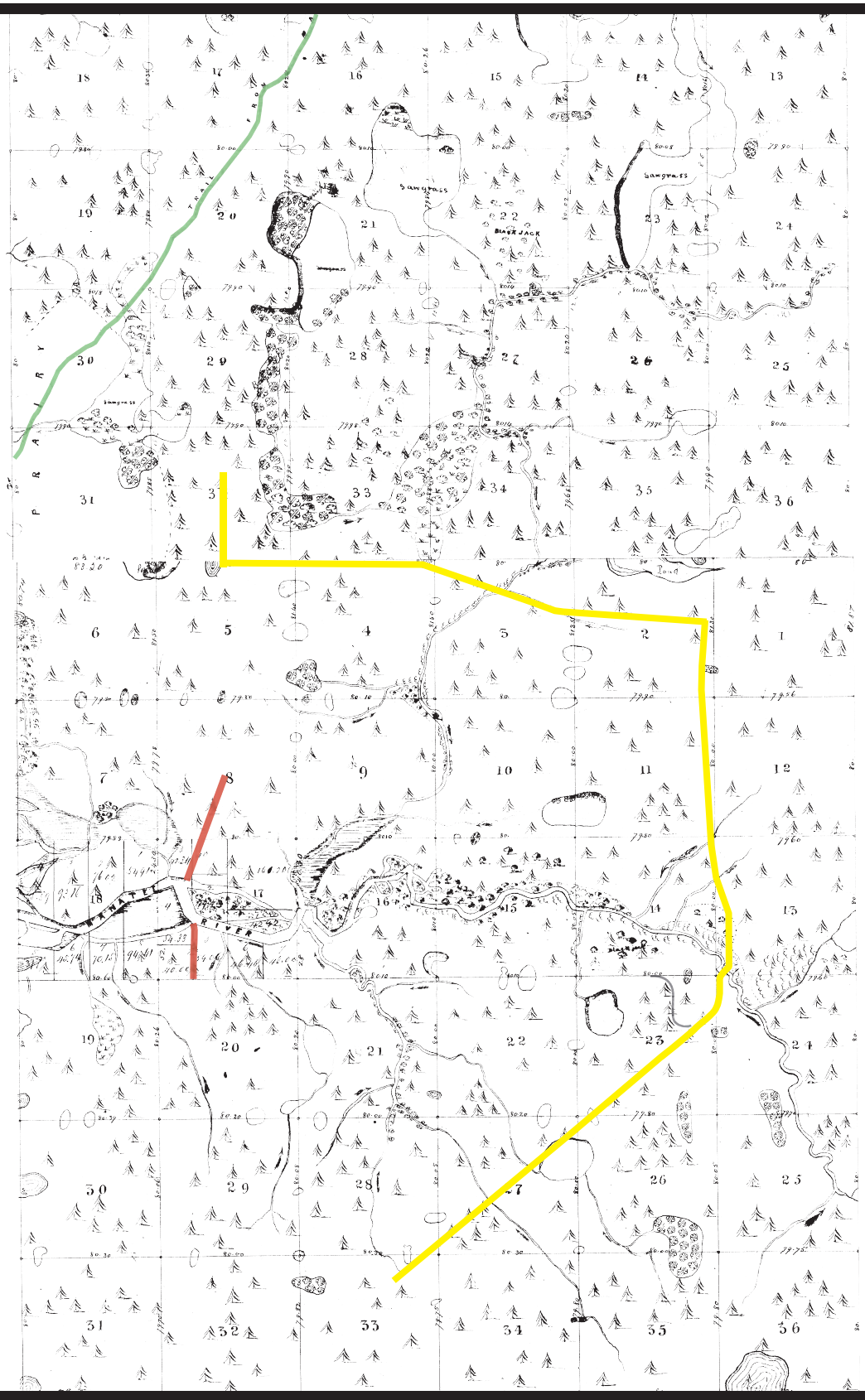


Figure 3.2. 1846 *Plats* of Township 33 and 34 South, Range 19 East (State of Florida, Department of Environmental Protection, Title and Land Records). Note "Trail from Manatee to Fort Brooke" highlighted in green, Fort Hamer segment is highlighted in red, and the Rye Road segment is highligted in yellow.

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

north of Section 17 and the Manatee River) from present-day Parrish forming Fort Hamer Road. The necessity of overland traffic from Fort Brooke to what would become Fort Hamer suggests motivation for the permanent rerouting of the old trail from Parrish to Ellenton. This crossing as well as a loading dock at the mouth of Gamble Creek, known as "the Port of Parrish" or Hickory Bluff, provided Parrish area residents a way to ship cattle, vegetables, and citrus (State of Florida 1846; ACI 1990a).

Most settlers at this time settled along or near the banks of the Manatee River as it provided accessibility to transportation, goods, and services not available elsewhere (Knetsch n.d.). Daniel Lafayette Hawkins was part of the surveying crew for the Manatee River area. While working, Daniel fell in love with the area and returned in 1846 to settle in the vicinity of what was to become Rye. Eventually he owned 160 acres of homestead land on which he planted citrus and crops, and raised cattle (Carlson 2003). Through the Armed Occupation Act, John Addison acquired land on the south bank of the waterway. Here, John and his four sons tended cattle and hogs (Matthews 1983:177). Also through the Armed Occupation Act, Josiah Gates acquired a quarter section at the site of the mineral spring on the south bank of the Manatee River. He built a log cabin and moved his family into it in January 1842. A number of other pioneers moved to the area during this period, including the Clark, Atzeroth, Lee, Gamble, Wyatt, Ware, Ledwith, Reed, Craig, Whitaker, Snell, Glazier, Jackson, and Turmon families. On April 16, 1842, Colonel Samuel Reid arrived with 15 white males, 10 black males, 2 black females, and over 18 black children to establish the Manatee Colony. Colonel Reid became the U.S. Deputy Surveyor of the Manatee area (Knetsch 1995).

As early as 1844, extensive sugar plantations and mills were constructed along the Manatee River. Raw sugar was shipped by schooners to New Orleans and other Gulf ports. Two brothers, Hector and Dr. Joseph Braden, purchased land on the south side of the Manatee River at the confluence of the river and a large creek that acquired the name of Braden. They grew sugar cane on their 1,100 acres and constructed a residence of tabby in 1850, later known as Braden Castle. In addition to the Braden brothers who came from a Tallahassee planter family, the Gamble brothers, also from Tallahassee, arrived in the area to farm the north side of the river. In 1844, Major Robert Gamble constructed a sugar plantation on the north side of the Manatee River with approximately 1,500 acres under cultivation. As part of his clearing operations, the lands were covered with a network of drainage ditches running north and south and east and west, which varied from 1 ft wide and 1-1/2 ft deep to 4 ft wide. Although sugar cane was the primary crop, corn, sweet potatoes, grapes, citrus, rice, and guava were also grown. John Grattan Gamble, Jr. purchased 160 acres on the south side of the river near that of Josiah and Mary Gates, whose property adjoined that of the Bradens. John sold his land to the Bradens 15 days after receiving his land claim and joined his brother on the north side of the river. They were joined by their brother, William, who built a house and lived on his quarter section in March 1846. The brothers' earliest holdings flank and constitute the site of present-day Ellenton (Sheppard et al. n.d.:18-19; Federal Writers' Project 1939:470-71; Matthews 1983:152-155).

In 1845, the Union admitted the State of Florida with Tallahassee as the state capital. As settlement in Florida increased, new residents established homesteads further south on the peninsula closer to the Indian Territory. On May 19, 1845, President James K. Polk created a 20-mi buffer around the Indian Reserve to establish neutral ground between the settlers and the Native Americans. Although the Land Office agreed that no claims were to be made in this 20-mi area (approximately 3,456,000 acres), they continued to conduct surveys within the boundaries around Charlotte Harbor (Covington 1993:110-111). The surveying greatly disturbed the Seminoles and led to their further distrust of the whites.

3.9 Indian Scare of 1849 and the U.S. Military Response

Although the majority of Florida's Seminoles had been deported to the western territories by the end of the Second Seminole War in 1842, approximately 360 Seminoles remained in central and south Florida. In addition to federal land surveys conducted throughout the 1840s, the U.S. Coastal Survey started in 1848, and the Buckingham Smith Report in 1848 (a proposal to the U.S. Senate to drain the Everglades), further indicated to the Seminoles that the U.S. Government intended on taking their land and possibly their water resources. In addition, legislation was passed in 1849, forbidding any Native Americans to cross the boundaries of the reserve established at the end of the Second Seminole War. Frustrated with the Federal Government's actions of encroaching surveys upon their reservation boundaries and waters, combined with increased settlement, led to inevitable hostilities between the Native American groups, settlers, and the government (Knetsch 1990:3; Covington 1982:9; Steele 2004; Bache 1848-1856).

A small group of Native Americans under the leadership of Chipco, who were outlawed and lived beyond the reservation boundaries, retaliated against whites and trading posts during the summer of 1849. On July 12, 1849, they raided Fort Pierce on the Indian River, killing William Barker, inspector of customs, and wounding James Russell. As the nearby citizens fled, a house was set on fire, another robbed, and another vandalized. Five days later, similar incident occurred at the Kennedy and Darling Store at Payne's Creek off of the Peace River, east of the project area. Dempsey Whidden and George Payne were killed and William McCullough and his wife Nancy were wounded before the group looted and burned the store (Covington 1961b:53-54,1982:10-11, 1993:114-6). In south Florida, hostilities occurred off the coast of Cape Roman in July 1849, when a group of Native Americans in canoes ambushed William Shannon in his sloop while on route from Key West to Tampa Bay (U.S. Congress 1850:122). These combined acts on white settlers and military posts led to what would be known as the "Indian Scare of 1849," and resulted in the U.S. Government establishing a series of forts across the state (Covington 1982:11; Brown 1991:80-84). The military strategy was to create a line of military posts extending east-west, from the Manatee River to the Indian River, across the peninsula in order to help protect the Florida frontier and settlers and to establish a visual and enforceable border around the Indian Territory in south Florida. Fort Hamer was established on the southern bank of the Manatee River east of Braden Creek, in the project vicinity, in direct response to the Indian Scare of 1849.

Fort Hamer. Fort Hamer was established seven miles upriver from the Manatee Village at the Fort King Trail crossing, east of Braden Creek (Figures 3.2, 3.3, and 3.4). The location of Fort Hamer, "near the head of steamboat navigation," was chosen because it was the furthest inland location that still maintained deep navigable waters and could serve as a port (U.S. Congress 1850:64). A ferry was established to transport passengers and goods from the south side of the river across to the north, approximately 400 ft. According to local historian Dewey Dye, the site of Fort Hamer was on "the narrowest point on the river with dry land on either side of the river" and was "the only place like this for several miles." He goes on to say that it was "5 miles to the west before you come to dry land on both sides of the river" (Dye 1967:17, 24; Warner and Warner 1986:134).

Fort Hamer was named in honor of General Thomas L. Hamer, a brigadier general of the Florida Volunteers who had died in Monterey, Mexico during the Mexican-American War. Fort Hamer became a central post for the surrounding forts, as mail and supplies for Forts Myakka and Crawford were delivered to Fort Hamer and then distributed from there by teams of mules. Court Martials were conducted there and it was the last surviving post when others, including Forts

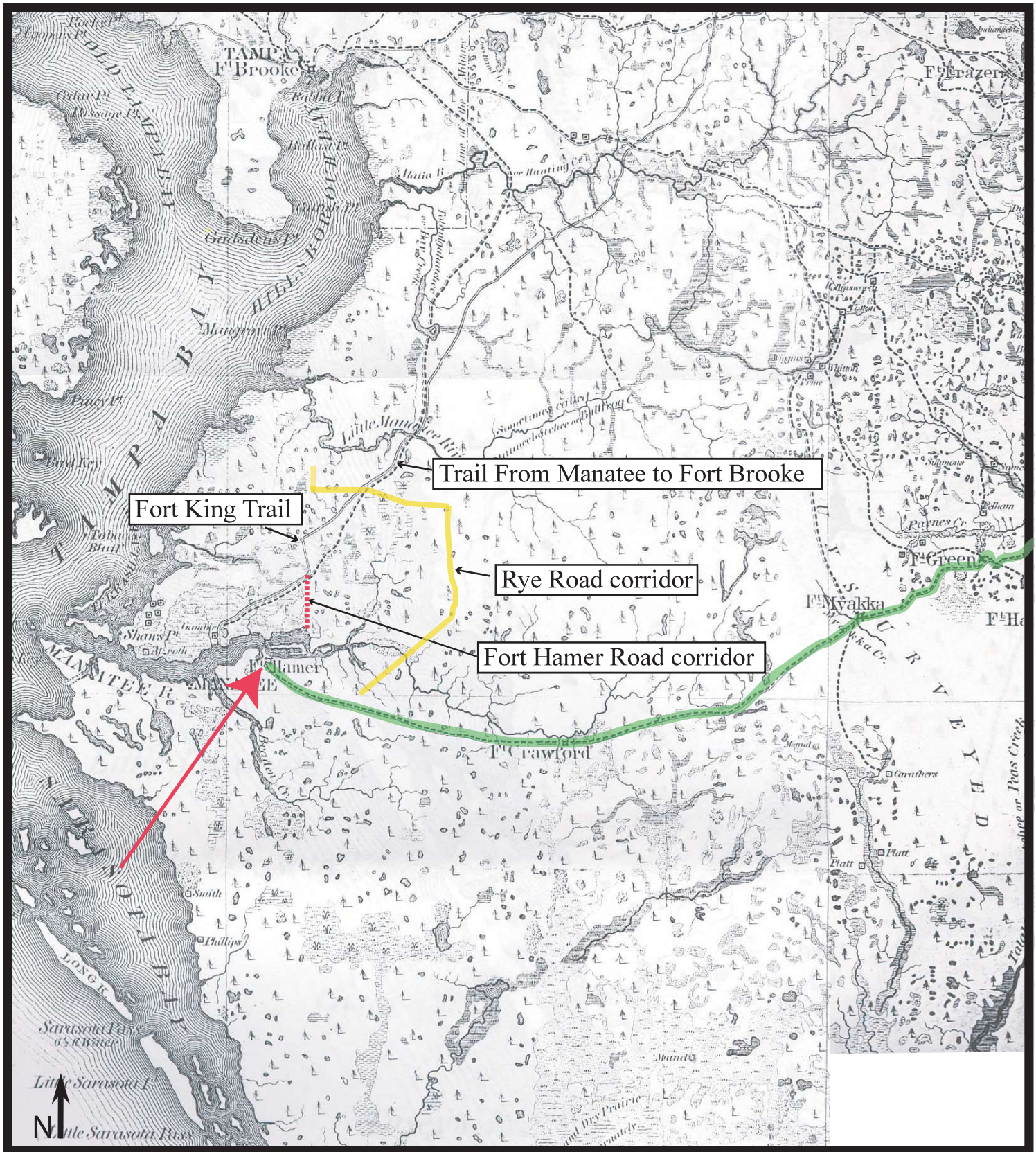


Figure 3.3. Military Map of the Peninsula of Florida, South of Tampa Bay, Lieutenant J.C. Ives, April 1856. Note locations of the Fort King Trail and the Trail from Manatee to Fort Brooke, connecting Fort Hamer to points north via land transport. Also note the location of trails connecting Fort Hamer to Forts Crawford, Myakka, Green, Chokkonikla, Meade, Clinch, and Arbuckle, highlighted in green.

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

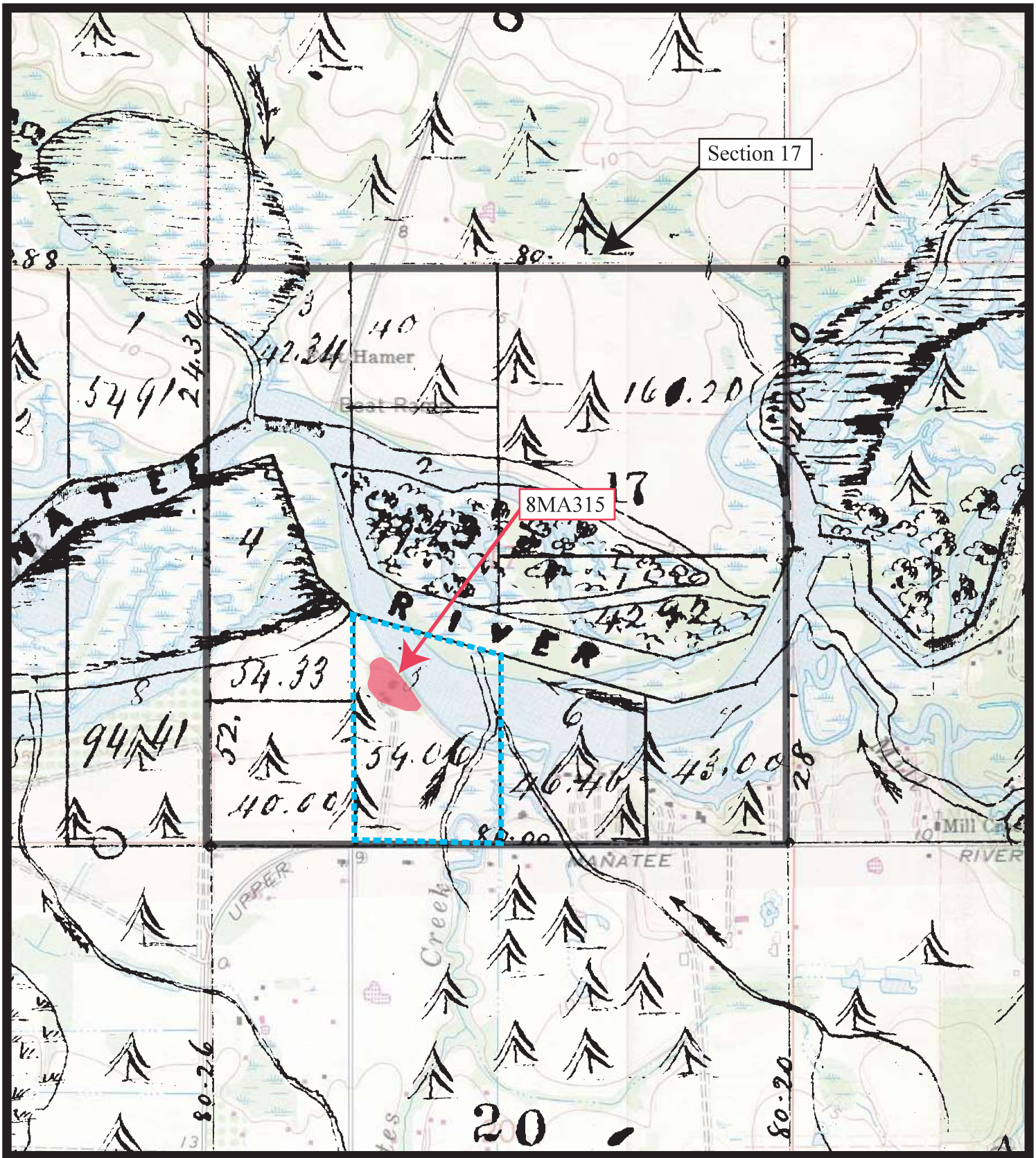


Figure 3.4. 1846 *Plat* of Township 34 South, Range 19 East, Section 17 overlaid with USGS Parrish, Fla. Quadrangle 1973. Note location of federally subdivided Lot 5 (denoted with blue dashed line) along the southern banks of the Manatee River containing the Fort Hamer Site 8MA315 (Florida Master Site File 1986, Janus Research 1998a and 1998b). Also note change in shoreline of the Manatee River.

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Fort Hamer Bridge EIS
Manatee County, Florida

Myakka, Crawford, and Chokkonikla, were abandoned. In November 1849, the Army Wagon team at Fort Hamer numbered 15 wagons, manned by teams of African-American drivers under the supervision of Reverend Lesley. By February 1850, 200 wagons and a proportionate number of drivers were manning supplies at Fort Hamer (Knetsch n.d.; Dye 1967:19-20; Lesley 1967:10; McMurria 1967:13; Warner and Warner 1986:134; Ross, Roberts, and Steptoe 1849-1850). Joe Knetsch in his paper *The Hardships and Inconviences: The Manatee River Forts during the Seminole Wars* describes the buildings at Fort Hamer as taken from Dewey Dye, Jr.'s excerpt of Lieutenant Edmund Hayes' report to the Quartermaster General:

> a hospital building had been completed [by April 1850], 60 ft by 25 ft, containing three airy wards with ceilings 11 ft high. He reported that porches extended the whole length of the hospital building, in front and rear. Ends of the front porch had been closed to make two shed rooms, one a dispensary and the other the storeroom. He also reported he had completed a hay house that had been erected to the dimensions 80 ft by 21 ft, height 15 ft. He also reported that three sheds had been completed and it looks like a ram of log houses under construction to accommodate a garrison of three companies. He also reported that the beams, rafters, and heavy timbers were cut from the nearby pine woods (Knetsch n.d.).

Military personnel stationed at the fort totaled 165 enlisted men, who were responsible for the construction of the buildings there with the help of one civilian (Knetsch n.d.; Ross, Roberts, and Steptoe 1849-1850). The garrison constructed provided for 3 companies, 2 militia, and 1 company of regular infantry (Dye 1967:25; Graham 1990:11; Ross, Roberts, and Steptoe 1849-1850; Warner and Warner 1986:134). The troops stationed at Fort Hamer were responsible for patrolling the territory between the Braden River to the west and about 15 mi to the east when they would meet the patrol from Fort Crawford (Knetsch n.d.; Matthews 1983:200; Warner and Warner 1986:134).

In September 1849, Seminole leaders, including representatives of Miccosukee and Muskogee groups, and Kapiktoosootsee on behalf of Sam Jones, met with General David Twiggs, commander of Troops in Florida, aboard the Steamer Colonel Clay anchored in Charlotte Harbor. They agreed to turn over the five outlaws responsible for the Indian Scare. A month later Bowlegs arrived with three of the prisoners, including the hand of Yahola (or Yo-ho-lo), who was killed while trying to escape. The fifth member of the outlaw band made a successful escape. These prisoners were turned over to Indian Agent, Captain John C. Casey as a gesture of good faith, showing that the majority of the remaining Native Americans did not support these hostile acts and wished to remain in south Florida and live in peace. However, at this meeting General Twiggs informed Bowlegs of the military's intention to pursue a more aggressive removal of his people (U.S. Congress 1850:82; Covington 1961b:57-59, 1982:11-14, 1993:117-118, 121; Matthews 1983:198-199).

The Indian Scare of 1849 further prompted the U.S. Government to actively pursue the removal of all remaining groups of Native Americans in Florida. Their strategy involved monetary inducements, a large military presence, and a delegation from the west to persuade the remaining Seminoles to emigrate (Covington 1982, 1993:120; Matthews 1983:199-200; Warner and Warner 1986:134). The Federal Government offered "to pay each Indian in Florida (without regard to sex or age), and…every Negro or mixed blood attached to the nation, $100, and to furnish transportation to the country of their tribe west of the Mississippi, and subsistence for 12 months after reaching their new homes" (U.S. Congress 1850:6).

A delegation from the Indian Territory in the West was sent over to Florida via New Orleans, during the fall of 1849, which included 11 members and 2 interpreters. The delegation agreed to assist in the removal of the remaining Seminoles for $100 per person, subsistence, and all travel expenses as outlined by the firm who agreed to provide transportation, Johnson & Gaines. They traveled from Fort Gibson at North Fork on the Canadian River to Fort Smith (New Orleans) where they boarded a steamboat bound for Florida. In addition, Indian Subagent, Marcellus Duval, also traveled to Florida to oversee the delegation (U.S. Congress 1850:143-145, 156; Johnson and Gaines to DuVal 1849). These delegates arrived in Tampa Bay in November 1849 (Matthews 1983:199).

Emigration from Ft. Hamer. At a meeting in January 1850, Billy Bowlegs told Captain John C. Casey that he wished to leave Florida. Billy Bowlegs and approximately 25 members of his clan agreed to emigrate (U.S. Congress 1850:73-74, 82-83; Covington 1993:120-121). Plans for emigration continued, and in February 1850, $100,000 in gold was sent from New York to Captain John C. Casey for payment to the emigrating Native Americans. Casey had already received $110,000 prior to this for Seminole removal in December 1849; however, as drafts were not recognized in New Orleans these funds were traded for gold in February (U.S. Congress 1850:155; Brown to Casey 1849, 1850). The emigrating groups of Native Americans made their way to Fort Hamer on the Manatee River to await deportation. Approximately 60 Native Americans, including Seminole, Mikasuki, and Muskogee Indians, traveled from Fort Arbukle near the Kissimmee River, to Fort Meade in the early part of 1850. While at Fort Meade, the emigrating party was increased by three (the prisoners turned over by Bowlegs) as they awaited the arrival of a party of 24 to 30 Native Americans. This party did not arrive as scheduled and the group of 63 Native Americans was forced to move on without them; the second group was to follow when they arrived at Fort Meade. They traveled to Fort Chokkonikla, and from here the emigrating party went on to Fort Hamer on the Manatee River where they would embark for the Indian Territory West (Dye 1967:20; U.S. Congress 1850:66-67, 82-87, 155-156; Duval to Brown 1850a, 1850b).

Upon arrival at Fort Hamer the 63 Native Americans, among them Kapiktoosootsee's band and the 3 prisoners given up by Bowlegs, were joined by eleven more emigrants. On February 28, 1850, a total of 74 Native Americans plus the eleven members of the delegation, set sail for New Orleans from Fort Hamer on the steamer Fashion (Covington 1982:14, 1993:121; U.S. Congress 1850:84-85, 87, 94-95, 156; Lantz 1994:3-4; Duval to Brown 1850a and 1850b; Matthews 1983:200; Ross, Roberts, and Steptoe 1849-1850). The U.S. Government paid the emigrating group a total of $15,953, which included $953 for their livestock (U.S. Congress 1850:84).

With the Seminole emigration, the number of troops at Fort Hamer declined to 129, and only two companies remained on the post. Companies D and H were ordered to accompany the emigrating Native Americans to New Orleans, while Major Smith of the 3rd Infantry was ordered to "proceed to New Orleans and superintend the immigration of the Indians" (Ross, Roberts, and Steptoe 1849-1850). The group of 24 additional emigrating Native Americans never arrived at Fort Hamer. However, 14 Native Americans were received from various posts and were awaiting transport following the February departure (Covington 1993:121; U.S. Congress 1850:87). On March 11, 1850, 11 of the 14 surrendered Seminoles emigrated from Fort Hamer on the Steamer Fashion (Covington 1993:121; Lantz 1994:3; U.S. Congress 1850:87).

3.10 End of 1850 Seminole Emigration and Abandonment of Fort Hamer

Rumors that Seminoles had been transported against their will and that the U.S. Government was withholding payment, in addition to further encroachment of the military upon the Florida Indian Reserve, caused the Native American emigration process to come to a halt. Billy Bowlegs backed out of his agreement with Casey to go west which caused all remaining Seminoles to cease negotiations. Two Native Americans were traveling with the emigrating party to trade when they were allegedly transported from Fort Hamer against their will (U.S. Congress 1850:94-95; Covington 1961b:60, 1982:15, 1993:121). According to James Covington in *The Seminoles of Florida*, Bowlegs eventually confessed to Casey that he had never intended to leave Florida (Covington 1993:117-118).

The halt of the emigration process and the decrease in hostile activities among the Native Americans, settlers, and U.S. Government, caused military action in Florida to cease. Citizens throughout Florida were angered by the amount of money being spent, which led to the emigration of 74 Native Americans, but involved the work of about 1,500 military troops. Bad publicity and the absence of additional violent acts led to the withdrawal of troops in Florida (Covington 1982:16). Posts were closed and troops made their way to Fort Hamer. Captain Casey declared that all negotiations with the remaining Seminoles were futile. In response, Twiggs suggested the reduction of troops, which included one company at Fort Hamer, two on the Caloosahatchee and the total abandonment of Fort Brooke as it was too far north from the remaining Native Americans. All Fort Brooke property was to be sent to Fort Hamer on the Manatee (Twiggs to Crawford 1850). In April 1850, Fort Hamer had as many as 160 troops on the post with three companies. In October 1850, Fort Hamer continued to maintain three companies of 157 troops (Ross, Roberts, and Steptoe 1849-1850).

Removal of Buildings at Fort Hamer. Although Fort Hamer was seen as the most viable military post in the state, it was now too far north of the remaining Seminole population and the fort was officially abandoned on November 24, 1850, a year after it was established. Troops previously stationed at Fort Hamer were ordered to Key West and Fort Casey. All public property, including buildings, was sent to Forts Casey and Myers to the south. On November 19, 1850, troops were ordered to dismantle all buildings that were not absolutely necessary for their survival while they awaited the arrival of the steamers Colonel Clay and Planter. The lumber was transported to Forts Casey and Myers, where it could be reused. The Planter was ordered to transport the lumber from Fort Hamer to Fort Casey until it was all removed (Childs to Steptoe 1850; Everett to French 1850c). Any buildings remaining on the site were sold and relocated off of the property. Lieutenant Hayes, who was stationed at Fort Hamer in 1850, reportedly sold all remaining buildings, which included some log houses, at a public sale. One of these log houses was reportedly purchased and relocated to the plantation of Schofield and Davis, known as the Gamble Plantation. Although the Federal Government did not relinquish its claim to these lands until many years later, William B. Hooker and his wife Mary laid claim to the land as early as 1855 (Bureau of Land Management 1855; State of Florid n.d; Dye 1967:22, 24; Manatee County Clerk of Circuit Court 1857; McMurria 1967:11-12; Hauford to Eddig 1871).

3.11 Third Seminole War, Reestablishment, and Abandonment of Fort Hamer

In December of 1855, the Third Seminole War, or the Billy Bowlegs War, started as a result of pressure placed on Native Americans remaining in Florida to migrate west. The war started when Seminole Chief Holatter-Micco, also known as Billy Bowlegs, and 30 warriors attacked an army camp, killing four soldiers and wounding four others. The attack was in

retaliation for damage done by several artillerymen to property belonging to Billy Bowlegs. This hostile action renewed state and federal interest in the final elimination of the Seminoles from Florida. Thus, hostilities in the Upper and Lower Manatee area soon led to the reactivation of Fort Hamer.

During this period, the site of Fort Hamer was briefly reactivated and occupied by a detachment of 10 men from William B. Hooker's Company of Florida Mounted Volunteers (Sheppard et al. n.d.:19; Federal Writers' Project 1939:471; Covington 1982, 1993; Warner and Warner 1986:134; Graham 1990:11). The location of Fort Hamer, established during the Third Seminole War, was on the property of William B. Hooker and his wife Mary. Hooker purchased the eastern half of the northwestern quarter of Section 17, Township 34 South, Range 19 East, consisting of the lands within federally subdivided Lot number five on May 1, 1855, under the Land Law of 1820 (State of Florida n.d.:239; Manatee County Clerk of Circuit Court 1857:20-21; Dye 1967:22). It appears that Hooker, a prominent cattle baron in the region who had a homestead north of the Manatee, purchased this parcel of land to herd cattle and was then forced to defend it.

According Dr. Joe Knetsch it is highly unlikely that the new Fort Hamer would have been established in the same location as the 1849-1850 fort, because no visual indicators of the site remained (all buildings had been removed in November 1850) and the site would have been disturbed by refuse and possibly contaminated by insects and rodents (Knetsch 2004). However, historical research indicates that the 1856 Fort Hamer was located at least in the general vicinity of the 1849-1850 Fort Hamer (Follett 1851; Peas Creek and Manatee River to Charlotte Harbor 1856; Belknap to Secretary of the Interior 1876). The later fort (1856) was occupied by Florida militia and not U.S. military commissioned officers, so the structures on the site and the post itself would not have been constructed on the same scale as the prior Fort Hamer (Knetsch 2004). On December 8, 1857, William B. Hooker sold the lands containing the former site of Fort Hamer to Benjamin J. Hagler and William J. Hooker (Manatee County Clerk of Circuit Court 1857:20-21). Fort Hamer was again abandoned at the end of the Third Seminole War and no buildings, structures, or artifacts from this period of occupation remained (Hauford to Eddig 1871). It should be noted that the previous CRAS in the area of Fort Hamer (ACI 2001a, 2005a, 2007; Janus 1998a, 1998b) found no evidence of the Fort buildings. This is in keeping with the historic documentation noted here.

Military action was not decisive during the Third Seminole War, and in 1858 the U.S. Government again resorted to monetary persuasion to induce the remaining Seminoles to migrate west. Chief Billy Bowlegs accepted $5,000 for himself, $2,500 for his lost cattle, each warrior received $500, and $100 was given to each woman and child. On May 4, 1858, the ship Grey Cloud set sail from Fort Myers with 38 Seminole warriors and 85 Seminole women and children. Stopping at Egmont Key, 41 captives and a Seminole woman guide was added to the group. This made a total of 165 Seminoles migrating west. On May 8, 1858, the Third Seminole War was declared officially over (Covington 1982:78-80).

3.12 Settlement in Manatee and the Civil War

In 1857, depression reached into the sugar and molasses industry. Northern markets were closed to shipments from this region. Those planters who had borrowed heavily, including Dr. Joseph Braden and Major Robert Gamble, suffered financial loss as their holdings were sold to pay for their debt (Sheppard et al. n.d.:20). Sugar cane never again achieved the same prominence in the Bradenton area. Residents turned to citrus, tobacco, vegetables, and lumber.

Cattle ranching also served as one of the first important economic activities reported in Manatee County. Mavericks left by early Spanish explorers such as DeSoto and Narvaez provided the source for the herds raised by the mid-eighteenth century "cowkeeper" Seminoles. As the Seminoles were pushed further south during the Seminole Wars and their cattle were either sold or left to roam, settlers captured or bought the cattle and branded them for their own. By the late 1850s, the cattle industry of southwestern Florida was developing on a significant scale. Hillsborough and Manatee Counties constituted Florida's leading cattle producing region.

Erasmus Rye, for whom Rye is named, arrived in Florida from Hanover County Virginia at approximately this time. Erasmus, the son of Scottish immigrants, fought in the Third Seminole War. While in Florida, Erasmus met and married Mary Lucebia Williams, daughter of James Green Williams. The newlyweds established a home at Oak Knoll, east of the project area, but when Erasmus joined the Confederate forces, Mary Lucebia relinquished their homestead and returned to her parents' home along Rye Branch (Warner and Warner 1986).

In 1861, Florida followed South Carolina's lead and seceded from the Union as a prelude to the American Civil War. One of the major contributions of the state to the war effort was in the supplying of beef to the Confederate Government. The Confederate Government estimated that three-fourths of the cattle which Florida supplied to the Confederacy originated from Brevard and Manatee Counties and the route of today's U.S. 301 was a major supply artery for the Confederate forces (Cole n.d.; Shofner 1995:72). Union troops stationed at Punta Rassa, south of Ft. Myers, conducted several raids into the Peace River Valley to seize cattle and destroy ranches. In response, Confederate supporters formed the Cattle Guard Battalion, consisting of nine companies under the command of Colonel Charles J. Mannerlyn. The lack of railway transport to other states, the federal embargo, and the enclaves of Union supporters and Union troops holding key areas such as Jacksonville and Ft. Myers prevented an influx of finished materials. Additionally, federal gunboats blockaded the mouth of the Manatee River, as well as other large rivers throughout the state, preventing the shipment of raw materials. In 1862, armed forces advanced up the river, burning mills and plantation houses. As a result, new settlement remained limited until after the Civil War, which ended in 1865, when General Robert E. Lee surrendered to General U.S. Grant at Appomattox Courthouse in Virginia (Federal Writers' Project 1939:471; Tebeau 1971:251).

Immediately following the Civil War, the South underwent a period of "Reconstruction" to prepare the Confederate States for readmission to the Union. The program was administered by the U.S. Congress, and on July 25, 1868, Florida officially returned to the Union (Tebeau 1971:251). The Homestead Act of 1866 allowed African-Americans and former Union supporters to file claims to receive an 80-acre tract in Florida and four other public land states in the south. Former Confederates were not eligible to file a claim under this act until after 1876, when the lands were opened to unrestricted sale for the following twelve years (Tebeau 1971:266, 294). The Homestead Act encouraged growth and settlement throughout the Reconstruction era.

Two new residents, John and Bartholomew Fogarty, settled on the south side of the Manatee River following the war. As master shipbuilders, they contributed to the reconstruction of the settlements along the Manatee River and founded the area known as Fogartyville, six to seven miles west of the Fort Hamer Bridge EIS project area (Sheppard et al. n.d.:21). William B. Hooker's settlement at present-day Parrish was purchased by Charles Turner in 1866, who conveyed the plantation to his father, Major William Iredell Turner in 1867. Turner, a 53-year-old native of Virginia and a veteran of the Seminole and Civil Wars, reportedly named the plantation Oak Hill after he and his wife, Isabella Higgenbotham, arrived from Tampa to live on Hooker's plantation in 1865. The couple had 10 children and their "splendid home" was

described as a log house near the old trail (McDuffee 1961:200). William J. Hooker continued to maintain his land holdings at the former site of Fort Hamer until shortly before his death in 1871 (Hauford to Eddig 1871; Dye 1967:22).

3.13 Economic Boom Period

During the 1870s and 1880s, the economy of Manatee County boomed with a number of winter visitors seeking the favorable subtropical climate and an increase of agricultural production with the introduction of truck farming of tomatoes, cucumbers and beans as well as experimentation with oranges and lemons. Cattle continued to play a major role in inland areas such as Pine Level and Arcadia. Harvesting of the natural resources - timber and naval stores fostered industry across the region. Along Gamble Creek, virgin pines were tapped for rosin, then timbered out. Tallevast Turpentine Camp operated at Mitchellville, and W. S. Warner of Palma Sola operated a logging camp near Fort Hamer. Warner's sawmill at Palma Sola turned out lumber from the logs barged from the old fort down river. Warner advertised yellow pine, cypress, and cedar made into orange and vegetable crates, shingles, doors, and sashes together with his general store merchandise. He was an agent for Disston's Florida Land and Improvement Company (Warner and Warner 1986:131,135). The arrival of the Atlantic Coast Line and the Seaboard Air Line into Tampa prompted an expansion of agriculture and settlement in Manatee County.

The railroad had an impact in eastern Manatee County as well. During the early 1880s, the Southern Florida Railroad acquired the old railroad charter and land grant of the Gainesville, Ocala, and Charlotte Harbor Railroad, which was due to expire in 1885. To hold this charter and secure lands, immediate railroad construction was necessary. Construction started in the Bartow area in Polk County and continued southward to Punta Gorda (Pettingill 1952:68-73). With the railroad as a catalyst, the 1880s witnessed a sudden surge of buying land for speculation, agriculture, and settlement in eastern Manatee County which prompted the creation of DeSoto County in 1887 out of eastern Manatee County. With the change, a new county seat was needed. Manatee was designated temporary county seat while an election was held to determine the permanent location. In an attempt to ensure that the seat of government remained along the river, Manatee and Palmetto encouraged Braidentown, which incorporated in May 1888, to enter the race. However, the attempt backfired on the two communities when the town of Braidentown was chosen by majority vote as the new county seat in 1888 (McDuffee 1961:277-78, 282-83).

Settlement of Rye. Beginning in 1875, the settlement along present-day Rye Road near the Manatee River came to be known as Rye after Erasmus Rye. Eventually growing to 72 families, this logging and farming community of Rye was strategically located at the head of navigation on the Manatee River (Warner and Warner 1986). Mitchell laid out a subdivision of five north/south running streets and four east/west avenues and changed the name of the area from Rye to Mitchellville. Sam's holdings also included a store and a warehouse which were supplied via the Parrish Road and shallow-draft side-wheel steamers which would dock at the Mitchellville landing (Warner 1980). During the community's tenure as Mitchellville, the first bridge was built across the Manatee River. Appropriated with $150.00 on September 8, 1879, the bridge spanned the river on the road from Oak Hill (Parrish) to the county seat of Pine Level (Warner and Warner 1986). A modern concrete bridge has since replaced the original bridge at the same location. The community expanded with additional stores owned by T.S. Browning and Mr. Frier, a blacksmith shop, a school (Rye School), a church, and a cemetery (Warner and Warner 1986:145 and 1988; Stewart 1964).

Prior to the opening of the Rye School (8MA1344), the children walked to the Gulley Creek School, several miles east (Warner and Warner 1986). Although the opening date of the Rye School is unknown, Warner and Warner (1986) report that Elizabeth Ann Hines, who arrived in Rye was a teacher at the Rye School. A ca. 1909 (Anonymous) account describes her first day at the Rye School:

> It was a square frame building, set on posts which were rotting and falling to pieces. The trustees of the district were there, busily occupied in cutting poles and propping the building so it would not collapse. Having made sure the building would not fall down, we went inside and all eyes were turned on me. I was pretty nervous by this time and thought if only I had a desk to stand behind. There was one in the back of the room and two trustees kindly shook the rats nest out of it and put it on the platform for me (Anonymous n.d.b). Today there is no evidence of this school west of the Rye Road APE (ACI 2004; USDA 1958; USGS 1972).

Little is known of the Mitchellville Cemetery (8MA1343) save for a single remaining headstone, that of Thomas Urquhart (b. ?, d. 16 April 1884). The marble column marker is surprisingly ornate for the rural community of Rye. The marker's iconography includes the column itself, which is complete, representing a full life, the clover symbolizing the Christian trinity, and the compass and the square marking Mr. Urquhart's membership in the Freemasons (Carmack 2001). The tombstone and foot marker originally faced east and the inscription reads "Blessed are they who die in the Lord." Mr. Urquhart was Sam Mitchell's father-in-law (Warner and Warner 1986:145). The Manasota Genealogical Society reports that:

> This cemetery is located on Rye Road north of Rye Bridge (east and west of the Rye Road APE [Figure 3.5]). Mr. Hubert Rutland bought this cemetery, and there was discussion of moving the bodies to Fortner Cemetery. To this date [1982], the bodies have not been moved. Permission to move the body of Thomas Urquhart was denied. There are about twenty-five bodies that will be transferred to Fortner if plans materialize. As there are no markers, we were unable to identify these graves (Manasota Genealogical Society 1982: 484).

The same year his father-in-law passed away, Sam Mitchell petitioned to open the Mitchellville Post Office. However, it was discovered that there was already another Florida Post Office by that name. Therefore, the community reverted to Rye, and established the Rye Post Office (the whereabouts of this building is unknown), to avoid confusion (Warner and Warner 1986).

Parrish. While an 1883 directory still referred to today's community of Parrish as Oak Hill (located north of the Rye Road APE), it also listed a post office called "Parish." The post office, established in 1879, had as its first postmaster Thomas S. Browning, who began his appointment on December 8. By 1885, a guidebook boasted a population of 30 at "Parish," that point reachable from Tampa for a boat fare of $1.50. Commercial orange groves were operated by C. C. and John Parish, G. W. Cason, R. I. McKinney, and W. H. Gillette. Cassie M. Harrison was postmaster that year, the eighth appointee (Bradbury and Hallock 1962:65; ACI 1990).

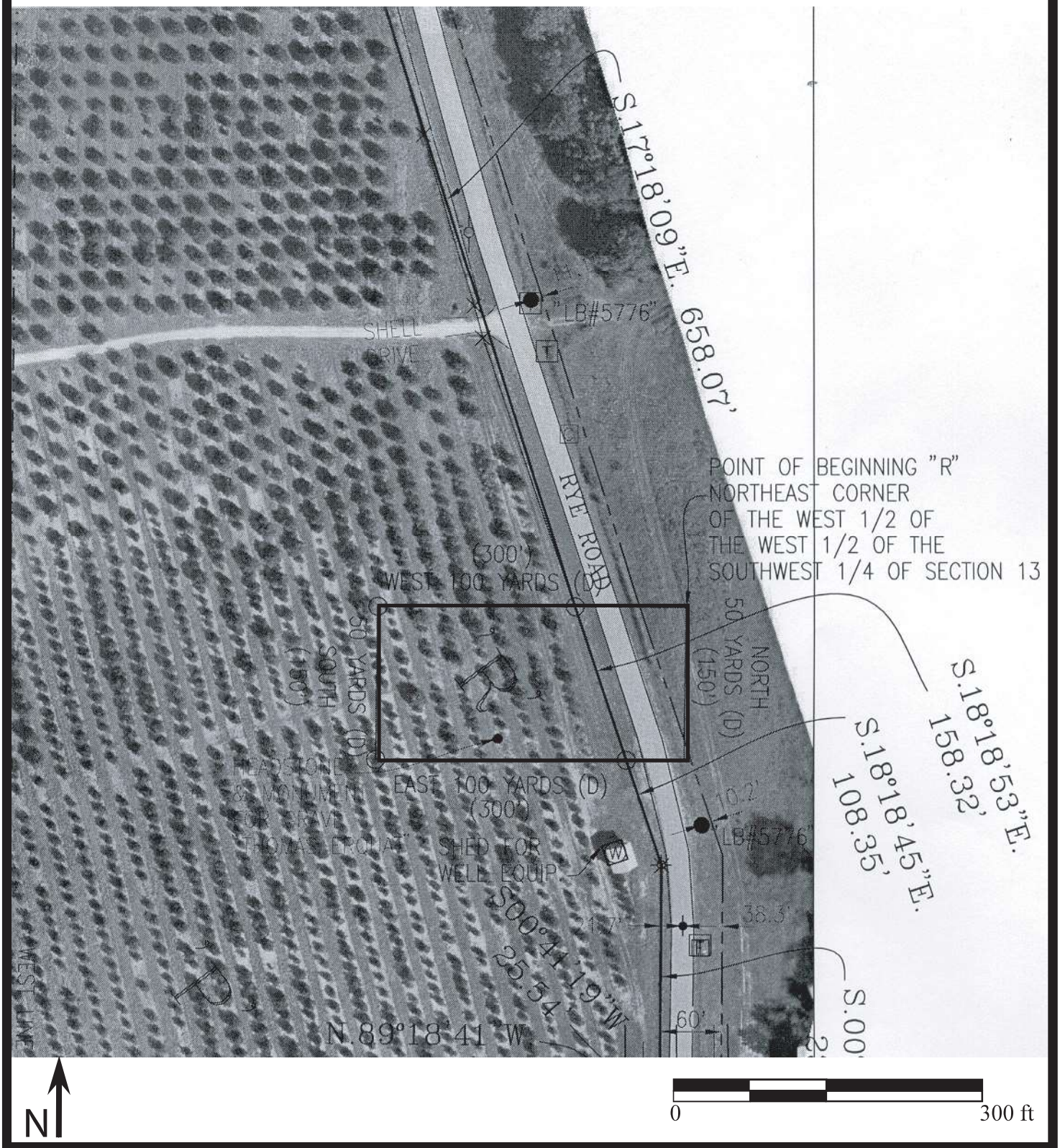

Figure 3.5. Legal boundaries of the Mitchellville Cemetery (8MA1343) denoted by black rectangle (ACI 2004; WilsonMiller 2004).

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

Land within the vicinity of the Rye Road APE was deeded to investors and individuals between 1850 and 1883 such as John Stephens, William B. Hooker, William J. Turner, Levin P. Johnson, W.H. Gillett, Florida Land and Improvement Company, and to Sir Edward James Reed (State of Florida n.d.:27, 235-237). The Manatee Valley Land and Development Company, based in Des Moines, Iowa, published a brochure promoting the agricultural value of the land (Manatee Valley Land and Development Company 1913) and development followed. Surrounding parcels of land were subdivided, reflecting the ambitions Florida land boom era. Several sections of large parcels were not subdivided, though, as they remained in the possession of the original owners, such as the Youngbloods, Huylers, Richs, Hendrys, and Heines. At the same time, additional plats were laid out in the town of Parrish and private residences were beginning to be constructed along US 301 North. Parrish was a busy rural center, servicing the commercial, educational, and religious needs of the surrounding cattle ranchers and farmers. The Manatee River Park, southeast of town, was platted in June, 1913. The Parrish United Methodist Church constructed a parsonage to the northeast of the chapel around 1920, and the Parrish School was constructed north of the church in 1924.

3.14 Prosperity from 1900 through the Land Boom in the Roaring Twenties

The turn of the century prompted optimism and excitement over growth and development. During this time the automobile, telephone, and electricity transformed Manatee County from isolation into a county linked with the rest of the state and nation. In May 1903, Braidentown incorporated. In 1905, the community removed the "I" from its name, and finally dropped the "w" from its name in 1924. In 1903, Bradenton received a new courthouse, and a trolley line, and an electric power plant to service Bradenton and Manatee. Although the power plant proved a great success, the trolley operated for just over a year. Soon, automobiles, first introduced to the area in 1896, overwhelmed the streets, and boats powered by gasoline plied the river (Sheppard et al. n.d.:22; McDuffee 1961:294-95; Federal Writers' Project 1939:394; Bradbury and Hallock 1962:10). The Fort Hamer location continued to be seen as a viable development site, which could manage steamboat navigation along the Manatee River (Dye 1967).

With the arrival of the Atlantic Coast Line railroad from Tampa, the Bradenton-Manatee area became the principal shipping center for the winter vegetables and citrus grown on surrounding farms (Youngblood, n.d.:19-23, 26; ACI 1990). The increase in rail transport and growing hostilities from competitive communities eventually led to the complete abandonment of all development at Fort Hamer (Dye 1967).

Head of Navigation. At the turn of the century, the narrow and hazard-filled Manatee River above Bradenton (in the Fort Hamer Bridge APE, Figure 3.6) made boat navigation difficult. Although shallow draft side wheel steamboats were able to negotiate the meandering river, deeper draft vessels capable of larger cargos could not reach Rye (Warner 1980). The situation was brought to the attention of the River and Harbor Committee of Congress and federal funds were directed to the U.S. Army Corps of Engineers to begin improving the river (Warner and Warner 1986; USACE 1996). Between Rocky Bluff and Rye, the channel was dredged to 4 ft deep by 75 ft wide (USACE 1996). The first steamer to travel up the Manatee River was called "Lewis," a side wheeler about 100 ft long, built by the Fogarty Brothers. It was used as a supply boat for the Tallevast Turpentine Camp at Mitchelville and sometimes carried passengers (Stanton 1972; Leffingwell 1988). However, around 1907/1908, the "Lewis" was laid up on the north side of Fort Hamer when she caught fire and burned (McMurria 1967). This area, known as the "Head of Navigation, is situated in the project's APE (Figure 3.6).

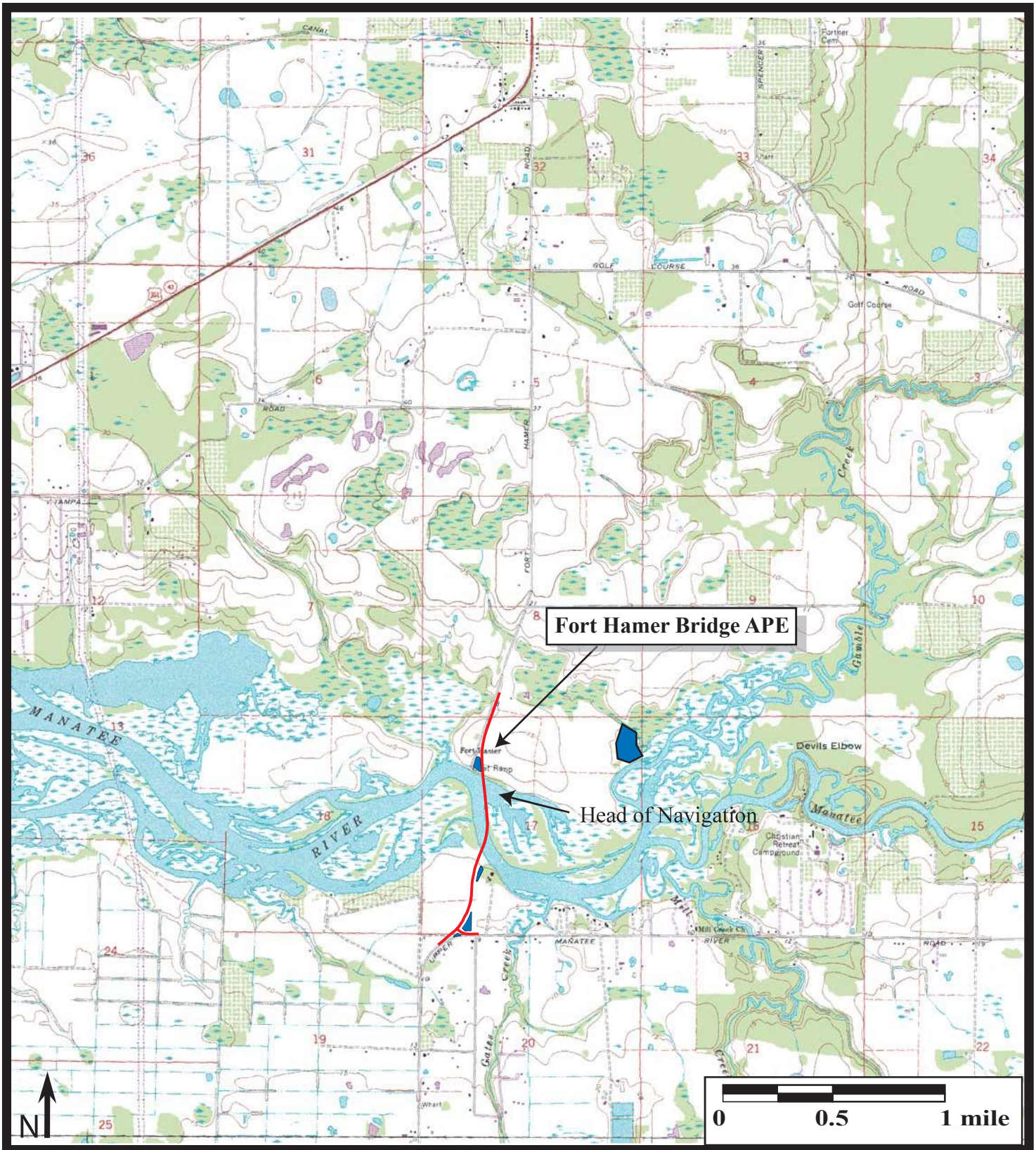

Figure 3.6. Head of Navigation on the Manatee River; Township 34 South, Range 19 East (USGS Parrish, Fla. 1973, PR 1987). The Fort Hamer Bridge APE is shown in red, pond sites and mitigation site shown in blue.

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

Sadly, the improved navigation was not enough to sustain the community of Rye, and when the railroad was constructed through Parrish, merchants began leaving the area. The timber industry soon followed and residents eventually abandoned the town. The Post Office closed in 1929, and the community of Rye became something of a ghost town (Bradbury and Hallock 1962).

A north/south connector from Tampa to Miami significantly opened up Manatee County. In 1915, a group of businessmen met to discuss the feasibility of a cross-state highway from Tampa through Miami by way of Sarasota. A portion of this route, which stretched from the Hillsborough County line to Sarasota, was constructed by Manatee County with the passage of a bond issue in 1911. This road was eventually designated U.S. 41, or the Tamiami Trail, but was not completed until April 1928 (Scupholm 1997:20-22; ACI 1993:4-6).

By the early 1920s, Manatee County was fully involved in the development of the Florida land boom. Several reasons prompted the 1920s boom, including the mild winters, growing number of tourists, the larger use of the automobile, completion of roads, prosperity of the 1920s, and the promise by the state legislature never to pass state income or inheritance taxes. In 1921, Sarasota County was formed from the southern portion of Manatee County.

3.15 Great Depression and Recovery

Signs of growth were halted by the end of the Florida Land Boom and the Great Depression. To make the situation even worse, two hurricanes hit south Florida in 1926 and 1928. The 1928 hurricane created a flood of refugees fleeing northward. The following year, in 1929, the Mediterranean fruit fly invaded and paralyzed the citrus industry creating quarantines and inspections which further slowed an already sluggish industry. Parrish, north of the Rye Road APE, with a mere 721 residents, was only briefly described as “a citrus-fruit and vegetable shipping center” (Federal Writers’ Project 1939:392).

3.16 World War II and Modern Development Trends

In January 1944, the Village of Manatee and the City of Bradenton united as one community (Sheppard et al. n.d.:24). The local economy of Manatee County recovered during World War II, as did the rest of the state. The state’s population increased from 1,897,414 to 2,771,305 from 1940 to 1950 (Tebeau 1971:431). It was around this time that the residence at 3250 Rye Road (8MA1476) was constructed. Within the 1950s, the properties at 4802 Red Rooster Road (8MA1473), 14355 Golf Course Road (8MA1474), 15450 Golf Course Road (8MA1475), the original nine hole golf course at Palmetto Pines (8MA1472), and FDOT bridge number 134022 (8MA1477) along Rye Road were constructed. Since 1960, Manatee County, along with the rest of Florida, has benefited from an influx of retirees and tourists, making Florida one of the fastest growing states in the nation. After the war, car ownership increased, making the American public more mobile and vacations increasingly inexpensive and easier. Many of the servicemen stationed in the area returned with their families to make Manatee County their home after the war. As veterans returned, the trend in new housing focused on the development of small tract homes in new subdivisions and extensive development along coastal areas.

In Manatee County, development has concentrated along the coast with the completion of Interstate 75 generating activity that has continued into the present. In 2009, the county population numbered 318,361 residents. With most of the people residing in the western portion

of the county along the coast, the eastern half is predominantly devoted to agriculture, rangeland, and forests. The county remains a major producer of tomatoes, nursery products, citrus, fish and shellfish (Purdum 1994:82, U.S. Census Bureau 2010).

4.0 RESEARCH CONSIDERATIONS AND METHODS

4.1 Background Research and Literature Review

A review of archaeological and historical literature, previous CRAS reports (ACI 2001a, 2005a, 2006a, 2007, 2008, 2010a and 2010b), and other documents, and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project area and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the FMSF, published books and articles, unpublished manuscripts, and maps. In addition to the FMSF, other data relative to the historical research were obtained from the Manatee County Public Library (Special Collections), the South Florida Museum, the Manatee County Property Appraiser's office, the FDHR, the Florida Division of State Lands, and the files of ACI. It should be noted that FMSF data in this report were updated in May 2011.

4.1.1 Archaeological Considerations

A review of the FMSF indicated that multiple surveys have been conducted in the Fort Hamer Bridge EIS project area, and 31 archaeological sites are recorded within one mile of the project (Table 4.1; Figure 4.1).

Fort Hamer Bridge APE. Only one archaeological site has been recorded within or immediately adjacent to the APE. The location where 8MA315 may have been located, lies immediately east of the proposed undertaking, south of the Manatee River (Figure 4.2). However, the actual location of the 19th Century Seminole War fortification, which is considered eligible for listing in the NRHP (FMSF; Appendix A), has never been confirmed (Gaske 2004, 2005, 2006; Percy 1991, 1998). The site was originally recorded by Henry Baker, archaeologist with the DHR, based on an informant and collections in 1986.

In 1998, a survey of the 700-acre Wading Bird Golf and Country Club project area was conducted north of the S.R. 64 corridor, on the southern bank of the Manatee River (Janus Research 1998a; see Figure 5.4 in this report). This effort recorded three prehistoric artifact scatter type sites (8MA1003-05), two historic structures (8MA1006 and 8MA1007), and re-evaluated 8MA315, the area where the Fort Hamer Site was recorded by Henry Baker in 1986 (FMSF).

When the area where Fort Hamer was thought to have been located was subjected to Phase II archaeological investigation, following the 1998 research, Janus concluded that "...the portion of the Fort Hamer Site (8MA315) identified within the Wading Bird Golf and Country Club [now Waterlefe Country Club] project boundaries area is minimal, and does not appear to meet minimum criteria for listing on the National Register of Historic Places" (Janus Research 1998b:23). The SHPO concurred with these findings (Percy 1998), noting that ". . . the portion of the Fort Hamer Site within the project area (Wading Bird Golf Course) is not eligible for listing in the NRHP." Part of the Waterlefe project cleared by the SHPO is located within and adjacent to the Fort Hamer Bridge APE (Figure 5.4). In addition, ACI's additional testing (2001a) and later extensive documentary research concerning Fort Hamer (ACI 2005a) resulted in another SHPO determination that the "proposed undertaking (constructing the proposed Upper Manatee Bridge) will have no effect on any historic properties within the project APE listed, determined eligible, or potentially eligible for listing in the NRHP" (Gaske 2005; Appendix B).

Table 4.1. Previously recorded archaeological sites within 1.6 km (1 mi) of the Fort Hamer Bridge EIS project.

SITE #	SITE NAME	SITE TYPE	CULTURE
8MA51	NN	Prehistoric mound	Unknown
8MA315	Fort Hamer	Seminole War Fort/Artifact scatter	19th century
8MA645	Pascuzzi	Lithic scatter	Middle Archaic
8MA646	Hilton	Habitation/Refuse	Safety Harbor/Weeden Island II
8MA647	Hooey	Habitation/Lithic scatter	Prehistoric lacking pottery
8MA715	Rye Bridge Mound	Prehistoric mound	Prehistoric/Safety Harbor/Contact
8MA769	Cassick	Artifact scatter	Prehistoric
8MA807	Gamble Creek	Artifact scatter, low density	Archaic
8MA842	Archery Range	Single artifact	Archaic
8MA908	Rye Road	Artifact scatter, low density	Prehistoric lacking pottery
8MA909	Swamp Edge	Artifact scatter, low density	Prehistoric lacking pottery
8MA910	Sandy Branch	Artifact scatter, low density	Prehistoric lacking pottery
8MA1003	Broken Pot	Artifact scatter	Manasota/Safety Harbor
8MA1004	Ancient Oaks Hammock	Artifact scatter	Prehistoric
8MA1005	Round the Bend	Artifact scatter	Prehistoric
8MA1025	Branwen's Scatter	Artifact scatter	Prehistoric
8MA1139	Swampside	Lithic scatter	Prehistoric lacking pottery
8MA1140	Boat Ramp	Lithic scatter	Early Archaic
8MA1141	Cumba	Lithic scatter	Prehistoric lacking pottery
8MA1142	Ridge's Edge	Lithic scatter	Prehistoric lacking pottery
8MA1238	MRP 1	Campsite	Prehistoric lacking pottery
8MA1250	Foxbrook	Extractive site/Lithic scatter	Prehistoric lacking pottery
8MA1288	Country Creek	Campsite (prehistoric)/Artifact scatter	Late Archaic
8MA1289	Country Meadows	Campsite(prehistoric)/Lithic scatter	Middle-Late Archaic
8MA1330	Underhill 4	Campsite(prehistoric)	Prehistoric
8MA1334	Dog's Mole Site	Lithic scatter	Prehistoric lacking pottery
8MA1335	Owl Place Site	Lithic scatter	Prehistoric lacking pottery
8MA1343	Mitchellville Cemetery	Historical cemetery	ca.1879-ca.1924
8MA1344	Waters Edge Historic Scatter	Town/Artifact scatter	19th century American
8MA1345	Waters Edge Prehistoric Scatter	Extractive site/Lithic scatter	Middle Archaic
8MA1346	Waters Edge Muticomponent	Lithic scatter; Town /Artifact scatter	Prehistoric lacking pottery;19th & 20th century American

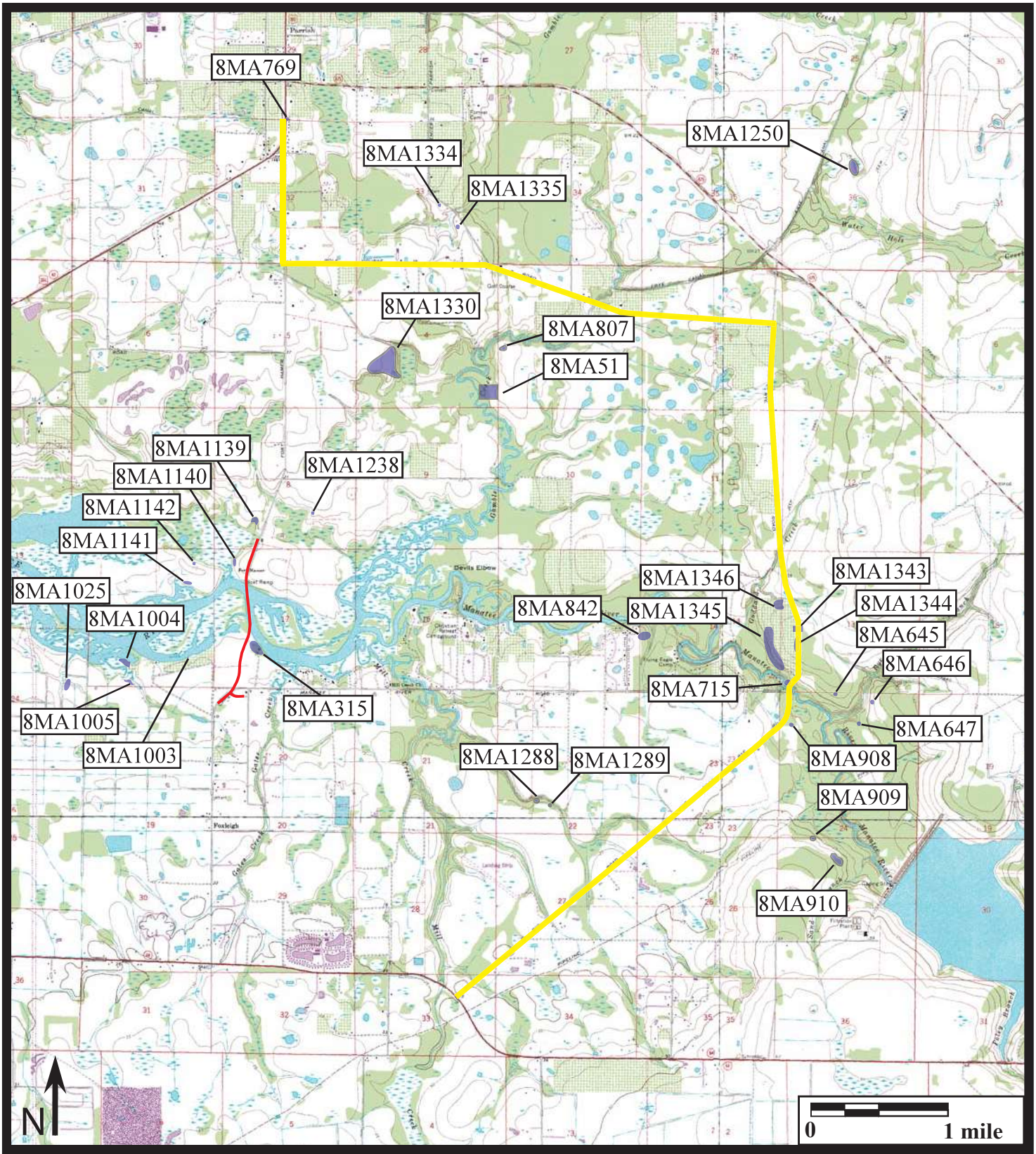

Figure 4.1. Previously recorded resources (purple) within one mile of the Fort Hamer Bridge EIS; Rye Road segment shown in yellow, Fort Hamer segment shown in red; Townships 33 and 34 South, Range 19 East, (Parrish, Fla. 1973, PR 1987; Rye, Fla. 1972, PR 1979; Lorraine, Fla. 1973, PR 1987; Verna, Fla. 1973, PR 1979).

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

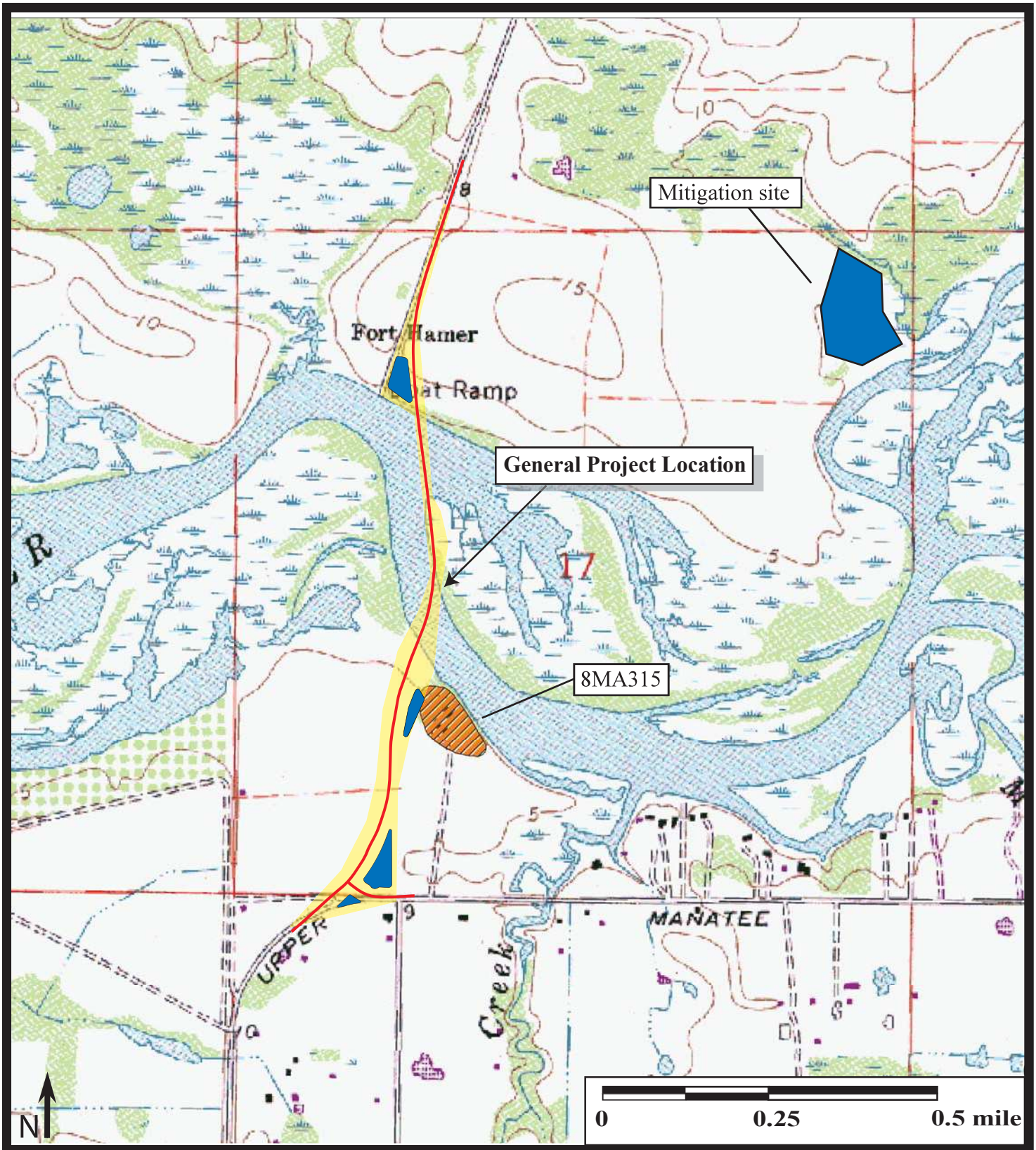

Figure 4.2. Location of previously recorded site 8MA315 within the Fort Hamer project corridor (yellow) and proposed pond site (blue); Township 34 South, Range 19 East, Section 17 (USGS Parrish, Fla. 1973, PR 1987).

CRAS
Fort Hamer Bridge EIS
Manatee County, Florida

Based on the distribution of archaeological sites in Manatee, the Fort Hamer Bridge APE was considered to have a moderate to low potential for the discovery of prehistoric and historic archaeological sites. Prehistoric sites, if found, were expected to be artifact or lithic scatter sites. Historic sites, if found, were expected to be associated with 19th and early 20th century activities along the river, near the Head of Navigation. Finally, based on background research there was a slight potential that remains associated with the ca. 1903 steamer "Lewis," which had burned in the river, might be discovered on the shore.

Rye Road APE. A review of the FMSF and previous CRAS reports (ACI 2005a, 2006a, 2007, 2010a) indicated that portions of two sites archaeological sites (8MA715 and 8MA1344) had been recorded adjacent to the APE (Figure 4.1). In addition, 8MA1343, a historic cemetery (Mitchellville Cemetery), was recorded east and west of Rye Road (Figure 3.4). Near the Rye Road/Golf Course Road alignment, seven prehistoric mounds (none within or immediately adjacent to the APE), as well as aboriginal lithic and artifact scatters associated with the town of Rye/Mitchellville had been recorded.

The 2004 survey of the 260-acre Waters Edge project area located on the north bank of the Manatee River and west of Rye Road (ACI 2004) recorded the Mitchellville Cemetery (8MA1343), as well as a historic artifact scatter (8MA1344), a lithic scatter (8MA1345), and a multi-component site (8MA1346). The historic sites were apparently associated with the no-longer extant town of Rye/Mitchellville. None of these sites was considered eligible for listing in the NRHP (Gaske 2004), but the historic plat of the cemetery (8MA1343; Figure 4.1) is within the APE, and SHPO commented: "It is the opinion of this office that should construction activities occur within 20 meters of the legal boundaries of 8MA1343, a professional archaeologist should monitor the construction activities since burials often occur outside boundaries of historic cemeteries" (Gaske 2004). The survey also failed to find evidence of the previously recorded Rye Bridge Mound (8MA715). Additional surveys in the project vicinity include a segment of U.S. 301 (ACI 1990a), the Heartland Development property (Austin and Hansen 1991), a transmission main corridor (Estabrook 1994), the Heritage Sound DRI/ADA project site (Janus 1998c), Foxbrook Phase III (ACI 2002a), the Country Meadows property (ACI 2002b), the Underhill property (Janus 2003) and Gamble Creek Estates (Janus 2004). In addition, other surveys along Rye Road resulted in no archaeological sites (ACI 2000, 2001b, 2003a, 2003b, 2005a, 2005b, 2006b).

4.1.2 Historical/Architectural Considerations

Fort Hamer Bridge APE: A review of the FMSF revealed that no historic buildings (50 years of age or older) have been recorded in this project APE. However, one residence, 8MA1214, is recorded on the river just east of the project APE. SHPO has determined that this resource is not eligible for listing in the NRHP (ACI 2001b; Matthews 2001).

Rye Road APE: Fifteen previously recorded historic resources have been identified within the historical APE along the Rye Road alignment (ACI 2001a, 2005a, 2007, 2008). Several of these were updated in 2008 during a survey of the historic structures of Manatee County (Parks and Younkin 2008). SHPO determined that 10 of the 15 resources (8MA1216-8MA1218, 8MA1220, 8MA1222-MA1226, 8MA1524) are not considered eligible for listing in the NRHP (Matthews 2001; Gaske 2008). Five of the resources have not been evaluated and include one resource group (8MA1472), one bridge (8MA1477), and three buildings (8MA1474-8MA1476). The recorded buildings consist of residential, commercial, and recreational structures constructed between 1924 and 1956. These resources represent commonly occurring types of

architecture for the locale, and available data does not indicate any associations with individuals important to the history of the area.

The visual examination of the APE in 2011 revealed that there are no additional historic buildings (which appear to be 50 years of age or older) located within the APE. Based on the reconnaissance and a check of the property records at the Manatee County Property Appraisers office, there are no structures that appear to be eligible for listing in the NRHP, individually or as part of a district.

4.2 Field Methodology

4.2.1 Archaeological

Fort Hamer Bridge APE: Field methodology in 2010 consisted of an initial reconnaissance followed by careful ground surface inspection and systematic and judgmental subsurface shovel testing. The purpose of the latter effort was to locate sites not exposed on the ground, as well as to test for the presence of buried cultural deposits in areas yielding surface artifacts. All shovel test pits were circular and measured approximately 0.5 m (20 in) in diameter by 1 m (3.3 ft) deep. All soil recovered was screened through 6.2 mm (0.25 in) mesh hardware cloth to maximize the recovery of any artifacts. If surface examination and/or subsurface testing recovered cultural material, testing at close intervals (i.e., 10 m [33 ft]) was planned to be conducted to determine site dimensions and integrity. The locations of all shovel tests were plotted on aerial maps and, following recording of relevant data such as stratigraphic profile and artifact finds, all test pits were refilled.

Rye Road APE: For this APE, no additional shovel testing was planned (Kammerer 2011) since the area of potential effects remained the same as it had been in the three previous surveys (ACI 2005a, 2006a, 2007). Thus, the results of the prior surveys are presented in Section 5.0.

4.2.2 Historical/Architectural

Fort Hamer Bridge and Rye Road APE: Field methodology consisted of a visual reconnaissance of each APE to identify any buildings constructed prior to 1961 that had not been previously documented. If structures were found, research would include a study of each identified historic resource including photographs, architectural descriptions, and potential NRHP eligibility.

4.3 Laboratory Methods and Curation

If artifacts had been found, laboratory methods would have included an initial cleaning and sorting by artifact type. However, no artifacts were found during the survey.

Curation of all project related information (i.e., field notes, photo logs, etc.) will be at Archaeological Consultants, Inc. in Sarasota pending transfer to a FDOT designated repository.

4.4 Unexpected Discoveries

If human burial sites such as Indian mounds, lost historic and precontact cemeteries, or other unmarked burials or associated artifacts were found, then the provisions and guidelines set forth in Chapter 872.05 *F.S.* (Offenses Concerning Dead Bodies and Graves) were to be followed. However, it was not anticipated that such sites would be found during this survey.

5.0 RESULTS AND CONCLUSIONS

5.1 Archaeological Survey Results

Fort Hamer Bridge APE: The 2010 archaeological field survey included both ground surface reconnaissance and the excavation of a total 122 shovel test pits within the project APE (Figures 5.1-5.3). Also, as a result of this effort, no significant cultural resources were found. These results are in keeping with previous surveys in the area (ACI 2010b).

More specifically, the proposed pond site and the general area near where Fort Hamer may have been located (south bank of the Manatee River), was tested at 25 m (82 ft) intervals offset at 12.5 m (41 ft). The remaining three proposed ponds and additional ROW, as well as the mitigation area, were tested at 25 m (82 ft) and 50 m (164 ft) intervals. On the marsh island, two parallel transects (25 m [82 ft] intervals offset at 12.5 m [41 ft]) were placed within the transect. None of the shovel tests pits produced cultural material.

Eighty-seven shovel tests were placed in the proposed pond sites and the additional ROW. Test pit stratigraphy can be described as follows: within the southernmost pond site, 0-100 cm (0-39 in) of gray-brown gravelly sand was observed; within the pond immediately north, stratigraphy was variable and consisted of black muck. Outside of the pond, to the west, 0-25 cm (0-10 in) of gray sand followed by 25-100 cm (10-39 in) of gray/brown clay was encountered. East of the pond, test pits yielded 0-100 cm (0-39 in) of gray/brown gravelly sand. Within and immediately adjacent to the pond, just south of the river, 0-20 cm (0-8 in) of dark gray sand, 20-80 cm (8-31 in) of brown hard pan was observed. North of the river, the soil stratigraphy of the proposed pond consisted of 0-30 cm (0-12 in) of grey sand, 30-80 cm (12-31 ft) of light gray sand, and 80-100 cm (31-39 ft) of brown sand.

Seventeen shovel tests were placed in the mitigation site, located north of the river and east of Fort Hamer Road (Figure 5.3). All shovel tests were negative and contained a general stratigraphy of 0-25 cm (0-10 in) of gray sand followed by light gray sand to 80 cm (31 in) and water. Eighteen shovel tests were placed in the marsh island in the Manatee River. Within the hammock area on the island, the stratigraphy consisted of 0-25 cm (0-10 in) of gray sand, 25-50 cm (10-20 in) of light brown sandy muck, followed by water. Along the River, blackmuck was encountered to 10 cm (4 in) followed by water. These shovel tests were placed along two parallel transects (25 m [82 ft] offset intervals). None of the shovel tests, or the ones on the river banks, produced any cultural evidence. However, this part of the river has never been subjected to an underwater survey (Cozzi 2010). Thus the presence or absence of cultural materials within the Manatee River, in and adjacent to the APE, remains unknown.

Finally in the area near where Fort Hamer had been recorded in 1986 based on informant information by DHR archaeologist Henry Baker, ACI excavated 35 shovel tests at 25 m (82 ft) intervals offset at 12.5 m (41 ft) and 50 m (164 ft) intervals (Figure 5.1); none was positive. These results are in keeping with the previous cultural resource assessments in the project area which resulted in three SHPO clearances of the "Fort Hamer Site" south of the Manatee River, and within a portion of the archaeological APE (Percy 1998; Matthews 2001; Gaske 2005). An updated FMSF form has been prepared to reflect this negative data (Appendix A).

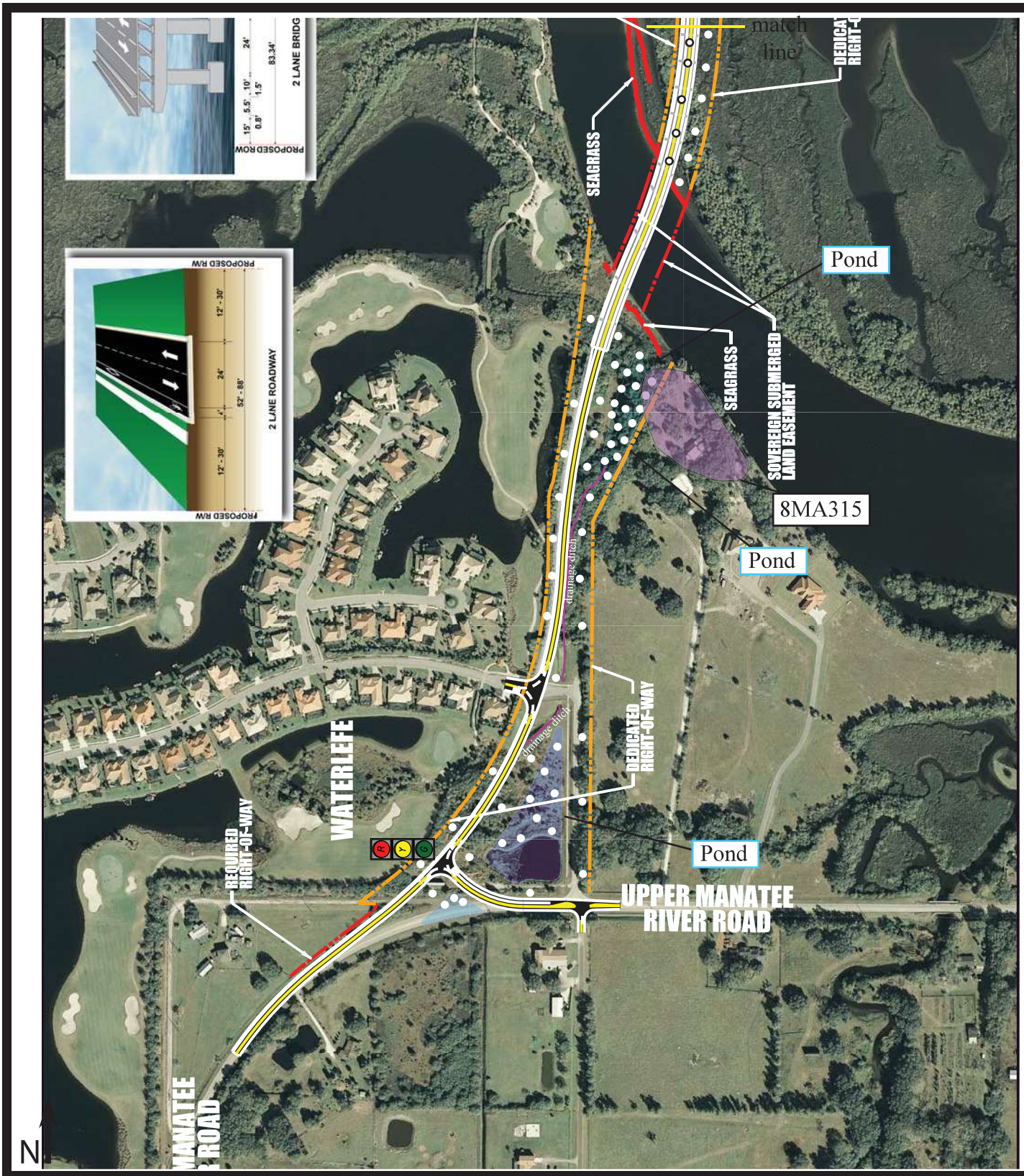

Figure 5.1. Approximate location of shovel tests within the Fort Hamer Road project APE; Township 34 South, Range 19 East, Sections 17 and 20 (Figure provided by URS). Shovel tests are not to scale. See Figure 5.2 for additional shovel tests.

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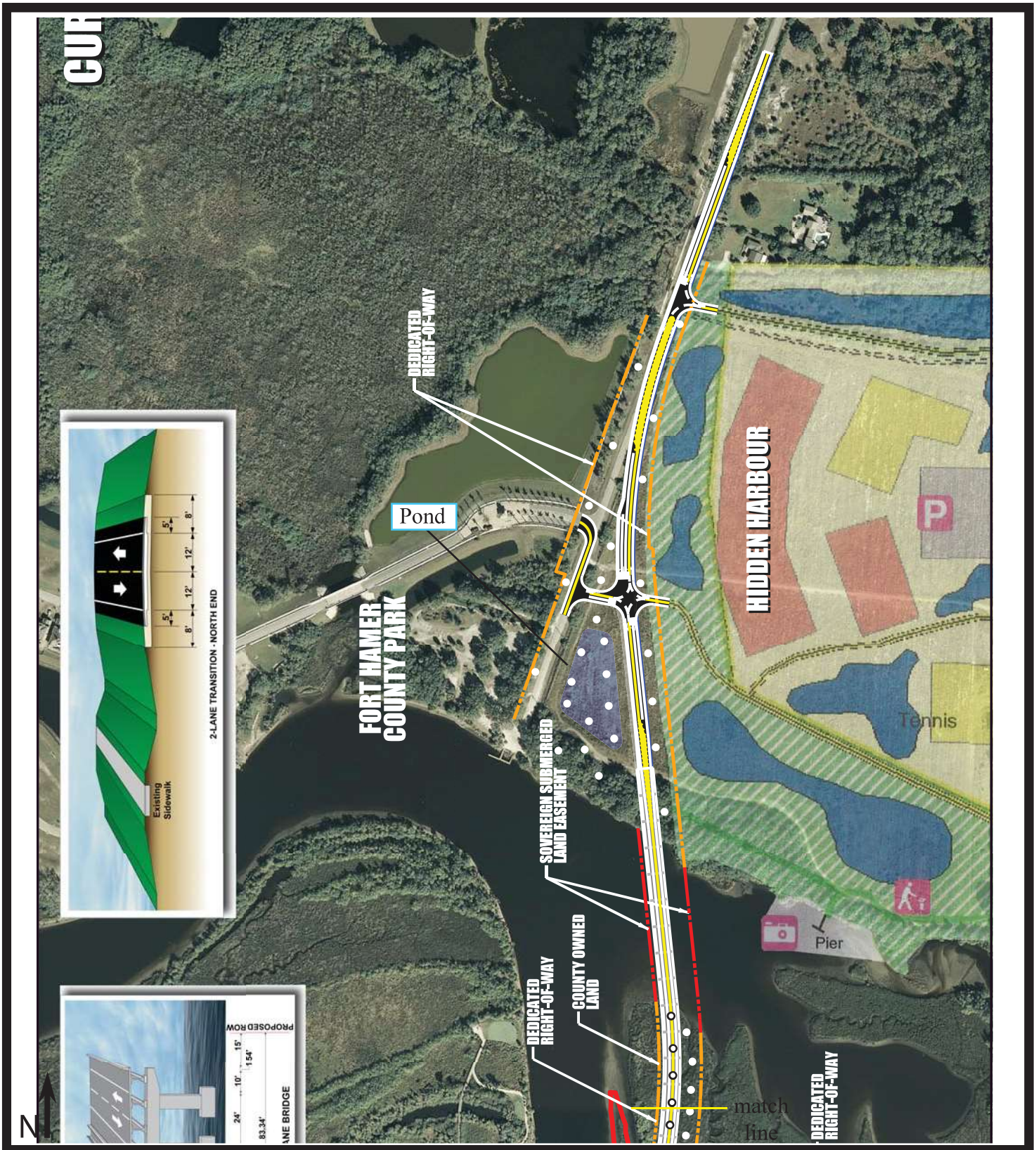

Figure 5.2. Approximate location of shovel tests within the Fort Hamer Road project APE (orange and red dashed lines); Township 34 South, Range 19 East, Sections 8 and 17 (Figure provided by URS). Shovel tests are not to scale. See Figure 5.3 for additional shovel tests.

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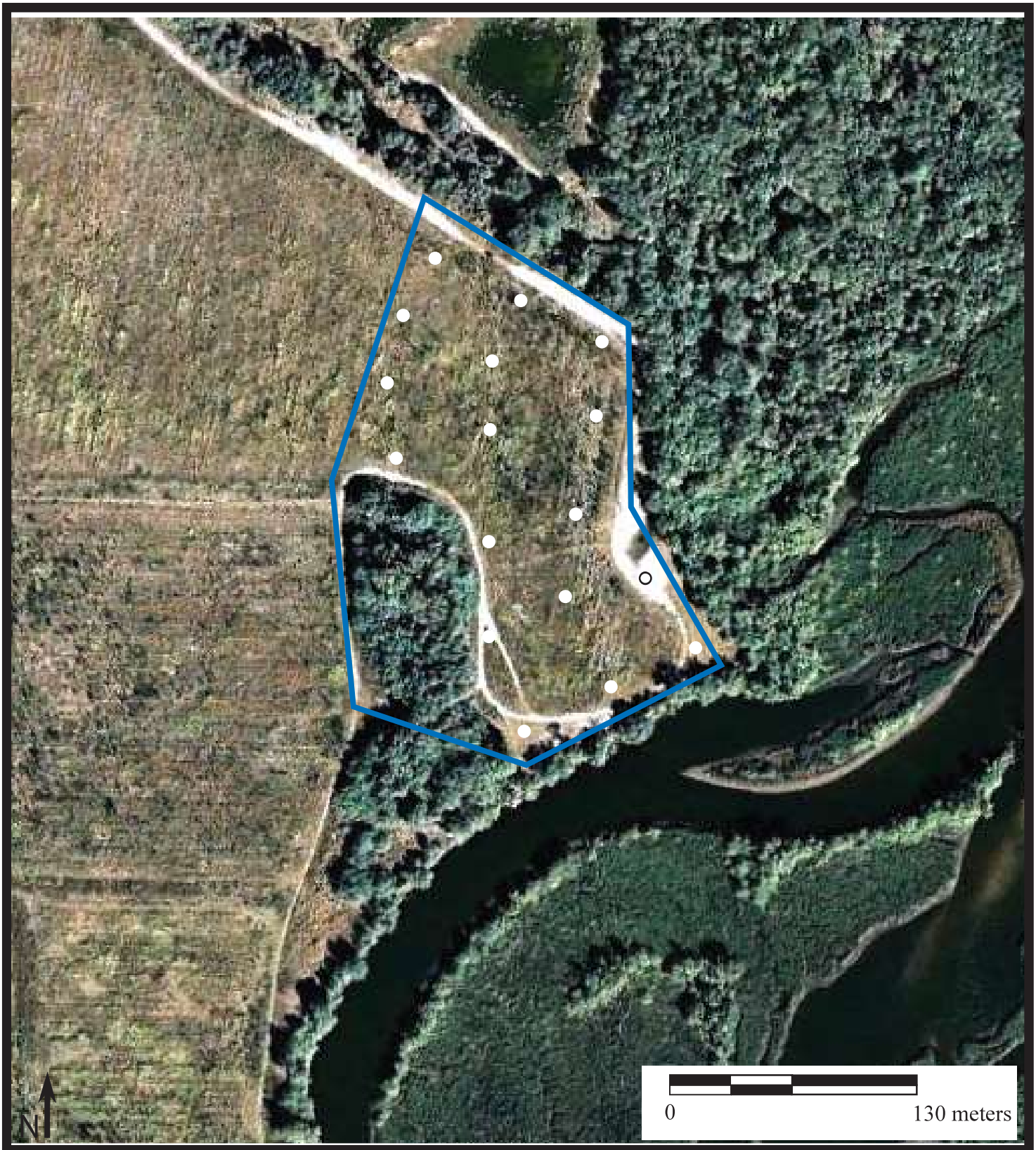

Figure 5.3. Approximate location of shovel tests within the Fort Hamer Bridge APE mitigation site north of the river; Township 34 South, Range 19 East, Section 17 (Figure provided by URS). Shovel tests are not to scale. All test pits are negative.

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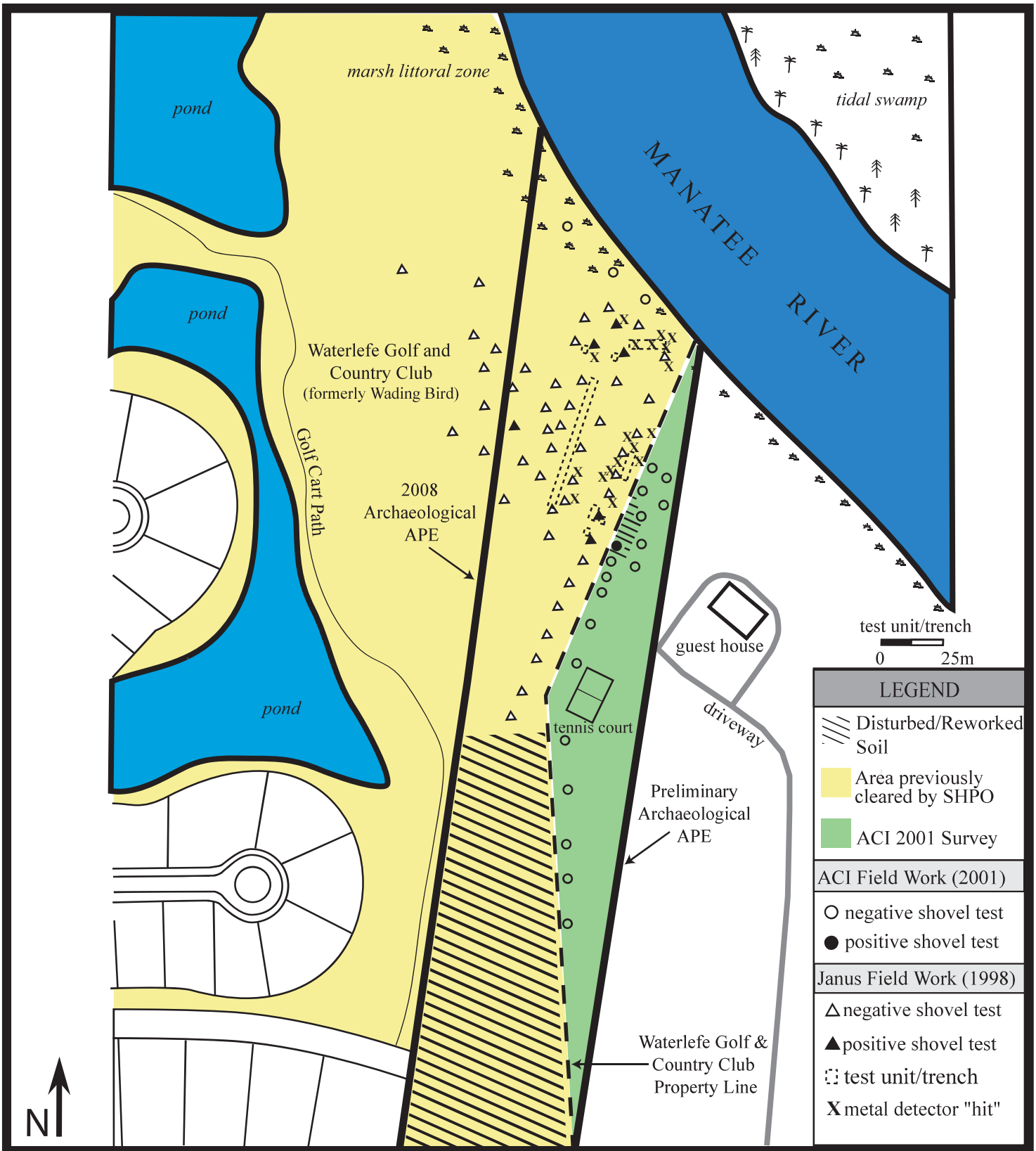

Figure 5.4. Previously excavated shovel tests and excavation units near where the fort (8MA315) may have been located; conducted by ACI and Janus (Figure from ACI 2005).

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Rye Road APE: Previous archaeological field surveys included a visual reconnaissance and the excavation of 258 test pits along Rye Road and Golf Course Road (ACI 2005a, 2006a, 2007, 2010b). The general location of each shovel test pit is noted in Figures 5.5 and 5.6. Test pits were generally excavated at 50 m (164 ft), 25 m (82 ft), intervals, and judgmentally. However, close interval testing (10 m (33 ft), 5 m (16.5 ft)) was performed in the vicinity of the Rye Bridge Mound Site (8MA715) near the river (ACI 2004; Figure 5.6) and near 8MA1343 and 8MA1344 just west of the Rye Road APE (ACI 2004).

8MA715: As reported in 2004, ACI's intensive testing in the vicinity of the Rye Bridge Mound found no evidence of the site (ACI 2004), and today the natural landscape has been altered as the result of bridge replacement, the addition of fill, and power line installation. SHPO concurred with the 2004 findings that the mound no longer existed (Gaske 2004). The site had been recorded by Jeffrey Mitchem, Ph.D. based on inspection of the private collection and catalogue of Mr. Ralph W. Burnworth. Mitchem was able to identify several types of glass trade beads from the collection, including Cornaline d'Aleppo and Nueva Cadiz beads. According to Mitchem, the glass bead assemblage indicates two episodes of European contact: early 16th century, and late 16th, 17th or early 18th century. This Safety Harbor/Contact Period site may also have had a prehistoric component. Mitchem noted that the area of the Rye Bridge Mound Site had been heavily vandalized and indicated that it was severely disturbed if not destroyed in 1988 (FMSF; ACI 2004). A copy of the 2006 FMSF form is included in Appendix B.

8MA1343: The Mitchellville Cemetery, recorded in the southwest quarter of Section 13 in Township 34 South, Range 19 East, is apparently partially bisected by Rye Road (Figures 3.5, 5.6). The cemetery plat measures approximately 300 ft by 150 ft (WilsonMiller 2004). Mitchellville Cemetery was established c. 1879 when Sam Mitchell purchased the property and filed a plat of the area changing the name from Rye to Mitchellville. When Mitchell attempted to establish a post office in 1884, it was discovered that another town in Florida already claimed that name, and Mitchellville reverted to the name of Rye. According to "Tombstone Inscriptions in Cemeteries of Manatee County, Florida 1850-1980" prepared by the Manasota Genealogical Society, the cemetery includes approximately 25 graves.

In 2004, ACI observed one grave marker dated 1884 for Thomas Urquhart, Mitchell's father-in-law. The marble marker, in the shape of a column, represents full life (Photo 5.1); it is located near the western extremity of the APE. A metal fence (Photo 5.2) marks a portion of the cemetery west of Rye Road. During a 2007 survey of the Rye Road corridor (ACI 2007), four shovel tests were placed east of Rye Road (within the APE) and east of the cemetery in order to check for the presence of cemetery features (i.e., grave markers, soil changes). Although no evidence of the cemetery or associated features were found within the APE, no testing was done in that portion of the cemetery outside of the eastern APE. The FMSF form for the cemetery is located in Appendix B.

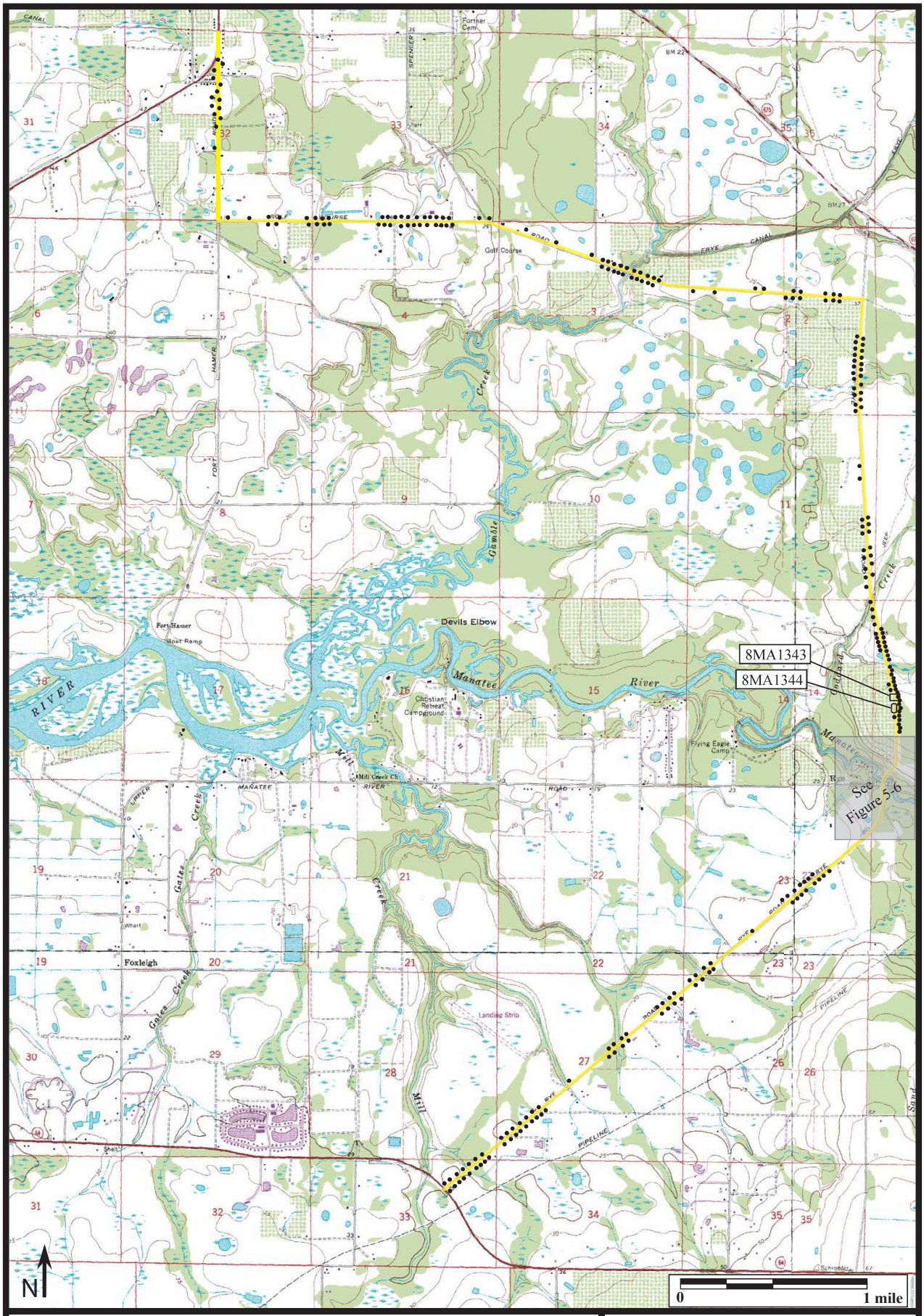

Figure 5.5. Approximate location of shovel tests within the Rye Road APE (ACI 2001a, 2005a, 2006a, 2007, 2010). Manatee County, Townships 33 and 34 South, Range 19 East, (Parrish, Fla. 1973, PR 1987; Rye, Fla. 1972, PI 1979; Lorraine, Fla. 1973, PR 1987; Verna, Fla. 1973, PR 1979). Shovel tests are not to scale.

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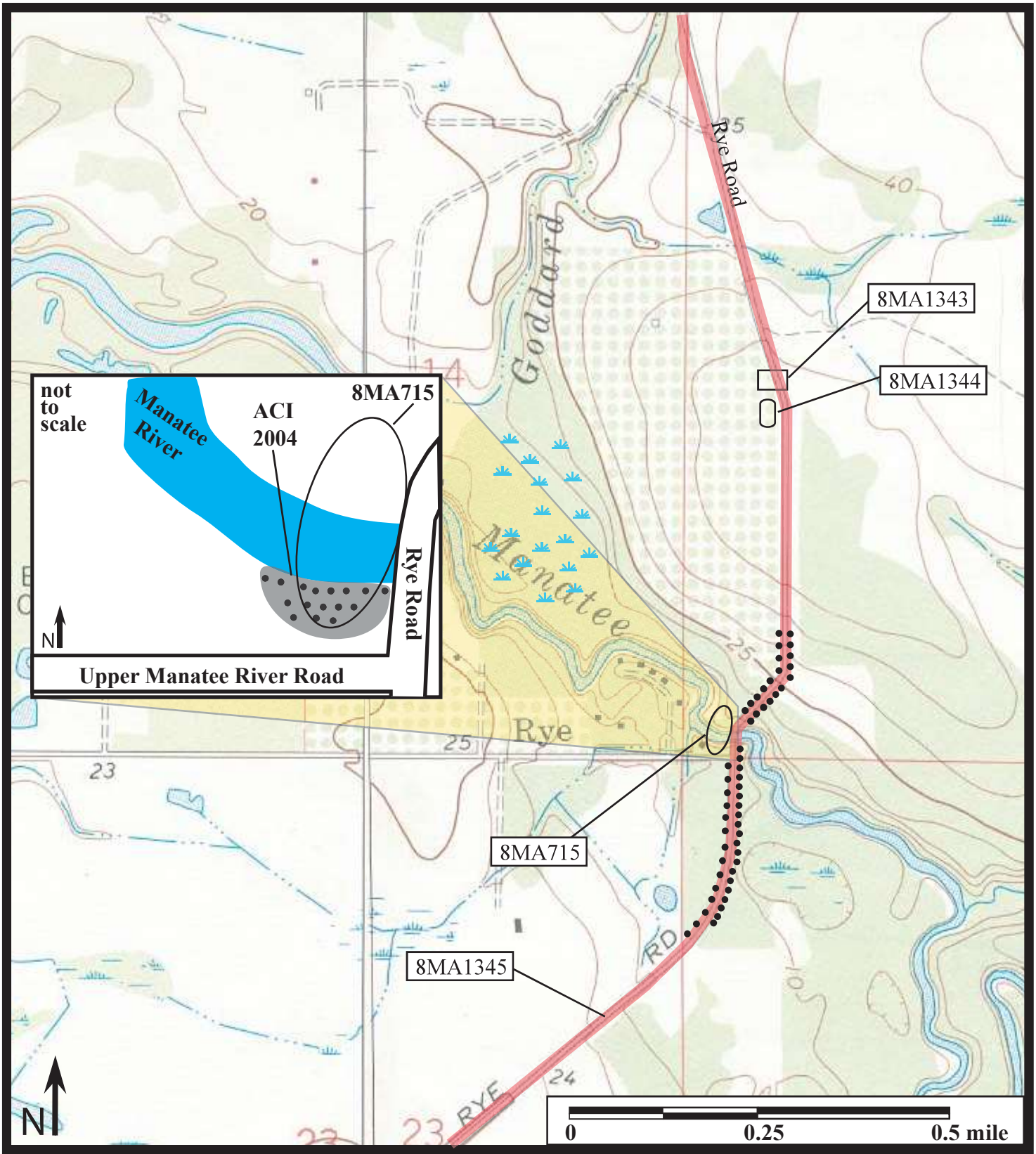

Figure 5.6. Approximate location of shovel tests (ACI 2004, 2005a, 2007) within and adjacent to archaeological sites 8MA1345 and 8MA715, Manatee County, Township 34 South, Range 19 East (USGS Parrish, Fla. 1973, PR 1987 and Rye Fla. 1972, PI 1979). Shovel tests are not to scale.

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Fort Hamer Bridge EIS
Manatee County, Florida

Photo 5.1. Single remaining grave marker located west of Rye Road.

Photo 5.2. Fence surrounding a portion of the cemetery west of Rye Road in 2011.

8MA1344: The Waters Edge Historic Scatter, found in 2004, was located in the southwest quarter of Section 13 in Township 34 South, Range 19 East (Figure 5.6). The site was located on the crest of a rise north of the Manatee River, immediately south of the Mitchellville Cemetery (8MA1343). Elevation of 8MA1344 is between 12 and 14 m (39 and 46 ft) amsl and the site occurs on Palmetto sand, a nearly level, poorly drained soil of the flatwoods (Photo 5.3). The closest source of freshwater is an unnamed tributary of Goddard Creek, approximately 400 m north.

Photo 5.3. Area of 8MA1344, a historic surface scatter.

The historic scatter was discovered on the surface and 12 shovel tests excavated in the site vicinity failed to produce subsurface artifacts or features. As noted in the 2004 report, the assemblage consisted of various pieces of glass including one fragment each of aqua glass, brown glass, "black" glass, slate, tile, and brick. In addition, two pieces of green glass, three pieces of cobalt glass, ten pieces of solarized glass, and 10 pale green plate glass fragments were recovered. A single piece of "black glass, actually a dark olive color produced by high levels of iron, manganese, carbon, and possibly cobalt, was found. The black is a base fragment exhibiting a push-up or kick-up bottom, which is common on wine bottles (Polak 2002: 497). The aqua glass fragment was produced by the inclusion of oxide during the manufacturing process which was manufactured until about 1930 (Polak 2002:495). Solarized or amethyst glass, identified by its purple or pink hue, is caused by a reaction of the sunlight to the manganese dioxide placed within the glass as a clarifying agent. The use of this material was limited to the period 1880 until 1914, after which World War I required the manganese dioxide for the war effort (Baugher-Perlin 1982; Jones and Sullivan 1989). The cobalt blue glass fragments were produced by the inclusion of cobalt during the manufacturing process. According to Ellis, this additive process began around 1870 (Ellis 1977:80).

Based on the data collected in 2004, the site, as situated west of Rye Road, was estimated to extend some 100 m north/south by 100 m east/west (328 ft by 328 ft), and was not considered eligible for listing in the NRHP. SHPO concurred with this evaluation (Gaske 2004), and in 2007, ACI revisited the site for another project and excavated eight additional shovel tests east of Rye Road (within the Rye Road APE) at a 25 m (82 ft) interval. No cultural materials were found (ACI 2007). The FMSF form is included in Appendix B.

5.2 Historical/Architectural Survey Results

Fort Hamer Bridge APE: No historic structures were found within the APE. This is in keeping with the background research and previous surveys (ACI 2001a, 2005a, 2007). One structure, 8MA1214, is situated east of and outside of the project APE; the SHPO determined this structure is not eligible for listing in the NRHP.

Rye Road APE: Fifteen historical resources are located within the Rye Road APE (Table 5.1; Figure 5.7). The SHPO determined that these resources were not eligible for listing in the NRHP (Matthews 2001; Gaske 2004, 2006). The resources consists of 13 residential/ commercial/recreational buildings, one resource group (a golf course), and one bridge. The bridge was replaced in 2008 All were constructed between 1924 and 1956, and represent commonly occurring types of architecture for the locale; available data did not indicate any significant historical associations with these buildings. In addition, the resources do not constitute a historic district due to their lack of contemporaneity. Since the FMSF forms have been prepared/updated within the last five years, copies of the 15 forms are located in Appendix B and brief discussions follow.

Table 5.1. Previously recorded historic resources within the APE

FMSF	Site Name/Address	Date	Style	NRHP Eligibility
8MA1216	5432 Fort Hamer Road	ca. 1940	Frame Vernacular	Not Eligible
8MA1217	5909 Fort Hamer Road	ca. 1951	Frame Vernacular	Not Eligible
8MA1218	5925 Fort Hamer Road	ca. 1924	Frame Vernacular	Demolished
8MA1220	12116 60th Street East	ca. 1940	Frame Vernacular	Not Eligible
8MA1222	6104 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1223	6108 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1224	6112 Fort Hamer Road	ca. 1940	Frame Vernacular	Not Eligible
8MA1225	6204 Fort Hamer Road	ca. 1950	Frame Vernacular	Not Eligible
8MA1226	12129 US 301	ca. 1950	Ranch	Not Eligible
8MA1472	Palmetto Pines Golf Course Resource Group	ca. 1956	Not applicable	Not Eligible
8MA1474	Clubhouse/Palmetto Pines Golf Course	ca. 1956	Masonry Vernacular	Not Eligible
8MA1475	15450 Golf Course Road	ca. 1950	Masonry Vernacular	Not Eligible
8MA1476	3250 Rye Road	ca. 1945	Frame Vernacular	Not Eligible
8MA1477	Rye Road Bridge	ca. 1950	Beam/Girder	Rebuilt in 2008
8MA1524	12125 US Hwy 301 North	Ca. 1940	Frame Vernacular	Not Eligible

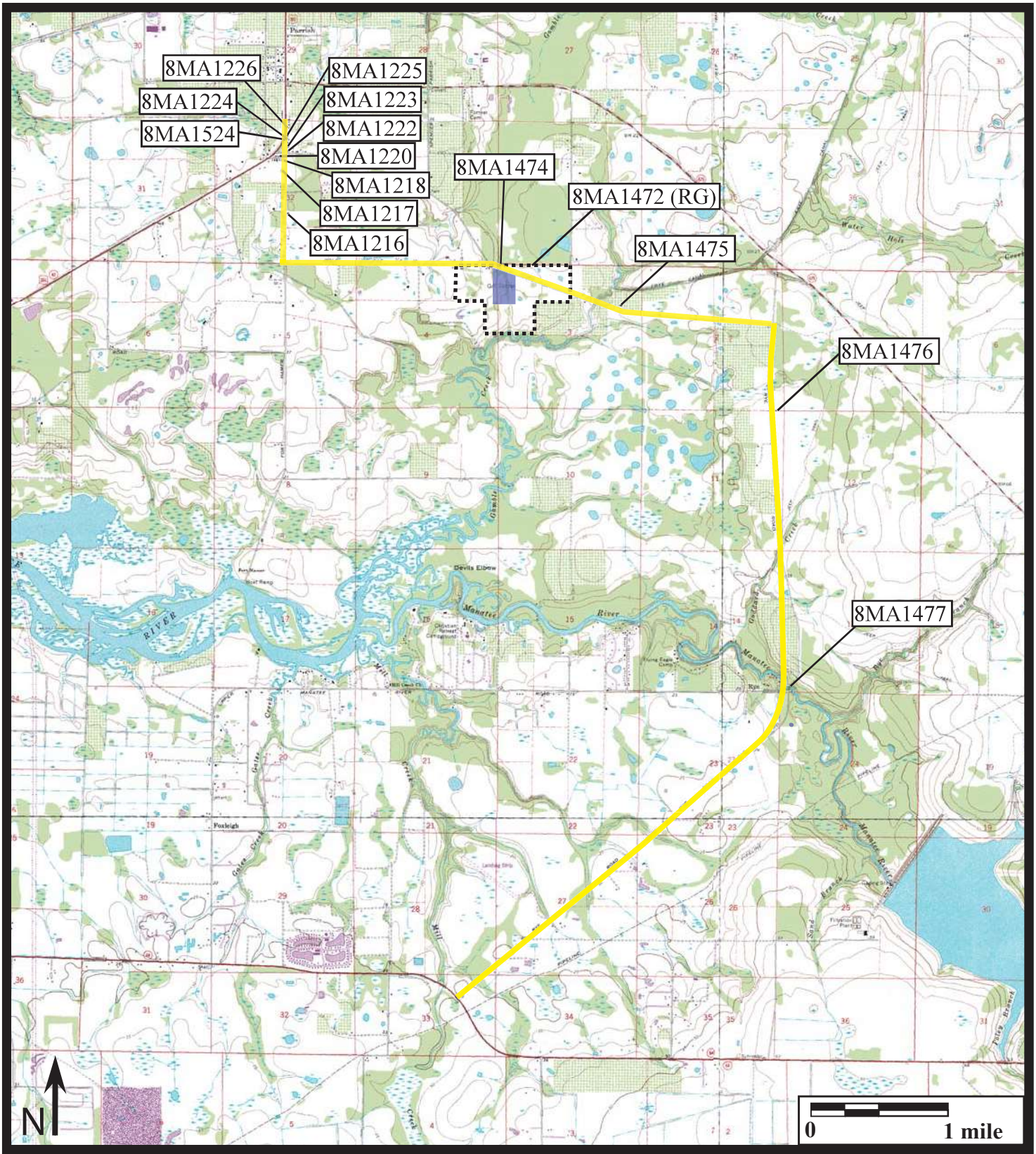

Figure 5.7. Historic building and structure in the Fort Hamer Bridge EIS Project APE; See Figures 4.1 and 5.6 for archaeological resources. Townships 33 and 34 South, Range 19 East, (Parrish, Fla. 1973, PR 1987; Rye, Fla. 1972, PI 1979; Lorraine, Fla. 1973, PR 1987; Verna, Fla. 1973, PR 1979); No historic buildings were in the Fort Hamer Bridge APE.

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Fort Hamer Bridge EIS
Manatee County, Florida

8MA1216: This one-story residence at 5432 Fort Hamer Road was constructed ca. 1940. The rectangular building has a continuous concrete block foundation, a hip roof, an interior masonry chimney, and a porch with a shed roof on the west elevation. The original siding was covered with vinyl siding and the original windows were replaced with 6/6 metal single-hung sash windows ca. 1985. A carport and shed were attached with a shed roof on the east elevation during the same renovation. This typical Frame Vernacular residence has lost its architectural integrity due to a substantial number of alterations. In addition, the limited information available did not indicate any historical significance (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1217: This Frame Vernacular residence located at 5909 Fort Hamer Road was constructed ca. 1951. The rectangular, one-story building has a gable roof, asbestos shingle and weatherboard siding, and a continuous concrete block foundation. Windows are a combination of eight- and 12-light metal casement, 2/2 metal single-hung sash, and jalousie windows. A porch with a shed roof is situated on the east elevation. The building has been altered with the replacement of some original windows and a carport addition ca. 1970. This Frame Vernacular building is typical of post World War II architecture found throughout the area. Available information did not indicate any historical significance (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1218: This one-and-one-half-story residence was constructed ca. 1924 in the Frame Vernacular style at 5925 Fort Hamer Road and originally recorded in 2007 (ACI 2007). However, by 2008, this structure had been demolished (Parks and Younkin 2008).

8MA1220: This Frame Vernacular one-story residence located at 12116 60th Street East was constructed ca. 1940. This rectangular building has asbestos shingle and plywood siding, a continuous concrete block foundation, a gable roof, and a brick chimney located on the exterior west wall. Windows are a combination of 1/1 metal single-hung sash, 6/6 metal single-hung sash, two-light metal awning, and four-light metal casement. A porch with a gable roof is situated on the south elevation. Alterations include the replacement of original siding and porch and a carport addition on the east ca. 1960. Subsequently the carport was enclosed ca. 1970, and a new carport was built on the northeast and windows were replaced ca. 1980. Additionally, limited research did not show any significant historical associations (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1222: The rectangular one-story residence located at 6104 Fort Hamer Road was constructed ca. 1950. The Frame Vernacular building is characterized by a continuous concrete block foundation, metal siding, a gable and shed roof, and two- and three-light metal awning and 2/2 metal single-hung sash windows. Around 1965 the original siding was covered with metal siding and the original windows were replaced. A ca. 1990 barn is situated northeast of the residence, and two ca. 1990 shed are located east of the residence. Limited research did not suggest that this residence possesses any historical significance. Furthermore, this building is typical of post World War II Frame Vernacular residences found throughout Florida (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1223: This one-story rectangular building, constructed ca. 1950 at 6108 Fort Hamer Road, has a concrete block pier foundation with brick infill, a gable roof, and weatherboard siding. Windows are 1/1 metal single-hung sash, 2/2 metal single-hung sash, four-light metal awning, and 1/1 wood double-hung sash flanking a one-light picture window. A porch with a flat roof is situated on the east elevation, and a porch with a shed roof is on the north elevation. Most of the original windows were replaced ca. 1970 and again ca. 1980; a porch was added on the east elevation ca. 1980. Available data did not indicate any historical significance. Furthermore, this modest residence is a typical example of Frame Vernacular residential construction found throughout the surrounding area (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1224: Constructed ca. 1940, this rectangular, one-story Frame Vernacular residence is located at 6112 Fort Hamer Road. Although the gable roof and concrete pier foundation indicate that this building was originally a Bungalow, alterations such as the application of plywood over original siding, the replacement of original windows with 1/1 metal single-hung sash and 2/2 metal single-hung sash, and the enclosure of the porch ca. 1980 have negatively impacted the integrity of this residence. Given the extent of the non-historic and non-sympathetic alterations to this residence, in combination with its lack of historical significance as evidenced in the available data, 8MA1224 does not appear eligible for listing in the NRHP (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1225: The Frame Vernacular residence located at 6204 Fort Hamer Road was constructed ca. 1950. The irregularly-shaped, one-story building has a concrete block pier foundation, metal and plywood siding, a gable roof, and 1/1 wood double-hung sash and jalousie windows. A porch with a shed roof is situated on the south elevation. Original siding was covered with metal siding and a room was added on the west elevation ca. 1955 and a porch was added on the south elevation ca. 1970. This modest residence is a typical example of Frame Vernacular residential construction found throughout Manatee County. In addition, non-historic alterations have diminished this building's architectural integrity. As available data did not demonstrate any historical significance, 8MA1225 does not appear NRHP eligible (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1226: This one-story rectangular residence, located at 12129 US 301, was constructed ca. 1950 in the Ranch style. This masonry building is surfaced with stucco, has a continuous concrete block foundation, a hip roof and two interior masonry chimneys. Windows are a combination of nine-light and 12-light metal casement windows and a three light fixed metal picture window. Notable features include brick planters and accents, and an inset porch situated in the northwest corner of the building. Alterations include the replacement of some windows ca. 1985. A ca. 1980 combination shed and carport is situated northeast of the residence. This residence is typical of post World War II residential architecture found throughout the region. In addition, limited research did not reveal any historical significance. Thus, 8MA1226 does not appear NRHP eligible (ACI 2007). Also, this structure was updated in 2008 during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008) and the SHPO determined that this structure was not NRHP eligible (FMSF).

8MA1472: The Palmetto Pines Golf Course Resource Group is a 217-acre golf course complex at 14355 Golf Course Road in Manatee County. The resource group includes five individual resources, two of which are contributing, and three of which are non-contributing. The two contributing resources are the Clubhouse (8MA1474), which dates to ca. 1956, and the original 40-acre nine-hole golf course, known as the "White Course," which dates to ca. 1956, and was constructed by Floyd Myers (Bates 2006a; Bates 2006b). Mr. Myers was a "snow bird" from Akron, Ohio who owned a farm and a car dealership in the area. He constructed the "White Course" as a private course for use by himself and invited guests. Currently, Golf Course Road passes through the resource group. Per telephone conversation with the FMSF office on September 27, 2006, this course was not given a separate resource number. The Club House is located to the north of the road and the "White Course" is to the south of the road. However, neither are situated within the historical APE. They lie approximately 100 ft outside of the APE. The three non-contributing resources are nine hole courses: "Blue Course," the "Orange Course," and the "Red Course," all of which date to the mid-1960s. Golf Course Road, which was once a dirt road has retained its name. In summary, the White Course, built in 1956, was not the first golf course in Manatee County (the Bradenton Country Club, for example, came at least 30 years prior to Palmetto Pines). Furthermore, non-historic golf course additions (Blue, Orange, and Red courses) have compromised its integrity. Therefore, 8MA1472 is not considered eligible for listing in the NRHP (ACI 2007).

8MA1474: This Masonry Vernacular style structure was constructed ca. 1956 at 14355 Golf Course Road. Its concrete block walls are partially faced with brick veneer and plywood. It rests on a continuous foundation, also of concrete block, and is topped partially by a hip and shed roof, clad with composition shingle, and partially by a flat roof. A brick chimney is located within the north slope of the hip roof. Original windows consist of four-light casement, three-light awning, one-light fixed, and eight-light fixed flanked by four-light casements. An ca. 1975 addition to the east contains single hung sash windows. An open porch on the south elevation provides access to the main entrance, a metal swing door with a one-light over one-light single hung sash window. Exterior ornament consists of projecting window sills and rounded building corners. There is an attached car shed to the north, a metal shed to the east, and two metal and two wood sheds to the north. This is a typical example of the Masonry Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Therefore, 8MA1474 does not appear eligible for listing in the NRHP (ACI 2007).

8MA1475: This two-story Masonry Vernacular style structure was constructed ca. 1950 at 15450 Golf Course Road. Its concrete block walls, faced with clapboard on the second story, rest on a continuous foundation, also of concrete block. It is topped by a gable roof, clad with composition shingle, and there are brick chimneys located within the north slope of the roof. Original windows consist of three- and four-light awning. There are also some two-light over two-light single hung sash (ca. 1970) and one-light over one-light single hung sash (ca. 1985) replacement windows. An incised porch on the south elevation provides access to the main entrance, a six-panel, wood swing door. Exterior ornament consists of projecting window sills and stationary wood shutters on some south elevation windows. There is three-car garage to the north and a shed to the west. This is a typical example of the Masonry Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Therefore, 8MA1475 does not appear eligible for listing in the NRHP (ACI 2007).

8MA1476: This Frame Vernacular style structure was constructed ca. 1945 at 3250 Rye Road. Its wood frame walls are faced with vinyl siding (ca. 1985). It rests on a pier foundation of poured concrete, and is topped by a cross-gable roof, clad with composition shingle, with shed and flat roof extensions. The main entrance, a nine-light, three-panel wood swing door, is on the

west elevation and is accessed by an open porch. Original windows consist of one-light over one-light double hung sash. Replacement windows consist of three-light awning (ca. 1955) and two-light over two-light single hung sash (ca. 1975). An ca. 1985 addition to the east contains single hung sash windows. Exterior ornament consists of gable vents, cornerboards, and awnings over some windows. There is an shed and a coop to the east. This is a typical example of the Frame Vernacular style found throughout Manatee County, and limited research revealed no significant historical associations. Furthermore, additions and alterations have compromised its historic integrity. Therefore, 8MA1476 does not appear eligible for listing in the NRHP (ACI 2007).

8MA1477: When FDOT bridge number 134022 was recorded in 2006 it was described as an example of a typical beam/girder bridge found in Manatee County. It was constructed over the Manatee River ca. 1950 with an overall span of approximately 100'-6 ½," running north to south, while its overall width is approximately 21'- 6." It consisted of an approach span, at 10'-8," and a main span of 89'-10½." It was supported by seven concrete bent piers, each with four piles. The superstructure of the bridge contained low concrete wall on either side, supporting a steel guardrail on steel posts (unknown date). The bridge, 8MA1477, was considered typical of bridge construction found in Manatee County, and research did not uncover any significant historical associations. Therefore, it was not considered eligible for listing in the NRHP (ACI 2007; Jackson 1992). However, since the 2007 survey, the bridge was replaced in 2008; its new number is 134114. The FMSF form for the historic bridge is included in Appendix B.

8MA1524: Although recently recorded as a Frame Vernacular style residence during the Manatee County Historical Structures Survey Phase I (Parks and Younkin 2008), this structure was built ca. 1940 at 12125 US 301 North in the Commercial style. It has masonry walls that are clad with a combination of stucco and aluminum siding, and a flat, built-up roof. The main entrance is located on the west elevation and consists of a nine-light, two-panel wood swing door. Windows consist of two-over-two single hung sash and jalousie. Exterior ornamentation includes projecting window sills, a cloth awning over the main entrance, and a flower box under the western window. An addition and an open porch were constructed to the east at an unknown date. A small shed also sits to the east. This structure is a typical example of a Commercial style building found throughout Manatee County, and research did not indicate any significant historical associations. As a result, 8MA1524 does not appear to be eligible for listing in the NRHP (ACI 2007; Parks and Younkin 2008).

5.3 Conclusions

Based on background research, historical documentation, and field survey of the APE, there are no terrestrial archaeological or historical resources listed, determined eligible or potentially eligible for listing in the NRHP in either the Fort Hamer Bridge APE or the Rye Road APE.

6.0 REFERENCES CITED

Almy, Marion M., Elizabeth A. Horvath and Joan Deming

1984 A Cultural Resources Survey of the U.S. Home Corporation Property (Northwood DRI) in Pasco County, Florida. Manuscript on file, ACI, Sarasota.

Anonymous

n.d. Recollections of a Rural School Teacher. Manuscript on file, Manatee County Central Library, Eaton Room, Bradenton.

Archaeological Consultants, Inc. (ACI)

1990a Cultural Resources Survey 8.3 Miles of US 301 in Manatee County, Florida. November. Manuscript on file, ACI, Sarasota.

1990b A Cultural Resources Survey of a Segment of State Road 64 in Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2000 A Cultural Resources Assessment Survey State Road 64 from East of I-75 to Lorraine Road, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2001a A Cultural Resources Assessment Survey Upper Manatee River Road PD&E Study S.R. 64 to U.S. 301, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2001b A Cultural Resources Assessment Survey River Chase Subdivision, Manatee County, Florida. ACI, Sarasota.

2002a A Cultural Resources Assessment Survey Foxbrook, Phase III, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2002b A Cultural Resources Assessment Survey Country Meadows, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2003a Cultural Resource Assessment Survey Rye Wilderness Estates, Florida. Manuscript on file, ACI, Sarasota.

2003b Archaeological Monitoring of Four Culverts at Gamble Creek/Twin Rivers Property, Florida. Letter report on file, ACI, Sarasota.

2004 Cultural Resource Assessment Survey Chlesea Oaks, Phase II and III, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2005a Upper Manatee River Road PD&E Study, SR 64 to US 301, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2005b Cultural Resource Assessment Survey Raven Crest, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2006a A Cultural Resource Assessment Survey US 301 (SR 43)/Fort Hamer Road Intersection Safety Improvement Project Development and Environmental (PD&E) Study, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2006b Cultural Resource Assessment Woodbridge Property, Florida. Manuscript on file, ACI, Sarasota.

2007 Draft Cultural Resource Assessment Survey Upper Manatee River Road PD&E Study S.R. 64 to U.S. 301, Manatee County, Florida (Revised August 2001, January 2005, January 2007). Manuscript on file, ACI, Sarasota.

2008 A Cultural Resource Assessment Survey US 301 (SR 43) from Erie Road to CR 675 Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2010a A Cultural Resource Assessment Survey, Manatee County Intersection Improvements at US 301 (SR 45) and Fort Hamer Road, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

2010b A Cultural Resource Assessment Survey Design of Bridge over Manatee River at Fort Hamer Road, Manatee County, Florida. Manuscript on file, ACI, Sarasota.

Austin, Robert J. and Howard F. Hansen
1991 Cultural Resource Assessment of the Heartland Development Property, Florida. Manuscript on file, Janus Research, Tampa.

Bache, A.D., Superintendent
1848-1856 U.S. Coast Survey, Sketch F, Showing the Progress of the Survey in Section VI, with a General Reconnaissance of the Coast of Florida. On File, Ah-Tah-Ti-Ki Museum Archives, Clewiston.

Baugher-Perlin, Sherene
1982 Analyzing Glass Bottles for Chronology, Function, and Trade Networks. In *Archaeology of Urban America: The Search for Pattern and Process*. Edited by Roy S. Dickens, pp. 259-290. Academic Press, New York.

Belknap, William W., Secretary of War
1876 Letter to the Secretary of the Interior, February 26. Letters Received, Register of Letters Received and Letters Sent by Headquarters, Department of Florida. National Archives, Washington D.C., Record Group 393, Microfilm 3, 5, and 7. Microfilm on File, Department of State, State Library of Florida, Florida Room,

Bradbury, Alford G. and E. Story Hallock
1962 *A Chronology of Florida Post Offices*. Florida Federation of Stamp Clubs.

Brown, Canter, Jr.
1991 *Florida's Peace River Frontier*. University of Central Florida Press, Orlando.

Brown, Orlando, Commissioner of Indian Affairs
1849 Letter to Captain John C. Casey, December 17 and 28. Records of the Office of Indian Affairs. National Archives, Washington D.C., Record Group 75, Microfilm No. 21, Roll 42, Letters Sent by the Office of Indian Affairs 1824-1881: April 1, 1849-January 31, 1850.
1850 Letter to Captain John C. Casey, February 8. Records of the Office of Indian Affairs. National Archives, Washington D.C., Record Group 75, Microfilm Number 21, Roll 43, Letters Sent by the Office of Indian Affairs 1824-1881: February 1-October 31, 1850.

Bullen, Ripley P.
1952 Eleven Archaeological Sites in Hillsborough County, Florida. *Report of Investigations,* Number 8, Florida Geological Survey, Tallahassee.
1959 The Transitional Period of Florida. *Southeastern Archaeological Conference Newsletter,* Number 6, pp. 43-53.
1965 Florida's Prehistory. In *Florida from Indian Trail to Space Age,* by Charlton W. Tebeau. Southern Publishing Company, Delray Beach.
1975 *A Guide to the Identification of Florida Projectile Points* (Revised Edition). Kendall Books, Gainesville.

Bullen, Ripley P., Walter Askew, Lee M. Feder, and Richard L. McDonnell
1978 The Canton Street Site, St. Petersburg, Florida. *Florida Anthropological Society Publications,* Number 9.