SUMMARY OF ANALYSIS
LUDINGTONVILLE ROAD AND ROUTE 52

Existing Conditions:

The existing intersection has three approaches, with Ludingtonville Rd being stop sign controlled and the two Route 52 approaches being uncontrolled. The westbound Ludingtonville Rd approach operates at LOS F in both the AM and PM peak hours with v/c ratios of 1.66 and 1.10 respectively (meaning the hourly volume is higher than the hourly capacity to handle that traffic, so back-ups and delays will bleed over into the next hour). There are no pedestrian accommodations at the intersection and sight distance is more than adequate with greater than 800' of visibility in each direction.

Signal Warrant Analysis:

A review of the hourly traffic volumes between 7:00 AM and 8:00 PM show that Warrant 1 (8-hour warrant) is satisfied with all 13 hours reviewed meeting criteria. Warrant 2 (4-hour warrant) is satisfied with all 13 hours meeting criteria and Warrant 3 (peak hour warrant) is satisfied with 9 hours meeting criteria. Warrant 7 (crash experience) is not satisfied, as there were not 5 accidents per year susceptible to correction by signalization (left or right turn, or right angle accidents). The satisfaction of Warrants 1, 2, & 3 combined with the existing over-capacity conditions indicates that the need for signalization, or similar treatment, such as a roundabout, is justified.

Accident Analysis:

Accident data noted 19 accidents at this location in the 3-year period reviewed. However, only 6 of these are of a type susceptible to correction by a traffic signal. Most of these accidents (12) were non-reportable, where damage was relatively minor, and only 3 accidents resulted in injury. The accident rate calculated for this intersection is 1.27 accidents per million entering vehicles (acc/MEV). Comparing this to the state-wide average for similar intersections of 0.17 acc/MEV, it is clear that safety should be improved at this location. With the predominant accident type being rear ends on Ludingtonville Rd, an advance warning sign notifying travelers of the traffic control at the intersection could reduce accidents at this location. A summary of the accident types and severity are shown in the table below:

ACCIDENT SUMMARY

Accident Type	Number of Occurrences	Accident Severity	Number of Occurrences
Right Angle	2	Fatality	0
Left Turn	4	Personal Injury	3
Rear End	6	Property Damage Only	4
Fixed Object	2	Non-Reportable	12
Backing	1		
Overtaking	2		
Other	2		
	19		19

Field Condition and Right of Way Review:

If a roundabout was to be constructed, there are wetlands near the intersection that would most likely will be impacted. These wetlands may empty out into the Stump Pond Stream and eventually join in with the New York City water supply system. Additionally, two utility poles will require relocation and a historic marker will need to be relocated; however, it does appear that a roundabout footprint could be accommodated within the existing right of way.

Design Alternative Consideration:

Three design alternatives were considered to improve traffic operations at this intersection. The first involved adding a westbound right turn lane to the existing intersection, which helps improve operations, but not enough, with just stop sign control, to alleviate the failing, over-capacity conditions in the AM peak hour. If a traffic signal were installed, operations would improve on the westbound approach from LOS F to LOS D in the AM peak hour and from LOS F to LOS C in the PM peak hour, and the overall intersection would operate at LOS C (25.4 seconds of delay per vehicle) in the AM peak and at LOS B (18.3 seconds of delay per vehicle) in the PM peak.

Traffic operations if a single lane roundabout were constructed would be similar to signalized operations. Overall the intersection would operate at LOS C in the AM peak and LOS B in the PM peak, and delays would be slightly improved (15.0 sec/veh and 11.2 sec/veh respectively). A concept sketch showing the roundabout alternative is included later under this tab.

Conceptual Cost Estimate:

Based on our past experience with similar projects, knowledge of construction pricing in this region of New York State and our understanding of the issues, it is estimated that a traffic signal would cost approximately $250,000 and a roundabout would cost approximately $1,560,000. These costs include construction of all improvements, wetland mitigation, and costs for design and inspection. A breakdown of the big picture cost items is included later under this tab.

Summary & Conclusion:

The analyses show that there is an operational need for improved traffic control. Either a traffic signal or roundabout is warranted, and both will provide similar and acceptable levels of service. However, a roundabout will require utility relocations, encroachment on a historic marker and the likely need for wetland mitigation of a potential source of New York City's water supply system, all of which can be avoided through a traffic signal installation. Additionally, the cost to construct a roundabout would be significantly higher than the cost of a traffic signal. Due to this, it is recommended that a traffic signal be installed at this location and that a "signal ahead" sign be installed on the westbound approach in advance of the intersection to help reduce rear end crashes. A roundabout would be feasible at this location and would provide safety and operational benefits, but it would cost substantially more and may result in environmental permitting issues.

The intersection evaluation worksheet summarizing the lane geometry and traffic operations, traffic volume data sheets, traffic signal warrant analysis sheets, accident summary sheets, capacity analysis worksheets, cost estimate breakdown and roundabout concept sketch for this intersection can be found on the following pages under this tab.

INTERSECTION EVALUATION WORKSHEET

Project:	Putnam County Roundabout Evaluation
Location:	Putnam County (Various Locations)
Intersection:	Route 52 & Ludingtonville Rd
GPS Coord.:	41°30'29.27"N, 73°41'2.11"W
Traffic Control:	Stop Sign (WB)

Traffic Control Notes (if applicable):

None

Other Intersection Notes (if applicable):

Sight Distance - 800'+ looking both north & south.
No Pedestrian Crossings.

APPROACH DATA

	Route 52 Northbound			Route 52 Southbound			n/a Eastbound			Ludingtonville Rd Westbound		
	Left	**Thru**	**Right**	**Left**	**Thru**	**Right**	**Left**	**Thru**	**Right**	**Left**	**Thru**	**Right**
Lane Assignments:		1->			<-1						<-1->	
Lane Widths:		11'			11'						12'	
Turn Bay Lengths:		-			-						-	
Speed Limits:		45 mph			45 mph						40 mph	

TRAFFIC COUNT DATA

(traffic volumes below represent counted traffic adjusted by 1.05 to account for seasonal variation and annual growth)

AM Peak Hour	Time Period:	7:00	to	8:00					Date Counted:		4/24/2018	
Volume:	-	75	208	418	225	-	-	-	-	128	-	102
Truck %:	-	20%	3%	4%	8%	-	-	-	-	5%	-	13%
Peds (Bikes):		0 (0)			0 (0)			-			0 (0)	
PHF = 0.91												
PM Peak Hour	Time Period:	4:15	to	5:15					Date Counted:		4/24/2018	
Volume:	-	263	145	139	180	-	-	-	-	151	-	328
Truck %:	-	1%	5%	2%	5%	-	-	-	-	4%	-	4%
Peds (Bikes):		1 (0)			0 (0)			-			0 (0)	
PHF = 0.93												

EXISTING CONDITION LEVEL OF SERVICE

AM Peak Delay (s):				9.6						377.7		
LOS:				A						F		
v/c:				0.37						1.66		
95% Queue:				45'						500'		
F (78.6) Overall		**A (0.0)**			**A (6.2)**			-			**F (377.7)**	
PM Peak Delay (s):				8.7						101.9		
LOS:				A						F		
v/c:				0.13						1.10		
95% Queue:				< 25'						430'		
E (41.5) Overall		**A (0.0)**			**A (3.8)**			-			**F (101.9)**	

Note: LOS calculated using HCM 6 methodologies. For unsignalized intersections, only side street approach delay and mainline left turn delay is shown. The HCM 6 methodology assumes zero delay for all other movements.

INTERSECTION EVALUATION WORKSHEET

	Route 52			Route 52			n/a			Ludingtonville Rd		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
BUILD ALTERNATIVE #1 - LEVEL OF SERVICE												
Description of Improvements: Remain Stop Controlled, but Add Turn Lanes (100'WB RT, 200' SB LT, 100' NB RT)												
AM Peak Delay (s):				9.6						209.5		9.3
LOS:				A						F		A
v/c:				0.37						1.18		0.12
95% Queue:				45'						220'		< 25'
D (27.5) Overall	**A (0.0)**			**A (6.2)**			-			**F (120.7)**		
PM Peak Delay (s):				8.7						27.8		14.0
LOS:				A						D		B
v/c:				0.13						0.51		0.47
95% Queue:				< 25'						70'		65'
A (8.3) Overall	**A (0.0)**			**A (3.8)**			-			**C (18.4)**		
BUILD ALTERNATIVE #2 - LEVEL OF SERVICE												
Description of Improvements: Actuated Traffic Signal with No Geometric Improvements												
AM Peak Delay (s):	4.9			28.7						41.3		
LOS:	A			C						D		
v/c:	0.33			0.91						0.85		
95% Queue:	40'			520'						170'		
C (25.4) Overall	**A (4.9)**			**C (28.7)**			-			**D (41.3)**		
PM Peak Delay (s):	10.9			14.6						27.1		
LOS:	B			B						C		
v/c:	0.57			0.66						0.89		
95% Queue:	150'			170'						250'		
B (18.3) Overall	**B (10.9)**			**B (14.6)**			-			**C (27.1)**		
BUILD ALTERNATIVE #3 - LEVEL OF SERVICE												
Description of Improvements: Single Lane Roundabout (120 ft. Diameter)												
AM Peak Delay (s):	12.8			19.1						6.6		
LOS:	B			C						A		
v/c:	0.48			0.76						0.27		
95% Queue:	75'			200'						25'		
C (15.0) Overall	**B (12.8)**			**C (19.1)**			-			**A (6.6)**		
PM Peak Delay (s):	9.4			8.1						14.8		
LOS:	A			A						B		
v/c:	0.46			0.37						0.63		
95% Queue:	50'			50'						125'		
B (11.2) Overall	**A (9.4)**			**A (8.1)**			-			**B (14.8)**		

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Site Code : 2018011_
Start Date : 4/24/2018
Page No : 1

Groups Printed- Cars - Trucks

	Route 52 From North					Ludingtonville Road From East					Route 52 From South					From West					
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
07:00 AM	0	38	100	0	138	29	0	33	0	62	49	17	0	0	66	0	0	0	0	0	266
07:15 AM	0	63	115	0	178	29	0	28	0	57	47	21	0	0	68	0	0	0	0	0	303
07:30 AM	0	66	90	0	156	19	0	35	0	54	60	11	0	0	71	0	0	0	0	0	281
07:45 AM	0	47	93	0	140	20	0	26	0	46	42	22	0	0	64	0	0	0	0	0	250
Total	0	214	398	0	612	97	0	122	0	219	198	71	0	0	269	0	0	0	0	0	1100
08:00 AM	0	47	79	0	126	31	0	26	0	57	34	21	0	0	55	0	0	0	0	0	238
08:15 AM	0	66	74	0	140	23	0	22	0	45	51	24	0	0	75	0	0	0	0	0	260
08:30 AM	0	60	74	0	134	26	0	35	1	62	37	19	0	0	56	0	0	0	0	0	252
08:45 AM	0	43	50	0	93	21	0	37	1	59	45	24	0	0	69	0	0	0	0	0	221
Total	0	216	277	0	493	101	0	120	2	223	167	88	0	0	255	0	0	0	0	0	971
09:00 AM	0	49	36	0	85	27	0	23	0	50	35	21	0	0	56	0	0	0	0	0	191
09:15 AM	0	37	50	0	87	27	0	25	0	52	25	20	0	0	45	0	0	0	0	0	184
09:30 AM	0	23	47	0	70	22	0	27	0	49	29	19	0	0	48	0	0	0	0	0	167
09:45 AM	0	28	41	0	69	19	0	24	0	43	32	21	0	0	53	0	0	0	0	0	165
Total	0	137	174	0	311	95	0	99	0	194	121	81	0	0	202	0	0	0	0	0	707
10:00 AM	0	23	33	0	56	23	0	19	0	42	35	21	0	0	56	0	0	0	0	0	154
10:15 AM	0	34	35	0	69	31	0	24	0	55	19	27	0	0	46	0	0	0	0	0	170
10:30 AM	0	31	41	0	72	31	0	20	0	51	33	22	0	0	55	0	0	0	0	0	178
10:45 AM	0	28	28	0	56	23	0	22	0	45	26	20	0	0	46	0	0	0	0	0	147
Total	0	116	137	0	253	108	0	85	0	193	113	90	0	0	203	0	0	0	0	0	649
11:00 AM	0	27	27	0	54	18	0	19	0	37	25	21	0	0	46	0	0	0	0	0	137
11:15 AM	0	31	26	0	57	18	0	16	0	34	25	27	0	0	52	0	0	0	0	0	143
11:30 AM	0	34	29	0	63	23	0	25	0	48	24	23	0	0	47	0	0	0	0	0	158
11:45 AM	0	26	24	0	50	22	0	17	0	39	29	24	0	0	53	0	0	0	0	0	142
Total	0	118	106	0	224	81	0	77	0	158	103	95	0	0	198	0	0	0	0	0	580
12:00 PM	0	39	31	0	70	32	0	26	0	58	23	26	0	0	49	0	0	0	0	0	177
12:15 PM	0	26	25	0	51	28	0	17	0	45	23	31	0	0	54	0	0	0	0	0	150
12:30 PM	0	20	31	0	51	30	0	18	0	48	16	32	0	0	48	0	0	0	0	0	147
12:45 PM	0	28	33	0	61	26	0	21	0	47	18	32	0	0	50	0	0	0	0	0	158
Total	0	113	120	0	233	116	0	82	0	198	80	121	0	0	201	0	0	0	0	0	632
01:00 PM	0	39	34	0	73	35	0	30	0	65	28	37	0	0	65	0	0	0	0	0	203
01:15 PM	0	32	31	0	63	28	0	25	0	53	24	32	0	2	58	0	0	0	0	0	174
01:30 PM	0	39	27	0	66	22	0	24	0	46	36	32	0	0	68	0	0	0	0	0	180
01:45 PM	0	28	24	0	52	32	0	32	0	64	30	29	0	0	59	0	0	0	0	0	175
Total	0	138	116	0	254	117	0	111	0	228	118	130	0	2	250	0	0	0	0	0	732
02:00 PM	0	28	29	0	57	29	0	36	0	65	22	54	0	0	76	0	0	0	0	0	198
02:15 PM	0	36	36	0	72	38	0	21	0	59	26	51	0	0	77	0	0	0	0	0	208
02:30 PM	0	33	36	0	69	40	0	33	0	73	38	45	0	0	83	0	0	0	0	0	225
02:45 PM	0	26	26	0	52	43	0	43	0	86	24	32	0	0	56	0	0	0	0	0	194
Total	0	123	127	0	250	150	0	133	0	283	110	182	0	0	292	0	0	0	0	0	825
03:00 PM	0	41	35	0	76	58	0	23	0	81	35	48	0	0	83	0	0	0	0	0	240
03:15 PM	0	34	27	0	61	42	0	38	0	80	32	46	0	0	78	0	0	0	0	0	219
03:30 PM	0	34	30	0	64	56	0	37	0	93	38	55	0	0	93	0	0	0	0	0	250
03:45 PM	0	31	43	0	74	66	0	28	0	94	37	59	0	0	96	0	0	0	0	0	264
Total	0	140	135	0	275	222	0	126	0	348	142	208	0	0	350	0	0	0	0	0	973

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Site Code : 2018011_
Start Date : 4/24/2018
Page No : 2

Groups Printed- Cars - Trucks

	Route 52 From North					Ludingtonville Road From East					Route 52 From South					From West					
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
04:00 PM	0	31	39	0	70	58	0	36	0	94	39	52	0	0	91	0	0	0	0	0	255
04:15 PM	0	58	42	0	100	78	0	38	0	116	32	60	0	0	92	0	0	0	0	0	308
04:30 PM	0	32	39	0	71	72	0	37	0	109	34	59	0	0	93	0	0	0	0	0	273
04:45 PM	0	44	24	0	68	85	0	41	0	126	44	65	0	0	109	0	0	0	0	0	303
Total	0	165	144	0	309	293	0	152	0	445	149	236	0	0	385	0	0	0	0	0	1139
05:00 PM	0	37	27	0	64	77	0	28	0	105	28	66	0	1	95	0	0	0	0	0	264
05:15 PM	0	39	27	0	66	81	0	42	0	123	44	50	0	1	95	0	0	0	0	0	284
05:30 PM	0	29	34	0	63	88	0	42	0	130	37	56	0	0	93	0	0	0	0	0	286
05:45 PM	0	29	39	0	68	68	0	53	0	121	27	53	0	0	80	0	0	0	0	0	269
Total	0	134	127	0	261	314	0	165	0	479	136	225	0	2	363	0	0	0	0	0	1103
06:00 PM	0	32	32	0	64	78	0	42	0	120	40	44	0	2	86	0	0	0	0	0	270
06:15 PM	0	31	32	0	63	63	0	36	0	99	30	48	0	1	79	0	0	0	0	0	241
06:30 PM	0	25	34	0	59	71	0	26	0	97	25	62	0	0	87	0	0	0	0	0	243
06:45 PM	0	27	35	0	62	67	0	44	0	111	27	50	0	0	77	0	0	0	0	0	250
Total	0	115	133	0	248	279	0	148	0	427	122	204	0	3	329	0	0	0	0	0	1004
07:00 PM	0	31	20	0	51	53	0	30	0	83	22	39	0	0	61	0	0	0	0	0	195
07:15 PM	0	20	26	0	46	63	0	29	0	92	19	40	0	0	59	0	0	0	0	0	197
07:30 PM	0	22	26	0	48	49	0	26	0	75	18	44	0	0	62	0	0	0	0	0	185
07:45 PM	0	17	16	0	33	50	0	27	0	77	19	32	0	0	51	0	0	0	0	0	161
Total	0	90	88	0	178	215	0	112	0	327	78	155	0	0	233	0	0	0	0	0	738
Grand Total	0	1819	2082	0	3901	2188	0	1532	2	3722	1637	1886	0	7	3530	0	0	0	0	0	11153
Apprch %	0	46.6	53.4	0		58.8	0	41.2	0.1		46.4	53.4	0	0.2		0	0	0	0		
Total %	0	16.3	18.7	0	35	19.6	0	13.7	0	33.4	14.7	16.9	0	0.1	31.7	0	0	0	0	0	
Cars	0	1705	1928			2027		1470			1564	1786									10489
% Cars	0	93.7	92.6	0	93.1	92.6	0	96	100	94	95.5	94.7	0	100	95.1	0	0	0	0	0	94
Trucks	0	114	154	0	268	161	0	62	0	223	73	100	0	0	173	0	0	0	0	0	664
% Trucks	0	6.3	7.4	0	6.9	7.4	0	4	0	6	4.5	5.3	0	0	4.9	0	0	0	0	0	6

	Route 52 From North					Ludingtonville Road From East					Route 52 From South					From West					
Start Time	Right	Thru		Peds	App. Total	Right	Thru		Peds	App. Total	Right	Thru		Peds	App. Total	Right	Thru		Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	38	100	0	138	**29**	0	33	0	**62**	49	17	0	0	66	0	0	0	0	0	266
07:15 AM	0	63	**115**	0	**178**	29	0	28	0	57	47	21	0	0	68	0	0	0	0	0	**303**
07:30 AM	0	**66**	90	0	156	19	0	**35**	0	54	**60**	11	0	0	**71**	0	0	0	0	0	281
07:45 AM	0	47	93	0	140	20	0	26	0	46	42	**22**	0	0	64	0	0	0	0	0	250
Total Volume	0	214	398	0	612	97	0	122	0	219	198	71	0	0	269	0	0	0	0	0	1100
% App. Total	0	35	65	0		44.3	0	55.7	0		73.6	26.4	0	0		0	0	0	0		
PHF	.000	.811	.865	.000	.860	.836	.000	.871	.000	.883	.825	.807	.000	.000	.947	.000	.000	.000	.000	.000	.908

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Site Code : 2018011_
Start Date : 4/24/2018
Page No : 3

	Route 52 From North					Ludingtonville Road From East					Route 52 From South					From West					
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 Analysis From 12:00 PM to 07:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	**58**	**42**	0	**100**	78	0	38	0	116	32	60	0	0	92	0	0	0	0	0	**308**
04:30 PM	0	32	39	0	71	72	0	37	0	109	34	59	0	0	93	0	0	0	0	0	273
04:45 PM	0	44	24	0	68	**85**	0	**41**	0	**126**	**44**	65	0	0	**109**	0	0	0	0	0	303
05:00 PM	0	37	27	0	64	77	0	28	0	105	28	**66**	0	**1**	95	0	0	0	0	0	264
Total Volume	0	171	132	0	303	312	0	144	0	456	138	250	0	1	389	0	0	0	0	0	1148
% App. Total	0	56.4	43.6	0		68.4	0	31.6	0		35.5	64.3	0	0.3		0	0	0	0		
PHF	.000	.737	.786	.000	.758	.918	.000	.878	.000	.905	.784	.947	.000	.250	.892	.000	.000	.000	.000	.000	.932

TRAFFIC SIGNAL WARRANT SUMMARY

Project: Putnam County Roundabout Evaluation Condition: 2019 Existing Condition

Location: Route 52 and Ludingtonville Rd Date: April 25, 2019

Major Street: Route 52 Lanes: 1 Critical Approach Speed: 45 mph

Minor Street: Ludingtonville Rd Lanes: 1

Volume Level Criteria

1. Is the critical speed of major street traffic greater than 40 mph? Yes
2. Is the intersection in a built-up area of an isolated community with population less than 10,000? No

If either Question 1 or Question 2 is answered "Yes", then use the 70% volume level. Criteria used: 70%

WARRANT 1 - EIGHT HOUR VEHICULAR VOLUME **Warrant 1 Satisfied: YES**

Warrant 1 is satisfied if EITHER Condition A OR Condition B is 100% satisfied.
Warrant 1 is also satisfied if BOTH Condition A AND Condition B are satisfied to the 80% volume level.

			Condition 1A - Minimum Vehicular Volume (X indicates that criteria is met for specified condition)				Condition 1B - Interuption of Continuous Traffic (X indicates that criteria is met for specified condition)				Total Satisfied Hours (8 required)		
											13	9	13
Minimum Volume Criteria:			350	105	280	84	525	53	420	42	Condition	Condition	80% for
Start Time	Major St. Volume[1]	Minor St. Volume[2]	Major St. 100%	Minor St. 100%	Major St. 80%	Minor St. 80%	Major St. 100%	Minor St. 100%	Major St. 80%	Minor St. 80%	1A Satisfied	1B Satisfied	Both Satisfied
12:00 AM			-	-	-	-	-	-	-	-	-	-	-
1:00 AM			-	-	-	-	-	-	-	-	-	-	-
2:00 AM			-	-	-	-	-	-	-	-	-	-	-
3:00 AM			-	-	-	-	-	-	-	-	-	-	-
4:00 AM			-	-	-	-	-	-	-	-	-	-	-
5:00 AM			-	-	-	-	-	-	-	-	-	-	-
6:00 AM			-	-	-	-	-	-	-	-	-	-	-
7:00 AM	925	230	X	X	X	X	X	X	X	X	1	1	1
8:00 AM	785	232	X	X	X	X	X	X	X	X	1	1	1
9:00 AM	539	204	X	X	X	X	X	X	X	X	1	1	1
10:00 AM	479	203	X	X	X	X	-	X	X	X	1	-	1
11:00 AM	443	166	X	X	X	X	-	X	X	X	1	-	1
12:00 PM	456	208	X	X	X	X	-	X	X	X	1	-	1
1:00 PM	527	239	X	X	X	X	X	X	X	X	1	1	1
2:00 PM	569	297	X	X	X	X	X	X	X	X	1	1	1
3:00 PM	656	365	X	X	X	X	X	X	X	X	1	1	1
4:00 PM	729	467	X	X	X	X	X	X	X	X	1	1	1
5:00 PM	653	503	X	X	X	X	X	X	X	X	1	1	1
6:00 PM	603	448	X	X	X	X	X	X	X	X	1	1	1
7:00 PM	432	343	X	X	X	X	-	X	X	X	1	-	1
8:00 PM			-	-	-	-	-	-	-	-	-	-	-
9:00 PM			-	-	-	-	-	-	-	-	-	-	-
10:00 PM			-	-	-	-	-	-	-	-	-	-	-
11:00 PM			-	-	-	-	-	-	-	-	-	-	-

[1] Major Street Volume is the total combined volume of both mainline approaches.

[2] Minor Street volumes is the highest single side street approach volume.

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME **Warrant 2 Satisfied: YES**

Warrant is satisfied if four (4) or more hours satisfy the volume requirements depicted on the four hour warranting graph (see page 2). No. of Points Above Criteria Curve: 13

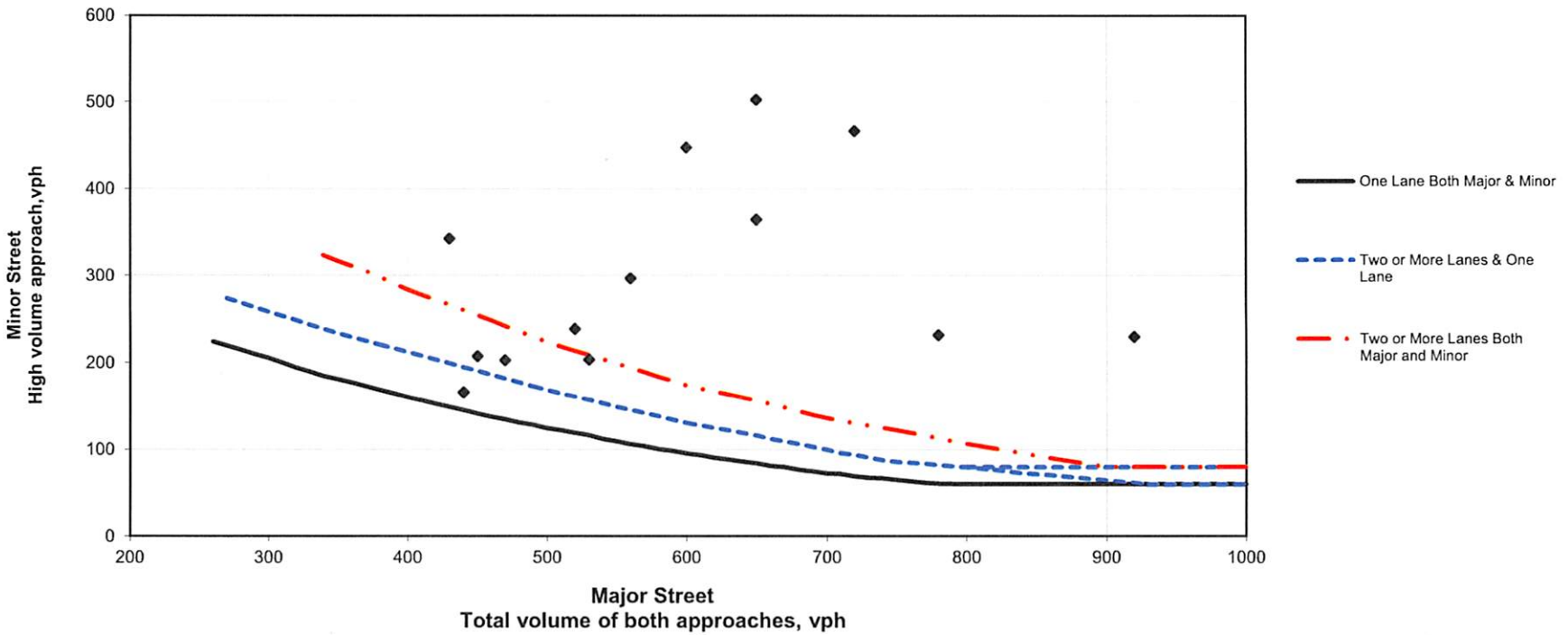
WARRANT 3 - PEAK HOUR VEHICULAR VOLUME **Warrant 3 Satisfied: YES**

Warrant is satisfied if any hour satisfy the volume requirements depicted on the peak hour warranting graph (see page 3), and ALL three of the following requirement are met. No. of Points Above Criteria Curve: 9

1. Total stopped time delay on Minor Street equals or exceeds 4 VHD (single lane) or 5 VHD (two lanes): 24.1 VHD Max. Yes
2. Volume on Minor Street equals or exceeds 100 vehicles (single lane) or 150 vehicles (two lanes): Yes
3. Total intersection volume serviced during the hour equals or exceeds 650 veh. (3-leg) or 800 veh. (4-leg or more): Yes

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

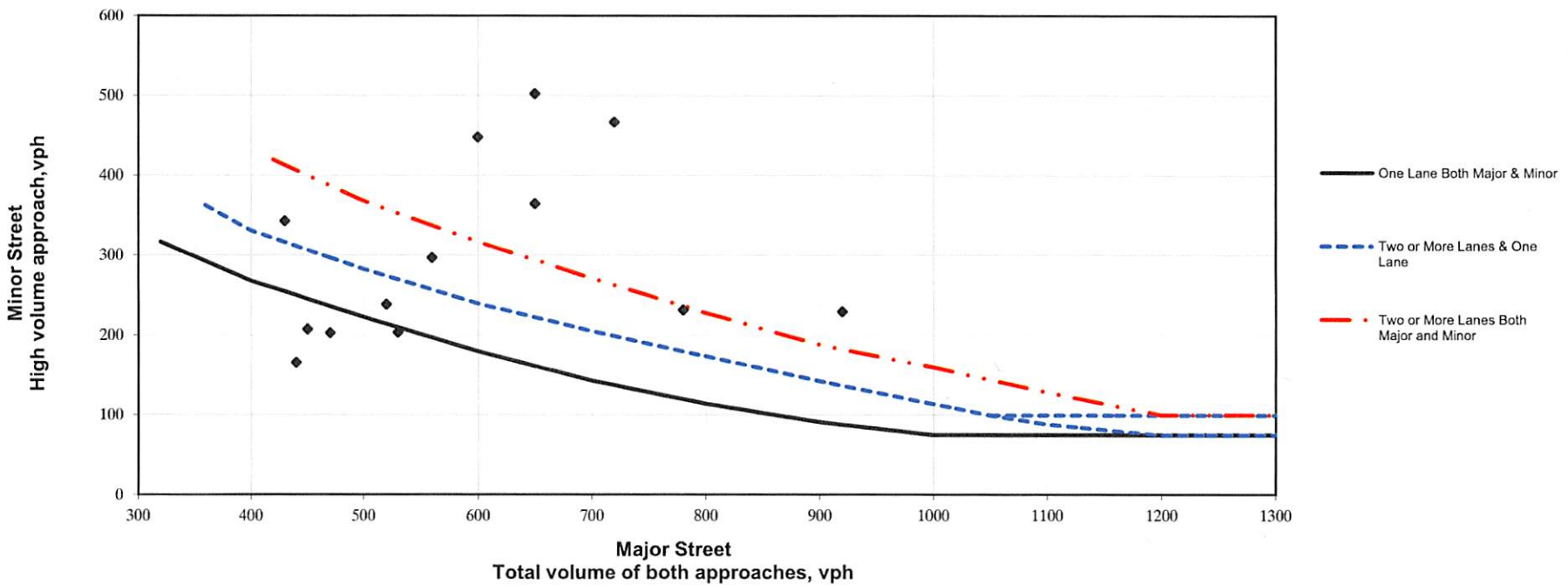
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



Note: Points on graph represent hourly volumes. Points above the respective curve satisfy warrant, points below do not satisfy warrant.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



Note: Points on graph represent hourly volumes. Points above the respective curve satisfy warrant, points below do not satisfy warrant.

Intersection	
Int Delay, s/veh	78.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	102	75	208	418	225
Future Vol, veh/h	128	102	75	208	418	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	13	20	3	4	8
Mvmt Flow	141	112	82	229	459	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1362	197	0	0	311	0
Stage 1	197	-	-	-	-	-
Stage 2	1165	-	-	-	-	-
Critical Hdwy	6.45	6.33	-	-	4.14	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.417	-	-	2.236	-
Pot Cap-1 Maneuver	161	817	-	-	1238	-
Stage 1	829	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 92	817	-	-	1238	-
Mov Cap-2 Maneuver	~ 92	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	293	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	$ 377.7	0	6.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	152	1238	-
HCM Lane V/C Ratio	-	-	1.663	0.371	-
HCM Control Delay (s)	-	-	$ 377.7	9.6	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	17.9	1.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	27.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	128	102	75	208	418	225
Future Vol, veh/h	128	102	75	208	418	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	100	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	13	20	3	4	8
Mvmt Flow	141	112	82	229	459	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1247	82	0	0	311	0
Stage 1	82	-	-	-	-	-
Stage 2	1165	-	-	-	-	-
Critical Hdwy	6.45	6.33	-	-	4.14	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.417	-	-	2.236	-
Pot Cap-1 Maneuver	189	948	-	-	1238	-
Stage 1	934	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 119	948	-	-	1238	-
Mov Cap-2 Maneuver	~ 119	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	293	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	120.7	0	6.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	119	948	1238	-
HCM Lane V/C Ratio	-	-	1.182	0.118	0.371	-
HCM Control Delay (s)	-	-	209.5	9.3	9.6	-
HCM Lane LOS	-	-	F	A	A	-
HCM 95th %tile Q(veh)	-	-	8.7	0.4	1.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	253	311	706
v/c Ratio	0.75	0.28	0.96
Control Delay	35.3	2.3	40.4
Queue Delay	0.0	0.0	0.0
Total Delay	35.3	2.3	40.4
Queue Length 50th (ft)	79	11	251
Queue Length 95th (ft)	#169	37	#518
Internal Link Dist (ft)	658	865	780
Turn Bay Length (ft)			
Base Capacity (vph)	392	1105	733
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.65	0.28	0.96

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						
Traffic Volume (veh/h)	128	102	75	208	418	225
Future Volume (veh/h)	128	102	75	208	418	225
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1604	1604	1781	1781
Adj Flow Rate, veh/h	141	112	82	229	459	247
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	20	20	8	8
Cap, veh/h	165	131	250	699	538	242
Arrive On Green	0.18	0.18	0.67	0.67	0.67	0.67
Sat Flow, veh/h	916	727	373	1043	671	361
Grp Volume(v), veh/h	254	0	0	311	706	0
Grp Sat Flow(s),veh/h/ln	1649	0	0	1416	1032	0
Q Serve(g_s), s	10.0	0.0	0.0	6.2	38.8	0.0
Cycle Q Clear(g_c), s	10.0	0.0	0.0	6.2	45.0	0.0
Prop In Lane	0.56	0.44		0.74	0.65	
Lane Grp Cap(c), veh/h	298	0	0	949	780	0
V/C Ratio(X)	0.85	0.00	0.00	0.33	0.91	0.00
Avail Cap(c_a), veh/h	369	0	0	949	780	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	0.0	0.0	4.7	14.6	0.0
Incr Delay (d2), s/veh	14.6	0.0	0.0	0.2	14.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.0	1.1	10.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.3	0.0	0.0	4.9	28.7	0.0
LnGrp LOS	D	A	A	A	C	A
Approach Vol, veh/h	254		311			706
Approach Delay, s/veh	41.3		4.9			28.7
Approach LOS	D		A			C

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	50.0			50.0	17.1
Change Period (Y+Rc), s	5.0			5.0	5.0
Max Green Setting (Gmax), s	45.0			45.0	15.0
Max Q Clear Time (g_c+I1), s	8.2			47.0	12.0
Green Ext Time (p_c), s	2.0			0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	15.0
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	253	311	706
Demand Flow Rate, veh/h	275	334	744
Vehicles Circulating, veh/h	98	477	148
Vehicles Exiting, veh/h	713	415	225
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.6	12.8	19.1
Approach LOS	A	B	C

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	275	334	744
Cap Entry Lane, veh/h	1024	701	974
Entry HV Adj Factor	0.920	0.930	0.949
Flow Entry, veh/h	253	311	706
Cap Entry, veh/h	943	652	925
V/C Ratio	0.268	0.476	0.763
Control Delay, s/veh	6.6	12.8	19.1
LOS	A	B	C
95th %tile Queue, veh	1	3	8

Intersection	
Int Delay, s/veh	41.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	151	328	263	145	139	180
Future Vol, veh/h	151	328	263	145	139	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	1	5	2	5
Mvmt Flow	162	353	283	156	149	194

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	853	361	0	0	439	0
Stage 1	361	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.12	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.218	-
Pot Cap-1 Maneuver	327	679	-	-	1121	-
Stage 1	701	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	278	679	-	-	1121	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	610	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	101.9	0	3.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	467	1121	-
HCM Lane V/C Ratio	-	-	1.103	0.133	-
HCM Control Delay (s)	-	-	101.9	8.7	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	17.2	0.5	-

Intersection	
Int Delay, s/veh	8.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	151	328	263	145	139	180
Future Vol, veh/h	151	328	263	145	139	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	100	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	4	1	5	2	5
Mvmt Flow	162	353	283	156	149	194

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	775	283	0	0	439	0
Stage 1	283	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.12	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.218	-
Pot Cap-1 Maneuver	364	751	-	-	1121	-
Stage 1	760	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	316	751	-	-	1121	-
Mov Cap-2 Maneuver	316	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	610	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.4	0	3.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	316	751	1121	-
HCM Lane V/C Ratio	-	-	0.514	0.47	0.133	-
HCM Control Delay (s)	-	-	27.8	14	8.7	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	2.8	2.5	0.5	-

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	515	439	343
v/c Ratio	0.79	0.54	0.71
Control Delay	19.9	11.1	20.4
Queue Delay	0.0	0.0	0.0
Total Delay	19.9	11.1	20.4
Queue Length 50th (ft)	66	66	69
Queue Length 95th (ft)	#248	147	169
Internal Link Dist (ft)	658	865	780
Turn Bay Length (ft)			
Base Capacity (vph)	850	1189	734
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.61	0.37	0.47

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						
Traffic Volume (veh/h)	151	328	263	145	139	180
Future Volume (veh/h)	151	328	263	145	139	180
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1885	1885	1826	1826
Adj Flow Rate, veh/h	162	353	283	156	149	194
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	1	1	5	5
Cap, veh/h	182	396	494	272	245	278
Arrive On Green	0.36	0.36	0.43	0.43	0.43	0.43
Sat Flow, veh/h	507	1106	1142	630	317	643
Grp Volume(v), veh/h	516	0	0	439	343	0
Grp Sat Flow(s),veh/h/ln	1616	0	0	1772	959	0
Q Serve(g_s), s	14.3	0.0	0.0	8.9	8.1	0.0
Cycle Q Clear(g_c), s	14.3	0.0	0.0	8.9	17.0	0.0
Prop In Lane	0.31	0.68		0.36	0.43	
Lane Grp Cap(c), veh/h	578	0	0	766	523	0
V/C Ratio(X)	0.89	0.00	0.00	0.57	0.66	0.00
Avail Cap(c_a), veh/h	679	0	0	1116	777	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	10.2	13.2	0.0
Incr Delay (d2), s/veh	12.7	0.0	0.0	0.7	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	2.4	2.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.1	0.0	0.0	10.9	14.6	0.0
LnGrp LOS	C	A	A	B	B	A
Approach Vol, veh/h	516		439			343
Approach Delay, s/veh	27.1		10.9			14.6
Approach LOS	C		B			B

Timer - Assigned Phs		2				6	8
Phs Duration (G+Y+Rc), s		25.6				25.6	22.0
Change Period (Y+Rc), s		5.0				5.0	5.0
Max Green Setting (Gmax), s		30.0				30.0	20.0
Max Q Clear Time (g_c+I1), s		10.9				19.0	16.3
Green Ext Time (p_c), s		2.4				1.6	0.7

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	515	439	343
Demand Flow Rate, veh/h	535	450	356
Vehicles Circulating, veh/h	286	152	168
Vehicles Exiting, veh/h	316	372	653
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	14.8	9.4	8.1
Approach LOS	B	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	535	450	356
Cap Entry Lane, veh/h	849	971	955
Entry HV Adj Factor	0.963	0.976	0.964
Flow Entry, veh/h	515	439	343
Cap Entry, veh/h	817	947	921
V/C Ratio	0.630	0.464	0.373
Control Delay, s/veh	14.8	9.4	8.1
LOS	B	A	A
95th %tile Queue, veh	5	2	2

NYSDOT QRA ACCIDENT VERBAL DESCRIPTION

Print Date 4/24/2019 Print Time 10:51:17AM

Query Number/Name	Query Type	Query SubType	Accident Date Range
45676Rt 52 Ludingtonville	AttributeQuery	None	1/1/2016 12:00:00AM To 12/31/2018 12:00:00AM

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36077585	30-January-2016	PUTNAM	Kent Town	STATE HWY 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT/ GRADE	CLEAR	NONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
1	NON-REPORTABLE	COLL. W/EARTH ELE./ROCK CUT/DITCH	OTHER	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	3	WEST	GOING STRAIGHT AHEAD	0	31	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	UNSAFE SPEED
2	ANIMAL'S ACTION

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36095405	11-February-2016	PUTNAM	Kent Town	LUDINGTONVILLE RD	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
WET	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
3	PROPERTY DAMAGE	COLLISION WITH MOTOR VEHICLE	OTHER	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	EAST	MAKING LEFT TURN	3146	17	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	PAVEMENT SLIPPERY
2	STEERING FAILURE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	STARTING IN TRAFFIC	5396	31	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
3	1	WEST	STARTING IN TRAFFIC	5287	39	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36143720	22-March-2016	PUTNAM	Kent Town	COUNTY RTE 43	

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLOUDY	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	RIGHT ANGLE	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH-WEST	MAKING LEFT TURN	0	39	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	NORTH	GOING STRAIGHT AHEAD	0	49	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36220635	23-May-2016	PUTNAM	Kent Town	LUDINGTONVILLE RD	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	PROPERTY DAMAGE	COLLISION WITH MOTOR VEHICLE	REAR END	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH-WEST	MAKING RIGHT TURN	3439	69	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE

2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	SOUTH	GOING STRAIGHT AHEAD	3230	30	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FOLLOWING TOO CLOSELY
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36301630	15-July-2016	PUTNAM	Kent Town	LUDINGTONVILLE RD	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	REAR END	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	GOING STRAIGHT AHEAD	0	25	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor

1	DRIVER INATTENTION
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	STOPPED IN TRAFFIC	0	66	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36310210	20-July-2016	PUTNAM	Kent Town	STATE HWY 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
1	NON-REPORTABLE	COLLISION WITH CURBING	OTHER	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	2	WEST	GOING STRAIGHT AHEAD	0	21	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	Y	N	N

Apparent Factor Sequence Number	Apparent Factor
1	TRAFFIC CONTROL DEVICES DISREGARDED
2	UNKNOWN

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36314856	26-July-2016	PUTNAM	Kent Town	STATE HWY 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NO PASSING ZONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	LEFT TURN (WITH OTHER CAR)	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH	MAKING LEFT TURN	0	41	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	NORTH	GOING STRAIGHT AHEAD	0	47	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36352973	05-August-2016	PUTNAM	Kent Town	LUDINGTONVILLE RD	

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	PROPERTY DAMAGE AND INJURY	COLLISION WITH MOTOR VEHICLE	REAR END	0	1	POSSIBL

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	SLOWED OR STOPPING	0	44	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	CT	Y	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FOLLOWING TOO CLOSELY

2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	STOPPED IN TRAFFIC	2912	43	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36361072	19-August-2016	PUTNAM	Kent Town	[Route] 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
3	PROPERTY DAMAGE AND INJURY	COLLISION WITH MOTOR VEHICLE	OTHER	0	1	POSSIBL

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	NORTH	GOING STRAIGHT AHEAD	2950	28	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor

1	OTHER (VEHICLE)
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	STOPPED IN TRAFFIC	4704	57	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
3	1	SOUTH-WEST	MAKING LEFT TURN	14500	53	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36411231	04-October-2016	PUTNAM	Kent Town	[Route] 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
1	NON-REPORTABLE	COLLISION WITH OTHER FIXED OBJECT	OTHER	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	EAST	BACKING	0	68	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
TRUCK	TN	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	BACKING UNSAFELY
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36433928	18-October-2016	PUTNAM	Kent Town	LUDINGTONVILLE RD	

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	REAR END	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	MAKING RIGHT TURN	0	67	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FOLLOWING TOO CLOSELY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	MAKING RIGHT TURN	0	57	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
36983645	02-September-2017	PUTNAM	Kent Town	[Route] 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NO PASSING ZONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	OVERTAKING	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH	OVERTAKING	0	22	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	PASSING OR LANE USAGE IMPROPERLY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	2	SOUTH	STOPPED IN TRAFFIC	0	51	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37043627	19-December-2017	PUTNAM	Kent Town	[Route] 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NO PASSING ZONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	PROPERTY DAMAGE	COLLISION WITH MOTOR VEHICLE	REAR END	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	3	WEST	STOPPED IN TRAFFIC	2687	39	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	GOING STRAIGHT AHEAD	3175	18	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FOLLOWING TOO CLOSELY
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37046293	20-December-2017	PUTNAM	Kent Town	STATE HWY 52	52 84051004

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	RIGHT ANGLE	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH	MAKING LEFT TURN	0	46	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	Y	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	TURNING IMPROPER

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	2	WEST	GOING STRAIGHT AHEAD	0	32	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE

2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37207927	20-March-2018	PUTNAM	Kent Town	STATE HWY 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	LEFT TURN (WITH OTHER CAR)	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	MAKING LEFT TURN	4335	66	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	SOUTH	GOING STRAIGHT AHEAD	3424	47	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor

1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37336365	18-June-2018	PUTNAM	Kent Town	[Route] 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	PROPERTY DAMAGE AND INJURY	COLLISION WITH MOTOR VEHICLE	LEFT TURN (AGAINST OTHER CAR)	0	3	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	SOUTH-WEST	MAKING LEFT TURN	5257	53	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	2	NORTH	GOING STRAIGHT AHEAD	2778	78	M

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37497439	24-September-2018	PUTNAM	Kent Town	STATE HWY 52	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	PROPERTY DAMAGE	COLLISION WITH MOTOR VEHICLE	LEFT TURN (WITH OTHER CAR)	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	MAKING LEFT TURN	0	60	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FAILURE TO YIELD RIGHT OF WAY
2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	2	SOUTH	GOING STRAIGHT AHEAD	0	80	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	PA	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37504324	27-September-2018	PUTNAM	Kent Town	LUDINGTONVILLE RD	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	STOP SIGN	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	REAR END	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	GOING STRAIGHT AHEAD	0	51	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
CAR/VAN/PICKUP	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	FOLLOWING TOO CLOSELY

2	NOT APPLICABLE

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	1	WEST	STOPPED IN TRAFFIC	0	46	F

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
BUS	NY	N	N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

Case Number	Accident Date	Region/County	Municipality/Type	Street	Reference Marker
37577470	07-November-2018	PUTNAM	Kent Town	LUDINGTONVILLE RD	52 84051003

Road Surface	Road Cond	Weather	TrafficControls	Location Ped/Bike	Action of Ped/Bike
DRY	STRAIGHT AND LEVEL	CLEAR	NO PASSING ZONE	NOT APPLICABLE	NOT APPLICABLE

Number of Vehicles	Accident Class	Type of Accident	Manner of Collision	Fatality	Injury	Ext of Injuries
2	NON-REPORTABLE	COLLISION WITH MOTOR VEHICLE	OVERTAKING	0	0	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
1	1	WEST	GOING STRAIGHT AHEAD	0	0	U

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
OTHER		N	N	N

Apparent Factor Sequence Number	Apparent Factor

1	UNKNOWN	
2	UNKNOWN	

Vehicle Number	Number of Occupants	Dir of Travel	Pre-Accd Action	Registered Weight	Drivers Age	Sex
2	2	WEST	PARKED	0	0	

Vehicle Type	State of Registration	Citation Issued	School Bus Involved	Property Damage
TRUCK			N	N

Apparent Factor Sequence Number	Apparent Factor
1	NOT APPLICABLE
2	NOT APPLICABLE

GPI Greenman-Pedersen, Inc.
Engineering and Construction Services

Intersection: NY Route 52 & Ludingtonville Rd
Client: Putnam County — GPI No. 2019058.00
Calculated By: D. Creen — Date: 6/27/2019
Checked By: M. Wieszchowski — Date: 6/28/2019

ACTUATED TRAFFIC SIGNAL WITH NO GEOMETRIC IMPROVEMENTS

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL COST
ACTUATED TRAFFIC SIGNAL [1]	1	EA	$150,000	$150,000
WORK ZONE TRAFFIC CONTROL	1	LS	$20,000	$20,000
			ESTIMATED CONSTRUCTION COST (CONCEPTUAL)	$170,000
CONTIGENCY (20%)	1	LS	$34,000	$35,000
DESIGN AND INSPECTION (25%)	1	LS	$42,500	$45,000
			FINAL TOTAL	$250,000.00

[1] INCLUDES TYPICAL COST FOR CONTROLLER, SIGNAL POLES, LOOPS, WIRING, SIGNAL HEADS, ETC., FOR AN ACTUATED TRAFFIC SIGNAL.

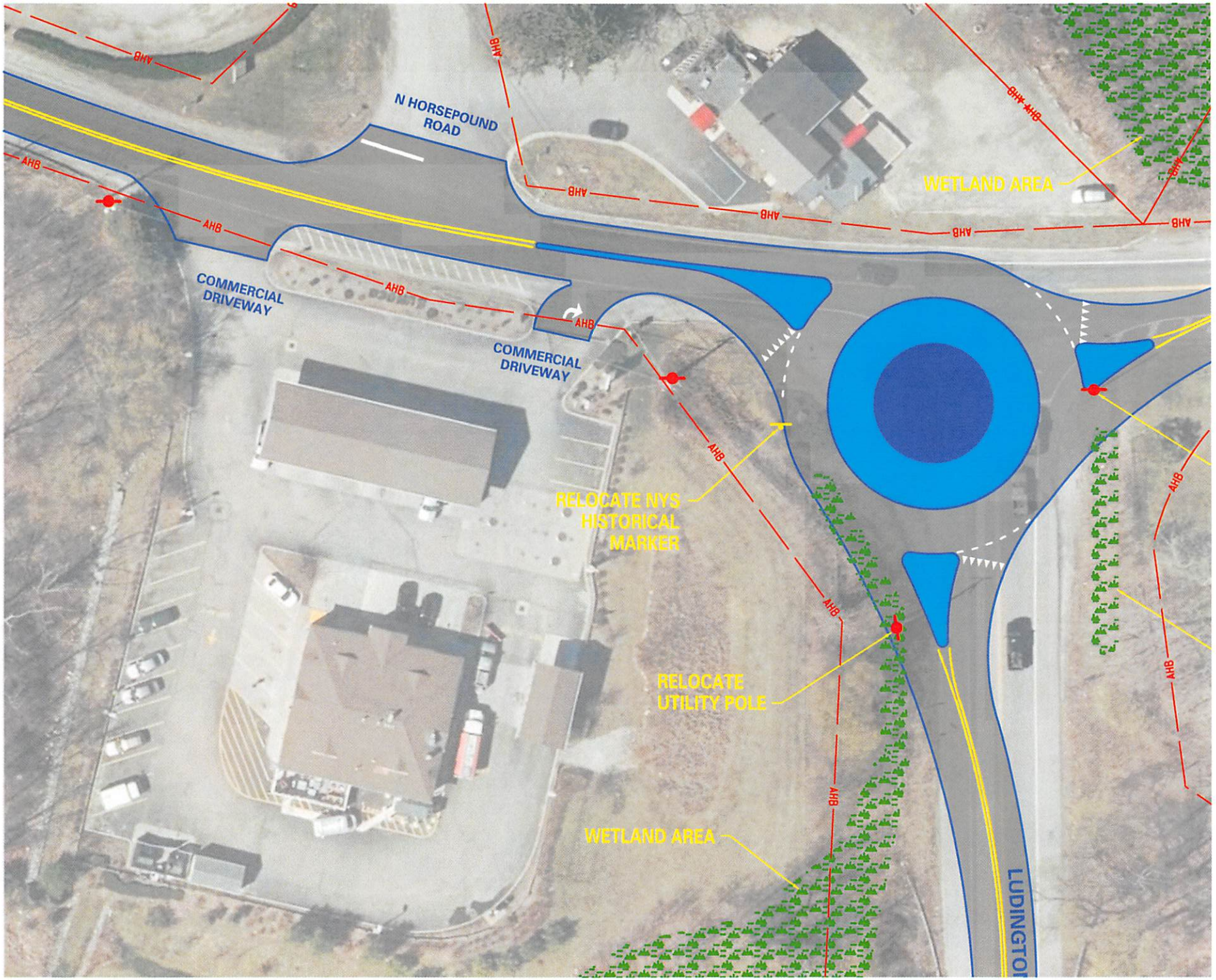
SINGLE LANE ROUNDABOUT (120 FT DIAMETER)

DESCRIPTION	TOTAL QUANTITY	UNIT	UNIT PRICE	TOTAL COST
SINGLE LANE ROUNDABOUT [2]	1	EA	$750,000	$750,000
UTILITY RELOCATION [3]	0	EA	$75,000	$0
STORMWATER AND TREATMENT [4]	1	LS	$100,000	$100,000
WETLAND MITIGATION	1	LS	$75,000	$75,000
WORK ZONE TRAFFIC CONTROL	1	LS	$150,000	$150,000
			ESTIMATED CONSTRUCTION COST (CONCEPTUAL)	$1,075,000.00
RIGHT OF WAY	0	ACRE	$340,000	$0
CONTIGENCY (20%)	1	LS	$215,000	$215,000
DESIGN AND INSPECTION (25%)	1	LS	$268,750	$270,000
			FINAL TOTAL	$1,560,000.00

[2] INCLUDES TYPICAL COST FOR PAVEMENT, CURB, EARTHWORK, DRAINAGE, LANDSCAPING, ETC., FOR A SINGLE LANE ROUNDABOUT.

[3] ELECTRIC AND GAS RELOCATIONS ARE ASSUMED NO COST FOR MUNICIPAL PROJECTS. WATER AND SEWER RELOCATIONS ARE ASSUMED AT $75,000 EACH.

[4] IMPACTS OVER 5,000 SF WITHIN DEP WATERSHEDS REQUIRE POST STORMWATER TREATMENT. $100,000 ALLOWANCE FOR EXTRA ROW OR WORK REQUIRED.


N HORSEPOUND ROAD
COMMERCIAL DRIVEWAY
COMMERCIAL DRIVEWAY
WETLAND AREA
RELOCATE NYS HISTORICAL MARKER
RELOCATE UTILITY POLE
WETLAND AREA
LUDINGTON
AHB