

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM  
RELEASE 4.0 (SEPT 2008)

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Run with file:-

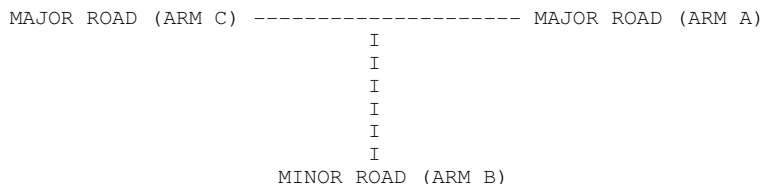
"P:\Projects\7000-0710-64 Barton Farm, Winchester\PICADY\October 2009 Work\Stoney Lane\Existing Junction\  
2009 Base + Dev AM & PM.vpi"  
(drive-on-the-left) at 16:56:52 on Wednesday, 14 October 2009

RUN INFORMATION  
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RUN TITLE : Andover Road/Stoney Lane Junction Priority Junction 2009 AM & PM Base + Dev  
LOCATION : Winchester  
DATE : 22/05/09  
CLIENT : Cala Homes (South) Limited  
ENUMERATOR : mff  
JOB NUMBER : 0710-64  
STATUS :  
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY  
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INPUT DATA  
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ARM A IS Andover Road (South)  
ARM B IS Stoney Lane  
ARM C IS Andover Road (North)

STREAM LABELLING CONVENTION  
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STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B  
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C  
ETC.

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 GEOMETRIC DATA  
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I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	( W ) 6.00 M.	I
I	CENTRAL RESERVE WIDTH	I	( WCR ) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	( WC-B ) 2.20 M.	I
I	- VISIBILITY	I	( VC-B ) 180.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	( VB-C ) 24.0 M.	I
I	- VISIBILITY TO RIGHT	I	( VB-A ) 43.0 M.	I
I	- LANE 1 WIDTH	I	( WB-C ) -	I
I	- LANE 2 WIDTH	I	( WB-A ) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	5.75 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	4.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

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 .SLOPES AND INTERCEPT  
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(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

\* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I	
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B
I	0.00		0.00		0.00		0.00		0.00

\* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	678.20		0.26		0.26	I

(NB These values do not allow for any site specific corrections)

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 TRAFFIC DEMAND DATA  
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I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: Andover Road/Stoney Lane Junction Priority Junction

TIME PERIOD BEGINS 07.30 AND ENDS 09.00

LENGTH OF TIME PERIOD - 90 MIN.  
 LENGTH OF TIME SEGMENT - 15 MIN.



TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.98	1.63	1.213		0.48	8.09	71.1		3.70
B-A	4.28	3.60	1.186		2.49	14.80	135.5		3.06
C-AB	14.31	19.07	0.750		1.80	5.52	80.0		0.20
C-A	3.69								
A-B	1.85								
A-C	5.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.98	1.70	1.168		8.09	13.05	159.1		6.84
B-A	4.28	3.54	1.207		14.80	26.30	308.8		6.01
C-AB	14.62	19.20	0.761		5.52	6.04	94.4		0.23
C-A	3.38								
A-B	1.85								
A-C	5.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	1.62	2.09	0.775		13.05	8.22	159.5		5.20
B-A	3.49	4.40	0.793		26.30	15.05	310.1		4.90
C-AB	8.77	17.61	0.498		6.04	2.00	33.5		0.12
C-A	5.93								
A-B	1.51								
A-C	4.69								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.36	5.44	0.249		8.22	0.34	14.3		0.32
B-A	2.92	5.34	0.548		15.05	1.32	66.2		1.01
C-AB	5.82	16.33	0.357		2.00	1.06	16.3		0.10
C-A	6.49								
A-B	1.27								
A-C	3.93								

\*WARNING\* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
07.45	0.2
08.00	0.5
08.15	8.1
08.30	13.0
08.45	8.2
09.00	0.3

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.1	*
08.00	2.5	**
08.15	14.8	*****
08.30	26.3	*****
08.45	15.1	*****
09.00	1.3	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
07.45	1.0	*
08.00	1.8	**
08.15	5.5	*****
08.30	6.0	*****
08.45	2.0	**
09.00	1.1	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-C	I	148.7	I	99.1	I	413.9	I	2.78
I	B-A	I	320.7	I	213.8	I	866.9	I	2.70
I	C-AB	I	865.6	I	577.1	I	265.9	I	0.31
I	C-A	I	484.6	I	323.1	I		I	
I	A-B	I	139.0	I	92.7	I		I	
I	A-C	I	430.8	I	287.2	I		I	
I	ALL	I	2389.5	I	1593.0	I	1546.8	I	0.65

\* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD  
 \* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD  
 \* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

\*\*\*\*\*END OF RUN\*\*\*\*\*

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

\* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM
I	I	I	I	I	I	I	I	I
I	0.00		0.00		0.00		0.00	

\* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	678.20		0.26		0.26	I

(NB These values do not allow for any site specific corrections)



TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-C	1.78	6.19	0.288		0.24	0.40	5.7		0.23
B-A	2.05	3.65	0.562		0.57	1.18	15.8		0.60
C-AB	7.40	8.76	0.845		1.94	4.79	68.8		0.60
C-A	0.23								
A-B	3.25								
A-C	9.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.18	1.93	1.134		0.40	7.42	66.8		3.11
B-A	2.51	2.26	1.113		1.18	8.03	75.6		3.04
C-AB	9.34	8.09	1.154		4.79	26.37	266.0		2.28
C-A	0.00								
A-B	3.98								
A-C	12.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.18	1.64	1.331		7.42	16.01	176.4		7.46
B-A	2.51	1.87	1.346		8.03	18.15	197.1		7.23
C-AB	9.34	8.10	1.153		26.37	45.62	561.6		4.63
C-A	0.00								
A-B	3.98								
A-C	12.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.78	2.20	0.810		16.01	11.66	207.6		6.03
B-A	2.05	2.52	0.814		18.15	13.10	234.4		6.25
C-AB	7.63	8.94	0.853		45.62	29.11	565.4		4.29
C-A	0.00								
A-B	3.25								
A-C	9.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	1.49	5.80	0.258		11.66	0.36	22.2		0.35
B-A	1.72	3.83	0.449		13.10	0.88	54.6		1.19
C-AB	6.20	9.37	0.662		29.11	2.43	174.1		1.30
C-A	0.18								
A-B	2.72								
A-C	8.29								

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