Appendix N Junction Modelling: Churchtown Road Access (on CD only)

TRL LIMITED

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

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAY 2001)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
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FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

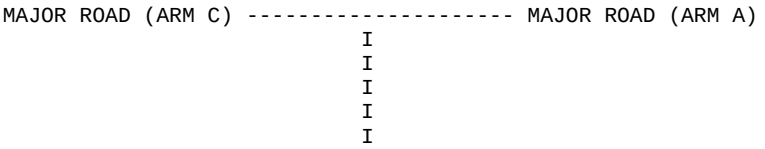
Run with file:-
"o:\022961 Hayle Harbour - OPA\F08 - Civils (name)\Transportation\Assessments\PICADY\
20071112 rs Churchtown Rd PM 2011 with dev.vpi"
(drive-on-the-left) at 11:32:05 on Monday, 12 November 2007

RUN TITLE
****
Hayle - Churchtown Road junction

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

****

INPUT DATA



I
MINOR ROAD (ARM B)

ARM A IS Churchtown Road east
ARM B IS Riviere Fields
ARM C IS Churchtown Road west

STREAM LABELLING CONVENTION

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.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	60.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		5.50 M.
- WIDTH AT 5 M FROM JUNC.		3.20 M.
- WIDTH AT 10 M FROM JUNC.		3.00 M.
- WIDTH AT 15 M FROM JUNC.		3.00 M.
- WIDTH AT 20 M FROM JUNC.		3.00 M.
- LENGTH OF FLARED SECTION		1 VEHS

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.38	3.56	2.38
ARM B	15.00	45.00	75.00	1.09	1.63	1.09
ARM C	15.00	45.00	75.00	1.25	1.88	1.25

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.579	0.421
		0.0	110.0	80.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.770	0.000	0.230
		67.0	0.0	20.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.800	0.200	0.000
		80.0	20.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.25	7.73	0.032		0.0	0.0	0.5	
B-A	0.84	7.53	0.111		0.0	0.1	1.8	
C-A	1.00							
C-B	0.25	9.78	0.026		0.0	0.0	0.4	
A-B	1.38							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.103	0.002			0.008
B-A	0.081	0.003	0.020	0.005	0.008
C-B	0.108	0.003		0.010	

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)
08.00-08.15								
B-C	0.30	7.61	0.039		0.0	0.0	0.6	
B-A	1.00	7.41	0.135		0.1	0.2	2.3	
C-A	1.19							
C-B	0.30	9.65	0.031		0.0	0.0	0.5	
A-B	1.64							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.102	0.002			0.008
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.106	0.004		0.010	

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)
08.15-08.30								
B-C	0.37	7.44	0.049		0.0	0.1	0.8	
B-A	1.22	7.24	0.169		0.2	0.2	2.9	
C-A	1.46							
C-B	0.37	9.48	0.039		0.0	0.0	0.6	
A-B	2.01							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
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B-A	0.077	0.004	0.020	0.005	0.008
C-B	0.104	0.004		0.010	

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)
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B-C	0.37	7.44	0.049		0.1	0.1	0.8	
B-A	1.22	7.24	0.169		0.2	0.2	3.0	
C-A	1.46							
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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)
08.45-09.00								
B-C	0.30	7.61	0.039		0.1	0.0	0.6	
B-A	1.00	7.41	0.135		0.2	0.2	2.4	
C-A	1.19							
C-B	0.30	9.65	0.031		0.0	0.0	0.5	
A-B	1.64							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
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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)
09.00-09.15								
B-C	0.25	7.72	0.032		0.0	0.0	0.5	
B-A	0.84	7.53	0.111		0.2	0.1	1.9	
C-A	1.00							
C-B	0.25	9.78	0.026		0.0	0.0	0.4	
A-B	1.38							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.103	0.002			0.008
B-A	0.081	0.003	0.020	0.005	0.008
C-B	0.108	0.003		0.010	

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	27.4	18.3	3.7	0.14	3.7	0.14
B-A	91.9	61.2	14.4	0.16	14.4	0.16
C-A	109.7	73.1				
C-B	27.4	18.3	2.9	0.11	2.9	0.11

```
I  A-B   I  150.8 I  100.6 I         I           I            I           I
I  A-C   I  109.7 I   73.1 I         I           I            I           I
-------------------------------------------------------------------------
I  ALL   I  516.9 I  344.6 I    21.1 I    0.04   I      21.1  I    0.04   I
-------------------------------------------------------------------------


 * 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 JOB

 ****** PICADY 4 run completed.
============================================ end of file ============================================
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TRL LIMITED

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

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAY 2001)

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EMAIL: SoftwareBureau@trl.co.uk

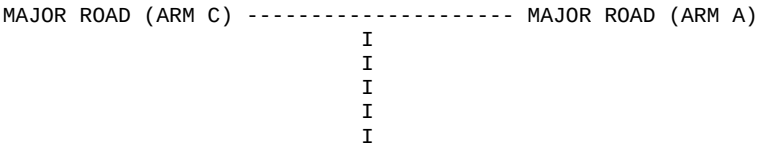
Run with file:-
"o:\022961 Hayle Harbour - OPA\F08 - Civils (name)\Transportation\Assessments\PICADY\
20071112 rs Churchtown Rd AM 2011 with dev (ROBUST trips).vpi"
(drive-on-the-left) at 11:37:06 on Monday, 12 November 2007

RUN TITLE
****
Hayle - Churchtown Road junction

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

****

INPUT DATA



I
MINOR ROAD (ARM B)

ARM A IS Churchtown Road east
ARM B IS Riviere Fields
ARM C IS Churchtown Road west

STREAM LABELLING CONVENTION

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.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	60.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		5.50 M.
- WIDTH AT 5 M FROM JUNC.		3.20 M.
- WIDTH AT 10 M FROM JUNC.		3.00 M.
- WIDTH AT 15 M FROM JUNC.		3.00 M.
- WIDTH AT 20 M FROM JUNC.		3.00 M.
- LENGTH OF FLARED SECTION		1 VEHS

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.59	2.38	1.59
ARM B	15.00	45.00	75.00	1.77	2.66	1.77
ARM C	15.00	45.00	75.00	1.25	1.88	1.25

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.370	0.630
		0.0	47.0	80.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.859	0.000	0.141
		122.0	0.0	20.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.800	0.200	0.000
		80.0	20.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.25	7.12	0.035		0.0	0.0	0.5	
B-A	1.52	7.68	0.199		0.0	0.2	3.5	
C-A	1.00							
C-B	0.25	9.98	0.025		0.0	0.0	0.4	
A-B	0.59							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.102	0.001			0.008
B-A	0.081	0.003	0.020	0.005	0.008
C-B	0.110	0.002		0.010	

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)
08.00-08.15								
B-C	0.30	6.95	0.043		0.0	0.0	0.7	
B-A	1.82	7.57	0.241		0.2	0.3	4.6	
C-A	1.19							
C-B	0.30	9.90	0.030		0.0	0.0	0.5	
A-B	0.70							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.100	0.001			0.007
B-A	0.080	0.003	0.020	0.005	0.008
C-B	0.109	0.002		0.010	

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)
08.15-08.30								
B-C	0.37	6.70	0.055		0.0	0.1	0.8	
B-A	2.23	7.42	0.301		0.3	0.4	6.1	
C-A	1.46							
C-B	0.37	9.79	0.037		0.0	0.0	0.6	
A-B	0.86							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.097	0.002			0.007
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.108	0.003		0.010	

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)
08.30-08.45								
B-C	0.37	6.70	0.055		0.1	0.1	0.9	
B-A	2.23	7.42	0.301		0.4	0.4	6.4	
C-A	1.46							
C-B	0.37	9.79	0.037		0.0	0.0	0.6	
A-B	0.86							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

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08.45-09.00								
B-C	0.30	6.95	0.043		0.1	0.0	0.7	
B-A	1.82	7.57	0.241		0.4	0.3	5.0	
C-A	1.19							
C-B	0.30	9.90	0.030		0.0	0.0	0.5	
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EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.100	0.001			0.007
B-A	0.080	0.003	0.020	0.005	0.008
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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)
09.00-09.15								
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B-A	1.52	7.68	0.199		0.3	0.3	3.9	
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WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.3

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	27.4	18.3	4.1	0.15	4.1	0.15
B-A	167.3	111.5	29.4	0.18	29.4	0.18
C-A	109.7	73.1				
C-B	27.4	18.3	2.8	0.10	2.8	0.10

```
I  A-B   I   64.4 I   43.0 I         I           I            I           I
I  A-C   I  109.7 I   73.1 I         I           I            I           I
-------------------------------------------------------------------------
I  ALL   I  506.0 I  337.3 I    36.4 I    0.07   I      36.4  I    0.07   I
-------------------------------------------------------------------------


 * 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 JOB

 ****** PICADY 4 run completed.
============================================ end of file ============================================
```

TRL LIMITED

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

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAY 2001)

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PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

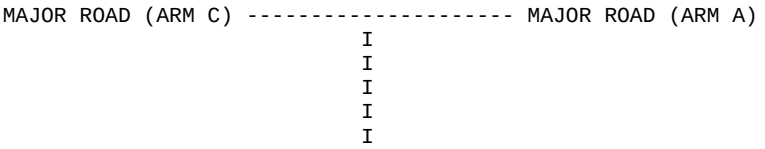
Run with file:-
"o:\022961 Hayle Harbour - OPA\F08 - Civils (name)\Transportation\Assessments\PICADY\
20071114 rs Churchtown Rd AM 2011 with dev (lower trips).vpi"
(drive-on-the-left) at 11:27:15 on Monday, 12 November 2007

RUN TITLE
****
Hayle - Churchtown Road junction

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

****

INPUT DATA



I
MINOR ROAD (ARM B)

ARM A IS Churchtown Road east
ARM B IS Riviere Fields
ARM C IS Churchtown Road west

STREAM LABELLING CONVENTION

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.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	60.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		5.50 M.
- WIDTH AT 5 M FROM JUNC.		3.20 M.
- WIDTH AT 10 M FROM JUNC.		3.00 M.
- WIDTH AT 15 M FROM JUNC.		3.00 M.
- WIDTH AT 20 M FROM JUNC.		3.00 M.
- LENGTH OF FLARED SECTION		1 VEHS

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	1.59	2.38	1.59
ARM B	15.00	45.00	75.00	1.64	2.46	1.64
ARM C	15.00	45.00	75.00	1.25	1.88	1.25

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.370	0.630
		0.0	47.0	80.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.847	0.000	0.153
		111.0	0.0	20.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.800	0.200	0.000
		80.0	20.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.25	7.23	0.035		0.0	0.0	0.5	
B-A	1.39	7.67	0.181		0.0	0.2	3.1	
C-A	1.00							
C-B	0.25	9.98	0.025		0.0	0.0	0.4	
A-B	0.59							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.102	0.001			0.008
B-A	0.081	0.003	0.020	0.005	0.008
C-B	0.110	0.002		0.010	

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)
08.00-08.15								
B-C	0.30	7.08	0.042		0.0	0.0	0.6	
B-A	1.66	7.56	0.219		0.2	0.3	4.0	
C-A	1.19							
C-B	0.30	9.90	0.030		0.0	0.0	0.5	
A-B	0.70							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.100	0.001			0.007
B-A	0.080	0.003	0.020	0.005	0.008
C-B	0.109	0.002		0.010	

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)
08.15-08.30								
B-C	0.37	6.85	0.053		0.0	0.1	0.8	
B-A	2.03	7.41	0.274		0.3	0.4	5.4	
C-A	1.46							
C-B	0.37	9.79	0.037		0.0	0.0	0.6	
A-B	0.86							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.098	0.002			0.007
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.108	0.003		0.010	

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)
08.30-08.45								
B-C	0.37	6.84	0.053		0.1	0.1	0.8	
B-A	2.03	7.41	0.274		0.4	0.4	5.6	
C-A	1.46							
C-B	0.37	9.79	0.037		0.0	0.0	0.6	
A-B	0.86							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.098	0.002			0.007
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.108	0.003		0.010	

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)
08.45-09.00								
B-C	0.30	7.07	0.042		0.1	0.0	0.7	
B-A	1.66	7.56	0.219		0.4	0.3	4.4	
C-A	1.19							
C-B	0.30	9.90	0.030		0.0	0.0	0.5	
A-B	0.70							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.100	0.001			0.007
B-A	0.080	0.003	0.020	0.005	0.008
C-B	0.109	0.002		0.010	

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)
09.00-09.15								
B-C	0.25	7.22	0.035		0.0	0.0	0.6	
B-A	1.39	7.67	0.181		0.3	0.2	3.4	
C-A	1.00							
C-B	0.25	9.98	0.025		0.0	0.0	0.4	
A-B	0.59							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.102	0.001			0.008
B-A	0.081	0.003	0.020	0.005	0.008
C-B	0.110	0.002		0.010	

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	27.4	18.3	4.0	0.15	4.0	0.15
B-A	152.2	101.5	26.0	0.17	26.0	0.17
C-A	109.7	73.1				
C-B	27.4	18.3	2.8	0.10	2.8	0.10

```
I  A-B   I   64.4 I   43.0 I         I           I            I           I
I  A-C   I  109.7 I   73.1 I         I           I            I           I
-------------------------------------------------------------------------
I  ALL   I  490.9 I  327.3 I    32.9 I    0.07   I      32.9  I    0.07   I
-------------------------------------------------------------------------


 * 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 JOB

 ****** PICADY 4 run completed.
============================================ end of file ============================================
```

TRL LIMITED

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

PICADY 4.1 ANALYSIS PROGRAM
RELEASE 3.0 (MAY 2001)

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TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

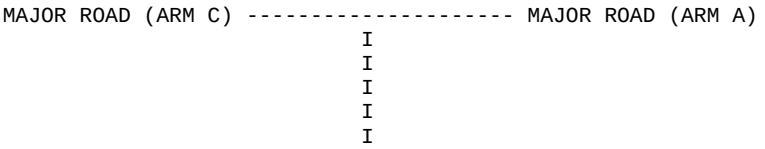
Run with file:-
"o:\022961 Hayle Harbour - OPA\F08 - Civils (name)\Transportation\Assessments\PICADY\
20071112 rs Churchtown Rd PM 2011 with dev (ROBUST trips).vpi"
(drive-on-the-left) at 11:33:30 on Monday, 12 November 2007

RUN TITLE
****
Hayle - Churchtown Road junction

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

****

INPUT DATA



I
MINOR ROAD (ARM B)

ARM A IS Churchtown Road east
ARM B IS Riviere Fields
ARM C IS Churchtown Road west

STREAM LABELLING CONVENTION

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.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.0 M.
- BLOCKS TRAFFIC		NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	50.0 M.
- VISIBILITY TO RIGHT	(VB-A)	60.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
- WIDTH AT 0 M FROM JUNC.		5.50 M.
- WIDTH AT 5 M FROM JUNC.		3.20 M.
- WIDTH AT 10 M FROM JUNC.		3.00 M.
- WIDTH AT 15 M FROM JUNC.		3.00 M.
- WIDTH AT 20 M FROM JUNC.		3.00 M.
- LENGTH OF FLARED SECTION		1 VEHS

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.53	3.79	2.53
ARM B	15.00	45.00	75.00	1.19	1.78	1.19
ARM C	15.00	45.00	75.00	1.25	1.88	1.25

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.604	0.396
		0.0	122.0	80.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.789	0.000	0.211
		75.0	0.0	20.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.800	0.200	0.000
		80.0	20.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
B-C	0.25	7.58	0.033		0.0	0.0	0.5	
B-A	0.94	7.53	0.124		0.0	0.1	2.0	
C-A	1.00							
C-B	0.25	9.74	0.026		0.0	0.0	0.4	
A-B	1.52							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.103	0.002			0.008
B-A	0.080	0.003	0.020	0.005	0.008
C-B	0.107	0.003		0.010	

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)
08.00-08.15								
B-C	0.30	7.46	0.040		0.0	0.0	0.6	
B-A	1.12	7.41	0.151		0.1	0.2	2.6	
C-A	1.19							
C-B	0.30	9.60	0.031		0.0	0.0	0.5	
A-B	1.82							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.101	0.002			0.008
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.106	0.004		0.010	

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)
08.15-08.30								
B-C	0.37	7.28	0.050		0.0	0.1	0.8	
B-A	1.37	7.23	0.190		0.2	0.2	3.4	
C-A	1.46							
C-B	0.37	9.42	0.039		0.0	0.0	0.6	
A-B	2.23							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.099	0.002			0.008
B-A	0.077	0.005	0.020	0.005	0.008
C-B	0.104	0.005		0.009	

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)
08.30-08.45								
B-C	0.37	7.27	0.050		0.1	0.1	0.8	
B-A	1.37	7.23	0.190		0.2	0.2	3.5	
C-A	1.46							
C-B	0.37	9.42	0.039		0.0	0.0	0.6	
A-B	2.23							
A-C	1.46							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.099	0.002			0.008
B-A	0.077	0.005	0.020	0.005	0.008
C-B	0.104	0.005		0.009	

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)
08.45-09.00								
B-C	0.30	7.46	0.040		0.1	0.0	0.6	
B-A	1.12	7.41	0.151		0.2	0.2	2.8	
C-A	1.19							
C-B	0.30	9.60	0.031		0.0	0.0	0.5	
A-B	1.82							
A-C	1.19							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.101	0.002			0.008
B-A	0.079	0.004	0.020	0.005	0.008
C-B	0.106	0.004		0.010	

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)
09.00-09.15								
B-C	0.25	7.58	0.033		0.0	0.0	0.5	
B-A	0.94	7.53	0.124		0.2	0.1	2.2	
C-A	1.00							
C-B	0.25	9.74	0.026		0.0	0.0	0.4	
A-B	1.52							
A-C	1.00							

EFFECT ON CAPACITY (PCU/MIN) OF MARGINAL CHANGES IN:

MARGINAL CHANGE:	LANE WIDTH (.1M)	MAJOR RD. WIDTH (.1M)	CENT RES WIDTH (.1M)	VIS TO LEFT (AHEAD FOR MAJOR) (M)	VISIBILITY TO RIGHT (M)
B-C	0.102	0.002			0.008
B-A	0.080	0.003	0.020	0.005	0.008
C-B	0.107	0.003		0.010	

WARNING THE JUNCTION MODELLED CAN CARRY HIGH-SPEED MAJOR ROAD TRAFFIC. (AG23 REF. 8.4.2(v)).

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	27.4	18.3	3.8	0.14	3.8	0.14
B-A	102.8	68.6	16.4	0.16	16.4	0.16
C-A	109.7	73.1				
C-B	27.4	18.3	2.9	0.11	2.9	0.11

```
I  A-B   I  167.3 I  111.5 I         I           I            I           I
I  A-C   I  109.7 I   73.1 I         I           I            I           I
-------------------------------------------------------------------------
I  ALL   I  544.4 I  362.9 I    23.2 I    0.04   I      23.2  I    0.04   I
-------------------------------------------------------------------------


 * 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 JOB

 ****** PICADY 4 run completed.
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