

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 5.0 (JUNE 2010)

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Run with file:-

"N:\Projects\A046980-7 Thurmaston\calculations\PICADY\J11_Beeby Rd_Thorpe Lane, Barkby\
Junction 11_BeebyRd_Thorpe Lane.vpi"
(drive-on-the-left) at 14:55:16 on Friday, 1 August 2014

RUN INFORMATION

RUN TITLE : Beeby Road/Main Street/Thorpe Lane, Barkby
LOCATION : Thurmaston
DATE : 15/07/14
CLIENT : CEG
ENUMERATOR : john.jones [LEIC-CAFE-TRAN]
JOB NUMBER : A046980-7
STATUS : Final TA
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Beeby Road
ARM B IS Thorpe Lane
ARM C IS Main Street

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

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.80 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) 150.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (0)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 18.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.96 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

 LOCAL DATA

ONE OR MORE CAPACITIES HAVE BEEN ADJUSTED
 ACCORDING TO LOCAL VALUES INPUT FROM A PREVIOUS RUN AND LISTED BELOW

I	STREAM	I	ADJUSTMENT TO	I
I	I	I	CAPACITY (PCU/MIN)	I
I	B-AC	I	2.200	I

 .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	696.33		0.26		0.10	I

I	Intercept For	Slope For	Opposing	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
I	539.62		0.24		0.09		0.15		0.34	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	660.83		0.25		0.25	I

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

 TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2014 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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)
08.30-08.45									
B-AC	5.95	9.70	0.613		1.35	1.53	22.2		0.26
C-AB	12.72	10.98	1.159		36.22	62.80	764.7		4.71
C-A	0.00								
A-B	1.84								
A-C	3.25								

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-AC	4.85	10.10	0.481		1.53	0.95	15.0		0.19
C-AB	10.38	11.22	0.925		62.80	53.10	871.0		5.24
C-A	0.00								
A-B	1.50								
A-C	2.65								

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)
09.00-09.15									
B-AC	4.07	10.82	0.376		0.95	0.61	9.5		0.15
C-AB	8.70	11.39	0.763		53.10	16.03	530.9		3.18
C-A	0.00								
A-B	1.25								
A-C	2.22								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.3	*
08.45	1.5	**
09.00	0.9	*
09.15	0.6	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	3.0	***
08.15	7.9	*****
08.30	36.2	*****
08.45	62.8	*****
09.00	53.1	*****
09.15	16.0	*****

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	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	446.0	I	297.3	I	84.6	I	0.19
I	C-AB	I	946.9	I	631.3	I	2682.9	I	2.83
I	C-A	I	6.9	I	4.6	I		I	
I	A-B	I	137.6	I	91.8	I		I	
I	A-C	I	243.6	I	162.4	I		I	
I	ALL	I	1781.1	I	1187.4	I	2767.5	I	1.55

* 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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15
							0.34

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2014 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I							
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I							
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I							
I	I	I	I	I	I	I							
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.05	I	4.57	I	3.05
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.93	I	11.89	I	7.93
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.35	I	8.02	I	5.35

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)
17.45-18.00									
B-AC	9.50	11.89	0.799		19.94	4.68	136.5		0.93
C-AB	5.02	11.75	0.427		1.40	0.89	13.4		0.15
C-A	1.39								
A-B	1.15								
A-C	2.50								

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)
18.00-18.15									
B-AC	7.96	12.13	0.656		4.68	1.99	33.3		0.26
C-AB	4.03	11.62	0.347		0.89	0.62	9.3		0.13
C-A	1.34								
A-B	0.97								
A-C	2.10								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.8	**
17.15	3.5	****
17.30	14.0	*****
17.45	19.9	*****
18.00	4.7	*****
18.15	2.0	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.8	*
17.30	1.4	*
17.45	1.4	*
18.00	0.9	*
18.15	0.6	*

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	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	872.7	I	581.8	I	642.9	I
I	C-AB	I	466.1	I	310.7	I	86.3	I
I	C-A	I	123.0	I	82.0	I		I
I	A-B	I	106.0	I	70.7	I		I
I	A-C	I	229.9	I	153.2	I		I
I	ALL	I	1797.6	I	1198.4	I	729.2	I

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*****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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2031+Comm Dev AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

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-AC	5.87	5.43	1.083		20.67	28.26	367.5		4.75
C-AB	12.39	11.02	1.124		164.66	185.27	2631.7		15.99
C-A	0.00								
A-B	1.78								
A-C	3.21								

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)
09.00-09.15									
B-AC	4.92	6.41	0.768		28.26	9.20	281.0		3.19
C-AB	10.38	11.23	0.924		185.27	173.42	2690.4		16.06
C-A	0.00								
A-B	1.49								
A-C	2.69								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.3 *
08.30	3.9 ****
08.45	20.7 *****
09.00	28.3 *****
09.15	9.2 *****

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	7.5 *****
08.15	31.0 *****
08.30	97.9 *****
08.45	164.7 *****
09.00	185.3 *****
09.15	173.4 *****

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	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)						
I	B-AC	I	539.6	I	359.7	I	917.3	I	1.70	I	924.0	I	1.71	I
I	C-AB	I	1136.2	I	757.4	I	8700.8	I	7.66	I	10039.5	I	8.84	I
I	C-A	I	2.1	I	1.4	I		I		I		I		I
I	A-B	I	163.8	I	109.2	I		I		I		I		I
I	A-C	I	294.6	I	196.4	I		I		I		I		I
I	ALL	I	2136.2	I	1424.1	I	9618.1	I	4.50	I	10963.4	I	5.13	I

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 * 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	STREAM	A-B	I
I	696.33		0.26		0.10				I

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	STREAM	C-B	I
I	539.62		0.24		0.09		0.15		0.34			I	

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	660.83		0.25		0.25				I

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2016+Phase1 AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	I	I	I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.50	I	5.25	I	3.50	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.80	I	5.70	I	3.80	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.75	I	13.13	I	8.75	I

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-AC	4.55	9.79	0.465		1.41	0.89	14.0		0.19
C-AB	10.49	11.24	0.933		66.26	57.66	930.8		5.59
C-A	0.00								
A-B	1.47								
A-C	2.73								

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)
09.00-09.15									
B-AC	3.81	10.55	0.362		0.89	0.58	9.0		0.15
C-AB	8.78	11.42	0.769		57.66	21.29	602.2		3.59
C-A	0.00								
A-B	1.23								
A-C	2.28								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.2 *
08.45	1.4 *
09.00	0.9 *
09.15	0.6 *

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	3.0 ***
08.15	8.3 *****
08.30	38.1 *****
08.45	66.3 *****
09.00	57.7 *****
09.15	21.3 *****

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	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-AC	I	418.4	I	279.0	I	78.4	I	0.19	I
I	C-AB	I	956.7	I	637.8	I	2876.7	I	3.01	I
I	C-A	I	6.8	I	4.5	I		I		I
I	A-B	I	134.9	I	89.9	I		I		I
I	A-C	I	250.5	I	167.0	I		I		I
I	ALL	I	1767.3	I	1178.2	I	2955.1	I	1.67	I
I		I		I		I		I	2975.0	I
I		I		I		I		I	1.68	I

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*****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	696.33		0.26		0.10	I

I	Intercept For	Slope For	Opposing	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
I	539.62		0.24		0.09		0.15		0.34	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	660.83		0.25		0.25	I

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2031+Comm Dev PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	I	I	I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.69	I	5.53	I	3.69	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.52	I	14.29	I	9.52	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.41	I	9.62	I	6.41	I

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)
17.45-18.00									
B-AC	11.42	11.57	0.987		98.27	98.04	1472.3		8.50
C-AB	6.33	11.93	0.531		2.53	1.38	21.2		0.18
C-A	1.35								
A-B	1.38								
A-C	3.04								

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)
18.00-18.15									
B-AC	9.56	11.87	0.805		98.04	65.15	1223.9		6.97
C-AB	5.04	11.75	0.429		1.38	0.89	13.4		0.15
C-A	1.40								
A-B	1.15								
A-C	2.55								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.6	****
17.15	12.0	*****
17.30	55.4	*****
17.45	98.3	*****
18.00	98.0	*****
18.15	65.2	*****

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.4	**
17.45	2.5	***
18.00	1.4	*
18.15	0.9	*

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	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	1048.8	I	699.2	I	4532.8	I
I	C-AB	I	589.0	I	392.7	I	142.6	I
I	C-A	I	117.1	I	78.1	I		I
I	A-B	I	126.6	I	84.4	I		I
I	A-C	I	279.4	I	186.3	I		I
I	ALL	I	2161.0	I	1440.7	I	4675.4	I
							2.16	
								4854.2
								2.25

* 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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15
							0.34

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2016+Phase1 PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	I	I	I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.22	I	4.84	I	3.22	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.89	I	11.83	I	7.89	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.36	I	8.04	I	5.36	I

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)
17.45-18.00									
B-AC	9.45	11.86	0.797		19.66	4.61	133.5		0.91
C-AB	5.02	11.73	0.428		1.41	0.89	13.5		0.15
C-A	1.41								
A-B	1.17								
A-C	2.70								

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)
18.00-18.15									
B-AC	7.92	12.10	0.654		4.61	1.98	33.0		0.26
C-AB	4.03	11.60	0.348		0.89	0.62	9.3		0.13
C-A	1.35								
A-B	0.98								
A-C	2.26								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.8	**
17.15	3.5	****
17.30	13.8	*****
17.45	19.7	*****
18.00	4.6	*****
18.15	2.0	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.4	*
17.45	1.4	*
18.00	0.9	*
18.15	0.6	*

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	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	868.5	I	579.0	I	634.4	I
I	C-AB	I	466.3	I	310.8	I	87.1	I
I	C-A	I	124.2	I	82.8	I		I
I	A-B	I	107.4	I	71.6	I		I
I	A-C	I	247.8	I	165.2	I		I
I	ALL	I	1814.1	I	1209.4	I	721.5	I

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*****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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2021+Phase2 AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	45.00	I
I	ARM C	I	15.00	I	45.00	I

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-AC	4.69	8.57	0.547		2.06	1.25	20.1		0.26
C-AB	11.12	11.13	0.999		97.15	97.91	1469.3		8.84
C-A	0.00								
A-B	1.39								
A-C	3.18								

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)
09.00-09.15									
B-AC	3.93	9.42	0.417		1.25	0.73	11.5		0.18
C-AB	9.31	11.33	0.822		97.91	69.53	1258.1		7.48
C-A	0.00								
A-B	1.17								
A-C	2.66								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.5	**
08.45	2.1	**
09.00	1.3	*
09.15	0.7	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	4.0	****
08.15	13.6	*****
08.30	55.7	*****
08.45	97.2	*****
09.00	97.9	*****
09.15	69.5	*****

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	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	430.8	I	287.2	I	100.9	I
I	C-AB	I	1016.9	I	677.9	I	4660.4	I
I	C-A	I	4.4	I	2.9	I		I
I	A-B	I	128.0	I	85.3	I		I
I	A-C	I	291.8	I	194.5	I		I
I	ALL	I	1871.9	I	1248.0	I	4761.3	I
							2.54	
								4974.8
								2.66

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*****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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15
							0.34

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2021+Phase2 PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
					75.00	
					3.49	
					5.23	
					3.49	
I	ARM B	I	15.00	I	45.00	I
					75.00	
					7.95	
					11.92	
					7.95	
I	ARM C	I	15.00	I	45.00	I
					75.00	
					5.80	
					8.70	
					5.80	

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)
17.45-18.00									
B-AC	9.53	11.69	0.815		25.11	5.56	195.7		1.33
C-AB	5.63	11.72	0.481		1.86	1.11	16.8		0.17
C-A	1.32								
A-B	1.35								
A-C	2.83								

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)
18.00-18.15									
B-AC	7.98	11.97	0.667		5.56	2.10	36.1		0.28
C-AB	4.52	11.59	0.390		1.11	0.75	11.2		0.14
C-A	1.31								
A-B	1.13								
A-C	2.37								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.9	**
17.15	3.8	****
17.30	16.5	*****
17.45	25.1	*****
18.00	5.6	*****
18.15	2.1	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.1	*
17.30	1.8	**
17.45	1.9	**
18.00	1.1	*
18.15	0.7	*

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	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)						
I	B-AC	I	875.4	I	583.6	I	788.0	I	0.90	I	788.2	I	0.90	I
I	C-AB	I	523.5	I	349.0	I	110.5	I	0.21	I	110.5	I	0.21	I
I	C-A	I	115.2	I	76.8	I		I		I		I		I
I	A-B	I	123.9	I	82.6	I		I		I		I		I
I	A-C	I	260.1	I	173.4	I		I		I		I		I
I	ALL	I	1898.1	I	1265.4	I	898.5	I	0.47	I	898.7	I	0.47	I

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 * 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	STREAM B-C	STREAM	A-C	STREAM	A-B
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I	539.62		0.24		0.09		0.15
							0.34

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2031+All Dev AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.34	I	5.01	I	3.34	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.22	I	6.34	I	4.22	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.89	I	16.33	I	10.89	I

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-AC	5.06	12.97	0.390		0.93	0.65	10.1		0.13
C-AB	13.05	11.05	1.181		197.44	227.51	3193.1		19.29
C-A	0.00								
A-B	1.32								
A-C	2.68								

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)
09.00-09.15									
B-AC	4.24	13.11	0.324		0.65	0.48	7.5		0.11
C-AB	10.93	11.21	0.975		227.51	224.00	3386.4		20.23
C-A	0.00								
A-B	1.10								
A-C	2.25								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.5

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	10.7
08.15	42.2
08.30	119.9
08.45	197.4
09.00	227.5
09.15	224.0

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	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	465.2	I	60.9	I	60.9	I
I	C-AB	I	1198.2	I	10745.4	I	12982.4	I
I	C-A	I	0.6	I		I		I
I	A-B	I	121.1	I	80.8	I		I
I	A-C	I	246.4	I		I		I
I	ALL	I	2031.6	I	10806.2	I	13043.2	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
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*****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	STREAM B-C	STREAM	A-C	STREAM	A-B
I					
I	696.33		0.26		0.10

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I							
I	539.62		0.24		0.09		0.15
I							0.34

I	Intercept For	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B
I					
I	660.83		0.25		0.25

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

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2031+All Dev PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	I	I	I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	2.40	I	3.60	I	2.40	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.30	I	12.45	I	8.30	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.72	I	11.59	I	7.72	I

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)
17.45-18.00									
B-AC	9.95	12.69	0.784		15.51	4.08	97.3		0.63
C-AB	8.32	12.42	0.670		6.23	2.51	42.6		0.28
C-A	0.94								
A-B	0.55								
A-C	2.32								

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)
18.00-18.15									
B-AC	8.33	12.87	0.647		4.08	1.91	31.3		0.23
C-AB	6.60	12.14	0.543		2.51	1.41	21.6		0.19
C-A	1.16								
A-B	0.46								
A-C	1.94								

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

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.8	**
17.15	3.3	***
17.30	11.7	*****
17.45	15.5	*****
18.00	4.1	****
18.15	1.9	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.3	*
17.15	2.2	**
17.30	5.6	*****
17.45	6.2	*****
18.00	2.5	***
18.15	1.4	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	913.9	609.3	529.2
C-AB	771.6	514.4	296.9
C-A	79.0	52.7	
A-B	50.9	34.0	
A-C	213.3	142.2	
ALL	2028.9	1352.6	826.1

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

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