

Chapter 13 MATERIAL ASSETS – TRAFFIC

- Appendix 13.6 AM Materials Compound PICADY Results

DRAFT

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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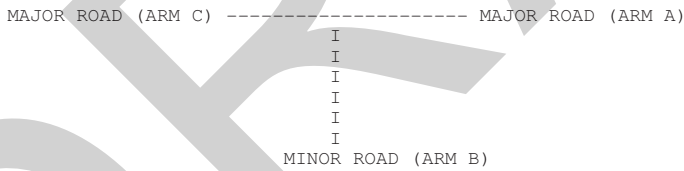
"W:\Projects\6244 - 400kv Woodland - Moyhill Re-Lodgement\04-Documents\07-EIS\Traffic\2013 EIS\PICADY\
6244-Compound AM.vpi"
(drive-on-the-left) at 18:05:25 on Wednesday, 22 January 2014

RUN INFORMATION

RUN TITLE: 6244-Eirgrid Compound
LOCATION: Castleblayney
DATE: 03/12/13
CLIENT: Eirgrid
ENUMERATOR: Brendan Ward [DUB-35LJ52J-BW]
JOB NUMBER: 6244
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS L4700 North
ARM B IS Access
ARM C IS L4700 South

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)	6.20 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)	90.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	20.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	20.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	4.00 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

.SLOPES AND INTERCEPT

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

I	Intercept For Stream B-C	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	700.25		0.27		0.11	I

I	Intercept For Stream B-A	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	Slope For Stream C-A	Opposing Stream C-A	Slope For Stream C-B	Opposing Stream C-B	I
I	543.37		0.25		0.10		0.16		0.35	I

I	Intercept For Stream C-B	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	626.08		0.24		0.24	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: 6244-Baseflow

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.36	I	0.54	I	0.36	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.50	I	0.75	I	0.50	I

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)	I
I	17.45-18.00										I
I	B-AC	0.00	9.11	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	0.00	9.39	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	0.43									I

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)	I
I	18.00-18.15										I
I	B-AC	0.00	9.14	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	0.00	9.41	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	0.36									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0



 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	I	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I	I	
I	I	I	I	I	I	I	I	I	I	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I	
I	B-AC	I	0.0	I	0.0	I	0.00	I	0.0	I	0.00
I	C-AB	I	0.0	I	0.0	I	0.00	I	0.0	I	0.00
I	A-B	I	0.0	I	0.0	I		I		I	
I	A-C	I	39.9	I	26.6	I		I		I	
I	ALL	I	95.0	I	63.3	I	0.00	I	0.0	I	0.00

* 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
 .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	Stream A-C	Stream A-B	I
I	700.25		0.27	0.11	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	Stream B-A	Stream	Stream A-C	Stream A-B	Stream C-A	Stream C-B	I
I	543.37		0.25	0.10	0.16	0.35	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	Stream C-B	Stream	Stream A-C	Stream A-B	I
I	626.08		0.24	0.24	I

NB These values do not allow for any site specific corrections

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
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Demand set: 6244-Baseflow + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

```

-----
I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 0.96 I 1.44 I 0.96 I
I ARM B I 15.00 I 45.00 I 75.00 I 0.59 I 0.88 I 0.59 I
I ARM C I 15.00 I 45.00 I 75.00 I 0.51 I 0.77 I 0.51 I
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I TURNING PROPORTIONS I
I TURNING COUNTS (VEH/HR) I
I (PERCENTAGE OF H.V.S) I
-----
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 16.45 - 18.15 I I I I I
I I ARM A I 0.00 I 0.610 I 0.390 I
I I I 0.0 I 47.0 I 30.0 I
I I I ( 0.0)I ( 85.1)I ( 0.0)I
I I I I I I
I I I ARM B I 1.000 I 0.000 I 0.000 I
I I I 47.0 I 0.0 I 0.0 I
I I I ( 85.1)I ( 0.0)I ( 0.0)I
I I I I I I
I I I ARM C I 1.000 I 0.000 I 0.000 I
I I I 41.0 I 0.0 I 0.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
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TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 6244-Baseflow + Dev
 AND FOR TIME PERIOD 1

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
-----
I 16.45-17.00 I
I B-AC 0.59 4.74 0.124 0.00 0.14 2.0 0.24 I
I C-AB 0.00 9.17 0.000 0.00 0.00 0.0 0.00 I
I A-B 0.59 I
I A-C 0.38 I
I I
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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
-----
I 17.00-17.15 I
I B-AC 0.70 4.71 0.149 0.14 0.17 2.5 0.25 I
I C-AB 0.00 9.10 0.000 0.00 0.00 0.0 0.00 I
I A-B 0.70 I
I A-C 0.45 I
I I
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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)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.86	4.67	0.185		0.17	0.22	3.2		0.26
C-AB	0.00	9.02	0.000		0.00	0.00	0.0		0.00
A-B	0.86								
A-C	0.55								

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-AC	0.86	4.67	0.185		0.22	0.22	3.3		0.26
C-AB	0.00	9.02	0.000		0.00	0.00	0.0		0.00
A-B	0.86								
A-C	0.55								

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	0.70	4.71	0.149		0.22	0.18	2.8		0.25
C-AB	0.00	9.10	0.000		0.00	0.00	0.0		0.00
A-B	0.70								
A-C	0.45								

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	0.59	4.74	0.124		0.18	0.14	2.2		0.24
C-AB	0.00	9.17	0.000		0.00	0.00	0.0		0.00
A-B	0.59								
A-C	0.38								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

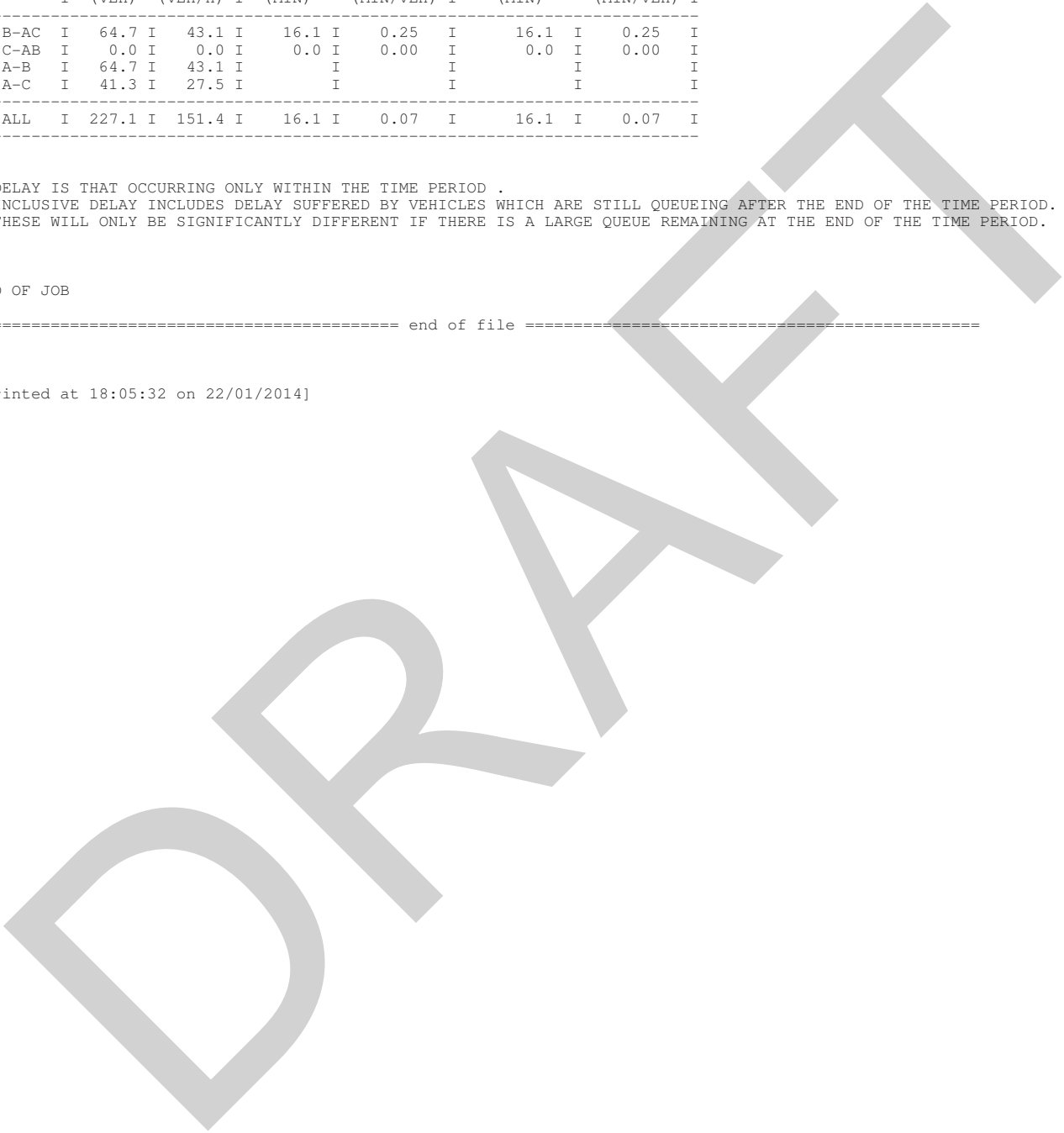
STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	64.7	43.1	16.1
C-AB	0.0	0.0	0.00
A-B	64.7	43.1	
A-C	41.3	27.5	
ALL	227.1	151.4	16.1

* 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

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

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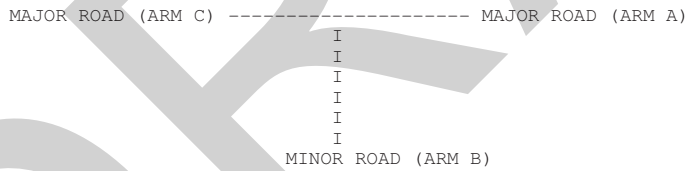
"W:\Projects\6244 - 400kV Woodland - Moyhill Re-Lodgement\04-Documents\07-EIS\Traffic\2013 EIS\PICADY\
6244-4700 Junction AM.vpi"
(drive-on-the-left) at 18:02:58 on Wednesday, 22 January 2014

RUN INFORMATION

RUN TITLE: 6244-Eirgrid Compound
LOCATION: Castleblayney
DATE: 03/12/13
CLIENT: Eirgrid
ENUMERATOR: Brendan Ward [DUB-35LJ52J-BW]
JOB NUMBER: 6244
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS L4700 North
ARM B IS Link Road
ARM C IS L4700 South

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)	6.20 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)	90.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	13.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	20.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.60 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

.SLOPES AND INTERCEPT

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

I	Intercept For Stream B-C	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	674.76		0.26		0.10	I

I	Intercept For Stream B-A	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	Slope For Stream C-A	Opposing Stream C-A	Slope For Stream C-B	Opposing Stream C-B	I
I	521.21		0.24		0.09		0.15		0.34	I

I	Intercept For Stream C-B	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	626.08		0.24		0.24	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: 6244-Baseflow

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

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.31	I	0.47	I	0.31	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.10	I	0.15	I	0.10	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.45	I	0.67	I	0.45	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	0.12	9.65	0.012		0.02	0.01	0.2		0.10
C-AB	0.15	10.34	0.014		0.02	0.01	0.2		0.10
A-B	0.10								
A-C	0.27								

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	0.10	9.68	0.010		0.01	0.01	0.2		0.10
C-AB	0.13	10.36	0.012		0.01	0.01	0.2		0.10
A-B	0.09								
A-C	0.23								

QUEUE FOR STREAM B-AC

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

QUEUE FOR STREAM C-AB

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

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-AC	I	11.0	I	7.3	I	1.1	I	0.10	I	1.1	I	0.10	I
I	C-AB	I	13.8	I	9.2	I	1.3	I	0.10	I	1.3	I	0.10	I
I	A-B	I	9.6	I	6.4	I		I		I		I		I
I	A-C	I	24.8	I	16.5	I		I		I		I		I
I	ALL	I	95.0	I	63.3	I	2.5	I	0.03	I	2.5	I	0.03	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
 .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	Stream A-C	Stream A-B	I
I	674.76		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	Stream A-C	Stream A-B	Stream C-A	Stream C-B	I
I	521.21		0.24	0.09	0.15	0.34	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	Stream C-B	Stream	Stream A-C	Stream A-B	I
I	626.08		0.24	0.24	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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-AC	1.01	6.32	0.160		0.15	0.19	2.7		0.19
C-AB	1.05	6.05	0.173		0.16	0.21	3.1		0.20
A-B	0.13								
A-C	0.35								

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)
08.30-08.45									
B-AC	1.01	6.32	0.160		0.19	0.19	2.8		0.19
C-AB	1.05	6.05	0.173		0.21	0.21	3.2		0.20
A-B	0.13								
A-C	0.35								

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)
08.45-09.00									
B-AC	0.82	6.34	0.130		0.19	0.15	2.3		0.18
C-AB	0.85	6.06	0.141		0.21	0.17	2.5		0.19
A-B	0.10								
A-C	0.28								

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	0.69	6.35	0.109		0.15	0.12	1.9		0.18
C-AB	0.72	6.07	0.118		0.17	0.14	2.0		0.19
A-B	0.09								
A-C	0.24								

QUEUE FOR STREAM B-AC

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

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

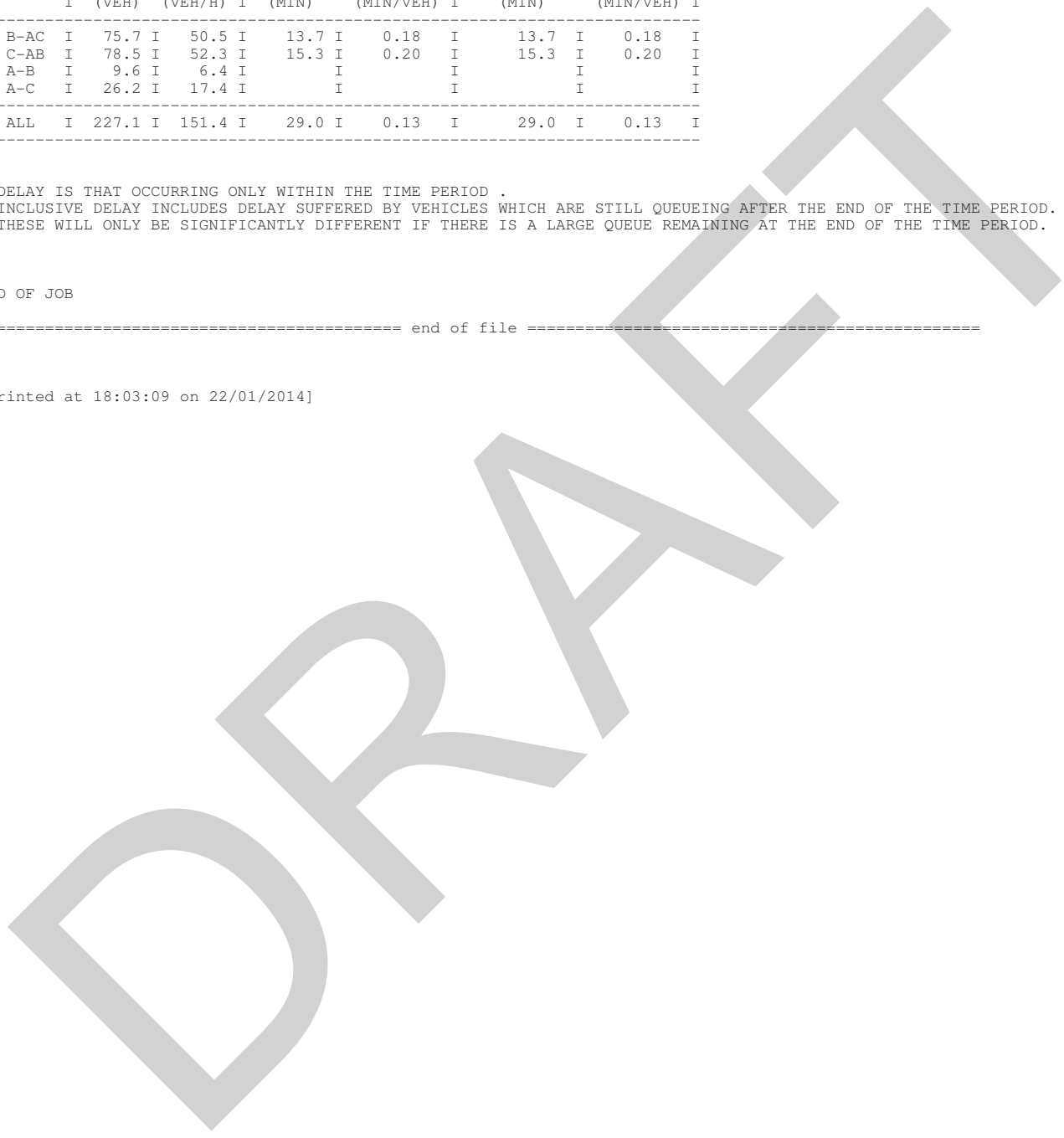
STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	75.7	13.7	0.18
C-AB	78.5	15.3	0.20
A-B	9.6	6.4	
A-C	26.2	17.4	
ALL	227.1	29.0	0.13

* 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

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[Printed at 18:03:09 on 22/01/2014]



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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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Run with file:-

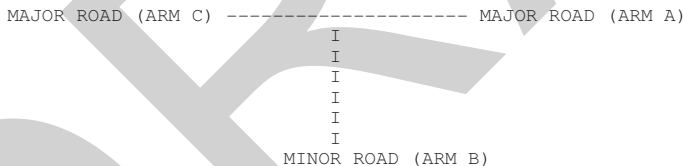
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6244-N2 AM.vpi"
(drive-on-the-left) at 18:11:11 on Wednesday, 22 January 2014

RUN INFORMATION

RUN TITLE: 6244-Eirgrid Compound
LOCATION: Castleblayney
DATE: 03/12/13
CLIENT: Eirgrid
ENUMERATOR: Brendan Ward [DUB-35LJ52J-BW]
JOB NUMBER: 6244
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS N2 South
ARM B IS Access
ARM C IS N2 North

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM A-BC CONTAINS TRAFFIC GOING FROM ARM A TO ARM B AND TO ARM C
ETC.

 GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 11.10 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.70 M.	I
I	- VISIBILITY	I	(VC-B) 200.0 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 40.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 40.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 3.50 M.	I

.SLOPES AND INTERCEPT

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

I	Intercept For Stream B-C	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	681.61		0.21		0.08	I

I	Intercept For Stream B-A	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	Slope For Stream C-A	Opposing Stream C-A	Slope For Stream C-B	Opposing Stream C-B	I
I	535.79		0.19		0.08		0.12		0.27	I

I	Intercept For Stream C-B	Slope For Stream A-C	Opposing Stream A-C	Slope For Stream A-B	Opposing Stream A-B	I
I	802.39		0.24		0.24	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: 6244-Baseflow

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

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	2.28	I	3.41	I	2.28	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.21	I	0.32	I	0.21	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	3.22	I	4.84	I	3.22	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-C	0.10	10.69	0.010		0.01	0.01	0.2		0.09
B-A	0.15	7.84	0.019		0.02	0.02	0.3		0.13
C-AB	0.07	12.64	0.006		0.01	0.01	0.1		0.08
A-B	0.03								
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)
09.00-09.15									
B-C	0.09	10.80	0.008		0.01	0.01	0.1		0.09
B-A	0.13	8.02	0.016		0.02	0.02	0.2		0.13
C-AB	0.06	12.76	0.005		0.01	0.00	0.1		0.08
A-B	0.03								
A-C	2.26								

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-AB

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

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-C	I	9.6	I	6.4	I	0.9	I	0.09	I
I	B-A	I	13.8	I	9.2	I	1.8	I	0.13	I
I	C-AB	I	6.9	I	4.6	I	0.5	I	0.08	I
I	A-B	I	2.8	I	1.8	I		I		I
I	A-C	I	247.8	I	165.2	I		I		I
I	ALL	I	629.0	I	419.4	I	3.2	I	0.01	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD .
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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 JOB

.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	681.61		0.21		0.08	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
I	535.79		0.19		0.08		0.12		0.27

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream C-B	Stream	A-C	Stream	A-B	I
I	802.39		0.24		0.24	I

NB These values do not allow for any site specific corrections

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: 6244-Baseflow + Dev

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

```

-----
I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 2.70 I 4.05 I 2.70 I
I ARM B I 15.00 I 45.00 I 75.00 I 0.89 I 1.33 I 0.89 I
I ARM C I 15.00 I 45.00 I 75.00 I 3.69 I 5.53 I 3.69 I
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I TURNING PROPORTIONS I
I TURNING COUNTS (VEH/HR) I
I (PERCENTAGE OF H.V.S) I
-----
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 09.15 I I I I I
I I ARM A I 0.000 I 0.134 I 0.866 I
I I I 0.0 I 29.0 I 187.0 I
I I I ( 0.0)I ( 78.2)I ( 11.2)I
I I I I I I
I I I ARM B I 0.521 I 0.000 I 0.479 I
I I I 37.0 I 0.0 I 34.0 I
I I I ( 62.8)I ( 0.0)I ( 67.3)I
I I I I I I
I I I ARM C I 0.892 I 0.108 I 0.000 I
I I I 263.0 I 32.0 I 0.0 I
I I I ( 7.6)I ( 72.3)I ( 0.0)I
I I I I I I
-----
    
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 6244-Baseflow + Dev
 AND FOR TIME PERIOD 1

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-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
-----
I 07.45-08.00 I
I B-C 0.43 6.28 0.068 0.00 0.07 1.0 0.17 I
I B-A 0.46 4.77 0.097 0.00 0.11 1.5 0.23 I
I C-AB 0.40 7.30 0.055 0.00 0.06 0.9 0.14 I
I A-B 0.36 I
I A-C 2.35 I
-----
    
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-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
-----
I 08.00-08.15 I
I B-C 0.51 6.18 0.082 0.07 0.09 1.3 0.18 I
I B-A 0.55 4.63 0.120 0.11 0.13 1.9 0.25 I
I C-AB 0.48 7.22 0.066 0.06 0.07 1.1 0.15 I
I A-B 0.43 I
I A-C 2.80 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)
08.15-08.30									
B-C	0.62	6.03	0.103		0.09	0.11	1.7		0.18
B-A	0.68	4.43	0.153		0.13	0.18	2.6		0.27
C-AB	0.59	7.09	0.083		0.07	0.09	1.3		0.15
A-B	0.53								
A-C	3.43								

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	0.62	6.03	0.103		0.11	0.11	1.7		0.18
B-A	0.68	4.43	0.153		0.18	0.18	2.7		0.27
C-AB	0.59	7.09	0.083		0.09	0.09	1.4		0.15
A-B	0.53								
A-C	3.43								

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	0.51	6.18	0.082		0.11	0.09	1.4		0.18
B-A	0.55	4.63	0.120		0.18	0.14	2.2		0.25
C-AB	0.48	7.22	0.066		0.09	0.07	1.1		0.15
A-B	0.43								
A-C	2.80								

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)
09.00-09.15									
B-C	0.43	6.28	0.068		0.09	0.07	1.1		0.17
B-A	0.46	4.77	0.097		0.14	0.11	1.7		0.23
C-AB	0.40	7.30	0.055		0.07	0.06	0.9		0.14
A-B	0.36								
A-C	2.35								

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I B-C	I	46.8	31.2	8.2	0.18	8.2	0.18
I B-A	I	50.9	34.0	12.5	0.25	12.5	0.25
I C-AB	I	44.0	29.4	6.6	0.15	6.6	0.15
I A-B	I	39.9	26.6				
I A-C	I	257.4	171.6				
I ALL	I	801.1	534.1	27.4	0.03	27.4	0.03

* 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

==== end of file =====

[Printed at 18:11:19 on 22/01/2014]