

## Chapter 13 MATERIAL ASSETS – TRAFFIC

- Appendix 13.7 PM Materials Compound PICADY Results

DRAFT

TRL LIMITED  
(C) COPYRIGHT 2006

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

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
BY PERMISSION OF THE CONTROLLER OF HMSO

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

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-  
"W:\Projects\6244 - 400kV Woodland - Moyhill Re-Lodgement\04-Documents\07-EIS\Traffic\2013 EIS\PICADY\  
6244-Compound PM.vpi"  
(drive-on-the-left ) at 18:06:36 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  
-----

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

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 14.45 AND ENDS 16.15

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	0.46	I	0.69	I	0.46	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	0.61	I	0.92	I	0.61	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	15.45-16.00										I
I	B-AC	0.00	9.07	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	0.00	9.36	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	0.55									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	16.00-16.15										I
I	B-AC	0.00	9.11	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	0.00	9.38	0.000		0.00	0.00	0.0		0.00	I
I	A-B	0.00									I
I	A-C	0.46									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
15.00	0.0
15.15	0.0
15.30	0.0
15.45	0.0
16.00	0.0
16.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
15.00	0.0
15.15	0.0
15.30	0.0
15.45	0.0
16.00	0.0
16.15	0.0



-----  
 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD  
 -----

I	STREAM	I	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	B-AC	I	0.0	0.0	0.0	0.00	0.0	0.00	I
I	C-AB	I	0.0	0.0	0.0	0.00	0.0	0.00	I
I	A-B	I	0.0	0.0	I	I	I	I	I
I	A-C	I	50.9	34.0	I	I	I	I	I
I	ALL	I	118.4	78.9	0.0	0.00	0.0	0.00	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	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  
 -----



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)
15.15-15.30									
B-AC	0.86	4.63	0.186		0.17	0.22	3.2		0.26
C-AB	0.00	8.98	0.000		0.00	0.00	0.0		0.00
A-B	0.86								
A-C	0.72								

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)
15.30-15.45									
B-AC	0.86	4.63	0.186		0.22	0.23	3.4		0.27
C-AB	0.00	8.98	0.000		0.00	0.00	0.0		0.00
A-B	0.86								
A-C	0.72								

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)
15.45-16.00									
B-AC	0.70	4.68	0.150		0.23	0.18	2.8		0.25
C-AB	0.00	9.07	0.000		0.00	0.00	0.0		0.00
A-B	0.70								
A-C	0.58								

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)
16.00-16.15									
B-AC	0.59	4.72	0.125		0.18	0.15	2.3		0.24
C-AB	0.00	9.14	0.000		0.00	0.00	0.0		0.00
A-B	0.59								
A-C	0.49								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
15.00	0.1
15.15	0.2
15.30	0.2
15.45	0.2
16.00	0.2
16.15	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
15.00	0.0
15.15	0.0
15.30	0.0
15.45	0.0
16.00	0.0
16.15	0.0



QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

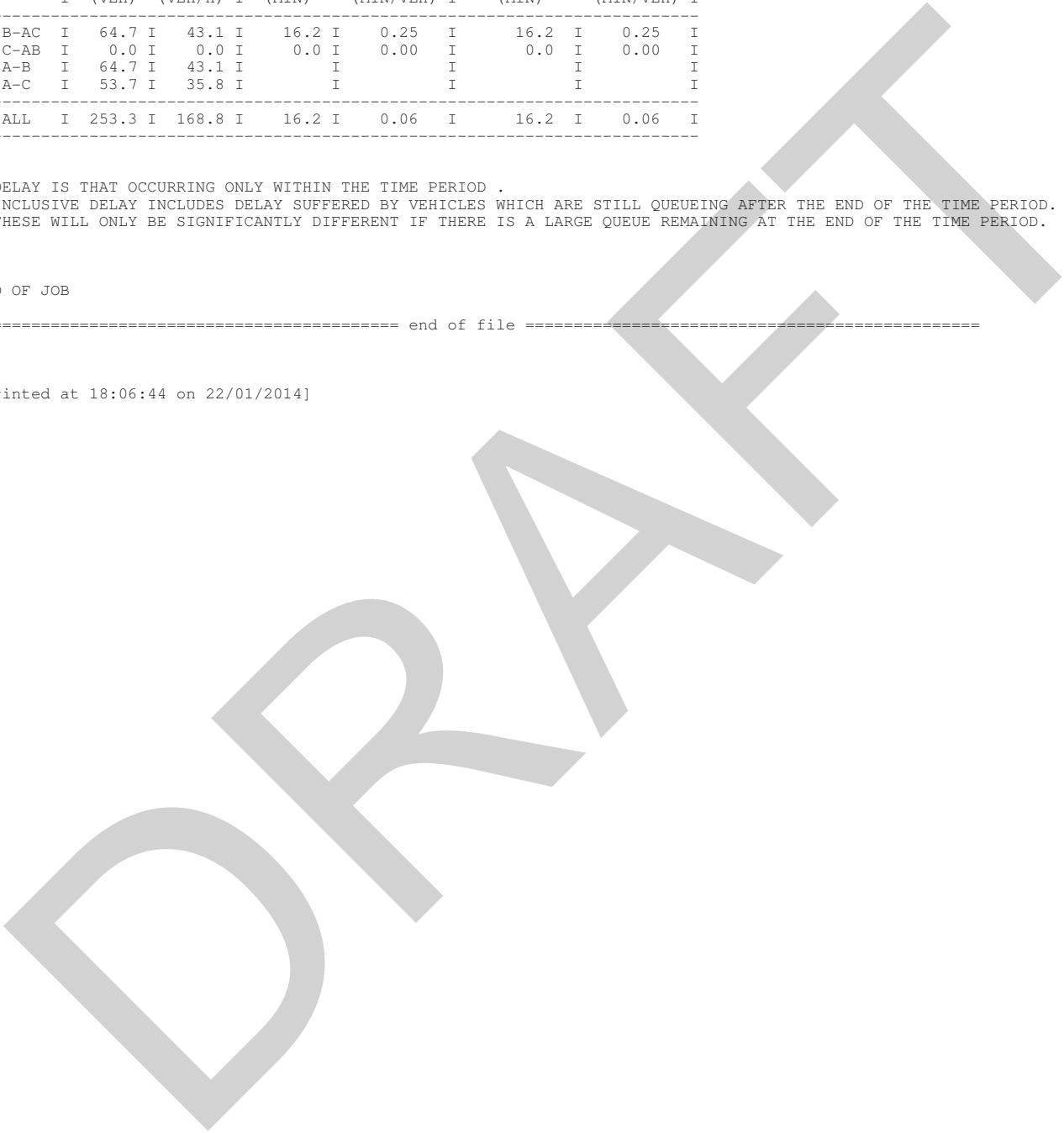
STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *			
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
B-AC	64.7	43.1	16.2	0.25	16.2	0.25
C-AB	0.0	0.0	0.0	0.00	0.0	0.00
A-B	64.7	43.1				
A-C	53.7	35.8				
ALL	253.3	168.8	16.2	0.06	16.2	0.06

\* 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 18:06:44 on 22/01/2014]



TRL LIMITED  
(C) COPYRIGHT 2006

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

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
BY PERMISSION OF THE CONTROLLER OF HMSO

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

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

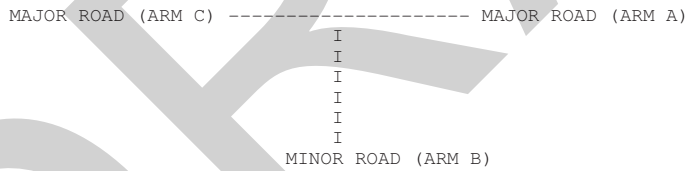
"W:\Projects\6244 - 400kV Woodland - Moyhill Re-Lodgement\04-Documents\07-EIS\Traffic\2013 EIS\PICADY\  
6244-4700 Junction AM.vpi"  
(drive-on-the-left ) at 18:04:11 on Wednesday, 22 January 2014

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 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	0.38	I	0.56	I	0.38	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	0.52	I	0.79	I	0.52	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	0.25	9.86	0.026		0.03	0.03	0.4		0.10
C-AB	0.10	10.33	0.010		0.01	0.01	0.2		0.10
A-B	0.07								
A-C	0.37								

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	0.21	9.89	0.022		0.03	0.02	0.3		0.10
C-AB	0.09	10.34	0.008		0.01	0.01	0.1		0.10
A-B	0.06								
A-C	0.31								

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		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
I	I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	I
I	B-AC	I 23.4	I 15.6	I 2.4	I 0.10	I 2.4	I 0.10	I	I
I	C-AB	I 9.6	I 6.4	I 0.9	I 0.10	I 0.9	I 0.10	I	I
I	A-B	I 6.9	I 4.6	I	I	I	I	I	I
I	A-C	I 34.4	I 22.9	I	I	I	I	I	I
I	ALL	I 122.5	I 81.7	I 3.4	I 0.03	I 3.4	I 0.03	I	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	1.17	6.64	0.177		0.17	0.21	3.1		0.18
C-AB	0.99	5.93	0.167		0.16	0.20	3.0		0.20
A-B	0.09								
A-C	0.48								

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	1.17	6.64	0.177		0.21	0.21	3.2		0.18
C-AB	0.99	5.93	0.167		0.20	0.20	3.1		0.20
A-B	0.09								
A-C	0.48								

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	0.96	6.66	0.144		0.21	0.17	2.6		0.18
C-AB	0.81	5.94	0.136		0.20	0.16	2.4		0.20
A-B	0.07								
A-C	0.39								

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	0.80	6.68	0.120		0.17	0.14	2.1		0.17
C-AB	0.68	5.95	0.114		0.16	0.13	2.0		0.19
A-B	0.06								
A-C	0.33								

QUEUE FOR STREAM B-AC

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-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

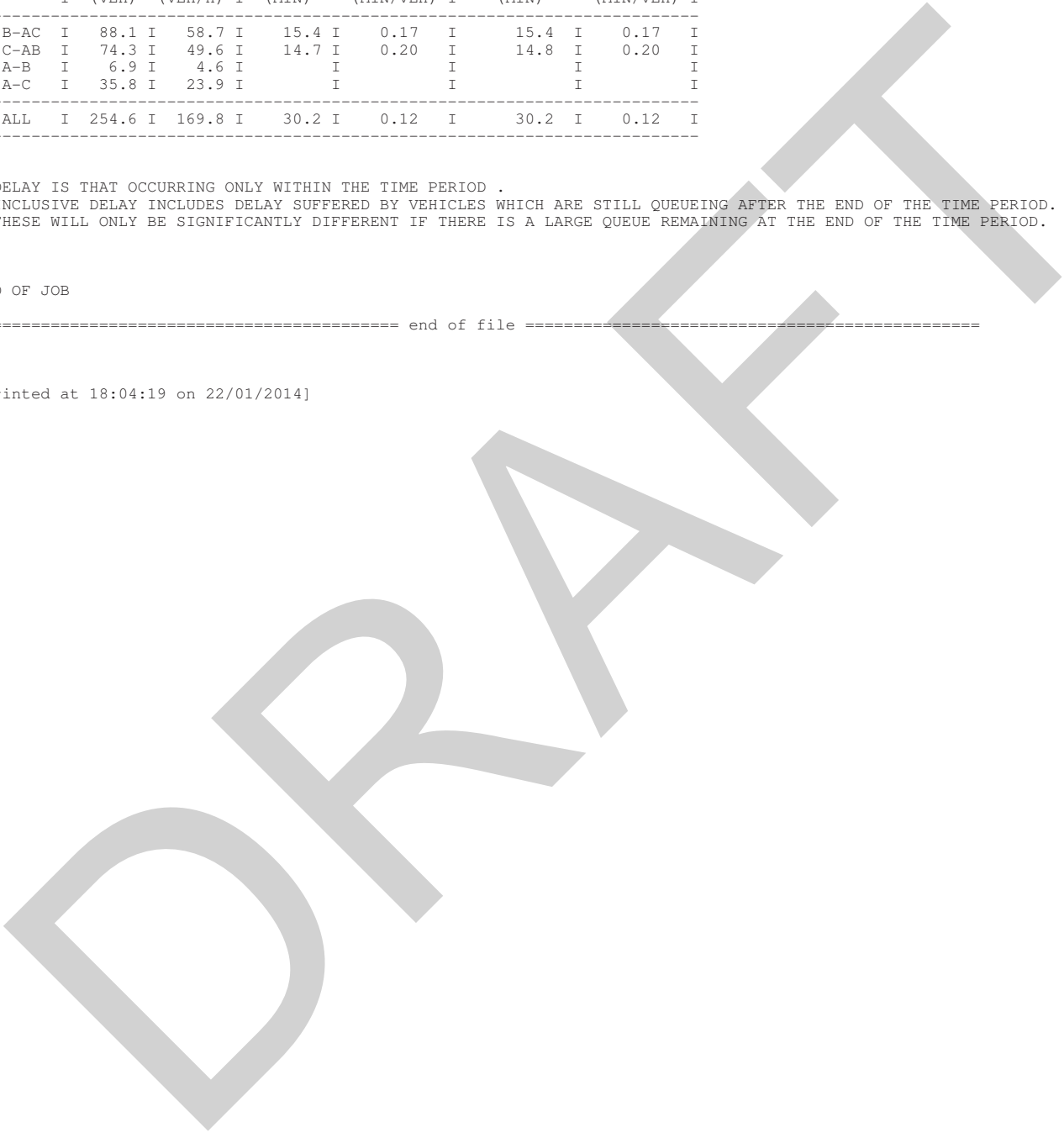
STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	88.1	58.7	15.4
C-AB	74.3	49.6	14.7
A-B	6.9	4.6	
A-C	35.8	23.9	
ALL	254.6	169.8	30.2

\* 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 18:04:19 on 22/01/2014]



TRL LIMITED  
(C) COPYRIGHT 2006

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

PICADY 5.0 ANALYSIS PROGRAM  
RELEASE 3.0 (JUNE 2006)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT  
BY PERMISSION OF THE CONTROLLER OF HMSO

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

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF HIS RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"W:\Projects\6244 - 400kV Woodland - Moyhill Re-Lodgement\04-Documents\07-EIS\Traffic\2013 EIS\PICADY\  
6244-N2 PM.vpi"  
(drive-on-the-left ) at 18:13:30 on Wednesday, 22 January 2014

RUN INFORMATION

\*\*\*\*\*

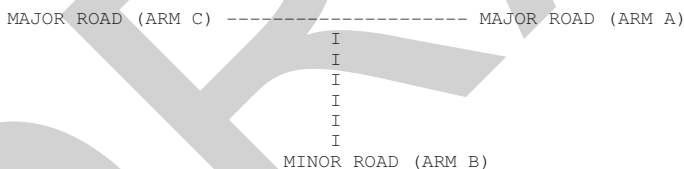
RUN TITLE: 6244-Eirgrid Compound  
LOCATION: Castleblayney  
DATE: 03/12/13  
CLIENT: Eirgrid  
ENUMERATOR: Brendan Ward [DUB-35LJ52J-BW]  
JOB NUMBER: 6244  
STATUS:  
DESCRIPTION:

.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 15.45 AND ENDS 17.15

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	4.69	I	7.03	I	4.69	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.15	I	0.23	I	0.15	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	3.66	I	5.49	I	3.66	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	16.45-17.00										I
I	B-C	0.10	10.09	0.010		0.01	0.01	0.2		0.10	I
I	B-A	0.07	7.19	0.010		0.01	0.01	0.2		0.14	I
I	C-AB	0.10	11.89	0.009		0.01	0.01	0.1		0.08	I
I	A-B	0.15									I
I	A-C	5.47									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	17.00-17.15										I
I	B-C	0.09	10.30	0.009		0.01	0.01	0.1		0.10	I
I	B-A	0.06	7.47	0.008		0.01	0.01	0.1		0.13	I
I	C-AB	0.09	12.13	0.007		0.01	0.01	0.1		0.08	I
I	A-B	0.13									I
I	A-C	4.58									I

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.0
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.0
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.0
16.15	0.0
16.30	0.0
16.45	0.0
17.00	0.0
17.15	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	1.0	I	0.10
I	B-A	I	6.9	I	4.6	I	1.0	I	0.14
I	C-AB	I	9.6	I	6.4	I	0.8	I	0.08
I	A-B	I	13.8	I	9.2	I		I	
I	A-C	I	502.4	I	334.9	I		I	
I	ALL	I	936.0	I	624.0	I	2.8	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	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  
 -----



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)
16.15-16.30									
B-C	0.62	5.57	0.112		0.10	0.12	1.8		0.20
B-A	0.59	3.71	0.158		0.13	0.18	2.6		0.32
C-AB	0.62	6.74	0.093		0.08	0.10	1.5		0.16
A-B	0.68								
A-C	6.95								

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	0.62	5.57	0.112		0.12	0.13	1.9		0.20
B-A	0.59	3.71	0.158		0.18	0.19	2.8		0.32
C-AB	0.62	6.74	0.093		0.10	0.10	1.5		0.16
A-B	0.68								
A-C	6.95								

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	0.51	5.80	0.088		0.13	0.10	1.5		0.19
B-A	0.48	3.98	0.120		0.19	0.14	2.2		0.29
C-AB	0.51	6.97	0.073		0.10	0.08	1.2		0.15
A-B	0.55								
A-C	5.68								

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)
17.00-17.15									
B-C	0.43	5.97	0.072		0.10	0.08	1.2		0.18
B-A	0.40	4.18	0.096		0.14	0.11	1.7		0.26
C-AB	0.43	7.13	0.060		0.08	0.06	1.0		0.15
A-B	0.46								
A-C	4.76								

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.1
17.15	0.1



QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM	I TOTAL DEMAND	I * QUEUEING * I	I * INCLUSIVE QUEUEING * I
I I	I I	I * DELAY * I	I * DELAY * I
I I	I I	I I	I I
I I	I (VEH) (VEH/H)	I (MIN) (MIN/VEH)	I (MIN) (MIN/VEH)
I B-C	I 46.8 I 31.2	I 8.9 I 0.19	I 8.9 I 0.19
I B-A	I 44.0 I 29.4	I 12.7 I 0.29	I 12.7 I 0.29
I C-AB	I 46.8 I 31.2	I 7.3 I 0.16	I 7.3 I 0.16
I A-B	I 50.9 I 34.0	I I	I I
I A-C	I 521.7 I 347.8	I I	I I
I ALL	I 1119.0 I 746.0	I 28.9 I 0.03	I 28.9 I 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 18:13:39 on 22/01/2014]