Document Reference: LCC7

Appendices to Proof of Evidence Transport Modelling and Traffic

Paul Smith MSc, CMILT

On behalf of Lincolnshire County Council

Public Inquiry in respect of the Lincoln Eastern Bypass and the following orders:

1. The Lincolnshire County Council (A15 Lincoln Eastern Bypass) (Classified Road) (Side Roads) Order 2014

2. The Lincolnshire County Council (A15 Lincoln Eastern Bypass) Compulsory Purchase Order 2014

3. Application In Relation To Proposed Compulsory Purchase Of Land Held By The Canal & River Trust

Department for Transport Reference: NATTRAN/EM/LAO/0084

10th July 2015

Contents

Appendix A:
Traffic Survey Summary

TRAFFIC + TRANSPORTATION

THE DATA COLLECTION SPECIALISTS

Mouchel

22451 – Lincoln Traffic Survey

Wednesday 4th & Thursday 5th March 2015

Jigisha Parekh

Contents

CTS Traffic & Transportation Ltd.
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Data Quality Assurance:

Data Revision: Rev. 1

Analysis and Report by: Jigisha Parekh
Date: 26/03/2015

Checked by: Victoria Hindle
Date: 26/03/2015

Approved by: Joe Maclaren
Date: 26/03/2015

Method of Survey:

VIDEO TURNING COUNTS:

Data was collected via high mast video units positioned at the following junctions and analysed manually at a later date:

1. Lincoln Rd/A158/A46 - Roundabout
2. B1182 Nettleham Rd/ Outer Cir Rd/ Searby Rd
3. A15 Wragby Rd/ Outer Cir Drive
4. A15 Bunkers Hill/ Hawthorn Rd
5. A158 Wragby Rd E/A15 Bunkers Hill/ A158
6. A158 Wragby Rd/ Greetwell Lane
7. A158 Wragby Rd E/Lodge Lane
8. A158 Wragby Rd E/ Kennel Lane
9. Outer Cir Rd/ Carlton Boulevard
10. Hawthorn Rd/St Augustine Rd
11. Hawthorn Rd/ Croft Lane
12. Kennel Lane/ Hawthorn Rd
13. Croft Lane/ Church Lane/ High St
14. Outer Cir Rd/ B1308 Greetwell Rd/Allenby Rd
15. Waterford Lane/ Fiskerton Rd
16. Church Lane/ Fiskerton Rd
17. Ferry Rd/ High St/ Chapel Rd

All possible traffic movements were recorded in 15 minutes intervals, between the times of 07:00 19:00 on Wednesday 4th March 2015. The results are provided in an Excel spreadsheet. The following classifications were used:

PC – Pedal cycles and C5 type vehicles using the road; this does not include cyclists using the pavement.

MC – Two wheeled motor cycles;

Car – Including taxis, state cars, 'people carriers' and other passenger vehicles (for example, minibuses and camper vans) with a gross vehicle weight of less than 3.5 tonnes, normally ones which can accommodate not more than 15 seats. Three-wheeled cars, motor invalid carriages, Land Rovers, Range Rovers and Jeeps and smaller ambulances are included. Cars towing caravans or trailers are counted as one vehicle;

LGV – Light Goods Vehicle. Includes all goods vehicles up to 3.5 tonnes gross vehicle weight (goods vehicles over 3.5 tonnes have sideguards fitted between axles), including those towing a trailer or caravan. This includes all car delivery vans and those of the next larger carrying capacity such as transit vans. Included here are small pickup vans, three-wheeled goods vehicles, milk floats and pedestrian controlled motor vehicles. Most of this group are delivery vans of one type or another;

OGV1 – Other Goods Vehicles Category 1. Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles. Includes larger ambulances, tractors (without trailers), road rollers for tarmac pressing, box vans and similar large vans. A two or three axle motor tractive without a trailer is also included;

OGV2 – Other Goods Vehicles Category 2. Includes all rigid vehicles with four or more axles and all articulated vehicles. Also included in this class are OGV1 goods vehicles towing a caravan or trailer;

PSV – Buses and Coaches. Includes all public service vehicles and works buses with a gross vehicle weight of 3.5 tonnes or more, usually vehicles with more than 16 seats.

PEDESTRIAN AND CYCLISTS COUNTS:

Our enumerator recorded the number of pedestrian and cyclists travelling in each direction at following locations.

1. Hawthorn Rd (east of St Augustine Rd)
2. Hawthorn Rd (west of Croft Lane)

Data was collected between 07:00 – 10:00 & 15:00 – 18:00 on Wednesday 4th March 2015 at 15 minute periods.

The results are provided in an Excel spreadsheet.

ORIGIN-DESTINATION SURVEYS/ LINK COUNT SURVEY:

High-mast video installations were positioned at the following points

1. Kennel Lane (South of Wragby Rd)
2. Fiskerton Rd (in vicinity of level crossing)
3. Croft Lane (in vicinity of level crossing
4. Carlton Boulevard (east of Carlton Centre access)
5. Hawthorn Rd (west of St Augustine Rd)

The recordings took place between 07:00 – 19:00 on Thursday 5th March 2015:

The recordings were analysed in our video suite by enumerators at a later date. Enumerators recorded:

- The cordon point passed
- Vehicle registration number
- Direction of travel
- Time the vehicle passed the cordon point (ss:mm:hh)

This data was then matched to provide an origin-destination matrix as laid out in your brief

Two way classified Link counts collected on each of the locations.

The results are presented in an Excel spreadsheet.

CAR JOURNEY TIMES:

Enumerators travel in cars between specified points, noting the time they pass each point. The journey time between the points is then identified by the difference between recorded times.

The following routes were surveyed between 08:00 – 09:00, 10:00 – 16:00 & 17:00 – 18:00 on Wednesday 4th march 2015.

Route 1: Reepham to Outer Cir Rd/ Carlton Boulevard junctions
Route 2: Reepham to Wragby Rd/Outer Cir Rd junction
Route 3: Reepham to Greetwell Rd/ Allenby Rd junction

QUEUE LENGTH SURVEYS:

Enumerators recorded the length of queues at the designated junctions, on the same day and time as the turning counts, every five minutes. Queue lengths were measured by number of vehicles in queue, where:

- motorbikes
- cars
- small and large vans
- mini buses

- small lorries

were counted as 1 vehicle, and

- HGVs
- full size buses/coaches

were counted as 2 vehicles.

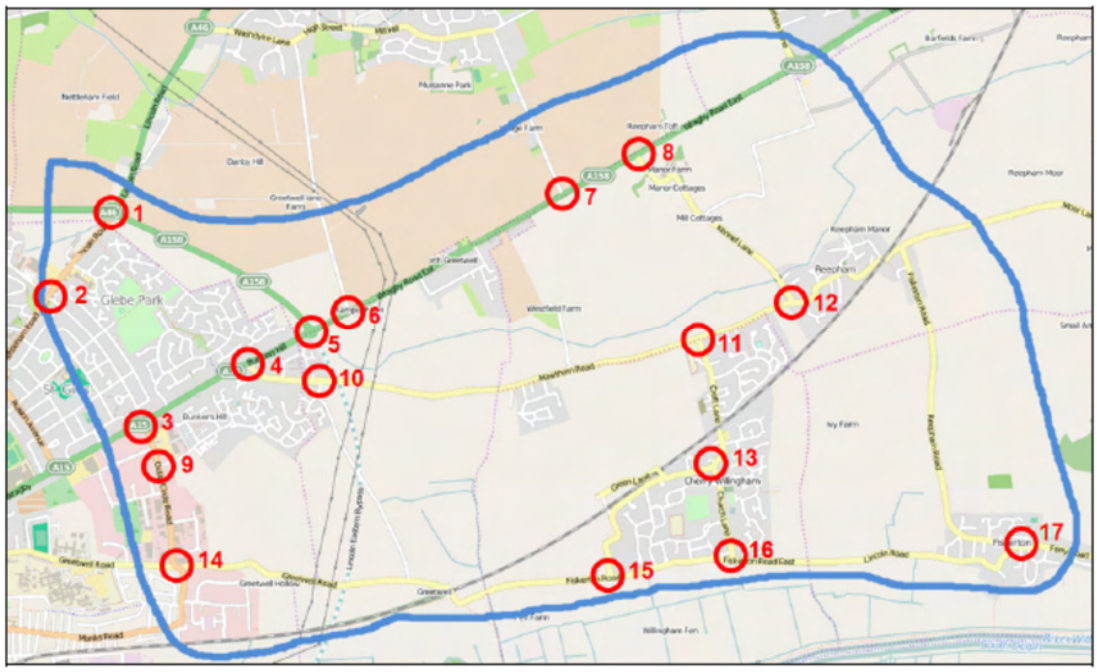
Incidents Encountered During Surveys:

There were no significant events or unforeseen circumstances to affect the results of the surveys.

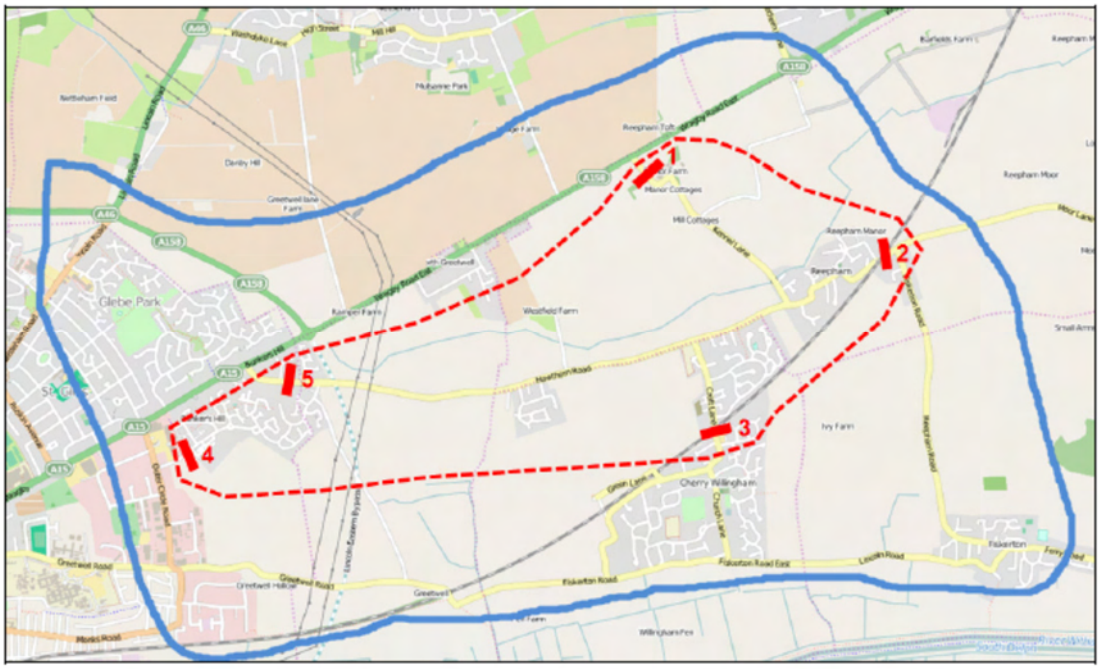
Weather Conditions:

It was dry and cloudy during the survey time.

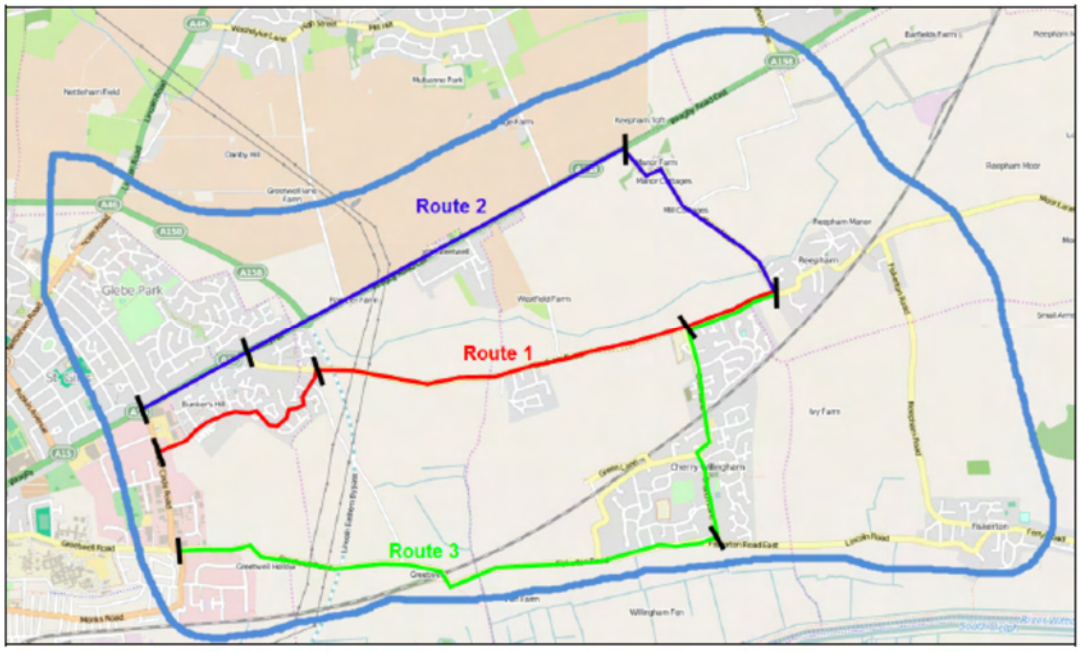
Manual Classified Junction Count Location



ANPR Survey Locations



Surveyed Journey Time Routes



Appendix B:
LEB Roundabout ARCADY Results

Wragby Road Roundabout – ARCADY Results

Scenario	2033					
Time Period	AM			PM		
Arm	RFC	Max Q	Delay (min/veh)	RFC	Max Q	Delay (min/veh)
A - LEB N	0.734	3	0.148	0.791	4	0.287
B - Wragby Rd E	0.760	3	0.196	0.547	1	0.092
C - LEB S	0.430	1	0.059	0.767	3	0.158
D - Wraby Rd W	0.428	1	0.093	0.651	2	0.132

Greetwell Road Roundabout – ARCADY Results

Scenario	2033					
Time Period	AM			PM		
Arm	RFC	Max Q	Delay (min/veh)	RFC	Max Q	Delay (min/veh)
A - LEB N	0.920	10	0.461	0.697	2	0.144
B - Greetwell Rd E	0.917	7	1.118	0.445	1	0.151
C - LEB S	0.792	4	0.169	0.875	7	0.242
D - Greetwell Rd W	0.281	0	0.053	0.321	1	0.069

Washingborough Road Roundabout – ARCADY Results

Scenario	2033					
Time Period	AM			PM		
Arm	RFC	Max Q	Delay (min/veh)	RFC	Max Q	Delay (min/veh)
A - LEB N	0.793	4	0.174	0.807	4	0.199
B - Washingborough Rd E	0.718	2	0.226	0.487	1	0.12
C - LEB S	0.587	1	0.090	0.768	3	0.149
D - Washingborough Rd W	0.323	1	0.079	0.578	1	0.132

Lincoln Road Roundabout – ARCADY Results

Scenario	2033					
Time Period	AM			PM		
Arm	RFC	Max Q	Delay (min/veh)	RFC	Max Q	Delay (min/veh)
A - LEB N	0.727	3	0.14	0.82	4	0.228
B - Lincoln Rd E	0.582	1	0.117	0.409	1	0.082
C - LEB S	0.598	1	0.108	0.843	5	0.249
D - Lincoln Rd W	0.476	1	0.088	0.752	3	0.216

Sleaford Road Roundabout – ARCADY Results

Scenario	2033					
Time Period	AM			PM		
Arm	RFC	Max Q	Delay (min/veh)	RFC	Max Q	Delay (min/veh)
A - Sleaford Road N	0.376	1	0.060	0.504	1	0.086
B - LEB	0.653	2	0.107	0.701	2	0.126
C - Bloxholm Lane	0.261	0	0.073	0.067	0	0.059
D - Sleaford Road S	0.498	1	0.073	0.76	3	0.149

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J2 Wragby\
Wragby Road Roundabout AM.vai"
(drive-on-the-left) at 16:28:45 on Wednesday, 24 June 2015

.FILE PROPERTIES

RUN TITLE: Wragby Road Roundabout 2033 AM
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: Lane arrows on B, C and D (as modified)

.INPUT DATA

ARM A - LEB N
ARM B - Wragby Road E
ARM C - LEB S
ARM D - Wragby Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	4.60	7.70	9.60	30.00	54.00	6.0	0.680	34.009	
ARM B	3.50	7.00	26.00	30.00	54.00	13.4	0.653	31.748	*
ARM C	3.87	7.54	37.80	20.00	60.70	9.7	0.651	38.257	*
ARM D	3.66	7.31	8.80	29.00	55.00	6.0	0.619	30.403	*

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM C Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	-0.500
ARM C	2.200
ARM D	1.400

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: 2033 AM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	12.69	19.03	12.69
ARM B	15.00	45.00	75.00	10.99	16.48	10.99
ARM C	15.00	45.00	75.00	8.69	13.03	8.69
ARM D	15.00	45.00	75.00	5.50	8.25	5.50

DEMAND SET TITLE: 2033 AM

T33

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.281	0.568	0.151
		0.0	285.0	577.0	153.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.394	0.000	0.350	0.256
		346.0	0.0	308.0	225.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.495	0.456	0.014	0.035
		344.0	317.0	10.0	24.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.168	0.516	0.316	0.000
		74.0	227.0	139.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.45-08.00									
ARM A	12.74	28.12	0.453	- -	0.0	0.8	12.0	-	0.065
ARM B	11.03	24.57	0.449	- -	0.0	0.8	11.7	-	0.073
ARM C	8.72	32.37	0.269	- -	0.0	0.4	5.4	-	0.042
ARM D	5.52	22.53	0.245	- -	0.0	0.3	4.7	-	0.059

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	15.21	26.96	0.564	- -	0.8	1.3	18.6	-	0.085
ARM B	13.17	23.16	0.569	- -	0.8	1.3	18.8	-	0.100
ARM C	10.41	31.21	0.334	- -	0.4	0.5	7.4	-	0.048
ARM D	6.59	20.99	0.314	- -	0.3	0.5	6.7	-	0.069

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									
ARM A	18.63	25.38	0.734	- -	1.3	2.7	37.3	-	0.144
ARM B	16.13	21.26	0.759	- -	1.3	3.0	41.1	-	0.187
ARM C	12.75	29.66	0.430	- -	0.5	0.7	11.0	-	0.059
ARM D	8.07	18.89	0.427	- -	0.5	0.7	10.8	-	0.092

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									
ARM A	18.63	25.37	0.734	- -	2.7	2.7	40.4	-	0.148
ARM B	16.13	21.22	0.760	- -	3.0	3.1	45.7	-	0.196
ARM C	12.75	29.61	0.431	- -	0.7	0.8	11.3	-	0.059
ARM D	8.07	18.86	0.428	- -	0.7	0.7	11.1	-	0.093

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									
ARM A	15.21	26.94	0.565	- - -	2.7	1.3	20.5	-	0.087
ARM B	13.17	23.10	0.570	- - -	3.1	1.3	21.3	-	0.103
ARM C	10.41	31.13	0.334	- - -	0.8	0.5	7.7	-	0.048
ARM D	6.59	20.94	0.315	- - -	0.7	0.5	7.1	-	0.070

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									
ARM A	12.74	28.09	0.453	- - -	1.3	0.8	12.9	-	0.065
ARM B	11.03	24.53	0.450	- - -	1.3	0.8	12.7	-	0.074
ARM C	8.72	32.32	0.270	- - -	0.5	0.4	5.6	-	0.042
ARM D	5.52	22.49	0.245	- - -	0.5	0.3	5.0	-	0.059

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.7	***
08.45	2.7	***
09.00	1.3	*
09.15	0.8	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	3.0	***
08.45	3.1	***
09.00	1.3	*
09.15	0.8	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.7	*
08.45	0.8	*
09.00	0.5	*
09.15	0.4	

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.3	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1397.1	931.4	141.6	0.10	141.6	0.10
B	1209.9	806.6	151.4	0.13	151.4	0.13
C	956.6	637.7	48.4	0.05	48.4	0.05
D	605.6	403.8	45.4	0.07	45.4	0.07
ALL	4169.2	2779.5	386.8	0.09	386.8	0.09

* 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

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J2 Wragby\
Wragby Road Roundabout PM.vai"
(drive-on-the-left) at 16:28:19 on Wednesday, 24 June 2015

.FILE PROPERTIES

RUN TITLE: Wragby Road Roundabout 2033 PM
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: Lane arrows on B, C and D (as modified)

.INPUT DATA

ARM A - LEB N
ARM B - Wragby Road E
ARM C - LEB S
ARM D - Wragby Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	4.60	7.70	9.60	30.00	54.00	6.0	0.680	34.009	
ARM B	3.50	7.00	26.00	30.00	54.00	13.4	0.653	35.348	*
ARM C	3.87	7.54	37.80	20.00	60.70	9.7	0.651	33.057	*
ARM D	3.66	7.31	8.80	29.00	55.00	6.0	0.619	37.803	*

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM C Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	3.100
ARM C	-3.000
ARM D	8.800

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: 2033 PM

T15

ARM	NUMBER OF MINUTES FROM START TO TOP OF PEAK: FLOW STARTS	NUMBER OF MINUTES FROM START TO TOP OF PEAK: TO RISE	NUMBER OF MINUTES FROM START WHEN FLOW STOPS: IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS: FALLING	RATE OF FLOW (VEH/MIN): BEFORE PEAK	RATE OF FLOW (VEH/MIN): AT TOP OF PEAK	RATE OF FLOW (VEH/MIN): AFTER PEAK
ARM A	15.00	45.00	75.00		8.88	13.31	8.88
ARM B	15.00	45.00	75.00		8.99	13.48	8.99
ARM C	15.00	45.00	75.00		14.18	21.26	14.18
ARM D	15.00	45.00	75.00		9.61	14.42	9.61

DEMAND SET TITLE: 2033 PM

T33

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S): ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.168	0.734	0.099
		0.0	119.0	521.0	70.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.455	0.000	0.406	0.139
		327.0	0.0	292.0	100.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.352	0.612	0.002	0.034
		399.0	694.0	2.0	39.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.077	0.473	0.450	0.000
		59.0	364.0	346.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	8.91	22.07	0.404	- - -	0.0	0.7	9.8	-	0.076
ARM B	9.02	27.69	0.326	- - -	0.0	0.5	7.1	-	0.053
ARM C	14.23	29.01	0.490	- - -	0.0	1.0	13.9	-	0.067
ARM D	9.65	26.81	0.360	- - -	0.0	0.6	8.2	-	0.058

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									
ARM A	10.64	19.72	0.539	- - -	0.7	1.2	16.7	-	0.109
ARM B	10.77	26.18	0.411	- - -	0.5	0.7	10.2	-	0.065
ARM C	16.99	28.21	0.602	- - -	1.0	1.5	21.6	-	0.089
ARM D	11.52	24.65	0.468	- - -	0.6	0.9	12.7	-	0.076

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									
ARM A	13.03	16.56	0.787	- - -	1.2	3.4	45.4	-	0.262
ARM B	13.19	24.20	0.545	- - -	0.7	1.2	17.2	-	0.090
ARM C	20.81	27.14	0.767	- - -	1.5	3.2	43.8	-	0.153
ARM D	14.11	21.73	0.649	- - -	0.9	1.8	25.7	-	0.129

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									
ARM A	13.03	16.48	0.791	- - -	3.4	3.6	52.9	-	0.287
ARM B	13.19	24.11	0.547	- - -	1.2	1.2	17.9	-	0.092
ARM C	20.81	27.12	0.767	- - -	3.2	3.2	47.9	-	0.158
ARM D	14.11	21.66	0.651	- - -	1.8	1.8	27.4	-	0.132

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									
ARM A	10.64	19.61	0.543	- - -	3.6	1.2	19.4	-	0.116
ARM B	10.77	26.05	0.413	- - -	1.2	0.7	10.9	-	0.066
ARM C	16.99	28.18	0.603	- - -	3.2	1.5	24.2	-	0.091
ARM D	11.52	24.54	0.469	- - -	1.8	0.9	13.9	-	0.077

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									
ARM A	8.91	21.99	0.405	- - -	1.2	0.7	10.6	-	0.077
ARM B	9.02	27.63	0.327	- - -	0.7	0.5	7.4	-	0.054
ARM C	14.23	28.99	0.491	- - -	1.5	1.0	15.0	-	0.068
ARM D	9.65	26.74	0.361	- - -	0.9	0.6	8.7	-	0.059

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.2	*
17.30	3.4	***
17.45	3.6	****
18.00	1.2	*
18.15	0.7	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.7	*
18.15	0.5	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.5	*
17.30	3.2	***
17.45	3.2	***
18.00	1.5	**
18.15	1.0	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.8	**
17.45	1.8	**
18.00	0.9	*
18.15	0.6	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	977.3	651.5	154.7	0.16	154.7	0.16
B	989.7	659.8	70.7	0.07	70.7	0.07
C	1560.9	1040.6	166.4	0.11	166.4	0.11
D	1058.5	705.6	96.6	0.09	96.6	0.09
ALL	4586.3	3057.5	488.3	0.11	488.4	0.11

* 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

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J3 Greetwell\
Greetwell Road AM.vai"
(drive-on-the-left) at 16:42:45 on Wednesday, 24 June 2015

.FILE PROPERTIES
****

RUN TITLE: Greetwell Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: Lane arrow markings on arm B and D

.INPUT DATA
****
ARM A - LEB N
ARM B - Greetwell Road E
ARM C - LEB S
ARM D - Greetwell Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	3.65	7.00	25.10	20.00	80.00	47.7	0.459	28.427	
ARM B	3.65	7.04	26.10	20.00	80.00	41.9	0.471	19.865	*
ARM C	6.50	7.03	4.80	17.30	80.00	34.6	0.517	33.982	
ARM D	3.55	7.00	20.20	20.00	80.00	36.6	0.469	32.724	*

V = approach half-width
E = entry width
L = effective flare length
R = entry radius
D = inscribed circle diameter
PHI = entry angle

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	-9.400
ARM D	4.200

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: 2033 AM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	15.32	22.99	15.32
ARM B	15.00	45.00	75.00	4.81	7.22	4.81
ARM C	15.00	45.00	75.00	15.27	22.91	15.27
ARM D	15.00	45.00	75.00	5.00	7.50	5.00

DEMAND SET TITLE: 2033 AM

T33

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15					
	ARM A	0.024	0.029	0.680	0.266
		30.0	36.0	834.0	326.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.088	0.000	0.358	0.553
		34.0	0.0	138.0	213.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.468	0.106	0.000	0.426
		572.0	129.0	0.0	521.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.147	0.303	0.550	0.000
		59.0	121.0	220.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.45-08.00									
ARM A	15.38	25.73	0.598	- -	-	0.0	1.5	20.9	-	0.095
ARM B	4.83	11.58	0.417	- -	-	0.0	0.7	10.0	-	0.146
ARM C	15.33	30.10	0.509	- -	-	0.0	1.0	14.9	-	0.067
ARM D	5.02	28.25	0.178	- -	-	0.0	0.2	3.2	-	0.043
08.00-08.15									
ARM A	18.37	25.20	0.729	- -	-	1.5	2.6	36.7	-	0.143
ARM B	5.77	9.95	0.580	- -	-	0.7	1.3	18.7	-	0.235
ARM C	18.31	29.34	0.624	- -	-	1.0	1.6	23.6	-	0.090
ARM D	5.99	27.36	0.219	- -	-	0.2	0.3	4.1	-	0.047
08.15-08.30									
ARM A	22.50	24.47	0.919	- -	-	2.6	8.7	104.9	-	0.369
ARM B	7.06	7.86	0.899	- -	-	1.3	5.7	66.0	-	0.772
ARM C	22.42	28.42	0.789	- -	-	1.6	3.6	49.1	-	0.160
ARM D	7.34	26.19	0.280	- -	-	0.3	0.4	5.7	-	0.053
08.30-08.45									
ARM A	22.50	24.47	0.920	- -	-	8.7	9.7	138.9	-	0.461
ARM B	7.06	7.70	0.917	- -	-	5.7	7.4	100.3	-	1.118
ARM C	22.42	28.31	0.792	- -	-	3.6	3.7	54.7	-	0.169
ARM D	7.34	26.15	0.281	- -	-	0.4	0.4	5.8	-	0.053

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)

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									
ARM A	18.37	25.18	0.729	- - -	9.7	2.8	49.4	-	0.168
ARM B	5.77	9.70	0.595	- - -	7.4	1.5	30.6	-	0.311
ARM C	18.31	29.12	0.629	- - -	3.7	1.7	27.1	-	0.095
ARM D	5.99	27.29	0.220	- - -	0.4	0.3	4.3	-	0.047
09.00-09.15									
ARM A	15.38	25.71	0.598	- - -	2.8	1.5	23.7	-	0.098
ARM B	4.83	11.49	0.421	- - -	1.5	0.7	11.6	-	0.153
ARM C	15.33	30.04	0.510	- - -	1.7	1.1	16.2	-	0.068
ARM D	5.02	28.21	0.178	- - -	0.3	0.2	3.3	-	0.043

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.5	*
08.15	2.6	***
08.30	8.7	*********
08.45	9.7	**********
09.00	2.8	***
09.15	1.5	**

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.3	*
08.30	5.7	******
08.45	7.4	*******
09.00	1.5	**
09.15	0.7	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	3.6	****
08.45	3.7	****
09.00	1.7	**
09.15	1.1	*

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1687.5	1125.0	374.5	0.22	374.5	0.22
B	529.9	353.3	237.2	0.45	237.3	0.45
C	1682.0	1121.3	185.8	0.11	185.8	0.11
D	550.6	367.0	26.5	0.05	26.5	0.05
ALL	4450.0	2966.7	824.0	0.19	824.1	0.19

* 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

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J3 Greetwell\Greetwell Road PM.vai"
(drive-on-the-left) at 16:45:54 on Wednesday, 24 June 2015

.FILE PROPERTIES

RUN TITLE: Greetwell Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: Lane arrow markings on arm B and D

.INPUT DATA

ARM A - LEB N
ARM B - Greetwell Road E
ARM C - LEB S
ARM D - Greetwell Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	3.65	7.00	25.10	20.00	80.00	47.7	0.459	28.427	
ARM B	3.65	7.04	26.10	20.00	80.00	41.9	0.471	20.665	*
ARM C	6.50	7.03	4.80	17.30	80.00	34.6	0.517	33.982	
ARM D	3.55	7.00	20.20	20.00	80.00	36.6	0.469	33.524	*

V = approach half-width
E = entry width
L = effective flare length
R = entry radius
D = inscribed circle diameter
PHI = entry angle

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	-8.600
ARM D	5.000

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: 2033 PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	10.82	16.24	10.82
ARM B	15.00	45.00	75.00	3.63	5.44	3.63
ARM C	15.00	45.00	75.00	19.34	29.01	19.34
ARM D	15.00	45.00	75.00	4.65	6.98	4.65

DEMAND SET TITLE: 2033 PM

T33

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.006	0.068	0.876	0.050
		5.0	59.0	759.0	43.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.121	0.000	0.607	0.272
		35.0	0.0	176.0	79.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.664	0.234	0.000	0.102
		1027.0	362.0	0.0	158.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.180	0.282	0.538	0.000
		67.0	105.0	200.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	10.87	24.60	0.442	- -	-	0.0	0.8	11.4	-	0.072
ARM B	3.64	14.74	0.247	- -	-	0.0	0.3	4.7	-	0.090
ARM C	19.41	32.94	0.589	- -	-	0.0	1.4	20.5	-	0.073
ARM D	4.67	25.16	0.186	- -	-	0.0	0.2	3.3	-	0.049
17.00-17.15									
ARM A	12.98	23.85	0.544	- -	-	0.8	1.2	17.1	-	0.092
ARM B	4.35	13.57	0.320	- -	-	0.3	0.5	6.8	-	0.108
ARM C	23.18	32.73	0.708	- -	-	1.4	2.4	33.9	-	0.103
ARM D	5.57	23.51	0.237	- -	-	0.2	0.3	4.6	-	0.056
17.15-17.30									
ARM A	15.89	22.84	0.696	- -	-	1.2	2.2	31.4	-	0.141
ARM B	5.32	11.99	0.444	- -	-	0.5	0.8	11.3	-	0.149
ARM C	28.39	32.45	0.875	- -	-	2.4	6.3	81.9	-	0.220
ARM D	6.83	21.34	0.320	- -	-	0.3	0.5	6.9	-	0.069
17.30-17.45									
ARM A	15.89	22.81	0.697	- -	-	2.2	2.3	33.7	-	0.144
ARM B	5.32	11.96	0.445	- -	-	0.8	0.8	11.9	-	0.151
ARM C	28.39	32.45	0.875	- -	-	6.3	6.6	96.8	-	0.242
ARM D	6.83	21.24	0.321	- -	-	0.5	0.5	7.1	-	0.069

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)

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									
ARM A	12.98	23.80	0.545	- - -	2.3	1.2	18.9	-	0.094
ARM B	4.35	13.52	0.321	- - -	0.8	0.5	7.4	-	0.109
ARM C	23.18	32.72	0.708	- - -	6.6	2.5	40.5	-	0.111
ARM D	5.57	23.37	0.238	- - -	0.5	0.3	4.8	-	0.056
18.00-18.15									
ARM A	10.87	24.57	0.442	- - -	1.2	0.8	12.3	-	0.073
ARM B	3.64	14.70	0.248	- - -	0.5	0.3	5.1	-	0.091
ARM C	19.41	32.93	0.589	- - -	2.5	1.5	22.6	-	0.075
ARM D	4.67	25.09	0.186	- - -	0.3	0.2	3.5	-	0.049

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.2	**
17.45	2.3	**
18.00	1.2	*
18.15	0.8	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	0.8	*
17.45	0.8	*
18.00	0.5	
18.15	0.3	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.4	**
17.30	6.3	******
17.45	6.6	*******
18.00	2.5	**
18.15	1.5	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1192.0	794.7	124.8	0.10	124.8	0.10
B	399.2	266.1	47.2	0.12	47.2	0.12
C	2129.3	1419.6	296.2	0.14	296.2	0.14
D	512.0	341.4	30.1	0.06	30.1	0.06
ALL	4232.5	2821.7	498.4	0.12	498.4	0.12

* 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

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J4 Washingborough\
Washingborough Road Roundabout AM.vai"
(drive-on-the-left) at 16:58:08 on Wednesday, 24 June 2015

.FILE PROPERTIES

RUN TITLE: Washingborough Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: With modified markings on arm B and D

.INPUT DATA

ARM A - LEB N
ARM B - Washingborough Road E
ARM C - LEB S
ARM D - Washingborough Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	3.65	7.03	21.90	19.00	90.00	38.3	0.454	28.922	
ARM B	3.01	7.10	35.70	19.80	90.00	46.0	0.447	24.916	*
ARM C	4.40	7.10	33.00	19.90	90.00	27.0	0.501	33.362	
ARM D	3.65	6.99	23.60	16.90	90.00	41.5	0.448	27.274	*

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM B Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING ARM C Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	-3.700
ARM D	-1.300

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100

I D I 100 I

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Washingborough Road Roundabout 2033 AM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	14.90	22.35	14.90
ARM B	15.00	45.00	75.00	7.65	11.48	7.65
ARM C	15.00	45.00	75.00	10.75	16.13	10.75
ARM D	15.00	45.00	75.00	4.09	6.13	4.09

DEMAND SET TITLE: Washingborough Road Roundabout 2033 AM

T33

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.051	0.790	0.159
		0.0	61.0	942.0	189.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.325	0.000	0.155	0.520
		199.0	0.0	95.0	318.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.940	0.058	0.000	0.002
		808.0	50.0	0.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.661	0.339	0.000	0.000
		216.0	111.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.45-08.00									
ARM A	14.96	28.01	0.534	- -	-	0.0	1.1	16.4	-	0.076
ARM B	7.68	18.61	0.413	- -	-	0.0	0.7	10.1	-	0.091
ARM C	10.79	28.95	0.373	- -	-	0.0	0.6	8.7	-	0.055
ARM D	4.10	21.36	0.192	- -	-	0.0	0.2	3.5	-	0.058
08.00-08.15									
ARM A	17.86	27.83	0.642	- -	-	1.1	1.8	25.4	-	0.099
ARM B	9.17	17.37	0.528	- -	-	0.7	1.1	15.9	-	0.121
ARM C	12.89	28.07	0.459	- -	-	0.6	0.8	12.4	-	0.066
ARM D	4.90	20.19	0.243	- -	-	0.2	0.3	4.7	-	0.065
08.15-08.30									
ARM A	21.87	27.58	0.793	- -	-	1.8	3.6	50.1	-	0.168
ARM B	11.23	15.70	0.715	- -	-	1.1	2.4	33.0	-	0.215
ARM C	15.78	26.92	0.586	- -	-	0.8	1.4	20.2	-	0.089
ARM D	6.00	18.62	0.322	- -	-	0.3	0.5	6.9	-	0.079
08.30-08.45									
ARM A	21.87	27.58	0.793	- -	-	3.6	3.7	55.4	-	0.174
ARM B	11.23	15.65	0.718	- -	-	2.4	2.5	36.6	-	0.226
ARM C	15.78	26.87	0.587	- -	-	1.4	1.4	21.1	-	0.090
ARM D	6.00	18.59	0.323	- -	-	0.5	0.5	7.1	-	0.079

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									
ARM A	17.86	27.82	0.642	- - -	3.7	1.8	28.8	-	0.103
ARM B	9.17	17.29	0.530	- - -	2.5	1.1	18.1	-	0.126
ARM C	12.89	28.01	0.460	- - -	1.4	0.9	13.2	-	0.066
ARM D	4.90	20.15	0.243	- - -	0.5	0.3	4.9	-	0.066

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									
ARM A	14.96	28.00	0.534	- - -	1.8	1.2	17.9	-	0.077
ARM B	7.68	18.56	0.414	- - -	1.1	0.7	11.0	-	0.092
ARM C	10.79	28.91	0.373	- - -	0.9	0.6	9.2	-	0.055
ARM D	4.10	21.32	0.192	- - -	0.3	0.2	3.6	-	0.058

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	3.6	****
08.45	3.7	****
09.00	1.8	**
09.15	1.2	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.4	**
08.45	2.5	**
09.00	1.1	*
09.15	0.7	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.4	*
08.45	1.4	*
09.00	0.9	*
09.15	0.6	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1640.7	1093.8	194.1	0.12	194.1	0.12
B	842.4	561.6	124.7	0.15	124.8	0.15
C	1183.7	789.2	84.7	0.07	84.7	0.07
D	450.1	300.1	30.8	0.07	30.8	0.07

I ALL	I 4116.9	I 2744.6	I 434.3	I 0.11	I 434.4	I 0.11	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

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J4 Washingborough\
Washingborough Road Roundabout PM.vai"
(drive-on-the-left) at 17:11:04 on Wednesday, 24 June 2015

.FILE PROPERTIES
****

RUN TITLE: Washingborough Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION: With modified markings on arm B and D

.INPUT DATA
****
ARM A - LEB N
ARM B - Washingborough Road E
ARM C - LEB S
ARM D - Washingborough Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)	
ARM A	3.65	7.03	21.90	19.00	90.00	38.3	0.454	28.922	
ARM B	3.01	7.10	35.70	19.80	90.00	46.0	0.447	25.616	*
ARM C	4.40	7.10	33.00	19.90	90.00	27.0	0.501	33.362	
ARM D	3.65	6.99	23.60	16.90	90.00	41.5	0.448	29.074	*

V = approach half-width
E = entry width
L = effective flare length
R = entry radius
D = inscribed circle diameter
PHI = entry angle

WARNING ARM B Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING ARM C Effective flare length is outside normal range.
Treat capacities with increasing caution.

WARNING One or more intercept values (flagged * in the table)
have been adjusted according to local input values
from a previous run and listed below -

T6

	ADJUSTMENT TO INTERCEPT (PCU/MIN)
ARM B	-3.000
ARM D	0.500

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100

I D I 100 I

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Washingborough Road Roundabout 2033 PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	14.19	21.28	14.19
ARM B	15.00	45.00	75.00	5.39	8.08	5.39
ARM C	15.00	45.00	75.00	15.06	22.59	15.06
ARM D	15.00	45.00	75.00	7.07	10.61	7.07

DEMAND SET TITLE: Washingborough Road Roundabout 2033 PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.161	0.708	0.130
		0.0	183.0	804.0	148.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.343	0.000	0.188	0.469
		148.0	0.0	81.0	202.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.983	0.017	0.000	0.000
		1184.0	21.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.380	0.277	0.343	0.000
		215.0	157.0	194.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	14.24	26.81	0.531	- -	0.0	1.1	16.2	-	0.079
ARM B	5.41	19.23	0.281	- -	0.0	0.4	5.7	-	0.072
ARM C	15.12	30.25	0.500	- -	0.0	1.0	14.4	-	0.066
ARM D	7.10	21.51	0.330	- -	0.0	0.5	7.1	-	0.069

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									
ARM A	17.01	26.39	0.644	- -	1.1	1.8	25.6	-	0.105
ARM B	6.46	17.97	0.359	- -	0.4	0.6	8.1	-	0.087
ARM C	18.05	29.63	0.609	- -	1.0	1.5	22.3	-	0.086
ARM D	8.48	20.01	0.424	- -	0.5	0.7	10.6	-	0.087

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									
ARM A	20.83	25.83	0.806	- -	1.8	3.9	53.3	-	0.189
ARM B	7.91	16.29	0.486	- -	0.6	0.9	13.4	-	0.119
ARM C	22.11	28.80	0.768	- -	1.5	3.2	44.3	-	0.145
ARM D	10.39	18.01	0.577	- -	0.7	1.3	19.1	-	0.130

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									
ARM A	20.83	25.82	0.807	- -	3.9	4.0	59.8	-	0.199
ARM B	7.91	16.23	0.487	- -	0.9	0.9	14.1	-	0.120
ARM C	22.11	28.78	0.768	- -	3.2	3.2	48.3	-	0.149
ARM D	10.39	17.96	0.578	- -	1.3	1.4	20.2	-	0.132

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									
ARM A	17.01	26.38	0.645	- - -	4.0	1.9	29.4	-	0.110
ARM B	6.46	17.89	0.361	- - -	0.9	0.6	8.8	-	0.088
ARM C	18.05	29.60	0.610	- - -	3.2	1.6	24.9	-	0.088
ARM D	8.48	19.94	0.425	- - -	1.4	0.7	11.6	-	0.088

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									
ARM A	14.24	26.80	0.531	- - -	1.9	1.1	17.8	-	0.080
ARM B	5.41	19.17	0.282	- - -	0.6	0.4	6.1	-	0.073
ARM C	15.12	30.22	0.500	- - -	1.6	1.0	15.6	-	0.067
ARM D	7.10	21.45	0.331	- - -	0.7	0.5	7.6	-	0.070

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.8	**
17.30	3.9	****
17.45	4.0	****
18.00	1.9	**
18.15	1.1	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	0.9	*
17.45	0.9	*
18.00	0.6	*
18.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.5	**
17.30	3.2	***
17.45	3.2	***
18.00	1.6	**
18.15	1.0	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.3	*
17.45	1.4	*
18.00	0.7	*
18.15	0.5	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1562.2	1041.5	202.0	0.13	202.0	0.13
B	593.2	395.5	56.2	0.09	56.2	0.09
C	1658.6	1105.7	169.6	0.10	169.7	0.10
D	779.1	519.4	76.4	0.10	76.4	0.10

I ALL	I 4593.1	I 3062.1	I 504.2	I 0.11	I 504.3	I 0.11	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

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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

Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J5 Lincoln\
Lincoln Road_AM.vai"
(drive-on-the-left) at 17:13:24 on Wednesday, 24 June 2015

.FILE PROPERTIES

RUN TITLE: Lincoln Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - LEB N
ARM B - Lincoln Road E
ARM C - LEB S
ARM D - Lincoln Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	7.03	27.90	20.10	90.00	35.4	0.468	30.165
ARM B	3.40	7.02	33.20	19.90	90.00	38.1	0.463	29.851
ARM C	3.65	7.00	25.90	19.90	90.00	35.4	0.465	29.821
ARM D	3.10	7.00	29.30	19.90	90.00	46.2	0.440	27.803

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM B Effective flare length is outside normal range.
Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Lincoln Road Roundabout 2033 AM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER

	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	12.95	19.42	12.95
ARM B	15.00	45.00	75.00	8.09	12.13	8.09
ARM C	15.00	45.00	75.00	9.38	14.06	9.38
ARM D	15.00	45.00	75.00	7.03	10.54	7.03

DEMAND SET TITLE: Lincoln Road Roundabout 2033 AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.093	0.729	0.179
		0.0	96.0	755.0	185.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.346	0.000	0.049	0.604
		224.0	0.0	32.0	391.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.649	0.069	0.000	0.281
		487.0	52.0	0.0	211.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.263	0.432	0.304	0.000
		148.0	243.0	171.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.45-08.00									
ARM A	13.00	27.44	0.474	- -	0.0	0.9	13.0	-	0.069
ARM B	8.12	23.43	0.347	- -	0.0	0.5	7.7	-	0.065
ARM C	9.41	25.18	0.374	- -	0.0	0.6	8.7	-	0.063
ARM D	7.05	23.61	0.299	- -	0.0	0.4	6.2	-	0.060
08.00-08.15									
ARM A	15.52	26.90	0.577	- -	0.9	1.3	19.5	-	0.087
ARM B	9.69	22.16	0.437	- -	0.5	0.8	11.3	-	0.080
ARM C	11.24	24.26	0.463	- -	0.6	0.9	12.5	-	0.077
ARM D	8.42	22.79	0.370	- -	0.4	0.6	8.6	-	0.070
08.15-08.30									
ARM A	19.01	26.17	0.726	- -	1.3	2.6	36.2	-	0.136
ARM B	11.87	20.45	0.581	- -	0.8	1.4	19.5	-	0.116
ARM C	13.76	23.02	0.598	- -	0.9	1.5	21.0	-	0.107
ARM D	10.31	21.67	0.476	- -	0.6	0.9	13.1	-	0.088
08.30-08.45									
ARM A	19.01	26.16	0.727	- -	2.6	2.6	39.0	-	0.140
ARM B	11.87	20.41	0.582	- -	1.4	1.4	20.6	-	0.117
ARM C	13.76	23.00	0.598	- -	1.5	1.5	22.1	-	0.108
ARM D	10.31	21.65	0.476	- -	0.9	0.9	13.5	-	0.088
08.45-09.00									
ARM A	15.52	26.89	0.577	- -	2.6	1.4	21.6	-	0.089
ARM B	9.69	22.11	0.439	- -	1.4	0.8	12.2	-	0.081
ARM C	11.24	24.23	0.464	- -	1.5	0.9	13.5	-	0.077
ARM D	8.42	22.76	0.370	- -	0.9	0.6	9.1	-	0.070

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									
ARM A	13.00	27.42	0.474	- - -	1.4	0.9	14.0	-	0.070
ARM B	8.12	23.38	0.347	- - -	0.8	0.5	8.2	-	0.066
ARM C	9.41	25.14	0.374	- - -	0.9	0.6	9.2	-	0.064
ARM D	7.05	23.59	0.299	- - -	0.6	0.4	6.6	-	0.061

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.3	*
08.30	2.6	***
08.45	2.6	***
09.00	1.4	*
09.15	0.9	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.4	*
08.45	1.4	*
09.00	0.8	*
09.15	0.5	*

.QUEUE AT ARM C

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

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1426.0	950.7	143.3	0.10	143.3	0.10
B	890.5	593.7	79.5	0.09	79.5	0.09
C	1032.3	688.2	87.0	0.08	87.0	0.08
D	773.6	515.7	57.0	0.07	57.0	0.07
ALL	4122.4	2748.3	366.8	0.09	366.8	0.09

T75

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END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J5 Lincoln\
Lincoln Road_PM.vai"
(drive-on-the-left) at 17:16:24 on Wednesday, 24 June 2015

.FILE PROPERTIES
****

RUN TITLE: Lincoln Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA
****
ARM A - LEB N
ARM B - Lincoln Road E
ARM C - LEB S
ARM D - Lincoln Road W

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	7.03	27.90	20.10	90.00	35.4	0.468	30.165
ARM B	3.40	7.02	33.20	19.90	90.00	38.1	0.463	29.851
ARM C	3.65	7.00	25.90	19.90	90.00	35.4	0.465	29.821
ARM D	3.10	7.00	29.30	19.90	90.00	46.2	0.440	27.803

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM B Effective flare length is outside normal range.
Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Lincoln Road Roundabout 2033 PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER

	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	13.49	20.23	13.49
ARM B	15.00	45.00	75.00	5.74	8.61	5.74
ARM C	15.00	45.00	75.00	14.51	21.77	14.51
ARM D	15.00	45.00	75.00	9.51	14.27	9.51

DEMAND SET TITLE: Lincoln Road Roundabout 2033 PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.337	0.551	0.111
		0.0	364.0	595.0	120.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.227	0.000	0.098	0.675
		104.0	0.0	45.0	310.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.787	0.109	0.000	0.103
		914.0	127.0	0.0	120.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.246	0.260	0.494	0.000
		187.0	198.0	376.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	13.54	26.07	0.519	- -	0.0	1.1	15.4	-	0.079
ARM B	5.76	23.55	0.245	- -	0.0	0.3	4.7	-	0.056
ARM C	14.57	26.72	0.545	- -	0.0	1.2	17.1	-	0.081
ARM D	9.55	21.52	0.444	- -	0.0	0.8	11.4	-	0.083
17.00-17.15									
ARM A	16.17	25.26	0.640	- -	1.1	1.7	25.0	-	0.109
ARM B	6.88	22.30	0.308	- -	0.3	0.4	6.5	-	0.065
ARM C	17.40	26.11	0.666	- -	1.2	2.0	28.0	-	0.113
ARM D	11.40	20.28	0.562	- -	0.8	1.3	18.2	-	0.112
17.15-17.30									
ARM A	19.80	24.20	0.818	- -	1.7	4.2	56.3	-	0.212
ARM B	8.42	20.66	0.408	- -	0.4	0.7	10.0	-	0.082
ARM C	21.30	25.28	0.843	- -	2.0	4.9	64.8	-	0.230
ARM D	13.96	18.65	0.749	- -	1.3	2.8	38.9	-	0.205
17.30-17.45									
ARM A	19.80	24.15	0.820	- -	4.2	4.4	64.4	-	0.228
ARM B	8.42	20.59	0.409	- -	0.7	0.7	10.3	-	0.082
ARM C	21.30	25.27	0.843	- -	4.9	5.1	75.3	-	0.249
ARM D	13.96	18.57	0.752	- -	2.8	2.9	43.4	-	0.216
17.45-18.00									
ARM A	16.17	25.20	0.641	- -	4.4	1.8	29.2	-	0.115
ARM B	6.88	22.21	0.310	- -	0.7	0.5	6.9	-	0.065
ARM C	17.40	26.09	0.667	- -	5.1	2.0	33.1	-	0.121
ARM D	11.40	20.18	0.565	- -	2.9	1.3	20.9	-	0.117

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									
ARM A	13.54	26.03	0.520	- - -	1.8	1.1	17.0	-	0.081
ARM B	5.76	23.49	0.245	- - -	0.5	0.3	5.0	-	0.056
ARM C	14.57	26.70	0.546	- - -	2.0	1.2	18.9	-	0.083
ARM D	9.55	21.47	0.445	- - -	1.3	0.8	12.5	-	0.084

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.7	**
17.30	4.2	****
17.45	4.4	****
18.00	1.8	**
18.15	1.1	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.7	*
17.45	0.7	*
18.00	0.5	
18.15	0.3	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.0	**
17.30	4.9	*****
17.45	5.1	*****
18.00	2.0	**
18.15	1.2	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.3	*
17.30	2.8	***
17.45	2.9	***
18.00	1.3	*
18.15	0.8	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1485.2	990.1	207.3	0.14	207.4	0.14
B	631.8	421.2	43.4	0.07	43.4	0.07
C	1598.0	1065.4	237.1	0.15	237.2	0.15
D	1047.5	698.3	145.4	0.14	145.4	0.14
ALL	4762.4	3175.0	633.3	0.13	633.4	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

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J6 Sleaford\
Sleaford Road Roundabout AM.vai"
(drive-on-the-left) at 17:17:58 on Wednesday, 24 June 2015

.FILE PROPERTIES
****

RUN TITLE: Sleaford Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA
****
ARM A - A15 Sleaford Road N
ARM B - LEB
ARM C - Bloxholm Lane
ARM D - A15 Sleaford Road S

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.66	7.01	29.40	20.00	90.00	22.0	0.491	31.737
ARM B	3.66	7.04	29.00	20.30	90.00	39.2	0.463	29.951
ARM C	3.75	7.00	15.00	20.30	90.00	28.6	0.461	28.790
ARM D	3.63	7.10	36.00	20.10	90.00	36.0	0.475	31.071

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM D Effective flare length is outside normal range.
Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Sleaford Road Roundabout 2033 AM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER

	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	6.82	10.24	6.82
ARM B	15.00	45.00	75.00	11.96	17.94	11.96
ARM C	15.00	45.00	75.00	3.29	4.93	3.29
ARM D	15.00	45.00	75.00	9.27	13.91	9.27

DEMAND SET TITLE: Sleaford Road Roundabout 2033 AM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.339	0.185	0.476
		0.0	185.0	101.0	260.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.176	0.000	0.000	0.824
		168.0	0.0	0.0	789.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	1.000	0.000	0.000	0.000
		263.0	0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.239	0.761	0.000	0.000
		177.0	565.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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)
07.45-08.00									
ARM A	6.85	28.27	0.242	- -	0.0	0.3	4.7	-	0.047
ARM B	12.01	27.86	0.431	- -	0.0	0.8	11.0	-	0.063
ARM C	3.30	21.77	0.152	- -	0.0	0.2	2.6	-	0.054
ARM D	9.31	28.51	0.327	- -	0.0	0.5	7.1	-	0.052
08.00-08.15									
ARM A	8.18	27.58	0.297	- -	0.3	0.4	6.2	-	0.052
ARM B	14.34	27.45	0.522	- -	0.8	1.1	15.8	-	0.076
ARM C	3.94	20.39	0.193	- -	0.2	0.2	3.5	-	0.061
ARM D	11.12	28.01	0.397	- -	0.5	0.7	9.6	-	0.059
08.15-08.30									
ARM A	10.02	26.65	0.376	- -	0.4	0.6	8.8	-	0.060
ARM B	17.56	26.89	0.653	- -	1.1	1.8	26.5	-	0.106
ARM C	4.83	18.51	0.261	- -	0.2	0.4	5.2	-	0.073
ARM D	13.62	27.32	0.498	- -	0.7	1.0	14.4	-	0.073
08.30-08.45									
ARM A	10.02	26.65	0.376	- -	0.6	0.6	9.0	-	0.060
ARM B	17.56	26.88	0.653	- -	1.8	1.9	27.9	-	0.107
ARM C	4.83	18.49	0.261	- -	0.4	0.4	5.3	-	0.073
ARM D	13.62	27.31	0.498	- -	1.0	1.0	14.8	-	0.073
08.45-09.00									
ARM A	8.18	27.57	0.297	- -	0.6	0.4	6.5	-	0.052
ARM B	14.34	27.44	0.523	- -	1.9	1.1	17.1	-	0.077
ARM C	3.94	20.35	0.194	- -	0.4	0.2	3.7	-	0.061
ARM D	11.12	28.00	0.397	- -	1.0	0.7	10.2	-	0.059

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									
ARM A	6.85	28.25	0.243	- - -	0.4	0.3	4.9	-	0.047
ARM B	12.01	27.85	0.431	- - -	1.1	0.8	11.7	-	0.063
ARM C	3.30	21.73	0.152	- - -	0.2	0.2	2.7	-	0.054
ARM D	9.31	28.50	0.327	- - -	0.7	0.5	7.4	-	0.052

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.1	*
08.30	1.8	**
08.45	1.9	**
09.00	1.1	*
09.15	0.8	*

.QUEUE AT ARM C

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

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	751.5	501.0	40.1	0.05	40.1	0.05
B	1317.2	878.2	110.0	0.08	110.0	0.08
C	362.0	241.3	23.0	0.06	23.0	0.06
D	1021.3	680.9	63.5	0.06	63.5	0.06
ALL	3452.1	2301.4	236.5	0.07	236.6	0.07

* 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

_____ A R C A D Y 6 _____

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"w:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Arcady\J6 Sleaford\
Sleaford Road Roundabout PM.vai"
(drive-on-the-left) at 17:20:59 on Wednesday, 24 June 2015

.FILE PROPERTIES
****

RUN TITLE: Sleaford Road Roundabout
LOCATION:
DATE: 24/06/15
CLIENT:
ENUMERATOR: jpenderg [MP513082]
JOB NUMBER:
STATUS:
DESCRIPTION:

.INPUT DATA
****
ARM A - A15 Sleaford Road N
ARM B - LEB
ARM C - Bloxholm Lane
ARM D - A15 Sleaford Road S

.GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A	3.66	7.01	29.40	20.00	90.00	22.0	0.491	31.737
I ARM B	3.66	7.04	29.00	20.30	90.00	39.2	0.463	29.951
I ARM C	3.75	7.00	15.00	20.30	90.00	28.6	0.461	28.790
I ARM D	3.63	7.10	36.00	20.10	90.00	36.0	0.475	31.071

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING ARM D Effective flare length is outside normal range.
Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

IARM	FLOW SCALE(%)
I A	100
I B	100
I C	100
I D	100

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 THE TURNING COUNT DATA

.DEMAND SET TITLE: Sleaford Road 2033 PM

I ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER

	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	8.09	12.13	8.09
ARM B	15.00	45.00	75.00	12.71	19.07	12.71
ARM C	15.00	45.00	75.00	0.82	1.24	0.82
ARM D	15.00	45.00	75.00	14.49	21.73	14.49

DEMAND SET TITLE: Sleaford Road 2033 PM

T33

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
16.45 - 18.15	ARM A	0.000	0.394	0.213	0.393
		0.0	255.0	138.0	254.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM B	0.285	0.000	0.000	0.715
		290.0	0.0	0.0	727.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	1.000	0.000	0.000	0.000
		66.0	0.0	0.0	0.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%
	ARM D	0.218	0.782	0.000	0.000
		253.0	906.0	0.0	0.0
		(0.0)%	(0.0)%	(0.0)%	(0.0)%

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

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									
ARM A	8.12	26.18	0.310	- -	0.0	0.4	6.6	-	0.055
ARM B	12.76	27.68	0.461	- -	0.0	0.8	12.3	-	0.067
ARM C	0.83	21.46	0.039	- -	0.0	0.0	0.6	-	0.048
ARM D	14.54	28.96	0.502	- -	0.0	1.0	14.5	-	0.069
17.00-17.15									
ARM A	9.69	25.08	0.386	- -	0.4	0.6	9.2	-	0.065
ARM B	15.24	27.23	0.560	- -	0.8	1.3	18.3	-	0.083
ARM C	0.99	20.02	0.049	- -	0.0	0.1	0.8	-	0.053
ARM D	17.37	28.54	0.608	- -	1.0	1.5	22.2	-	0.089
17.15-17.30									
ARM A	11.87	23.61	0.503	- -	0.6	1.0	14.6	-	0.085
ARM B	18.66	26.63	0.701	- -	1.3	2.3	32.4	-	0.124
ARM C	1.21	18.07	0.067	- -	0.1	0.1	1.1	-	0.059
ARM D	21.27	27.98	0.760	- -	1.5	3.0	42.6	-	0.144
17.30-17.45									
ARM A	11.87	23.57	0.504	- -	1.0	1.0	15.1	-	0.086
ARM B	18.66	26.62	0.701	- -	2.3	2.3	34.5	-	0.126
ARM C	1.21	18.03	0.067	- -	0.1	0.1	1.1	-	0.059
ARM D	21.27	27.97	0.760	- -	3.0	3.1	46.3	-	0.149
17.45-18.00									
ARM A	9.69	25.03	0.387	- -	1.0	0.6	9.8	-	0.065
ARM B	15.24	27.22	0.560	- -	2.3	1.3	20.0	-	0.084
ARM C	0.99	19.97	0.050	- -	0.1	0.1	0.8	-	0.053
ARM D	17.37	28.53	0.609	- -	3.1	1.6	24.7	-	0.091

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									
ARM A	8.12	26.14	0.311	- - -	0.6	0.5	6.9	-	0.056
ARM B	12.76	27.67	0.461	- - -	1.3	0.9	13.3	-	0.067
ARM C	0.83	21.42	0.039	- - -	0.1	0.0	0.6	-	0.049
ARM D	14.54	28.94	0.502	- - -	1.6	1.0	15.7	-	0.070

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	1.0	*
17.45	1.0	*
18.00	0.6	*
18.15	0.5	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.3	*
17.30	2.3	**
17.45	2.3	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.5	**
17.30	3.0	***
17.45	3.1	***
18.00	1.6	**
18.15	1.0	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	890.5	593.7	62.1	0.07	62.1	0.07
B	1399.8	933.2	130.8	0.09	130.8	0.09
C	90.8	60.6	4.9	0.05	4.9	0.05
D	1595.3	1063.5	166.0	0.10	166.0	0.10
ALL	3976.5	2651.0	363.9	0.09	363.9	0.09

T75

* 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

Appendix C:
PICADY and LinSig Results

Wragby Road / Outer Cir Road Traffic Signals

Movement	AM		PM	
	DoS (%)	Mean Max Queue	DoS (%)	Mean Max Queue
2015 Surveyed				
Wragby Road East	93	30	91	13
Outer Cir Road	91	15	94	21
Wragby Road West Lane 1	16	3	62	9
Wragby Road West Lane 2 + 3	80	7	87	9
Outer Cir Drive	91	10	91	12
2033 Do-Minimum				
Wragby Road East	104	54	92	15
Outer Cir Road	103	30	94	20
Wragby Road West Lane 1	18	3	57	10
Wragby Road West Lane 2 + 3	50	3	59	10
Outer Cir Drive	103	16	93	11
2033 Do-Something				
Wragby Road East	83	14	90	12
Outer Cir Road	84	14	97	25
Wragby Road West Lane 1	16	3	41	7
Wragby Road West Lane 2 + 3	43	3	51	7
Outer Cir Drive	84	9	92	11
2033 Do-Something Alternative Option 1				
Wragby Road East	95	26	95	13
Outer Cir Road	96	19	100	32
Wragby Road West Lane 1	12	2	48	9
Wragby Road West Lane 2 + 3	34	3	56	10
Outer Cir Drive	92	11	100	14
2033 Do-Something Alternative Option 2				
Wragby Road East	96	26	93	11
Outer Cir Road	94	17	98	26
Wragby Road West Lane 1	15	3	54	10
Wragby Road West Lane 2 + 3	35	3	56	10
Outer Cir Drive	92	11	98	13

Outer Cir Road / Carlton Boulevard Traffic Signals

Movement	AM		PM	
	DoS (%)	Mean Max Queue	DoS (%)	Mean Max Queue
2015 Surveyed				
Outer Cir Road North	97	28	56	7
Carlton Boulevard	96	18	64	7
Outer Cir Road Sout	32	4	63	10
2033 Do-Minimum				
Outer Cir Road North	65	12	52	9
Carlton Boulevard	66	6	28	2
Outer Cir Road Sout	13	1	45	4
2033 Do-Something				
Outer Cir Road North	57	9	28	4
Carlton Boulevard	58	6	23	2
Outer Cir Road Sout	13	1	43	4
2033 Do-Something Alternative Option 1				
Outer Cir Road North	59	9	28	3
Carlton Boulevard	60	7	36	3
Outer Cir Road Sout	13	1	53	6
2033 Do-Something Alternative Option 2				
Outer Cir Road North	57	8	28	4
Carlton Boulevard	57	6	31	2
Outer Cir Road Sout	12	1	54	6

Bunkers Hill / Hawthorn Road Priority Junction

Movement	AM		PM	
	Max RFC	Max Queue	Max RFC	Max Queue
2015 Surveyed				
Hawthorn Road Left Turn	0.264	0	0.326	0
Hawthorn Road Right Turn	0.592	1	0.626	2
Bunkers Hill Right Turn	0.264	0	0.370	1
2033 Do-Minimum				
Hawthorn Road Left Turn	1.369	37	1.230	19
Hawthorn Road Right Turn	1.379	60	1.208	29
Bunkers Hill Right Turn	0.287	0	0.520	1
2033 Do-Something				
Hawthorn Road Left Turn	0.257	0	0.330	0
Hawthorn Road Right Turn	0.518	1	0.437	1
Bunkers Hill Right Turn	0.079	0	0.188	1
2033 Do-Minimum Sensitivity Test				
Hawthorn Road Left Turn	1.308	29	1.299	20
Hawthorn Road Right Turn	1.287	40	1.272	34
Bunkers Hill Right Turn	0.340	1	0.548	1
2033 Do-Something Sensitivity Test				
Hawthorn Road Left Turn	0.294	0	0.345	1
Hawthorn Road Right Turn	0.600	1	0.455	1
Bunkers Hill Right Turn	0.091	0	0.197	0
2033 Do-Something Alternative Option 1				
Hawthorn Road Left Turn	1.322	54	0.286	0
Hawthorn Road Right Turn	1.328	70	0.347	1
Bunkers Hill Right Turn	0.182	0	0.625	2
2033 Do-Something Alternative Option 2				
Hawthorn Road Left Turn	0.956	8	0.207	0
Hawthorn Road Right Turn	0.938	7	0.261	0
Bunkers Hill Right Turn	0.174	0	0.789	4

Hawthorn Road / St. Augustine Road Priority Junction

Movement	AM		PM	
	Max RFC	Max Queue	Max RFC	Max Queue
2015 Surveyed				
St Augustine Road Left Turn	0.141	0	0.218	0
St Augustine Road Right Turn	0.178	0	0.265	0
Hawthorn Road Right Turn	0.462	1	0.219	0
2033 Do-Minimum				
St Augustine Road Left Turn	0.146	0	0.323	0
St Augustine Road Right Turn	0.066	0	0.082	0
Hawthorn Road Right Turn	0.132	0	0.105	0
2033 Do-Something				
St Augustine Road Left Turn	0.309	0	0.396	1
St Augustine Road Right Turn	0.000	0	0.000	0
Hawthorn Road Right Turn	0.101	0	0.194	0
2033 Do-Minimum Sensitivity Test				
St Augustine Road Left Turn	0.159	0	0.282	0
St Augustine Road Right Turn	0.134	0	0.089	0
Hawthorn Road Right Turn	0.483	1	0.300	0
2033 Do-Something Sensitivity Test				
St Augustine Road Left Turn	0.333	0	0.395	1
St Augustine Road Right Turn	0.000	0	0.000	0
Hawthorn Road Right Turn	0.359	1	0.365	1
2033 Do-Something Alternative Option 1				
St Augustine Road Left Turn	0.257	0	0.320	0
St Augustine Road Right Turn	0.148	0	0.576	1
Hawthorn Road Right Turn	0.115	0	0.173	0
2033 Do-Something Alternative Option 2				
St Augustine Road Left Turn	0.210	0	0.356	1
St Augustine Road Right Turn	0.285	0	0.825	4
Hawthorn Road Right Turn	0.091	0	0.152	0

Wragby Road / Kennel Lane Priority Junction

Movement	AM		PM	
	Max RFC	Max Queue	Max RFC	Max Queue
2015 Surveyed				
Kennel Lane Left Turn	0.323	0	0.250	0
Kennel Lane Right Turn	0.367	1	0.386	1
Wragby Road Right Turn	0.192	0	0.208	0
2033 Do-Minimum				
Kennel Lane Left Turn	0.319	0	0.148	0
Kennel Lane Right Turn	0.392	1	0.502	1
Wragby Road Right Turn	0.252	0	0.137	0
2033 Do-Something				
Kennel Lane Left Turn	0.635	2	0.252	0
Kennel Lane Right Turn	0.408	1	0.262	0
Wragby Road Right Turn	0.073	0	0.037	0
2033 Do-Something 'Worst Case'				
Kennel Lane Left Turn	1.052	18	0.886	5
Kennel Lane Right Turn	1.008	6	0.851	3
Wragby Road Right Turn	0.104	0	0.090	0

LEB / Hawthorn Road Priority Junction

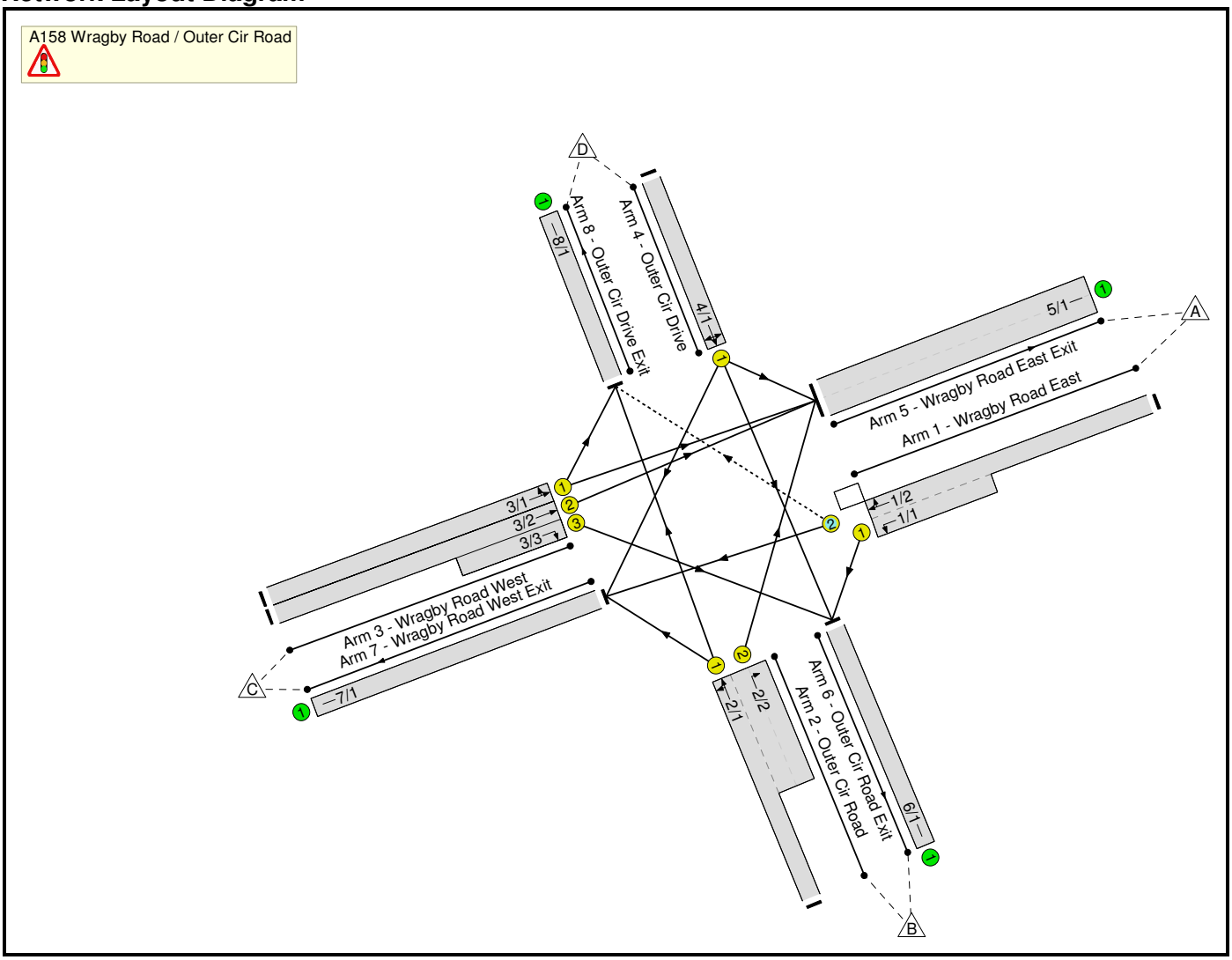
Movement	AM		PM	
	Max RFC	Max Queue	Max RFC	Max Queue
2033 Do-Something				
Hawthorn Road Left Turn	0.963	12	0.096	0
2033 Do-Something Sensitivity Test				
Hawthorn Road Left Turn	0.808	4	0.094	0
2033 Do-Something Alternative Option 2				
Hawthorn Road Left Turn	0.690	2	0.668	2

Full Input Data And Results

User and Project Details

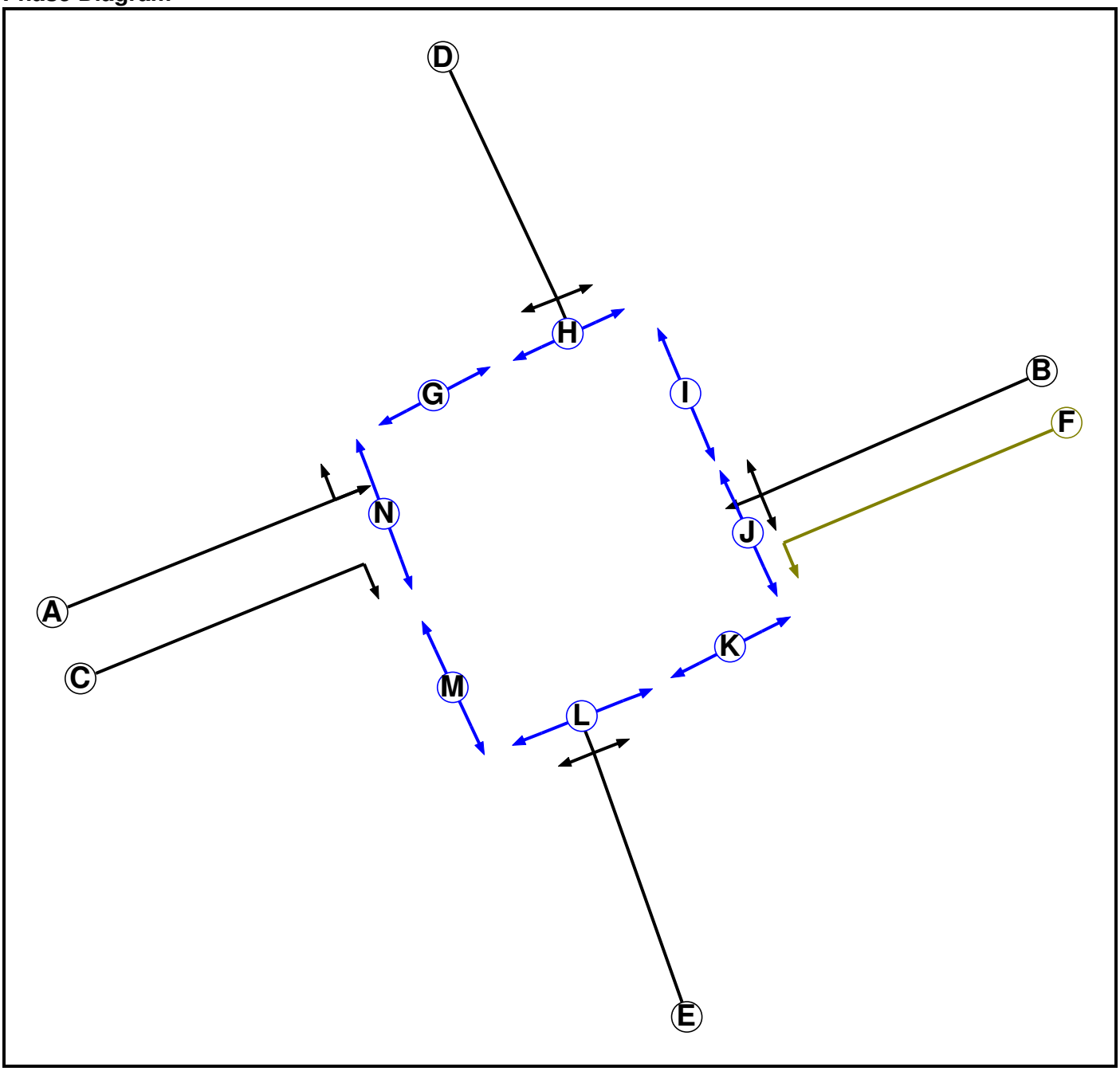
Project:	**Lincoln Eastern Bypass**
Title:	
Location:	Lincoln
File name:	A158 Wragby Road_Outer Cir Road v03.lsg3x
Author:	BHope
Company:	Mouchel
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	B	0	0
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Pedestrian		6	6

Full Input Data And Results

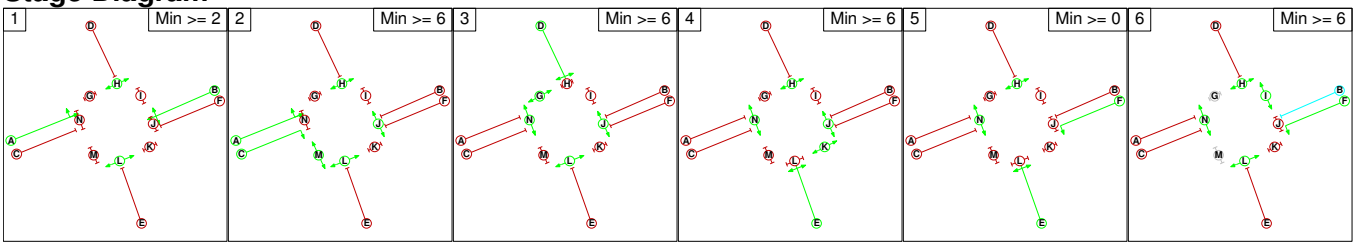
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N
A		-	-	6	6	-	9	-	10	-	-	-	-	5
B	-		5	5	6	-	12	-	-	5	9	-	10	-
C	-	5		5	5	7	-	-	-	-	12	-	-	5
D	5	6	5		7	6	-	5	9	-	10	-	12	-
E	6	6	5	6		-	10	-	12	-	-	5	8	-
F	-	-	5	5	-		-	-	-	5	9	-	-	-
G	6	6	-	-	6	-		-	-	-	-	-	-	-
H	-	-	-	6	-	-	-		-	-	-	-	-	-
I	7	-	-	7	7	-	-	-		-	-	-	-	-
J	-	7	-	-	-	7	-	-	-		-	-	-	-
K	-	0	0	0	-	0	-	-	-	-		-	-	-
L	-	-	-	-	0	-	-	-	-	-	-		-	-
M	-	0	-	0	0	-	-	-	-	-	-	-		-
N	0	-	0	-	-	-	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B H L
2	A C H J L M
3	D G J L N
4	E H J K N
5	E F H N
6	F H I L N

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	3	3
1	5	A	Losing	3	3
1	5	B	Losing	3	3
1	5	F	Gaining absolute	9	9
1	6	F	Gaining absolute	10	10
3	1	D	Losing	1	1

Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage					
	1	2	3	4	5	6
1		10	12	9	9	10
2	7		9	12	7	10
3	7	12		10	7	9
4	7	8	10		7	12
5	6	X	X	X		12
6	7	X	X	X	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A158 Wragby Road / Outer Cir Road

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Wragby Road East)	8/1 (Right)	1439	0	3/1	1.09	All	2.00	2.00	0.50	2	2.00
				3/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A158 Wragby Road / Outer Cir Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Wragby Road East)	U	B F	2	3	10.0	Geom	-	3.25	0.00	Y	Arm 6 Left	10.00
1/2 (Wragby Road East)	O	B	2	3	60.0	Geom	-	3.25	0.00	N	Arm 7 Ahead	Inf
											Arm 8 Right	15.00
2/1 (Outer Cir Road)	U	E	2	3	60.0	Geom	-	3.25	0.00	N	Arm 7 Left	Inf
											Arm 8 Ahead	Inf
2/2 (Outer Cir Road)	U	E	2	3	10.0	User	3000	-	-	-	-	-
3/1 (Wragby Road West)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	10.00
3/2 (Wragby Road West)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm 5 Ahead	Inf
3/3 (Wragby Road West)	U	C	2	3	8.7	Geom	-	3.25	0.00	N	Arm 6 Right	15.00
4/1 (Outer Cir Drive)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	10.00
											Arm 6 Ahead	Inf
											Arm 7 Right	15.00
5/1 (Wragby Road East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Outer Cir Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Wragby Road West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Outer Cir Drive Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2015 Survey AM'	08:00	09:00	01:00	
2: '2015 Survey PM'	17:00	18:00	01:00	
3: '2033 Do-Minimum AM'	08:00	09:00	01:00	
4: '2033 Do-Minimum PM'	17:00	18:00	01:00	
5: '2033 Do-Something AM'	08:00	09:00	01:00	
6: '2033 Do-Something PM'	17:00	18:00	01:00	
7: '2033 DS1 AM'	08:00	09:00	01:00	
8: '2033 DS1 PM'	17:00	18:00	01:00	
9: '2033 DS2 AM'	08:00	09:00	01:00	
10: '2033 DS2 PM'	17:00	18:00	01:00	

Scenario 1: '2015 Survey AM' (FG1: '2015 Survey AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	618	331	48	997
	B	200	0	126	197	523
	C	207	151	0	29	387
	D	10	163	29	0	202
	Tot.	417	932	486	274	2109

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2015 Survey AM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	618
1/2 (with short)	997(In) 379(Out)
2/1 (with short)	523(In) 323(Out)
2/2 (short)	200
3/1	118
3/2 (with short)	269(In) 118(Out)
3/3 (short)	151
4/1	202
5/1	417
6/1	932
7/1	486
8/1	274

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	87.3 %	2054	2054
				Arm 8 Right	15.00	12.7 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	39.0 %	2080	2080
				Arm 8 Ahead	Inf	61.0 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	75.4 %	1871	1871
				Arm 8 Left	10.00	24.6 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	5.0 %	1899	1899
				Arm 6 Ahead	Inf	80.7 %		
				Arm 7 Right	15.00	14.4 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2015 Survey PM' (FG2: '2015 Survey PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	254	234	30	518
	B	577	0	115	284	976
	C	497	178	0	64	739
	D	56	148	34	0	238
	Tot.	1130	580	383	378	2471

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2015 Survey PM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	254
1/2 (with short)	518(In) 264(Out)
2/1 (with short)	976(In) 399(Out)
2/2 (short)	577
3/1	281
3/2 (with short)	458(In) 280(Out)
3/3 (short)	178
4/1	238
5/1	1130
6/1	580
7/1	383
8/1	378

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	88.6 %	2057	2057
				Arm 8 Right	15.00	11.4 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	28.8 %	2080	2080
				Arm 8 Ahead	Inf	71.2 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	77.2 %	1876	1876
				Arm 8 Left	10.00	22.8 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	23.5 %	1848	1848
				Arm 6 Ahead	Inf	62.2 %		
				Arm 7 Right	15.00	14.3 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2033 Do-Minimum AM' (FG3: '2033 Do-Minimum AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	404	469	45	918
	B	170	0	153	210	533
	C	257	94	0	25	376
	D	5	186	22	0	213
	Tot.	432	684	644	280	2040

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2033 Do-Minimum AM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	404
1/2 (with short)	918(In) 514(Out)
2/1 (with short)	533(In) 363(Out)
2/2 (short)	170
3/1	141
3/2 (with short)	235(In) 141(Out)
3/3 (short)	94
4/1	213
5/1	432
6/1	684
7/1	644
8/1	280

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	91.2 %	2062	2062
				Arm 8 Right	15.00	8.8 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	42.1 %	2080	2080
				Arm 8 Ahead	Inf	57.9 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	82.3 %	1890	1890
				Arm 8 Left	10.00	17.7 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	2.3 %	1913	1913
				Arm 6 Ahead	Inf	87.3 %		
				Arm 7 Right	15.00	10.3 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2033 Do-Minimum PM' (FG4: '2033 Do-Minimum PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	230	260	69	559
	B	539	0	83	285	907
	C	699	93	0	4	796
	D	15	182	11	0	208
	Tot.	1253	505	354	358	2470

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2033 Do-Minimum PM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	230
1/2 (with short)	559(In) 329(Out)
2/1 (with short)	907(In) 368(Out)
2/2 (short)	539
3/1	352
3/2 (with short)	444(In) 351(Out)
3/3 (short)	93
4/1	208
5/1	1253
6/1	505
7/1	354
8/1	358

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	79.0 %	2037	2037
				Arm 8 Right	15.00	21.0 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	22.6 %	2080	2080
				Arm 8 Ahead	Inf	77.4 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	98.9 %	1937	1937
				Arm 8 Left	10.00	1.1 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	7.2 %	1909	1909
				Arm 6 Ahead	Inf	87.5 %		
				Arm 7 Right	15.00	5.3 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2033 Do-Something AM' (FG5: '2033 Do-Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	243	289	79	611
	B	75	0	168	183	426
	C	210	82	0	7	299
	D	1	190	12	0	203
	Tot.	286	515	469	269	1539

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2033 Do-Something AM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	243
1/2 (with short)	611(In) 368(Out)
2/1 (with short)	426(In) 351(Out)
2/2 (short)	75
3/1	109
3/2 (with short)	190(In) 108(Out)
3/3 (short)	82
4/1	203
5/1	286
6/1	515
7/1	469
8/1	269

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	78.5 %	2036	2036
				Arm 8 Right	15.00	21.5 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	47.9 %	2080	2080
				Arm 8 Ahead	Inf	52.1 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	93.6 %	1921	1921
				Arm 8 Left	10.00	6.4 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	0.5 %	1927	1927
				Arm 6 Ahead	Inf	93.6 %		
				Arm 7 Right	15.00	5.9 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2033 Do-Something PM' (FG6: '2033 Do-Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	97	146	112	355
	B	571	0	93	290	954
	C	488	96	0	4	588
	D	36	167	0	0	203
	Tot.	1095	360	239	406	2100

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2033 Do-Something PM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	97
1/2 (with short)	355(In) 258(Out)
2/1 (with short)	954(In) 383(Out)
2/2 (short)	571
3/1	246
3/2 (with short)	342(In) 246(Out)
3/3 (short)	96
4/1	203
5/1	1095
6/1	360
7/1	239
8/1	406

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	56.6 %	1993	1993
				Arm 8 Right	15.00	43.4 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	24.3 %	2080	2080
				Arm 8 Ahead	Inf	75.7 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	98.4 %	1935	1935
				Arm 8 Left	10.00	1.6 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	17.7 %	1890	1890
				Arm 6 Ahead	Inf	82.3 %		
				Arm 7 Right	15.00	0.0 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2033 DS1 AM' (FG7: '2033 DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	207	423	68	698
	B	81	0	141	223	445
	C	228	65	0	7	300
	D	4	196	7	0	207
	Tot.	313	468	571	298	1650

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2033 DS1 AM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	207
1/2 (with short)	698(In) 491(Out)
2/1 (with short)	445(In) 364(Out)
2/2 (short)	81
3/1	91
3/2 (with short)	209(In) 144(Out)
3/3 (short)	65
4/1	207
5/1	313
6/1	468
7/1	571
8/1	298

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	86.2 %	2052	2052
				Arm 8 Right	15.00	13.8 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	38.7 %	2080	2080
				Arm 8 Ahead	Inf	61.3 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	92.3 %	1918	1918
				Arm 8 Left	10.00	7.7 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	1.9 %	1928	1928
				Arm 6 Ahead	Inf	94.7 %		
				Arm 7 Right	15.00	3.4 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2033 DS1 PM' (FG8: '2033 DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	76	113	112	301
	B	544	0	106	282	932
	C	650	96	0	4	750
	D	27	178	0	0	205
	Tot.	1221	350	219	398	2188

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2033 DS1 PM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	76
1/2 (with short)	301(In) 225(Out)
2/1 (with short)	932(In) 388(Out)
2/2 (short)	544
3/1	308
3/2 (with short)	442(In) 346(Out)
3/3 (short)	96
4/1	205
5/1	1221
6/1	350
7/1	219
8/1	398

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	50.2 %	1981	1981
				Arm 8 Right	15.00	49.8 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	27.3 %	2080	2080
				Arm 8 Ahead	Inf	72.7 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	98.7 %	1936	1936
				Arm 8 Left	10.00	1.3 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	13.2 %	1902	1902
				Arm 6 Ahead	Inf	86.8 %		
				Arm 7 Right	15.00	0.0 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2033 DS2 AM' (FG9: '2033 DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	220	415	72	707
	B	74	0	135	222	431
	C	222	66	0	7	295
	D	3	192	11	0	206
	Tot.	299	478	561	301	1639

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2033 DS2 AM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	220
1/2 (with short)	707(In) 487(Out)
2/1 (with short)	431(In) 357(Out)
2/2 (short)	74
3/1	115
3/2 (with short)	180(In) 114(Out)
3/3 (short)	66
4/1	206
5/1	299
6/1	478
7/1	561
8/1	301

Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	85.2 %	2050	2050
				Arm 8 Right	15.00	14.8 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	37.8 %	2080	2080
				Arm 8 Ahead	Inf	62.2 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	93.9 %	1922	1922
				Arm 8 Left	10.00	6.1 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	1.5 %	1926	1926
				Arm 6 Ahead	Inf	93.2 %		
				Arm 7 Right	15.00	5.3 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2033 DS2 PM' (FG10: '2033 DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	75	112	95	282
	B	604	0	87	283	974
	C	695	88	0	4	787
	D	18	185	0	0	203
	Tot.	1317	348	199	382	2246

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2033 DS2 PM
Junction: A158 Wragby Road / Outer Cir Road	
1/1 (short)	75
1/2 (with short)	282(In) 207(Out)
2/1 (with short)	974(In) 370(Out)
2/2 (short)	604
3/1	350
3/2 (with short)	437(In) 349(Out)
3/3 (short)	88
4/1	203
5/1	1317
6/1	348
7/1	199
8/1	382

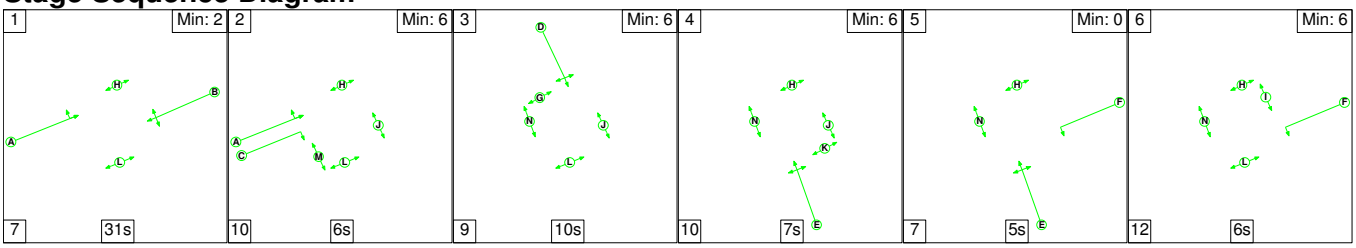
Full Input Data And Results

Lane Saturation Flows

Junction: A158 Wragby Road / Outer Cir Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wragby Road East)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
1/2 (Wragby Road East)	3.25	0.00	N	Arm 7 Ahead	Inf	54.1 %	1989	1989
				Arm 8 Right	15.00	45.9 %		
2/1 (Outer Cir Road)	3.25	0.00	N	Arm 7 Left	Inf	23.5 %	2080	2080
				Arm 8 Ahead	Inf	76.5 %		
2/2 (Outer Cir Road Lane 2)	This lane uses a directly entered Saturation Flow						3000	3000
3/1 (Wragby Road West)	3.25	0.00	Y	Arm 5 Ahead	Inf	98.9 %	1937	1937
				Arm 8 Left	10.00	1.1 %		
3/2 (Wragby Road West)	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/3 (Wragby Road West)	3.25	0.00	N	Arm 6 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Drive)	3.25	0.00	Y	Arm 5 Left	10.00	8.9 %	1915	1915
				Arm 6 Ahead	Inf	91.1 %		
				Arm 7 Right	15.00	0.0 %		
5/1 (Wragby Road East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Wragby Road West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Outer Cir Drive Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2015 Survey AM' (FG1: '2015 Survey AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

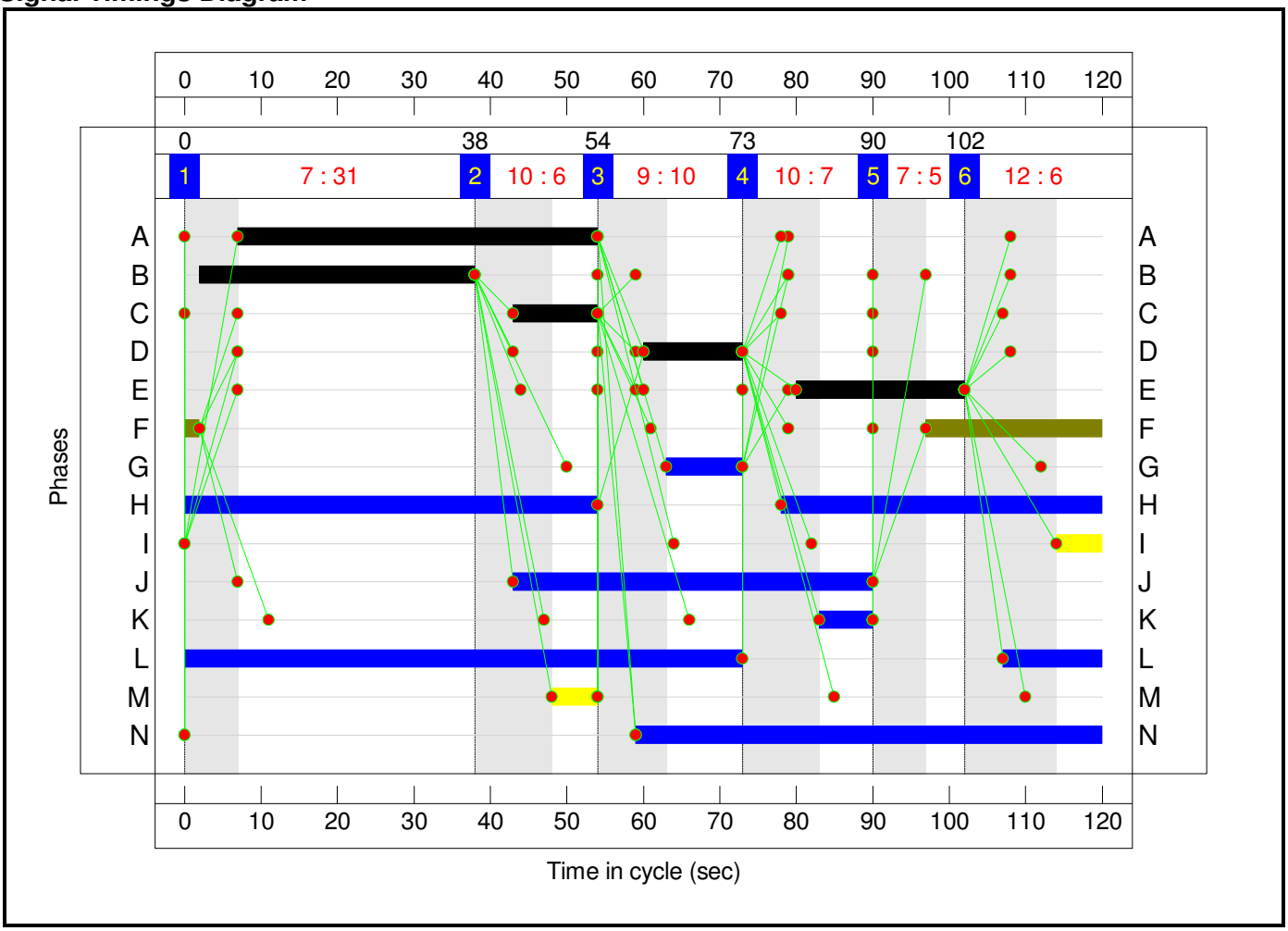


Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	10	7	5	6
Change Point	0	38	54	73	90	102

Full Input Data And Results

Signal Timings Diagram

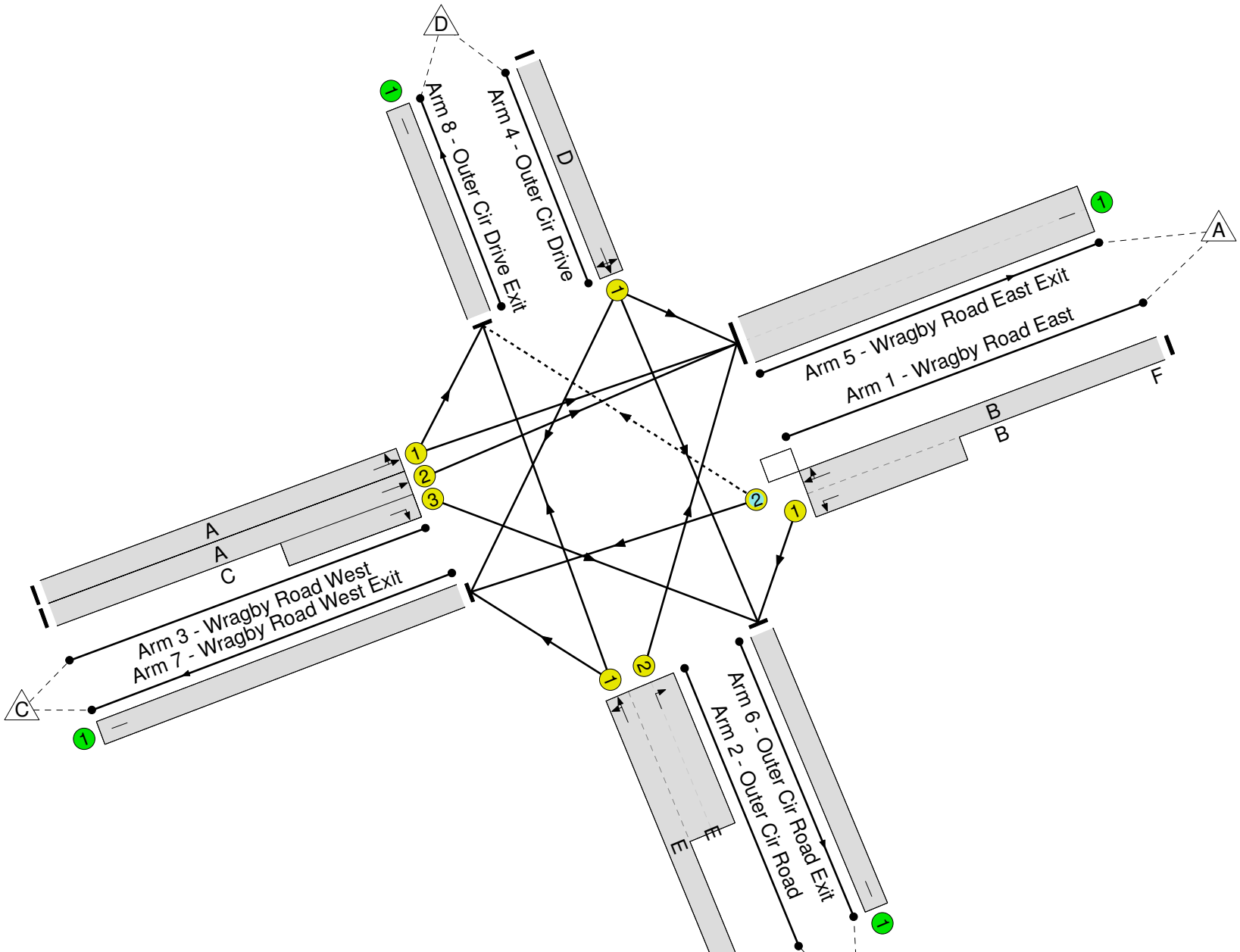


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -2.9 %
Total Traffic Delay: 36.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.6%**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.6%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	36:61	25	997	2054:1687	409+667	92.6 : 92.6%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	22	-	523	2080:3000	356+220	90.7 : 90.7%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	47	-	118	1871	748	15.8%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	47:11	-	269	2080:1891	148+189	79.9 : 79.9%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	13	-	202	1899	222	91.2%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	417	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	932	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	274	Inf	Inf	0.0%

Full Input Data And Results

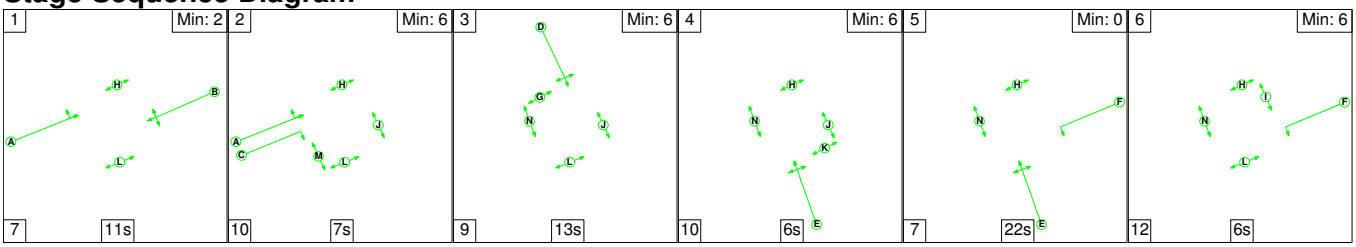
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**41**	**7**	**0**	**21.0**	**15.4**	**0.0**	**36.4**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**41**	**7**	**0**	**21.0**	**15.4**	**0.0**	**36.4**	**-**	**-**	**-**	**-**
1/2+1/1	997	997	41	7	0	7.8	5.5	0.0	13.3	47.9	24.6	5.5	30.1
2/1+2/2	523	523	-	-	-	6.6	4.2	-	10.8	74.4	10.6	4.2	14.8
3/1	118	118	-	-	-	0.8	0.1	-	0.8	25.9	2.5	0.1	2.6
3/2+3/3	269	269	-	-	-	3.0	1.9	-	4.8	64.8	4.9	1.9	6.8
4/1	202	202	-	-	-	2.9	3.7	-	6.7	119.0	6.6	3.7	10.4
5/1	417	417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	932	932	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	274	274	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -2.9 Total Delay for Signalled Lanes (pcuHr): 36.45 Cycle Time (s): 120
PRC Over All Lanes (%): -2.9 Total Delay Over All Lanes(pcuHr): 36.45

Full Input Data And Results

Scenario 2: '2015 Survey PM' (FG2: '2015 Survey PM', Plan 1: 'Network Control Plan 1')

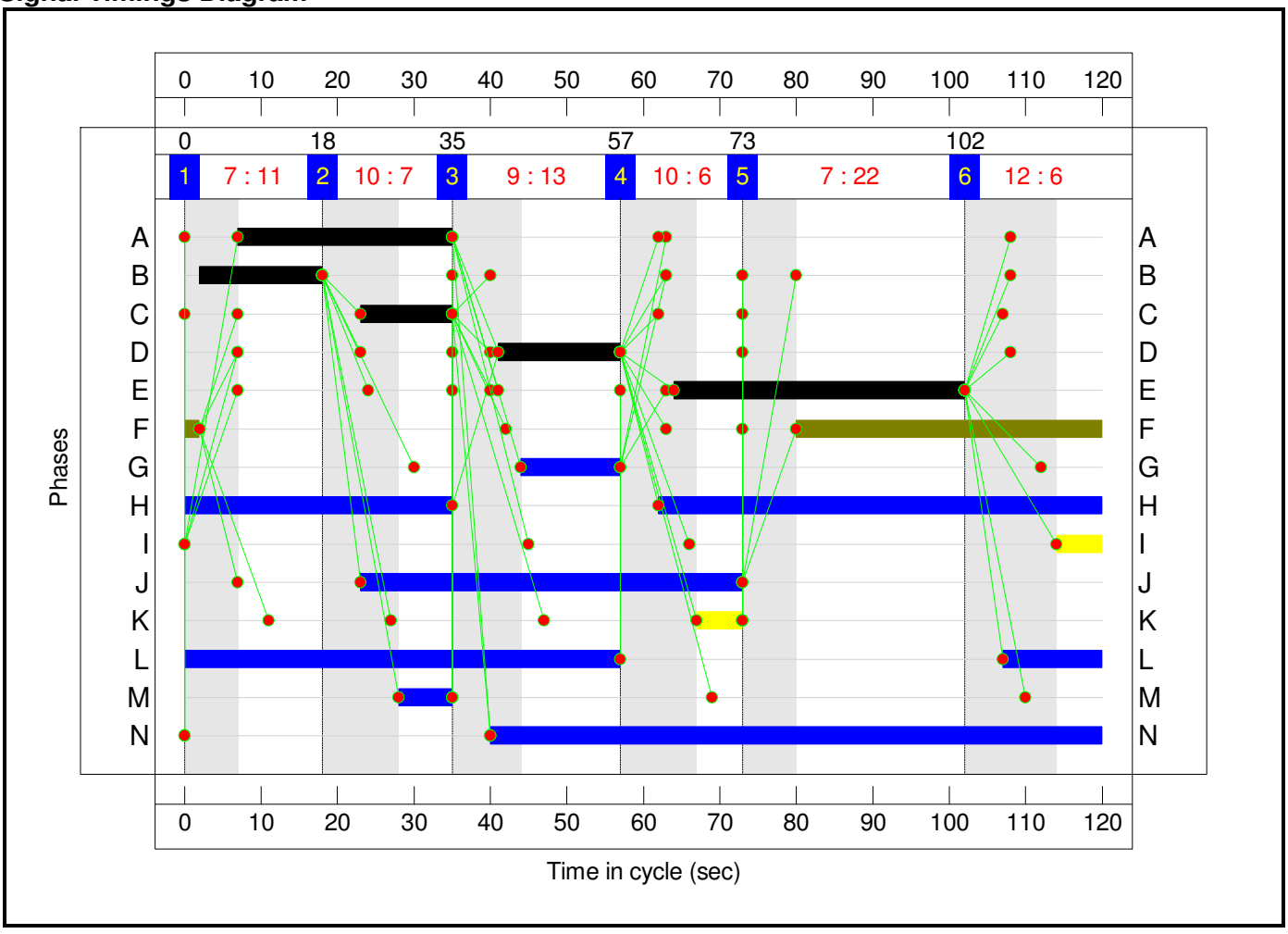
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	11	7	13	6	22	6
Change Point	0	18	35	57	73	102

Signal Timings Diagram

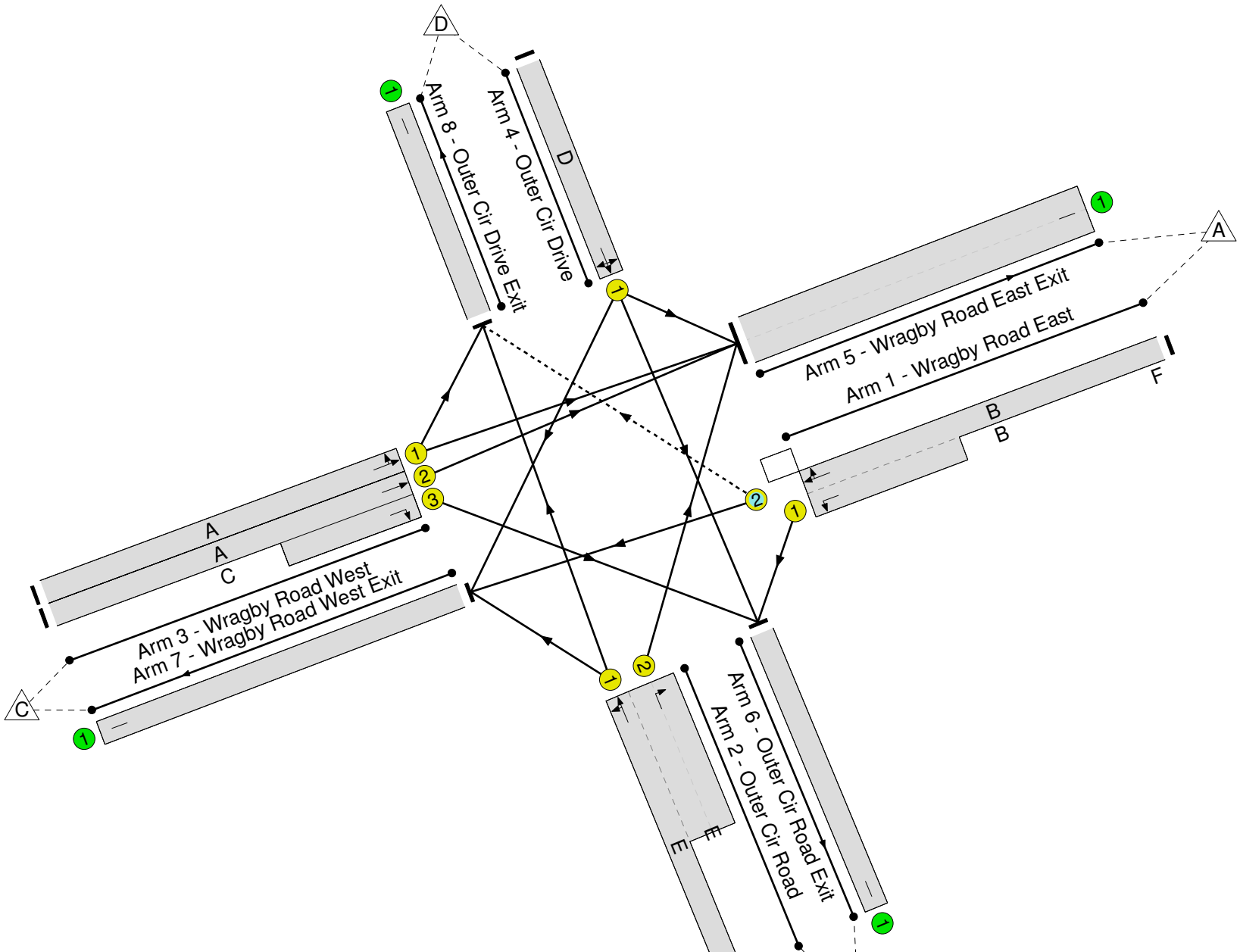


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -3.9 %
Total Traffic Delay: 44.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.5%**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.5%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	16:58	42	518	2057:1687	291+280	90.6 : 90.6%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	38	-	976	2080:3000	427+617	93.5 : 93.5%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	28	-	281	1876	453	62.0%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	28:12	-	458	2080:1891	324+205	86.5 : 86.9%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	16	-	238	1848	262	90.9%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	1130	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	383	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	378	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**24**	**6**	**0**	**26.5**	**17.8**	**0.1**	**44.5**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**24**	**6**	**0**	**26.5**	**17.8**	**0.1**	**44.5**	**-**	**-**	**-**	**-**
1/2+1/1	518	518	24	6	0	5.0	4.2	0.1	9.3	64.4	8.7	4.2	12.8
2/1+2/2	976	976	-	-	-	9.3	6.1	-	15.4	56.7	15.2	6.1	21.2
3/1	281	281	-	-	-	3.2	0.8	-	4.0	50.9	8.4	0.8	9.2
3/2+3/3	458	458	-	-	-	5.7	3.0	-	8.7	68.4	8.2	3.0	11.2
4/1	238	238	-	-	-	3.4	3.8	-	7.1	108.1	7.8	3.8	11.6
5/1	1130	1130	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	378	378	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): -3.9
PRC Over All Lanes (%): -3.9

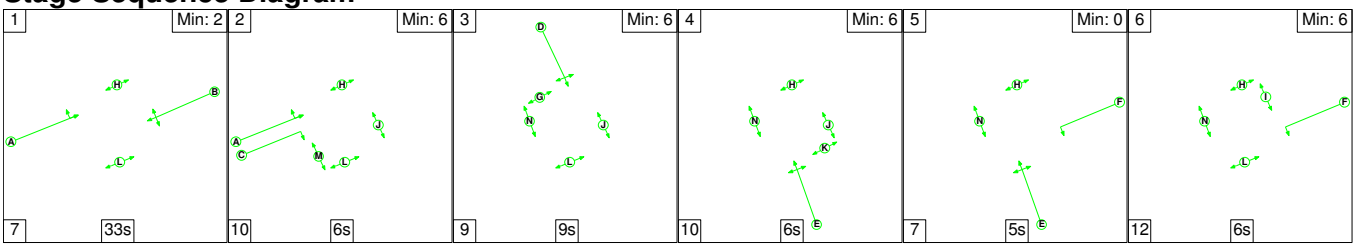
Total Delay for Signalled Lanes (pcuHr): 44.46
Total Delay Over All Lanes(pcuHr): 44.46

Cycle Time (s): 120

Full Input Data And Results

Scenario 3: '2033 Do-Minimum AM' (FG3: '2033 Do-Minimum AM', Plan 1: 'Network Control Plan 1')

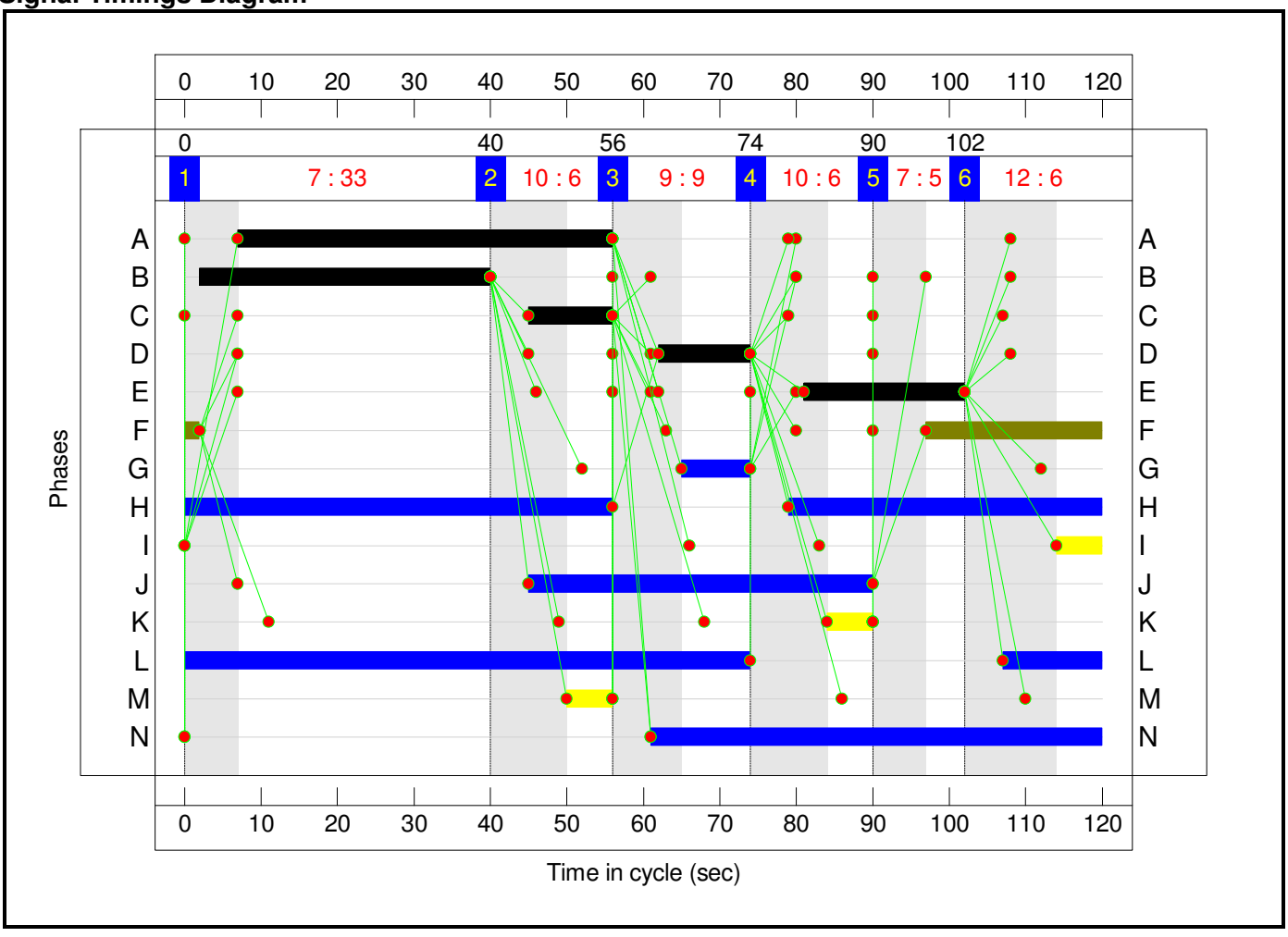
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	33	6	9	6	5	6
Change Point	0	40	56	74	90	102

Signal Timings Diagram

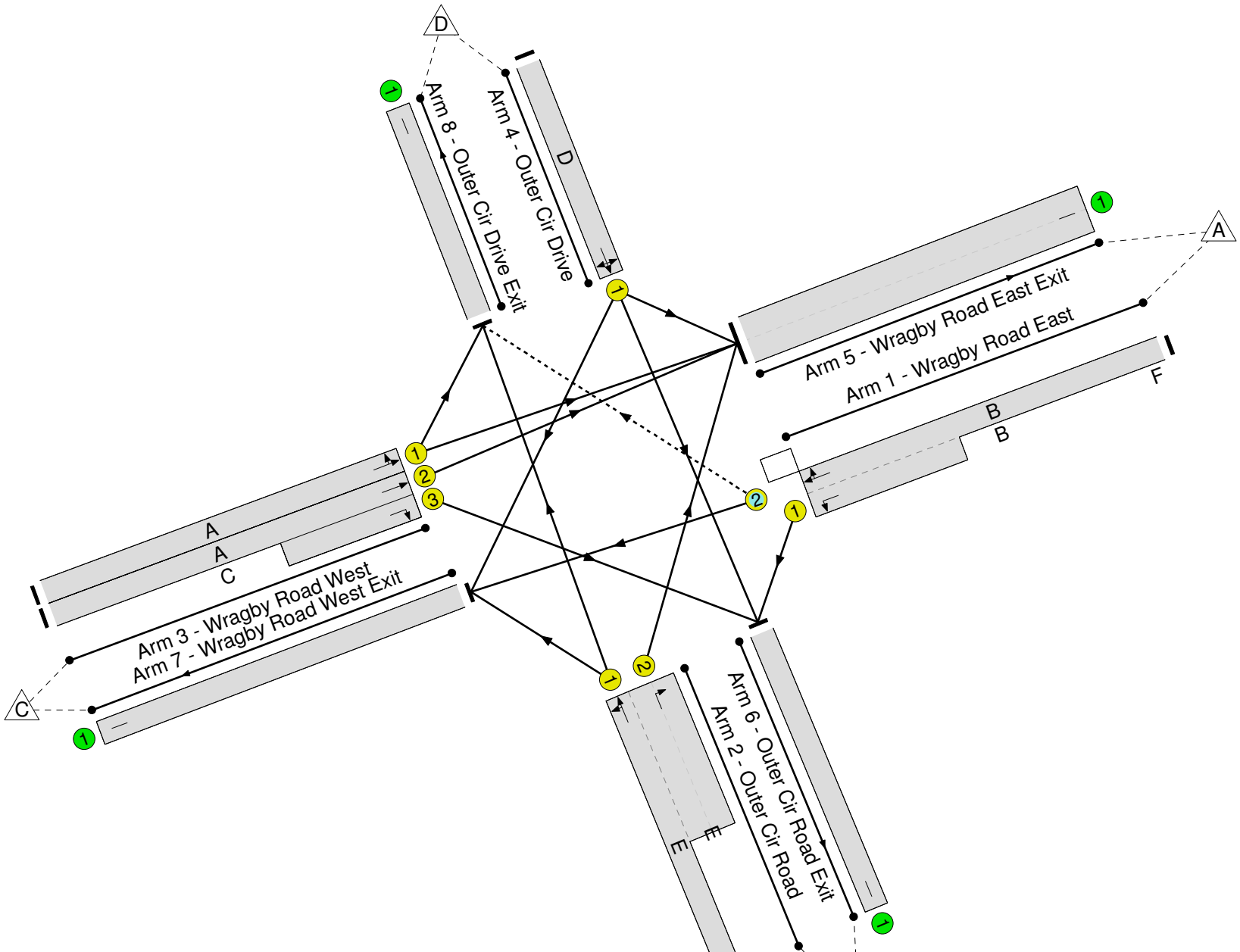


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -15.9 %
Total Traffic Delay: 77.7 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.3%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.3%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	38:63	25	918	2062:1687	493+387	104.3 : 104.3%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	21	-	533	2080:3000	353+165	103.0 : 103.0%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	49	-	141	1890	788	17.9%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	49:11	-	235	2080:1891	284+189	49.7 : 49.7%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	12	-	213	1913	207	102.8%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	684	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	644	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	280	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**39**	**5**	**0**	**24.9**	**52.8**	**0.0**	**77.7**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**39**	**5**	**0**	**24.9**	**52.8**	**0.0**	**77.7**	**-**	**-**	**-**	**-**
1/2+1/1	918	880	39	5	0	10.4	27.3	0.0	37.8	148.1	26.1	27.3	53.4
2/1+2/2	533	518	-	-	-	7.9	16.0	-	23.9	161.8	13.9	16.0	29.9
3/1	141	141	-	-	-	0.9	0.1	-	1.0	24.9	2.9	0.1	3.0
3/2+3/3	235	235	-	-	-	2.2	0.5	-	2.7	41.1	3.0	0.5	3.4
4/1	213	207	-	-	-	3.4	8.9	-	12.3	208.1	7.3	8.9	16.2
5/1	427	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): -15.9
PRC Over All Lanes (%): -15.9

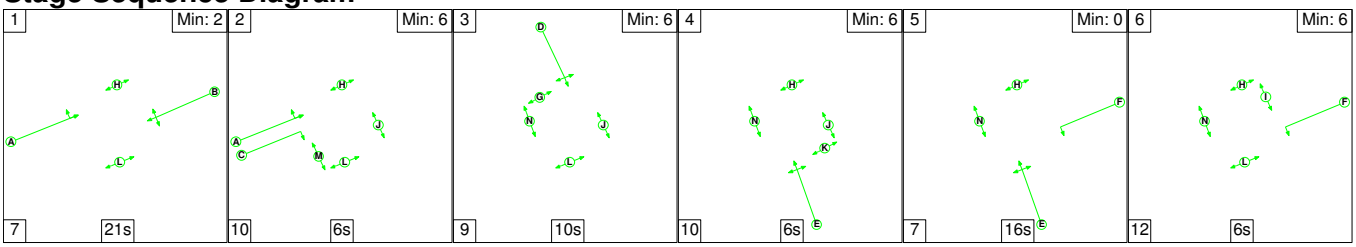
Total Delay for Signalled Lanes (pcuHr): 77.69
Total Delay Over All Lanes(pcuHr): 77.69

Cycle Time (s): 120

Full Input Data And Results

Scenario 4: '2033 Do-Minimum PM' (FG4: '2033 Do-Minimum PM', Plan 1: 'Network Control Plan 1')

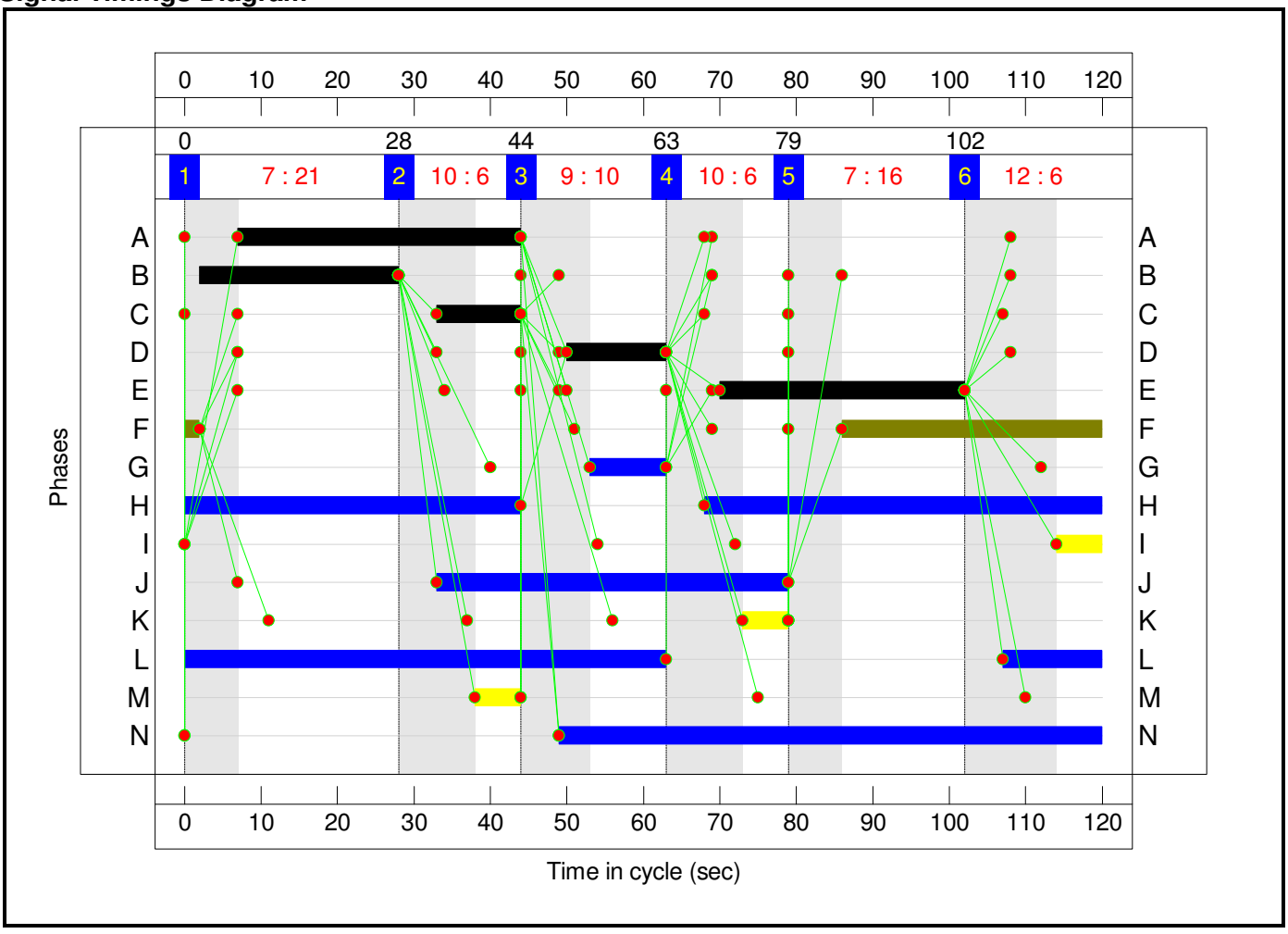
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	21	6	10	6	16	6
Change Point	0	28	44	63	79	102

Signal Timings Diagram

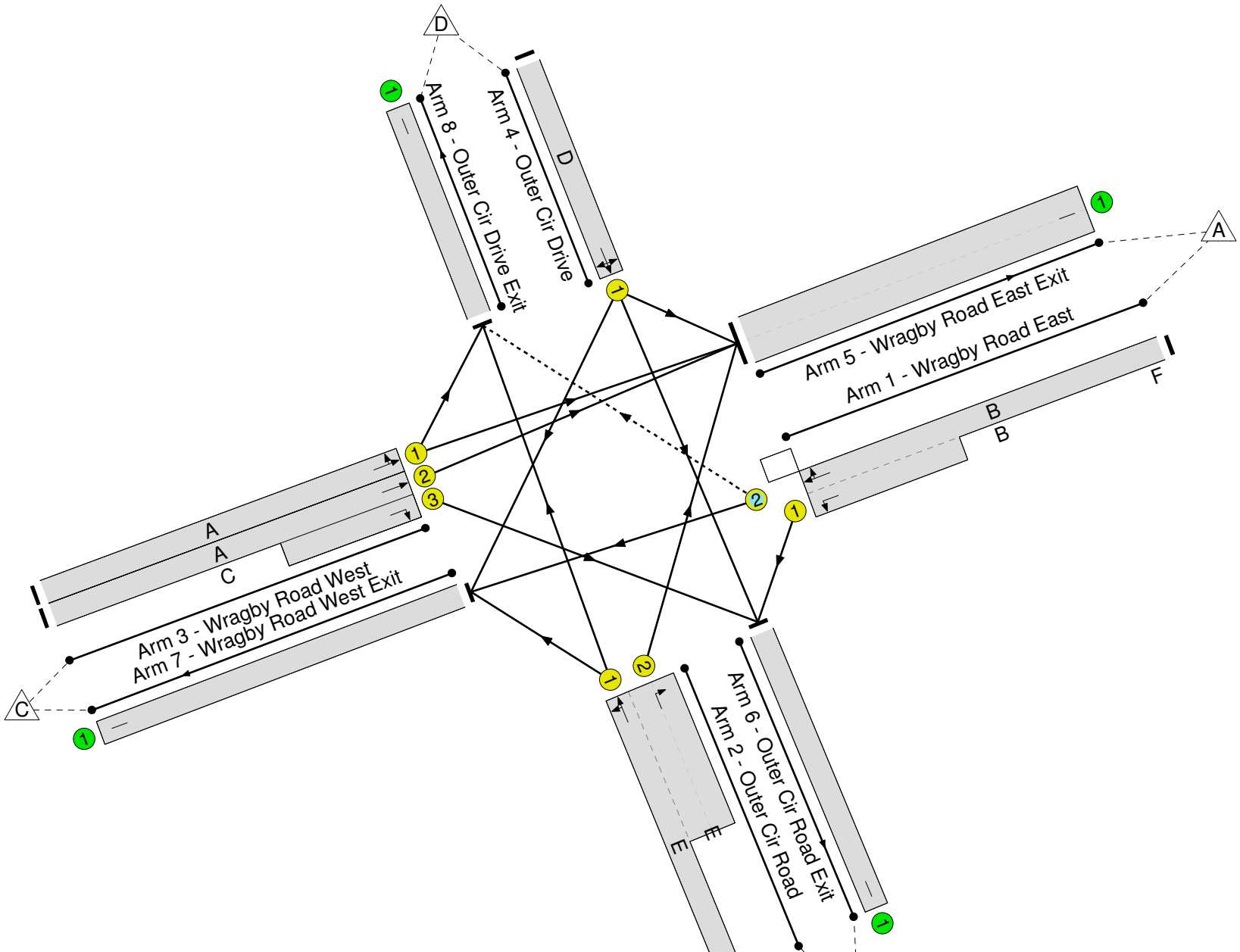


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -4.4 %
Total Traffic Delay: 43.0 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**94.0%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**94.0%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	26:62	36	559	2037:1687	358+250	92.0 : 92.0%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	32	-	907	2080:3000	391+573	94.0 : 94.0%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	37	-	352	1937	613	57.4%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	37:11	-	444	2080:1891	574+152	61.1 : 61.1%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	13	-	208	1909	223	93.4%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	1253	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	354	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%

Full Input Data And Results

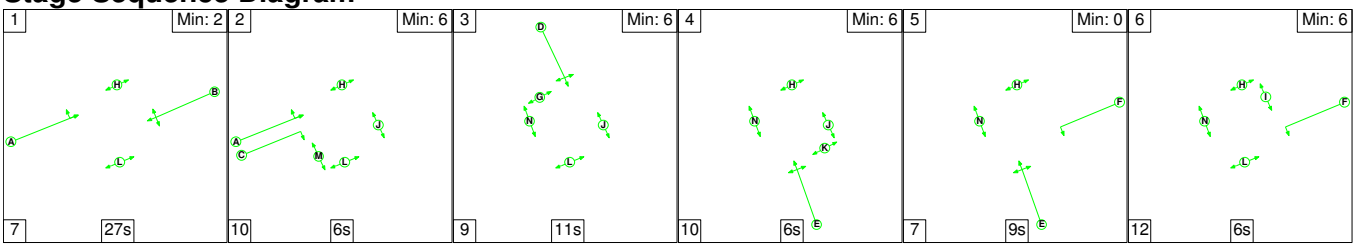
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**58**	**11**	**0**	**25.7**	**17.1**	**0.3**	**43.0**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**58**	**11**	**0**	**25.7**	**17.1**	**0.3**	**43.0**	**-**	**-**	**-**	**-**
1/2+1/1	559	559	58	11	0	4.9	4.8	0.3	10.0	64.6	10.3	4.8	15.1
2/1+2/2	907	907	-	-	-	9.7	6.4	-	16.1	64.1	13.5	6.4	19.9
3/1	352	352	-	-	-	3.3	0.7	-	4.0	41.1	9.8	0.7	10.4
3/2+3/3	444	444	-	-	-	4.6	0.8	-	5.4	43.7	9.8	0.8	10.6
4/1	208	208	-	-	-	3.0	4.4	-	7.5	129.0	6.8	4.4	11.2
5/1	1253	1253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	354	354	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -4.4 Total Delay for Signalled Lanes (pcuHr): 43.04 Cycle Time (s): 120
PRC Over All Lanes (%): -4.4 Total Delay Over All Lanes(pcuHr): 43.04

Full Input Data And Results

Scenario 5: '2033 Do-Something AM' (FG5: '2033 Do-Something AM', Plan 1: 'Network Control Plan 1')

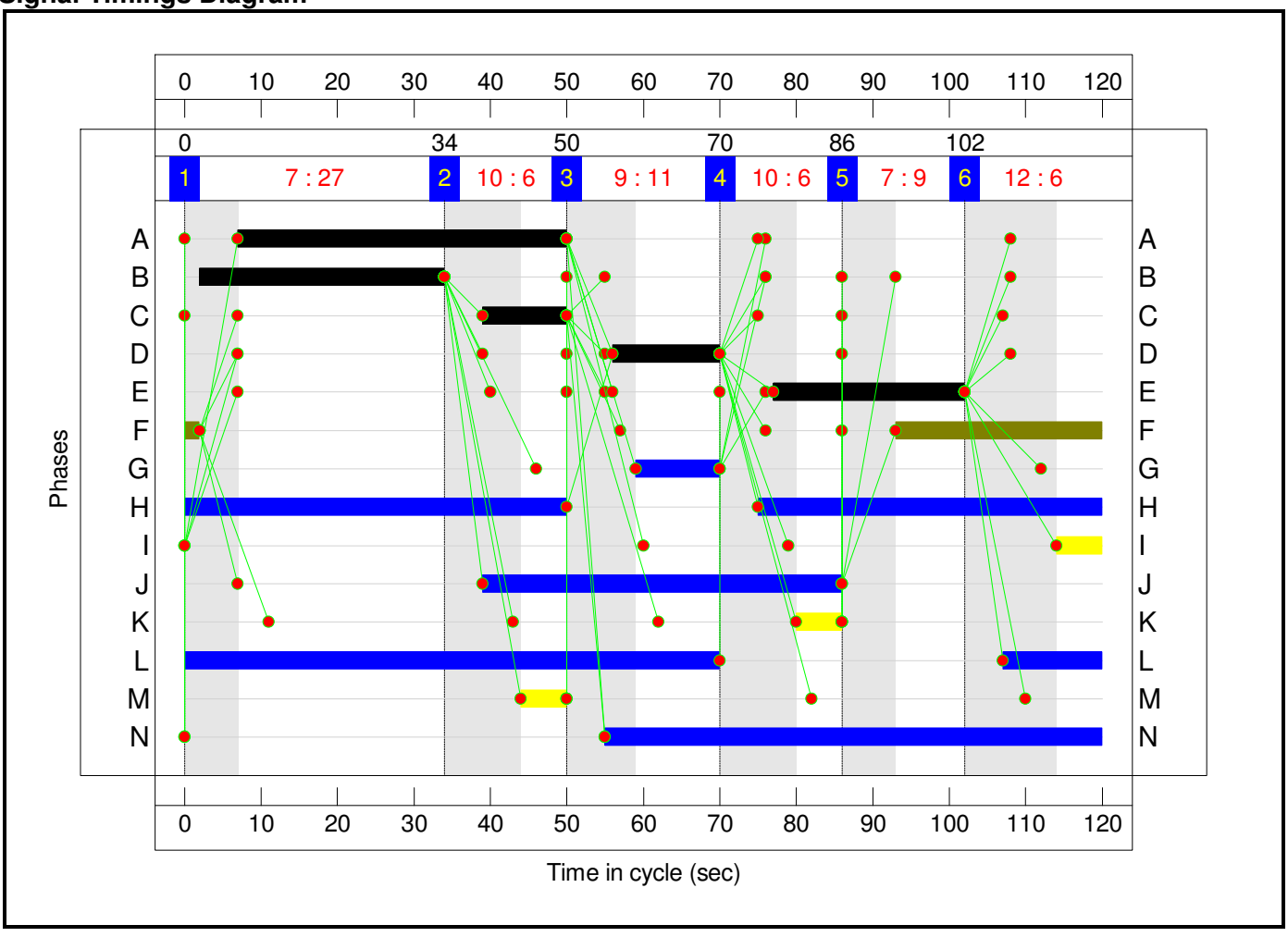
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	27	6	11	6	9	6
Change Point	0	34	50	70	86	102

Signal Timings Diagram

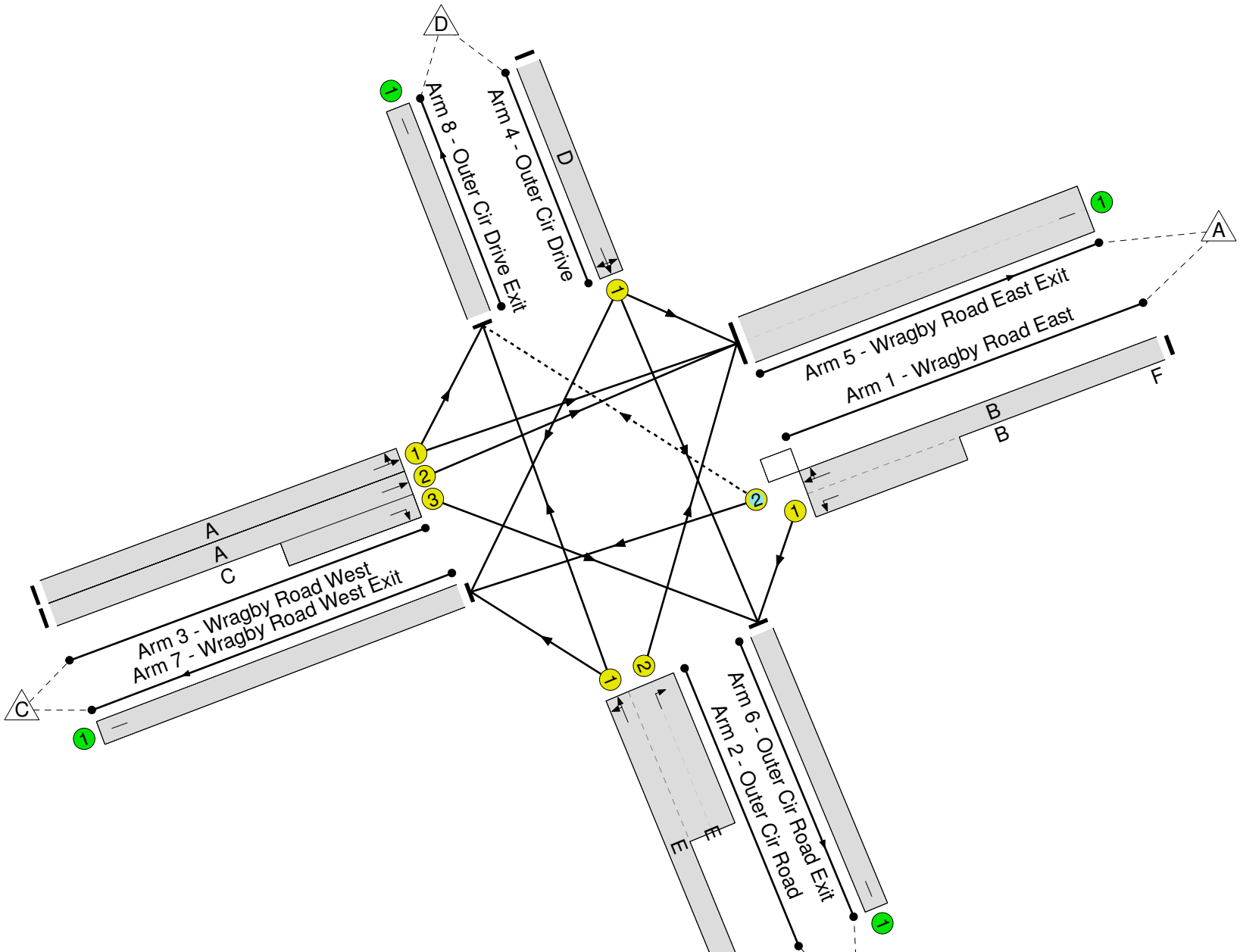


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: 6.8 %
Total Traffic Delay: 23.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	32:61	29	611	2036:1687	442+292	83.3 : 83.3%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	25	-	426	2080:3000	420+90	83.5 : 83.5%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	43	-	109	1921	704	15.5%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	43:11	-	190	2080:1891	249+189	43.4 : 43.4%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	14	-	203	1927	241	84.3%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	469	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	269	Inf	Inf	0.0%

Full Input Data And Results

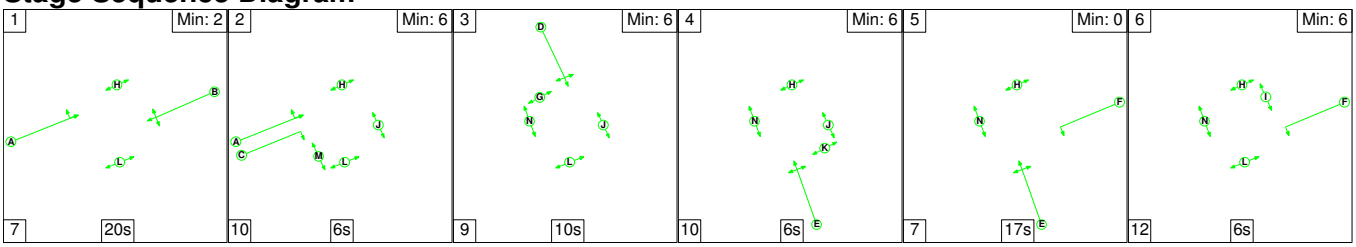
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**68**	**11**	**0**	**15.8**	**7.7**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**68**	**11**	**0**	**15.8**	**7.7**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
1/2+1/1	611	611	68	11	0	5.1	2.4	0.0	7.5	44.3	11.9	2.4	14.3
2/1+2/2	426	426	-	-	-	5.1	2.4	-	7.5	63.6	11.3	2.4	13.7
3/1	109	109	-	-	-	0.8	0.1	-	0.9	28.6	2.4	0.1	2.5
3/2+3/3	190	190	-	-	-	1.9	0.4	-	2.3	43.6	2.6	0.4	2.9
4/1	203	203	-	-	-	2.9	2.4	-	5.3	93.6	6.6	2.4	9.0
5/1	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	469	469	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.8 Total Delay for Signalled Lanes (pcuHr): 23.49 Cycle Time (s): 120
PRC Over All Lanes (%): 6.8 Total Delay Over All Lanes(pcuHr): 23.49

Full Input Data And Results

Scenario 6: '2033 Do-Something PM' (FG6: '2033 Do-Something PM', Plan 1: 'Network Control Plan 1')

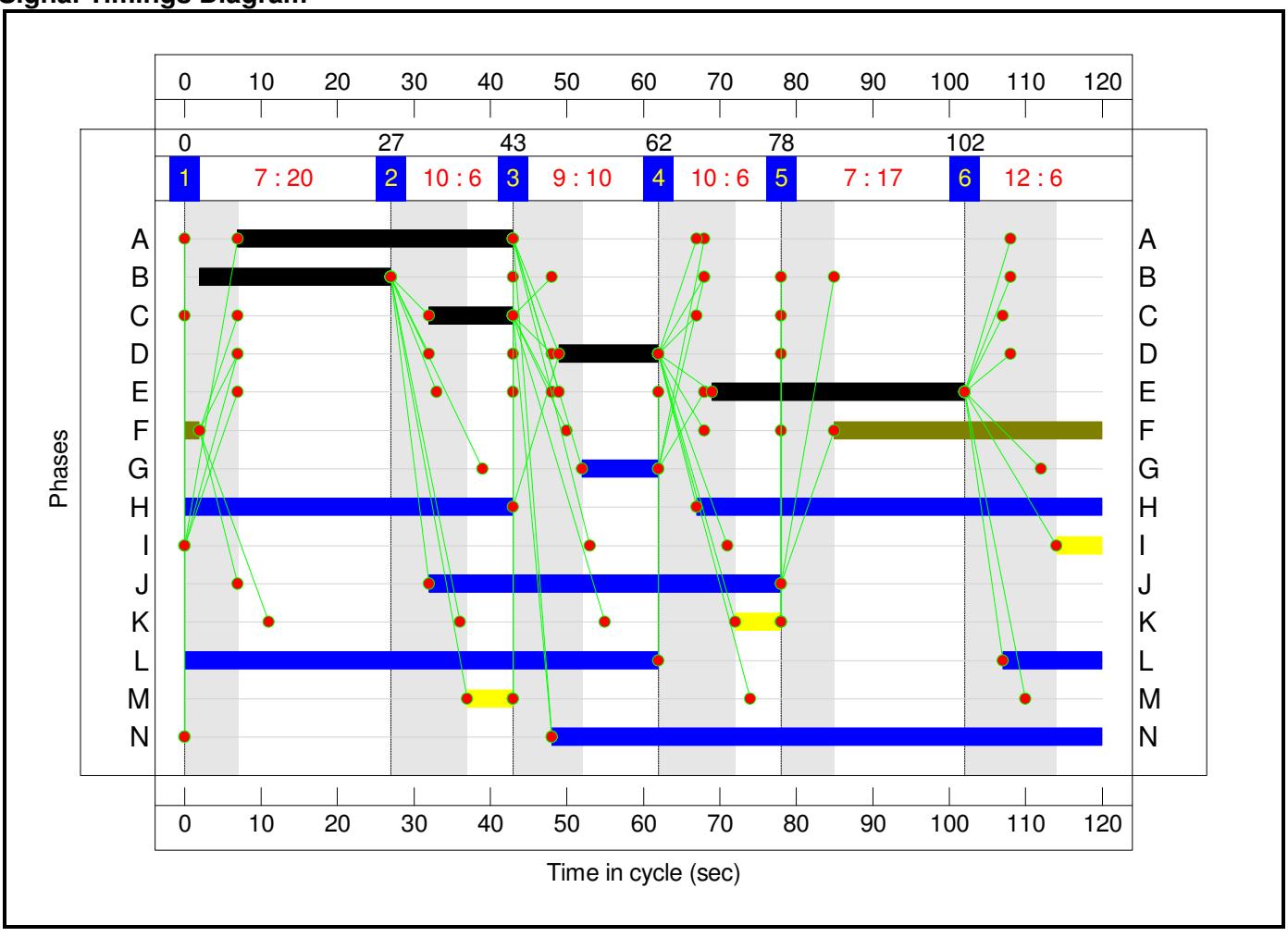
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	20	6	10	6	17	6
Change Point	0	27	43	62	78	102

Signal Timings Diagram

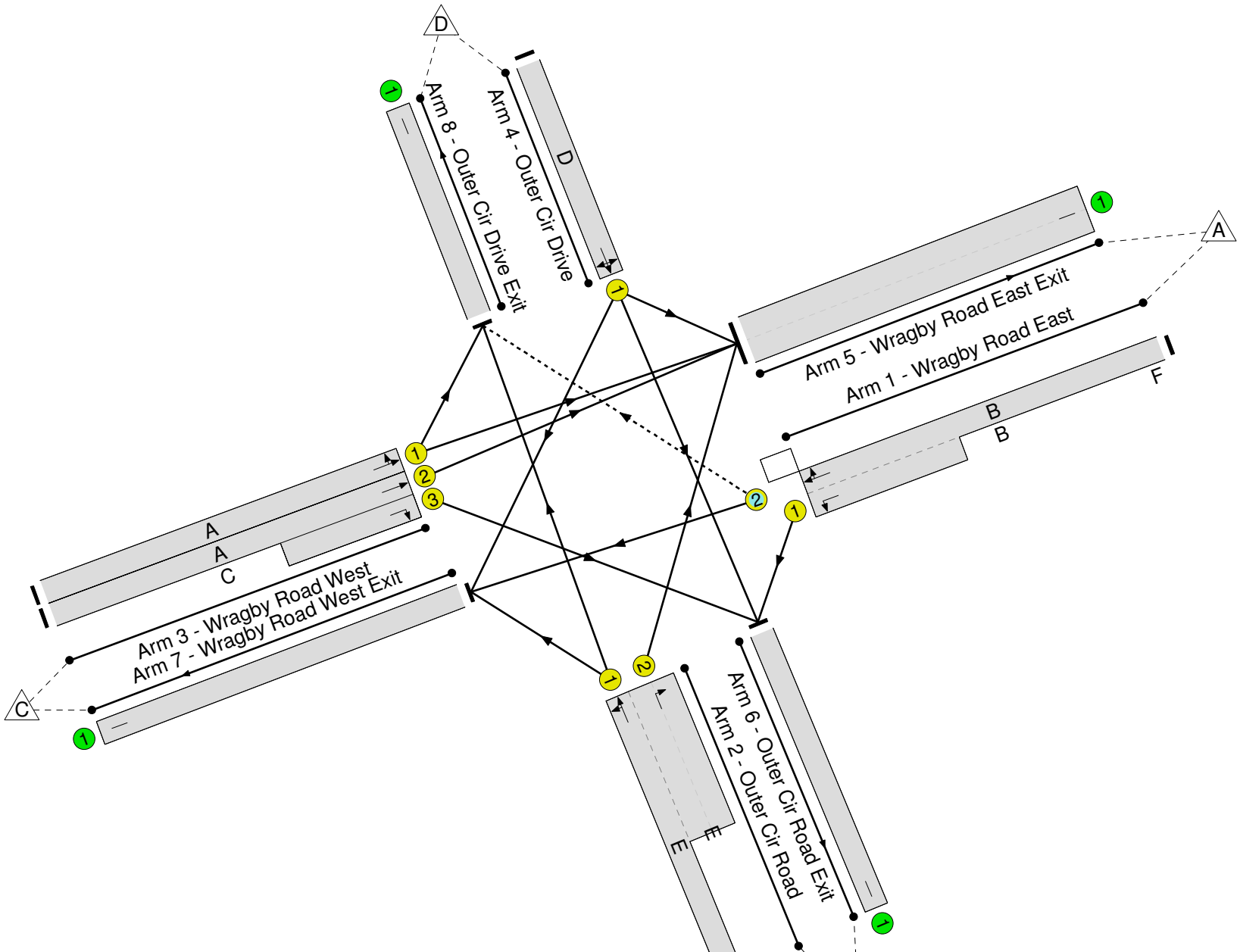


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -7.4 %
Total Traffic Delay: 40.9 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.7%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.7%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	25:62	37	355	1993:1687	286+108	90.1 : 90.1%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	33	-	954	2080:3000	396+590	96.7 : 96.7%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	36	-	246	1935	597	41.2%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	36:11	-	342	2080:1891	532+189	46.2 : 50.8%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	13	-	203	1890	221	92.1%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	1095	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	406	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**90**	**22**	**0**	**22.7**	**17.9**	**0.3**	**40.9**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**90**	**22**	**0**	**22.7**	**17.9**	**0.3**	**40.9**	**-**	**-**	**-**	**-**
1/2+1/1	355	355	90	22	0	3.5	3.8	0.3	7.6	77.3	8.4	3.8	12.2
2/1+2/2	954	954	-	-	-	10.4	9.3	-	19.7	74.3	15.6	9.3	24.9
3/1	246	246	-	-	-	2.2	0.4	-	2.6	38.0	6.5	0.4	6.8
3/2+3/3	342	342	-	-	-	3.6	0.4	-	4.0	42.5	6.4	0.4	6.9
4/1	203	203	-	-	-	3.0	4.0	-	6.9	123.1	6.7	4.0	10.6
5/1	1095	1095	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	406	406	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): -7.4
PRC Over All Lanes (%): -7.4

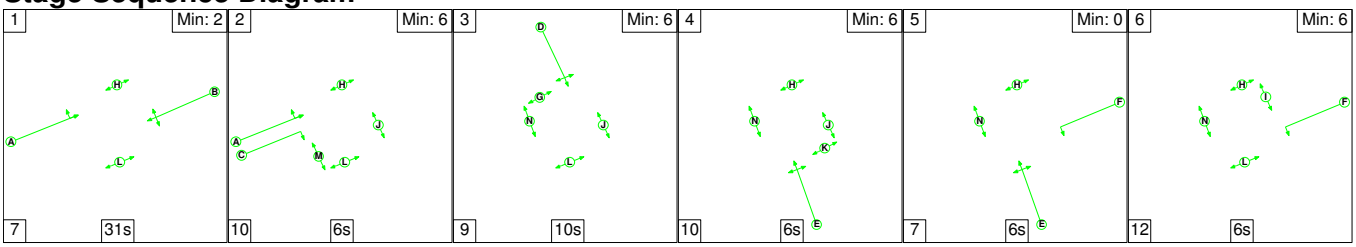
Total Delay for Signalled Lanes (pcuHr): 40.91
Total Delay Over All Lanes(pcuHr): 40.91

Cycle Time (s): 120

Full Input Data And Results

Scenario 7: '2033 DS1 AM' (FG7: '2033 DS1 AM', Plan 1: 'Network Control Plan 1')

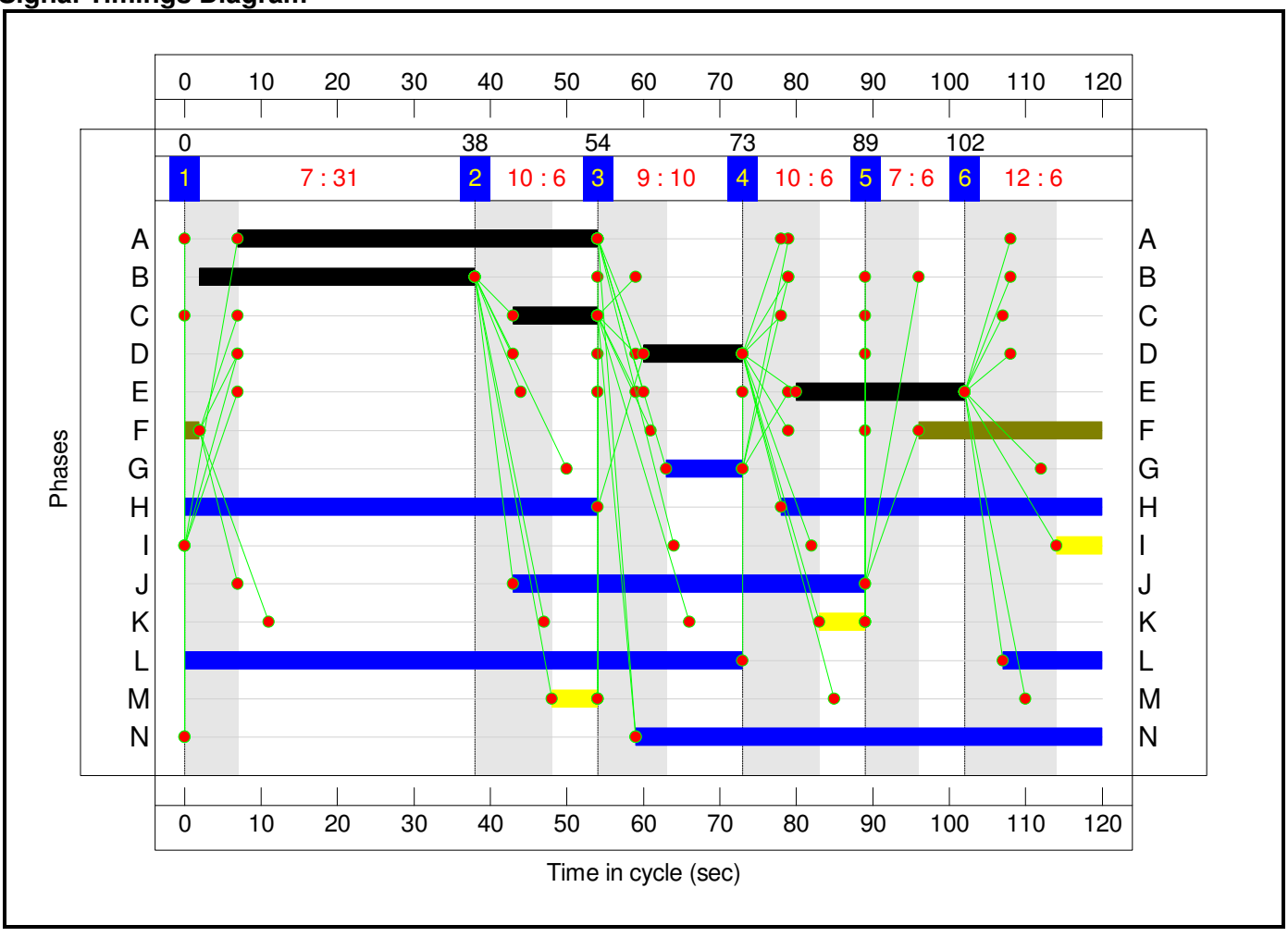
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	10	6	6	6
Change Point	0	38	54	73	89	102

Signal Timings Diagram

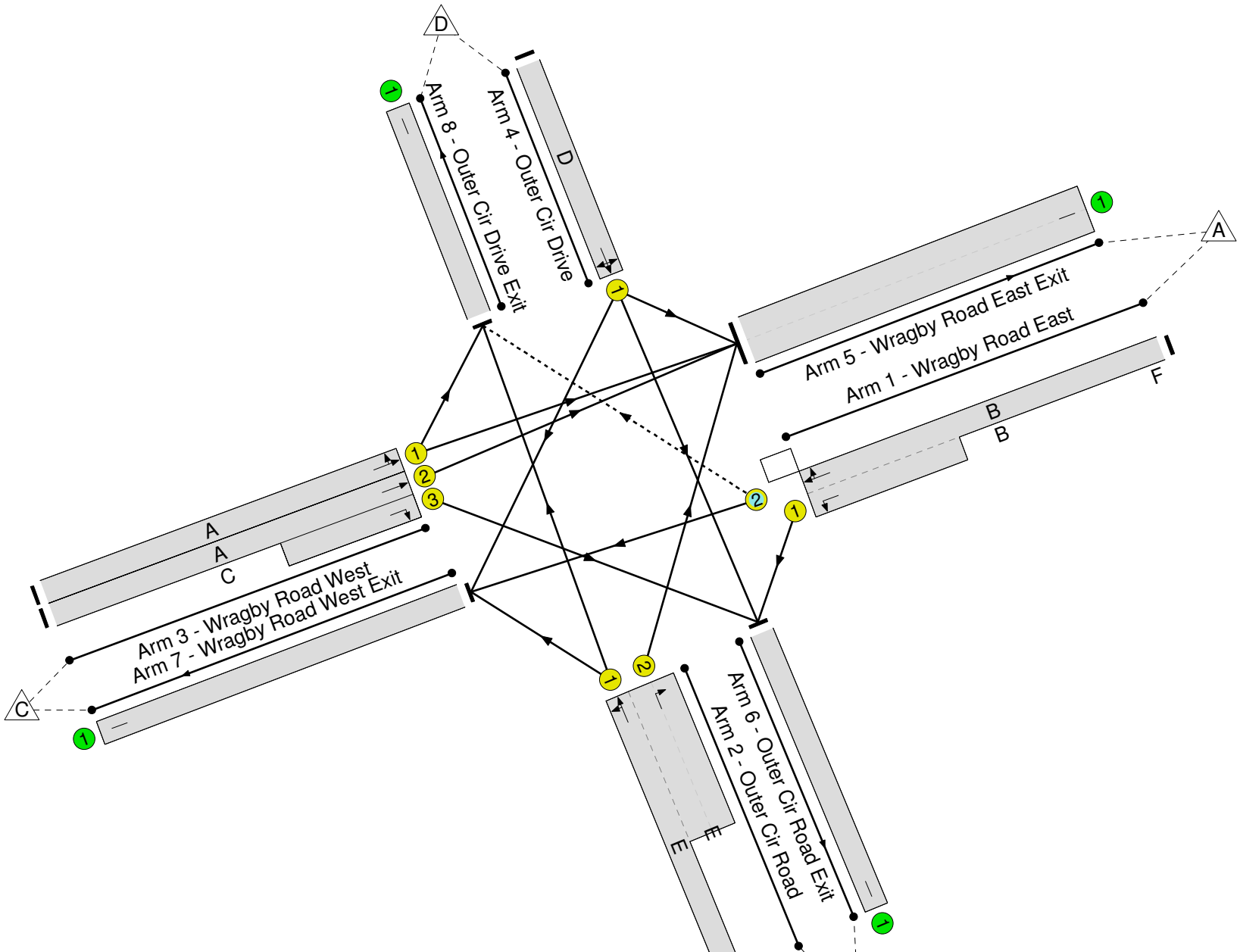


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -6.6 %
Total Traffic Delay: 36.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.9%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.9%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	36:62	26	698	2052:1687	515+217	95.4 : 95.4%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	22	-	445	2080:3000	379+84	95.9 : 95.9%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	47	-	91	1918	767	11.9%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	47:11	-	209	2080:1891	419+189	34.4 : 34.4%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	13	-	207	1928	225	92.0%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	313	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	468	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%

Full Input Data And Results

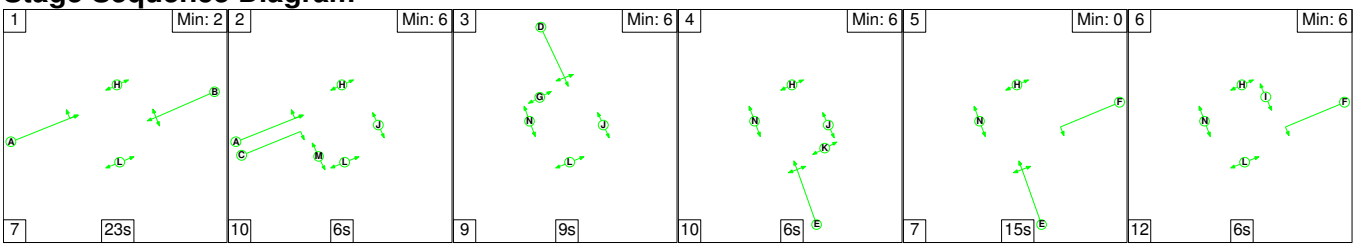
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**61**	**7**	**0**	**17.9**	**18.4**	**0.0**	**36.3**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**61**	**7**	**0**	**17.9**	**18.4**	**0.0**	**36.3**	**-**	**-**	**-**	**-**
1/2+1/1	698	698	61	7	0	6.5	7.2	0.0	13.7	70.7	18.3	7.2	25.6
2/1+2/2	445	445	-	-	-	6.0	6.8	-	12.8	103.8	12.4	6.8	19.2
3/1	91	91	-	-	-	0.6	0.1	-	0.6	25.4	1.9	0.1	2.0
3/2+3/3	209	209	-	-	-	1.8	0.3	-	2.1	36.2	3.1	0.3	3.3
4/1	207	207	-	-	-	3.0	4.0	-	7.0	121.9	6.8	4.0	10.8
5/1	313	313	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	468	468	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -6.6 Total Delay for Signalled Lanes (pcuHr): 36.29 Cycle Time (s): 120
PRC Over All Lanes (%): -6.6 Total Delay Over All Lanes(pcuHr): 36.29

Full Input Data And Results

Scenario 8: '2033 DS1 PM' (FG8: '2033 DS1 PM', Plan 1: 'Network Control Plan 1')

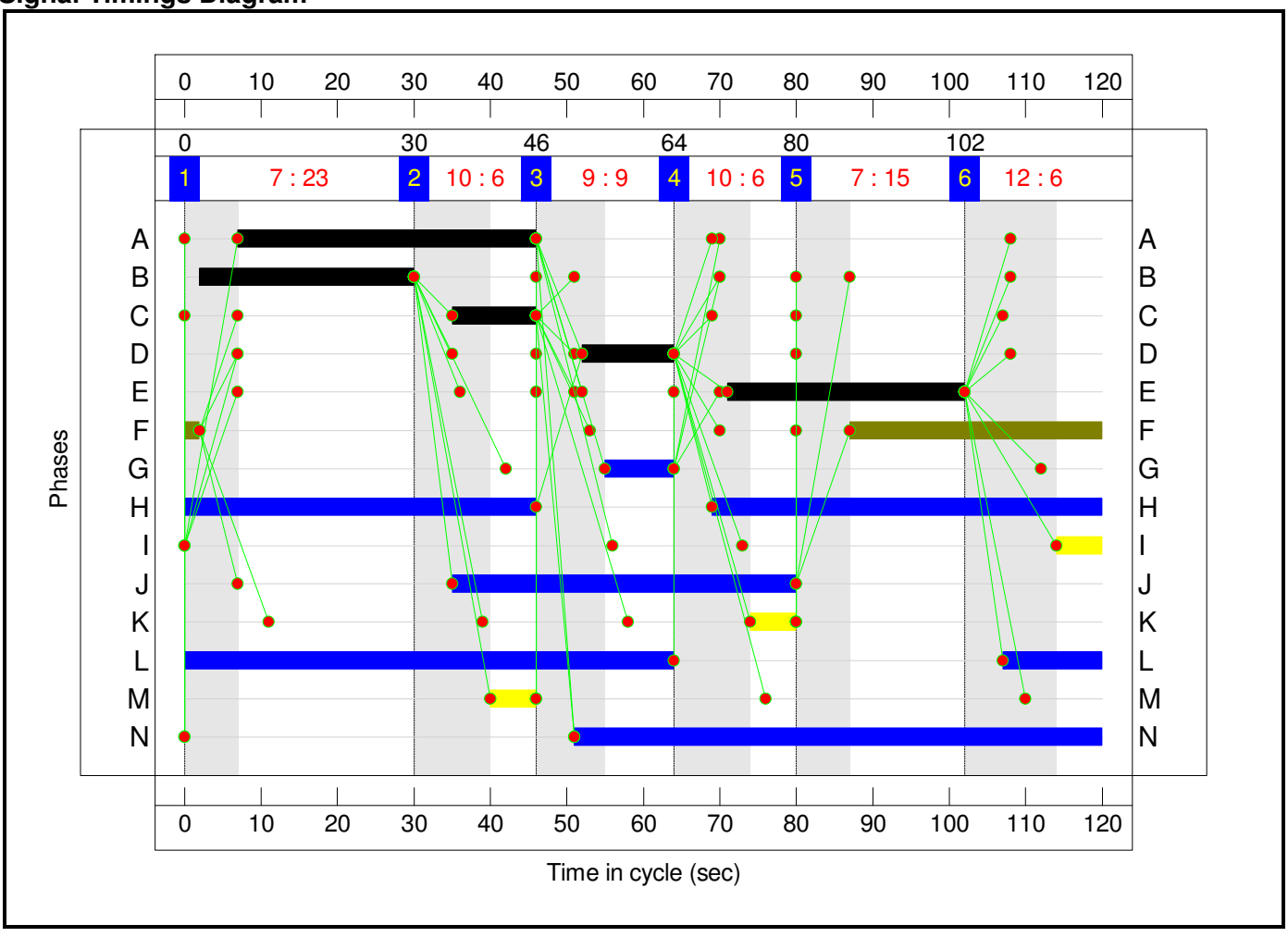
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	23	6	9	6	15	6
Change Point	0	30	46	64	80	102

Signal Timings Diagram

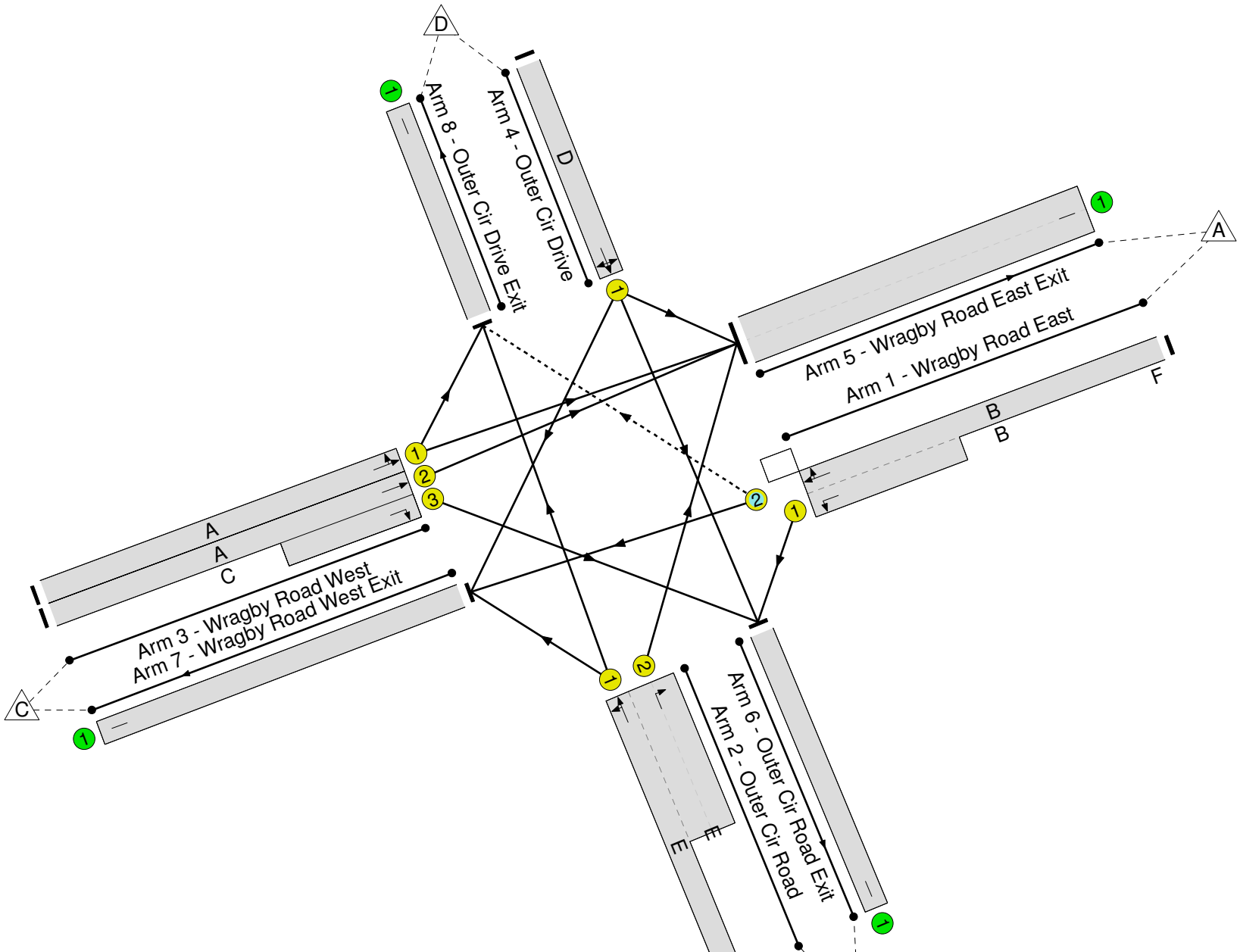


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -11.0 %
Total Traffic Delay: 53.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.9%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.9%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	28:63	35	301	1981:1687	236+80	95.3 : 95.3%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	31	-	932	2080:3000	388+544	99.9 : 99.9%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	39	-	308	1936	645	47.7%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	39:11	-	442	2080:1891	598+166	57.9 : 57.9%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	12	-	205	1902	206	99.5%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	1221	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**87**	**25**	**0**	**24.3**	**28.8**	**0.4**	**53.5**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**87**	**25**	**0**	**24.3**	**28.8**	**0.4**	**53.5**	**-**	**-**	**-**	**-**
1/2+1/1	301	301	87	25	0	2.9	5.7	0.4	9.0	107.2	7.4	5.7	13.1
2/1+2/2	932	932	-	-	-	11.2	15.1	-	26.3	101.5	16.8	15.1	31.9
3/1	308	308	-	-	-	2.7	0.5	-	3.2	37.0	8.1	0.5	8.6
3/2+3/3	442	442	-	-	-	4.4	0.7	-	5.1	41.7	9.3	0.7	10.0
4/1	205	205	-	-	-	3.0	6.9	-	9.9	174.7	6.8	6.9	13.7
5/1	1221	1221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	398	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): -11.0
PRC Over All Lanes (%): -11.0

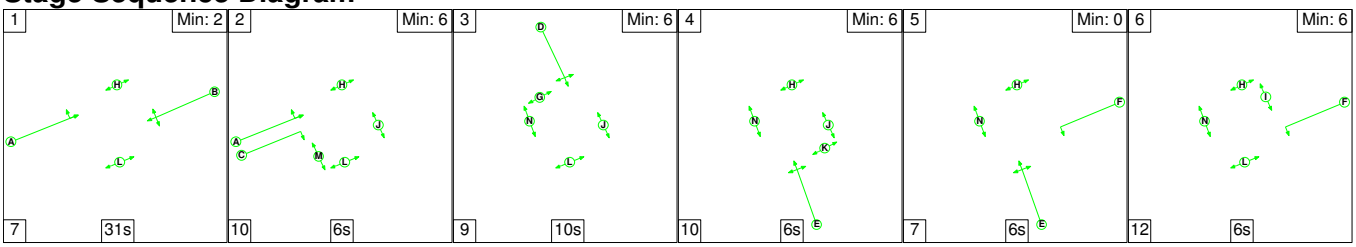
Total Delay for Signalled Lanes (pcuHr): 53.48
Total Delay Over All Lanes(pcuHr): 53.48

Cycle Time (s): 120

Full Input Data And Results

Scenario 9: '2033 DS2 AM' (FG9: '2033 DS2 AM', Plan 1: 'Network Control Plan 1')

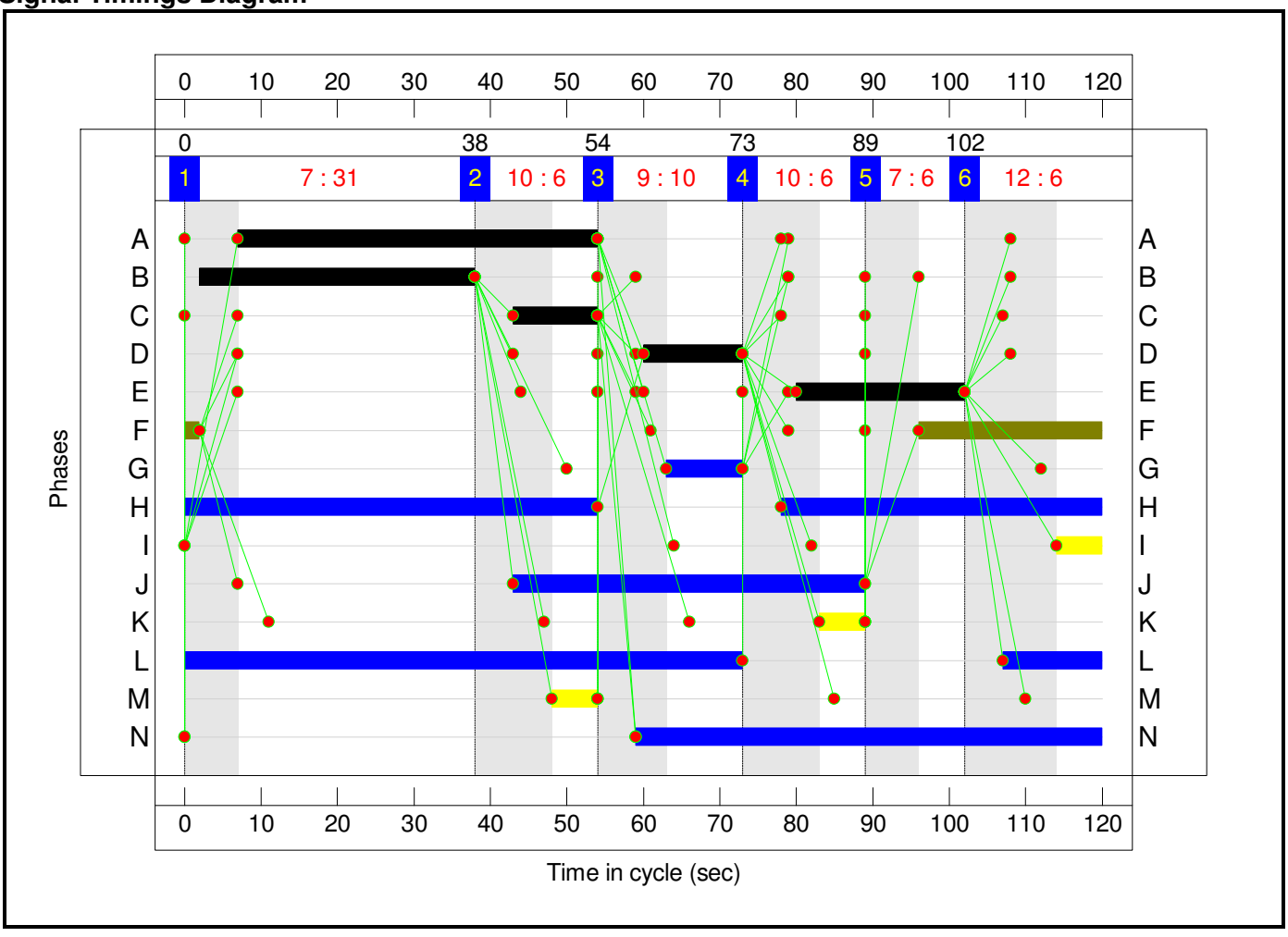
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	10	6	6	6
Change Point	0	38	54	73	89	102

Signal Timings Diagram

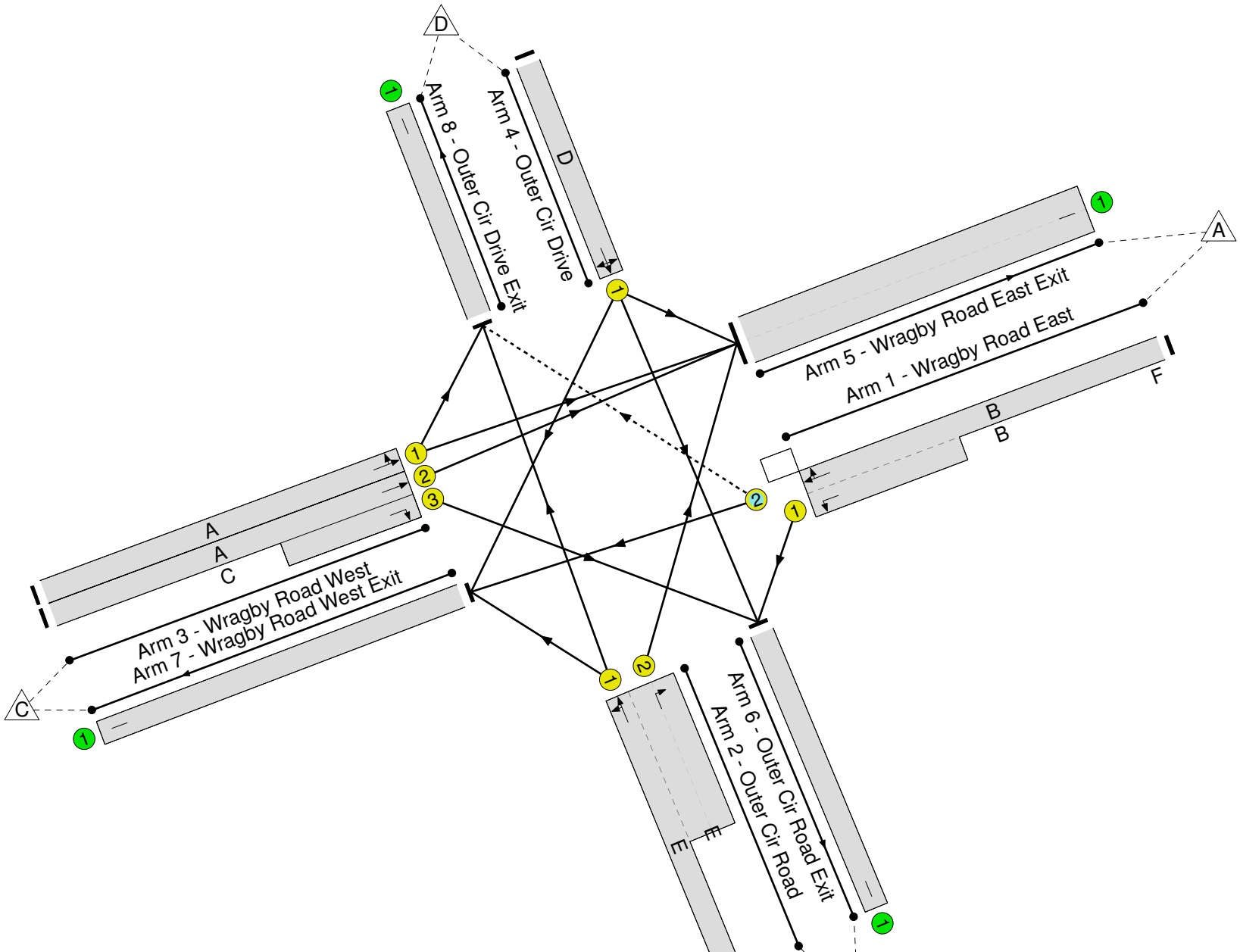


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -6.2 %
Total Traffic Delay: 34.7 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.6%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.6%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	36:62	26	707	2050:1687	510+230	95.6 : 95.6%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	22	-	431	2080:3000	381+79	93.8 : 93.8%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	47	-	115	1922	769	15.0%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	47:11	-	180	2080:1891	327+189	34.9 : 34.9%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	13	-	206	1926	225	91.7%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	478	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	561	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	301	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**64**	**8**	**0**	**17.6**	**17.1**	**0.0**	**34.7**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**64**	**8**	**0**	**17.6**	**17.1**	**0.0**	**34.7**	**-**	**-**	**-**	**-**
1/2+1/1	707	707	64	8	0	6.5	7.4	0.0	13.9	70.9	18.4	7.4	25.9
2/1+2/2	431	431	-	-	-	5.7	5.4	-	11.2	93.4	11.9	5.4	17.4
3/1	115	115	-	-	-	0.7	0.1	-	0.8	25.7	2.4	0.1	2.5
3/2+3/3	180	180	-	-	-	1.6	0.3	-	1.9	38.3	2.4	0.3	2.7
4/1	206	206	-	-	-	3.0	3.9	-	6.9	120.4	6.8	3.9	10.6
5/1	299	299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	478	478	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	561	561	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	301	301	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

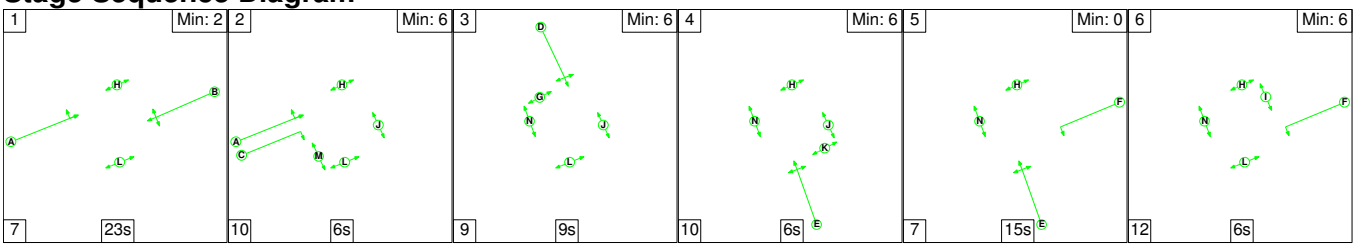
C1 PRC for Signalled Lanes (%): -6.2 Total Delay for Signalled Lanes (pcuHr): 34.73 Cycle Time (s): 120

PRC Over All Lanes (%): -6.2 Total Delay Over All Lanes(pcuHr): 34.73

Full Input Data And Results

Scenario 10: '2033 DS2 PM' (FG10: '2033 DS2 PM', Plan 1: 'Network Control Plan 1')

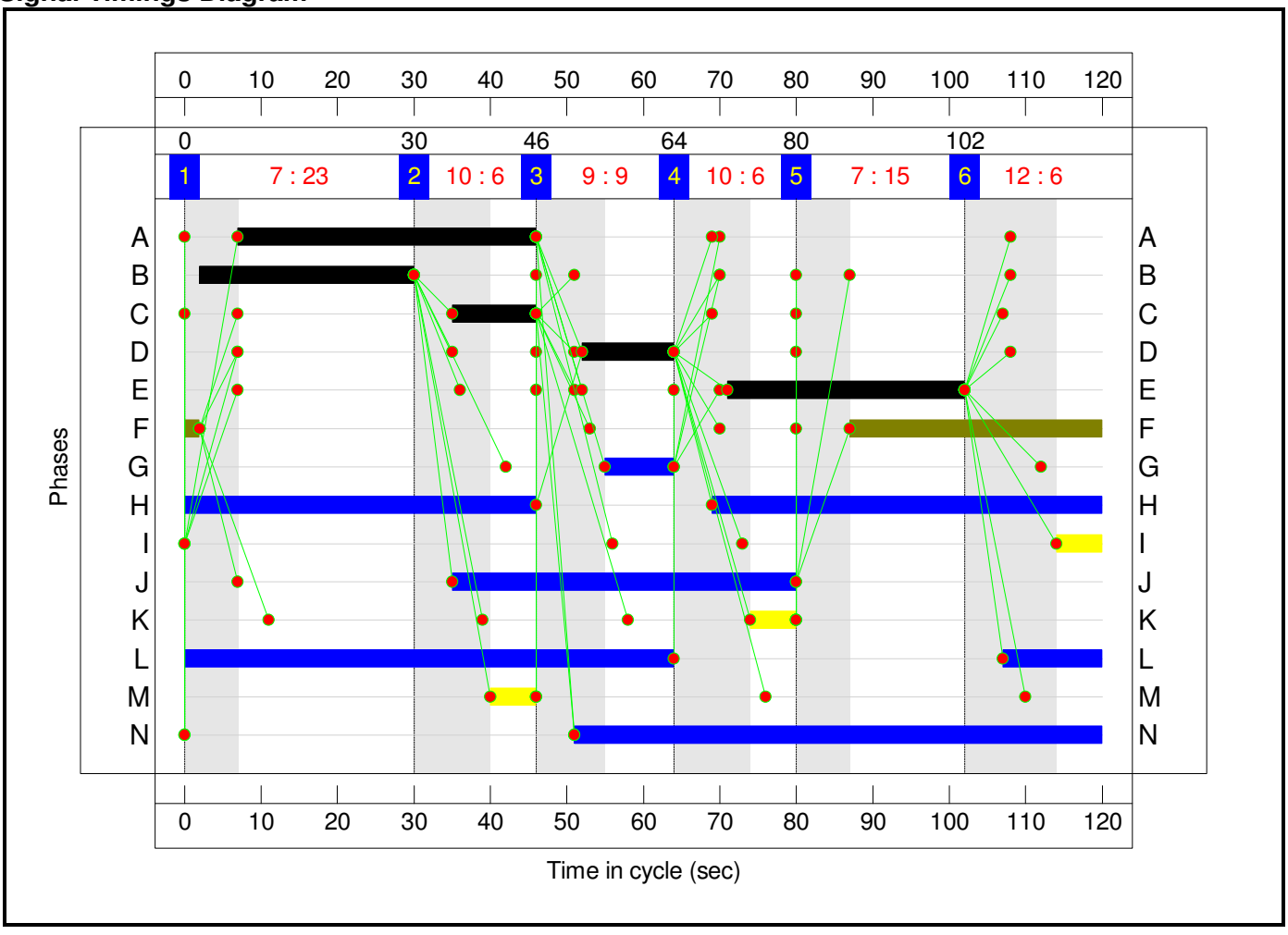
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	23	6	9	6	15	6
Change Point	0	30	46	64	80	102

Signal Timings Diagram

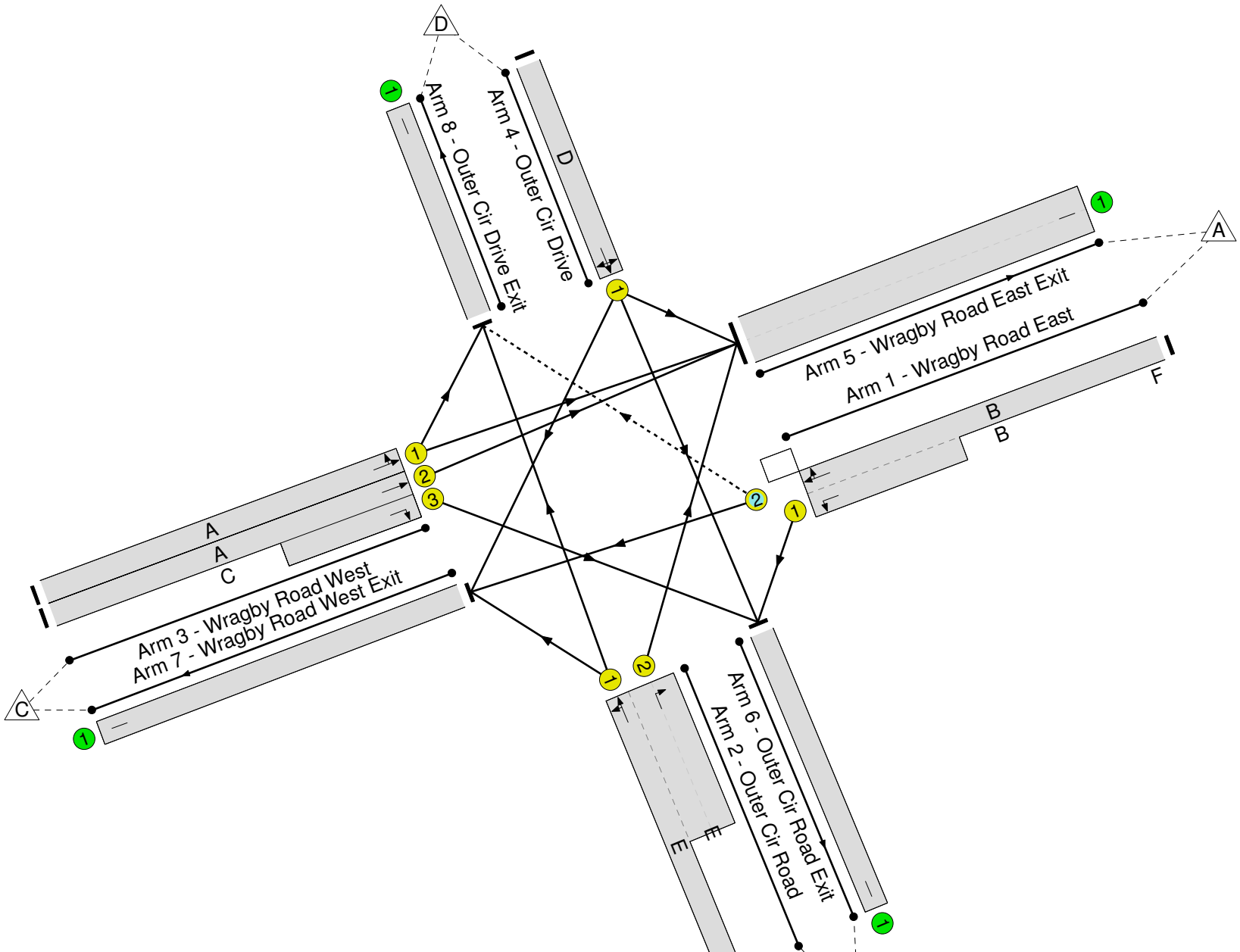


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A158 Wragby Road / Outer Cir Road
PRC: -8.7 %
Total Traffic Delay: 47.1 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.9%**
A158 Wragby Road / Outer Cir Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.9%**
1/2+1/1	Wragby Road East Left Ahead Right	O+U	N/A	N/A	B	F	1	28:63	35	282	1989:1687	223+81	93.0 : 93.0%
2/1+2/2	Outer Cir Road Right Left Ahead	U	N/A	N/A	E		1	31	-	974	2080:3000	380+620	97.5 : 97.5%
3/1	Wragby Road West Ahead Left	U	N/A	N/A	A		1	39	-	350	1937	646	54.2%
3/2+3/3	Wragby Road West Ahead Right	U	N/A	N/A	A C		1	39:11	-	437	2080:1891	605+153	57.7 : 57.7%
4/1	Outer Cir Drive Left Ahead Right	U	N/A	N/A	D		1	12	-	203	1915	207	97.9%
5/1	Wragby Road East Exit	U	N/A	N/A	-		-	-	-	1317	Inf	Inf	0.0%
6/1	Outer Cir Road Exit	U	N/A	N/A	-		-	-	-	348	Inf	Inf	0.0%
7/1	Wragby Road West Exit	U	N/A	N/A	-		-	-	-	199	Inf	Inf	0.0%
8/1	Outer Cir Drive Exit	U	N/A	N/A	-		-	-	-	382	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**72**	**23**	**0**	**24.3**	**22.5**	**0.4**	**47.1**	**-**	**-**	**-**	**-**
A158 Wragby Road / Outer Cir Road	**-**	**-**	**72**	**23**	**0**	**24.3**	**22.5**	**0.4**	**47.1**	**-**	**-**	**-**	**-**
1/2+1/1	282	282	72	23	0	2.5	4.6	0.4	7.6	96.5	5.9	4.6	10.5
2/1+2/2	974	974	-	-	-	11.2	10.5	-	21.7	80.2	15.1	10.5	25.6
3/1	350	350	-	-	-	3.2	0.6	-	3.8	38.6	9.4	0.6	10.0
3/2+3/3	437	437	-	-	-	4.4	0.7	-	5.0	41.5	9.4	0.7	10.1
4/1	203	203	-	-	-	3.0	6.1	-	9.1	161.5	6.7	6.1	12.8
5/1	1317	1317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	348	348	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	199	199	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	382	382	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

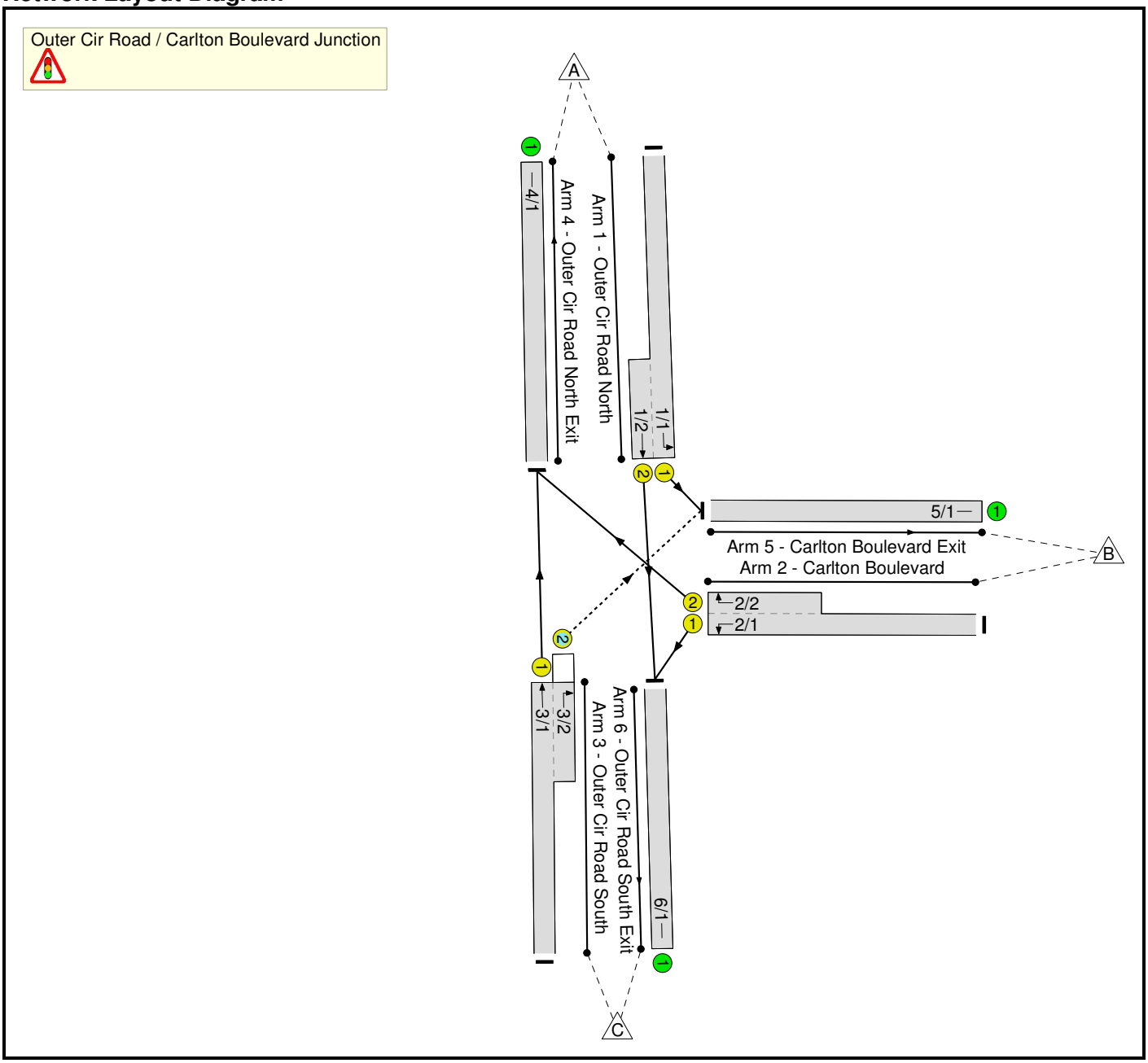
C1 PRC for Signalled Lanes (%): -8.7 Total Delay for Signalled Lanes (pcuHr): 47.14 Cycle Time (s): 120
PRC Over All Lanes (%): -8.7 Total Delay Over All Lanes(pcuHr): 47.14

Full Input Data And Results

User and Project Details

Project:	**Lincoln Eastern Bypass**
Title:	
Location:	
File name:	Outer Cir Road_Carlton Boulevard-ilm.lsg3x
Author:	BHope
Company:	Mouchel
Address:	
Notes:	

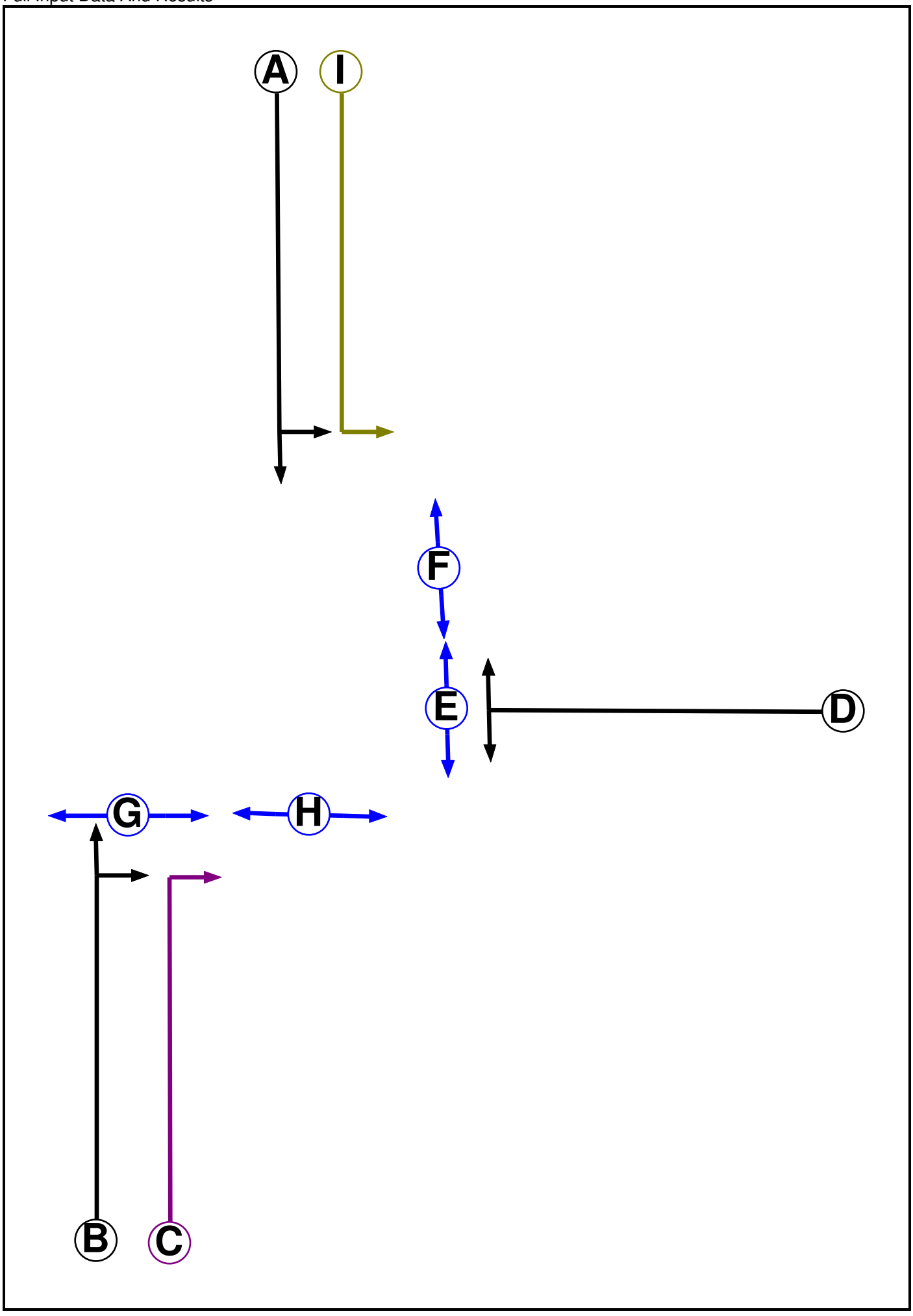
Network Layout Diagram



Full Input Data And Results

Phase Diagram

Full Input Data And Results



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	1
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Filter	A	0	0

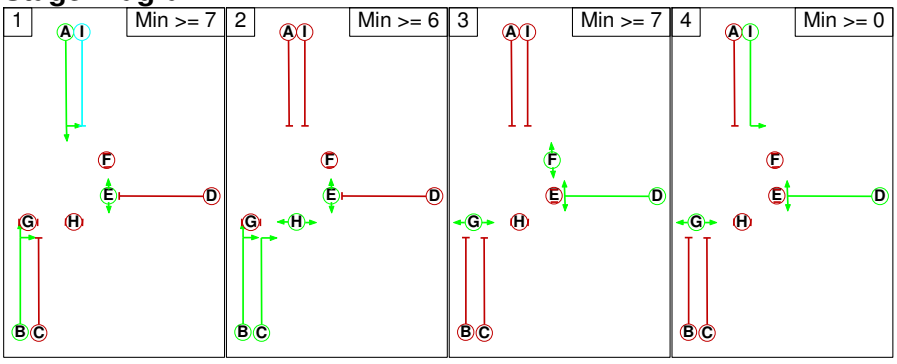
Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		-	6	6	-	6	-	9	-
	B	-		-	5	-	8	5	-	-
	C	6	-		5	-	8	5	-	6
	D	6	6	6		5	-	-	7	-
	E	-	-	-	0		-	-	-	-
	F	0	0	0	-	-		-	-	5
	G	-	6	7	-	-	-		-	-
	H	7	-	-	7	-	-	-		-
	I	-	-	6	-	-	6	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B E
2	B C E H
3	D F G
4	D G I

Stage Diagram



Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	6	6
1	3	B	Losing	6	6
1	4	A	Losing	6	6
1	4	B	Losing	6	6
2	3	B	Losing	6	6
2	4	B	Losing	6	6
3	1	D	Losing	6	6

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		9	14	12
	2	7		14	12
	3	12	7		5
	4	6	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Outer Cir Road / Carlton Boulevard Junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/2 (Outer Cir Road South)	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Outer Cir Road / Carlton Boulevard Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Outer Cir Road North)	U	A I	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	10.00
1/2 (Outer Cir Road North)	U	A	2	3	7.0	Geom	-	3.25	0.00	N	Arm 6 Ahead	Inf
2/1 (Carlton Boulevard)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	10.00
2/2 (Carlton Boulevard)	U	D	2	3	8.0	Geom	-	3.25	0.00	N	Arm 4 Right	15.00
3/1 (Outer Cir Road South)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/2 (Outer Cir Road South)	O	B C	2	3	7.0	Geom	-	3.25	0.00	N	Arm 5 Right	15.00
4/1 (Outer Cir Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Carlton Boulevard Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Outer Cir Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2015 Survey AM'	08:00	09:00	01:00	
2: '2015 Survey PM'	17:00	18:00	01:00	
3: '2033 Do-Minimum AM'	08:00	09:00	01:00	
4: '2033 Do-Minimum PM'	17:00	18:00	01:00	
5: '2033 Do-Something AM'	08:00	09:00	01:00	
6: '2033 Do-Something PM'	17:00	18:00	01:00	
7: '2033 DS1 AM'	08:00	09:00	01:00	
8: '2033 DS1 PM'	17:00	18:00	01:00	
9: '2033 DS2 AM'	08:00	09:00	01:00	
10: '2033 DS2 PM'	17:00	18:00	01:00	

Scenario 1: '2015 Survey AM' (FG1: '2015 Survey AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	104	725	829
	B	212	0	394	606
	C	304	114	0	418
	Tot.	516	218	1119	1853

Traffic Lane Flows

Lane	Scenario 1: 2015 Survey AM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	829(In) 104(Out)
1/2 (short)	725
2/1 (with short)	606(In) 394(Out)
2/2 (short)	212
3/1 (with short)	418(In) 304(Out)
3/2 (short)	114
4/1	516
5/1	218
6/1	1119

Full Input Data And Results

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2015 Survey PM' (FG2: '2015 Survey PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	169	350	519
	B	276	0	163	439
	C	598	241	0	839
	Tot.	874	410	513	1797

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2015 Survey PM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	519(In) 169(Out)
1/2 (short)	350
2/1 (with short)	439(In) 163(Out)
2/2 (short)	276
3/1 (with short)	839(In) 598(Out)
3/2 (short)	241
4/1	874
5/1	410
6/1	513

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2033 Do-Minimum AM' (FG3: '2033 Do-Minimum AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	54	584	638
	B	149	0	219	368
	C	145	46	0	191
	Tot.	294	100	803	1197

Traffic Lane Flows

Lane	Scenario 3: 2033 Do-Minimum AM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	638(In) 54(Out)
1/2 (short)	584
2/1 (with short)	368(In) 219(Out)
2/2 (short)	149
3/1 (with short)	191(In) 145(Out)
3/2 (short)	46
4/1	294
5/1	100
6/1	803

Full Input Data And Results

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2033 Do-Minimum PM' (FG4: '2033 Do-Minimum PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	61	479	540
	B	65	0	84	149
	C	446	259	0	705
	Tot.	511	320	563	1394

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2033 Do-Minimum PM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	540(In) 61(Out)
1/2 (short)	479
2/1 (with short)	149(In) 84(Out)
2/2 (short)	65
3/1 (with short)	705(In) 446(Out)
3/2 (short)	259
4/1	511
5/1	320
6/1	563

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2033 Do-Something AM' (FG5: '2033 Do-Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	47	427	474
	B	145	0	245	390
	C	114	62	0	176
	Tot.	259	109	672	1040

Traffic Lane Flows

Lane	Scenario 5: 2033 Do-Something AM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	474(In) 47(Out)
1/2 (short)	427
2/1 (with short)	390(In) 245(Out)
2/2 (short)	145
3/1 (with short)	176(In) 114(Out)
3/2 (short)	62
4/1	259
5/1	109
6/1	672

Full Input Data And Results

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2033 Do-Something PM' (FG6: '2033 Do-Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	57	235	292
	B	77	0	70	147
	C	389	299	0	688
	Tot.	466	356	305	1127

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2033 Do-Something PM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	292(In) 57(Out)
1/2 (short)	235
2/1 (with short)	147(In) 70(Out)
2/2 (short)	77
3/1 (with short)	688(In) 389(Out)
3/2 (short)	299
4/1	466
5/1	356
6/1	305

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2033 DS1 AM' (FG7: '2033 DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	50	376	426
	B	178	0	286	464
	C	78	75	0	153
	Tot.	256	125	662	1043

Traffic Lane Flows

Lane	Scenario 7: 2033 DS1 AM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	426(In) 50(Out)
1/2 (short)	376
2/1 (with short)	464(In) 286(Out)
2/2 (short)	178
3/1 (with short)	153(In) 78(Out)
3/2 (short)	75
4/1	256
5/1	125
6/1	662

Full Input Data And Results

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2033 DS1 PM' (FG8: '2033 DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	64	230	294
	B	87	0	109	196
	C	350	464	0	814
	Tot.	437	528	339	1304

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2033 DS1 PM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	294(In) 64(Out)
1/2 (short)	230
2/1 (with short)	196(In) 109(Out)
2/2 (short)	87
3/1 (with short)	814(In) 350(Out)
3/2 (short)	464
4/1	437
5/1	528
6/1	339

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 9: '2033 DS2 AM' (FG9: '2033 DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	50	387	437
	B	168	0	254	422
	C	68	72	0	140
	Tot.	236	122	641	999

Traffic Lane Flows

Lane	Scenario 9: 2033 DS2 AM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	437(In) 50(Out)
1/2 (short)	387
2/1 (with short)	422(In) 254(Out)
2/2 (short)	168
3/1 (with short)	140(In) 68(Out)
3/2 (short)	72
4/1	236
5/1	122
6/1	641

Full Input Data And Results

Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2033 DS2 PM' (FG10: '2033 DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	62	233	295
	B	94	0	94	188
	C	391	455	0	846
	Tot.	485	517	327	1329

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2033 DS2 PM
Junction: Outer Cir Road / Carlton Boulevard Junction	
1/1 (with short)	295(In) 62(Out)
1/2 (short)	233
2/1 (with short)	188(In) 94(Out)
2/2 (short)	94
3/1 (with short)	846(In) 391(Out)
3/2 (short)	455
4/1	485
5/1	517
6/1	327

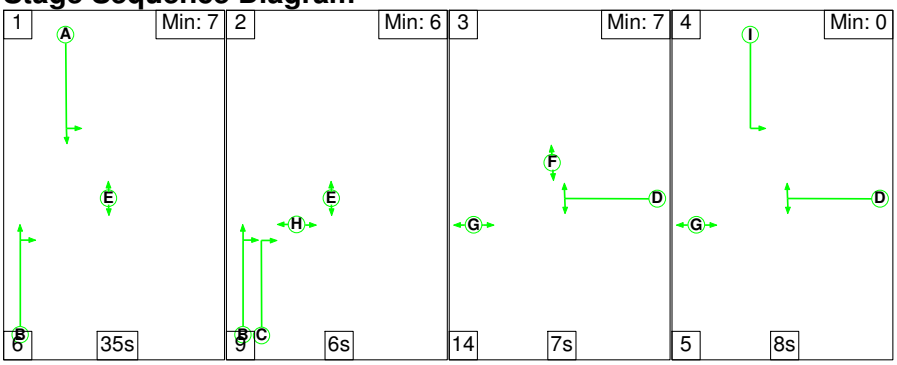
Lane Saturation Flows

Junction: Outer Cir Road / Carlton Boulevard Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Outer Cir Road North)	3.25	0.00	Y	Arm 5 Left	10.00	100.0 %	1687	1687
1/2 (Outer Cir Road North)	3.25	0.00	N	Arm 6 Ahead	Inf	100.0 %	2080	2080
2/1 (Carlton Boulevard)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
2/2 (Carlton Boulevard)	3.25	0.00	N	Arm 4 Right	15.00	100.0 %	1891	1891
3/1 (Outer Cir Road South)	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Outer Cir Road South)	3.25	0.00	N	Arm 5 Right	15.00	100.0 %	1891	1891
4/1 (Outer Cir Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Carlton Boulevard Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Outer Cir Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: '2015 Survey AM' (FG1: '2015 Survey AM', Plan 1: 'Network Control Plan 1')

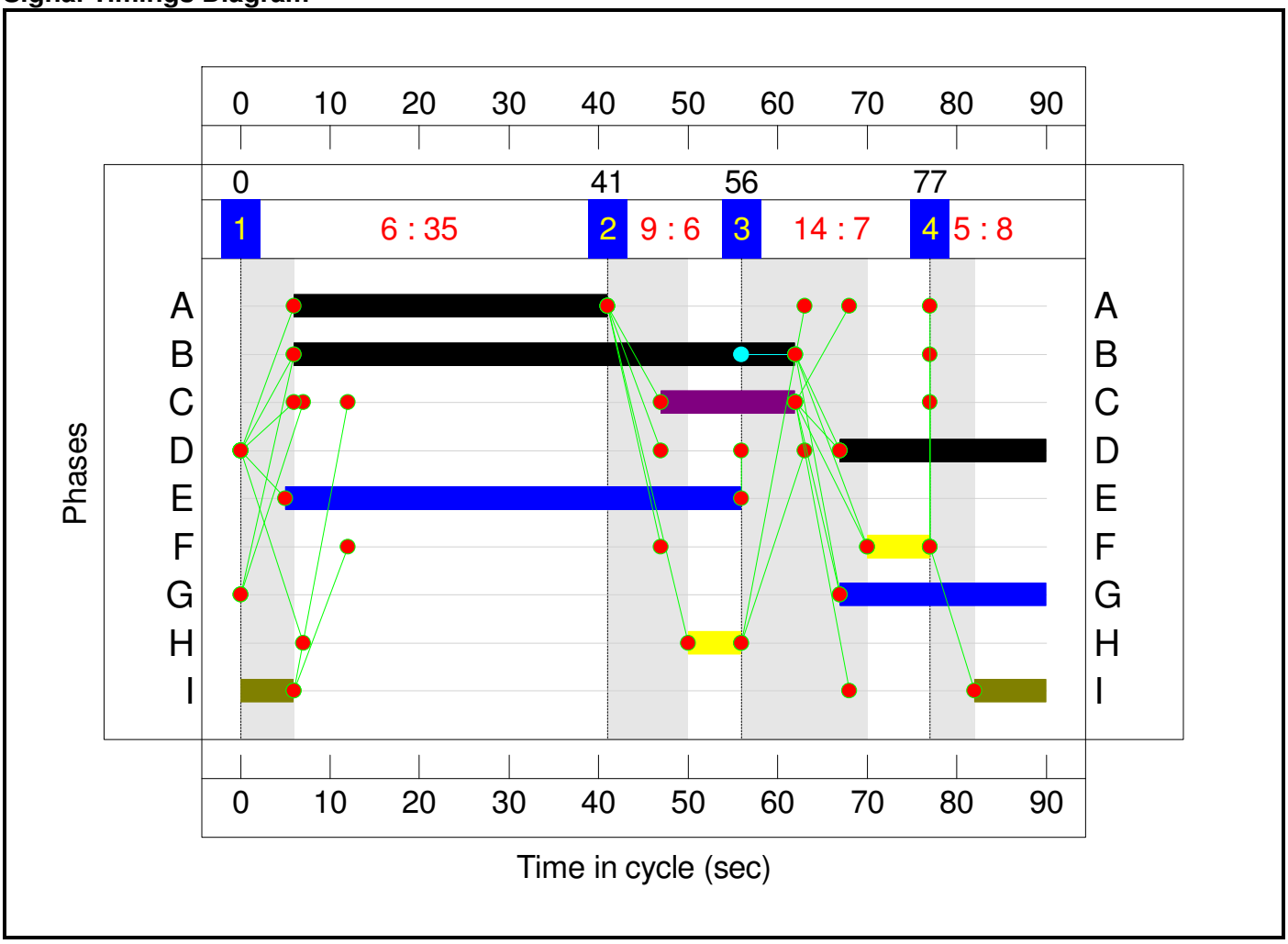
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	35	6	7	8
Change Point	0	41	56	77

Signal Timings Diagram



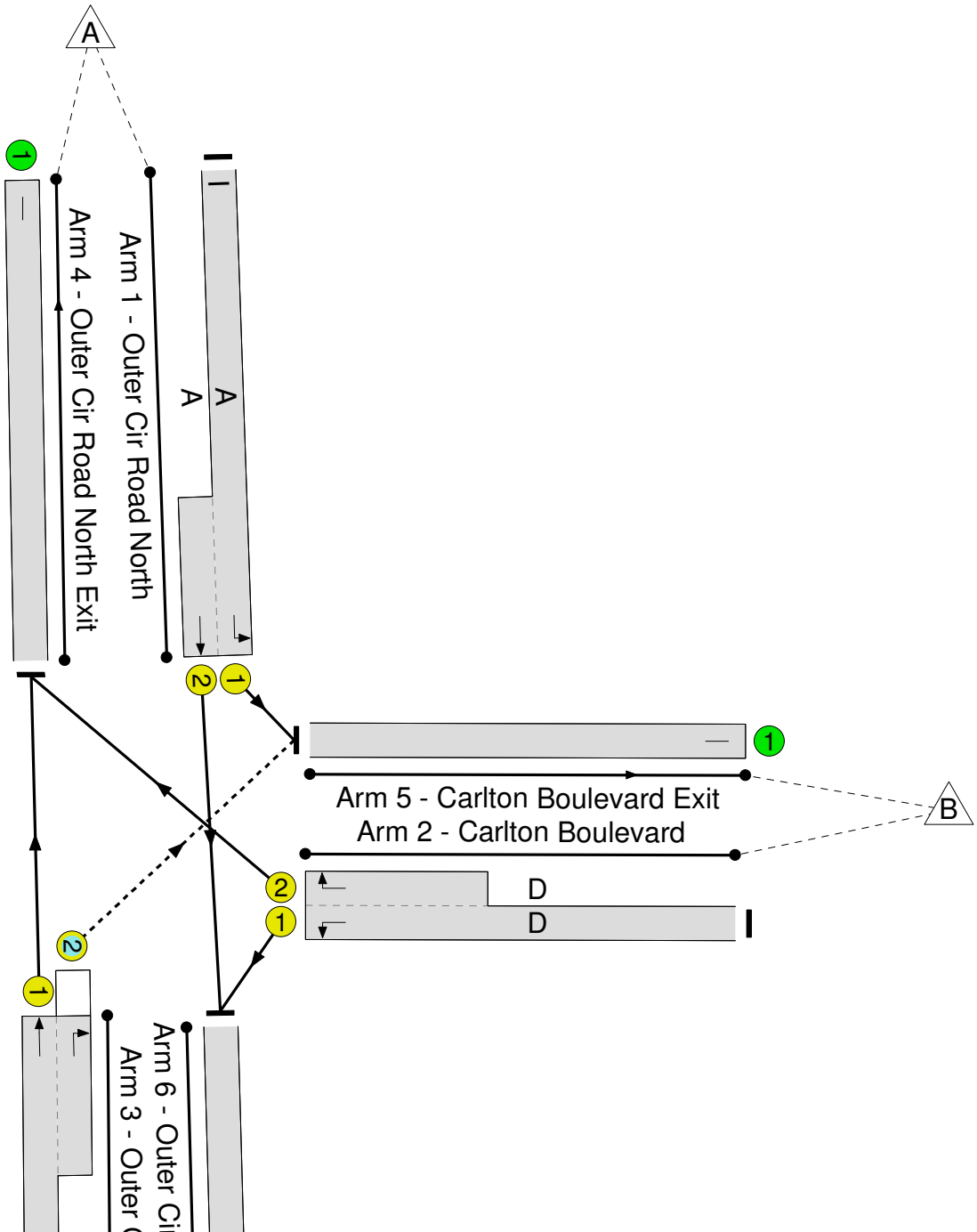
Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: -7.2 %

Total Traffic Delay: 29.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.5%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.5%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:35	14	829	1687:2080	108+751	96.5 : 96.5%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	23	-	606	1687:1891	409+220	96.4 : 96.4%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	56	15	418	1940:1891	965+362	31.5 : 31.5%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	516	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	1119	Inf	Inf	0.0%

Full Input Data And Results

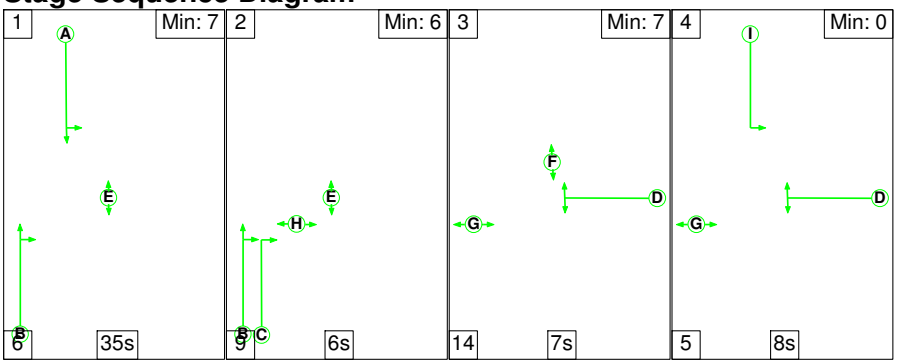
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**8**	**103**	**3**	**11.7**	**16.9**	**0.7**	**29.2**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**8**	**103**	**3**	**11.7**	**16.9**	**0.7**	**29.2**	**-**	**-**	**-**	**-**
1/1+1/2	829	829	-	-	-	5.7	8.7	-	14.4	62.7	19.0	8.7	27.8
2/1+2/2	606	606	-	-	-	5.1	7.9	-	13.0	77.4	10.5	7.9	18.4
3/1+3/2	418	418	8	103	3	0.8	0.2	0.7	1.7	14.8	3.3	0.2	3.5
4/1	516	516	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	218	218	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1119	1119	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -7.2 Total Delay for Signalled Lanes (pcuHr): 29.18 Cycle Time (s): 90
PRC Over All Lanes (%): -7.2 Total Delay Over All Lanes(pcuHr): 29.18

Full Input Data And Results

Scenario 2: '2015 Survey PM' (FG2: '2015 Survey PM', Plan 1: 'Network Control Plan 1')

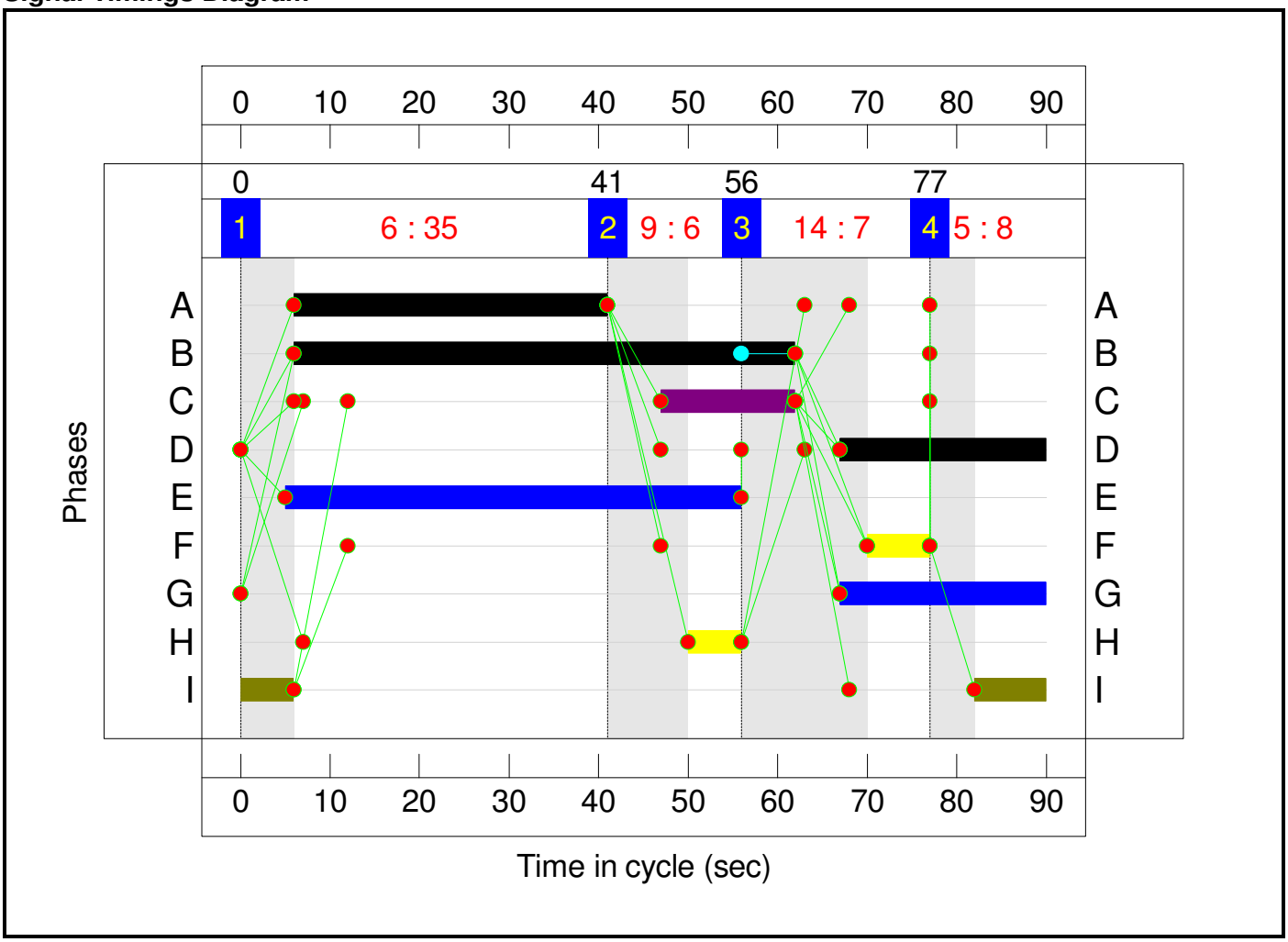
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	35	6	7	8
Change Point	0	41	56	77

Signal Timings Diagram



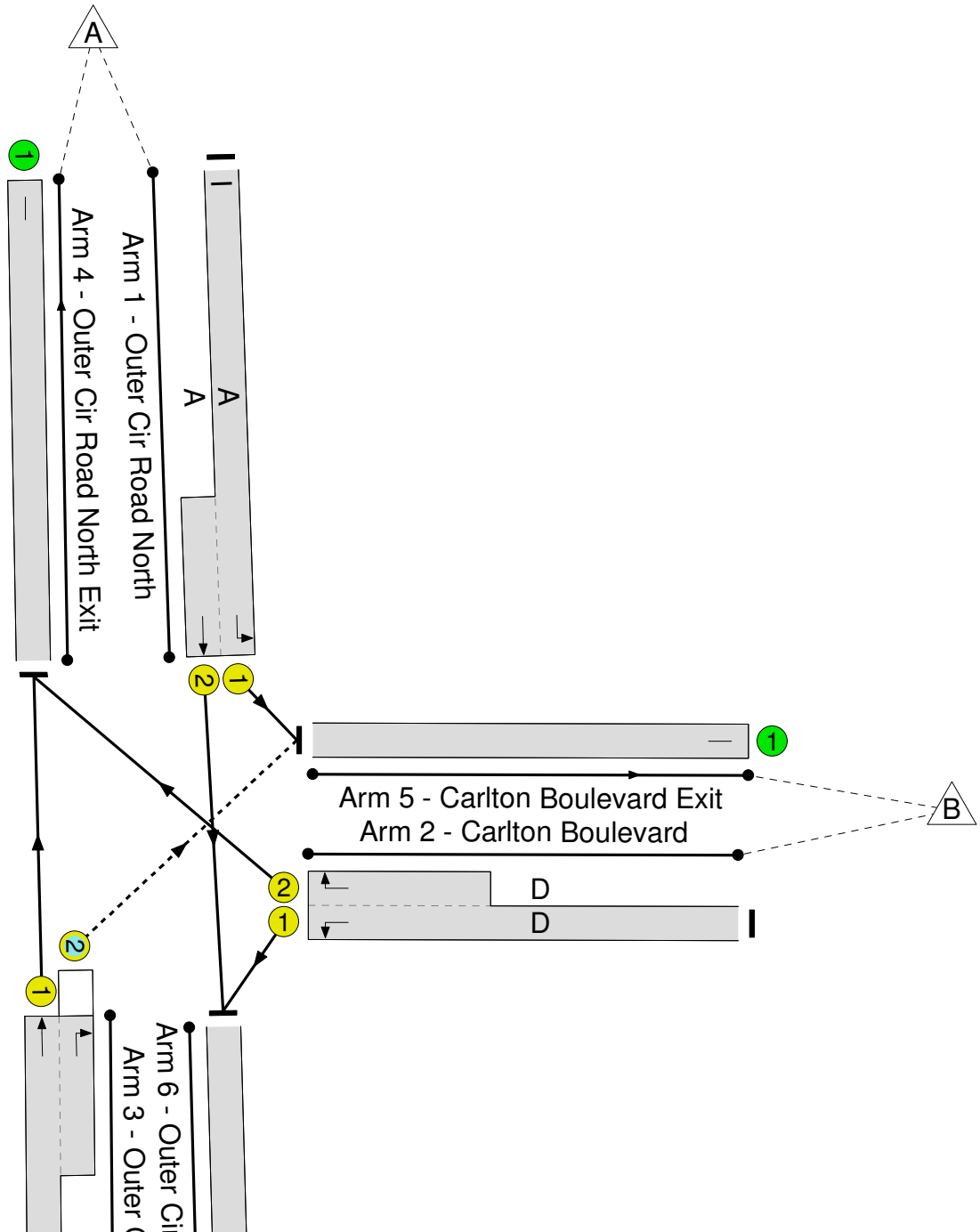
Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 41.4 %

Total Traffic Delay: 10.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.6%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.6%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:35	14	519	1687:2080	303+628	55.8 : 55.8%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	23	-	439	1687:1891	256+434	63.6 : 63.6%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	56	15	839	1940:1891	951+383	62.9 : 62.9%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	874	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**185**	**51**	**5**	**7.8**	**2.3**	**0.4**	**10.5**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**185**	**51**	**5**	**7.8**	**2.3**	**0.4**	**10.5**	**-**	**-**	**-**	**-**
1/1+1/2	519	519	-	-	-	2.4	0.6	-	3.0	20.7	6.2	0.6	6.9
2/1+2/2	439	439	-	-	-	3.4	0.9	-	4.3	34.9	5.9	0.9	6.8
3/1+3/2	839	839	185	51	5	2.0	0.8	0.4	3.3	14.1	8.6	0.8	9.5
4/1	874	874	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 41.4
PRC Over All Lanes (%): 41.4

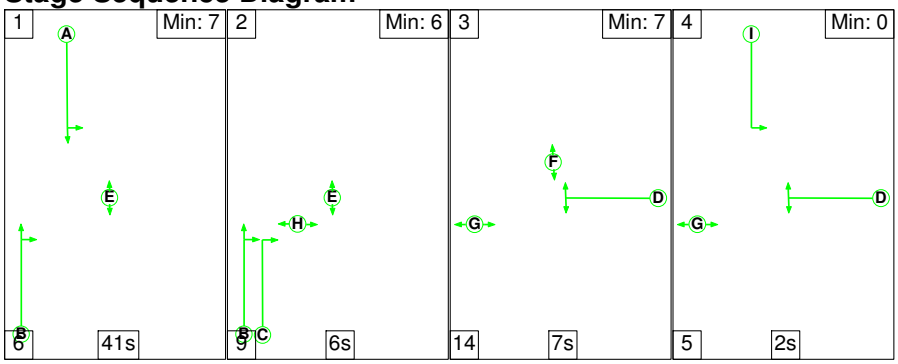
Total Delay for Signalled Lanes (pcuHr): 10.54
Total Delay Over All Lanes(pcuHr): 10.54

Cycle Time (s): 90

Full Input Data And Results

Scenario 3: '2033 Do-Minimum AM' (FG3: '2033 Do-Minimum AM', Plan 1: 'Network Control Plan 1')

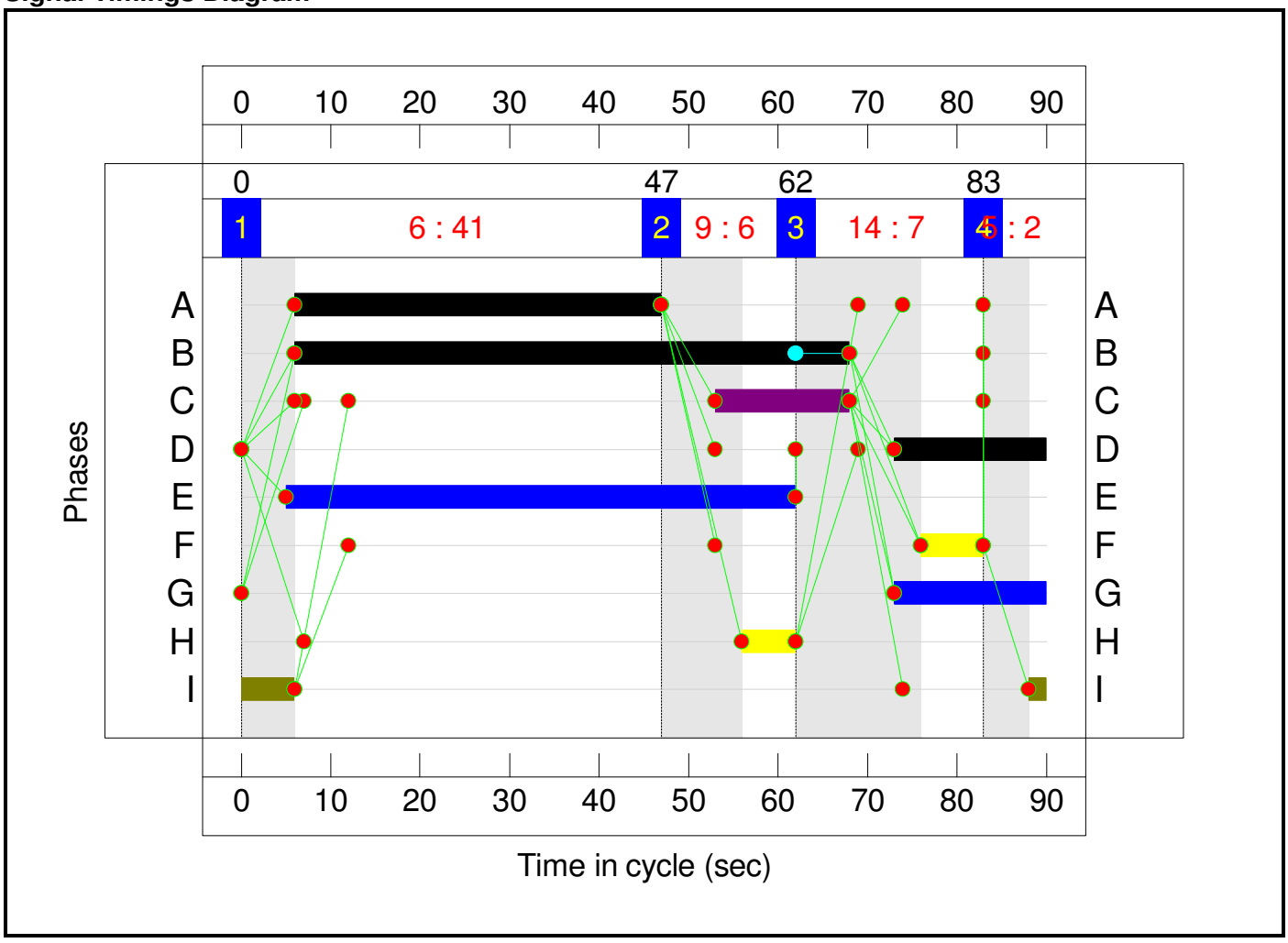
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	41	6	7	2
Change Point	0	47	62	83

Signal Timings Diagram

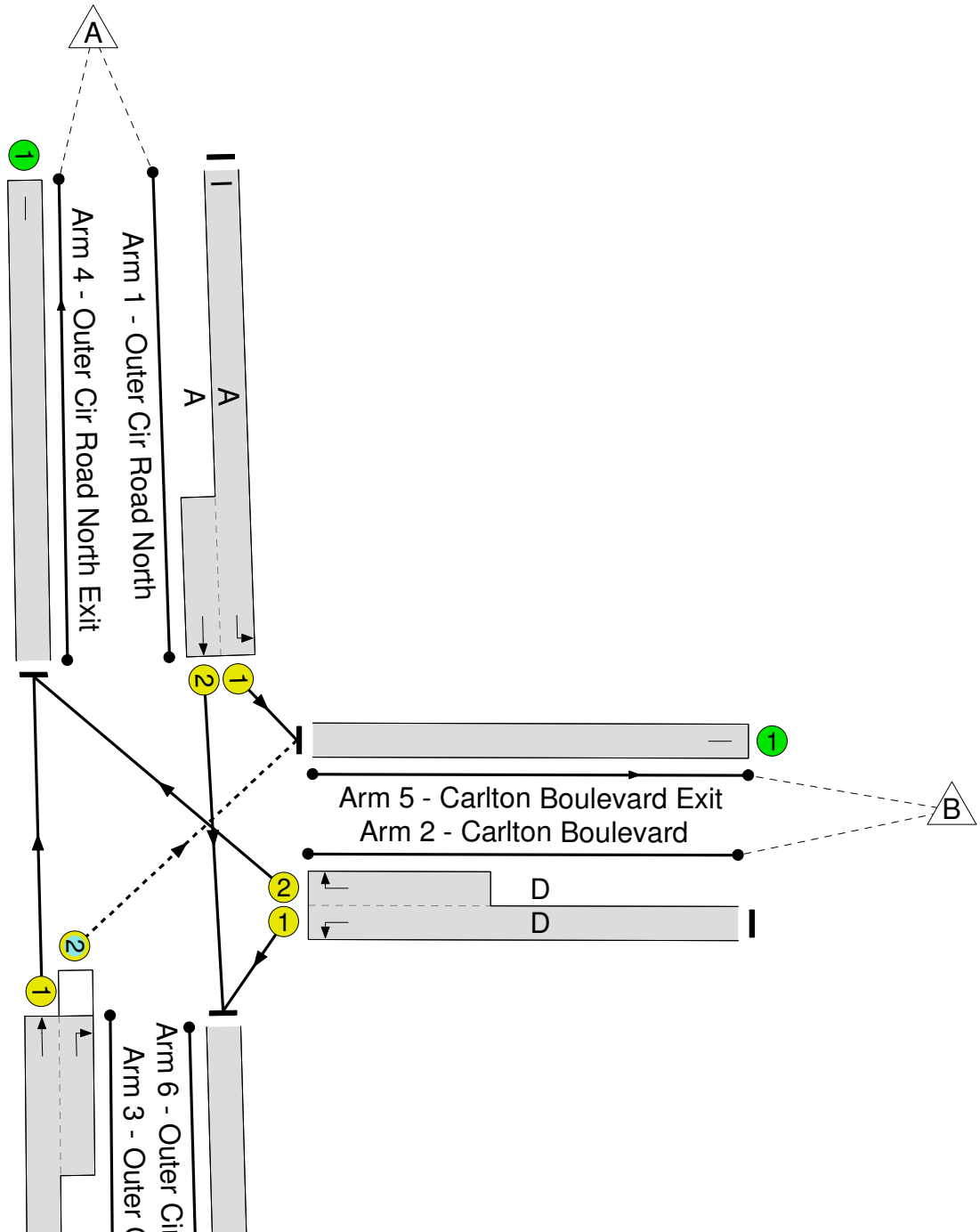


Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 36.3 %
Total Traffic Delay: 8.7 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.0%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.0%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:41	8	638	1687:2080	83+902	64.7 : 64.7%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	17	-	368	1687:1891	332+226	66.0 : 66.0%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	62	15	191	1940:1891	1093+347	13.3 : 13.3%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	294	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	803	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**35**	**10**	**1**	**6.6**	**2.0**	**0.1**	**8.7**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**35**	**10**	**1**	**6.6**	**2.0**	**0.1**	**8.7**	**-**	**-**	**-**	**-**
1/1+1/2	638	638	-	-	-	3.1	0.9	-	4.0	22.5	11.2	0.9	12.1
2/1+2/2	368	368	-	-	-	3.3	1.0	-	4.3	41.8	5.0	1.0	6.0
3/1+3/2	191	191	35	10	1	0.2	0.1	0.1	0.4	8.0	1.2	0.1	1.2
4/1	294	294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	803	803	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 36.3
PRC Over All Lanes (%): 36.3

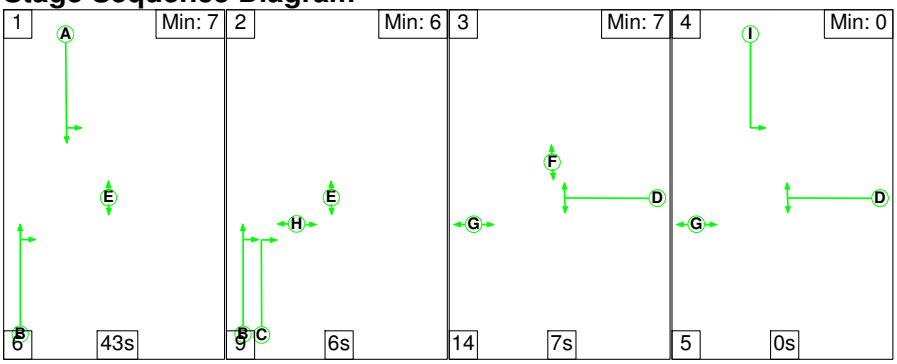
Total Delay for Signalled Lanes (pcuHr): 8.68
Total Delay Over All Lanes(pcuHr): 8.68

Cycle Time (s): 90

Full Input Data And Results

Scenario 4: '2033 Do-Minimum PM' (FG4: '2033 Do-Minimum PM', Plan 1: 'Network Control Plan 1')

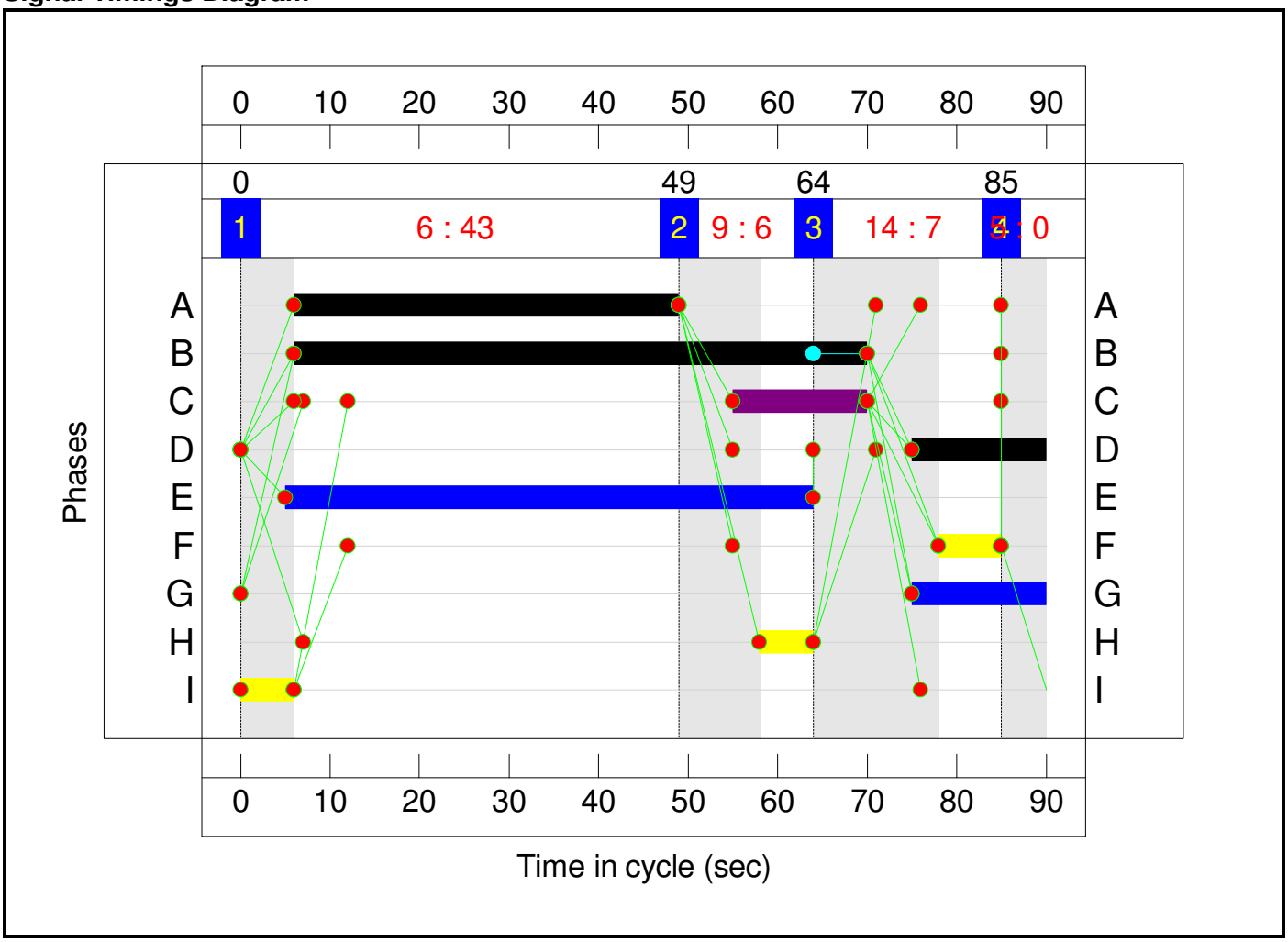
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	43	6	7	0
Change Point	0	49	64	85

Signal Timings Diagram



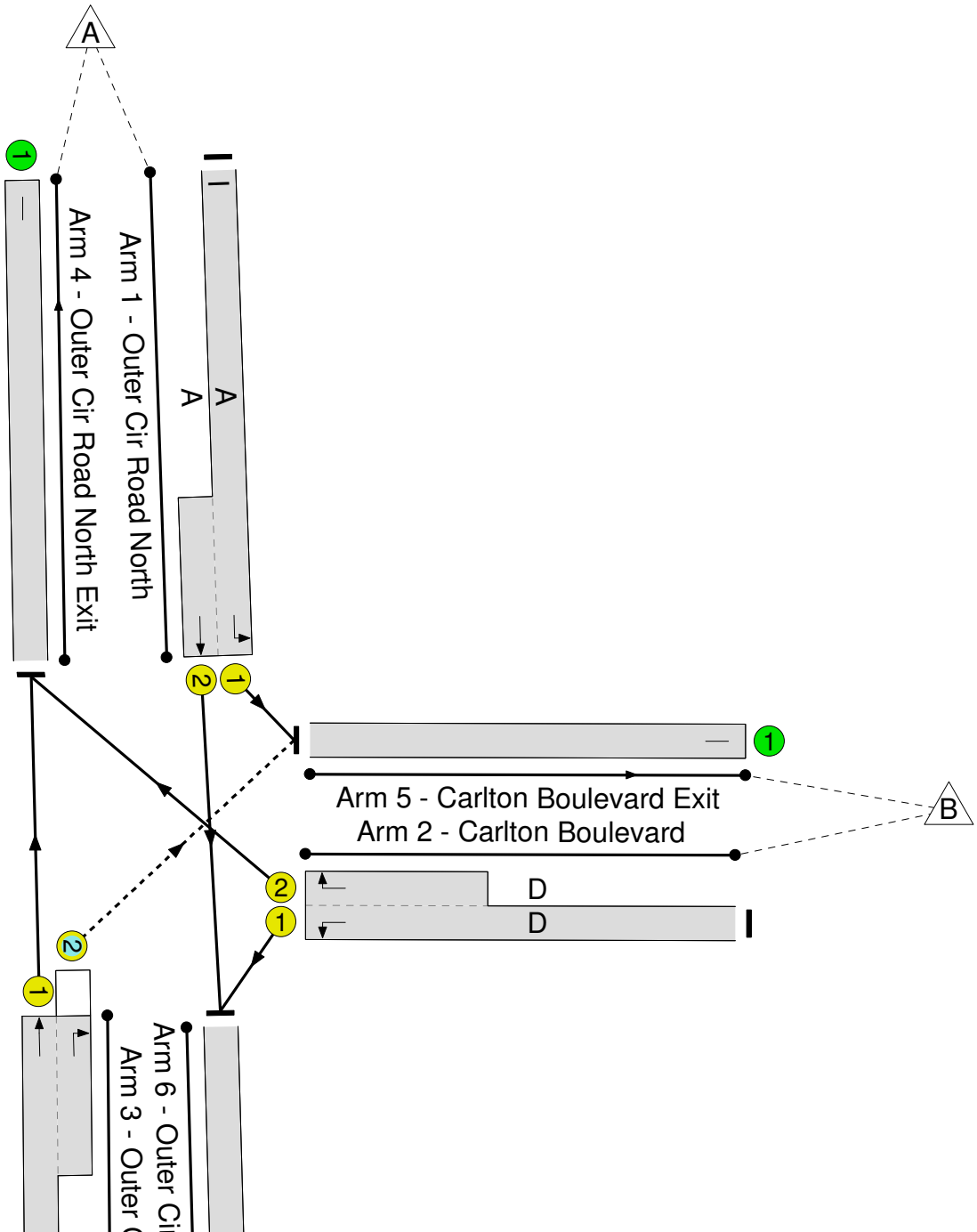
Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 72.7 %

Total Traffic Delay: 6.1 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.1%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.1%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:43	6	540	1687:2080	117+919	52.1 : 52.1%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	15	-	149	1687:1891	300+232	28.0 : 28.0%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	64	15	705	1940:1891	982+571	45.4 : 45.4%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	511	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**199**	**55**	**6**	**4.5**	**1.2**	**0.5**	**6.1**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**199**	**55**	**6**	**4.5**	**1.2**	**0.5**	**6.1**	**-**	**-**	**-**	**-**
1/1+1/2	540	540	-	-	-	2.2	0.5	-	2.7	18.2	8.1	0.5	8.6
2/1+2/2	149	149	-	-	-	1.3	0.2	-	1.5	36.5	1.8	0.2	2.0
3/1+3/2	705	705	199	55	6	1.0	0.4	0.5	1.9	9.5	4.0	0.4	4.4
4/1	511	511	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	563	563	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 72.7
PRC Over All Lanes (%): 72.7

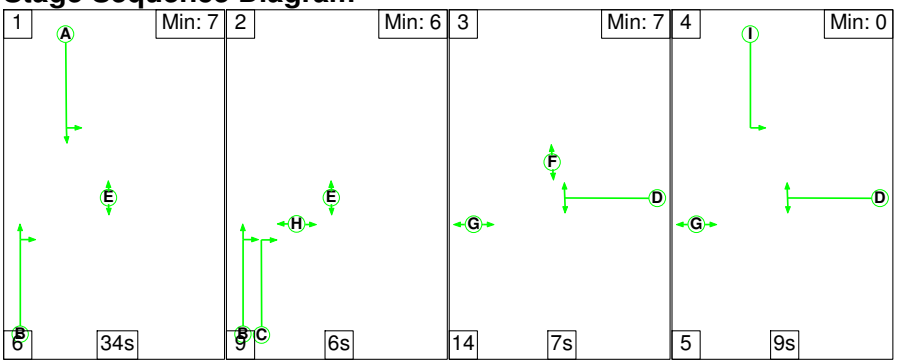
Total Delay for Signalled Lanes (pcuHr): 6.11
Total Delay Over All Lanes(pcuHr): 6.11

Cycle Time (s): 90

Full Input Data And Results

Scenario 5: '2033 Do-Something AM' (FG5: '2033 Do-Something AM', Plan 1: 'Network Control Plan 1')

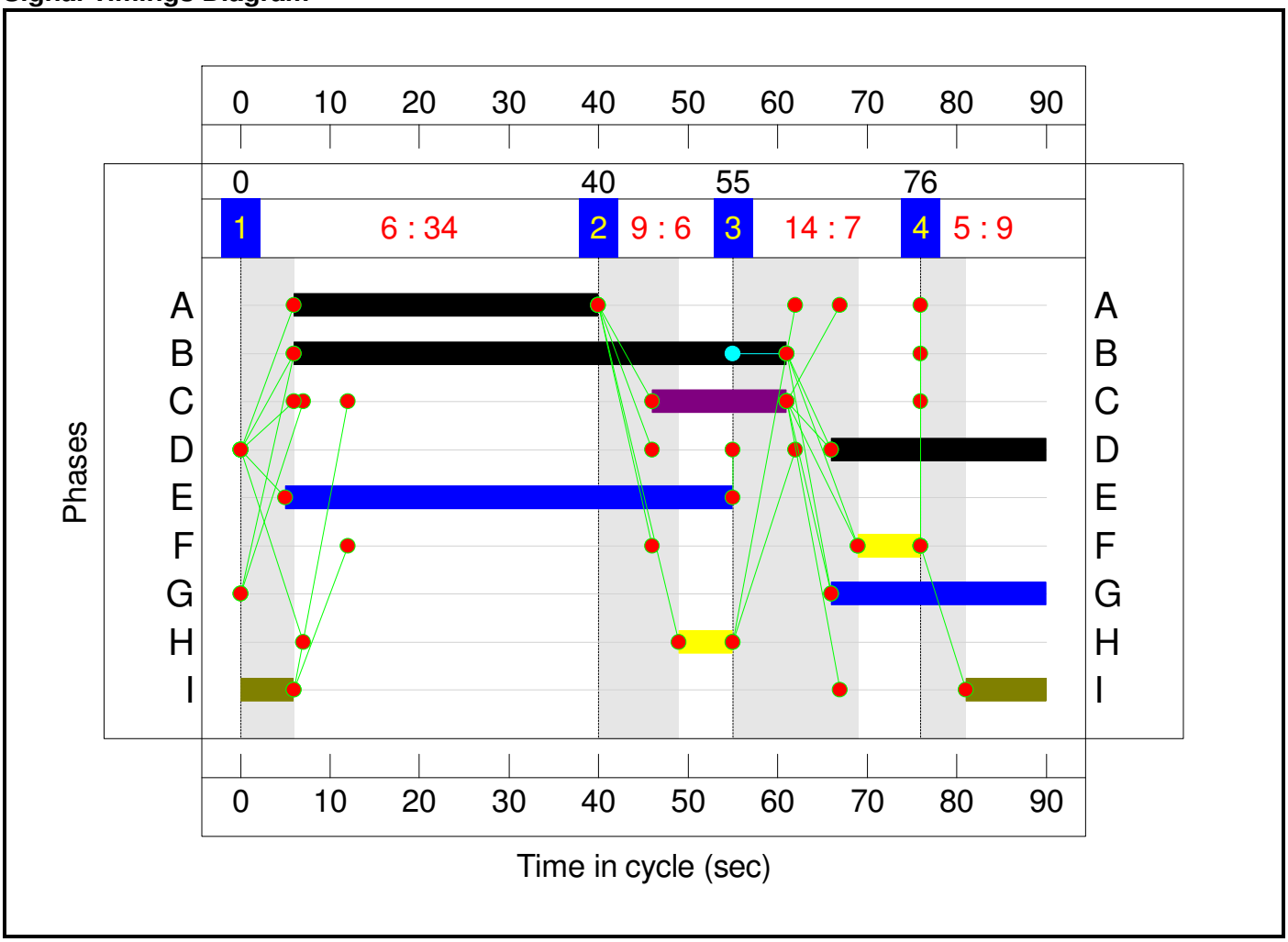
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	34	6	7	9
Change Point	0	40	55	76

Signal Timings Diagram

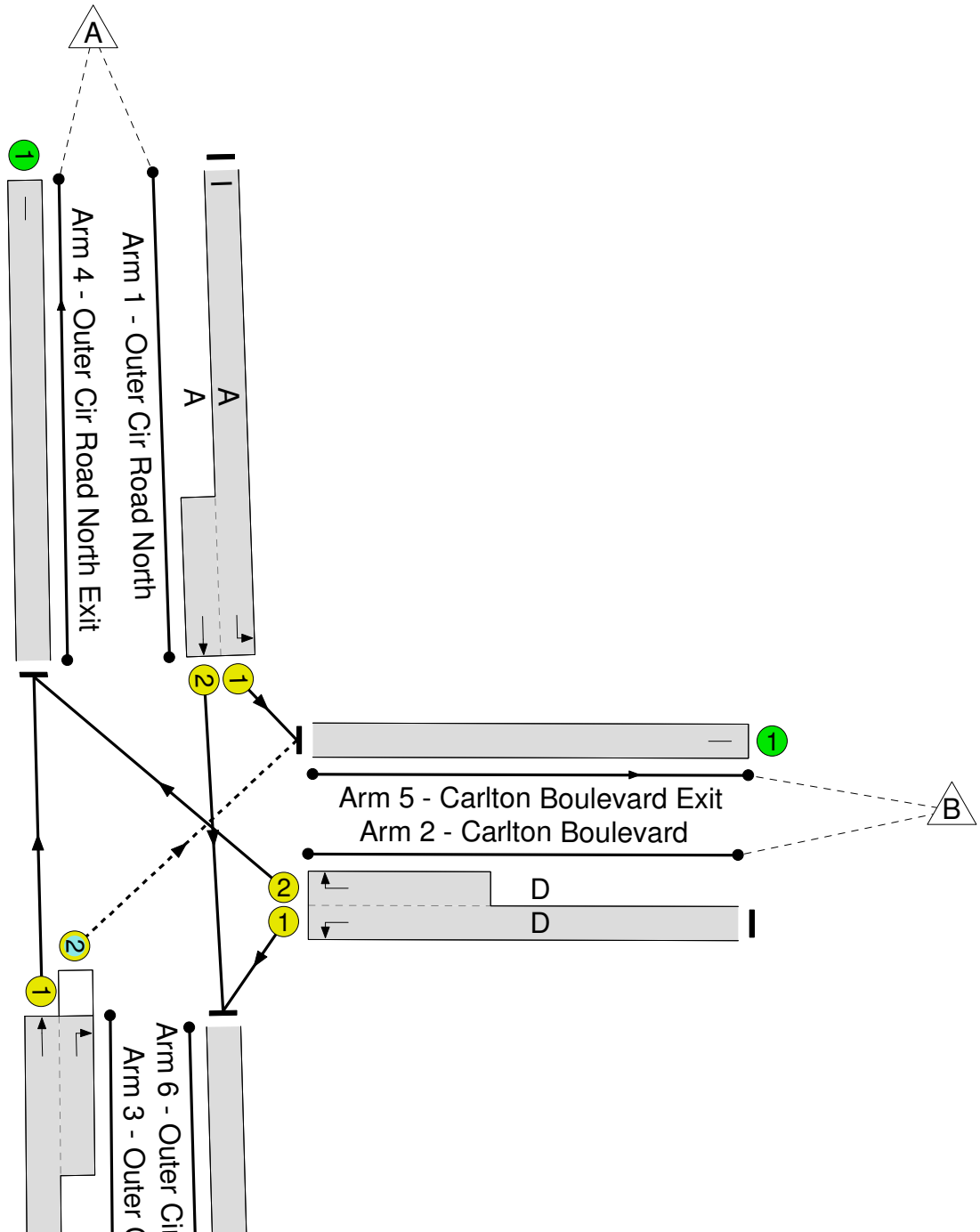


Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 53.6 %
Total Traffic Delay: 7.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**58.6%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**58.6%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:34	15	474	1687:2080	82+748	57.1 : 57.1%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	24	-	390	1687:1891	418+247	58.6 : 58.6%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	55	15	176	1940:1891	875+476	13.0 : 13.0%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	259	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	109	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**48**	**13**	**1**	**5.9**	**1.4**	**0.1**	**7.4**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**48**	**13**	**1**	**5.9**	**1.4**	**0.1**	**7.4**	**-**	**-**	**-**	**-**
1/1+1/2	474	474	-	-	-	2.6	0.7	-	3.3	25.0	8.4	0.7	9.1
2/1+2/2	390	390	-	-	-	2.9	0.7	-	3.6	33.2	5.2	0.7	5.9
3/1+3/2	176	176	48	13	1	0.3	0.1	0.1	0.5	11.0	1.1	0.1	1.2
4/1	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 53.6
PRC Over All Lanes (%): 53.6

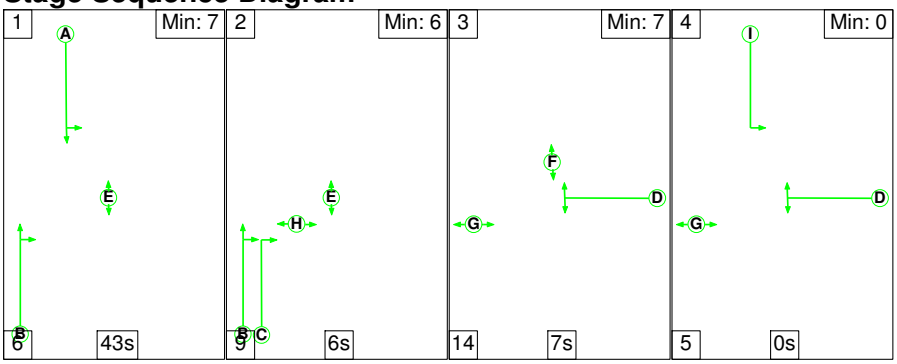
Total Delay for Signalled Lanes (pcuHr): 7.43
Total Delay Over All Lanes(pcuHr): 7.43

Cycle Time (s): 90

Full Input Data And Results

Scenario 6: '2033 Do-Something PM' (FG6: '2033 Do-Something PM', Plan 1: 'Network Control Plan 1')

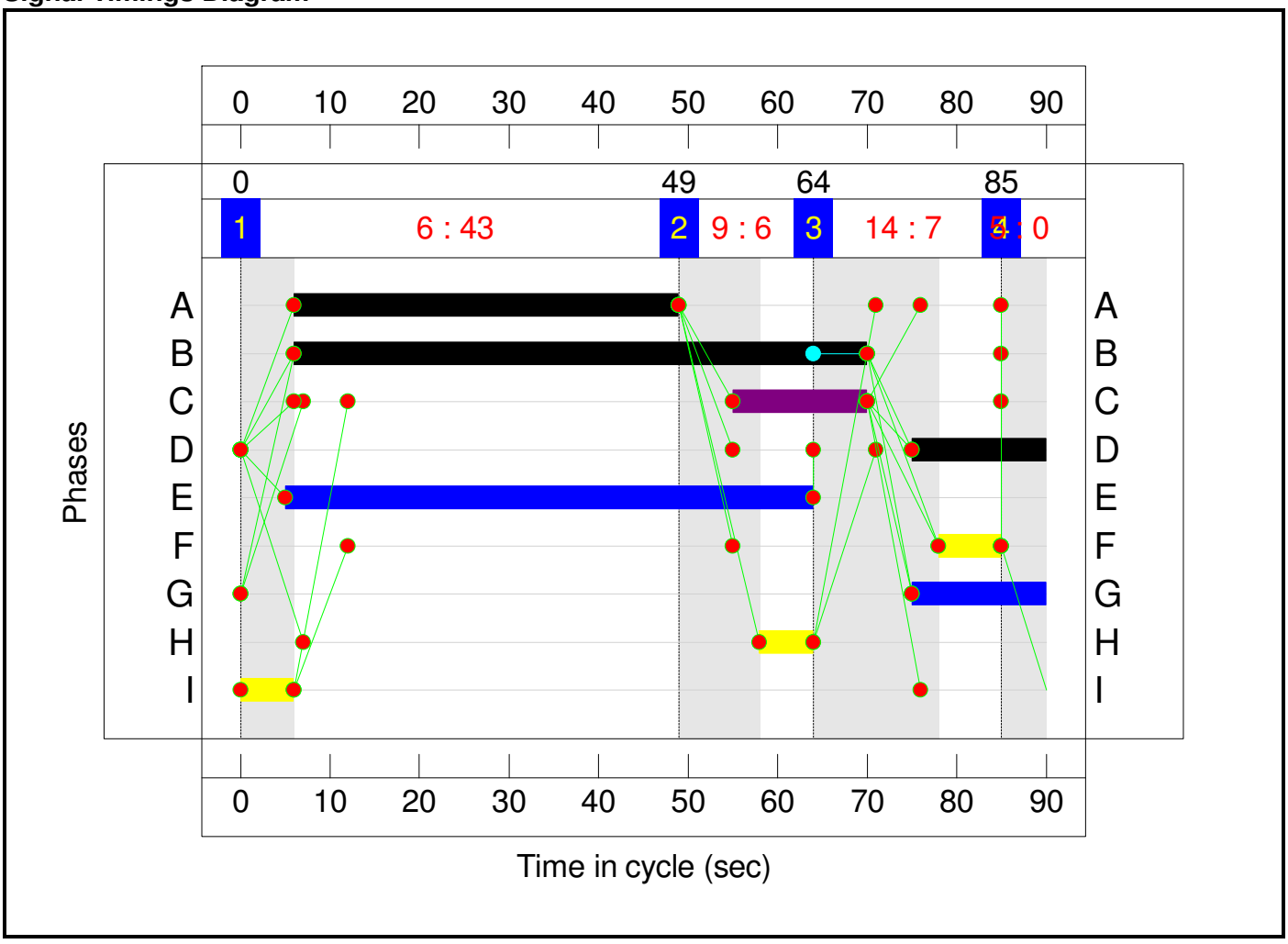
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	43	6	7	0
Change Point	0	49	64	85

Signal Timings Diagram

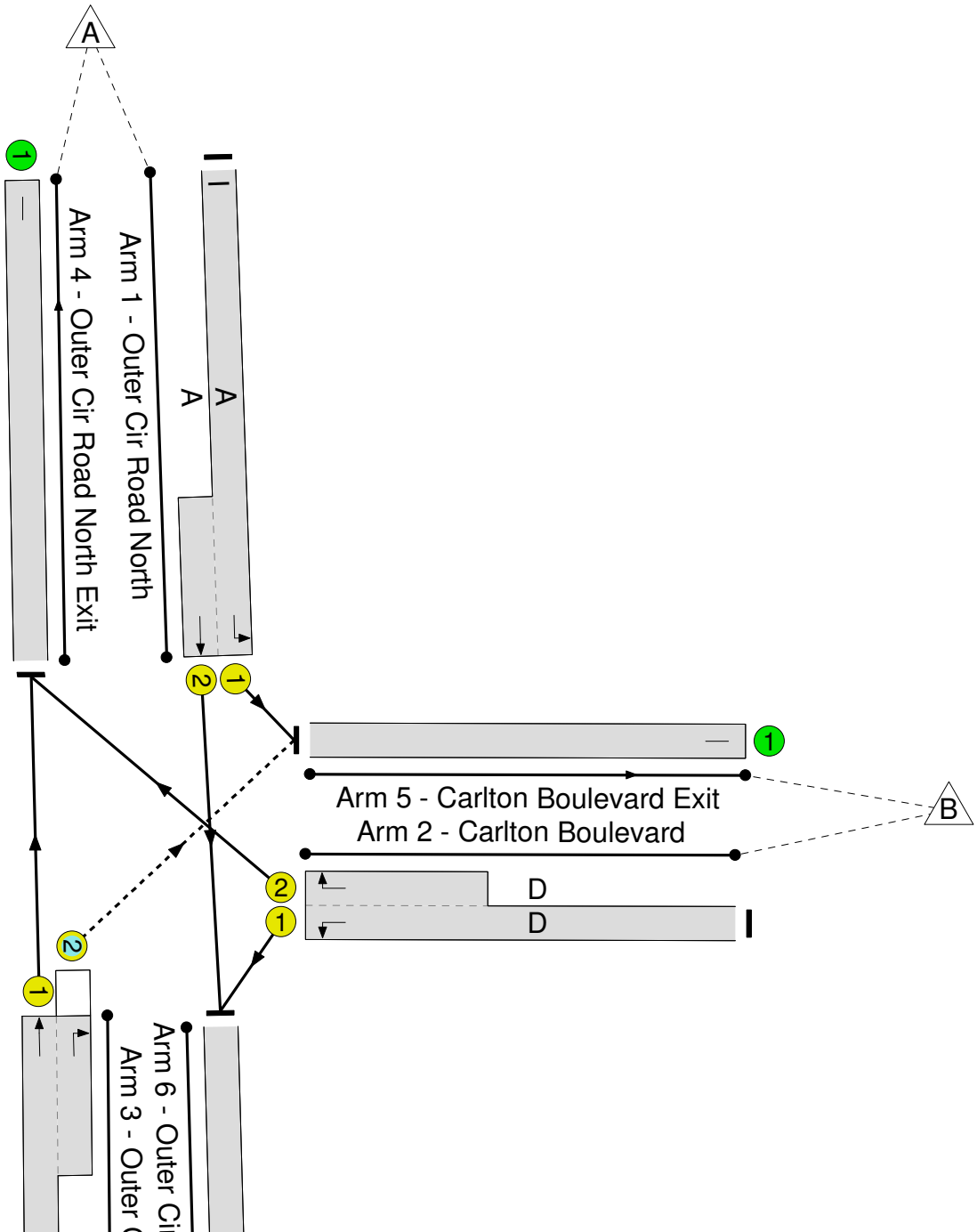


Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 109.8 %
Total Traffic Delay: 4.1 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**42.9%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**42.9%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:43	6	292	1687:2080	206+849	27.7 : 27.7%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	15	-	147	1687:1891	300+330	23.3 : 23.3%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	64	15	688	1940:1891	907+697	42.9 : 42.9%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	356	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	305	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**229**	**63**	**7**	**3.2**	**0.7**	**0.2**	**4.1**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**229**	**63**	**7**	**3.2**	**0.7**	**0.2**	**4.1**	**-**	**-**	**-**	**-**
1/1+1/2	292	292	-	-	-	1.0	0.2	-	1.2	14.8	3.3	0.2	3.5
2/1+2/2	147	147	-	-	-	1.3	0.2	-	1.4	35.5	1.6	0.2	1.8
3/1+3/2	688	688	229	63	7	0.9	0.4	0.2	1.5	7.6	3.3	0.4	3.7
4/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	356	356	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 109.8
PRC Over All Lanes (%): 109.8

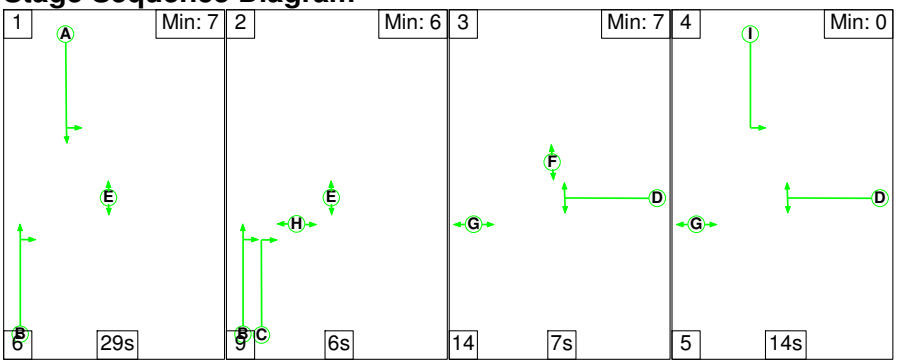
Total Delay for Signalled Lanes (pcuHr): 4.10
Total Delay Over All Lanes(pcuHr): 4.10

Cycle Time (s): 90

Full Input Data And Results

Scenario 7: '2033 DS1 AM' (FG7: '2033 DS1 AM', Plan 1: 'Network Control Plan 1')

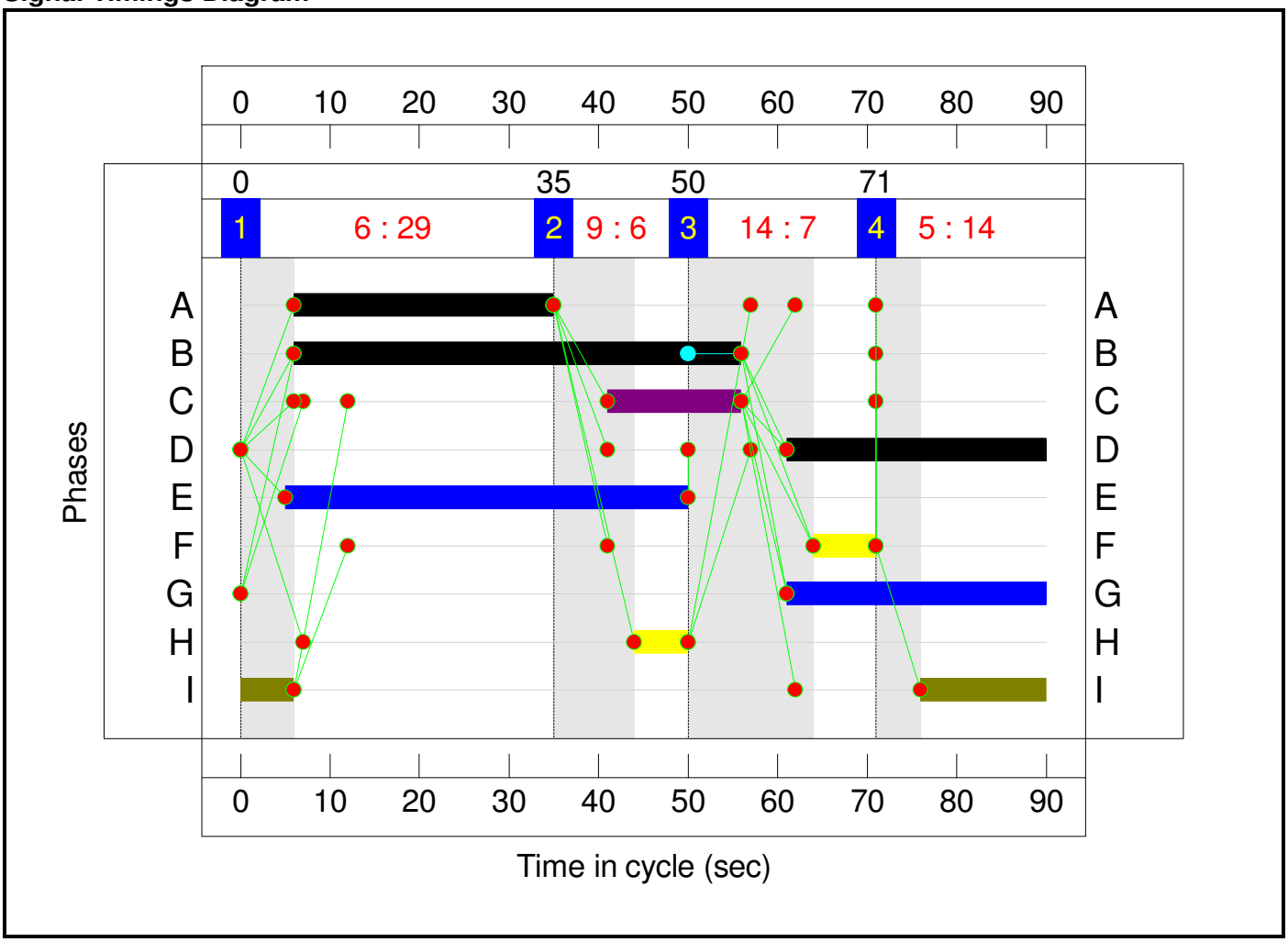
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	29	6	7	14
Change Point	0	35	50	71

Signal Timings Diagram



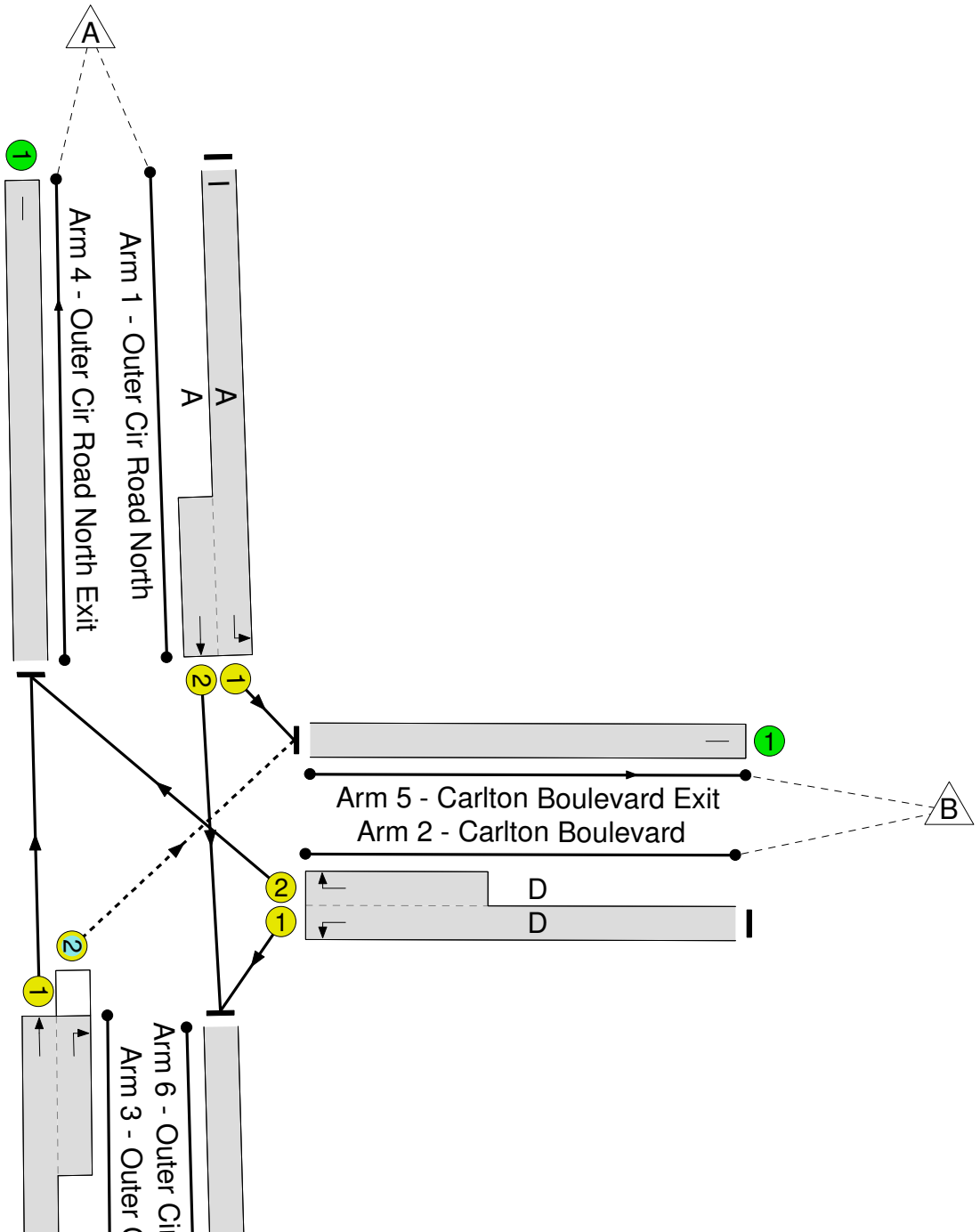
Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 50.0 %

Total Traffic Delay: 7.8 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**60.0%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**60.0%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:29	20	426	1687:2080	85+637	59.0 : 59.0%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	29	-	464	1687:1891	477+297	60.0 : 60.0%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	50	15	153	1940:1891	602+579	13.0 : 13.0%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	256	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	125	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**57**	**16**	**2**	**6.1**	**1.5**	**0.2**	**7.8**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**57**	**16**	**2**	**6.1**	**1.5**	**0.2**	**7.8**	**-**	**-**	**-**	**-**
1/1+1/2	426	426	-	-	-	2.7	0.7	-	3.4	28.7	7.8	0.7	8.5
2/1+2/2	464	464	-	-	-	3.0	0.7	-	3.8	29.1	5.7	0.7	6.5
3/1+3/2	153	153	57	16	2	0.4	0.1	0.2	0.6	14.4	0.9	0.1	0.9
4/1	256	256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	125	125	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 50.0
PRC Over All Lanes (%): 50.0

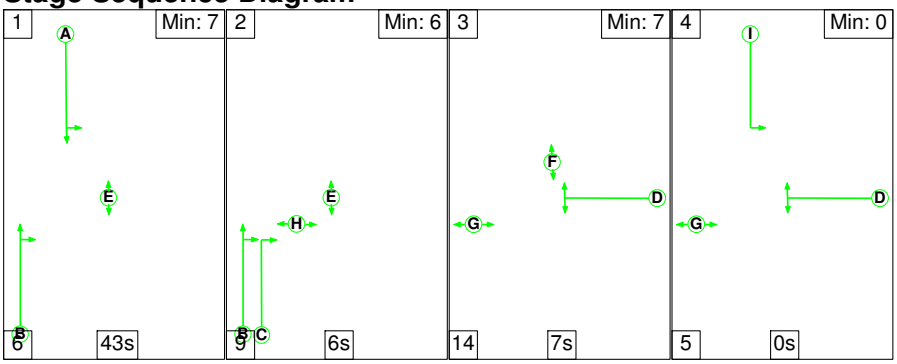
Total Delay for Signalled Lanes (pcuHr): 7.76
Total Delay Over All Lanes(pcuHr): 7.76

Cycle Time (s): 90

Full Input Data And Results

Scenario 8: '2033 DS1 PM' (FG8: '2033 DS1 PM', Plan 1: 'Network Control Plan 1')

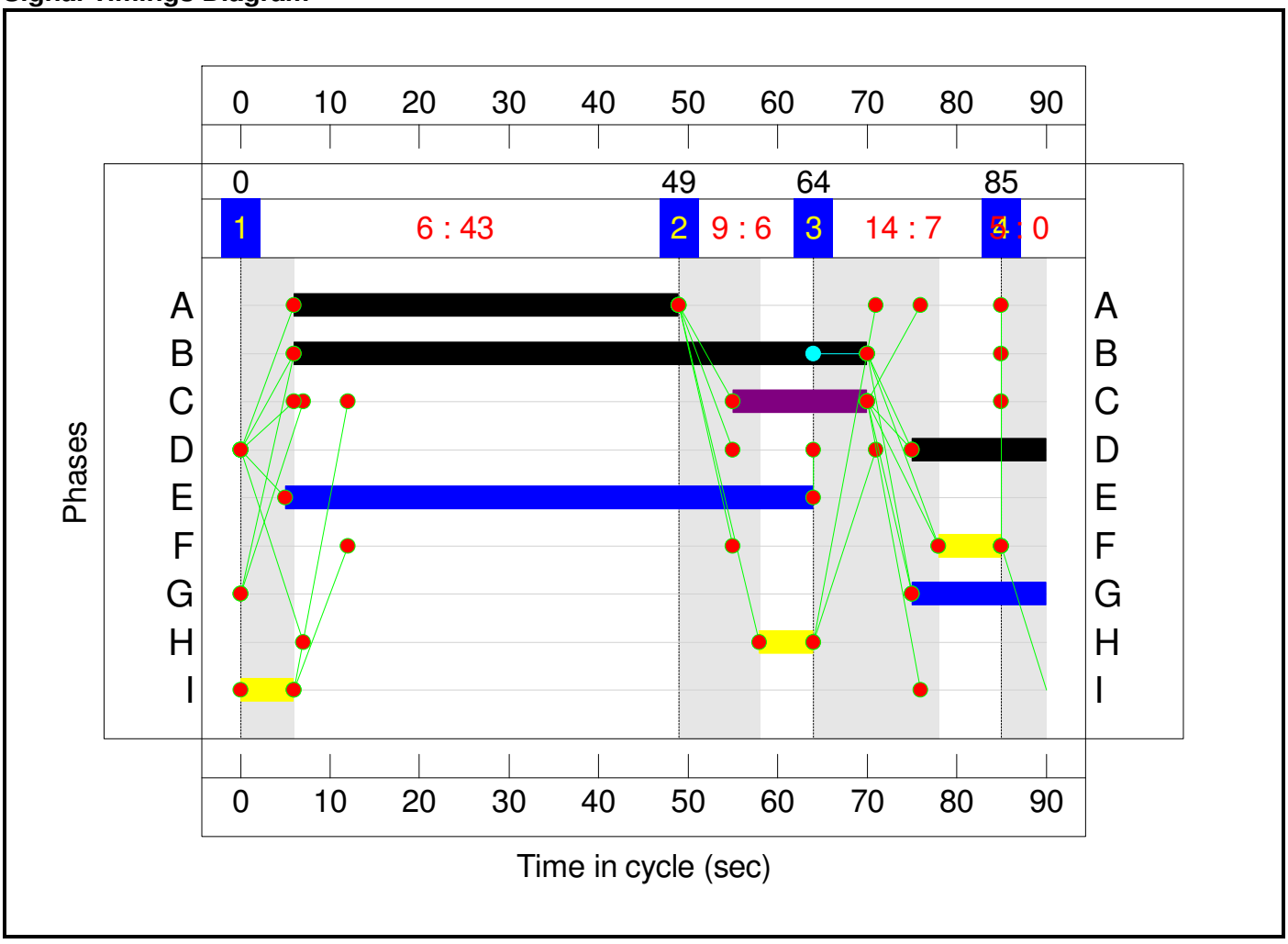
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	43	6	7	0
Change Point	0	49	64	85

Signal Timings Diagram



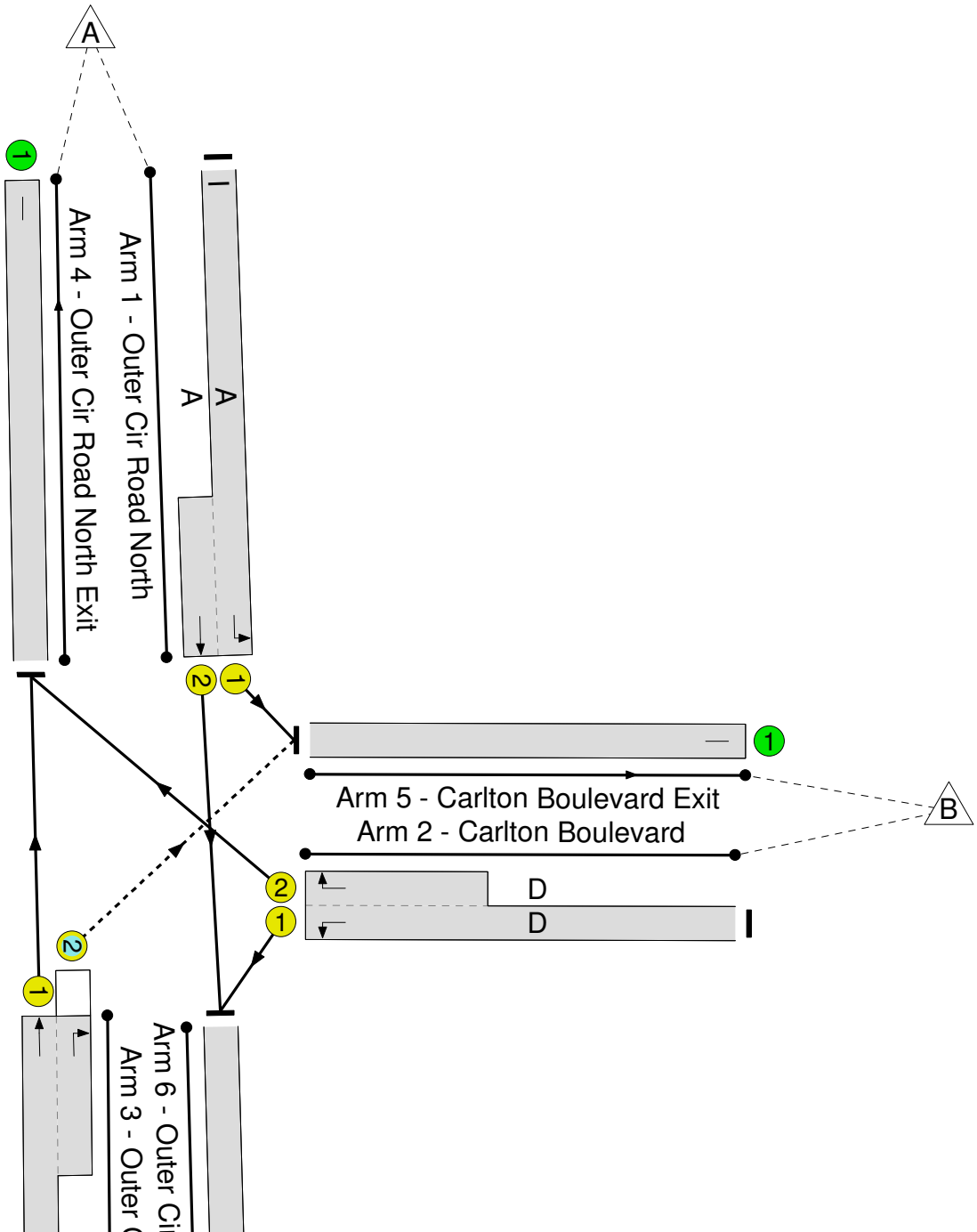
Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 68.5 %

Total Traffic Delay: 5.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**53.4%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**53.4%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:43	6	294	1687:2080	231+831	27.7 : 27.7%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	15	-	196	1687:1891	300+239	36.3 : 36.3%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	64	15	814	1940:1891	655+869	53.4 : 53.4%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	437	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	528	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**356**	**98**	**10**	**4.0**	**1.0**	**0.4**	**5.4**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**356**	**98**	**10**	**4.0**	**1.0**	**0.4**	**5.4**	**-**	**-**	**-**	**-**
1/1+1/2	294	294	-	-	-	1.0	0.2	-	1.2	14.7	3.3	0.2	3.4
2/1+2/2	196	196	-	-	-	1.8	0.3	-	2.0	37.5	2.4	0.3	2.7
3/1+3/2	814	814	356	98	10	1.2	0.6	0.4	2.2	9.6	5.8	0.6	6.4
4/1	437	437	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	528	528	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 68.5
PRC Over All Lanes (%): 68.5

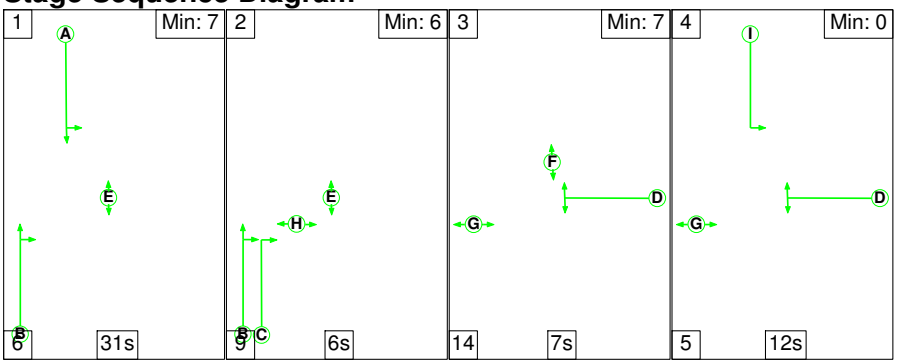
Total Delay for Signalled Lanes (pcuHr): 5.40
Total Delay Over All Lanes(pcuHr): 5.40

Cycle Time (s): 90

Full Input Data And Results

Scenario 9: '2033 DS2 AM' (FG9: '2033 DS2 AM', Plan 1: 'Network Control Plan 1')

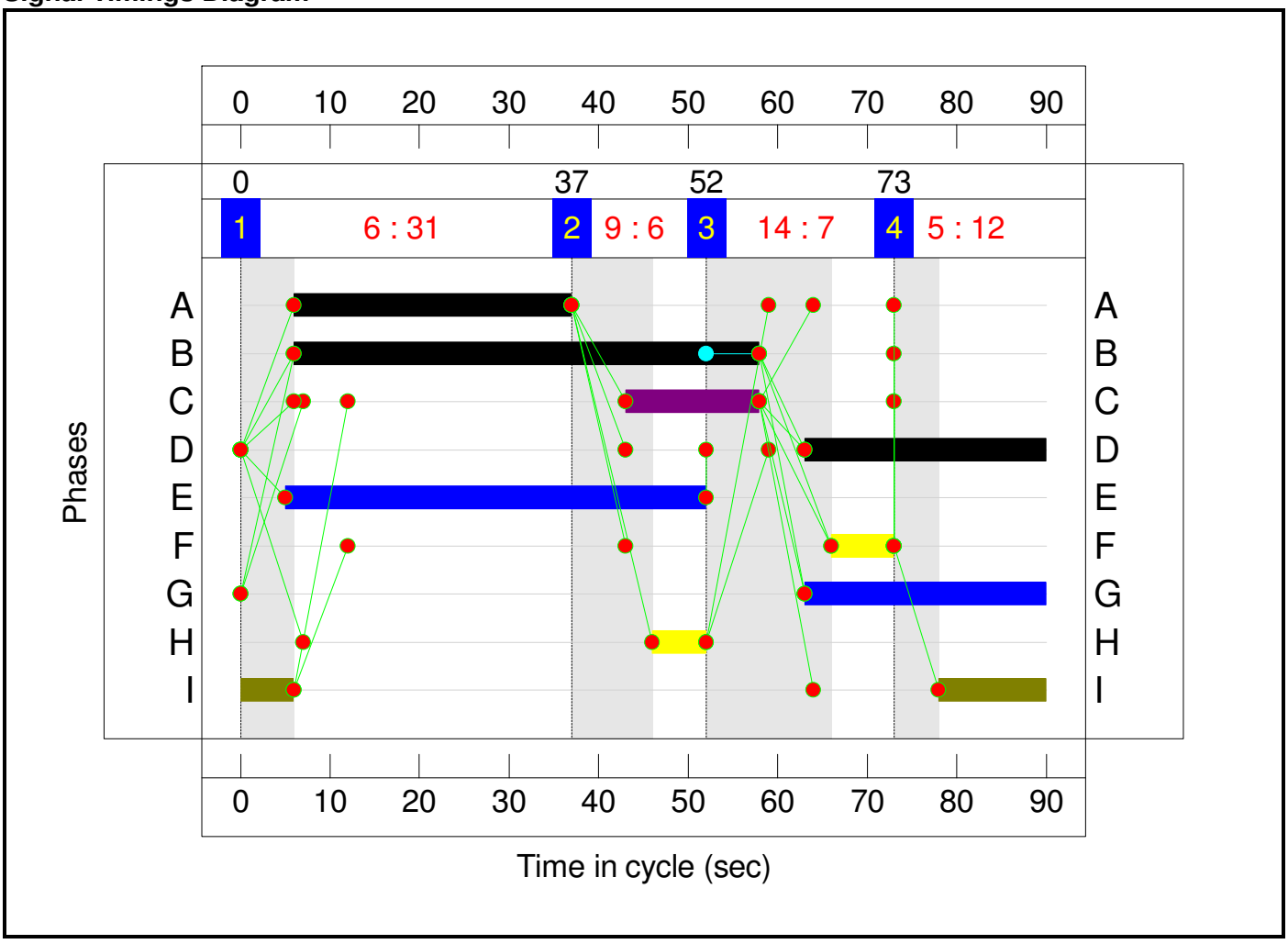
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	31	6	7	12
Change Point	0	37	52	73

Signal Timings Diagram

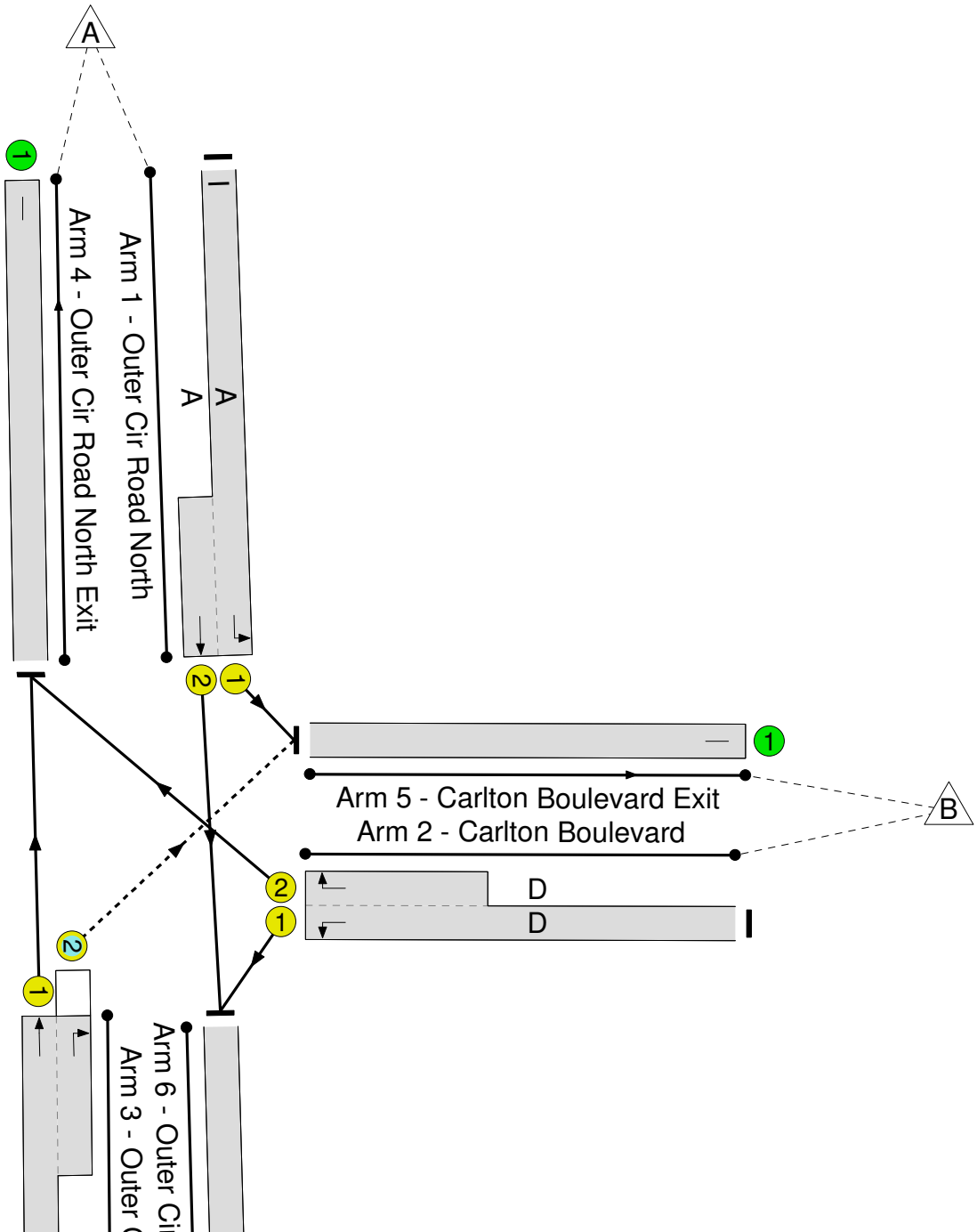


Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 57.8 %
Total Traffic Delay: 7.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**57.0%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**57.0%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:31	18	437	1687:2080	88+679	57.0 : 57.0%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	27	-	422	1687:1891	450+297	56.5 : 56.5%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	52	15	140	1940:1891	578+612	11.8 : 11.8%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	122	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	641	Inf	Inf	0.0%

Full Input Data And Results

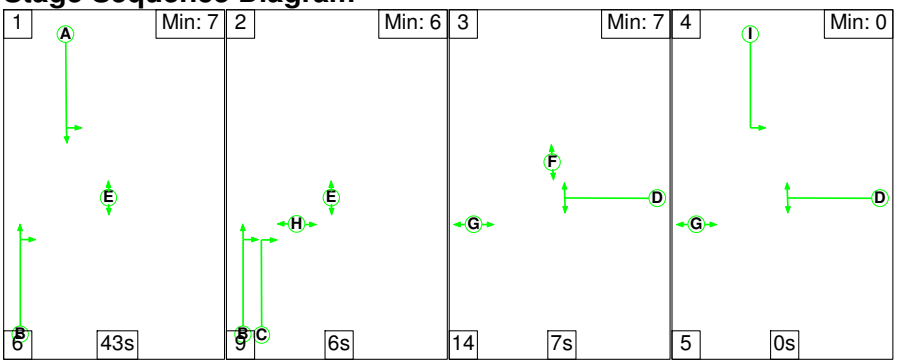
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**55**	**15**	**2**	**5.8**	**1.4**	**0.1**	**7.3**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**55**	**15**	**2**	**5.8**	**1.4**	**0.1**	**7.3**	**-**	**-**	**-**	**-**
1/1+1/2	437	437	-	-	-	2.6	0.7	-	3.3	26.9	7.7	0.7	8.4
2/1+2/2	422	422	-	-	-	2.9	0.6	-	3.5	30.0	5.1	0.6	5.7
3/1+3/2	140	140	55	15	2	0.3	0.1	0.1	0.5	13.5	0.8	0.1	0.8
4/1	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	122	122	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 57.8 Total Delay for Signalled Lanes (pcuHr): 7.30 Cycle Time (s): 90
PRC Over All Lanes (%): 57.8 Total Delay Over All Lanes(pcuHr): 7.30

Full Input Data And Results

Scenario 10: '2033 DS2 PM' (FG10: '2033 DS2 PM', Plan 1: 'Network Control Plan 1')

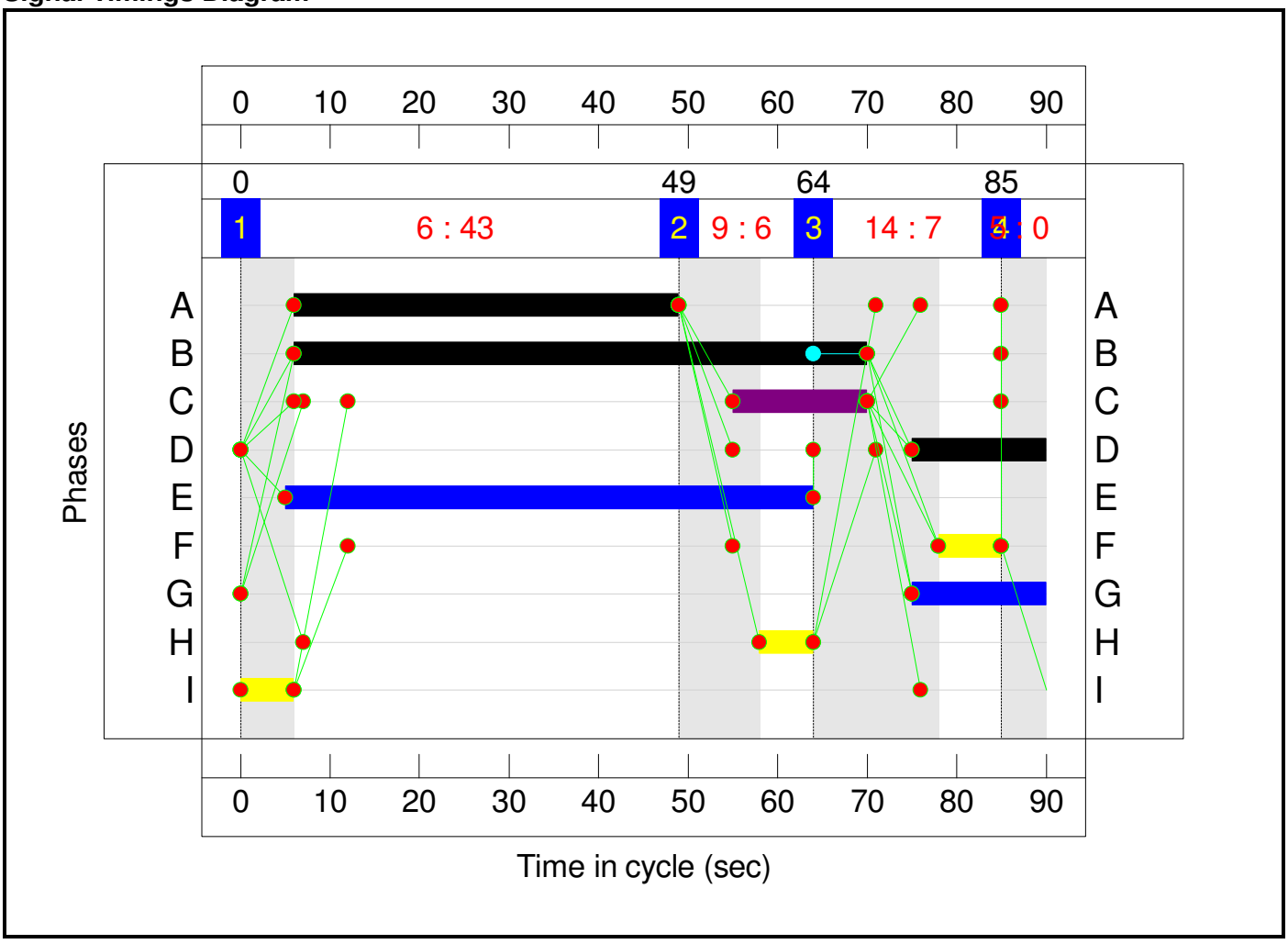
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	43	6	7	0
Change Point	0	49	64	85

Signal Timings Diagram

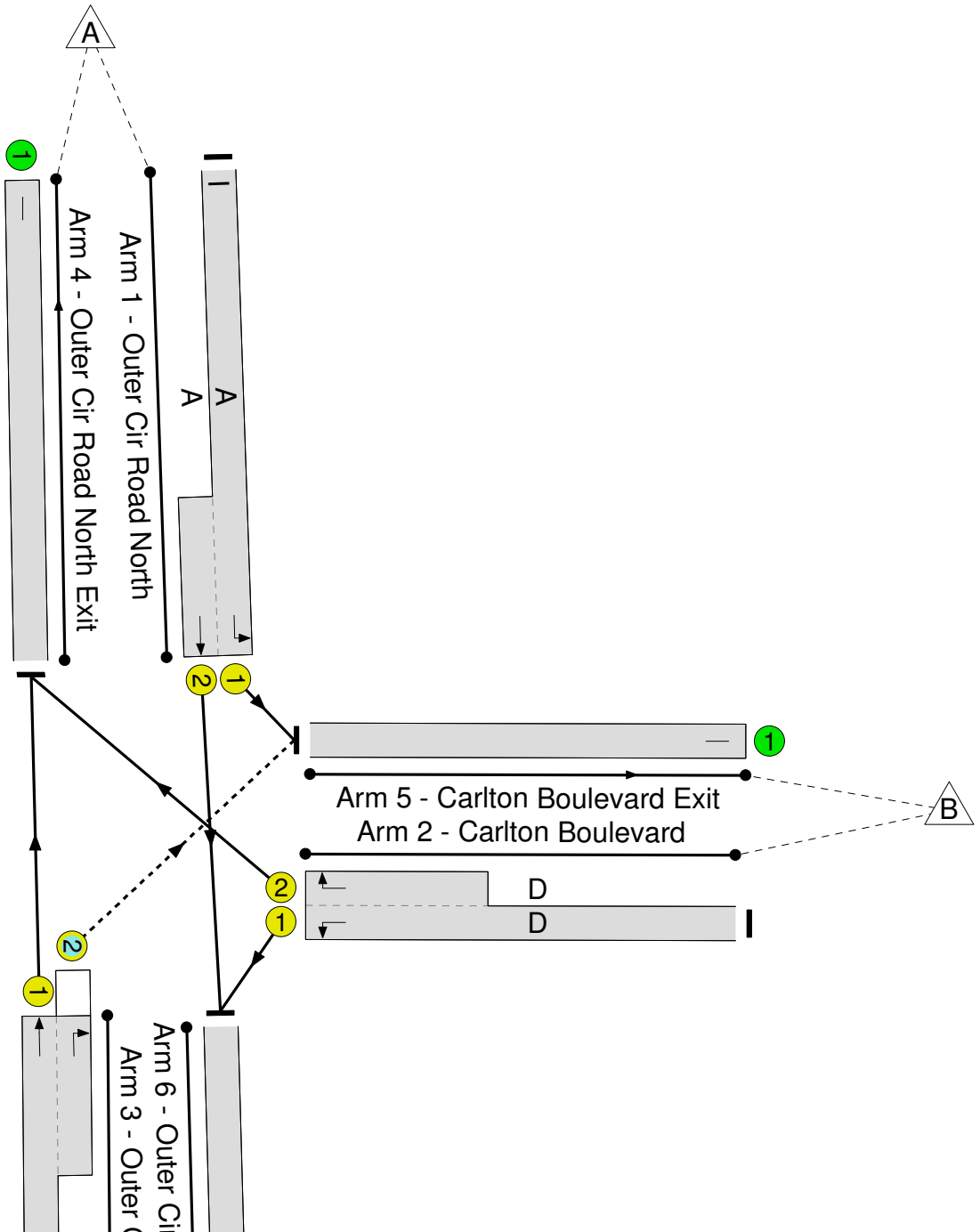


Full Input Data And Results

Network Layout Diagram

Outer Cir Road / Carlton Boulevard Junction

PRC: 66.2 %
Total Traffic Delay: 5.3 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.2%**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.2%**
1/1+1/2	Outer Cir Road North Left Ahead	U	N/A	N/A	A	I	1	49:43	6	295	1687:2080	223+837	27.8 : 27.8%
2/1+2/2	Carlton Boulevard Right Left	U	N/A	N/A	D		1	15	-	188	1687:1891	300+300	31.3 : 31.3%
3/1+3/2	Outer Cir Road South Ahead Right	U+O	N/A	N/A	B	C	1	64	15	846	1940:1891	722+840	54.2 : 54.2%
4/1	Outer Cir Road North Exit	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%
5/1	Carlton Boulevard Exit	U	N/A	N/A	-		-	-	-	517	Inf	Inf	0.0%
6/1	Outer Cir Road South Exit	U	N/A	N/A	-		-	-	-	327	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**349**	**96**	**10**	**4.0**	**1.0**	**0.3**	**5.3**	**-**	**-**	**-**	**-**
Outer Cir Road / Carlton Boulevard Junction	**-**	**-**	**349**	**96**	**10**	**4.0**	**1.0**	**0.3**	**5.3**	**-**	**-**	**-**	**-**
1/1+1/2	295	295	-	-	-	1.0	0.2	-	1.2	14.8	3.3	0.2	3.5
2/1+2/2	188	188	-	-	-	1.7	0.2	-	1.9	36.5	2.0	0.2	2.3
3/1+3/2	846	846	349	96	10	1.3	0.6	0.3	2.2	9.4	5.6	0.6	6.2
4/1	485	485	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	517	517	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	327	327	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 66.2
PRC Over All Lanes (%): 66.2

Total Delay for Signalled Lanes (pcuHr): 5.32
Total Delay Over All Lanes(pcuHr): 5.32

Cycle Time (s): 90

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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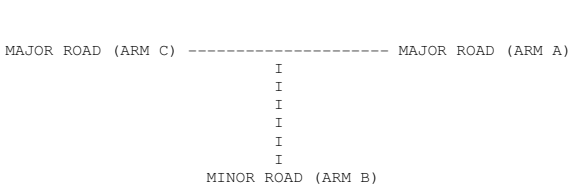
Run with file:-
"W:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Picady\
Bunkers Hill_Hawthorn Road\Bunkers Hill_Hawthorn Road v03.vpi"
(drive-on-the-left) at 14:26:11 on Tuesday, 30 June 2015

.RUN INFORMATION

RUN TITLE : A15 Bunkers Hill/Hawthorn Road
LOCATION : Lincoln
DATE : 28/06/15
CLIENT :
ENUMERATOR : dwatt [M7006458]
JOB NUMBER :
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS A15 Bunkers Hill NE
ARM B IS Hawthorn Road
ARM C IS A15 Bunkers Hill SW

.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)	6.54 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.80 M.
- VISIBILITY	(VC-B)	123.00 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	35.0 M.
- VISIBILITY TO RIGHT	(VB-A)	38.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
WIDTH AT 0 M FROM JUNCTION		9.99 M.
WIDTH AT 5 M FROM JUNCTION		7.75 M.
WIDTH AT 10 M FROM JUNCTION		5.54 M.
WIDTH AT 15 M FROM JUNCTION		4.37 M.
WIDTH AT 20 M FROM JUNCTION		3.63 M.
- LENGTH OF FLARED SECTION		2 VEHS

.SLOPES AND INTERCEPT

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

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

I	0.00	0.00	0.00	I

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

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

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

I Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing I STREAM A-B I
I 687.33	0.26	0.26 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: 2015_Survey_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 FLOW STARTS I TOP OF PEAK I FLOW STOPS I TO RISE I IS REACHED I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I AT TOP I AFTER I PEAK I OF PEAK I PEAK
I ARM A I	15.00 I 45.00 I 75.00 I	11.44 I 17.16 I 11.44 I
I ARM B I	15.00 I 45.00 I 75.00 I	2.78 I 4.16 I 2.78 I
I ARM C I	15.00 I 45.00 I 75.00 I	5.53 I 8.29 I 5.53 I

.Demand set: 2015_Survey_AM

I TIME	I FROM/TO I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
I 07.45 - 08.00	I	I	I	I
	I ARM A	I 0.000	I 0.282	I 0.718 I
	I	I 0.0	I 258.0	I 657.0 I
	I	I (0.0)	I (0.0)	I (0.0) I
	I	I	I	I
	I ARM B	I 0.622	I 0.000	I 0.378 I
	I	I 138.0	I 0.0	I 84.0 I
	I	I (0.0)	I (0.0)	I (0.0) I
	I	I	I	I
	I ARM C	I 0.769	I 0.231	I 0.000 I
	I	I 340.0	I 102.0	I 0.0 I
	I	I (0.0)	I (0.0)	I (0.0) I
	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_AM
AND FOR TIME PERIOD 1

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 07.45-08.00									
I B-C	1.05	8.08	0.130		0.00	0.15	2.1		0.14
I B-A	1.73	6.00	0.288		0.00	0.40	5.6		0.23
I C-AB	1.28	8.47	0.151		0.00	0.18	2.6		0.14
I A-B	3.24								
I A-C	8.24								

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 08.00-08.15									
I B-C	1.26	7.34	0.172		0.15	0.20	3.0		0.16
I B-A	2.07	5.28	0.391		0.40	0.62	8.8		0.31
I C-AB	1.53	7.89	0.194		0.18	0.24	3.6		0.16

A-B	3.87								
A-C	9.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.54	5.91	0.261		0.20	0.35	5.0		0.23
B-A	2.53	4.28	0.591		0.62	1.33	17.9		0.54
C-AB	1.87	7.09	0.264		0.24	0.35	5.3		0.19
A-B	4.73								
A-C	12.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	1.54	5.84	0.264		0.35	0.35	5.3		0.23
B-A	2.53	4.28	0.592		1.33	1.39	20.5		0.57
C-AB	1.87	7.09	0.264		0.35	0.36	5.4		0.19
A-B	4.73								
A-C	12.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.26	7.29	0.173		0.35	0.21	3.3		0.17
B-A	2.07	5.28	0.392		1.39	0.67	10.8		0.32
C-AB	1.53	7.89	0.194		0.36	0.24	3.7		0.16
A-B	3.87								
A-C	9.84								

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	1.05	8.06	0.131		0.21	0.15	2.3		0.14
B-A	1.73	6.00	0.289		0.67	0.41	6.5		0.24
C-AB	1.28	8.47	0.151		0.24	0.18	2.7		0.14
A-B	3.24								
A-C	8.24								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.1	
08.15	0.2	
08.30	0.3	
08.45	0.4	
09.00	0.2	
09.15	0.2	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.3	*
08.45	1.4	*
09.00	0.7	*
09.15	0.4	

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)

I	B-C	I	115.6	I	77.1	I	21.0	I	0.18	I	21.0	I	0.18	I
I	B-A	I	189.9	I	126.6	I	70.1	I	0.37	I	70.2	I	0.37	I
I	C-AB	I	140.4	I	93.6	I	23.2	I	0.17	I	23.2	I	0.17	I
I	A-B	I	355.1	I	236.7	I		I		I		I		I
I	A-C	I	904.3	I	602.9	I		I		I		I		I
I	ALL	I	2173.4	I	1448.9	I	114.3	I	0.05	I	114.4	I	0.05	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

I Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2015_Survey_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 FLOW STARTS TO RISE	I NUMBER OF MINUTES FROM START WHEN 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 ARM A	I 15.00	I 45.00	I 75.00	I 7.03	I 10.54	I 7.03
I ARM B	I 15.00	I 45.00	I 75.00	I 3.11	I 4.67	I 3.11
I ARM C	I 15.00	I 45.00	I 75.00	I 12.50	I 18.75	I 12.50

.Demand set: 2015_Survey_PM

I TIME	I FROM/TO	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) I ARM A	I ARM B	I ARM C
I 16.45 - 17.00	I ARM A	I 0.000	I 0.347	I 0.653
		I 0.0	I 195.0	I 367.0
		I (0.0)	I (0.0)	I (0.0)
	I ARM B	I 0.494	I 0.000	I 0.506
		I 123.0	I 0.0	I 126.0
		I (0.0)	I (0.0)	I (0.0)
	I ARM C	I 0.823	I 0.177	I 0.000
		I 823.0	I 177.0	I 0.0
		I (0.0)	I (0.0)	I (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_PM
AND FOR TIME PERIOD 2

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	1.58	9.52	0.166		0.00	0.20	2.9		0.13
B-A	1.54	5.40	0.286		0.00	0.39	5.5		0.26
C-AB	2.22	9.62	0.231		0.00	0.30	4.4		0.13
A-B	2.45								
A-C	4.60								

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	1.89	8.85	0.213		0.20	0.27	3.9		0.14
B-A	1.84	4.65	0.396		0.39	0.63	8.9		0.35
C-AB	2.65	9.27	0.286		0.30	0.40	5.9		0.15
A-B	2.92								
A-C	5.50								

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)
17.15-17.30									
B-C	2.31	7.22	0.320		0.27	0.46	6.6		0.20
B-A	2.26	3.61	0.625		0.63	1.49	19.5		0.68
C-AB	3.25	8.77	0.370		0.40	0.58	8.6		0.18
A-B	3.58								
A-C	6.73								

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)
17.30-17.45									
B-C	2.31	7.08	0.326		0.46	0.48	7.1		0.21
B-A	2.26	3.61	0.626		1.49	1.57	23.1		0.73
C-AB	3.25	8.77	0.370		0.58	0.58	8.8		0.18
A-B	3.58								
A-C	6.73								

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)
17.45-18.00									
B-C	1.89	8.78	0.215		0.48	0.28	4.3		0.15
B-A	1.84	4.65	0.397		1.57	0.68	11.3		0.37
C-AB	2.65	9.27	0.286		0.58	0.41	6.1		0.15
A-B	2.92								
A-C	5.50								

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-C	1.58	9.49	0.167		0.28	0.20	3.1		0.13
B-A	1.54	5.39	0.286		0.68	0.41	6.5		0.26
C-AB	2.22	9.62	0.231		0.41	0.30	4.6		0.14
A-B	2.45								
A-C	4.60								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4

17.15	0.6	*
17.30	1.5	*
17.45	1.6	**
18.00	0.7	*
18.15	0.4	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

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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	173.4	115.6	27.9	0.16	27.9	0.16
B-A	169.3	112.9	74.8	0.44	74.8	0.44
C-AB	243.6	162.4	38.5	0.16	38.5	0.16
A-B	268.4	178.9				
A-C	505.1	336.8				
ALL	2492.7	1661.8	141.2	0.06	141.2	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

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	9.90	14.85	9.90
ARM B	15.00	45.00	75.00	6.96	10.44	6.96

I ARM C I	15.00 I	45.00 I	75.00 I	4.82 I	7.24 I	4.82 I

.Demand set: 2033_DM_AM

I TIME I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)		
I FROM/TO I	ARM A I	ARM B I	ARM C I
07.45 - 08.00 I			
ARM A I	0.000 I	0.294 I	0.706 I
I	0.0 I	233.0 I	559.0 I
I	(0.0)I	(0.0)I	(0.0)I
ARM B I	0.619 I	0.000 I	0.381 I
I	345.0 I	0.0 I	212.0 I
I	(0.0)I	(0.0)I	(0.0)I
ARM C I	0.689 I	0.311 I	0.000 I
I	266.0 I	120.0 I	0.0 I
I	(0.0)I	(0.0)I	(0.0)I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	2.66	6.53	0.407		0.00	0.67	9.3		0.25
B-A	4.33	6.29	0.688		0.00	2.00	25.8		0.45
C-AB	1.51	8.87	0.170		0.00	0.20	3.0		0.14
A-B	2.92								
A-C	7.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.18	3.41	0.932		0.67	5.08	53.3		1.47
B-A	5.17	5.38	0.962		2.00	7.24	78.4		1.32
C-AB	1.80	8.37	0.215		0.20	0.27	4.1		0.15
A-B	3.49								
A-C	8.38								

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	3.89	2.85	1.366		5.08	21.45	201.0		5.37
B-A	6.33	4.59	1.379		7.24	33.98	311.1		4.97
C-AB	2.20	7.68	0.287		0.27	0.40	5.9		0.18
A-B	4.28								
A-C	10.26								

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	3.89	2.84	1.369		21.45	37.35	441.2		10.31
B-A	6.33	4.59	1.379		33.98	60.20	706.5		10.03
C-AB	2.20	7.68	0.287		0.40	0.40	6.0		0.18
A-B	4.28								
A-C	10.26								

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	3.18	3.28	0.969		37.35	37.29	559.8		11.24
B-A	5.17	5.31	0.973		60.20	58.77	891.9		11.08
C-AB	1.80	8.37	0.215		0.40	0.28	4.2		0.15
A-B	3.49								
A-C	8.38								

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	2.66	3.62	0.734		37.29	24.26	461.6		8.82

I B-A	4.33	5.81	0.745	58.77	38.05	726.1		8.53	I
I C-AB	1.51	8.87	0.170	0.28	0.21	3.1		0.14	I
I A-B	2.92								I
I A-C	7.01								I
I									I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	5.1	*****
08.30	21.5	**********
08.45	37.4	**********
09.00	37.3	**********
09.15	24.3	**********

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.0	**
08.15	7.2	*******
08.30	34.0	**********
08.45	60.2	**********
09.00	58.8	**********
09.15	38.1	**********

QUEUE FOR STREAM C-AB

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

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	291.8	194.5	1726.3	5.92	1807.5	6.19
B-A	474.9	316.6	2739.8	5.77	2864.5	6.03
C-AB	165.2	110.1	26.3	0.16	26.3	0.16
A-B	320.7	213.8				
A-C	769.4	512.9				
ALL	2388.1	1592.1	4492.4	1.88	4698.3	1.97

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
	TO RISE					
ARM A	15.00	45.00	75.00	5.44	8.16	5.44
ARM B	15.00	45.00	75.00	5.28	7.91	5.28
ARM C	15.00	45.00	75.00	11.35	17.03	11.35

.Demand set: 2033_DM_PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.207	0.793
		0.0	90.0	345.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.611	0.000	0.389
		258.0	0.0	164.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.707	0.293	0.000
		642.0	266.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.06	8.04	0.256		0.00	0.34	4.8		0.17
B-A	3.24	5.80	0.558		0.00	1.19	16.0		0.37
C-AB	3.34	10.04	0.333		0.00	0.49	7.3		0.15
A-B	1.13								
A-C	4.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.46	5.84	0.421		0.34	0.70	9.9		0.29
B-A	3.87	4.99	0.774		1.19	2.83	35.7		0.75
C-AB	3.99	9.76	0.408		0.49	0.68	10.2		0.17
A-B	1.35								
A-C	5.17								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.01	2.45	1.230		0.70	11.62	100.4		3.31
B-A	4.73	3.94	1.201		2.83	16.80	152.8		3.10
C-AB	4.88	9.38	0.520		0.68	1.06	15.7		0.22
A-B	1.65								
A-C	6.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.01	2.53	1.188		11.62	19.33	232.6		6.49

B-A	4.73	3.92	1.208	16.80	29.47	347.6		6.08
C-AB	4.88	9.38	0.520	1.06	1.07	16.3		0.22
A-B	1.65							
A-C	6.33							

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-C	2.46	3.09	0.795		19.33	12.10	235.7		5.13
B-A	3.87	4.81	0.803		29.47	17.66	353.5		5.07
C-AB	3.99	9.76	0.408		1.07	0.70	10.7		0.17
A-B	1.35								
A-C	5.17								

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-C	2.06	6.25	0.329		12.10	0.51	26.1		0.36
B-A	3.24	5.68	0.570		17.66	1.46	84.5		1.18
C-AB	3.34	10.04	0.333		0.70	0.51	7.6		0.15
A-B	1.13								
A-C	4.33								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.7	*
17.30	11.6	**********
17.45	19.3	**********
18.00	12.1	**********
18.15	0.5	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.8	***
17.30	16.8	**********
17.45	29.5	**********
18.00	17.7	**********
18.15	1.5	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	225.7	150.5	609.5	2.70	609.6	2.70
B-A	355.1	236.7	990.2	2.79	990.3	2.79
C-AB	366.1	244.1	67.7	0.18	67.7	0.18
A-B	123.9	82.6				
A-C	474.9	316.6				
ALL	2429.4	1619.6	1667.4	0.69	1667.6	0.69

* 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)

Intercept For Opposing	Slope For Opposing

I STREAM B-C	STREAM A-C	STREAM A-B
0.00	0.00	0.00

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_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

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	5.07	7.61	5.07
ARM B	15.00	45.00	75.00	3.80	5.70	3.80
ARM C	15.00	45.00	75.00	3.63	5.44	3.63

.Demand set: 2033_DS_AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.177	0.823
		0.0	72.0	334.0
		(0.0)%	(0.0)%	(0.0)%
	ARM B	0.641	0.000	0.359
		195.0	0.0	109.0
		(0.0)%	(0.0)%	(0.0)%
	ARM C	0.859	0.141	0.000
		249.0	41.0	0.0
		(0.0)%	(0.0)%	(0.0)%

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.37	9.09	0.150		0.00	0.18	2.5		0.13
B-A	2.45	7.83	0.313		0.00	0.45	6.3		0.18
C-AB	0.51	10.13	0.051		0.00	0.05	0.8		0.10
A-B	0.90								
A-C	4.19								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.63	8.60	0.190		0.18	0.23	3.4		0.14

B-A	2.92	7.45	0.392	0.45	0.63	9.1		0.22
C-AB	0.61	9.87	0.062	0.05	0.07	1.0		0.11
A-B	1.08							
A-C	5.00							

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	2.00	7.77	0.257		0.23	0.34	5.0		0.17
B-A	3.58	6.91	0.518		0.63	1.03	14.5		0.30
C-AB	0.75	9.52	0.079		0.07	0.09	1.3		0.11
A-B	1.32								
A-C	6.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	2.00	7.75	0.258		0.34	0.35	5.2		0.17
B-A	3.58	6.91	0.518		1.03	1.05	15.7		0.30
C-AB	0.75	9.52	0.079		0.09	0.09	1.3		0.11
A-B	1.32								
A-C	6.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.63	8.58	0.190		0.35	0.24	3.7		0.14
B-A	2.92	7.45	0.392		1.05	0.66	10.4		0.22
C-AB	0.61	9.87	0.062		0.09	0.07	1.0		0.11
A-B	1.08								
A-C	5.00								

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	1.37	9.07	0.151		0.24	0.18	2.8		0.13
B-A	2.45	7.83	0.313		0.66	0.46	7.2		0.19
C-AB	0.51	10.13	0.051		0.07	0.05	0.8		0.10
A-B	0.90								
A-C	4.19								

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

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.0	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	

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

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *	* INCLUSIVE QUEUEING * DELAY *

	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	150.0	100.0	22.5	0.15	22.5	0.15
B-A	268.4	178.9	63.3	0.24	63.3	0.24
C-AB	56.4	37.6	6.2	0.11	6.2	0.11
A-B	99.1	66.1				
A-C	459.7	306.5				
ALL	1376.4	917.6	91.9	0.07	91.9	0.07

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_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

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	2.67	4.01	2.67
ARM B	15.00	45.00	75.00	3.94	5.91	3.94
ARM C	15.00	45.00	75.00	9.26	13.89	9.26

.Demand set: 2033_DS_PM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.500	0.500
		0.0	107.0	107.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.438	0.000	0.562
		138.0	0.0	177.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.856	0.144	0.000
		634.0	107.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.22	10.79	0.206		0.00	0.26	3.7		0.12
B-A	1.73	6.83	0.253		0.00	0.33	4.7		0.19
C-AB	1.34	10.76	0.125		0.00	0.14	2.1		0.11
A-B	1.34								
A-C	1.34								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.65	10.45	0.254		0.26	0.34	4.9		0.13
B-A	2.07	6.40	0.323		0.33	0.47	6.7		0.23
C-AB	1.60	10.62	0.151		0.14	0.18	2.7		0.11
A-B	1.60								
A-C	1.60								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.25	9.87	0.329		0.34	0.48	7.0		0.15
B-A	2.53	5.79	0.437		0.47	0.75	10.6		0.30
C-AB	1.96	10.43	0.188		0.18	0.23	3.5		0.12
A-B	1.96								
A-C	1.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.25	9.86	0.330		0.48	0.49	7.3		0.15
B-A	2.53	5.79	0.437		0.75	0.76	11.4		0.31
C-AB	1.96	10.43	0.188		0.23	0.23	3.5		0.12
A-B	1.96								
A-C	1.96								

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-C	2.65	10.43	0.254		0.49	0.34	5.3		0.13
B-A	2.07	6.40	0.323		0.76	0.49	7.7		0.23
C-AB	1.60	10.62	0.151		0.23	0.18	2.7		0.11
A-B	1.60								
A-C	1.60								

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-C	2.22	10.77	0.206		0.34	0.26	4.0		0.12
B-A	1.73	6.83	0.254		0.49	0.35	5.4		0.20
C-AB	1.34	10.76	0.125		0.18	0.14	2.2		0.11
A-B	1.34								
A-C	1.34								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES

ENDING	IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	0.8	*
17.45	0.8	*
18.00	0.5	
18.15	0.3	

.

QUEUE FOR STREAM C-AB

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

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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	243.6	162.4	32.3	0.13	32.3	0.13
B-A	189.9	126.6	46.5	0.25	46.5	0.25
C-AB	147.3	98.2	16.5	0.11	16.5	0.11
A-B	147.3	98.2				
A-C	147.3	98.2				
ALL	1748.1	1165.4	95.4	0.05	95.4	0.05

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_AM_Sensitivity

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

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

I ARM A I	15.00	I	45.00	I	75.00	I 11.04	I 16.56	I 11.04 I
I ARM B I	15.00	I	45.00	I	75.00	I 6.10	I 9.15	I 6.10 I
I ARM C I	15.00	I	45.00	I	75.00	I 6.56	I 9.84	I 6.56 I

.Demand set: 2033_DM_AM_Sensitivity

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
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 - 08.00	I	I	I	I
I	I ARM A	I 0.000	I 0.427	I 0.573 I
I	I	I 0.0	I 377.0	I 506.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM B	I 0.584	I 0.000	I 0.416 I
I	I	I 285.0	I 0.0	I 203.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I
I	I ARM C	I 0.745	I 0.255	I 0.000 I
I	I	I 391.0	I 134.0	I 0.0 I
I	I	I (0.0)	I (0.0)	I (0.0) I
I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_AM_Sensitivity
AND FOR TIME PERIOD 1

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 07.45-08.00									I
I B-C	2.55	7.21	0.353		0.00	0.53	7.5		0.21 I
I B-A	3.58	5.92	0.604		0.00	1.43	18.9		0.40 I
I C-AB	1.68	8.57	0.196		0.00	0.24	3.6		0.14 I
I A-B	4.73								I
I A-C	6.35								I
I									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 08.00-08.15									I
I B-C	3.04	4.84	0.629		0.53	1.55	20.5		0.52 I
I B-A	4.27	5.05	0.845		1.43	3.92	47.2		0.92 I
I C-AB	2.01	8.01	0.250		0.24	0.33	4.9		0.17 I
I A-B	5.65								I
I A-C	7.58								I
I									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 08.15-08.30									I
I B-C	3.73	2.85	1.308		1.55	16.42	140.6		3.86 I
I B-A	5.23	4.08	1.280		3.92	22.42	201.5		3.80 I
I C-AB	2.46	7.24	0.340		0.33	0.50	7.5		0.21 I
I A-B	6.92								I
I A-C	9.29								I
I									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 08.30-08.45									I
I B-C	3.73	2.91	1.279		16.42	28.91	340.3		7.94 I
I B-A	5.23	4.06	1.287		22.42	40.15	469.6		7.71 I
I C-AB	2.46	7.24	0.340		0.50	0.51	7.7		0.21 I
I A-B	6.92								I
I A-C	9.29								I
I									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 08.45-09.00									I
I B-C	3.04	3.45	0.881		28.91	24.48	400.4		7.84 I
I B-A	4.27	4.83	0.885		40.15	33.57	552.9		7.67 I
I C-AB	2.01	8.01	0.250		0.51	0.34	5.1		0.17 I
I A-B	5.65								I
I A-C	7.58								I
I									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

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I 09.00-09.15                                                                                                    I
I   B-C       2.55      3.86    0.661              24.48   7.12      237.1                            4.49      I
I   B-A       3.58      5.36    0.667              33.57   9.08      319.9                            4.28      I
I   C-AB      1.68      8.57    0.196               0.34   0.25        3.7                            0.15      I
I   A-B       4.73                                                                                           I
I   A-C       6.35                                                                                           I
I                                                                                                            I
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WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	1.6	**
08.30	16.4	**********
08.45	28.9	******************
09.00	24.5	***************
09.15	7.1	*******

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.4	*
08.15	3.9	****
08.30	22.4	**********
08.45	40.2	**********
09.00	33.6	**********
09.15	9.1	*********

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	(VEH/H)	* QUEUEING * DELAY * (MIN)	(MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	(MIN/VEH)
B-C	279.4	186.3	1146.5	4.10	1153.0	4.13
B-A	392.3	261.5	1610.0	4.10	1617.7	4.12
C-AB	184.4	123.0	32.6	0.18	32.6	0.18
A-B	518.9	345.9				
A-C	696.5	464.3				
ALL	2609.7	1739.8	2789.0	1.07	2803.3	1.07

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Sensitivity

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	6.70	10.05	6.70
ARM B	15.00	45.00	75.00	4.00	6.00	4.00
ARM C	15.00	45.00	75.00	5.38	8.06	5.38

.Demand set: 2033_DS_AM_Sensitivity

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.429	0.571
		0.0	230.0	306.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.644	0.000	0.356
		206.0	0.0	114.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.898	0.102	0.000
		386.0	44.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Sensitivity
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.43	8.87	0.161		0.00	0.19	2.7		0.13
B-A	2.58	7.42	0.348		0.00	0.52	7.4		0.20
C-AB	0.55	9.71	0.057		0.00	0.06	0.9		0.11
A-B	2.89								
A-C	3.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.71	8.26	0.207		0.19	0.26	3.8		0.15
B-A	3.09	6.96	0.444		0.52	0.77	11.0		0.26
C-AB	0.66	9.37	0.070		0.06	0.08	1.1		0.11
A-B	3.45								
A-C	4.58								

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)
08.15-08.30									
B-C	2.09	7.13	0.294		0.26	0.41	5.9		0.20
B-A	3.78	6.30	0.600		0.77	1.41	19.4		0.38
C-AB	0.81	8.90	0.091		0.08	0.10	1.5		0.12
A-B	4.22								
A-C	5.62								

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	2.09	7.08	0.296		0.41	0.41	6.2	0.20	
B-A	3.78	6.30	0.600		1.41	1.45	21.6	0.40	
C-AB	0.81	8.90	0.091		0.10	0.10	1.5	0.12	
A-B	4.22								
A-C	5.62								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.71	8.22	0.208		0.41	0.27	4.1		0.15
B-A	3.09	6.96	0.444		1.45	0.82	13.1		0.26
C-AB	0.66	9.37	0.070		0.10	0.08	1.1		0.11
A-B	3.45								
A-C	4.58								

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)
09.00-09.15									
B-C	1.43	8.84	0.162		0.27	0.20	3.0		0.14
B-A	2.58	7.42	0.348		0.82	0.55	8.6		0.21
C-AB	0.55	9.71	0.057		0.08	0.06	0.9		0.11
A-B	2.89								
A-C	3.84								

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

.

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
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 B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.4	*
08.45	1.5	*
09.00	0.8	*
09.15	0.5	*

.

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	156.9	104.6	25.7	0.16	25.7	0.16
B-A	283.5	189.0	81.1	0.29	81.1	0.29
C-AB	60.6	40.4	7.1	0.12	7.1	0.12
A-B	316.6	211.1				
A-C	421.2	280.8				
ALL	1770.1	1180.1	113.9	0.06	113.9	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_PM_Sensitivity

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

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	7.10	10.65	7.10
ARM B	15.00	45.00	75.00	4.94	7.41	4.94
ARM C	15.00	45.00	75.00	11.52	17.29	11.52

.Demand set: 2033_DM_PM_Sensitivity

TIME	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.329	0.671
		0.0	187.0	381.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.635	0.000	0.365
		251.0	0.0	144.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.717	0.283	0.000
		661.0	261.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_PM_Sensitivity
AND FOR TIME PERIOD 2

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	1.81	7.73	0.234		0.00	0.30	4.3		0.17
B-A	3.15	5.60	0.562		0.00	1.21	16.2		0.38
C-AB	3.27	9.60	0.341		0.00	0.51	7.5		0.16
A-B	2.35								
A-C	4.78								

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)

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.16	5.30	0.407		0.30	0.66	9.3		0.31
B-A	3.76	4.75	0.792		1.21	3.03	37.7		0.82
C-AB	3.91	9.24	0.423		0.51	0.72	10.8		0.19
A-B	2.80								
A-C	5.71								
17.15-17.30									
B-C	2.64	2.03	1.299		0.66	11.78	100.2		3.95
B-A	4.61	3.64	1.265		3.03	19.06	170.2		3.66
C-AB	4.79	8.74	0.548		0.72	1.18	17.4		0.25
A-B	3.43								
A-C	6.99								
17.30-17.45									
B-C	2.64	2.11	1.251		11.78	20.12	239.7		7.77
B-A	4.61	3.62	1.272		19.06	34.10	399.0		7.29
C-AB	4.79	8.74	0.548		1.18	1.20	18.2		0.25
A-B	3.43								
A-C	6.99								
17.45-18.00									
B-C	2.16	2.68	0.806		20.12	14.22	257.6		6.26
B-A	3.76	4.62	0.814		34.10	23.22	429.9		6.29
C-AB	3.91	9.24	0.423		1.20	0.75	11.4		0.19
A-B	2.80								
A-C	5.71								
18.00-18.15									
B-C	1.81	4.98	0.362		14.22	0.59	42.0		0.64
B-A	3.15	5.45	0.578		23.22	1.58	137.3		1.98
C-AB	3.27	9.60	0.341		0.75	0.53	7.9		0.16
A-B	2.35								
A-C	4.78								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.7	*
17.30	11.8	**********
17.45	20.1	**********
18.00	14.2	**********
18.15	0.6	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	3.0	***
17.30	19.1	**********
17.45	34.1	**********
18.00	23.2	**********
18.15	1.6	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.7	*
18.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *

		* DELAY *		* DELAY *	
	(VEH)	(VEH/H)	(MIN) (MIN/VEH)	(MIN)	(MIN/VEH)
B-C	198.2	132.1	653.0 3.29	653.0	3.29
B-A	345.5	230.3	1190.3 3.45	1190.6	3.45
C-AB	359.2	239.5	73.2 0.20	73.3	0.20
A-B	257.4	171.6			
A-C	524.4	349.6			
ALL	2594.6	1729.7	1916.6 0.74	1916.9	0.74

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Sensitivity

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.43	6.64	4.43
ARM B	15.00	45.00	75.00	3.91	5.87	3.91
ARM C	15.00	45.00	75.00	9.23	13.84	9.23

.Demand set: 2033_DS_PM_Sensitivity

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.599	0.401
		0.0	212.0	142.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.431	0.000	0.569
		135.0	0.0	178.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.858	0.142	0.000
		633.0	105.0	0.0

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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
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QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Sensitivity
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.23	10.56	0.212		0.00	0.27	3.8		0.12
B-A	1.69	6.59	0.257		0.00	0.34	4.8		0.20
C-AB	1.32	10.30	0.128		0.00	0.15	2.2		0.11
A-B	2.66								
A-C	1.78								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.67	10.17	0.262		0.27	0.35	5.1		0.13
B-A	2.02	6.12	0.331		0.34	0.48	6.9		0.24
C-AB	1.57	10.08	0.156		0.15	0.18	2.8		0.12
A-B	3.18								
A-C	2.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.27	9.49	0.344		0.35	0.52	7.5		0.16
B-A	2.48	5.44	0.455		0.48	0.80	11.3		0.33
C-AB	1.93	9.77	0.197		0.18	0.24	3.7		0.13
A-B	3.89								
A-C	2.61								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.27	9.47	0.345		0.52	0.52	7.8		0.16
B-A	2.48	5.44	0.455		0.80	0.82	12.2		0.34
C-AB	1.93	9.77	0.197		0.24	0.24	3.7		0.13
A-B	3.89								
A-C	2.61								

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-C	2.67	10.15	0.263		0.52	0.36	5.6		0.13
B-A	2.02	6.11	0.331		0.82	0.51	8.0		0.25
C-AB	1.57	10.08	0.156		0.24	0.19	2.8		0.12
A-B	3.18								
A-C	2.13								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	2.23	10.54	0.212		0.36	0.27	4.2		0.12
B-A	1.69	6.59	0.257		0.51	0.35	5.5		0.21
C-AB	1.32	10.30	0.128		0.19	0.15	2.2		0.11
A-B	2.66								
A-C	1.78								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.5	*
17.45	0.5	*
18.00	0.4	
18.15	0.3	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	0.8	*
17.45	0.8	*
18.00	0.5	*
18.15	0.4	

.

QUEUE FOR STREAM C-AB

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

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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	245.0	163.3	34.0	0.14	34.0	0.14
B-A	185.8	123.9	48.8	0.26	48.8	0.26
C-AB	144.5	96.3	17.3	0.12	17.3	0.12
A-B	291.8	194.5				
A-C	195.5	130.3				
ALL	1933.9	1289.3	100.1	0.05	100.1	0.05

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Alternative1

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK FLOW 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	5.18	7.76	5.18	
ARM B	15.00	45.00	75.00	9.26	13.89	9.26	
ARM C	15.00	45.00	75.00	4.03	6.04	4.03	

.Demand set: 2033_DS_AM_Alternative1

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	TURNING PROPORTIONS			
	TURNING COUNTS			
	(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.396	0.604
		0.0	164.0	250.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.567	0.000	0.433
		420.0	0.0	321.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.708	0.292	0.000
		228.0	94.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Alternative1
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	4.03	7.34	0.549		0.00	1.17	15.9		0.29
B-A	5.27	7.18	0.734		0.00	2.46	31.3		0.45
C-AB	1.18	10.10	0.117		0.00	0.13	1.9		0.11
A-B	2.06								
A-C	3.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	4.81	4.73	1.017		1.17	8.76	86.2		1.59
B-A	6.29	6.25	1.007		2.46	10.00	103.4		1.45
C-AB	1.41	9.84	0.143		0.13	0.17	2.5		0.12
A-B	2.46								
A-C	3.75								

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	5.89	4.48	1.316		8.76	30.59	296.7		4.90
B-A	7.71	5.79	1.331		10.00	39.33	371.5		4.66
C-AB	1.72	9.48	0.182		0.17	0.22	3.3		0.13
A-B	3.01								
A-C	4.59								

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	5.89	4.45	1.322		30.59	52.27	621.6		9.48
B-A	7.71	5.80	1.328		39.33	68.01	805.2		9.34
C-AB	1.72	9.48	0.182		0.22	0.22	3.3		0.13
A-B	3.01								
A-C	4.59								

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	4.81	4.72	1.019		52.27	54.05	797.4		11.39
B-A	6.29	6.16	1.021		68.01	70.37	1037.8		11.30
C-AB	1.41	9.84	0.143		0.22	0.17	2.5		0.12
A-B	2.46								
A-C	3.75								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

I	(VEH/MIN)	(VEH/MIN) CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)	I
I 09.00-09.15									I
I B-C	4.03	4.91	0.820	54.05	42.10	721.2		10.01	I
I B-A	5.27	6.41	0.822	70.37	54.56	936.9		9.92	I
I C-AB	1.18	10.10	0.117	0.17	0.13	2.0		0.11	I
I A-B	2.06								I
I A-C	3.14								I
I									I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.2	*
08.15	8.8	*********
08.30	30.6	******************************
08.45	52.3	**
09.00	54.1	***
09.15	42.1	***

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.5	**
08.15	10.0	**********
08.30	39.3	**************************************
08.45	68.0	***
09.00	70.4	**
09.15	54.6	***

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

I STREAM I	TOTAL DEMAND I	* QUEUEING * DELAY * I		I * INCLUSIVE QUEUEING * DELAY * I		I
I	I (VEH)	(VEH/H) I (MIN)	(MIN/VEH) I	(MIN)	(MIN/VEH)	I
I B-C	I 441.8	I 294.6 I 2539.1	I 5.75 I	2719.5	I 6.16	I
I B-A	I 578.1	I 385.4 I 3286.1	I 5.68 I	3518.2	I 6.09	I
I C-AB	I 129.4	I 86.3 I 15.6	I 0.12 I	15.6	I 0.12	I
I A-B	I 225.7	I 150.5 I	I	I	I	I
I A-C	I 344.1	I 229.4 I	I	I	I	I
I ALL	I 2033.0	I 1355.3 I 5840.9	I 2.87 I	6253.3	I 3.08	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

I Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I 687.33	0.26	0.26	I

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Alternative1

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.56	5.34	3.56
ARM B	15.00	45.00	75.00	3.05	4.57	3.05
ARM C	15.00	45.00	75.00	11.25	16.88	11.25

.Demand set: 2033_DS_PM_Alternative1

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00				
	ARM A	0.000	0.649	0.351
		0.0	185.0	100.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.328	0.000	0.672
		80.0	0.0	164.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.618	0.382	0.000
		556.0	344.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Alternative1
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.06	11.35	0.181		0.00	0.22	3.2		0.11
B-A	1.00	5.66	0.177		0.00	0.21	3.0		0.21
C-AB	4.32	10.53	0.410		0.00	0.68	10.1		0.16
A-B	2.32								
A-C	1.25								

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)
17.00-17.15									
B-C	2.46	11.05	0.222		0.22	0.28	4.2		0.12
B-A	1.20	5.06	0.237		0.21	0.30	4.4		0.26
C-AB	5.15	10.34	0.498		0.68	0.97	14.5		0.19
A-B	2.77								
A-C	1.50								

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)
17.15-17.30									
B-C	3.01	10.52	0.286		0.28	0.40	5.8		0.13
B-A	1.47	4.24	0.346		0.30	0.51	7.2		0.36
C-AB	6.31	10.10	0.625		0.97	1.62	23.9		0.26
A-B	3.39								
A-C	1.84								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

	(VEH/MIN)	(VEH/MIN) CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)
17.30-17.45								
B-C	3.01	10.51 0.286		0.40	0.40	6.0		0.13
B-A	1.47	4.23 0.347		0.51	0.52	7.8		0.36
C-AB	6.31	10.10 0.625		1.62	1.65	25.2		0.26
A-B	3.39							
A-C	1.84							

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-C	2.46	11.04	0.223		0.40	0.29	4.5		0.12
B-A	1.20	5.04	0.238		0.52	0.32	5.0		0.26
C-AB	5.15	10.34	0.498		1.65	1.02	15.5		0.20
A-B	2.77								
A-C	1.50								

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-C	2.06	11.33	0.182		0.29	0.22	3.4		0.11
B-A	1.00	5.64	0.178		0.32	0.22	3.4		0.22
C-AB	4.32	10.53	0.410		1.02	0.71	10.7		0.16
A-B	2.32								
A-C	1.25								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.4	
17.45	0.4	
18.00	0.3	
18.15	0.2	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.5	*
17.45	0.5	*
18.00	0.3	
18.15	0.2	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	1.6	**
17.45	1.7	**
18.00	1.0	*
18.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	225.7	150.5	27.0	0.12	27.0	0.12
B-A	110.1	73.4	30.8	0.28	30.8	0.28
C-AB	473.5	315.7	99.9	0.21	100.0	0.21
A-B	254.6	169.8				
A-C	137.6	91.8				
ALL	1966.9	1311.3	157.7	0.08	157.8	0.08

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Alternative2

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.07	6.11	4.07
ARM B	15.00	45.00	75.00	7.16	10.74	7.16
ARM C	15.00	45.00	75.00	3.92	5.89	3.92

.Demand set: 2033_DS_AM_Alternative2

TIME	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.172	0.828
		0.0	56.0	270.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.459	0.000	0.541
		263.0	0.0	310.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.701	0.299	0.000
		220.0	94.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Alternative2
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	3.89	9.58	0.406		0.00	0.67	9.5		0.17
B-A	3.30	7.16	0.461		0.00	0.83	11.5		0.25
C-AB	1.18	10.39	0.114		0.00	0.13	1.9		0.11
A-B	0.70								
A-C	3.39								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

	(VEH/MIN)	(VEH/MIN) CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)
08.00-08.15								
B-C	4.64	8.81	0.527	0.67	1.08	15.3		0.24
B-A	3.94	6.59	0.598	0.83	1.41	19.5		0.37
C-AB	1.41	10.19	0.138	0.13	0.16	2.4		0.11
A-B	0.84							
A-C	4.05							

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	5.69	6.65	0.856		1.08	4.35	51.6		0.75
B-A	4.83	5.37	0.899		1.41	5.18	58.9		1.04
C-AB	1.72	9.90	0.174		0.16	0.21	3.1		0.12
A-B	1.03								
A-C	4.95								

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)
08.30-08.45									
B-C	5.69	5.95	0.956		4.35	8.03	97.0		1.42
B-A	4.83	5.15	0.938		5.18	7.38	96.2		1.61
C-AB	1.72	9.90	0.174		0.21	0.21	3.2		0.12
A-B	1.03								
A-C	4.95								

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)
08.45-09.00									
B-C	4.64	8.36	0.555		8.03	1.30	28.8		0.34
B-A	3.94	6.35	0.620		7.38	1.76	37.7		0.56
C-AB	1.41	10.19	0.138		0.21	0.16	2.4		0.11
A-B	0.84								
A-C	4.05								

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	3.89	9.51	0.409		1.30	0.71	11.1		0.18
B-A	3.30	7.14	0.462		1.76	0.89	14.3		0.27
C-AB	1.18	10.39	0.114		0.16	0.13	1.9		0.11
A-B	0.70								
A-C	3.39								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	4.4	****
08.45	8.0	********
09.00	1.3	*
09.15	0.7	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.4	*
08.30	5.2	*****
08.45	7.4	*******
09.00	1.8	**
09.15	0.9	*

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)	(MIN)	(MIN/VEH)
B-C	426.7	284.5	213.4	0.50	213.4	0.50
B-A	362.0	241.3	238.0	0.66	238.1	0.66
C-AB	129.4	86.3	14.9	0.12	14.9	0.12
A-B	77.1	51.4				
A-C	371.6	247.8				
ALL	1669.6	1113.1	466.4	0.28	466.5	0.28

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
687.33	0.26	0.26

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Alternative2

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

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	3.69	5.53	3.69
ARM B	15.00	45.00	75.00	2.11	3.17	2.11
ARM C	15.00	45.00	75.00	13.06	19.59	13.06

.Demand set: 2033_DS_PM_Alternative2

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.532	0.468
		0.0	157.0	138.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.284	0.000	0.716
		48.0	0.0	121.0
		(0.0)	(0.0)	(0.0)

	ARM C	0.587	0.413	0.000	
		613.0	432.0	0.0	
		(0.0)	(0.0)	(0.0)	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Alternative2
AND FOR TIME PERIOD 2

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	1.52	11.52	0.132		0.00	0.15	2.2		0.10
B-A	0.60	5.07	0.119		0.00	0.13	1.9		0.22
C-AB	5.42	10.49	0.517		0.00	1.04	15.2		0.19
A-B	1.97								
A-C	1.73								

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)
17.00-17.15									
B-C	1.81	11.24	0.161		0.15	0.19	2.8		0.11
B-A	0.72	4.37	0.165		0.13	0.19	2.8		0.27
C-AB	6.47	10.31	0.628		1.04	1.64	24.2		0.26
A-B	2.35								
A-C	2.07								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.22	10.76	0.206		0.19	0.26	3.8		0.12
B-A	0.88	3.42	0.258		0.19	0.34	4.7		0.39
C-AB	7.93	10.05	0.789		1.64	3.61	50.2		0.43
A-B	2.88								
A-C	2.53								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	2.22	10.74	0.207		0.26	0.26	3.9		0.12
B-A	0.88	3.37	0.261		0.34	0.35	5.1		0.40
C-AB	7.93	10.05	0.789		3.61	3.87	59.9		0.47
A-B	2.88								
A-C	2.53								

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-C	1.81	11.22	0.162		0.26	0.19	3.0		0.11
B-A	0.72	4.31	0.167		0.35	0.20	3.2		0.28
C-AB	6.47	10.31	0.628		3.87	1.79	28.1		0.28
A-B	2.35								
A-C	2.07								

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-C	1.52	11.50	0.132		0.19	0.15	2.3		0.10
B-A	0.60	5.03	0.120		0.20	0.14	2.2		0.23
C-AB	5.42	10.49	0.517		1.79	1.10	16.8		0.20
A-B	1.97								
A-C	1.73								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.2	
17.30	0.3	
17.45	0.3	
18.00	0.2	
18.15	0.1	

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	3.6	****
17.45	3.9	****
18.00	1.8	**
18.15	1.1	*

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	166.5	111.0	18.0	0.11	18.0	0.11
B-A	66.1	44.0	19.9	0.30	19.9	0.30
C-AB	594.6	396.4	194.4	0.33	194.5	0.33
A-B	216.1	144.1				
A-C	189.9	126.6				
ALL	2077.0	1384.7	232.3	0.11	232.4	0.11

* 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*******

TRL LIMITED

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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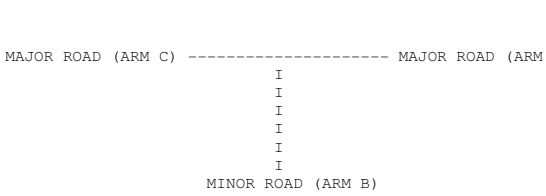
Run with file:-
"W:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Picady\
Hawthorn Road_St Augustine Road\Hawthorn Road_St Augustine Road v03.vpi"
(drive-on-the-left) at 14:34:29 on Tuesday, 30 June 2015

.RUN INFORMATION

RUN TITLE	: Hawthorn Road/St Augustine Road
LOCATION	: Lincoln
DATE	: 29/06/15
CLIENT	:
ENUMERATOR	: dwatt [M7006458]
JOB NUMBER	:
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Hawthorn Road E
ARM B IS St Augustine Road
ARM C IS Hawthorn Road W

.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)	7.00 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.00 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	60.0 M.
- VISIBILITY TO RIGHT	(VB-A)	44.0 M.
- LANE 1 WIDTH	(WB-C)	-
- LANE 2 WIDTH	(WB-A)	-
WIDTH AT 0 M FROM JUNCTION		10.00 M.
WIDTH AT 5 M FROM JUNCTION		8.00 M.
WIDTH AT 10 M FROM JUNCTION		3.90 M.
WIDTH AT 15 M FROM JUNCTION		3.70 M.
WIDTH AT 20 M FROM JUNCTION		3.70 M.
- LENGTH OF FLARED SECTION		DERIVED: 1 PCU

.SLOPES AND INTERCEPT

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

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

0.00	0.00	0.00	

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2015_Survey_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

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	3.21	4.82	3.21
ARM B	15.00	45.00	75.00	1.84	2.76	1.84
ARM C	15.00	45.00	75.00	4.94	7.41	4.94

.Demand set: 2015_Survey_AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.518	0.482
		0.0	133.0	124.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.442	0.000	0.558
		65.0	0.0	82.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.347	0.653	0.000
		137.0	258.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.03	11.21	0.092		0.00	0.10	1.5		0.10
B-A	0.82	7.70	0.106		0.00	0.12	1.7		0.14
C-AB	3.24	10.63	0.305		0.00	0.43	6.4		0.13
A-B	1.67								
A-C	1.56								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.23	11.01	0.112		0.10	0.12	1.8		0.10
B-A	0.97	7.29	0.134		0.12	0.15	2.2		0.16
C-AB	3.87	10.47	0.369		0.43	0.58	8.7		0.15

A-B	1.99								
A-C	1.86								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.50	10.71	0.141		0.12	0.16	2.4		0.11
B-A	1.19	6.72	0.177		0.15	0.21	3.1		0.18
C-AB	4.73	10.25	0.462		0.58	0.84	12.6		0.18
A-B	2.44								
A-C	2.28								

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)
08.30-08.45									
B-C	1.50	10.71	0.141		0.16	0.16	2.4		0.11
B-A	1.19	6.72	0.178		0.21	0.21	3.2		0.18
C-AB	4.73	10.25	0.462		0.84	0.85	12.9		0.18
A-B	2.44								
A-C	2.28								

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)
08.45-09.00									
B-C	1.23	11.00	0.112		0.16	0.13	1.9		0.10
B-A	0.97	7.28	0.134		0.21	0.16	2.4		0.16
C-AB	3.87	10.47	0.369		0.85	0.59	9.0		0.15
A-B	1.99								
A-C	1.86								

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	1.03	11.20	0.092		0.13	0.10	1.6		0.10
B-A	0.82	7.68	0.106		0.16	0.12	1.8		0.15
C-AB	3.24	10.63	0.305		0.59	0.44	6.7		0.14
A-B	1.67								
A-C	1.56								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
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 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-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.8	*
08.45	0.8	*
09.00	0.6	*
09.15	0.4	

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	112.9	75.2	11.6	0.10		11.6	0.10			
B-A	89.5	59.6	14.5	0.16		14.5	0.16			
C-AB	355.1	236.7	56.1	0.16		56.2	0.16			
A-B	183.1	122.0								
A-C	170.7	113.8								
ALL	1099.8	733.2	82.2	0.07		82.2	0.07			

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2015_Survey_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

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	2.15	3.23	2.15
ARM B	15.00	45.00	75.00	2.92	4.39	2.92
ARM C	15.00	45.00	75.00	4.24	6.36	4.24

.Demand set: 2015_Survey_PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	TURNING PROPORTIONS			
	TURNING COUNTS			
	(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.285	0.715
		0.0	49.0	123.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.466	0.000	0.534
		109.0	0.0	125.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.625	0.375	0.000
		212.0	127.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_PM
AND FOR TIME PERIOD 2

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	1.57	11.10	0.141		0.00	0.16	2.4		0.10
B-A	1.37	8.31	0.165		0.00	0.19	2.8		0.14
C-AB	1.59	10.90	0.146		0.00	0.17	2.5		0.11
A-B	0.61								
A-C	1.54								

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	1.87	10.87	0.172		0.16	0.21	3.0		0.11
B-A	1.63	7.99	0.204		0.19	0.25	3.7		0.16
C-AB	1.90	10.79	0.176		0.17	0.21	3.2		0.11
A-B	0.73								
A-C	1.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.29	10.53	0.218		0.21	0.28	4.0		0.12
B-A	2.00	7.55	0.265		0.25	0.36	5.2		0.18
C-AB	2.33	10.64	0.219		0.21	0.28	4.2		0.12
A-B	0.90								
A-C	2.26								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	2.29	10.52	0.218		0.28	0.28	4.2		0.12
B-A	2.00	7.54	0.265		0.36	0.36	5.4		0.18
C-AB	2.33	10.64	0.219		0.28	0.28	4.2		0.12
A-B	0.90								
A-C	2.26								

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-C	1.87	10.87	0.172		0.28	0.21	3.2		0.11
B-A	1.63	7.99	0.204		0.36	0.26	4.0		0.16
C-AB	1.90	10.79	0.176		0.28	0.22	3.2		0.11
A-B	0.73								
A-C	1.84								

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-C	1.57	11.09	0.141		0.21	0.17	2.5		0.11
B-A	1.37	8.30	0.165		0.26	0.20	3.1		0.14
C-AB	1.59	10.90	0.146		0.22	0.17	2.6		0.11
A-B	0.61								
A-C	1.54								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2

17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

.

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	172.1	114.7	19.4	0.11	19.4	0.11
B-A	150.0	100.0	24.1	0.16	24.1	0.16
C-AB	174.8	116.5	19.9	0.11	19.9	0.11
A-B	67.4	45.0				
A-C	169.3	112.9				
ALL	1025.4	683.6	63.4	0.06	63.4	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	5.26	7.89	5.26
ARM B	15.00	45.00	75.00	1.29	1.93	1.29

ARM	C	15.00	45.00	75.00	4.03	6.04	4.03

Demand set: 2033_DM_AM

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	TURNING PROPORTIONS			
	ARM A	0.000	0.055	0.945
		0.0	23.0	398.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.223	0.000	0.777
		23.0	0.0	80.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.789	0.211	0.000
		254.0	68.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.00	10.73	0.094		0.00	0.10	1.5		0.10
B-A	0.29	7.41	0.039		0.00	0.04	0.6		0.14
C-AB	0.85	10.10	0.084		0.00	0.09	1.4		0.11
A-B	0.29								
A-C	4.99								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.20	10.44	0.115		0.10	0.13	1.9		0.11
B-A	0.34	7.00	0.049		0.04	0.05	0.8		0.15
C-AB	1.02	9.84	0.104		0.09	0.11	1.7		0.11
A-B	0.34								
A-C	5.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.47	10.02	0.146		0.13	0.17	2.5		0.12
B-A	0.42	6.43	0.066		0.05	0.07	1.0		0.17
C-AB	1.25	9.48	0.132		0.11	0.15	2.3		0.12
A-B	0.42								
A-C	7.30								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	1.47	10.02	0.146		0.17	0.17	2.6		0.12
B-A	0.42	6.43	0.066		0.07	0.07	1.0		0.17
C-AB	1.25	9.48	0.132		0.15	0.15	2.3		0.12
A-B	0.42								
A-C	7.30								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.20	10.44	0.115		0.17	0.13	2.0		0.11
B-A	0.34	7.00	0.049		0.07	0.05	0.8		0.15
C-AB	1.02	9.84	0.104		0.15	0.12	1.7		0.11
A-B	0.34								
A-C	5.96								

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	1.00	10.73	0.094		0.13	0.10	1.6		0.10

I	B-A	0.29	7.41	0.039	0.05	0.04	0.6		0.14	I
I	C-AB	0.85	10.10	0.084	0.12	0.09	1.4		0.11	I
I	A-B	0.29								I
I	A-C	4.99								I
I										I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
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 B-A

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

QUEUE FOR STREAM C-AB

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

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	110.1	73.4	12.0	0.11	12.0	0.11
B-A	31.7	21.1	4.8	0.15	4.8	0.15
C-AB	93.6	62.4	10.8	0.11	10.8	0.11
A-B	31.7	21.1				
A-C	547.8	365.2				
ALL	1164.5	776.3	27.6	0.02	27.6	0.02

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
	TO RISE					
ARM A	15.00	45.00	75.00	2.53	3.79	2.53
ARM B	15.00	45.00	75.00	2.84	4.26	2.84
ARM C	15.00	45.00	75.00	3.47	5.21	3.47

.Demand set: 2033_DM_PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.050	0.950
		0.0	10.0	192.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.145	0.000	0.855
		33.0	0.0	194.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.784	0.216	0.000
		218.0	60.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.43	11.41	0.213		0.00	0.27	3.9		0.11
B-A	0.41	8.12	0.051		0.00	0.05	0.8		0.13
C-AB	0.75	10.80	0.070		0.00	0.07	1.1		0.10
A-B	0.13								
A-C	2.41								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.91	11.24	0.259		0.27	0.35	5.1		0.12
B-A	0.49	7.81	0.063		0.05	0.07	1.0		0.14
C-AB	0.90	10.68	0.084		0.07	0.09	1.4		0.10
A-B	0.15								
A-C	2.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.56	11.01	0.323		0.35	0.47	6.9		0.13
B-A	0.61	7.35	0.082		0.07	0.09	1.3		0.15
C-AB	1.10	10.50	0.105		0.09	0.12	1.7		0.11
A-B	0.18								
A-C	3.52								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.56	11.01	0.323		0.47	0.48	7.1		0.13

I B-A	0.61	7.35	0.082	0.09	0.09	1.3	0.15	I
I C-AB	1.10	10.50	0.105	0.12	0.12	1.8	0.11	I
I A-B	0.18							I
I A-C	3.52							I
I								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-C	2.91	11.24	0.259		0.48	0.35	5.4		0.12	I
I B-A	0.49	7.81	0.063		0.09	0.07	1.0		0.14	I
I C-AB	0.90	10.68	0.084		0.12	0.09	1.4		0.10	I
I A-B	0.15									I
I A-C	2.88									I
I										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-C	2.43	11.41	0.213		0.35	0.27	4.2		0.11	I
I B-A	0.41	8.12	0.051		0.07	0.05	0.8		0.13	I
I C-AB	0.75	10.80	0.070		0.09	0.08	1.1		0.10	I
I A-B	0.13									I
I A-C	2.41									I
I										I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND (VEH)	(VEH/H)	* QUEUEING * DELAY * (MIN)	(MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	(MIN/VEH)	I
I B-C	267.0	178.0	32.6	0.12	32.6	0.12	I
I B-A	45.4	30.3	6.3	0.14	6.3	0.14	I
I C-AB	82.6	55.1	8.5	0.10	8.5	0.10	I
I A-B	13.8	9.2					I
I A-C	264.3	176.2					I
I ALL	973.1	648.8	47.3	0.05	47.3	0.05	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 RUN*******

.SLOPES AND INTERCEPT

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

I Intercept For Opposing	Slope For Opposing I

I STREAM B-C	STREAM A-C	STREAM A-B	I
I 0.00	0.00	0.00	I

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

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

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

I Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	I
I 686.89	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	100	I
I B	100	I
I C	100	I

.Demand set: 2033_DS_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	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	
I ARM A	15.00	45.00	75.00	0.00	0.00	0.00	I
I ARM B	15.00	45.00	75.00	2.58	3.86	2.58	I
I ARM C	15.00	45.00	75.00	0.79	1.18	0.79	I

.Demand set: 2033_DS_AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C	I
07.45 - 08.00	ARM A	0.000	0.000	0.000	I
		0.0	0.0	0.0	I
		(0.0)	(0.0)	(0.0)	I
	ARM B	0.000	0.000	1.000	I
		0.0	0.0	206.0	I
		(0.0)	(0.0)	(0.0)	I
	ARM C	0.000	1.000	0.000	I
		0.0	63.0	0.0	I
		(0.0)	(0.0)	(0.0)	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR DEMAND SET 2033_DS_AM
AND FOR TIME PERIOD 1

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 07.45-08.00										I
B-C	2.58	12.23	0.211		0.00	0.27	3.9		0.10	I
B-A	0.00	8.39	0.000		0.00	0.00	0.0		0.00	I
C-AB	0.79	11.45	0.069		0.00	0.07	1.1		0.09	I
A-B	0.00									I
A-C	0.00									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)	I
I 08.00-08.15										I
B-C	3.09	12.23	0.252		0.27	0.33	4.9		0.11	I

B-A	0.00	8.34	0.000	0.00	0.00	0.0		0.00
C-AB	0.94	11.45	0.082	0.07	0.09	1.3		0.10
A-B	0.00							
A-C	0.00							

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	3.78	12.23	0.309		0.33	0.44	6.5		0.12
B-A	0.00	8.27	0.000		0.00	0.00	0.0		0.00
C-AB	1.16	11.45	0.101		0.09	0.11	1.7		0.10
A-B	0.00								
A-C	0.00								

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	3.78	12.23	0.309		0.44	0.44	6.7		0.12
B-A	0.00	8.27	0.000		0.00	0.00	0.0		0.00
C-AB	1.16	11.45	0.101		0.11	0.11	1.7		0.10
A-B	0.00								
A-C	0.00								

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	3.09	12.23	0.252		0.44	0.34	5.2		0.11
B-A	0.00	8.34	0.000		0.00	0.00	0.0		0.00
C-AB	0.94	11.45	0.082		0.11	0.09	1.4		0.10
A-B	0.00								
A-C	0.00								

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	2.58	12.23	0.211		0.34	0.27	4.1		0.10
B-A	0.00	8.39	0.000		0.00	0.00	0.0		0.00
C-AB	0.79	11.45	0.069		0.09	0.07	1.1		0.09
A-B	0.00								
A-C	0.00								

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

QUEUE FOR STREAM B-C

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

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	0.1
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

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *	* INCLUSIVE QUEUEING * DELAY *

	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	283.5	189.0	31.3	0.11	31.3	0.11
B-A	0.0	0.0	0.0	0.00	0.0	0.00
C-AB	86.7	57.8	8.3	0.10	8.3	0.10
A-B	0.0	0.0				
A-C	0.0	0.0				
ALL	370.3	246.8	39.5	0.11	39.5	0.11

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	3.30	4.95	3.30
ARM C	15.00	45.00	75.00	1.51	2.27	1.51

.Demand set: 2033_DS_PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	1.000
		0.0	0.0	264.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	121.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM
AND FOR TIME PERIOD 2

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	3.31	12.23	0.271		0.00	0.37	5.3		0.11
B-A	0.00	8.15	0.000		0.00	0.00	0.0		0.00
C-AB	1.52	11.45	0.133		0.00	0.15	2.3		0.10
A-B	0.00								
A-C	0.00								

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	3.96	12.23	0.323		0.37	0.47	6.9		0.12
B-A	0.00	8.05	0.000		0.00	0.00	0.0		0.00
C-AB	1.81	11.45	0.158		0.15	0.19	2.8		0.10
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	4.84	12.23	0.396		0.47	0.65	9.4		0.13
B-A	0.00	7.92	0.000		0.00	0.00	0.0		0.00
C-AB	2.22	11.45	0.194		0.19	0.24	3.6		0.11
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	4.84	12.23	0.396		0.65	0.65	9.7		0.14
B-A	0.00	7.92	0.000		0.00	0.00	0.0		0.00
C-AB	2.22	11.45	0.194		0.24	0.24	3.6		0.11
A-B	0.00								
A-C	0.00								

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-C	3.96	12.23	0.323		0.65	0.48	7.5		0.12
B-A	0.00	8.05	0.000		0.00	0.00	0.0		0.00
C-AB	1.81	11.45	0.158		0.24	0.19	2.8		0.10
A-B	0.00								
A-C	0.00								

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-C	3.31	12.23	0.271		0.48	0.38	5.8		0.11
B-A	0.00	8.15	0.000		0.00	0.00	0.0		0.00
C-AB	1.52	11.45	0.133		0.19	0.15	2.3		0.10
A-B	0.00								
A-C	0.00								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.6	*
17.45	0.7	*
18.00	0.5	
18.15	0.4	

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES

ENDING	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

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QUEUE FOR STREAM C-AB

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

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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	363.4	242.3	44.6	0.12	44.6	0.12
B-A	0.0	0.0	0.0	0.00	0.0	0.00
C-AB	166.5	111.0	17.4	0.10	17.4	0.10
A-B	0.0	0.0				
A-C	0.0	0.0				
ALL	529.9	353.3	62.0	0.12	62.0	0.12

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_AM_Sensitivity

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

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

I ARM A I	15.00	I	45.00	I	75.00	I 4.39	I 6.58	I 4.39 I
I ARM B I	15.00	I	45.00	I	75.00	I 1.61	I 2.42	I 1.61 I
I ARM C I	15.00	I	45.00	I	75.00	I 6.00	I 9.00	I 6.00 I

.Demand set: 2033_DM_AM_Sensitivity

TIME	FROM/TO	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.088	0.912
		0.0	31.0	320.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.318	0.000	0.682
		41.0	0.0	88.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.463	0.538	0.000
		222.0	258.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_AM_Sensitivity
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.10	10.88	0.101		0.00	0.11	1.6		0.10
B-A	0.51	6.86	0.075		0.00	0.08	1.2		0.16
C-AB	3.24	10.33	0.313		0.00	0.45	6.7		0.14
A-B	0.39								
A-C	4.02								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.32	10.60	0.124		0.11	0.14	2.1		0.11
B-A	0.61	6.33	0.097		0.08	0.11	1.5		0.17
C-AB	3.87	10.11	0.382		0.45	0.61	9.1		0.16
A-B	0.46								
A-C	4.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	1.61	10.18	0.159		0.14	0.19	2.7		0.12
B-A	0.75	5.61	0.134		0.11	0.15	2.2		0.21
C-AB	4.73	9.81	0.483		0.61	0.91	13.6		0.20
A-B	0.57								
A-C	5.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	1.61	10.18	0.159		0.19	0.19	2.8		0.12
B-A	0.75	5.61	0.134		0.15	0.15	2.3		0.21
C-AB	4.73	9.81	0.483		0.91	0.92	14.0		0.20
A-B	0.57								
A-C	5.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.32	10.60	0.124		0.19	0.14	2.2		0.11
B-A	0.61	6.32	0.097		0.15	0.11	1.7		0.18
C-AB	3.87	10.11	0.382		0.92	0.63	9.5		0.16
A-B	0.46								
A-C	4.79								

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 09.00-09.15									I
I B-C	1.10	10.88	0.101	0.14	0.11	1.7		0.10	I
I B-A	0.51	6.84	0.075	0.11	0.08	1.3		0.16	I
I C-AB	3.24	10.33	0.313	0.63	0.46	7.0		0.14	I
I A-B	0.39								I
I A-C	4.02								I
I									I

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

.

QUEUE FOR STREAM B-C

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

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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	0.5	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.5	

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	(VEH/H)	* QUEUEING * DELAY * (MIN)	(MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	(MIN/VEH)
B-C	121.1	80.8	13.2	0.11	13.2	0.11
B-A	56.4	37.6	10.2	0.18	10.2	0.18
C-AB	355.1	236.7	59.9	0.17	59.9	0.17
A-B	42.7	28.4				
A-C	440.5	293.6				
ALL	1321.4	880.9	83.2	0.06	83.3	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_PM_Sensitivity

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.49	3.73	2.49
ARM B	15.00	45.00	75.00	2.53	3.79	2.53
ARM C	15.00	45.00	75.00	4.64	6.96	4.64

.Demand set: 2033_DM_PM_Sensitivity

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.050	0.950
		0.0	10.0	189.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.163	0.000	0.837
		33.0	0.0	169.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.536	0.464	0.000
		199.0	172.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_PM_Sensitivity
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.12	11.41	0.186		0.00	0.23	3.3		0.11
B-A	0.41	7.69	0.054		0.00	0.06	0.8		0.14
C-AB	2.16	10.81	0.200		0.00	0.25	3.7		0.12
A-B	0.13								
A-C	2.37								

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)
17.00-17.15									
B-C	2.53	11.24	0.225		0.23	0.29	4.2		0.11
B-A	0.49	7.31	0.068		0.06	0.07	1.1		0.15
C-AB	2.58	10.69	0.241		0.25	0.31	4.7		0.12
A-B	0.15								
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)
17.15-17.30									
B-C	3.10	11.00	0.282		0.29	0.39	5.7		0.13
B-A	0.61	6.77	0.089		0.07	0.10	1.4		0.16
C-AB	3.16	10.52	0.300		0.31	0.42	6.4		0.14
A-B	0.18								
A-C	3.47								

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)

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.10	11.00	0.282		0.39	0.39	5.8		0.13
B-A	0.61	6.77	0.089		0.10	0.10	1.5		0.16
C-AB	3.16	10.52	0.300		0.42	0.43	6.4		0.14
A-B	0.18								
A-C	3.47								

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-C	2.53	11.24	0.225		0.39	0.29	4.5		0.11
B-A	0.49	7.30	0.068		0.10	0.07	1.1		0.15
C-AB	2.58	10.69	0.241		0.43	0.32	4.8		0.12
A-B	0.15								
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-C	2.12	11.41	0.186		0.29	0.23	3.5		0.11
B-A	0.41	7.68	0.054		0.07	0.06	0.9		0.14
C-AB	2.16	10.81	0.200		0.32	0.25	3.8		0.12
A-B	0.13								
A-C	2.37								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM B-A

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

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	232.6	155.1	27.1	0.12	27.1	0.12
B-A	45.4	30.3	6.8	0.15	6.8	0.15
C-AB	236.7	157.8	29.8	0.13	29.8	0.13
A-B	13.8	9.2				
A-C	260.1	173.4				
ALL	1062.6	708.4	63.6	0.06	63.6	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Sensitivity

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

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	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	2.78	4.16	2.78
ARM C	15.00	45.00	75.00	2.80	4.20	2.80

.Demand set: 2033_DS_AM_Sensitivity

TIME	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	1.000
		0.0	0.0	222.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	224.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Sensitivity
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	2.79	12.23	0.228		0.00	0.29	4.2		0.11
B-A	0.00	7.73	0.000		0.00	0.00	0.0		0.00
C-AB	2.81	11.45	0.246		0.00	0.32	4.8		0.12
A-B	0.00								
A-C	0.00								

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)

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.33	12.23	0.272		0.29	0.37	5.4		0.11
B-A	0.00	7.55	0.000		0.00	0.00	0.0		0.00
C-AB	3.36	11.45	0.293		0.32	0.41	6.2		0.12
A-B	0.00								
A-C	0.00								
08.15-08.30									
B-C	4.07	12.23	0.333		0.37	0.49	7.2		0.12
B-A	0.00	7.30	0.000		0.00	0.00	0.0		0.00
C-AB	4.11	11.45	0.359		0.41	0.55	8.3		0.14
A-B	0.00								
A-C	0.00								

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	4.07	12.23	0.333		0.49	0.50	7.4		0.12
B-A	0.00	7.29	0.000		0.00	0.00	0.0		0.00
C-AB	4.11	11.45	0.359		0.55	0.56	8.4		0.14
A-B	0.00								
A-C	0.00								

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	3.33	12.23	0.272		0.50	0.38	5.8		0.11
B-A	0.00	7.54	0.000		0.00	0.00	0.0		0.00
C-AB	3.36	11.45	0.293		0.56	0.42	6.3		0.12
A-B	0.00								
A-C	0.00								

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	2.79	12.23	0.228		0.38	0.30	4.6		0.11
B-A	0.00	7.72	0.000		0.00	0.00	0.0		0.00
C-AB	2.81	11.45	0.246		0.42	0.33	4.9		0.12
A-B	0.00								
A-C	0.00								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.5	
08.45	0.5	
09.00	0.4	
09.15	0.3	

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	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *

		* DELAY *		* DELAY *	
	(VEH)	(VEH/H)	(MIN) (MIN/VEH)	(MIN)	(MIN/VEH)
B-C	305.6	203.7	34.7 0.11	34.7	0.11
B-A	0.0	0.0	0.0 0.00	0.0	0.00
C-AB	308.3	205.5	38.9 0.13	38.9	0.13
A-B	0.0	0.0			
A-C	0.0	0.0			
ALL	613.9	409.3	73.5 0.12	73.5	0.12

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Sensitivity

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.00	0.00	0.00
ARM B	15.00	45.00	75.00	3.29	4.93	3.29
ARM C	15.00	45.00	75.00	2.85	4.27	2.85

.Demand set: 2033_DS_PM_Sensitivity

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.000	0.000
		0.0	0.0	0.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.000	0.000	1.000
		0.0	0.0	263.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.000	1.000	0.000
		0.0	228.0	0.0

I	I	I (0.0)	I (0.0)	I (0.0)	I
I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Sensitivity
AND FOR TIME PERIOD 2

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	3.30	12.23	0.270		0.00	0.37	5.3		0.11
B-A	0.00	7.71	0.000		0.00	0.00	0.0		0.00
C-AB	2.86	11.45	0.250		0.00	0.33	4.9		0.12
A-B	0.00								
A-C	0.00								

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	3.94	12.23	0.322		0.37	0.47	6.9		0.12
B-A	0.00	7.53	0.000		0.00	0.00	0.0		0.00
C-AB	3.42	11.45	0.298		0.33	0.42	6.3		0.12
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	4.83	12.23	0.395		0.47	0.64	9.3		0.13
B-A	0.00	7.27	0.000		0.00	0.00	0.0		0.00
C-AB	4.18	11.45	0.365		0.42	0.57	8.5		0.14
A-B	0.00								
A-C	0.00								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	4.83	12.23	0.395		0.64	0.65	9.7		0.14
B-A	0.00	7.27	0.000		0.00	0.00	0.0		0.00
C-AB	4.18	11.45	0.365		0.57	0.57	8.6		0.14
A-B	0.00								
A-C	0.00								

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-C	3.94	12.23	0.322		0.65	0.48	7.4		0.12
B-A	0.00	7.52	0.000		0.00	0.00	0.0		0.00
C-AB	3.42	11.45	0.298		0.57	0.43	6.5		0.12
A-B	0.00								
A-C	0.00								

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-C	3.30	12.23	0.270		0.48	0.37	5.7		0.11
B-A	0.00	7.70	0.000		0.00	0.00	0.0		0.00
C-AB	2.86	11.45	0.250		0.43	0.34	5.0		0.12
A-B	0.00								
A-C	0.00								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.6	*
17.45	0.6	*
18.00	0.5	
18.15	0.4	

QUEUE FOR STREAM B-A

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	0.3	
17.15	0.4	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

.

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	362.0	241.3	44.3	0.12	44.4	0.12
B-A	0.0	0.0	0.0	0.00	0.0	0.00
C-AB	313.8	209.2	39.9	0.13	39.9	0.13
A-B	0.0	0.0				
A-C	0.0	0.0				
ALL	675.8	450.6	84.2	0.12	84.2	0.12

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Alternate1

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK FLOW 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	7.51	11.27	7.51	
ARM B	15.00	45.00	75.00	2.20	3.30	2.20	
ARM C	15.00	45.00	75.00	2.61	3.92	2.61	

.Demand set: 2033_DS_AM_Alternate1

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00				
	ARM A	0.000	0.138	0.862
		0.0	83.0	518.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.278	0.000	0.722
		49.0	0.0	127.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.742	0.258	0.000
		155.0	54.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Alternate1
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.59	10.12	0.157		0.00	0.19	2.7		0.12
B-A	0.61	7.20	0.085		0.00	0.09	1.3		0.15
C-AB	0.68	9.53	0.071		0.00	0.08	1.1		0.11
A-B	1.04								
A-C	6.50								

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)
08.00-08.15									
B-C	1.90	9.69	0.196		0.19	0.24	3.5		0.13
B-A	0.73	6.74	0.109		0.09	0.12	1.8		0.17
C-AB	0.81	9.16	0.088		0.08	0.10	1.4		0.12
A-B	1.24								
A-C	7.76								

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	2.33	9.09	0.257		0.24	0.34	5.0		0.15
B-A	0.90	6.08	0.148		0.12	0.17	2.5		0.19
C-AB	0.99	8.64	0.115		0.10	0.13	1.9		0.13
A-B	1.52								
A-C	9.51								

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	2.33	9.08	0.257		0.34	0.34	5.1		0.15
B-A	0.90	6.08	0.148		0.17	0.17	2.6		0.19
C-AB	0.99	8.64	0.115		0.13	0.13	1.9		0.13
A-B	1.52								
A-C	9.51								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	1.90	9.69	0.196		0.34	0.25	3.8		0.13
B-A	0.73	6.74	0.109		0.17	0.12	1.9		0.17
C-AB	0.81	9.16	0.088		0.13	0.10	1.5		0.12
A-B	1.24								
A-C	7.76								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

	(VEH/MIN)	(VEH/MIN)	CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	1.59	10.12	0.158		0.25	0.19	2.9		0.12
B-A	0.61	7.20	0.085		0.12	0.09	1.5		0.15
C-AB	0.68	9.53	0.071		0.10	0.08	1.2		0.11
A-B	1.04								
A-C	6.50								

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

QUEUE FOR STREAM B-C

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

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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	174.8	116.5	23.0	0.13	23.0	0.13
B-A	67.4	45.0	11.5	0.17	11.5	0.17
C-AB	74.3	49.6	9.1	0.12	9.1	0.12
A-B	114.2	76.2				
A-C	713.0	475.3				
ALL	1357.2	904.8	43.6	0.03	43.6	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Alternate1

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	0.81	1.22	0.81
ARM B	15.00	45.00	75.00	4.81	7.22	4.81
ARM C	15.00	45.00	75.00	5.46	8.19	5.46

.Demand set: 2033_DS_PM_Alternate1

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00				
	ARM A	0.000	0.369	0.631
		0.0	24.0	41.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.610	0.000	0.390
		235.0	0.0	150.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.760	0.240	0.000
		332.0	105.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Alternate1
AND FOR TIME PERIOD 2

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	1.88	10.43	0.181		0.00	0.22	3.2		0.12
B-A	2.95	8.32	0.355		0.00	0.54	7.6		0.18
C-AB	1.32	11.24	0.117		0.00	0.13	2.0		0.10
A-B	0.30								
A-C	0.51								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.25	9.81	0.229		0.22	0.29	4.3		0.13
B-A	3.52	7.99	0.441		0.54	0.77	11.0		0.22
C-AB	1.57	11.20	0.140		0.13	0.16	2.4		0.10
A-B	0.36								
A-C	0.61								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.75	8.64	0.319		0.29	0.46	6.6		0.17
B-A	4.31	7.49	0.576		0.77	1.30	18.1		0.31
C-AB	1.93	11.14	0.173		0.16	0.21	3.1		0.11
A-B	0.44								
A-C	0.75								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

I	(VEH/MIN)	(VEH/MIN) CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)	I
I 17.30-17.45									I
I B-C	2.75	8.59	0.320	0.46	0.47	7.0		0.17	I
I B-A	4.31	7.48	0.576	1.30	1.33	19.7		0.31	I
I C-AB	1.93	11.14	0.173	0.21	0.21	3.1		0.11	I
I A-B	0.44								I
I A-C	0.75								I
I									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-C	2.25	9.75	0.230		0.47	0.30	4.7		0.13	I
I B-A	3.52	7.98	0.441		1.33	0.81	12.8		0.23	I
I C-AB	1.57	11.20	0.140		0.21	0.16	2.5		0.10	I
I A-B	0.36									I
I A-C	0.61									I
I										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-C	1.88	10.39	0.181		0.30	0.22	3.4		0.12	I
I B-A	2.95	8.31	0.355		0.81	0.56	8.8		0.19	I
I C-AB	1.32	11.24	0.117		0.16	0.13	2.0		0.10	I
I A-B	0.30									I
I A-C	0.51									I
I										I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.5	
17.45	0.5	
18.00	0.3	
18.15	0.2	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.8	*
17.30	1.3	*
17.45	1.3	*
18.00	0.8	*
18.15	0.6	*

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND		I * QUEUEING * DELAY *		I * INCLUSIVE QUEUEING * DELAY *		I
I	(VEH)	(VEH/H) I	(MIN)	(MIN/VEH) I	(MIN)	(MIN/VEH) I	
I B-C	206.5	137.6 I	29.2	0.14 I	29.2	0.14 I	
I B-A	323.5	215.6 I	78.1	0.24 I	78.1	0.24 I	
I C-AB	144.5	96.3 I	15.1	0.10 I	15.1	0.10 I	
I A-B	33.0	22.0 I		I		I	
I A-C	56.4	37.6 I		I		I	
I ALL	1220.9	813.9 I	122.4	0.10 I	122.5	0.10 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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_AM_Alternate2

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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	5.22	7.84	5.22
ARM B	15.00	45.00	75.00	2.78	4.16	2.78
ARM C	15.00	45.00	75.00	1.26	1.89	1.26

.Demand set: 2033_DS_AM_Alternate2

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.122	0.878
		0.0	51.0	367.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.505	0.000	0.495
		112.0	0.0	110.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.535	0.465	0.000
		54.0	47.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM_Alternate2
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.38	10.60	0.130		0.00	0.15	2.2		0.11
B-A	1.41	8.00	0.176		0.00	0.21	3.0		0.15
C-AB	0.59	10.11	0.058		0.00	0.06	0.9		0.10
A-B	0.64								
A-C	4.60								

TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY

	(VEH/MIN)	(VEH/MIN) CAPACITY (RFC)	FLOW (PEDS/MIN)	QUEUE (VEHS)	QUEUE (VEHS)	(VEH.MIN/ TIME SEGMENT)	(VEH.MIN/ TIME SEGMENT)	PER ARRIVING VEHICLE (MIN)
08.00-08.15								
B-C	1.65	10.20 0.162		0.15	0.19	2.8		0.12
B-A	1.68	7.68 0.219		0.21	0.28	4.0		0.17
C-AB	0.70	9.85 0.071		0.06	0.08	1.1		0.11
A-B	0.76							
A-C	5.50							

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)
08.15-08.30									
B-C	2.02	9.62	0.210		0.19	0.26	3.8		0.13
B-A	2.06	7.21	0.285		0.28	0.39	5.7		0.19
C-AB	0.86	9.50	0.091		0.08	0.10	1.5		0.12
A-B	0.94								
A-C	6.73								

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)
08.30-08.45									
B-C	2.02	9.61	0.210		0.26	0.26	4.0		0.13
B-A	2.06	7.21	0.285		0.39	0.39	5.9		0.19
C-AB	0.86	9.50	0.091		0.10	0.10	1.5		0.12
A-B	0.94								
A-C	6.73								

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)
08.45-09.00									
B-C	1.65	10.20	0.162		0.26	0.19	3.0		0.12
B-A	1.68	7.67	0.219		0.39	0.28	4.4		0.17
C-AB	0.70	9.85	0.071		0.10	0.08	1.2		0.11
A-B	0.76								
A-C	5.50								

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)
09.00-09.15									
B-C	1.38	10.60	0.130		0.19	0.15	2.3		0.11
B-A	1.41	8.00	0.176		0.28	0.22	3.3		0.15
C-AB	0.59	10.11	0.058		0.08	0.06	0.9		0.11
A-B	0.64								
A-C	4.60								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

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-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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	151.4	100.9	18.1	0.12	18.1	0.12
B-A	154.2	102.8	26.4	0.17	26.4	0.17
C-AB	64.7	43.1	7.1	0.11	7.1	0.11
A-B	70.2	46.8				
A-C	505.1	336.8				
ALL	1019.9	680.0	51.6	0.05	51.6	0.05

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
686.89	0.25	0.25

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_PM_Alternate2

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

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	0.93	1.39	0.93
ARM B	15.00	45.00	75.00	5.25	7.88	5.25
ARM C	15.00	45.00	75.00	6.34	9.51	6.34

.Demand set: 2033_DS_PM_Alternate2

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.432	0.568
		0.0	32.0	42.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.798	0.000	0.202
		335.0	0.0	85.0
		(0.0)	(0.0)	(0.0)

I	I ARM C	I 0.819	I 0.181	I 0.000	I
I	I	I 415.0	I 92.0	I 0.0	I
I	I	I (0.0)	I (0.0)	I (0.0)	I
I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM_Alternate2
AND FOR TIME PERIOD 2

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	1.07	9.09	0.117		0.00	0.13	1.9		0.12
B-A	4.20	8.25	0.509		0.00	1.00	13.9		0.24
C-AB	1.15	11.21	0.103		0.00	0.11	1.7		0.10
A-B	0.40								
A-C	0.53								

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	1.27	7.64	0.167		0.13	0.20	2.9		0.16
B-A	5.02	7.93	0.633		1.00	1.63	22.6		0.33
C-AB	1.38	11.17	0.123		0.11	0.14	2.1		0.10
A-B	0.48								
A-C	0.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.56	4.74	0.329		0.20	0.48	6.7		0.31
B-A	6.15	7.46	0.824		1.63	3.81	48.0		0.63
C-AB	1.69	11.10	0.152		0.14	0.18	2.7		0.11
A-B	0.59								
A-C	0.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	1.56	4.39	0.356		0.48	0.54	7.8		0.35
B-A	6.15	7.45	0.825		3.81	4.17	60.3		0.72
C-AB	1.69	11.10	0.152		0.18	0.18	2.7		0.11
A-B	0.59								
A-C	0.77								

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-C	1.27	7.29	0.175		0.54	0.21	3.4		0.17
B-A	5.02	7.93	0.633		4.17	1.83	31.1		0.38
C-AB	1.38	11.17	0.123		0.18	0.14	2.1		0.10
A-B	0.48								
A-C	0.63								

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-C	1.07	8.95	0.119		0.21	0.14	2.1		0.13
B-A	4.20	8.25	0.510		1.83	1.07	17.2		0.25
C-AB	1.15	11.21	0.103		0.14	0.12	1.7		0.10
A-B	0.40								
A-C	0.53								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.2	
17.30	0.5	
17.45	0.5	*
18.00	0.2	
18.15	0.1	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	3.8	****
17.45	4.2	****
18.00	1.8	**
18.15	1.1	*

.

QUEUE FOR STREAM C-AB

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

.

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	117.0	78.0	24.8	0.21	24.8	0.21
B-A	461.1	307.4	193.0	0.42	193.1	0.42
C-AB	126.6	84.4	13.0	0.10	13.0	0.10
A-B	44.0	29.4				
A-C	57.8	38.5				
ALL	1377.8	918.5	230.8	0.17	230.9	0.17

* 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*******

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

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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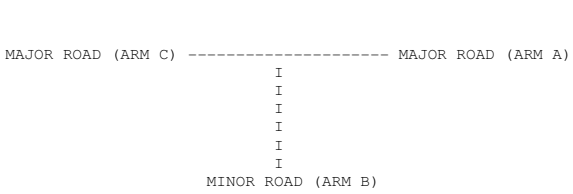
Run with file:-
"W:\Jobs\1030171 Lincoln Eastern Bypass\15 2015 Public Inquiry\15 Junction Assessments\Kennel Lane Picady\A158_Kennel Lane Junction.vpi"
(drive-on-the-left) at 14:45:30 on Friday, 26 June 2015

.RUN INFORMATION

RUN TITLE : Wragby Road Kennel Lane
LOCATION : Lincoln
DATE : 25/06/15
CLIENT :
ENUMERATOR : dwatt [M7006458]
JOB NUMBER :
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Wragby Road NE
ARM B IS Kennel Lane
ARM C IS Wragby Road SW

.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) 6.72 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 4.70 M.
- VISIBILITY	(VC-B) 91.00 M.
- BLOCKS TRAFFIC	YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 41.0 M.
- VISIBILITY TO RIGHT	(VB-A) 48.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
WIDTH AT 0 M FROM JUNCTION	10.00 M.
WIDTH AT 5 M FROM JUNCTION	6.86 M.
WIDTH AT 10 M FROM JUNCTION	5.06 M.
WIDTH AT 15 M FROM JUNCTION	4.25 M.
WIDTH AT 20 M FROM JUNCTION	3.48 M.
- LENGTH OF FLARED SECTION	2 VEHS

.SLOPES AND INTERCEPT

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

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

0.00	0.00	0.00	

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2015_Survey_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

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	7.39	11.08	7.39
ARM B	15.00	45.00	75.00	2.41	3.62	2.41
ARM C	15.00	45.00	75.00	9.68	14.51	9.68

.Demand set: 2015_Survey_PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.091	0.909
		0.0	54.0	537.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.425	0.000	0.575
		82.0	0.0	111.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.853	0.147	0.000
		660.0	114.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_PM
AND FOR TIME PERIOD 2

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	1.39	9.58	0.145		0.00	0.17	2.4		0.12
B-A	1.03	5.49	0.187		0.00	0.23	3.2		0.22
C-AB	1.43	11.07	0.129		0.00	0.15	2.2		0.10
A-B	0.68								
A-C	6.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.66	9.05	0.184		0.17	0.22	3.3		0.14
B-A	1.23	4.83	0.255		0.23	0.33	4.8		0.28
C-AB	1.71	10.64	0.161		0.15	0.19	2.9		0.11

I A-B	0.81								I
I A-C	8.05								I
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)
17.15-17.30									
B-C	2.04	8.18	0.249		0.22	0.33	4.7		0.16
B-A	1.50	3.90	0.385		0.33	0.60	8.4		0.41
C-AB	2.09	10.04	0.208		0.19	0.26	3.9		0.13
A-B	0.99								
A-C	9.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	2.04	8.16	0.250		0.33	0.33	4.9		0.16
B-A	1.50	3.90	0.386		0.60	0.61	9.1		0.42
C-AB	2.09	10.04	0.208		0.26	0.26	3.9		0.13
A-B	0.99								
A-C	9.85								

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-C	1.66	9.03	0.184		0.33	0.23	3.5		0.14
B-A	1.23	4.82	0.255		0.61	0.35	5.6		0.28
C-AB	1.71	10.64	0.161		0.26	0.19	2.9		0.11
A-B	0.81								
A-C	8.05								

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-C	1.39	9.57	0.146		0.23	0.17	2.6		0.12
B-A	1.03	5.49	0.188		0.35	0.23	3.7		0.23
C-AB	1.43	11.07	0.129		0.19	0.15	2.2		0.10
A-B	0.68								
A-C	6.74								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.2	
17.30	0.3	
17.45	0.3	
18.00	0.2	
18.15	0.2	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.6	*
17.45	0.6	*
18.00	0.4	
18.15	0.2	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)

I B-C	I 152.8	I 101.9	I 21.5	I 0.14	I 21.6	I 0.14	I		
I B-A	I 112.9	I 75.2	I 34.8	I 0.31	I 34.8	I 0.31	I		
I C-AB	I 156.9	I 104.6	I 18.0	I 0.11	I 18.0	I 0.11	I		
I A-B	I 74.3	I 49.6	I	I	I	I	I		
I A-C	I 739.1	I 492.8	I	I	I	I	I		
I ALL	I 2144.5	I 1429.6	I 74.3	I 0.03	I 74.4	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2015_Survey_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	10.27	15.41	10.27
ARM B	15.00	45.00	75.00	2.54	3.81	2.54
ARM C	15.00	45.00	75.00	7.95	11.92	7.95

.Demand set: 2015_Survey_AM

TIME	FROM/TO	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) TURNING COUNTS ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.151	0.849
		0.0	124.0	698.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.335	0.000	0.665
		68.0	0.0	135.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.855	0.145	0.000
		544.0	92.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2015_Survey_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.69	9.31	0.182		0.00	0.22	3.2		0.13
B-A	0.85	5.06	0.169		0.00	0.20	2.8		0.24
C-AB	1.15	10.20	0.113		0.00	0.13	1.9		0.11
A-B	1.56								
A-C	8.76								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	2.02	8.68	0.233		0.22	0.30	4.4		0.15
B-A	1.02	4.36	0.233		0.20	0.30	4.3		0.30
C-AB	1.38	9.60	0.144		0.13	0.17	2.5		0.12
A-B	1.86								
A-C	10.46								

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	2.48	7.69	0.322		0.30	0.47	6.7		0.19
B-A	1.25	3.40	0.367		0.30	0.55	7.7		0.46
C-AB	1.69	8.77	0.192		0.17	0.24	3.5		0.14
A-B	2.28								
A-C	12.81								

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	2.48	7.67	0.323		0.47	0.47	7.1		0.19
B-A	1.25	3.40	0.367		0.55	0.57	8.4		0.46
C-AB	1.69	8.77	0.192		0.24	0.24	3.6		0.14
A-B	2.28								
A-C	12.81								

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	2.02	8.66	0.233		0.47	0.31	4.8		0.15
B-A	1.02	4.36	0.234		0.57	0.31	5.0		0.30
C-AB	1.38	9.60	0.144		0.24	0.17	2.5		0.12
A-B	1.86								
A-C	10.46								

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	1.69	9.30	0.182		0.31	0.22	3.5		0.13
B-A	0.85	5.06	0.169		0.31	0.21	3.2		0.24
C-AB	1.15	10.20	0.113		0.17	0.13	1.9		0.11
A-B	1.56								
A-C	8.76								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2

08.15	0.3	
08.30	0.6	*
08.45	0.6	*
09.00	0.3	
09.15	0.2	

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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

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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	185.8	123.9	29.6	0.16	29.6	0.16
B-A	93.6	62.4	31.4	0.34	31.4	0.34
C-AB	126.6	84.4	16.0	0.13	16.0	0.13
A-B	170.7	113.8				
A-C	960.7	640.5				
ALL	2286.2	1524.2	77.0	0.03	77.0	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

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	8.89	13.33	8.89
ARM B	15.00	45.00	75.00	2.64	3.96	2.64

I ARM	C I	15.00	I	45.00	I	75.00	I	8.68	I	13.01	I	8.68	I

.Demand set: 2033_DM_AM

I TIME	I FROM/TO I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	I	ARM B	I	ARM C	I
I 07.45 - 08.00	I	I		I		I	
I	I ARM A	I 0.000	I	0.094	I	0.906	I
I	I	I 0.0	I	67.0	I	644.0	I
I	I	I (0.0)	I	(0.0)	I	(0.0)	I
I	I	I		I		I	
I	I ARM B	I 0.351	I	0.000	I	0.649	I
I	I	I 74.0	I	0.0	I	137.0	I
I	I	I (0.0)	I	(0.0)	I	(0.0)	I
I	I	I		I		I	
I	I ARM C	I 0.814	I	0.186	I	0.000	I
I	I	I 565.0	I	129.0	I	0.0	I
I	I	I (0.0)	I	(0.0)	I	(0.0)	I
I	I	I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_AM
AND FOR TIME PERIOD 1

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 07.45-08.00										I
I B-C	1.72	9.49	0.181		0.00	0.22	3.2		0.13	I
I B-A	0.93	5.12	0.181		0.00	0.22	3.1		0.24	I
I C-AB	1.62	10.62	0.152		0.00	0.18	2.7		0.11	I
I A-B	0.84									I
I A-C	8.08									I
I										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 08.00-08.15										I
I B-C	2.05	8.88	0.231		0.22	0.30	4.3		0.15	I
I B-A	1.11	4.43	0.250		0.22	0.33	4.7		0.30	I
I C-AB	1.93	10.10	0.191		0.18	0.23	3.5		0.12	I
I A-B	1.00									I
I A-C	9.65									I
I										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 08.15-08.30										I
I B-C	2.51	7.91	0.318		0.30	0.46	6.6		0.18	I
I B-A	1.36	3.46	0.392		0.33	0.61	8.5		0.47	I
I C-AB	2.37	9.38	0.252		0.23	0.33	5.0		0.14	I
I A-B	1.23									I
I A-C	11.82									I
I										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 08.30-08.45										I
I B-C	2.51	7.89	0.319		0.46	0.46	6.9		0.19	I
I B-A	1.36	3.46	0.392		0.61	0.63	9.4		0.47	I
I C-AB	2.37	9.38	0.252		0.33	0.34	5.1		0.14	I
I A-B	1.23									I
I A-C	11.82									I
I										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 08.45-09.00										I
I B-C	2.05	8.86	0.232		0.46	0.31	4.7		0.15	I
I B-A	1.11	4.42	0.251		0.63	0.34	5.5		0.31	I
I C-AB	1.93	10.10	0.191		0.34	0.24	3.6		0.12	I
I A-B	1.00									I
I A-C	9.65									I
I										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 09.00-09.15										I
I B-C	1.72	9.48	0.181		0.31	0.22	3.4		0.13	I

I	B-A	0.93	5.11	0.182	0.34	0.23	3.5		0.24	I
I	C-AB	1.62	10.62	0.152	0.24	0.18	2.7		0.11	I
I	A-B	0.84								I
I	A-C	8.08								I
I										I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	
08.45	0.5	
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.6	*
08.45	0.6	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM C-AB

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

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	188.6	125.7	29.2	0.15	29.2	0.15
B-A	101.9	67.9	34.6	0.34	34.6	0.34
C-AB	177.6	118.4	22.5	0.13	22.6	0.13
A-B	92.2	61.5				
A-C	886.4	590.9				
ALL	2224.3	1482.9	86.4	0.04	86.4	0.04

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
	TO RISE					
ARM A	15.00	45.00	75.00	10.25	15.38	10.25
ARM B	15.00	45.00	75.00	4.06	6.09	4.06
ARM C	15.00	45.00	75.00	9.04	13.56	9.04

.Demand set: 2033_DS_AM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.068	0.932
		0.0	56.0	764.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.191	0.000	0.809
		62.0	0.0	263.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.952	0.048	0.000
		688.0	35.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_AM
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	3.30	9.50	0.347		0.00	0.52	7.5		0.16
B-A	0.78	4.68	0.166		0.00	0.20	2.8		0.25
C-AB	0.44	10.21	0.043		0.00	0.04	0.7		0.10
A-B	0.70								
A-C	9.59								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.94	8.79	0.448		0.52	0.79	11.4		0.20
B-A	0.93	3.94	0.236		0.20	0.30	4.3		0.33
C-AB	0.52	9.61	0.055		0.04	0.06	0.9		0.11
A-B	0.84								
A-C	11.45								

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)
08.15-08.30									
B-C	4.83	7.63	0.632		0.79	1.62	22.2		0.34
B-A	1.14	2.81	0.405		0.30	0.64	8.7		0.58
C-AB	0.64	8.78	0.073		0.06	0.08	1.2		0.12
A-B	1.03								
A-C	14.02								

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	4.83	7.60	0.635		1.62	1.68	24.9		0.36

B-A	1.14	2.79	0.408	0.64	0.67	9.8	0.60	
C-AB	0.64	8.78	0.073	0.08	0.08	1.2	0.12	
A-B	1.03							
A-C	14.02							

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	3.94	8.77	0.449		1.68	0.84	13.3		0.21
B-A	0.93	3.93	0.236		0.67	0.32	5.1		0.34
C-AB	0.52	9.61	0.055		0.08	0.06	0.9		0.11
A-B	0.84								
A-C	11.45								

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)
09.00-09.15									
B-C	3.30	9.49	0.348		0.84	0.54	8.5		0.16
B-A	0.78	4.68	0.166		0.32	0.20	3.2		0.26
C-AB	0.44	10.21	0.043		0.06	0.05	0.7		0.10
A-B	0.70								
A-C	9.59								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.6	**
08.45	1.7	**
09.00	0.8	*
09.15	0.5	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.6	*
08.45	0.7	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM C-AB

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	362.0	241.3	87.7	0.24	87.7	0.24
B-A	85.3	56.9	33.9	0.40	33.9	0.40
C-AB	48.2	32.1	5.4	0.11	5.4	0.11
A-B	77.1	51.4				
A-C	1051.6	701.1				
ALL	2571.2	1714.1	127.0	0.05	127.1	0.05

* 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)

Intercept For Opposing	Slope For Opposing

I STREAM B-C	STREAM A-C	STREAM A-B
I 0.00	0.00	0.00

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

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

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

I Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
I 797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS+Uplift_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 FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	I RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
I ARM A	I 15.00	I 45.00	I 75.00	I 10.54	I 15.81	I 10.54
I ARM B	I 15.00	I 45.00	I 75.00	I 5.71	I 8.57	I 5.71
I ARM C	I 15.00	I 45.00	I 75.00	I 9.21	I 13.82	I 9.21

.Demand set: 2033_DS+Uplift_AM

I TIME	I FROM/TO	I TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
I 07.45 - 08.00	I	I	I	I
	I ARM A	I 0.000	I 0.094	I 0.906
	I	I 0.0	I 79.0	I 764.0
	I	I (0.0)%	I (0.0)%	I (0.0)%
	I	I	I	I
	I ARM B	I 0.190	I 0.000	I 0.810
	I	I 87.0	I 0.0	I 370.0
	I	I (0.0)%	I (0.0)%	I (0.0)%
	I	I	I	I
	I ARM C	I 0.934	I 0.066	I 0.000
	I	I 688.0	I 49.0	I 0.0
	I	I (0.0)%	I (0.0)%	I (0.0)%
	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS+Uplift_AM
AND FOR TIME PERIOD 1

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 07.45-08.00									
I B-C	4.64	9.27	0.501		0.00	0.98	13.6		0.21
I B-A	1.09	4.45	0.245		0.00	0.32	4.4		0.29
I C-AB	0.61	10.12	0.061		0.00	0.06	1.0		0.11
I A-B	0.99								
I A-C	9.59								

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 08.00-08.15									
I B-C	5.54	8.40	0.660		0.98	1.82	25.0		0.34

B-A	1.30	3.46	0.376		0.32	0.58	8.0		0.46
C-AB	0.73	9.51	0.077		0.06	0.08	1.2		0.11
A-B	1.18								
A-C	11.45								

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)
08.15-08.30									
B-C	6.79	6.70	1.014		1.82	10.58	105.8		1.36
B-A	1.60	1.58	1.008		0.58	4.60	45.2		2.76
C-AB	0.90	8.66	0.104		0.08	0.11	1.7		0.13
A-B	1.45								
A-C	14.02								

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	6.79	6.45	1.052		10.58	18.09	217.1		2.57
B-A	1.60	1.64	0.974		4.60	6.19	81.6		4.02
C-AB	0.90	8.66	0.104		0.11	0.12	1.7		0.13
A-B	1.45								
A-C	14.02								

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	5.54	7.93	0.699		18.09	2.63	101.9		1.05
B-A	1.30	2.79	0.467		6.19	0.96	27.9		1.08
C-AB	0.73	9.51	0.077		0.12	0.08	1.3		0.11
A-B	1.18								
A-C	11.45								

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)
09.00-09.15									
B-C	4.64	9.22	0.503		2.63	1.04	17.1		0.23
B-A	1.09	4.42	0.247		0.96	0.34	5.5		0.31
C-AB	0.61	10.12	0.061		0.08	0.07	1.0		0.11
A-B	0.99								
A-C	9.59								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.8	**
08.30	10.6	**********
08.45	18.1	**********
09.00	2.6	***
09.15	1.0	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.6	*
08.30	4.6	*****
08.45	6.2	******
09.00	1.0	*
09.15	0.3	

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

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *	* INCLUSIVE QUEUEING * DELAY *

	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	509.3	339.5	480.4	0.94	480.5	0.94
B-A	119.7	79.8	172.7	1.44	172.7	1.44
C-AB	67.4	45.0	7.9	0.12	7.9	0.12
A-B	108.7	72.5				
A-C	1051.6	701.1				
ALL	2803.8	1869.2	661.0	0.24	661.1	0.24

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DM_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

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	8.95	13.42	8.95
ARM B	15.00	45.00	75.00	1.86	2.79	1.86
ARM C	15.00	45.00	75.00	10.79	16.18	10.79

.Demand set: 2033_DM_PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.064	0.936
		0.0	46.0	670.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.651	0.000	0.349
		97.0	0.0	52.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.919	0.081	0.000
		793.0	70.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DM_PM
AND FOR TIME PERIOD 2

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	0.65	8.32	0.078		0.00	0.08	1.2		0.13
B-A	1.22	5.48	0.222		0.00	0.28	4.0		0.23
C-AB	0.88	10.60	0.083		0.00	0.09	1.3		0.10
A-B	0.58								
A-C	8.41								

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	0.78	7.70	0.101		0.08	0.11	1.6		0.14
B-A	1.45	4.67	0.311		0.28	0.44	6.3		0.31
C-AB	1.05	10.08	0.104		0.09	0.12	1.7		0.11
A-B	0.69								
A-C	10.04								

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)
17.15-17.30									
B-C	0.95	6.49	0.147		0.11	0.17	2.5		0.18
B-A	1.78	3.55	0.502		0.44	0.94	12.7		0.55
C-AB	1.28	9.36	0.137		0.12	0.16	2.4		0.12
A-B	0.84								
A-C	12.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.95	6.44	0.148		0.17	0.17	2.6		0.18
B-A	1.78	3.54	0.502		0.94	0.97	14.4		0.56
C-AB	1.28	9.36	0.137		0.16	0.16	2.4		0.12
A-B	0.84								
A-C	12.29								

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-C	0.78	7.67	0.102		0.17	0.11	1.8		0.15
B-A	1.45	4.67	0.311		0.97	0.47	7.5		0.32
C-AB	1.05	10.08	0.104		0.16	0.12	1.8		0.11
A-B	0.69								
A-C	10.04								

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-C	0.65	8.31	0.079		0.11	0.09	1.3		0.13
B-A	1.22	5.48	0.222		0.47	0.29	4.6		0.24
C-AB	0.88	10.60	0.083		0.12	0.09	1.4		0.10
A-B	0.58								
A-C	8.41								

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

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES

ENDING	IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.9	*
17.45	1.0	*
18.00	0.5	
18.15	0.3	

.

QUEUE FOR STREAM C-AB

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

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	71.6	47.7	11.0	0.15	11.0	0.15
B-A	133.5	89.0	49.5	0.37	49.5	0.37
C-AB	96.3	64.2	10.9	0.11	10.9	0.11
A-B	63.3	42.2				
A-C	922.2	614.8				
ALL	2378.5	1585.6	71.4	0.03	71.4	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 RUN*******

.SLOPES AND INTERCEPT

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

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS_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

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

I ARM A I	15.00	I	45.00	I	75.00	I 11.00	I 16.50	I 11.00 I
I ARM B I	15.00	I	45.00	I	75.00	I 1.75	I 2.63	I 1.75 I
I ARM C I	15.00	I	45.00	I	75.00	I 11.94	I 17.91	I 11.94 I

.Demand set: 2033_DS_PM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (PERCENTAGE OF H.V.S)		
		ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000 0.0 (0.0)	0.081 71.0 (0.0)	0.919 809.0 (0.0)
	ARM B	0.243 34.0 (0.0)	0.000 0.0 (0.0)	0.757 106.0 (0.0)
	ARM C	0.982 938.0 (0.0)	0.018 17.0 (0.0)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS_PM
AND FOR TIME PERIOD 2

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	1.33	9.42	0.141		0.00	0.16	2.4		0.12
B-A	0.43	4.26	0.100		0.00	0.11	1.5		0.26
C-AB	0.21	9.98	0.021		0.00	0.02	0.3		0.10
A-B	0.89								
A-C	10.15								

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	1.59	8.74	0.182		0.16	0.22	3.2		0.14
B-A	0.51	3.47	0.147		0.11	0.17	2.4		0.34
C-AB	0.25	9.34	0.027		0.02	0.03	0.4		0.11
A-B	1.06								
A-C	12.12								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	1.95	7.72	0.252		0.22	0.33	4.8		0.17
B-A	0.62	2.38	0.262		0.17	0.34	4.7		0.56
C-AB	0.31	8.45	0.037		0.03	0.04	0.6		0.12
A-B	1.30								
A-C	14.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	1.95	7.71	0.252		0.33	0.33	5.0		0.17
B-A	0.62	2.38	0.262		0.34	0.35	5.2		0.57
C-AB	0.31	8.45	0.037		0.04	0.04	0.6		0.12
A-B	1.30								
A-C	14.85								

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-C	1.59	8.73	0.182		0.33	0.22	3.5		0.14
B-A	0.51	3.47	0.147		0.35	0.18	2.8		0.34
C-AB	0.25	9.34	0.027		0.04	0.03	0.4		0.11
A-B	1.06								
A-C	12.12								

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 18.00-18.15									I
I B-C	1.33	9.42	0.141	0.22	0.17	2.6		0.12	I
I B-A	0.43	4.26	0.100	0.18	0.11	1.8		0.26	I
I C-AB	0.21	9.98	0.021	0.03	0.02	0.3		0.10	I
I A-B	0.89								I
I A-C	10.15								I
I									I

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
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 (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	145.9	97.3	21.4	0.15	21.4	0.15
B-A	46.8	31.2	18.4	0.39	18.4	0.39
C-AB	23.4	15.6	2.6	0.11	2.6	0.11
A-B	97.7	65.2				
A-C	1113.5	742.4				
ALL	2718.4	1812.3	42.4	0.02	42.4	0.02

* 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)

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

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

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

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

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
797.17	0.30	0.30

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

.TRAFFIC DEMAND DATA

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

.Demand set: 2033_DS+Uplift_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

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	12.14	18.21	12.14
ARM B	15.00	45.00	75.00	4.00	6.00	4.00
ARM C	15.00	45.00	75.00	12.21	18.32	12.21

.Demand set: 2033_DS+Uplift_PM

TIME	FROM/TO	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) TURNING COUNTS ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.167	0.833
		0.0	162.0	809.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.244	0.000	0.756
		78.0	0.0	242.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.960	0.040	0.000
		938.0	39.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2033_DS+Uplift_PM
AND FOR TIME PERIOD 2

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	3.04	8.93	0.340		0.00	0.51	7.2		0.17
B-A	0.98	4.05	0.242		0.00	0.31	4.3		0.32
C-AB	0.49	9.64	0.051		0.00	0.05	0.8		0.11
A-B	2.03								
A-C	10.15								

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	3.63	7.98	0.454		0.51	0.81	11.5		0.23
B-A	1.17	3.19	0.366		0.31	0.55	7.6		0.49
C-AB	0.58	8.93	0.065		0.05	0.07	1.0		0.12
A-B	2.43								
A-C	12.12								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	4.44	5.80	0.765		0.81	2.77	34.7		0.62
B-A	1.43	1.77	0.811		0.55	2.55	28.6		1.81
C-AB	0.72	7.96	0.090		0.07	0.10	1.5		0.14
A-B	2.97								
A-C	14.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)

17.30-17.45									
B-C	4.44	5.01	0.886		2.77	4.97	62.1	1.17	
B-A	1.43	1.68	0.851		2.55	3.42	45.7	2.67	
C-AB	0.72	7.96	0.090		0.10	0.10	1.5	0.14	
A-B	2.97								
A-C	14.85								

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-C	3.63	7.74	0.469		4.97	0.91	17.4	0.28	
B-A	1.17	3.17	0.368		3.42	0.62	13.0	0.60	
C-AB	0.58	8.93	0.065		0.10	0.07	1.1	0.12	
A-B	2.43								
A-C	12.12								

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-C	3.04	8.90	0.341		0.91	0.53	8.3	0.17	
B-A	0.98	4.04	0.242		0.62	0.33	5.3	0.33	
C-AB	0.49	9.64	0.051		0.07	0.05	0.8	0.11	
A-B	2.03								
A-C	10.15								

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

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.8	*
17.30	2.8	***
17.45	5.0	*****
18.00	0.9	*
18.15	0.5	*

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.6	*
17.30	2.6	***
17.45	3.4	***
18.00	0.6	*
18.15	0.3	

QUEUE FOR STREAM C-AB

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

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	333.1	222.1	141.2	0.42	141.2	0.42
B-A	107.4	71.6	104.4	0.97	104.4	0.97
C-AB	53.7	35.8	6.7	0.12	6.7	0.12
A-B	223.0	148.7				
A-C	1113.5	742.4				
ALL	3121.7	2081.2	252.2	0.08	252.3	0.08

* 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*******