Appendix L. Oxford Road / A41 Arcady Results

OXFORDSHIRE COUNTY COUNCIL

APPROVED

DATE: 06/01/14
APPLICATION No: R3.0143/13

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: Oxford Road - A41 - App L.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 12:04:45

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Base			
Arm 1	0.69	7.34	0.39	A
Arm 2	0.75	2.09	0.41	A
Arm 3	0.09	2.95	0.07	A
Arm 4	0.67	2.85	0.39	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base, AM " model duration: 07:30 - 08:30
"D2 - Base, PM" model duration: 17:00 - 18:00
"D4 - 2019 FY +CD +P&R, AM" model duration: 07:30 - 08:30
"D5 - 2019 FY +CD +P&R, PM" model duration: 17:00 - 18:00
"D13 - 2014 OY +CD, AM" model duration: 07:30 - 08:30
"D14 - 2014 OY +CD, PM" model duration: 17:00 - 18:00
"D15 - 2014 OY +CD + P&R, AM" model duration: 07:30 - 08:30
"D16 - 2014 OY +CD + P&R, PM" model duration: 17:00 - 18:00
"D17 - 2019 FY +CD, AM" model duration: 07:30 - 08:30
"D18 - 2019 FY +CD, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 12:04:43

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
Base, AM	Base	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				4.18	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1251.00	100.000
2	FLAT	✓	1294.00	100.000
3	FLAT	✓	104.00	100.000
4	FLAT	✓	844.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	1251.00	1251.00		0.00
07:30-08:30	2	1294.00	1294.00		
07:30-08:30	3	104.00	104.00		
07:30-08:30	4	844.00	844.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	914.000	35.000	302.000
	2	656.000	0.000	41.000	597.000
	3	24.000	48.000	0.000	32.000
	4	271.000	565.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.73	0.03	0.24
	2	0.51	0.00	0.03	0.46
	3	0.23	0.46	0.00	0.31
	4	0.32	0.67	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.39	7.34	0.69	A	1251.00	337.00	40.57	7.22	0.68	40.59	7.23
2	0.41	2.09	0.75	A	1294.00	1294.00	44.88	2.08	0.75	44.89	2.08
3	0.07	2.95	0.09	A	104.00	104.00	5.08	2.93	0.08	5.08	2.93
4	0.39	2.85	0.67	A	844.00	844.00	39.81	2.83	0.66	39.82	2.83

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1251.00	337.00	337.00	914.00	0.00	336.31	950.38	620.51	0.00	860.45	625.72	0.392	0.00	0.69	7.341	A
2	1294.00	1294.00	1294.00	0.00	914.00	1293.25	612.51	344.31	0.00	3167.69	2922.44	0.409	0.00	0.75	2.093	A
3	104.00	104.00	104.00	0.00	0.00	103.91	83.90	1553.66	0.00	1499.07	236.44	0.069	0.00	0.09	2.948	A
4	844.00	844.00	844.00	0.00	0.00	843.33	930.01	727.56	0.00	2148.94	1507.98	0.393	0.00	0.67	2.851	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	40.57	0.68	7.341	A	A
2	44.88	0.75	2.093	A	A
3	5.08	0.08	2.948	A	A
4	39.81	0.66	2.851	A	A

(Default Analysis Set) - Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
Base, PM	Base	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				5.03	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1215.00	100.000
2	FLAT	✓	1687.00	100.000
3	FLAT	✓	127.00	100.000
4	FLAT	✓	1081.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1215.00	1215.00		0.00
17:00-18:00	2	1687.00	1687.00		
17:00-18:00	3	127.00	127.00		
17:00-18:00	4	1081.00	1081.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	790.000	19.000	406.000
	2	705.000	0.000	33.000	949.000
	3	36.000	55.000	0.000	36.000
	4	366.000	702.000	13.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.65	0.02	0.33
	2	0.42	0.00	0.02	0.56
	3	0.28	0.43	0.00	0.28
	4	0.34	0.65	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.54	9.76	1.15	A	1215.00	425.00	67.56	9.54	1.13	67.61	9.54
2	0.55	2.64	1.24	A	1687.00	1687.00	73.64	2.62	1.23	73.65	2.62
3	0.11	3.62	0.13	A	127.00	127.00	7.61	3.60	0.13	7.61	3.60
4	0.51	3.61	1.08	A	1081.00	1081.00	64.43	3.58	1.07	64.44	3.58

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1215.00	425.00	425.00	790.00	0.00	423.85	1106.08	769.23	0.00	792.33	591.12	0.536	0.00	1.15	9.759	A
2	1687.00	1687.00	1687.00	0.00	790.00	1685.76	756.24	436.83	0.00	3090.95	2946.04	0.546	0.00	1.24	2.640	A
3	127.00	127.00	127.00	0.00	0.00	126.87	64.91	2057.69	0.00	1152.62	193.47	0.110	0.00	0.13	3.623	A
4	1081.00	1081.00	1081.00	0.00	0.00	1079.92	1389.17	795.39	0.00	2101.56	1700.37	0.514	0.00	1.08	3.613	A

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	67.56	1.13	9.759	A	A
2	73.64	1.23	2.640	A	A
3	7.61	0.13	3.623	A	A
4	64.43	1.07	3.613	A	A

(Default Analysis Set) - 2019 FY +CD +P&R, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 FY +CD +P&R, AM	2019 FY +CD +P	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				8.54	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	2143.00	100.000
2	FLAT	✓	1913.00	100.000
3	FLAT	✓	111.00	100.000
4	FLAT	✓	1296.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	2143.00	2143.00		0.00
07:30-08:30	2	1913.00	1913.00		
07:30-08:30	3	111.00	111.00		
07:30-08:30	4	1296.00	1296.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1732.000	37.000	374.000
	2	1089.000	0.000	44.000	780.000
	3	26.000	51.000	0.000	34.000
	4	315.000	972.000	9.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.81	0.02	0.17
	2	0.57	0.00	0.02	0.41
	3	0.23	0.46	0.00	0.31
	4	0.24	0.75	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.61	14.51	1.66	B	2143.00	411.00	96.16	14.04	1.60	96.28	14.06
2	0.62	3.29	1.75	A	1913.00	1913.00	103.87	3.26	1.73	103.90	3.26
3	0.11	4.49	0.14	A	111.00	111.00	8.23	4.45	0.14	8.23	4.45
4	0.70	6.75	2.44	A	1296.00	1296.00	142.69	6.61	2.38	142.79	6.61

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2143.00	411.00	411.00	1732.00	0.00	409.34	1428.38	1030.09	0.00	672.83	618.65	0.611	0.00	1.66	14.514	B
2	1913.00	1913.00	1913.00	0.00	1732.00	1911.25	1021.11	418.32	0.00	3106.31	2932.16	0.616	0.00	1.75	3.294	A
3	111.00	111.00	111.00	0.00	0.00	110.86	89.79	2239.78	0.00	1027.46	210.94	0.108	0.00	0.14	4.488	A
4	1296.00	1296.00	1296.00	0.00	0.00	1293.56	1185.73	1164.91	0.00	1843.47	1389.05	0.703	0.00	2.44	6.751	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	96.16	1.60	14.514	B	B
2	103.87	1.73	3.294	A	A
3	8.23	0.14	4.488	A	A
4	142.69	2.38	6.751	A	A

(Default Analysis Set) - 2019 FY +CD +P&R, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 FY +CD +P&R, PM	2019 FY +CD +P	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				27.47	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1838.00	100.000
2	FLAT	✓	2971.00	100.000
3	FLAT	✓	137.00	100.000
4	FLAT	✓	1517.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1838.00	1838.00		0.00
17:00-18:00	2	2971.00	2971.00		
17:00-18:00	3	137.00	137.00		
17:00-18:00	4	1517.00	1517.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1386.000	20.000	432.000
	2	1461.000	0.000	35.000	1475.000
	3	39.000	59.000	0.000	39.000
	4	453.000	1050.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.75	0.01	0.24
	2	0.49	0.00	0.01	0.50
	3	0.28	0.43	0.00	0.28
	4	0.30	0.69	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.71	19.04	2.41	C	1838.00	452.00	137.07	18.19	2.28	137.34	18.23
2	0.97	26.42	24.82	D	2971.00	2971.00	1195.32	24.14	19.92	1201.34	24.26
3	0.51	27.44	1.04	D	137.00	137.00	59.71	26.15	1.00	59.83	26.20
4	0.96	39.75	19.33	E	1517.00	1517.00	910.61	36.02	15.18	917.72	36.30

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1838.00	452.00	452.00	1386.00	0.00	449.59	1934.72	1108.99	0.00	636.69	608.70	0.710	0.00	2.41	19.043	C
2	2971.00	2971.00	2971.00	0.00	1386.00	2946.18	1095.17	463.41	0.00	3068.91	2936.46	0.968	0.00	24.82	26.423	D
3	137.00	137.00	137.00	0.00	0.00	135.96	68.42	3341.17	0.00	270.41	172.48	0.507	0.00	1.04	27.443	D
4	1517.00	1517.00	1517.00	0.00	0.00	1497.67	1931.08	1546.05	0.00	1577.26	1562.34	0.962	0.00	19.33	39.755	E

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	137.07	2.28	19.043	C	B
2	1195.32	19.92	26.423	D	C
3	59.71	1.00	27.443	D	C
4	910.61	15.18	39.755	E	D

(Default Analysis Set) - 2014 OY +CD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2014 OY +CD, AM	2014 OY +CD	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				5.40	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1535.00	100.000
2	FLAT	✓	1620.00	100.000
3	FLAT	✓	104.00	100.000
4	FLAT	✓	1151.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	1535.00	1535.00		0.00
07:30-08:30	2	1620.00	1620.00		
07:30-08:30	3	104.00	104.00		
07:30-08:30	4	1151.00	1151.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1235.000	35.000	265.000
	2	840.000	0.000	41.000	739.000
	3	24.000	48.000	0.000	32.000
	4	242.000	901.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.80	0.02	0.17
	2	0.52	0.00	0.03	0.46
	3	0.23	0.46	0.00	0.31
	4	0.21	0.78	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.42	9.45	0.79	A	1535.00	300.00	46.28	9.26	0.77	46.31	9.26
2	0.51	2.48	1.12	A	1620.00	1620.00	66.57	2.47	1.11	66.59	2.47
3	0.08	3.44	0.10	A	104.00	104.00	5.92	3.41	0.10	5.92	3.41
4	0.57	4.28	1.37	A	1151.00	1151.00	81.02	4.22	1.35	81.05	4.22

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1535.00	300.00	300.00	1235.00	0.00	299.21	1105.11	955.87	0.00	706.83	564.98	0.424	0.00	0.79	9.445	A
2	1620.00	1620.00	1620.00	0.00	1235.00	1618.88	947.88	307.20	0.00	3198.46	2976.21	0.506	0.00	1.12	2.485	A
3	104.00	104.00	104.00	0.00	0.00	103.90	83.87	1842.22	0.00	1300.73	230.00	0.080	0.00	0.10	3.437	A
4	1151.00	1151.00	1151.00	0.00	0.00	1149.63	1034.76	911.35	0.00	2020.57	1468.01	0.570	0.00	1.37	4.276	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	46.28	0.77	9.445	A	A
2	66.57	1.11	2.485	A	A
3	5.92	0.10	3.437	A	A
4	81.02	1.35	4.276	A	A

(Default Analysis Set) - 2014 OY +CD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2014 OY +CD, PM	2014 OY +CD	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				6.75	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1410.00	100.000
2	FLAT	✓	2462.00	100.000
3	FLAT	✓	127.00	100.000
4	FLAT	✓	1205.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1410.00	1410.00		0.00
17:00-18:00	2	2462.00	2462.00		
17:00-18:00	3	127.00	127.00		
17:00-18:00	4	1205.00	1205.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1064.000	19.000	327.000
	2	1085.000	0.000	33.000	1344.000
	3	36.000	55.000	0.000	36.000
	4	292.000	900.000	13.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.75	0.01	0.23
	2	0.44	0.00	0.01	0.55
	3	0.28	0.43	0.00	0.28
	4	0.24	0.75	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.49	10.08	0.97	B	1410.00	346.00	56.82	9.85	0.95	56.86	9.86
2	0.78	5.30	3.64	A	2462.00	2462.00	212.77	5.19	3.55	212.90	5.19
3	0.19	6.77	0.24	A	127.00	127.00	14.14	6.68	0.24	14.14	6.68
4	0.66	5.82	1.95	A	1205.00	1205.00	114.89	5.72	1.91	114.95	5.72

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1410.00	346.00	346.00	1064.00	0.00	345.03	1410.86	966.42	0.00	702.00	537.55	0.493	0.00	0.97	10.077	B
2	2462.00	2462.00	2462.00	0.00	1064.00	2458.36	953.44	358.01	0.00	3156.33	2992.74	0.780	0.00	3.64	5.297	A
3	127.00	127.00	127.00	0.00	0.00	126.76	64.88	2751.50	0.00	675.72	188.28	0.188	0.00	0.24	6.768	A
4	1205.00	1205.00	1205.00	0.00	0.00	1203.05	1704.03	1174.23	0.00	1836.96	1641.69	0.656	0.00	1.95	5.825	A

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	56.82	0.95	10.077	B	B
2	212.77	3.55	5.297	A	A
3	14.14	0.24	6.768	A	A
4	114.89	1.91	5.825	A	A

(Default Analysis Set) - 2014 OY +CD + P&R, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2014 OY +CD + P&R, AM	2014 OY +CD + P	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				5.64	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1608.00	100.000
2	FLAT	✓	1623.00	100.000
3	FLAT	✓	104.00	100.000
4	FLAT	✓	1186.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	1608.00	1608.00		0.00
07:30-08:30	2	1623.00	1623.00		
07:30-08:30	3	104.00	104.00		
07:30-08:30	4	1186.00	1186.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1308.000	35.000	265.000
	2	841.000	0.000	41.000	741.000
	3	24.000	48.000	0.000	32.000
	4	242.000	936.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.81	0.02	0.16
	2	0.52	0.00	0.03	0.46
	3	0.23	0.46	0.00	0.31
	4	0.20	0.79	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.43	9.83	0.82	A	1608.00	300.00	48.12	9.62	0.80	48.15	9.63
2	0.51	2.49	1.12	A	1623.00	1623.00	66.82	2.47	1.11	66.83	2.47
3	0.08	3.44	0.10	A	104.00	104.00	5.93	3.42	0.10	5.93	3.42
4	0.59	4.46	1.47	A	1186.00	1186.00	86.97	4.40	1.45	87.00	4.40

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1608.00	300.00	300.00	1308.00	0.00	299.18	1106.10	990.78	0.00	690.83	561.02	0.434	0.00	0.82	9.828	A
2	1623.00	1623.00	1623.00	0.00	1308.00	1621.88	982.79	307.17	0.00	3198.49	2979.75	0.507	0.00	1.12	2.489	A
3	104.00	104.00	104.00	0.00	0.00	103.90	83.87	1845.18	0.00	1298.69	229.94	0.080	0.00	0.10	3.443	A
4	1186.00	1186.00	1186.00	0.00	0.00	1184.53	1036.73	912.35	0.00	2019.87	1467.47	0.587	0.00	1.47	4.459	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	48.12	0.80	9.828	A	A
2	66.82	1.11	2.489	A	A
3	5.93	0.10	3.443	A	A
4	86.97	1.45	4.459	A	A

(Default Analysis Set) - 2014 OY +CD + P&R, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2014 OY +CD + P&R, PM	2014 OY +CD +P	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				6.97	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1411.00	100.000
2	FLAT	✓	2511.00	100.000
3	FLAT	✓	127.00	100.000
4	FLAT	✓	1208.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1411.00	1411.00		0.00
17:00-18:00	2	2511.00	2511.00		
17:00-18:00	3	127.00	127.00		
17:00-18:00	4	1208.00	1208.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1065.000	19.000	327.000
	2	1098.000	0.000	33.000	1380.000
	3	36.000	55.000	0.000	36.000
	4	292.000	903.000	13.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.75	0.01	0.23
	2	0.44	0.00	0.01	0.55
	3	0.28	0.43	0.00	0.28
	4	0.24	0.75	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.49	10.12	0.97	B	1411.00	346.00	57.03	9.89	0.95	57.07	9.90
2	0.80	5.69	3.99	A	2511.00	2511.00	232.56	5.56	3.88	232.71	5.56
3	0.20	7.21	0.25	A	127.00	127.00	15.05	7.11	0.25	15.05	7.11
4	0.66	5.93	1.99	A	1208.00	1208.00	117.32	5.83	1.96	117.39	5.83

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1411.00	346.00	346.00	1065.00	0.00	345.03	1423.70	969.38	0.00	700.64	534.85	0.494	0.00	0.97	10.116	B
2	2511.00	2511.00	2511.00	0.00	1065.00	2507.01	956.40	358.01	0.00	3156.33	2994.95	0.796	0.00	3.99	5.687	A
3	127.00	127.00	127.00	0.00	0.00	126.75	64.87	2800.15	0.00	642.28	187.99	0.198	0.00	0.25	7.208	A
4	1208.00	1208.00	1208.00	0.00	0.00	1206.01	1739.82	1187.08	0.00	1827.98	1648.31	0.661	0.00	1.99	5.935	A

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	57.03	0.95	10.116	B	B
2	232.56	3.88	5.687	A	A
3	15.05	0.25	7.208	A	A
4	117.32	1.96	5.935	A	A

(Default Analysis Set) - 2019 FY +CD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 FY +CD, AM	2019 FY +CD	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				8.13	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	2131.00	100.000
2	FLAT	✓	1910.00	100.000
3	FLAT	✓	111.00	100.000
4	FLAT	✓	1262.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	2131.00	2131.00		0.00
07:30-08:30	2	1910.00	1910.00		
07:30-08:30	3	111.00	111.00		
07:30-08:30	4	1262.00	1262.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1720.000	37.000	374.000
	2	1088.000	0.000	44.000	778.000
	3	26.000	51.000	0.000	34.000
	4	315.000	938.000	9.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.81	0.02	0.18
	2	0.57	0.00	0.02	0.41
	3	0.23	0.46	0.00	0.31
	4	0.25	0.74	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.60	13.72	1.57	B	2131.00	411.00	91.07	13.30	1.52	91.18	13.31
2	0.61	3.29	1.74	A	1910.00	1910.00	103.47	3.25	1.72	103.49	3.25
3	0.11	4.48	0.14	A	111.00	111.00	8.21	4.44	0.14	8.21	4.44
4	0.68	6.36	2.23	A	1262.00	1262.00	131.02	6.23	2.18	131.10	6.23

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	2131.00	411.00	411.00	1720.00	0.00	409.43	1427.42	996.26	0.00	688.33	622.60	0.597	0.00	1.57	13.721	B
2	1910.00	1910.00	1910.00	0.00	1720.00	1908.26	987.28	418.42	0.00	3106.23	2928.67	0.615	0.00	1.74	3.286	A
3	111.00	111.00	111.00	0.00	0.00	110.86	89.80	2236.87	0.00	1029.46	210.89	0.108	0.00	0.14	4.478	A
4	1262.00	1262.00	1262.00	0.00	0.00	1259.77	1183.82	1163.91	0.00	1844.16	1389.71	0.684	0.00	2.23	6.355	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	91.07	1.52	13.721	B	B
2	103.47	1.72	3.286	A	A
3	8.21	0.14	4.478	A	A
4	131.02	2.18	6.355	A	A

(Default Analysis Set) - 2019 FY +CD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 FY +CD, PM	2019 FY +CD	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				24.13	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1837.00	100.000
2	FLAT	✓	2922.00	100.000
3	FLAT	✓	137.00	100.000
4	FLAT	✓	1515.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1837.00	1837.00		0.00
17:00-18:00	2	2922.00	2922.00		
17:00-18:00	3	137.00	137.00		
17:00-18:00	4	1515.00	1515.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1385.000	20.000	432.000
	2	1448.000	0.000	35.000	1439.000
	3	39.000	59.000	0.000	39.000
	4	453.000	1048.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.75	0.01	0.24
	2	0.50	0.00	0.01	0.49
	3	0.28	0.43	0.00	0.28
	4	0.30	0.69	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.71	19.01	2.40	C	1837.00	452.00	136.82	18.16	2.28	137.09	18.20
2	0.95	20.68	18.19	C	2922.00	2922.00	928.10	19.06	15.47	931.34	19.12
3	0.46	22.63	0.86	C	137.00	137.00	49.62	21.73	0.83	49.70	21.77
4	0.96	37.12	17.73	E	1515.00	1515.00	850.75	33.69	14.18	856.71	33.93

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1837.00	452.00	452.00	1385.00	0.00	449.60	1925.44	1108.20	0.00	637.05	611.25	0.710	0.00	2.40	19.007	C
2	2922.00	2922.00	2922.00	0.00	1385.00	2903.81	1094.36	463.43	0.00	3068.89	2934.38	0.952	0.00	18.19	20.677	C
3	137.00	137.00	137.00	0.00	0.00	136.14	68.51	3298.73	0.00	299.58	172.62	0.457	0.00	0.86	22.629	C
4	1515.00	1515.00	1515.00	0.00	0.00	1497.27	1898.50	1536.37	0.00	1584.02	1555.21	0.956	0.00	17.73	37.122	E

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	136.82	2.28	19.007	C	B
2	928.10	15.47	20.677	C	C
3	49.62	0.83	22.629	C	C
4	850.75	14.18	37.122	E	D

Appendix M. Vendee Drive / A4095 / B4030 Arcady Results

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: A4095 B4030 - App M.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 12:36:18

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Base			
Arm 1	0.49	4.94	0.32	A
Arm 2	0.25	3.18	0.19	A
Arm 3	0.26	4.29	0.20	A
Arm 4	0.87	4.95	0.46	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base, AM " model duration: 07:30 - 08:30
"D2 - Base, PM" model duration: 17:00 - 18:00
"D22 - 2019 FY +CD +P&R, AM" model duration: 07:30 - 08:30
"D23 - 2019 FY +CD +P&R, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 12:36:17

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base, AM	Base	AM		FLAT	07:30	08:30	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			4.52	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	354.00	100.000
2	FLAT	✓	281.00	100.000
3	FLAT	✓	221.00	100.000
4	FLAT	✓	633.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	354.00	354.00		
07:30-08:30	2	281.00	281.00		
07:30-08:30	3	221.00	221.00		
07:30-08:30	4	633.00	633.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	164.000	151.000	39.000
	2	93.000	0.000	26.000	162.000
	3	141.000	18.000	0.000	62.000
	4	23.000	548.000	62.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.46	0.43	0.11
	2	0.33	0.00	0.09	0.58
	3	0.64	0.08	0.00	0.28
	4	0.04	0.87	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.025	1.060	1.083
	2	1.057	1.000	1.238	1.025
	3	1.052	1.125	1.000	1.069
	4	1.095	1.007	1.088	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.500	6.000	8.300
	2	5.700	0.000	23.800	2.500
	3	5.200	12.500	0.000	6.900
	4	9.500	0.700	8.800	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.32	4.94	0.49	A
2	0.19	3.18	0.25	A
3	0.20	4.29	0.26	A
4	0.46	4.95	0.87	A

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	354.00	353.51	627.14	0.00	1115.06	0.317	0.49	4.941	A
2	281.00	280.75	251.65	0.00	1471.64	0.191	0.25	3.180	A
3	221.00	220.74	293.72	0.00	1111.05	0.199	0.26	4.294	A
4	633.00	632.13	251.73	0.00	1371.28	0.462	0.87	4.948	A

(Default Analysis Set) - Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base, PM	Base	PM		FLAT	17:00	18:00	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			4.78	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	305.00	100.000
2	FLAT	✓	740.00	100.000
3	FLAT	✓	325.00	100.000
4	FLAT	✓	289.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	305.00	305.00		
17:00-18:00	2	740.00	740.00		
17:00-18:00	3	325.00	325.00		
17:00-18:00	4	289.00	289.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	115.000	151.000	39.000
	2	190.000	0.000	28.000	522.000
	3	184.000	25.000	0.000	116.000
	4	29.000	200.000	60.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.38	0.50	0.13
	2	0.26	0.00	0.04	0.71
	3	0.57	0.08	0.00	0.36
	4	0.10	0.69	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.027	1.013	1.000
	2	1.000	1.000	1.037	1.008
	3	1.011	1.000	1.000	1.018
	4	1.036	1.005	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.700	1.300	0.000
	2	0.000	0.000	3.700	0.800
	3	1.100	0.000	0.000	1.800
	4	3.600	0.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.23	3.68	0.31	A
2	0.50	4.93	1.01	A
3	0.37	6.51	0.59	A
4	0.22	3.62	0.29	A

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	305.00	304.69	284.69	0.00	1299.54	0.235	0.31	3.678	A
2	740.00	738.99	249.75	0.00	1472.74	0.502	1.01	4.933	A
3	325.00	324.41	749.98	0.00	883.64	0.368	0.59	6.512	A
4	289.00	288.71	398.36	0.00	1291.09	0.224	0.29	3.616	A

(Default Analysis Set) - 2019 FY +CD +P&R, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2019 FY +CD +P&R, AM	2019 FY +CD +P	AM		FLAT	07:30	08:30	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			5.91	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	411.00	100.000
2	FLAT	✓	383.00	100.000
3	FLAT	✓	261.00	100.000
4	FLAT	✓	840.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	411.00	411.00		
07:30-08:30	2	383.00	383.00		
07:30-08:30	3	261.00	261.00		
07:30-08:30	4	840.00	840.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	176.000	173.000	62.000
	2	100.000	0.000	42.000	241.000
	3	161.000	35.000	0.000	65.000
	4	74.000	700.000	66.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.43	0.42	0.15
	2	0.26	0.00	0.11	0.63
	3	0.62	0.13	0.00	0.25
	4	0.09	0.83	0.08	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.025	1.060	1.083
	2	1.057	1.000	1.238	1.025
	3	1.052	1.125	1.000	1.069
	4	1.095	1.007	1.088	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.500	6.000	8.300
	2	5.700	0.000	23.800	2.500
	3	5.200	12.500	0.000	6.900
	4	9.500	0.700	8.800	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.40	6.16	0.70	A
2	0.27	3.57	0.38	A
3	0.25	4.82	0.35	A
4	0.62	7.19	1.68	A

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	411.00	410.30	799.42	0.00	1022.25	0.402	0.70	6.159	A
2	383.00	382.62	300.47	0.00	1443.51	0.265	0.38	3.574	A
3	261.00	260.65	402.56	0.00	1056.80	0.247	0.35	4.815	A
4	840.00	838.32	295.64	0.00	1347.26	0.623	1.68	7.194	A

(Default Analysis Set) - 2019 FY +CD +P&R, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2019 FY +CD +P&R, PM	2019 FY +CD +P	PM		FLAT	17:00	18:00	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			6.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	371.00	100.000
2	FLAT	✓	929.00	100.000
3	FLAT	✓	372.00	100.000
4	FLAT	✓	413.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	371.00	371.00		
17:00-18:00	2	929.00	929.00		
17:00-18:00	3	372.00	372.00		
17:00-18:00	4	413.00	413.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	123.000	168.000	80.000
	2	205.000	0.000	47.000	677.000
	3	201.000	41.000	0.000	130.000
	4	66.000	283.000	64.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.33	0.45	0.22
	2	0.22	0.00	0.05	0.73
	3	0.54	0.11	0.00	0.35
	4	0.16	0.69	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.027	1.013	1.000
	2	1.000	1.000	1.037	1.008
	3	1.011	1.000	1.000	1.018
	4	1.036	1.005	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.700	1.300	0.000
	2	0.000	0.000	3.700	0.800
	3	1.100	0.000	0.000	1.800
	4	3.600	0.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.30	4.18	0.43	A
2	0.65	7.09	1.83	A
3	0.48	8.92	0.92	A
4	0.33	4.26	0.49	A

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	371.00	370.57	387.49	0.00	1244.17	0.298	0.43	4.180	A
2	929.00	927.17	311.64	0.00	1437.07	0.646	1.83	7.088	A
3	372.00	371.08	960.17	0.00	778.88	0.478	0.92	8.917	A
4	413.00	412.51	446.00	0.00	1265.04	0.326	0.49	4.259	A

Appendix N. M40 Junction 9 Existing Situation LinSig Results

Table 28. M40 Junction 9 Existing Layout

Arm / Movement	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2013 Base						
M40 SB Off Slip Ahead Left	98.7%	61.6	30.1	95.7%	44.0	23.6
M40 SB Off Slip Ahead	74.8%	23.3	12.5	62.3%	19.6	9.2
A41 Ahead Left	145.8%	639.1	148.2	177.0%	866.7	154.2
A41 Ahead	132.5%	499.8	127.0	144.6%	621.3	135.3
M40 NB Off Slip Left	44.7%	42.9	2.2	77.8%	63.6	4.9
M40 NB Off Slip Ahead	34.8%	34.3	1.6	91.4%	73.0	8.1
A34 Left	68.5%	2.9	1.1	77.1%	4.0	1.7
A34 Ahead Left	70.6%	3.0	1.9	77.2%	4.0	4.0
M40 SB OS Circ Ahead	63.3%	25.2	8.8	96.4%	61.3	22.6
M40 SB OS Circ Ahead	63.3%	24.5	9.3	83.6%	32.7	15.0
M40 SB OS Circ Right	22.3%	16.1	2.5	8.2%	14.4	0.8
A41 Circ Right Ahead	44.9%	11.5	4.8	34.1%	9.1	4.2
A41 Circ Right	51.5%	8.1	2.5	39.3%	10.4	4.8
A41 Circ Right	60.6%	6.7	2.1	42.8%	8.2	3.9
M40 NB OS Circ Ahead	66.4%	5.7	5.4	39.1%	3.0	3.6
M40 NB OS Circ Ahead	96.3%	29.8	15.0	96.1%	31.9	16.9
M40 NB OS Circ Right	7.2%	2.7	0.2	11.2%	1.3	0.1
A34 Circ Right Ahead	9.8%	1.0	0.1	16.5%	1.1	0.1
A34 Circ Right	3.6%	0.9	0.0	10.1%	1.0	0.1
Total Delay (pcuHr)	**310.78**			**347.17**		
PRC (%)	**-62.0**			**-96.7**		
Cycle Time (sec)	**69**					
2014 Opening Year + Committed						
M40 SB Off Slip Ahead Left	96.9%	51.8	25.6	94.1%	41.8	19.7
M40 SB Off Slip Ahead	90.5%	36.0	19.4	86.9%	34.2	16.0
A41 Ahead Left	234.4%	1140.3	308.3	283.3%	1289.5	309.6
A41 Ahead	221.3%	1084.9	335.8	: 210.8%	1049.4	293.4
M40 NB Off Slip Left	45.2%	43.1	2.2	78.2%	64.3	4.9

Arm / Movement	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
M40 NB Off Slip Ahead	53.6%	37.4	2.7	128.2%	467.1	60.3
A34 Left	79.3%	4.4	1.9	85.0%	6.0	2.8
A34 Ahead Left	80.7%	4.6	4.9	84.4%	5.9	7.2
M40 SB OS Circ Ahead	92.7%	50.3	18.9	97.6%	61.5	24.4
M40 SB OS Circ Ahead	93.7%	51.1	20.7	95.9%	53.9	23.0
M40 SB OS Circ Right	22.5%	15.8	2.5	7.5%	12.9	0.8
A41 Circ Right Ahead	45.0%	9.0	5.0	26.6%	2.6	0.6
A41 Circ Right	30.5%	6.9	1.9	33.5%	1.9	0.3
A41 Circ Right	65.0%	9.3	4.4	51.7%	2.7	0.7
M40 NB OS Circ Ahead	50.1%	6.5	4.3	41.5%	3.4	6.0
M40 NB OS Circ Ahead	99.4%	46.2	23.6	90.4%	21.2	10.7
M40 NB OS Circ Right	5.2%	4.7	0.4	10.0%	3.3	2.6
A34 Circ Right Ahead	10.2%	1.0	0.1	14.1%	1.1	0.1
A34 Circ Right	5.9%	0.9	0.0	11.2%	1.0	0.1
Total Delay (pcuHr)	**705.19**			**710.23**		
PRC (%)	**-160.5**			**-214.8**		
Cycle Time (sec)	**69**			**69**		
2014 Opening Year + Committed + P&R						
M40 SB Off Slip Ahead Left	: 99.8%	71.8	32.5	94.3%	42.7	20.3
M40 SB Off Slip Ahead	90.5%	36.0	19.4	86.9%	34.2	16.0
A41 Ahead Left	234.4%	1140.3	308.3	285.0%	1293.5	312.4
A41 Ahead	221.3%	1085.1	336.2	210.8%	1049.4	300.7
M40 NB Off Slip Left	45.2%	43.1	2.2	78.2%	64.3	4.9
M40 NB Off Slip Ahead	59.4%	39.7	3.1	126.6%	449.4	58.1
A34 Left	79.4%	4.4	1.9	85.2%	6.1	2.8
A34 Ahead Left	80.8%	4.6	4.9	: 84.3%	5.9	7.4
M40 SB OS Circ Ahead	93.1%	50.8	19.1	97.7%	62.8	24.7
M40 SB OS Circ Ahead	93.8%	51.9	20.8	96.3%	56.6	24.0
M40 SB OS Circ Right	22.5%	15.8	2.5	7.5%	12.5	0.8
A41 Circ Right Ahead	45.0%	9.4	5.1	26.6%	2.6	0.6
A41 Circ Right	30.5%	7.3	2.1	33.5%	1.9	0.3
A41 Circ Right	65.0%	9.3	4.4	51.7%	2.7	0.7
M40 NB OS Circ Ahead	50.1%	6.7	4.4	41.5%	3.9	6.1
M40 NB OS Circ Ahead	99.3%	46.0	23.7	90.4%	20.8	10.7
M40 NB OS Circ Right	5.2%	4.7	0.4	10.8%	4.3	3.0

Arm / Movement	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
A34 Circ Right Ahead	9.5%	1.0	0.1	15.0%	1.1	0.1
A34 Circ Right	6.5%	0.9	0.0	11.1%	1.0	0.1
Total Delay (pcuHr)	**712.18**			**719.35**		
PRC (%)	**-160.5**			**-216.7**		
Cycle Time (sec)	**69**			**69**		

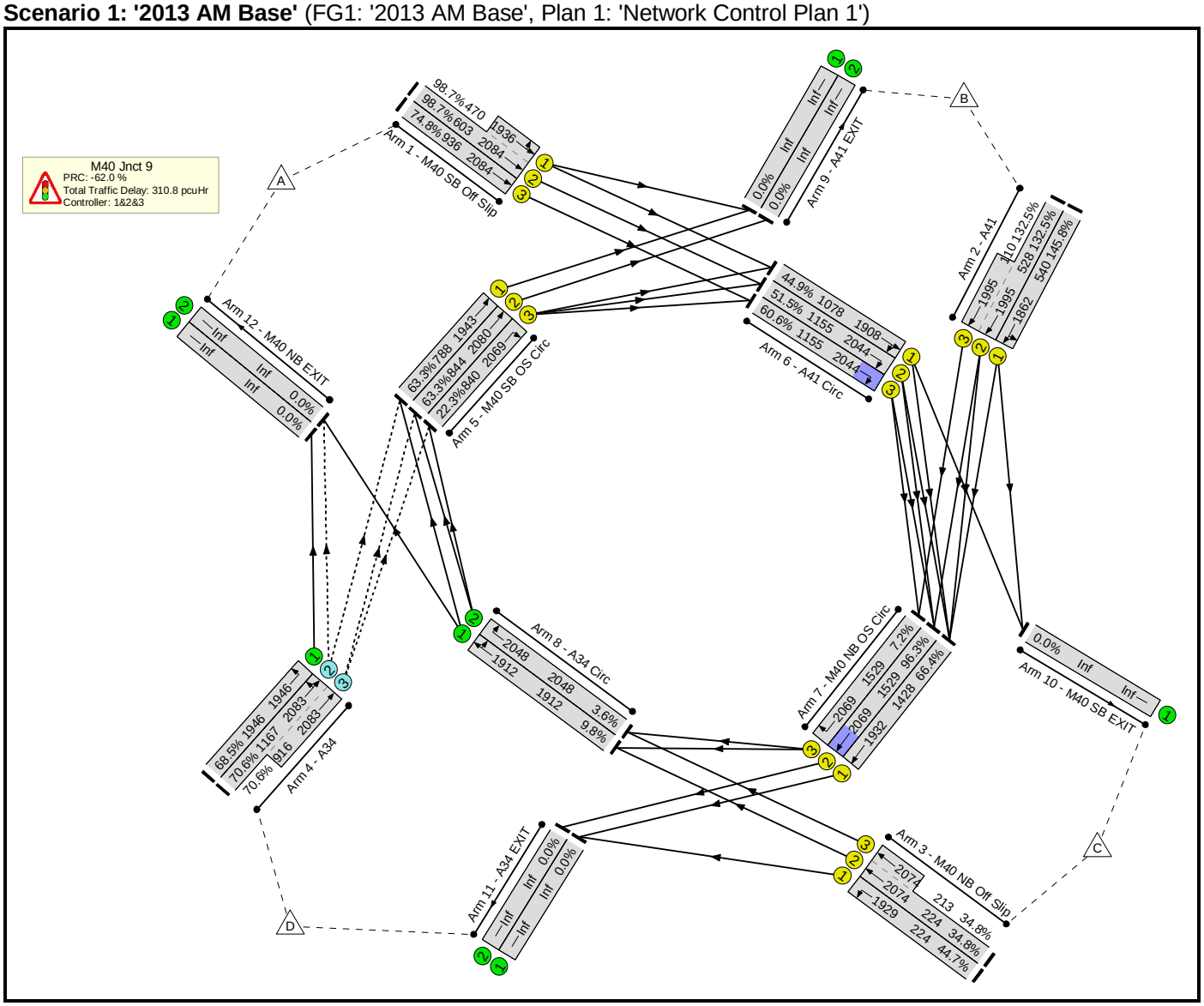
Basic Results Summary

User and Project Details

Project:	
Title:	**M40 Junction 9**
Location:	
File name:	Existing Layout - App N.lsg3x
Author:	Nigel Pettitt
Company:	Atkins
Address:	Cambridge
Notes:	

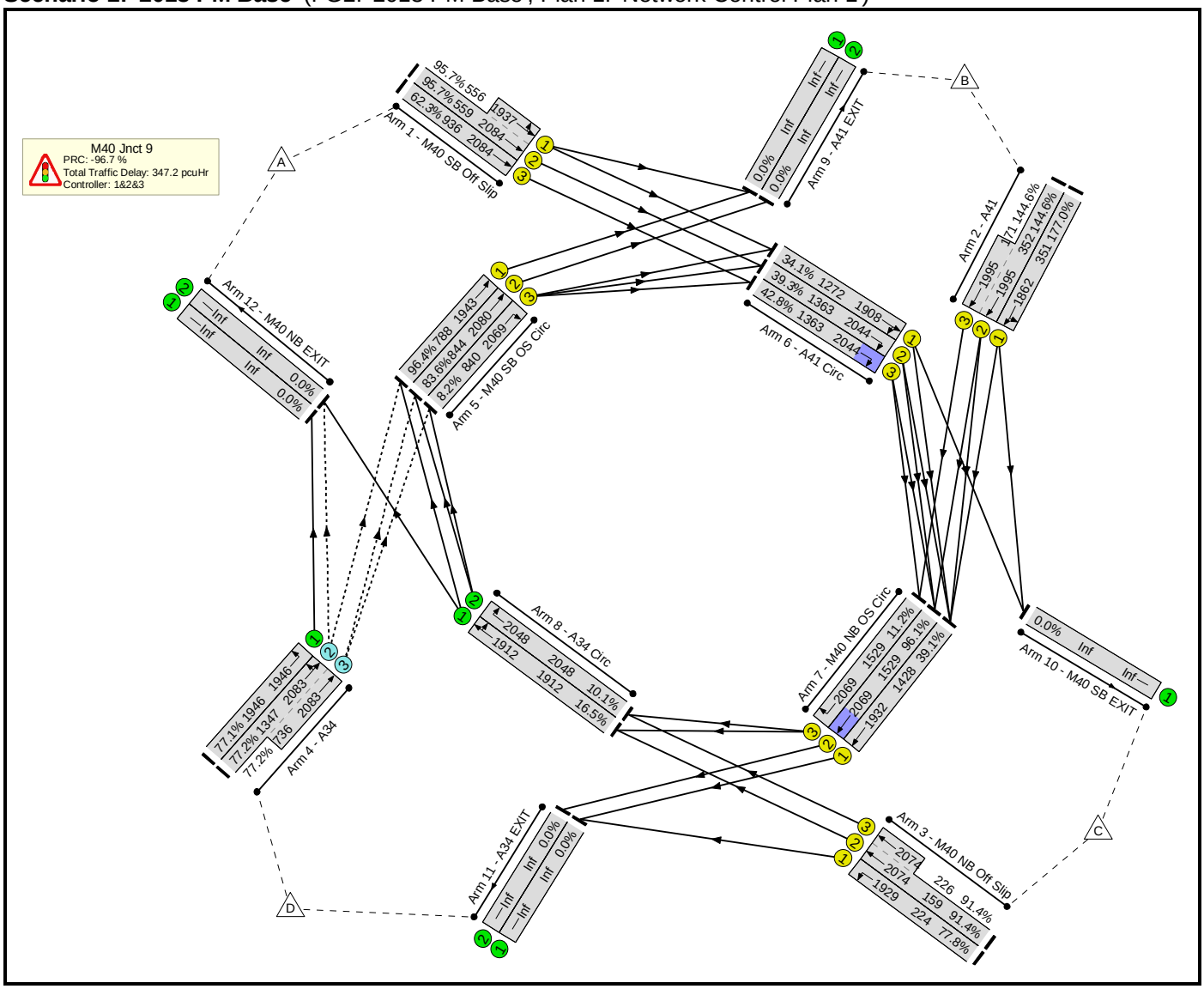
Network Layout Diagram

Scenario 1: '2013 AM Base' (FG1: '2013 AM Base', Plan 1: 'Network Control Plan 1')



Basic Results Summary

Scenario 2: '2013 PM Base' (FG2: '2013 PM Base', Plan 1: 'Network Control Plan 1')

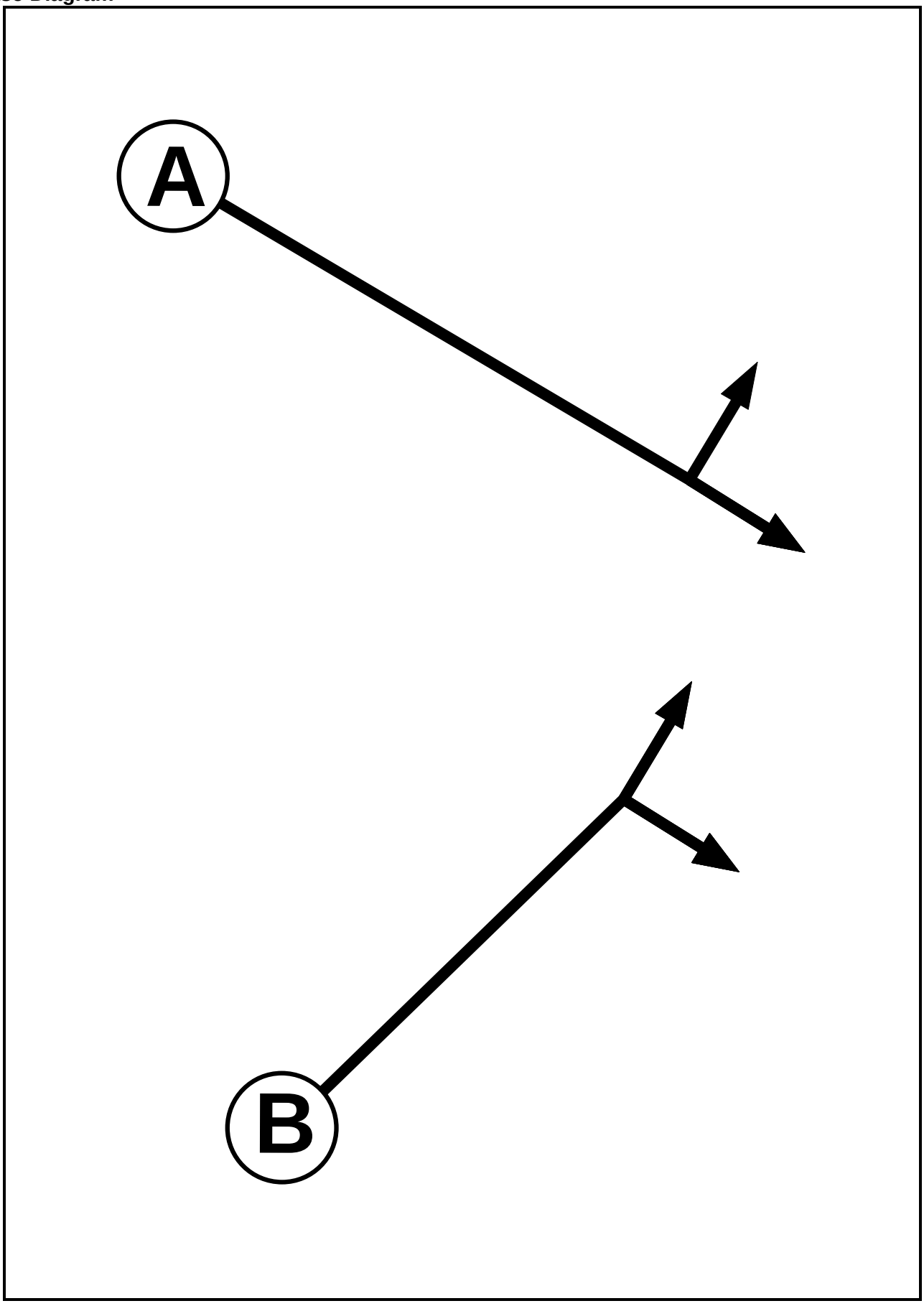


C1
Phases in Stage

Stage No.	Phases in Stage
1	A
2	B

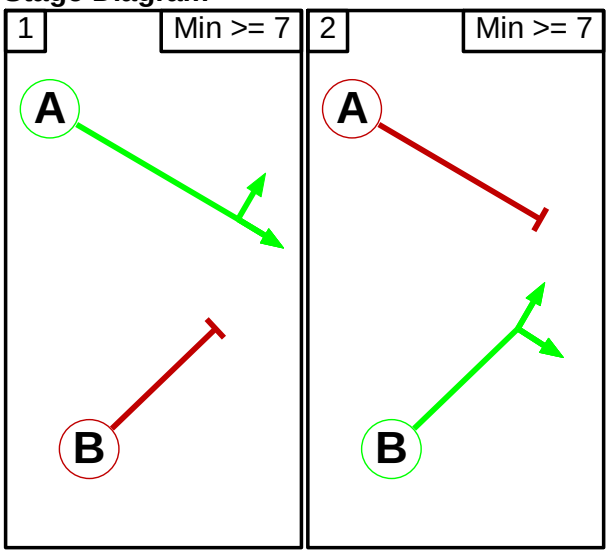
Basic Results Summary

Phase Diagram



Basic Results Summary

Stage Diagram



Phase Intergreens Matrix

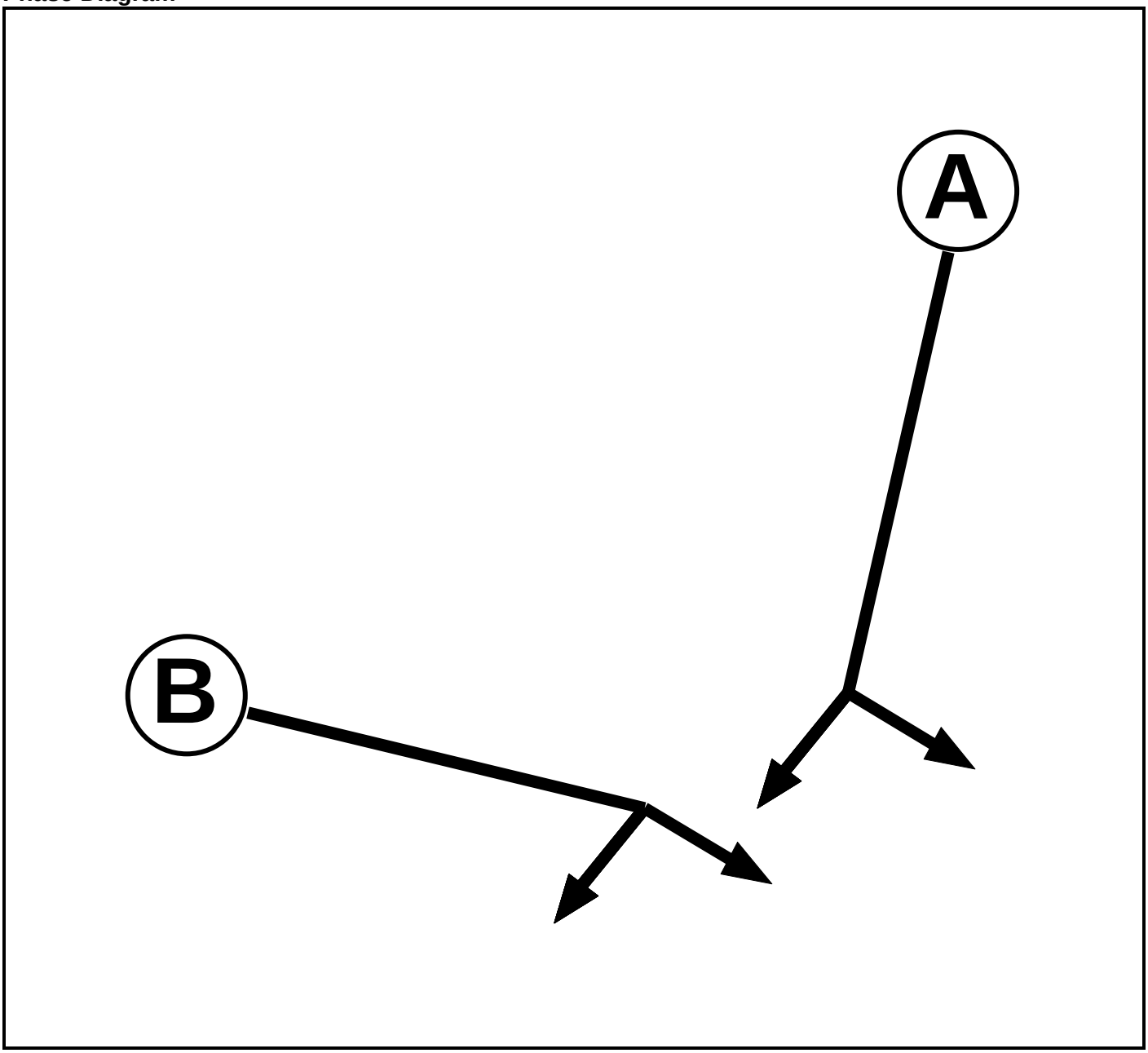
	Starting Phase		
Terminating Phase		A	B
	A		7
	B	5	

C2
Phases in Stage

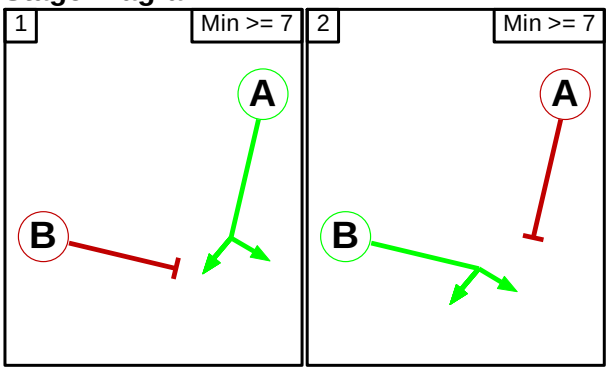
Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Phase Diagram



Stage Diagram



Basic Results Summary

Phase Intergreens Matrix

Terminating Phase	Starting Phase		
		A	B
	A		7
	B	5	

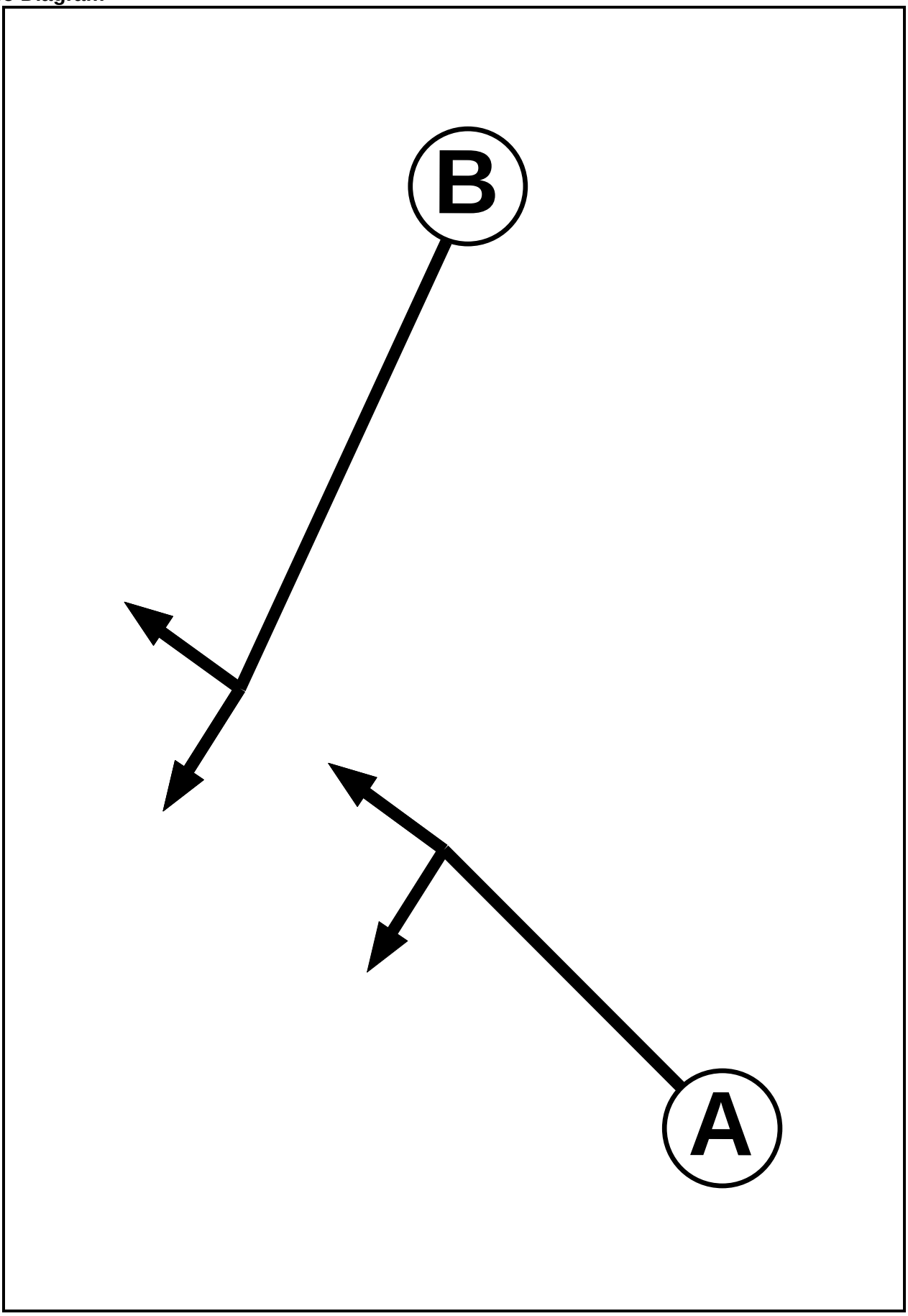
C3

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B

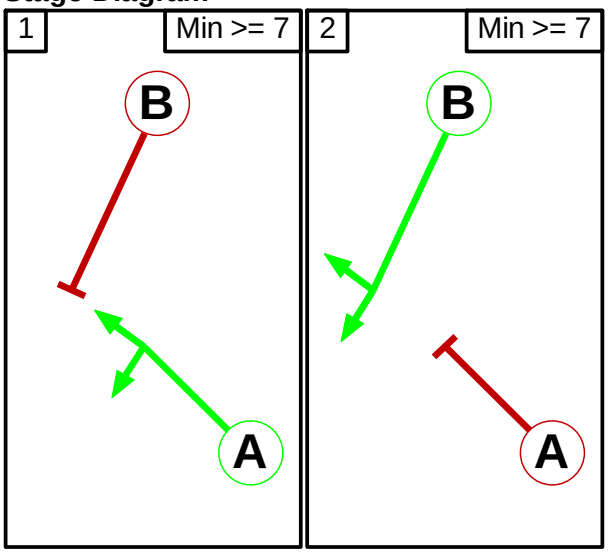
Basic Results Summary

Phase Diagram



Basic Results Summary

Stage Diagram



Phase Intergreens Matrix

Terminating Phase	Starting Phase		
		A	B
A			7
B	5		

Basic Results Summary

Network Results

Scenario 1: '2013 AM Base' (FG1: '2013 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**145.8%**	**2942**	**0**	**0**	**310.8**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**145.8%**	**2942**	**0**	**0**	**310.8**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	30	-	1059	2084:1936	603+470	98.7 : 98.7%	-	-	-	18.1	61.6	30.1
1/3	M40 SB Off Slip Ahead	U	C1:A		1	30	-	700	2084	936	74.8%	-	-	-	4.5	23.3	12.5
2/1	A41 Ahead Left	U	C2:A		1	19	-	787	1862	540	145.8%	-	-	-	139.7	639.1	148.2
2/2+2/3	A41 Ahead	U	C2:A		1	19	-	846	1995:1995	528+110	132.5 : 132.5%	-	-	-	117.5	499.8	127.0
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	100	1929	224	44.7%	-	-	-	1.2	42.9	2.2
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	152	2074:2074	224+213	34.8 : 34.8%	-	-	-	1.4	34.3	1.6
4/1	A34 Left	U	-		-	-	-	1333	1946	1946	68.5%	-	-	-	1.1	2.9	1.1
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1471	2083:2083	1167+916	70.6 : 70.6%	2942	0	0	1.2	3.0	1.9
5/1	M40 SB OS Circ Ahead	U	C1:B		1	27	-	499	1943	788	63.3%	-	-	-	3.5	25.2	8.8
5/2	M40 SB OS Circ Ahead	U	C1:B		1	27	-	534	2080	844	63.3%	-	-	-	3.6	24.5	9.3
5/3	M40 SB OS Circ Right	U	C1:B		1	27	-	187	2069	840	22.3%	-	-	-	0.8	16.1	2.5
6/1	A41 Circ Right Ahead	U	C2:B		1	38	-	484	1908	1078	44.9%	-	-	-	1.5	11.5	4.8
6/2	A41 Circ Right	U	C2:B		1	38	-	595	2044	1155	51.5%	-	-	-	1.3	8.1	2.5
6/3	A41 Circ Right	U	C2:B		1	38	-	700	2044	1155	60.6%	-	-	-	1.3	6.7	2.1

Basic Results Summary

7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1136	1932	1428	66.4%	-	-	-	1.5	5.7	5.4
7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1595	2069	1529	96.3%	-	-	-	12.2	29.8	15.0
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	146	2069	1529	7.2%	-	-	-	0.1	2.7	0.2
8/1	A34 Circ Right Ahead	U	-		-	-	-	224	1912	1912	9.8%	-	-	-	0.1	1.0	0.1
8/2	A34 Circ Right	U	-		-	-	-	74	2048	2048	3.6%	-	-	-	0.0	0.9	0.0

C1	PRC for Signalled Lanes (%):	-9.7	Total Delay for Signalled Lanes (pcuHr):	30.61	Cycle Time (s):	69
C2	PRC for Signalled Lanes (%):	-62.0	Total Delay for Signalled Lanes (pcuHr):	261.38	Cycle Time (s):	69
C3	PRC for Signalled Lanes (%):	-7.0	Total Delay for Signalled Lanes (pcuHr):	16.42	Cycle Time (s):	69
	PRC Over All Lanes (%):	-62.0	Total Delay Over All Lanes(pcuHr):	310.78		

Basic Results Summary

Scenario 2: '2013 PM Base' (FG2: '2013 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**177.0%**	**3216**	**0**	**0**	**347.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**177.0%**	**3216**	**0**	**0**	**347.2**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	30	-	1067	2084:1937	559+556	95.7 : 95.7%	-	-	-	13.1	44.0	23.6
1/3	M40 SB Off Slip Ahead	U	C1:A		1	30	-	583	2084	936	62.3%	-	-	-	3.2	19.6	9.2
2/1	A41 Ahead Left	U	C2:A		1	12	-	621	1862	351	177.0%	-	-	-	149.5	866.7	154.2
2/2+2/3	A41 Ahead	U	C2:A		1	12	-	756	1995:1995	352+171	144.6 : 144.6%	-	-	-	130.5	621.3	135.3
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	174	1929	224	77.8%	-	-	-	3.1	63.6	4.9
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	352	2074:2074	159+226	91.4 : 91.4%	-	-	-	7.1	73.0	8.1
4/1	A34 Left	U	-		-	-	-	1501	1946	1946	77.1%	-	-	-	1.7	4.0	1.7
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1608	2083:2083	1347+736	77.2 : 77.2%	3216	0	0	1.8	4.0	4.0
5/1	M40 SB OS Circ Ahead	U	C1:B		1	27	-	760	1943	788	96.4%	-	-	-	12.9	61.3	22.6
5/2	M40 SB OS Circ Ahead	U	C1:B		1	27	-	706	2080	844	83.6%	-	-	-	6.4	32.7	15.0
5/3	M40 SB OS Circ Right	U	C1:B		1	27	-	69	2069	840	8.2%	-	-	-	0.3	14.4	0.8
6/1	A41 Circ Right Ahead	U	C2:B		1	45	-	434	1908	1272	34.1%	-	-	-	1.1	9.1	4.2
6/2	A41 Circ Right	U	C2:B		1	45	-	535	2044	1363	39.3%	-	-	-	1.5	10.4	4.8
6/3	A41 Circ Right	U	C2:B		1	45	-	583	2044	1363	42.8%	-	-	-	1.3	8.2	3.9
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	706	1932	1428	39.1%	-	-	-	0.5	3.0	3.6

Basic Results Summary

7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1627	2069	1529	96.1%	-	-	-	13.0	31.9	16.9
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	247	2069	1529	11.2%	-	-	-	0.1	1.3	0.1
8/1	A34 Circ Right Ahead	U	-		-	-	-	392	1912	1912	16.5%	-	-	-	0.1	1.1	0.1
8/2	A34 Circ Right	U	-		-	-	-	207	2048	2048	10.1%	-	-	-	0.1	1.0	0.1

C1	PRC for Signalled Lanes (%):	-7.1	Total Delay for Signalled Lanes (pcuHr):	35.84	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-96.7	Total Delay for Signalled Lanes (pcuHr):	283.94	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-6.8	Total Delay for Signalled Lanes (pcuHr):	23.77	Cycle Time (s): 69
	PRC Over All Lanes (%):	-96.7	Total Delay Over All Lanes(pcuHr):	347.17	

Basic Results Summary

Scenario 3: '2014 AM OY + Comm' (FG5: '2014 AM OY + Comm', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**234.4%**	**3362**	**0**	**0**	**705.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**234.4%**	**3362**	**0**	**0**	**705.2**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	30	-	1006	2084:1934	411+627	96.9 : 96.9%	-	-	-	14.5	51.8	25.6
1/3	M40 SB Off Slip Ahead	U	C1:A		1	30	-	847	2084	936	90.5%	-	-	-	8.5	36.0	19.4
2/1	A41 Ahead Left	U	C2:A		1	14	-	949	1862	405	234.4%	-	-	-	300.6	1140.3	308.3
2/2+2/3	A41 Ahead	U	C2:A		1	14	-	1083	1995:1995	410+80	221.3 : 221.3%	-	-	-	326.4	1084.9	335.8
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	101	1929	224	45.2%	-	-	-	1.2	43.1	2.2
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	236	2074:2074	217+224	53.6 : 53.6%	-	-	-	2.4	37.4	2.7
4/1	A34 Left	U	-		-	-	-	1543	1946	1946	79.3%	-	-	-	1.9	4.4	1.9
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1681	2083:2083	1017+1066	80.7 : 80.7%	3362	0	0	2.2	4.6	4.9
5/1	M40 SB OS Circ Ahead	U	C1:B		1	27	-	731	1943	788	92.7%	-	-	-	10.2	50.3	18.9
5/2	M40 SB OS Circ Ahead	U	C1:B		1	27	-	791	2080	844	93.7%	-	-	-	11.2	51.1	20.7
5/3	M40 SB OS Circ Right	U	C1:B		1	27	-	189	2069	840	22.5%	-	-	-	0.8	15.8	2.5
6/1	A41 Circ Right Ahead	U	C2:B		1	43	-	547	1908	1217	45.0%	-	-	-	1.4	9.0	5.0
6/2	A41 Circ Right	U	C2:B		1	43	-	398	2044	1303	30.5%	-	-	-	0.8	6.9	1.9
6/3	A41 Circ Right	U	C2:B		1	43	-	847	2044	1303	65.0%	-	-	-	2.2	9.3	4.4
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1180	1932	1428	50.1%	-	-	-	1.3	6.5	4.3

Basic Results Summary

7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1852	2069	1529	99.4%	-	-	-	19.5	46.2	23.6
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	176	2069	1529	5.2%	-	-	-	0.1	4.7	0.4
8/1	A34 Circ Right Ahead	U	-		-	-	-	292	1912	1912	10.2%	-	-	-	0.1	1.0	0.1
8/2	A34 Circ Right	U	-		-	-	-	120	2048	2048	5.9%	-	-	-	0.0	0.9	0.0

C1	PRC for Signalled Lanes (%):	-7.7	Total Delay for Signalled Lanes (pcuHr):	45.22	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-160.5	Total Delay for Signalled Lanes (pcuHr):	631.26	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-10.4	Total Delay for Signalled Lanes (pcuHr):	24.57	Cycle Time (s): 69
	PRC Over All Lanes (%):	-160.5	Total Delay Over All Lanes(pcuHr):	705.19	

Basic Results Summary

Scenario 4: '2014 PM OY + Comm' (FG6: '2014 PM OY + Comm', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**283.3%**	**3518**	**0**	**0**	**710.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**283.3%**	**3518**	**0**	**0**	**710.2**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	27	-	963	2084:1934	507+517	94.1 : 94.1%	-	-	-	11.2	41.8	19.7
1/3	M40 SB Off Slip Ahead	U	C1:A		1	27	-	735	2084	846	86.9%	-	-	-	7.0	34.2	16.0
2/1	A41 Ahead Left	U	C2:A		1	10	-	841	1862	297	283.3%	-	-	-	301.2	1289.5	309.6
2/2+2/3	A41 Ahead	U	C2:A		1	10	-	982	1995:1995	313+153	210.8 : 210.8%	-	-	-	286.3	1049.4	293.4
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	175	1929	224	78.2%	-	-	-	3.1	64.3	4.9
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	443	2074:2074	117+229	128.2 : 128.2%	-	-	-	57.5	467.1	60.3
4/1	A34 Left	U	-		-	-	-	1654	1946	1946	85.0%	-	-	-	2.8	6.0	2.8
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1759	2083:2083	1209+874	84.4 : 84.4%	3518	0	0	2.9	5.9	7.2
5/1	M40 SB OS Circ Ahead	U	C1:B		1	30	-	885	1943	873	97.6%	-	-	-	14.5	61.5	24.4
5/2	M40 SB OS Circ Ahead	U	C1:B		1	30	-	961	2080	934	95.9%	-	-	-	13.4	53.9	23.0
5/3	M40 SB OS Circ Right	U	C1:B		1	30	-	70	2069	930	7.5%	-	-	-	0.3	12.9	0.8
6/1	A41 Circ Right Ahead	U	C2:B		1	47	-	353	1908	1327	26.6%	-	-	-	0.3	2.6	0.6
6/2	A41 Circ Right	U	C2:B		1	47	-	477	2044	1422	33.5%	-	-	-	0.3	1.9	0.3
6/3	A41 Circ Right	U	C2:B		1	47	-	735	2044	1422	51.7%	-	-	-	0.5	2.7	0.7
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1057	1932	1428	41.5%	-	-	-	0.6	3.4	6.0

Basic Results Summary

7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1572	2069	1529	90.4%	-	-	-	8.1	21.2	10.7
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	322	2069	1529	10.0%	-	-	-	0.1	3.3	2.6
8/1	A34 Circ Right Ahead	U	-		-	-	-	472	1912	1912	14.1%	-	-	-	0.1	1.1	0.1
8/2	A34 Circ Right	U	-		-	-	-	293	2048	2048	11.2%	-	-	-	0.1	1.0	0.1

C1	PRC for Signalled Lanes (%):	-8.4	Total Delay for Signalled Lanes (pcuHr):	46.40	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-214.8	Total Delay for Signalled Lanes (pcuHr):	588.56	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-42.4	Total Delay for Signalled Lanes (pcuHr):	69.45	Cycle Time (s): 69
	PRC Over All Lanes (%):	-214.8	Total Delay Over All Lanes(pcuHr):	710.23	

Basic Results Summary

Scenario 5: '2014 AM OY + Comm + Dev P&R' (FG7: '2014 AM OY + Comm + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**234.4%**	**3366**	**0**	**0**	**712.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**234.4%**	**3366**	**0**	**0**	**712.2**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	30	-	1030	2084:1933	399+633	99.8 : 99.8%	-	-	-	20.5	71.8	32.5
1/3	M40 SB Off Slip Ahead	U	C1:A		1	30	-	847	2084	936	90.5%	-	-	-	8.5	36.0	19.4
2/1	A41 Ahead Left	U	C2:A		1	14	-	949	1862	405	234.4%	-	-	-	300.6	1140.3	308.3
2/2+2/3	A41 Ahead	U	C2:A		1	14	-	1084	1995:1995	410+80	221.3 : 221.3%	-	-	-	326.7	1085.1	336.2
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	101	1929	224	45.2%	-	-	-	1.2	43.1	2.2
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	236	2074:2074	172+226	59.4 : 59.4%	-	-	-	2.6	39.7	3.1
4/1	A34 Left	U	-		-	-	-	1545	1946	1946	79.4%	-	-	-	1.9	4.4	1.9
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1683	2083:2083	1035+1048	80.8 : 80.8%	3366	0	0	2.2	4.6	4.9
5/1	M40 SB OS Circ Ahead	U	C1:B		1	27	-	734	1943	788	93.1%	-	-	-	10.4	50.8	19.1
5/2	M40 SB OS Circ Ahead	U	C1:B		1	27	-	792	2080	844	93.8%	-	-	-	11.4	51.9	20.8
5/3	M40 SB OS Circ Right	U	C1:B		1	27	-	189	2069	840	22.5%	-	-	-	0.8	15.8	2.5
6/1	A41 Circ Right Ahead	U	C2:B		1	43	-	547	1908	1217	45.0%	-	-	-	1.4	9.4	5.1
6/2	A41 Circ Right	U	C2:B		1	43	-	398	2044	1303	30.5%	-	-	-	0.8	7.3	2.1
6/3	A41 Circ Right	U	C2:B		1	43	-	847	2044	1303	65.0%	-	-	-	2.2	9.3	4.4
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1180	1932	1428	50.1%	-	-	-	1.3	6.7	4.4

Basic Results Summary

7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1852	2069	1529	99.3%	-	-	-	19.4	46.0	23.7
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	177	2069	1529	5.2%	-	-	-	0.1	4.7	0.4
8/1	A34 Circ Right Ahead	U	-		-	-	-	279	1912	1912	9.5%	-	-	-	0.1	1.0	0.1
8/2	A34 Circ Right	U	-		-	-	-	134	2048	2048	6.5%	-	-	-	0.0	0.9	0.0

C1	PRC for Signalled Lanes (%):	-10.9	Total Delay for Signalled Lanes (pcuHr):	51.62	Cycle Time (s):	69
C2	PRC for Signalled Lanes (%):	-160.5	Total Delay for Signalled Lanes (pcuHr):	631.73	Cycle Time (s):	69
C3	PRC for Signalled Lanes (%):	-10.4	Total Delay for Signalled Lanes (pcuHr):	24.66	Cycle Time (s):	69
	PRC Over All Lanes (%):	-160.5	Total Delay Over All Lanes(pcuHr):	712.18		

Basic Results Summary

Scenario 6: '2014 PM OY + Comm + Dev P&R' (FG8: '2014 PM OY + Comm + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**285.0%**	**3510**	**0**	**0**	**719.4**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**285.0%**	**3510**	**0**	**0**	**719.4**	-	-
1/2+1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	27	-	965	2084:1934	506+517	94.3 : 94.3%	-	-	-	11.4	42.7	20.3
1/3	M40 SB Off Slip Ahead	U	C1:A		1	27	-	735	2084	846	86.9%	-	-	-	7.0	34.2	16.0
2/1	A41 Ahead Left	U	C2:A		1	10	-	846	1862	297	285.0%	-	-	-	304.0	1293.5	312.4
2/2+2/3	A41 Ahead	U	C2:A		1	10	-	1007	1995:1995	313+165	210.8 : 210.8%	-	-	-	293.5	1049.4	300.7
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	175	1929	224	78.2%	-	-	-	3.1	64.3	4.9
3/2+3/3	M40 NB Off Slip Ahead	U	C3:A		1	7	-	443	2074:2074	122+228	126.6 : 126.6%	-	-	-	55.3	449.4	58.1
4/1	A34 Left	U	-		-	-	-	1658	1946	1946	85.2%	-	-	-	2.8	6.1	2.8
4/2+4/3	A34 Ahead Left	O	-		-	-	-	1755	2083:2083	1202+881	84.3 : 84.3%	3510	0	0	2.9	5.9	7.4
5/1	M40 SB OS Circ Ahead	U	C1:B		1	30	-	885	1943	873	97.7%	-	-	-	14.9	62.8	24.7
5/2	M40 SB OS Circ Ahead	U	C1:B		1	30	-	961	2080	934	96.3%	-	-	-	14.2	56.6	24.0
5/3	M40 SB OS Circ Right	U	C1:B		1	30	-	70	2069	930	7.5%	-	-	-	0.2	12.5	0.8
6/1	A41 Circ Right Ahead	U	C2:B		1	47	-	353	1908	1327	26.6%	-	-	-	0.3	2.6	0.6
6/2	A41 Circ Right	U	C2:B		1	47	-	477	2044	1422	33.5%	-	-	-	0.3	1.9	0.3
6/3	A41 Circ Right	U	C2:B		1	47	-	735	2044	1422	51.7%	-	-	-	0.5	2.7	0.7
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1061	1932	1428	41.5%	-	-	-	0.6	3.9	6.1

Basic Results Summary

7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1572	2069	1529	90.4%	-	-	-	8.0	20.8	10.7
7/3	M40 NB OS Circ Right	U	C3:B		1	50	-	347	2069	1529	10.8%	-	-	-	0.2	4.3	3.0
8/1	A34 Circ Right Ahead	U	-		-	-	-	501	1912	1912	15.0%	-	-	-	0.1	1.1	0.1
8/2	A34 Circ Right	U	-		-	-	-	289	2048	2048	11.1%	-	-	-	0.1	1.0	0.1

C1	PRC for Signalled Lanes (%):	-8.5	Total Delay for Signalled Lanes (pcuHr):	47.70
C2	PRC for Signalled Lanes (%):	-216.7	Total Delay for Signalled Lanes (pcuHr):	598.56
C3	PRC for Signalled Lanes (%):	-40.7	Total Delay for Signalled Lanes (pcuHr):	67.25
	PRC Over All Lanes (%):	-216.7	Total Delay Over All Lanes(pcuHr):	719.36

Cycle Time (s):	69
Cycle Time (s):	69
Cycle Time (s):	69

Appendix O. M40 Junction 9 Proposed Scheme LinSig Results

Table 29. M40 Junction 9 Proposed Highway Scheme

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2019 Future Year + Committed						
M40 SB Off Slip Ahead Left	82.8%	33.4	12.7	89.5%	42.9	15.2
M40 SB Off Slip Ahead	81.6%	31.5	13.2	78.4%	30.4	11.8
M40 SB Off Slip Ahead	93.7%	50.1	19.5	78.1%	30.3	11.7
A41 Ahead Left	113.6%	271.6	70.3	99.5%	80.4	27.8
A41 Ahead	113.7%	272.5	75.6	101.0%	93.1	33.2
A41 Ahead	113.5%	268.8	74.5	80.0%	28.0	13.1
M40 NB Off Slip Left	45.2%	43.1	2.2	51.2%	35.2	3.7
M40 NB Off Slip Ahead Left	70.0%	42.8	4.0	90.2%	53.4	9.9
A34 Left	80.7%	20.3	15.5	80.1%	16.5	16.0
A34 Left	82.6%	20.9	17.5	81.2%	16.5	17.4
A34 Ahead	96.1%	42.7	29.4	90.0%	23.4	23.5
A34 Ahead	46.7%	11.7	6.5	47.3%	9.1	6.6
M40 SB OS Circ Ahead	66.4%	25.5	9.4	73.0%	15.8	10.2
M40 SB OS Circ Ahead	66.9%	24.8	10.3	74.6%	15.5	11.4
M40 SB OS Circ Right Ahead	68.7%	16.7	8.2	86.0%	27.7	18.9
A41 Circ Right Ahead	56.9%	11.7	4.8	58.5%	8.5	2.3
A41 Circ Right	65.6%	7.1	6.1	66.6%	6.6	5.0
A41 Circ Right	75.3%	8.1	11.2	66.4%	6.1	6.8
M40 NB OS Circ Ahead	63.2%	4.4	3.2	78.3%	14.3	14.5
M40 NB OS Circ Ahead	68.4%	6.0	13.4	83.0%	13.4	14.1
M40 NB OS Circ Right Ahead	95.0%	22.2	23.2	89.7%	19.3	18.2
A34 Circ Ahead	28.6%	33.5	3.3	76.7%	25.8	5.6
A34 Circ Right Ahead	27.4%	16.4	3.2	73.2%	37.7	7.2
A34 Circ Right	23.3%	14.9	2.9	58.7%	33.3	5.9
Total Delay (pcuHr)	**272.25**			**130.30**		
PRC (%)	**-26.4**			**-12.2**		
Cycle Time (sec)	**69**					
2019 Future Year + Committed + P&R						
M40 SB Off Slip Ahead Left	74.5%	24.6	11.4	88.1%	39.3	14.9

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
M40 SB Off Slip Ahead	70.7%	22.7	11.2	75.1%	27.8	11.2
M40 SB Off Slip Ahead	81.2%	27.4	14.4	73.7%	27.2	10.9
A41 Ahead Left	113.4%	268.3	72.2	103.0%	120.2	36.0
A41 Ahead	114.5%	283.4	81.9	104.0%	132.0	41.5
A41 Ahead	100.8%	94.1	31.0	87.1%	35.1	15.5
M40 NB Off Slip Left	47.8%	43.9	2.4	51.2%	35.2	3.7
M40 NB Off Slip Ahead Left	72.3 : 72.3%	44.7	4.3	91.6%	57.2	10.7
A34 Left	62.9%	8.3	9.2	78.3%	15.0	15.2
A34 Left	64.5%	8.3	10.4	79.4%	15.0	16.6
A34 Ahead	74.5%	10.3	14.3	88.0%	20.4	22.1
A34 Ahead	37.2%	5.5	4.3	46.2%	8.4	6.4
M40 SB OS Circ Ahead	73.2%	25.2	11.4	75.2%	16.7	11.3
M40 SB OS Circ Ahead	75.3%	20.4	12.2	76.3%	16.9	12.2
M40 SB OS Circ Right Ahead	81.7%	31.4	14.9	89.2%	31.4	20.1
A41 Circ Right Ahead	58.7%	13.2	5.3	58.1%	8.0	2.3
A41 Circ Right	67.6%	9.5	5.1	64.2%	6.0	4.9
A41 Circ Right	77.6%	10.7	10.3	63.1%	5.4	6.5
M40 NB OS Circ Ahead	63.3%	4.8	4.3	78.9%	12.9	12.9
M40 NB OS Circ Ahead	71.8%	7.8	13.8	80.3%	14.2	16.1
M40 NB OS Circ Right Ahead	96.9%	29.7	28.5	91.4%	20.6	18.5
A34 Circ Ahead	61.1%	30.2	3.2	79.9%	41.5	8.0
A34 Circ Right Ahead	64.6%	64.3	4.0	85.1%	39.6	5.1
A34 Circ Right	59.0%	68.9	3.8	64.3%	22.0	1.9
Total Delay (pcuHr)	**223.20**			**149.06**		
PRC (%)	**-27.2**			**-15.6**		
Cycle Time (sec)	**69**					

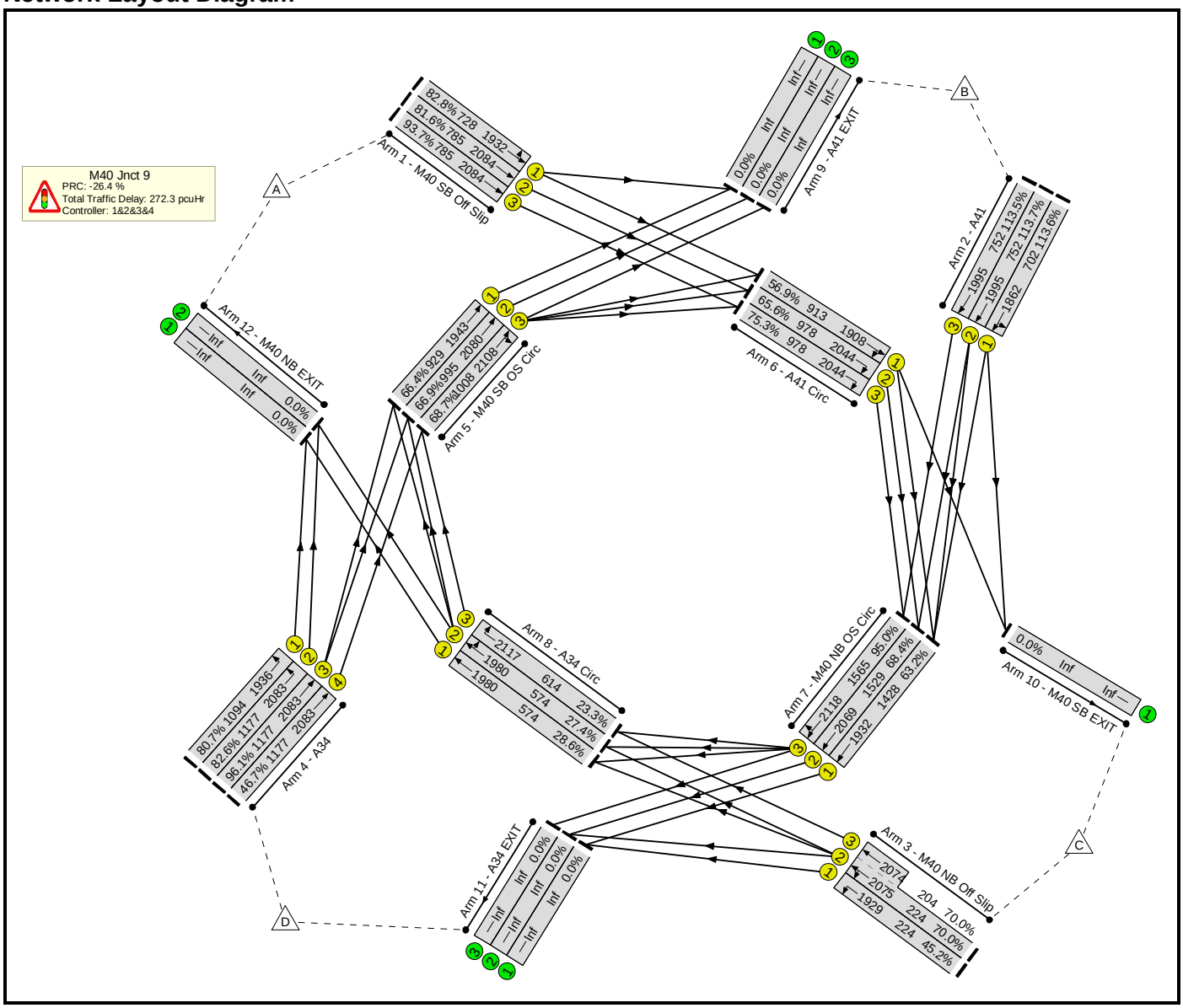
Basic Results Summary

User and Project Details

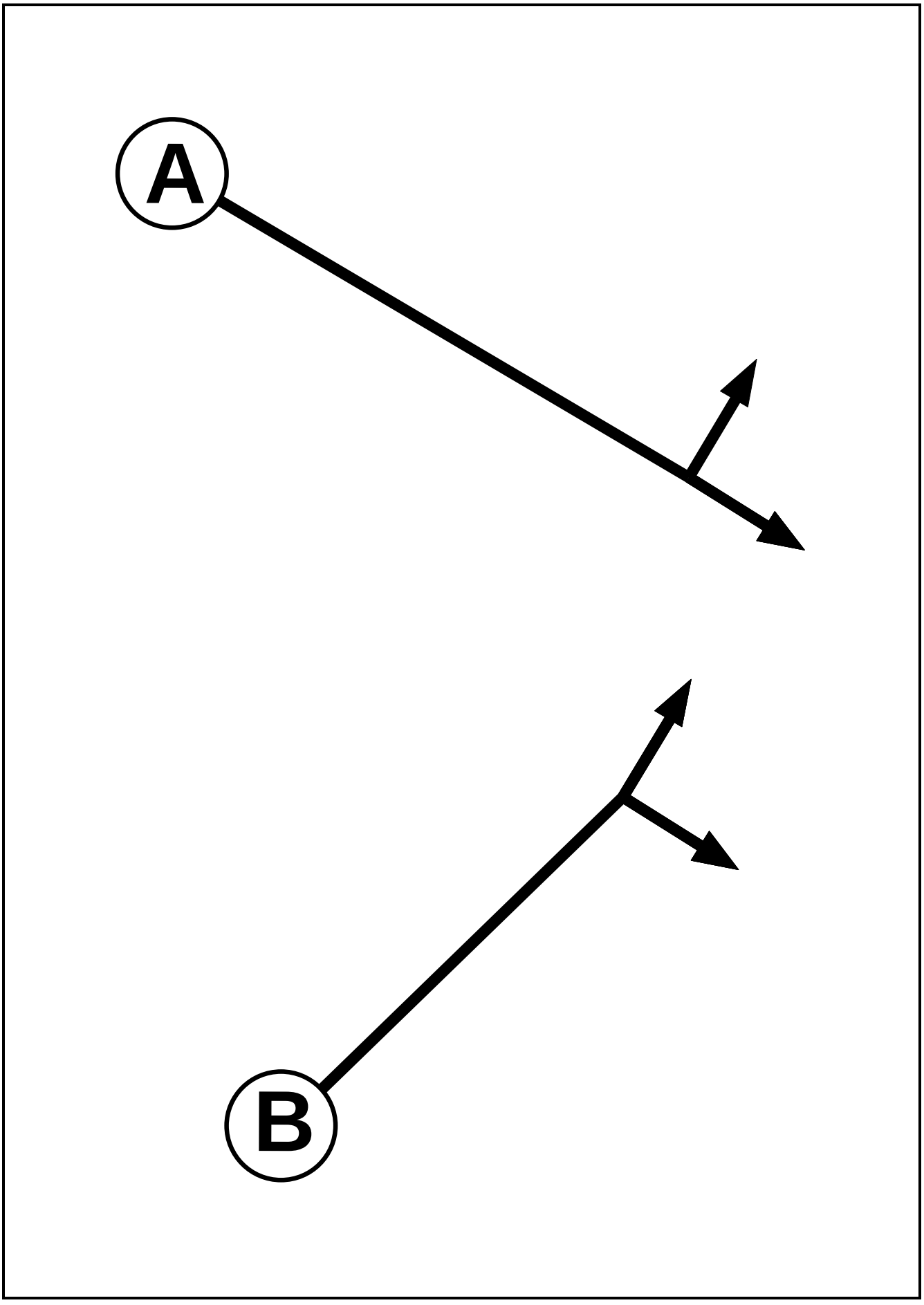
Project:	**Bicester Park and Ride**
Title:	**M40 Junction 9**
Location:	
File name:	M40 Jct 9 Proposed Layout - App O.lsg3x
Author:	Nigel Pettitt
Company:	Atkins
Address:	Cambridge
Notes:	

Scenario 1: '2019 AM FY Base + Comm' (FG13: '2019 AM FY + Comm', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Phase Diagram
C1



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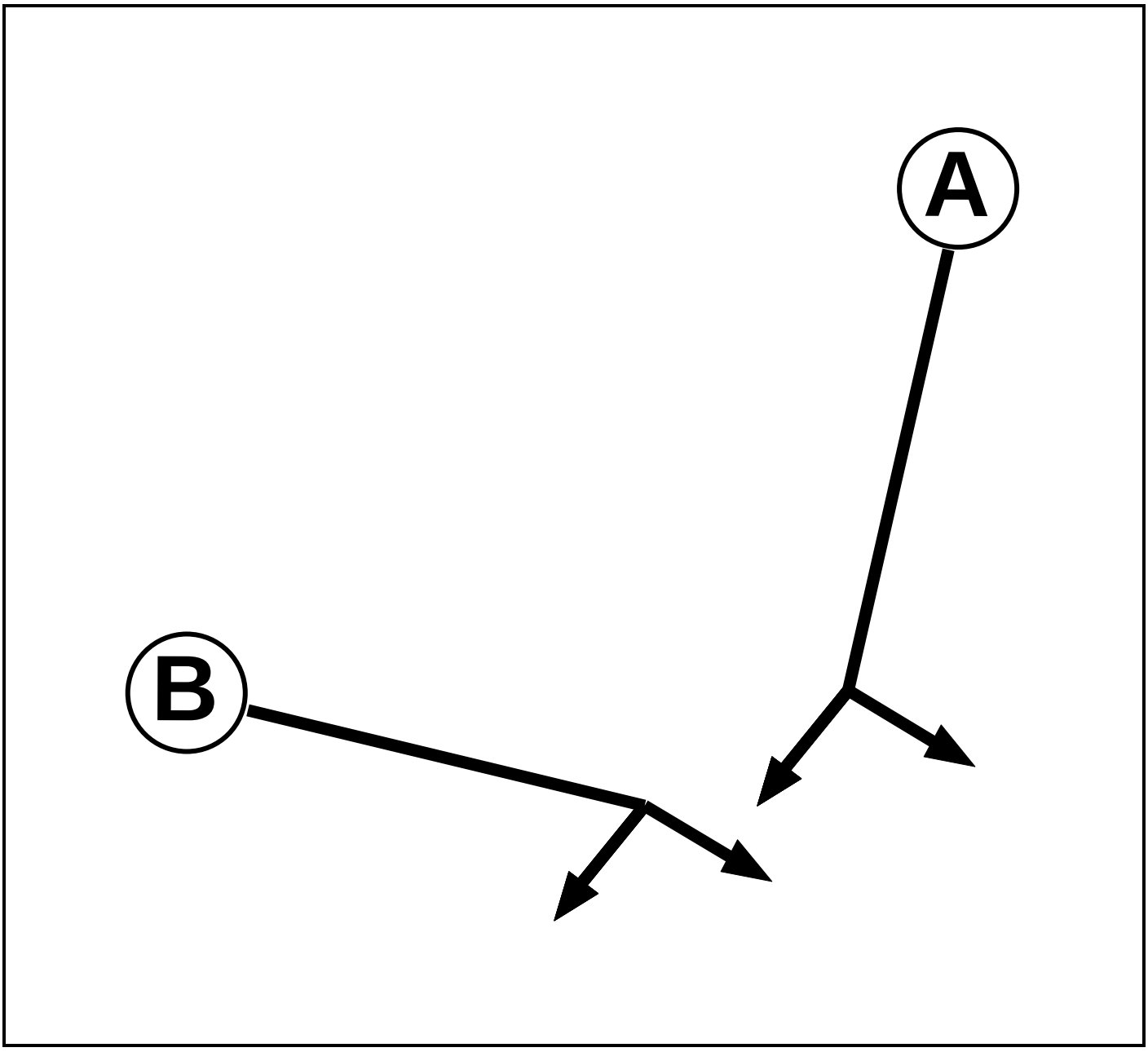

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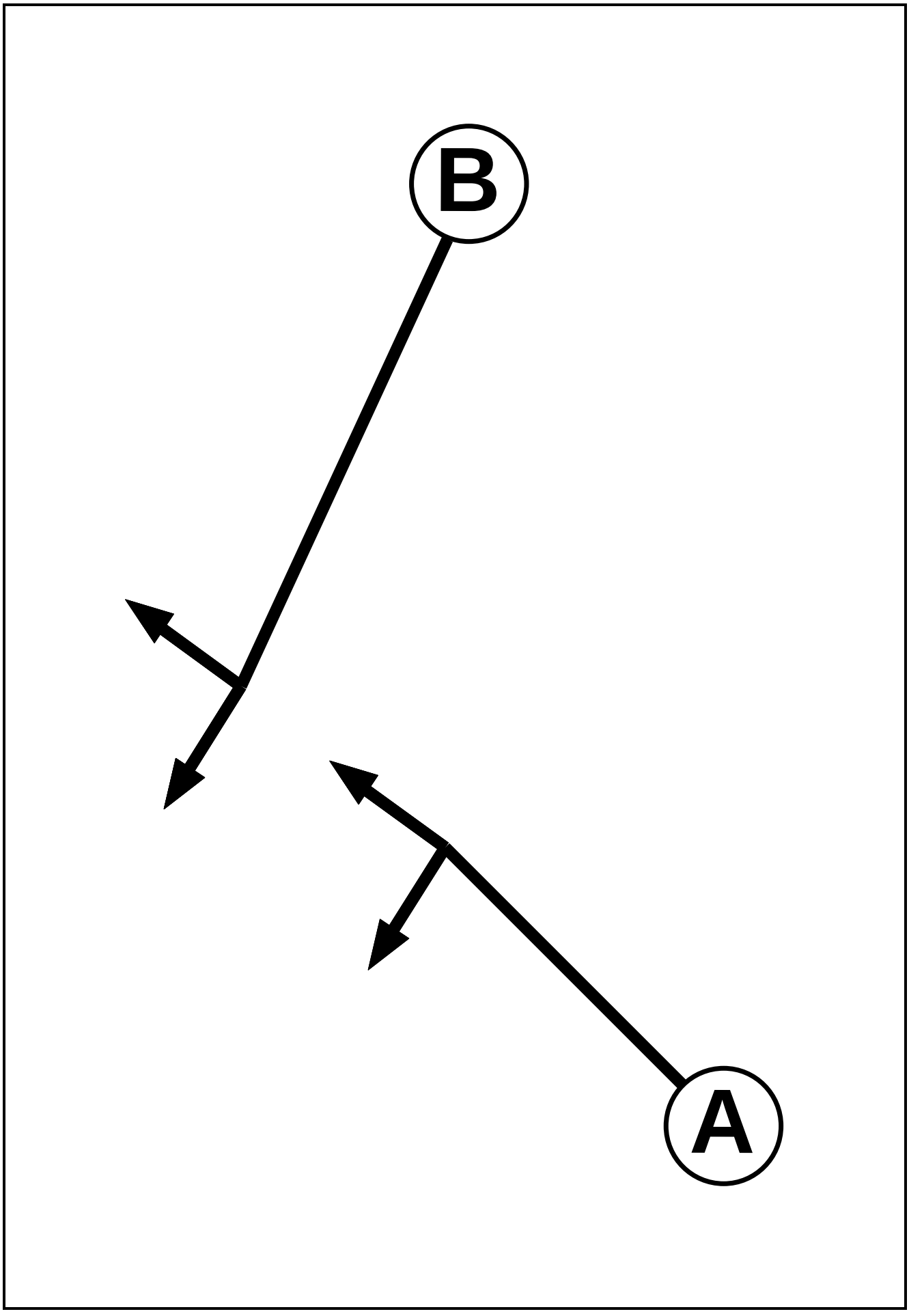

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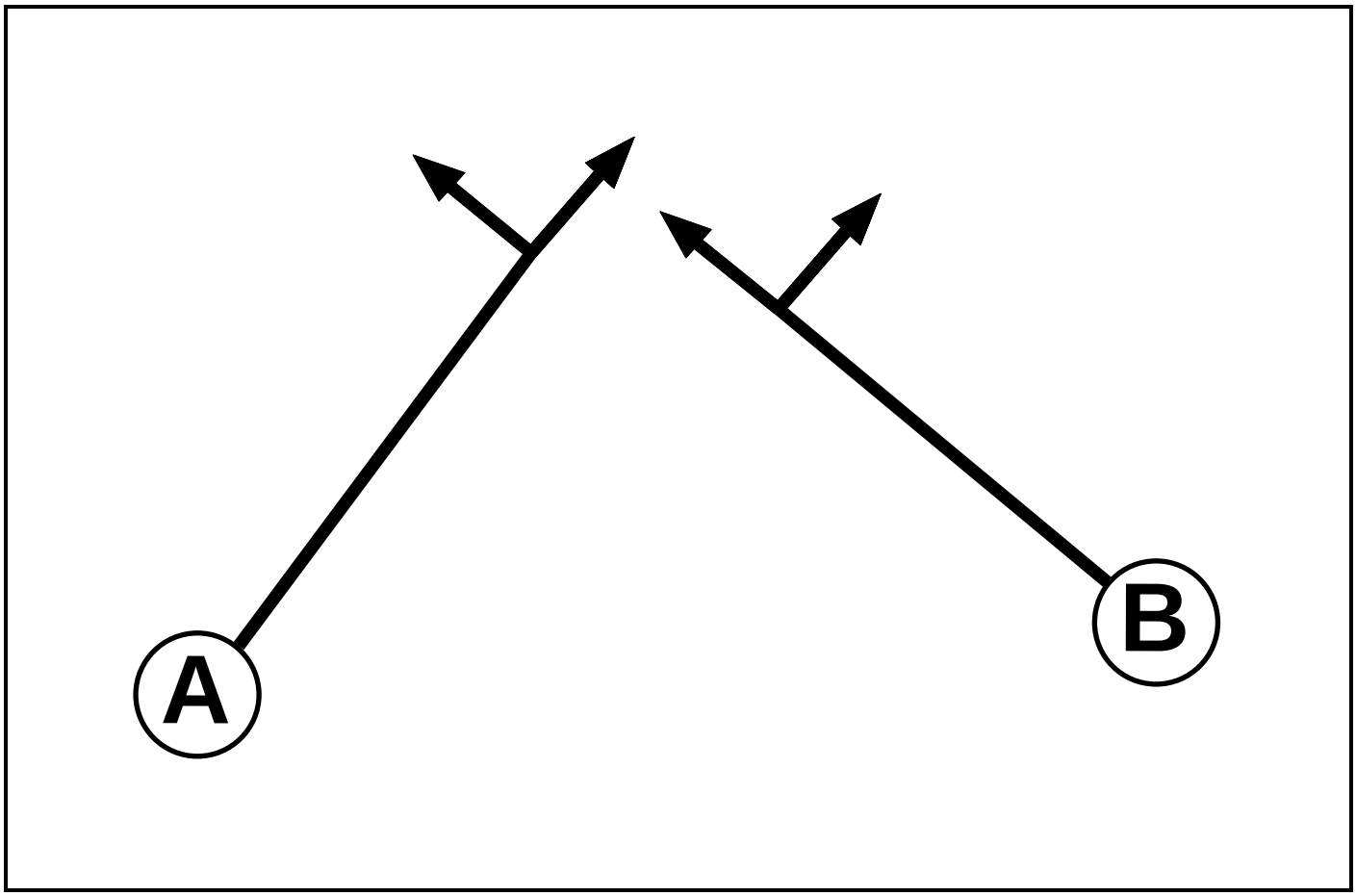


Phases in Stage

FG1: '2013 AM Base'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Phases in Stage
FG2: '2013 PM Base'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG3: '2014 AM OY Base'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Phases in Stage
FG4: '2014 PM OY Base'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG5: '2014 AM OY + Comm'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG6: '2014 PM OY + Comm'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG7: '2014 AM OY + Comm + Dev P&R'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG8: '2014 PM OY + Comm + Dev P&R'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG9: '2014 AM OY + Comm + Dev P&R Max Acc'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG10: '2014 PM OY + Comm + Dev P&R Max Acc'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG11: '2019 AM FY Base'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG12: '2019 PM FY Base'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG13: '2019 AM FY + Comm'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG14: '2019 PM FY + Comm'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG15: '2019 AM FY + Comm + Dev P&R'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG16: '2019 PM FY + Comm + Dev P&R'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG17: '2019 AM FY + Comm + Dev P&R Max Acc'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG18: '2019 PM FY + Comm + Dev P&R Max Acc'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG19: '2031 AM SATURN'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Phases in Stage
FG20: '2031 PM SATURN'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage
FG21: '2031 AM SATURN + Dev P&R'
C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG22: '2031 PM SATURN + Dev P&R'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG23: '2031 AM SATURN + Dev P&R Max Acc'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Phases in Stage

FG24: '2031 PM SATURN + Dev P&R Max Acc'

C1

Stage No.	Phases in Stage
1	A
2	B

C2

Stage No.	Phases in Stage
1	A
2	B

C3

Stage No.	Phases in Stage
1	A
2	B

C4

Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Phase Intergreens Matrix

C1

Terminating Phase	Starting Phase		
		A	B
A			7
B	5		

C2

Terminating Phase	Starting Phase		
		A	B
A			7
B	5		

C3

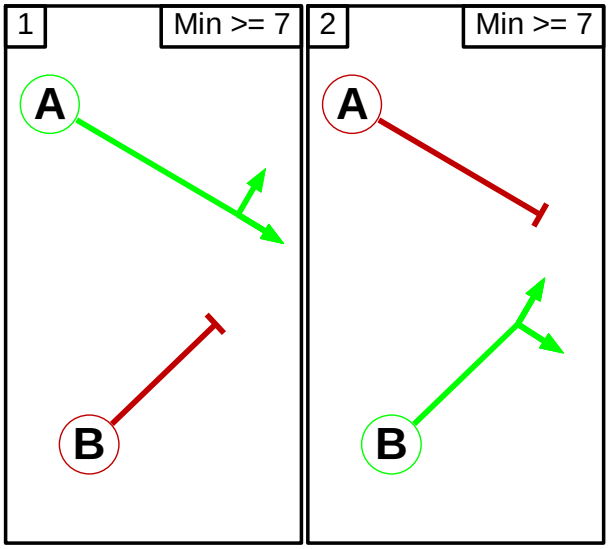
Terminating Phase	Starting Phase		
		A	B
A			7
B	5		

C4

Terminating Phase	Starting Phase		
		A	B
A			7
B	5		

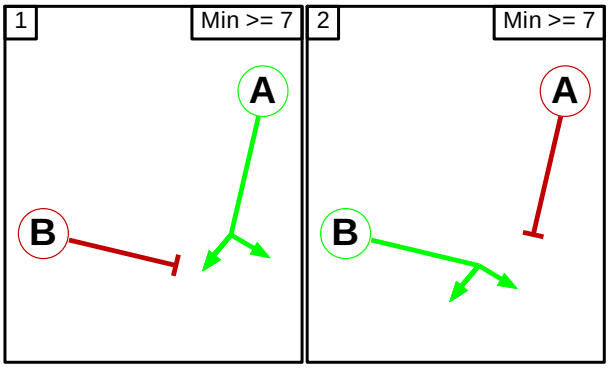
Stage Diagram

C1

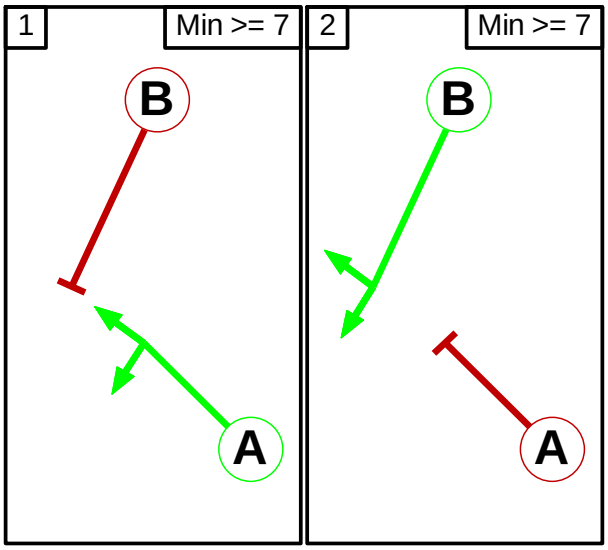


Basic Results Summary

C2



C3



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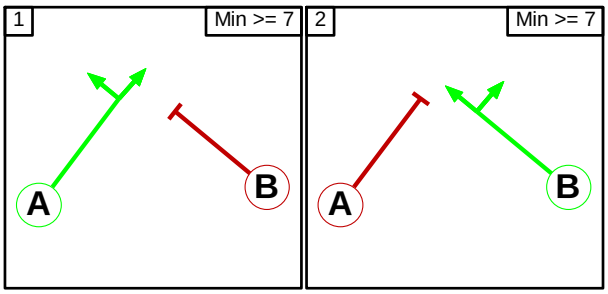


Basic Results Summary

Network Results

Scenario 1: '2019 AM FY Base + Comm' (FG13: '2019 AM FY + Comm', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**113.7%**	**0**	**0**	**0**	**272.3**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**113.7%**	**0**	**0**	**0**	**272.3**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	25	-	603	1932	728	82.8%	-	-	-	5.6	33.4	12.7
1/2	M40 SB Off Slip Ahead	U	C1:A		1	25	-	641	2084	785	81.6%	-	-	-	5.6	31.5	13.2
1/3	M40 SB Off Slip Ahead	U	C1:A		1	25	-	736	2084	785	93.7%	-	-	-	10.2	50.1	19.5
2/1	A41 Ahead Left	U	C2:A		1	25	-	797	1862	702	113.6%	-	-	-	60.1	271.6	70.3
2/2	A41 Ahead	U	C2:A		1	25	-	855	1995	752	113.7%	-	-	-	64.7	272.5	75.6
2/3	A41 Ahead	U	C2:A		1	25	-	853	1995	752	113.5%	-	-	-	63.7	268.8	74.5
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	101	1929	224	45.2%	-	-	-	1.2	43.1	2.2
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	7	-	300	2075:2074	224+204	70.0 : 70.0%	-	-	-	3.6	42.8	4.0
4/1	A34 Left	U	C4:A		1	38	-	883	1936	1094	80.7%	-	-	-	5.0	20.3	15.5
4/2	A34 Left	U	C4:A		1	38	-	973	2083	1177	82.6%	-	-	-	5.6	20.9	17.5
4/3	A34 Ahead	U	C4:A		1	38	-	1132	2083	1177	96.1%	-	-	-	13.4	42.7	29.4
4/4	A34 Ahead	U	C4:A		1	38	-	550	2083	1177	46.7%	-	-	-	1.8	11.7	6.5
5/1	M40 SB OS Circ Ahead	U	C1:B		1	32	-	617	1943	929	66.4%	-	-	-	4.4	25.5	9.4
5/2	M40 SB OS Circ Ahead	U	C1:B		1	32	-	666	2080	995	66.9%	-	-	-	4.6	24.8	10.3
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	32	-	693	2108	1008	68.7%	-	-	-	3.2	16.7	8.2

Basic Results Summary

6/1	A41 Circ Right Ahead	U	C2:B		1	32	-	519	1908	913	56.9%	-	-	-	1.7	11.7	4.8
6/2	A41 Circ Right	U	C2:B		1	32	-	641	2044	978	65.6%	-	-	-	1.3	7.1	6.1
6/3	A41 Circ Right	U	C2:B		1	32	-	736	2044	978	75.3%	-	-	-	1.6	8.1	11.2
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	982	1932	1428	63.2%	-	-	-	1.1	4.4	3.2
7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1101	2069	1529	68.4%	-	-	-	1.7	6.0	13.4
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	50	-	1589	2118	1565	95.0%	-	-	-	9.2	22.2	23.2
8/1	A34 Circ Ahead	U	C4:B		1	19	-	186	1980	574	28.6%	-	-	-	1.5	33.5	3.3
8/2	A34 Circ Right Ahead	U	C4:B		1	19	-	158	1980	574	27.4%	-	-	-	0.7	16.4	3.2
8/3	A34 Circ Right	U	C4:B		1	19	-	143	2117	614	23.3%	-	-	-	0.6	14.9	2.9

C1	PRC for Signalled Lanes (%):	-4.1	Total Delay for Signalled Lanes (pcuHr):	33.60
C2	PRC for Signalled Lanes (%):	-26.4	Total Delay for Signalled Lanes (pcuHr):	193.15
C3	PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	16.81
C4	PRC for Signalled Lanes (%):	-6.8	Total Delay for Signalled Lanes (pcuHr):	28.70
	PRC Over All Lanes (%):	-26.4	Total Delay Over All Lanes(pcuHr):	272.25

Cycle Time (s):	69
Cycle Time (s):	69
Cycle Time (s):	69
Cycle Time (s):	69

Basic Results Summary

Scenario 2: '2019 PM FY Base + Comm' (FG14: '2019 PM FY + Comm', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**101.0%**	**0**	**0**	**0**	**130.3**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**101.0%**	**0**	**0**	**0**	**130.3**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	24	-	628	1936	701	89.5%	-	-	-	7.5	42.9	15.2
1/2	M40 SB Off Slip Ahead	U	C1:A		1	24	-	592	2084	755	78.4%	-	-	-	5.0	30.4	11.8
1/3	M40 SB Off Slip Ahead	U	C1:A		1	24	-	590	2084	755	78.1%	-	-	-	5.0	30.3	11.7
2/1	A41 Ahead Left	U	C2:A		1	28	-	779	1862	783	99.5%	-	-	-	17.4	80.4	27.8
2/2	A41 Ahead	U	C2:A		1	28	-	847	1995	838	101.0%	-	-	-	21.9	93.1	33.2
2/3	A41 Ahead	U	C2:A		1	28	-	671	1995	838	80.0%	-	-	-	5.2	28.0	13.1
3/1	M40 NB Off Slip Left	U	C3:A		1	12	-	186	1929	363	51.2%	-	-	-	1.8	35.2	3.7
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	12	-	538	2074:2074	297+299	90.2 : 90.2%	-	-	-	8.0	53.4	9.9
4/1	A34 Left	U	C4:A		1	43	-	989	1936	1235	80.1%	-	-	-	4.5	16.5	16.0
4/2	A34 Left	U	C4:A		1	43	-	1079	2083	1328	81.2%	-	-	-	4.9	16.5	17.4
4/3	A34 Ahead	U	C4:A		1	43	-	1196	2083	1328	90.0%	-	-	-	7.8	23.4	23.5
4/4	A34 Ahead	U	C4:A		1	43	-	628	2083	1328	47.3%	-	-	-	1.6	9.1	6.6
5/1	M40 SB OS Circ Ahead	U	C1:B		1	33	-	699	1943	957	73.0%	-	-	-	3.1	15.8	10.2
5/2	M40 SB OS Circ Ahead	U	C1:B		1	33	-	765	2080	1025	74.6%	-	-	-	3.3	15.5	11.4
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	33	-	898	2120	1045	86.0%	-	-	-	6.9	27.7	18.9
6/1	A41 Circ Right Ahead	U	C2:B		1	29	-	485	1908	830	58.5%	-	-	-	1.1	8.5	2.3

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	29	-	592	2044	889	66.6%	-	-	-	1.1	6.6	5.0
6/3	A41 Circ Right	U	C2:B		1	29	-	590	2044	889	66.4%	-	-	-	1.0	6.1	6.8
7/1	M40 NB OS Circ Ahead	U	C3:B		1	45	-	1011	1932	1288	78.3%	-	-	-	4.0	14.3	14.5
7/2	M40 NB OS Circ Ahead	U	C3:B		1	45	-	1150	2069	1379	83.0%	-	-	-	4.3	13.4	14.1
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	45	-	1261	2108	1405	89.7%	-	-	-	6.8	19.3	18.2
8/1	A34 Circ Ahead	U	C4:B		1	14	-	330	1980	430	76.7%	-	-	-	2.4	25.8	5.6
8/2	A34 Circ Right Ahead	U	C4:B		1	14	-	315	1980	430	73.2%	-	-	-	3.3	37.7	7.2
8/3	A34 Circ Right	U	C4:B		1	14	-	270	2117	460	58.7%	-	-	-	2.5	33.3	5.9

C1	PRC for Signalled Lanes (%):	0.5	Total Delay for Signalled Lanes (pcuHr):	30.71	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-12.2	Total Delay for Signalled Lanes (pcuHr):	47.75	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-0.3	Total Delay for Signalled Lanes (pcuHr):	24.85	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	-0.0	Total Delay for Signalled Lanes (pcuHr):	26.99	Cycle Time (s): 69
	PRC Over All Lanes (%):	-12.2	Total Delay Over All Lanes(pcuHr):	130.30	

Basic Results Summary

Scenario 3: '2019 AM FY + Comm + Dev P&R' (FG15: '2019 AM FY + Comm + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**114.5%**	**0**	**0**	**0**	**223.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**114.5%**	**0**	**0**	**0**	**223.2**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	29	-	626	1932	840	74.5%	-	-	-	4.3	24.6	11.4
1/2	M40 SB Off Slip Ahead	U	C1:A		1	29	-	641	2084	906	70.7%	-	-	-	4.0	22.7	11.2
1/3	M40 SB Off Slip Ahead	U	C1:A		1	29	-	736	2084	906	81.2%	-	-	-	5.6	27.4	14.4
2/1	A41 Ahead Left	U	C2:A		1	26	-	826	1862	729	113.4%	-	-	-	61.6	268.3	72.2
2/2	A41 Ahead	U	C2:A		1	26	-	894	1995	781	114.5%	-	-	-	70.4	283.4	81.9
2/3	A41 Ahead	U	C2:A		1	26	-	787	1995	781	100.8%	-	-	-	20.6	94.1	31.0
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	107	1929	224	47.8%	-	-	-	1.3	43.9	2.4
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	7	-	294	2074:2074	181+225	72.3 : 72.3%	-	-	-	3.7	44.7	4.3
4/1	A34 Left	U	C4:A		1	49	-	883	1936	1403	62.9%	-	-	-	2.0	8.3	9.2
4/2	A34 Left	U	C4:A		1	49	-	973	2083	1509	64.5%	-	-	-	2.2	8.3	10.4
4/3	A34 Ahead	U	C4:A		1	49	-	1125	2083	1509	74.5%	-	-	-	3.2	10.3	14.3
4/4	A34 Ahead	U	C4:A		1	49	-	561	2083	1509	37.2%	-	-	-	0.9	5.5	4.3
5/1	M40 SB OS Circ Ahead	U	C1:B		1	28	-	598	1943	817	73.2%	-	-	-	4.2	25.2	11.4
5/2	M40 SB OS Circ Ahead	U	C1:B		1	28	-	658	2080	874	75.3%	-	-	-	3.7	20.4	12.2
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	28	-	724	2109	886	81.7%	-	-	-	6.3	31.4	14.9
6/1	A41 Circ Right Ahead	U	C2:B		1	31	-	519	1908	885	58.7%	-	-	-	1.9	13.2	5.3

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	31	-	641	2044	948	67.6%	-	-	-	1.7	9.5	5.1
6/3	A41 Circ Right	U	C2:B		1	31	-	736	2044	948	77.6%	-	-	-	2.2	10.7	10.3
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	986	1932	1428	63.3%	-	-	-	1.2	4.8	4.3
7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1165	2069	1529	71.8%	-	-	-	2.4	7.8	13.8
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	50	-	1523	2118	1565	96.9%	-	-	-	12.5	29.7	28.5
8/1	A34 Circ Ahead	U	C4:B		1	8	-	159	1980	258	61.1%	-	-	-	1.3	30.2	3.2
8/2	A34 Circ Right Ahead	U	C4:B		1	8	-	167	1980	258	64.6%	-	-	-	3.0	64.3	4.0
8/3	A34 Circ Right	U	C4:B		1	8	-	163	2117	276	59.0%	-	-	-	3.1	68.9	3.8

C1	PRC for Signalled Lanes (%):	10.2	Total Delay for Signalled Lanes (pcuHr):	28.14	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-27.2	Total Delay for Signalled Lanes (pcuHr):	158.27	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-7.6	Total Delay for Signalled Lanes (pcuHr):	21.03	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	20.8	Total Delay for Signalled Lanes (pcuHr):	15.76	Cycle Time (s): 69
	PRC Over All Lanes (%):	-27.2	Total Delay Over All Lanes(pcuHr):	223.20	

Basic Results Summary

Scenario 4: '2019 PM FY + Comm + Dev P&R' (FG16: '2019 PM FY + Comm + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**104.0%**	**0**	**0**	**0**	**149.1**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**104.0%**	**0**	**0**	**0**	**149.1**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	25	-	643	1936	730	88.1%	-	-	-	7.0	39.3	14.9
1/2	M40 SB Off Slip Ahead	U	C1:A		1	25	-	590	2084	785	75.1%	-	-	-	4.6	27.8	11.2
1/3	M40 SB Off Slip Ahead	U	C1:A		1	25	-	579	2084	785	73.7%	-	-	-	4.4	27.2	10.9
2/1	A41 Ahead Left	U	C2:A		1	27	-	778	1862	756	103.0%	-	-	-	26.0	120.2	36.0
2/2	A41 Ahead	U	C2:A		1	27	-	842	1995	810	104.0%	-	-	-	30.9	132.0	41.5
2/3	A41 Ahead	U	C2:A		1	27	-	705	1995	810	87.1%	-	-	-	6.9	35.1	15.5
3/1	M40 NB Off Slip Left	U	C3:A		1	12	-	186	1929	363	51.2%	-	-	-	1.8	35.2	3.7
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	12	-	538	2074:2074	286+301	91.6 : 91.6%	-	-	-	8.5	57.2	10.7
4/1	A34 Left	U	C4:A		1	44	-	989	1936	1263	78.3%	-	-	-	4.1	15.0	15.2
4/2	A34 Left	U	C4:A		1	44	-	1079	2083	1358	79.4%	-	-	-	4.5	15.0	16.6
4/3	A34 Ahead	U	C4:A		1	44	-	1196	2083	1358	88.0%	-	-	-	6.8	20.4	22.1
4/4	A34 Ahead	U	C4:A		1	44	-	628	2083	1358	46.2%	-	-	-	1.5	8.4	6.4
5/1	M40 SB OS Circ Ahead	U	C1:B		1	32	-	699	1943	929	75.2%	-	-	-	3.3	16.7	11.3
5/2	M40 SB OS Circ Ahead	U	C1:B		1	32	-	759	2080	995	76.3%	-	-	-	3.6	16.9	12.2
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	32	-	904	2120	1014	89.2%	-	-	-	7.9	31.4	20.1
6/1	A41 Circ Right Ahead	U	C2:B		1	30	-	498	1908	857	58.1%	-	-	-	1.1	8.0	2.3

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	30	-	590	2044	918	64.2%	-	-	-	1.0	6.0	4.9
6/3	A41 Circ Right	U	C2:B		1	30	-	579	2044	918	63.1%	-	-	-	0.9	5.4	6.5
7/1	M40 NB OS Circ Ahead	U	C3:B		1	45	-	1037	1932	1288	78.9%	-	-	-	3.7	12.9	12.9
7/2	M40 NB OS Circ Ahead	U	C3:B		1	45	-	1129	2069	1379	80.3%	-	-	-	4.4	14.2	16.1
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	45	-	1284	2107	1405	91.4%	-	-	-	7.3	20.6	18.5
8/1	A34 Circ Ahead	U	C4:B		1	13	-	321	1980	402	79.9%	-	-	-	3.7	41.5	8.0
8/2	A34 Circ Right Ahead	U	C4:B		1	13	-	342	1980	402	85.1%	-	-	-	3.8	39.6	5.1
8/3	A34 Circ Right	U	C4:B		1	13	-	276	2117	430	64.3%	-	-	-	1.7	22.0	1.9

C1	PRC for Signalled Lanes (%):	0.9	Total Delay for Signalled Lanes (pcuHr):	30.64	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-15.6	Total Delay for Signalled Lanes (pcuHr):	66.68	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	-1.8	Total Delay for Signalled Lanes (pcuHr):	25.71	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	2.2	Total Delay for Signalled Lanes (pcuHr):	26.04	Cycle Time (s): 69
	PRC Over All Lanes (%):	-15.6	Total Delay Over All Lanes(pcuHr):	149.06	

Appendix P. A41 / Oxford Road Proposed Scheme

Table 30. A41 / Oxford Road Proposed Highway Scheme

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2014 Opening Year + Committed						
ESSO Roundabout						
Oxford Road Left Ahead	55.6%	16.6	22.8	87.2%	29.1	45.2
Oxford Road Right	64.7%	21.3	7.1	72.4%	5.5	9.5
Central Link Ahead	92.5%	72.6	14.7	91.1%	7.8	16.1
Central Link Ahead	85.8%	48.2	11.5	91.3%	7.8	16.2
A41 Eastbound Ped Crossing Ahead	59.2%	8.9	4.6	66.2%	1.8	6.6
A41 Eastbound Ped Crossing Ahead	57.7%	7.6	1.9	68.4%	2.0	3.6
Services Entry Ahead Left	24.6%	9.0	0.8	55.5%	1.4	3.2
Oxford Road SB Entry Left	54.0%	38.3	5.8	62.4%	3.2	7.2
Oxford Road SB Entry Ahead	88.8%	60.7	14.5	84.6%	6.6	13.3
Oxford Road SB Entry Ahead	88.9%	61.1	14.4	86.2%	7.0	13.7
Internal EB Ahead Right	13.4%	15.5	2.2	27.8%	1.0	3.7
Internal EB Right	2.4%	16.6	0.2	3.5%	0.1	0.1
Internal Southbound Link Ahead	48.8%	23.4	6.1	44.1%	2.5	5.5
Internal Southbound Link Ahead	47.4%	23.0	5.8	43.7%	2.5	5.4
Internal Westbound Ahead Right	19.4%	9.1	0.7	24.7%	0.6	1.1
Internal Westbound Right	17.7%	8.6	0.6	25.5%	0.6	0.9
Internal Northbound Ahead	21.3%	1.1	0.1	41.1%	0.3	0.3
Internal Northbound Ahead	26.9%	1.2	1.4	40.3%	0.3	0.3
Internal Northbound Right	3.0%	0.9	0.0	6.7%	0.0	0.0
A41 westbound Left	95.1%	68.7	21.9	93.6%	10.1	17.9
A41 westbound Left	95.8%	69.6	23.9	94.6%	11.1	19.8
A41 westbound Ahead	42.8%	27.8	6.1	59.2%	3.4	8.1
Tesco / Bicester Business Park Access						
A41 Northbound Ahead	75.6%	12.6	19.6	97.9%	57.0	33.8
A41 Northbound Ahead Right	96.5%	49.5	26.4	98.2%	56.7	35.5
A41 Southbound Left Ahead	101.1%	70.5	58.7	102.1%	82.2	58.8
A41 Southbound Ahead	99.4%	70.8	36.7	100.1%	77.5	36.3
Tesco / BBP Access Right Left	55.2%	45.1	3.0	99.9%	99.0	22.8

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
Tesco / BBP Access Right	59.5%	63.0	3.3	72.6%	49.1	8.3
South West Bicester Urban Extension Access						
A41 Northbound Ahead Left	72.7%	16.8	15.7	76.3%	17.3	17.8
A41 Northbound Ahead	60.1%	15.2	13.1	71.9%	18.1	17.9
SWBUE Access Left Right	80.9%	60.9	5.9	90.1%	81.2	7.5
A41 Southbound Ahead	74.5%	12.0	17.4	86.5%	25.5	23.5
A41 Southbound Right Ahead	: 88.5%	19.7	30.1	91.5%	24.5	33.6
Total Delay (pcuHr)	**161.09**			**220.39**		
PRC (%)	**-12.3**			**-13.5**		
Cycle Time (sec)	**90/90/90**					
2014 Opening Year + Committed + P&R						
ESSO Roundabout						
Oxford Road Left Ahead	57.7%	16.9	23.4	86.6%	29.6	45.3
Oxford Road Right	64.8%	21.4	7.2	72.8%	21.2	10.4
Central Link Ahead	92.5%	72.6	14.7	89.4%	50.5	15.7
Central Link Ahead	86.3%	49.0	11.7	89.1%	52.0	15.6
A41 Eastbound Ped Crossing Ahead	56.4%	8.5	4.5	65.6%	9.2	7.1
A41 Eastbound Ped Crossing Ahead	60.5%	8.0	2.1	67.0%	8.8	3.3
Services Entry Ahead Left	24.5%	8.7	0.8	57.0%	41.8	3.3
Oxford Road SB Entry Left	54.0%	38.3	5.8	62.4%	39.8	7.2
Oxford Road SB Entry Ahead	94.3%	77.0	17.7	85.7%	53.7	13.7
Oxford Road SB Entry Ahead	90.3%	64.3	15.1	85.6%	53.9	13.5
Internal EB Ahead Right	13.3%	15.5	2.2	27.7%	17.6	3.4
Internal EB Right	2.4%	16.7	0.2	3.1%	8.5	0.1
Internal Southbound Link Ahead	51.7%	25.2	6.9	44.0%	18.0	5.7
Internal Southbound Link Ahead	48.1%	23.5	6.0	42.3%	17.7	5.3
Internal Westbound Ahead Right	19.4%	9.1	0.7	24.9%	13.9	1.1
Internal Westbound Right	17.7%	8.6	0.6	26.9%	13.5	1.0
Internal Northbound Ahead	19.9%	1.1	0.1	42.7%	1.6	0.4
Internal Northbound Ahead	28.3%	1.2	1.4	40.3%	1.4	5.7
Internal Northbound Right	2.9%	0.9	0.0	6.2%	1.0	0.0
A41 westbound Left	96.2%	73.8	23.2	97.9%	95.2	21.6
A41 westbound Left	96.6%	74.0	25.0	98.3%	95.7	23.3
A41 westbound Ahead	42.8%	27.8	6.1	61.6%	37.3	8.3
Tesco / Bicester Business Park Access						

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
A41 Northbound Ahead	75.7%	12.6	19.6	100.6%	79.3	40.8
A41 Northbound Ahead Right	96.5%	49.4	26.5	100.7%	77.1	43.1
A41 Southbound Left Ahead	105.7%	133.9	81.9	102.1%	82.4	58.9
A41 Southbound Ahead	100.3%	78.6	39.1	100.5%	81.2	37.2
Tesco / BBP Access Right Left	55.2%	45.1	3.0	: 100.4%	104.0	24.0
Tesco / BBP Access Right	59.5%	63.0	3.3	72.1%	48.8	8.3
South West Bicester Urban Extension Access						
A41 Northbound Ahead Left	72.7%	16.8	15.8	76.8%	17.5	18.0
A41 Northbound Ahead	60.2%	15.3	13.1	75.2%	19.2	19.4
SWBUE Access Left Right	80.9%	60.9	5.9	90.1%	81.2	7.5
A41 Southbound Ahead	74.8%	11.9	17.4	87.7%	25.3	24.4
A41 Southbound Right Ahead	88.1%	20.1	30.2	90.2%	22.4	32.2
Total Delay (pcuHr)	**194.09**			**236.78**		
PRC (%)	**-17.4**			**-13.5**		
Cycle Time (sec)	**90/90/90**					

Table 31. A41 / Oxford Road Proposed Highway Scheme

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2019 Opening Year + Committed						
Oxford Road / Pingle Drive						
Oxford Road NB Ahead				58.7%	3.9	3.0
Oxford Road NB Ahead				43.8%	4.0	4.4
Oxford Road NB Ahead				20.1%	18.6	2.8
Pingle Drive Left				66.4%	27.3	8.8
Pingle Drive Right				46.4%	48.7	3.2
Oxford Road SB Left				19.8%	13.2	2.7
Oxford Road SB Ahead				55.4%	23.4	10.0
Oxford Road SB Ahead				55.4%	23.4	10.0
Oxford Road Exit				43.6%	1.6	0.4
Oxford Road Exit				36.2%	1.4	0.3
Pingle Exit Lane				15.9%	1.1	0.1
Pingle Exit Lane				6.1%	0.9	0.0
Right turn lane Right				18.9%	5.3	0.2

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
Right turn lane Right				21.6%	5.1	0.2
ESSO Roundabout						
Oxford Road Left Ahead				102.8%	105.7	81.7
Oxford Road Right				79.4%	20.9	10.3
Central Link Ahead				98.7%	98.6	21.8
Central Link Ahead				99.7%	105.3	23.0
A41 Eastbound Ped Crossing Ahead				88.4%	26.3	21.5
A41 Eastbound Ped Crossing Ahead				91.1%	33.6	26.1
Services Entry Ahead Left				40.0%	14.1	1.9
Oxford Road SB Entry Left				108.1%	211.1	34.8
Oxford Road SB Entry Ahead				110.8%	242.7	45.7
Oxford Road SB Entry Ahead				111.1%	247.4	46.0
Internal EB Ahead Right				47.3%	27.3	9.5
Internal EB Right				3.6%	14.5	0.4
Internal Southbound Link Ahead				50.3%	26.0	7.6
Internal Southbound Link Ahead				49.4%	26.0	7.4
Internal Westbound Ahead Right				23.8%	12.0	1.1
Internal Westbound Right				35.5%	11.9	1.4
Internal Northbound Ahead				42.3%	1.6	0.4
Internal Northbound Ahead				28.3%	1.2	0.2
Internal Northbound Right				26.4%	1.2	0.2
A41 westbound Left				109.3%	223.5	52.1
A41 westbound Left				109.5%	225.1	56.3
A41 westbound Ahead				68.9%	35.9	10.9
Tesco / Bicester Business Park Access						
A41 Northbound Ahead				110.8%	217.6	92.4
A41 Northbound Ahead Right				111.1%	218.2	97.3
A41 Southbound Left Ahead				109.0%	186.6	93.6
A41 Southbound Ahead				107.9%	186.5	70.6
Tesco / BBP Access Right Left				108.2%	205.0	40.7
Tesco / BBP Access Right				103.2%	172.8	20.7
South West Bicester Urban Extension Access						
A41 Northbound Ahead Left				89.0%	25.3	27.3
A41 Northbound Ahead				90.1%	28.6	30.1
SWBUE Access Left Right				100.7%	148.1	13.2

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
A41 Southbound Ahead				93.6%	30.9	29.5
A41 Southbound Right Ahead				95.8%	35.8	15.7
Total Delay (pcuHr)				**684.28**		
PRC (%)				**-23.5**		
Cycle Time (sec)	**90/90/90/90**					
2019 Opening Year + Committed + P&R						
Oxford Road / Pingle Drive						
Oxford Road NB Ahead				56.1%	3.8	2.9
Oxford Road NB Ahead				45.7%	4.0	4.4
Oxford Road NB Ahead				19.8%	18.5	2.8
Pingle Drive Left				66.3%	27.3	8.8
Pingle Drive Right				46.4%	48.7	3.2
Oxford Road SB Left				19.8%	13.2	2.7
Oxford Road SB Ahead				55.3%	23.4	10.0
Oxford Road SB Ahead				55.4%	23.4	10.0
Oxford Road Exit				41.7%	1.6	0.4
Oxford Road Exit				37.5%	1.4	0.3
Pingle Exit Lane				15.9%	1.1	0.1
Pingle Exit Lane				6.0%	0.9	0.0
Right turn lane Right				18.9%	5.2	0.2
Right turn lane Right				21.3%	5.1	0.2
ESSO Roundabout						
Oxford Road Left Ahead				104.7%	132.8	92.9
Oxford Road Right				80.4%	21.3	10.5
Central Link Ahead				97.8%	92.4	20.7
Central Link Ahead				102.1%	131.3	27.2
A41 Eastbound Ped Crossing Ahead				87.7%	26.7	21.8
A41 Eastbound Ped Crossing Ahead				90.0%	30.2	24.5
Services Entry Ahead Left				39.6%	13.5	1.8
Oxford Road SB Entry Left				107.6%	204.8	33.9
Oxford Road SB Entry Ahead				110.8%	242.7	45.7
Oxford Road SB Entry Ahead				111.1%	247.4	46.0
Internal EB Ahead Right				45.4%	26.7	9.1
Internal EB Right				3.6%	14.8	0.4
Internal Southbound Link Ahead				50.3%	26.0	7.6

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
Internal Southbound Link Ahead				49.4%	26.0	7.4
Internal Westbound Ahead Right				23.6%	12.0	1.1
Internal Westbound Right				35.7%	11.9	1.4
Internal Northbound Ahead				40.2%	1.5	0.3
Internal Northbound Ahead				29.8%	1.2	0.2
Internal Northbound Right				25.6%	1.2	0.2
A41 westbound Left				109.4%	225.9	52.6
A41 westbound Left				109.6%	227.3	56.8
A41 westbound Ahead				68.9%	35.9	10.9
Tesco / Bicester Business Park Access						
A41 Northbound Ahead				113.0%	249.4	104.4
A41 Northbound Ahead Right				113.8%	257.2	112.4
A41 Southbound Left Ahead				109.0%	186.7	93.6
A41 Southbound Ahead				107.9%	186.8	70.7
Tesco / BBP Access Right Left				108.2%	205.0	40.7
Tesco / BBP Access Right				103.2%	172.8	20.7
South West Bicester Urban Extension Access						
A41 Northbound Ahead Left				91.8%	29.2	30.4
A41 Northbound Ahead				91.2%	30.2	31.3
SWBUE Access Left Right				100.7%	148.1	13.2
A41 Southbound Ahead				93.7%	31.0	29.5
A41 Southbound Right Ahead				95.8%	35.8	15.7
Total Delay (pcuHr)				**727.90**		
PRC (%)				**-26.4**		
Cycle Time (sec)	**90/90/90**					

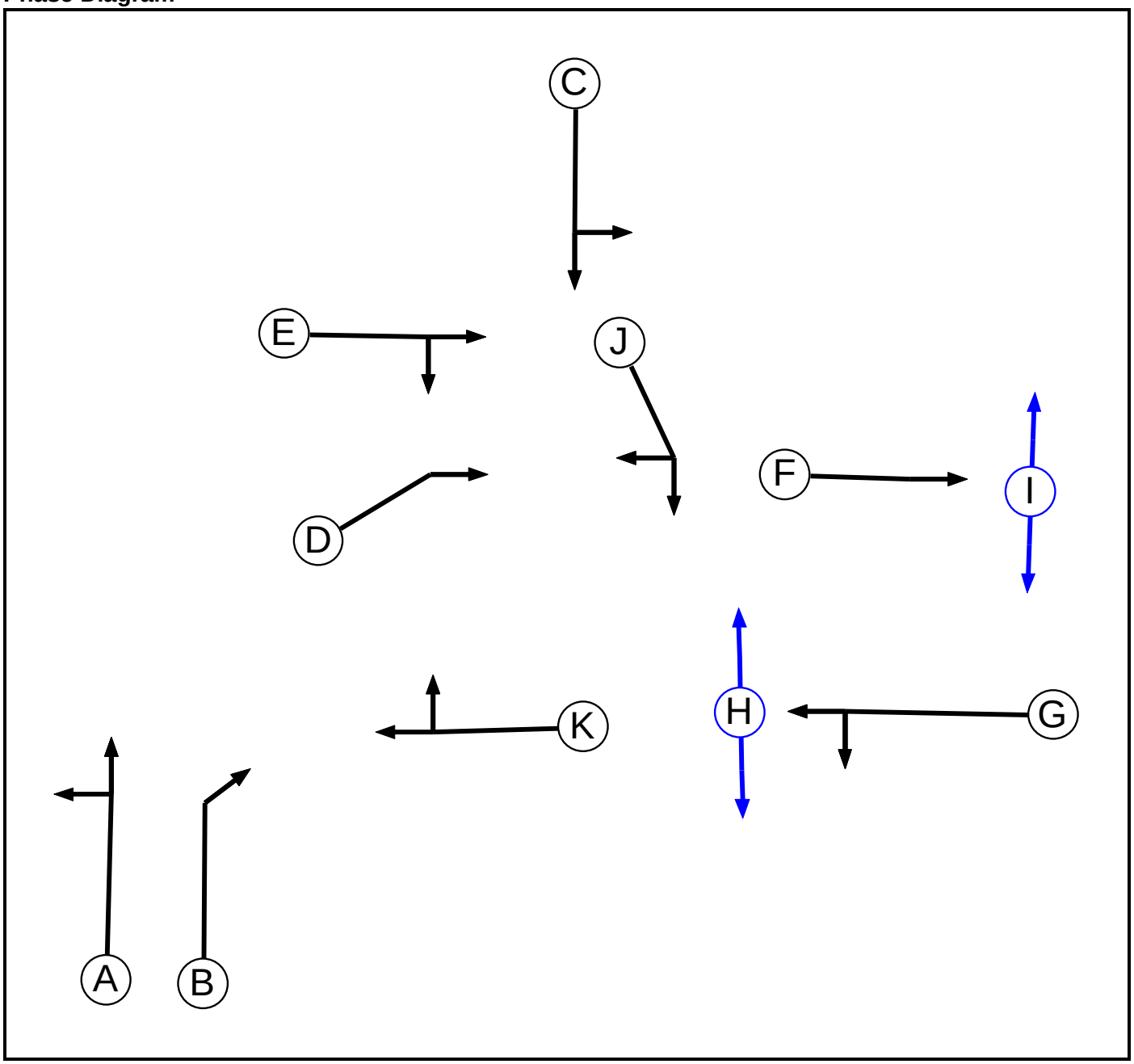
Basic Results Summary

User and Project Details

Project:	**Bicester Park and Ride**
Title:	A41 - Oxford Road 2014 Proposed Layout
Location:	
File name:	A41 - Oxford Road 2014 - App P.lsg3x
Author:	Nigel Pettitt
Company:	Atkins
Address:	
Notes:	

C1

Phase Diagram



Basic Results Summary

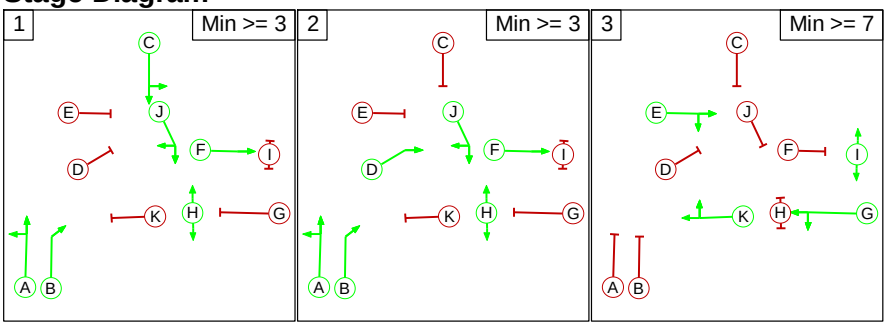
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K
A		-	-	-	-	-	-	-	-	-	5
B	-		-	-	-	-	-	-	-	-	5
C	-	-		5	5	-	-	-	-	-	-
D	-	-	5		5	-	-	-	-	-	-
E	-	-	5	5		-	-	-	-	-	-
F	-	-	-	-	-		-	-	5	-	-
G	-	-	-	-	-	-		5	-	5	-
H	-	-	-	-	-	-	12		-	-	-
I	-	-	-	-	-	9	-	-		-	-
J	-	-	-	-	-	-	5	-	-		-
K	6	5	-	-	-	-	-	-	-	-	

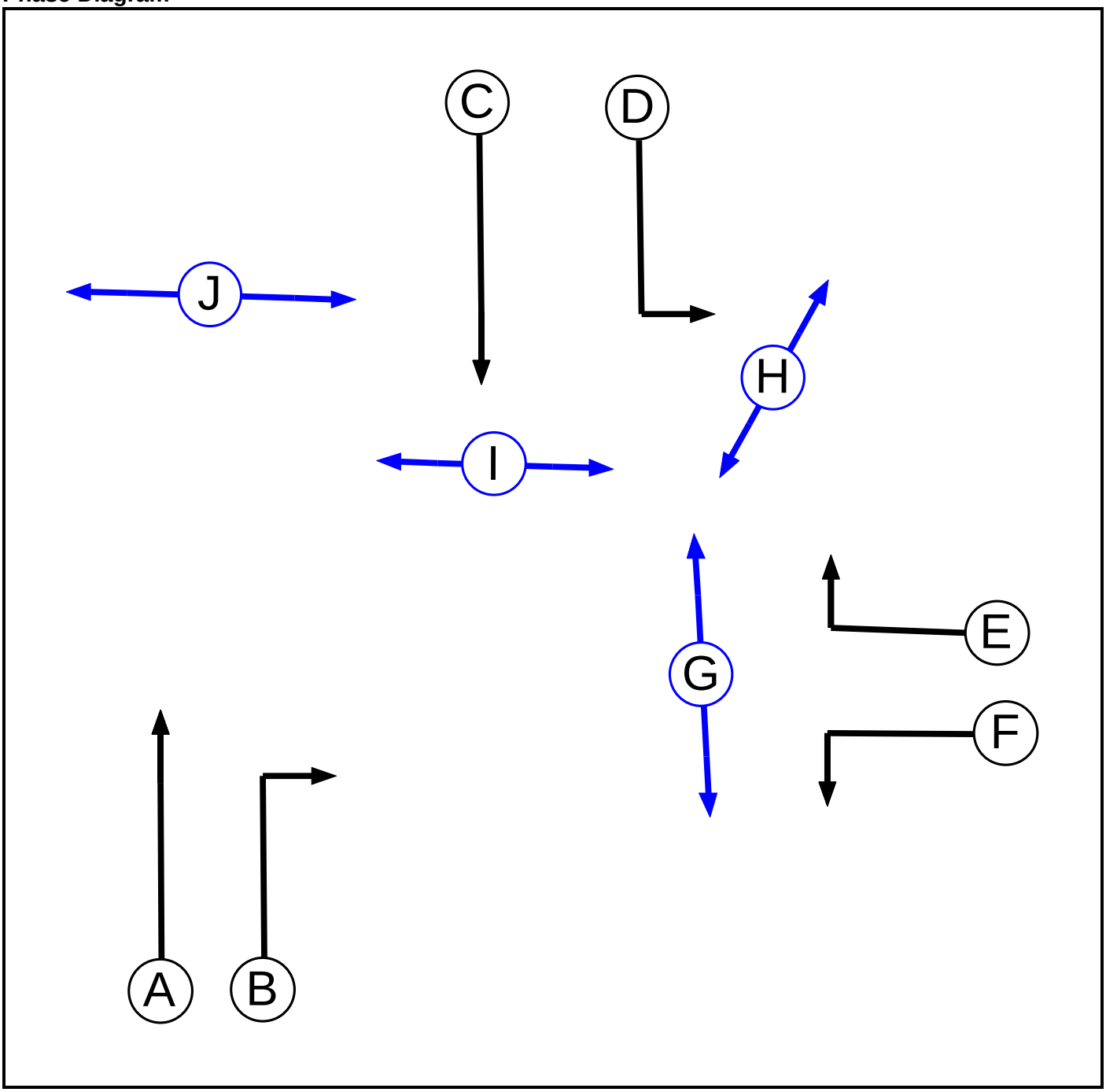
Phases in Stage

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

Stage Diagram



C2
Phase Diagram



Basic Results Summary

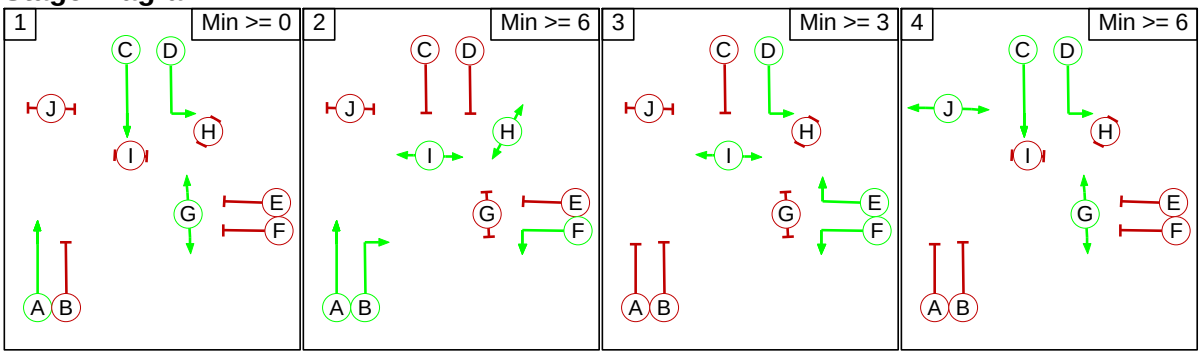
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	5	-	-	-	-	8
B	-		5	6	5	-	8	-	-	-
C	-	5		-	5	6	-	-	5	-
D	-	5	-		-	-	-	5	-	-
E	7	6	5	-		-	10	-	-	10
F	-	-	5	-	-		5	-	-	-
G	-	16	-	-	16	16		-	-	-
H	-	-	-	9	-	-	-		-	-
I	-	-	9	-	-	-	-	-		-
J	11	-	-	-	11	-	-	-	-	

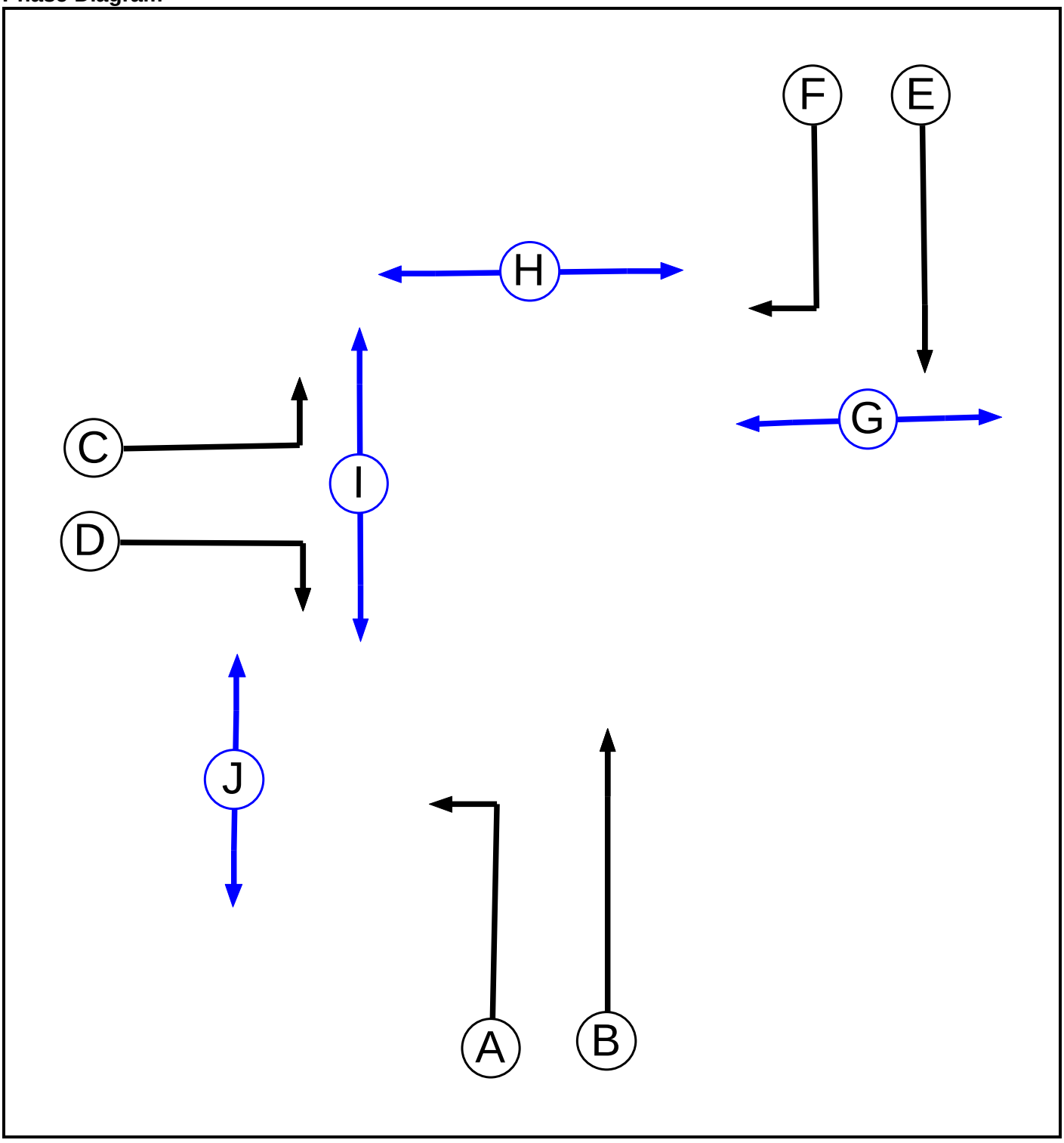
Phases in Stage

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

Stage Diagram



C3
Phase Diagram



Basic Results Summary

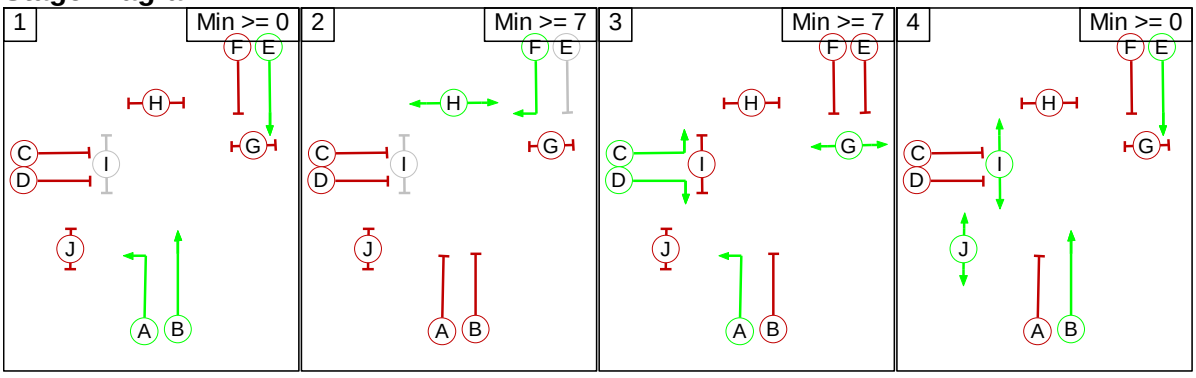
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	-	5	-	-	-	5
B	-		6	5	-	5	-	8	-	-
C	-	5		-	-	-	-	6	5	-
D	-	5	-		7	6	-	-	5	-
E	-	-	-	5		-	5	-	-	-
F	8	6	-	5	-		10	-	-	7
G	-	-	-	-	15	15		-	-	-
H	-	10	10	-	-	-	-		-	-
I	-	-	7	7	-	-	-	-		-
J	7	-	-	-	-	7	-	-	-	

Phases in Stage

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

Stage Diagram



Basic Results Summary

Network Results

Scenario 1: '2014 AM OY + Comm Dev' (FG1: '2014 AM OY + Comm Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**101.1%**	**104**	**0**	**0**	**161.1**	-	-
J1: Esso Roundabout	-	-	-		-	-	-	-	-	-	**95.8%**	**104**	**0**	**0**	**77.3**	-	-
1/2+1/1	Oxford Road Left Ahead	U	C1:A		1	43	-	832	2155:1991	878+619	55.6 : 55.6%	-	-	-	3.8	16.6	22.8
1/3+1/4	Oxford Road Right	U	C1:B		1	44	-	772	2020:2020	620+573	64.7 : 64.7%	-	-	-	4.6	21.3	7.1
2/1	Central Link Ahead	U	C1:D		1	18	-	401	2053	433	92.5%	-	-	-	8.1	72.6	14.7
2/2	Central Link Ahead	U	C1:D		1	18	-	371	2048	432	85.8%	-	-	-	5.0	48.2	11.5
3/1	Ped Crossing Ahead	U	C1:F		1	40	-	537	1990	907	59.2%	-	-	-	1.3	8.9	4.6
3/2	Ped Crossing Ahead	U	C1:F		1	40	-	560	2130	970	57.7%	-	-	-	1.2	7.6	1.9
4/1	Services Entry Ahead Left	O	-		-	-	-	104	2058	423	24.6%	104	0	0	0.3	9.0	0.8
6/1	Oxford Road SB Entry Left	U	C1:C		1	21	-	242	1832	448	54.0%	-	-	-	2.6	38.3	5.8
6/2	Oxford Road SB Entry Ahead	U	C1:C		1	21	-	457	2105	515	88.8%	-	-	-	7.7	60.7	14.5
6/3	Oxford Road SB Entry Ahead	U	C1:C		1	21	-	452	2080	508	88.9%	-	-	-	7.7	61.1	14.4
7/1	Internal EB Ahead Right	U	C1:E		1	36	-	112	2033	836	13.4%	-	-	-	0.5	15.5	2.2
7/2	Internal EB Right	U	C1:E		1	36	-	19	1936	796	2.4%	-	-	-	0.1	16.6	0.2
8/1	Ahead	U	C1:J		1	44	-	486	1990	995	48.8%	-	-	-	3.2	23.4	6.1
8/2	Right Ahead	U	C1:J		1	44	-	471	1988	994	47.4%	-	-	-	3.0	23.0	5.8
9/1	Ahead Right	U	C1:K		1	36	-	163	2040	839	19.4%	-	-	-	0.4	9.1	0.7

Basic Results Summary

9/2	Right	U	C1:K		1	36	-	145	1997	821	17.7%	-	-	-	0.3	8.6	0.6
10/1	Ahead	U	-		-	-	-	423	1990	1990	21.3%	-	-	-	0.1	1.1	0.1
10/2	Ahead	U	-		-	-	-	574	2130	2130	26.9%	-	-	-	0.2	1.2	1.4
10/3	Right	U	-		-	-	-	59	1997	1997	3.0%	-	-	-	0.0	0.9	0.0
11/1	A41 westbound Left	U	C1:G		1	29	-	623	1965	655	95.1%	-	-	-	11.9	68.7	21.9
11/2	A41 westbound Left	U	C1:G		1	29	-	672	2105	702	95.8%	-	-	-	13.0	69.6	23.9
11/3	A41 westbound Ahead	U	C1:G		1	29	-	300	2105	702	42.8%	-	-	-	2.3	27.8	6.1
Ped Link: P1	Unnamed Ped Link	-	C1:I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:H		1	44	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**101.1%**	**0**	**0**	**0**	**62.6**	**-**	**-**
1/1	Ahead	U	C2:A		1	50	-	891	2080	1179	75.6%	-	-	-	3.1	12.6	19.6
1/2+1/3	Ahead Right	U	C2:A C2:B		1	50:14	-	805	2080:1891	519+315	96.5 : 96.5%	-	-	-	11.1	49.5	26.4
2/2+2/1	Left Ahead	U	C2:C C2:D		1	39:51	-	1325	2080:1764	757+554	101.1 : 101.1%	-	-	-	25.9	70.5	58.7
2/3	Ahead	U	C2:C		1	39	-	919	2080	924	99.4%	-	-	-	18.1	70.8	36.7
3/2+3/1	Right Left	U	C2:E C2:F		1	7:26	-	175	2080:1687	185+132	55.2 : 55.2%	-	-	-	2.2	45.1	3.0
3/3	Right	U	C2:E		1	7	-	110	2080	185	59.5%	-	-	-	1.9	63.0	3.3
4/1		U	-		-	-	-	560	1965	1965	28.5%	-	-	-	0.2	1.3	0.2
4/2		U	-		-	-	-	304	1965	1965	15.5%	-	-	-	0.1	1.1	0.1
Ped Link: P1	Unnamed Ped Link	-	C2:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:I		1	37	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C2:H		1	25	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P4	Unnamed Ped Link	-	C2:G		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
J3: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.5%**	**0**	**0**	**0**	**21.2**	**-**	**-**
1/2+1/1	Ahead Left	U	C3:B C3:A		1:2	52:30	-	962	2205:1709	1072+252	72.7 : 72.7%	-	-	-	4.5	16.8	15.7
1/3	Ahead	U	C3:B		1	52	-	780	2205	1298	60.1%	-	-	-	3.3	15.2	13.1
3/2+3/1	Left Right	U	C3:D C3:C		1	13:8	-	307	1830:1709	210+169	80.9 : 80.9%	-	-	-	5.2	60.9	5.9
4/1	Ahead	U	C3:E		1	42	-	785	2205	1054	74.5%	-	-	-	2.6	12.0	17.4
4/2+4/3	Right Ahead	U	C3:E C3:F		1	42:10	-	972	2205:1874	913+185	88.5 : 88.5%	-	-	-	5.3	19.7	30.1
5/2		U	-		-	-	-	808	2105	2105	38.4%	-	-	-	0.3	1.4	0.3
Ped Link: P1	Unnamed Ped Link	-	C3:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:I		1	25	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:J		1	25	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	-6.4	Total Delay for Signalled Lanes (pcuHr):	76.66	Cycle Time (s): 90
C2	PRC for Signalled Lanes (%):	-12.3	Total Delay for Signalled Lanes (pcuHr):	62.31	Cycle Time (s): 90
C3	PRC for Signalled Lanes (%):	1.7	Total Delay for Signalled Lanes (pcuHr):	20.92	Cycle Time (s): 90
	PRC Over All Lanes (%):	-12.3	Total Delay Over All Lanes(pcuHr):	161.09	

Basic Results Summary

Scenario 2: '2014 PM OY + Comm Dev' (FG2: '2014 PM OY + Comm Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**102.1%**	**128**	**0**	**0**	**220.4**	-	-
J1: Esso Roundabout	-	-	-		-	-	-	-	-	-	**98.5%**	**128**	**0**	**0**	**92.0**	-	-
1/2+1/1	Oxford Road Left Ahead	U	C1:A		1	49	-	1517	2155:2006	931+808	87.2 : 87.2%	-	-	-	12.3	29.1	45.2
1/3+1/4	Oxford Road Right	U	C1:B		1	50	-	956	2020:2020	671+671	71.2 : 71.2%	-	-	-	5.3	19.9	9.5
2/1	Central Link Ahead	U	C1:D		1	23	-	478	2053	547	87.3%	-	-	-	6.5	49.3	14.9
2/2	Central Link Ahead	U	C1:D		1	23	-	478	2048	546	87.5%	-	-	-	6.5	48.8	15.0
3/1	Ped Crossing Ahead	U	C1:F		1	46	-	673	1990	1039	64.8%	-	-	-	1.7	9.1	6.5
3/2	Ped Crossing Ahead	U	C1:F		1	46	-	745	2130	1112	67.0%	-	-	-	1.9	9.1	3.5
4/1	Services Entry Ahead Left	O	-		-	-	-	128	2056	224	57.1%	128	0	0	1.5	41.9	3.3
6/1	Oxford Road SB Entry Left	U	C1:C		1	22	-	292	1832	468	62.4%	-	-	-	3.2	39.8	7.2
6/2	Oxford Road SB Entry Ahead	U	C1:C		1	22	-	455	2105	538	84.6%	-	-	-	6.6	52.3	13.3
6/3	Oxford Road SB Entry Ahead	U	C1:C		1	22	-	458	2080	532	86.2%	-	-	-	7.0	54.7	13.7
7/1	Internal EB Ahead Right	U	C1:E		1	30	-	202	2046	705	28.7%	-	-	-	1.0	17.9	3.6
7/2	Internal EB Right	U	C1:E		1	30	-	24	1936	667	3.6%	-	-	-	0.1	8.6	0.1
8/1	Ahead	U	C1:J		1	50	-	487	1990	1128	43.2%	-	-	-	2.4	17.6	5.5
8/2	Right Ahead	U	C1:J		1	50	-	482	1986	1125	42.8%	-	-	-	2.4	17.9	5.4
9/1	Ahead Right	U	C1:K		1	30	-	178	2030	699	25.5%	-	-	-	0.7	14.0	1.2

Basic Results Summary

9/2	Right	U	C1:K		1	30	-	181	1997	688	26.3%	-	-	-	0.7	13.5	1.0
10/1	Ahead	U	-		-	-	-	818	1990	1990	41.1%	-	-	-	0.3	1.5	0.3
10/2	Ahead	U	-		-	-	-	859	2130	2130	40.3%	-	-	-	0.3	1.4	0.3
10/3	Right	U	-		-	-	-	134	1997	1997	6.7%	-	-	-	0.0	1.0	0.0
11/1	A41 westbound Left	U	C1:G		1	23	-	511	1965	524	97.5%	-	-	-	13.2	92.7	21.1
11/2	A41 westbound Left	U	C1:G		1	23	-	553	2105	561	98.5%	-	-	-	14.9	97.0	23.5
11/3	A41 westbound Ahead	U	C1:G		1	23	-	346	2105	561	61.6%	-	-	-	3.6	37.3	8.3
Ped Link: P1	Unnamed Ped Link	-	C1:I		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:H		1	50	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.1%**	**0**	**0**	**0**	**98.3**	**-**	**-**
1/1	Ahead	U	C2:A		1	40	-	928	2080	948	97.9%	-	-	-	14.7	57.0	33.8
1/2+1/3	Ahead Right	U	C2:A C2:B		1	40:7	-	990	2080:1891	876+132	98.2 : 98.2%	-	-	-	15.6	56.7	35.5
2/2+2/1	Left Ahead	U	C2:C C2:D		1	36:58	-	1164	2080:1764	742+398	102.1 : 102.1%	-	-	-	26.6	82.2	58.8
2/3	Ahead	U	C2:C		1	36	-	856	2080	855	100.1%	-	-	-	18.4	77.5	36.3
3/2+3/1	Right Left	U	C2:E C2:F		1	17:29	-	682	2080:1687	384+299	99.9 : 99.9%	-	-	-	18.8	99.0	22.8
3/3	Right	U	C2:E		1	17	-	302	2080	416	72.6%	-	-	-	4.1	49.1	8.3
4/1		U	-		-	-	-	406	1965	1965	20.7%	-	-	-	0.1	1.2	0.1
4/2		U	-		-	-	-	130	1965	1965	6.6%	-	-	-	0.0	1.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C2:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:I		1	40	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C2:H		1	18	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P4	Unnamed Ped Link	-	C2:G		1	35	-	0	-	0	0.0%	-	-	-	-	-	-
J3: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.5%**	**0**	**0**	**0**	**30.1**	**-**	**-**
1/2+1/1	Ahead Left	U	C3:B C3:A		1:2	52:45	-	1008	2205:1709	1090+231	76.3 : 76.3%	-	-	-	4.8	17.3	17.8
1/3	Ahead	U	C3:B		1	52	-	933	2205	1298	71.9%	-	-	-	4.7	18.1	17.9
3/2+3/1	Left Right	U	C3:D C3:C		1	13:8	-	308	1830:1709	172+170	90.1 : 90.1%	-	-	-	6.9	81.2	7.5
4/1	Ahead	U	C3:E		1	42	-	911	2205	1054	86.5%	-	-	-	6.5	25.5	23.5
4/2+4/3	Right Ahead	U	C3:E C3:F		1	42:10	-	1002	2205:1874	925+169	91.5 : 91.5%	-	-	-	6.8	24.5	33.6
5/2		U	-		-	-	-	847	2105	2105	40.2%	-	-	-	0.3	1.4	0.3
Ped Link: P1	Unnamed Ped Link	-	C3:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:I		1	10	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:J		1	10	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	-9.5	Total Delay for Signalled Lanes (pcuHr):	89.79
C2	PRC for Signalled Lanes (%):	-13.5	Total Delay for Signalled Lanes (pcuHr):	98.15
C3	PRC for Signalled Lanes (%):	-1.7	Total Delay for Signalled Lanes (pcuHr):	29.73
	PRC Over All Lanes (%):	-13.5	Total Delay Over All Lanes(pcuHr):	220.39

Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90

Basic Results Summary

Scenario 3: '2014 AM OY + Comm Dev + P&R' (FG3: '2014 AM OY + Comm Dev + P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**105.7%**	**104**	**0**	**0**	**194.1**	-	-
J1: Esso Roundabout	-	-	-		-	-	-	-	-	-	**96.6%**	**104**	**0**	**0**	**83.1**	-	-
1/2+1/1	Oxford Road Left Ahead	U	C1:A		1	43	-	833	2155:1989	892+551	57.7 : 57.7%	-	-	-	3.9	16.9	23.4
1/3+1/4	Oxford Road Right	U	C1:B		1	44	-	774	2020:2020	619+575	64.8 : 64.8%	-	-	-	4.6	21.4	7.2
2/1	Central Link Ahead	U	C1:D		1	18	-	401	2053	433	92.5%	-	-	-	8.1	72.6	14.7
2/2	Central Link Ahead	U	C1:D		1	18	-	373	2048	432	86.3%	-	-	-	5.1	49.0	11.7
3/1	Ped Crossing Ahead	U	C1:F		1	40	-	511	1990	907	56.4%	-	-	-	1.2	8.5	4.5
3/2	Ped Crossing Ahead	U	C1:F		1	40	-	587	2130	970	60.5%	-	-	-	1.3	8.0	2.1
4/1	Services Entry Ahead Left	O	-		-	-	-	104	2058	425	24.5%	104	0	0	0.3	8.7	0.8
6/1	Oxford Road SB Entry Left	U	C1:C		1	21	-	242	1832	448	54.0%	-	-	-	2.6	38.3	5.8
6/2	Oxford Road SB Entry Ahead	U	C1:C		1	21	-	485	2105	515	94.3%	-	-	-	10.4	77.0	17.7
6/3	Oxford Road SB Entry Ahead	U	C1:C		1	21	-	459	2080	508	90.3%	-	-	-	8.2	64.3	15.1
7/1	Internal EB Ahead Right	U	C1:E		1	36	-	111	2033	836	13.3%	-	-	-	0.5	15.5	2.2
7/2	Internal EB Right	U	C1:E		1	36	-	19	1936	796	2.4%	-	-	-	0.1	16.7	0.2
8/1	Ahead	U	C1:J		1	44	-	514	1990	995	51.7%	-	-	-	3.6	25.2	6.9
8/2	Right Ahead	U	C1:J		1	44	-	478	1988	994	48.1%	-	-	-	3.1	23.5	6.0
9/1	Ahead Right	U	C1:K		1	36	-	163	2040	839	19.4%	-	-	-	0.4	9.1	0.7

Basic Results Summary

9/2	Right	U	C1:K		1	36	-	145	1997	821	17.7%	-	-	-	0.3	8.6	0.6
10/1	Ahead	U	-		-	-	-	397	1990	1990	19.9%	-	-	-	0.1	1.1	0.1
10/2	Ahead	U	-		-	-	-	602	2130	2130	28.3%	-	-	-	0.2	1.2	1.4
10/3	Right	U	-		-	-	-	58	1997	1997	2.9%	-	-	-	0.0	0.9	0.0
11/1	A41 westbound Left	U	C1:G		1	29	-	630	1965	655	96.2%	-	-	-	12.9	73.8	23.2
11/2	A41 westbound Left	U	C1:G		1	29	-	678	2105	702	96.6%	-	-	-	13.9	74.0	25.0
11/3	A41 westbound Ahead	U	C1:G		1	29	-	300	2105	702	42.8%	-	-	-	2.3	27.8	6.1
Ped Link: P1	Unnamed Ped Link	-	C1:I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:H		1	44	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**105.7%**	**0**	**0**	**0**	**89.6**	**-**	**-**
1/1	Ahead	U	C2:A		1	50	-	892	2080	1179	75.7%	-	-	-	3.1	12.6	19.6
1/2+1/3	Ahead Right	U	C2:A C2:B		1	50:14	-	807	2080:1891	521+315	96.5 : 96.5%	-	-	-	11.1	49.4	26.5
2/2+2/1	Left Ahead	U	C2:C C2:D		1	39:51	-	1365	2080:1764	761+531	105.7 : 105.7%	-	-	-	50.8	133.9	81.9
2/3	Ahead	U	C2:C		1	39	-	927	2080	924	100.3%	-	-	-	20.2	78.6	39.1
3/2+3/1	Right Left	U	C2:E C2:F		1	7:26	-	175	2080:1687	185+132	55.2 : 55.2%	-	-	-	2.2	45.1	3.0
3/3	Right	U	C2:E		1	7	-	110	2080	185	59.5%	-	-	-	1.9	63.0	3.3
4/1		U	-		-	-	-	561	1965	1965	28.5%	-	-	-	0.2	1.3	0.2
4/2		U	-		-	-	-	304	1965	1965	15.5%	-	-	-	0.1	1.1	0.1
Ped Link: P1	Unnamed Ped Link	-	C2:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:I		1	37	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C2:H		1	25	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P4	Unnamed Ped Link	-	C2:G		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
J3: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.0%**	**0**	**0**	**0**	**21.4**	**-**	**-**
1/2+1/1	Ahead Left	U	C3:B C3:A		1:2	52:30	-	963	2205:1709	1072+252	72.7 : 72.7%	-	-	-	4.5	16.8	15.8
1/3	Ahead	U	C3:B		1	52	-	782	2205	1298	60.2%	-	-	-	3.3	15.3	13.1
3/2+3/1	Left Right	U	C3:D C3:C		1	13:8	-	307	1830:1709	210+169	80.9 : 80.9%	-	-	-	5.2	60.9	5.9
4/1	Ahead	U	C3:E		1	42	-	824	2205	1054	74.8%	-	-	-	2.6	11.9	17.4
4/2+4/3	Right Ahead	U	C3:E C3:F		1	42:10	-	980	2205:1874	914+184	89.0 : 88.1%	-	-	-	5.4	20.1	30.2
5/2		U	-		-	-	-	816	2105	2105	38.7%	-	-	-	0.3	1.4	0.3
Ped Link: P1	Unnamed Ped Link	-	C3:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:I		1	25	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:J		1	25	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	-7.4	Total Delay for Signalled Lanes (pcuHr):	82.54	Cycle Time (s): 90
C2	PRC for Signalled Lanes (%):	-17.4	Total Delay for Signalled Lanes (pcuHr):	89.31	Cycle Time (s): 90
C3	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	21.04	Cycle Time (s): 90
	PRC Over All Lanes (%):	-17.4	Total Delay Over All Lanes(pcuHr):	194.09	

Basic Results Summary

Scenario 4: '2104 PM OY + Comm Dev + P&R' (FG4: '2014 PM OY + Comm Dev + P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**102.1%**	**128**	**0**	**0**	**236.8**	-	-
J1: Esso Roundabout	-	-	-		-	-	-	-	-	-	**98.3%**	**128**	**0**	**0**	**94.0**	-	-
1/2+1/1	Oxford Road Left Ahead	U	C1:A		1	49	-	1543	2155:2006	921+856	86.5 : 86.6%	-	-	-	12.7	29.6	45.3
1/3+1/4	Oxford Road Right	U	C1:B		1	50	-	979	2020:2020	673+669	72.7 : 72.8%	-	-	-	5.8	21.2	10.4
2/1	Central Link Ahead	U	C1:D		1	23	-	491	2053	547	89.4%	-	-	-	6.9	50.5	15.7
2/2	Central Link Ahead	U	C1:D		1	23	-	488	2048	546	89.1%	-	-	-	7.0	52.0	15.6
3/1	Ped Crossing Ahead	U	C1:F		1	46	-	684	1990	1039	65.6%	-	-	-	1.7	9.2	7.1
3/2	Ped Crossing Ahead	U	C1:F		1	46	-	747	2130	1112	67.0%	-	-	-	1.8	8.8	3.3
4/1	Services Entry Ahead Left	O	-		-	-	-	128	2056	224	57.0%	128	0	0	1.5	41.8	3.3
6/1	Oxford Road SB Entry Left	U	C1:C		1	22	-	292	1832	468	62.4%	-	-	-	3.2	39.8	7.2
6/2	Oxford Road SB Entry Ahead	U	C1:C		1	22	-	461	2105	538	85.7%	-	-	-	6.9	53.7	13.7
6/3	Oxford Road SB Entry Ahead	U	C1:C		1	22	-	455	2080	532	85.6%	-	-	-	6.8	53.9	13.5
7/1	Internal EB Ahead Right	U	C1:E		1	30	-	195	2043	704	27.7%	-	-	-	1.0	17.6	3.4
7/2	Internal EB Right	U	C1:E		1	30	-	21	1936	667	3.1%	-	-	-	0.0	8.5	0.1
8/1	Ahead	U	C1:J		1	50	-	496	1990	1128	44.0%	-	-	-	2.5	18.0	5.7
8/2	Right Ahead	U	C1:J		1	50	-	476	1986	1125	42.3%	-	-	-	2.3	17.7	5.3
9/1	Ahead Right	U	C1:K		1	30	-	174	2031	700	24.9%	-	-	-	0.7	13.9	1.1

Basic Results Summary

9/2	Right	U	C1:K		1	30	-	185	1997	688	26.9%	-	-	-	0.7	13.5	1.0
10/1	Ahead	U	-		-	-	-	852	1990	1990	42.7%	-	-	-	0.4	1.6	0.4
10/2	Ahead	U	-		-	-	-	861	2130	2130	40.3%	-	-	-	0.3	1.4	5.7
10/3	Right	U	-		-	-	-	124	1997	1997	6.2%	-	-	-	0.0	1.0	0.0
11/1	A41 westbound Left	U	C1:G		1	23	-	513	1965	524	97.9%	-	-	-	13.6	95.2	21.6
11/2	A41 westbound Left	U	C1:G		1	23	-	552	2105	561	98.3%	-	-	-	14.7	95.7	23.3
11/3	A41 westbound Ahead	U	C1:G		1	23	-	346	2105	561	61.6%	-	-	-	3.6	37.3	8.3
Ped Link: P1	Unnamed Ped Link	-	C1:I		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:H		1	50	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.1%**	**0**	**0**	**0**	**112.7**	**-**	**-**
1/1	Ahead	U	C2:A		1	40	-	953	2080	948	100.6%	-	-	-	21.0	79.3	40.8
1/2+1/3	Ahead Right	U	C2:A C2:B		1	40:7	-	1014	2080:1891	878+129	100.7 : 100.7%	-	-	-	21.7	77.1	43.1
2/2+2/1	Left Ahead	U	C2:C C2:D		1	36:58	-	1165	2080:1764	742+398	102.1 : 102.1%	-	-	-	26.7	82.4	58.9
2/3	Ahead	U	C2:C		1	36	-	859	2080	855	100.5%	-	-	-	19.4	81.2	37.2
3/2+3/1	Right Left	U	C2:E C2:F		1	17:29	-	684	2080:1687	384+298	100.4 : 100.4%	-	-	-	19.8	104.0	24.0
3/3	Right	U	C2:E		1	17	-	300	2080	416	72.1%	-	-	-	4.1	48.8	8.3
4/1		U	-		-	-	-	407	1965	1965	20.7%	-	-	-	0.1	1.2	0.1
4/2		U	-		-	-	-	130	1965	1965	6.6%	-	-	-	0.0	1.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C2:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:I		1	40	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C2:H		1	18	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P4	Unnamed Ped Link	-	C2:G		1	35	-	0	-	0	0.0%	-	-	-	-	-	-
J3: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.2%**	**0**	**0**	**0**	**30.0**	**-**	**-**
1/2+1/1	Ahead Left	U	C3:B C3:A		1:2	52:45	-	1014	2205:1709	1091+229	76.8 : 76.8%	-	-	-	4.9	17.5	18.0
1/3	Ahead	U	C3:B		1	52	-	976	2205	1298	75.2%	-	-	-	5.2	19.2	19.4
3/2+3/1	Left Right	U	C3:D C3:C		1	13:8	-	308	1830:1709	172+170	90.1 : 90.1%	-	-	-	6.9	81.2	7.5
4/1	Ahead	U	C3:E		1	42	-	925	2205	1054	87.7%	-	-	-	6.5	25.3	24.4
4/2+4/3	Right Ahead	U	C3:E C3:F		1	42:10	-	991	2205:1874	923+171	90.2 : 90.2%	-	-	-	6.1	22.4	32.2
5/2		U	-		-	-	-	836	2105	2105	39.5%	-	-	-	0.3	1.4	0.3
Ped Link: P1	Unnamed Ped Link	-	C3:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:G		1	8	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:I		1	10	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:J		1	10	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	-9.3	Total Delay for Signalled Lanes (pcuHr):	91.79	Cycle Time (s): 90
C2	PRC for Signalled Lanes (%):	-13.5	Total Delay for Signalled Lanes (pcuHr):	112.56	Cycle Time (s): 90
C3	PRC for Signalled Lanes (%):	-0.2	Total Delay for Signalled Lanes (pcuHr):	29.70	Cycle Time (s): 90
	PRC Over All Lanes (%):	-13.5	Total Delay Over All Lanes(pcuHr):	236.78	

Basic Results Summary

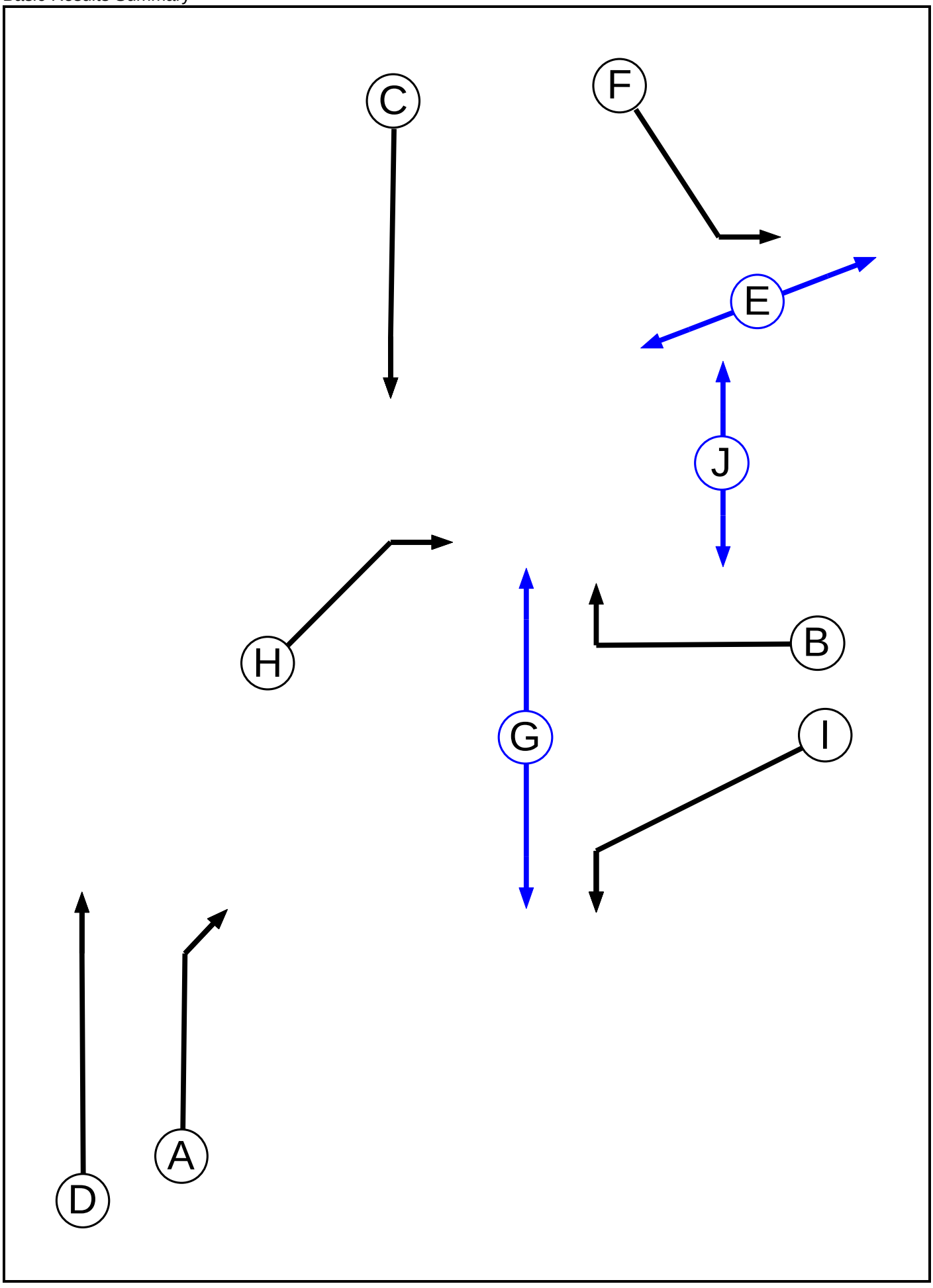
User and Project Details

Project:	**Bicester Park and Ride**
Title:	A41 - Oxford Road 2019 Proposed Layout
Location:	
File name:	A41 - Oxford Road 2019 - App P.lsg3x
Author:	Nigel Pettit
Company:	Atkins
Address:	
Notes:	

Basic Results Summary

C1
Phase Diagram

Basic Results Summary



Basic Results Summary

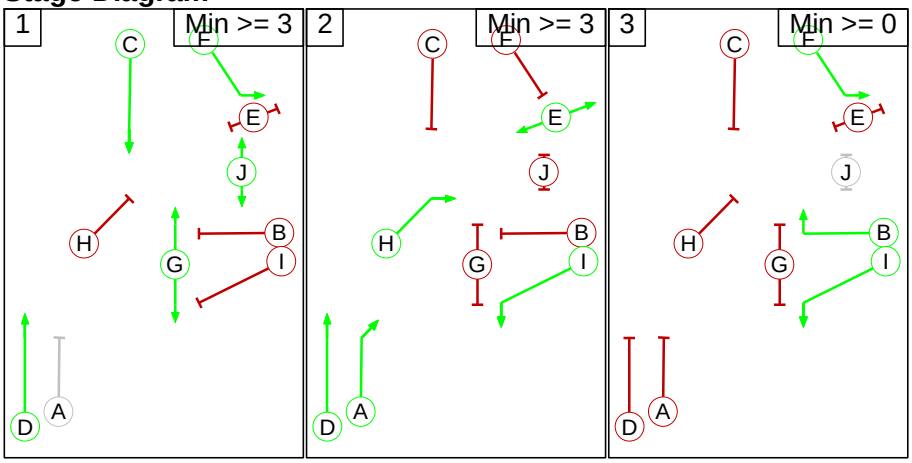
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		5	-	-	-	-	-	-	-	-
B	8		5	9	-	-	5	-	-	-
C	-	7		-	-	-	-	5	8	-
D	-	5	-		-	-	-	-	-	-
E	-	-	-	-		8	-	-	-	-
F	-	-	-	-	5		-	5	-	-
G	-	13	-	-	-	-		-	13	-
H	-	-	5	-	-	8	-		-	8
I	-	-	5	-	-	-	5	-		-
J	-	-	-	-	-	-	-	9	-	

Phases in Stage

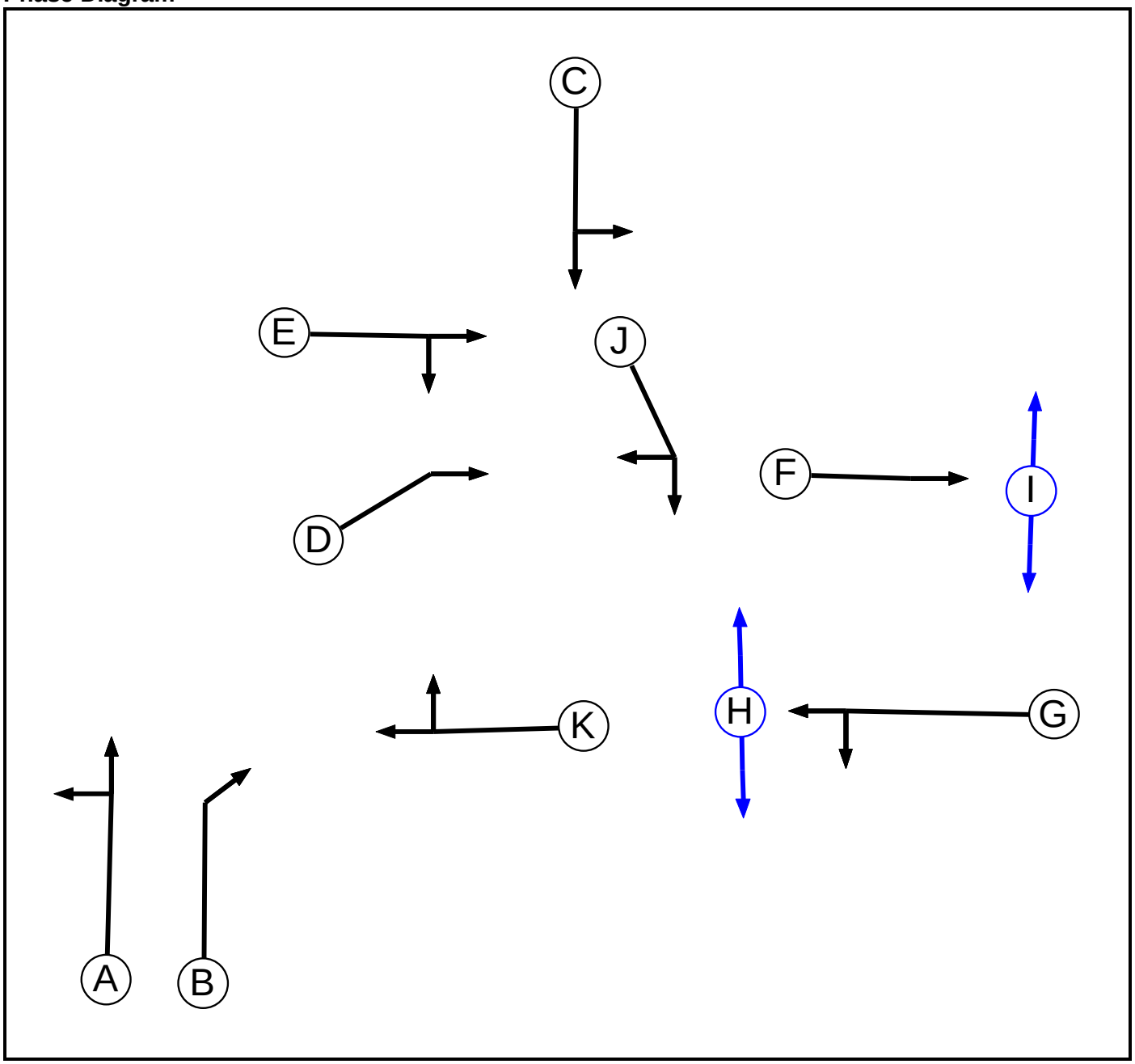
Stage No.	Phases in Stage
1	C D F G J
2	A D E H I
3	B F I

Stage Diagram



C2

Phase Diagram



Basic Results Summary

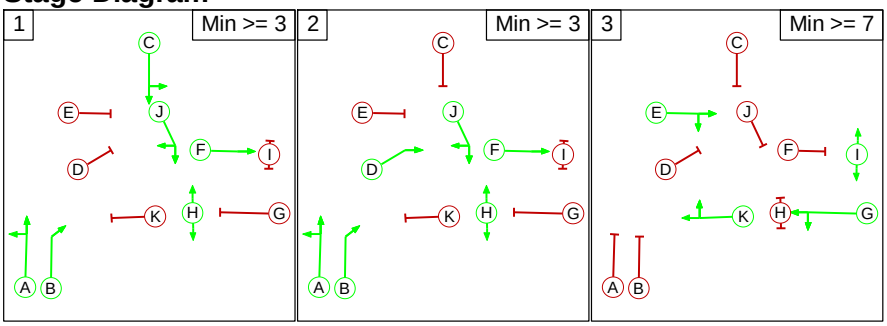
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K
A		-	-	-	-	-	-	-	-	-	5
B	-		-	-	-	-	-	-	-	-	5
C	-	-		5	5	-	-	-	-	-	-
D	-	-	5		5	-	-	-	-	-	-
E	-	-	5	5		-	-	-	-	-	-
F	-	-	-	-	-		-	-	5	-	-
G	-	-	-	-	-	-		5	-	5	-
H	-	-	-	-	-	-	12		-	-	-
I	-	-	-	-	-	9	-	-		-	-
J	-	-	-	-	-	-	5	-	-		-
K	6	5	-	-	-	-	-	-	-	-	

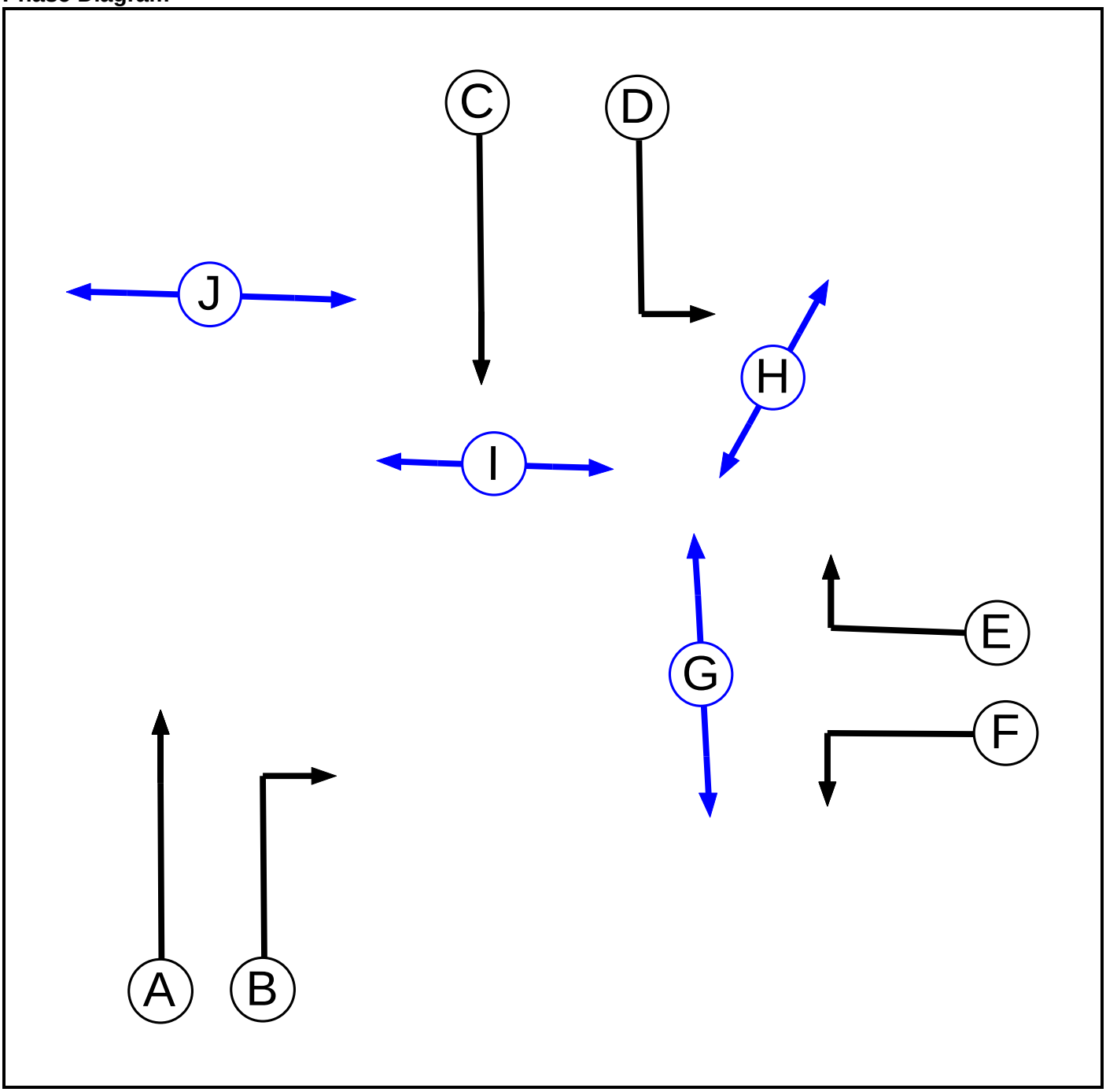
Phases in Stage

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

Stage Diagram



C3
Phase Diagram



Basic Results Summary

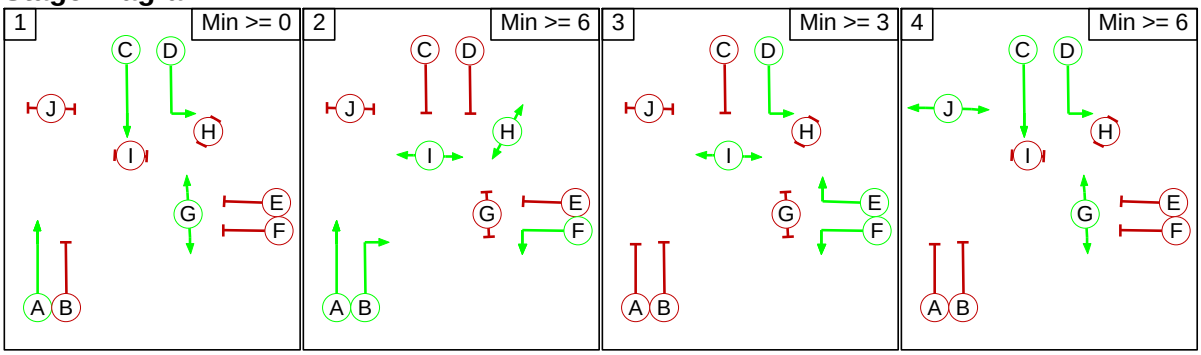
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	5	-	-	-	-	8
B	-		5	6	5	-	8	-	-	-
C	-	5		-	5	6	-	-	5	-
D	-	5	-		-	-	-	5	-	-
E	7	6	5	-		-	10	-	-	10
F	-	-	5	-	-		5	-	-	-
G	-	16	-	-	16	16		-	-	-
H	-	-	-	9	-	-	-		-	-
I	-	-	9	-	-	-	-	-		-
J	11	-	-	-	11	-	-	-	-	

Phases in Stage

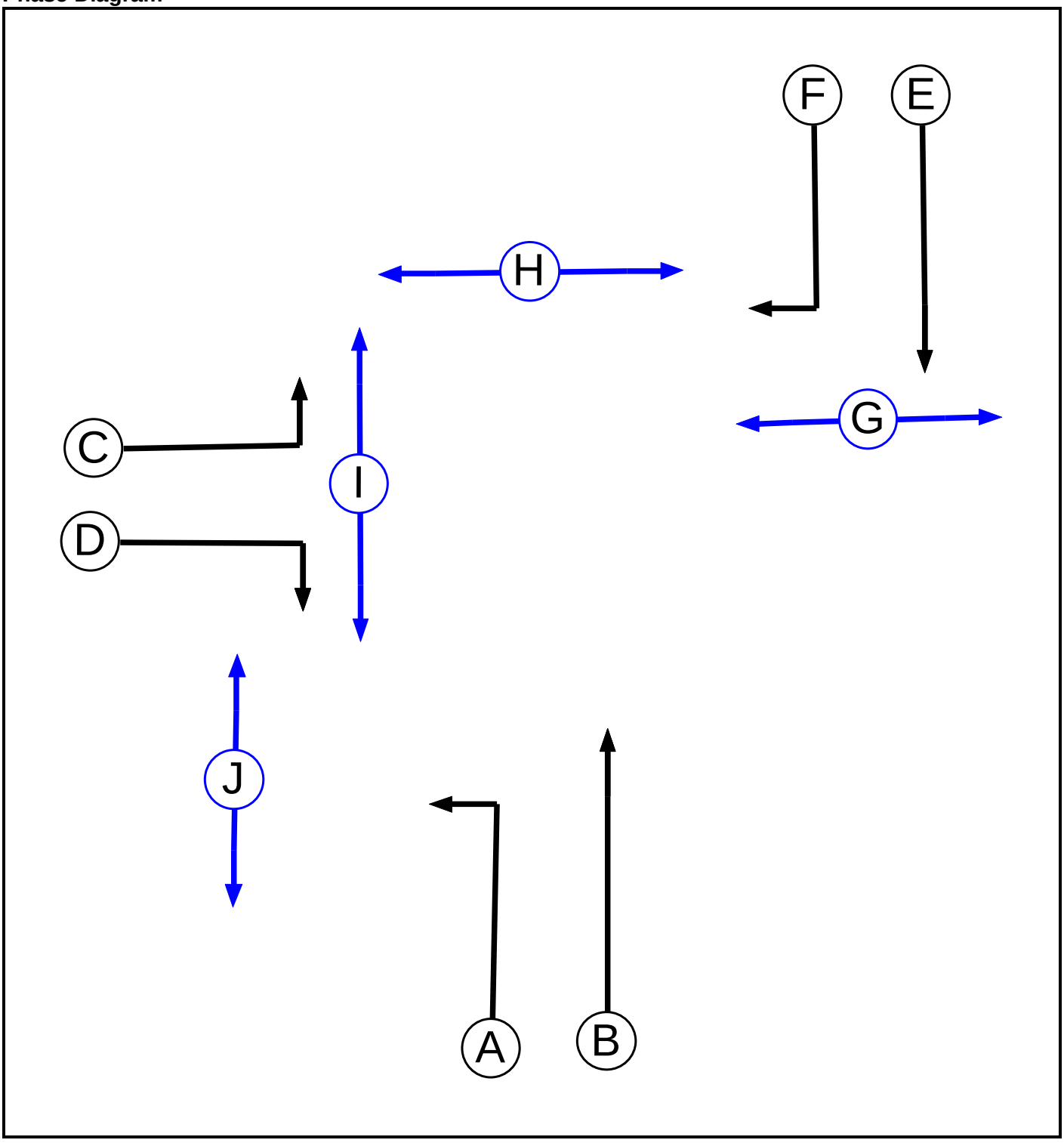
Stage No.	Phases in Stage
1	A C D G
2	A B F H I
3	D E F I
4	C D G J

Stage Diagram



C4

Phase Diagram



Basic Results Summary

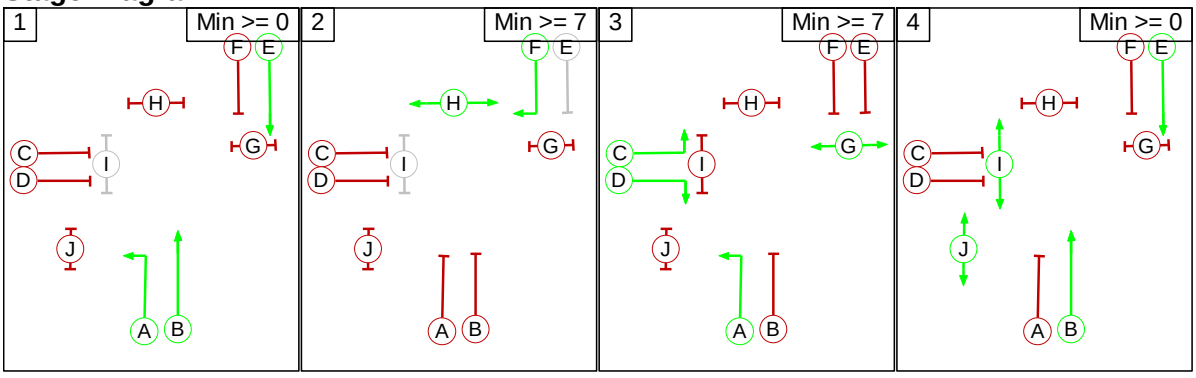
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	-	5	-	-	-	5
B	-		6	5	-	5	-	8	-	-
C	-	5		-	-	-	-	6	5	-
D	-	5	-		7	6	-	-	5	-
E	-	-	-	5		-	5	-	-	-
F	8	6	-	5	-		10	-	-	7
G	-	-	-	-	15	15		-	-	-
H	-	10	10	-	-	-	-		-	-
I	-	-	7	7	-	-	-	-		-
J	7	-	-	-	-	7	-	-	-	

Phases in Stage

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

Stage Diagram



Basic Results Summary

Network Results

Scenario 1: '2019 + Comm PM Peak' (FG1: '2019 + Comm PM Peak', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**111.1%**	**136**	**0**	**0**	**684.3**	-	-
J1: Pingle Lane/Oxford Road	-	-	-		-	-	-	-	-	-	**66.4%**	**0**	**0**	**0**	**17.0**	-	-
1/1	Oxford Road NB Ahead	U	C1:D		1	65	-	959	1965	1441	58.7%	-	-	-	0.9	3.9	3.0
1/2	Oxford Road NB Ahead	U	C1:D		1	65	-	680	1965	1441	43.8%	-	-	-	0.7	4.0	4.4
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	29	-	266	1884:1884	1193	20.1%	-	-	-	1.2	18.6	2.8
2/2+2/1	Pingle Drive Left	U	C1:I		1	34	-	535	1764:1940	806	66.4%	-	-	-	4.1	27.3	8.8
2/3	Pingle Drive Right	U	C1:B		1	11	-	122	1973	263	46.4%	-	-	-	1.7	48.7	3.2
3/1	Oxford Road SB Left	U	C1:F		1	47	-	201	1908	1018	19.8%	-	-	-	0.7	13.2	2.7
3/2	Oxford Road SB Ahead	U	C1:C		1	38	-	505	2105	912	55.4%	-	-	-	3.3	23.4	10.0
3/3	Oxford Road SB Ahead	U	C1:C		1	38	-	505	2105	912	55.4%	-	-	-	3.3	23.4	10.0
4/1	Oxford Road Exit	U	-		-	-	-	959	1940	1940	43.6%	-	-	-	0.4	1.6	0.4
4/2	Oxford Road Exit	U	-		-	-	-	802	2080	2080	36.2%	-	-	-	0.3	1.4	0.3
5/1	Pinge Exit Lane	U	-		-	-	-	327	1965	1965	15.9%	-	-	-	0.1	1.1	0.1
5/2	Pinge Exit Lane	U	-		-	-	-	140	2105	2105	6.1%	-	-	-	0.0	0.9	0.0
6/1	Right turn lane Right	U	C1:H		1	26	-	126	1980	594	18.9%	-	-	-	0.2	5.3	0.2
6/2	Right turn lane Right	U	C1:H		1	26	-	140	1980	594	21.6%	-	-	-	0.2	5.1	0.2

Basic Results Summary

Ped Link: P1	Unnamed Ped Link	-	C1:E		1	26	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C1:G		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	43	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**111.1%**	**136**	**0**	**0**	**302.6**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	45	-	1843	2155:2007	1622	102.8%	-	-	-	48.9	105.7	81.7
1/3+1/4	Oxford Road Right	U	C2:B		1	46	-	1073	2020:2020	1252	79.4%	-	-	-	5.8	20.9	10.3
2/1	Central Link Ahead	U	C2:D		1	21	-	535	2053	502	98.7%	-	-	-	13.6	98.6	21.8
2/2	Central Link Ahead	U	C2:D		1	21	-	538	2048	501	99.7%	-	-	-	14.6	105.3	23.0
3/1	Ped Crossing Ahead	U	C2:F		1	42	-	926	1990	951	88.4%	-	-	-	6.1	26.3	21.5
3/2	Ped Crossing Ahead	U	C2:F		1	42	-	1020	2130	1018	91.1%	-	-	-	8.7	33.6	26.1
4/1	Services Entry Left Ahead	O	-		-	-	-	136	2056	340	40.0%	136	0	0	0.5	14.1	1.9
6/1	Oxford Road SB Entry Left	U	C2:C		1	20	-	462	1832	427	108.1%	-	-	-	27.1	211.1	34.8
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	20	-	544	2105	491	110.8%	-	-	-	36.7	242.7	45.7
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	20	-	539	2080	485	111.1%	-	-	-	37.0	247.4	46.0
7/1	Internal EB Ahead Right	U	C2:E		1	34	-	443	2056	800	47.3%	-	-	-	2.9	27.3	9.5
7/2	Internal EB Right	U	C2:E		1	34	-	27	1936	753	3.6%	-	-	-	0.1	14.5	0.4
8/1	Ahead	U	C2:J		1	46	-	576	1990	1039	50.3%	-	-	-	3.8	26.0	7.6
8/2	Right Ahead	U	C2:J		1	46	-	566	1987	1038	49.4%	-	-	-	3.7	26.0	7.4
9/1	Ahead Right	U	C2:K		1	34	-	189	2030	789	23.8%	-	-	-	0.6	12.0	1.1

Basic Results Summary

9/2	Right	U	C2:K		1	34	-	276	1997	777	35.5%	-	-	-	0.9	11.9	1.4
10/1	Ahead	U	-		-	-	-	955	1990	1990	42.3%	-	-	-	0.4	1.6	0.4
10/2	Ahead	U	-		-	-	-	651	2130	2130	28.3%	-	-	-	0.2	1.2	0.2
10/3	Ahead Right	U	-		-	-	-	633	2050	2050	26.4%	-	-	-	0.2	1.2	0.2
11/1	A41 westbound Left	U	C2:G		1	27	-	668	1965	611	109.3%	-	-	-	41.5	223.5	52.1
11/2	A41 westbound Left	U	C2:G		1	27	-	717	2105	655	109.5%	-	-	-	44.8	225.1	56.3
11/3	A41 westbound Ahead	U	C2:G		1	27	-	451	2105	655	68.9%	-	-	-	4.5	35.9	10.9
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-
J3: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**111.1%**	**0**	**0**	**0**	**314.6**	**-**	**-**
1/1	Ahead	U	C3:A		1	44	-	1153	2080	1040	110.8%	-	-	-	69.6	217.6	92.4
1/2+1/3	Ahead Right	U	C3:A C3:B		1	44:7	-	1208	2080:1891	1087	111.1%	-	-	-	73.2	218.2	97.3
2/2+2/1	Left Ahead	U	C3:C C3:D		1	40:58	-	1389	2080:1764	1163	109.0%	-	-	-	65.7	186.6	93.6
2/3	Ahead	U	C3:C		1	40	-	1124	2080	948	107.9%	-	-	-	52.9	186.5	70.6
3/2+3/1	Right Left	U	C3:E C3:F		1	13:25	-	649	2080:1687	600	108.2%	-	-	-	37.0	205.0	40.7
3/3	Right	U	C3:E		1	13	-	334	2080	324	103.2%	-	-	-	16.0	172.8	20.7
4/1		U	-		-	-	-	407	1965	1965	17.6%	-	-	-	0.1	1.1	0.1
4/2		U	-		-	-	-	129	1965	1965	6.0%	-	-	-	0.0	1.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C3:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:H		1	18	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P4	Unnamed Ped Link	-	C3:G		1	39	-	0	-	0	0.0%	-	-	-	-	-	-
J4: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.7%**	**0**	**0**	**0**	**50.1**	**-**	**-**
1/2+1/1	Ahead Left	U	C4:B C4:A		1:2	53:38	-	1192	2205:1709	1339	89.0%	-	-	-	8.4	25.3	27.3
1/3	Ahead	U	C4:B		1	53	-	1192	2205	1323	90.1%	-	-	-	9.5	28.6	30.1
3/2+3/1	Left Right	U	C4:D C4:C		1	12:7	-	308	1830:1709	306	100.7%	-	-	-	12.7	148.1	13.2
4/1	Ahead	U	C4:E		1	43	-	1165	2205	1078	93.6%	-	-	-	8.7	30.9	29.5
4/2+4/3	Right Ahead	U	C4:E C4:F		1	43:10	-	1240	2205:1874	1109	95.8%	-	-	-	10.6	35.8	15.7
5/2		U	-		-	-	-	1085	2105	2105	44.1%	-	-	-	0.4	1.5	2.2
Ped Link: P1	Unnamed Ped Link	-	C4:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C4:G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C4:I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C4:J		1	17	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	35.6	Total Delay for Signalled Lanes (pcuHr):	16.21	Cycle Time (s): 90
C2	PRC for Signalled Lanes (%):	-23.4	Total Delay for Signalled Lanes (pcuHr):	301.29	Cycle Time (s): 90
C3	PRC for Signalled Lanes (%):	-23.5	Total Delay for Signalled Lanes (pcuHr):	314.42	Cycle Time (s): 90
C4	PRC for Signalled Lanes (%):	-11.9	Total Delay for Signalled Lanes (pcuHr):	49.74	Cycle Time (s): 90
	PRC Over All Lanes (%):	-23.5	Total Delay Over All Lanes(pcuHr):	684.28	

Basic Results Summary

Scenario 2: '2019 + Comm + P&R PM Peak' (FG2: '2019 + Comm + P&R PM Peak', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.8%**	**136**	**0**	**0**	**727.9**	**-**	**-**
J1: Pingle Lane/Oxford Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.3%**	**0**	**0**	**0**	**16.9**	**-**	**-**
1/1	Oxford Road NB Ahead	U	C1:D		1	65	-	942	1965	1441	56.1%	-	-	-	0.8	3.8	2.9
1/2	Oxford Road NB Ahead	U	C1:D		1	65	-	728	1965	1441	45.7%	-	-	-	0.7	4.0	4.4
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	29	-	272	1884:1884	1203	19.8%	-	-	-	1.2	18.5	2.8
2/2+2/1	Pingle Drive Left	U	C1:I		1	34	-	534	1764:1940	805	66.3%	-	-	-	4.0	27.3	8.8
2/3	Pingle Drive Right	U	C1:B		1	11	-	122	1973	263	46.4%	-	-	-	1.7	48.7	3.2
3/1	Oxford Road SB Left	U	C1:F		1	47	-	201	1908	1018	19.8%	-	-	-	0.7	13.2	2.7
3/2	Oxford Road SB Ahead	U	C1:C		1	38	-	504	2105	912	55.3%	-	-	-	3.3	23.4	10.0
3/3	Oxford Road SB Ahead	U	C1:C		1	38	-	505	2105	912	55.4%	-	-	-	3.3	23.4	10.0
4/1	Oxford Road Exit	U	-		-	-	-	942	1940	1940	41.7%	-	-	-	0.4	1.6	0.4
4/2	Oxford Road Exit	U	-		-	-	-	850	2080	2080	37.5%	-	-	-	0.3	1.4	0.3
5/1	Pinge Exit Lane	U	-		-	-	-	331	1965	1965	15.9%	-	-	-	0.1	1.1	0.1
5/2	Pinge Exit Lane	U	-		-	-	-	142	2105	2105	6.0%	-	-	-	0.0	0.9	0.0
6/1	Right turn lane Right	U	C1:H		1	26	-	130	1980	594	18.9%	-	-	-	0.2	5.2	0.2
6/2	Right turn lane Right	U	C1:H		1	26	-	142	1980	594	21.3%	-	-	-	0.2	5.1	0.2
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	26	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	C1:G		1	38	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	43	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**111.1%**	**136**	**0**	**0**	**317.0**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	45	-	1871	2155:2006	1586	104.7%	-	-	-	61.2	132.8	92.9
1/3+1/4	Oxford Road Right	U	C2:B		1	46	-	1095	2020:2020	1245	80.4%	-	-	-	5.9	21.3	10.5
2/1	Central Link Ahead	U	C2:D		1	21	-	537	2053	502	97.8%	-	-	-	12.6	92.4	20.7
2/2	Central Link Ahead	U	C2:D		1	21	-	558	2048	501	102.1%	-	-	-	18.6	131.3	27.2
3/1	Ped Crossing Ahead	U	C2:F		1	42	-	926	1990	951	87.7%	-	-	-	6.2	26.7	21.8
3/2	Ped Crossing Ahead	U	C2:F		1	42	-	1031	2130	1018	90.0%	-	-	-	7.7	30.2	24.5
4/1	Services Entry Left Ahead	O	-		-	-	-	136	2056	344	39.6%	136	0	0	0.5	13.5	1.8
6/1	Oxford Road SB Entry Left	U	C2:C		1	20	-	460	1832	427	107.6%	-	-	-	26.2	204.8	33.9
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	20	-	544	2105	491	110.8%	-	-	-	36.7	242.7	45.7
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	20	-	539	2080	485	111.1%	-	-	-	37.0	247.4	46.0
7/1	Internal EB Ahead Right	U	C2:E		1	34	-	434	2056	800	45.4%	-	-	-	2.7	26.7	9.1
7/2	Internal EB Right	U	C2:E		1	34	-	27	1936	753	3.6%	-	-	-	0.1	14.8	0.4
8/1	Ahead	U	C2:J		1	46	-	576	1990	1039	50.3%	-	-	-	3.8	26.0	7.6
8/2	Right Ahead	U	C2:J		1	46	-	566	1987	1038	49.4%	-	-	-	3.7	26.0	7.4
9/1	Ahead Right	U	C2:K		1	34	-	188	2030	789	23.6%	-	-	-	0.6	12.0	1.1
9/2	Right	U	C2:K		1	34	-	277	1997	777	35.7%	-	-	-	0.9	11.9	1.4
10/1	Ahead	U	-		-	-	-	933	1990	1990	40.2%	-	-	-	0.3	1.5	0.3

Basic Results Summary

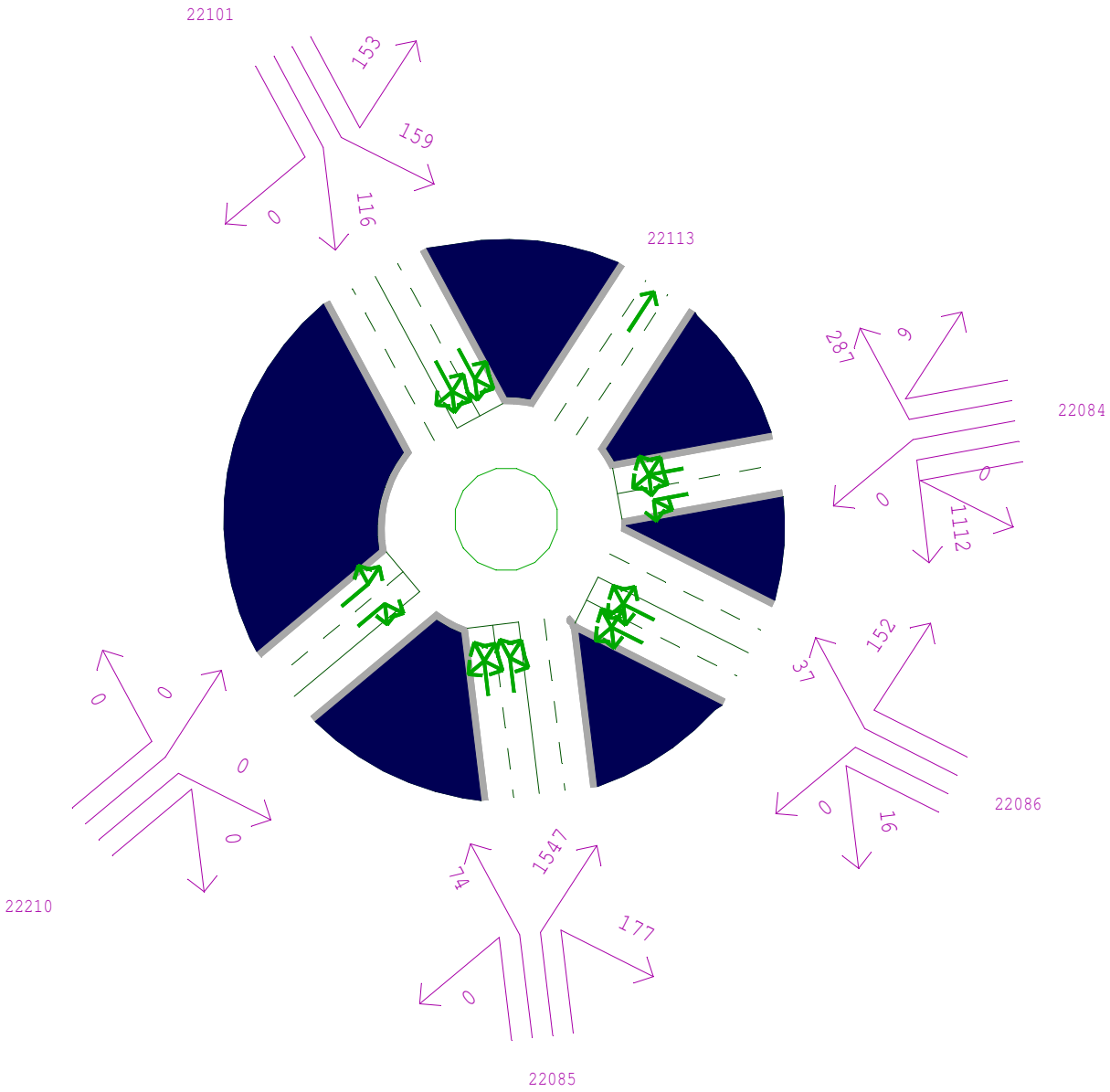
10/2	Ahead	U	-		-	-	-	704	2130	2130	29.8%	-	-	-	0.2	1.2	0.2
10/3	Ahead Right	U	-		-	-	-	630	2051	2051	25.6%	-	-	-	0.2	1.2	0.2
11/1	A41 westbound Left	U	C2:G		1	27	-	669	1965	611	109.4%	-	-	-	42.0	225.9	52.6
11/2	A41 westbound Left	U	C2:G		1	27	-	718	2105	655	109.6%	-	-	-	45.3	227.3	56.8
11/3	A41 westbound Ahead	U	C2:G		1	27	-	451	2105	655	68.9%	-	-	-	4.5	35.9	10.9
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-
J3: Business Park	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.8%**	**0**	**0**	**0**	**341.5**	**-**	**-**
1/1	Ahead	U	C3:A		1	44	-	1176	2080	1040	113.0%	-	-	-	81.4	249.4	104.4
1/2+1/3	Ahead Right	U	C3:A C3:B		1	44:7	-	1236	2080:1891	1086	113.8%	-	-	-	88.3	257.2	112.4
2/2+2/1	Left Ahead	U	C3:C C3:D		1	40:58	-	1390	2080:1764	1163	109.0%	-	-	-	65.7	186.7	93.6
2/3	Ahead	U	C3:C		1	40	-	1125	2080	948	107.9%	-	-	-	53.0	186.8	70.7
3/2+3/1	Right Left	U	C3:E C3:F		1	13:25	-	649	2080:1687	600	108.2%	-	-	-	37.0	205.0	40.7
3/3	Right	U	C3:E		1	13	-	334	2080	324	103.2%	-	-	-	16.0	172.8	20.7
4/1		U	-		-	-	-	407	1965	1965	17.6%	-	-	-	0.1	1.1	0.1
4/2		U	-		-	-	-	130	1965	1965	5.9%	-	-	-	0.0	1.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C3:J		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C3:I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C3:H		1	18	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C3:G		1	39	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

J4: SWB Development	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**100.7%**	**0**	**0**	**0**	**52.4**	**-**	**-**
1/2+1/1	Ahead Left	U	C4:B C4:A		1:2	53:38	-	1228	2205:1709	1338	91.8%	-	-	-	10.0	29.2	30.4
1/3	Ahead	U	C4:B		1	53	-	1207	2205	1323	91.2%	-	-	-	10.1	30.2	31.3
3/2+3/1	Left Right	U	C4:D C4:C		1	12:7	-	308	1830:1709	306	100.7%	-	-	-	12.7	148.1	13.2
4/1	Ahead	U	C4:E		1	43	-	1166	2205	1078	93.7%	-	-	-	8.7	31.0	29.5
4/2+4/3	Right Ahead	U	C4:E C4:F		1	43:10	-	1241	2205:1874	1109	95.8%	-	-	-	10.6	35.8	15.7
5/2		U	-		-	-	-	1086	2105	2105	44.1%	-	-	-	0.4	1.5	2.2
Ped Link: P1	Unnamed Ped Link	-	C4:H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C4:G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C4:I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	C4:J		1	17	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	35.7	Total Delay for Signalled Lanes (pcuHr):	16.14	Cycle Time (s): 90
C2	PRC for Signalled Lanes (%):	-23.4	Total Delay for Signalled Lanes (pcuHr):	315.79	Cycle Time (s): 90
C3	PRC for Signalled Lanes (%):	-26.4	Total Delay for Signalled Lanes (pcuHr):	341.40	Cycle Time (s): 90
C4	PRC for Signalled Lanes (%):	-11.9	Total Delay for Signalled Lanes (pcuHr):	52.02	Cycle Time (s): 90
	PRC Over All Lanes (%):	-26.4	Total Delay Over All Lanes(pcuHr):	727.90	

Appendix Q. SATURN Outputs



SATURN

Atkins Ltd /
DVV / ITS

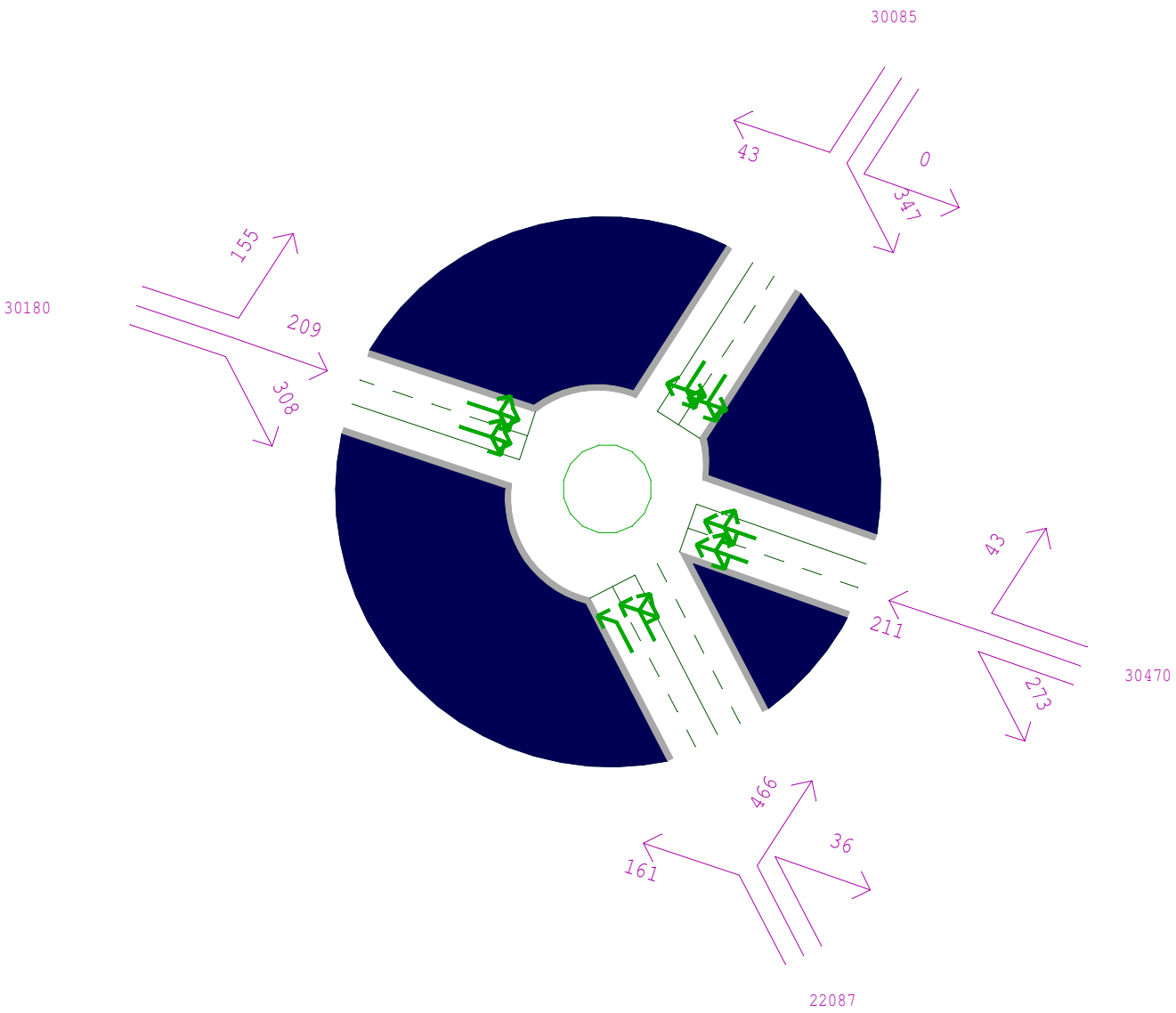
2031_PM_NETW

Node 22083

Roundabout

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

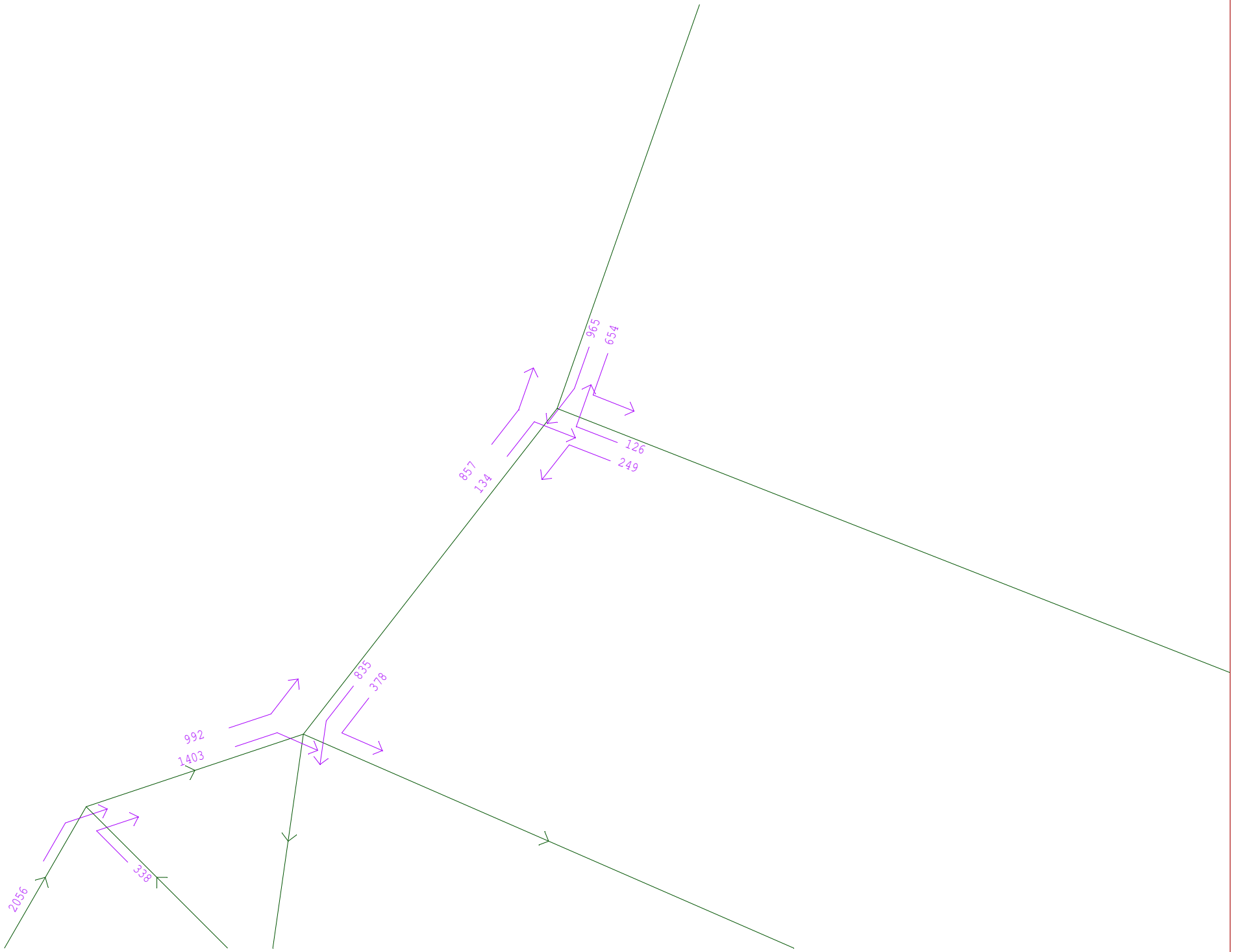
2031_PM_NETW

Node 30025

Roundabout

Demand flow

25- 9-13
WHITE YOUNG



SATURN

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ORK_WC10.UFS
2031_PM_NETW

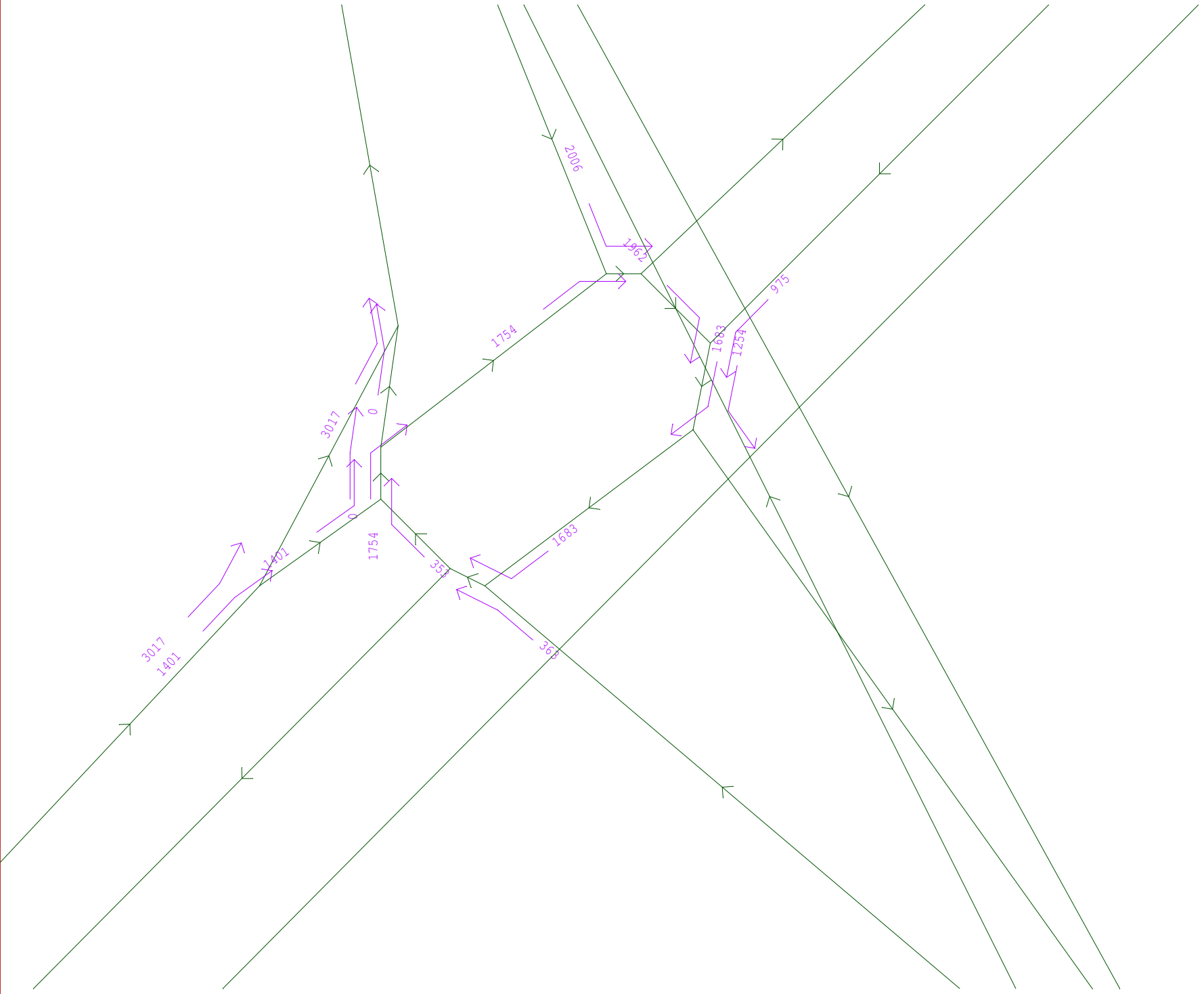
Scale 1355

Turn Data:

Demand flow

8-10-13
WHITE YOUNG

Bicester Network - 2031 Working Copy 10 PM Peak 8-10-13



SATURN

Atkins Ltd /
DVV / ITS

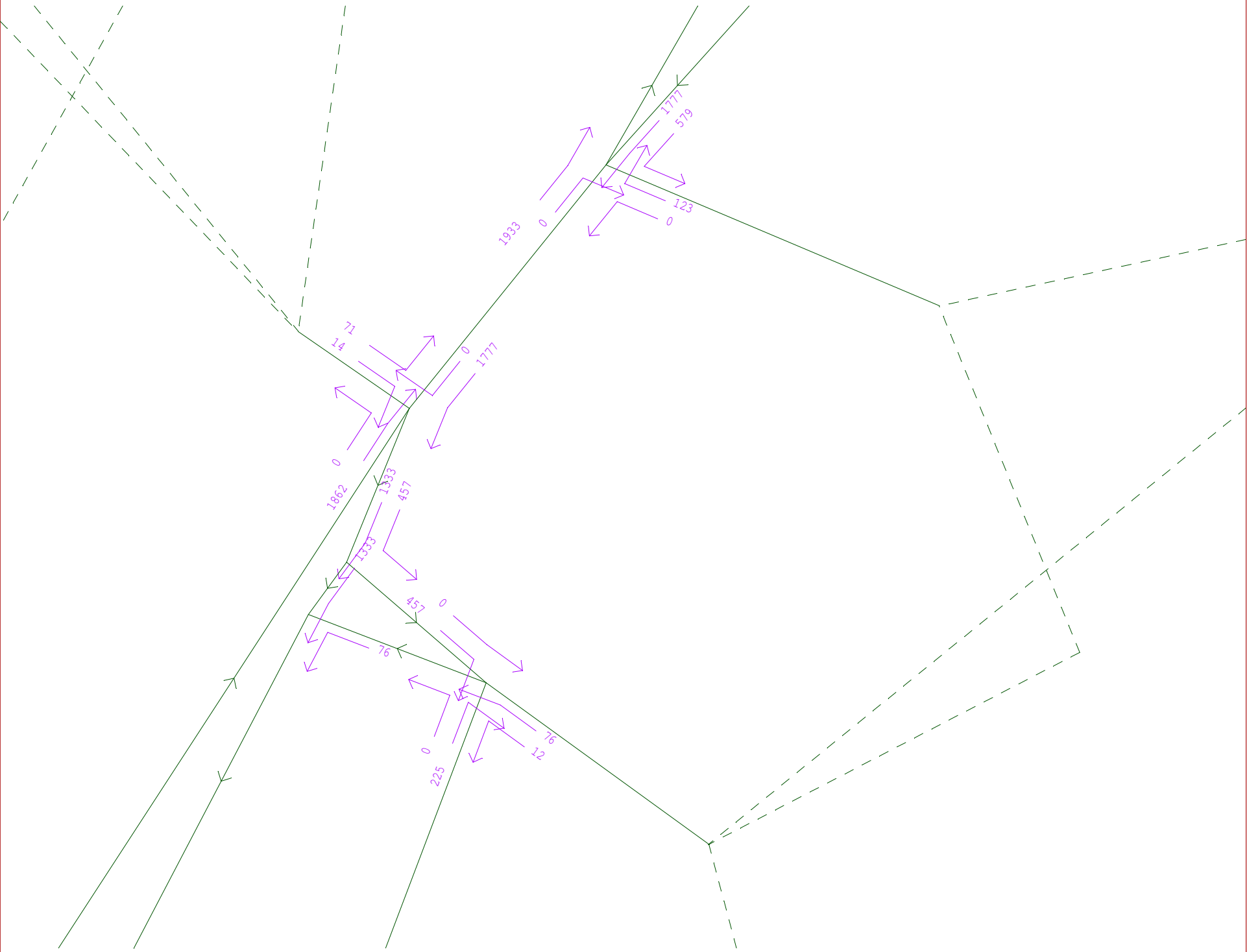
ORK_WC10.UFS
2031_PM_NETW

Scale 2951

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

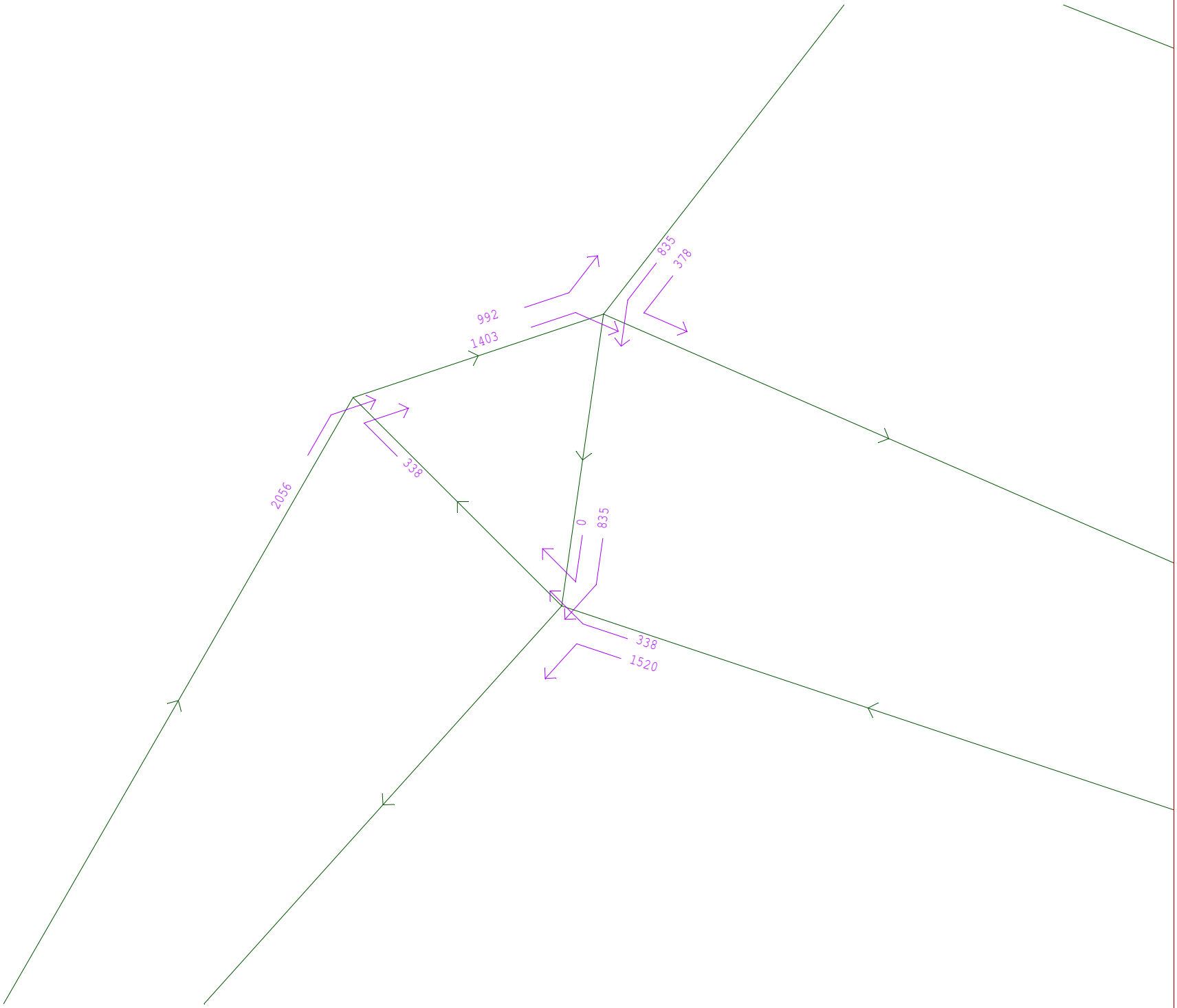
ORK_WC10.UFS
2031_PM_NETW

Scale 1912

Turn Data:

Demand flow

8-10-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

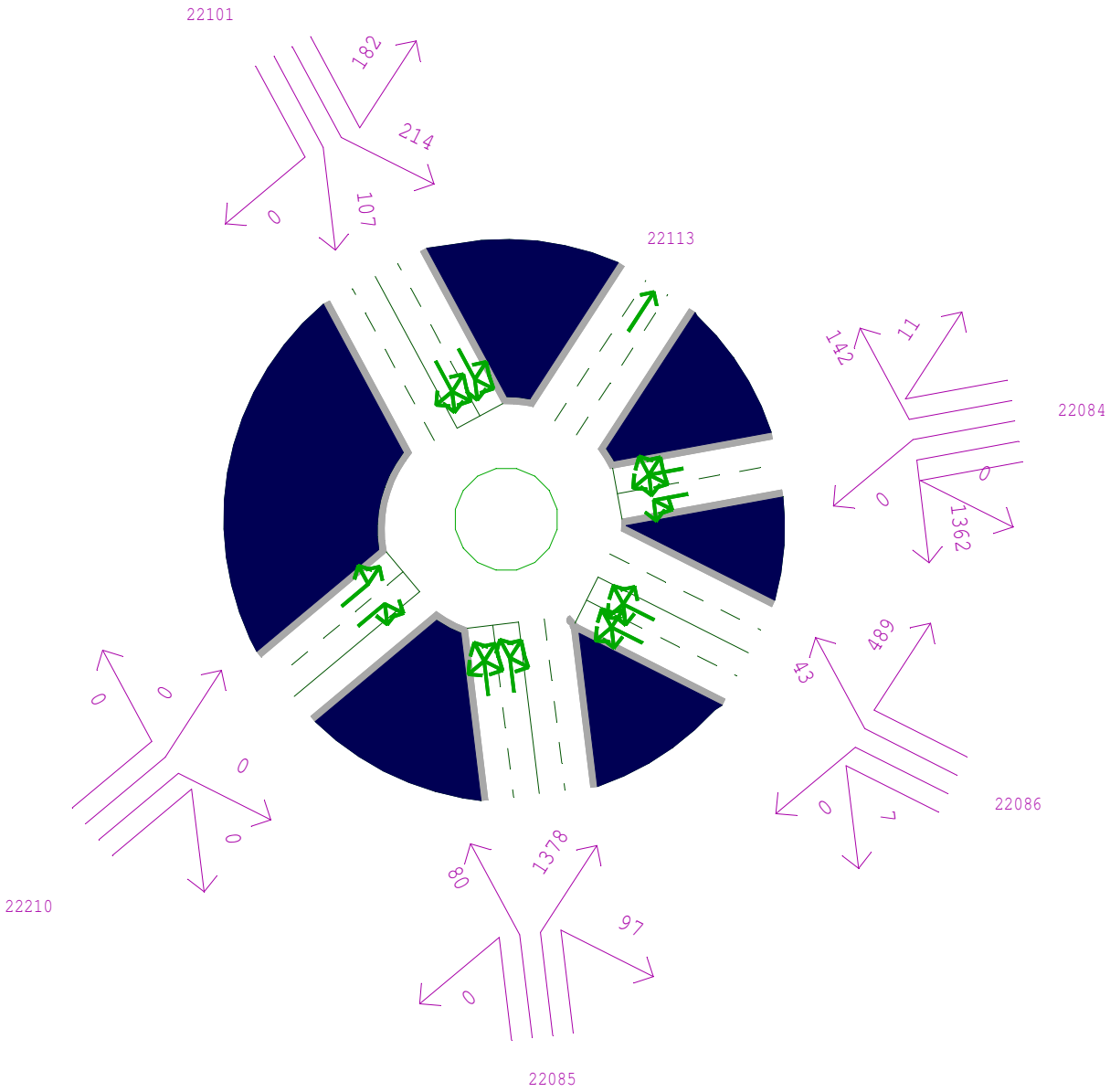
ORK_WC10.UFS
2031_PM_NETW

Scale 1246

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

2031_AM_NETW

Node 22083

Roundabout

Demand flow

25- 9-13
WHITE YOUNG

SATURN

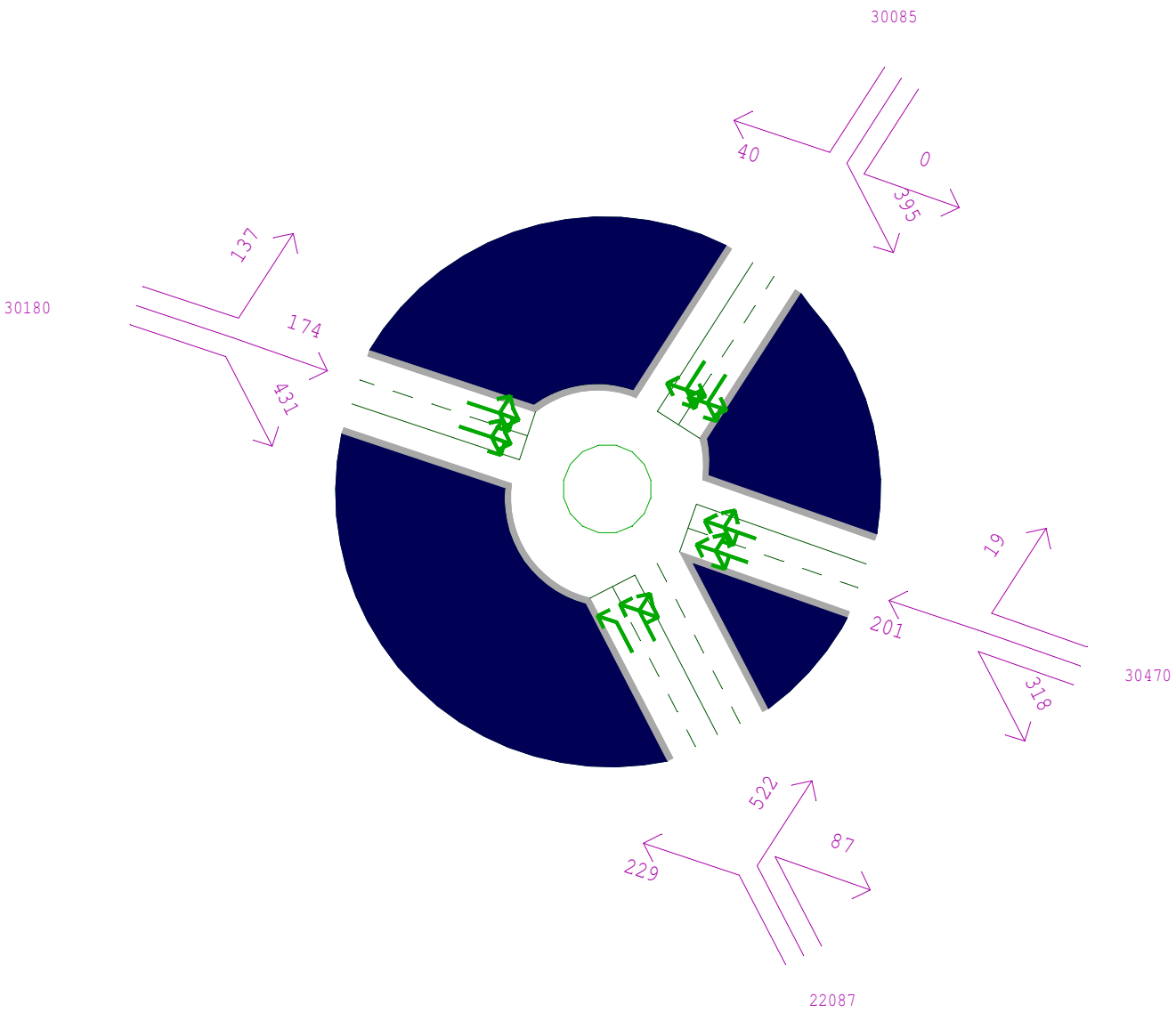
Atkins Ltd /
DVV / ITS

2031_AM_NETW

Node 30025

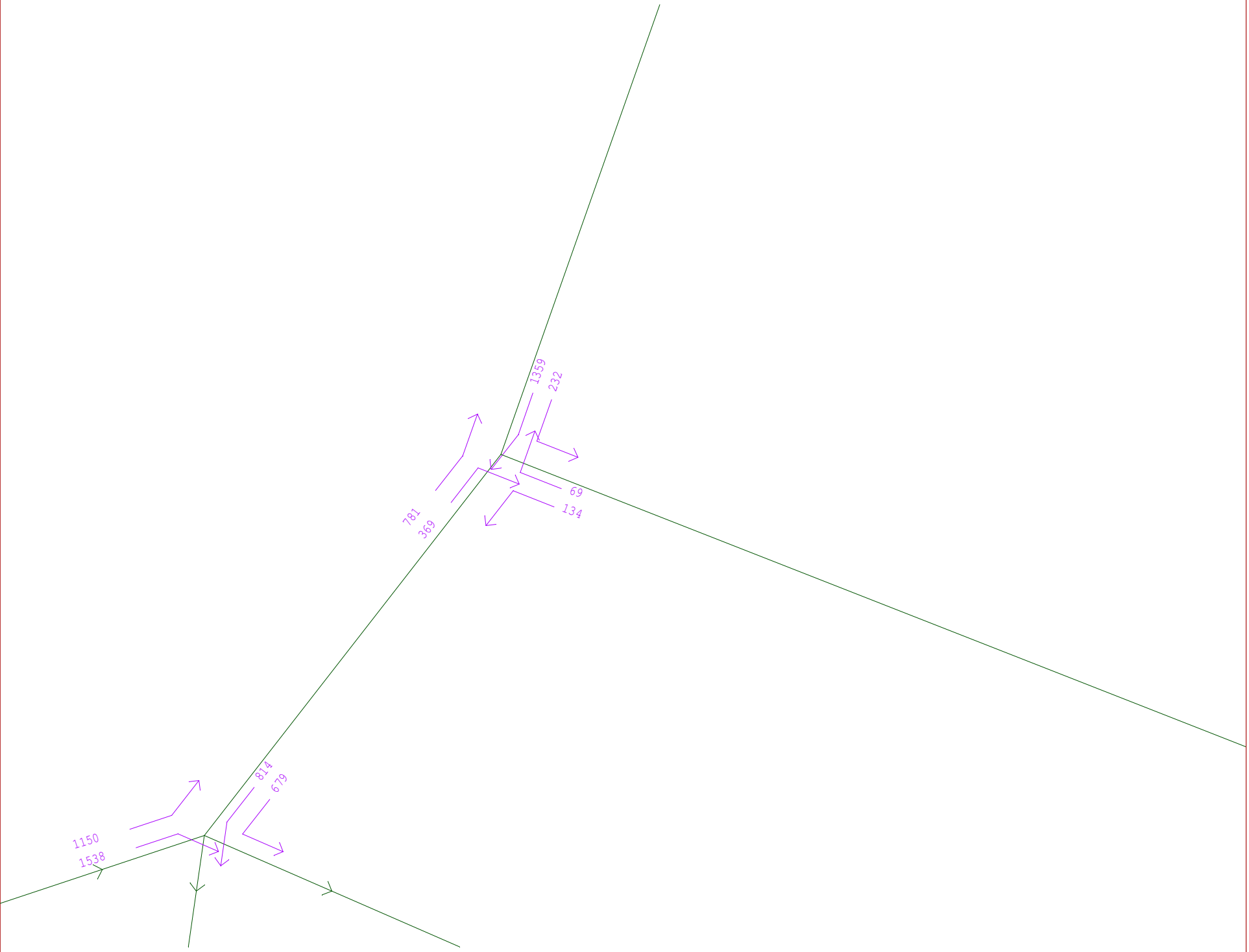
Roundabout

Demand flow



Node 30025

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

ORK_WC10.UFS
2031_AM_NETW

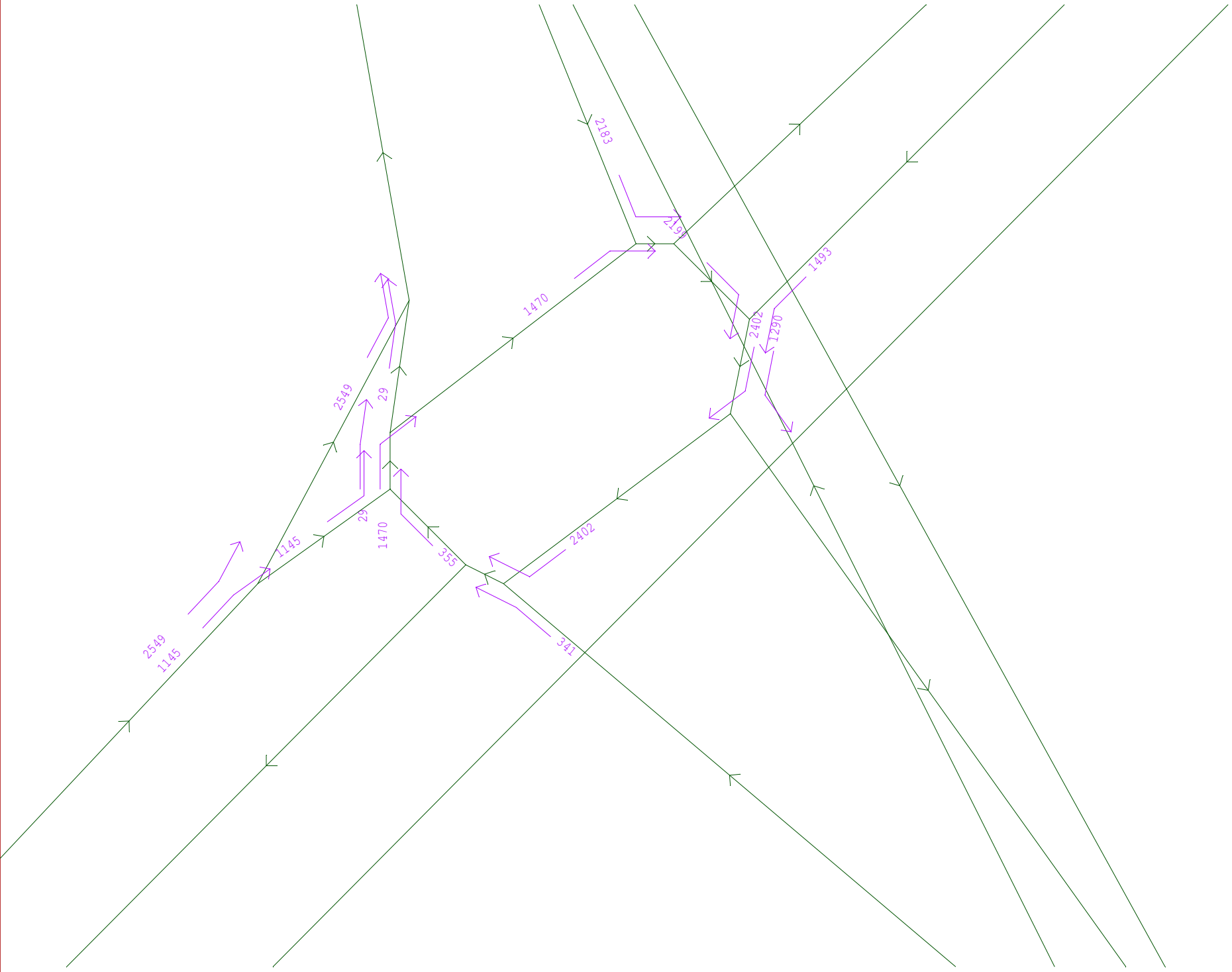
Scale 1157

Turn Data:

Demand flow

8-10-13
WHITE YOUNG

Bicester Network - 2031 Working Copy 10 AM Peak 8-10-13



SATURN

Atkins Ltd /
DVV / ITS

ORK_WC10.UFS
2031_AM_NETW

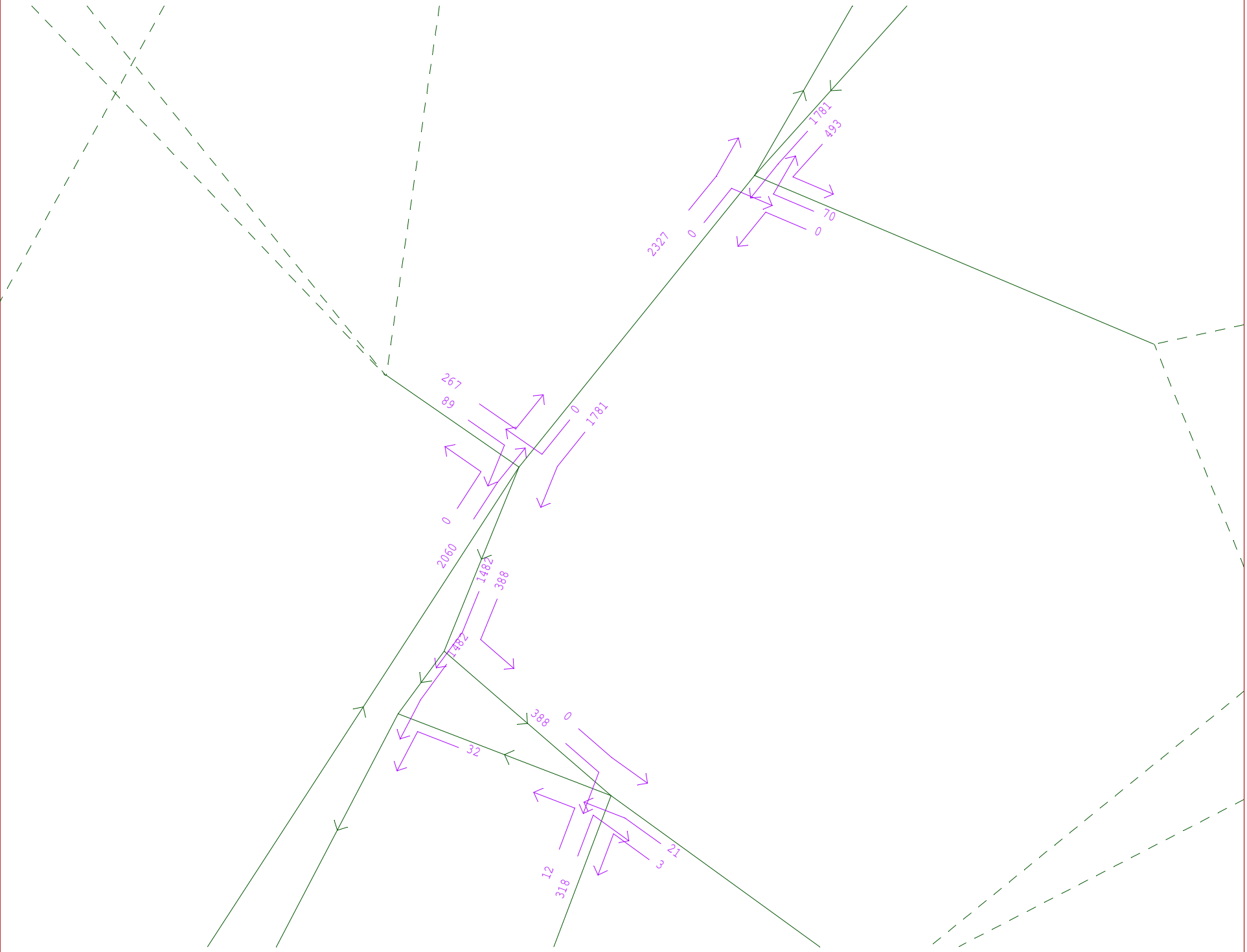
Scale 2649

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG

Bicester Network - 2031 Working Copy 10 AM Peak 25- 9-13



SATURN

Atkins Ltd /
DVV / ITS

ORK_WC10.UFS
2031_AM_NETW

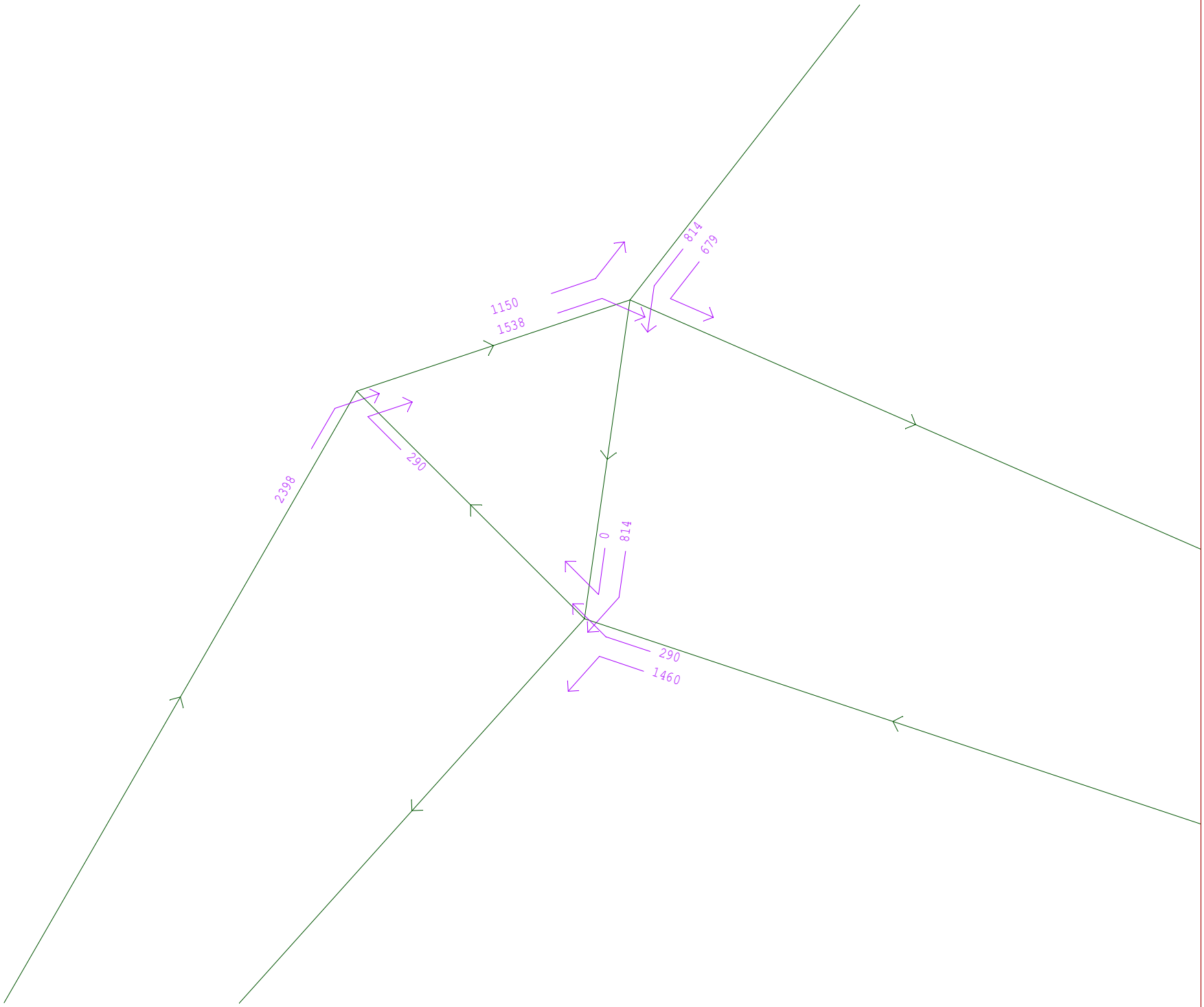
Scale 1594

Turn Data:

Demand flow

8-10-13
WHITE YOUNG

Bicester Network - 2031 Working Copy 10 AM Peak 8-10-13



SATURN

Atkins Ltd /
DVV / ITS

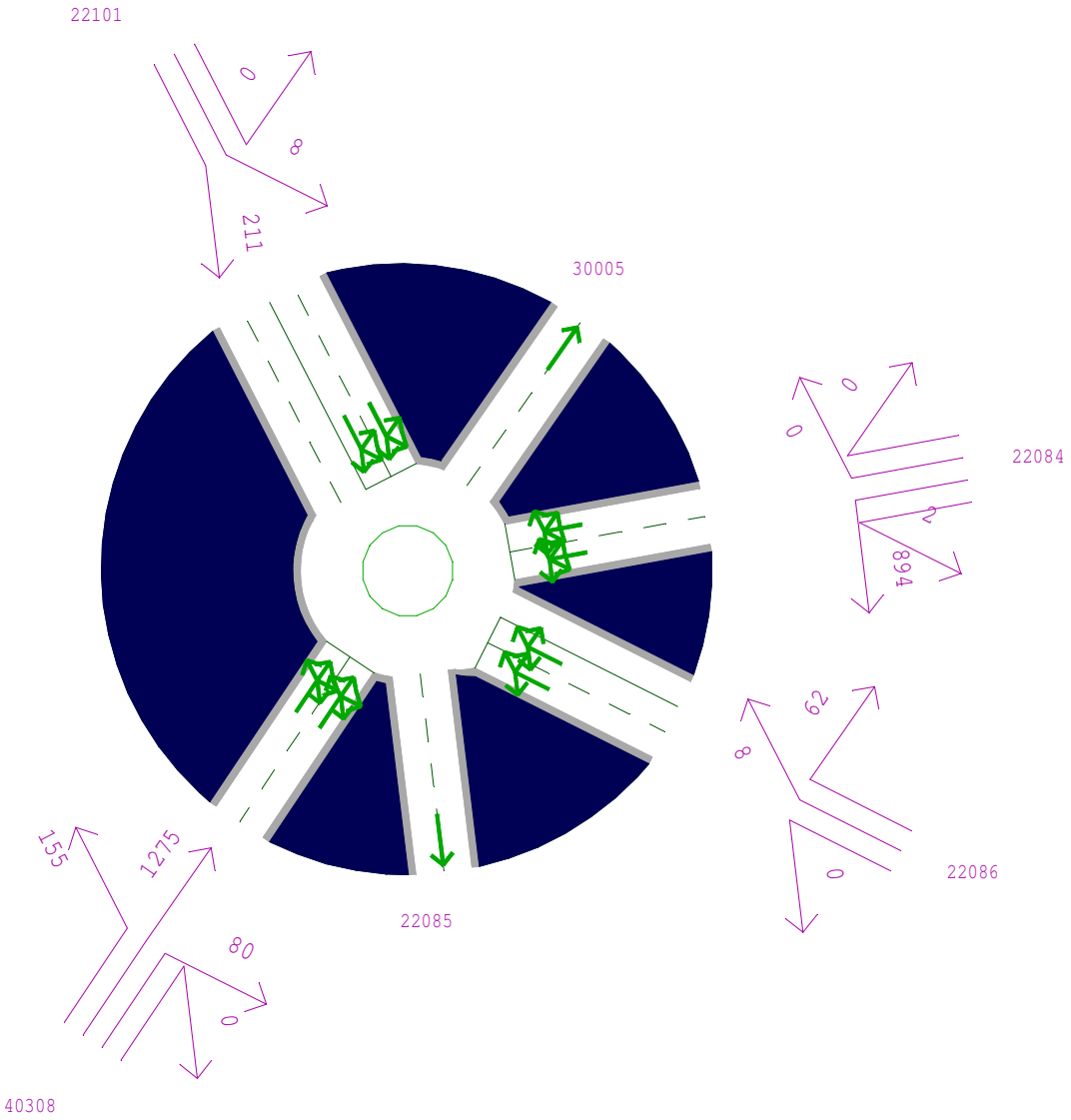
ORK_WC10.UFS
2031_AM_NETW

Scale 1140

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

2012_PM_NETW

Node 22083

Roundabout

Demand flow

25- 9-13
WHITE YOUNG

SATURN

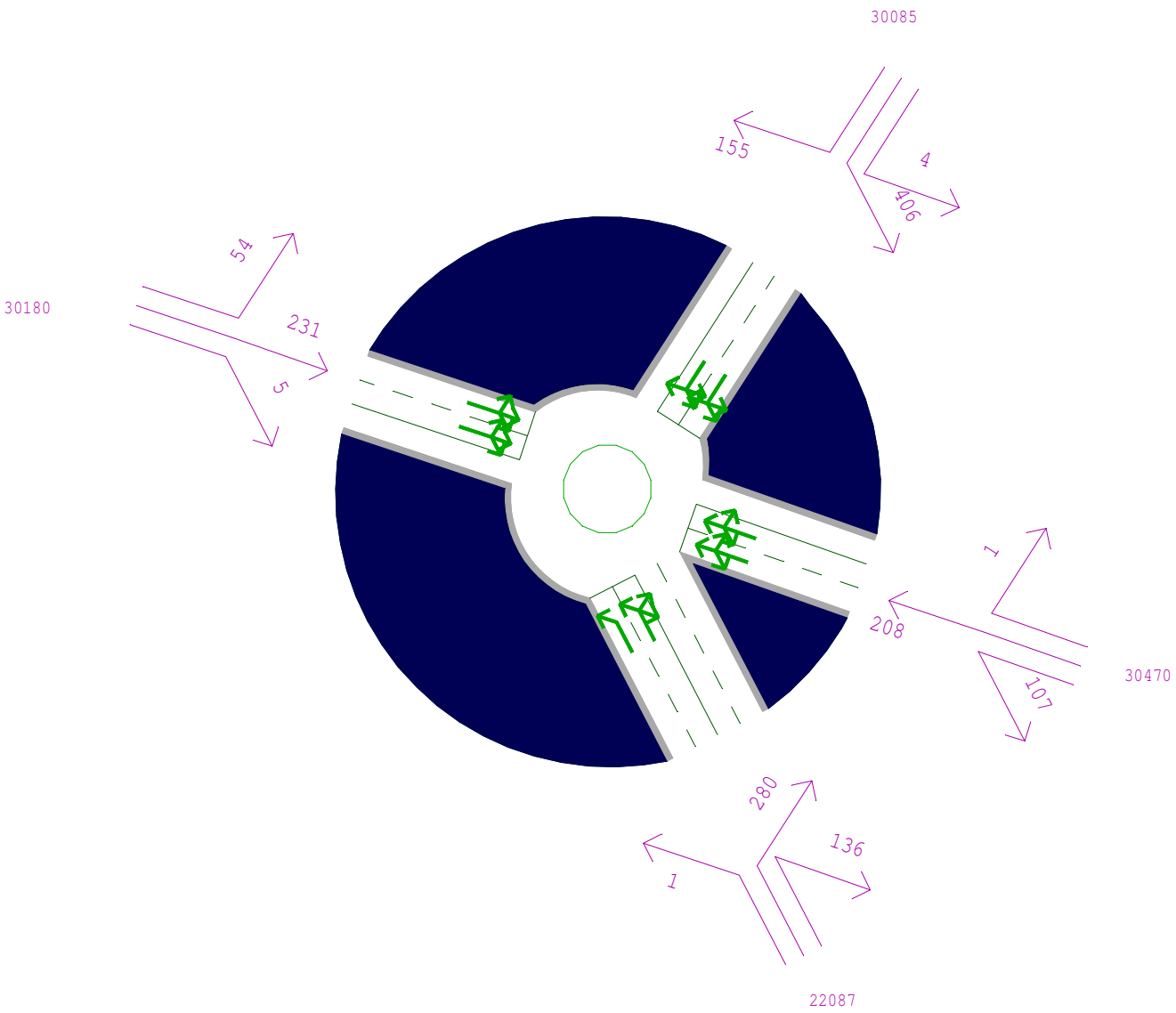
Atkins Ltd /
DVV / ITS

2012_PM_NETW

Node 30025

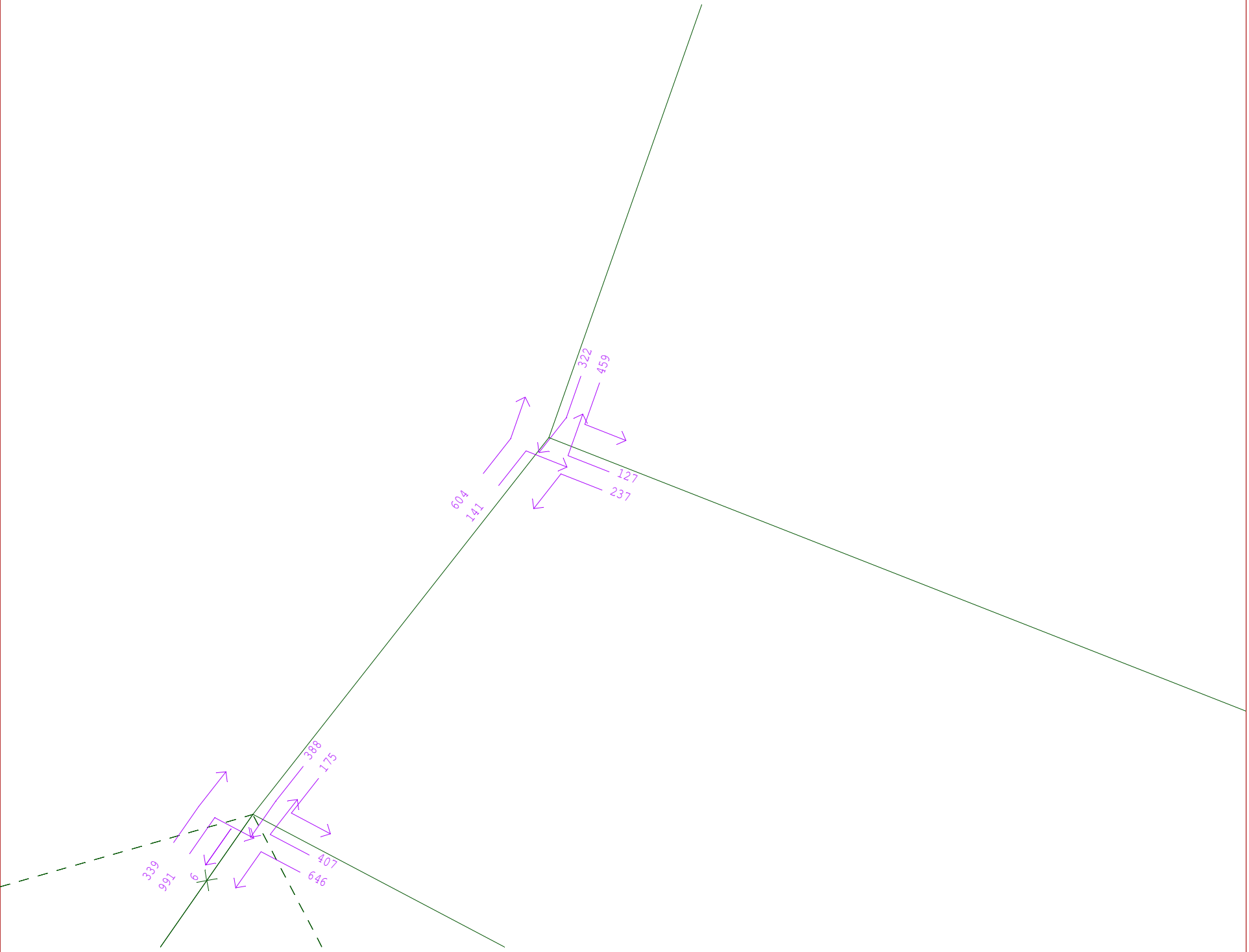
Roundabout

Demand flow



Node 30025

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

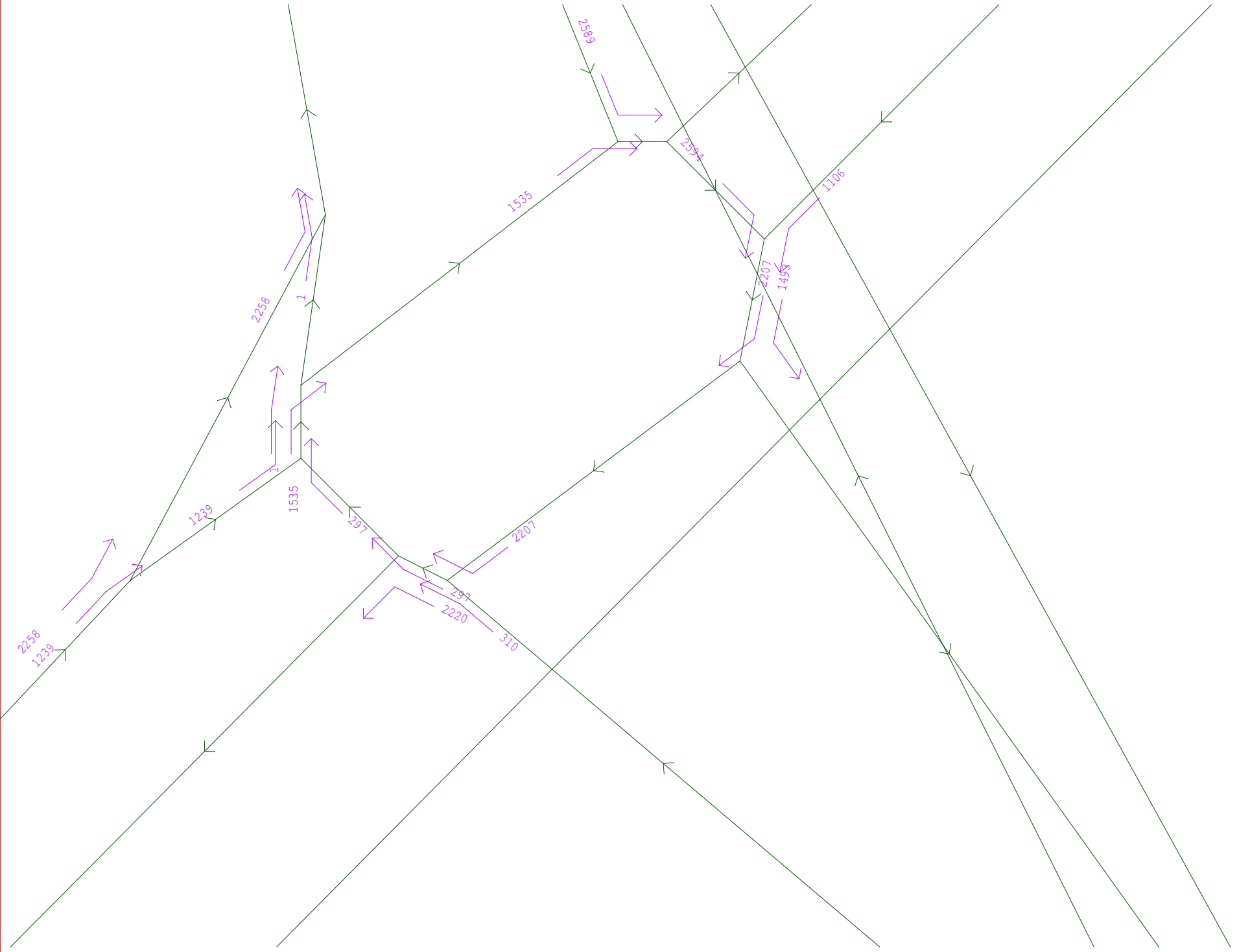
ORK.UFS
2012_PM_NETW

Scale 1523

Turn Data:

Demand flow

8-10-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

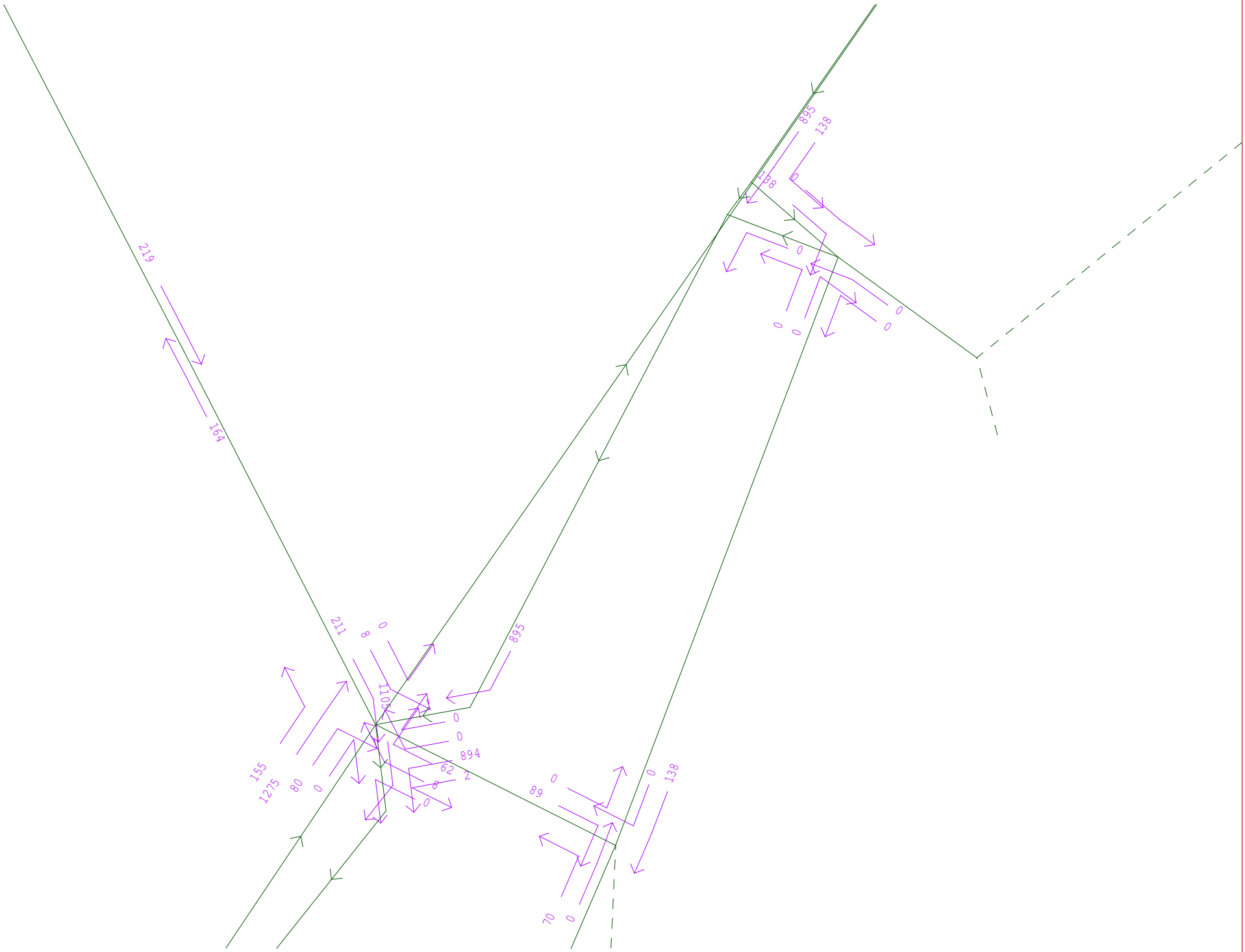
ORK.UFS
2012_PM_NETW

Scale 2010

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

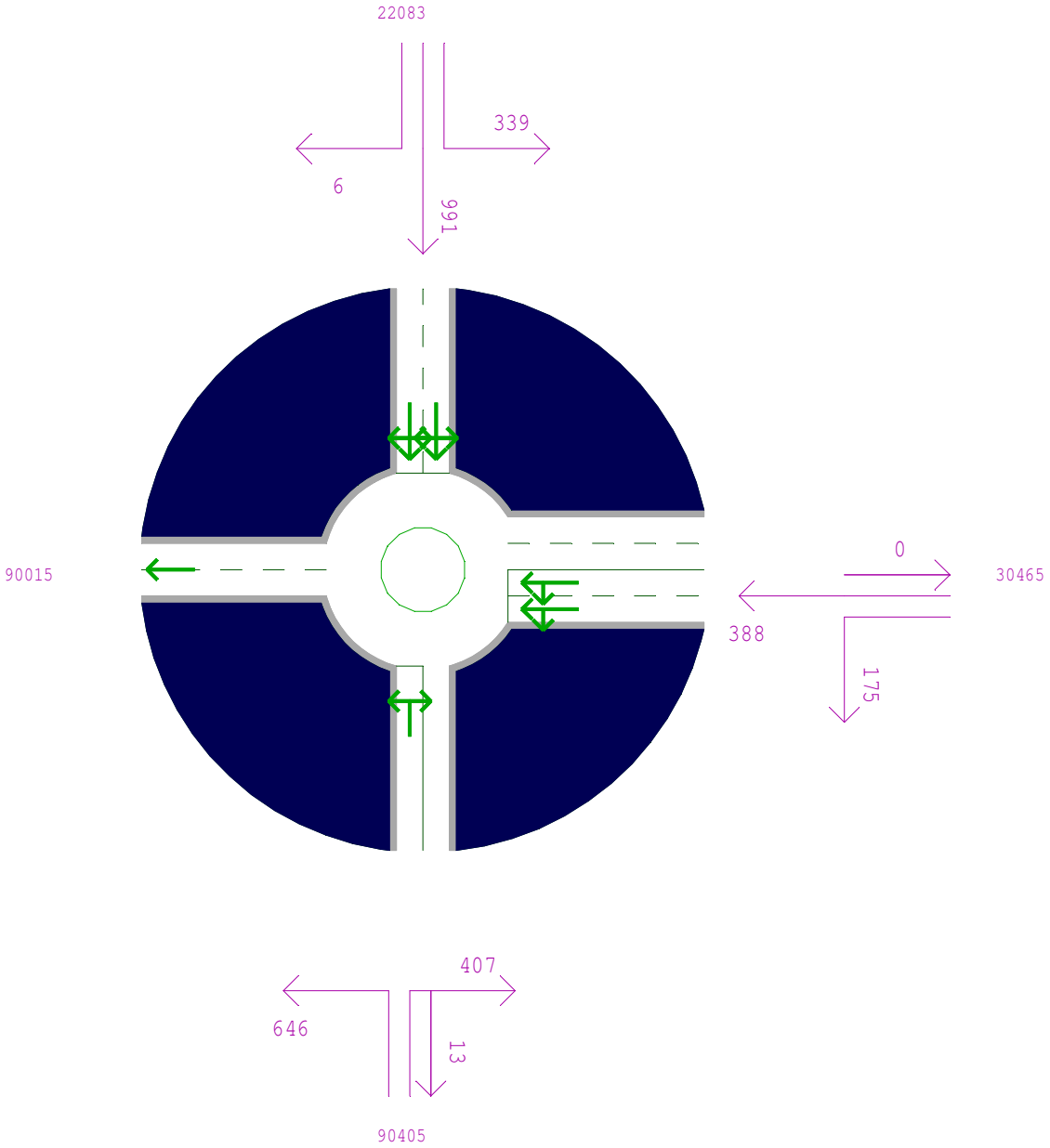
ORK.UFS
2012_PM_NETW

Scale 3072

Turn Data:

Demand flow

8-10-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

2012_PM_NETW

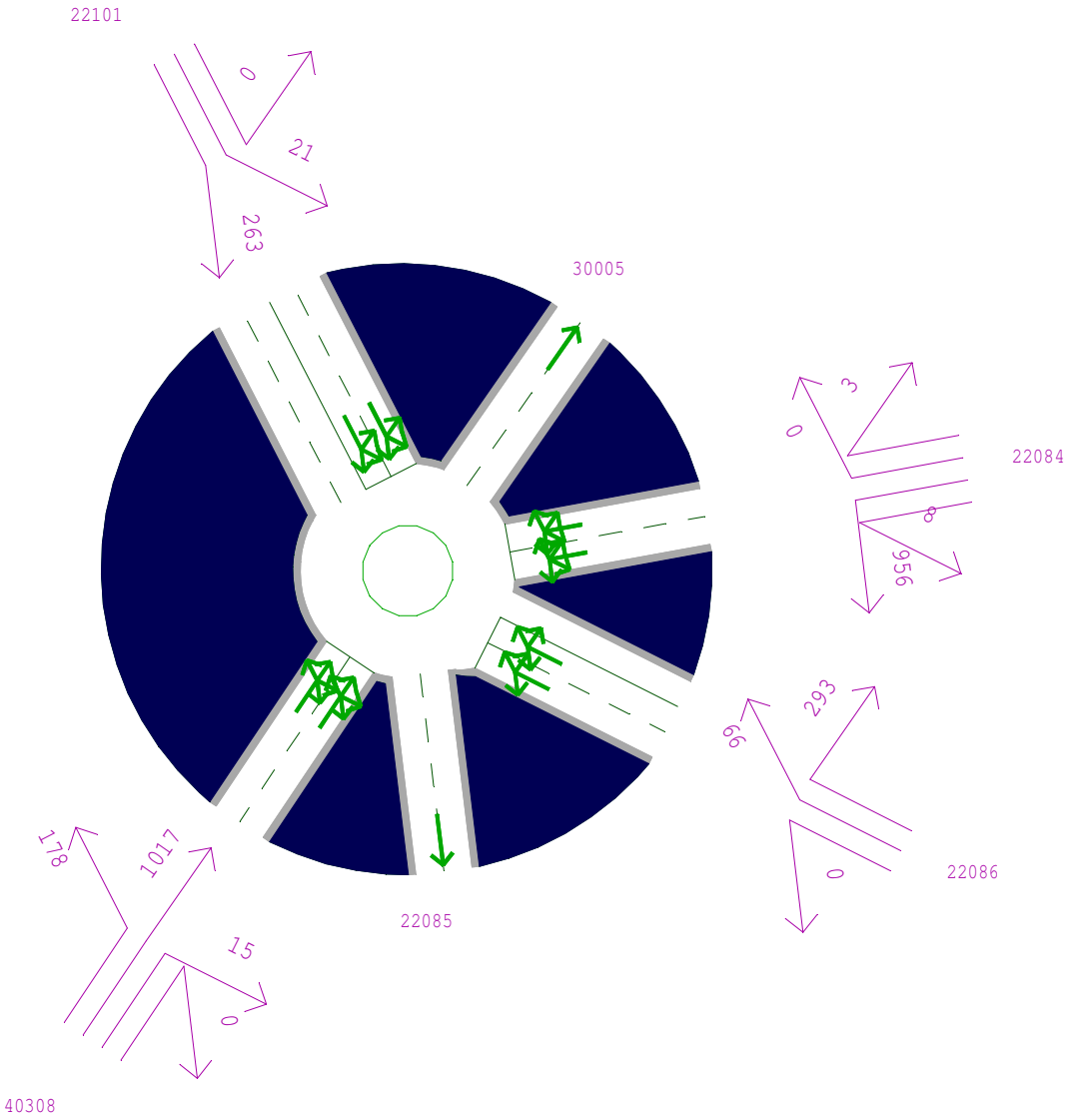
Node 30005

Roundabout

Equal Angles

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

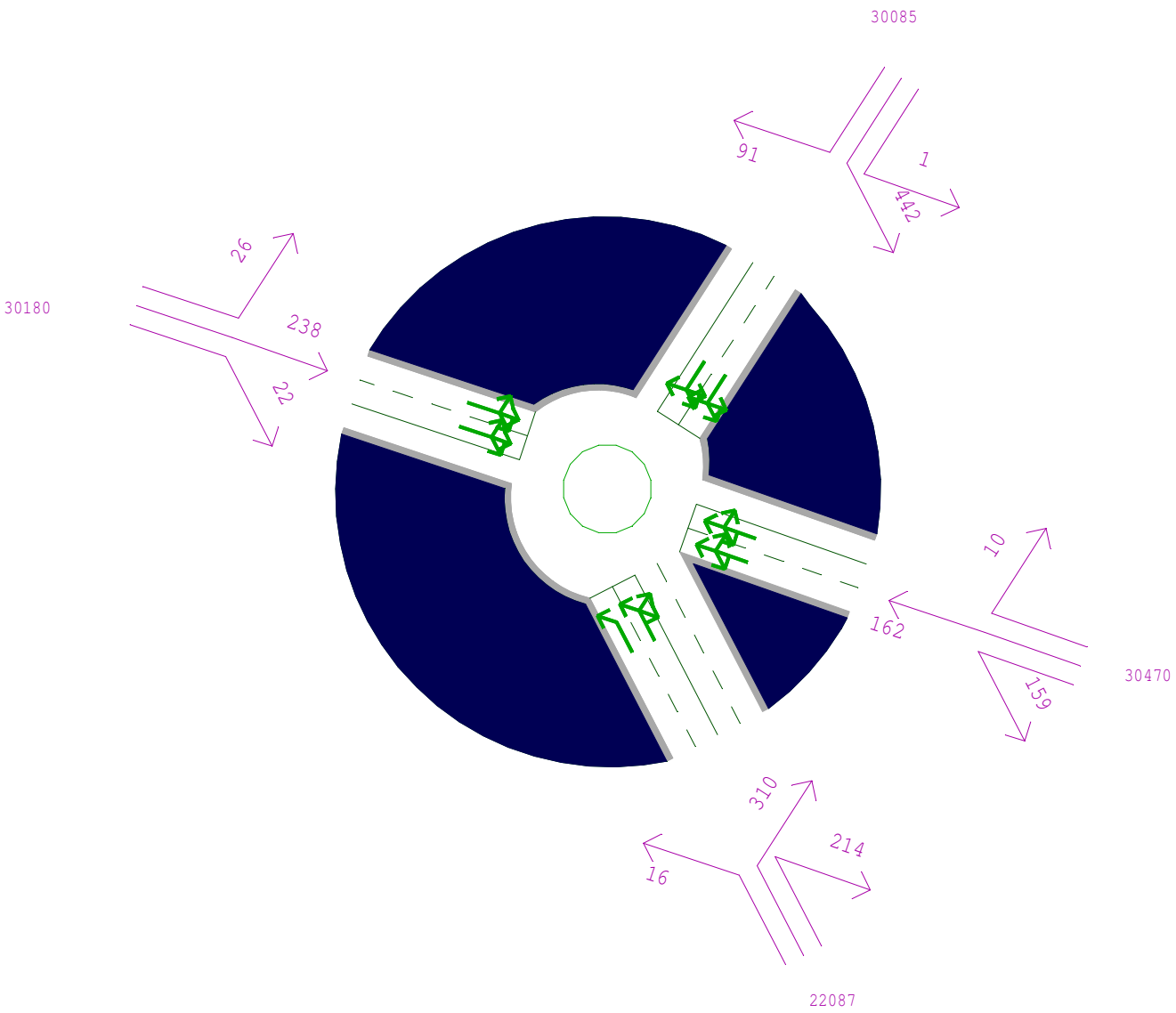
2012_AM_NETW

Node 22083

Roundabout

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

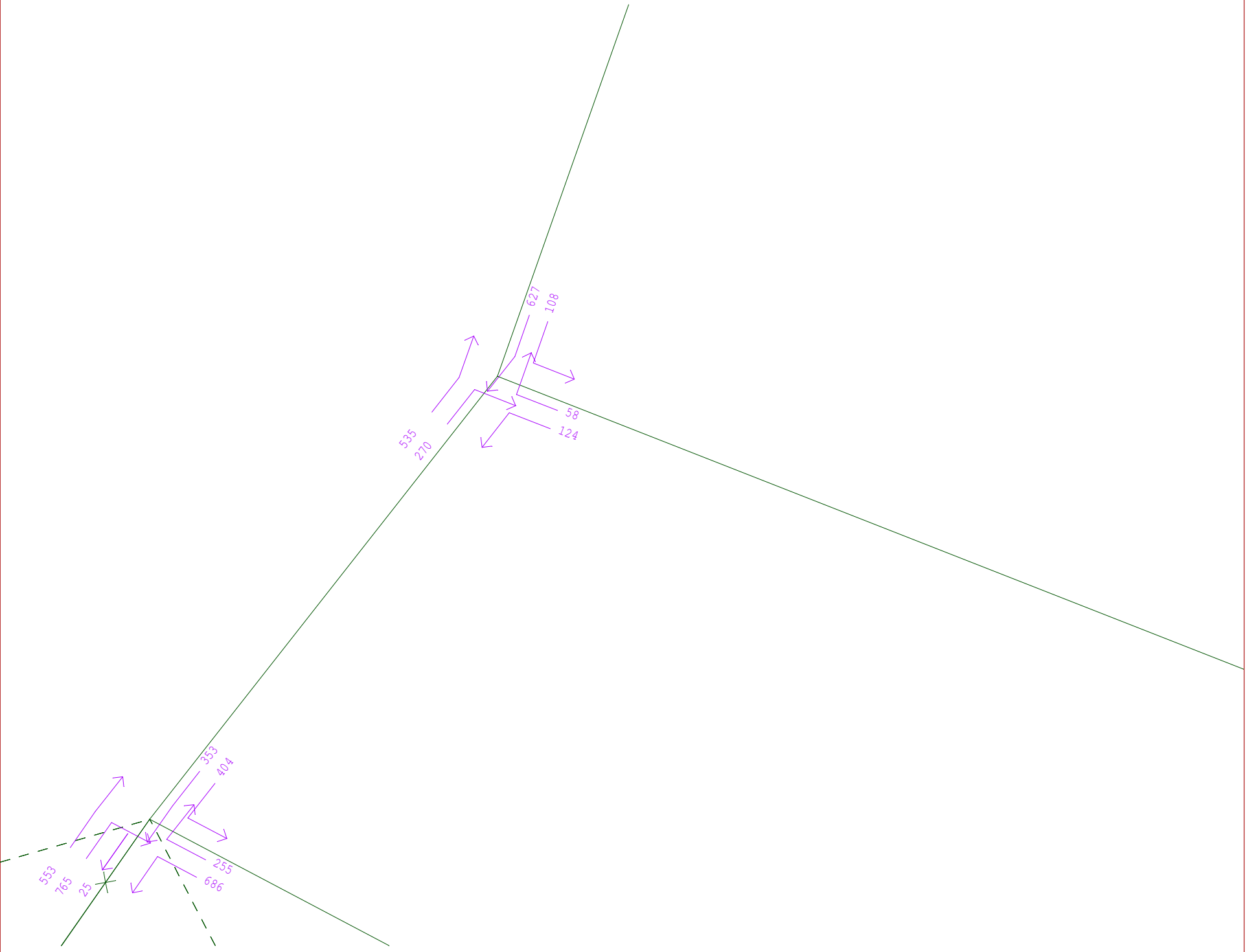
2012_AM_NETW

Node 30025

Roundabout

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

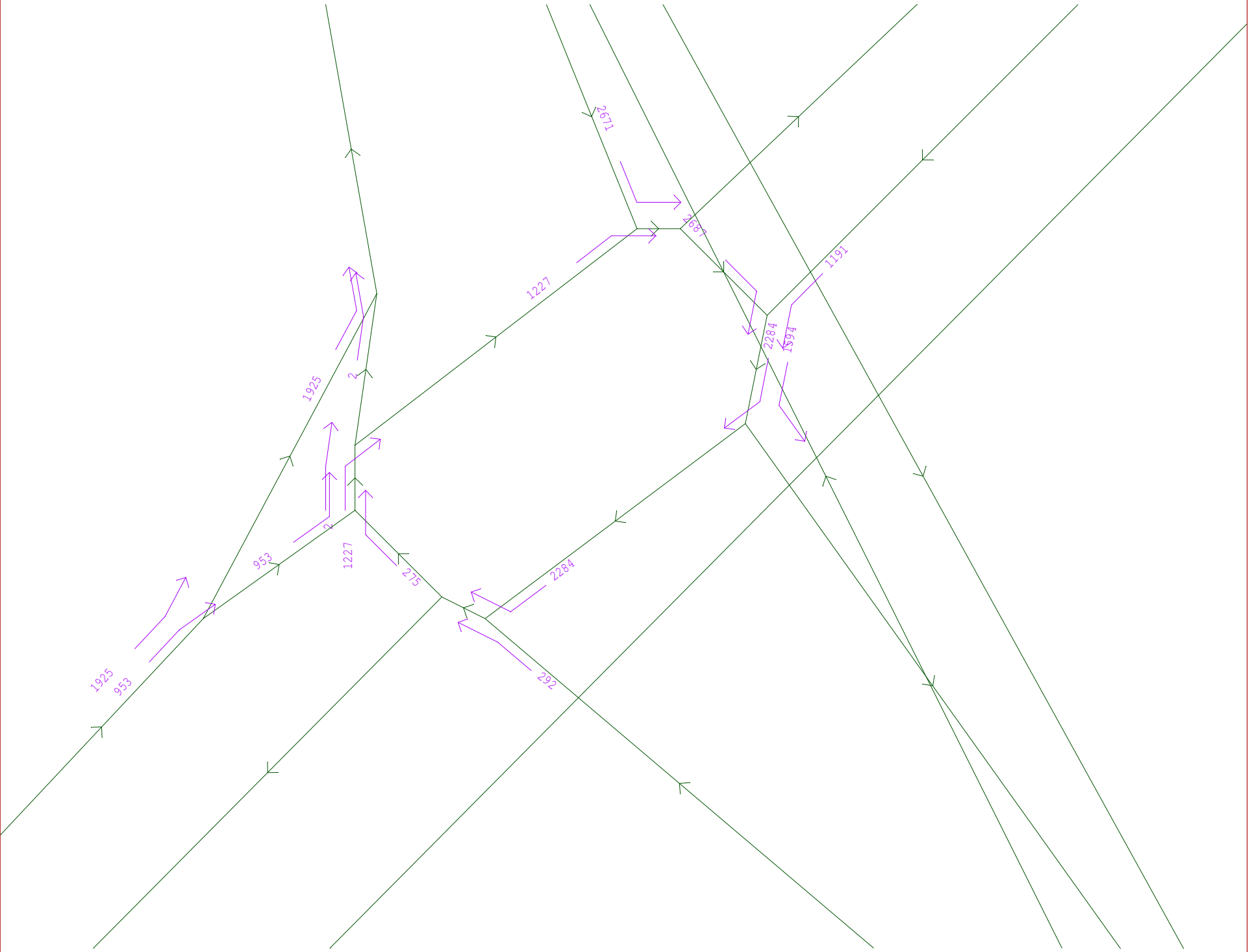
ORK.UFS
2012_AM_NETW

Scale 1294

Turn Data:

Demand flow

8-10-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

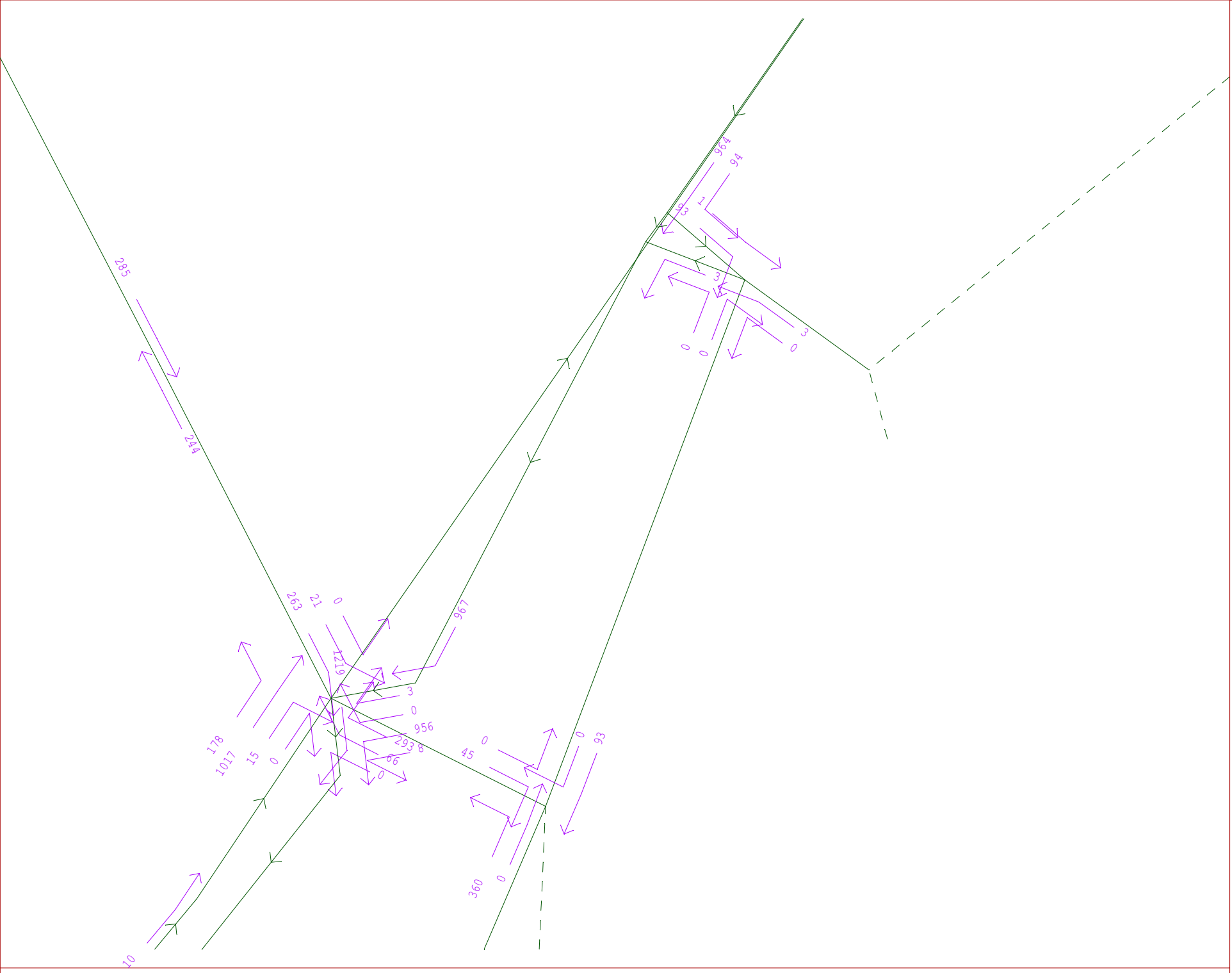
ORK.UFS
2012_AM_NETW

Scale 2264

Turn Data:

Demand flow

25- 9-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

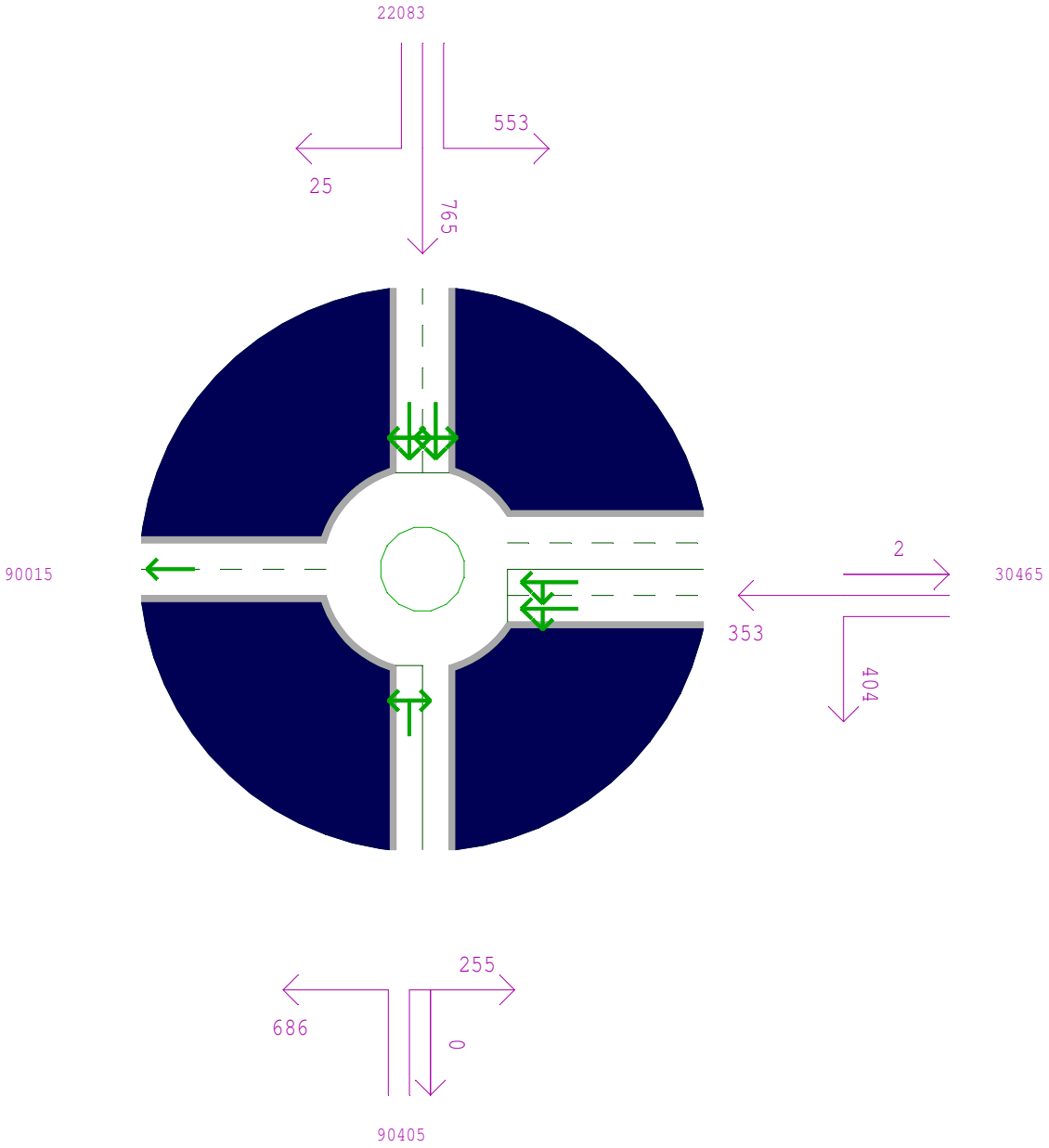
ORK.UFS
2012_AM_NETW

Scale 3385

Turn Data:

Demand flow

8-10-13
WHITE YOUNG



SATURN

Atkins Ltd /
DVV / ITS

2012_AM_NETW

Node 30005

Roundabout

Equal Angles

Demand flow

25- 9-13
WHITE YOUNG

Appendix R. Vendee Drive / A41 / Site Access Junction ARCADY Results (Sensitivity 1)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: A41 Vendee Drive - App R.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 11:40:13

» (Default Analysis Set) - 2031 FY SATURN +P&R, AM
» (Default Analysis Set) - 2031 FY SATURN +P&R, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2031 FY SATURN +P&R			
Arm 1	1.75	12.17	0.61	B
Arm 2	1.31	3.04	0.55	A
Arm 3	0.93	6.24	0.47	A
Arm 4	1.69	3.83	0.61	A
Arm 5	0.01	4.97	0.01	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D30 - 2031 FY SATURN +P&R, AM " model duration: 07:30 - 08:30
"D31 - 2031 FY SATURN +P&R, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 11:40:13

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2031 FY SATURN +P&R, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2031 FY SATURN +P&R, AM	2031 FY SATURN +P	AM		FLAT	07:30	08:30	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4,5			4.87	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Vendee Drive	
2	A41 North	
3	Wendlebury Road	
4	A41 South	
5	P&R Site	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.70	7.30	25.00	18.00	70.00	20.00	
2	7.00	11.00	32.00	32.00	70.00	20.00	
3	3.50	10.00	21.00	25.00	70.00	25.00	
4	7.00	12.00	25.00	35.00	70.00	25.00	
5	4.00	8.50	15.00	18.00	70.00	20.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.548	1922.479
2		(calculated)	(calculated)	0.745	3145.122
3		(calculated)	(calculated)	0.576	2105.577
4		(calculated)	(calculated)	0.745	3161.417
5		(calculated)	(calculated)	0.554	1963.494

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	516.00	100.000
2	FLAT	✓	1552.00	100.000
3	FLAT	✓	539.00	100.000
4	FLAT	✓	1583.00	100.000
5	FLAT	✓	6.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	516.00	516.00		
07:30-08:30	2	1552.00	1552.00		
07:30-08:30	3	539.00	539.00		
07:30-08:30	4	1583.00	1583.00		
07:30-08:30	5	6.00	6.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	182.000	214.000	107.000	13.000
	2	142.000	0.000	0.000	1362.000	48.000
	3	43.000	489.000	0.000	7.000	0.000
	4	80.000	1378.000	97.000	0.000	28.000
	5	1.000	3.000	0.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.35	0.41	0.21	0.03
	2	0.09	0.00	0.00	0.88	0.03
	3	0.08	0.91	0.00	0.01	0.00
	4	0.05	0.87	0.06	0.00	0.02
	5	0.17	0.50	0.00	0.33	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.132	1.200	1.008	1.000
	2	1.079	1.000	1.100	1.077	1.000
	3	1.000	1.049	1.000	1.600	1.000
	4	1.083	1.085	1.500	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	13.200	20.000	0.800	0.000
	2	7.900	0.000	10.000	7.700	0.000
	3	0.000	4.900	0.000	60.000	0.000
	4	8.300	8.500	50.000	0.000	0.000
	5	0.000	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.61	12.17	1.75	B
2	0.55	3.04	1.31	A
3	0.47	6.24	0.93	A
4	0.61	3.83	1.69	A
5	0.01	4.97	0.01	A

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	516.00	514.25	1966.58	0.00	845.72	0.610	1.75	12.166	B
2	1552.00	1550.69	431.76	0.00	2823.26	0.550	1.31	3.037	A
3	539.00	538.07	1672.28	0.00	1142.66	0.472	0.93	6.241	A
4	1583.00	1581.31	733.87	0.00	2615.04	0.605	1.69	3.831	A
5	6.00	5.99	2226.30	0.00	730.17	0.008	0.01	4.970	A

(Default Analysis Set) - 2031 FY SATURN +P&R, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2031 FY SATURN +P&R, PM	2031 FY SATURN +P	PM		FLAT	17:00	18:00	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4,5			3.90	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Vendee Drive	
2	A41 North	
3	Wendlebury Road	
4	A41 South	
5	P&R Site	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.70	7.30	25.00	18.00	70.00	20.00	
2	7.00	11.00	32.00	32.00	70.00	20.00	
3	3.50	10.00	21.00	25.00	70.00	25.00	
4	7.00	12.00	25.00	35.00	70.00	25.00	
5	4.00	8.50	15.00	18.00	70.00	20.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.548	1922.479
2		(calculated)	(calculated)	0.745	3145.122
3		(calculated)	(calculated)	0.576	2105.577
4		(calculated)	(calculated)	0.745	3161.417
5		(calculated)	(calculated)	0.554	1963.494

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	429.00	100.000
2	FLAT	✓	1403.00	100.000
3	FLAT	✓	205.00	100.000
4	FLAT	✓	1800.00	100.000
5	FLAT	✓	92.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	429.00	429.00		
17:00-18:00	2	1403.00	1403.00		
17:00-18:00	3	205.00	205.00		
17:00-18:00	4	1800.00	1800.00		
17:00-18:00	5	92.00	92.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	153.000	159.000	116.000	1.000
	2	287.000	0.000	0.000	1112.000	4.000
	3	37.000	152.000	0.000	16.000	0.000
	4	74.000	1547.000	177.000	0.000	2.000
	5	14.000	49.000	0.000	29.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.36	0.37	0.27	0.00
	2	0.20	0.00	0.00	0.79	0.00
	3	0.18	0.74	0.00	0.08	0.00
	4	0.04	0.86	0.10	0.00	0.00
	5	0.15	0.53	0.00	0.32	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.018	1.000	1.022	1.000	1.000
	2	1.000	1.000	1.049	1.000	1.000
	3	1.000	1.000	1.067	1.000	1.000
	4	1.038	1.056	1.000	1.000	1.013
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.800	0.000	2.200	0.000	0.000
	2	0.000	0.000	4.900	0.000	0.000
	3	0.000	0.000	6.700	0.000	0.000
	4	3.800	5.600	0.000	0.000	1.300
	5	0.000	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.50	8.50	1.01	A
2	0.50	2.60	1.01	A
3	0.17	3.57	0.20	A
4	0.64	3.75	1.88	A
5	0.13	5.87	0.15	A

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	429.00	427.99	1951.93	0.00	853.74	0.502	1.01	8.503	A
2	1403.00	1401.99	481.12	0.00	2786.47	0.504	1.01	2.599	A
3	205.00	204.80	1547.66	0.00	1214.42	0.169	0.20	3.565	A
4	1800.00	1798.12	480.60	0.00	2803.61	0.642	1.88	3.751	A
5	92.00	91.85	2271.73	0.00	705.00	0.131	0.15	5.869	A

Appendix S. Existing A41 / Oxford Road Junction ARCADY Results (Sensitivity 1)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: Oxford Road - A41 - App S.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 12:12:02

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2031 FY SATURN +P&R			
Arm 1	0.65	8.08	0.38	A
Arm 2	3.23	4.83	0.75	A
Arm 3	0.00	0.00	0.00	A
Arm 4	20.45	41.32	0.96	E

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D10 - 2031 FY SATURN +P&R, AM " model duration: 07:30 - 08:30
"D11 - 2031 FY SATURN +P&R, PM" model duration: 17:00 - 18:00
"D19 - 2031 FY SATURN, AM" model duration: 07:30 - 08:30
"D20 - 2031 FY SATURN, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 12:12:01

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2031 FY SATURN +P&R, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 FY SATURN +P&R, AM	2031 FY SATURN +P	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				15.63	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1763.00	100.000
2	FLAT	✓	2401.00	100.000
3	FLAT	✓	0.00	100.000
4	FLAT	✓	1528.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	1763.00	1763.00		0.00
07:30-08:30	2	2401.00	2401.00		
07:30-08:30	3	0.00	0.00		
07:30-08:30	4	1528.00	1528.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1473.000	0.000	290.000
	2	1539.000	0.000	0.000	862.000
	3	0.000	0.000	0.000	0.000
	4	679.000	849.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.84	0.00	0.16
	2	0.64	0.00	0.00	0.36
	3	0.25	0.25	0.25	0.25
	4	0.44	0.56	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.38	8.08	0.65	A	1763.00	290.00	38.39	7.94	0.64	38.40	7.95
2	0.75	4.83	3.23	A	2401.00	2401.00	189.83	4.74	3.16	189.92	4.75
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.96	41.32	20.45	E	1528.00	1528.00	952.46	37.40	15.87	960.38	37.71

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1763.00	290.00	290.00	1473.00	0.00	289.35	2206.84	837.64	0.00	760.99	774.44	0.381	0.00	0.65	8.079	A
2	2401.00	2401.00	2401.00	0.00	1473.00	2397.77	837.64	289.35	0.00	3213.27	2786.16	0.747	0.00	3.23	4.832	A
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2687.12	0.00	719.97	119.58	0.000	0.00	0.00	0.000	A
4	1528.00	1528.00	1528.00	0.00	0.00	1507.55	1150.19	1536.93	0.00	1583.63	1347.10	0.965	0.00	20.45	41.315	E

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	38.39	0.64	8.079	A	A
2	189.83	3.16	4.832	A	A
3	0.00	0.00	0.000	A	A
4	952.46	15.87	41.315	E	D

(Default Analysis Set) - 2031 FY SATURN +P&R, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 FY SATURN +P&R, PM	2031 FY SATURN +P	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				6.36	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1859.00	100.000
2	FLAT	✓	2106.00	100.000
3	FLAT	✓	0.00	100.000
4	FLAT	✓	1216.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1859.00	1859.00		0.00
17:00-18:00	2	2106.00	2106.00		
17:00-18:00	3	0.00	0.00		
17:00-18:00	4	1216.00	1216.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1521.000	0.000	338.000
	2	1416.000	0.000	0.000	690.000
	3	0.000	0.000	0.000	0.000
	4	378.000	838.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.82	0.00	0.18
	2	0.67	0.00	0.00	0.33
	3	0.25	0.25	0.25	0.25
	4	0.31	0.69	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.44	8.48	0.80	A	1859.00	338.00	46.89	8.32	0.78	46.92	8.33
2	0.66	3.50	2.05	A	2106.00	2106.00	121.16	3.45	2.02	121.20	3.45
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.73	8.07	2.73	A	1216.00	1216.00	159.33	7.86	2.66	159.46	7.87

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1859.00	338.00	338.00	1521.00	0.00	337.20	1791.77	836.12	0.00	761.69	717.58	0.444	0.00	0.80	8.481	A
2	2106.00	2106.00	2106.00	0.00	1521.00	2103.95	836.12	337.20	0.00	3173.58	2831.71	0.664	0.00	2.05	3.496	A
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2441.16	0.00	889.04	127.35	0.000	0.00	0.00	0.000	A
4	1216.00	1216.00	1216.00	0.00	0.00	1213.27	1026.53	1414.62	0.00	1669.05	1260.57	0.729	0.00	2.73	8.068	A

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	46.89	0.78	8.481	A	A
2	121.16	2.02	3.496	A	A
3	0.00	0.00	0.000	A	A
4	159.33	2.66	8.068	A	A

(Default Analysis Set) - 2031 FY SATURN, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 FY SATURN, AM	2031 FY SATURN	AM		FLAT	07:30	08:30	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				12.87	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1750.00	100.000
2	FLAT	✓	2398.00	100.000
3	FLAT	✓	0.00	100.000
4	FLAT	✓	1493.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	1750.00	1750.00		0.00
07:30-08:30	2	2398.00	2398.00		
07:30-08:30	3	0.00	0.00		
07:30-08:30	4	1493.00	1493.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1460.000	0.000	290.000
	2	1538.000	0.000	0.000	860.000
	3	0.000	0.000	0.000	0.000
	4	679.000	814.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.83	0.00	0.17
	2	0.64	0.00	0.00	0.36
	3	0.25	0.25	0.25	0.25
	4	0.45	0.55	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.097	1.167	1.060
	2	1.131	1.000	1.139	1.046
	3	1.091	1.171	1.000	1.143
	4	1.023	1.039	1.143	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	9.700	16.700	6.000
	2	13.100	0.000	13.900	4.600
	3	9.100	17.100	0.000	14.300
	4	2.300	3.900	14.300	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.37	7.84	0.63	A	1750.00	290.00	37.27	7.71	0.62	37.29	7.71
2	0.75	4.82	3.22	A	2398.00	2398.00	188.93	4.73	3.15	189.03	4.73
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.94	31.70	14.43	D	1493.00	1493.00	720.17	28.94	12.00	724.11	29.10

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1750.00	290.00	290.00	1460.00	0.00	289.37	2208.38	806.14	0.00	775.42	780.59	0.374	0.00	0.63	7.841	A
2	2398.00	2398.00	2398.00	0.00	1460.00	2394.78	806.14	289.37	0.00	3213.26	2781.24	0.746	0.00	3.22	4.816	A
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2684.15	0.00	722.01	118.74	0.000	0.00	0.00	0.000	A
4	1493.00	1493.00	1493.00	0.00	0.00	1478.57	1148.22	1535.94	0.00	1584.32	1349.00	0.942	0.00	14.43	31.702	D

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	37.27	0.62	7.841	A	A
2	188.93	3.15	4.816	A	A
3	0.00	0.00	0.000	A	A
4	720.17	12.00	31.702	D	C

(Default Analysis Set) - 2031 FY SATURN, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default settings only. Is this correct?
Warning	Pedestrian Crossing	Arm 1 - Pelican/Puffin Details	Pedestrian crossing uses default flow of 0. Is this correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 FY SATURN, PM	2031 FY SATURN	PM		FLAT	17:00	18:00	60	60				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4				6.26	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A41 East	
2	A41 South	
3	Services	
4	Oxford Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	3.50	0.00	42.00	65.00	14.50	
2	8.00	12.00	35.00	49.00	65.00	26.00	
3	8.00	8.00	0.00	20.00	65.00	13.00	
4	8.40	8.40	0.00	21.00	65.00	18.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Bypass

Arm	Arm Has Bypass	Bypass Utilisation (%)
1	✓	100
2		
3		
4		

Pedestrian Crossings

Arm	Crossing Type
1	Pelican
2	None
3	None
4	None

Pelican/ Puffin Crossings

Arm	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)	Space between crossing and junction entry (PCU)
1	3.00	2.90	1.00	6.00	6.00	7.00	0.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.458	1144.703
2		(calculated)	(calculated)	0.829	3453.247
3		(calculated)	(calculated)	0.687	2566.992
4		(calculated)	(calculated)	0.698	2657.109

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	1858.00	100.000
2	FLAT	✓	2057.00	100.000
3	FLAT	✓	0.00	100.000
4	FLAT	✓	1211.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
1	FLAT	0.00
2	-	-
3	-	-
4	-	-

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	1858.00	1858.00		0.00
17:00-18:00	2	2057.00	2057.00		
17:00-18:00	3	0.00	0.00		
17:00-18:00	4	1211.00	1211.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	1520.000	0.000	338.000
	2	1403.000	0.000	0.000	654.000
	3	0.000	0.000	0.000	0.000
	4	376.000	835.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.82	0.00	0.18
	2	0.68	0.00	0.00	0.32
	3	0.25	0.25	0.25	0.25
	4	0.31	0.69	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.058	1.000	1.002
	2	1.052	1.000	1.031	1.017
	3	1.000	1.038	1.000	1.059
	4	1.011	1.035	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	5.800	0.000	0.200
	2	5.200	0.000	3.100	1.700
	3	0.000	3.800	0.000	5.900
	4	1.100	3.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.44	8.46	0.79	A	1858.00	338.00	46.75	8.30	0.78	46.77	8.30
2	0.65	3.34	1.91	A	2057.00	2057.00	113.31	3.31	1.89	113.35	3.31
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.72	7.83	2.64	A	1211.00	1211.00	154.15	7.64	2.57	154.28	7.64

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Junction Demand (PCU/hr)	Junction Arrivals (PCU)	Bypass Demand (PCU/hr)	Bypass Exit Flow (PCU/hr)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	1858.00	338.00	338.00	1520.00	0.00	337.21	1776.88	833.18	0.00	763.03	722.84	0.443	0.00	0.79	8.456	A
2	2057.00	2057.00	2057.00	0.00	1520.00	2055.09	833.18	337.21	0.00	3173.58	2827.49	0.648	0.00	1.91	3.343	A
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2392.29	0.00	922.62	126.63	0.000	0.00	0.00	0.000	A
4	1211.00	1211.00	1211.00	0.00	0.00	1208.36	990.60	1401.70	0.00	1678.08	1243.78	0.722	0.00	2.64	7.831	A

Queueing Delay Results for each time segment

Queueing Delay results: (17:00-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	46.75	0.78	8.456	A	A
2	113.31	1.89	3.343	A	A
3	0.00	0.00	0.000	A	A
4	154.15	2.57	7.831	A	A

Appendix T. Vendee Drive / A4095 / B4030 Junction ARCADY Results (Sensitivity 1)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: A4095 B4030 - App T.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 12:41:01

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2031 FY SATURN +P&R			
Arm 1	1.26	8.42	0.55	A
Arm 2	1.43	6.15	0.57	A
Arm 3	3.96	18.92	0.79	C
Arm 4	0.65	5.30	0.39	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D28 - 2031 FY SATURN +P&R, AM " model duration: 07:30 - 08:30
"D29 - 2031 FY SATURN +P&R, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 12:41:00

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2031 FY SATURN +P&R, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2031 FY SATURN +P&R, AM	2031 FY SATURN +P	AM		FLAT	07:30	08:30	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			10.18	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	540.00	100.000
2	FLAT	✓	838.00	100.000
3	FLAT	✓	744.00	100.000
4	FLAT	✓	444.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	540.00	540.00		
07:30-08:30	2	838.00	838.00		
07:30-08:30	3	744.00	744.00		
07:30-08:30	4	444.00	444.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	320.000	201.000	19.000
	2	87.000	0.000	229.000	522.000
	3	174.000	433.000	0.000	137.000
	4	0.000	404.000	40.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.59	0.37	0.04
	2	0.10	0.00	0.27	0.62
	3	0.23	0.58	0.00	0.18
	4	0.00	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.025	1.060	1.083
	2	1.057	1.000	1.238	1.025
	3	1.052	1.125	1.000	1.069
	4	1.095	1.007	1.088	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.500	6.000	8.300
	2	5.700	0.000	23.800	2.500
	3	5.200	12.500	0.000	6.900
	4	9.500	0.700	8.800	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.55	8.42	1.26	A
2	0.57	6.15	1.43	A
3	0.79	18.92	3.96	C
4	0.39	5.30	0.65	A

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	540.00	538.74	874.04	0.00	982.05	0.550	1.26	8.420	A
2	838.00	836.57	259.43	0.00	1467.16	0.571	1.43	6.147	A
3	744.00	740.04	626.92	0.00	944.98	0.787	3.96	18.915	C
4	444.00	443.35	690.62	0.00	1131.27	0.392	0.65	5.301	A

(Default Analysis Set) - 2031 FY SATURN +P&R, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2031 FY SATURN +P&R, PM	2031 FY SATURN +P	PM		FLAT	17:00	18:00	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			7.16	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Middleton Stoney Road	
2	Vendee Drive	
3	B4030	
4	A4095	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.50	6.75	7.00	19.00	55.00	30.00	
2	3.65	7.10	9.00	33.00	55.00	28.00	
3	3.30	7.00	4.00	19.00	55.00	35.00	
4	3.50	6.50	10.00	23.50	55.00	35.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.539	1452.915
2		(calculated)	(calculated)	0.576	1616.700
3		(calculated)	(calculated)	0.498	1257.444
4		(calculated)	(calculated)	0.547	1508.931

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	527.00	100.000
2	FLAT	✓	676.00	100.000
3	FLAT	✓	672.00	100.000
4	FLAT	✓	391.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	527.00	527.00		
17:00-18:00	2	676.00	676.00		
17:00-18:00	3	672.00	672.00		
17:00-18:00	4	391.00	391.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	273.000	211.000	43.000
	2	38.000	0.000	163.000	475.000
	3	209.000	308.000	0.000	155.000
	4	0.000	348.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.52	0.40	0.08
	2	0.06	0.00	0.24	0.70
	3	0.31	0.46	0.00	0.23
	4	0.00	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.027	1.013	1.000
	2	1.000	1.000	1.037	1.008
	3	1.011	1.000	1.000	1.018
	4	1.036	1.005	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	2.700	1.300	0.000
	2	0.000	0.000	3.700	0.800
	3	1.100	0.000	0.000	1.800
	4	3.600	0.500	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.49	6.65	0.97	A
2	0.47	4.73	0.89	A
3	0.69	11.59	2.17	B
4	0.32	4.43	0.48	A

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	527.00	526.03	697.52	0.00	1077.14	0.489	0.97	6.647	A
2	676.00	675.11	296.48	0.00	1445.80	0.468	0.89	4.734	A
3	672.00	669.83	555.25	0.00	980.70	0.685	2.17	11.588	B
4	391.00	390.52	553.28	0.00	1206.38	0.324	0.48	4.429	A

Appendix U. M40 Junction 9 Proposed Scheme (Sensitivity Test 1)

Table 32. M40 Junction 9 Proposed Highway Scheme

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2031 Future Year (SATURN FLOWS)						
M40 SB Off Slip Ahead Left	62.1%	15.0	9.5	79.6%	29.0	12.3
M40 SB Off Slip Ahead	64.8%	15.3	10.8	78.4%	27.5	12.8
M40 SB Off Slip Ahead	67.7%	15.9	11.6	84.8%	32.0	15.0
A41 Ahead Left	118.3%	342.8	50.7	86.1%	60.2	8.3
A41 Ahead	120.1%	363.6	58.1	89.9%	67.1	10.0
A41 Ahead	113.7%	281.7	43.9	89.1%	64.9	9.7
M40 NB Off Slip Left	35.8%	40.7	1.7	27.2%	35.1	1.5
M40 NB Off Slip Ahead Left	63.1%	40.5	3.4	56.7%	35.3	3.2
A34 Left	76.4%	10.7	14.0	91.8%	21.4	25.6
A34 Left	77.6%	10.7	15.6	92.4%	21.5	27.7
A34 Ahead	61.9%	7.4	9.5	73.3%	9.5	13.6
A34 Ahead	29.6%	4.7	3.1	35.9%	5.0	4.0
M40 SB OS Circ Ahead	85.1%	38.9	11.9	66.8%	25.5	10.4
M40 SB OS Circ Ahead	84.8%	40.8	12.5	69.1%	28.4	11.5
M40 SB OS Circ Right Ahead	89.8%	51.1	14.7	73.1%	19.7	9.6
A41 Circ Right Ahead	57.7%	7.0	4.6	41.0%	3.2	1.2
A41 Circ Right	57.1%	8.8	4.8	48.7%	2.6	5.7
A41 Circ Right	59.6%	8.3	7.6	52.6%	3.6	13.1
M40 NB OS Circ Ahead	56.4%	5.4	3.6	51.1%	3.0	1.2
M40 NB OS Circ Ahead	63.0%	6.2	5.2	56.2%	3.2	1.3
M40 NB OS Circ Right Ahead	77.3%	7.3	5.8	70.0%	4.1	1.8
A34 Circ Ahead	41.0%	28.0	2.1	58.8%	52.4	3.3
A34 Circ Right Ahead	47.9%	21.9	1.2	61.0%	68.0	3.5
A34 Circ Right	48.5%	18.6	0.6	58.3%	71.3	3.4
Total Delay (pcuHr)	**191.27**			**82.17**		
PRC (%)	**-33.5**			**-2.7**		
Cycle Time (sec)	**69**					
2031 Future Year (SATURN FLOWS) + P&R						

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
M40 SB Off Slip Ahead Left	75.2%	23.2	12.0	86.2%	36.8	14.0
M40 SB Off Slip Ahead	77.7%	23.7	13.6	84.6%	33.9	14.2
M40 SB Off Slip Ahead	80.8%	25.4	14.9	91.1%	43.1	17.4
A41 Ahead Left	118.8%	348.3	51.7	82.6%	52.0	7.9
A41 Ahead	120.8%	371.3	59.7	86.0%	55.4	9.2
A41 Ahead	113.0%	272.2	42.5	85.2%	54.2	9.0
M40 NB Off Slip Left	35.8%	40.7	1.7	33.6%	36.2	1.9
M40 NB Off Slip Ahead Left	63.1%	40.5	3.4	58.5%	36.4	3.4
A34 Left	88.5%	22.5	21.0	91.8%	21.4	25.6
A34 Left	89.9%	23.2	23.4	92.4%	21.5	27.7
A34 Ahead	71.9%	13.2	13.5	73.8%	9.6	13.7
A34 Ahead	34.3%	7.9	4.3	35.3%	5.0	3.9
M40 SB OS Circ Ahead	66.3%	32.0	8.3	62.7%	22.1	10.4
M40 SB OS Circ Ahead	66.1%	29.2	9.0	64.8%	24.4	12.8
M40 SB OS Circ Right Ahead	70.0%	21.6	8.3	68.7%	22.6	11.4
A41 Circ Right Ahead	56.8%	7.7	4.7	41.9%	3.8	1.1
A41 Circ Right	57.6%	6.4	7.0	49.8%	2.7	6.3
A41 Circ Right	59.9%	5.7	9.9	53.6%	3.7	13.7
M40 NB OS Circ Ahead	56.0%	4.2	2.0	51.7%	3.3	1.0
M40 NB OS Circ Ahead	63.1%	4.8	3.0	57.0%	3.5	1.3
M40 NB OS Circ Right Ahead	77.6%	6.1	3.6	70.6%	4.4	1.5
A34 Circ Ahead	22.2%	48.2	2.0	62.7%	66.3	3.6
A34 Circ Right Ahead	25.8%	36.7	2.3	64.0%	41.5	3.3
A34 Circ Right	25.9%	33.3	2.5	61.9%	23.8	2.0
Total Delay (pcuHr)	**199.43**			**82.28**		
PRC (%)	**-34.2**			**-2.7**		
Cycle Time (sec)	**69**					

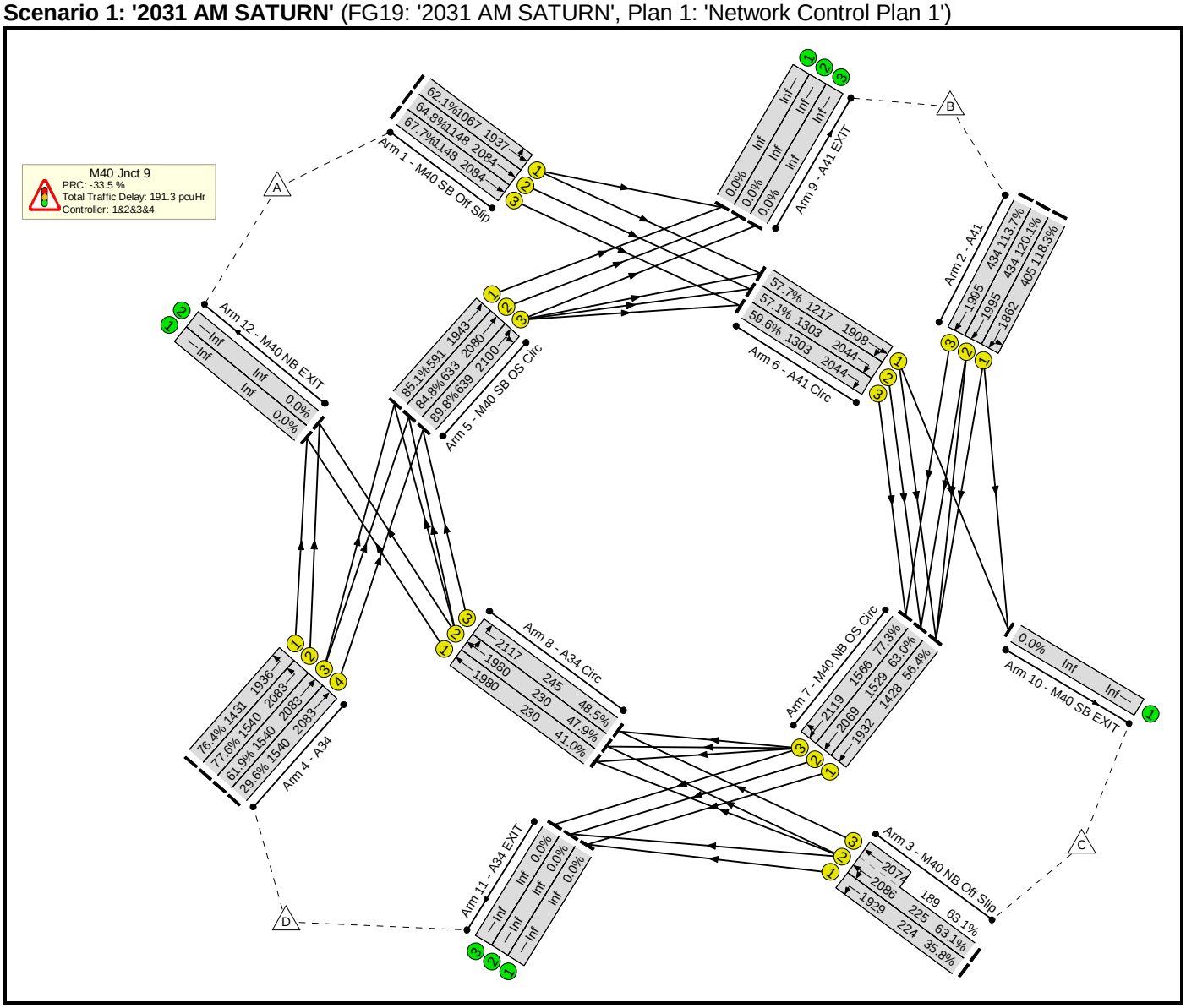
Basic Results Summary

User and Project Details

Project:	**Bicester Park and Ride**
Title:	**M40 Junction 9**
Location:	
File name:	M40 Jct 9 Proposed Layout - App U.lsg3x
Author:	Nigel Pettitt
Company:	Atkins
Address:	Cambridge
Notes:	

Network Layout Diagram

Scenario 1: '2031 AM SATURN' (FG19: '2031 AM SATURN', Plan 1: 'Network Control Plan 1')



Basic Results Summary

C1

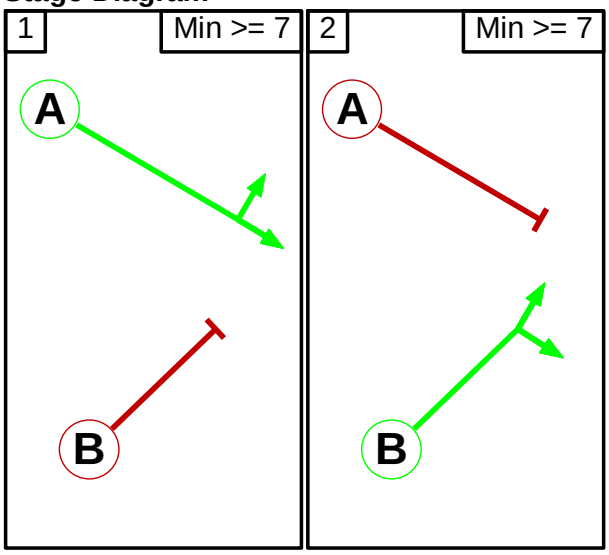
Phase Intergreens Matrix

	Starting Phase		
Terminating Phase		A	B
	A		7
	B	5	

Phases in Stage

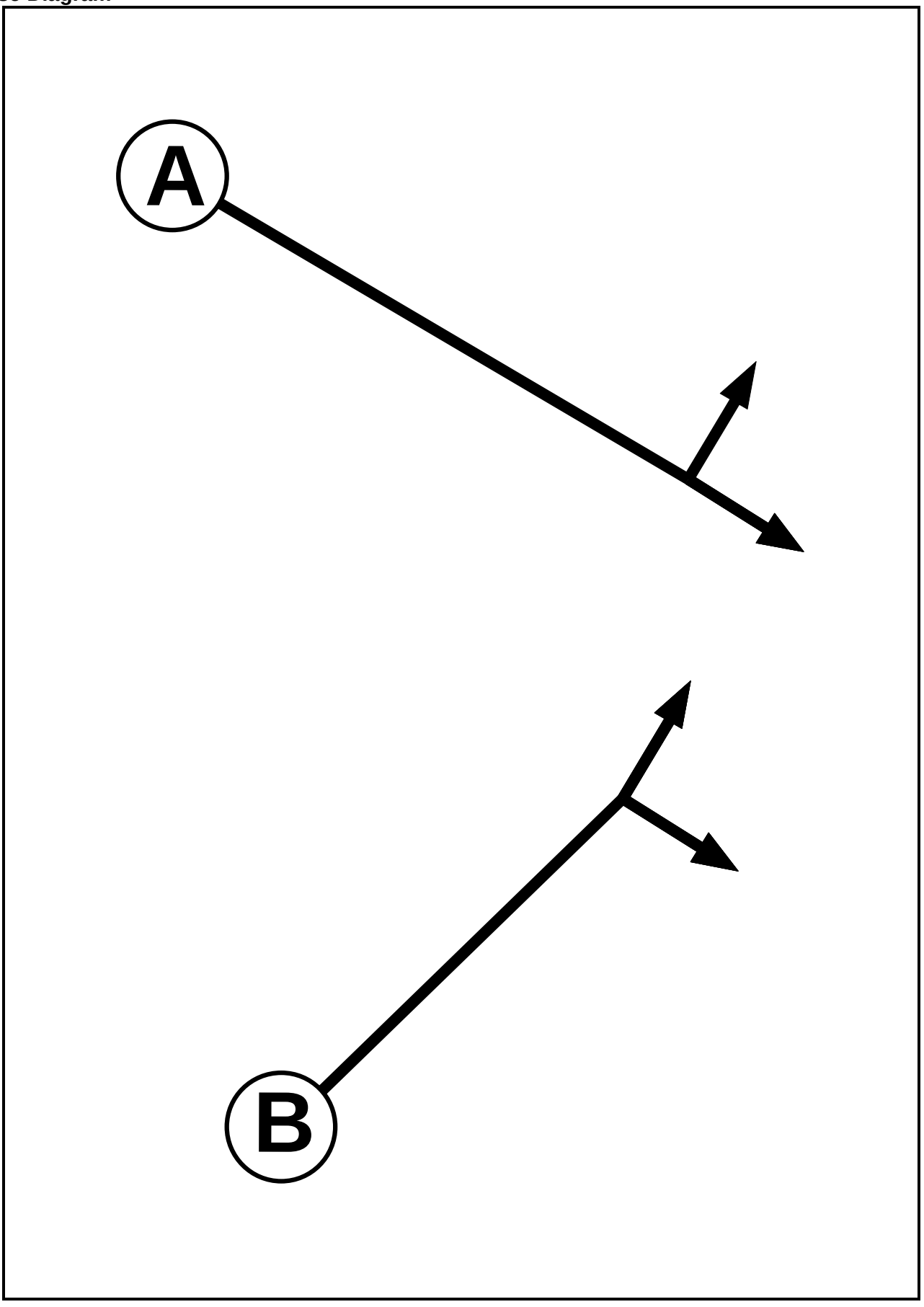
Stage No.	Phases in Stage
1	A
2	B

Stage Diagram



Basic Results Summary

Phase Diagram



Basic Results Summary

C2

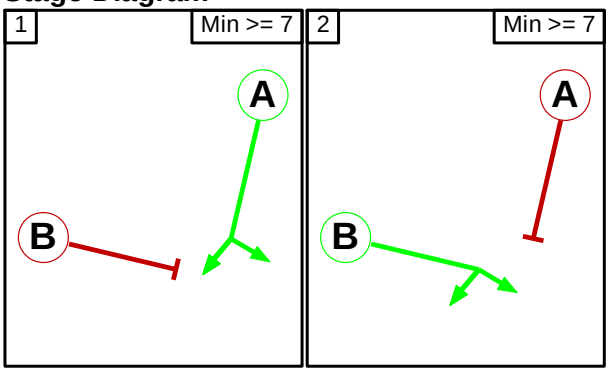
Phase Intergreens Matrix

	Starting Phase		
Terminating Phase		A	B
	A		7
	B	5	

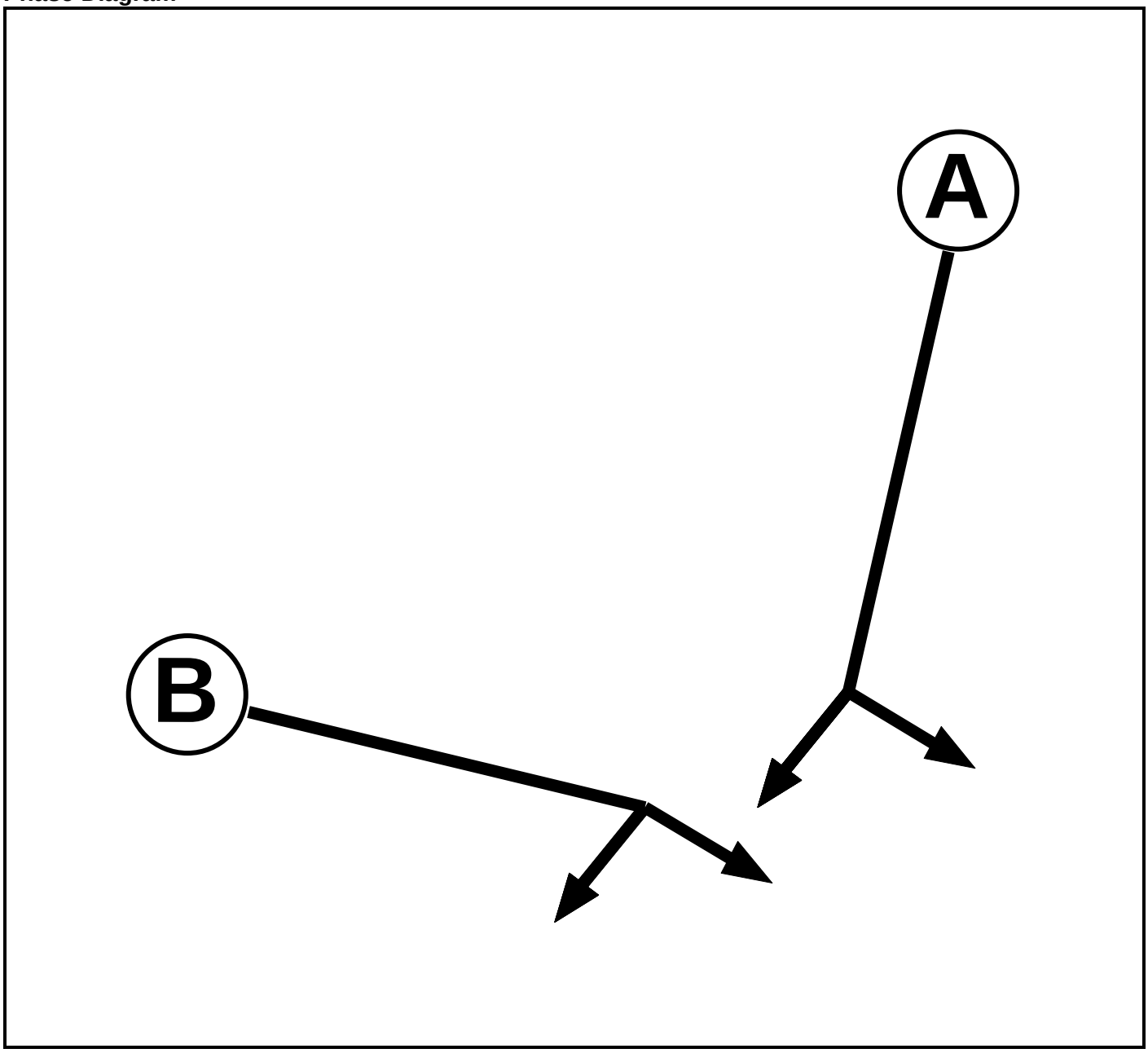
Phases in Stage

Stage No.	Phases in Stage
1	A
2	B

Stage Diagram



Phase Diagram



C3
Phase Intergreens Matrix

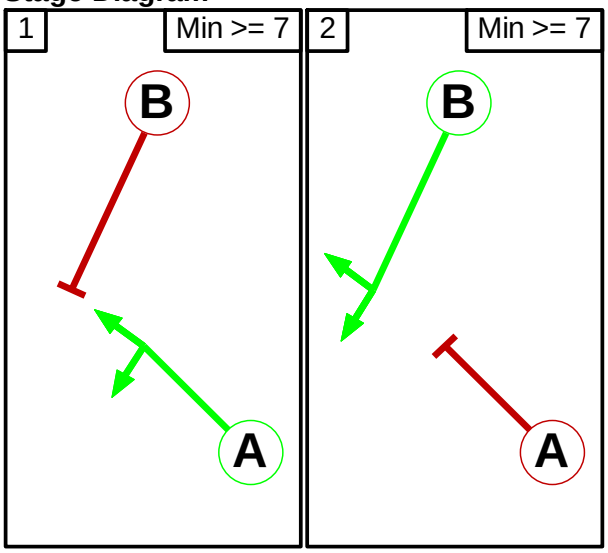
	Starting Phase		
		A	B
Terminating Phase	A		7
	B	5	

Phases in Stage

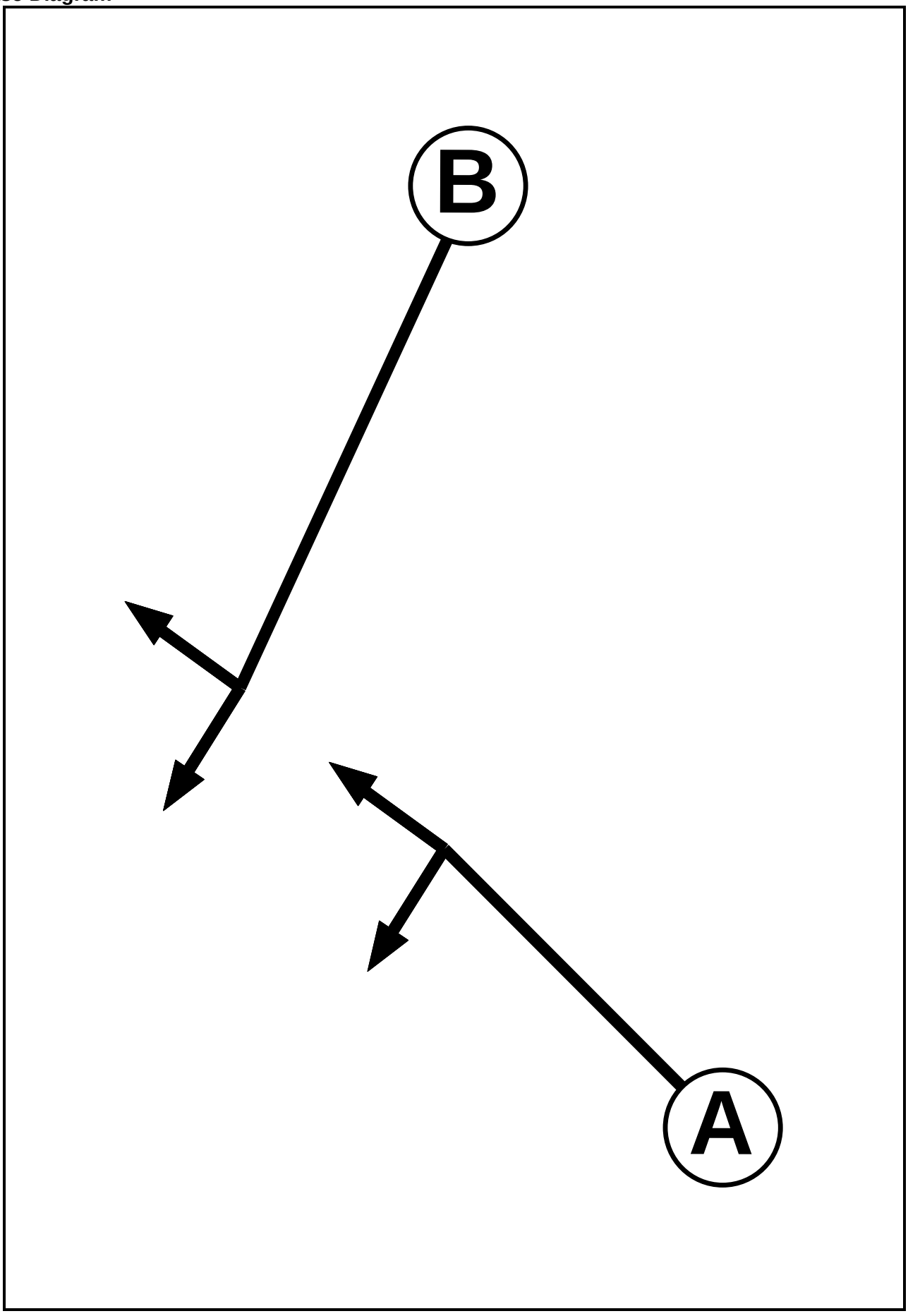
Stage No.	Phases in Stage
1	A
2	B

Basic Results Summary

Stage Diagram



Phase Diagram



Basic Results Summary

C4

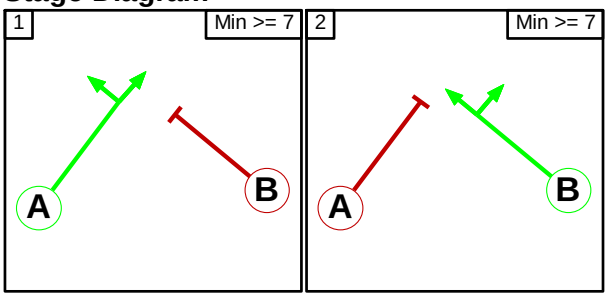
Phase Intergreens Matrix

	Starting Phase		
Terminating Phase		A	B
	A		7
	B	5	

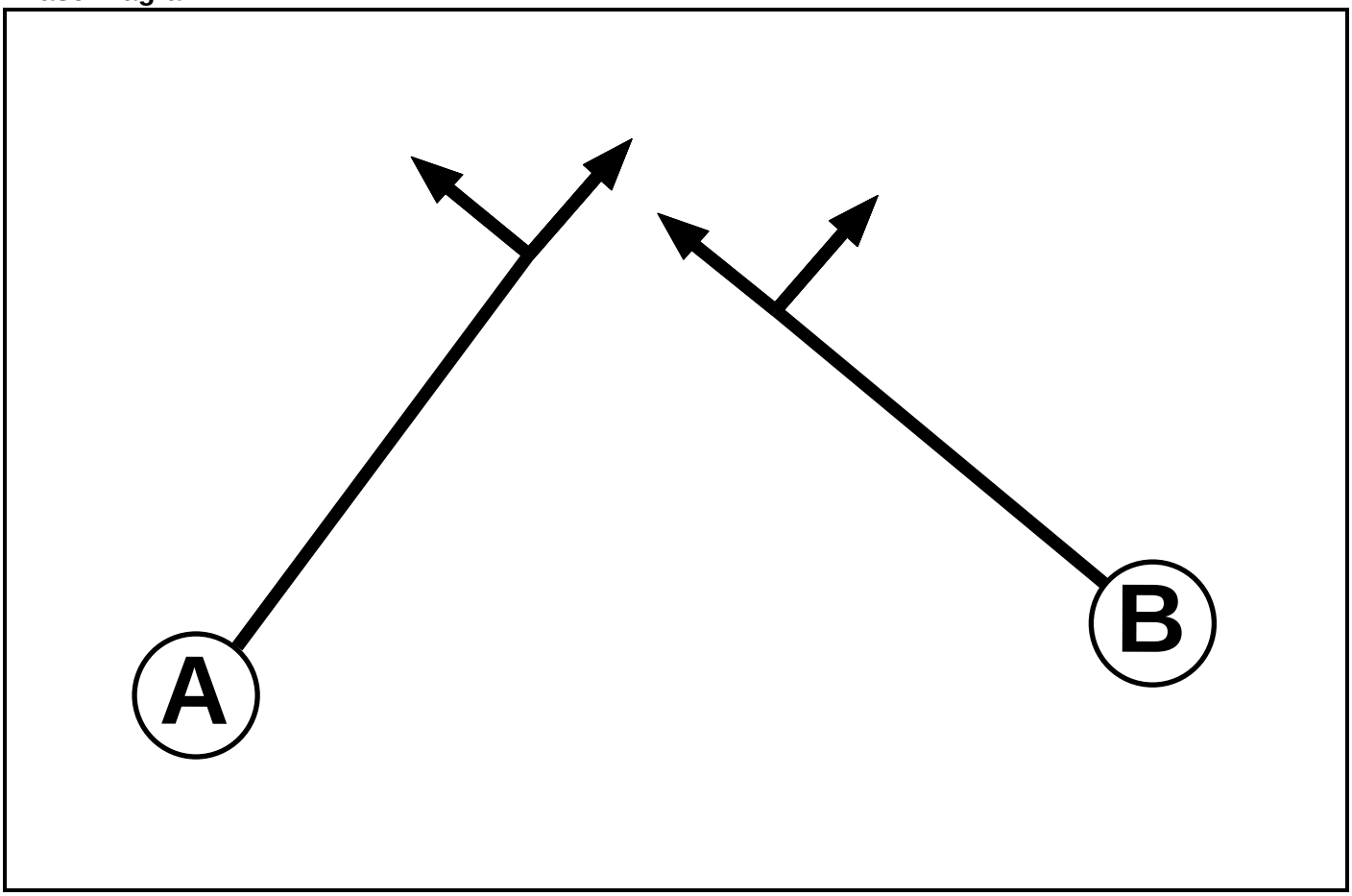
Phases in Stage

Stage No.	Phases in Stage
1	A
2	B

Stage Diagram



Phase Diagram



Basic Results Summary

Network Results

Scenario 1: '2031 AM SATURN' (FG19: '2031 AM SATURN', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**120.1%**	**0**	**0**	**0**	**191.3**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**120.1%**	**0**	**0**	**0**	**191.3**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	37	-	662	1937	1067	62.1%	-	-	-	2.8	15.0	9.5
1/2	M40 SB Off Slip Ahead	U	C1:A		1	37	-	744	2084	1148	64.8%	-	-	-	3.2	15.3	10.8
1/3	M40 SB Off Slip Ahead	U	C1:A		1	37	-	777	2084	1148	67.7%	-	-	-	3.4	15.9	11.6
2/1	A41 Ahead Left	U	C2:A		1	14	-	479	1862	405	118.3%	-	-	-	45.6	342.8	50.7
2/2	A41 Ahead	U	C2:A		1	14	-	521	1995	434	120.1%	-	-	-	52.6	363.6	58.1
2/3	A41 Ahead	U	C2:A		1	14	-	493	1995	434	113.7%	-	-	-	38.6	281.7	43.9
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	80	1929	224	35.8%	-	-	-	0.9	40.7	1.7
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	7	-	261	2086:2074	225+189	63.1 : 63.1%	-	-	-	2.9	40.5	3.4
4/1	A34 Left	U	C4:A		1	50	-	1093	1936	1431	76.4%	-	-	-	3.2	10.7	14.0
4/2	A34 Left	U	C4:A		1	50	-	1194	2083	1540	77.6%	-	-	-	3.5	10.7	15.6
4/3	A34 Ahead	U	C4:A		1	50	-	953	2083	1540	61.9%	-	-	-	2.0	7.4	9.5
4/4	A34 Ahead	U	C4:A		1	50	-	455	2083	1540	29.6%	-	-	-	0.6	4.7	3.1
5/1	M40 SB OS Circ Ahead	U	C1:B		1	20	-	503	1943	591	85.1%	-	-	-	5.4	38.9	11.9
5/2	M40 SB OS Circ Ahead	U	C1:B		1	20	-	537	2080	633	84.8%	-	-	-	6.1	40.8	12.5
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	20	-	574	2100	639	89.8%	-	-	-	8.2	51.1	14.7

Basic Results Summary

6/1	A41 Circ Right Ahead	U	C2:B		1	43	-	702	1908	1217	57.7%	-	-	-	1.4	7.0	4.6
6/2	A41 Circ Right	U	C2:B		1	43	-	744	2044	1303	57.1%	-	-	-	1.8	8.8	4.8
6/3	A41 Circ Right	U	C2:B		1	43	-	777	2044	1303	59.6%	-	-	-	1.8	8.3	7.6
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	873	1932	1428	56.4%	-	-	-	1.2	5.4	3.6
7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1007	2069	1529	63.0%	-	-	-	1.6	6.2	5.2
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	50	-	1270	2119	1566	77.3%	-	-	-	2.5	7.3	5.8
8/1	A34 Circ Ahead	U	C4:B		1	7	-	107	1980	230	41.0%	-	-	-	0.7	28.0	2.1
8/2	A34 Circ Right Ahead	U	C4:B		1	7	-	113	1980	230	47.9%	-	-	-	0.7	21.9	1.2
8/3	A34 Circ Right	U	C4:B		1	7	-	119	2117	245	48.5%	-	-	-	0.6	18.6	0.6

C1	PRC for Signalled Lanes (%):	0.2	Total Delay for Signalled Lanes (pcuHr):	29.02	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-33.5	Total Delay for Signalled Lanes (pcuHr):	141.76	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	16.4	Total Delay for Signalled Lanes (pcuHr):	9.15	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	16.1	Total Delay for Signalled Lanes (pcuHr):	11.33	Cycle Time (s): 69
	PRC Over All Lanes (%):	-33.5	Total Delay Over All Lanes(pcuHr):	191.27	

Basic Results Summary

Scenario 2: '2031 PM SATURN' (FG20: '2031 PM SATURN', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**92.4%**	**0**	**0**	**0**	**82.2**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**92.4%**	**0**	**0**	**0**	**82.2**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	27	-	626	1937	786	79.6%	-	-	-	5.0	29.0	12.3
1/2	M40 SB Off Slip Ahead	U	C1:A		1	27	-	663	2084	846	78.4%	-	-	-	5.1	27.5	12.8
1/3	M40 SB Off Slip Ahead	U	C1:A		1	27	-	717	2084	846	84.8%	-	-	-	6.4	32.0	15.0
2/1	A41 Ahead Left	U	C2:A		1	12	-	302	1862	351	86.1%	-	-	-	5.1	60.2	8.3
2/2	A41 Ahead	U	C2:A		1	12	-	338	1995	376	89.9%	-	-	-	6.3	67.1	10.0
2/3	A41 Ahead	U	C2:A		1	12	-	335	1995	376	89.1%	-	-	-	6.0	64.9	9.7
3/1	M40 NB Off Slip Left	U	C3:A		1	9	-	76	1929	280	27.2%	-	-	-	0.7	35.1	1.5
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	9	-	287	2083:2074	254+252	56.7 : 56.7%	-	-	-	2.8	35.3	3.2
4/1	A34 Left	U	C4:A		1	50	-	1314	1936	1431	91.8%	-	-	-	7.8	21.4	25.6
4/2	A34 Left	U	C4:A		1	50	-	1423	2083	1540	92.4%	-	-	-	8.5	21.5	27.7
4/3	A34 Ahead	U	C4:A		1	50	-	1129	2083	1540	73.3%	-	-	-	3.0	9.5	13.6
4/4	A34 Ahead	U	C4:A		1	50	-	552	2083	1540	35.9%	-	-	-	0.8	5.0	4.0
5/1	M40 SB OS Circ Ahead	U	C1:B		1	30	-	583	1943	873	66.8%	-	-	-	4.1	25.5	10.4
5/2	M40 SB OS Circ Ahead	U	C1:B		1	30	-	646	2080	934	69.1%	-	-	-	5.1	28.4	11.5
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	30	-	695	2117	951	73.1%	-	-	-	3.8	19.7	9.6
6/1	A41 Circ Right Ahead	U	C2:B		1	45	-	521	1908	1272	41.0%	-	-	-	0.5	3.2	1.2

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	45	-	663	2044	1363	48.7%	-	-	-	0.5	2.6	5.7
6/3	A41 Circ Right	U	C2:B		1	45	-	717	2044	1363	52.6%	-	-	-	0.7	3.6	13.1
7/1	M40 NB OS Circ Ahead	U	C3:B		1	48	-	701	1932	1372	51.1%	-	-	-	0.6	3.0	1.2
7/2	M40 NB OS Circ Ahead	U	C3:B		1	48	-	826	2069	1469	56.2%	-	-	-	0.7	3.2	1.3
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	48	-	1052	2115	1502	70.0%	-	-	-	1.2	4.1	1.8
8/1	A34 Circ Ahead	U	C4:B		1	7	-	135	1980	230	58.8%	-	-	-	2.0	52.4	3.3
8/2	A34 Circ Right Ahead	U	C4:B		1	7	-	140	1980	230	61.0%	-	-	-	2.6	68.0	3.5
8/3	A34 Circ Right	U	C4:B		1	7	-	143	2117	245	58.3%	-	-	-	2.8	71.3	3.4

C1	PRC for Signalled Lanes (%):	6.2	Total Delay for Signalled Lanes (pcuHr):	29.51	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	0.1	Total Delay for Signalled Lanes (pcuHr):	19.04	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	28.5	Total Delay for Signalled Lanes (pcuHr):	6.10	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	-2.7	Total Delay for Signalled Lanes (pcuHr):	27.52	Cycle Time (s): 69
	PRC Over All Lanes (%):	-2.7	Total Delay Over All Lanes(pcuHr):	82.17	

Basic Results Summary

Scenario 3: '2031 AM SATURN + Dev P&R' (FG21: '2031 AM SATURN + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**120.8%**	**0**	**0**	**0**	**199.4**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**120.8%**	**0**	**0**	**0**	**199.4**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	31	-	675	1936	898	75.2%	-	-	-	4.4	23.2	12.0
1/2	M40 SB Off Slip Ahead	U	C1:A		1	31	-	751	2084	966	77.7%	-	-	-	5.0	23.7	13.6
1/3	M40 SB Off Slip Ahead	U	C1:A		1	31	-	781	2084	966	80.8%	-	-	-	5.5	25.4	14.9
2/1	A41 Ahead Left	U	C2:A		1	14	-	481	1862	405	118.8%	-	-	-	46.5	348.3	51.7
2/2	A41 Ahead	U	C2:A		1	14	-	524	1995	434	120.8%	-	-	-	54.1	371.3	59.7
2/3	A41 Ahead	U	C2:A		1	14	-	490	1995	434	113.0%	-	-	-	37.0	272.2	42.5
3/1	M40 NB Off Slip Left	U	C3:A		1	7	-	80	1929	224	35.8%	-	-	-	0.9	40.7	1.7
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	7	-	261	2086:2074	225+189	63.1 : 63.1%	-	-	-	2.9	40.5	3.4
4/1	A34 Left	U	C4:A		1	43	-	1093	1936	1235	88.5%	-	-	-	6.8	22.5	21.0
4/2	A34 Left	U	C4:A		1	43	-	1194	2083	1328	89.9%	-	-	-	7.7	23.2	23.4
4/3	A34 Ahead	U	C4:A		1	43	-	955	2083	1328	71.9%	-	-	-	3.5	13.2	13.5
4/4	A34 Ahead	U	C4:A		1	43	-	456	2083	1328	34.3%	-	-	-	1.0	7.9	4.3
5/1	M40 SB OS Circ Ahead	U	C1:B		1	26	-	504	1943	760	66.3%	-	-	-	4.5	32.0	8.3
5/2	M40 SB OS Circ Ahead	U	C1:B		1	26	-	538	2080	814	66.1%	-	-	-	4.4	29.2	9.0
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	26	-	575	2100	822	70.0%	-	-	-	3.5	21.6	8.3
6/1	A41 Circ Right Ahead	U	C2:B		1	43	-	691	1908	1217	56.8%	-	-	-	1.5	7.7	4.7

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	43	-	751	2044	1303	57.6%	-	-	-	1.3	6.4	7.0
6/3	A41 Circ Right	U	C2:B		1	43	-	781	2044	1303	59.9%	-	-	-	1.2	5.7	9.9
7/1	M40 NB OS Circ Ahead	U	C3:B		1	50	-	872	1932	1428	56.0%	-	-	-	0.9	4.2	2.0
7/2	M40 NB OS Circ Ahead	U	C3:B		1	50	-	1009	2069	1529	63.1%	-	-	-	1.3	4.8	3.0
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	50	-	1271	2119	1566	77.6%	-	-	-	2.1	6.1	3.6
8/1	A34 Circ Ahead	U	C4:B		1	14	-	108	1980	430	22.2%	-	-	-	1.3	48.2	2.0
8/2	A34 Circ Right Ahead	U	C4:B		1	14	-	114	1980	430	25.8%	-	-	-	1.1	36.7	2.3
8/3	A34 Circ Right	U	C4:B		1	14	-	119	2117	460	25.9%	-	-	-	1.1	33.3	2.5

C1	PRC for Signalled Lanes (%):	11.4	Total Delay for Signalled Lanes (pcuHr):	27.09	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	-34.2	Total Delay for Signalled Lanes (pcuHr):	141.69	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	16.0	Total Delay for Signalled Lanes (pcuHr):	8.13	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	0.1	Total Delay for Signalled Lanes (pcuHr):	22.53	Cycle Time (s): 69
	PRC Over All Lanes (%):	-34.2	Total Delay Over All Lanes(pcuHr):	199.43	

Basic Results Summary

Scenario 4: '2031 PM SATURN + Dev P&R' (FG22: '2031 PM SATURN + Dev P&R', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: M40 Junction 9	-	-	-		-	-	-	-	-	-	**92.4%**	**0**	**0**	**0**	**82.3**	-	-
M40 Jnct 9	-	-	-		-	-	-	-	-	-	**92.4%**	**0**	**0**	**0**	**82.3**	-	-
1/1	M40 SB Off Slip Ahead Left	U	C1:A		1	25	-	629	1936	730	86.2%	-	-	-	6.4	36.8	14.0
1/2	M40 SB Off Slip Ahead	U	C1:A		1	25	-	664	2084	785	84.6%	-	-	-	6.3	33.9	14.2
1/3	M40 SB Off Slip Ahead	U	C1:A		1	25	-	715	2084	785	91.1%	-	-	-	8.6	43.1	17.4
2/1	A41 Ahead Left	U	C2:A		1	13	-	312	1862	378	82.6%	-	-	-	4.5	52.0	7.9
2/2	A41 Ahead	U	C2:A		1	13	-	348	1995	405	86.0%	-	-	-	5.4	55.4	9.2
2/3	A41 Ahead	U	C2:A		1	13	-	345	1995	405	85.2%	-	-	-	5.2	54.2	9.0
3/1	M40 NB Off Slip Left	U	C3:A		1	9	-	94	1929	280	33.6%	-	-	-	0.9	36.2	1.9
3/2+3/3	M40 NB Off Slip Ahead Left	U	C3:A		1	9	-	269	2081:2074	200+260	58.5 : 58.5%	-	-	-	2.7	36.4	3.4
4/1	A34 Left	U	C4:A		1	50	-	1314	1936	1431	91.8%	-	-	-	7.8	21.4	25.6
4/2	A34 Left	U	C4:A		1	50	-	1423	2083	1540	92.4%	-	-	-	8.5	21.5	27.7
4/3	A34 Ahead	U	C4:A		1	50	-	1137	2083	1540	73.8%	-	-	-	3.0	9.6	13.7
4/4	A34 Ahead	U	C4:A		1	50	-	544	2083	1540	35.3%	-	-	-	0.8	5.0	3.9
5/1	M40 SB OS Circ Ahead	U	C1:B		1	32	-	583	1943	929	62.7%	-	-	-	3.6	22.1	10.4
5/2	M40 SB OS Circ Ahead	U	C1:B		1	32	-	645	2080	995	64.8%	-	-	-	4.4	24.4	12.8
5/3	M40 SB OS Circ Right Ahead	U	C1:B		1	32	-	696	2117	1012	68.7%	-	-	-	4.4	22.6	11.4
6/1	A41 Circ Right Ahead	U	C2:B		1	44	-	522	1908	1244	41.9%	-	-	-	0.6	3.8	1.1

Basic Results Summary

6/2	A41 Circ Right	U	C2:B		1	44	-	664	2044	1333	49.8%	-	-	-	0.5	2.7	6.3
6/3	A41 Circ Right	U	C2:B		1	44	-	715	2044	1333	53.6%	-	-	-	0.7	3.7	13.7
7/1	M40 NB OS Circ Ahead	U	C3:B		1	48	-	710	1932	1372	51.7%	-	-	-	0.6	3.3	1.0
7/2	M40 NB OS Circ Ahead	U	C3:B		1	48	-	838	2069	1469	57.0%	-	-	-	0.8	3.5	1.3
7/3	M40 NB OS Circ Right Ahead	U	C3:B		1	48	-	1060	2114	1501	70.6%	-	-	-	1.3	4.4	1.5
8/1	A34 Circ Ahead	U	C4:B		1	7	-	144	1980	230	62.7%	-	-	-	2.7	66.3	3.6
8/2	A34 Circ Right Ahead	U	C4:B		1	7	-	147	1980	230	64.0%	-	-	-	1.7	41.5	3.3
8/3	A34 Circ Right	U	C4:B		1	7	-	152	2117	245	61.9%	-	-	-	1.0	23.8	2.0

C1	PRC for Signalled Lanes (%):	-1.2	Total Delay for Signalled Lanes (pcuHr):	33.54	Cycle Time (s): 69
C2	PRC for Signalled Lanes (%):	4.7	Total Delay for Signalled Lanes (pcuHr):	16.85	Cycle Time (s): 69
C3	PRC for Signalled Lanes (%):	27.5	Total Delay for Signalled Lanes (pcuHr):	6.42	Cycle Time (s): 69
C4	PRC for Signalled Lanes (%):	-2.7	Total Delay for Signalled Lanes (pcuHr):	25.47	Cycle Time (s): 69
	PRC Over All Lanes (%):	-2.7	Total Delay Over All Lanes(pcuHr):	82.28	

Appendix V. A41 / Oxford Road LinSig Results (Sensitivity 1)

Table 33. A41 / Oxford Road Proposed Highway Scheme

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
2019 Opening Year + Committed						
Oxford Road / Pingle Drive						
Oxford Road NB Ahead	35.7%	2.4	0.9	42.3%	2.8	1.5
Oxford Road NB Ahead	12.0%	2.7	0.7	18.8%	5.9	4.0
Oxford Road NB Ahead	43.7%	25.1	4.4	22.9%	33.8	1.9
Pingle Drive Left	22.0%	30.2	1.8	46.3%	34.7	4.3
Pingle Drive Right	39.3%	55.5	1.9	44.2%	46.5	3.3
Oxford Road SB Left	76.5%	17.1	15.7	73.0%	12.0	9.3
Oxford Road SB Ahead	56.2%	15.3	11.3	39.4%	12.3	6.8
Oxford Road SB Ahead	28.1%	1.3	0.2	31.0%	1.3	0.2
Oxford Road Exit	12.2%	1.0	0.1	18.9%	1.1	0.1
Oxford Road Exit	24.6%	1.2	0.2	36.9%	1.5	0.3
Pingle Exit Lane	9.0%	0.9	0.0	3.5%	0.9	0.0
Pingle Exit Lane	40.4%	11.8	0.6	26.9%	14.7	0.3
Right turn lane Right	47.9%	13.9	0.8	27.7%	14.7	0.3
ESSO Roundabout						
Oxford Road Left Ahead	111.8%	235.3	129.1	83.5%	27.1	16.3
Oxford Road Right	64.7%	17.0	8.8	76.4%	24.3	13.0
Central Link Ahead	118.4%	365.2	46.1	104.0%	164.2	26.3
Central Link Ahead	118.7%	368.9	46.5	104.2%	167.5	26.7
A41 Eastbound Ped Crossing Ahead	96.8%	58.1	31.9	103.5%	126.8	45.2
A41 Eastbound Ped Crossing Ahead	97.7%	57.7	34.8	104.1%	129.9	50.2
Services Entry Ahead Left	10.4%	6.5	0.2	9.4%	6.8	0.3
Oxford Road SB Entry Left	119.1%	350.1	77.2	98.0%	103.4	17.4
Oxford Road SB Entry Ahead	64.7%	24.5	9.8	96.8%	88.8	18.0
Oxford Road SB Entry Ahead	63.4%	25.0	9.5	96.8%	89.6	17.9
Internal EB Ahead Right	82.4%	43.7	18.8	59.4%	33.2	14.7
Internal EB Right	1.3%	18.2	0.2	1.1%	13.6	0.1
Internal Southbound Link Ahead	40.8%	9.2	2.0	47.4%	30.6	6.4
Internal Southbound Link Ahead	40.5%	9.2	3.2	48.1%	30.8	6.5

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
Internal Westbound Ahead Right	12.1%	9.5	0.7	11.8%	9.1	0.7
Internal Westbound Right	28.8%	9.7	0.9	28.4%	8.1	1.0
Internal Northbound Ahead	27.4%	1.2	0.2	30.2%	1.3	0.2
Internal Northbound Ahead	8.2%	0.9	0.0	12.1%	1.0	0.1
Internal Northbound Right	48.6%	1.7	11.8	33.8%	1.3	0.3
A41 westbound Left	115.2%	304.6	70.5	101.6%	112.0	36.2
A41 westbound Left	115.4%	307.5	76.3	96.3%	66.6	27.1
A41 westbound Ahead	45.8%	30.0	6.4	43.8%	24.9	6.9
Total Delay (pcuHr)	**446.59**			**216.19**		
PRC (%)	**-32.4**			**-15.8**		
Cycle Time (sec)	**90/90**					
2019 Opening Year + Committed + P&R						
Oxford Road / Pingle Drive						
Oxford Road NB Ahead	35.4%	2.4	0.9	43.8%	2.9	1.5
Oxford Road NB Ahead	12.4%	2.6	0.7	19.9%	5.4	4.0
Oxford Road NB Ahead	44.4%	25.3	4.5	22.9%	33.3	1.9
Pingle Drive Left	22.2%	30.3	1.8	46.5%	34.7	4.3
Pingle Drive Right	39.3%	55.5	1.9	44.2%	46.5	3.3
Oxford Road SB Left	72.6%	16.6	14.8	73.2%	12.0	9.3
Oxford Road SB Ahead	57.7%	15.5	11.8	39.4%	12.3	6.8
Oxford Road SB Ahead	27.9%	1.3	0.2	32.0%	1.4	0.2
Oxford Road Exit	12.4%	1.0	0.1	19.7%	1.1	0.1
Oxford Road Exit	19.8%	1.1	0.1	36.9%	1.5	0.3
Pingle Exit Lane	9.2%	0.9	0.1	3.5%	0.9	0.0
Pingle Exit Lane	39.4%	11.6	0.6	26.9%	14.5	0.3
Right turn lane Right	48.7%	14.1	0.8	27.7%	14.2	0.3
ESSO Roundabout						
Oxford Road Left Ahead	112.1%	240.5	131.4	85.3%	27.3	17.0
Oxford Road Right	64.9%	17.1	8.8	75.2%	23.2	12.7
Central Link Ahead	118.9%	372.9	47.1	99.0%	105.6	19.7
Central Link Ahead	118.9%	372.9	47.0	99.2%	107.6	20.0
A41 Eastbound Ped Crossing Ahead	96.8%	57.3	31.7	103.5%	124.6	46.5
A41 Eastbound Ped Crossing Ahead	97.4%	56.3	34.3	103.9%	126.9	50.5
Services Entry Ahead Left	10.3%	6.5	0.2	9.6%	7.0	0.3
Oxford Road SB Entry Left	119.1%	350.0	77.2	97.7%	101.7	17.1

Arm	Weekday AM Peak			Weekday PM Peak		
	DoS %	Delay	Queue	DoS %	Delay	Queue
Oxford Road SB Entry Ahead	66.7%	25.4	10.1	97.4%	93.2	18.7
Oxford Road SB Entry Ahead	66.6%	25.5	10.0	97.0%	91.2	18.1
Internal EB Ahead Right	81.9%	43.4	18.6	61.9%	34.3	15.0
Internal EB Right	1.3%	18.3	0.2	1.2%	14.1	0.1
Internal Southbound Link Ahead	42.1%	9.4	2.1	46.6%	30.0	6.4
Internal Southbound Link Ahead	42.6%	9.8	3.8	47.1%	30.1	6.6
Internal Westbound Ahead Right	12.2%	9.5	0.7	12.2%	9.3	0.7
Internal Westbound Right	28.7%	9.7	0.9	29.0%	8.4	1.0
Internal Northbound Ahead	27.1%	1.2	0.2	31.2%	1.3	0.2
Internal Northbound Ahead	8.4%	0.9	0.0	12.8%	1.0	0.1
Internal Northbound Right	48.4%	1.7	10.1	34.2%	1.4	0.3
A41 westbound Left	116.3%	320.6	74.4	104.2%	148.2	43.4
A41 westbound Left	116.4%	320.3	79.6	99.8%	91.2	32.5
A41 westbound Ahead	45.8%	30.0	6.4	45.1%	25.9	7.0
Total Delay (pcuHr)	**456.91**			**216.45**		
PRC (%)	**-32.4**			**-15.8**		
Cycle Time (sec)	**90/90**					

Basic Results Summary

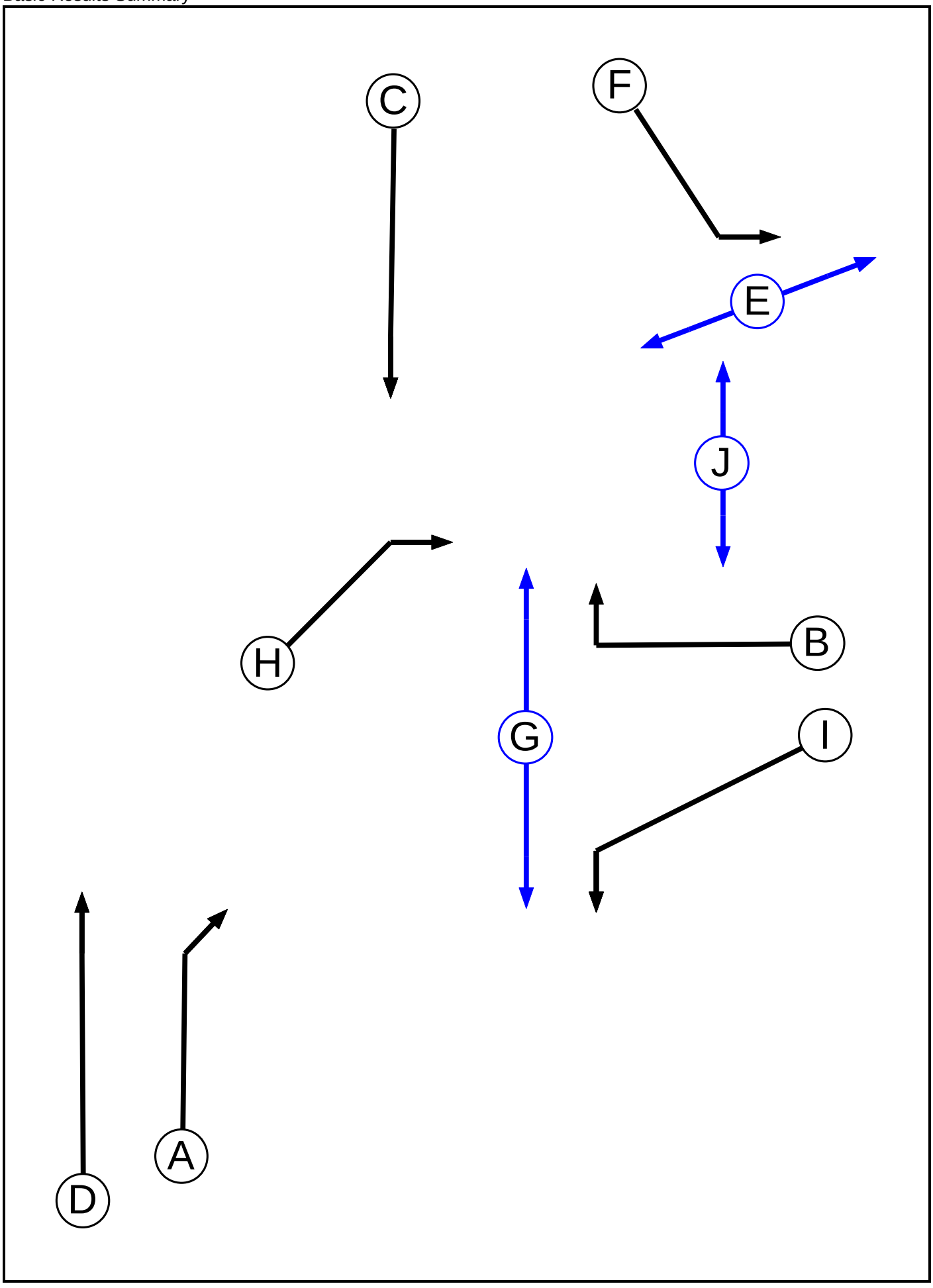
User and Project Details

Project:	**Bicester Park and Ride**
Title:	A41 - Oxford Road 2031 Proposed Layout
Location:	
File name:	A41 - Oxford Road 2031 - App V.lsg3x
Author:	Nigel Pettitt
Company:	Atkins
Address:	
Notes:	

Basic Results Summary

C1
Phase Diagram

Basic Results Summary



Basic Results Summary

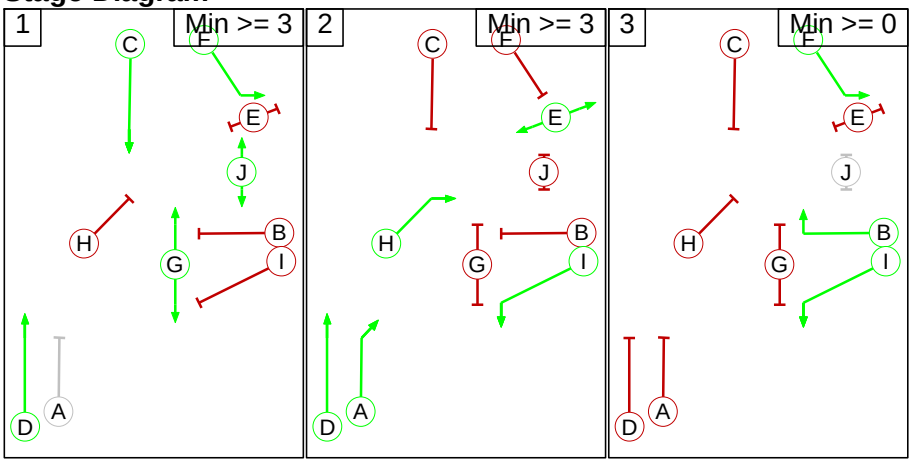
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		5	-	-	-	-	-	-	-	-
B	8		5	9	-	-	5	-	-	-
C	-	7		-	-	-	-	5	8	-
D	-	5	-		-	-	-	-	-	-
E	-	-	-	-		8	-	-	-	-
F	-	-	-	-	5		-	5	-	-
G	-	13	-	-	-	-		-	13	-
H	-	-	5	-	-	8	-		-	8
I	-	-	5	-	-	-	5	-		-
J	-	-	-	-	-	-	-	9	-	

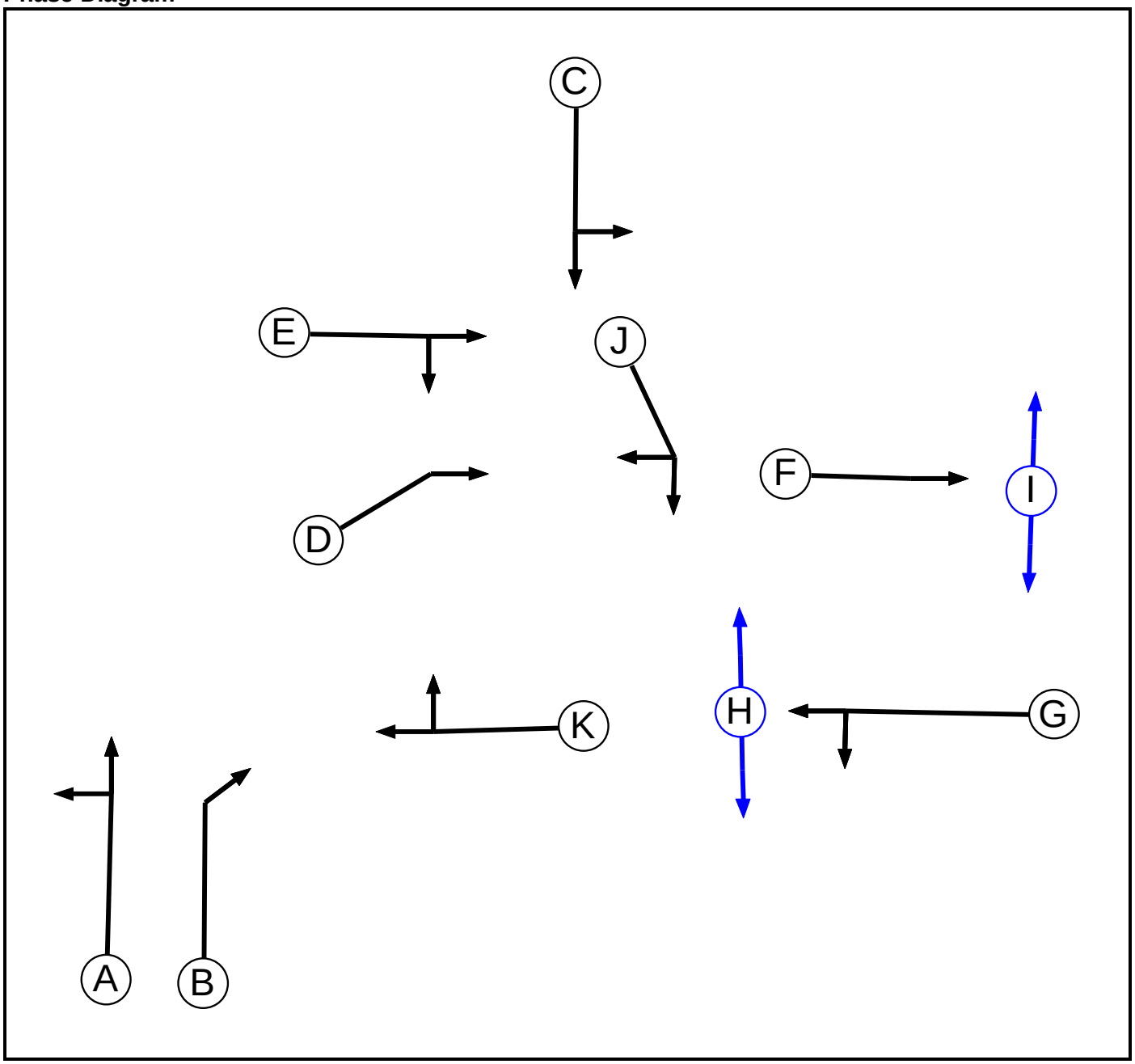
Phases in Stage

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

Stage Diagram



C2
Phase Diagram



Basic Results Summary

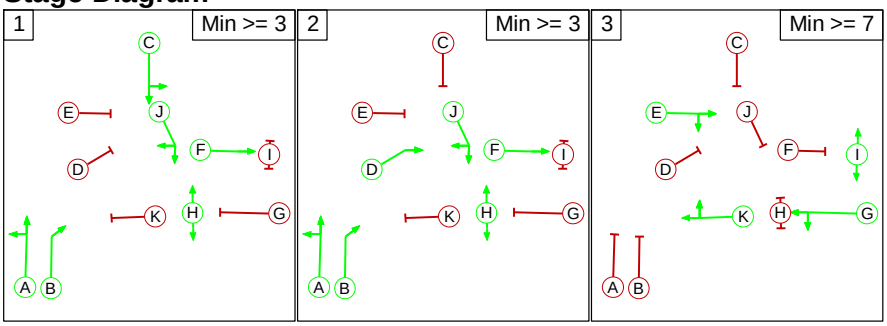
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K
A		-	-	-	-	-	-	-	-	-	5
B	-		-	-	-	-	-	-	-	-	5
C	-	-		5	5	-	-	-	-	-	-
D	-	-	5		5	-	-	-	-	-	-
E	-	-	5	5		-	-	-	-	-	-
F	-	-	-	-	-		-	-	5	-	-
G	-	-	-	-	-	-		5	-	5	-
H	-	-	-	-	-	-	12		-	-	-
I	-	-	-	-	-	9	-	-		-	-
J	-	-	-	-	-	-	5	-	-		-
K	6	5	-	-	-	-	-	-	-	-	

Phases in Stage

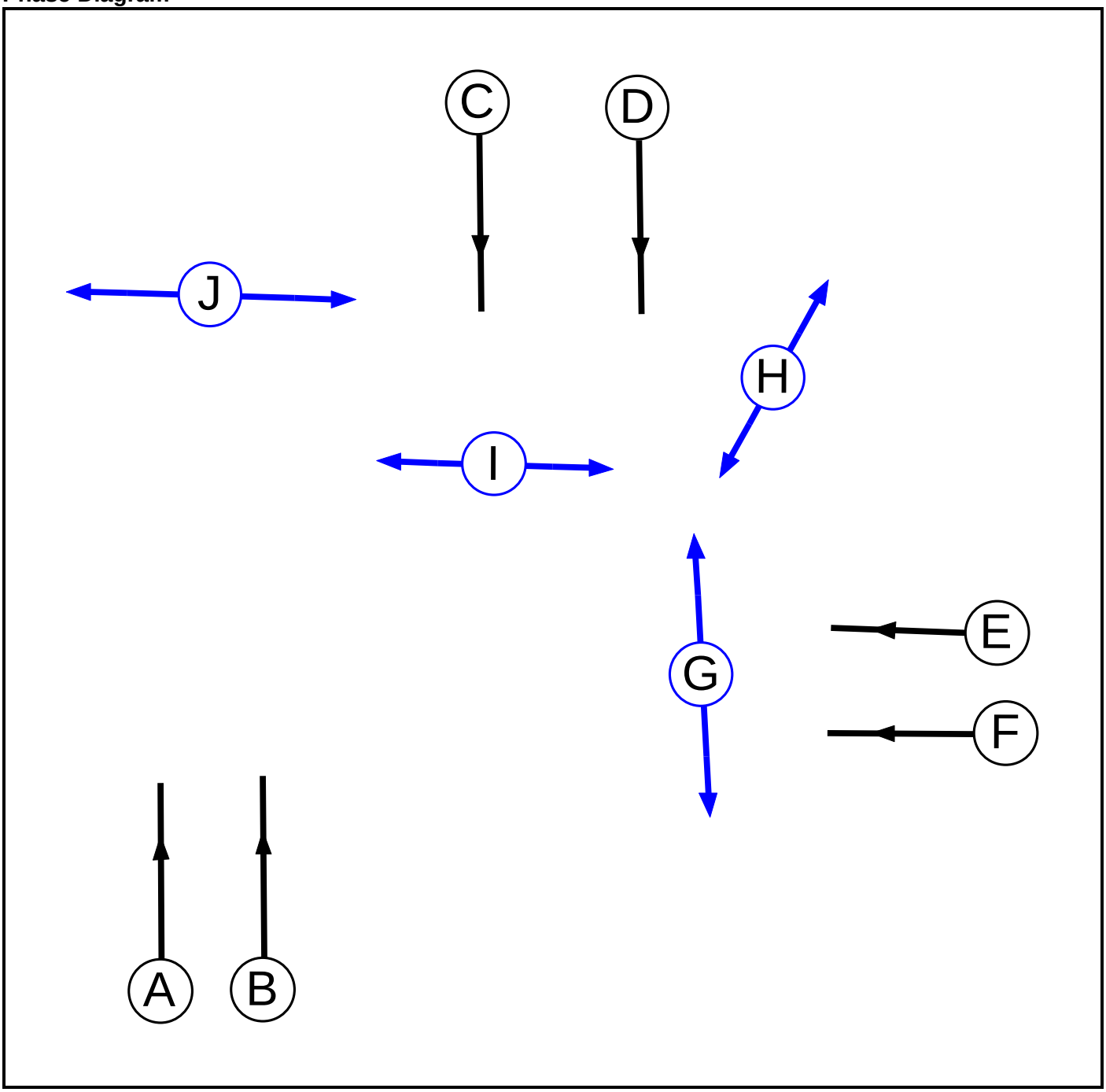
Stage No.	Phases in Stage
1	A B C F H J
2	A B D F H J
3	E G I K

Stage Diagram



C3

Phase Diagram



Basic Results Summary

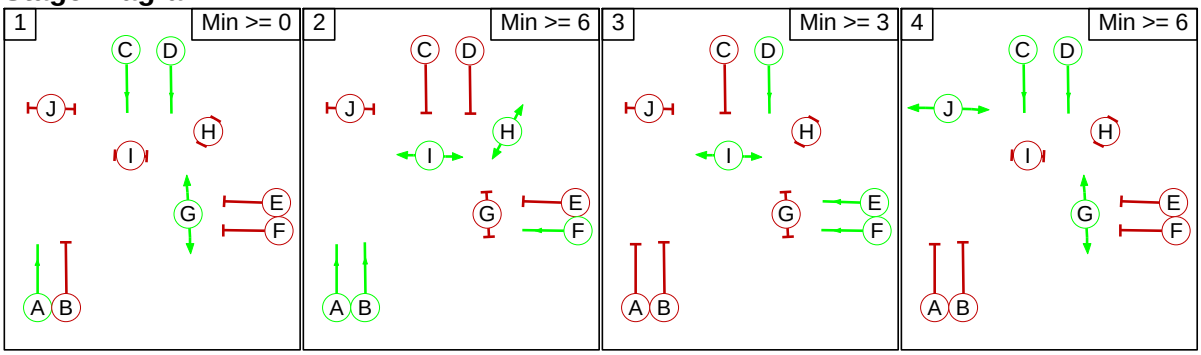
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	5	-	-	-	-	8
B	-		5	6	5	-	8	-	-	-
C	-	5		-	5	6	-	-	5	-
D	-	5	-		-	-	-	5	-	-
E	7	6	5	-		-	10	-	-	10
F	-	-	5	-	-		5	-	-	-
G	-	16	-	-	16	16		-	-	-
H	-	-	-	9	-	-	-		-	-
I	-	-	9	-	-	-	-	-		-
J	11	-	-	-	11	-	-	-	-	

Phases in Stage

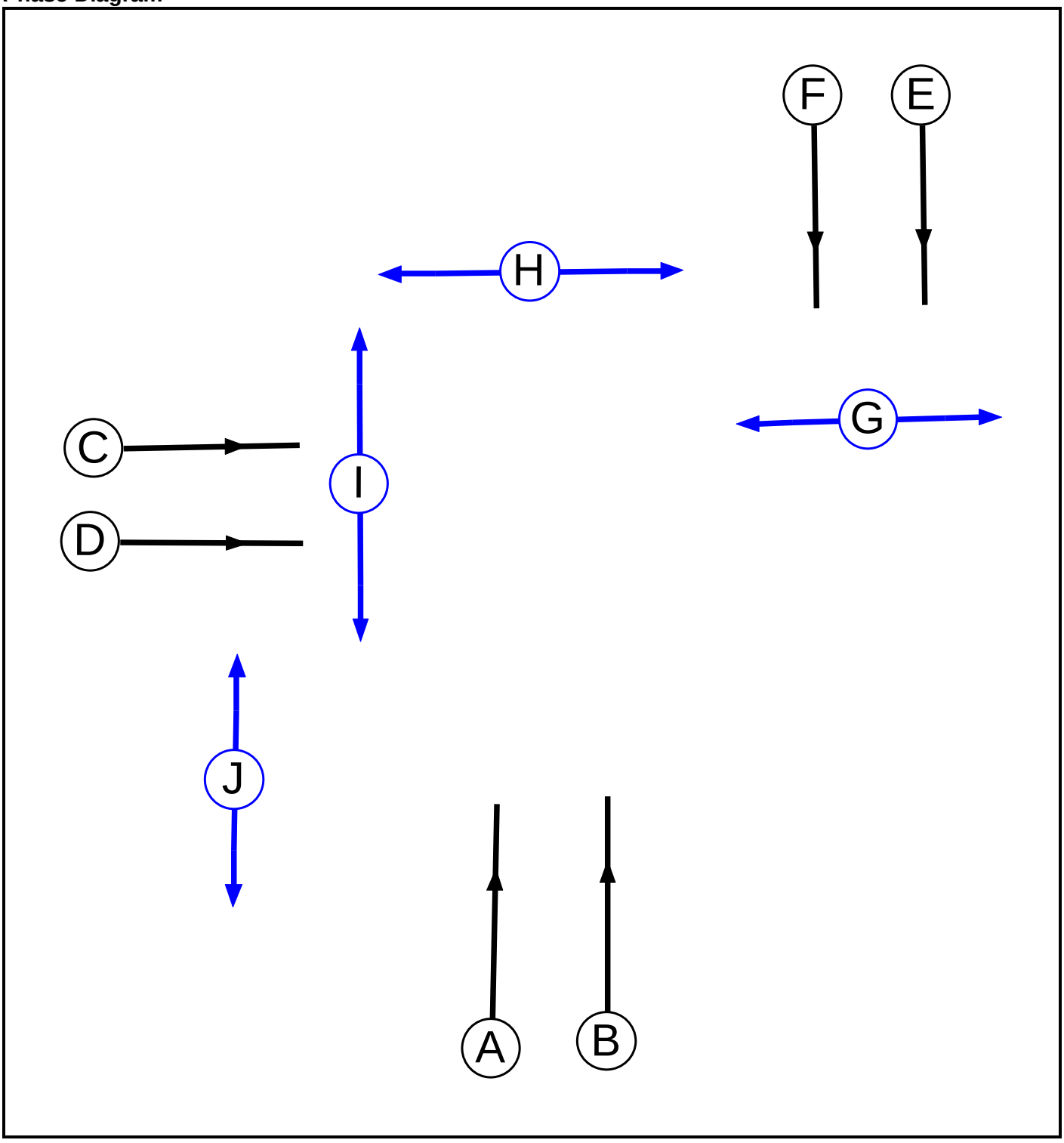
Stage No.	Phases in Stage
1	A C D G
2	A B F H I
3	D E F I
4	C D G J

Stage Diagram



C4

Phase Diagram



Basic Results Summary

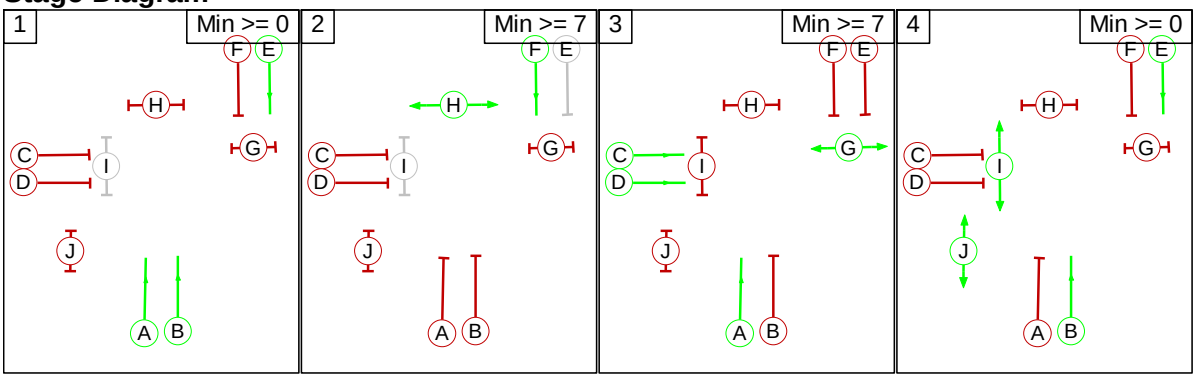
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	-	5	-	-	-	5
B	-		6	5	-	5	-	8	-	-
C	-	5		-	-	-	-	6	5	-
D	-	5	-		7	6	-	-	5	-
E	-	-	-	5		-	5	-	-	-
F	8	6	-	5	-		10	-	-	7
G	-	-	-	-	15	15		-	-	-
H	-	10	10	-	-	-	-		-	-
I	-	-	7	7	-	-	-	-		-
J	7	-	-	-	-	7	-	-	-	

Phases in Stage

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

Stage Diagram



Basic Results Summary

Network Results

Scenario 1: '2031 Base AM Peak' (FG1: '2031 SATURN Flows AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**119.1%**	**40**	**0**	**0**	**446.6**	-	-
J1: Pingle Lane/Oxford Road	-	-	-		-	-	-	-	-	-	**76.5%**	**0**	**0**	**0**	**14.6**	-	-
1/1	Oxford Road NB Ahead	U	C1:D		1	69	-	602	1965	1528	35.7%	-	-	-	0.4	2.4	0.9
1/2	Oxford Road NB Ahead	U	C1:D		1	69	-	189	1965	1528	12.0%	-	-	-	0.1	2.7	0.7
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	20	-	379	1884:1884	801	43.7%	-	-	-	2.4	25.1	4.4
2/2+2/1	Pingle Drive Left	U	C1:I		1	21	-	144	1940:1940	653	22.0%	-	-	-	1.2	30.2	1.8
2/3	Pingle Drive Right	U	C1:B		1	7	-	69	1973	175	39.3%	-	-	-	1.1	55.5	1.9
3/1+3/2	Oxford Road SB Left Ahead	U	C1:F C1:C		1	56:51	-	1008	1908:2105	1318	76.5%	-	-	-	4.8	17.1	15.7
3/3	Oxford Road SB Ahead	U	C1:C		1	51	-	684	2105	1216	56.2%	-	-	-	2.9	15.3	11.3
4/1	Oxford Road Exit	U	-		-	-	-	602	1940	1940	28.1%	-	-	-	0.2	1.3	0.2
4/2	Oxford Road Exit	U	-		-	-	-	258	2080	2080	12.2%	-	-	-	0.1	1.0	0.1
5/1	Pinge Exit Lane	U	-		-	-	-	494	1965	1965	24.6%	-	-	-	0.2	1.2	0.2
5/2	Pinge Exit Lane	U	-		-	-	-	208	2105	2105	9.0%	-	-	-	0.0	0.9	0.0
6/1	Right turn lane Right	U	C1:H		1	17	-	171	1980	396	40.4%	-	-	-	0.5	11.8	0.6
6/2	Right turn lane Right	U	C1:H		1	17	-	208	1980	396	47.9%	-	-	-	0.7	13.9	0.8
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	17	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	C1:G		1	51	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	56	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.1%**	**40**	**0**	**0**	**431.9**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	45	-	1598	2155:2011	1430	111.8%	-	-	-	104.4	235.3	129.1
1/3+1/4	Oxford Road Right	U	C2:B		1	46	-	810	2020:2020	1253	64.7%	-	-	-	3.8	17.0	8.8
2/1	Central Link Ahead	U	C2:D		1	14	-	405	2053	342	118.4%	-	-	-	41.1	365.2	46.1
2/2	Central Link Ahead	U	C2:D		1	14	-	405	2048	341	118.7%	-	-	-	41.5	368.9	46.5
3/1	Ped Crossing Ahead	U	C2:F		1	42	-	1067	1990	951	96.8%	-	-	-	14.9	58.1	31.9
3/2	Ped Crossing Ahead	U	C2:F		1	42	-	1160	2130	1018	97.7%	-	-	-	15.9	57.7	34.8
4/1	Services Entry Left Ahead	O	-		-	-	-	40	2074	386	10.4%	40	0	0	0.1	6.5	0.2
6/1	Oxford Road SB Entry Left	U	C2:C		1	27	-	679	1832	570	119.1%	-	-	-	66.0	350.1	77.2
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	27	-	424	2105	655	64.7%	-	-	-	2.9	24.5	9.8
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	27	-	410	2080	647	63.4%	-	-	-	2.8	25.0	9.5
7/1	Internal EB Ahead Right	U	C2:E		1	34	-	738	2065	803	82.4%	-	-	-	8.0	43.7	18.8
7/2	Internal EB Right	U	C2:E		1	34	-	10	1936	753	1.3%	-	-	-	0.1	18.2	0.2
8/1	Ahead	U	C2:J		1	46	-	424	1990	1039	40.8%	-	-	-	1.1	9.2	2.0
8/2	Right Ahead	U	C2:J		1	46	-	420	1984	1036	40.5%	-	-	-	1.1	9.2	3.2
9/1	Ahead Right	U	C2:K		1	34	-	96	2046	796	12.1%	-	-	-	0.3	9.5	0.7
9/2	Right	U	C2:K		1	34	-	224	1997	777	28.8%	-	-	-	0.6	9.7	0.9
10/1	Ahead	U	-		-	-	-	601	1990	1990	27.4%	-	-	-	0.2	1.2	0.2

Basic Results Summary

10/2	Ahead	U	-		-	-	-	180	2130	2130	8.2%	-	-	-	0.0	0.9	0.0
10/3	Ahead Right	U	-		-	-	-	1097	2040	2040	48.6%	-	-	-	0.5	1.7	11.8
11/1	A41 westbound Left	U	C2:G		1	27	-	704	1965	611	115.2%	-	-	-	59.6	304.6	70.5
11/2	A41 westbound Left	U	C2:G		1	27	-	756	2105	655	115.4%	-	-	-	64.6	307.5	76.3
11/3	A41 westbound Ahead	U	C2:G		1	27	-	300	2105	655	45.8%	-	-	-	2.5	30.0	6.4
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	17.6	Total Delay for Signalled Lanes (pcuHr):	14.16
C2	PRC for Signalled Lanes (%):	-32.4	Total Delay for Signalled Lanes (pcuHr):	431.16
C3	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
C4	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
	PRC Over All Lanes (%):	-32.4	Total Delay Over All Lanes(pcuHr):	446.59

Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90

Basic Results Summary

Scenario 2: '2031 Base PM Peak' (FG2: '2031 SATURN Flows PM Peak', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.2%**	**40**	**0**	**0**	**216.2**	**-**	**-**
J1: Pingle Lane/Oxford Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.0%**	**0**	**0**	**0**	**13.1**	**-**	**-**
1/1	Oxford Road NB Ahead	U	C1:D		1	64	-	601	1965	1419	42.3%	-	-	-	0.5	2.8	1.5
1/2	Oxford Road NB Ahead	U	C1:D		1	64	-	267	1965	1419	18.8%	-	-	-	0.4	5.9	4.0
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	14	-	144	1884:1884	628	22.9%	-	-	-	1.4	33.8	1.9
2/2+2/1	Pingle Drive Left	U	C1:I		1	20	-	259	1940:1940	559	46.3%	-	-	-	2.5	34.7	4.3
2/3	Pingle Drive Right	U	C1:B		1	12	-	126	1973	285	44.2%	-	-	-	1.6	46.5	3.3
3/1+3/2	Oxford Road SB Left Ahead	U	C1:F C1:C		1	62:52	-	1141	1908:2105	1563	73.0%	-	-	-	3.8	12.0	9.3
3/3	Oxford Road SB Ahead	U	C1:C		1	52	-	488	2105	1240	39.4%	-	-	-	1.7	12.3	6.8
4/1	Oxford Road Exit	U	-		-	-	-	601	1940	1940	31.0%	-	-	-	0.2	1.3	0.2
4/2	Oxford Road Exit	U	-		-	-	-	393	2080	2080	18.9%	-	-	-	0.1	1.1	0.1
5/1	Pinge Exit Lane	U	-		-	-	-	725	1965	1965	36.9%	-	-	-	0.3	1.5	0.3
5/2	Pinge Exit Lane	U	-		-	-	-	73	2105	2105	3.5%	-	-	-	0.0	0.9	0.0
6/1	Right turn lane Right	U	C1:H		1	11	-	71	1980	264	26.9%	-	-	-	0.3	14.7	0.3
6/2	Right turn lane Right	U	C1:H		1	11	-	73	1980	264	27.7%	-	-	-	0.3	14.7	0.3
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	11	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	C1:G		1	52	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	57	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.2%**	**40**	**0**	**0**	**203.1**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	39	-	1213	2155:2011	1452	83.5%	-	-	-	9.1	27.1	16.3
1/3+1/4	Oxford Road Right	U	C2:B		1	40	-	854	2020:2020	1118	76.4%	-	-	-	5.8	24.3	13.0
2/1	Central Link Ahead	U	C2:D		1	17	-	427	2053	411	104.0%	-	-	-	19.5	164.2	26.3
2/2	Central Link Ahead	U	C2:D		1	17	-	427	2048	410	104.2%	-	-	-	19.9	167.5	26.7
3/1	Ped Crossing Ahead	U	C2:F		1	36	-	863	1990	818	103.5%	-	-	-	29.8	126.8	45.2
3/2	Ped Crossing Ahead	U	C2:F		1	36	-	929	2130	876	104.1%	-	-	-	32.9	129.9	50.2
4/1	Services Entry Left Ahead	O	-		-	-	-	40	2074	423	9.4%	40	0	0	0.1	6.8	0.3
6/1	Oxford Road SB Entry Left	U	C2:C		1	18	-	379	1832	387	98.0%	-	-	-	10.9	103.4	17.4
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	18	-	430	2105	444	96.8%	-	-	-	10.6	88.8	18.0
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	18	-	425	2080	439	96.8%	-	-	-	10.6	89.6	17.9
7/1	Internal EB Ahead Right	U	C2:E		1	40	-	559	2065	941	59.4%	-	-	-	5.2	33.2	14.7
7/2	Internal EB Right	U	C2:E		1	40	-	10	1936	882	1.1%	-	-	-	0.0	13.6	0.1
8/1	Ahead	U	C2:J		1	40	-	430	1990	907	47.4%	-	-	-	3.7	30.6	6.4
8/2	Right Ahead	U	C2:J		1	40	-	435	1984	904	48.1%	-	-	-	3.7	30.8	6.5
9/1	Ahead Right	U	C2:K		1	40	-	110	2041	930	11.8%	-	-	-	0.3	9.1	0.7
9/2	Right	U	C2:K		1	40	-	258	1997	910	28.4%	-	-	-	0.6	8.1	1.0
10/1	Ahead	U	-		-	-	-	601	1990	1990	30.2%	-	-	-	0.2	1.3	0.2

Basic Results Summary

10/2	Ahead	U	-		-	-	-	257	2130	2130	12.1%	-	-	-	0.1	1.0	0.1
10/3	Ahead Right	U	-		-	-	-	683	2022	2022	33.8%	-	-	-	0.3	1.3	0.3
11/1	A41 westbound Left	U	C2:G		1	33	-	754	1965	742	101.6%	-	-	-	23.5	112.0	36.2
11/2	A41 westbound Left	U	C2:G		1	33	-	766	2105	795	96.3%	-	-	-	14.2	66.6	27.1
11/3	A41 westbound Ahead	U	C2:G		1	33	-	348	2105	795	43.8%	-	-	-	2.4	24.9	6.9
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	40	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	40	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	23.3	Total Delay for Signalled Lanes (pcuHr):	12.43
C2	PRC for Signalled Lanes (%):	-15.8	Total Delay for Signalled Lanes (pcuHr):	202.49
C3	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
C4	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
	PRC Over All Lanes (%):	-15.8	Total Delay Over All Lanes(pcuHr):	216.19

Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90

Basic Results Summary

Scenario 3: '2031 Base + P&R AM Peak' (FG3: '2031 SATURN Flows + P&R AM', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.1%**	**40**	**0**	**0**	**456.9**	**-**	**-**
J1: Pingle Lane/Oxford Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.6%**	**0**	**0**	**0**	**14.3**	**-**	**-**
1/1	Oxford Road NB Ahead	U	C1:D		1	69	-	598	1965	1528	35.4%	-	-	-	0.4	2.4	0.9
1/2	Oxford Road NB Ahead	U	C1:D		1	69	-	195	1965	1528	12.4%	-	-	-	0.1	2.6	0.7
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	20	-	379	1884:1884	786	44.4%	-	-	-	2.5	25.3	4.5
2/2+2/1	Pingle Drive Left	U	C1:I		1	21	-	144	1940:1940	649	22.2%	-	-	-	1.2	30.3	1.8
2/3	Pingle Drive Right	U	C1:B		1	7	-	69	1973	175	39.3%	-	-	-	1.1	55.5	1.9
3/1+3/2	Oxford Road SB Left Ahead	U	C1:F C1:C		1	56:51	-	933	1908:2105	1285	72.6%	-	-	-	4.3	16.6	14.8
3/3	Oxford Road SB Ahead	U	C1:C		1	51	-	702	2105	1216	57.7%	-	-	-	3.0	15.5	11.8
4/1	Oxford Road Exit	U	-		-	-	-	598	1940	1940	27.9%	-	-	-	0.2	1.3	0.2
4/2	Oxford Road Exit	U	-		-	-	-	264	2080	2080	12.4%	-	-	-	0.1	1.0	0.1
5/1	Pinge Exit Lane	U	-		-	-	-	399	1965	1965	19.8%	-	-	-	0.1	1.1	0.1
5/2	Pinge Exit Lane	U	-		-	-	-	212	2105	2105	9.2%	-	-	-	0.1	0.9	0.1
6/1	Right turn lane Right	U	C1:H		1	17	-	167	1980	396	39.4%	-	-	-	0.5	11.6	0.6
6/2	Right turn lane Right	U	C1:H		1	17	-	212	1980	396	48.7%	-	-	-	0.8	14.1	0.8
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	17	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	C1:G		1	51	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	56	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**119.1%**	**40**	**0**	**0**	**442.7**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	45	-	1598	2155:2011	1425	112.1%	-	-	-	106.8	240.5	131.4
1/3+1/4	Oxford Road Right	U	C2:B		1	46	-	813	2020:2020	1252	64.9%	-	-	-	3.9	17.1	8.8
2/1	Central Link Ahead	U	C2:D		1	14	-	407	2053	342	118.9%	-	-	-	42.2	372.9	47.1
2/2	Central Link Ahead	U	C2:D		1	14	-	406	2048	341	118.9%	-	-	-	42.1	372.9	47.0
3/1	Ped Crossing Ahead	U	C2:F		1	42	-	1070	1990	951	96.8%	-	-	-	14.6	57.3	31.7
3/2	Ped Crossing Ahead	U	C2:F		1	42	-	1158	2130	1018	97.4%	-	-	-	15.5	56.3	34.3
4/1	Services Entry Left Ahead	O	-		-	-	-	40	2074	387	10.3%	40	0	0	0.1	6.5	0.2
6/1	Oxford Road SB Entry Left	U	C2:C		1	27	-	679	1832	570	119.1%	-	-	-	66.0	350.0	77.2
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	27	-	437	2105	655	66.7%	-	-	-	3.1	25.4	10.1
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	27	-	431	2080	647	66.6%	-	-	-	3.1	25.5	10.0
7/1	Internal EB Ahead Right	U	C2:E		1	34	-	736	2065	803	81.9%	-	-	-	7.9	43.4	18.6
7/2	Internal EB Right	U	C2:E		1	34	-	10	1936	753	1.3%	-	-	-	0.1	18.3	0.2
8/1	Ahead	U	C2:J		1	46	-	437	1990	1039	42.1%	-	-	-	1.1	9.4	2.1
8/2	Right Ahead	U	C2:J		1	46	-	441	1984	1036	42.6%	-	-	-	1.2	9.8	3.8
9/1	Ahead Right	U	C2:K		1	34	-	97	2045	795	12.2%	-	-	-	0.3	9.5	0.7
9/2	Right	U	C2:K		1	34	-	223	1997	777	28.7%	-	-	-	0.6	9.7	0.9
10/1	Ahead	U	-		-	-	-	597	1990	1990	27.1%	-	-	-	0.2	1.2	0.2

Basic Results Summary

10/2	Ahead	U	-		-	-	-	186	2130	2130	8.4%	-	-	-	0.0	0.9	0.0
10/3	Ahead Right	U	-		-	-	-	1095	2040	2040	48.4%	-	-	-	0.5	1.7	10.1
11/1	A41 westbound Left	U	C2:G		1	27	-	711	1965	611	116.3%	-	-	-	63.3	320.6	74.4
11/2	A41 westbound Left	U	C2:G		1	27	-	762	2105	655	116.4%	-	-	-	67.8	320.3	79.6
11/3	A41 westbound Ahead	U	C2:G		1	27	-	300	2105	655	45.8%	-	-	-	2.5	30.0	6.4
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	46	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	23.9	Total Delay for Signalled Lanes (pcuHr):	13.82
C2	PRC for Signalled Lanes (%):	-32.4	Total Delay for Signalled Lanes (pcuHr):	441.89
C3	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
C4	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
	PRC Over All Lanes (%):	-32.4	Total Delay Over All Lanes(pcuHr):	456.91

Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90

Basic Results Summary

Scenario 4: '2031 Base + P&R PM Peak' (FG4: 'SATURN Flows + P&R PM Peak', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.2%**	**40**	**0**	**0**	**216.5**	**-**	**-**
J1: Pingle Lane/Oxford Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.2%**	**0**	**0**	**0**	**13.1**	**-**	**-**
1/1	Oxford Road NB Ahead	U	C1:D		1	64	-	621	1965	1419	43.8%	-	-	-	0.5	2.9	1.5
1/2	Oxford Road NB Ahead	U	C1:D		1	64	-	283	1965	1419	19.9%	-	-	-	0.4	5.4	4.0
1/3+1/4	Oxford Road NB Ahead	U	C1:A		1	14	-	144	1884:1884	628	22.9%	-	-	-	1.3	33.3	1.9
2/2+2/1	Pingle Drive Left	U	C1:I		1	20	-	259	1940:1940	557	46.5%	-	-	-	2.5	34.7	4.3
2/3	Pingle Drive Right	U	C1:B		1	12	-	126	1973	285	44.2%	-	-	-	1.6	46.5	3.3
3/1+3/2	Oxford Road SB Left Ahead	U	C1:F C1:C		1	62:52	-	1143	1908:2105	1561	73.2%	-	-	-	3.8	12.0	9.3
3/3	Oxford Road SB Ahead	U	C1:C		1	52	-	489	2105	1240	39.4%	-	-	-	1.7	12.3	6.8
4/1	Oxford Road Exit	U	-		-	-	-	621	1940	1940	32.0%	-	-	-	0.2	1.4	0.2
4/2	Oxford Road Exit	U	-		-	-	-	409	2080	2080	19.7%	-	-	-	0.1	1.1	0.1
5/1	Pinge Exit Lane	U	-		-	-	-	725	1965	1965	36.9%	-	-	-	0.3	1.5	0.3
5/2	Pinge Exit Lane	U	-		-	-	-	73	2105	2105	3.5%	-	-	-	0.0	0.9	0.0
6/1	Right turn lane Right	U	C1:H		1	11	-	71	1980	264	26.9%	-	-	-	0.3	14.5	0.3
6/2	Right turn lane Right	U	C1:H		1	11	-	73	1980	264	27.7%	-	-	-	0.3	14.2	0.3
Ped Link: P1	Unnamed Ped Link	-	C1:E		1	11	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	C1:G		1	52	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	C1:J		1	57	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Esso Roundabout	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.2%**	**40**	**0**	**0**	**203.3**	**-**	**-**
1/2+1/1	Oxford Road Left Ahead	U	C2:A		1	40	-	1258	2155:2011	1474	85.3%	-	-	-	9.5	27.3	17.0
1/3+1/4	Oxford Road Right	U	C2:B		1	41	-	858	2020:2020	1141	75.2%	-	-	-	5.5	23.2	12.7
2/1	Central Link Ahead	U	C2:D		1	18	-	429	2053	433	99.0%	-	-	-	12.6	105.6	19.7
2/2	Central Link Ahead	U	C2:D		1	18	-	429	2048	432	99.2%	-	-	-	12.8	107.6	20.0
3/1	Ped Crossing Ahead	U	C2:F		1	37	-	870	1990	840	103.5%	-	-	-	30.1	124.6	46.5
3/2	Ped Crossing Ahead	U	C2:F		1	37	-	934	2130	899	103.9%	-	-	-	32.9	126.9	50.5
4/1	Services Entry Left Ahead	O	-		-	-	-	40	2074	415	9.6%	40	0	0	0.1	7.0	0.3
6/1	Oxford Road SB Entry Left	U	C2:C		1	18	-	378	1832	387	97.7%	-	-	-	10.7	101.7	17.1
6/2	Oxford Road SB Entry Ahead	U	C2:C		1	18	-	433	2105	444	97.4%	-	-	-	11.2	93.2	18.7
6/3	Oxford Road SB Entry Ahead	U	C2:C		1	18	-	426	2080	439	97.0%	-	-	-	10.8	91.2	18.1
7/1	Internal EB Ahead Right	U	C2:E		1	39	-	568	2065	918	61.9%	-	-	-	5.4	34.3	15.0
7/2	Internal EB Right	U	C2:E		1	39	-	10	1936	860	1.2%	-	-	-	0.0	14.1	0.1
8/1	Ahead	U	C2:J		1	41	-	433	1990	929	46.6%	-	-	-	3.6	30.0	6.4
8/2	Right Ahead	U	C2:J		1	41	-	436	1984	926	47.1%	-	-	-	3.6	30.1	6.6
9/1	Ahead Right	U	C2:K		1	39	-	111	2041	907	12.2%	-	-	-	0.3	9.3	0.7
9/2	Right	U	C2:K		1	39	-	257	1997	888	29.0%	-	-	-	0.6	8.4	1.0
10/1	Ahead	U	-		-	-	-	621	1990	1990	31.2%	-	-	-	0.2	1.3	0.2

Basic Results Summary

10/2	Ahead	U	-		-	-	-	273	2130	2130	12.8%	-	-	-	0.1	1.0	0.1
10/3	Ahead Right	U	-		-	-	-	692	2021	2021	34.2%	-	-	-	0.3	1.4	0.3
11/1	A41 westbound Left	U	C2:G		1	32	-	751	1965	721	104.2%	-	-	-	30.9	148.2	43.4
11/2	A41 westbound Left	U	C2:G		1	32	-	770	2105	772	99.8%	-	-	-	19.5	91.2	32.5
11/3	A41 westbound Ahead	U	C2:G		1	32	-	348	2105	772	45.1%	-	-	-	2.5	25.9	7.0
Ped Link: P1	Unnamed Ped Link	-	C2:I		1	39	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	C2:H		1	41	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	22.9	Total Delay for Signalled Lanes (pcuHr):	12.45
C2	PRC for Signalled Lanes (%):	-15.8	Total Delay for Signalled Lanes (pcuHr):	202.70
C3	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
C4	PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00
	PRC Over All Lanes (%):	-15.8	Total Delay Over All Lanes(pcuHr):	216.45

Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90
Cycle Time (s):	90

Appendix W. Vendee Drive / A41 / Site Access Junction (Sensitivity Test 2)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: A41 Vendee Drive - App W.arc8
Path: P:\GBBMA\HandT\CS\Projects\5124607.610 - Bicester P&R - CORB6289\030 - Technical\ARCADY\Result Models
Report generation date: 25/10/2013 11:42:32

» (Default Analysis Set) - 2019 FY +CD +P&R Max, AM
» (Default Analysis Set) - 2019 FY +CD +P&R Max, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2019 FY +CD +P&R Max			
Arm 1	1.75	11.58	0.63	B
Arm 2	4.69	7.36	0.82	A
Arm 3	0.28	9.06	0.21	A
Arm 4	2.84	4.77	0.72	A
Arm 5	0.01	5.14	0.01	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D27 - 2019 FY +CD +P&R Max, AM " model duration: 07:30 - 08:30
"D28 - 2019 FY +CD +P&R Max, PM" model duration: 17:00 - 18:00

Run using Junctions 8.0.2.316 at 25/10/2013 11:42:31

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	20/09/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 2019 FY +CD +P&R Max, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2019 FY +CD +P&R Max, AM	2019 FY +CD +P&R Max	AM		FLAT	07:30	08:30	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4,5			6.76	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Vendee Drive	
2	A41 North	
3	Wendlebury Road	
4	A41 South	
5	P&R Site	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.70	7.30	25.00	18.00	70.00	20.00	
2	7.00	11.00	32.00	32.00	70.00	20.00	
3	3.50	10.00	21.00	25.00	70.00	25.00	
4	7.00	12.00	25.00	35.00	70.00	25.00	
5	4.00	8.50	15.00	18.00	70.00	20.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.548	1922.479
2		(calculated)	(calculated)	0.745	3145.122
3		(calculated)	(calculated)	0.576	2105.577
4		(calculated)	(calculated)	0.745	3161.417
5		(calculated)	(calculated)	0.554	1963.494

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	544.00	100.000
2	FLAT	✓	2280.00	100.000
3	FLAT	✓	112.00	100.000
4	FLAT	✓	2138.00	100.000
5	FLAT	✓	9.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-08:30	1	544.00	544.00		
07:30-08:30	2	2280.00	2280.00		
07:30-08:30	3	112.00	112.00		
07:30-08:30	4	2138.00	2138.00		
07:30-08:30	5	9.00	9.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	83.000	5.000	433.000	23.000
	2	76.000	0.000	10.000	2111.000	83.000
	3	12.000	91.000	0.000	9.000	0.000
	4	244.000	1839.000	6.000	0.000	49.000
	5	1.000	5.000	0.000	3.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.15	0.01	0.80	0.04
	2	0.03	0.00	0.00	0.93	0.04
	3	0.11	0.81	0.00	0.08	0.00
	4	0.11	0.86	0.00	0.00	0.02
	5	0.11	0.56	0.00	0.33	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.132	1.200	1.008	1.000
	2	1.079	1.000	1.100	1.077	1.000
	3	1.000	1.049	1.000	1.600	1.000
	4	1.083	1.085	1.500	1.000	1.000
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	13.200	20.000	0.800	0.000
	2	7.900	0.000	10.000	7.700	0.000
	3	0.000	4.900	0.000	60.000	0.000
	4	8.300	8.500	50.000	0.000	0.000
	5	0.000	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.63	11.58	1.75	B
2	0.82	7.36	4.69	A
3	0.21	9.06	0.28	A
4	0.72	4.77	2.84	A
5	0.01	5.14	0.01	A

Main Results for each time segment

Main results: (07:30-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	544.00	542.25	1941.31	0.00	859.55	0.633	1.75	11.582	B
2	2280.00	2275.31	468.50	0.00	2795.87	0.815	4.69	7.363	A
3	112.00	111.72	2722.85	0.00	537.73	0.208	0.28	9.062	A
4	2138.00	2135.16	284.34	0.00	2949.72	0.725	2.84	4.772	A
5	9.00	8.99	2264.81	0.00	708.83	0.013	0.01	5.143	A

(Default Analysis Set) - 2019 FY +CD +P&R Max, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2019 FY +CD +P&R Max, PM	2019 FY +CD +P&R Max	PM		FLAT	17:00	18:00	60	60		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4,5			9.94	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Vendee Drive	
2	A41 North	
3	Wendlebury Road	
4	A41 South	
5	P&R Site	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.70	7.30	25.00	18.00	70.00	20.00	
2	7.00	11.00	32.00	32.00	70.00	20.00	
3	3.50	10.00	21.00	25.00	70.00	25.00	
4	7.00	12.00	25.00	35.00	70.00	25.00	
5	4.00	8.50	15.00	18.00	70.00	20.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.548	1922.479
2		(calculated)	(calculated)	0.745	3145.122
3		(calculated)	(calculated)	0.576	2105.577
4		(calculated)	(calculated)	0.745	3161.417
5		(calculated)	(calculated)	0.554	1963.494

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	FLAT	✓	318.00	100.000
2	FLAT	✓	2297.00	100.000
3	FLAT	✓	210.00	100.000
4	FLAT	✓	2624.00	100.000
5	FLAT	✓	194.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-18:00	1	318.00	318.00		
17:00-18:00	2	2297.00	2297.00		
17:00-18:00	3	210.00	210.00		
17:00-18:00	4	2624.00	2624.00		
17:00-18:00	5	194.00	194.00		

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	90.000	16.000	210.000	2.000
	2	125.000	0.000	11.000	2153.000	8.000
	3	34.000	159.000	0.000	17.000	0.000
	4	462.000	2137.000	20.000	0.000	5.000
	5	29.000	104.000	0.000	61.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.28	0.05	0.66	0.01
	2	0.05	0.00	0.00	0.94	0.00
	3	0.16	0.76	0.00	0.08	0.00
	4	0.18	0.81	0.01	0.00	0.00
	5	0.15	0.54	0.00	0.31	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.018	1.000	1.022	1.000	1.000
	2	1.000	1.000	1.049	1.000	1.000
	3	1.000	1.000	1.067	1.000	1.000
	4	1.038	1.056	1.000	1.000	1.013
	5	1.000	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.800	0.000	2.200	0.000	0.000
	2	0.000	0.000	4.900	0.000	0.000
	3	0.000	0.000	6.700	0.000	0.000
	4	3.800	5.600	0.000	0.000	1.300
	5	0.000	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.56	14.22	1.26	B
2	0.79	5.75	3.68	A
3	0.33	8.45	0.49	A
4	0.90	12.17	9.09	B
5	0.57	23.94	1.29	C

Main Results for each time segment

Main results: (17:00-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	318.00	316.74	2472.06	0.00	568.95	0.559	1.26	14.219	B
2	2297.00	2293.32	307.62	0.00	2915.80	0.788	3.68	5.752	A
3	210.00	209.51	2554.09	0.00	634.91	0.331	0.49	8.453	A
4	2624.00	2614.91	327.33	0.00	2917.72	0.899	9.09	12.168	B
5	194.00	192.71	2927.28	0.00	341.84	0.568	1.29	23.938	C

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