

APPENDIX L

Modelling Output

Junctions 8				
ARCADY 8 - Roundabout Module				
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2015				
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Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:04:58

« (Default Analysis Set) - Existing, AM Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM Peak				
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - Existing					
Arm A	0.72	0.05	0.42	A	72 % [Arm B]
Arm B	0.72	0.07	0.42	A	
Arm C	0.54	0.05	0.35	A	
Arm D	0.00	0.00	0.00	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak" model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak" model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:04:57

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - Existing, AM Peak

Data Errors and Warnings

No errors or warnings

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
Existing, AM Peak	Existing	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.06	A

Connaught Bridge Road/Connaught Road

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	72	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	720.00	100.000
B	ONE HOUR	✓	542.00	100.000
C	ONE HOUR	✓	624.00	100.000
D	ONE HOUR	✓	3.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	171.000	548.000	1.000
	B	152.000	0.000	390.000	0.000
	C	311.000	312.000	0.000	1.000
	D	1.000	1.000	1.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.24	0.76	0.00
	B	0.28	0.00	0.72	0.00
	C	0.50	0.50	0.00	0.00
	D	0.33	0.33	0.33	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.041	1.080	1.000
	B	1.059	1.000	1.021	1.000
	C	1.186	1.022	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	4.100	8.000	0.000
	B	5.900	0.000	2.100	0.000
	C	18.600	2.200	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.42	0.05	0.72	A	660.68	991.02	47.58	0.05	0.53	47.58	0.05
B	0.42	0.07	0.72	A	497.35	746.02	46.62	0.06	0.52	46.62	0.06
C	0.35	0.05	0.54	A	572.59	858.89	37.38	0.04	0.42	37.39	0.04
D	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Junctions 8				
ARCADY 8 - Roundabout Module				
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Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:05:30

« (Default Analysis Set) - 2023 Without Development, AM Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM Peak				
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - 2023 Without Development					
Arm A	1.45	0.08	0.59	A	26 % [Arm B]
Arm B	1.54	0.13	0.61	A	
Arm C	0.97	0.06	0.49	A	
Arm D	0.11	0.05	0.10	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak" model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak" model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:05:28

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - 2023 Without Development, AM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2023 Without Development, AM Peak	2023 Without Development	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.08	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	26	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1035.00	100.000
B	ONE HOUR	✓	656.00	100.000
C	ONE HOUR	✓	819.00	100.000
D	ONE HOUR	✓	107.00	100.000

Turning Proportions

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

		To			
From		A	B	C	D
	A	0.000	147.000	696.000	192.000
	B	188.000	0.000	468.000	0.000
	C	468.000	332.000	0.000	19.000
	D	90.000	1.000	16.000	0.000

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

		To			
From		A	B	C	D
	A	0.00	0.14	0.67	0.19
	B	0.29	0.00	0.71	0.00
	C	0.57	0.41	0.00	0.02
	D	0.84	0.01	0.15	0.00

Vehicle Mix

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

	To				
		A	B	C	D
From	A	1.000	1.000	1.063	1.000
	B	1.000	1.000	1.017	1.000
	C	1.124	1.021	1.000	1.053
	D	1.011	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	0.000	6.300	0.000
	B	0.000	0.000	1.700	0.000
	C	12.400	2.100	0.000	5.300
	D	1.100	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.59	0.08	1.45	A	949.73	1424.59	88.59	0.06	0.98	88.59	0.06
B	0.61	0.13	1.54	A	601.96	902.93	85.41	0.09	0.95	85.41	0.09
C	0.49	0.06	0.97	A	751.53	1127.29	62.31	0.06	0.69	62.31	0.06
D	0.10	0.05	0.11	A	98.19	147.28	7.10	0.05	0.08	7.10	0.05

Junctions 8				
ARCADY 8 - Roundabout Module				
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2015				
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:06:06

« (Default Analysis Set) - 2023 With Development, AM Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

AM Peak					
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - 2023 With Development					
Arm A	1.29	0.07	0.57	A	20 % [Arm B]
Arm B	2.01	0.15	0.67	A	
Arm C	1.06	0.06	0.52	A	
Arm D	0.10	0.05	0.09	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
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 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak" model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:06:05

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - 2023 With Development, AM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2023 With Development, AM Peak	2023 With Development	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.09	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	20	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	950.00	100.000
B	ONE HOUR	✓	724.26	100.000
C	ONE HOUR	✓	898.70	100.000
D	ONE HOUR	✓	107.00	100.000

Turning Proportions

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

		To			
From		A	B	C	D
	A	0.000	62.000	696.000	192.000
	B	81.260	0.000	643.000	0.000
	C	468.000	411.700	0.000	19.000
	D	90.000	1.000	16.000	0.000

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

		To			
From		A	B	C	D
	A	0.00	0.07	0.73	0.20
	B	0.11	0.00	0.89	0.00
	C	0.52	0.46	0.00	0.02
	D	0.84	0.01	0.15	0.00

Vehicle Mix

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

	To				
		A	B	C	D
From	A	1.000	1.000	1.063	1.000
	B	1.000	1.000	1.013	1.000
	C	1.124	1.017	1.000	1.053
	D	1.011	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	0.000	6.300	0.000
	B	0.000	0.000	1.300	0.000
	C	12.400	1.700	0.000	5.300
	D	1.100	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.57	0.07	1.29	A	871.73	1307.60	79.57	0.06	0.88	79.57	0.06
B	0.67	0.15	2.01	A	664.59	996.89	106.46	0.11	1.18	106.47	0.11
C	0.52	0.06	1.06	A	824.66	1237.00	67.95	0.05	0.76	67.96	0.05
D	0.09	0.05	0.10	A	98.19	147.28	7.00	0.05	0.08	7.00	0.05

Junctions 8				
ARCADY 8 - Roundabout Module				
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Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:06:32

« (Default Analysis Set) - 2025 Without Development, AM Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

AM Peak					
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - 2025 Without Development					
Arm A	1.45	0.08	0.59	A	26 % [Arm B]
Arm B	1.54	0.13	0.61	A	
Arm C	0.97	0.06	0.49	A	
Arm D	0.11	0.05	0.10	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak " model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak" model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak" model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:06:30

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - 2025 Without Development, AM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2025 Without Development, AM Peak	2025 Without Development	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.08	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	26	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1035.00	100.000
B	ONE HOUR	✓	655.93	100.000
C	ONE HOUR	✓	819.70	100.000
D	ONE HOUR	✓	107.00	100.000

Turning Proportions

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

	To				
From		A	B	C	D
	A	0.000	147.000	696.000	192.000
	B	187.930	0.000	468.000	0.000
	C	468.000	332.700	0.000	19.000
D	90.000	1.000	16.000	0.000	

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

		To			
From		A	B	C	D
	A	0.00	0.14	0.67	0.19
	B	0.29	0.00	0.71	0.00
	C	0.57	0.41	0.00	0.02
	D	0.84	0.01	0.15	0.00

Vehicle Mix

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

	To				
From		A	B	C	D
	A	1.000	1.000	1.063	1.000
	B	1.000	1.000	1.017	1.000
	C	1.124	1.021	1.000	1.053
	D	1.011	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.000	0.000	6.300	0.000
	B	0.000	0.000	1.700	0.000
	C	12.400	2.100	0.000	5.300
	D	1.100	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.59	0.08	1.45	A	949.73	1424.59	88.63	0.06	0.98	88.64	0.06
B	0.61	0.13	1.54	A	601.89	902.84	85.39	0.09	0.95	85.40	0.09
C	0.49	0.06	0.97	A	752.17	1128.26	62.39	0.06	0.69	62.40	0.06
D	0.10	0.05	0.11	A	98.19	147.28	7.11	0.05	0.08	7.11	0.05

Junctions 8				
ARCADY 8 - Roundabout Module				
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Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:06:58

« (Default Analysis Set) - 2025 With Development, AM Peak

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

AM Peak					
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - 2025 With Development					
Arm A	1.29	0.07	0.57	A	20 % [Arm B]
Arm B	2.03	0.15	0.67	A	
Arm C	1.06	0.06	0.52	A	
Arm D	0.10	0.05	0.09	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak " model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak" model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:06:57

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - 2025 With Development, AM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2025 With Development, AM Peak	2025 With Development	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.09	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	20	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	950.00	100.000
B	ONE HOUR	✓	726.91	100.000
C	ONE HOUR	✓	898.89	100.000
D	ONE HOUR	✓	107.00	100.000

Turning Proportions

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

		To			
From		A	B	C	D
	A	0.000	62.000	696.000	192.000
	B	81.910	0.000	645.000	0.000
	C	468.000	411.890	0.000	19.000
	D	90.000	1.000	16.000	0.000

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

		To			
From		A	B	C	D
	A	0.00	0.07	0.73	0.20
	B	0.11	0.00	0.89	0.00
	C	0.52	0.46	0.00	0.02
	D	0.84	0.01	0.15	0.00

Vehicle Mix

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

	To				
		A	B	C	D
From	A	1.000	1.000	1.063	1.000
	B	1.000	1.000	1.013	1.000
	C	1.124	1.017	1.000	1.053
	D	1.011	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	0.000	6.300	0.000
	B	0.000	0.000	1.300	0.000
	C	12.400	1.700	0.000	5.300
	D	1.100	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.57	0.07	1.29	A	871.73	1307.60	79.58	0.06	0.88	79.59	0.06
B	0.67	0.15	2.03	A	667.02	1000.53	107.40	0.11	1.19	107.41	0.11
C	0.52	0.06	1.06	A	824.84	1237.26	68.01	0.05	0.76	68.01	0.05
D	0.09	0.05	0.10	A	98.19	147.28	7.00	0.05	0.08	7.00	0.05

Junctions 8					
ARCADY 8 - Roundabout Module					
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution					

Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:07:25

- « (Default Analysis Set) - 2025 With Development - Sensitivity, AM Peak
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM Peak				
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - 2025 With Development - Sensitivity					
Arm A	1.31	0.08	0.57	A	20 % [Arm B]
Arm B	2.03	0.15	0.67	A	
Arm C	1.08	0.07	0.52	A	
Arm D	0.10	0.05	0.09	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak" model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak" model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak" model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak" model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak" model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak" model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak" model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak" model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak " model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:07:24

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - 2025 With Development - Sensitivity, AM Peak

Data Errors and Warnings

No errors or warnings

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	Relat
2025 With Development - Sensitivity, AM Peak	2025 With Development - Sensitivity	AM Peak		ONE HOUR	07:45	09:15	90	15						

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.09	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	20	Arm B

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	952.00	100.000
B	ONE HOUR	✓	726.91	100.000
C	ONE HOUR	✓	906.87	100.000
D	ONE HOUR	✓	107.00	100.000

Turning Proportions

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

	To			
	A	B	C	D
From	A	0.000	64.000	696.000
	B	81.910	0.000	645.000
	C	468.000	419.870	0.000
	D	90.000	1.000	16.000

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

	To			
	A	B	C	D
From	A	0.00	0.07	0.73
	B	0.11	0.00	0.89
	C	0.52	0.46	0.02
	D	0.84	0.01	0.15

Vehicle Mix

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

	To				
From		A	B	C	D
	A	1.000	1.000	1.063	1.000
	B	1.000	1.000	1.013	1.000
	C	1.124	1.017	1.000	1.053
	D	1.011	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.000	0.000	6.300	0.000
	B	0.000	0.000	1.300	0.000
	C	12.400	1.700	0.000	5.300
	D	1.100	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.57	0.08	1.31	A	873.57	1310.36	80.37	0.06	0.89	80.38	0.06
B	0.67	0.15	2.03	A	667.02	1000.53	107.40	0.11	1.19	107.41	0.11
C	0.52	0.07	1.08	A	832.16	1248.24	69.05	0.06	0.77	69.05	0.06
D	0.09	0.05	0.10	A	98.19	147.28	7.03	0.05	0.08	7.03	0.05

Junctions 8				
ARCADY 8 - Roundabout Module				
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2015				
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk				
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Import of Connaught Bridge Road Roundabout.arc8
Path: X:\Projects\110000\110116B - London City Airport Revised ES\MODELLING\ARCADY
Report generation date: 28/08/2015 15:03:58

- » (Default Analysis Set) - Existing, PM Peak
- » (Default Analysis Set) - 2023 Without Development, PM Peak
- » (Default Analysis Set) - 2023 With Development, PM Peak
- » (Default Analysis Set) - 2025 Without Development, PM Peak
- » (Default Analysis Set) - 2025 With Development, PM Peak
- » (Default Analysis Set) - 2025 With Development - Sensitivity, PM Peak

Summary of junction performance

	PM Peak				
	Queue (Veh)	Delay (min)	RFC	LOS	Network Residual Capacity
A1 - Existing					
Arm A	0.55	0.05	0.35	A	56 % [Arm C]
Arm B	0.63	0.06	0.39	A	
Arm C	1.47	0.07	0.60	A	
Arm D	0.00	0.00	0.00	A	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

'D1 - Existing, AM Peak' model duration: 07:45 - 09:15
 'D2 - Existing, PM Peak' model duration: 16:45 - 18:15
 'D3 - 2023 Without Development, AM Peak' model duration: 07:45 - 09:15
 'D4 - 2023 Without Development, PM Peak' model duration: 16:45 - 18:15
 'D5 - 2023 With Development, AM Peak' model duration: 07:45 - 09:15
 'D6 - 2023 With Development, PM Peak' model duration: 16:45 - 18:15
 'D7 - 2025 Without Development, AM Peak' model duration: 07:45 - 09:15
 'D8 - 2025 Without Development, PM Peak' model duration: 16:45 - 18:15
 'D9 - 2025 With Development, AM Peak' model duration: 07:45 - 09:15
 'D10 - 2025 With Development, PM Peak' model duration: 16:45 - 18:15
 'D11 - 2025 With Development - Sensitivity, AM Peak' model duration: 07:45 - 09:15
 'D12 - 2025 With Development - Sensitivity, PM Peak' model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 28/08/2015 15:03:52

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	17/01/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\Robert.Roughan
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75		✓	Delay	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin

(Default Analysis Set) - Existing, PM Peak

Data Errors and Warnings

No errors or warnings

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
Existing, PM Peak	Existing	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.06	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	56	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	603.00	100.000
B	ONE HOUR	✓	539.00	100.000
C	ONE HOUR	✓	1136.00	100.000
D	ONE HOUR	✓	0.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	177.000	426.000	0.000
	B	160.000	0.000	379.000	0.000
	C	720.000	416.000	0.000	0.000
	D	0.000	0.000	0.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.29	0.71	0.00
	B	0.30	0.00	0.70	0.00
	C	0.63	0.37	0.00	0.00
	D	0.25	0.25	0.25	0.25

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.040	1.038	1.000
	B	1.038	1.000	1.024	1.000
	C	1.028	1.017	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		A	B	C	D
From	A	0.000	4.000	3.800	0.000
	B	3.800	0.000	2.400	0.000
	C	2.800	1.700	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.35	0.05	0.55	A	553.32	829.98	36.87	0.04	0.41	36.87	0.04
B	0.39	0.06	0.63	A	494.59	741.89	41.83	0.06	0.46	41.83	0.06
C	0.60	0.07	1.47	A	1042.42	1563.62	91.16	0.06	1.01	91.17	0.06
D	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00

(Default Analysis Set) - 2023 Without Development, PM Peak

Data Errors and Warnings

No errors or warnings

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
2023 Without Development, PM Peak	2023 Without Development	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.08	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	33	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	870.00	100.000
B	ONE HOUR	✓	471.00	100.000
C	ONE HOUR	✓	1268.00	100.000
D	ONE HOUR	✓	184.00	100.000

Turning Proportions

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

	To				
From	A	B	C	D	
	A	0.000	196.000	518.000	156.000
	B	120.000	0.000	351.000	0.000
	C	814.000	442.000	0.000	12.000
	D	175.000	8.000	1.000	0.000

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

	To				
From		A	B	C	D
	A	0.00	0.23	0.60	0.18
	B	0.25	0.00	0.75	0.00
	C	0.64	0.35	0.00	0.01
	D	0.95	0.04	0.01	0.00

Vehicle Mix

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

	To				
From		A	B	C	D
	A	1.000	1.036	1.031	1.000
	B	1.050	1.000	1.026	1.000
	C	1.025	1.016	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.000	3.600	3.100	0.000
	B	5.000	0.000	2.600	0.000
	C	2.500	1.600	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.51	0.07	1.05	A	798.33	1197.49	66.12	0.06	0.73	66.12	0.06
B	0.39	0.07	0.62	A	432.20	648.30	40.24	0.06	0.45	40.24	0.06
C	0.69	0.10	2.25	A	1163.53	1745.30	128.71	0.07	1.43	128.72	0.07
D	0.21	0.08	0.26	A	168.84	253.26	16.30	0.06	0.18	16.30	0.06

(Default Analysis Set) - 2023 With Development, PM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2023 With Development, PM Peak	2023 With Development	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.08	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	36	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	602.00	100.000
B	ONE HOUR	✓	451.00	100.000
C	ONE HOUR	✓	1406.67	100.000
D	ONE HOUR	✓	184.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	84.000	518.000	0.000
	B	54.000	0.000	397.000	0.000
	C	814.000	580.670	0.000	12.000
	D	175.000	8.000	1.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.14	0.86	0.00
	B	0.12	0.00	0.88	0.00
	C	0.58	0.41	0.00	0.01
	D	0.95	0.04	0.01	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.088	1.031	1.000
	B	1.114	1.000	1.023	1.000
	C	1.025	1.002	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	8.800	3.100	0.000
	B	11.400	0.000	2.300	0.000
	C	2.500	0.200	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.38	0.06	0.61	A	552.41	828.61	40.29	0.05	0.45	40.29	0.05
B	0.34	0.06	0.52	A	413.84	620.77	34.41	0.06	0.38	34.41	0.06
C	0.70	0.09	2.36	A	1290.79	1936.18	136.43	0.07	1.52	136.44	0.07
D	0.22	0.08	0.28	A	168.84	253.26	17.19	0.07	0.19	17.19	0.07

(Default Analysis Set) - 2025 Without Development, PM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2025 Without Development, PM Peak	2025 Without Development	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.08	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	31	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	870.00	100.000
B	ONE HOUR	✓	509.26	100.000
C	ONE HOUR	✓	1268.10	100.000
D	ONE HOUR	✓	184.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	196.000	518.000	156.000
	B	129.260	0.000	360.000	20.000
	C	814.000	442.100	0.000	12.000
	D	175.000	8.000	1.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.23	0.60	0.18
	B	0.25	0.00	0.71	0.04
	C	0.64	0.35	0.00	0.01
	D	0.95	0.04	0.01	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.036	1.031	1.000
	B	1.046	1.000	1.025	1.000
	C	1.025	1.016	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	3.600	3.100	0.000
	B	4.600	0.000	2.500	0.000
	C	2.500	1.600	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.51	0.07	1.05	A	798.33	1197.49	66.12	0.06	0.73	66.12	0.06
B	0.42	0.08	0.71	A	467.31	700.96	45.09	0.06	0.50	45.10	0.06
C	0.70	0.10	2.34	A	1163.63	1745.44	132.34	0.08	1.47	132.35	0.08
D	0.21	0.08	0.27	A	168.84	253.26	16.42	0.06	0.18	16.42	0.06

(Default Analysis Set) - 2025 With Development, PM Peak

Data Errors and Warnings

No errors or warnings

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	Rela
2025 With Development, PM Peak	2025 With Development	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.10	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	24	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	758.00	100.000
B	ONE HOUR	✓	483.72	100.000
C	ONE HOUR	✓	1406.67	100.000
D	ONE HOUR	✓	184.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	84.000	518.000	156.000
	B	56.720	0.000	407.000	20.000
	C	814.000	580.670	0.000	12.000
	D	175.000	8.000	1.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.11	0.68	0.21
	B	0.12	0.00	0.84	0.04
	C	0.58	0.41	0.00	0.01
	D	0.95	0.04	0.01	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.088	1.031	1.000
	B	1.109	1.000	1.023	1.000
	C	1.025	1.012	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	8.800	3.100	0.000
	B	10.900	0.000	2.300	0.000
	C	2.500	1.200	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.48	0.07	0.91	A	695.55	1043.33	57.41	0.06	0.64	57.42	0.06
B	0.40	0.07	0.65	A	443.87	665.81	41.87	0.06	0.47	41.88	0.06
C	0.76	0.12	3.05	A	1290.79	1936.18	164.74	0.09	1.83	164.75	0.09
D	0.22	0.08	0.29	A	168.84	253.26	17.30	0.07	0.19	17.30	0.07

(Default Analysis Set) - 2025 With Development - Sensitivity, PM Peak

Data Errors and Warnings

No errors or warnings

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	Relat
2025 With Development - Sensitivity, PM Peak	2025 With Development - Sensitivity	PM Peak		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
Connaught Bridge Road/Connaught Road	Roundabout	A,B,C,D				0.10	A

Junction Network Options

Driving Side	Lighting	Network Residual Capacity (%)	First Arm Reaching Threshold
Left	Normal/unknown	24	Arm C

Arms

Arms

Arm	Name	Description
A	Connaught Bridge Road (N)	
B	Connaught Road (E)	
C	Connaught Bridge Road (South)	
D	Silvertown Quays	

12/08/2015 15:04:07

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A	7.30	7.50	1.00	20.00	46.50	24.50	
B	4.50	7.00	15.00	19.00	46.50	23.00	
C	7.30	7.50	1.00	19.00	46.50	25.00	
D	5.00	7.30	15.00	40.00	46.50	26.00	

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
A	None
B	None
C	None
D	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)
A		(calculated)	(calculated)	0.743	2291.771
B		(calculated)	(calculated)	0.667	1897.860
C		(calculated)	(calculated)	0.740	2282.081
D		(calculated)	(calculated)	0.703	2058.499

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 (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	758.00	100.000
B	ONE HOUR	✓	494.80	100.000
C	ONE HOUR	✓	1406.67	100.000
D	ONE HOUR	✓	184.00	100.000

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.000	84.000	518.000	156.000
	B	58.800	0.000	416.000	20.000
	C	814.000	580.670	0.000	12.000
	D	175.000	8.000	1.000	0.000

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

		To			
		A	B	C	D
From	A	0.00	0.11	0.68	0.21
	B	0.12	0.00	0.84	0.04
	C	0.58	0.41	0.00	0.01
	D	0.95	0.04	0.01	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.000	1.088	1.031	1.000
	B	1.107	1.000	1.022	1.000
	C	1.025	1.012	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	8.800	3.100	0.000
	B	10.700	0.000	2.200	0.000
	C	2.500	1.200	0.000	0.000
	D	0.000	0.000	0.000	0.000

Results

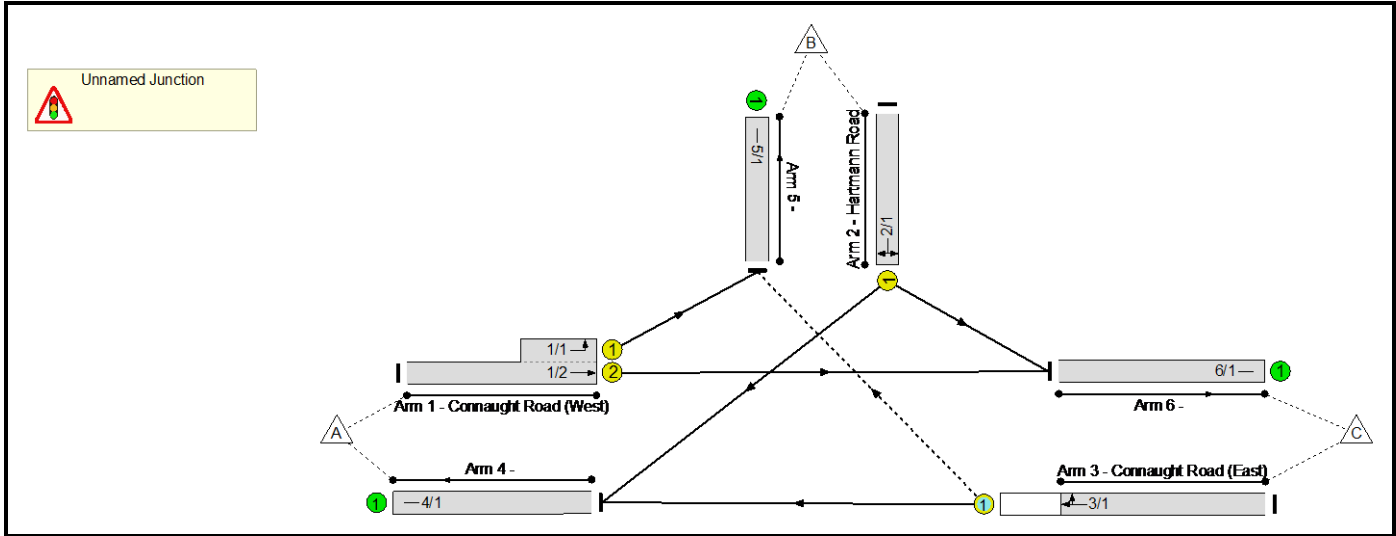
Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
A	0.48	0.07	0.91	A	695.55	1043.33	57.41	0.06	0.64	57.41	0.06
B	0.40	0.07	0.68	A	454.04	681.06	43.27	0.06	0.48	43.27	0.06
C	0.76	0.12	3.06	A	1290.79	1936.18	165.14	0.09	1.83	165.15	0.09
D	0.22	0.09	0.29	A	168.84	253.26	17.33	0.07	0.19	17.33	0.07

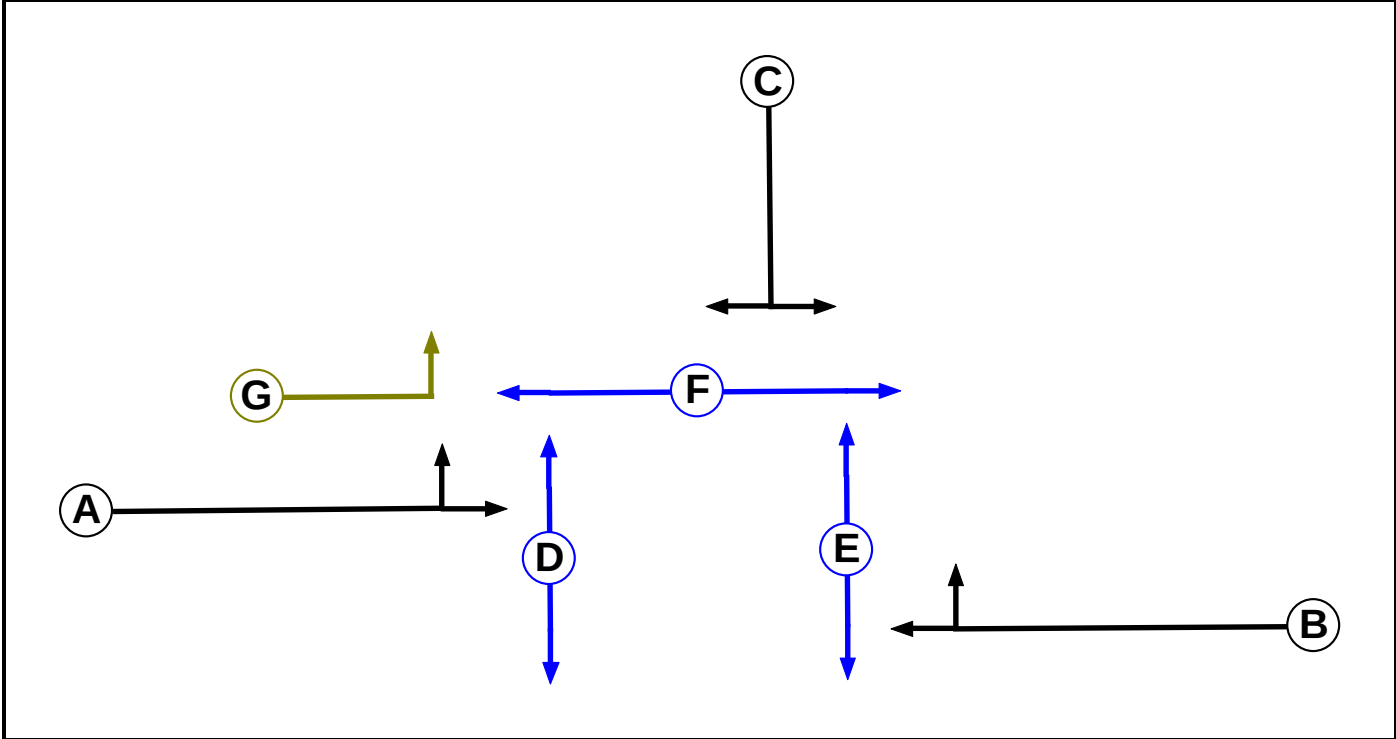
User and Project Details

Project:	City Airport
Title:	Apron Stand Replacement Project
Location:	London
File name:	Connaught Road-Hartmann Road - 150812.lsg3x
Author:	RR
Company:	Vectos
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

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

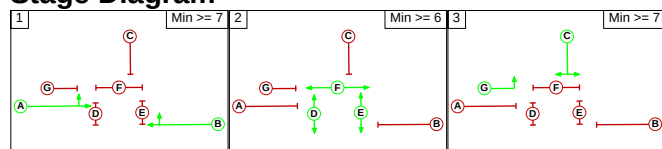
Phase Intergreens Matrix

	Starting Phase							
Terminating Phase		A	B	C	D	E	F	G
	A		-	7	5	11	9	-
	B	-		7	11	5	12	-
	C	5	5		11	10	5	-
	D	12	12	12		-	-	12
	E	9	9	9	-		-	-
	F	11	11	11	-	-		11
	G	-	-	-	5	-	9	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	G	Gaining absolute	5	5

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		12	7
	2	12		12
	3	5	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/1 (Connaught Road (East))	5/1 (Right)	1439	0	1/1	1.09	All	4.00	-	0.50	4	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Connaught Road (West))	U	A G	2	3	5.0	Geom	-	2.75	0.00	Y	Arm 5 Left	22.50
1/2 (Connaught Road (West))	U	A	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 6 Ahead	Inf
2/1 (Hartmann Road)	U	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Right	22.50
											Arm 6 Left	10.00
3/1 (Connaught Road (East))	O	B	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Ahead	Inf
											Arm 5 Right	10.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Existing AM Peak'	08:00	09:00	01:00	
2: 'Existing PM Peak'	17:00	18:00	01:00	
3: '2023 Without Development AM Peak'	08:00	09:00	01:00	
4: '2023 Without Development PM Peak'	17:00	18:00	01:00	
5: '2023 With Development AM Peak'	08:00	09:00	01:00	
6: '2023 With Development PM Peak'	17:00	18:00	01:00	
7: '2025 Without Development AM Peak'	08:00	09:00	01:00	
8: '2025 Without Development PM Peak'	17:00	18:00	01:00	
9: '2025 With Development AM Peak'	08:00	09:00	01:00	
10: '2025 With Development PM Peak'	17:00	18:00	01:00	
11: '2025 With Development AM Peak - Sensitivity Test'	08:00	09:00	01:00	
12: '2025 With Development PM Peak - Sensitivity Test'	17:00	18:00	01:00	

Scenario 1: 'Existing AM Peak' (FG1: 'Existing AM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	374	124	498
	B	373	0	30	403
	C	177	33	0	210
	Tot.	550	407	154	1111

Traffic Lane Flows

Lane	Scenario 1: Existing AM Peak
Junction: Unnamed Junction	
1/1 (short)	374
1/2 (with short)	498(In) 124(Out)
2/1	403
3/1	210
4/1	550
5/1	407
6/1	154

Lane Saturation Flows

Junction: Unnamed Junction										
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)		
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772		
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890		
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	92.6 %	1878	1878		
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 6 Left	10.00	7.4 %				
				Arm 4 Ahead	Inf	84.3 %	1969	1969		
				Arm 5 Right	10.00	15.7 %				
4/1	Infinite Saturation Flow						Inf	Inf		
5/1	Infinite Saturation Flow						Inf	Inf		
6/1	Infinite Saturation Flow						Inf	Inf		

Scenario 2: 'Existing PM Peak' (FG2: 'Existing PM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	A	B	C	Tot.
	A	0	403	164	567
	B	381	0	37	418
	C	141	31	0	172
	Tot.	522	434	201	1157

Traffic Lane Flows

Lane	Scenario 2: Existing PM Peak
Junction: Unnamed Junction	
1/1 (short)	403
1/2 (with short)	567(In) 164(Out)
2/1	418
3/1	172
4/1	522
5/1	434
6/1	201

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
2/1 (Hartmann Road) 3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Right	22.50	91.1 %	1876	1876
				Arm 6 Left	10.00	8.9 %		
	4.00	0.00	Y	Arm 4 Ahead	Inf	82.0 %	1962	1962
				Arm 5 Right	10.00	18.0 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2023 Without Development AM Peak' (FG3: '2023 Without Development AM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	284	208	492
	B	367	0	32	399
	C	278	25	0	303
	Tot.	645	309	240	1194

Traffic Lane Flows

Lane	Scenario 3: 2023 Without Development AM Peak
Junction: Unnamed Junction	
1/1 (short)	284
1/2 (with short)	492(In) 208(Out)
2/1	399
3/1	303
4/1	645
5/1	309
6/1	240

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	92.0 %	1877	1877	
				Arm 6 Left	10.00	8.0 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	91.7 %	1990	1990	
				Arm 5 Right	10.00	8.3 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 4: '2023 Without Development PM Peak' (FG4: '2023 Without Development PM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	359	245	604
	B	217	0	19	236
	C	245	31	0	276
	Tot.	462	390	264	1116

Traffic Lane Flows

Lane	Scenario 4: 2023 Without Development PM Peak
Junction: Unnamed Junction	
1/1 (short)	359
1/2 (with short)	604(In) 245(Out)
2/1	236
3/1	276
4/1	462
5/1	390
6/1	264

Lane Saturation Flows

Junction: Unnamed Junction										
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)		
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772		
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890		
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	91.9 %	1877	1877		
				Arm 6 Left	10.00	8.1 %				
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	88.8 %	1982	1982		
				Arm 5 Right	10.00	11.2 %				
4/1	Infinite Saturation Flow						Inf	Inf		
5/1	Infinite Saturation Flow						Inf	Inf		
6/1	Infinite Saturation Flow						Inf	Inf		

Full Input Data And Results

Scenario 5: '2023 With Development AM Peak' (FG5: '2023 With Development AM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	279	204	483
	B	435	0	6	441
	C	278	5	0	283
	Tot.	713	284	210	1207

Traffic Lane Flows

Lane	Scenario 5: 2023 With Development AM Peak
Junction: Unnamed Junction	
1/1 (short)	279
1/2 (with short)	483(In) 204(Out)
2/1	441
3/1	283
4/1	713
5/1	284
6/1	210

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.6 %	1887	1887	
				Arm 6 Left	10.00	1.4 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	98.2 %	2010	2010	
				Arm 5 Right	10.00	1.8 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 6: '2023 With Development PM Peak' (FG6: '2023 With Development PM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	386	245	631
	B	198	0	4	202
	C	245	6	0	251
	Tot.	443	392	249	1084

Traffic Lane Flows

Lane	Scenario 6: 2023 With Development PM Peak
Junction: Unnamed Junction	
1/1 (short)	386
1/2 (with short)	631(In) 245(Out)
2/1	202
3/1	251
4/1	443
5/1	392
6/1	249

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.0 %	1886	1886	
				Arm 6 Left	10.00	2.0 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	97.6 %	2008	2008	
				Arm 5 Right	10.00	2.4 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 7: '2025 Without Development AM Peak' (FG7: '2025 Without Development AM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	285	208	493
	B	367	0	32	399
	C	278	25	0	303
	Tot.	645	310	240	1195

Traffic Lane Flows

Lane	Scenario 7: 2025 Without Development AM Peak
Junction: Unnamed Junction	
1/1 (short)	285
1/2 (with short)	493(In) 208(Out)
2/1	399
3/1	303
4/1	645
5/1	310
6/1	240

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	92.0 %	1877	1877	
				Arm 6 Left	10.00	8.0 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	91.7 %	1990	1990	
				Arm 5 Right	10.00	8.3 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 8: '2025 Without Development PM Peak' (FG8: '2025 Without Development PM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	359	245	604
	B	235	0	21	256
	C	245	31	0	276
	Tot.	480	390	266	1136

Traffic Lane Flows

Lane	Scenario 8: 2025 Without Development PM Peak
Junction: Unnamed Junction	
1/1 (short)	359
1/2 (with short)	604(In) 245(Out)
2/1	256
3/1	276
4/1	480
5/1	390
6/1	266

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	91.8 %	1877	1877	
				Arm 6 Left	10.00	8.2 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	88.8 %	1982	1982	
				Arm 5 Right	10.00	11.2 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 9: '2025 With Development AM Peak' (FG9: '2025 With Development AM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	279	208	487
	B	439	0	6	445
	C	278	5	0	283
	Tot.	717	284	214	1215

Traffic Lane Flows

Lane	Scenario 9: 2025 With Development AM Peak
Junction: Unnamed Junction	
1/1 (short)	279
1/2 (with short)	487(In) 208(Out)
2/1	445
3/1	283
4/1	717
5/1	284
6/1	214

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.7 %	1887	1887	
				Arm 6 Left	10.00	1.3 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	98.2 %	2010	2010	
				Arm 5 Right	10.00	1.8 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 10: '2025 With Development PM Peak' (FG10: '2025 With Development PM Peak', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	386	245	631
	B	210	0	4	214
	C	245	6	0	251
	Tot.	455	392	249	1096

Traffic Lane Flows

Lane	Scenario 10: 2025 With Development PM Peak
Junction: Unnamed Junction	
1/1 (short)	386
1/2 (with short)	631(In) 245(Out)
2/1	214
3/1	251
4/1	455
5/1	392
6/1	249

Lane Saturation Flows

Junction: Unnamed Junction									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772	
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890	
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.1 %	1886	1886	
				Arm 6 Left	10.00	1.9 %			
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	97.6 %	2008	2008	
				Arm 5 Right	10.00	2.4 %			
4/1	Infinite Saturation Flow					Inf	Inf		
5/1	Infinite Saturation Flow					Inf	Inf		
6/1	Infinite Saturation Flow					Inf	Inf		

Full Input Data And Results

Scenario 11: '2025 With Development AM Peak - Sensitivity Test' (FG11: '2025 With Development AM Peak - Sensitivity Test', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	289	208	497
	B	439	0	6	445
	C	278	5	0	283
	Tot.	717	294	214	1225

Traffic Lane Flows

Lane	Scenario 11: 2025 With Development AM Peak - Sensitivity Test
Junction: Unnamed Junction	
1/1 (short)	289
1/2 (with short)	497(In) 208(Out)
2/1	445
3/1	283
4/1	717
5/1	294
6/1	214

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.7 %	1887	1887
				Arm 6 Left	10.00	1.3 %		
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	98.2 %	2010	2010
				Arm 5 Right	10.00	1.8 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 12: '2025 With Development PM Peak - Sensitivity Test' (FG12: '2025 With Development PM Peak - Sensitivity Test', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	386	245	631
	B	221	0	4	225
	C	245	6	0	251
	Tot.	466	392	249	1107

Traffic Lane Flows

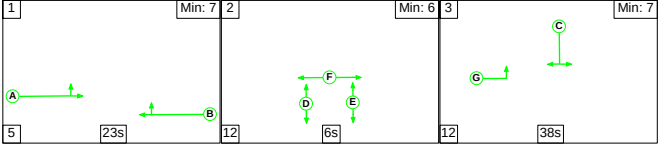
Lane	Scenario 12: 2025 With Development PM Peak - Sensitivity Test
Junction: Unnamed Junction	
1/1 (short)	386
1/2 (with short)	631(In) 245(Out)
2/1	225
3/1	251
4/1	466
5/1	392
6/1	249

Lane Saturation Flows

Junction: Unnamed Junction										
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)		
1/1 (Connaught Road (West))	2.75	0.00	Y	Arm 5 Left	22.50	100.0 %	1772	1772		
1/2 (Connaught Road (West))	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890		
2/1 (Hartmann Road)	4.00	0.00	Y	Arm 4 Right	22.50	98.2 %	1886	1886		
				Arm 6 Left	10.00	1.8 %				
3/1 (Connaught Road (East))	4.00	0.00	Y	Arm 4 Ahead	Inf	97.6 %	2008	2008		
				Arm 5 Right	10.00	2.4 %				
4/1	Infinite Saturation Flow						Inf	Inf		
5/1	Infinite Saturation Flow						Inf	Inf		
6/1	Infinite Saturation Flow						Inf	Inf		

Scenario 1: 'Existing AM Peak' (FG1: 'Existing AM Peak', Plan 1: 'Peds Every Cycle')

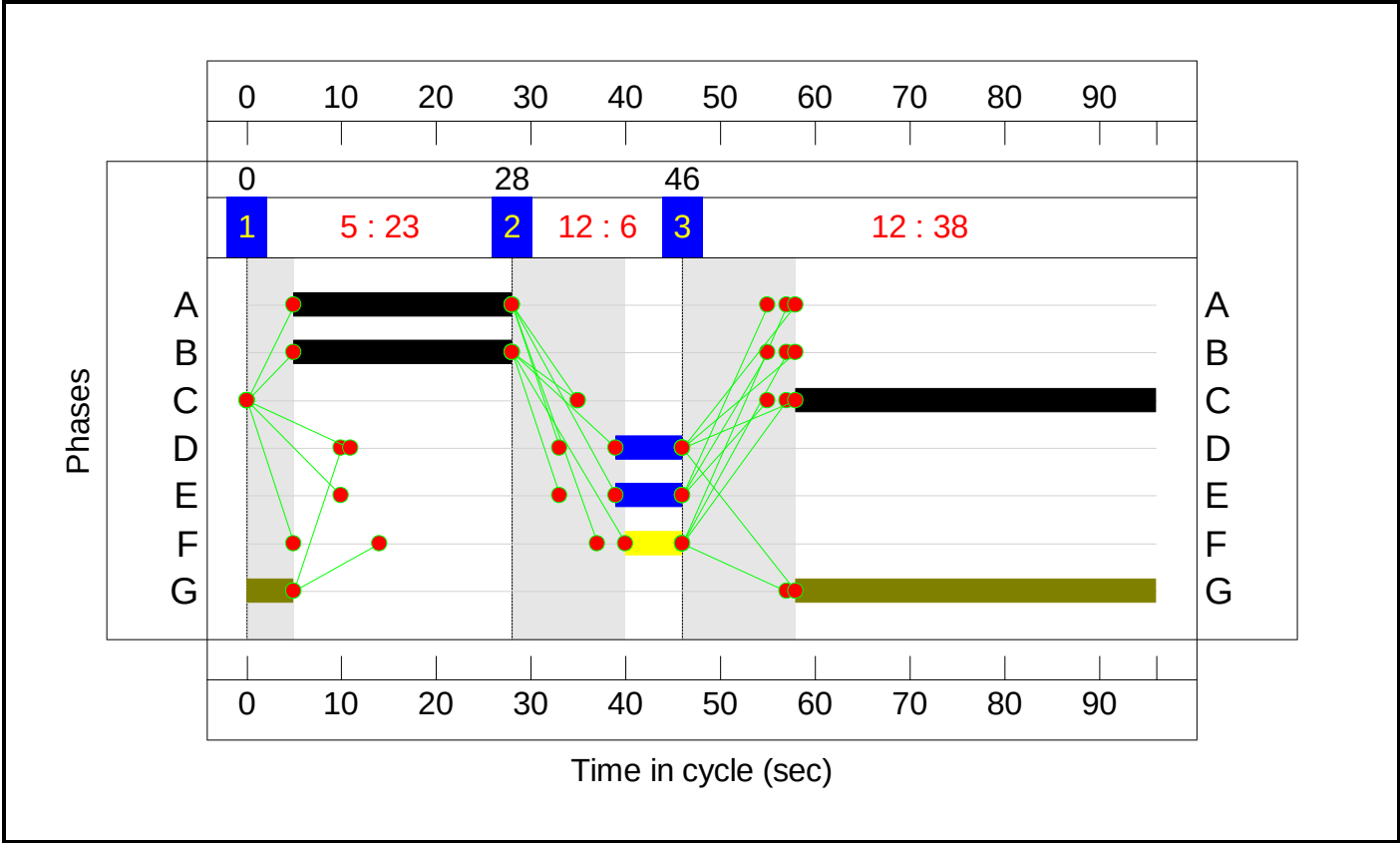
Stage Sequence Diagram



Stage Timings

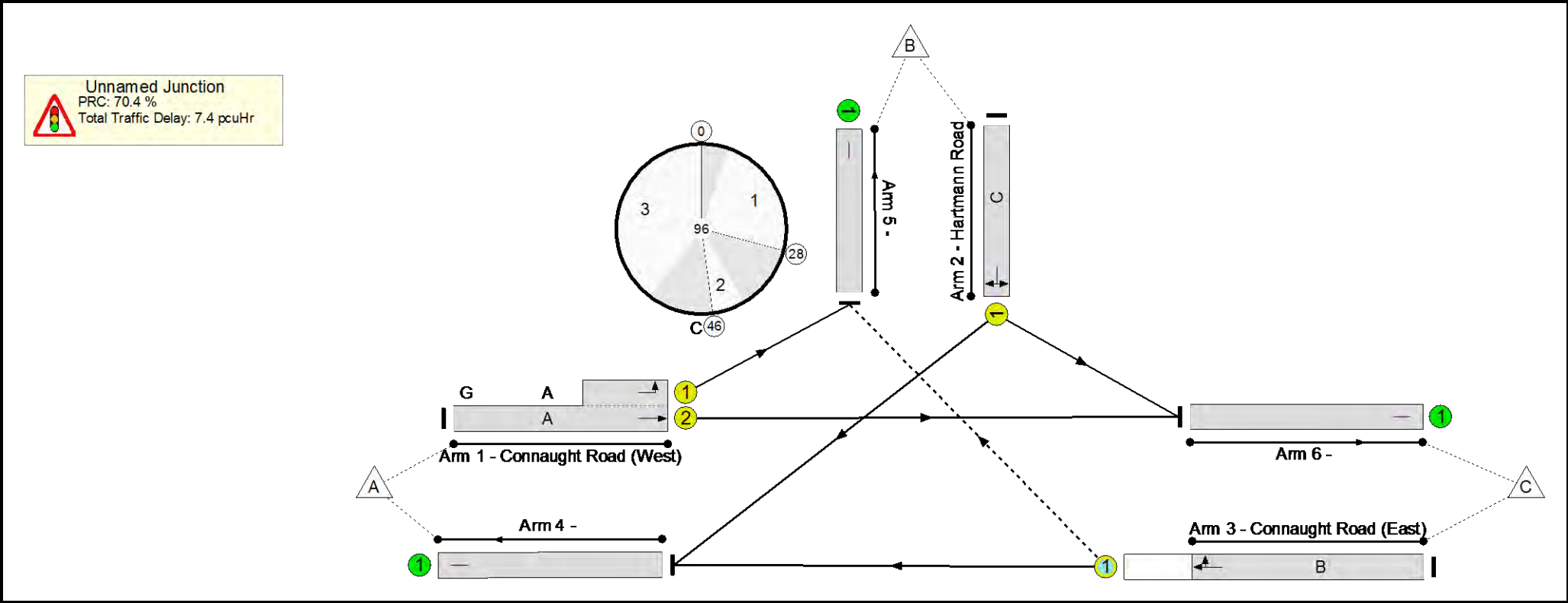
Stage	1	2	3
Duration	23	6	38
Change Point	0	28	46

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	52.8%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	52.8%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	23:66	43	498	1890:1772	1016	49.0%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	38	-	403	1878	763	52.8%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	23	-	210	1969	404	52.0%
4/1		U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	154	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	32	0	1	5.8	1.6	0.0	7.4	-	-	-	-
Unnamed Junction	-	-	32	0	1	5.8	1.6	0.0	7.4	-	-	-	-
1/2+1/1	498	498	-	-	-	1.6	0.5	-	2.1	14.8	3.7	0.5	4.2
2/1	403	403	-	-	-	2.4	0.6	-	3.0	26.5	8.1	0.6	8.6
3/1	210	210	32	0	1	1.8	0.5	0.0	2.4	40.4	4.9	0.5	5.4
4/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	407	407	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	154	154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

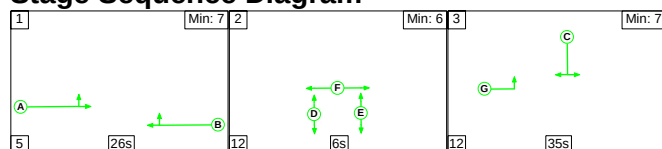
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	70.4	Total Delay for Signalled Lanes (pcuHr):	7.38	Cycle Time (s):	96
	PRC Over All Lanes (%):	70.4	Total Delay Over All Lanes(pcuHr):	7.38		

Full Input Data And Results

Scenario 2: 'Existing PM Peak' (FG2: 'Existing PM Peak', Plan 1: 'Peds Every Cycle')

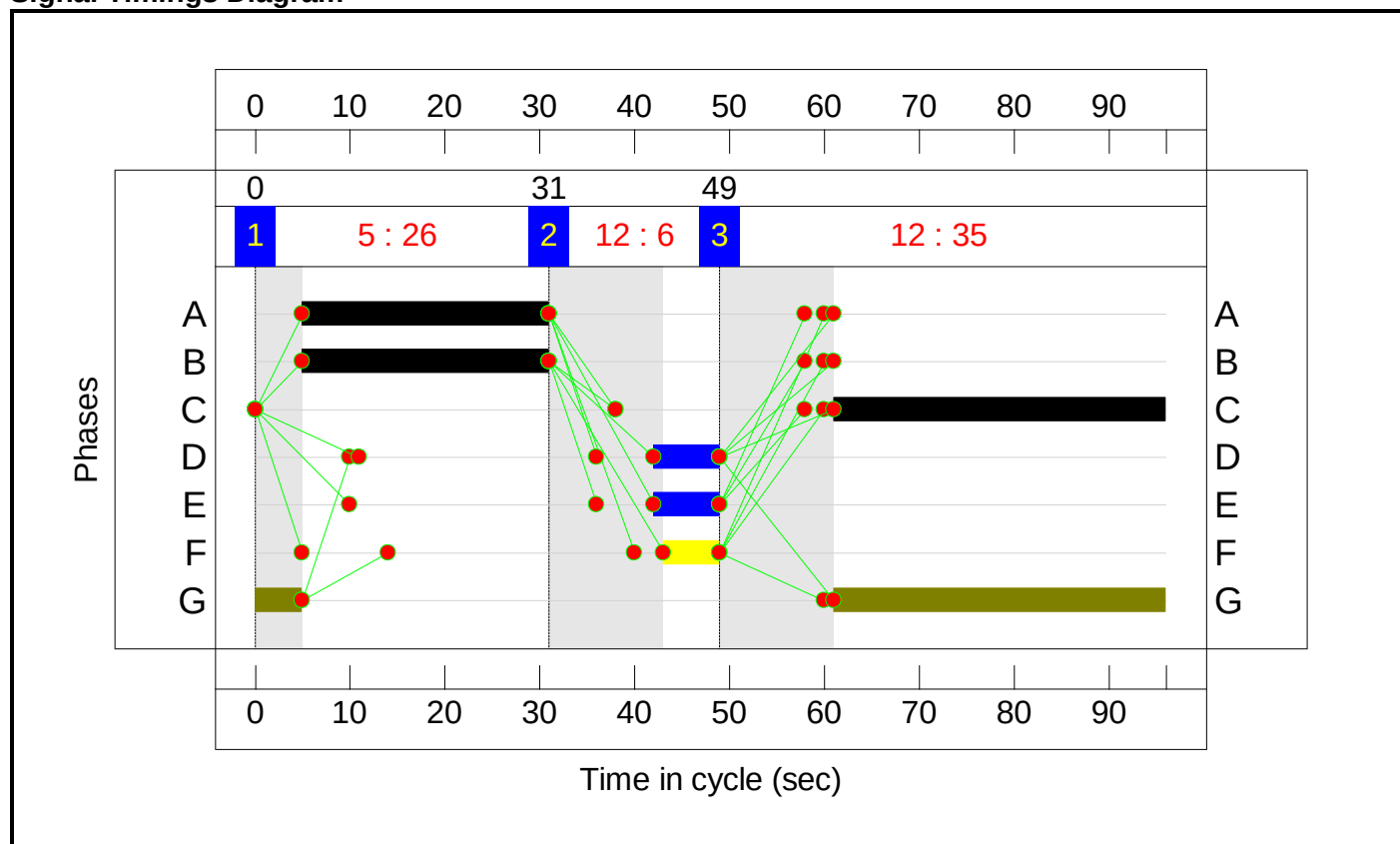
Stage Sequence Diagram



Stage Timings

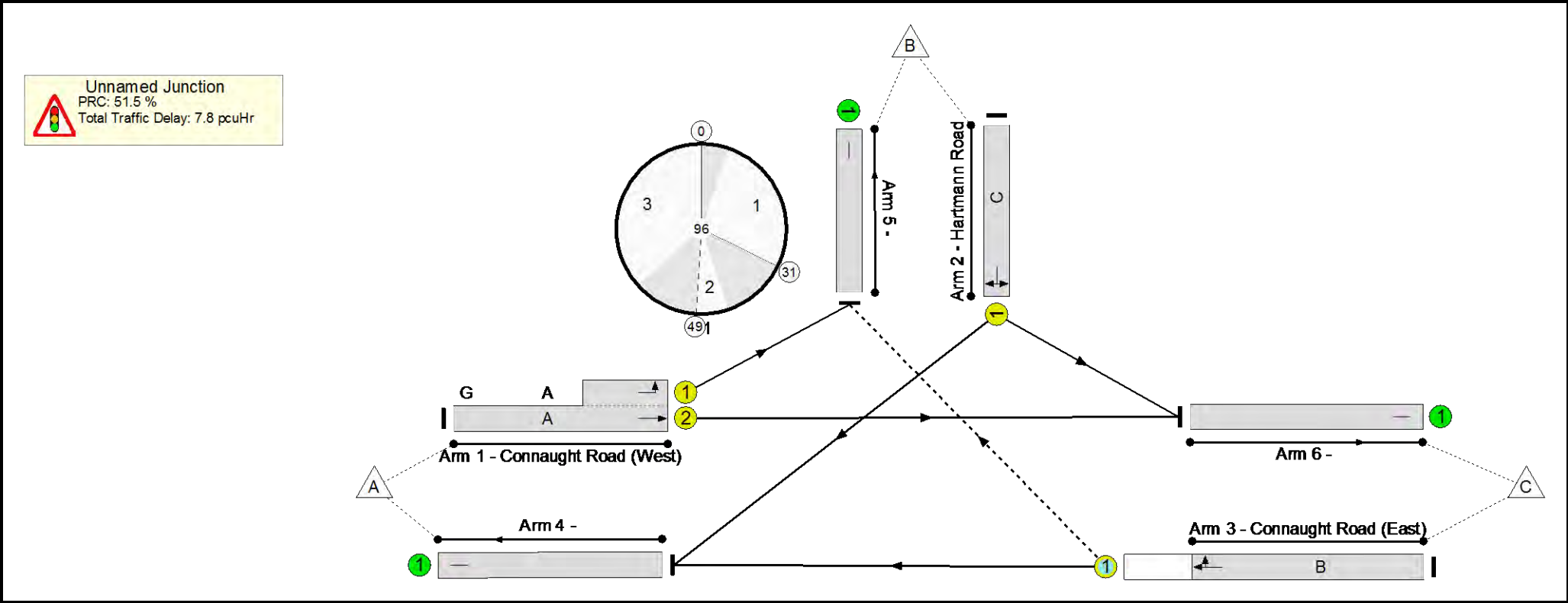
Stage	1	2	3
Duration	26	6	35
Change Point	0	31	49

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	59.4%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	59.4%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	26:66	40	567	1890:1772	968	58.6%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	35	-	418	1876	704	59.4%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	26	-	172	1962	404	42.6%
4/1		U	N/A	N/A	-		-	-	-	522	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	201	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	30	0	1	6.0	1.8	0.0	7.8	-	-	-	-
Unnamed Junction	-	-	30	0	1	6.0	1.8	0.0	7.8	-	-	-	-
1/2+1/1	567	567	-	-	-	1.9	0.7	-	2.6	16.4	4.1	0.7	4.8
2/1	418	418	-	-	-	2.8	0.7	-	3.5	30.4	8.9	0.7	9.7
3/1	172	172	30	0	1	1.3	0.4	0.0	1.7	35.8	3.6	0.4	4.0
4/1	522	522	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	201	201	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

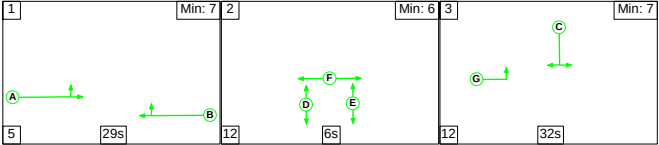
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	51.5	Total Delay for Signalled Lanes (pcuHr):	7.82	Cycle Time (s):	96
	PRC Over All Lanes (%):	51.5	Total Delay Over All Lanes(pcuHr):	7.82		

Full Input Data And Results

Scenario 3: '2023 Without Development AM Peak' (FG3: '2023 Without Development AM Peak', Plan 1: 'Peds Every Cycle')

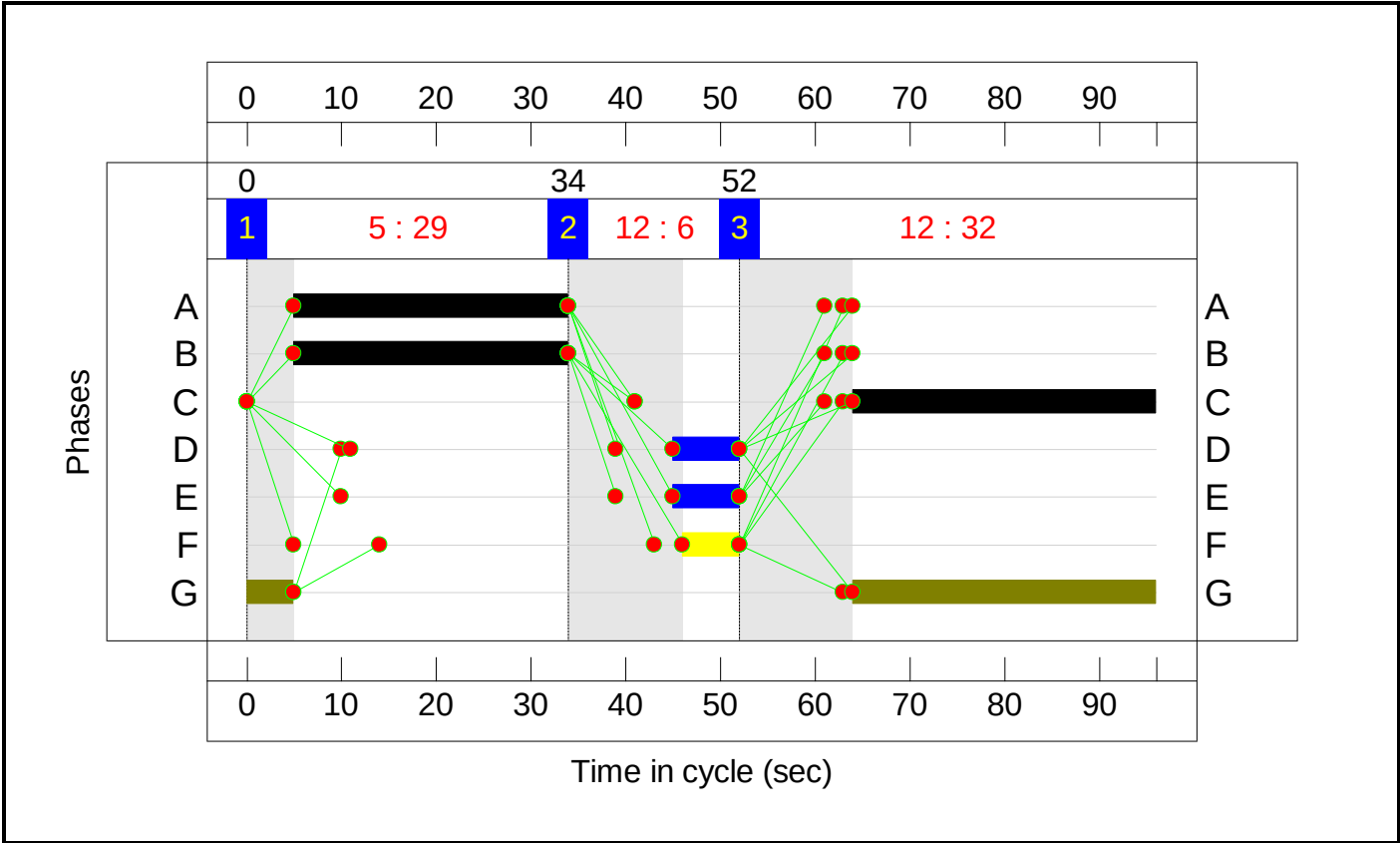
Stage Sequence Diagram



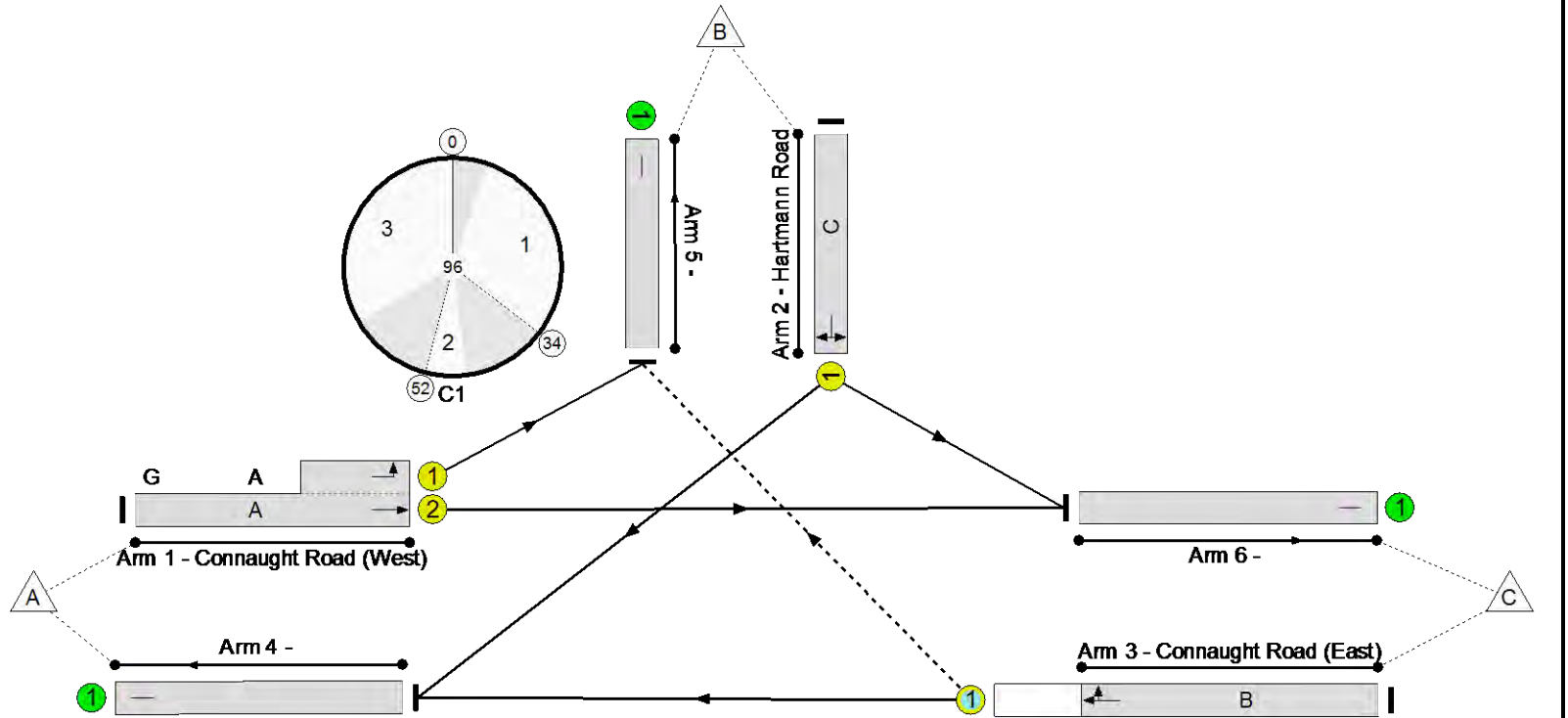
Stage Timings

Stage	1	2	3
Duration	29	6	32
Change Point	0	34	52

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	62.9%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	62.9%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	29:66	37	492	1890:1772	823	59.8%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	32	-	399	1877	645	61.8%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	29	-	303	1990	482	62.9%
4/1		U	N/A	N/A	-		-	-	-	645	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	309	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	24	0	1	7.3	2.4	0.0	9.7	-	-	-	-
Unnamed Junction	-	-	24	0	1	7.3	2.4	0.0	9.7	-	-	-	-
1/2+1/1	492	492	-	-	-	1.9	0.7	-	2.6	19.2	4.3	0.7	5.0
2/1	399	399	-	-	-	2.9	0.8	-	3.7	33.5	8.9	0.8	9.7
3/1	303	303	24	0	1	2.5	0.8	0.0	3.3	39.4	7.2	0.8	8.0
4/1	645	645	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	309	309	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

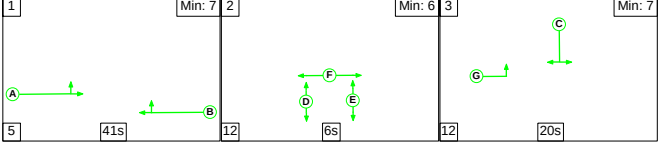
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	43.1	Total Delay for Signalled Lanes (pcuHr):	9.66	Cycle Time (s):	96
	PRC Over All Lanes (%):	43.1	Total Delay Over All Lanes(pcuHr):	9.66		

Full Input Data And Results

Scenario 4: '2023 Without Development PM Peak' (FG4: '2023 Without Development PM Peak', Plan 1: 'Peds Every Cycle')

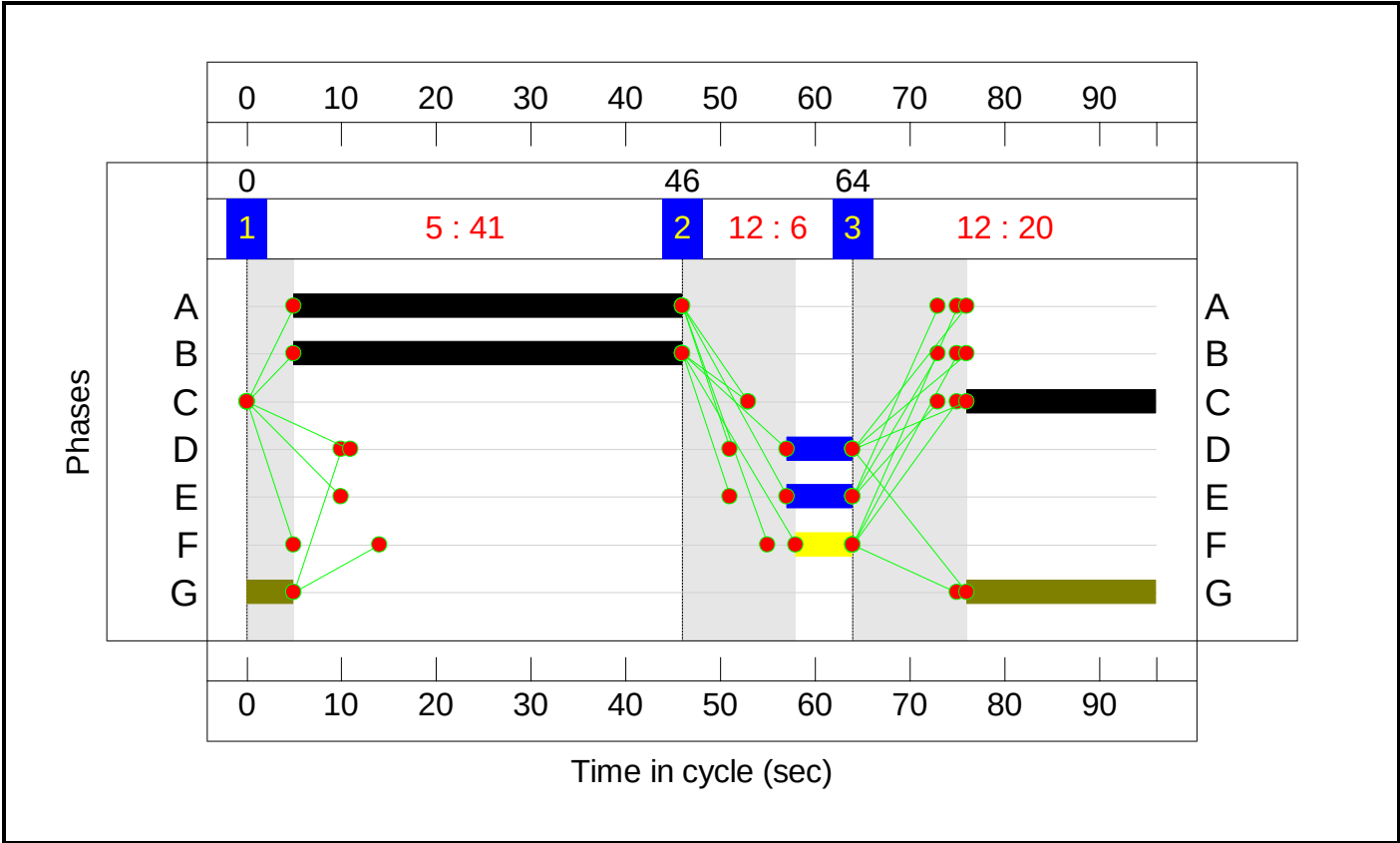
Stage Sequence Diagram



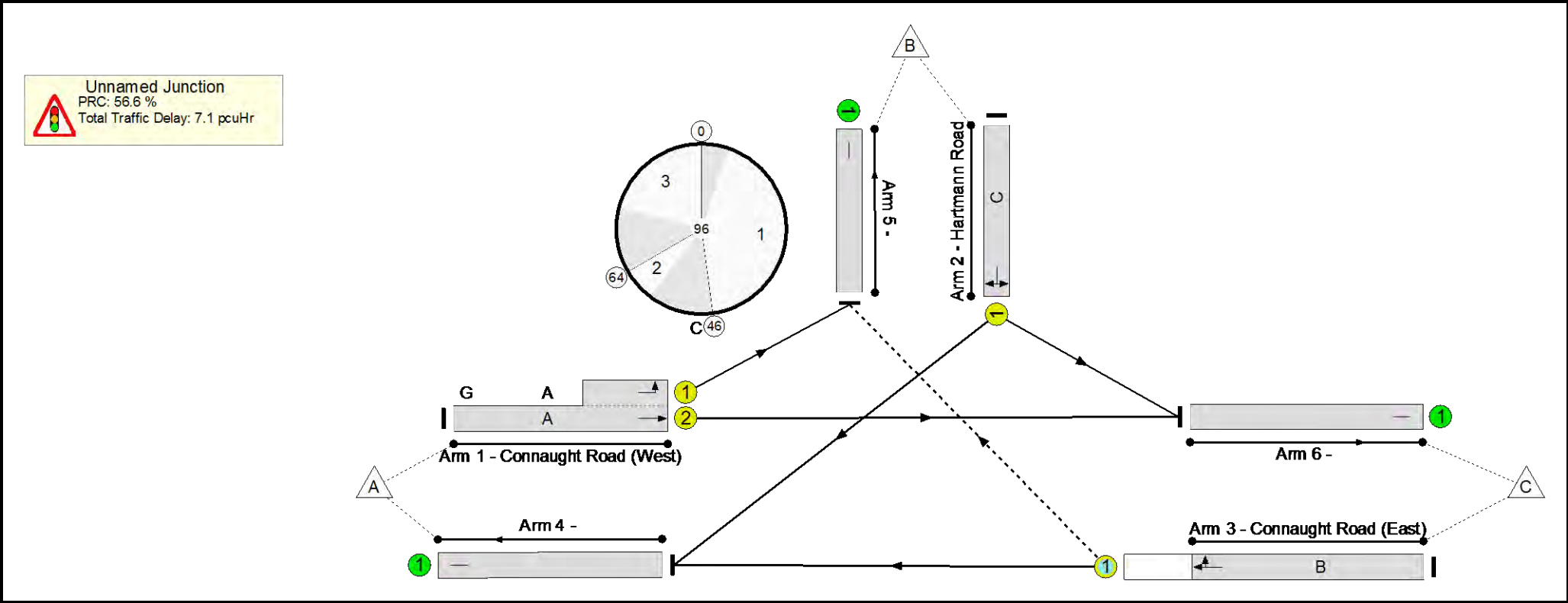
Stage Timings

Stage	1	2	3
Duration	41	6	20
Change Point	0	46	64

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	57.5%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	57.5%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	41:66	25	604	1890:1772	1068	56.5%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	20	-	236	1877	411	57.5%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	41	-	276	1982	675	40.9%
4/1		U	N/A	N/A	-		-	-	-	462	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	30	0	1	5.4	1.7	0.0	7.1	-	-	-	-
Unnamed Junction	-	-	30	0	1	5.4	1.7	0.0	7.1	-	-	-	-
1/2+1/1	604	604	-	-	-	1.7	0.6	-	2.4	14.2	4.2	0.6	4.9
2/1	236	236	-	-	-	2.2	0.7	-	2.9	43.7	5.6	0.7	6.2
3/1	276	276	30	0	1	1.4	0.3	0.0	1.8	23.6	5.4	0.3	5.7
4/1	462	462	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

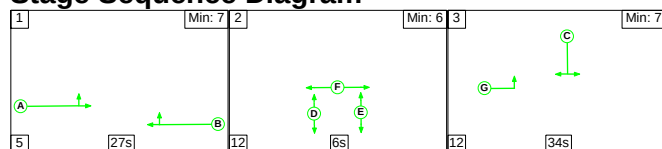
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	56.6	Total Delay for Signalled Lanes (pcuHr):	7.06	Cycle Time (s):	96
	PRC Over All Lanes (%):	56.6	Total Delay Over All Lanes(pcuHr):	7.06		

Full Input Data And Results

Scenario 5: '2023 With Development AM Peak' (FG5: '2023 With Development AM Peak', Plan 1: 'Peds Every Cycle')

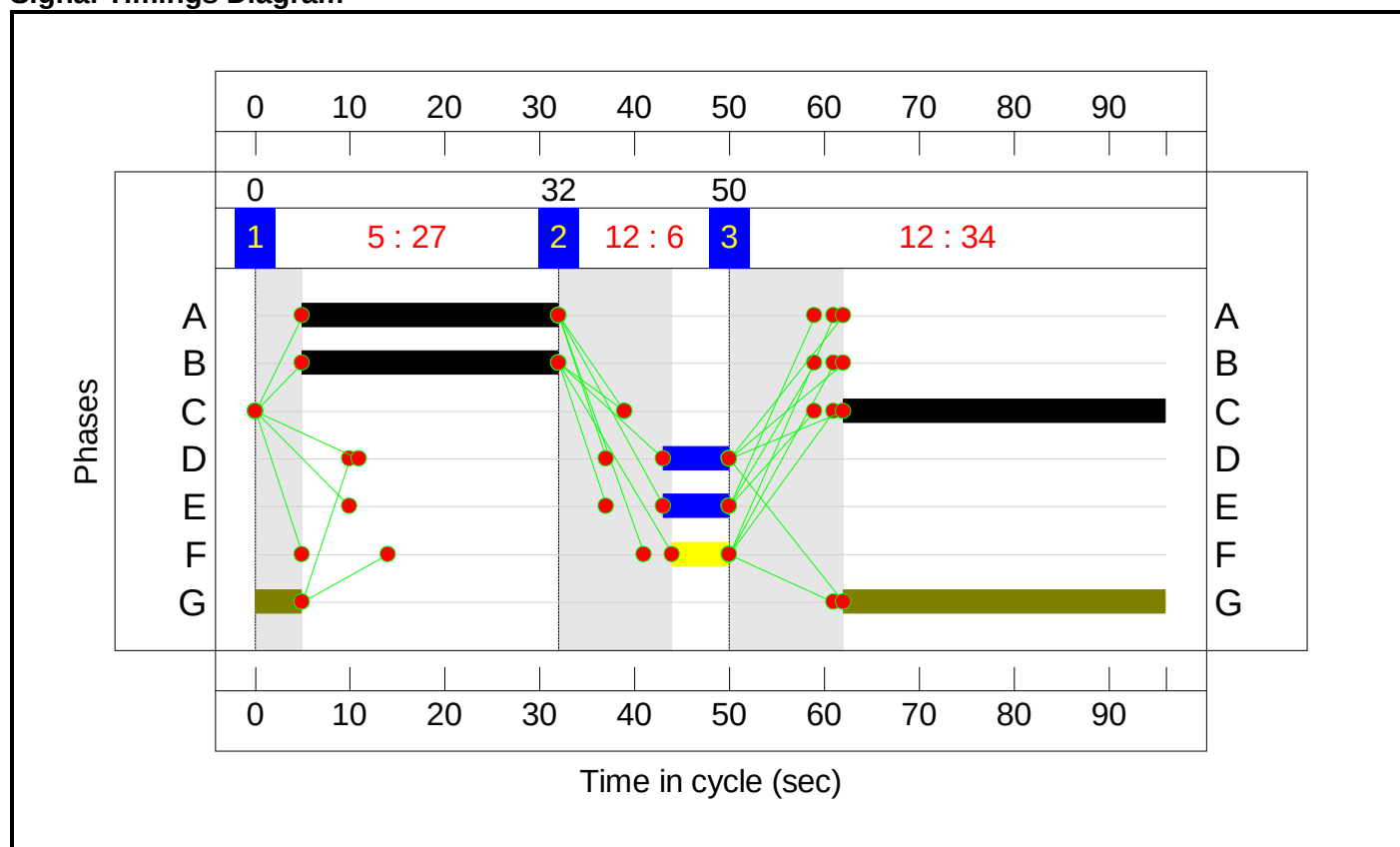
Stage Sequence Diagram



Stage Timings

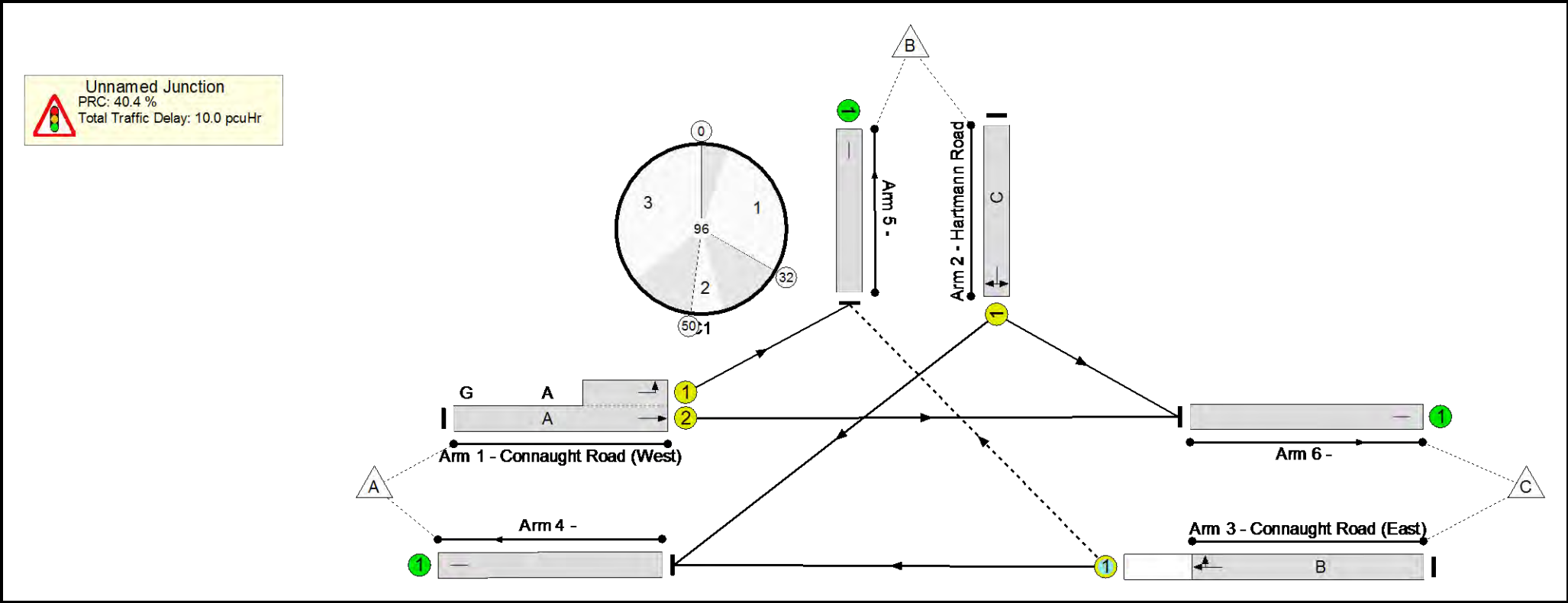
Stage	1	2	3
Duration	27	6	34
Change Point	0	32	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	64.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	64.1%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	27:66	39	483	1890:1772	785	61.5%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	34	-	441	1887	688	64.1%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	27	-	283	2010	443	63.9%
4/1		U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	284	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	210	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	5	0	0	7.4	2.6	0.0	10.0	-	-	-	-
Unnamed Junction	-	-	5	0	0	7.4	2.6	0.0	10.0	-	-	-	-
1/2+1/1	483	483	-	-	-	1.9	0.8	-	2.7	20.3	4.3	0.8	5.1
2/1	441	441	-	-	-	3.1	0.9	-	4.0	32.5	9.7	0.9	10.6
3/1	283	283	5	0	0	2.4	0.9	0.0	3.3	41.5	6.8	0.9	7.7
4/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	210	210	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

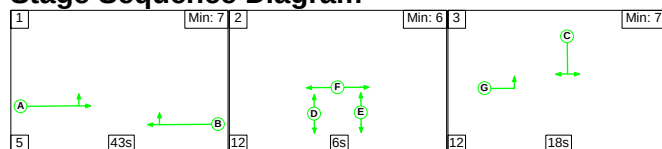
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	40.4	Total Delay for Signalled Lanes (pcuHr):	9.98	Cycle Time (s):	96
	PRC Over All Lanes (%):	40.4	Total Delay Over All Lanes(pcuHr):	9.98		

Full Input Data And Results

Scenario 6: '2023 With Development PM Peak' (FG6: '2023 With Development PM Peak', Plan 1: 'Peds Every Cycle')

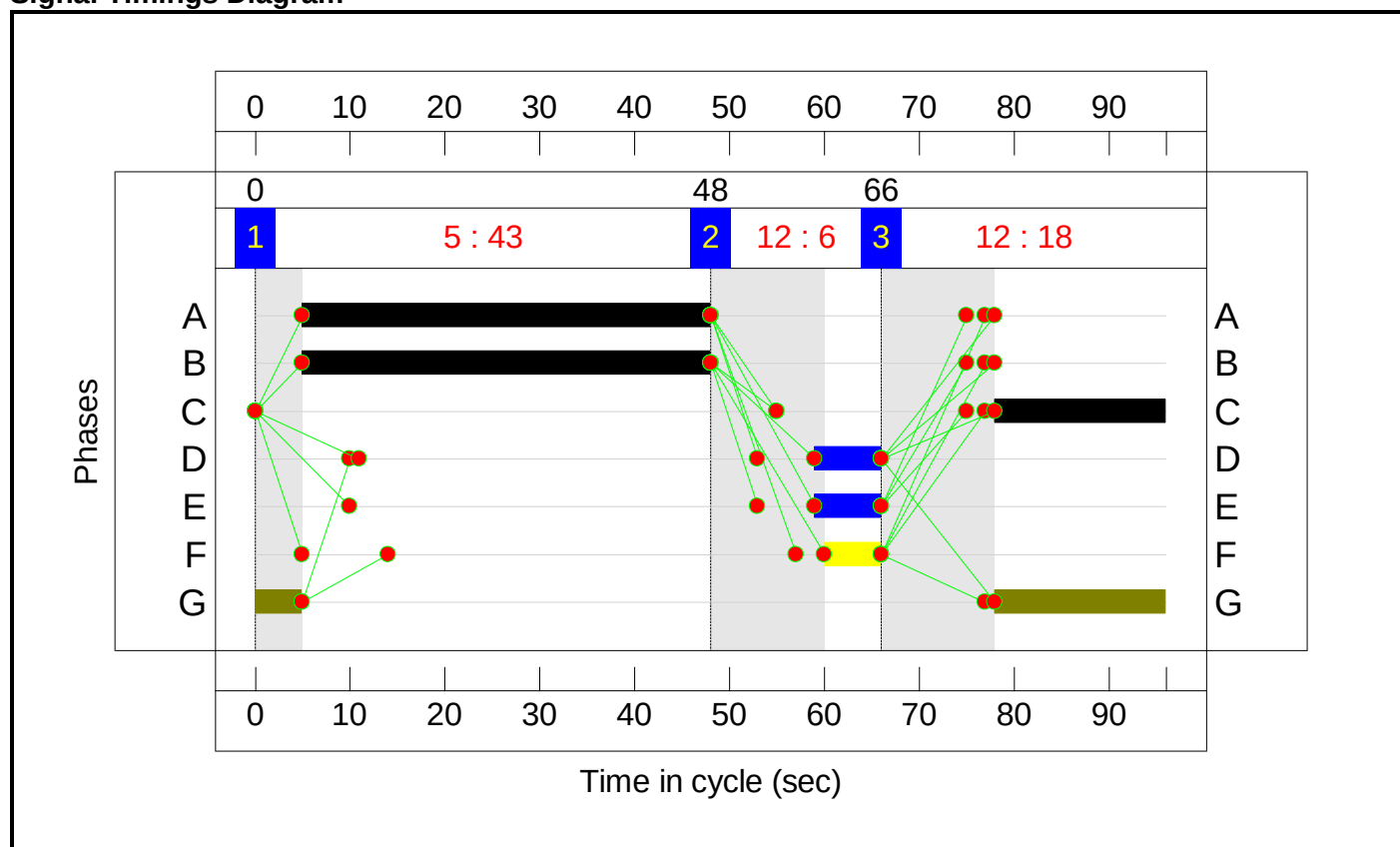
Stage Sequence Diagram



Stage Timings

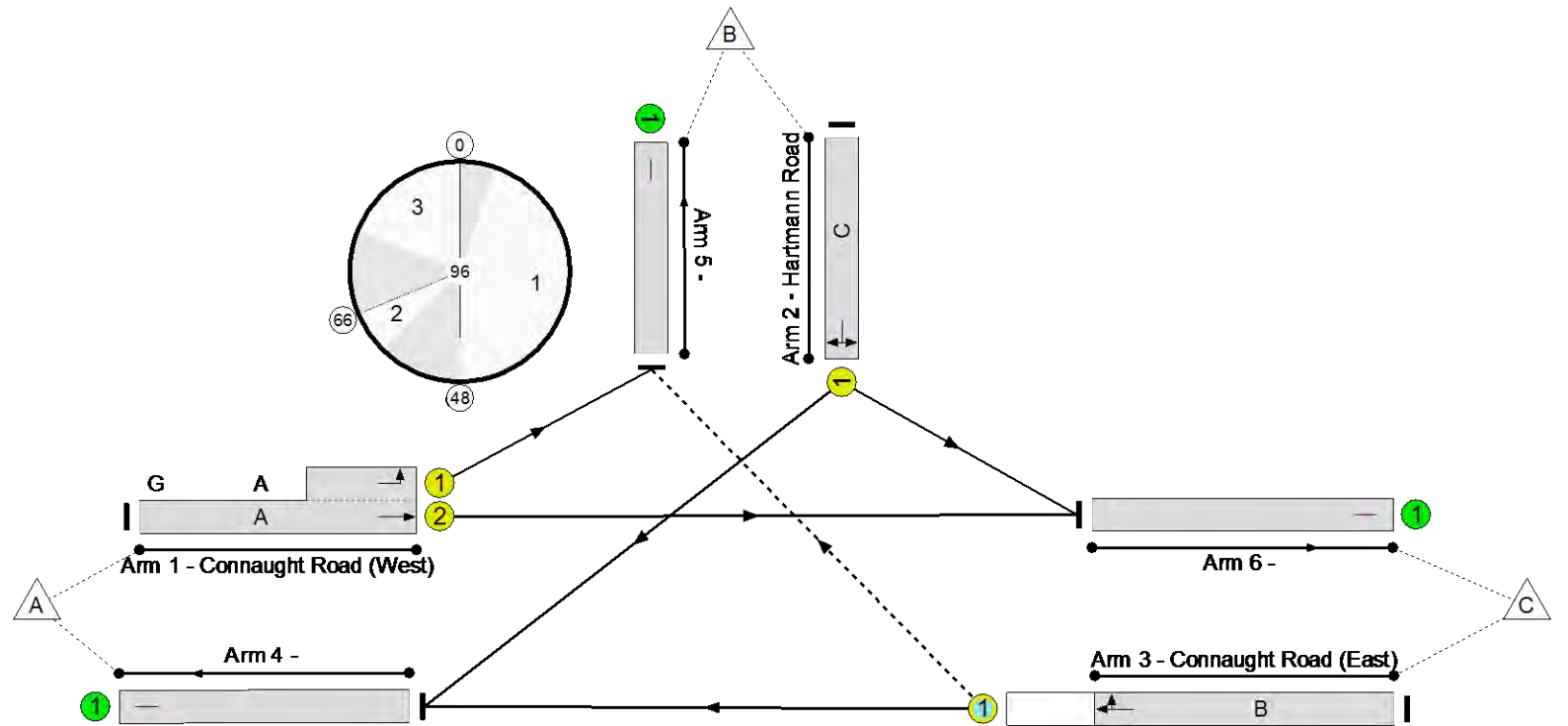
Stage	1	2	3
Duration	43	6	18
Change Point	0	48	66

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Unnamed Junction
PRC: 60.6 %
Total Traffic Delay: 6.3 pcuHr



Full Input Data And Results

Network Results

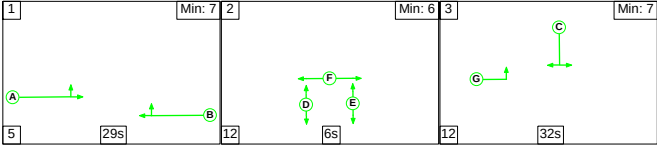
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	56.0%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	56.0%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	43:66	23	631	1890:1772	1126	56.0%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	18	-	202	1886	373	54.1%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	43	-	251	2008	777	32.3%
4/1		U	N/A	N/A	-		-	-	-	443	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	6	0	0	4.8	1.5	0.0	6.3	-	-	-	-
Unnamed Junction	-	-	6	0	0	4.8	1.5	0.0	6.3	-	-	-	-
1/2+1/1	631	631	-	-	-	1.7	0.6	-	2.3	13.3	4.0	0.6	4.7
2/1	202	202	-	-	-	1.9	0.6	-	2.5	45.0	4.8	0.6	5.4
3/1	251	251	6	0	0	1.2	0.2	0.0	1.4	20.0	4.7	0.2	4.9
4/1	443	443	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	249	249	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	60.6	Total Delay for Signalled Lanes (pcuHr):	6.26	Cycle Time (s):	96
	PRC Over All Lanes (%):	60.6	Total Delay Over All Lanes(pcuHr):	6.26		

Scenario 7: '2025 Without Development AM Peak' (FG7: '2025 Without Development AM Peak', Plan 1: 'Peds Every Cycle')

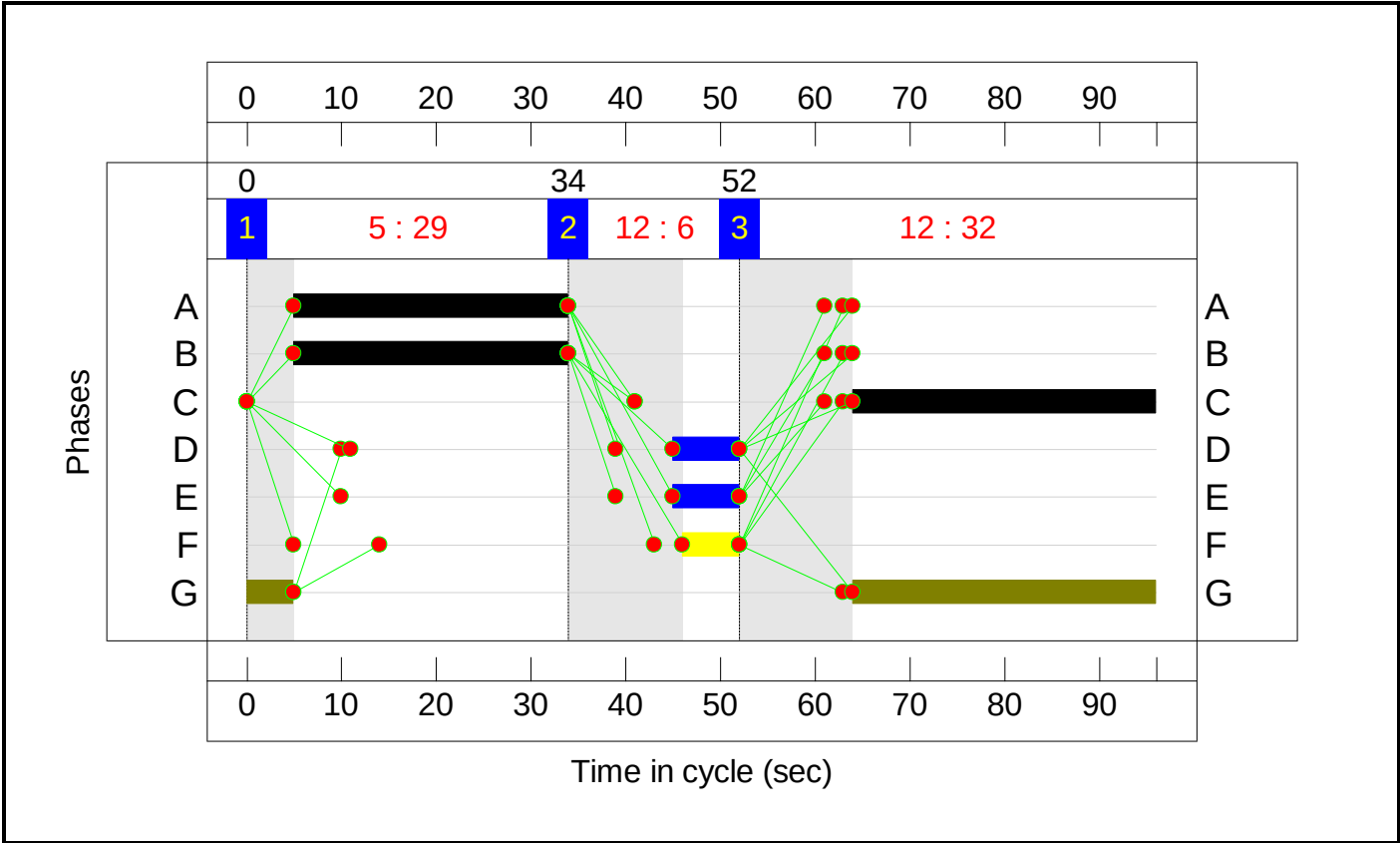
Stage Sequence Diagram



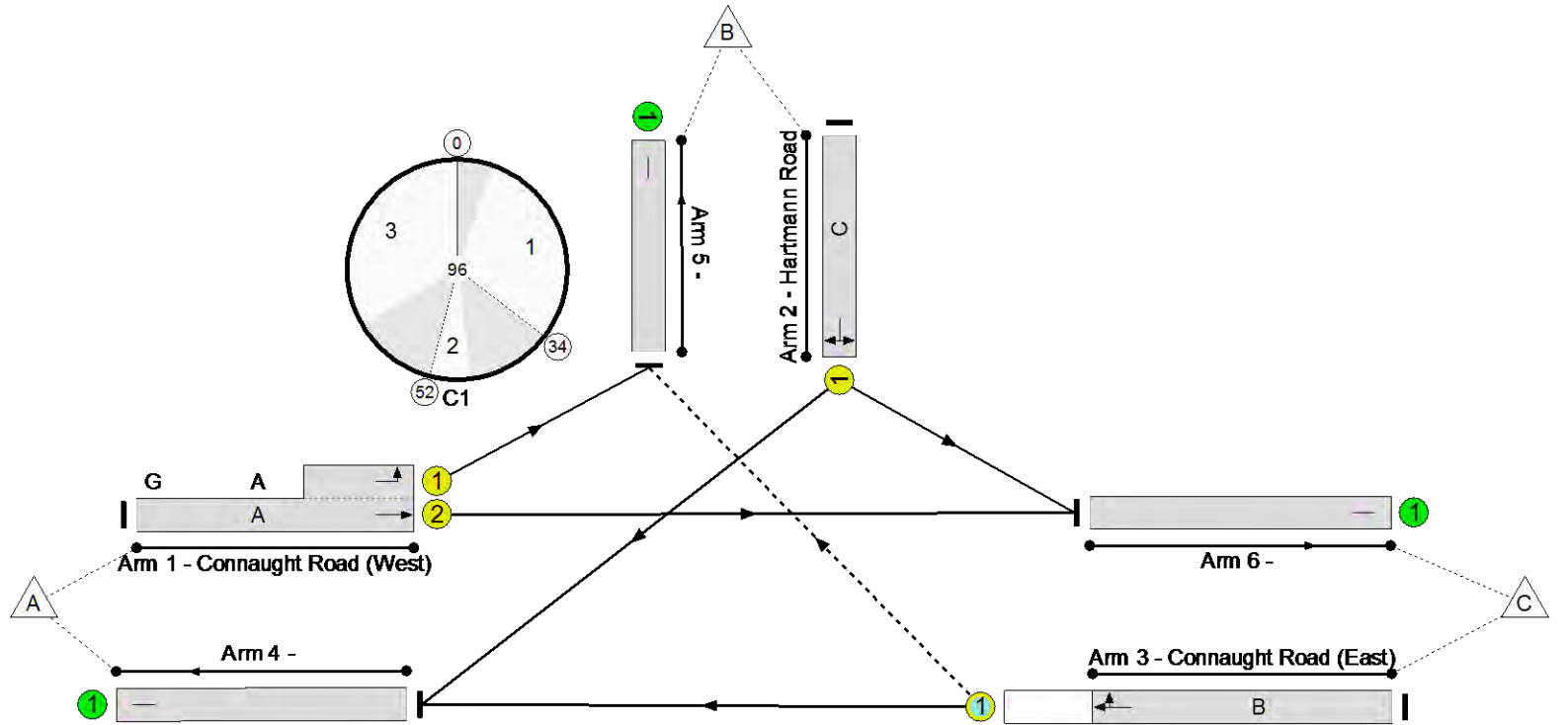
Stage Timings

Stage	1	2	3
Duration	29	6	32
Change Point	0	34	52

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

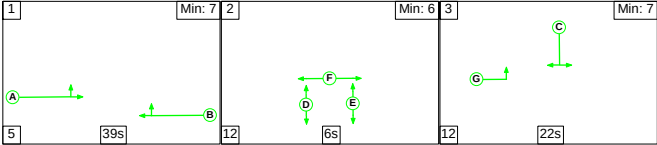
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	62.9%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	62.9%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	29:66	37	493	1890:1772	824	59.9%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	32	-	399	1877	645	61.8%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	29	-	303	1990	482	62.9%
4/1		U	N/A	N/A	-		-	-	-	645	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	310	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	24	0	1	7.3	2.4	0.0	9.7	-	-	-	-
Unnamed Junction	-	-	24	0	1	7.3	2.4	0.0	9.7	-	-	-	-
1/2+1/1	493	493	-	-	-	1.9	0.7	-	2.6	19.2	4.3	0.7	5.0
2/1	399	399	-	-	-	2.9	0.8	-	3.7	33.5	8.9	0.8	9.7
3/1	303	303	24	0	1	2.5	0.8	0.0	3.3	39.4	7.2	0.8	8.0
4/1	645	645	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	310	310	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	43.1	Total Delay for Signalled Lanes (pcuHr):	9.66	Cycle Time (s):	96
	PRC Over All Lanes (%):	43.1	Total Delay Over All Lanes(pcuHr):	9.66		

Scenario 8: '2025 Without Development PM Peak' (FG8: '2025 Without Development PM Peak', Plan 1: 'Peds Every Cycle')

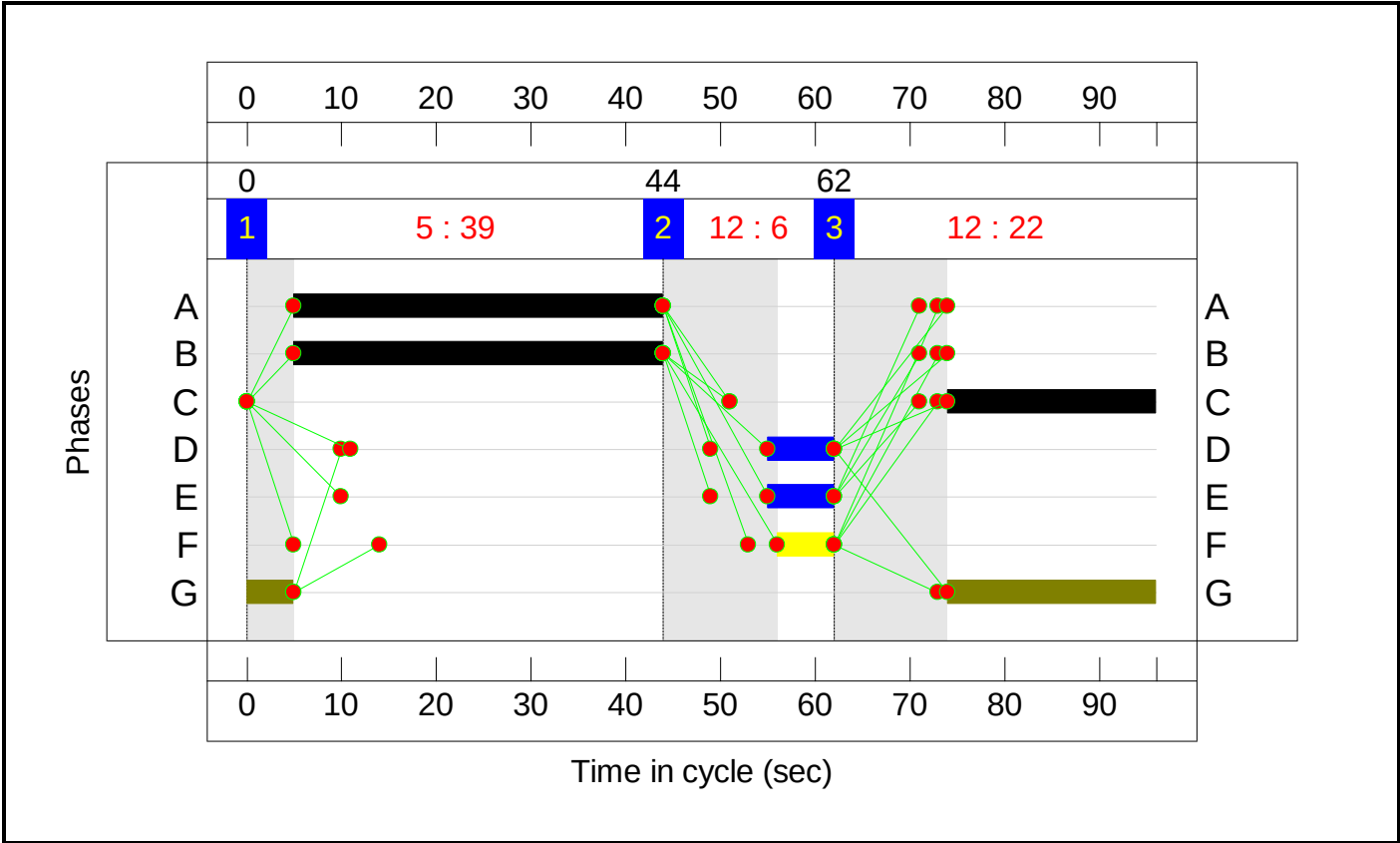
Stage Sequence Diagram



Stage Timings

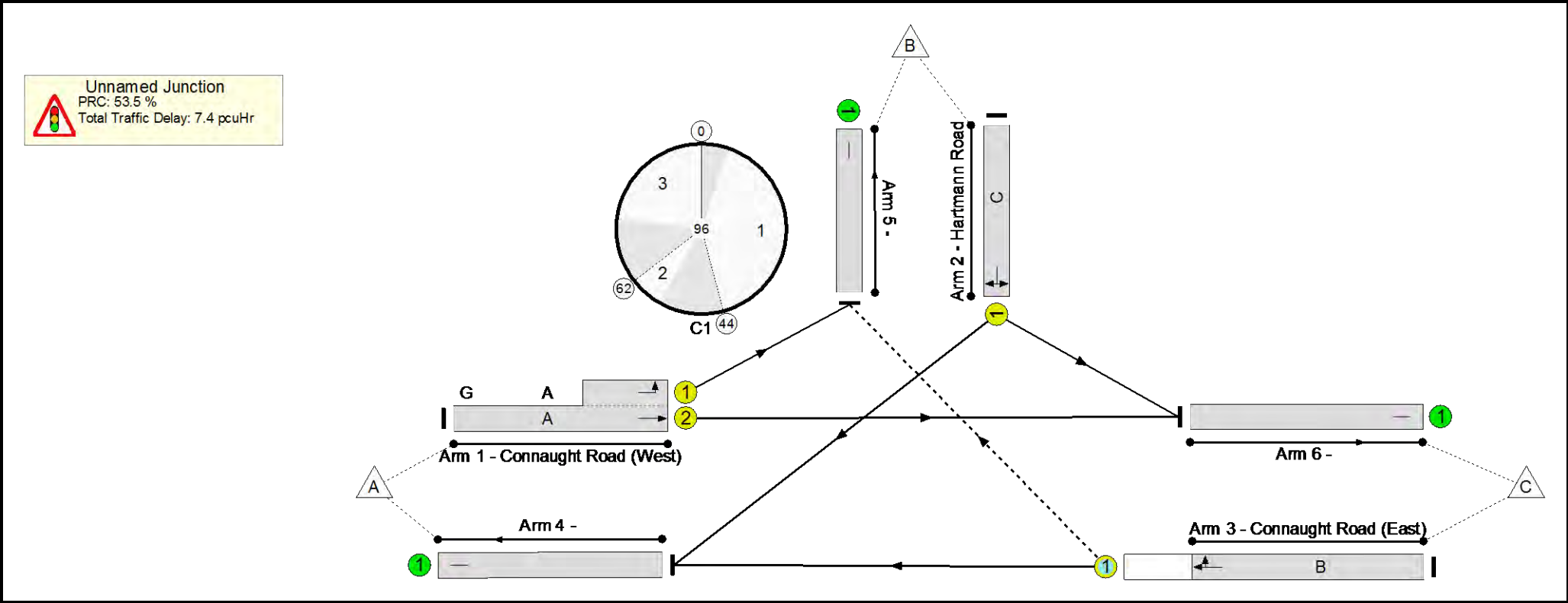
Stage	1	2	3
Duration	39	6	22
Change Point	0	44	62

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

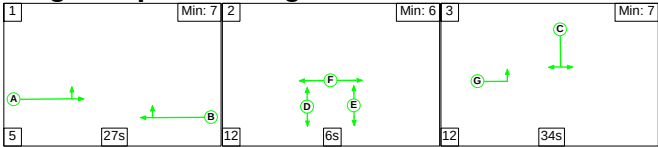
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	58.6%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	58.6%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	39:66	27	604	1890:1772	1030	58.6%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	22	-	256	1877	450	56.9%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	39	-	276	1982	632	43.6%
4/1		U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	266	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	30	0	1	5.7	1.7	0.0	7.4	-	-	-	-
Unnamed Junction	-	-	30	0	1	5.7	1.7	0.0	7.4	-	-	-	-
1/2+1/1	604	604	-	-	-	1.8	0.7	-	2.5	15.1	4.4	0.7	5.1
2/1	256	256	-	-	-	2.3	0.7	-	2.9	41.4	6.0	0.7	6.6
3/1	276	276	30	0	1	1.5	0.4	0.0	2.0	25.7	5.5	0.4	5.9
4/1	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	266	266	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	53.5	Total Delay for Signalled Lanes (pcuHr):	7.44	Cycle Time (s):	96
	PRC Over All Lanes (%):	53.5	Total Delay Over All Lanes(pcuHr):	7.44		

Full Input Data And Results
Scenario 9: '2025 With Development AM Peak' (FG9: '2025 With Development AM Peak', Plan 1: 'Peds Every Cycle')

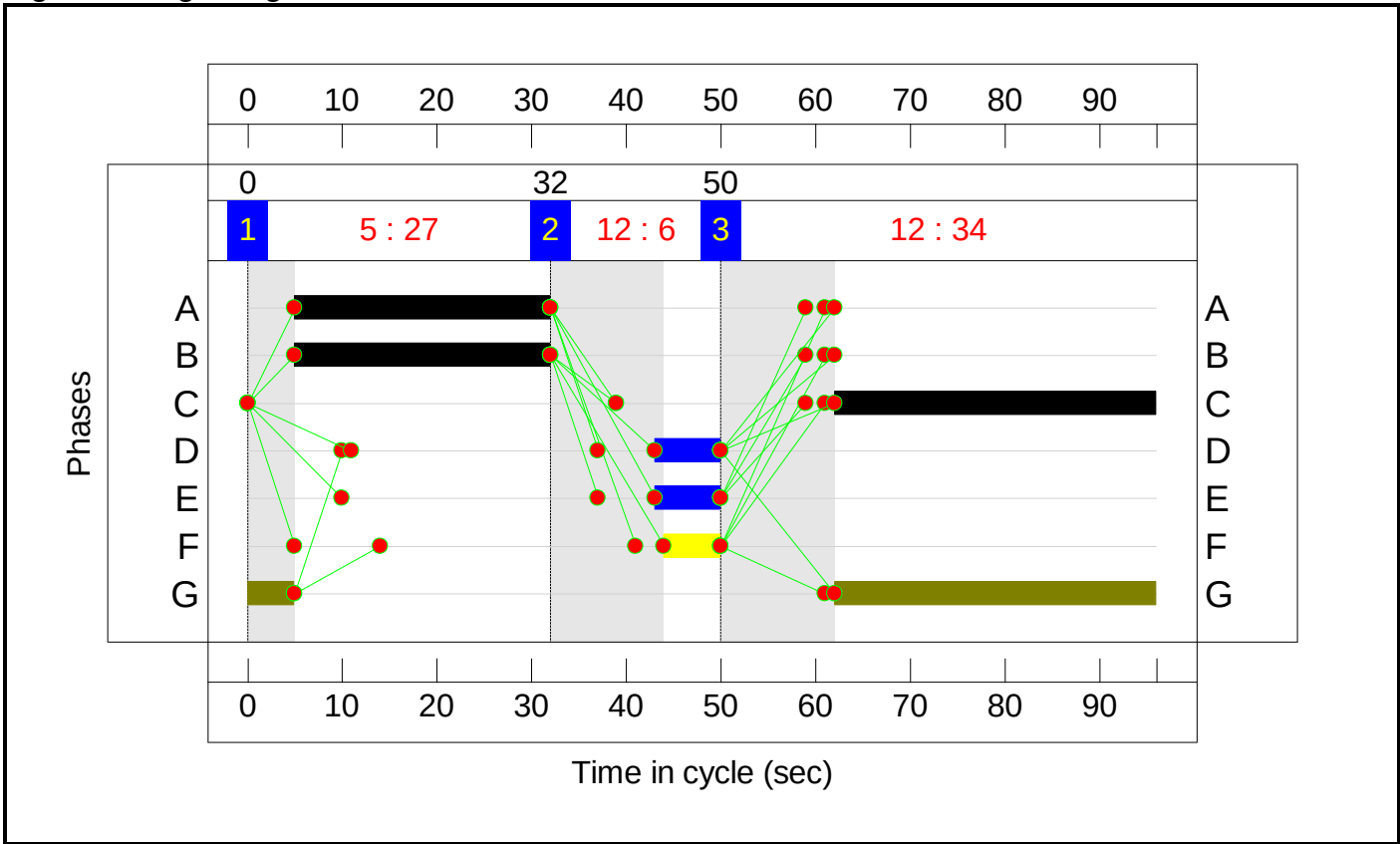
Stage Sequence Diagram



Stage Timings

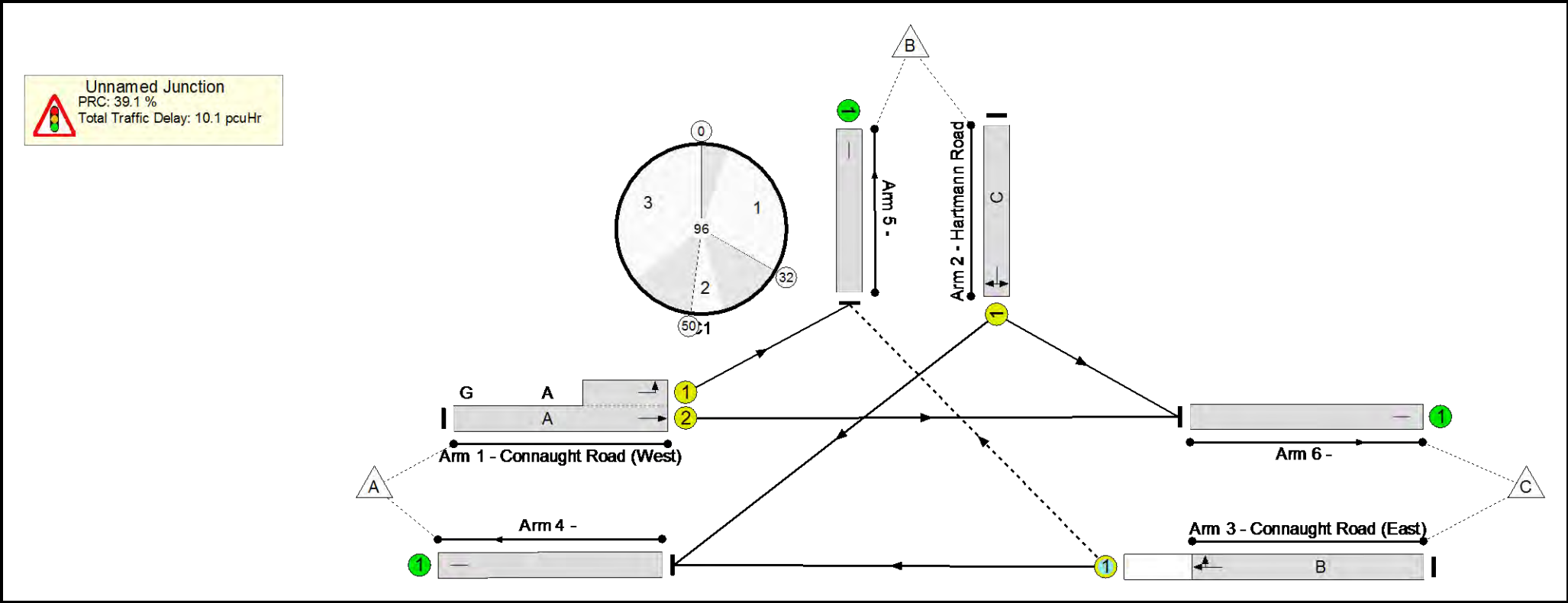
Stage	1	2	3
Duration	27	6	34
Change Point	0	32	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

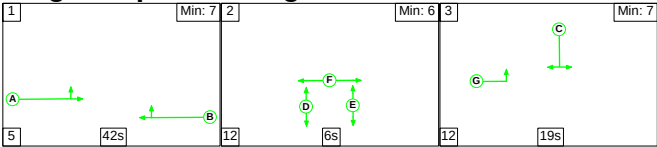
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	64.7%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	64.7%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	27:66	39	487	1890:1772	780	62.4%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	34	-	445	1887	688	64.7%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	27	-	283	2010	443	63.9%
4/1		U	N/A	N/A	-		-	-	-	717	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	284	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	214	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	5	0	0	7.5	2.6	0.0	10.1	-	-	-	-
Unnamed Junction	-	-	5	0	0	7.5	2.6	0.0	10.1	-	-	-	-
1/2+1/1	487	487	-	-	-	2.0	0.8	-	2.8	20.6	4.4	0.8	5.2
2/1	445	445	-	-	-	3.1	0.9	-	4.0	32.7	9.8	0.9	10.7
3/1	283	283	5	0	0	2.4	0.9	0.0	3.3	41.5	6.8	0.9	7.7
4/1	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	214	214	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	39.1	Total Delay for Signalled Lanes (pcuHr):	10.10	Cycle Time (s):	96
	PRC Over All Lanes (%):	39.1	Total Delay Over All Lanes(pcuHr):	10.10		

Full Input Data And Results
Scenario 10: '2025 With Development PM Peak' (FG10: '2025 With Development PM Peak', Plan 1: 'Peds Every Cycle')

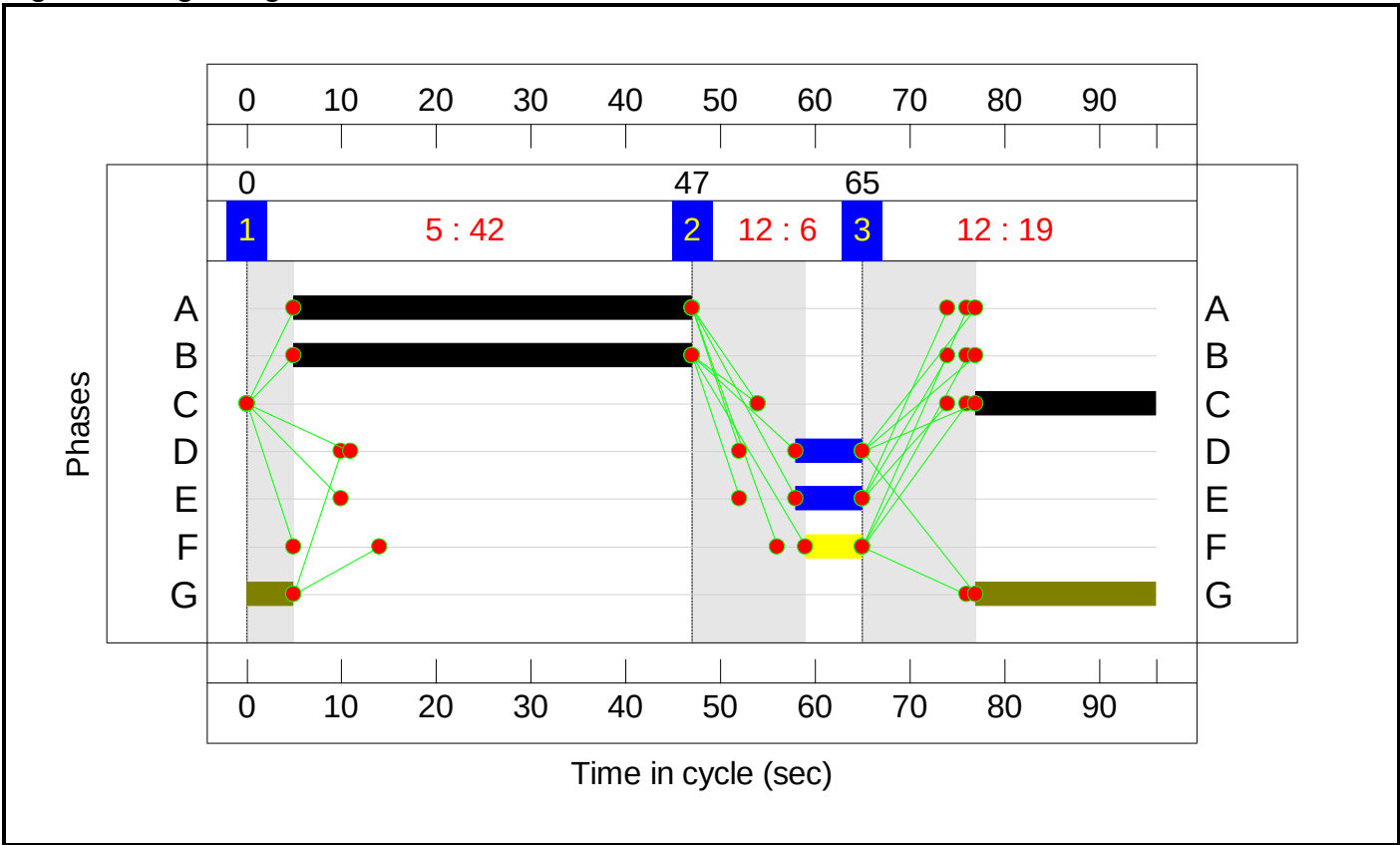
Stage Sequence Diagram



Stage Timings

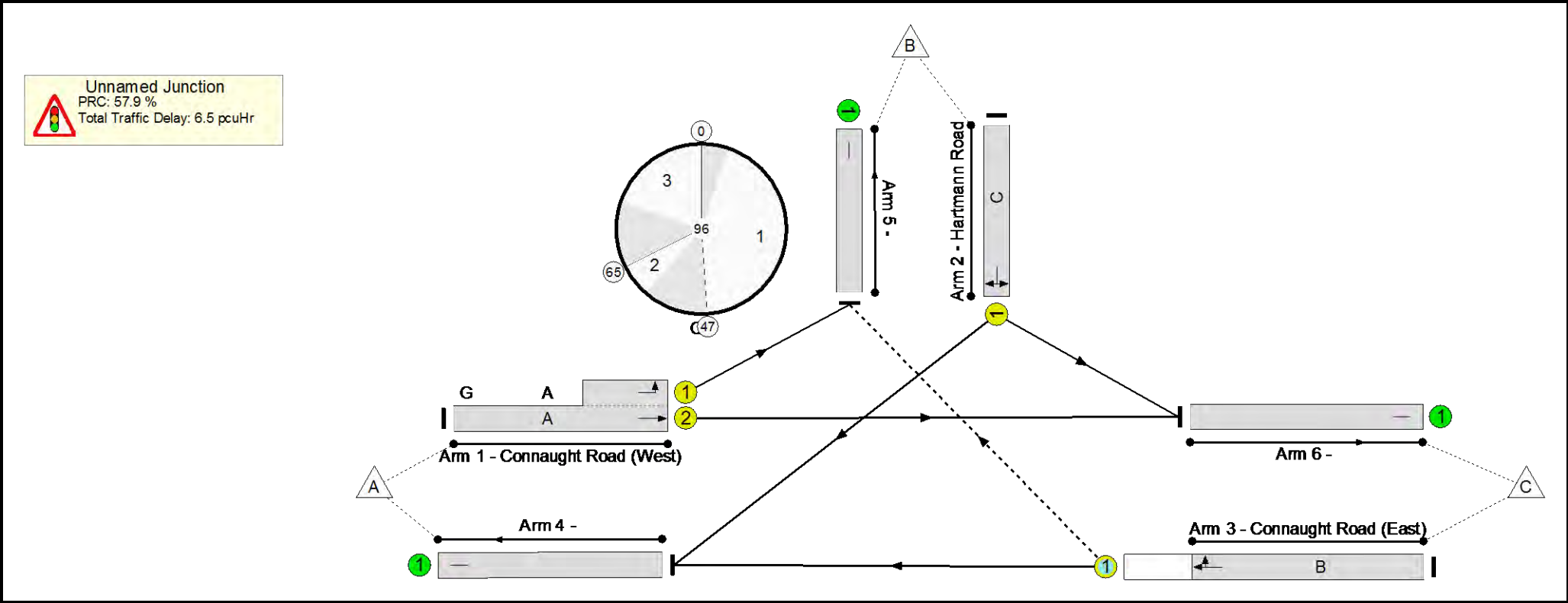
Stage	1	2	3
Duration	42	6	19
Change Point	0	47	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

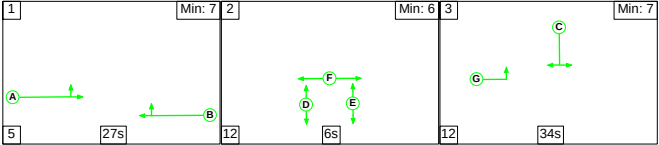
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	57.0%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	57.0%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	42:66	24	631	1890:1772	1107	57.0%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	19	-	214	1886	393	54.5%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	42	-	251	2008	757	33.2%
4/1		U	N/A	N/A	-		-	-	-	455	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	6	0	0	5.0	1.5	0.0	6.5	-	-	-	-
Unnamed Junction	-	-	6	0	0	5.0	1.5	0.0	6.5	-	-	-	-
1/2+1/1	631	631	-	-	-	1.7	0.7	-	2.4	13.7	4.1	0.7	4.7
2/1	214	214	-	-	-	2.0	0.6	-	2.6	43.9	5.1	0.6	5.6
3/1	251	251	6	0	0	1.2	0.2	0.0	1.5	20.9	4.7	0.2	5.0
4/1	455	455	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	249	249	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	57.9	Total Delay for Signalled Lanes (pcuHr):	6.47	Cycle Time (s):	96
	PRC Over All Lanes (%):	57.9	Total Delay Over All Lanes(pcuHr):	6.47		

Full Input Data And Results
Scenario 11: '2025 With Development AM Peak - Sensitivity Test' (FG11: '2025 With Development AM Peak - Sensitivity Test', Plan 1: 'Peds Every Cycle')

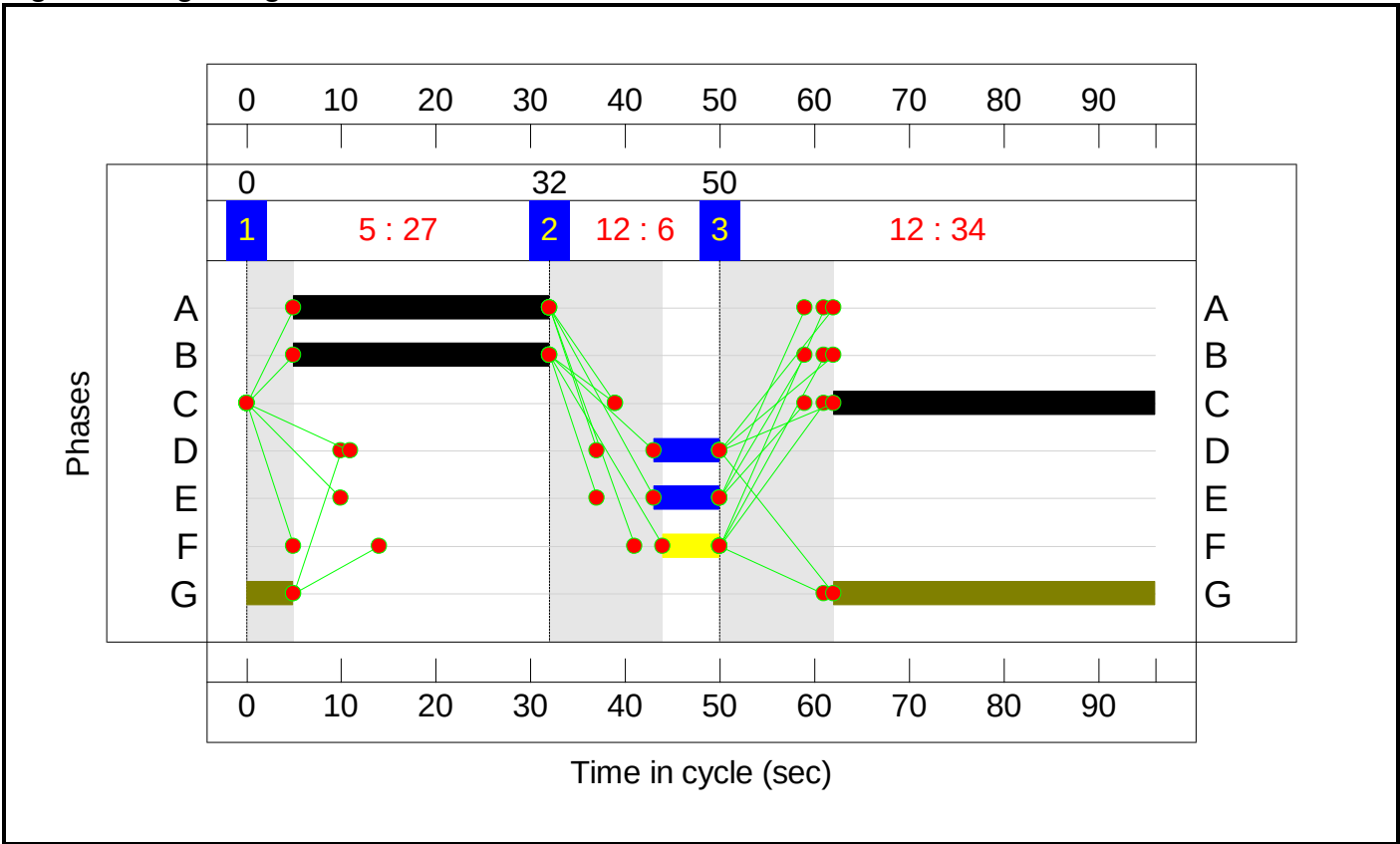
Stage Sequence Diagram



Stage Timings

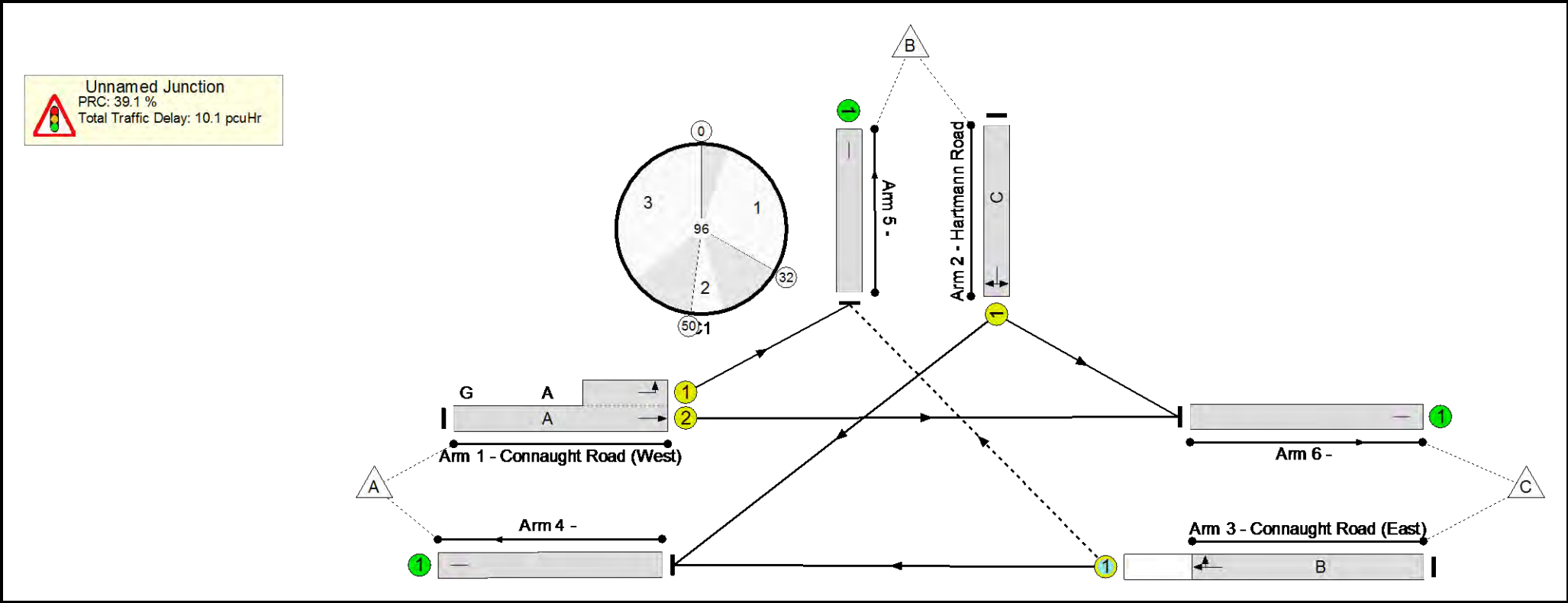
Stage	1	2	3
Duration	27	6	34
Change Point	0	32	50

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	64.7%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	64.7%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	27:66	39	497	1890:1772	789	63.0%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	34	-	445	1887	688	64.7%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	27	-	283	2010	443	63.9%
4/1		U	N/A	N/A	-		-	-	-	717	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	294	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	214	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	5	0	0	7.5	2.6	0.0	10.1	-	-	-	-
Unnamed Junction	-	-	5	0	0	7.5	2.6	0.0	10.1	-	-	-	-
1/2+1/1	497	497	-	-	-	2.0	0.8	-	2.8	20.5	4.4	0.8	5.2
2/1	445	445	-	-	-	3.1	0.9	-	4.0	32.7	9.8	0.9	10.7
3/1	283	283	5	0	0	2.4	0.9	0.0	3.3	41.5	6.8	0.9	7.7
4/1	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	294	294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	214	214	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

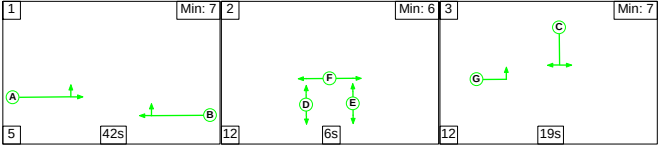
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	39.1	Total Delay for Signalled Lanes (pcuHr):	10.14	Cycle Time (s):	96
	PRC Over All Lanes (%):	39.1	Total Delay Over All Lanes(pcuHr):	10.14		

Full Input Data And Results

Scenario 12: '2025 With Development PM Peak - Sensitivity Test' (FG12: '2025 With Development PM Peak - Sensitivity Test', Plan 1: 'Peds Every Cycle')

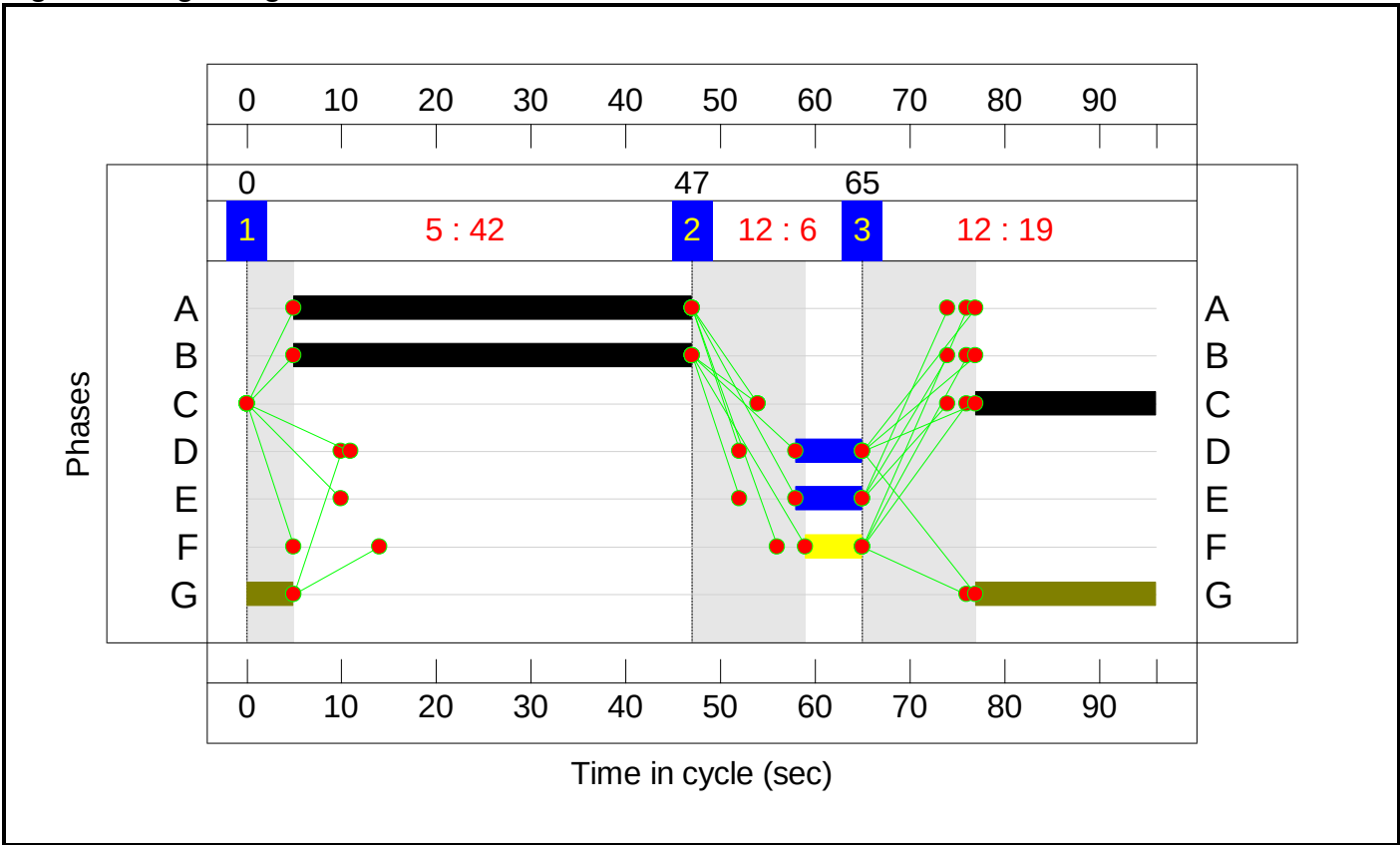
Stage Sequence Diagram



Stage Timings

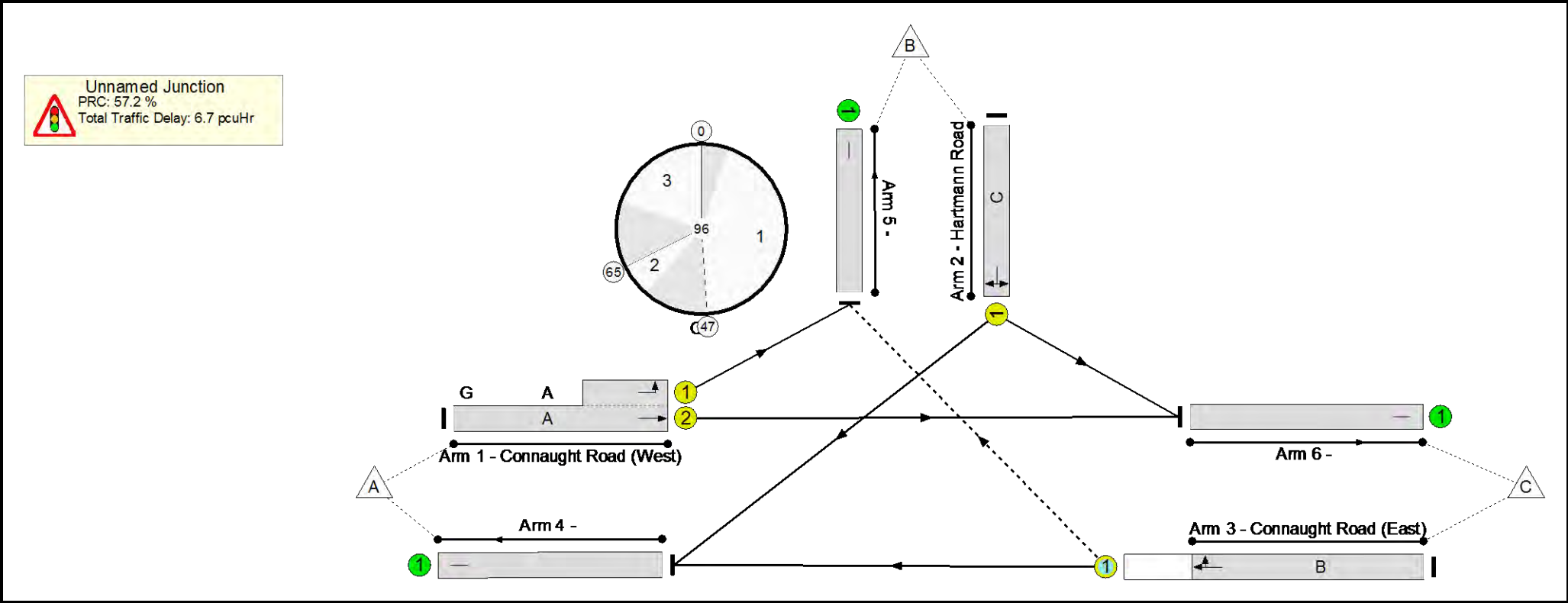
Stage	1	2	3
Duration	42	6	19
Change Point	0	47	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Apron Stand Replacement Project	-	-	N/A	-	-		-	-	-	-	-	-	57.3%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	57.3%
1/2+1/1	Connaught Road (West) Left Ahead	U	N/A	N/A	A	G	1	42:66	24	631	1890:1772	1107	57.0%
2/1	Hartmann Road Right Left	U	N/A	N/A	C		1	19	-	225	1886	393	57.3%
3/1	Connaught Road (East) Ahead Right	O	N/A	N/A	B		1	42	-	251	2008	757	33.2%
4/1		U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Apron Stand Replacement Project	-	-	6	0	0	5.1	1.6	0.0	6.7	-	-	-	-
Unnamed Junction	-	-	6	0	0	5.1	1.6	0.0	6.7	-	-	-	-
1/2+1/1	631	631	-	-	-	1.7	0.7	-	2.4	13.7	4.1	0.7	4.7
2/1	225	225	-	-	-	2.1	0.7	-	2.8	44.8	5.4	0.7	6.0
3/1	251	251	6	0	0	1.2	0.2	0.0	1.5	20.9	4.7	0.2	5.0
4/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	249	249	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	57.2	Total Delay for Signalled Lanes (pcuHr):	6.66	Cycle Time (s):	96
	PRC Over All Lanes (%):	57.2	Total Delay Over All Lanes(pcuHr):	6.66		

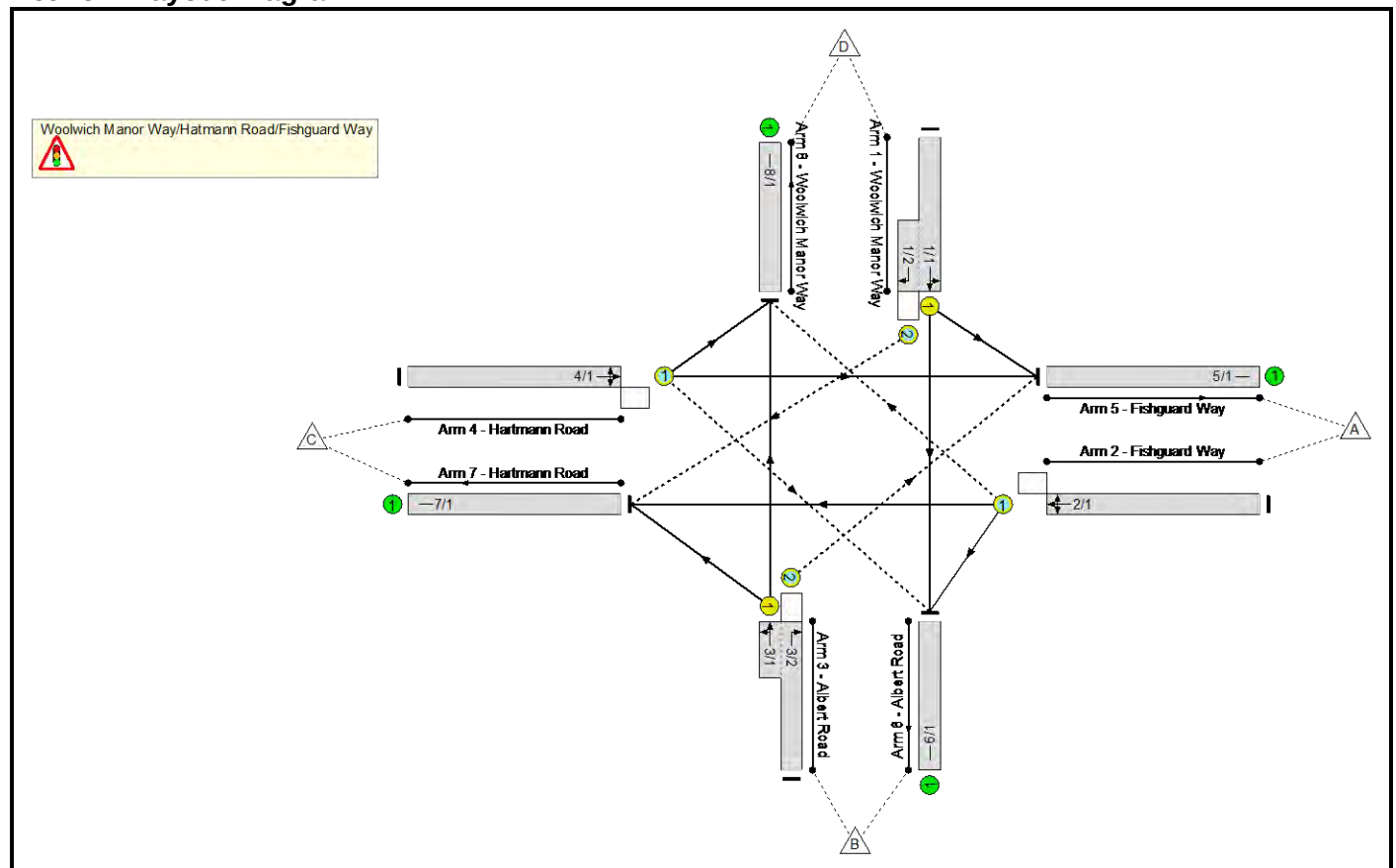
Full Input Data And Results

Full Input Data And Results

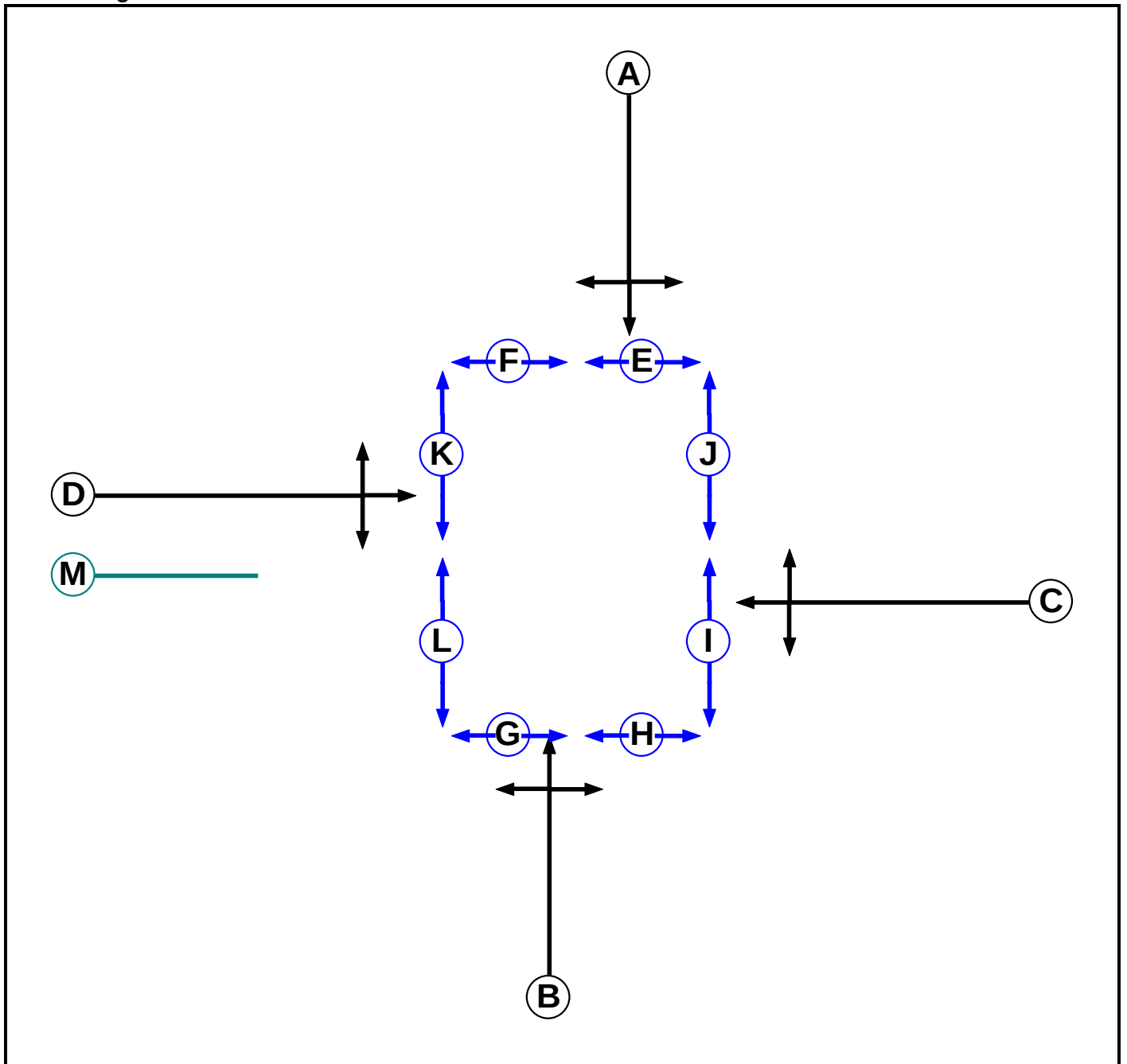
User and Project Details

Project:	
Title:	
Location:	
File name:	Woolwich Manor Road, Hartmann Road - 150812.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Dummy		3	3

Phase Intergreens Matrix

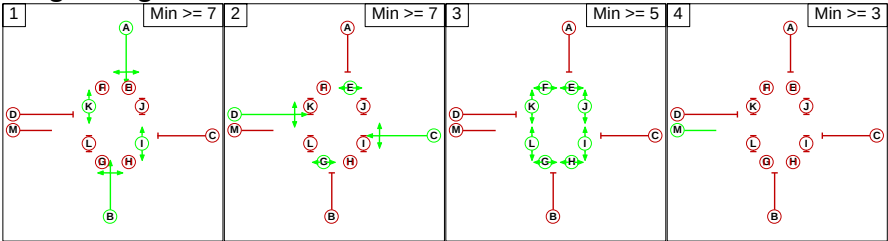
	Starting Phase												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A	-	7	7	5	-	-	11	-	9	-	12	3
	B	-	7	7	-	10	5	-	-	13	-	8	3
	C	6	6	-	-	11	-	9	5	-	-	9	3
	D	6	6	-	-	8	-	13	-	10	5	-	3
	E	9	-	-	-	-	-	-	-	-	-	-	3
	F	-	10	10	10	-	-	-	-	-	-	-	4
	G	-	10	-	-	-	-	-	-	-	-	-	4
	H	8	-	8	8	-	-	-	-	-	-	-	3
	I	-	-	8	-	-	-	-	-	-	-	-	3
	J	9	9	-	9	-	-	-	-	-	-	-	3
	K	-	-	-	8	-	-	-	-	-	-	-	3
	L	11	11	11	-	-	-	-	-	-	-	-	4
	M	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

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

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage			
	1	2	3	4
From Stage	1		8	13
	2	10		13
	3	11	11	
	4	2	2	2

Full Input Data And Results

Give-Way Lane Input Data

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Woolwich Manor Way)	7/1 (Right)	1439	0	3/1	1.09	All	2.00	-	0.50	2	2.00
2/1 (Fishguard Way)	8/1 (Right)	1439	0	4/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	2.00	2.00	0.50	2	2.00
3/2 (Albert Road)	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
4/1 (Hartmann Road)	6/1 (Right)	1439	0	2/1	1.09	To 6/1 (Left) To 7/1 (Ahead)	2.00	2.00	0.50	2	2.00

Lane Input Data

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Woolwich Manor Way)	U	A	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 5 Left	15.00
											Arm 6 Ahead	Inf
1/2 (Woolwich Manor Way)	O	A	2	3	5.0	Geom	-	3.00	0.00	Y	Arm 7 Right	10.00
2/1 (Fishguard Way)	O	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Left	10.00
											Arm 7 Ahead	Inf
											Arm 8 Right	15.00
3/1 (Albert Road)	U	B	2	3	4.0	Geom	-	2.75	0.00	Y	Arm 7 Left	9.00
											Arm 8 Ahead	Inf
3/2 (Albert Road)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	15.00
4/1 (Hartmann Road)	O	D	2	3	60.0	Geom	-	4.50	0.00	Y	Arm 5 Ahead	10.00
											Arm 6 Right	Inf
											Arm 8 Left	10.00
5/1 (Fishguard Way)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Albert Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Hartmann Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Woolwich Manor Way)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Existing AM Peak'	08:00	09:00	01:00	
2: 'Existing PM Peak'	17:00	18:00	01:00	
3: '2023 Without Development AM Peak'	08:00	09:00	01:00	
4: '2023 Without Development PM Peak'	17:00	18:00	01:00	
5: '2023 With Development AM Peak'	08:00	09:00	01:00	
6: '2023 With Development PM Peak'	17:00	18:00	01:00	
7: '2025 Without Development AM Peak'	08:00	09:00	01:00	
8: '2025 Without Development PM Peak'	17:00	18:00	01:00	
9: '2025 With Development AM Peak'	08:00	09:00	01:00	
10: '2025 With Development PM Peak'	17:00	18:00	01:00	
11: '2025 With Development AM Peak - Sensitivity Test'	08:00	09:00	01:00	
12: '2025 With Development PM Peak - Sensitivity Test'	17:00	18:00	01:00	

Scenario 1: 'Existing AM Peak' (FG1: 'Existing AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	38	0	70	108
	B	17	0	28	254	299
	C	0	1	0	2	3
	D	40	263	3	0	306
	Tot.	57	302	31	326	716

Traffic Lane Flows

Lane	Scenario 1: Existing AM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	306(In) 303(Out)
1/2 (short)	3
2/1	108
3/1 (short)	282
3/2 (with short)	299(In) 17(Out)
4/1	3
5/1	57
6/1	302
7/1	31
8/1	326

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.2 %	1865	1865
				Arm 6 Ahead	Inf	86.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.9 %	1859	1859
				Arm 8 Ahead	Inf	90.1 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1877	1877
				Arm 6 Right	Inf	33.3 %		
				Arm 8 Left	10.00	66.7 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'Existing PM Peak' (FG2: 'Existing PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	26	0	23	312	361
	C	0	0	0	1	1
	D	46	288	0	0	334
	Tot.	72	306	23	349	750

Traffic Lane Flows

Lane	Scenario 2: Existing PM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	334(In) 334(Out)
1/2 (short)	0
2/1	54
3/1 (short)	335
3/2 (with short)	361(In) 26(Out)
4/1	1
5/1	72
6/1	306
7/1	23
8/1	349

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.8 %	1864	1864
				Arm 6 Ahead	Inf	86.2 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	0.0 %	1915	1915
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.9 %	1869	1869
				Arm 8 Ahead	Inf	93.1 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2023 Without Development AM Peak' (FG3: '2023 Without Development AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	38	0	70	108
	B	17	0	28	261	306
	C	0	1	0	2	3
	D	40	287	3	0	330
	Tot.	57	326	31	333	747

Traffic Lane Flows

Lane	Scenario 3: 2023 Without Development AM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	330(In) 327(Out)
1/2 (short)	3
2/1	108
3/1 (short)	289
3/2 (with short)	306(In) 17(Out)
4/1	3
5/1	57
6/1	326
7/1	31
8/1	333

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	12.2 %	1867	1867
				Arm 6 Ahead	Inf	87.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.7 %	1860	1860
				Arm 8 Ahead	Inf	90.3 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1877	1877
				Arm 6 Right	Inf	33.3 %		
				Arm 8 Left	10.00	66.7 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results
Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	26	0	23	323	372
	C	0	0	0	1	1
	D	46	296	0	0	342
	Tot.	72	314	23	360	769

Traffic Lane Flows

Lane	Scenario 4: 2023 Without Development PM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	342(In) 342(Out)
1/2 (short)	0
2/1	54
3/1 (short)	346
3/2 (with short)	372(In) 26(Out)
4/1	1
5/1	72
6/1	314
7/1	23
8/1	360

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.5 %	1865	1865
				Arm 6 Ahead	Inf	86.5 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	0.0 %	1915	1915
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.6 %	1869	1869
				Arm 8 Ahead	Inf	93.4 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 With Development AM Peak' (FG5: '2023 With Development AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	38	0	70	108
	B	17	0	28	261	306
	C	0	1	0	182	183
	D	40	287	172	0	499
	Tot.	57	326	200	513	1096

Traffic Lane Flows

Lane	Scenario 5: 2023 With Development AM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	499(In) 327(Out)
1/2 (short)	172
2/1	108
3/1 (short)	289
3/2 (with short)	306(In) 17(Out)
4/1	183
5/1	57
6/1	326
7/1	200
8/1	513

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	12.2 %	1867	1867
				Arm 6 Ahead	Inf	87.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.7 %	1860	1860
				Arm 8 Ahead	Inf	90.3 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1797	1797
				Arm 6 Right	Inf	0.5 %		
				Arm 8 Left	10.00	99.5 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2023 With Development PM Peak' (FG6: '2023 With Development PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	0	0	23	323	346
	C	0	0	0	134	134
	D	46	296	160	0	502
	Tot.	46	314	183	493	1036

Traffic Lane Flows

Lane	Scenario 6: 2023 With Development PM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	502(In) 342(Out)
1/2 (short)	160
2/1	54
3/1 (short)	346
3/2 (with short)	346(In) 0(Out)
4/1	134
5/1	46
6/1	314
7/1	183
8/1	493

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.5 %	1865	1865
				Arm 6 Ahead	Inf	86.5 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.6 %	1869	1869
				Arm 8 Ahead	Inf	93.4 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	0.0 %	1915	1915
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2025 Without Development AM Peak' (FG7: '2025 Without Development AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	38	0	70	108
	B	17	0	28	261	306
	C	0	1	0	2	3
	D	40	287	3	0	330
	Tot.	57	326	31	333	747

Traffic Lane Flows

Lane	Scenario 7: 2025 Without Development AM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	330(In) 327(Out)
1/2 (short)	3
2/1	108
3/1 (short)	289
3/2 (with short)	306(In) 17(Out)
4/1	3
5/1	57
6/1	326
7/1	31
8/1	333

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	12.2 %	1867	1867
				Arm 6 Ahead	Inf	87.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.7 %	1860	1860
				Arm 8 Ahead	Inf	90.3 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1877	1877
				Arm 6 Right	Inf	33.3 %		
				Arm 8 Left	10.00	66.7 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results
Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	26	0	23	323	372
	C	0	0	0	1	1
	D	46	296	0	0	342
	Tot.	72	314	23	360	769

Traffic Lane Flows

Lane	Scenario 8: 2025 Without Development PM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	342(In) 342(Out)
1/2 (short)	0
2/1	54
3/1 (short)	346
3/2 (with short)	372(In) 26(Out)
4/1	1
5/1	72
6/1	314
7/1	23
8/1	360

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.5 %	1865	1865
				Arm 6 Ahead	Inf	86.5 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	0.0 %	1915	1915
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.6 %	1869	1869
				Arm 8 Ahead	Inf	93.4 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2025 With Development AM Peak' (FG9: '2025 With Development AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	38	0	70	108
	B	17	0	28	261	306
	C	0	1	0	184	185
	D	40	287	170	0	497
	Tot.	57	326	198	515	1096

Traffic Lane Flows

Lane	Scenario 9: 2025 With Development AM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	497(In) 327(Out)
1/2 (short)	170
2/1	108
3/1 (short)	289
3/2 (with short)	306(In) 17(Out)
4/1	185
5/1	57
6/1	326
7/1	198
8/1	515

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	12.2 %	1867	1867
				Arm 6 Ahead	Inf	87.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.7 %	1860	1860
				Arm 8 Ahead	Inf	90.3 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1797	1797
				Arm 6 Right	Inf	0.5 %		
				Arm 8 Left	10.00	99.5 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 10: '2025 With Development PM Peak' (FG10: '2025 With Development PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	26	0	23	323	372
	C	0	0	0	139	139
	D	46	296	160	0	502
	Tot.	72	314	183	498	1067

Traffic Lane Flows

Lane	Scenario 10: 2025 With Development PM Peak
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	502(In) 342(Out)
1/2 (short)	160
2/1	54
3/1 (short)	346
3/2 (with short)	372(In) 26(Out)
4/1	139
5/1	72
6/1	314
7/1	183
8/1	498

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.5 %	1865	1865
				Arm 6 Ahead	Inf	86.5 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.6 %	1869	1869
				Arm 8 Ahead	Inf	93.4 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 11: '2025 With Development AM Peak Sens' (FG11: '2025 With Development AM Peak - Sensitivity Test', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	38	0	70	108
	B	17	0	28	261	306
	C	0	1	0	184	185
	D	40	287	174	0	501
	Tot.	57	326	202	515	1100

Traffic Lane Flows

Lane	Scenario 11: 2025 With Development AM Peak Sens
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	501(In) 327(Out)
1/2 (short)	174
2/1	108
3/1 (short)	289
3/2 (with short)	306(In) 17(Out)
4/1	185
5/1	57
6/1	326
7/1	202
8/1	515

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	12.2 %	1867	1867
				Arm 6 Ahead	Inf	87.8 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	35.2 %	1758	1758
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	64.8 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	9.7 %	1860	1860
				Arm 8 Ahead	Inf	90.3 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1797	1797
				Arm 6 Right	Inf	0.5 %		
				Arm 8 Left	10.00	99.5 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results
Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	18	0	36	54
	B	26	0	23	323	372
	C	0	0	0	144	144
	D	46	296	160	0	502
	Tot.	72	314	183	503	1072

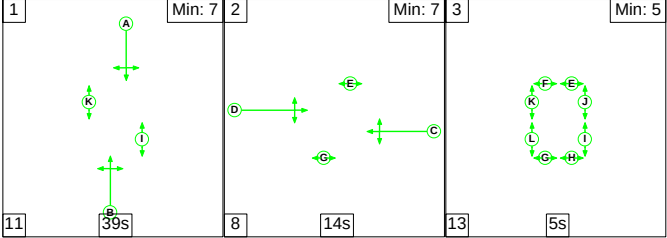
Traffic Lane Flows

Lane	Scenario 12: 2025 With Development PM Peak Sens
Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way	
1/1 (with short)	502(In) 342(Out)
1/2 (short)	160
2/1	54
3/1 (short)	346
3/2 (with short)	372(In) 26(Out)
4/1	144
5/1	72
6/1	314
7/1	183
8/1	503

Lane Saturation Flows

Junction: Woolwich Manor Way/Hatmann Road/Fishguard Way								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Woolwich Manor Way)	2.75	0.00	Y	Arm 5 Left	15.00	13.5 %	1865	1865
				Arm 6 Ahead	Inf	86.5 %		
1/2 (Woolwich Manor Way)	3.00	0.00	Y	Arm 7 Right	10.00	100.0 %	1665	1665
2/1 (Fishguard Way)	3.50	0.00	Y	Arm 6 Left	10.00	33.3 %	1760	1760
				Arm 7 Ahead	Inf	0.0 %		
				Arm 8 Right	15.00	66.7 %		
3/1 (Albert Road)	2.75	0.00	Y	Arm 7 Left	9.00	6.6 %	1869	1869
				Arm 8 Ahead	Inf	93.4 %		
3/2 (Albert Road)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
4/1 (Hartmann Road)	4.50	0.00	Y	Arm 5 Ahead	10.00	0.0 %	1796	1796
				Arm 6 Right	Inf	0.0 %		
				Arm 8 Left	10.00	100.0 %		
5/1 (Fishguard Way Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Albert Road Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Hartmann Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Woolwich Manor Way Lane 1)	Infinite Saturation Flow						Inf	Inf

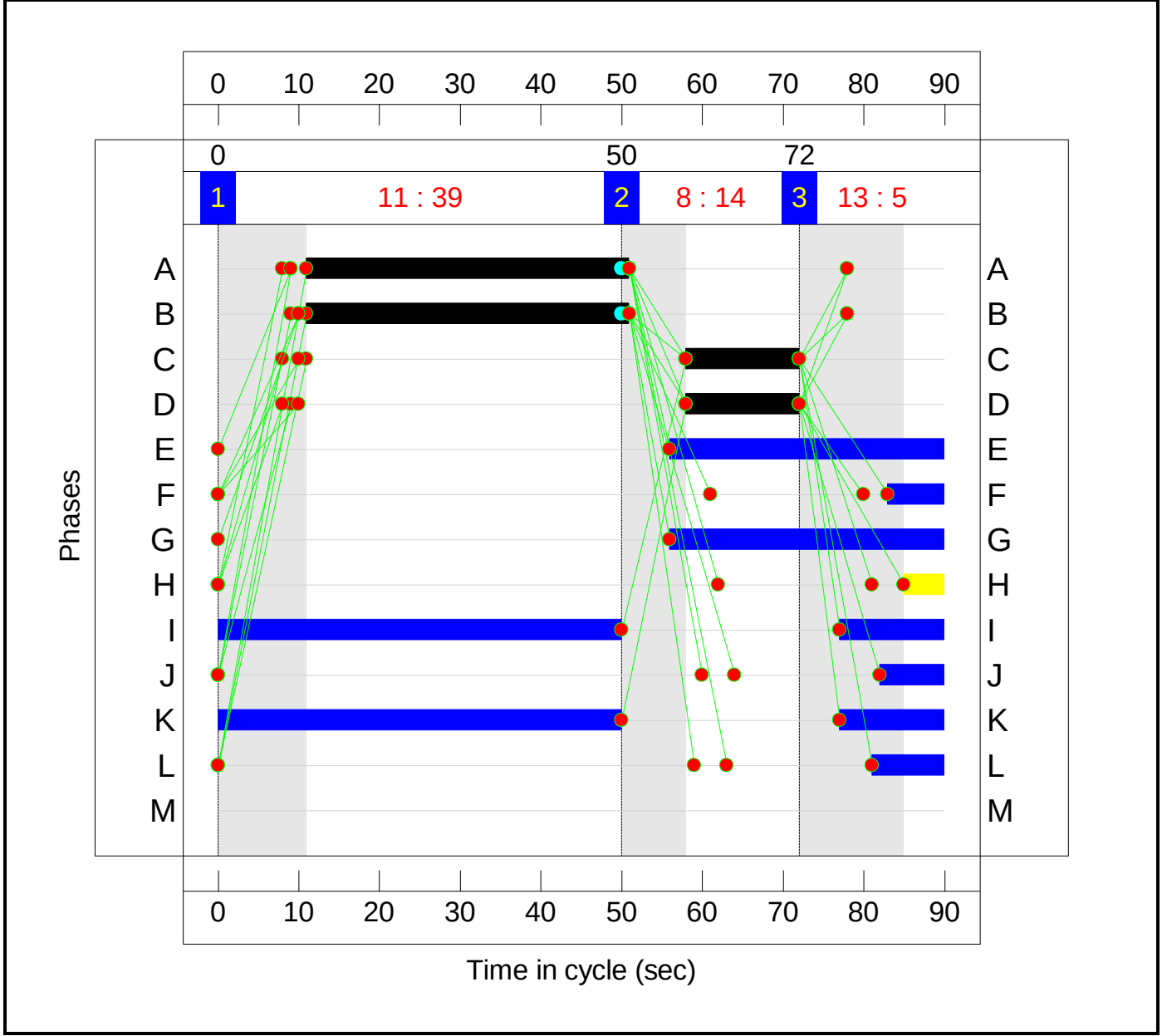
Scenario 1: 'Existing AM Peak' (FG1: 'Existing AM Peak', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



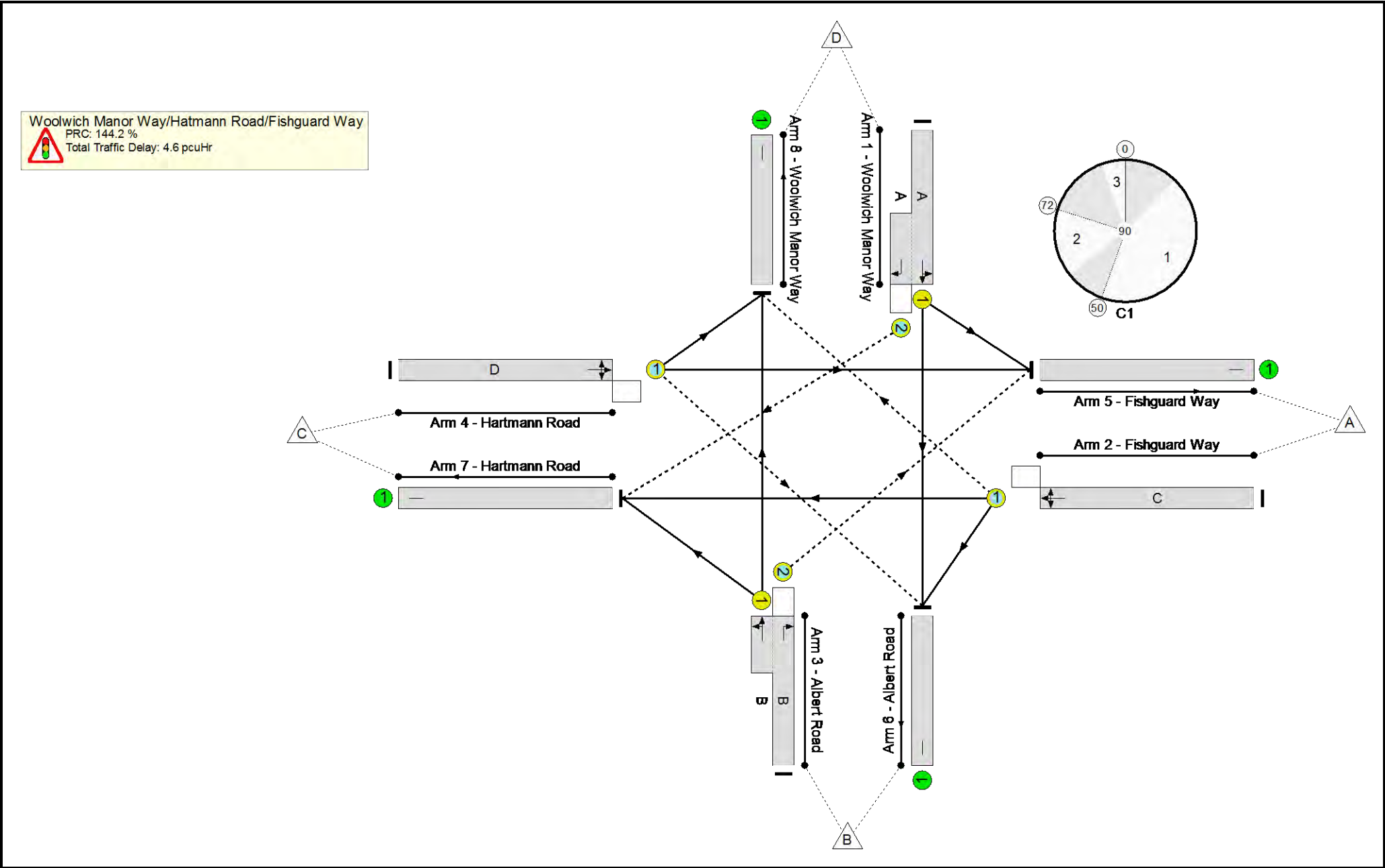
Stage Timings

Stage	1	2	3
Duration	39	14	5
Change Point	0	50	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	36.9%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	36.9%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	40	-	306	1865:1665	844	36.3%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	14	-	108	1758	293	36.9%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	40	-	299	1741:1859	849	35.2%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	14	-	3	1877	313	1.0%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	302	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%

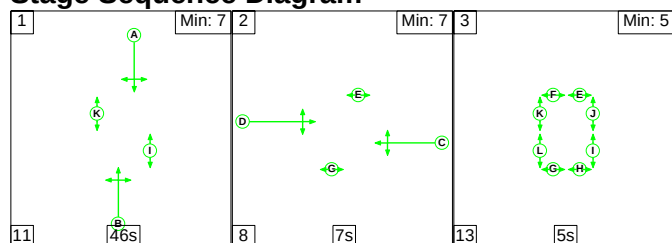
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	91	0	0	3.7	0.9	0.0	4.6	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	91	0	0	3.7	0.9	0.0	4.6	-	-	-	-
1/1+1/2	306	306	3	0	0	1.4	0.3	0.0	1.6	19.3	4.9	0.3	5.2
2/1	108	108	70	0	0	1.0	0.3	0.0	1.3	43.0	2.4	0.3	2.7
3/2+3/1	299	299	17	0	0	1.3	0.3	0.0	1.6	19.2	4.6	0.3	4.8
4/1	3	3	1	0	0	0.0	0.0	0.0	0.0	37.5	0.1	0.0	0.1
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	302	302	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 144.2 Total Delay for Signalled Lanes (pcuHr): 4.56 Cycle Time (s): 90 PRC Over All Lanes (%): 144.2 Total Delay Over All Lanes(pcuHr): 4.56													

Full Input Data And Results

Scenario 2: 'Existing PM Peak' (FG2: 'Existing PM Peak', Plan 1: 'Network Control Plan 1')

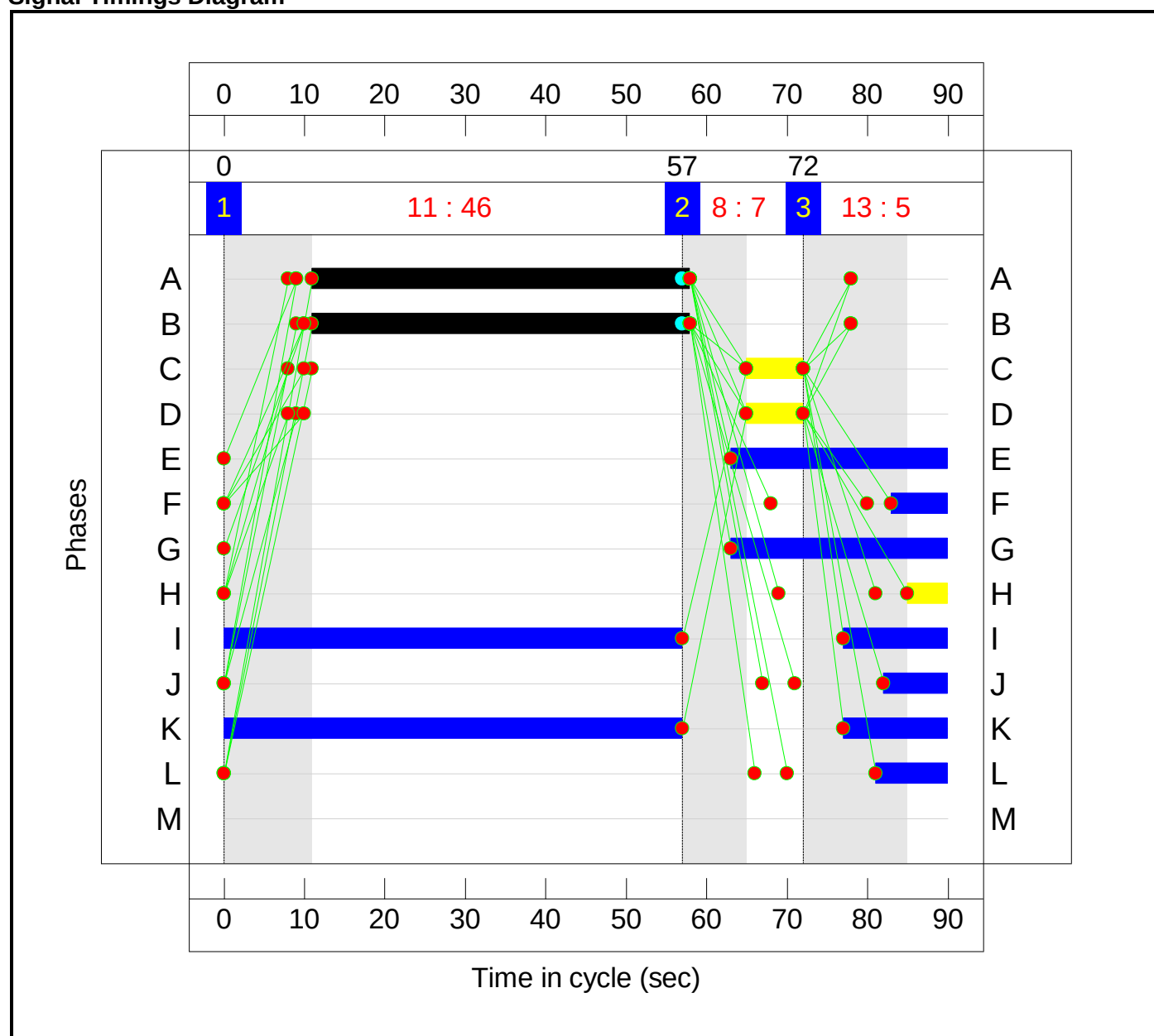
Stage Sequence Diagram



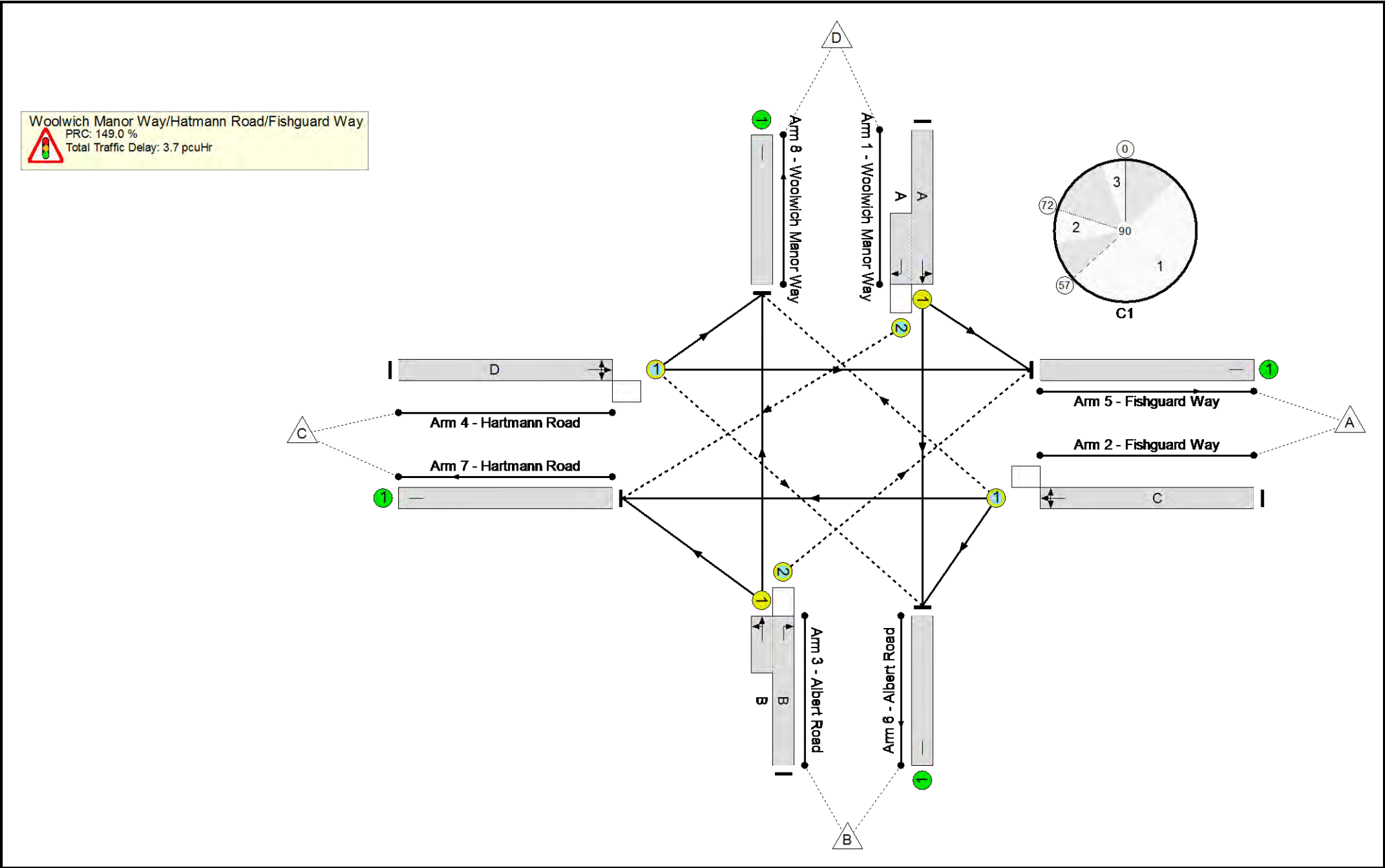
Stage Timings

Stage	1	2	3
Duration	46	7	5
Change Point	0	57	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	36.1%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	36.1%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	47	-	334	1864:1915	987	33.8%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	7	-	54	1760	156	34.5%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	47	-	361	1741:1869	999	36.1%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	7	-	1	1796	160	0.6%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%

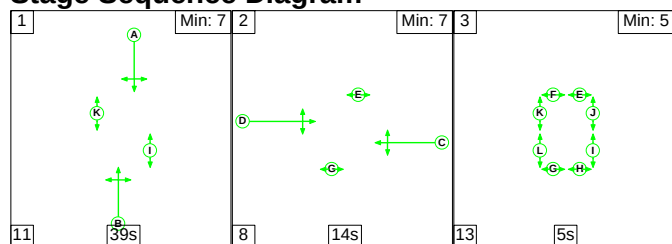
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	62	0	0	2.9	0.8	0.0	3.7	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	62	0	0	2.9	0.8	0.0	3.7	-	-	-	-
1/1+1/2	334	334	0	0	0	1.1	0.3	0.0	1.4	14.7	4.7	0.3	5.0
2/1	54	54	36	0	0	0.6	0.3	0.0	0.8	56.1	1.3	0.3	1.5
3/2+3/1	361	361	26	0	0	1.2	0.3	0.0	1.5	15.0	4.8	0.3	5.1
4/1	1	1	0	0	0	0.0	0.0	0.0	0.0	49.1	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 149.0 Total Delay for Signalled Lanes (pcuHr): 3.72 Cycle Time (s): 90 PRC Over All Lanes (%): 149.0 Total Delay Over All Lanes(pcuHr): 3.72													

Full Input Data And Results

Scenario 3: '2023 Without Development AM Peak' (FG3: '2023 Without Development AM Peak', Plan 1: 'Network Control Plan 1')

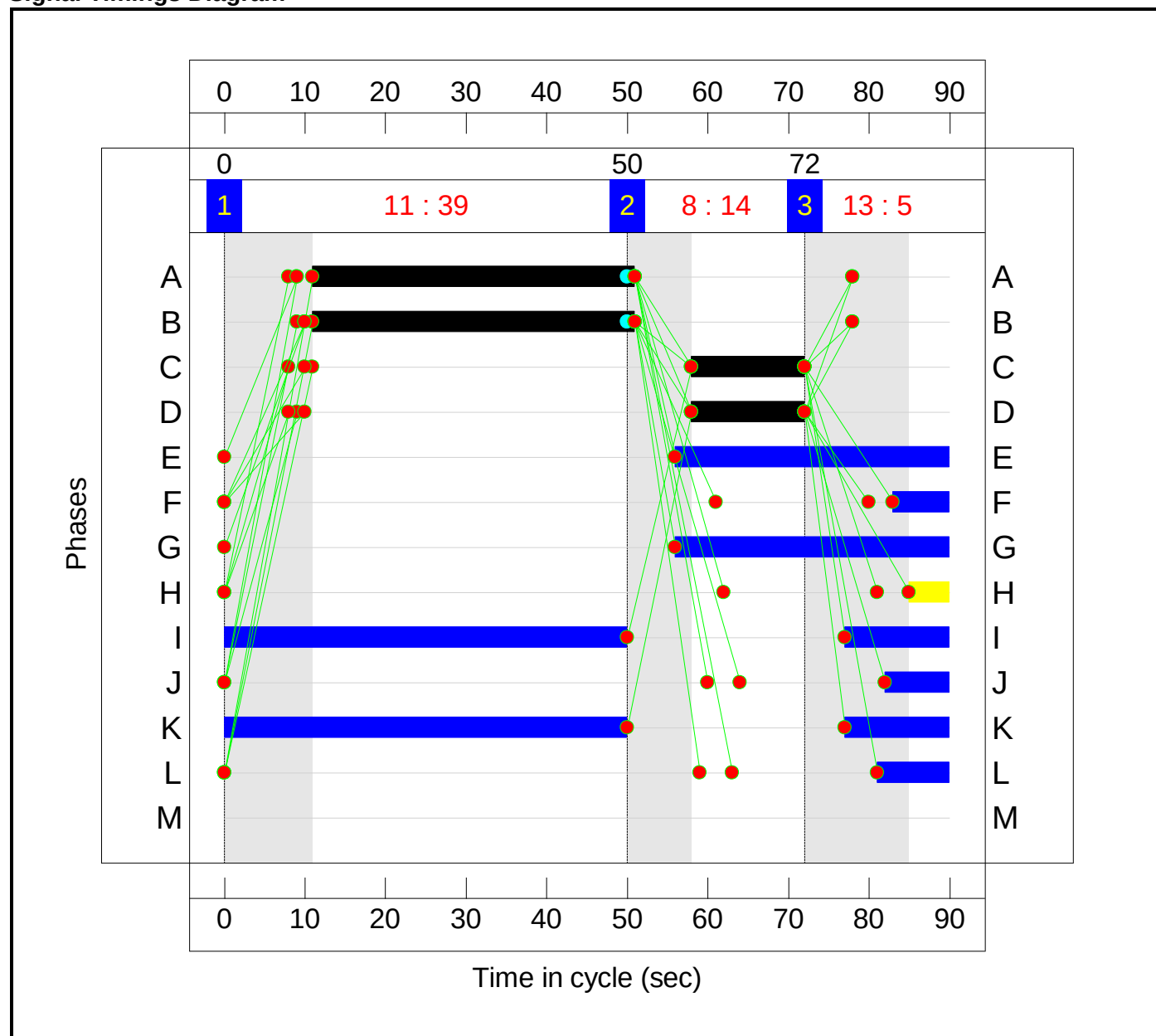
Stage Sequence Diagram



Stage Timings

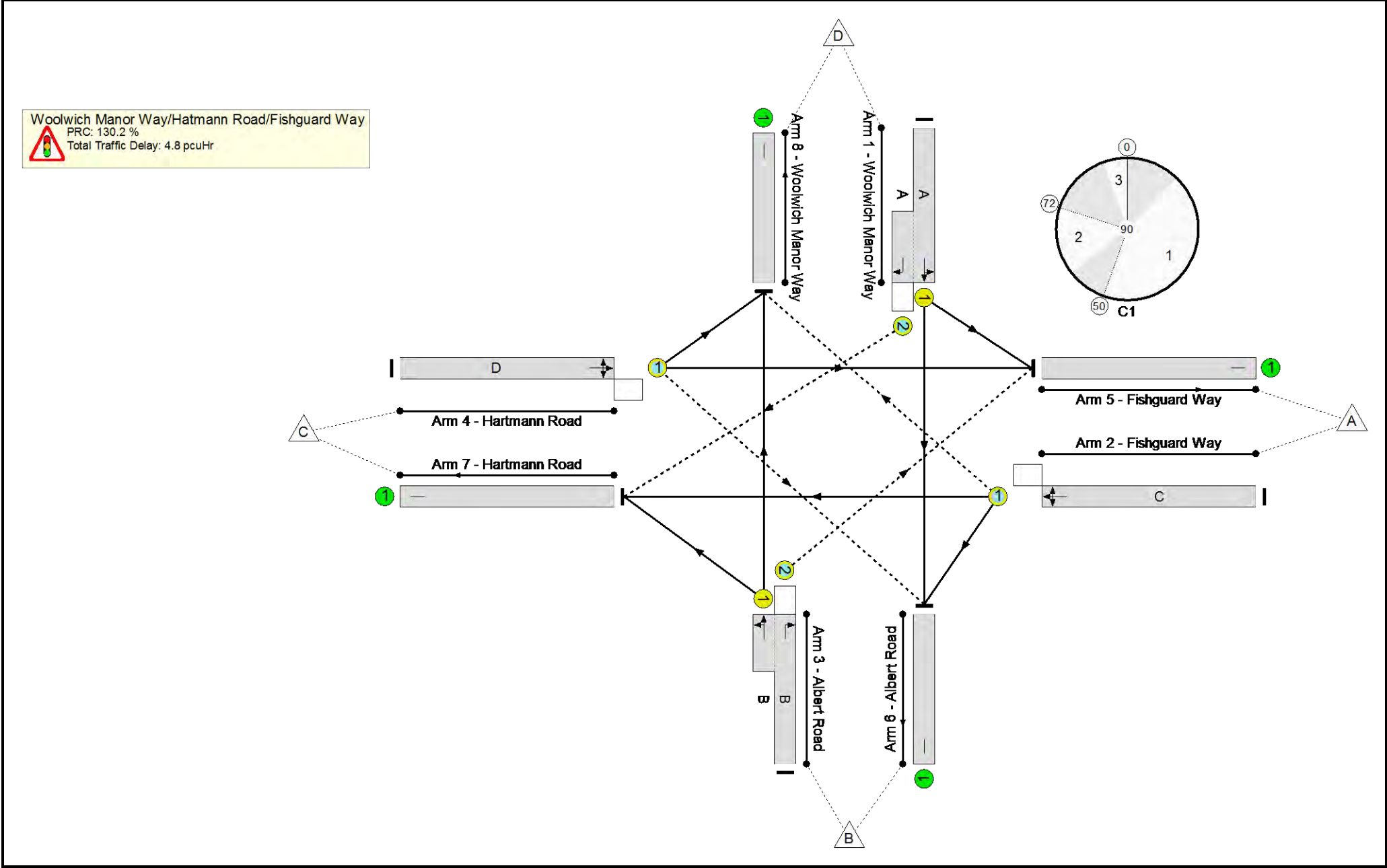
Stage	1	2	3
Duration	39	14	5
Change Point	0	50	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	39.1%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	39.1%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	40	-	330	1867:1665	844	39.1%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	14	-	108	1758	293	36.9%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	40	-	306	1741:1860	849	36.0%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	14	-	3	1877	313	1.0%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	333	Inf	Inf	0.0%

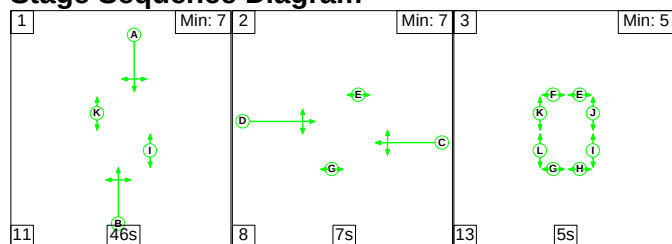
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	91	0	0	3.8	0.9	0.0	4.8	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	91	0	0	3.8	0.9	0.0	4.8	-	-	-	-
1/1+1/2	330	330	3	0	0	1.5	0.3	0.0	1.8	19.7	5.4	0.3	5.7
2/1	108	108	70	0	0	1.0	0.3	0.0	1.3	43.0	2.4	0.3	2.7
3/2+3/1	306	306	17	0	0	1.3	0.3	0.0	1.6	19.4	4.7	0.3	5.0
4/1	3	3	1	0	0	0.0	0.0	0.0	0.0	37.5	0.1	0.0	0.1
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	333	333	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 130.2 Total Delay for Signalled Lanes (pcuHr): 4.78 Cycle Time (s): 90 PRC Over All Lanes (%): 130.2 Total Delay Over All Lanes(pcuHr): 4.78													

Full Input Data And Results

Scenario 4: '2023 Without Development PM Peak' (FG4: '2023 Without Development PM Peak', Plan 1: 'Network Control Plan 1')

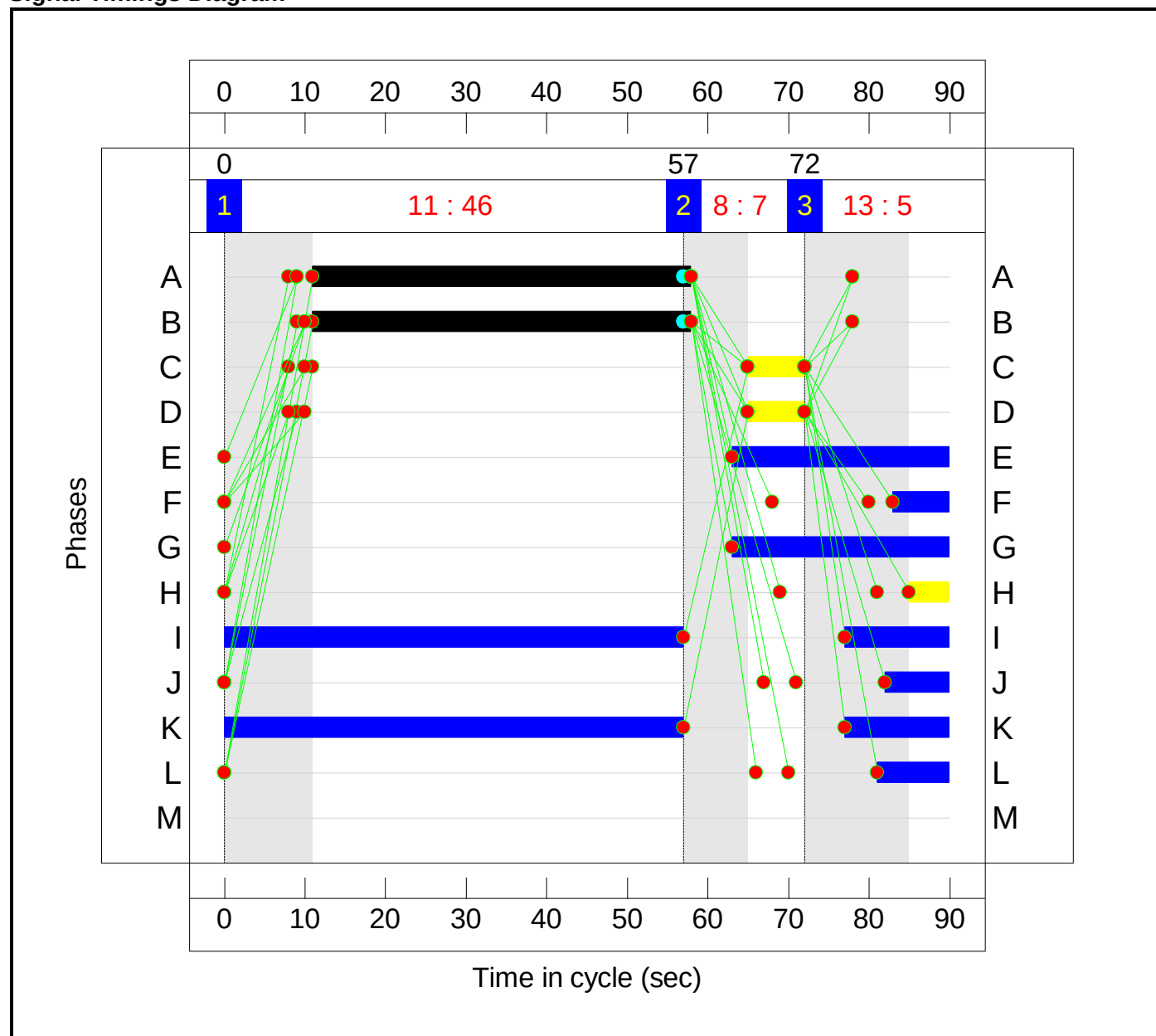
Stage Sequence Diagram



Stage Timings

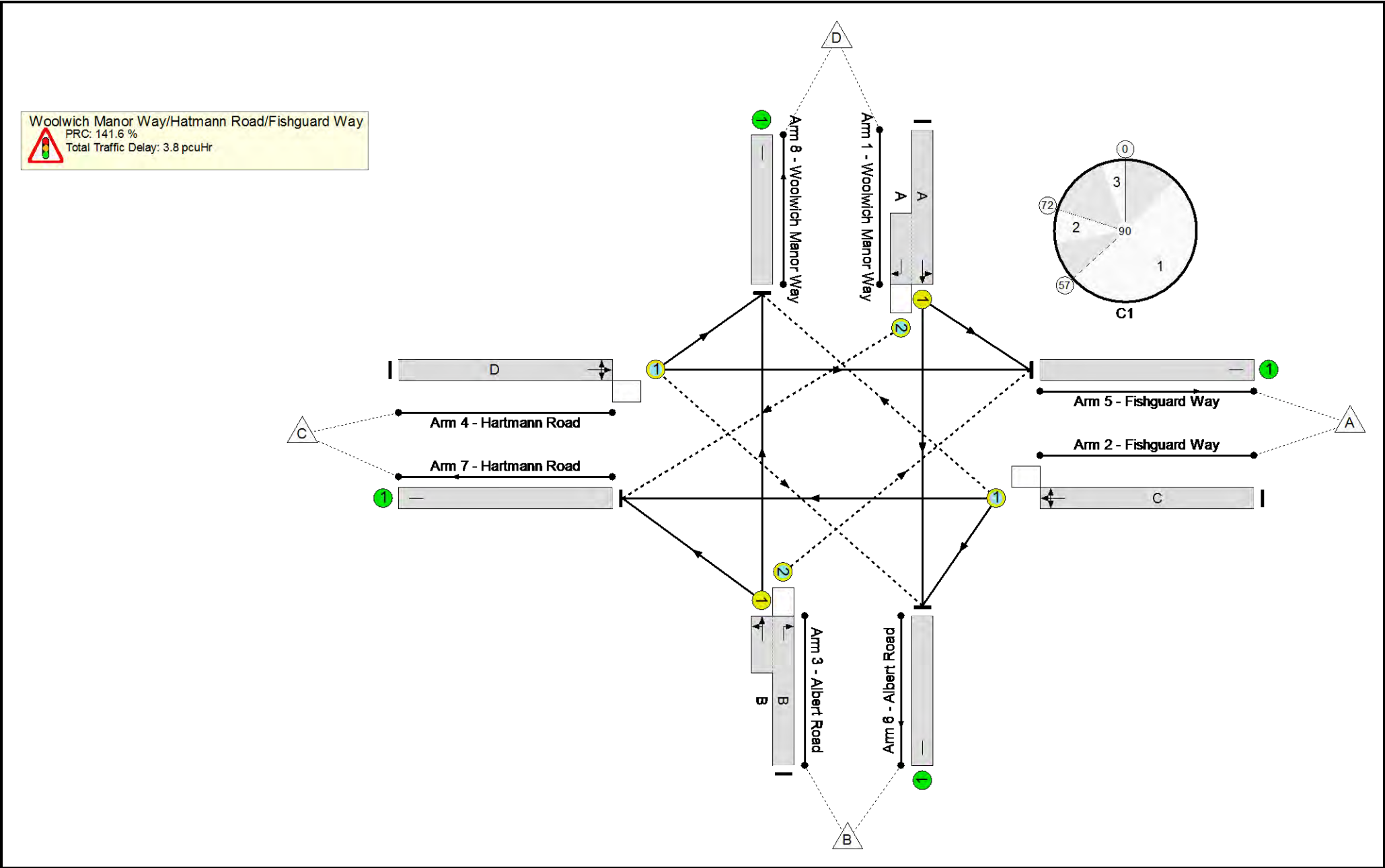
Stage	1	2	3
Duration	46	7	5
Change Point	0	57	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	37.3%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	37.3%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	47	-	342	1865:1915	987	34.6%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	7	-	54	1760	156	34.5%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	47	-	372	1741:1869	998	37.3%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	7	-	1	1796	160	0.6%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%

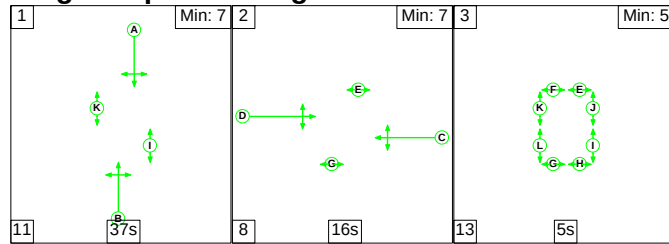
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	62	0	0	3.0	0.8	0.0	3.8	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	62	0	0	3.0	0.8	0.0	3.8	-	-	-	-
1/1+1/2	342	342	0	0	0	1.1	0.3	0.0	1.4	14.8	4.8	0.3	5.1
2/1	54	54	36	0	0	0.6	0.3	0.0	0.8	56.1	1.3	0.3	1.5
3/2+3/1	372	372	26	0	0	1.2	0.3	0.0	1.6	15.2	5.1	0.3	5.4
4/1	1	1	0	0	0	0.0	0.0	0.0	0.0	49.1	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 141.6 Total Delay for Signalled Lanes (pcuHr): 3.83 Cycle Time (s): 90 PRC Over All Lanes (%): 141.6 Total Delay Over All Lanes(pcuHr): 3.83													

Full Input Data And Results

Scenario 5: '2023 With Development AM Peak' (FG5: '2023 With Development AM Peak', Plan 1: 'Network Control Plan 1')

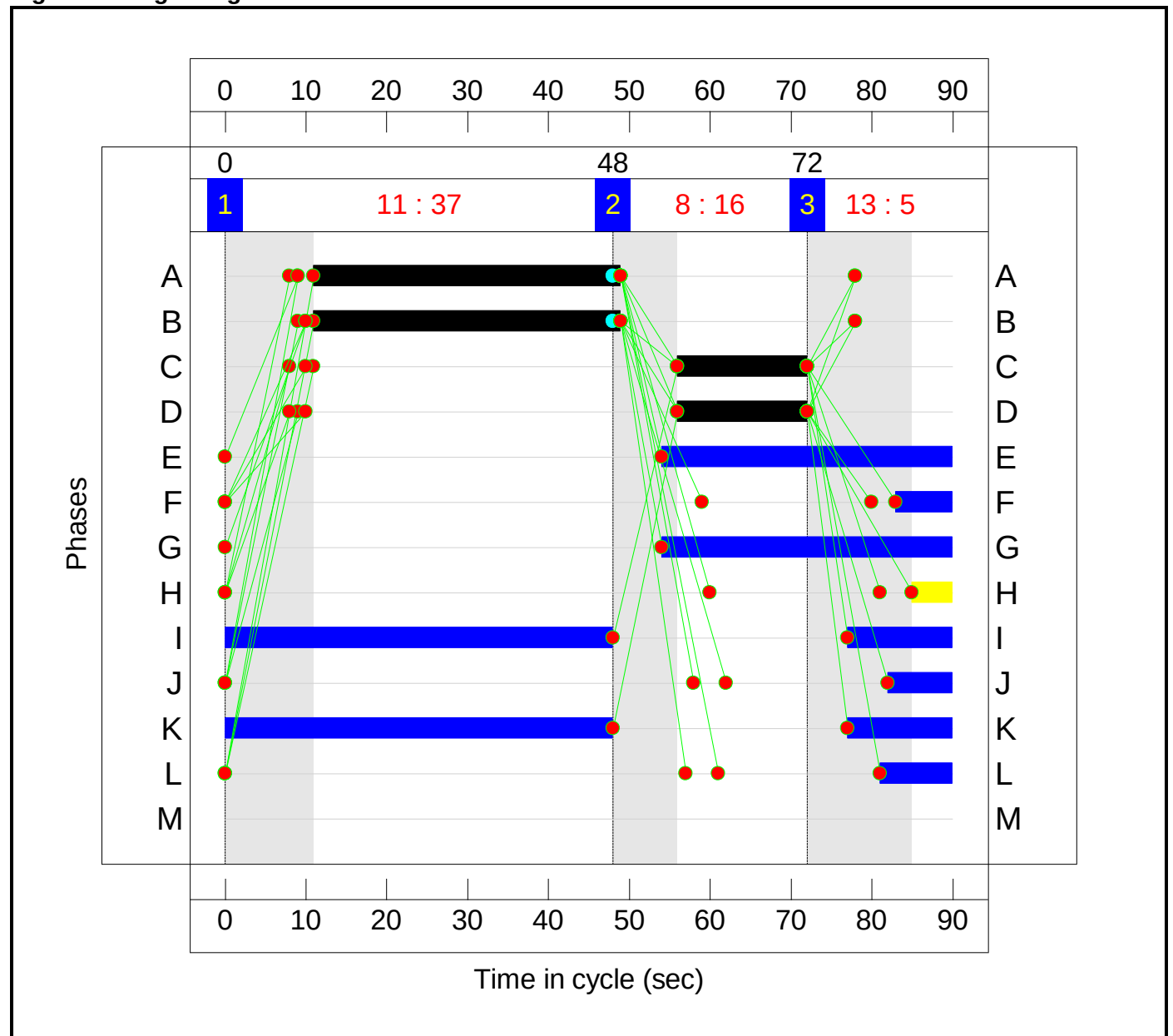
Stage Sequence Diagram



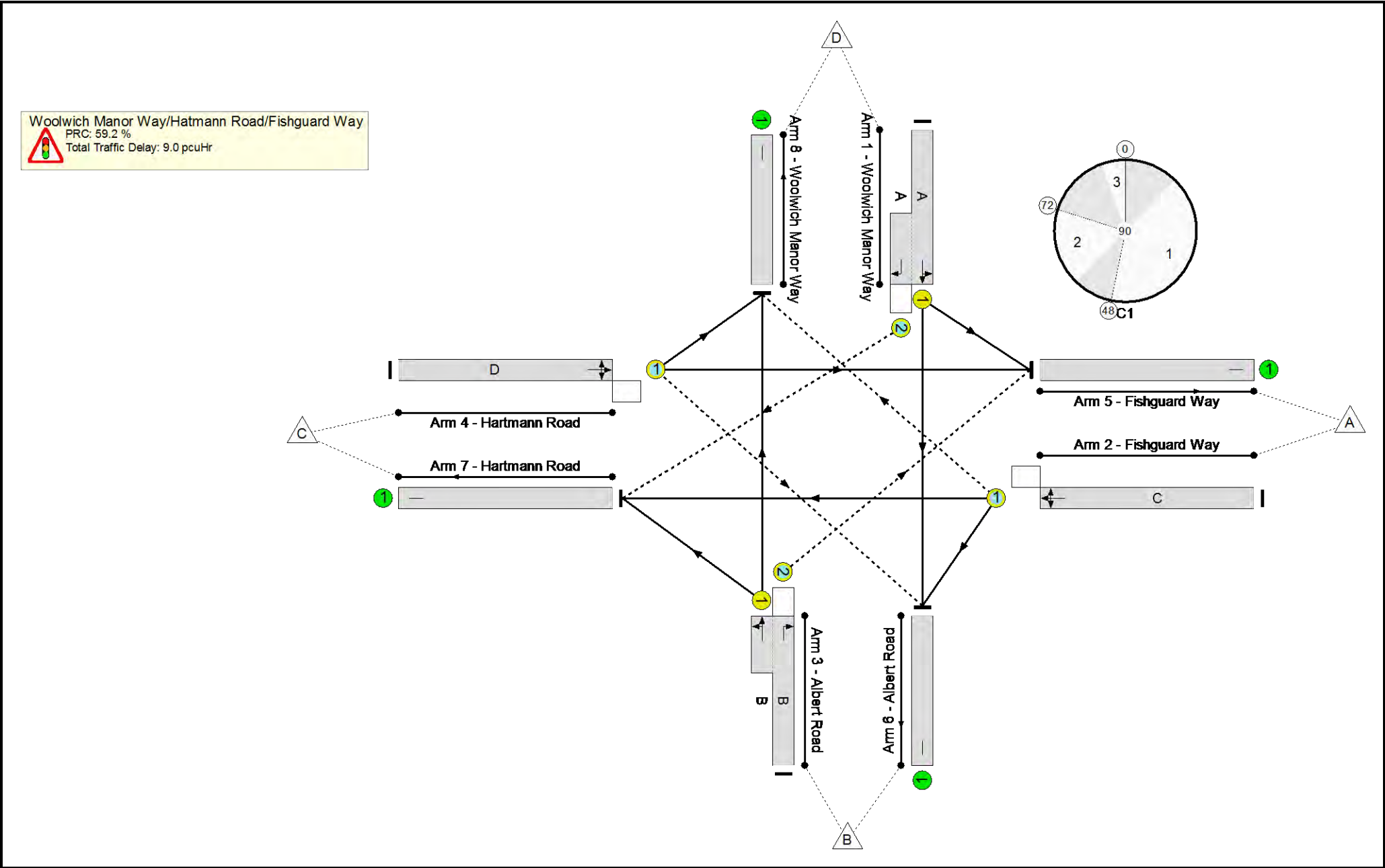
Stage Timings

Stage	1	2	3
Duration	37	16	5
Change Point	0	48	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	56.5%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	56.5%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	38	-	499	1867:1665	883	56.5%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	16	-	108	1758	221	48.8%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	38	-	306	1741:1860	808	37.9%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	16	-	183	1797	339	53.9%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	200	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%

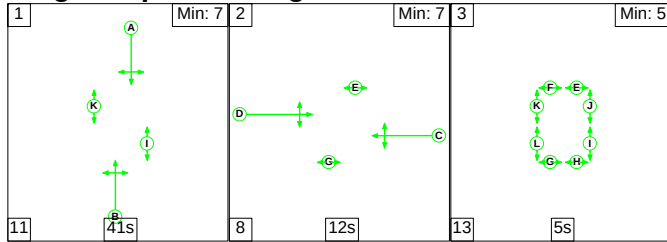
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	260	0	0	6.5	2.0	0.5	9.0	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	260	0	0	6.5	2.0	0.5	9.0	-	-	-	-
1/1+1/2	499	499	172	0	0	2.5	0.6	0.3	3.4	24.6	6.1	0.6	6.8
2/1	108	108	70	0	0	0.9	0.5	0.1	1.6	52.2	2.3	0.5	2.8
3/2+3/1	306	306	17	0	0	1.4	0.3	0.0	1.8	21.0	4.9	0.3	5.2
4/1	183	183	1	0	0	1.7	0.6	0.0	2.3	44.4	4.1	0.6	4.7
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	200	200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 59.2 Total Delay for Signalled Lanes (pcuHr): 9.02 Cycle Time (s): 90 PRC Over All Lanes (%): 59.2 Total Delay Over All Lanes(pcuHr): 9.02													

Full Input Data And Results

Scenario 6: '2023 With Development PM Peak' (FG6: '2023 With Development PM Peak', Plan 1: 'Network Control Plan 1')

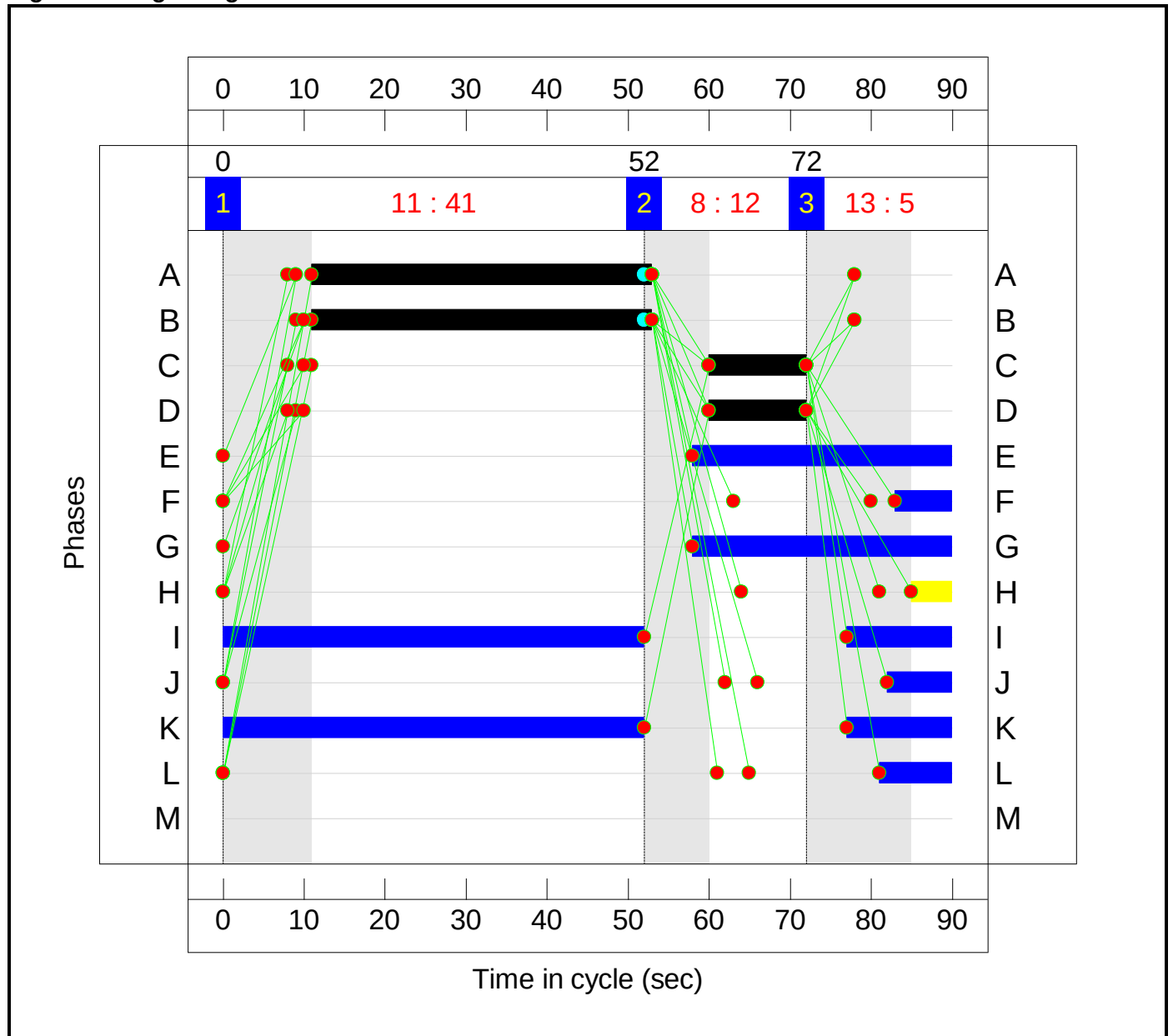
Stage Sequence Diagram



Stage Timings

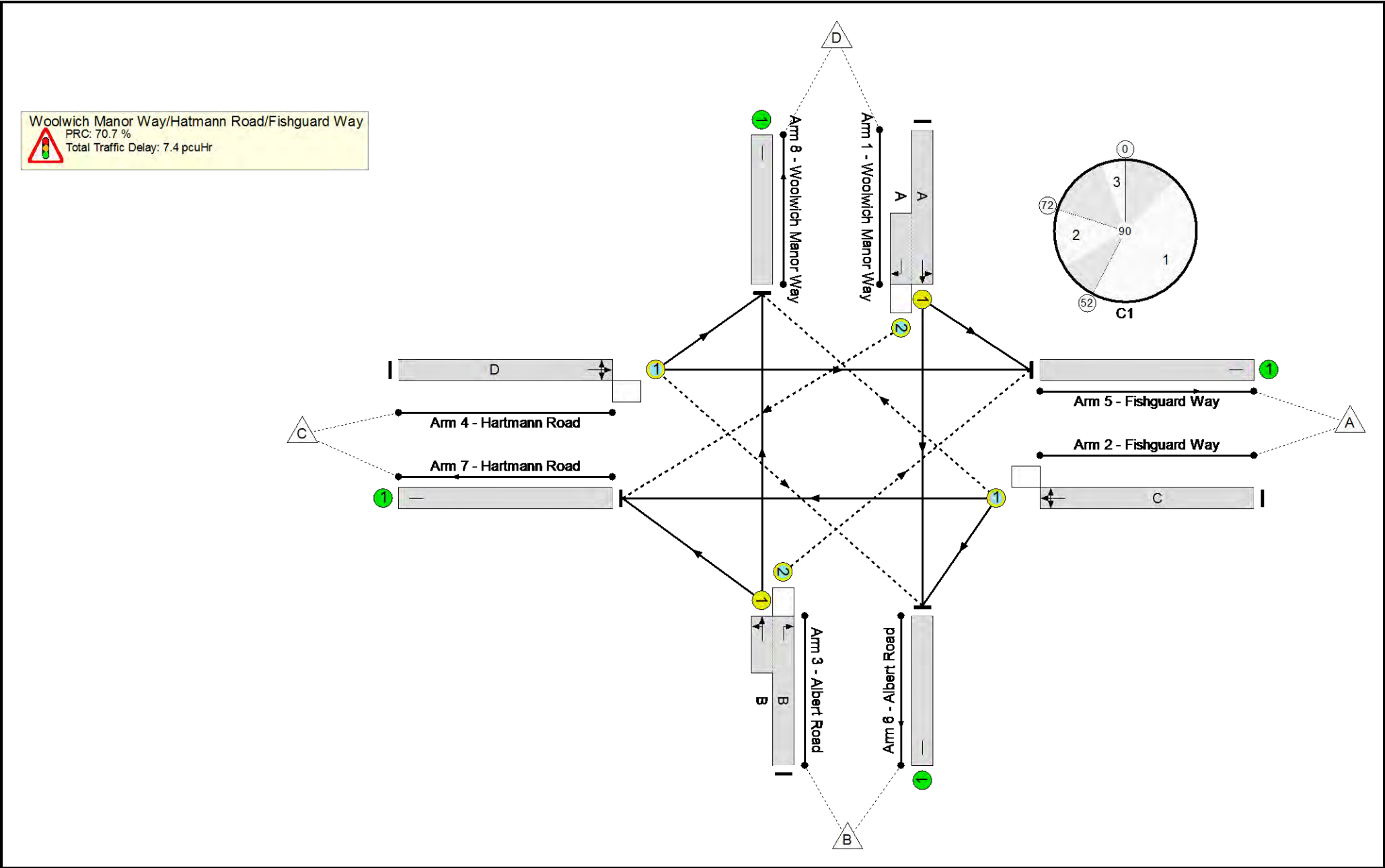
Stage	1	2	3
Duration	41	12	5
Change Point	0	52	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

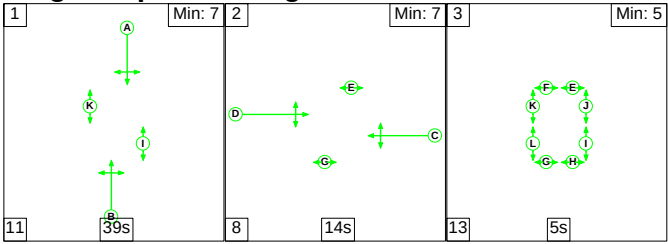
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	52.7%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	52.7%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	42	-	502	1865:1665	952	52.7%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	12	-	54	1760	179	30.2%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	42	-	346	1915:1869	887	39.0%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	12	-	134	1796	259	51.7%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	46	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	493	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	196	0	0	5.4	1.6	0.4	7.4	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	196	0	0	5.4	1.6	0.4	7.4	-	-	-	-
1/1+1/2	502	502	160	0	0	2.1	0.6	0.3	3.0	21.3	5.8	0.6	6.4
2/1	54	54	36	0	0	0.5	0.2	0.1	0.8	52.2	1.2	0.2	1.4
3/2+3/1	346	346	0	0	0	1.5	0.3	0.0	1.8	18.4	5.6	0.3	5.9
4/1	134	134	0	0	0	1.3	0.5	0.0	1.9	49.8	3.1	0.5	3.6
5/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	493	493	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 70.7 Total Delay for Signalled Lanes (pcuHr): 7.38 PRC Over All Lanes (%): 70.7 Total Delay Over All Lanes(pcuHr): 7.38 Cycle Time (s): 90													

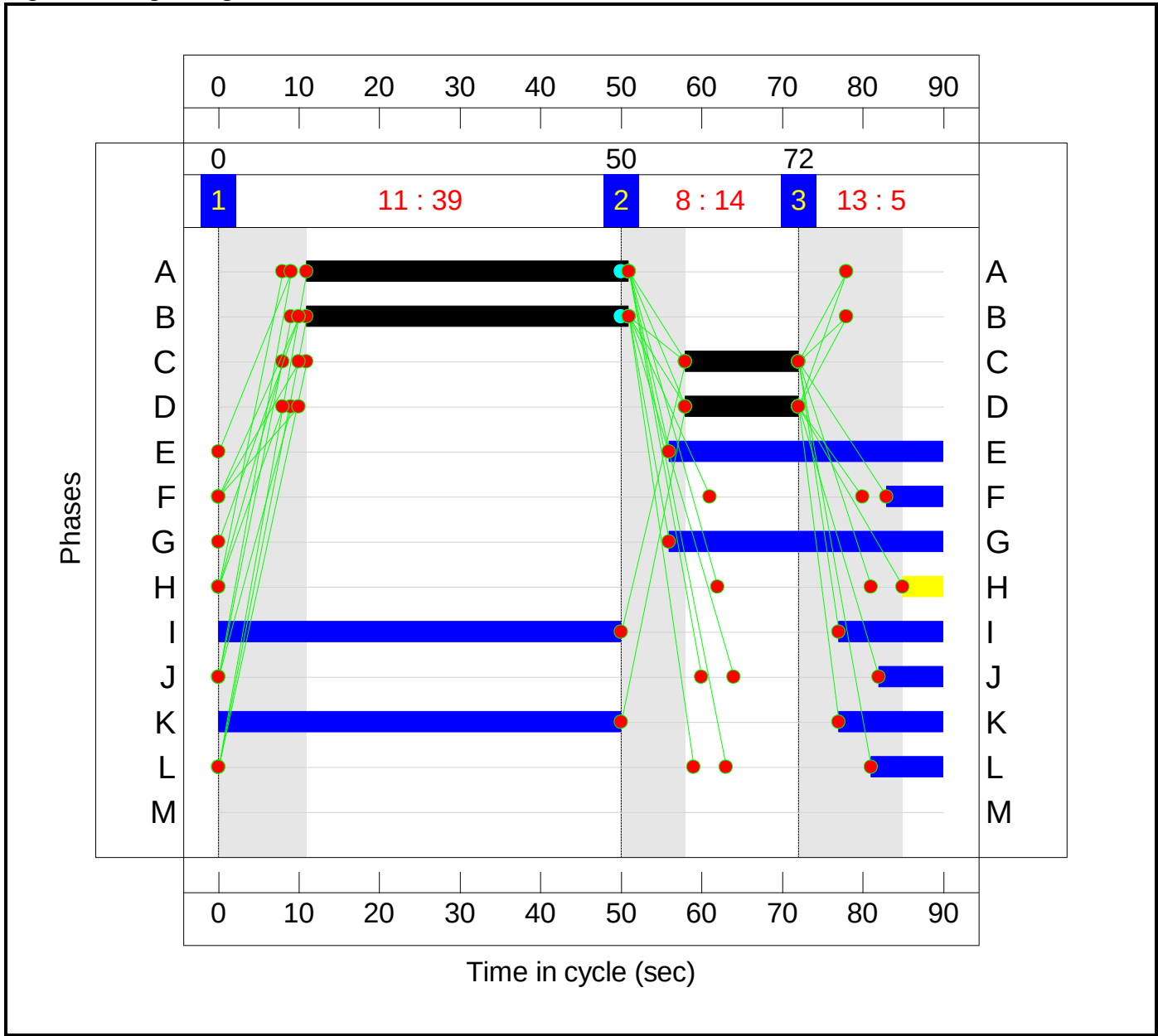
Stage Sequence Diagram



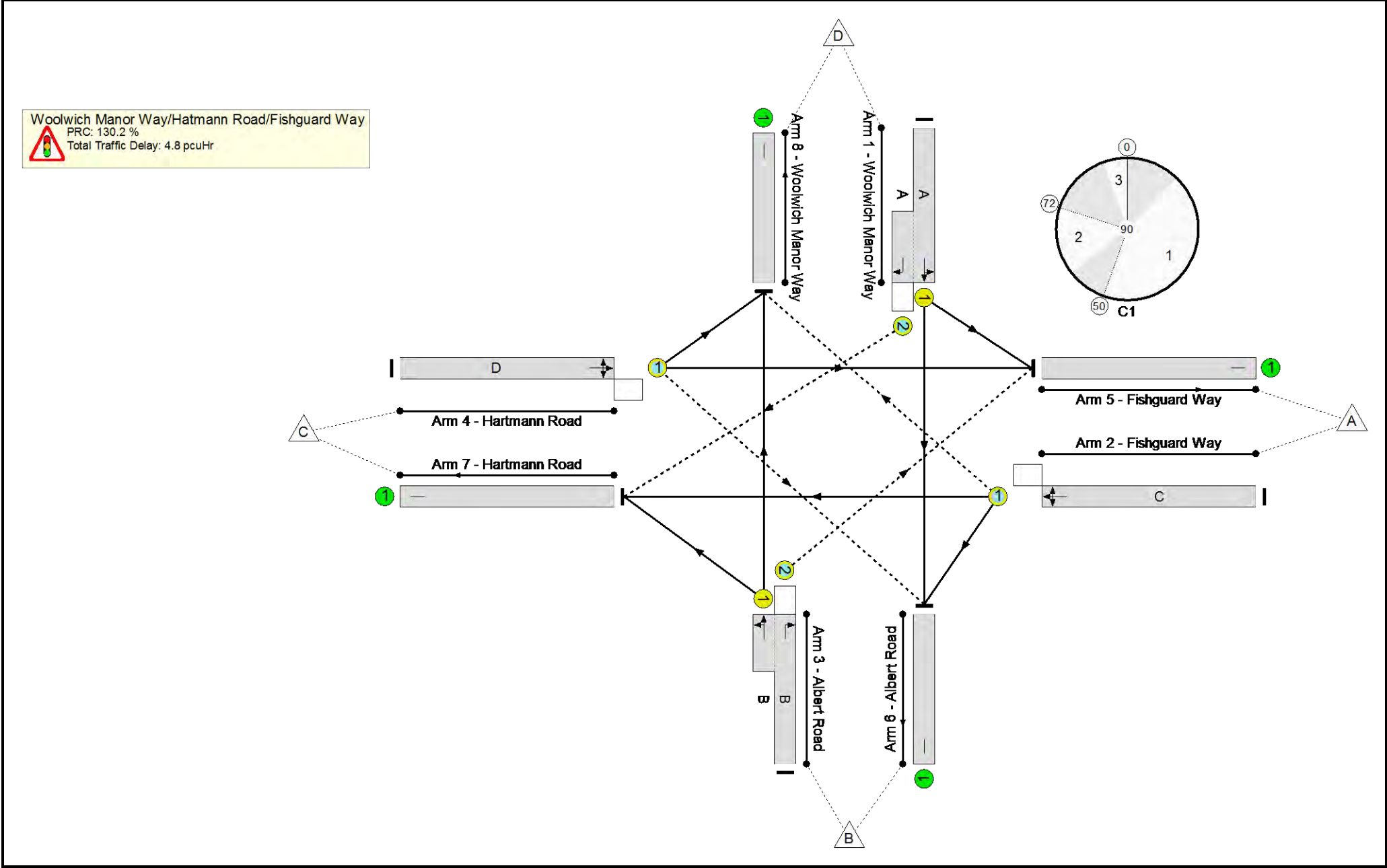
Stage Timings

Stage	1	2	3
Duration	39	14	5
Change Point	0	50	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

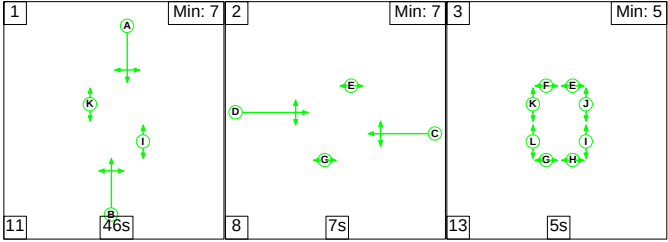
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	39.1%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	39.1%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	40	-	330	1867:1665	844	39.1%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	14	-	108	1758	293	36.9%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	40	-	306	1741:1860	849	36.0%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	14	-	3	1877	313	1.0%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	333	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	91	0	0	3.8	0.9	0.0	4.8	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	91	0	0	3.8	0.9	0.0	4.8	-	-	-	-
1/1+1/2	330	330	3	0	0	1.5	0.3	0.0	1.8	19.7	5.4	0.3	5.7
2/1	108	108	70	0	0	1.0	0.3	0.0	1.3	43.0	2.4	0.3	2.7
3/2+3/1	306	306	17	0	0	1.3	0.3	0.0	1.6	19.4	4.7	0.3	5.0
4/1	3	3	1	0	0	0.0	0.0	0.0	0.0	37.5	0.1	0.0	0.1
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	333	333	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 130.2 Total Delay for Signalled Lanes (pcuHr): 4.78 Cycle Time (s): 90 PRC Over All Lanes (%): 130.2 Total Delay Over All Lanes(pcuHr): 4.78													

Full Input Data And Results
Scenario 8: '2025 Without Development PM Peak' (FG8: '2025 Without Development PM Peak', Plan 1: 'Network Control Plan 1')

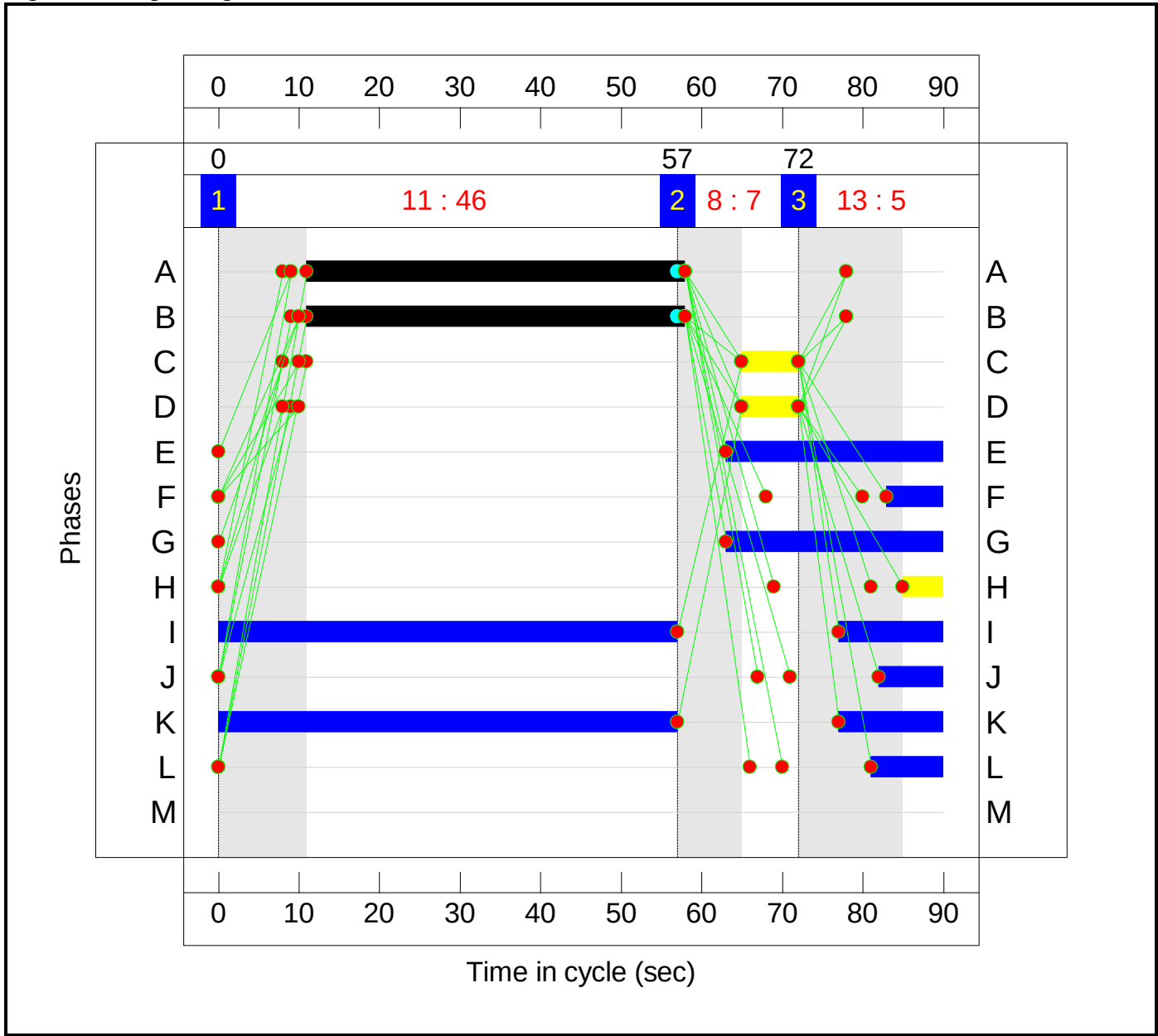
Stage Sequence Diagram



Stage Timings

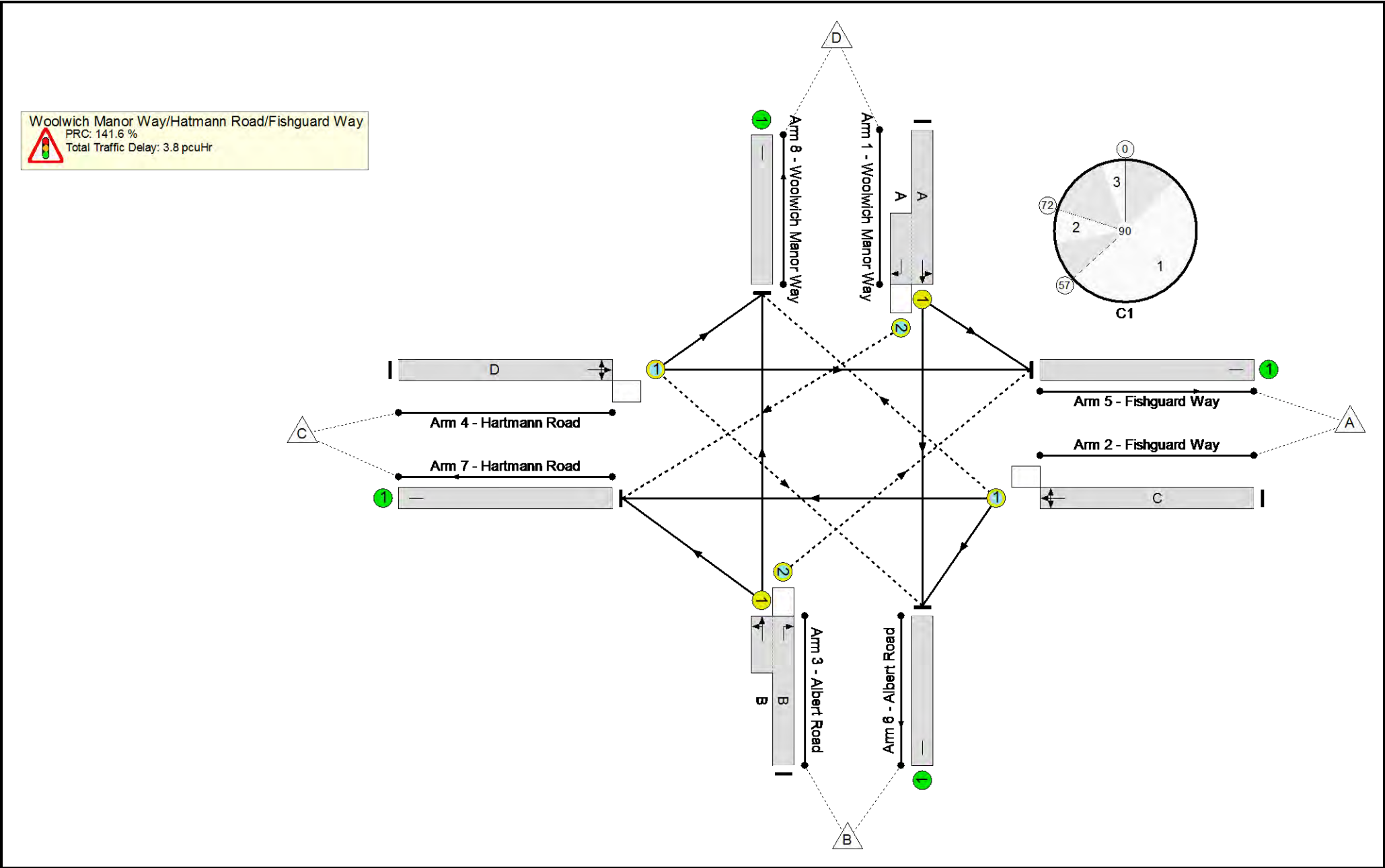
Stage	1	2	3
Duration	46	7	5
Change Point	0	57	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	37.3%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	37.3%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	47	-	342	1865:1915	987	34.6%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	7	-	54	1760	156	34.5%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	47	-	372	1741:1869	998	37.3%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	7	-	1	1796	160	0.6%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%

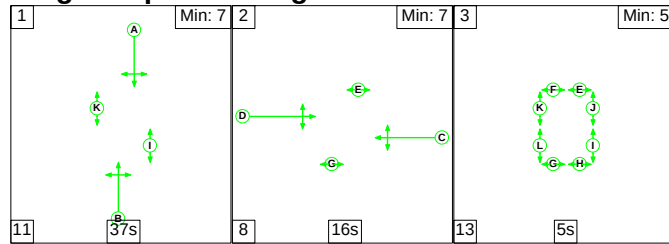
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	62	0	0	3.0	0.8	0.0	3.8	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	62	0	0	3.0	0.8	0.0	3.8	-	-	-	-
1/1+1/2	342	342	0	0	0	1.1	0.3	0.0	1.4	14.8	4.8	0.3	5.1
2/1	54	54	36	0	0	0.6	0.3	0.0	0.8	56.1	1.3	0.3	1.5
3/2+3/1	372	372	26	0	0	1.2	0.3	0.0	1.6	15.2	5.1	0.3	5.4
4/1	1	1	0	0	0	0.0	0.0	0.0	0.0	49.1	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 141.6 Total Delay for Signalled Lanes (pcuHr): 3.83 Cycle Time (s): 90 PRC Over All Lanes (%): 141.6 Total Delay Over All Lanes(pcuHr): 3.83													

Full Input Data And Results

Scenario 9: '2025 With Development AM Peak' (FG9: '2025 With Development AM Peak', Plan 1: 'Network Control Plan 1')

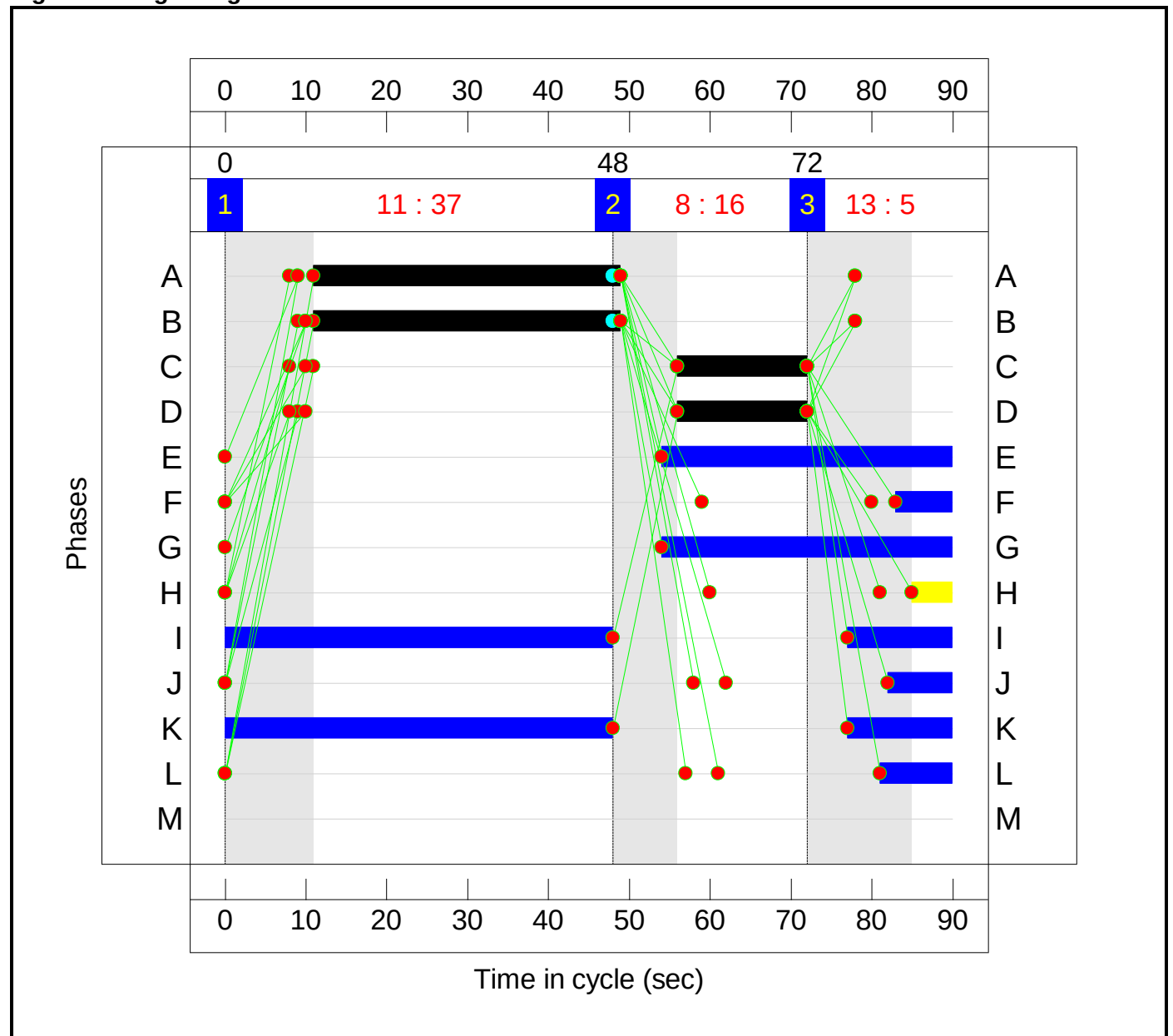
Stage Sequence Diagram



Stage Timings

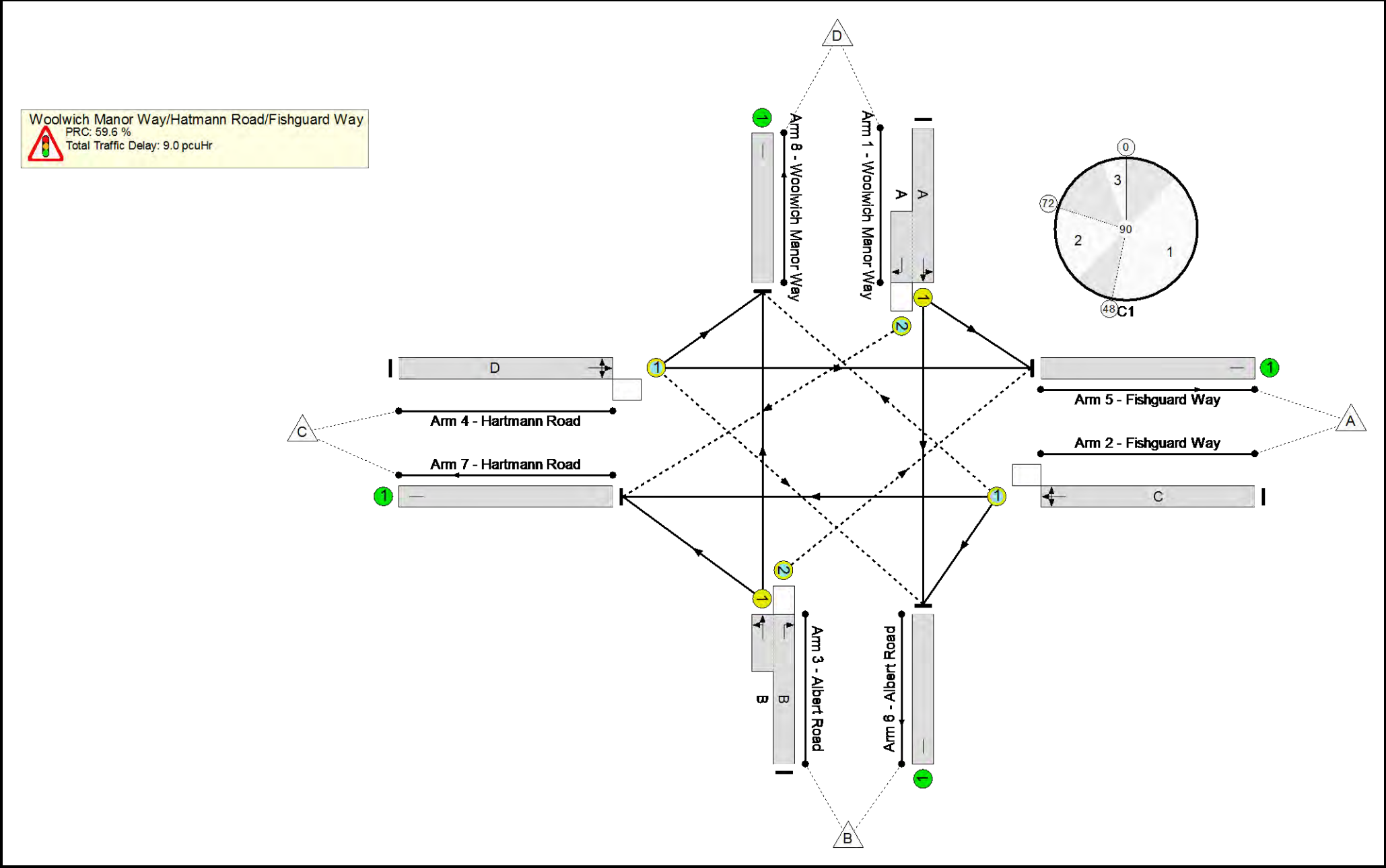
Stage	1	2	3
Duration	37	16	5
Change Point	0	48	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	56.4%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	56.4%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	38	-	497	1867:1665	882	56.4%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	16	-	108	1758	221	48.8%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	38	-	306	1741:1860	808	37.9%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	16	-	185	1797	339	54.5%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	198	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%

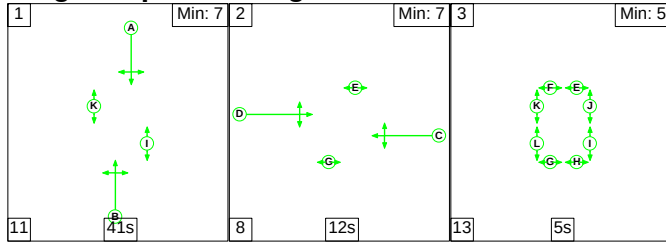
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	258	0	0	6.6	2.0	0.5	9.0	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	258	0	0	6.6	2.0	0.5	9.0	-	-	-	-
1/1+1/2	497	497	170	0	0	2.5	0.6	0.3	3.4	24.6	6.1	0.6	6.7
2/1	108	108	70	0	0	0.9	0.5	0.1	1.6	52.3	2.3	0.5	2.8
3/2+3/1	306	306	17	0	0	1.4	0.3	0.0	1.8	21.0	4.9	0.3	5.2
4/1	185	185	1	0	0	1.7	0.6	0.0	2.3	44.6	4.2	0.6	4.8
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	198	198	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 59.6 Total Delay for Signalled Lanes (pcuHr): 9.04 Cycle Time (s): 90 PRC Over All Lanes (%): 59.6 Total Delay Over All Lanes(pcuHr): 9.04													

Full Input Data And Results

Scenario 10: '2025 With Development PM Peak' (FG10: '2025 With Development PM Peak', Plan 1: 'Network Control Plan 1')

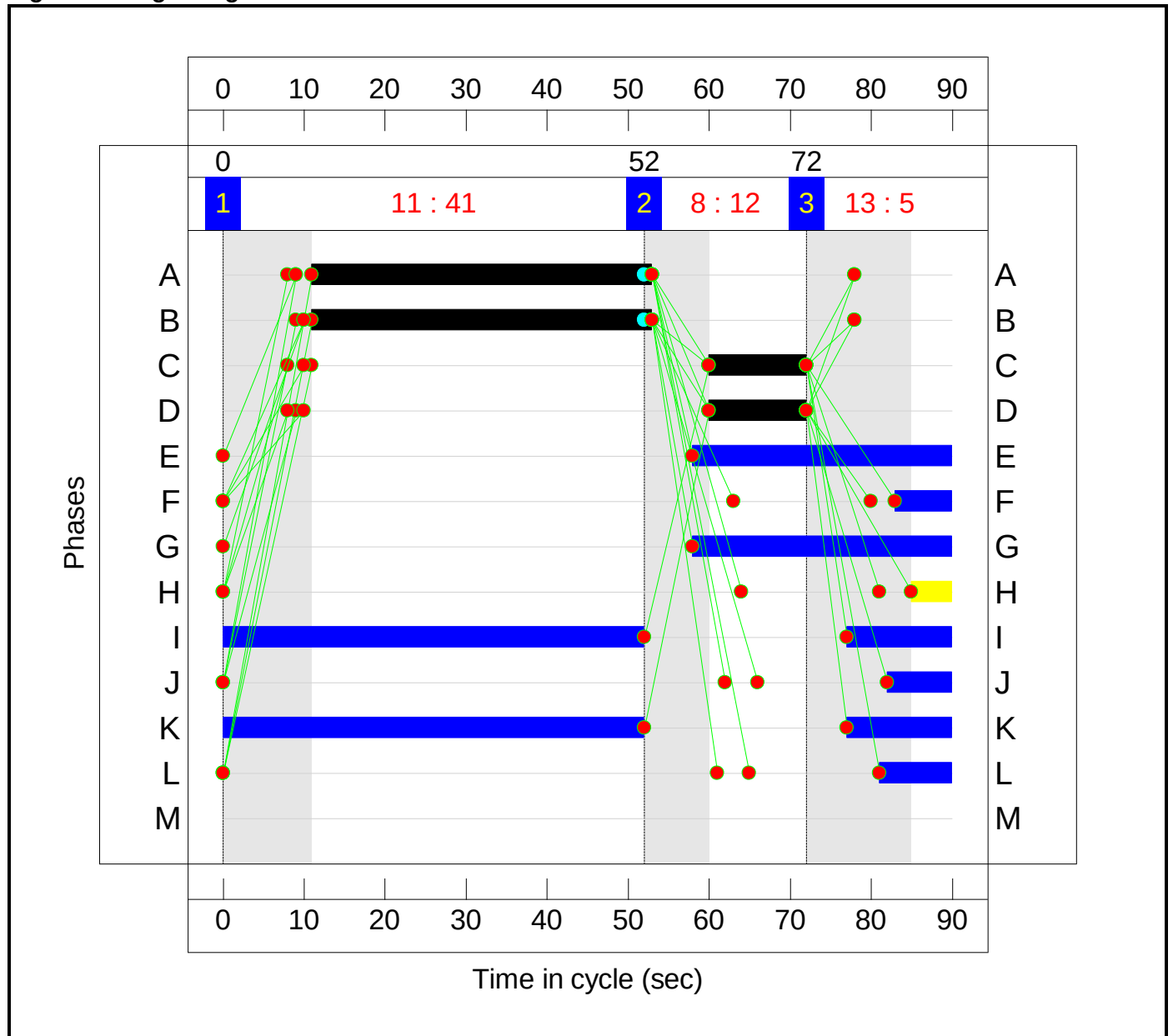
Stage Sequence Diagram



Stage Timings

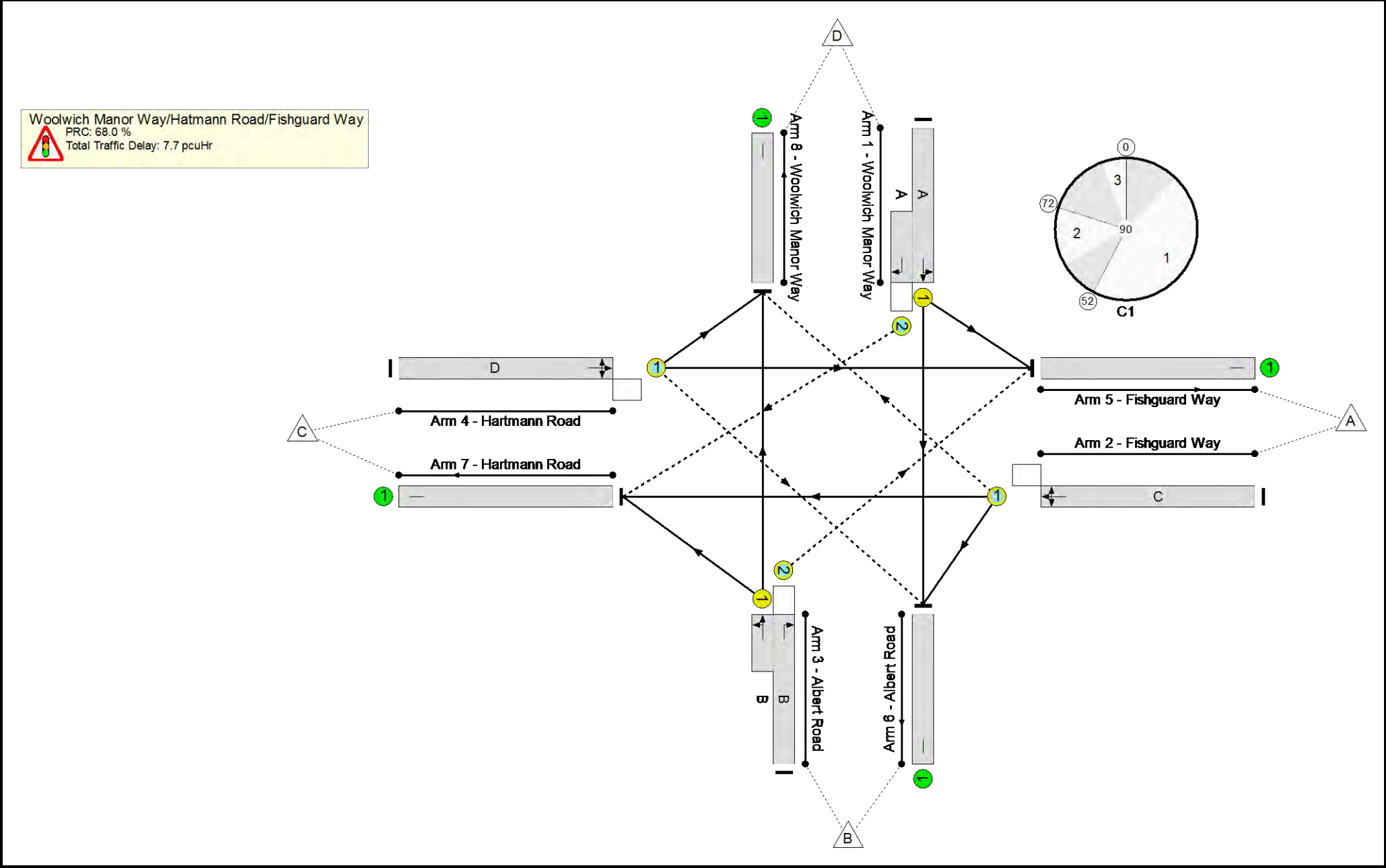
Stage	1	2	3
Duration	41	12	5
Change Point	0	52	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

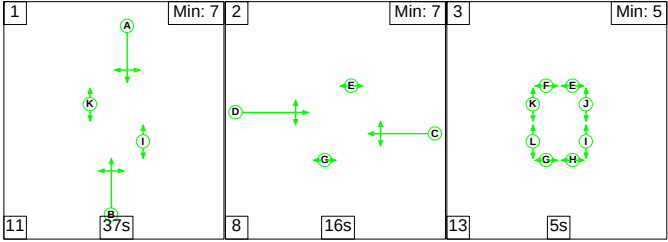
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	42	-	502	1865:1665	952	52.7%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	12	-	54	1760	179	30.2%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	42	-	372	1741:1869	895	41.6%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	12	-	139	1796	259	53.6%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	222	0	0	5.5	1.7	0.4	7.7	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	222	0	0	5.5	1.7	0.4	7.7	-	-	-	-
1/1+1/2	502	502	160	0	0	2.1	0.6	0.3	3.0	21.4	5.8	0.6	6.4
2/1	54	54	36	0	0	0.5	0.2	0.1	0.8	52.4	1.2	0.2	1.4
3/2+3/1	372	372	26	0	0	1.6	0.4	0.0	2.0	18.9	5.7	0.4	6.0
4/1	139	139	0	0	0	1.4	0.6	0.0	2.0	50.5	3.2	0.6	3.8
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 68.0 Total Delay for Signalled Lanes (pcuHr): 7.67 Cycle Time (s): 90 PRC Over All Lanes (%): 68.0 Total Delay Over All Lanes(pcuHr): 7.67													

Full Input Data And Results
Scenario 11: '2025 With Development AM Peak Sens' (FG11: '2025 With Development AM Peak - Sensitivity Test',
Plan 1: 'Network Control Plan 1')

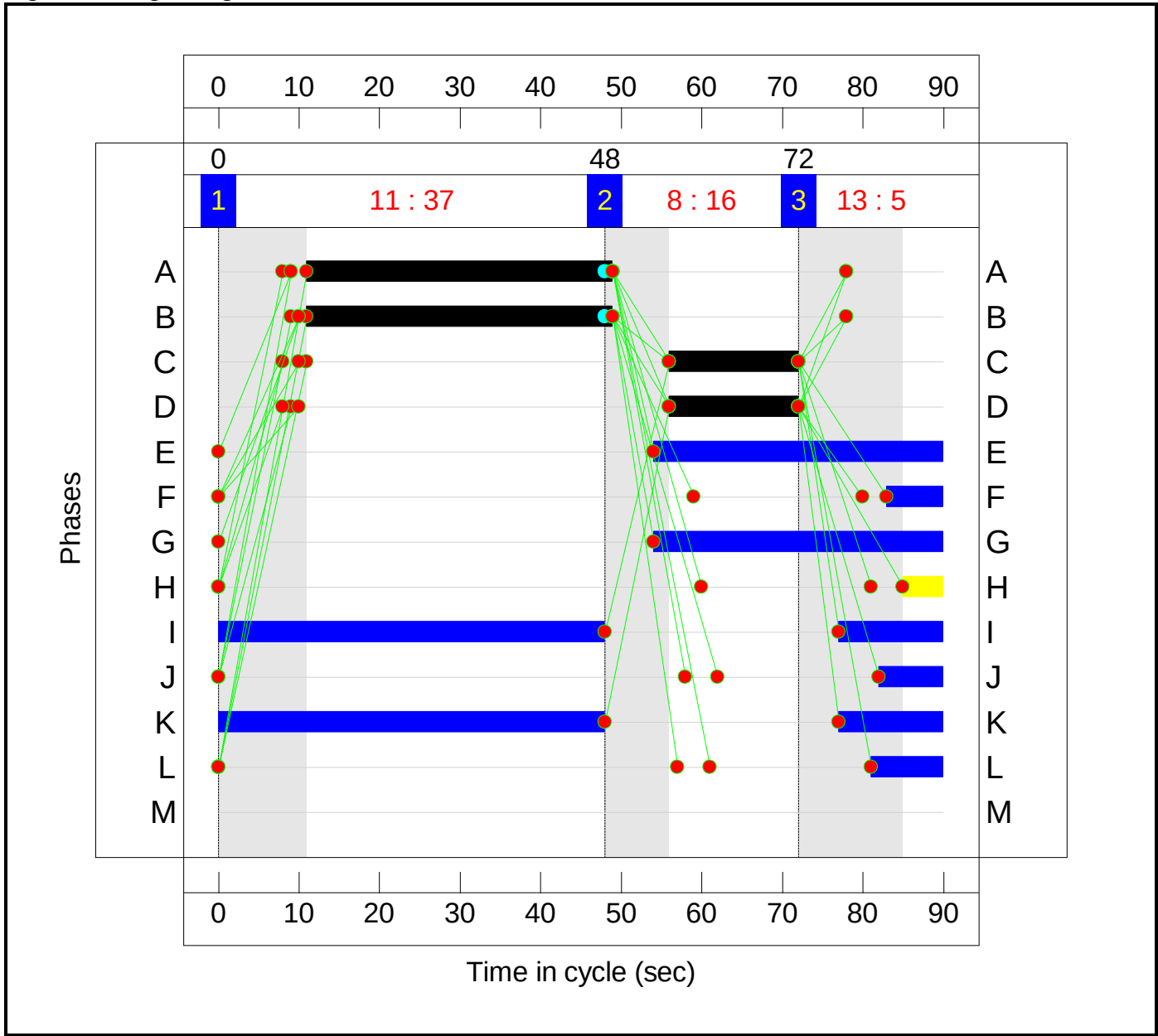
Stage Sequence Diagram



Stage Timings

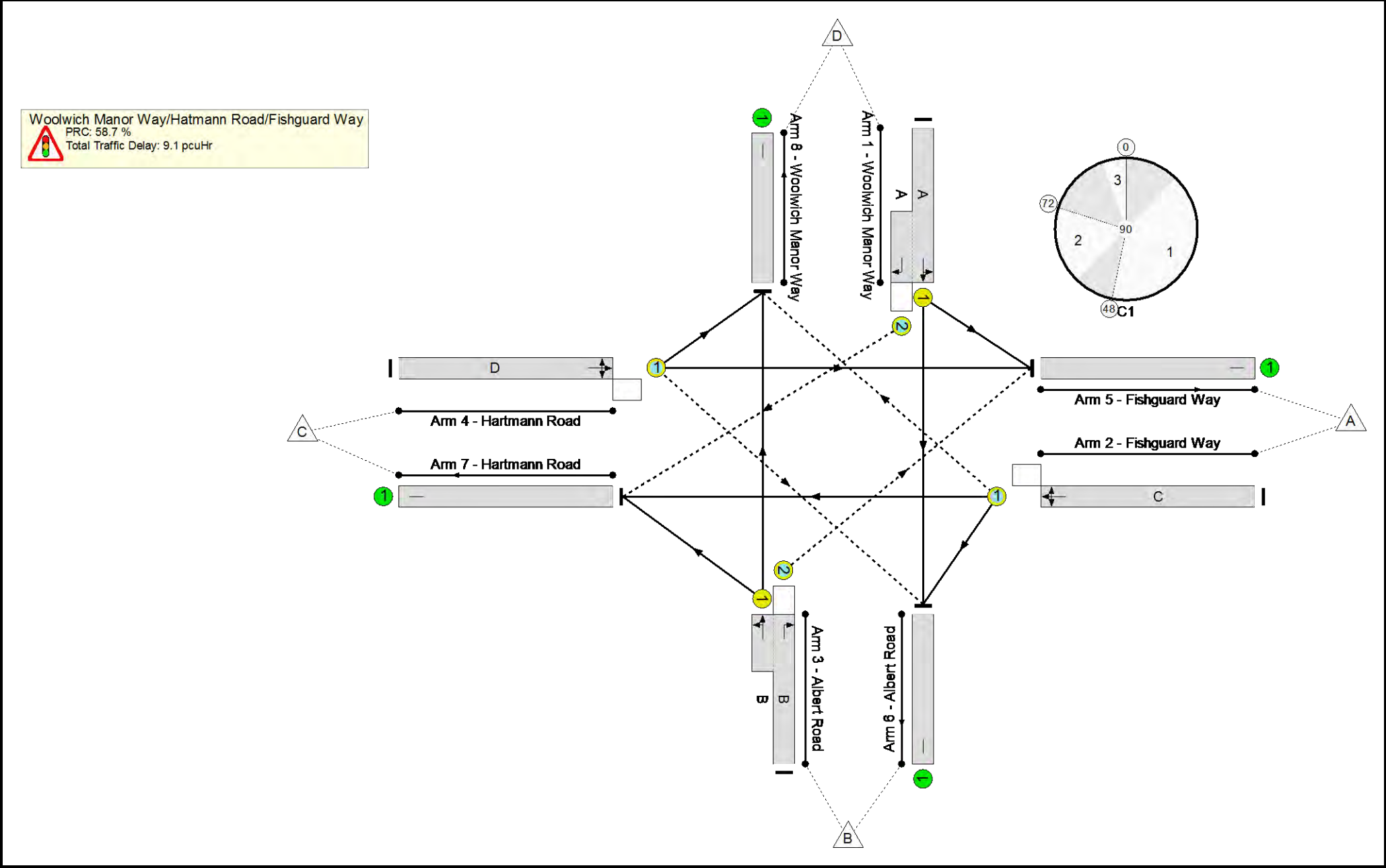
Stage	1	2	3
Duration	37	16	5
Change Point	0	48	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

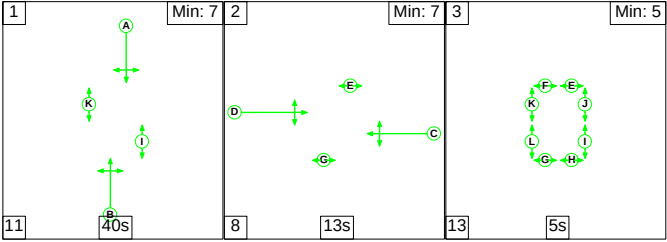
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	56.7%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	56.7%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	38	-	501	1867:1665	884	56.7%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	16	-	108	1758	221	48.8%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	38	-	306	1741:1860	808	37.9%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	16	-	185	1797	339	54.5%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	202	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	262	0	0	6.6	2.0	0.5	9.1	-	-	-	-
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	262	0	0	6.6	2.0	0.5	9.1	-	-	-	-
1/1+1/2	501	501	174	0	0	2.5	0.7	0.3	3.4	24.7	6.1	0.7	6.8
2/1	108	108	70	0	0	0.9	0.5	0.1	1.6	52.3	2.3	0.5	2.8
3/2+3/1	306	306	17	0	0	1.4	0.3	0.0	1.8	21.0	4.9	0.3	5.2
4/1	185	185	1	0	0	1.7	0.6	0.0	2.3	44.6	4.2	0.6	4.8
5/1	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	202	202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 58.7 Total Delay for Signalled Lanes (pcuHr): 9.08 Cycle Time (s): 90 PRC Over All Lanes (%): 58.7 Total Delay Over All Lanes(pcuHr): 9.08													

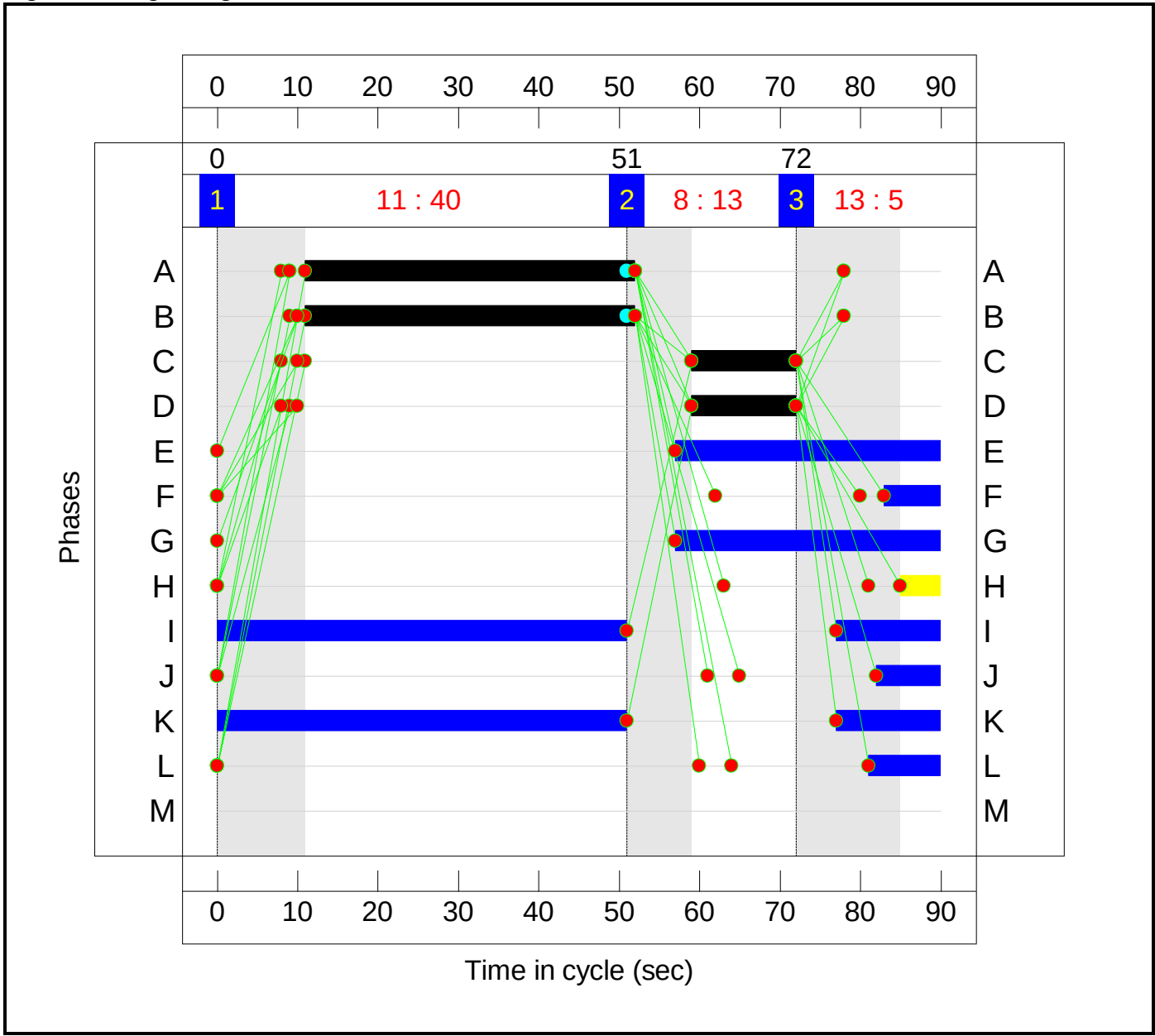
Stage Sequence Diagram



Stage Timings

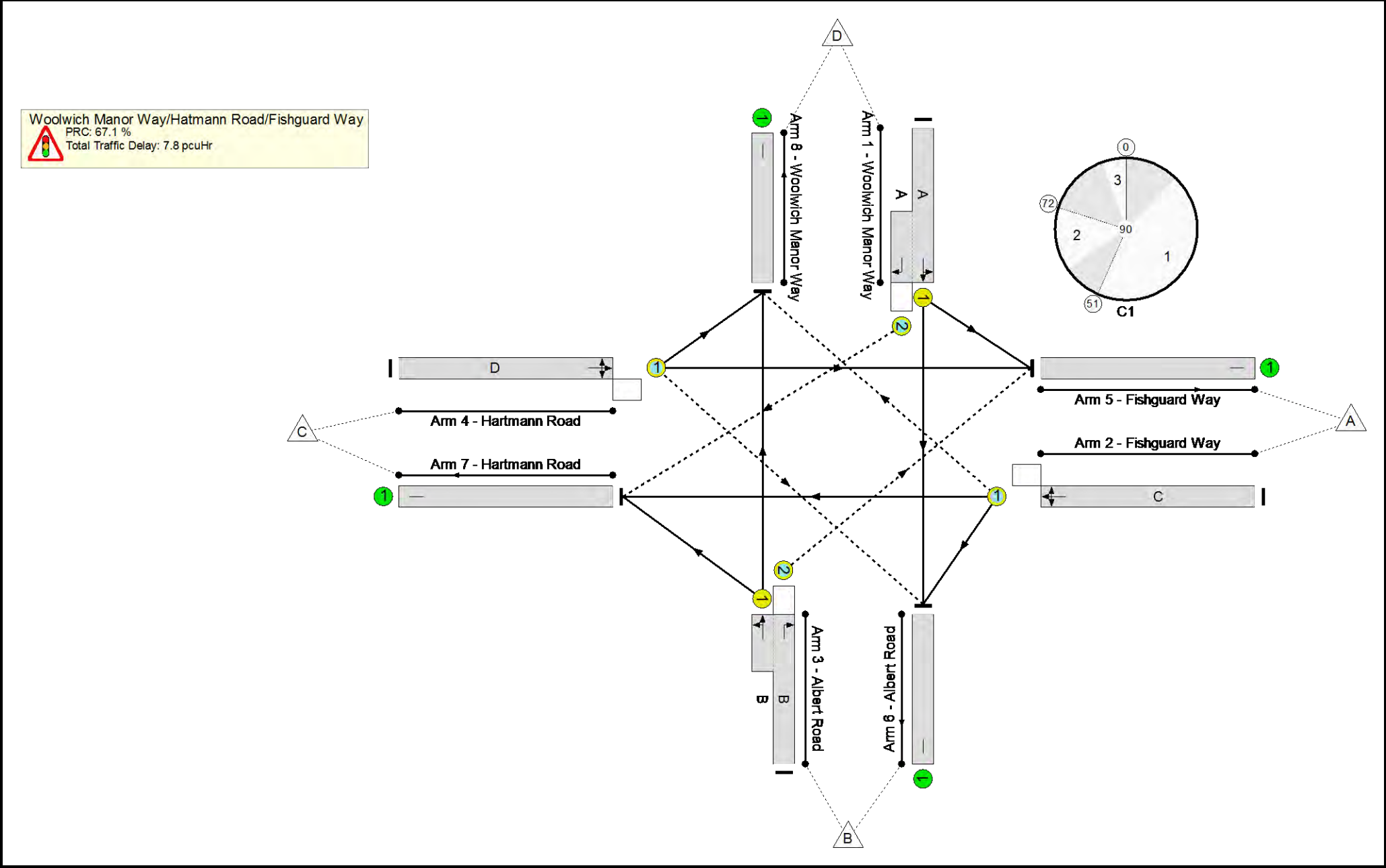
Stage	1	2	3
Duration	40	13	5
Change Point	0	51	72

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	53.8%
Woolwich Manor Way/Hatmann Road/Fishguard Way	-	-	N/A	-	-		-	-	-	-	-	-	53.8%
1/1+1/2	Woolwich Manor Way Left Ahead Right	U+O	N/A	N/A	A		1	41	-	502	1865:1665	932	53.8%
2/1	Fishguard Way Left Ahead Right	O	N/A	N/A	C		1	13	-	54	1760	198	27.2%
3/2+3/1	Albert Road Right Left Ahead	O+U	N/A	N/A	B		1	41	-	372	1741:1869	874	42.5%
4/1	Hartmann Road Ahead Right Left	O	N/A	N/A	D		1	13	-	144	1796	279	51.5%
5/1	Fishguard Way	U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1	Albert Road	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
7/1	Hartmann Road	U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
8/1	Woolwich Manor Way	U	N/A	N/A	-		-	-	-	503	Inf	Inf	0.0%

Full Input Data And Results

[illegible]