

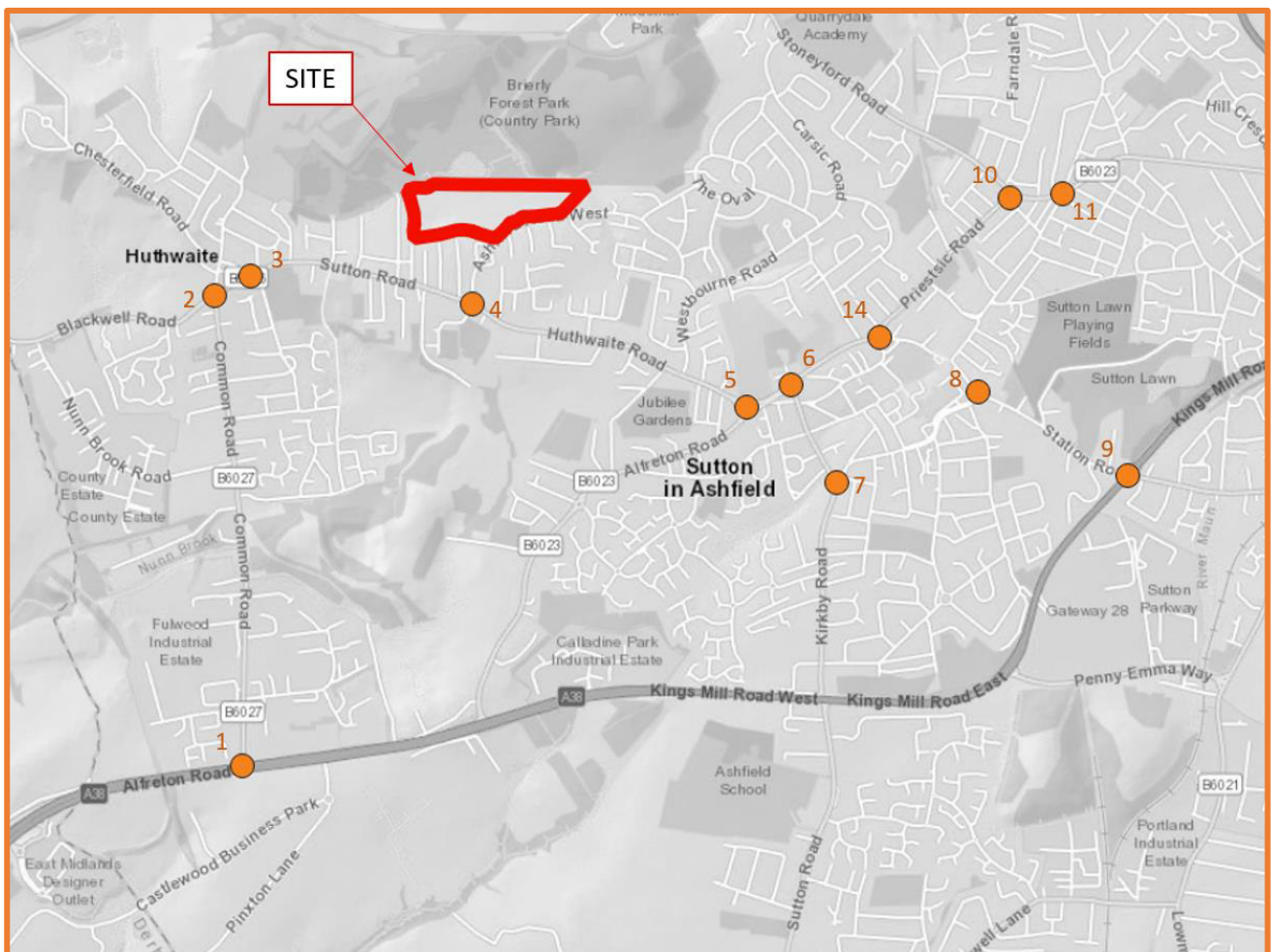
20 November 2020

Sarah Hancock
Highway Development Control
Nottinghamshire County Council
County Hall
West Bridgford
Nottingham
NG2 7QP

Dear Sarah,

V/2020/0184 – LAND OFF ASHLAND ROAD WEST, SUTTON IN ASHFIELD

Thank you for your comments on our Transport Assessment Addendum report (ADC1032-RP-G-V3), which were received on 10 November 2020. In summary, NCC continue to have reservations about the assessments carried out on the basis of traffic counts undertaken during the COVID-19 pandemic. NCC also state that the Beck Lane committed development should be considered within the capacity assessments. NCC also reviewed the capacity assessments at the study area junctions shown below and listed beneath.



Ref	Junction	survey	status
1	A38/Common Road	2018	further info reqd
2	B6026 Blackwell Road/Common Road	2020*	amended model reqd
3	Blackwell Road/Market Street	2020*	NCC ok
4	Huthwaite Road/Ashland Road West	2019	further info reqd
5	Huthwaite Road/Alfreton Road	2020*	further info reqd
6	Lammas Road/Hack Lane	2020*	amended model reqd
7	Kirkby Road/Spring Road	2020*	NCC ok
8	High Pavement/Station Road/Forest Road	2020*	amended model reqd
9	A38 Kings Mill Road E/Station Road	2018	amended model reqd
10	Mansfield Road/Stoneyford Road	2019	add Beck Lane devel flows
11	Mansfield Road/Dalestorth Street	2008	add Beck Lane devel flows
14	Lammas Road/Forest Street/Manor Street	2019	NCC ok

In summary, NCC accept the assessments at Junctions 3, 7 and 14. NCC require further information and slight changes to the junction models at Junctions 1, 4, and 5 before those assessments can be agreed. NCC also stated that the details of the access to the development need to be re-submitted and the pedestrian routes to the nearest bus stops on Ashland Road and Huthwaite Road should be addressed. This letter therefore responds to those comments.

Traffic counts

As agreed with NCC, new surveys were undertaken at 6 of the study area junctions in September 2020. NCC state in their latest comments that *“there is doubt that the journey purposes are the same meaning that the turning proportions may not be representative of normal conditions.”* NCC go on to state that *“the HA therefore have reservations about the assessments carried out on the basis of these counts”* and that *“there is no consideration given in the TAA as to how this issue could be overcome.”*

It is appreciated that trip patterns during the COVID-19 pandemic are likely to be different to those under normal conditions, but there is no way of confirming this without undertaking extensive origin/destination surveys or household/online questionnaires to assess travel behaviour. It is not practical to survey on this scale and given how the pandemic is forecast to go on into next year, it could be a while yet before traffic patterns go back to normal, if indeed they do at all, given the new home working systems companies have put in place to remain operational.

It should also be noted that the key junctions in the study area, the most congested ones, are controlled by traffic signals. Compared with other junction types, the capacity of signal controlled junctions is less sensitive to changes in traffic patterns because the overall volume of traffic dictates the cycle time. Within the cycle time, the time given to different movements (phases) can be altered as demands alter. With advanced monitoring systems such as MOVA the changes occur automatically. We therefore do not believe that different travel patterns means the capacity assessment work is invalid.

It has been suggested that validation tests be carried out once conditions return to normal. Such an approach is not possible for Bellway, as it is open ended and the timescales unknown. Bellway must commit to purchase of the site with a known set of obligations. If it were to be discovered later on that more works were required, there would be no funds to implement them. This works the other way around too, as if it was found that less works were required, NCC would not expect to recompense for measures already implemented. The planning system requires a forecast to be made, which is the best estimate at that point in time, agreed by all parties.

The traffic forecasts used in our work are for 2030, with robust growth applied to background traffic. The capacity analysis work is therefore already accounting for growth that is unrelated to the development. Judging the development impact, is about comparing a junctions operation without development against

with development. Thus, if there is a slight error in the without scenario, it will also apply in the with scenario, and the difference between the two is still relevant.

Again, we therefore conclude that the capacity analysis presented here and previously is suitable for judging the impact of the development.

Committed development

The Transport Assessment (February 2016) and Supplementary Transport Assessment (December 2016) produced to support the Beck Lane application has been reviewed. The development generates additional vehicle movements onto Dalestorth Street and the B6023. However, there was no assessment of the impact of these flows at the B6023 Mansfield Road/Dalestorth Street and B6023 Mansfield Road/Stoneyford Road junctions despite generating more than 30 two-way trips at both junctions. Nevertheless, the committed traffic flows associated with the Beck Lane development are now included in the 2030 background traffic flows and therefore included in the capacity assessments at Junctions 10 and 11.

J1: A38 Alfreton Road/Common Road

NCC required changes to vehicle to pedestrian intergreens and stated that the saturation flows used in the model were higher than those normally accepted, making the model over optimistic. As a result, the model has been revised. The revised capacity assessment results are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
2030	AM	9.5%	6.0%	42.66	46.59
	PM	8.0%	5.9%	47.38	49.64

The results show that the junction would continue to operate within the normally accepted limits of performance in all modelled scenarios, with a positive PRC indicating that all links are operating below 90% of their theoretical capacity. The A38/Common Road junction can accommodate the increase in vehicle trips generated by the proposed development.

J2: Common Road/Blackwell Road

NCC state that *“the LinSig model is not based on the actual junction configuration; the phasing, staging and intergreens are wrong. Given the above the results and conclusions in the TAA are not accepted and the junction should be remodelled.”*

As a result of the above, ADC visited the site on Wednesday 11 November 2020 to observe the junction. It should be noted that the operation of the junction is demand dependant and hence the cycle times varied depending on traffic demand. It should also be noted that stage 2 which allows the unopposed right turn from Common Road to Blackwell Road was never called and the all-red stage was very rarely called.

The model has therefore been revised to reflect the on-site observations. The revised capacity assessment results are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
		Single Cycle (90 seconds)			
2030	AM	-27.8%	-46.9%	53.59	91.35
	PM	-34.9%	-38.0%	77.10	175.91

As shown, when modelled on a single 90 second cycle the junction is forecast to operate above the normally accepted limits of performance and the development has a slight impact on the operation of the junction.

The existing pedestrian intergreens significantly reduce the capacity in the junction. There is no land around the junction to provide widening works. However, an improvement scheme that provides on-crossing detection would provide a nil-detriment improvement, as shown in the results summary table below. By installing on-crossing detection, the intergreens could be reduced significantly, as presented in the LinSig output in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity	Total Delay (PCUhr)
		With Development	With Development
		Single Cycle (90 seconds)	
2030	AM	-26.1%	96.93
	PM	-26.1%	82.44

Overall, the mitigation scheme would provide considerable betterments, and more than a nil-detriment solution.

Junction 4: Huthwaite Road/Ashland Road

NCC state that the “*there is predicted to be significant headroom in the base scenarios so that, even with flows on the site road doubling the performance still has plenty in reserve. However, we would need reassurance in respect to the side road geometry used prior to being able to accept the results.*”

The junction geometries based on OS mapping are shown in Appendix H of the Transport Assessment and enclosed in Appendix A of this letter for ease of reference.

Junction 5: Huthwaite Road/Alfreton Road

NCC state that the approach to use a mix of ARCADY and PICADY modelling seems reasonable. However they go on to state that “*the right turn movement from Huthwaite Road to Alfreton Road should be assigned to the ahead movement so that the vehicles coming from Lammas Road have no opposing flow and can freely discharge into the junction.*”

The ARCADY model has therefore been revised to reflect NCC's suggested changes. The revised capacity assessment results are summarised in the table below, and the full ARCADY report is in Appendix A.

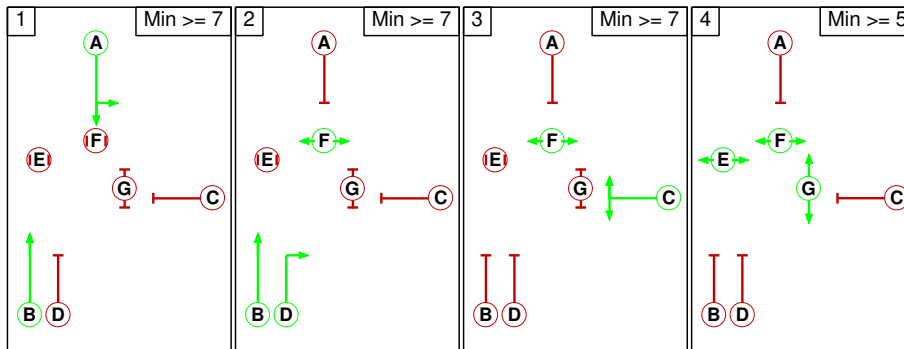
	AM			PM		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2030 Background						
Alfreton Road	0.7	4.53	41%	2.0	9.10	67%
Huthwaite Road	0.7	3.21	42%	0.8	3.46	43%
2030 With Development						
Alfreton Road	0.7	4.66	42%	2.3	10.30	70%
Huthwaite Road	0.9	3.44	46%	0.8	3.63	46%

As shown, the Alfreton Road and Huthwaite Road arms would continue to operate within the normally accepted limits of performance in all modelled scenarios with the RFC values on both arms below 85% of their theoretical maximum.

J6: Lammas Road/Hack Lane

NCC state that “the LinSig model is not based on the actual junction configuration; the phasing, staging and intergreens are wrong. Given the above the results and conclusions in the TAA are not accepted and the junction should be remodelled.”

As a result of the above the model has been revised to reflect the on-site observations. As observed on site, the junction operates with four stages as follows.



The revised capacity assessment results are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
2030	AM	7.5%	3.1%	21.87	25.20
	PM	-4.6%	-10.6%	33.81	49.19

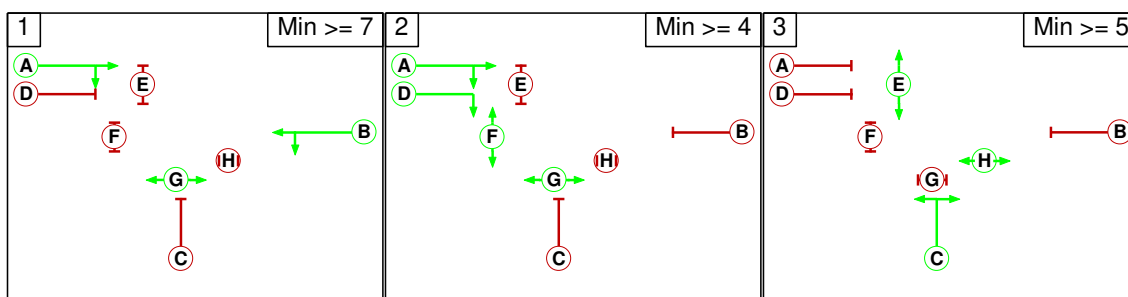
The revised capacity assessment results show that the junction would continue to operate within the normally accepted limits of performance in the morning peak hour, with a positive PRC. In the evening peak hour the junction is forecast to operate at 94.6% capacity in the background scenario. With the development in place, the PRC reduces by 6% to -10.6% PRC (100.6% of capacity).

Overall, despite operating above the normally accepted limit in the evening peak hour, the impact of the additional development traffic is not severe and hence no mitigation measures are required.

J8: High Pavement/Forest Street

NCC state that “the LinSig model is not based on the actual junction configuration; the phasing, staging and intergreens are wrong. Given the above the results and conclusions in the TAA are not accepted and the junction should be remodelled.”

As a result of the above the model has been revised to reflect the on-site observations. As observed on site, the junction operates with three stages as follows.



The revised capacity assessment results are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
2030	AM	18.2%	15.8%	17.48	18.30
	PM	4.0%	0.6%	23.45	26.38

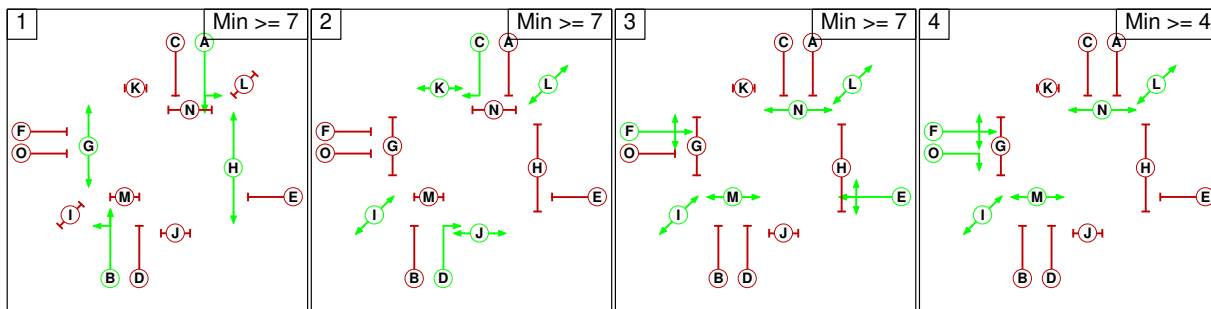
The results show that the junction would continue to operate within the normally accepted limits of performance in all modelled scenarios, with a positive PRC indicating that all links are operating below 90% of their theoretical capacity.

Overall, it is still considered that the High Pavement/Forest Street junction can accommodate the increase in vehicle trips generated by the proposed development

J9: A38 Kings Mill Road/Station Road

NCC state that the pedestrian clearance periods should be revised and that a missing intergreen which allows the right turn to run from Sutton at the same time as the opposite traffic stream needs to be addressed.

As a result, the model has been revised to reflect NCC's comments and on-site observations. As observed on site, the junction operates with four stages as follows.



The revised capacity assessment results are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
2030	AM	-18.3%	-22.1%	141.17	186.41
	PM	-17.4%	-20.5%	128.79	144.15

As shown the junction is forecast to operate above its maximum capacity in all modelled scenarios. The proposed development would increase traffic at the junction by 31 two-way vehicle trips in the morning peak and 37 two-way movements in the evening peak. This equates to less than one additional vehicle every cycle and a 0.5% increase on the two-way movements already passing through the junction in both the morning and evening peak hours. The results show that the additional development trips would not have a significant impact on the performance of the junction and that in terms of PRC, there would only be minor deteriorations and delay. Hence, no mitigation measures are required.

J10 & 11: Mansfield Road/Stoneyford Road/Dalestorth Road

NCC state that "it is not clear why count data from 2008 has been used for Junction 11 as data from 2019 is available." NCC go on to state that the stage order has been changed round at both junctions and

therefore the model is affected. They also state that the estimated crossing times are lower than anticipated.

It is understood a 2019 count was carried out at Junction 11. However, ADC have been unable to obtain the data from the survey company (Streetwise), or the consultancy who appointed Streetwise and own the intellectual property. The count is not in the public domain and it is unclear what (if any) development the count was used to support. Therefore, to undertake some assessment, 2008 data was provided by NCC.

The revised capacity assessments, taking into account the changes to the stage order at both junctions and the revised crossing times, are summarised in the table below, and the full LinSig report is in Appendix A.

Assessment Year	Peak	Practical Reserve Capacity		Total Delay (PCUhr)	
		Background	With Development	Background	With Development
2030	AM	-31.9%	-33.3%	182.09	197.38
	PM	-119.1%	-119.1%	301.15	342.63

As shown, both junctions are forecast to operate above their maximum capacity in all modelled scenarios. The proposed development would generate 28 two-way vehicle trips in the morning peak and 32 two-way movements in the evening peak at both junctions. This equates to less than one additional vehicle every cycle. The results show that the additional development trips would not have a significant impact on the performance of the junction and that in terms of PRC, there would only be minor deteriorations and delay. Hence, no mitigation measures are required.

Access

Given the majority of the proposed houses would be accessed via the western access, NCC require the that access to be over-engineered to provide a 7.3m wide carriageway flanked by 3m wide footways. Therefore, enclosed with this letter is Drawing ADC1032-DR-001-P8 showing the requested access junction layout and the revised masterplan.

Pedestrian routes to bus stops

The nearest bus stops are on Ashland Road. These stops are less than 100m from both access junctions and serve the number 417 operated by Nottsbus Connect. However, for more frequent public transport services, the Number 1 operated by Stagecoach East Midlands is served by bus stops on Huthwaite Road.

NCC state that these stops are around a kilometre away from the extremities of the site and that given the TA identifies that there would be around 13 peak hour bus journeys associated with the proposed development, a pedestrian audit of the routes to these bus stops is required, with consideration given to how pedestrians will safely cross the Huthwaite Road.

Figure 1 below therefore displays the key pedestrian desire lines from the development site to the bus stops on Huthwaite Road. As shown, a number of crossing opportunities are provided with dropped kerbs, pedestrian islands and a zebra crossing on the Huthwaite Road.

To the east of the development site the desire line follows Ashland Road West southwards, which has footways on either side of the carriageway with dropped kerbs at key crossing points. As displayed in Figure 1 (inset 1), there is a pedestrian island at the Huthwaite Road/Ashland Road West T-junction, allowing pedestrians to cross the junction safely.

To access the bus stops to the east of the Ashland Road/Huthwaite Road junction, the desire line follows the footway along the northern edge of Huthwaite Road where the eastbound stop is located approximately 600m from the junction. There are two pedestrian island (Figure1, inset 2) allowing pedestrians to cross

the carriageway to access the westbound stop on the southern edge of Huthwaite Road. This route is approximately 350m walking distance and takes approximately 5 minutes.

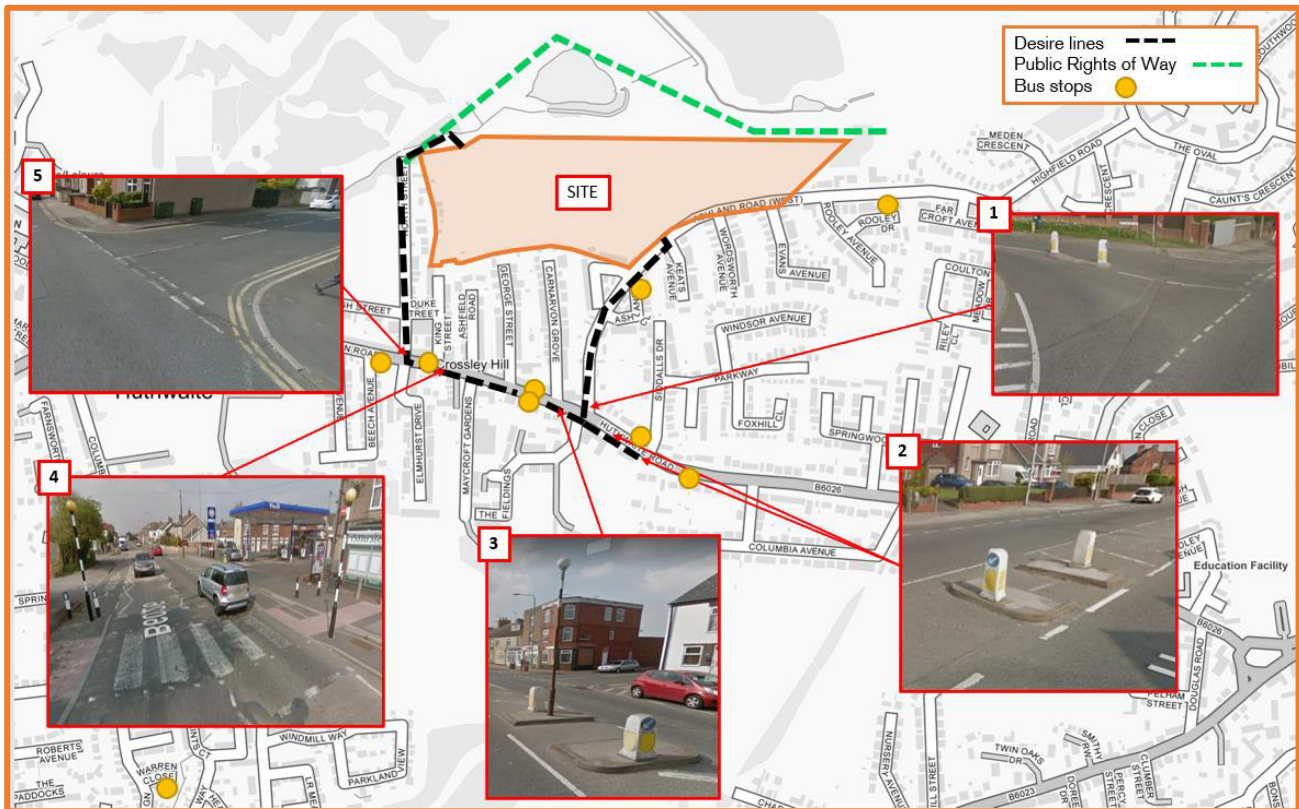


Figure 1: Pedestrian routes to bus stops

To access the bus stops approximately 120m to the west of the Huthwaite Road/Ashland Road T-junction, the desire line also follows the footway along Huthwaite Road, where the eastbound stop is located. To access the westbound stop there is a pedestrian island approximately 30m to the west of the Huthwaite Road/Ashland Road T-junction as shown in Figure 1 (inset 3), which allows pedestrians to cross the carriageway safely. This route is approximately 500m walking distance and takes 5 to 6 minutes.

To the northwest of the proposed development site, the desire line follows a Public Rights of Way which connects to North Street. North Street has a footway on the western side of the carriageway and although the gradient is steep for approximately 100m, the existing residents along North Street would use this route to access any of the bus stops within the area. At the point where the gradient levels off there is a footway on both sides of the carriageway with dropped kerbs at key crossing points.

As shown in Figure 1 (inset 5) at the Huthwaite Road/North Street T-junction there are dropped kerbs to allow pedestrians to cross to the opposite side of Huthwaite Road. The eastbound stop is located approximately 20m to the east of the junction on the northern side of the carriageway. The westbound stop is located approximately 30m to the west of the Huthwaite Road/North Street junction on the southern side of Huthwaite Road, where there are dropped kerbs to allow pedestrians to cross the carriageway. These routes are approximately 480m walking distance and takes approximately 5 to 10 minutes.

Pedestrians using the western desire line could also use the stops further east along Huthwaite Road by following the northern footway or using the zebra crossing displayed in Figure 1 (inset 4) to access to the stops on the southern side of the carriageway (approximately 10 minutes to walk).

Summary

As detailed above, NCC agreed the capacity assessments and assumptions at Junctions 3, 7, and 14. NCC also stated that further information was required in order to accept the assessments at Junctions 1, 4 and 5. The additional information is provided within this letter and hence these junction assessments and conclusions can be considered acceptable.

With regards to the remaining 6 study area junctions, revised capacity assessments are provided for review. In summary:

- Junction 2 operates over capacity and the proposed development has an impact on the operation of the junction. A mitigation scheme was presented in the TAA that introduced MOVA control at the junction. Instead of that, it is now recommended that on-crossing detection be provided as mitigation to reduce the pedestrian intergreens and provide considerable betterment, and more than a nil-detriment solution.
- Junction 6 operates within capacity in the morning peak hour and over the normally accepted limits in the evening. However, the development does not have a significant impact on the operation of the junction, and it can accommodate the additional development traffic.
- Junction 8 continues to operate with spare capacity and the development does not have a severe impact on the operation of the signals.
- Junction 9 is forecast to operate over capacity however the development does not have a severe impact on the signals and hence no mitigation measures are considered necessary.
- Junctions 10 and 11 are over capacity. However, the development does not have a severe impact on the junctions, generating less than one additional trip every cycle. Hence, mitigation measures are not considered necessary.

NCC's comments regarding the over-engineered western access junction and the pedestrian routes to the bus stops on Huthwaite Road have also been addressed. In summary, it is accepted that the majority of the development would be accessed from the western access junction and hence the over-engineered solution put forward by NCC has been integrated into the illustrative masterplan. In addition, the pedestrian routes to the bus stops on Huthwaite Road are safe and suitable with numerous formal and informal crossing points on the desire lines. The stops on Huthwaite Road are only a 10 minute walk from the site. Hence, the stops are within walking distance and can accommodate the increase in person trips generated by the development.

Yours sincerely,



Matt Tatler
Principal Engineer
tel: 07771 516 206
Matt.Tatler@ADCInfrastructure.com

Enc.

Appendix A Capacity assessment outputs
Appendix B Drawing ADC1032-DR-001-P8 - Access Junction Layouts
Appendix C P19-1014 007D Amended Masterplan

APPENDIX A JUNCTION CAPACITY ASSESSMENT OUTPUTS

Junction 1 A38 Alfreton Road/Common Road

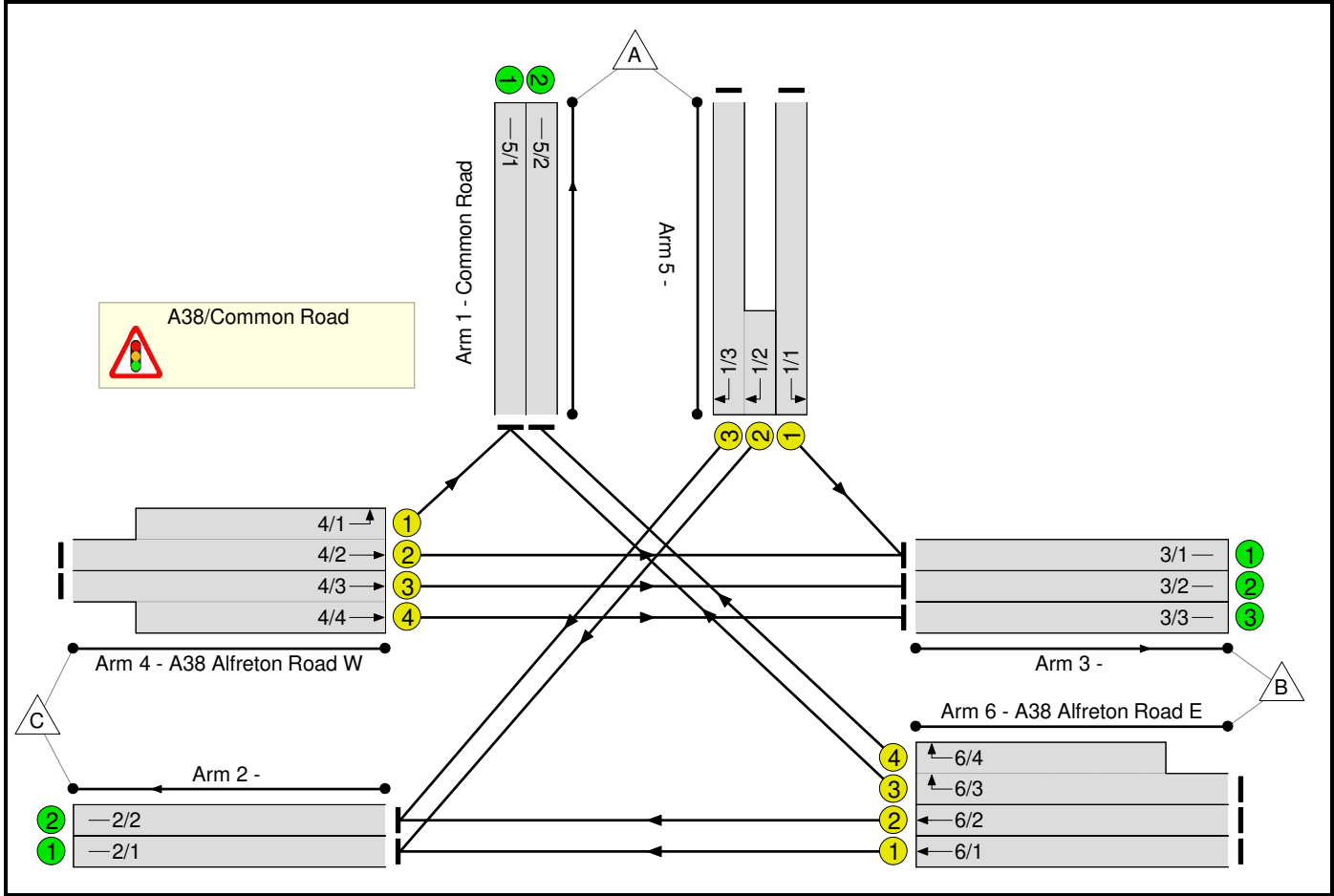
Full Input Data And Results

Full Input Data And Results

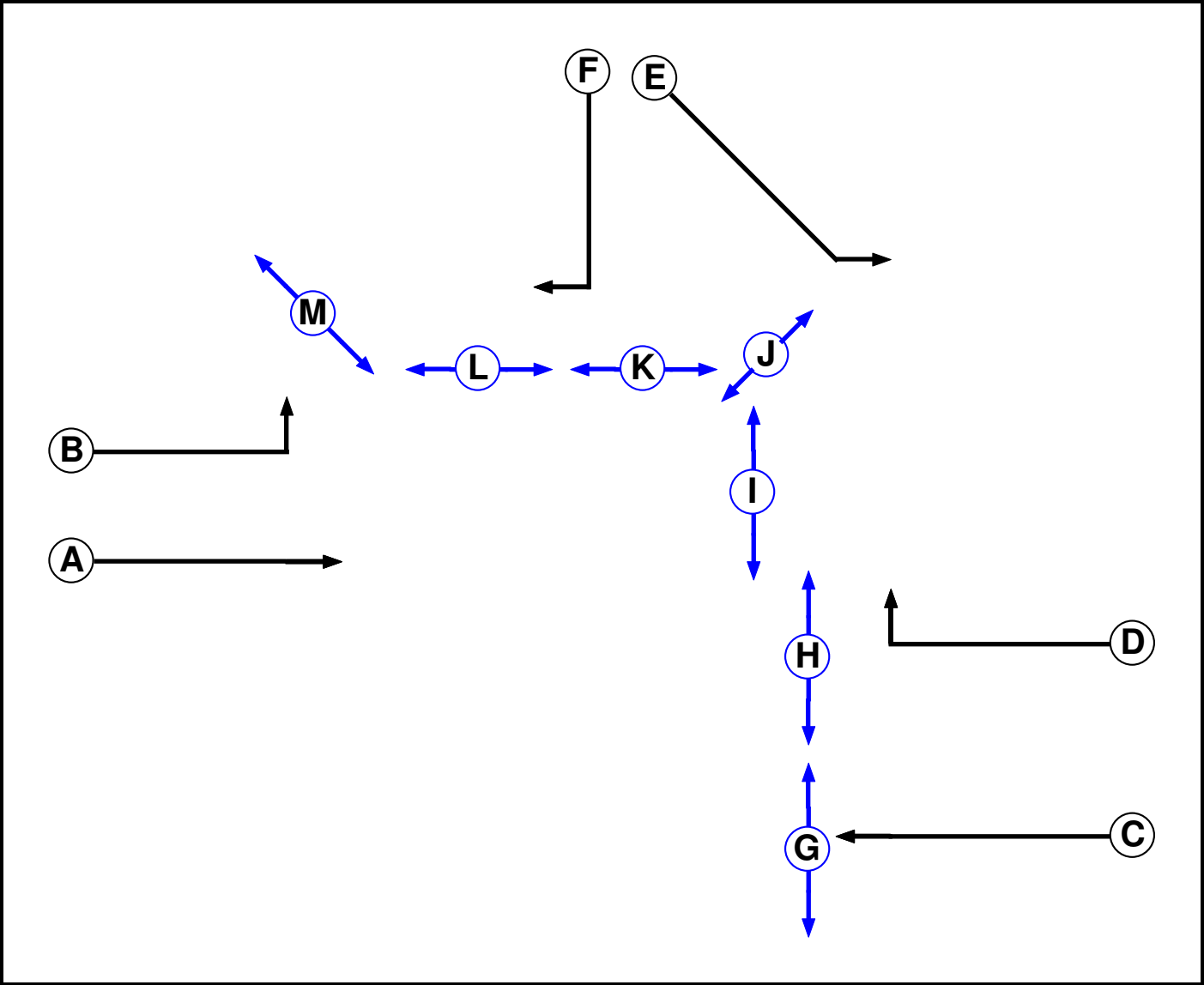
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	A38 - Common Road
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J1 A38-Common Road V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



Phase Diagram



Phase Input Data

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

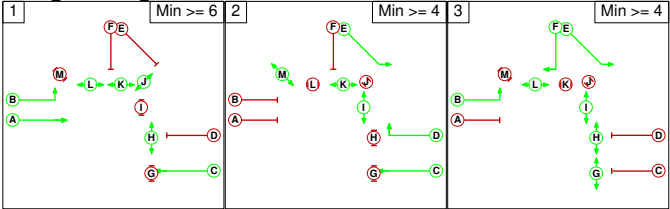
Phase Intergreens Matrix

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

Phases in Stage

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

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
3	1	E	Losing	5	5
3	1	F	Losing	5	5

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38/Common Road
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: A38/Common Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Common Road)	U	E	2	3	60.0	User	1800	-	-	-	-	-
1/2 (Common Road)	U	F	2	3	5.0	User	1800	-	-	-	-	-
1/3 (Common Road)	U	F	2	3	9.6	User	1800	-	-	-	-	-
2/1	U		2	3	60.0	User	2000	-	-	-	-	-
2/2	U		2	3	60.0	User	2000	-	-	-	-	-
3/1	U		2	3	60.0	User	2000	-	-	-	-	-
3/2	U		2	3	60.0	User	2000	-	-	-	-	-
3/3	U		2	3	60.0	User	2000	-	-	-	-	-
4/1 (A38 Alferton Road W)	U	B	2	3	19.1	User	1800	-	-	-	-	-
4/2 (A38 Alferton Road W)	U	A	2	3	60.0	User	1800	-	-	-	-	-
4/3 (A38 Alferton Road W)	U	A	2	3	60.0	User	1800	-	-	-	-	-
4/4 (A38 Alferton Road W)	U	A	2	3	23.5	User	1800	-	-	-	-	-
5/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/2	U		2	3	5.2	Geom	-	3.25	0.00	Y		
6/1 (A38 Alferton Road E)	U	C	2	3	60.0	User	1800	-	-	-	-	-
6/2 (A38 Alferton Road E)	U	C	2	3	60.0	User	1800	-	-	-	-	-
6/3 (A38 Alferton Road E)	U	D	2	3	60.0	User	1800	-	-	-	-	-
6/4 (A38 Alferton Road E)	U	D	2	3	16.5	User	1800	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Validation'	08:00	09:00	01:00	
2: '2030 Bkgd AM'	08:00	09:00	01:00	
3: '2030 Bkgd PM'	17:00	18:00	01:00	
4: '2030 With Dev AM'	08:00	09:00	01:00	
5: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	360	424	784
	B	456	0	2038	2494
	C	548	1863	0	2411
	Tot.	1004	2223	2462	5689

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: A38/Common Road	
1/1	360
1/2 (short)	212
1/3 (with short)	424(In) 212(Out)
2/1	1231
2/2	1231
3/1	961
3/2	631
3/3	631
4/1 (short)	548
4/2 (with short)	1149(In) 601(Out)
4/3 (with short)	1262(In) 631(Out)
4/4 (short)	631
5/1	766
5/2	238
6/1	1019
6/2	1019
6/3 (with short)	456(In) 218(Out)
6/4 (short)	238

Lane Saturation Flows

Junction: A38/Common Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	This lane uses a directly entered Saturation Flow						2000	2000
2/2	This lane uses a directly entered Saturation Flow						2000	2000
3/1	This lane uses a directly entered Saturation Flow						2000	2000
3/2	This lane uses a directly entered Saturation Flow						2000	2000
3/3	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road W Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Alfreton Road W Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Alfreton Road W Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Alfreton Road W Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	3.25	0.00	Y				1940	1940
5/2	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road E Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Alfreton Road E Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (A38 Alfreton Road E Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road E Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination				
		A	B	C	Tot.
	A	0	360	470	830
	B	457	0	2038	2495
	C	567	1863	0	2430
Origin	Tot.	1024	2223	2508	5755

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: A38/Common Road	
1/1	360
1/2 (short)	235
1/3 (with short)	470(In) 235(Out)
2/1	1254
2/2	1254
3/1	970
3/2	626
3/3	627
4/1 (short)	567
4/2 (with short)	1177(In) 610(Out)
4/3 (with short)	1253(In) 626(Out)
4/4 (short)	627
5/1	785
5/2	239
6/1	1019
6/2	1019
6/3 (with short)	457(In) 218(Out)
6/4 (short)	239

Lane Saturation Flows

Junction: A38/Common Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	This lane uses a directly entered Saturation Flow						2000	2000
2/2	This lane uses a directly entered Saturation Flow						2000	2000
3/1	This lane uses a directly entered Saturation Flow						2000	2000
3/2	This lane uses a directly entered Saturation Flow						2000	2000
3/3	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road W Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Alfreton Road W Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Alfreton Road W Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Alfreton Road W Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	3.25	0.00	Y				1940	1940
5/2	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road E Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Alfreton Road E Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (A38 Alfreton Road E Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road E Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination				
		A	B	C	Tot.
	A	0	563	550	1113
	B	274	0	1823	2097
	C	426	1935	0	2361
	Tot.	700	2498	2373	5571

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: A38/Common Road	
1/1	563
1/2 (short)	275
1/3 (with short)	550(In) 275(Out)
2/1	1186
2/2	1187
3/1	1180
3/2	659
3/3	659
4/1 (short)	426
4/2 (with short)	1043(In) 617(Out)
4/3 (with short)	1318(In) 659(Out)
4/4 (short)	659
5/1	556
5/2	144
6/1	911
6/2	912
6/3 (with short)	274(In) 130(Out)
6/4 (short)	144

Lane Saturation Flows

Junction: A38/Common Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	This lane uses a directly entered Saturation Flow						2000	2000
2/2	This lane uses a directly entered Saturation Flow						2000	2000
3/1	This lane uses a directly entered Saturation Flow						2000	2000
3/2	This lane uses a directly entered Saturation Flow						2000	2000
3/3	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road W Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Alfreton Road W Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Alfreton Road W Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Alfreton Road W Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	3.25	0.00	Y				1940	1940
5/2	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road E Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Alfreton Road E Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (A38 Alfreton Road E Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road E Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

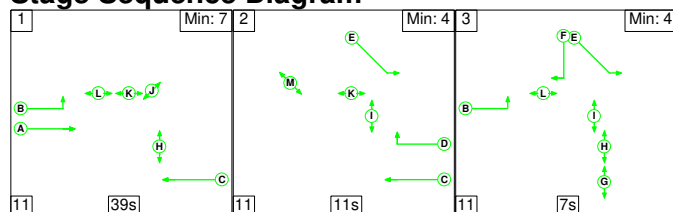
Origin	Destination				
		A	B	C	Tot.
	A	0	563	578	1141
	B	275	0	1823	2098
	C	471	1935	0	2406
	Tot.	746	2498	2401	5645

Traffic Lane Flows

Lane	Scenario 4: 2030 With Dev PM
Junction: A38/Common Road	
1/1	563
1/2 (short)	289
1/3 (with short)	578(In) 289(Out)
2/1	1200
2/2	1201
3/1	1188
3/2	655
3/3	655
4/1 (short)	471
4/2 (with short)	1096(In) 625(Out)
4/3 (with short)	1310(In) 655(Out)
4/4 (short)	655
5/1	601
5/2	145
6/1	911
6/2	912
6/3 (with short)	275(In) 130(Out)
6/4 (short)	145

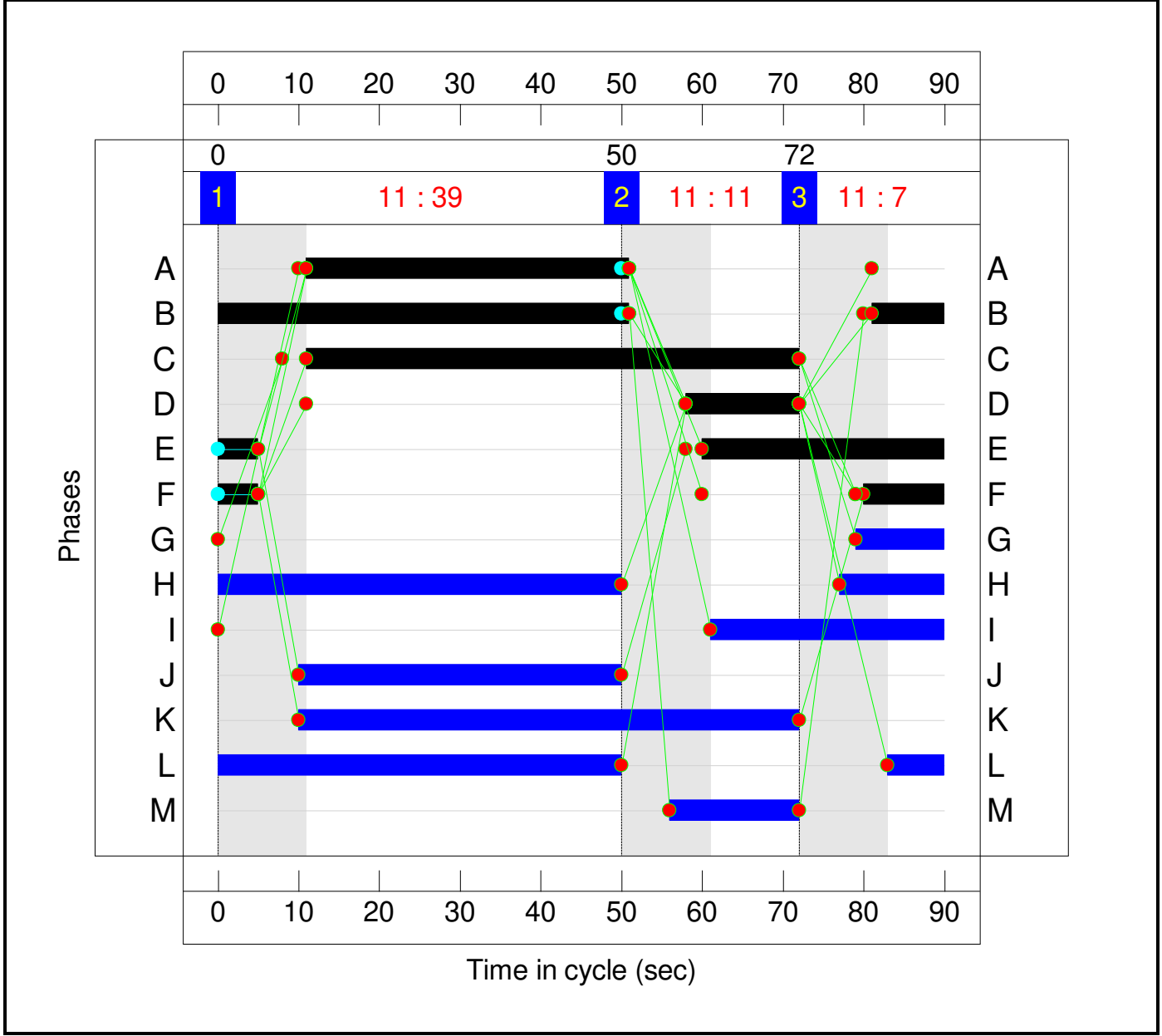
Lane Saturation Flows

Junction: A38/Common Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Common Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Common Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (Common Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1	This lane uses a directly entered Saturation Flow						2000	2000
2/2	This lane uses a directly entered Saturation Flow						2000	2000
3/1	This lane uses a directly entered Saturation Flow						2000	2000
3/2	This lane uses a directly entered Saturation Flow						2000	2000
3/3	This lane uses a directly entered Saturation Flow						2000	2000
4/1 (A38 Alfreton Road W Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A38 Alfreton Road W Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/3 (A38 Alfreton Road W Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/4 (A38 Alfreton Road W Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	3.25	0.00	Y				1940	1940
5/2	3.25	0.00	Y				1940	1940
6/1 (A38 Alfreton Road E Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
6/2 (A38 Alfreton Road E Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
6/3 (A38 Alfreton Road E Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
6/4 (A38 Alfreton Road E Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram****Stage Timings**

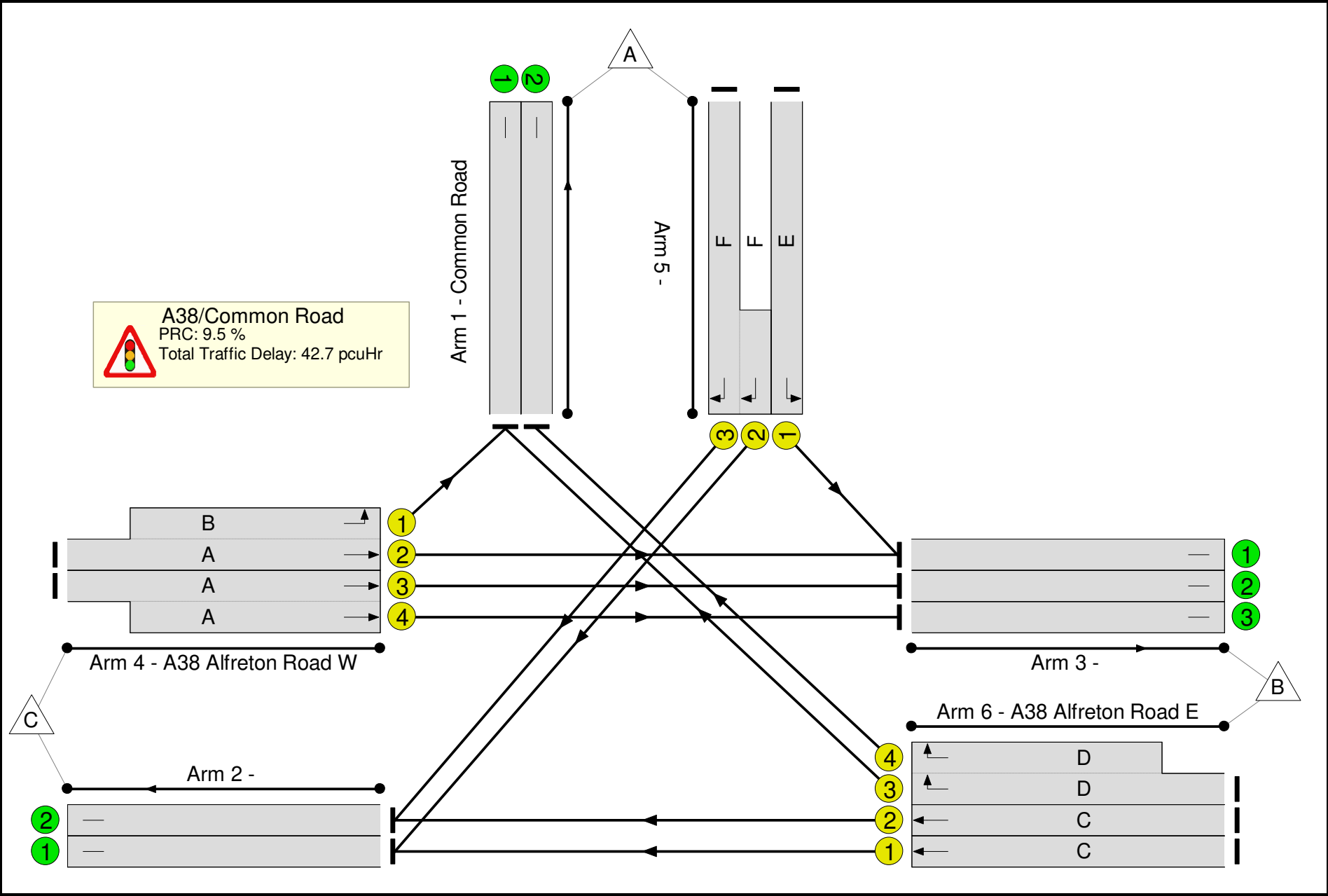
Stage	1	2	3
Duration	39	11	7
Change Point	0	50	72

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: A38 - Common Road	-	-	N/A	-	-		-	-	-	-	-	-	82.2%
A38/Common Road	-	-	N/A	-	-		-	-	-	-	-	-	82.2%
1/1	Common Road Left	U	N/A	N/A	E		1	35	-	360	1800	720	50.0%
1/3+1/2	Common Road Right	U	N/A	N/A	F		1	15	-	424	1800:1800	260+260	81.5 : 81.5%
2/1		U	N/A	N/A	-		-	-	-	1231	2000	2000	61.6%
2/2		U	N/A	N/A	-		-	-	-	1231	2000	2000	61.6%
3/1		U	N/A	N/A	-		-	-	-	961	2000	2000	48.1%
3/2		U	N/A	N/A	-		-	-	-	631	2000	2000	31.6%
3/3		U	N/A	N/A	-		-	-	-	631	2000	2000	31.6%
4/2+4/1	A38 Alfreton Road W Ahead Left	U	N/A	N/A	A B		1	40:60	-	1149	1800:1800	795+725	75.6 : 75.6%
4/3+4/4	A38 Alfreton Road W Ahead	U	N/A	N/A	A		1	40	-	1262	1800:1800	820+820	77.0 : 77.0%
5/1		U	N/A	N/A	-		-	-	-	766	1940	1940	39.5%
5/2		U	N/A	N/A	-		-	-	-	238	1940	1940	12.3%
6/1	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	61	-	1019	1800	1240	82.2%
6/2	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	61	-	1019	1800	1240	82.2%
6/3+6/4	A38 Alfreton Road E Right	U	N/A	N/A	D		1	14	-	456	1800:1800	300+300	72.7 : 79.3%

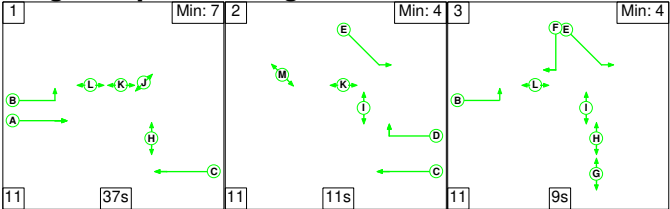
Full Input Data And Results

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: A38 - Common Road	-	-	0	0	0	27.9	14.8	0.0	42.7	-	-	-	-
A38/Common Road	-	-	0	0	0	27.9	14.8	0.0	42.7	-	-	-	-
1/1	360	360	-	-	-	2.0	0.5	-	2.5	25.2	6.7	0.5	7.2
1/3+1/2	424	424	-	-	-	4.1	2.1	-	6.2 (3.1+3.1)	52.4 (52.4:52.4)	4.9	2.1	7.0
2/1	1231	1231	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
2/2	1231	1231	-	-	-	0.0	0.8	-	0.8	2.3	0.0	0.8	0.8
3/1	961	961	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
3/2	631	631	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/3	631	631	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/2+4/1	1149	1149	-	-	-	4.4	1.5	-	5.9 (4.1+1.8)	18.5 (24.8:11.5)	12.2	1.5	13.7
4/3+4/4	1262	1262	-	-	-	7.2	1.7	-	8.9 (4.4+4.4)	25.3 (25.3:25.3)	13.1	1.7	14.8
5/1	766	766	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
5/2	238	238	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	1019	1019	-	-	-	2.8	2.3	-	5.1	18.0	18.1	2.3	20.4
6/2	1019	1019	-	-	-	2.8	2.3	-	5.1	18.0	18.1	2.3	20.4
6/3+6/4	456	456	-	-	-	4.5	1.5	-	6.1 (2.9+3.2)	48.0 (47.8:48.3)	5.7	1.5	7.2
C1 PRC for Signalled Lanes (%): 9.5 Total Delay for Signalled Lanes (pcuHr): 39.75 Cycle Time (s): 90 PRC Over All Lanes (%): 9.5 Total Delay Over All Lanes(pcuHr): 42.66													

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

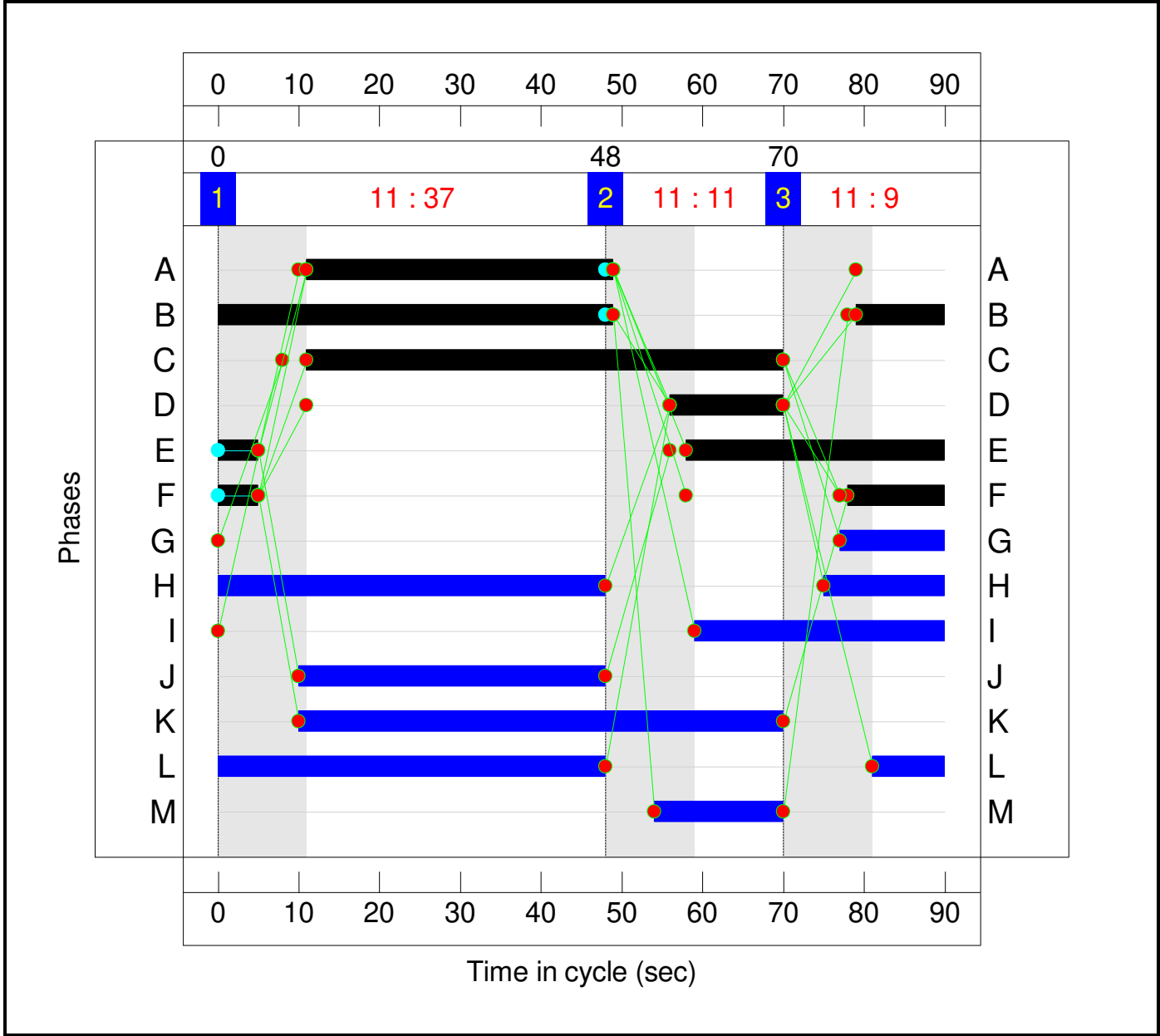
Stage Sequence Diagram



Stage Timings

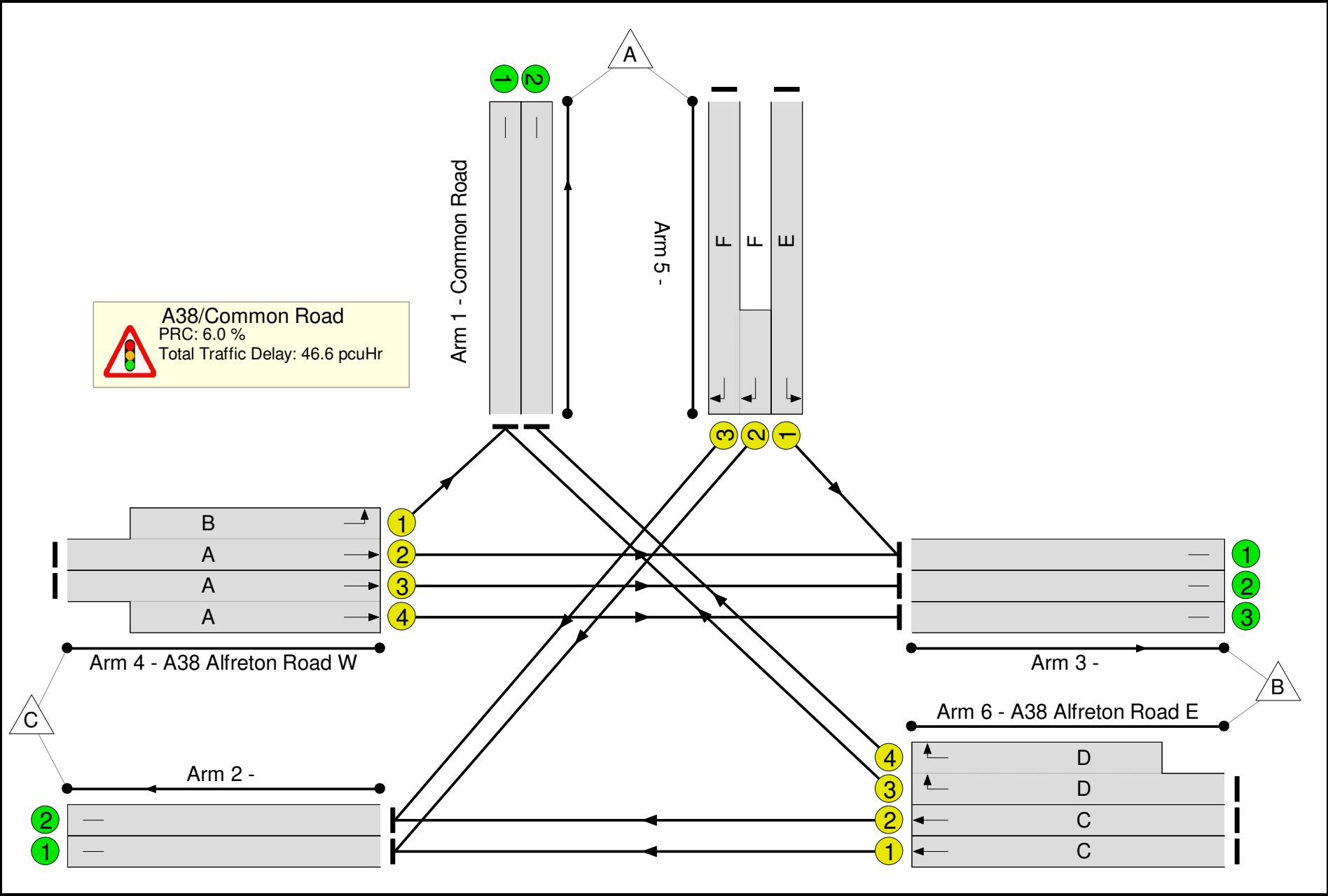
Stage	1	2	3
Duration	37	11	9
Change Point	0	48	70

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: A38 - Common Road	-	-	N/A	-	-		-	-	-	-	-	-	84.9%
A38/Common Road	-	-	N/A	-	-		-	-	-	-	-	-	84.9%
1/1	Common Road Left	U	N/A	N/A	E		1	37	-	360	1800	760	47.4%
1/3+1/2	Common Road Right	U	N/A	N/A	F		1	17	-	470	1800:1800	280+280	83.9 : 83.9%
2/1		U	N/A	N/A	-		-	-	-	1254	2000	2000	62.7%
2/2		U	N/A	N/A	-		-	-	-	1254	2000	2000	62.7%
3/1		U	N/A	N/A	-		-	-	-	970	2000	2000	48.5%
3/2		U	N/A	N/A	-		-	-	-	626	2000	2000	31.3%
3/3		U	N/A	N/A	-		-	-	-	627	2000	2000	31.4%
4/2+4/1	A38 Alfreton Road W Ahead Left	U	N/A	N/A	A B		1	38:60	-	1177	1800:1800	774+719	78.8 : 78.8%
4/3+4/4	A38 Alfreton Road W Ahead	U	N/A	N/A	A		1	38	-	1253	1800:1800	780+780	80.3 : 80.4%
5/1		U	N/A	N/A	-		-	-	-	785	1940	1940	40.5%
5/2		U	N/A	N/A	-		-	-	-	239	1940	1940	12.3%
6/1	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	59	-	1019	1800	1200	84.9%
6/2	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	59	-	1019	1800	1200	84.9%
6/3+6/4	A38 Alfreton Road E Right	U	N/A	N/A	D		1	14	-	457	1800:1800	300+300	72.7 : 79.7%

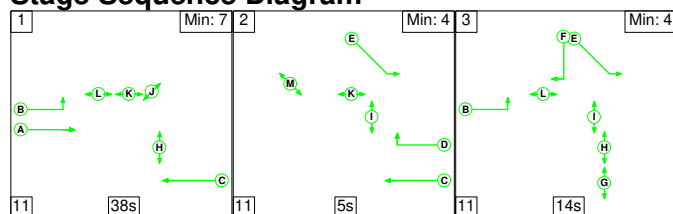
Full Input Data And Results

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: A38 - Common Road	-	-	0	0	0	29.8	16.8	0.0	46.6	-	-	-	-
A38/Common Road	-	-	0	0	0	29.8	16.8	0.0	46.6	-	-	-	-
1/1	360	360	-	-	-	1.9	0.4	-	2.3	23.3	6.4	0.4	6.8
1/3+1/2	470	470	-	-	-	4.3	2.5	-	6.8 (3.4+3.4)	52.1 (52.1:52.1)	5.9	2.5	8.4
2/1	1254	1254	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
2/2	1254	1254	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
3/1	970	970	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
3/2	626	626	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/3	627	627	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/2+4/1	1177	1177	-	-	-	4.8	1.8	-	6.6 (4.7+2.0)	20.2 (27.5:12.5)	13.0	1.8	14.9
4/3+4/4	1253	1253	-	-	-	7.7	2.0	-	9.7 (4.9+4.9)	28.0 (27.9:28.0)	13.6	2.0	15.6
5/1	785	785	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
5/2	239	239	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
6/1	1019	1019	-	-	-	3.3	2.7	-	6.0	21.2	19.5	2.7	22.3
6/2	1019	1019	-	-	-	3.3	2.7	-	6.0	21.2	19.5	2.7	22.3
6/3+6/4	457	457	-	-	-	4.5	1.6	-	6.1 (2.9+3.2)	48.1 (47.9:48.4)	5.7	1.6	7.3
C1 PRC for Signalled Lanes (%): 6.0 Total Delay for Signalled Lanes (pcuHr): 43.58 Cycle Time (s): 90 PRC Over All Lanes (%): 6.0 Total Delay Over All Lanes(pcuHr): 46.59													

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

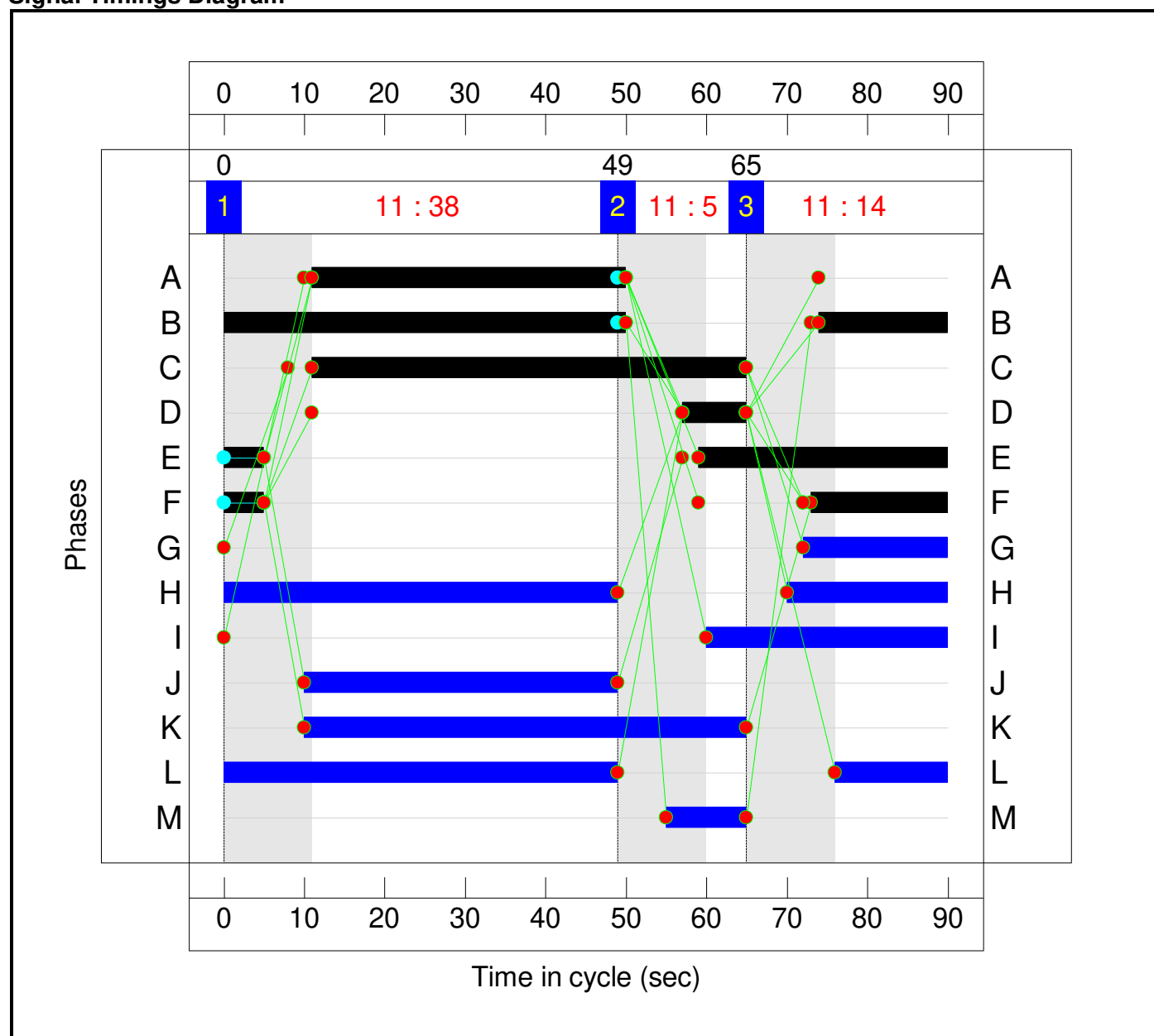
Stage Sequence Diagram



Stage Timings

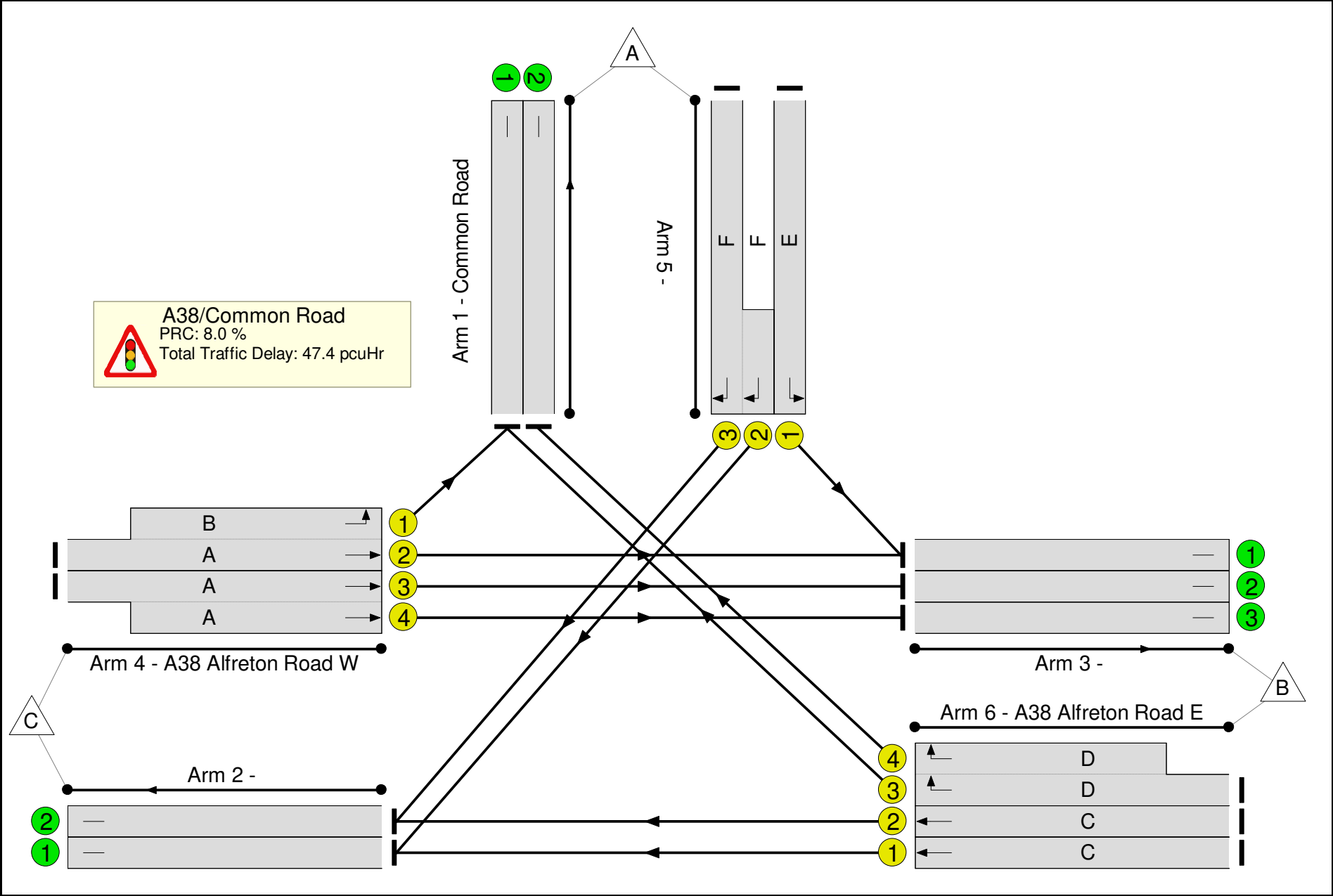
Stage	1	2	3
Duration	38	5	14
Change Point	0	49	65

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: A38 - Common Road	-	-	N/A	-	-		-	-	-	-	-	-	83.3%
A38/Common Road	-	-	N/A	-	-		-	-	-	-	-	-	83.3%
1/1	Common Road Left	U	N/A	N/A	E		1	36	-	563	1800	740	76.1%
1/3+1/2	Common Road Right	U	N/A	N/A	F		1	22	-	550	1800:1800	330+330	83.3 : 83.3%
2/1		U	N/A	N/A	-		-	-	-	1186	2000	2000	59.3%
2/2		U	N/A	N/A	-		-	-	-	1187	2000	2000	59.4%
3/1		U	N/A	N/A	-		-	-	-	1180	2000	2000	59.0%
3/2		U	N/A	N/A	-		-	-	-	659	2000	2000	33.0%
3/3		U	N/A	N/A	-		-	-	-	659	2000	2000	33.0%
4/2+4/1	A38 Alfreton Road W Ahead Left	U	N/A	N/A	A B		1	39:66	-	1043	1800:1800	787+543	78.4 : 78.4%
4/3+4/4	A38 Alfreton Road W Ahead	U	N/A	N/A	A		1	39	-	1318	1800:1800	800+800	82.4 : 82.4%
5/1		U	N/A	N/A	-		-	-	-	556	1940	1940	28.7%
5/2		U	N/A	N/A	-		-	-	-	144	1940	1940	7.4%
6/1	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	54	-	911	1800	1100	82.8%
6/2	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	54	-	912	1800	1100	82.9%
6/3+6/4	A38 Alfreton Road E Right	U	N/A	N/A	D		1	8	-	274	1800:1800	180+180	72.2 : 80.0%

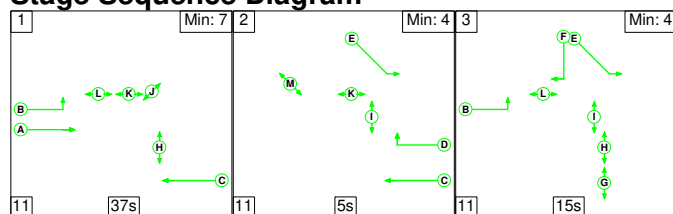
Full Input Data And Results

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: A38 - Common Road	-	-	0	0	0	30.2	17.2	0.0	47.4	-	-	-	-
A38/Common Road	-	-	0	0	0	30.2	17.2	0.0	47.4	-	-	-	-
1/1	563	563	-	-	-	3.6	1.6	-	5.1	32.7	12.0	1.6	13.6
1/3+1/2	550	550	-	-	-	4.5	2.4	-	6.9 (3.5+3.5)	45.3 (45.3:45.3)	7.5	2.4	9.9
2/1	1186	1186	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
2/2	1187	1187	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
3/1	1180	1180	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
3/2	659	659	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/3	659	659	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/2+4/1	1043	1043	-	-	-	4.1	1.8	-	5.9 (4.7+1.2)	20.3 (27.3:10.0)	13.0	1.8	14.8
4/3+4/4	1318	1318	-	-	-	8.0	2.3	-	10.3 (5.2+5.2)	28.2 (28.2:28.2)	14.3	2.3	16.6
5/1	556	556	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/2	144	144	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
6/1	911	911	-	-	-	3.5	2.4	-	5.8	23.1	17.7	2.4	20.1
6/2	912	912	-	-	-	3.5	2.4	-	5.9	23.1	17.7	2.4	20.1
6/3+6/4	274	274	-	-	-	3.0	1.5	-	4.5 (2.1+2.4)	59.7 (59.5:59.8)	3.5	1.5	5.1
C1 PRC for Signalled Lanes (%): 8.0 Total Delay for Signalled Lanes (pcuHr): 44.47 Cycle Time (s): 90 PRC Over All Lanes (%): 8.0 Total Delay Over All Lanes(pcuHr): 47.38													

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

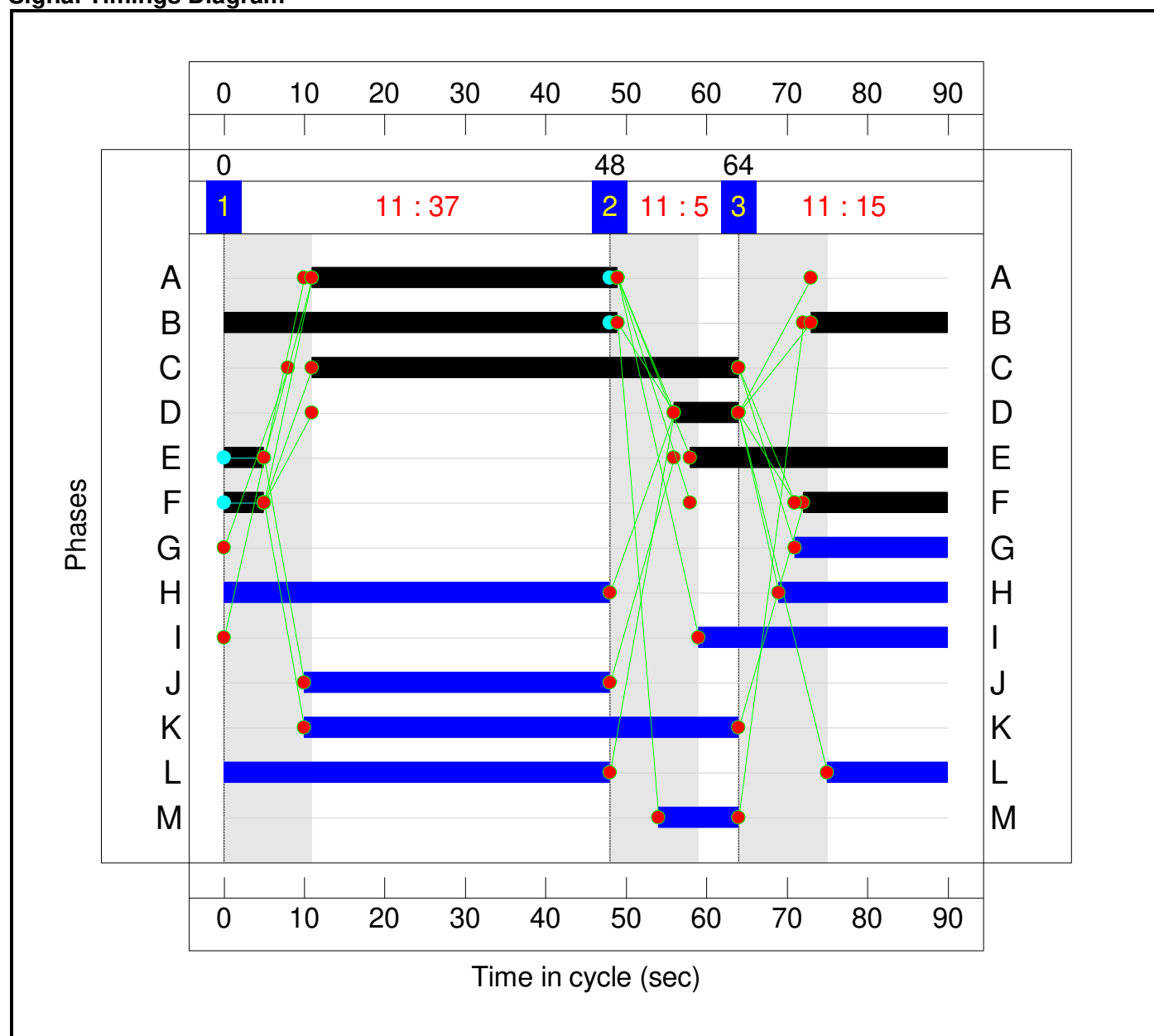
Stage Sequence Diagram



Stage Timings

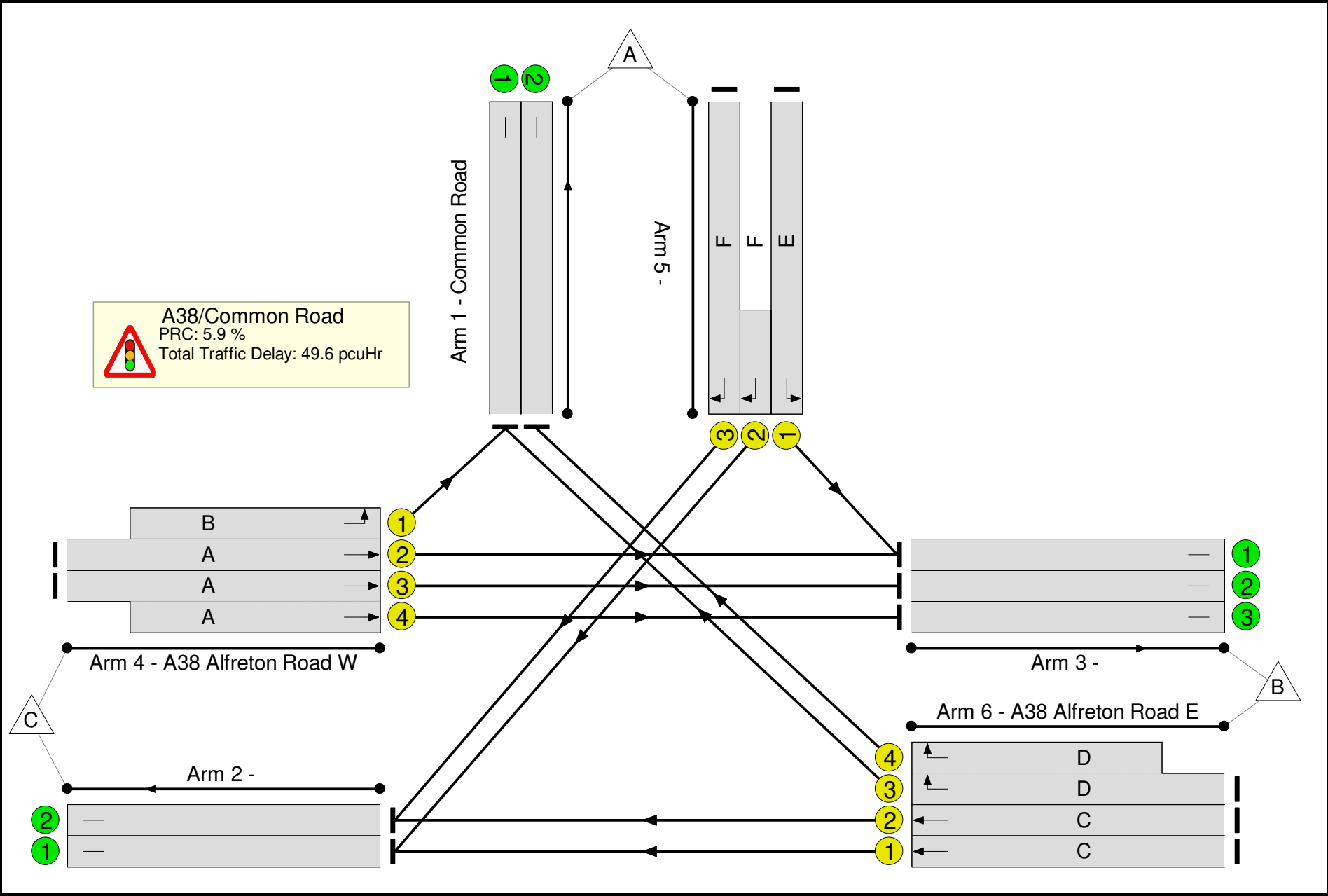
Stage	1	2	3
Duration	37	5	15
Change Point	0	48	64

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: A38 - Common Road	-	-	N/A	-	-		-	-	-	-	-	-	85.0%
A38/Common Road	-	-	N/A	-	-		-	-	-	-	-	-	85.0%
1/1	Common Road Left	U	N/A	N/A	E		1	37	-	563	1800	760	74.1%
1/3+1/2	Common Road Right	U	N/A	N/A	F		1	23	-	578	1800:1800	340+340	85.0 : 85.0%
2/1		U	N/A	N/A	-		-	-	-	1200	2000	2000	60.0%
2/2		U	N/A	N/A	-		-	-	-	1201	2000	2000	60.1%
3/1		U	N/A	N/A	-		-	-	-	1188	2000	2000	59.4%
3/2		U	N/A	N/A	-		-	-	-	655	2000	2000	32.8%
3/3		U	N/A	N/A	-		-	-	-	655	2000	2000	32.8%
4/2+4/1	A38 Alfreton Road W Ahead Left	U	N/A	N/A	A B		1	38:66	-	1096	1800:1800	775+584	80.7 : 80.7%
4/3+4/4	A38 Alfreton Road W Ahead	U	N/A	N/A	A		1	38	-	1310	1800:1800	780+780	84.0 : 84.0%
5/1		U	N/A	N/A	-		-	-	-	601	1940	1940	31.0%
5/2		U	N/A	N/A	-		-	-	-	145	1940	1940	7.5%
6/1	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	53	-	911	1800	1080	84.4%
6/2	A38 Alfreton Road E Ahead	U	N/A	N/A	C		1	53	-	912	1800	1080	84.4%
6/3+6/4	A38 Alfreton Road E Right	U	N/A	N/A	D		1	8	-	275	1800:1800	180+180	72.2 : 80.6%

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: A38 - Common Road	-	-	0	0	0	31.1	18.5	0.0	49.6	-	-	-	-
A38/Common Road	-	-	0	0	0	31.1	18.5	0.0	49.6	-	-	-	-
1/1	563	563	-	-	-	3.4	1.4	-	4.8	30.9	11.7	1.4	13.1
1/3+1/2	578	578	-	-	-	4.7	2.7	-	7.4 (3.7+3.7)	45.9 (45.9:45.9)	8.2	2.7	10.9
2/1	1200	1200	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
2/2	1201	1201	-	-	-	0.0	0.8	-	0.8	2.2	0.0	0.8	0.8
3/1	1188	1188	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
3/2	655	655	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
3/3	655	655	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
4/2+4/1	1096	1096	-	-	-	4.4	2.1	-	6.4 (5.0+1.4)	21.1 (28.9:10.7)	13.5	2.1	15.6
4/3+4/4	1310	1310	-	-	-	8.3	2.6	-	10.8 (5.4+5.4)	29.8 (29.8:29.8)	14.6	2.6	17.1
5/1	601	601	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/2	145	145	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
6/1	911	911	-	-	-	3.7	2.6	-	6.3	24.9	18.2	2.6	20.8
6/2	912	912	-	-	-	3.7	2.6	-	6.3	25.0	18.2	2.6	20.9
6/3+6/4	275	275	-	-	-	3.0	1.6	-	4.6 (2.2+2.4)	59.9 (59.7:60.1)	3.5	1.6	5.1
C1 PRC for Signalled Lanes (%): 5.9 Total Delay for Signalled Lanes (pcuHr): 46.66 Cycle Time (s): 90 PRC Over All Lanes (%): 5.9 Total Delay Over All Lanes(pcuHr): 49.64													

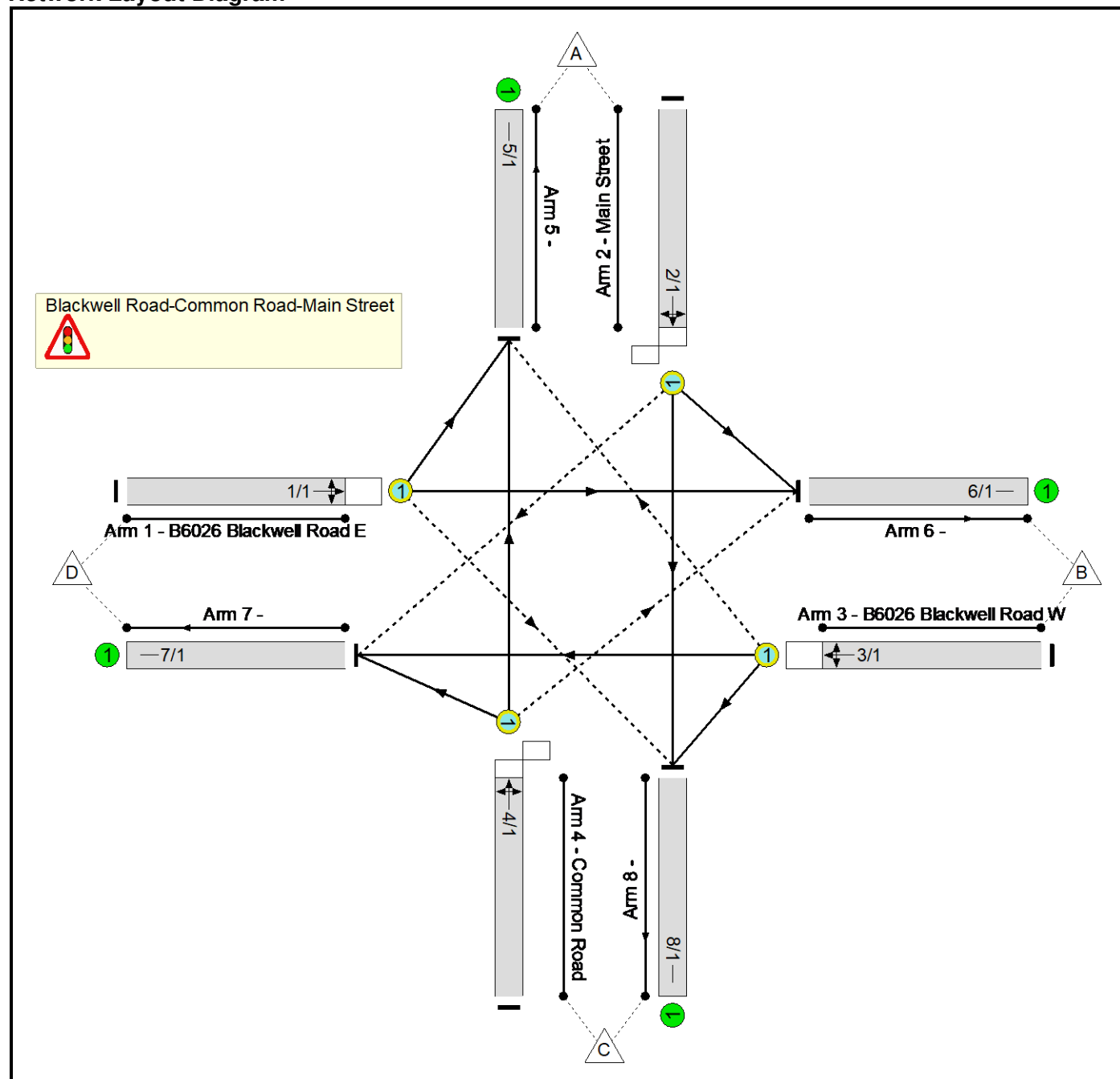
Junction 2
Common Road/Blackwell Road
Existing Layout

Full Input Data And Results
Full Input Data And Results

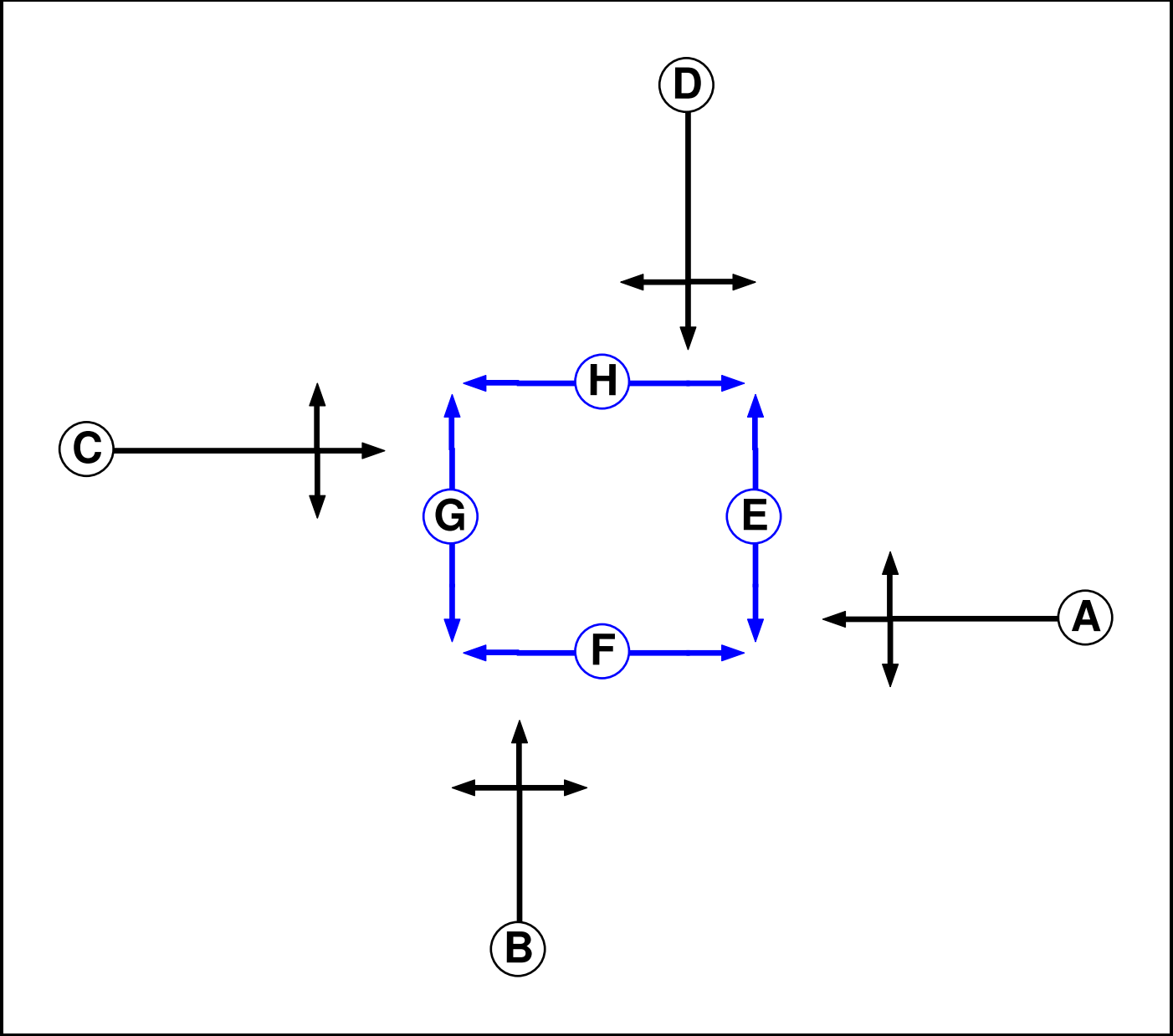
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	J2 Blackwell Road-Common Road-Main Street
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J2 Blackwell Road-Common Road-Main Street V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



Phase Diagram



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

Full Input Data And Results

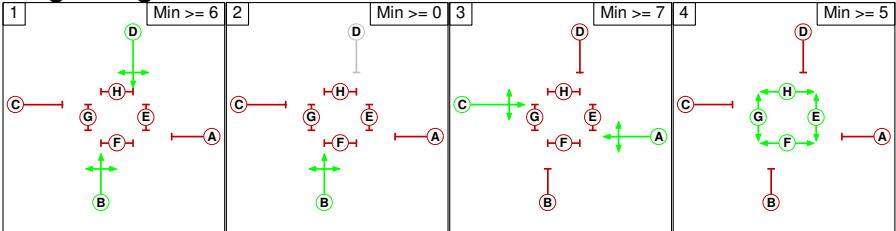
Phase Intergreens Matrix

Terminating Phase	Starting Phase								
		A	B	C	D	E	F	G	H
	A		9	-	7	5	7	10	9
	B	7		7	-	9	5	7	10
	C	-	7		8	10	9	5	7
	D	7	-	6		7	10	9	5
	E	12	12	12	12		-	-	-
	F	11	11	11	11	-		-	-
	G	10	10	10	10	-	-		-
	H	12	12	12	12	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		0	7	10
	2	2		7	10
	3	9	9		10
	4	12	12	12	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Blackwell Road-Common Road-Main Street											
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)
1/1 (B6026 Blackwell Road E)	8/1 (Right)	1439	0	3/1	1.09	To 7/1 (Ahead) To 8/1 (Left)	2.00	-	0.50	2	2.00
2/1 (Main Street)	7/1 (Right)	1439	0	4/1	1.09	To 5/1 (Ahead) To 7/1 (Left)	2.00	1.00	0.50	2	2.00
3/1 (B6026 Blackwell Road W)	5/1 (Right)	1439	0	1/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00
4/1 (Common Road)	6/1 (Right)	1439	0	2/1	1.09	To 6/1 (Left) To 8/1 (Ahead)	2.00	1.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Blackwell Road-Common Road-Main Street												
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 (B6026 Blackwell Road E)	O	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	6.00
											Arm 6 Ahead	Inf
											Arm 8 Right	12.00
											Arm 6 Left	10.00
2/1 (Main Street)	O	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Right	12.00
											Arm 7 Right	12.00
3/1 (B6026 Blackwell Road W)	O	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Ahead	Inf
											Arm 5 Right	12.00
											Arm 7 Ahead	Inf
4/1 (Common Road)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Left	10.00
											Arm 5 Ahead	Inf
											Arm 6 Right	12.00
5/1	U		2	3	60.0	Inf	-	-	-	-	Arm 7 Left	10.00
6/1	U		2	3	60.0	Inf	-	-	-	-		
7/1	U		2	3	60.0	Inf	-	-	-	-		
8/1	U		2	3	60.0	Inf	-	-	-	-		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2030 Bkgd AM'	08:00	09:00	01:00	
2: '2030 Bkgd PM'	17:00	18:00	01:00	
3: '2030 With Dev AM'	08:00	09:00	01:00	
4: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Single Cycle')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	141	317	66	524
	B	9	0	192	116	317
	C	186	150	0	22	358
	D	45	118	44	0	207
	Tot.	240	409	553	204	1406

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: Blackwell Road-Common Road-Main Street	
1/1	207
2/1	524
3/1	317
4/1	358
5/1	240
6/1	409
7/1	204
8/1	553

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	21.7 %	1795	1795
				Arm 6 Ahead	Inf	57.0 %		
				Arm 8 Right	12.00	21.3 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	26.9 %	1837	1837
				Arm 7 Right	12.00	12.6 %		
				Arm 8 Ahead	Inf	60.5 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	2.8 %	1773	1773
				Arm 7 Ahead	Inf	36.6 %		
				Arm 8 Left	10.00	60.6 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	52.0 %	1804	1804
				Arm 6 Right	12.00	41.9 %		
				Arm 7 Left	10.00	6.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2030 With Dev AM' (FG3: '2030 With Dev AM', Plan 1: 'Single Cycle')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	146	317	66	529
	B	9	0	238	116	363
	C	186	170	0	22	378
	D	45	118	44	0	207
	Tot.	240	434	599	204	1477

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: Blackwell Road-Common Road-Main Street	
1/1	207
2/1	529
3/1	363
4/1	378
5/1	240
6/1	434
7/1	204
8/1	599

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	21.7 %	1795	1795
				Arm 6 Ahead	Inf	57.0 %		
				Arm 8 Right	12.00	21.3 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	27.6 %	1835	1835
				Arm 7 Right	12.00	12.5 %		
				Arm 8 Ahead	Inf	59.9 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	2.5 %	1761	1761
				Arm 7 Ahead	Inf	32.0 %		
				Arm 8 Left	10.00	65.6 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	49.2 %	1798	1798
				Arm 6 Right	12.00	45.0 %		
				Arm 7 Left	10.00	5.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG2: '2030 Bkgd PM', Plan 1: 'Single Cycle')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	177	217	33	427
	B	10	0	142	113	265
	C	290	229	0	34	553
	D	80	188	20	0	288
	Tot.	380	594	379	180	1533

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: Blackwell Road-Common Road-Main Street	
1/1	288
2/1	427
3/1	265
4/1	553
5/1	380
6/1	594
7/1	180
8/1	379

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	27.8 %	1799	1799
				Arm 6 Ahead	Inf	65.3 %		
				Arm 8 Right	12.00	6.9 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	41.5 %	1810	1810
				Arm 7 Right	12.00	7.7 %		
				Arm 8 Ahead	Inf	50.8 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	3.8 %	1788	1788
				Arm 7 Ahead	Inf	42.6 %		
				Arm 8 Left	10.00	53.6 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	52.4 %	1805	1805
				Arm 6 Right	12.00	41.4 %		
				Arm 7 Left	10.00	6.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Single Cycle')
Traffic Flows, Desired
Desired Flow :

	Destination					
Origin	A	0	190	217	33	440
	B	11	0	170	113	294
	C	290	275	0	34	599
	D	80	188	20	0	288
	Tot.	381	653	407	180	1621

Traffic Lane Flows

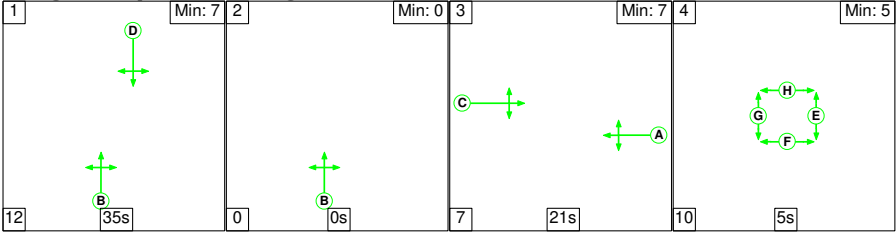
Lane	Scenario 4: 2030 With Dev PM
Junction: Blackwell Road-Common Road-Main Street	
1/1	288
2/1	440
3/1	294
4/1	599
5/1	381
6/1	653
7/1	180
8/1	407

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	27.8 %	1799	1799
				Arm 6 Ahead	Inf	65.3 %		
				Arm 8 Right	12.00	6.9 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	43.2 %	1806	1806
				Arm 7 Right	12.00	7.5 %		
				Arm 8 Ahead	Inf	49.3 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	3.7 %	1778	1778
				Arm 7 Ahead	Inf	38.4 %		
				Arm 8 Left	10.00	57.8 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	48.4 %	1797	1797
				Arm 6 Right	12.00	45.9 %		
				Arm 7 Left	10.00	5.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Single Cycle')

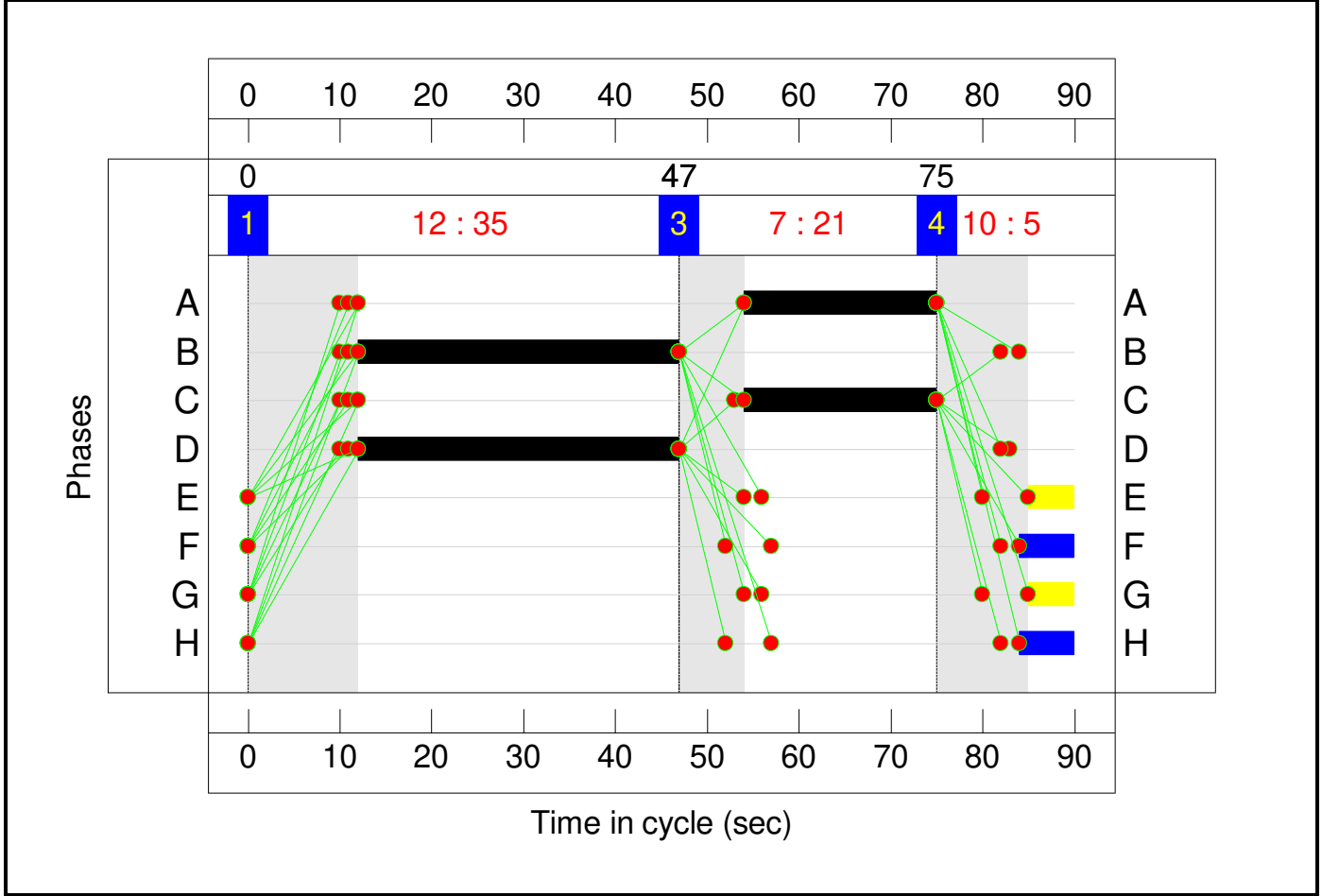
Stage Sequence Diagram



Stage Timings

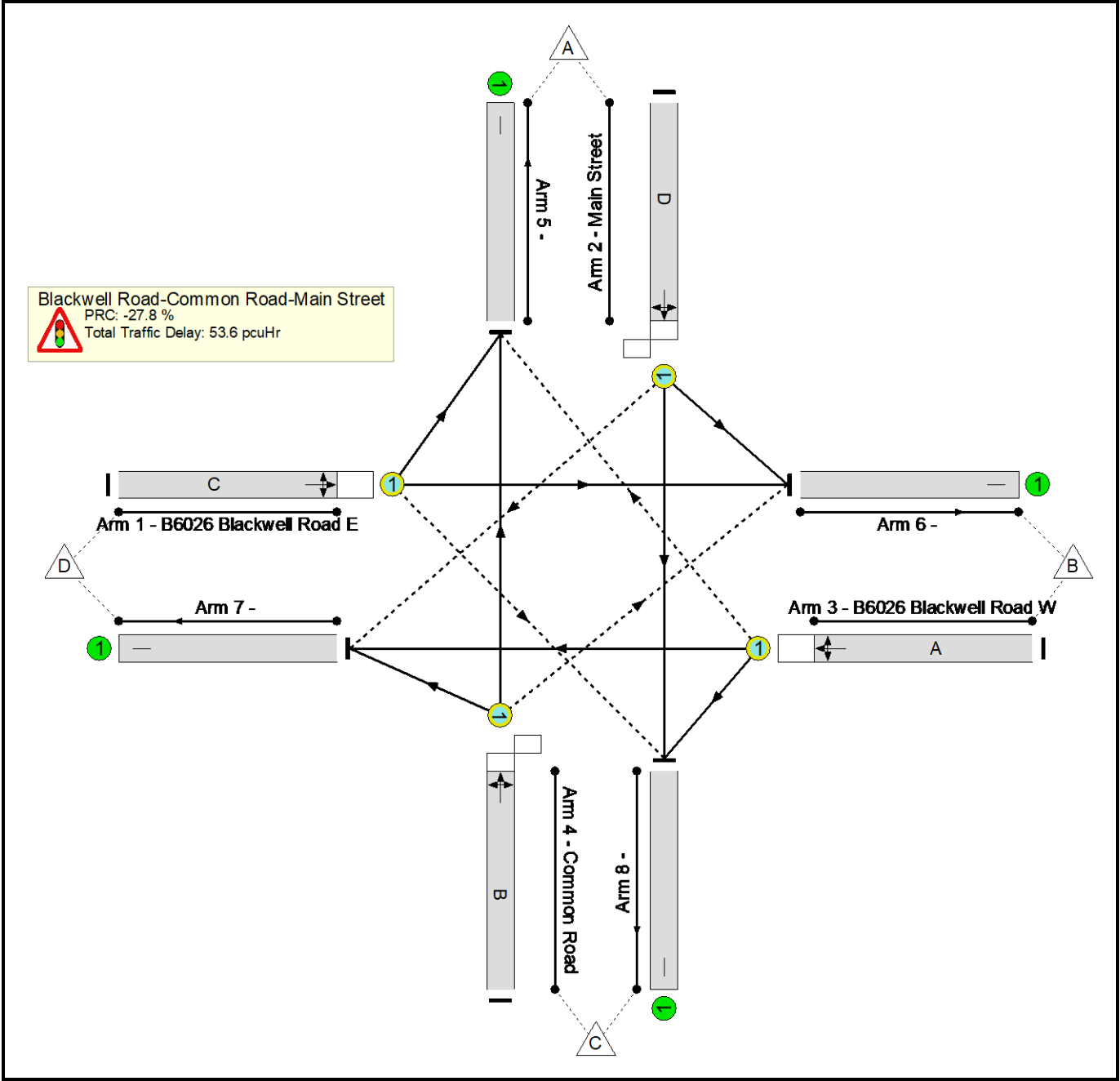
Stage	1	2	3	4
Duration	35	0	21	5
Change Point	0	47	47	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

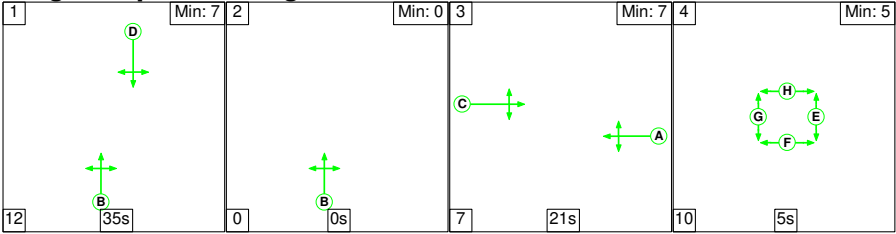
Network Results

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	115.0%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	115.0%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	21	-	207	1795	269	76.8%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	35	-	524	1837	735	71.3%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	21	-	317	1773	276	115.0%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	35	-	358	1804	343	104.3%
5/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	409	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	553	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

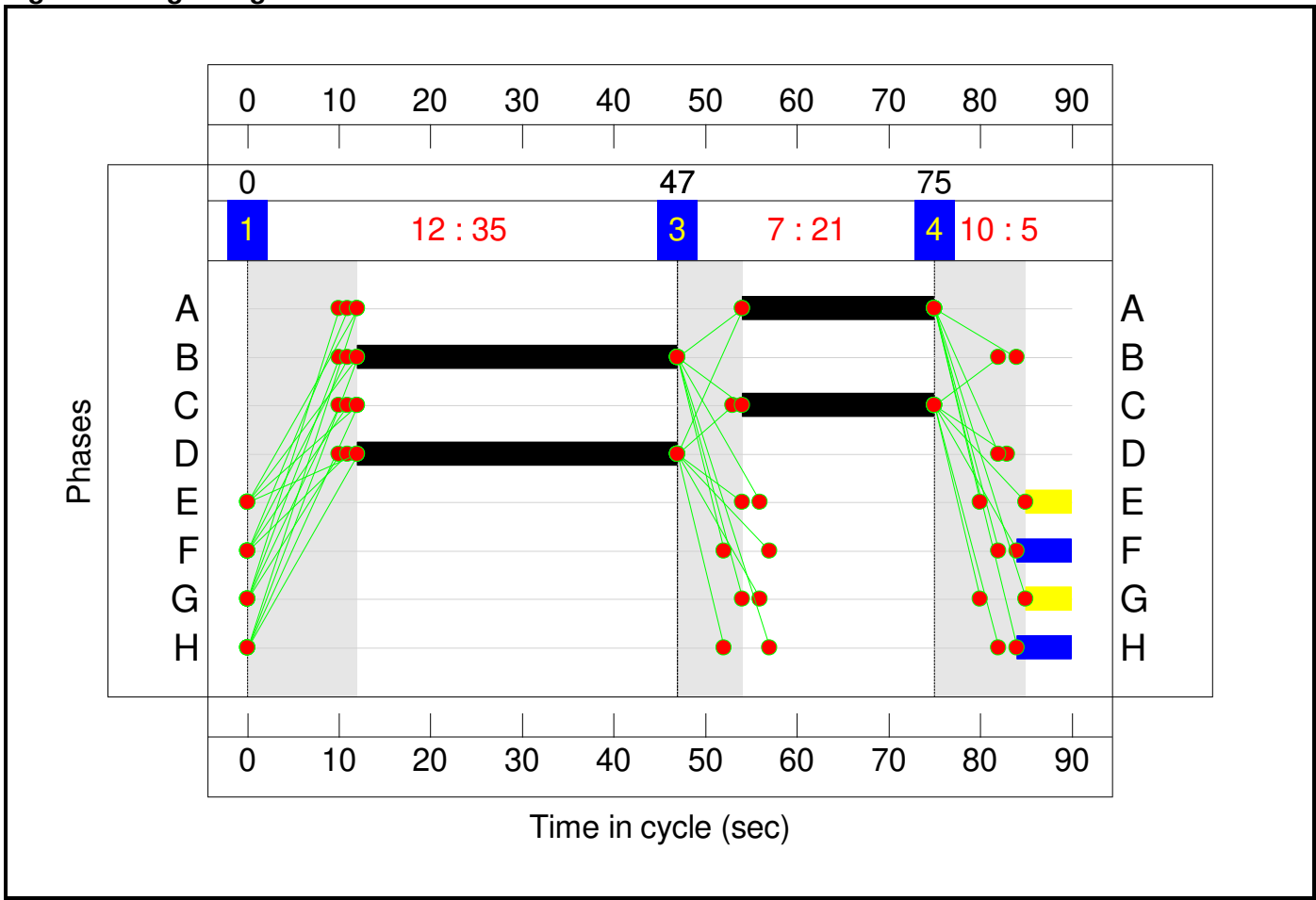
Stage Sequence Diagram



Stage Timings

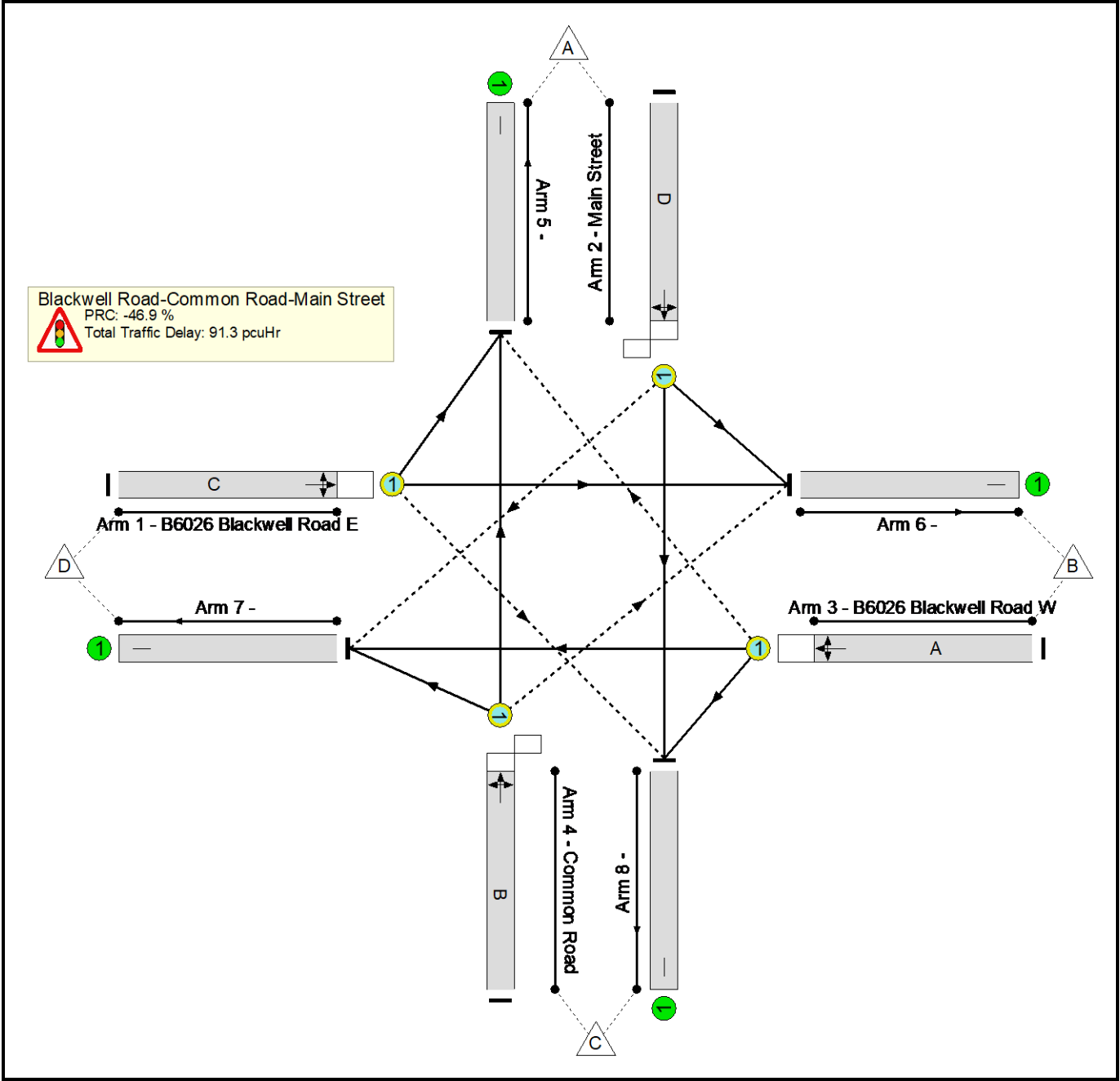
Stage	1	2	3	4
Duration	35	0	21	5
Change Point	0	47	47	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

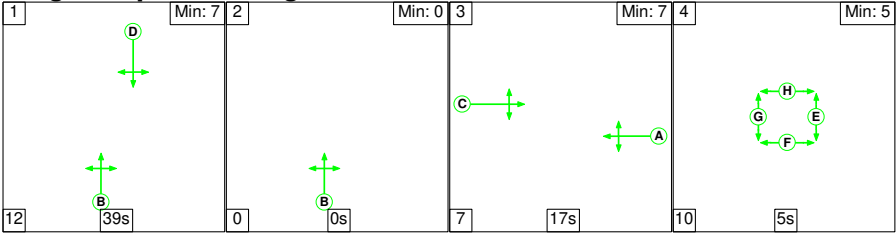
Network Results

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	132.2%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	132.2%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	21	-	207	1795	269	76.8%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	35	-	529	1835	734	72.1%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	21	-	363	1761	275	132.2%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	35	-	378	1798	335	112.7%
5/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	599	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: J2 Blackwell Road-Common Road-Main Street	-	-	252	0	16	16.8	74.1	0.4	91.3	-	-	-	-
Blackwell Road-Common Road-Main Street	-	-	252	0	16	16.8	74.1	0.4	91.3	-	-	-	-
1/1	207	207	40	0	4	1.7	1.6	0.0	3.3	58.1	4.7	1.6	6.2
2/1	529	529	65	0	1	3.3	1.3	0.0	4.6	31.5	11.0	1.3	12.3
3/1	363	275	5	0	2	7.1	46.2	0.0	53.3	528.6	12.3	46.2	58.5
4/1	378	335	142	0	9	4.7	25.0	0.4	30.1	286.5	10.5	25.0	35.5
5/1	217	217	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	541	541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -46.9 Total Delay for Signalled Lanes (pcuHr): 91.35 Cycle Time (s): 90 PRC Over All Lanes (%): -46.9 Total Delay Over All Lanes(pcuHr): 91.35													

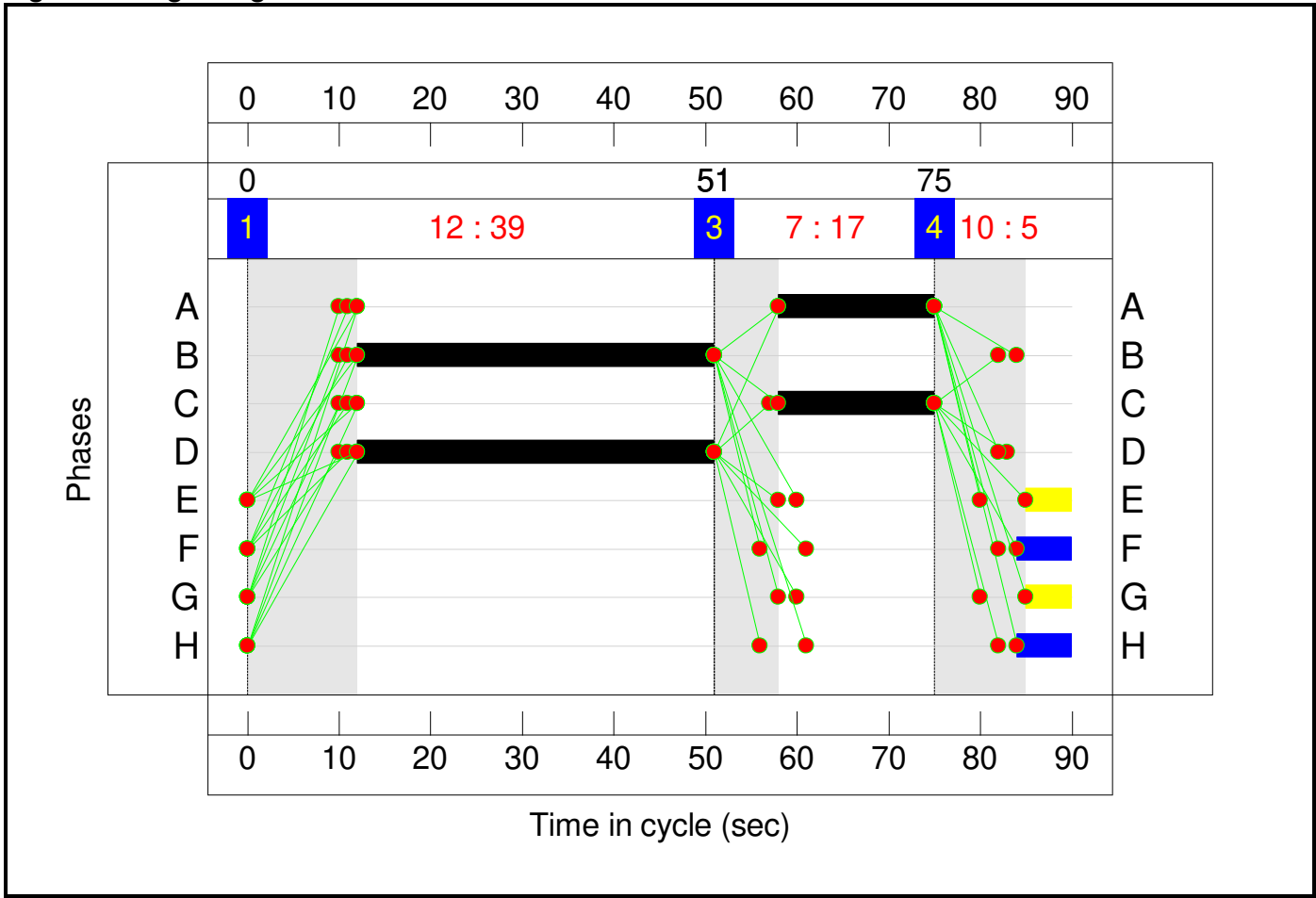
Stage Sequence Diagram



Stage Timings

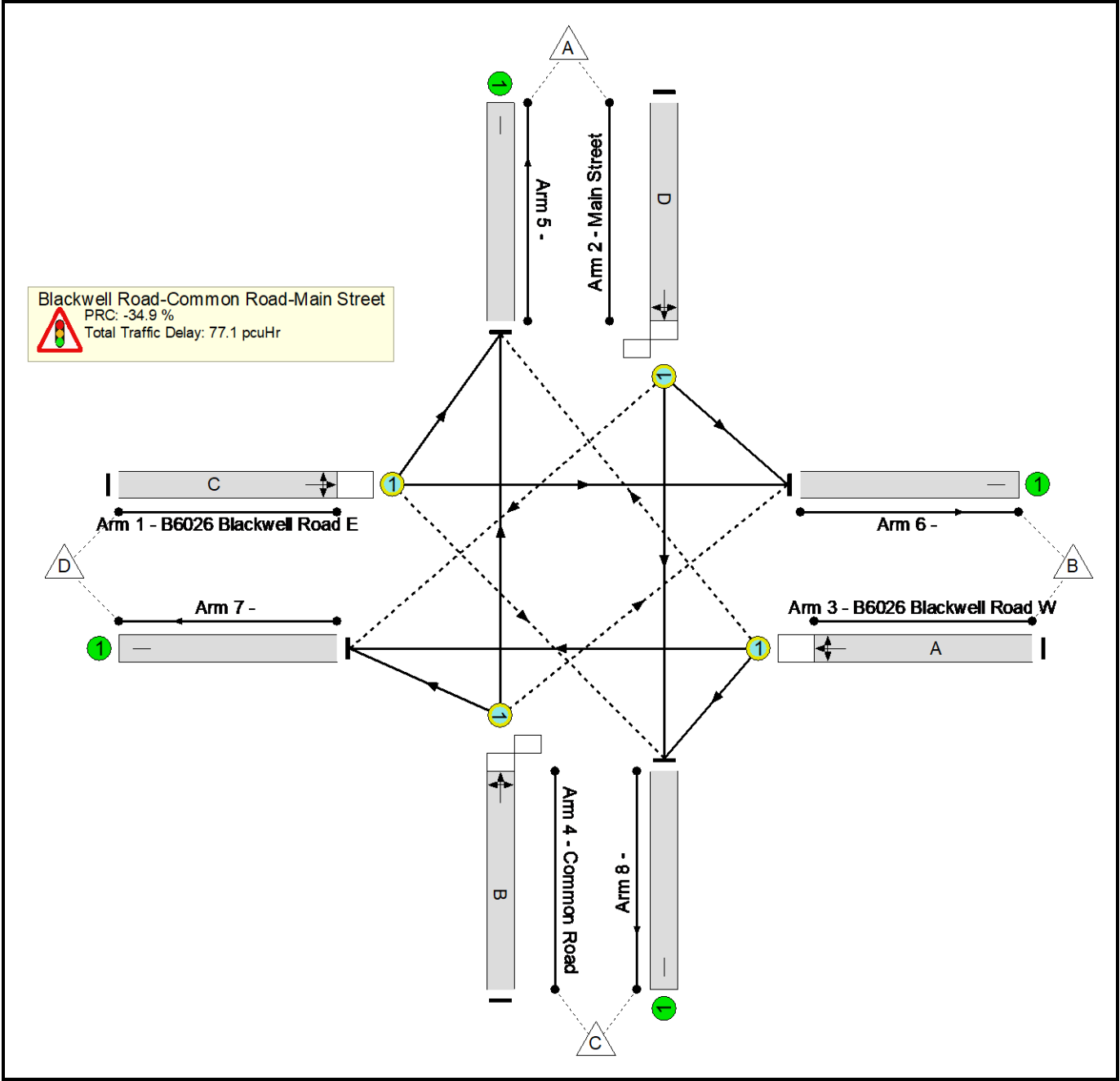
Stage	1	2	3	4
Duration	39	0	17	5
Change Point	0	51	51	75

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	121.4%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	121.4%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	17	-	288	1799	237	121.4%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	39	-	427	1810	804	53.1%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	17	-	265	1788	237	111.6%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	39	-	553	1805	539	102.5%
5/1		U	N/A	N/A	-		-	-	-	380	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	180	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	379	Inf	Inf	0.0%

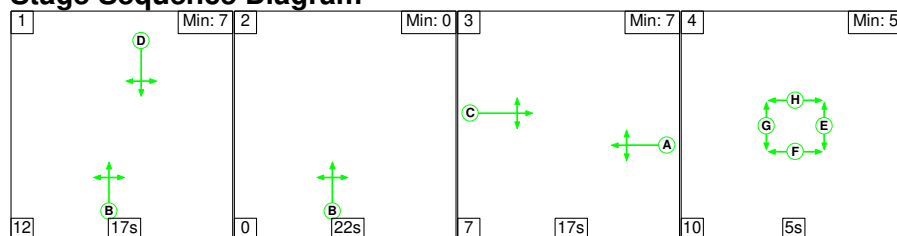
Full Input Data And Results

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: J2 Blackwell Road-Common Road-Main Street	-	-	265	0	17	15.1	61.7	0.3	77.1	-	-	-	-
Blackwell Road-Common Road-Main Street	-	-	265	0	17	15.1	61.7	0.3	77.1	-	-	-	-
1/1	288	237	11	0	6	4.7	28.0	0.0	32.7	408.7	8.8	28.0	36.8
2/1	427	427	33	0	0	2.2	0.6	0.0	2.7	22.9	7.7	0.6	8.3
3/1	265	237	6	0	3	3.4	17.5	0.0	21.0	285.0	7.3	17.5	24.8
4/1	553	539	215	0	8	4.8	15.7	0.2	20.7	134.8	14.2	15.7	29.8
5/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	555	555	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	167	167	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	361	361	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -34.9 Total Delay for Signalled Lanes (pcuHr): 77.10 Cycle Time (s): 90 PRC Over All Lanes (%): -34.9 Total Delay Over All Lanes(pcuHr): 77.10													

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Single Cycle')

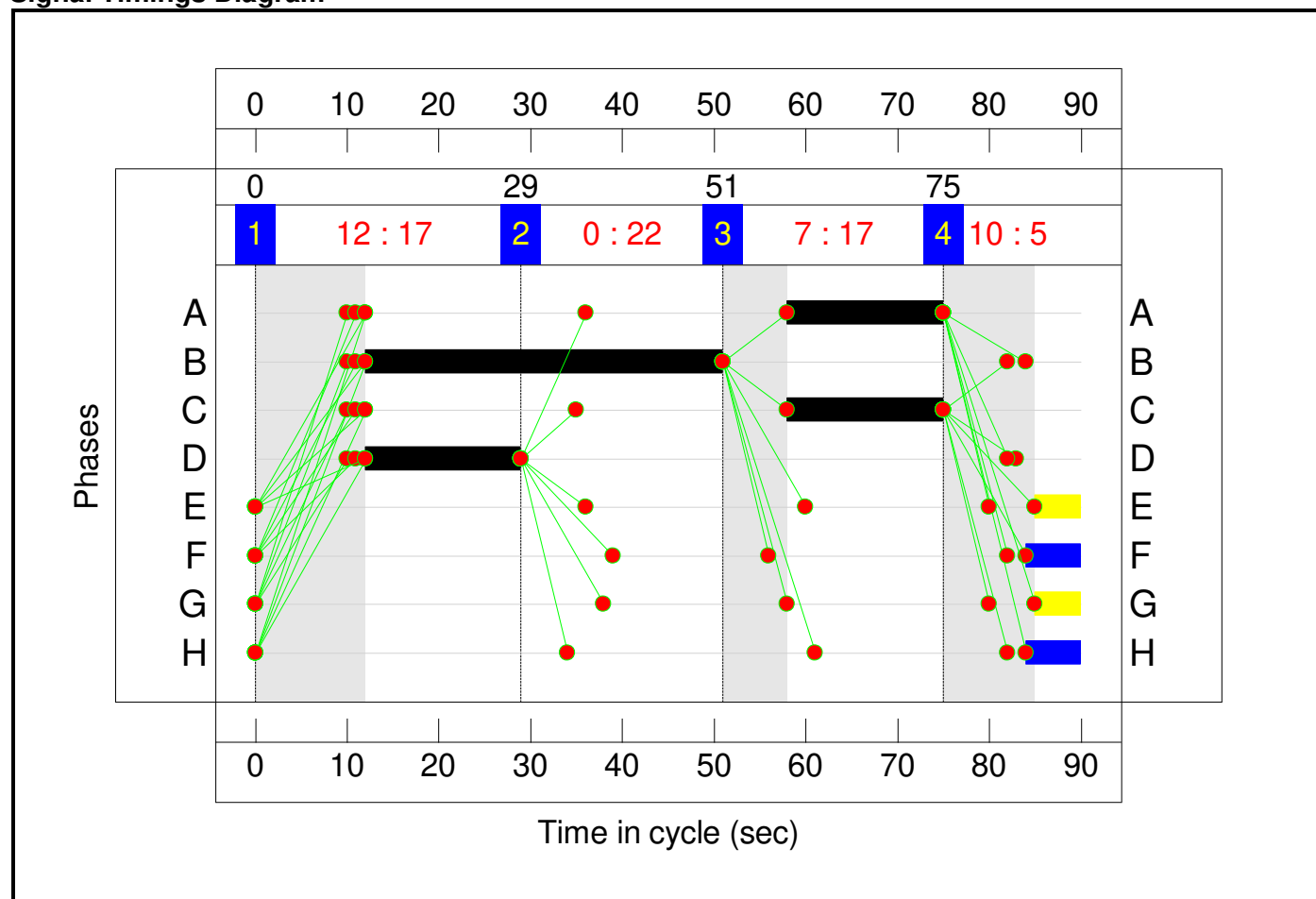
Stage Sequence Diagram



Stage Timings

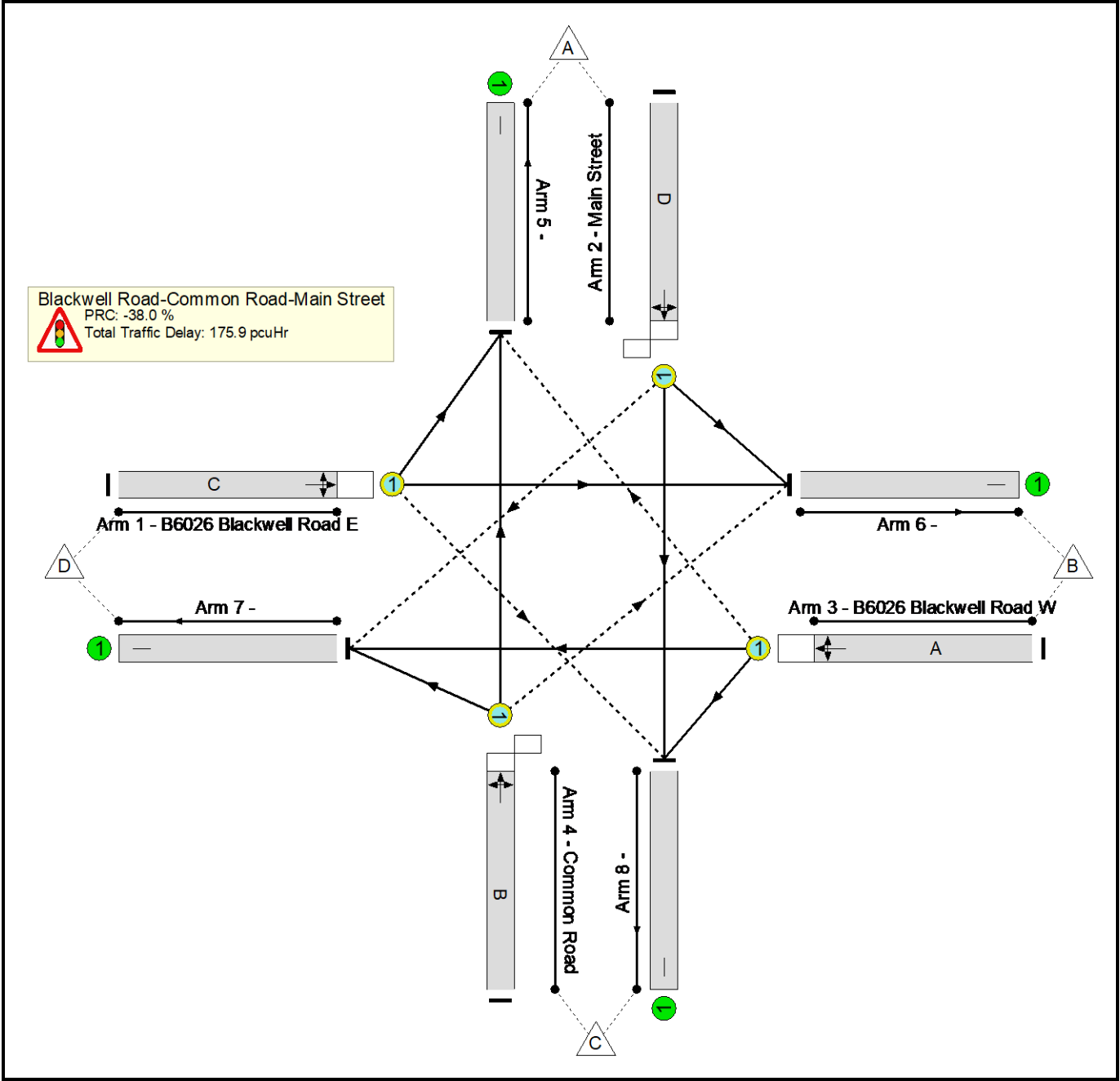
Stage	1	2	3	4
Duration	17	22	17	5
Change Point	0	29	51	75

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	124.2%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	124.2%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	17	-	288	1799	237	121.4%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	17	-	440	1806	361	121.8%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	17	-	294	1778	237	124.2%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	39	-	599	1797	508	117.9%
5/1		U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	180	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	407	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: J2 Blackwell Road-Common Road-Main Street	-	-	52	205	29	25.9	149.7	0.3	175.9	-	-	-	-
Blackwell Road-Common Road-Main Street	-	-	52	205	29	25.9	149.7	0.3	175.9	-	-	-	-
1/1	288	237	11	0	6	4.7	28.0	0.0	32.7	408.7	8.8	28.0	36.8
2/1	440	361	25	0	2	7.8	42.0	0.0	49.9	408.1	13.0	42.0	55.0
3/1	294	237	6	0	3	5.1	31.0	0.0	36.1	442.6	9.2	31.0	40.3
4/1	599	508	10	205	18	8.3	48.6	0.3	57.2	343.7	17.3	48.6	65.9
5/1	321	321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	147	147	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	331	331	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -38.0 Total Delay for Signalled Lanes (pcuHr): 175.91 Cycle Time (s): 90 PRC Over All Lanes (%): -38.0 Total Delay Over All Lanes(pcuHr): 175.91													

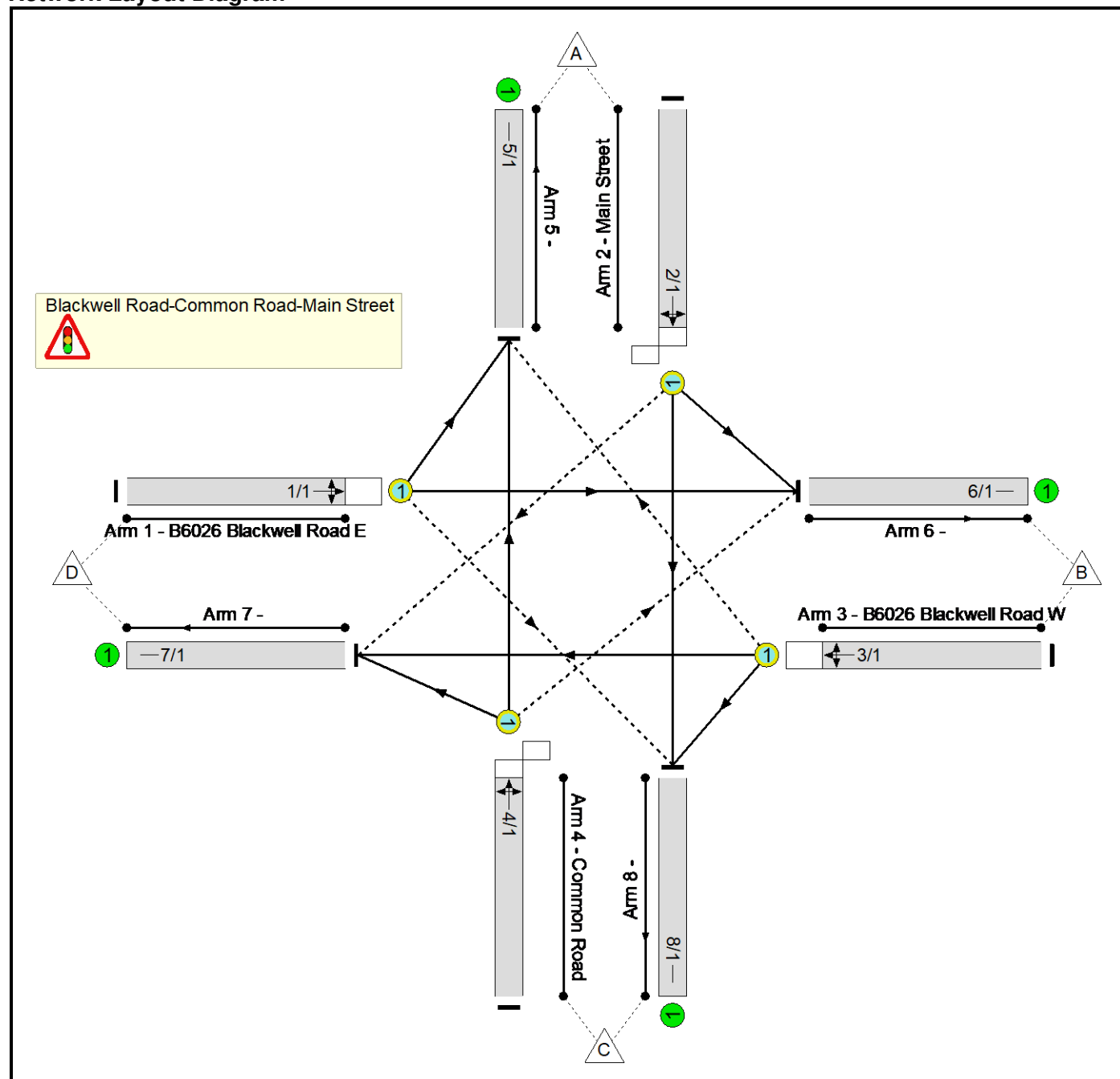
Junction 2
Common Road/Blackwell Road
Proposed Layout

Full Input Data And Results
Full Input Data And Results

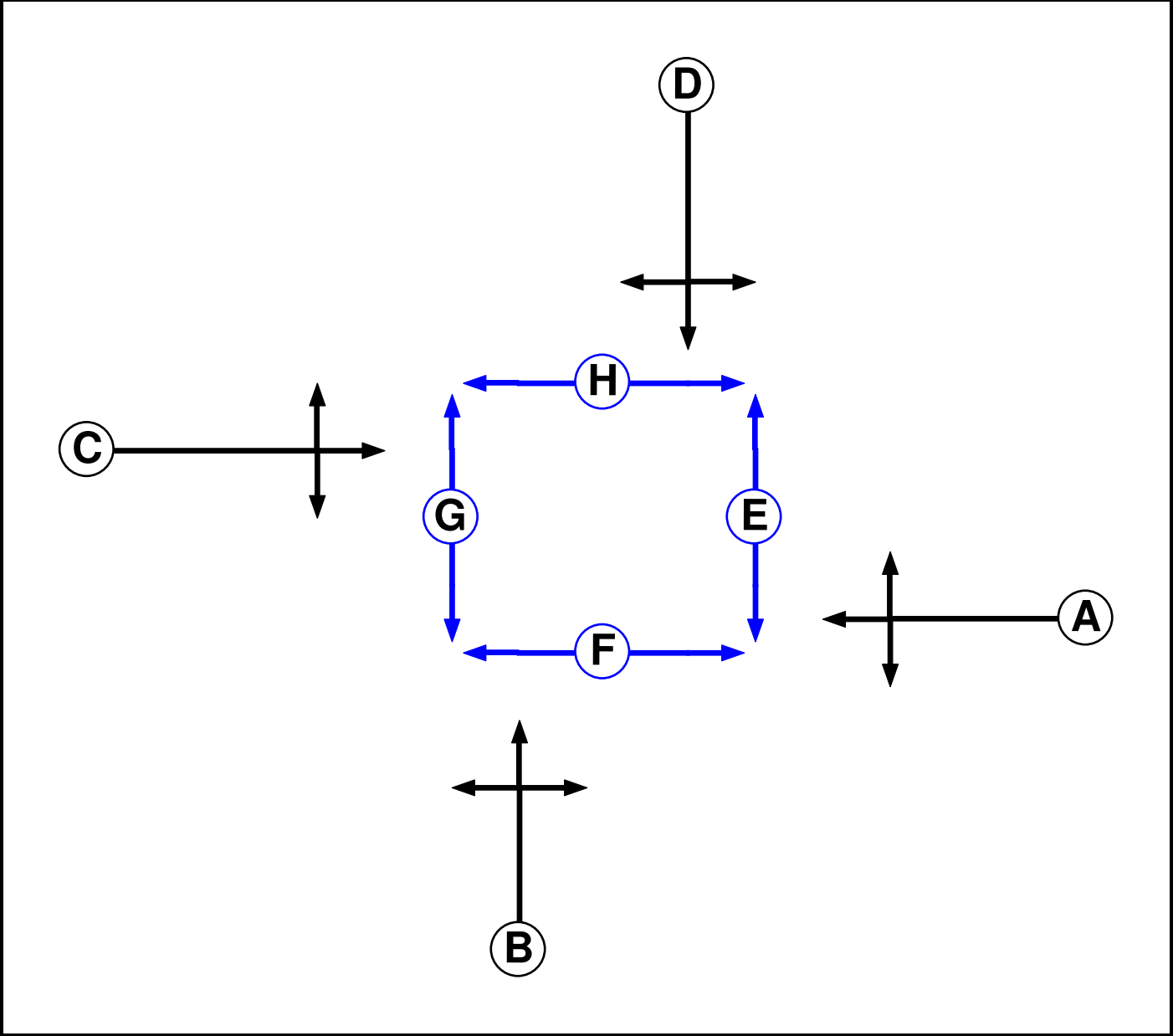
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	J2 Blackwell Road-Common Road-Main Street
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J2 Blackwell Road-Common Road-Main Street V2 - Sens.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



Phase Diagram



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

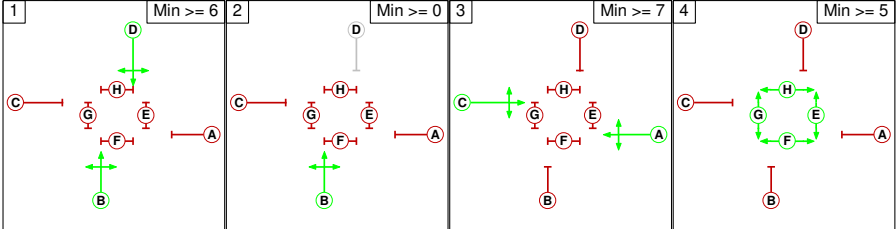
Phase Intergreens Matrix

Terminating Phase	Starting Phase								
		A	B	C	D	E	F	G	H
	A		9	-	7	5	7	10	9
	B	7		7	-	9	5	7	10
	C	-	7		8	10	9	5	7
	D	7	-	6		7	10	9	5
	E	8	8	8	8		-	-	-
	F	7	7	7	7	-		-	-
	G	7	7	7	7	-	-		-
	H	8	8	8	8	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		0	7	10
	2	2		7	10
	3	9	9		10
	4	8	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Blackwell Road-Common Road-Main Street											
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)
1/1 (B6026 Blackwell Road E)	8/1 (Right)	1439	0	3/1	1.09	To 7/1 (Ahead) To 8/1 (Left)	2.00	-	0.50	2	2.00
2/1 (Main Street)	7/1 (Right)	1439	0	4/1	1.09	To 5/1 (Ahead) To 7/1 (Left)	2.00	1.00	0.50	2	2.00
3/1 (B6026 Blackwell Road W)	5/1 (Right)	1439	0	1/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00
4/1 (Common Road)	6/1 (Right)	1439	0	2/1	1.09	To 6/1 (Left) To 8/1 (Ahead)	2.00	1.00	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Blackwell Road-Common Road-Main Street												
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 (B6026 Blackwell Road E)	O	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	6.00
											Arm 6 Ahead	Inf
											Arm 8 Right	12.00
											Arm 6 Left	10.00
											Arm 7 Right	12.00
2/1 (Main Street)	O	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Ahead	Inf
3/1 (B6026 Blackwell Road W)	O	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	12.00
											Arm 7 Ahead	Inf
											Arm 8 Left	10.00
4/1 (Common Road)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	12.00
											Arm 7 Left	10.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2030 With Dev AM'	08:00	09:00	01:00	
2: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 With Dev AM' (FG1: '2030 With Dev AM', Plan 1: 'Single Cycle')
Traffic Flows, Desired
Desired Flow :

	Destination					
Origin	A	0	146	317	66	529
	B	9	0	238	116	363
	C	186	170	0	22	378
	D	45	118	44	0	207
	Tot.	240	434	599	204	1477

Traffic Lane Flows

Lane	Scenario 1: 2030 With Dev AM
Junction: Blackwell Road-Common Road-Main Street	
1/1	207
2/1	529
3/1	363
4/1	378
5/1	240
6/1	434
7/1	204
8/1	599

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	21.7 %	1795	1795
				Arm 6 Ahead	Inf	57.0 %		
				Arm 8 Right	12.00	21.3 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	27.6 %	1835	1835
				Arm 7 Right	12.00	12.5 %		
				Arm 8 Ahead	Inf	59.9 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	2.5 %	1761	1761
				Arm 7 Ahead	Inf	32.0 %		
				Arm 8 Left	10.00	65.6 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	49.2 %	1798	1798
				Arm 6 Right	12.00	45.0 %		
				Arm 7 Left	10.00	5.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2030 With Dev PM' (FG2: '2030 With Dev PM', Plan 1: 'Single Cycle')**Traffic Flows, Desired****Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	190	217	33	440
	B	11	0	170	113	294
	C	290	275	0	34	599
	D	80	188	20	0	288
	Tot.	381	653	407	180	1621

Traffic Lane Flows

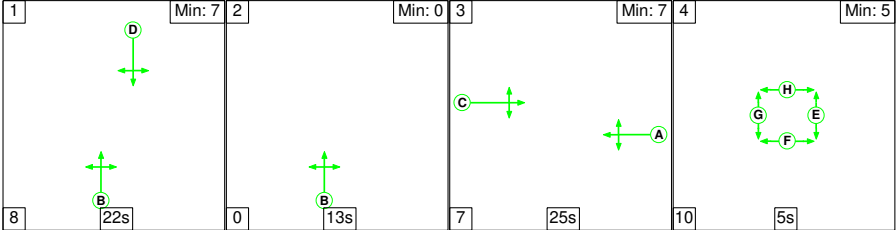
Lane	Scenario 2: 2030 With Dev PM
Junction: Blackwell Road-Common Road-Main Street	
1/1	288
2/1	440
3/1	294
4/1	599
5/1	381
6/1	653
7/1	180
8/1	407

Lane Saturation Flows

Junction: Blackwell Road-Common Road-Main Street								
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 (B6026 Blackwell Road E)	3.25	0.00	Y	Arm 5 Left	6.00	27.8 %	1799	1799
				Arm 6 Ahead	Inf	65.3 %		
				Arm 8 Right	12.00	6.9 %		
2/1 (Main Street)	3.25	0.00	Y	Arm 6 Left	10.00	43.2 %	1806	1806
				Arm 7 Right	12.00	7.5 %		
				Arm 8 Ahead	Inf	49.3 %		
3/1 (B6026 Blackwell Road W)	3.25	0.00	Y	Arm 5 Right	12.00	3.7 %	1778	1778
				Arm 7 Ahead	Inf	38.4 %		
				Arm 8 Left	10.00	57.8 %		
4/1 (Common Road)	3.00	0.00	Y	Arm 5 Ahead	Inf	48.4 %	1797	1797
				Arm 6 Right	12.00	45.9 %		
				Arm 7 Left	10.00	5.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2030 With Dev AM' (FG1: '2030 With Dev AM', Plan 1: 'Single Cycle')

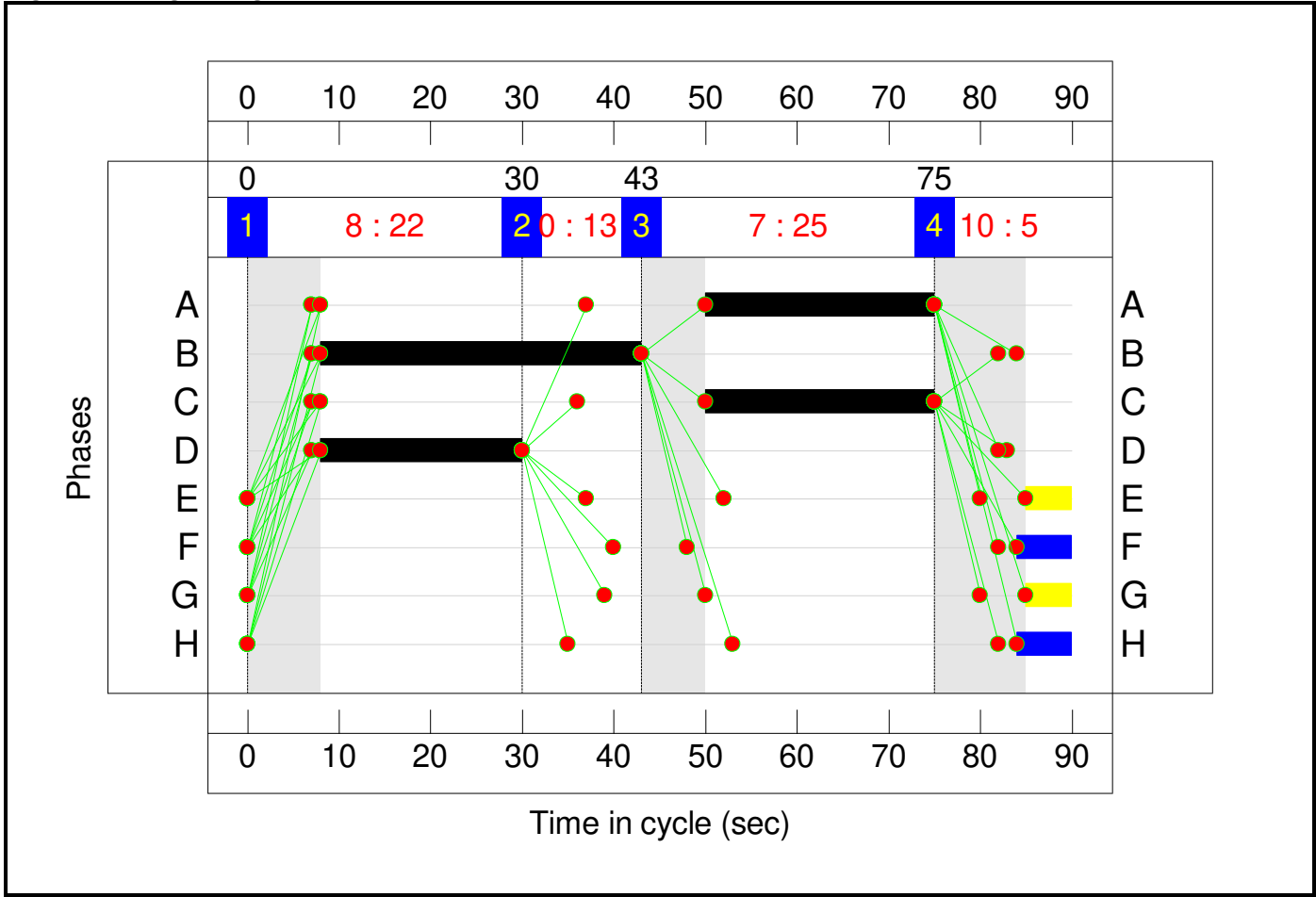
Stage Sequence Diagram



Stage Timings

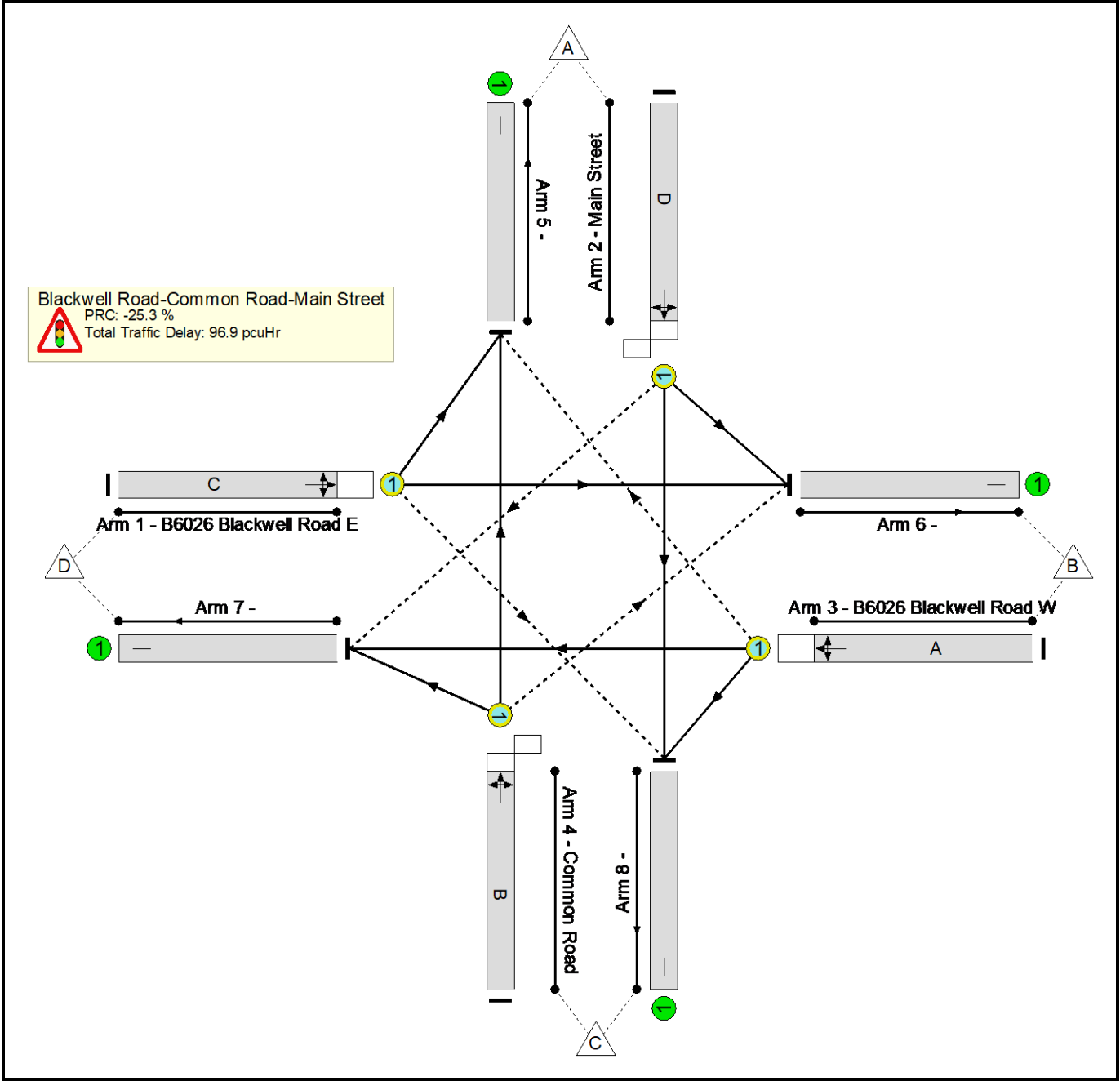
Stage	1	2	3	4
Duration	22	13	25	5
Change Point	0	30	43	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

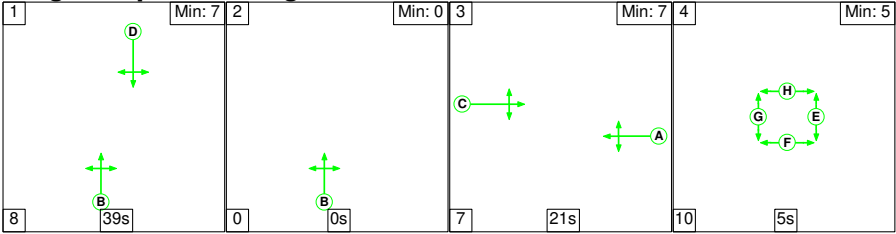
Network Results

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	112.8%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	112.8%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	25	-	207	1795	301	68.7%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	22	-	529	1835	469	112.8%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	25	-	363	1761	333	108.9%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	35	-	378	1798	337	112.0%
5/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	599	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: J2 Blackwell Road-Common Road-Main Street	-	-	117	121	25	17.8	78.7	0.4	96.9	-	-	-	-
Blackwell Road-Common Road-Main Street	-	-	117	121	25	17.8	78.7	0.4	96.9	-	-	-	-
1/1	207	207	42	0	2	1.5	1.1	0.0	2.6	45.7	4.4	1.1	5.5
2/1	529	469	55	0	4	7.6	33.9	0.0	41.5	282.6	14.7	33.9	48.7
3/1	363	333	7	0	1	4.1	19.5	0.0	23.6	234.4	9.8	19.5	29.3
4/1	378	337	13	121	18	4.6	24.2	0.3	29.1	277.6	10.5	24.2	34.7
5/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	185	185	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -25.3 Total Delay for Signalled Lanes (pcuHr): 96.93 Cycle Time (s): 90 PRC Over All Lanes (%): -25.3 Total Delay Over All Lanes(pcuHr): 96.93													

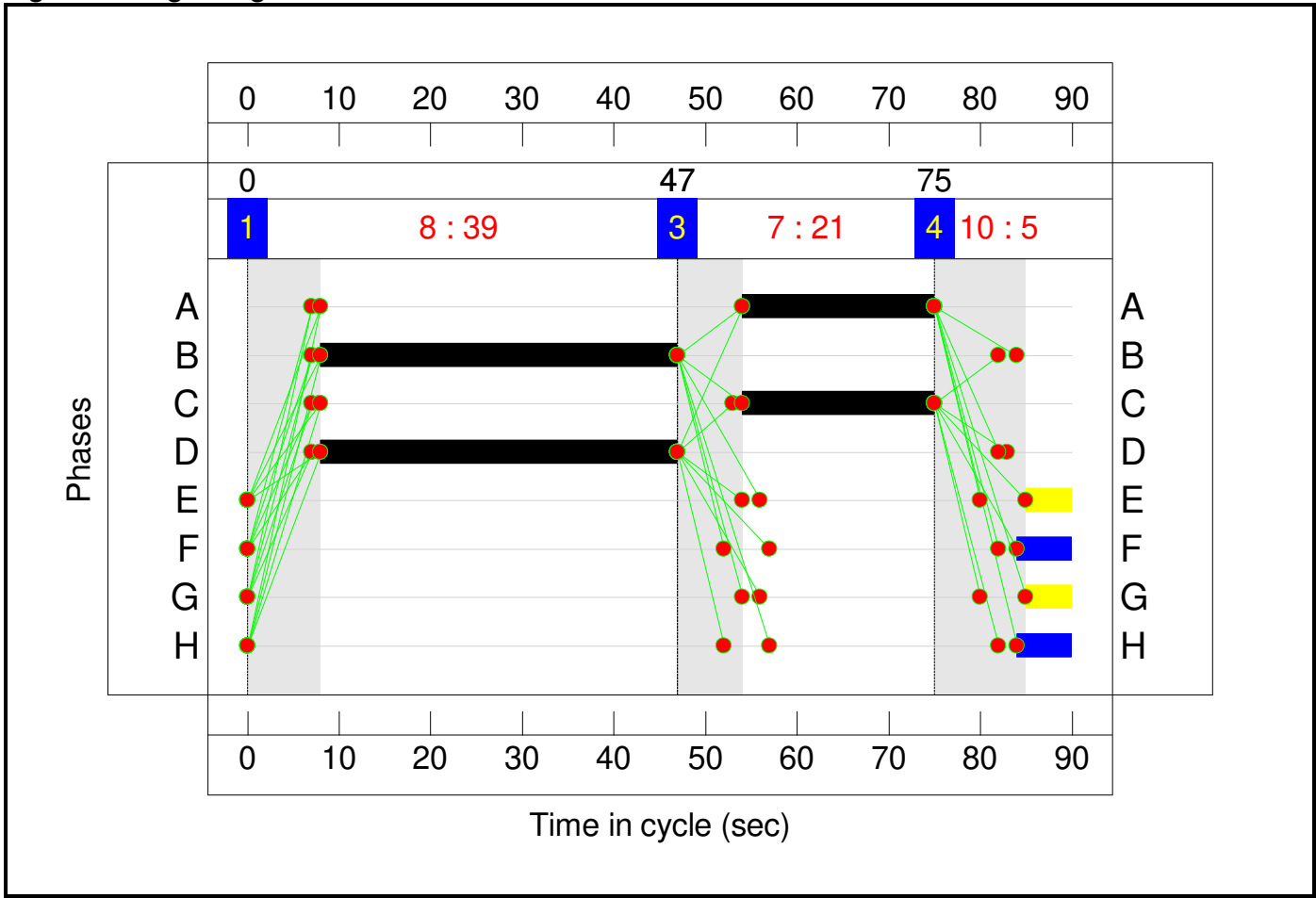
Stage Sequence Diagram



Stage Timings

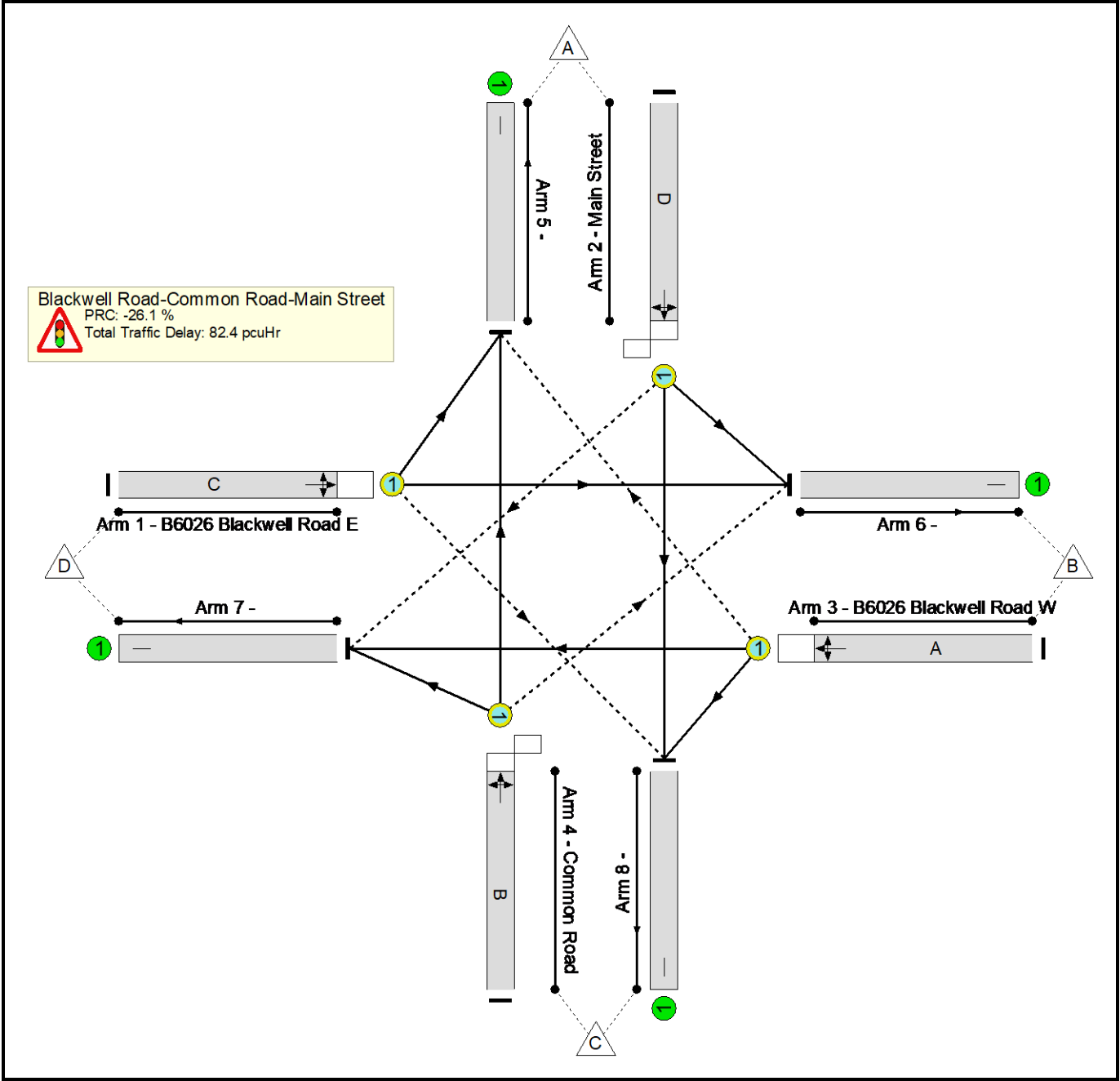
Stage	1	2	3	4
Duration	39	0	21	5
Change Point	0	47	47	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

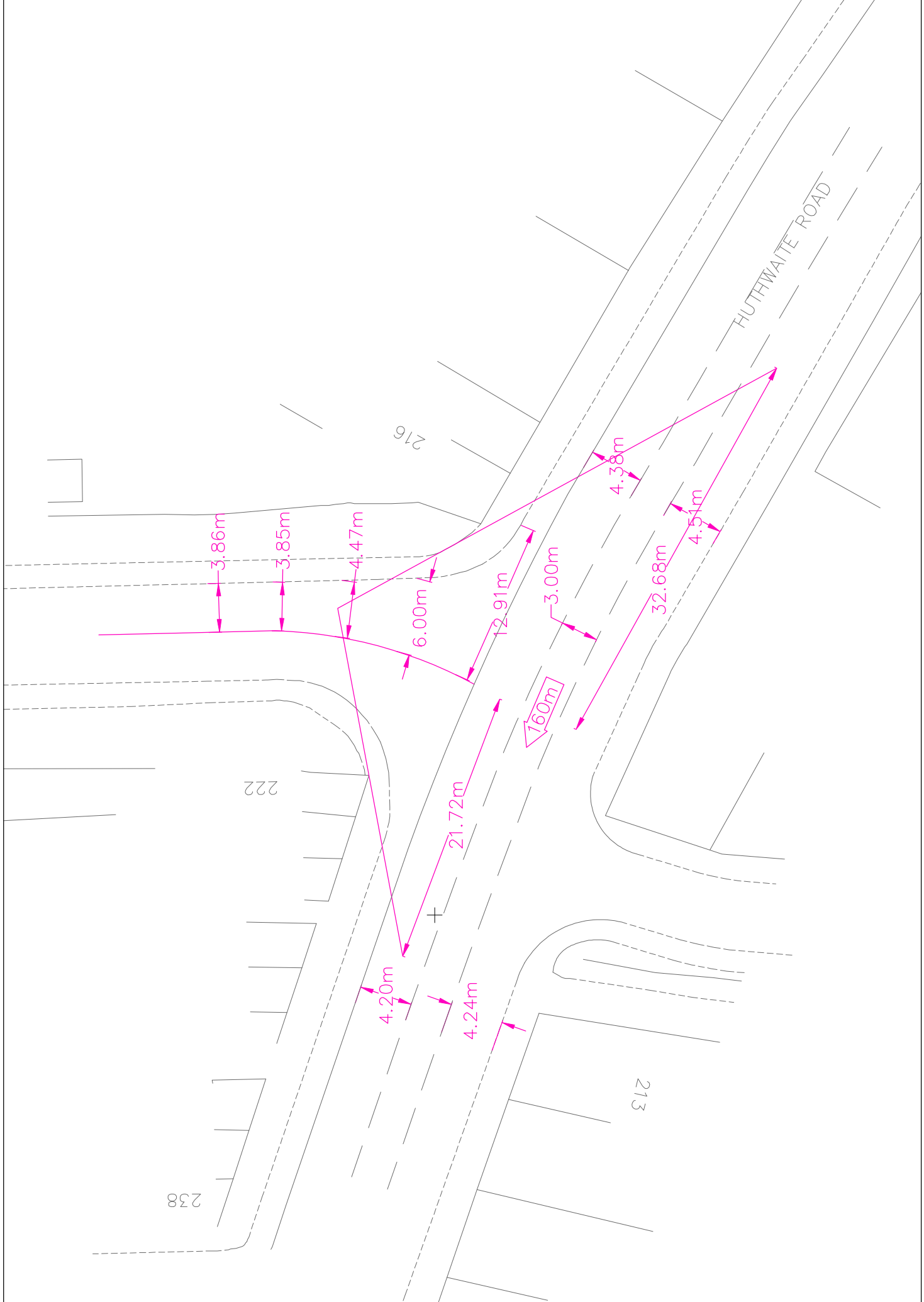
Network Results

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: J2 Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	113.5%
Blackwell Road-Common Road-Main Street	-	-	N/A	-	-		-	-	-	-	-	-	113.5%
1/1	B6026 Blackwell Road E Left Ahead Right	O	N/A	N/A	C		1	21	-	288	1799	276	104.2%
2/1	Main Street Left Right Ahead	O	N/A	N/A	D		1	39	-	440	1806	803	54.8%
3/1	B6026 Blackwell Road W Right Ahead Left	O	N/A	N/A	A		1	21	-	294	1778	276	106.6%
4/1	Common Road Ahead Right Left	O	N/A	N/A	B		1	39	-	599	1797	528	113.5%
5/1		U	N/A	N/A	-		-	-	-	381	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	180	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

Junction 4 Huthwaite Road/Ashland Road



Junction 5 Huthwaite Road/Alfreton Road

Junctions 9						
ARCADY 9 - Roundabout Module						
Version: 9.5.1.7462 © Copyright TRL Limited, 2019						
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk 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: J5 Huthwaite Road-Alfreton Road ARCADY Model.j9

Path: D:\Dropbox (ADC Infrastructure)\!!! ADC Projects\ADC1032 Ashland Road (Bellway)\Calculations

Report generation date: 10/11/2020 18:43:16

»2030 Traffic Flows - Bkgd, AM

»2030 Traffic Flows - Bkgd, PM

»2030 Traffic Flows - With Dev, AM

»2030 Traffic Flows - With Dev, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2030 Traffic Flows - Bkgd						
Arm 1	1.5	5.14	0.60	4.2	10.58	0.81
Arm 2	0.7	4.53	0.41	2.0	9.10	0.67
Arm 3	0.7	3.21	0.42	0.8	3.46	0.43
2030 Traffic Flows - With Dev						
Arm 1	1.6	5.36	0.62	5.5	13.25	0.85
Arm 2	0.7	4.66	0.42	2.3	10.30	0.70
Arm 3	0.9	3.44	0.46	0.8	3.63	0.46

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

File summary

File Description

Title	
Location	
Site number	
Date	08/10/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-1AM25OV\Matt Tatler
Description	

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	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Bkgd	AM	ONE HOUR	07:45	09:15	15
D2	Bkgd	PM	ONE HOUR	16:45	18:15	15
D3	With Dev	AM	ONE HOUR	07:45	09:15	15
D4	With Dev	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	2030 Traffic Flows	100.000

2030 Traffic Flows - Bkgd, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huthwaite Road/Alfreton Road	Standard Roundabout		1, 2, 3	4.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Lammas Road	
2	Alfreton Road	
3	Huthwaite Road	

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
1	6.00	6.00	0.0	999.0	71.0	40.0	
2	3.00	6.70	30.0	21.0	57.0	26.0	
3	4.70	8.30	29.0	136.0	71.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.527	1842
2	0.585	1741
3	0.604	2297

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	Bkgd	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	973	100.000
2		✓	503	100.000
3		✓	750	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	461	512
	2	424	0	79
	3	750	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	5	3
	2	3	0	9
	3	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.60	5.14	1.5	A
2	0.41	4.53	0.7	A
3	0.42	3.21	0.7	A

2030 Traffic Flows - Bkgd, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huthwaite Road/Alfreton Road	Standard Roundabout		1, 2, 3	8.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	Bkgd	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	1342	100.000
2		✓	729	100.000
3		✓	715	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	571	771
	2	628	0	101
	3	715	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	2	1
	2	4	0	0
	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.81	10.58	4.2	B
2	0.67	9.10	2.0	A
3	0.43	3.46	0.8	A

2030 Traffic Flows - With Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huthwaite Road/Alfreton Road	Standard Roundabout		1, 2, 3	4.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	With Dev	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	1000	100.000
2		✓	506	100.000
3		✓	820	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	461	539
	2	424	0	82
	3	820	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	5	3
	2	3	0	9
	3	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.62	5.36	1.6	A
2	0.42	4.66	0.7	A
3	0.46	3.44	0.9	A

2030 Traffic Flows - With Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huthwaite Road/Alfreton Road	Standard Roundabout		1, 2, 3	9.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	With Dev	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	1406	100.000
2		✓	735	100.000
3		✓	759	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	1	2	3	
From	1	0	571	835
	2	628	0	107
	3	759	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	2	1
	2	4	0	0
	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.85	13.25	5.5	B
2	0.70	10.30	2.3	B
3	0.46	3.63	0.8	A

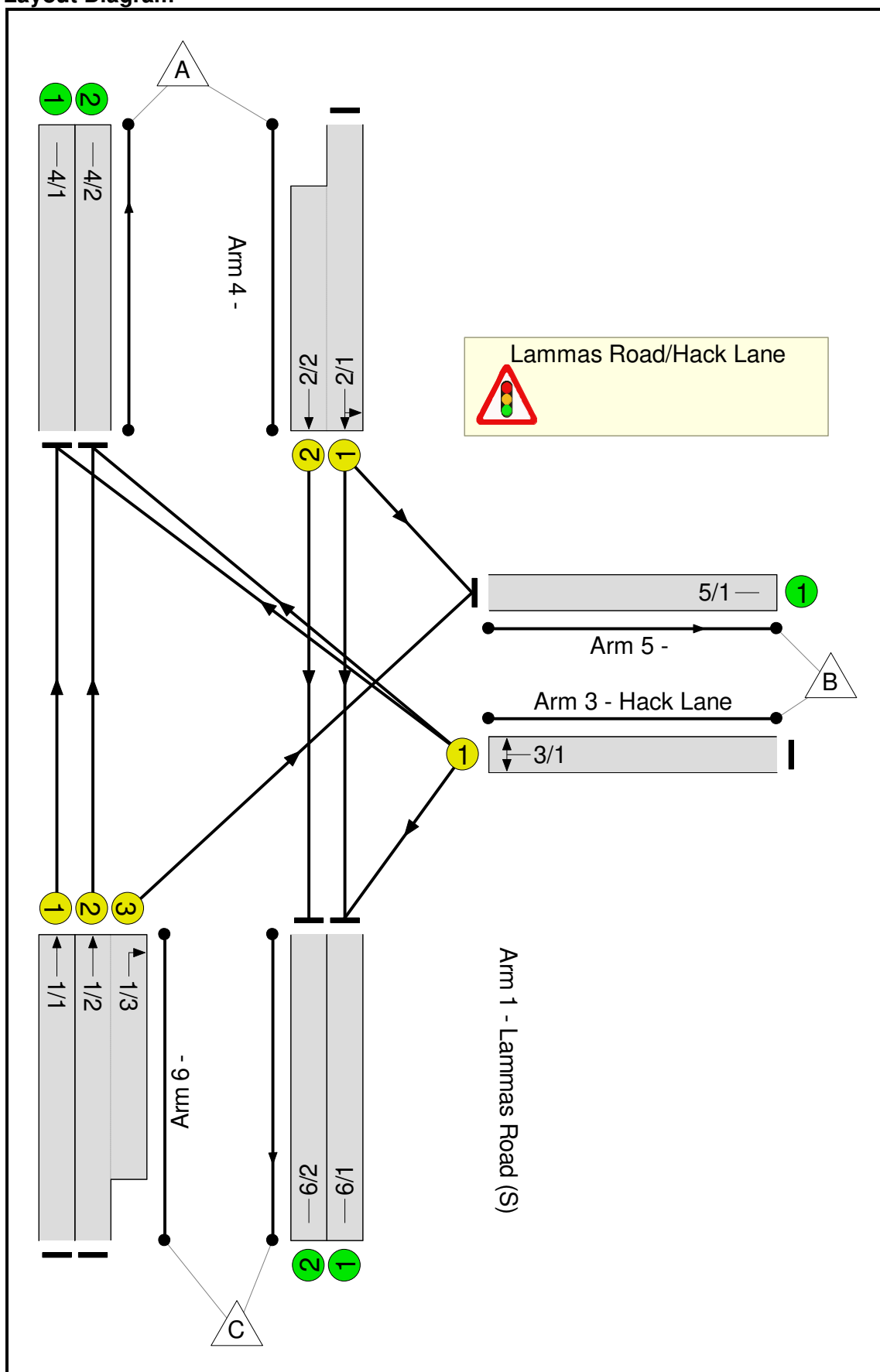
Junction 6 Lammas Road/Hack Lane

Full Input Data And Results

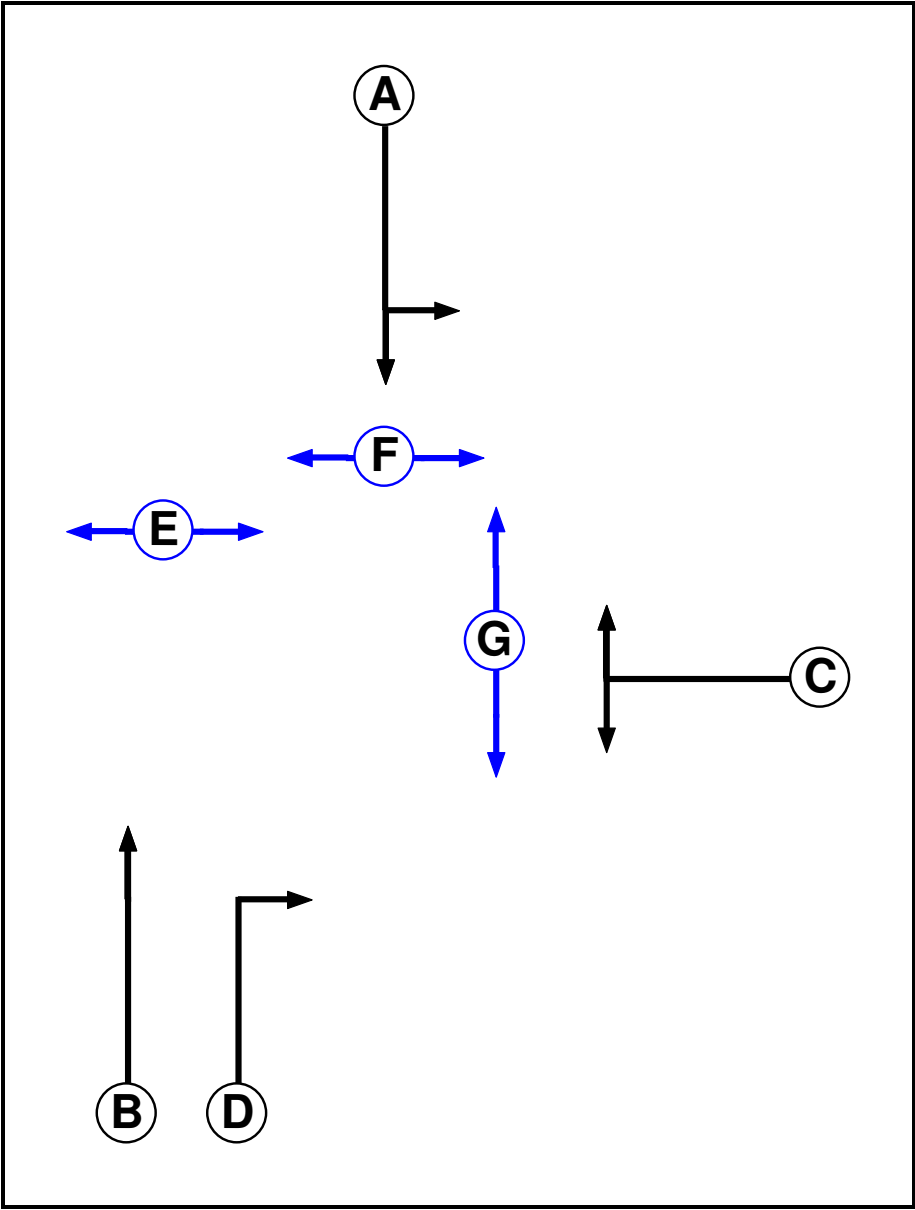
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	Lammas Road-Hack Lane
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J6 Lammas Road-Hack Lane V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



Phase Diagram



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

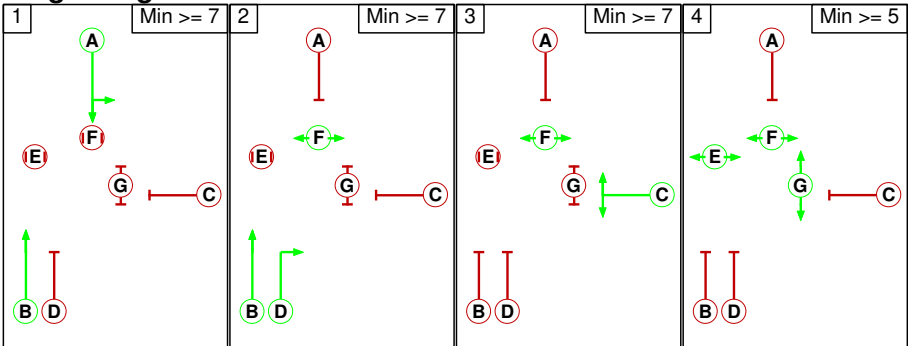
Phase Intergreens Matrix

Terminating Phase	Starting Phase							
		A	B	C	D	E	F	G
	A		-	5	5	-	5	6
	B	-		5	-	6	-	-
	C	5	5		5	7	-	5
	D	5	-	5		-	-	6
	E	-	7	7	-		-	-
	F	7	-	-	-	-		-
	G	7	-	7	7	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage				
	1	2	3	4	
	1		5	5	6
	2	7		5	6
	3	7	5		7
	4	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Lammas Road/Hack Lane
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Lammas Road/Hack Lane												
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 (Lammas Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
1/2 (Lammas Road (S))	U	B	2	3	60.0	Geom	-	3.00	0.00	N	Arm 4 Ahead	Inf
1/3 (Lammas Road (S))	U	D	2	3	12.2	Geom	-	3.00	0.00	Y	Arm 5 Right	10.00
2/1 (Lammas Road (N))	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	10.00
											Arm 6 Ahead	Inf
2/2 (Lammas Road (N))	U	A	2	3	10.4	Geom	-	3.40	0.00	N	Arm 6 Ahead	Inf
3/1 (Hack Lane)	U	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Right	12.00
											Arm 6 Left	10.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2	U		2	3	20.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2030 Bkgd AM'	08:00	09:00	01:00	
2: '2030 Bkgd PM'	17:00	18:00	01:00	
3: '2030 With Dev AM'	08:00	09:00	01:00	
4: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	100	631	731
	B	201	0	9	210
	C	673	446	0	1119
	Tot.	874	546	640	2060

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: Lammass Road/Hack Lane	
1/1	673
1/2 (with short)	446(In) 0(Out)
1/3 (short)	446
2/1 (with short)	731(In) 346(Out)
2/2 (short)	385
3/1	210
4/1	774
4/2	100
5/1	546
6/1	255
6/2	385

Lane Saturation Flows

Junction: Lammas Road/Hack Lane								
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 (Lammas Road (S))	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Lammas Road (S))	3.00	0.00	N	Arm 4 Ahead	Inf	0.0 %	2055	2055
1/3 (Lammas Road (S))	3.00	0.00	Y	Arm 5 Right	10.00	100.0 %	1665	1665
2/1 (Lammas Road (N))	3.50	0.00	Y	Arm 5 Left	10.00	28.9 %	1883	1883
				Arm 6 Ahead	Inf	71.1 %		
2/2 (Lammas Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
3/1 (Hack Lane)	4.00	0.00	Y	Arm 4 Right	12.00	95.7 %	1789	1789
				Arm 6 Left	10.00	4.3 %		
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG3: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	100	643	743
	B	201	0	24	225
	C	701	482	0	1183
	Tot.	902	582	667	2151

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: Lammas Road/Hack Lane	
1/1	701
1/2 (with short)	482(In) 0(Out)
1/3 (short)	482
2/1 (with short)	743(In) 352(Out)
2/2 (short)	391
3/1	225
4/1	802
4/2	100
5/1	582
6/1	276
6/2	391

Lane Saturation Flows

Junction: Lammas Road/Hack Lane								
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 (Lammas Road (S))	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Lammas Road (S))	3.00	0.00	N	Arm 4 Ahead	Inf	0.0 %	2055	2055
1/3 (Lammas Road (S))	3.00	0.00	Y	Arm 5 Right	10.00	100.0 %	1665	1665
2/1 (Lammas Road (N))	3.50	0.00	Y	Arm 5 Left Arm 6 Ahead	10.00 Inf	28.4 % 71.6 %	1885	1885
2/2 (Lammas Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
3/1 (Hack Lane)	4.00	0.00	Y	Arm 4 Right Arm 6 Left	12.00 10.00	89.3 % 10.7 %	1787	1787
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 Bkgd PM' (FG2: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

	Destination				
	A	B	C	Tot.	
Origin	A	0	121	839	960
	B	214	0	17	231
	C	899	383	0	1282
	Tot.	1113	504	856	2473

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: Lammass Road/Hack Lane	
1/1	899
1/2 (with short)	383(In) 0(Out)
1/3 (short)	383
2/1 (with short)	960(In) 455(Out)
2/2 (short)	505
3/1	231
4/1	1006
4/2	107
5/1	504
6/1	351
6/2	505

Lane Saturation Flows

[illegible]

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	121	867	988
	B	214	0	53	267
	C	917	405	0	1322
	Tot.	1131	526	920	2577

Traffic Lane Flows

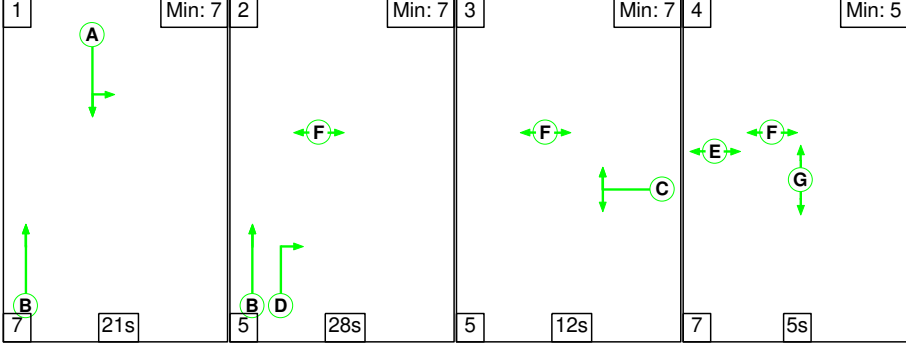
Lane	Scenario 4: 2030 With Dev PM
Junction: Lammas Road/Hack Lane	
1/1	917
1/2 (with short)	405(In) 0(Out)
1/3 (short)	405
2/1 (with short)	988(In) 469(Out)
2/2 (short)	519
3/1	267
4/1	1024
4/2	107
5/1	526
6/1	401
6/2	519

Lane Saturation Flows

Junction: Lammas Road/Hack Lane								
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 (Lammas Road (S))	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Lammas Road (S))	3.00	0.00	N	Arm 4 Ahead	Inf	0.0 %	2055	2055
1/3 (Lammas Road (S))	3.00	0.00	Y	Arm 5 Right	10.00	100.0 %	1665	1665
2/1 (Lammas Road (N))	3.50	0.00	Y	Arm 5 Left Arm 6 Ahead	10.00 Inf	25.8 % 74.2 %	1892	1892
2/2 (Lammas Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
3/1 (Hack Lane)	4.00	0.00	Y	Arm 4 Right Arm 6 Left	12.00 10.00	80.1 % 19.9 %	1783	1783
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

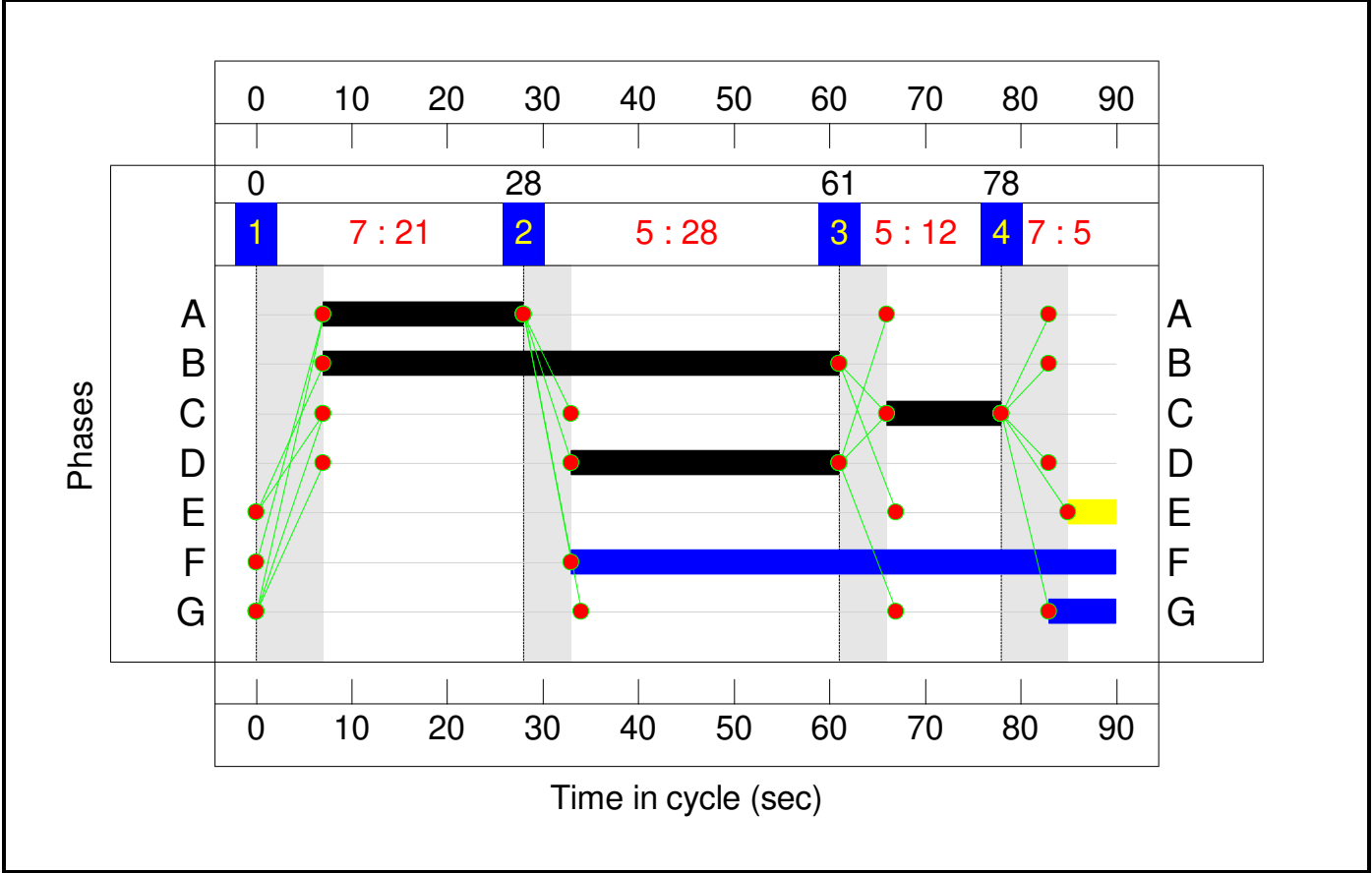
Stage Sequence Diagram



Stage Timings

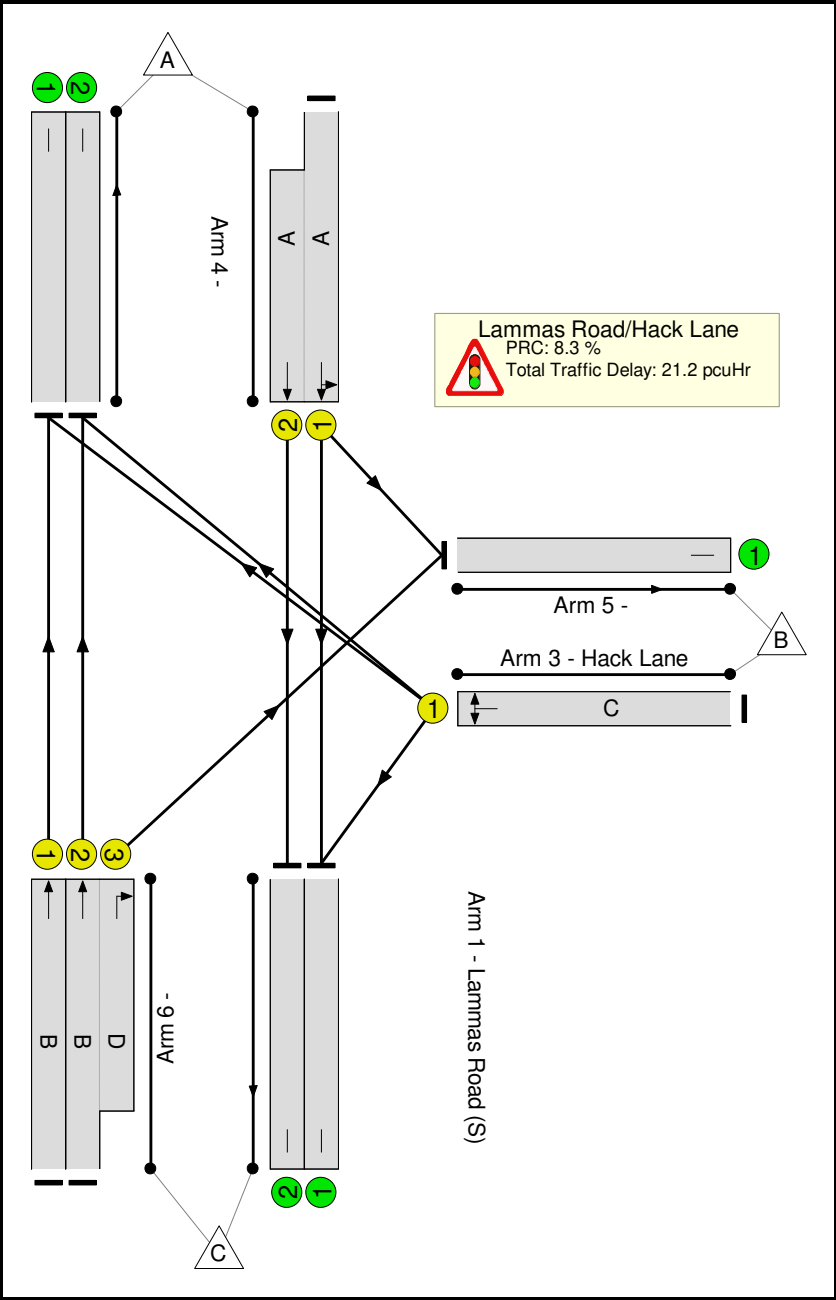
Stage	1	2	3	4
Duration	21	28	12	5
Change Point	0	28	61	78

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: Lammas Road-Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.1%
Lammas Road/Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.1%
1/1	Lammas Road (S) Ahead	U	N/A	N/A	B		1	54	-	673	1915	1170	57.5%
1/2+1/3	Lammas Road (S) Ahead Right	U	N/A	N/A	B D		1	54:28	-	446	2055:1665	0+537	0.0 : 83.1%
2/1+2/2	Lammas Road (N) Left Ahead	U	N/A	N/A	A		1	21	-	731	1883:2095	424+471	81.7 : 81.7%
3/1	Hack Lane Right Left	U	N/A	N/A	C		1	12	-	210	1789	258	81.3%
4/1		U	N/A	N/A	-		-	-	-	774	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	385	Inf	Inf	0.0%

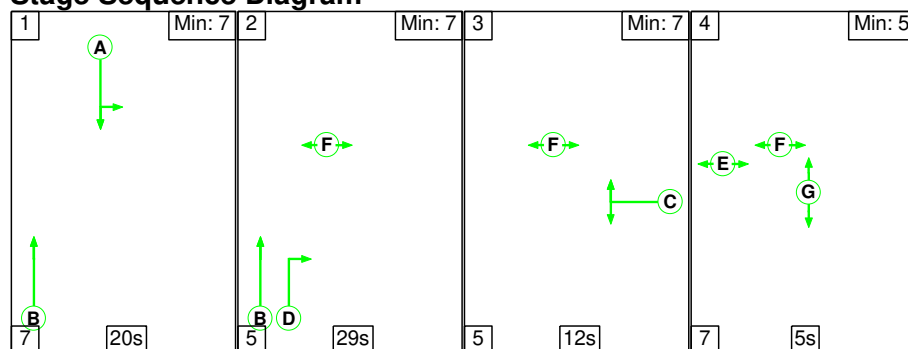
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG3: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

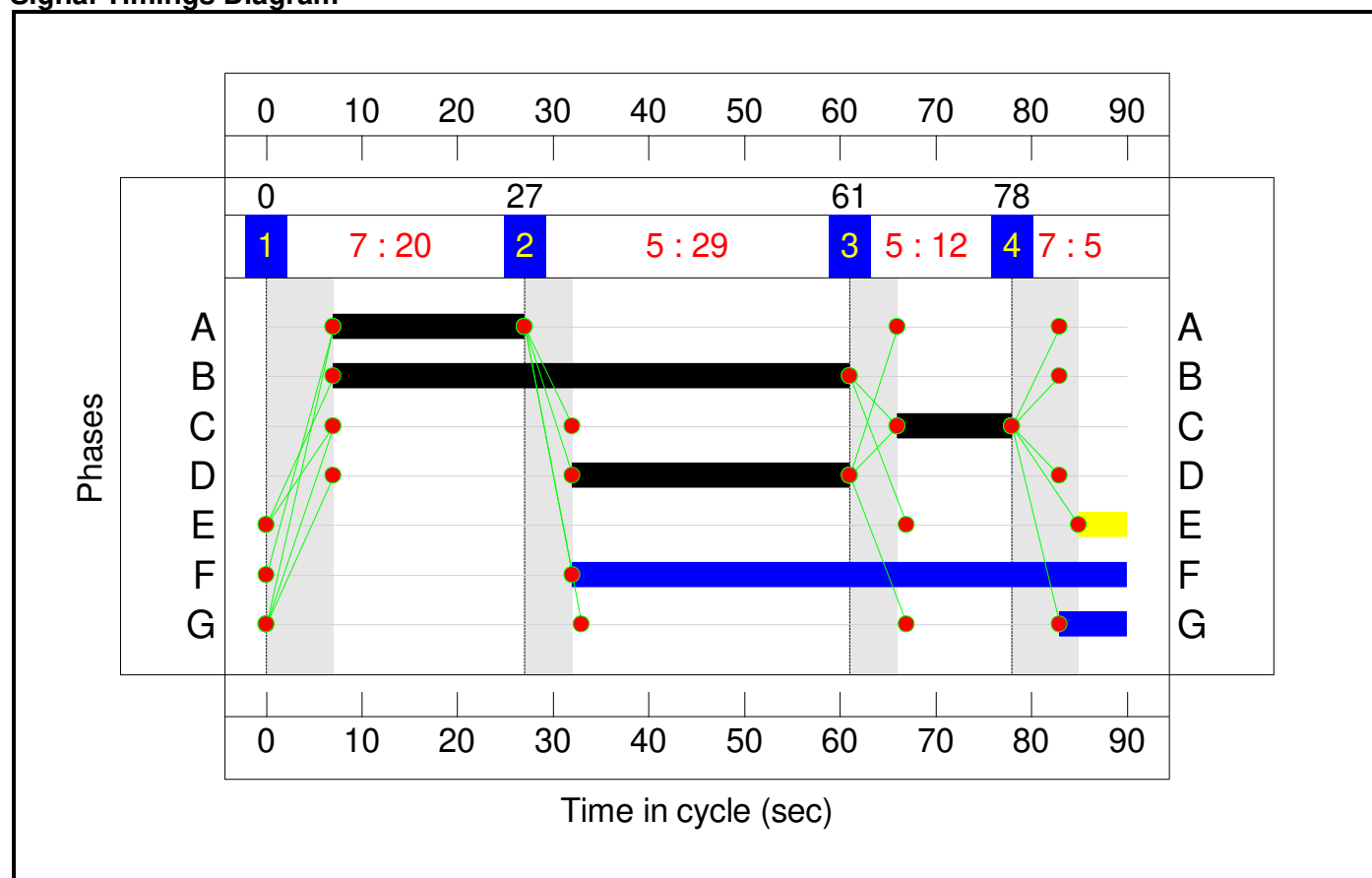
Stage Sequence Diagram



Stage Timings

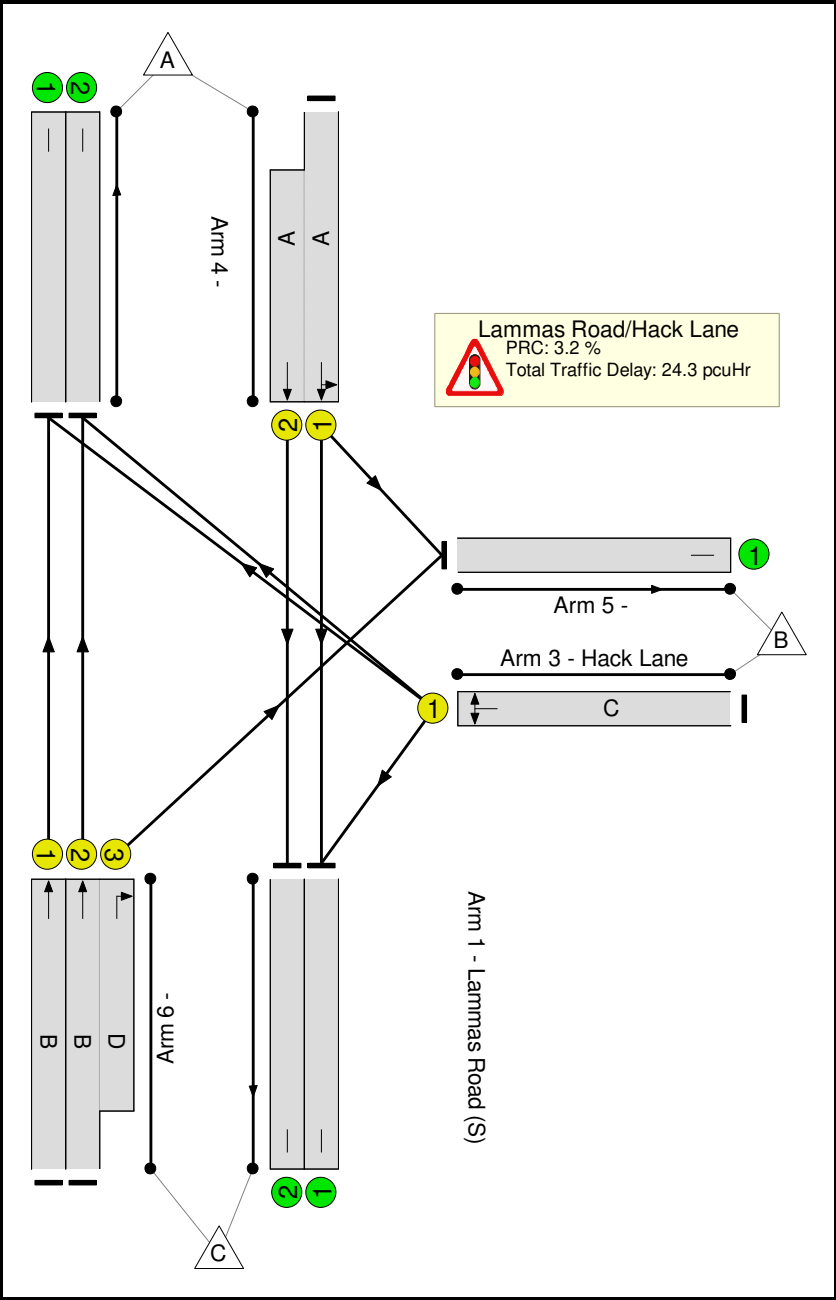
Stage	1	2	3	4
Duration	20	29	12	5
Change Point	0	27	61	78

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: Lammas Road-Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
Lammas Road/Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
1/1	Lammas Road (S) Ahead	U	N/A	N/A	B		1	54	-	701	1915	1170	59.9%
1/2+1/3	Lammas Road (S) Ahead Right	U	N/A	N/A	B D		1	54:29	-	482	2055:1665	0+555	0.0 : 86.8%
2/1+2/2	Lammas Road (N) Left Ahead	U	N/A	N/A	A		1	20	-	743	1885:2095	414+460	85.1 : 85.1%
3/1	Hack Lane Right Left	U	N/A	N/A	C		1	12	-	225	1787	258	87.2%
4/1		U	N/A	N/A	-		-	-	-	802	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	276	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	391	Inf	Inf	0.0%

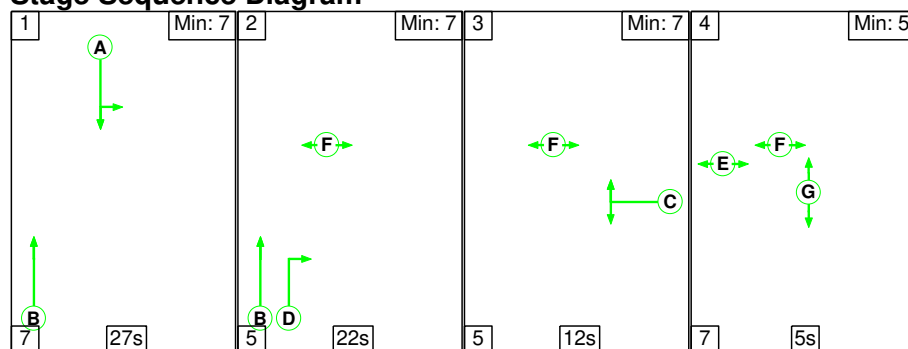
Full Input Data And Results

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: Lammas Road-Hack Lane	-	-	0	0	0	14.9	9.4	0.0	24.3	-	-	-	-
Lammas Road/Hack Lane	-	-	0	0	0	14.9	9.4	0.0	24.3	-	-	-	-
1/1	701	701	-	-	-	2.1	0.7	-	2.8	14.6	10.7	0.7	11.5
1/2+1/3	482	482	-	-	-	3.8	3.0	-	6.8 (0.0+6.8)	50.9 (0.0:50.9)	11.2	3.0	14.3
2/1+2/2	743	743	-	-	-	6.7	2.7	-	9.4 (4.5+5.0)	45.8 (45.8:45.8)	9.1	2.7	11.9
3/1	225	225	-	-	-	2.4	2.9	-	5.2	84.0	5.5	2.9	8.4
4/1	802	802	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	276	276	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	391	391	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 3.2 Total Delay for Signalled Lanes (pcuHr): 24.35 Cycle Time (s): 90 PRC Over All Lanes (%): 3.2 Total Delay Over All Lanes(pcuHr): 24.35													

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG2: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

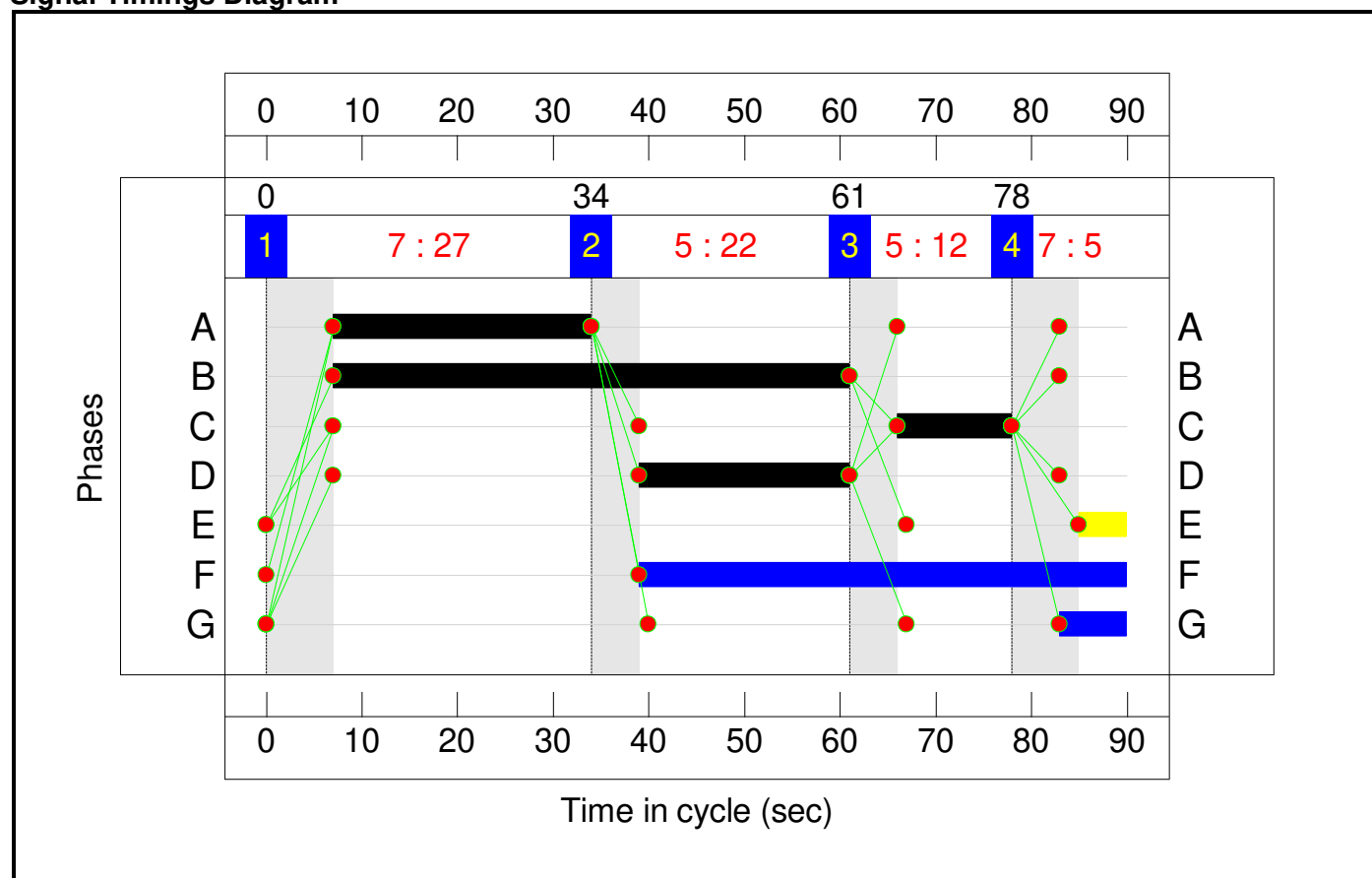
Stage Sequence Diagram



Stage Timings

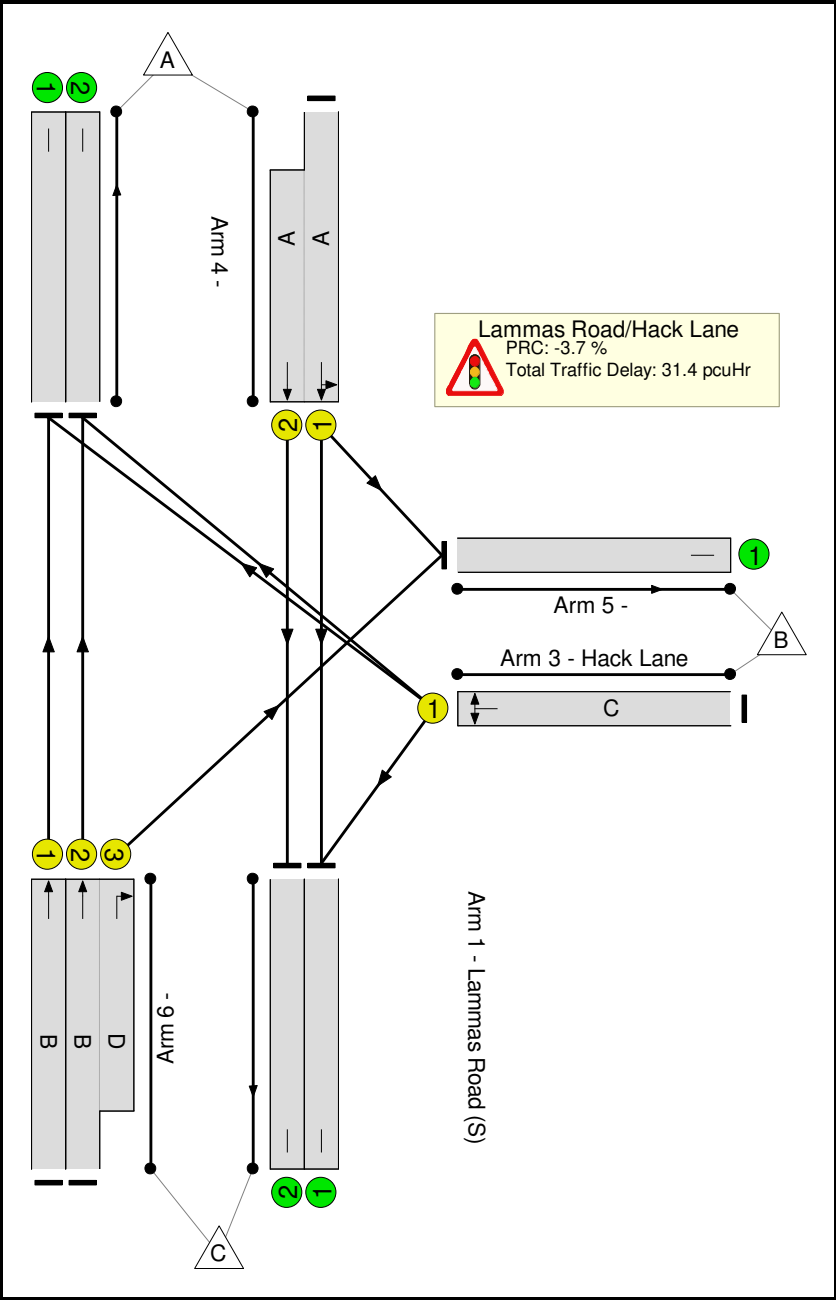
Stage	1	2	3	4
Duration	27	22	12	5
Change Point	0	34	61	78

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: Lammas Road-Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	93.3%
Lammas Road/Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	93.3%
1/1	Lammas Road (S) Ahead	U	N/A	N/A	B		1	54	-	899	1915	1170	76.8%
1/2+1/3	Lammas Road (S) Ahead Right	U	N/A	N/A	B D		1	54:22	-	383	2055:1665	0+425	0.0 : 90.0%
2/1+2/2	Lammas Road (N) Left Ahead	U	N/A	N/A	A		1	27	-	960	1890:2095	488+541	93.3 : 93.3%
3/1	Hack Lane Right Left	U	N/A	N/A	C		1	12	-	231	1788	258	89.4%
4/1		U	N/A	N/A	-		-	-	-	1006	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	107	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	504	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	351	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%

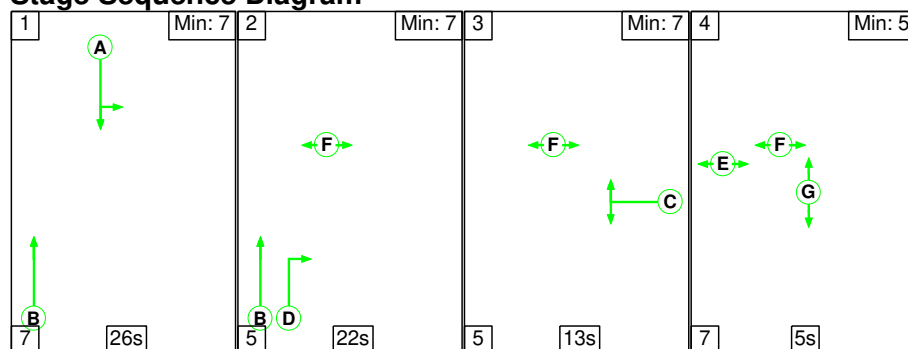
Full Input Data And Results

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: Lammas Road-Hack Lane	-	-	0	0	0	16.6	14.8	0.0	31.4	-	-	-	-
Lammas Road/Hack Lane	-	-	0	0	0	16.6	14.8	0.0	31.4	-	-	-	-
1/1	899	899	-	-	-	3.2	1.6	-	4.8	19.4	16.2	1.6	17.9
1/2+1/3	383	383	-	-	-	3.4	3.8	-	7.3 (0.0+7.3)	68.3 (0.0:68.3)	9.3	3.8	13.1
2/1+2/2	960	960	-	-	-	7.5	5.9	-	13.5 (6.4+7.1)	50.5 (50.6:50.5)	13.1	5.9	19.0
3/1	231	231	-	-	-	2.4	3.4	-	5.8	90.7	5.6	3.4	9.0
4/1	1006	1006	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	504	504	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	351	351	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -3.7 Total Delay for Signalled Lanes (pcuHr): 31.40 Cycle Time (s): 90 PRC Over All Lanes (%): -3.7 Total Delay Over All Lanes(pcuHr): 31.40													

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

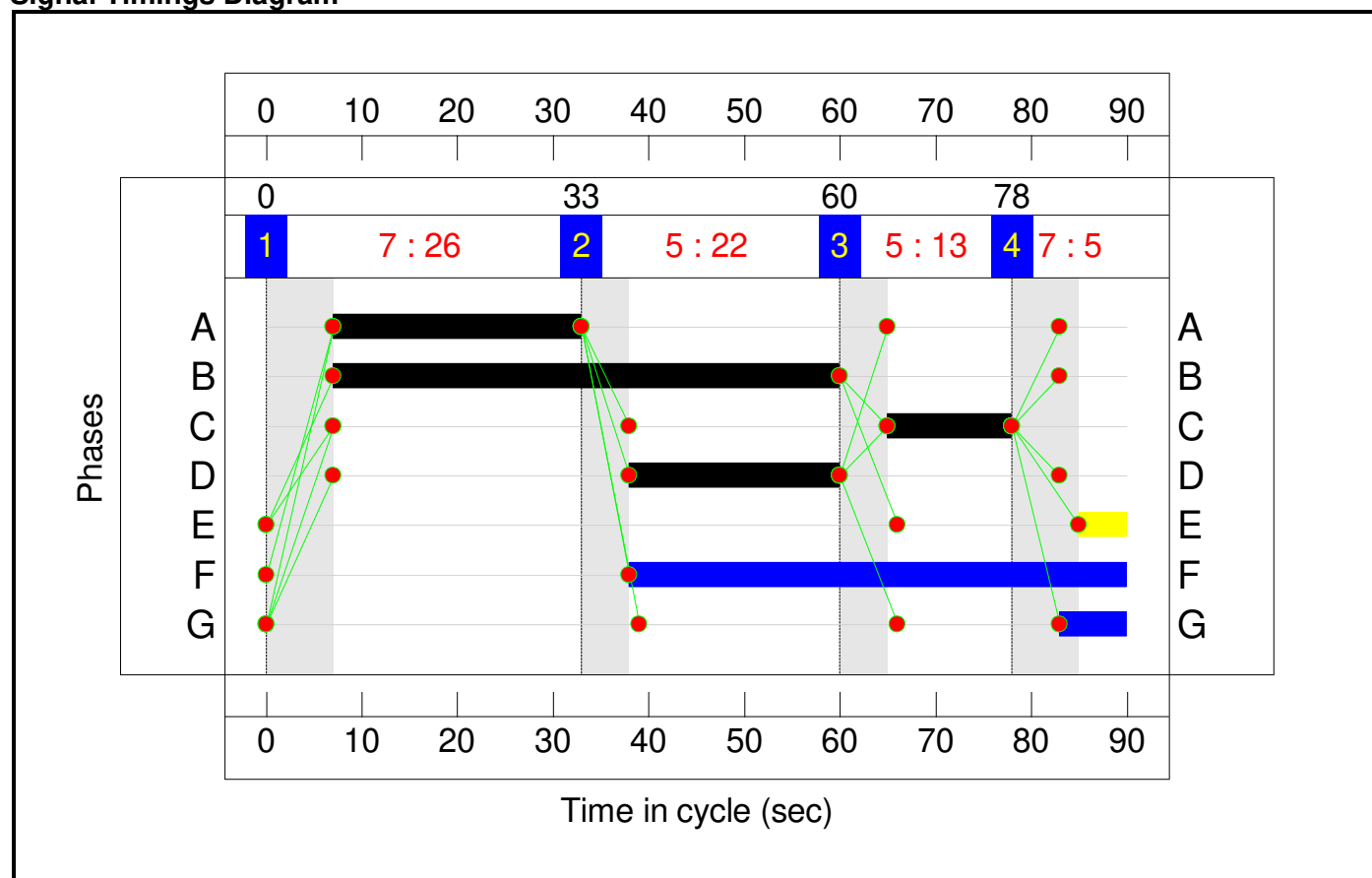
Stage Sequence Diagram



Stage Timings

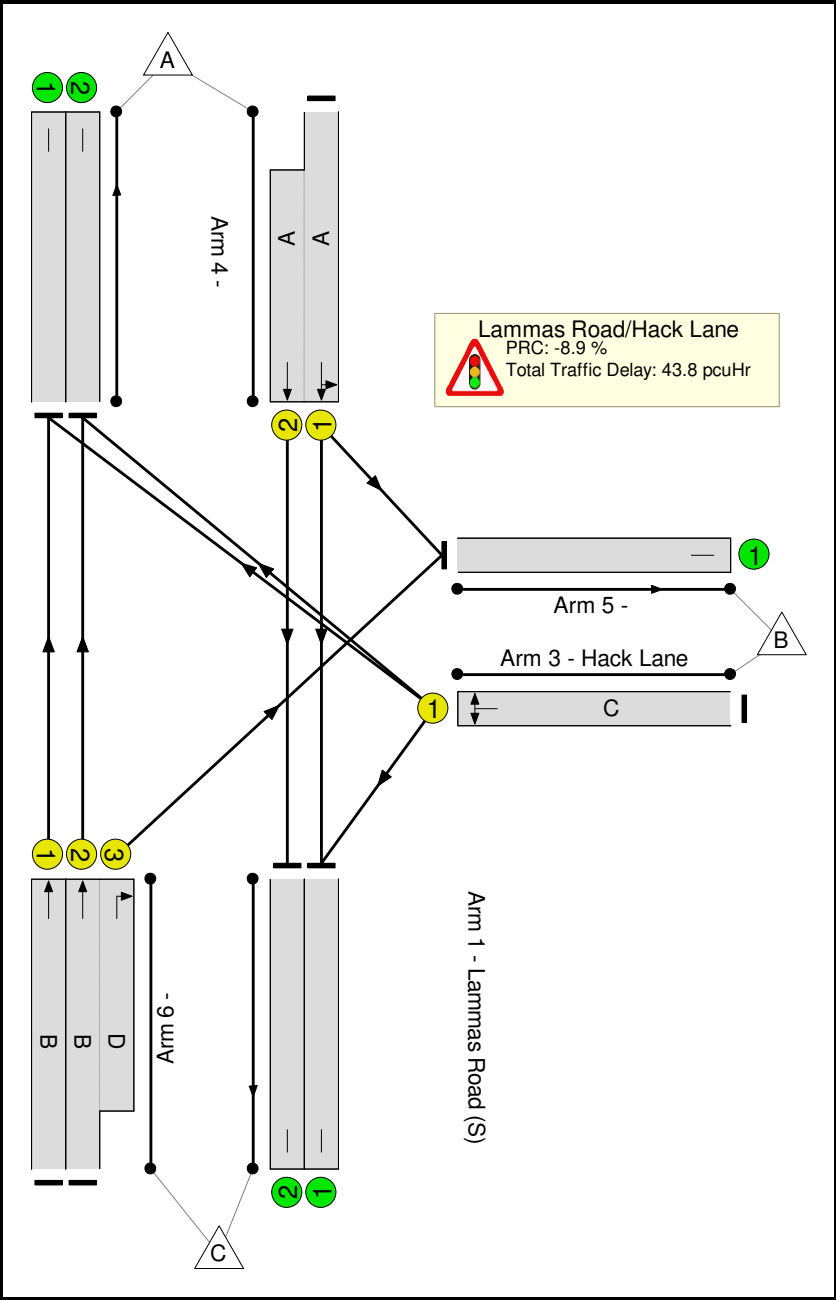
Stage	1	2	3	4
Duration	26	22	13	5
Change Point	0	33	60	78

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: Lammas Road-Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	98.0%
Lammas Road/Hack Lane	-	-	N/A	-	-		-	-	-	-	-	-	98.0%
1/1	Lammas Road (S) Ahead	U	N/A	N/A	B		1	53	-	917	1915	1149	79.8%
1/2+1/3	Lammas Road (S) Ahead Right	U	N/A	N/A	B D		1	53:22	-	405	2055:1665	0+425	0.0 : 95.2%
2/1+2/2	Lammas Road (N) Left Ahead	U	N/A	N/A	A		1	26	-	988	1892:2095	478+529	98.0 : 98.0%
3/1	Hack Lane Right Left	U	N/A	N/A	C		1	13	-	267	1783	277	96.3%
4/1		U	N/A	N/A	-		-	-	-	1024	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	107	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	526	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	401	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	519	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: Lammas Road-Hack Lane	-	-	0	0	0	18.2	25.6	0.0	43.8	-	-	-	-
Lammas Road/Hack Lane	-	-	0	0	0	18.2	25.6	0.0	43.8	-	-	-	-
1/1	917	917	-	-	-	3.5	1.9	-	5.5	21.4	17.6	1.9	19.5
1/2+1/3	405	405	-	-	-	3.7	6.2	-	9.9 (0.0+9.9)	87.8 (0.0:87.8)	9.9	6.2	16.1
2/1+2/2	988	988	-	-	-	8.1	11.5	-	19.6 (9.3+10.3)	71.6 (71.7:71.4)	15.1	11.5	26.6
3/1	267	267	-	-	-	2.8	6.0	-	8.8	118.4	6.6	6.0	12.6
4/1	1024	1024	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	526	526	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	401	401	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -8.9 Total Delay for Signalled Lanes (pcuHr): 43.76 Cycle Time (s): 90 PRC Over All Lanes (%): -8.9 Total Delay Over All Lanes(pcuHr): 43.76													

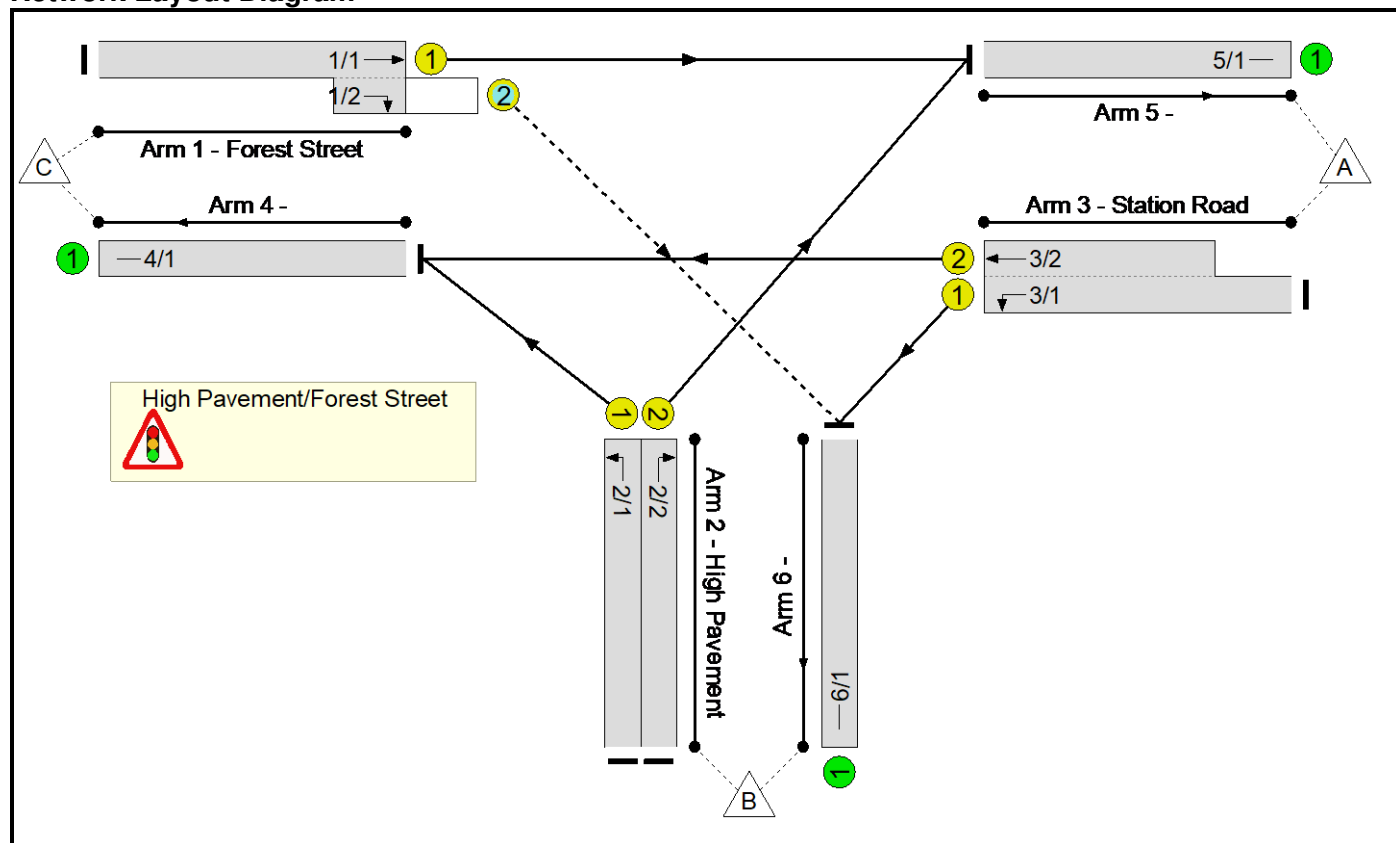
Junction 8 High Pavement/Forest Street

Full Input Data And Results
Full Input Data And Results

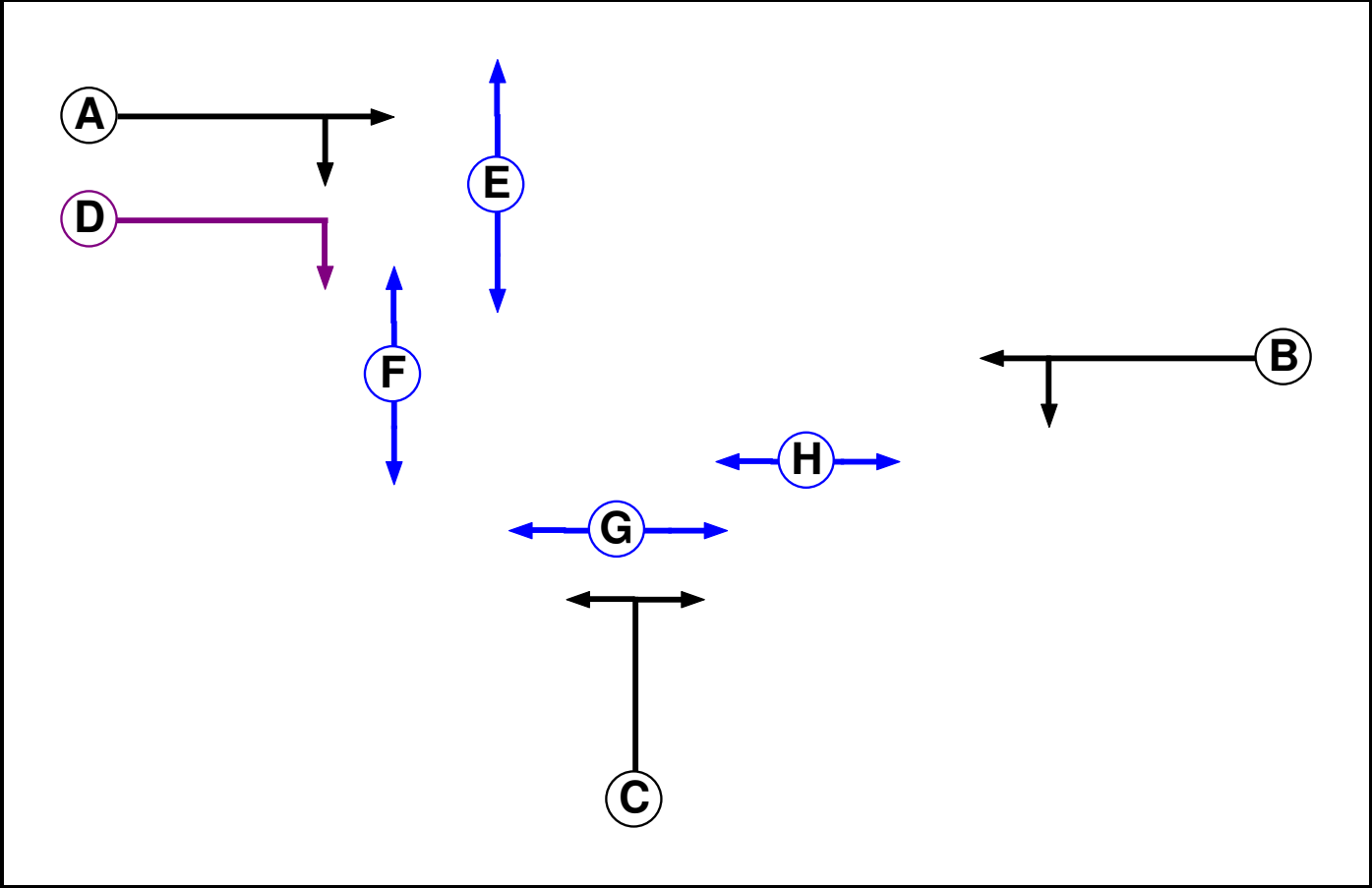
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	High Pavement - Forest Street
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J8 High Pavement-Forest Street V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



Phase Diagram



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	Ind. Arrow	A	4	4
E	Pedestrian		5	5
F	Pedestrian		4	4
G	Pedestrian		4	4
H	Pedestrian		5	5

Full Input Data And Results

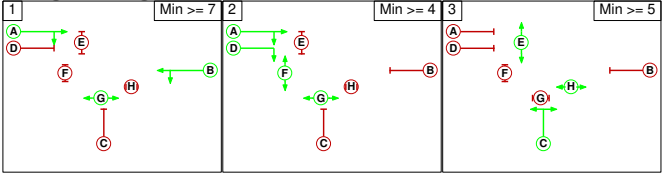
Phase Intergreens Matrix

Terminating Phase	Starting Phase								
		A	B	C	D	E	F	G	H
	A		-	5	-	5	-	-	-
	B	-		5	5	-	10	-	5
	C	5	5		5	-	7	5	-
	D	-	5	5		5	-	-	10
	E	6	-	-	6		-	-	-
	F	-	6	6	-	-		-	-
	G	-	-	6	-	-	-		-
	H	-	6	-	6	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
	1	10	6
	2	6	10
3	6	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: High Pavement/Forest Street											
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 (Forest Street)	6/1 (Right)	1439	0	3/1	1.09	All	3.00	-	0.50	3	3.00
				3/2	1.09	All					

Lane Input Data

Junction: High Pavement/Forest Street												
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 (Forest Street)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
1/2 (Forest Street)	O	A D	2	3	3.0	Geom	-	3.00	0.00	Y	Arm 6 Right	15.00
2/1 (High Pavement)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Left	12.00
2/2 (High Pavement)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	15.00
3/1 (Station Road)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	10.00
3/2 (Station Road)	U	B	2	3	9.6	Geom	-	3.25	0.00	N	Arm 4 Ahead	Inf
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: '2030 Bkgd AM'	08:00	09:00	01:00	
2: '2030 Bkgd PM'	17:00	18:00	01:00	
3: '2030 With Dev AM'	08:00	09:00	01:00	
4: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	395	294	689
	B	511	0	327	838
	C	274	258	0	532
	Tot.	785	653	621	2059

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: High Pavement/Forest Street	
1/1 (with short)	532(In) 274(Out)
1/2 (short)	258
2/1	327
2/2	511
3/1 (with short)	689(In) 395(Out)
3/2 (short)	294
4/1	621
5/1	785
6/1	653

Lane Saturation Flows

Junction: High Pavement/Forest Street								
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 (Forest Street)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
1/2 (Forest Street)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
2/1 (High Pavement)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
2/2 (High Pavement)	3.25	0.00	Y	Arm 5 Right	15.00	100.0 %	1764	1764
3/1 (Station Road)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
3/2 (Station Road)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2030 With Dev AM' (FG3: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	404	294	698
	B	533	0	327	860
	C	274	258	0	532
	Tot.	807	662	621	2090

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: High Pavement/Forest Street	
1/1 (with short)	532(In) 274(Out)
1/2 (short)	258
2/1	327
2/2	533
3/1 (with short)	698(In) 404(Out)
3/2 (short)	294
4/1	621
5/1	807
6/1	662

Lane Saturation Flows

Junction: High Pavement/Forest Street								
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 (Forest Street)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
1/2 (Forest Street)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
2/1 (High Pavement)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
2/2 (High Pavement)	3.25	0.00	Y	Arm 5 Right	15.00	100.0 %	1764	1764
3/1 (Station Road)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
3/2 (Station Road)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 Bkgd PM' (FG2: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

CROSSLINK					
	Destination				
Origin		A	B	C	Tot.
	A	0	590	302	892
	B	394	0	314	708
	C	256	324	0	580
	Tot.	650	914	616	2180

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: High Pavement/Forest Street	
1/1 (with short)	580(In) 256(Out)
1/2 (short)	324
2/1	314
2/2	394
3/1 (with short)	892(In) 590(Out)
3/2 (short)	302
4/1	616
5/1	650
6/1	914

Lane Saturation Flows

Junction: High Pavement/Forest Street								
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 (Forest Street)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
1/2 (Forest Street)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
2/1 (High Pavement)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
2/2 (High Pavement)	3.25	0.00	Y	Arm 5 Right	15.00	100.0 %	1764	1764
3/1 (Station Road)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
3/2 (Station Road)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
Origin		A	B	C	Tot.
	A	0	613	302	915
	B	408	0	314	722
	C	256	324	0	580
	Tot.	664	937	616	2217

Traffic Lane Flows

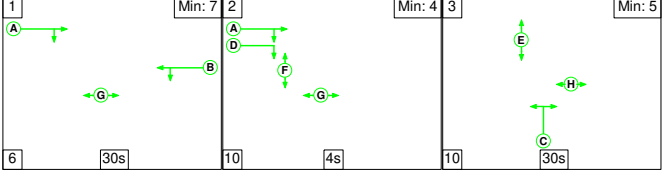
Lane	Scenario 4: 2030 With Dev PM
Junction: High Pavement/Forest Street	
1/1 (with short)	580(In) 256(Out)
1/2 (short)	324
2/1	314
2/2	408
3/1 (with short)	915(In) 613(Out)
3/2 (short)	302
4/1	616
5/1	664
6/1	937

Lane Saturation Flows

Junction: High Pavement/Forest Street								
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 (Forest Street)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
1/2 (Forest Street)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
2/1 (High Pavement)	3.25	0.00	Y	Arm 4 Left	12.00	100.0 %	1724	1724
2/2 (High Pavement)	3.25	0.00	Y	Arm 5 Right	15.00	100.0 %	1764	1764
3/1 (Station Road)	3.25	0.00	Y	Arm 6 Left	10.00	100.0 %	1687	1687
3/2 (Station Road)	3.25	0.00	N	Arm 4 Ahead	Inf	100.0 %	2080	2080
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2030 Bkgd AM' (FG1: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

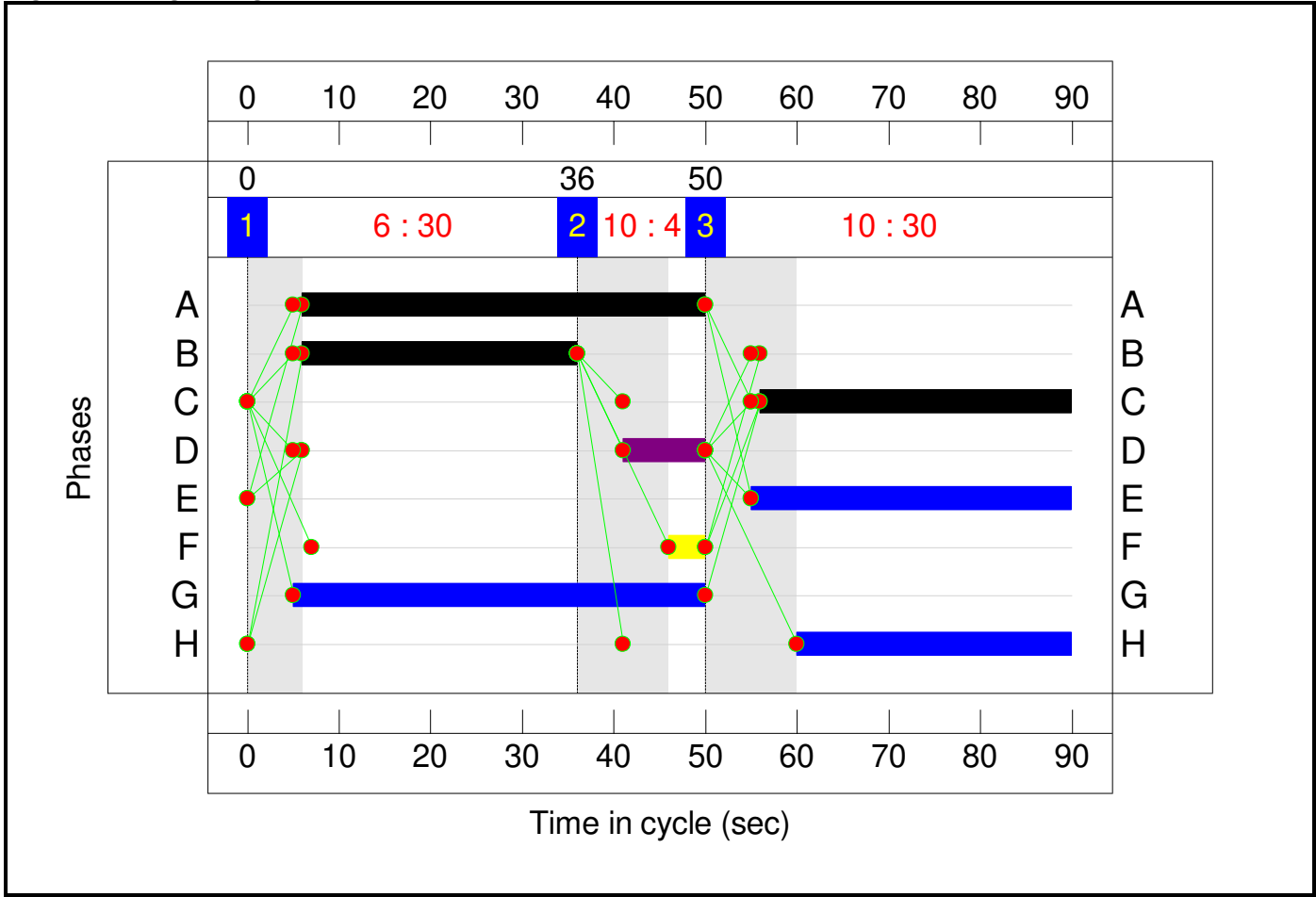
Stage Sequence Diagram



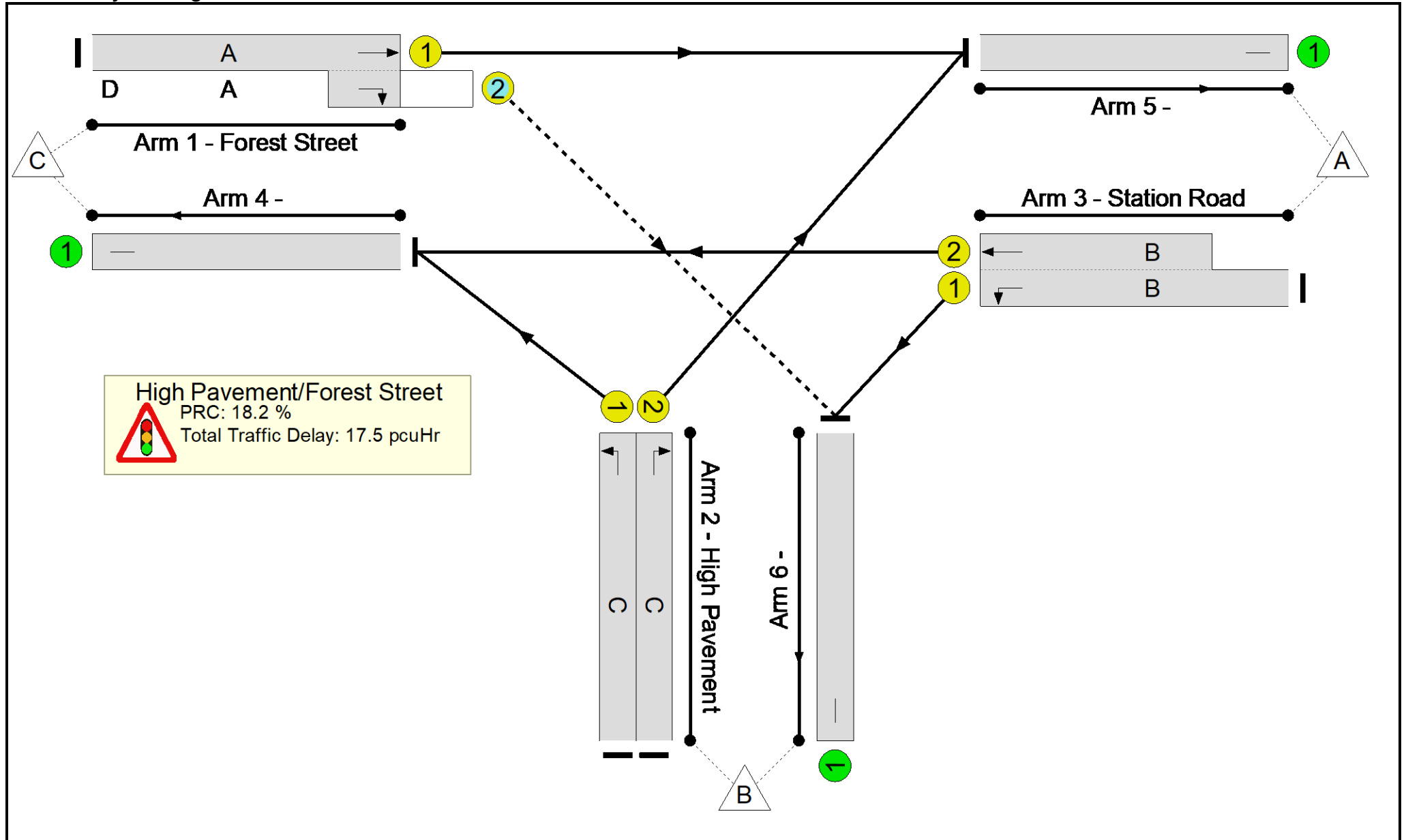
Stage Timings

Stage	1	2	3
Duration	30	4	30
Change Point	0	36	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: High Pavement - Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	76.2%
High Pavement/Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	76.2%
1/1+1/2	Forest Street Ahead Right	U+O	N/A	N/A	A	D	1	44	9	532	1915:1741	422+397	64.9 : 64.9%
2/1	High Pavement Left	U	N/A	N/A	C		1	34	-	327	1724	670	48.8%
2/2	High Pavement Right	U	N/A	N/A	C		1	34	-	511	1764	686	74.5%
3/1+3/2	Station Road Ahead Left	U	N/A	N/A	B		1	30	-	689	1687:2080	519+386	76.2 : 76.2%
4/1		U	N/A	N/A	-		-	-	-	621	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%

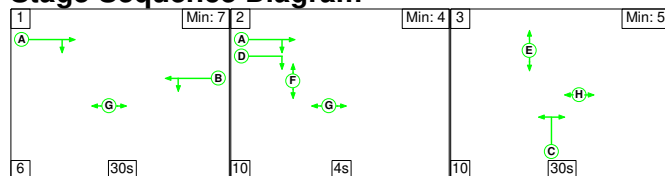
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG3: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

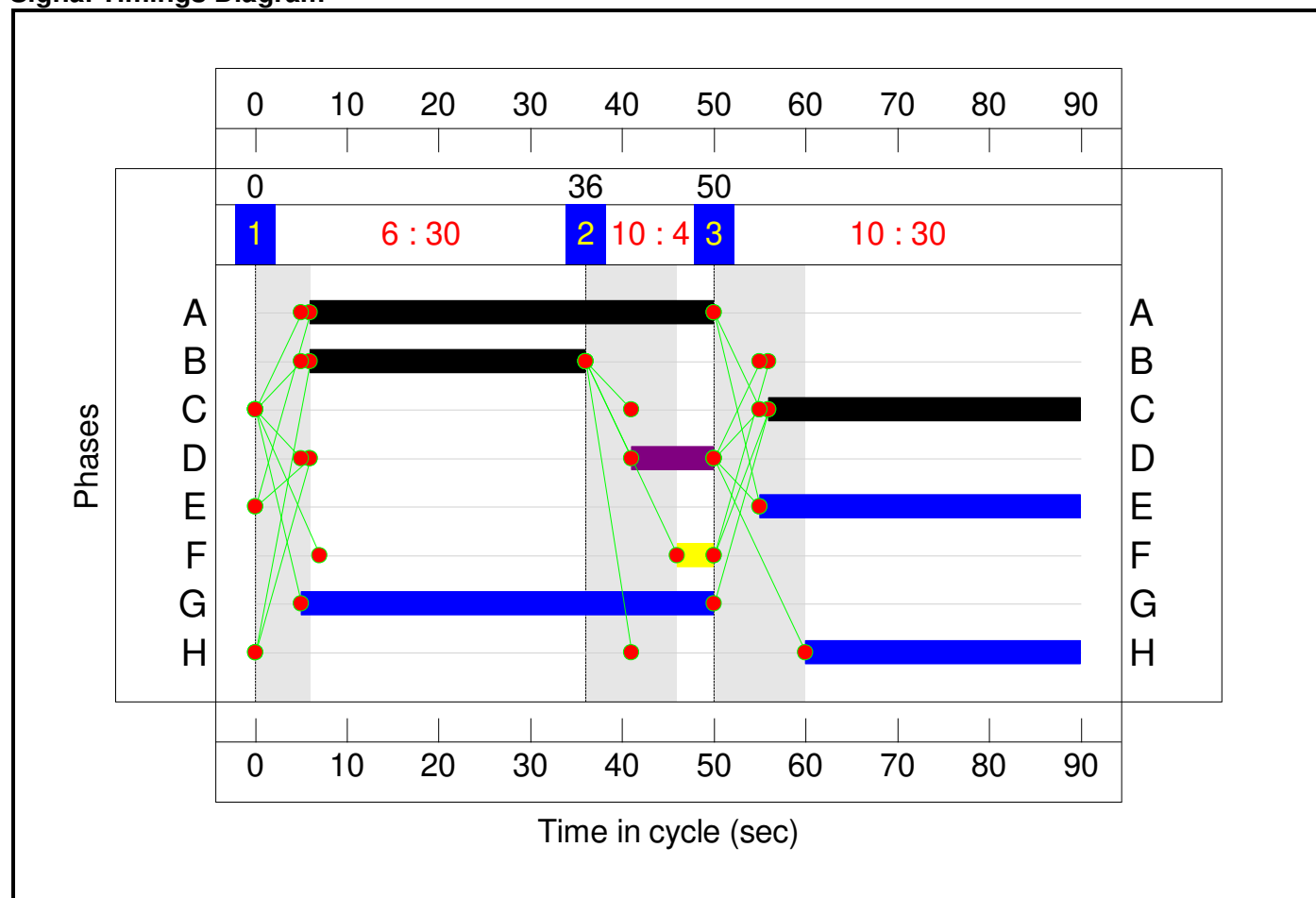
Stage Sequence Diagram



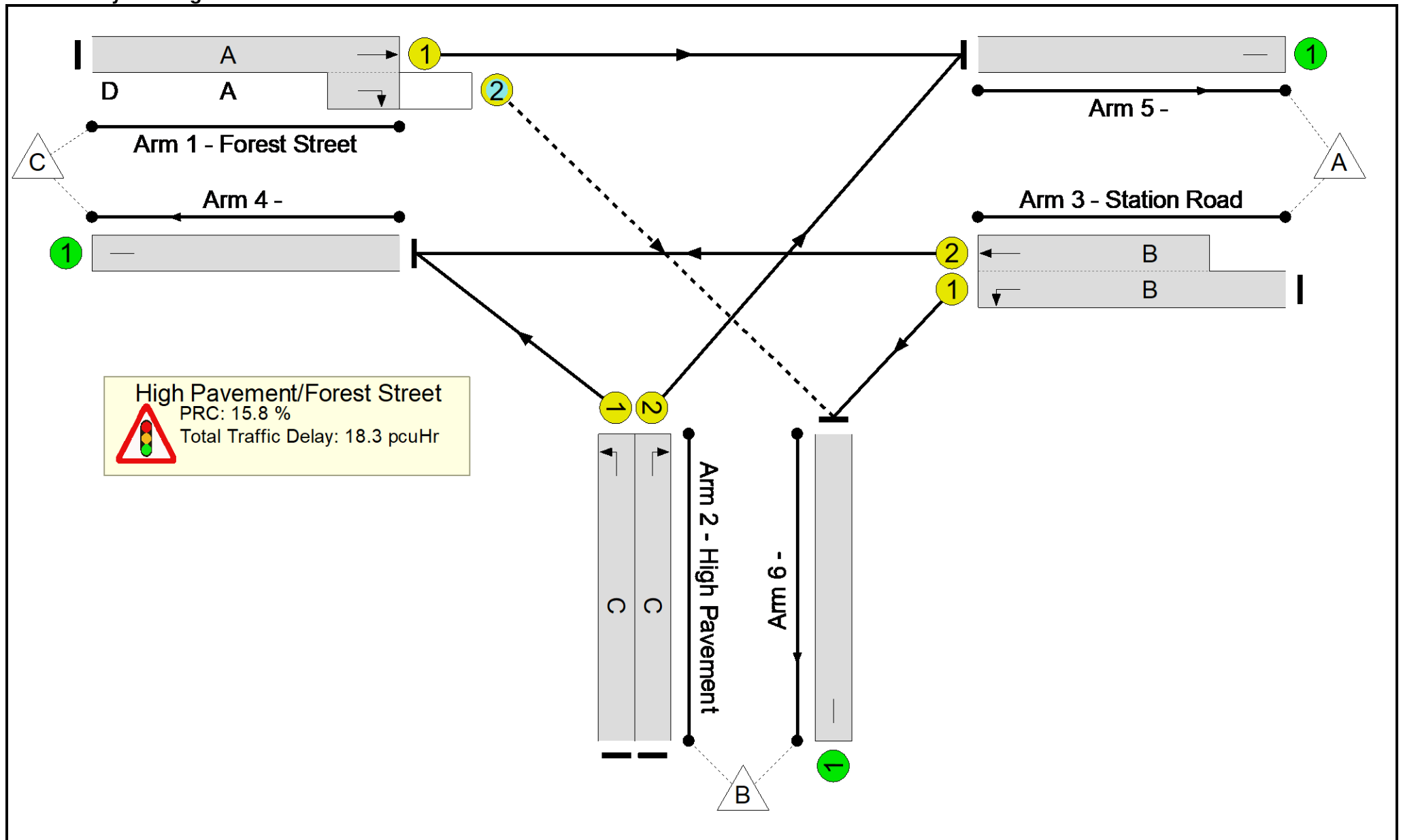
Stage Timings

Stage	1	2	3
Duration	30	4	30
Change Point	0	36	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: High Pavement - Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	77.7%
High Pavement/Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	77.7%
1/1+1/2	Forest Street Ahead Right	U+O	N/A	N/A	A	D	1	44	9	532	1915:1741	412+388	66.6 : 66.6%
2/1	High Pavement Left	U	N/A	N/A	C		1	34	-	327	1724	670	48.8%
2/2	High Pavement Right	U	N/A	N/A	C		1	34	-	533	1764	686	77.7%
3/1+3/2	Station Road Ahead Left	U	N/A	N/A	B		1	30	-	698	1687:2080	520+378	77.7 : 77.7%
4/1		U	N/A	N/A	-		-	-	-	621	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	807	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%

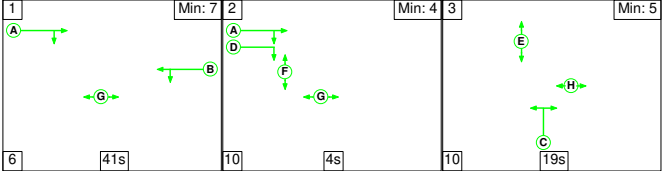
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG2: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

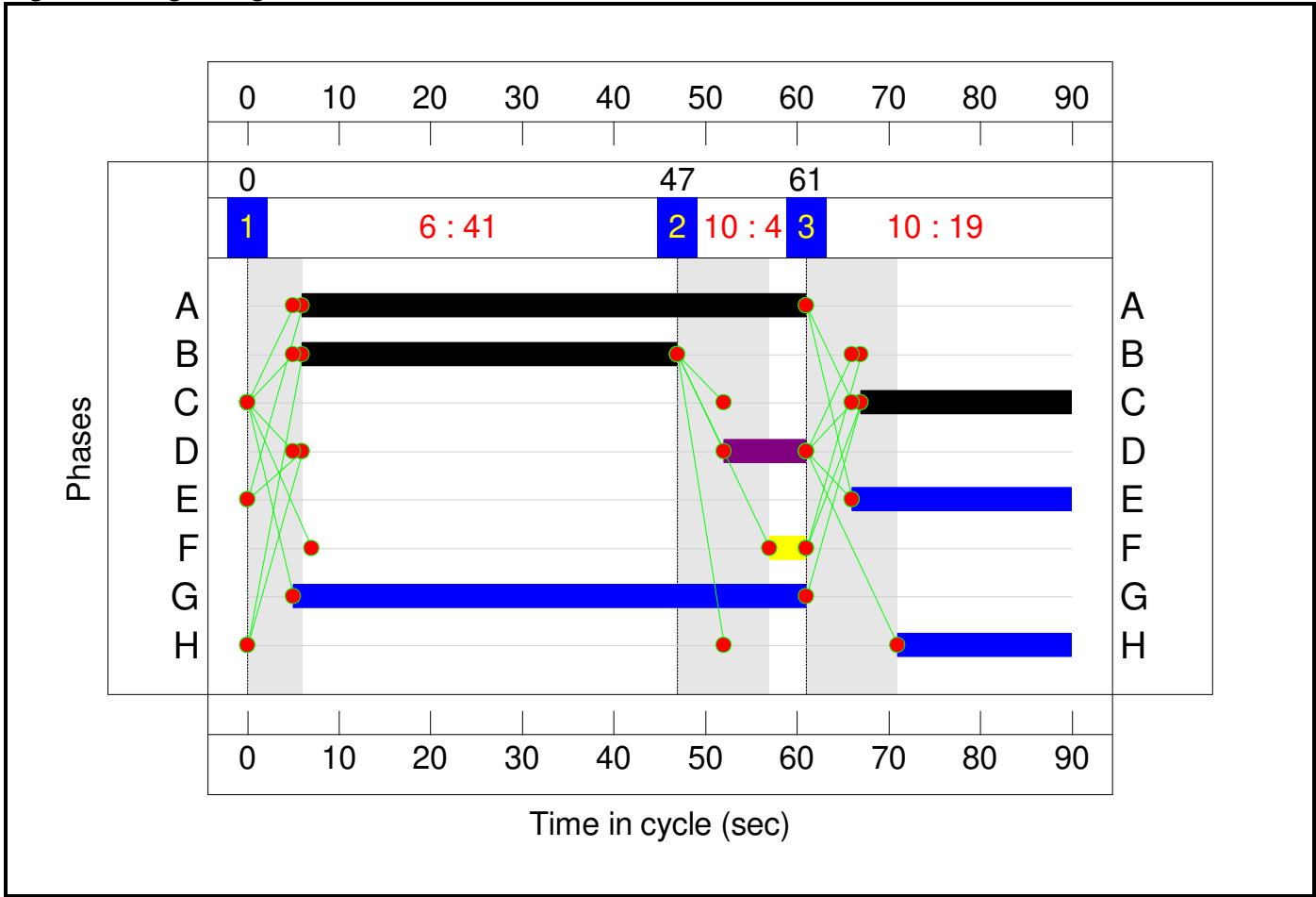
Stage Sequence Diagram



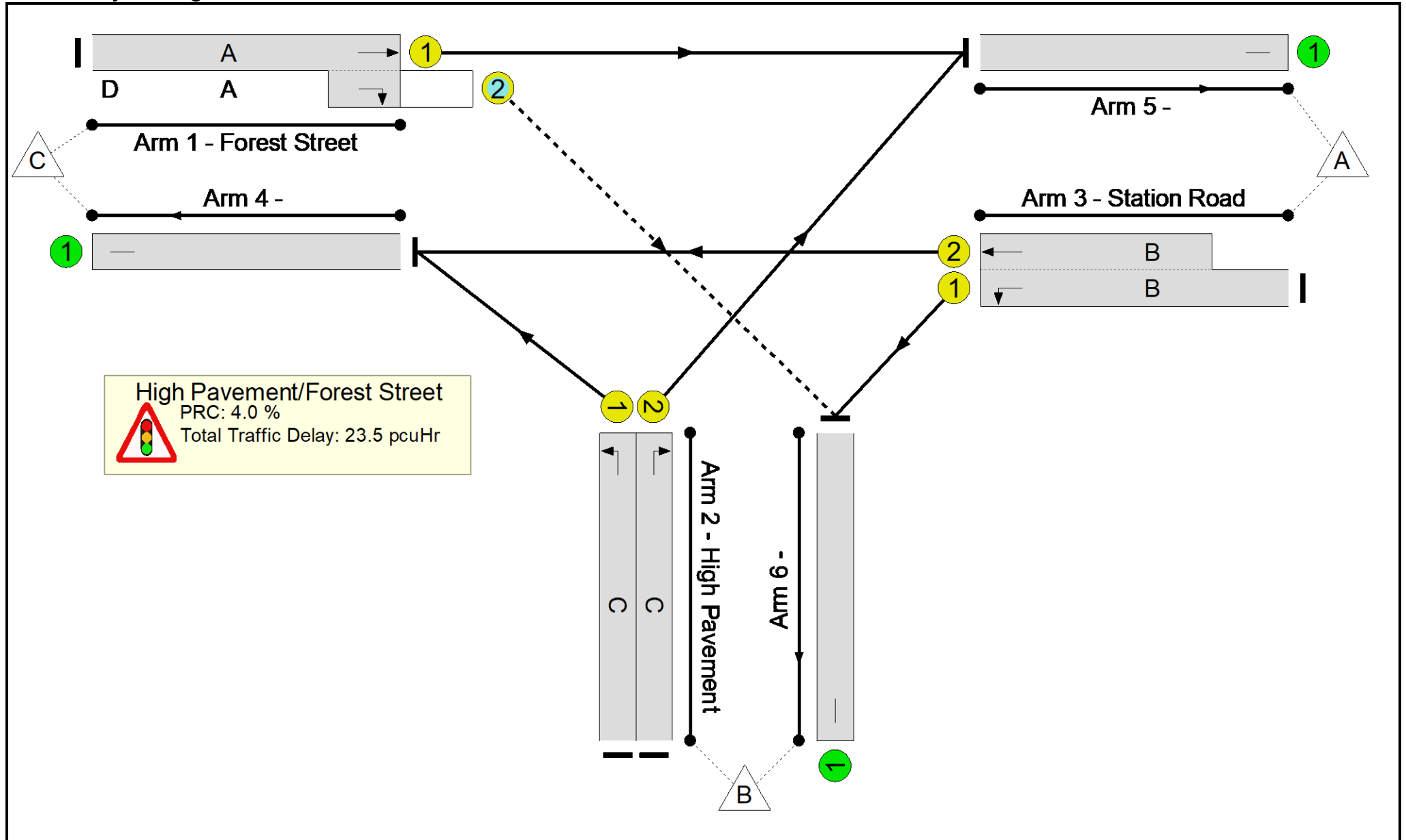
Stage Timings

Stage	1	2	3
Duration	41	4	19
Change Point	0	47	61

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: High Pavement - Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
High Pavement/Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
1/1+1/2	Forest Street Ahead Right	U+O	N/A	N/A	A	D	1	55	9	580	1915:1741	302+382	84.7 : 84.7%
2/1	High Pavement Left	U	N/A	N/A	C		1	23	-	314	1724	460	68.3%
2/2	High Pavement Right	U	N/A	N/A	C		1	23	-	394	1764	470	83.8%
3/1+3/2	Station Road Ahead Left	U	N/A	N/A	B		1	41	-	892	1687:2080	682+349	86.5 : 86.5%
4/1		U	N/A	N/A	-		-	-	-	616	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	650	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	914	Inf	Inf	0.0%

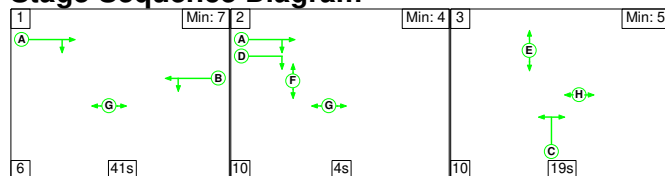
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG4: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

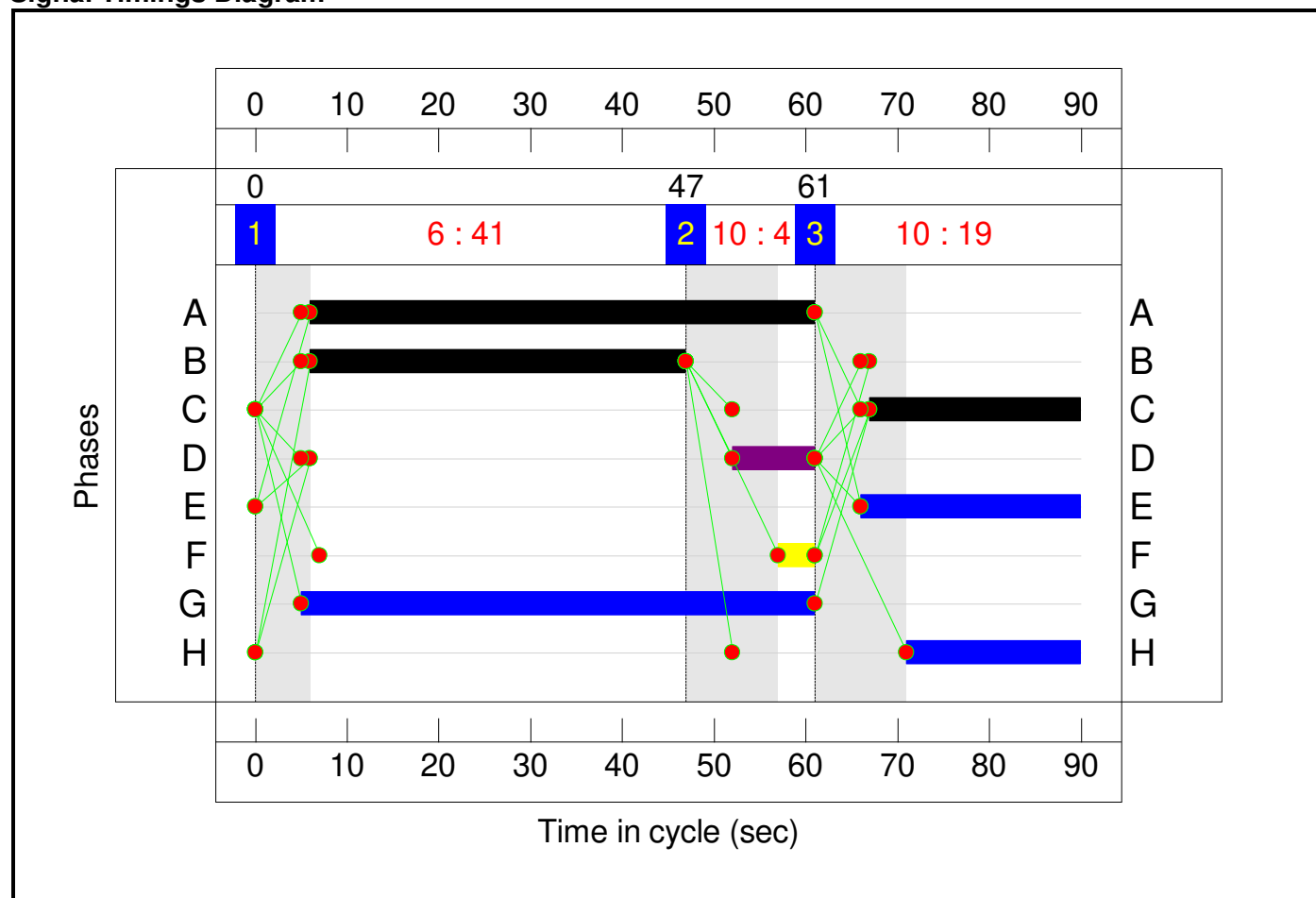
Stage Sequence Diagram



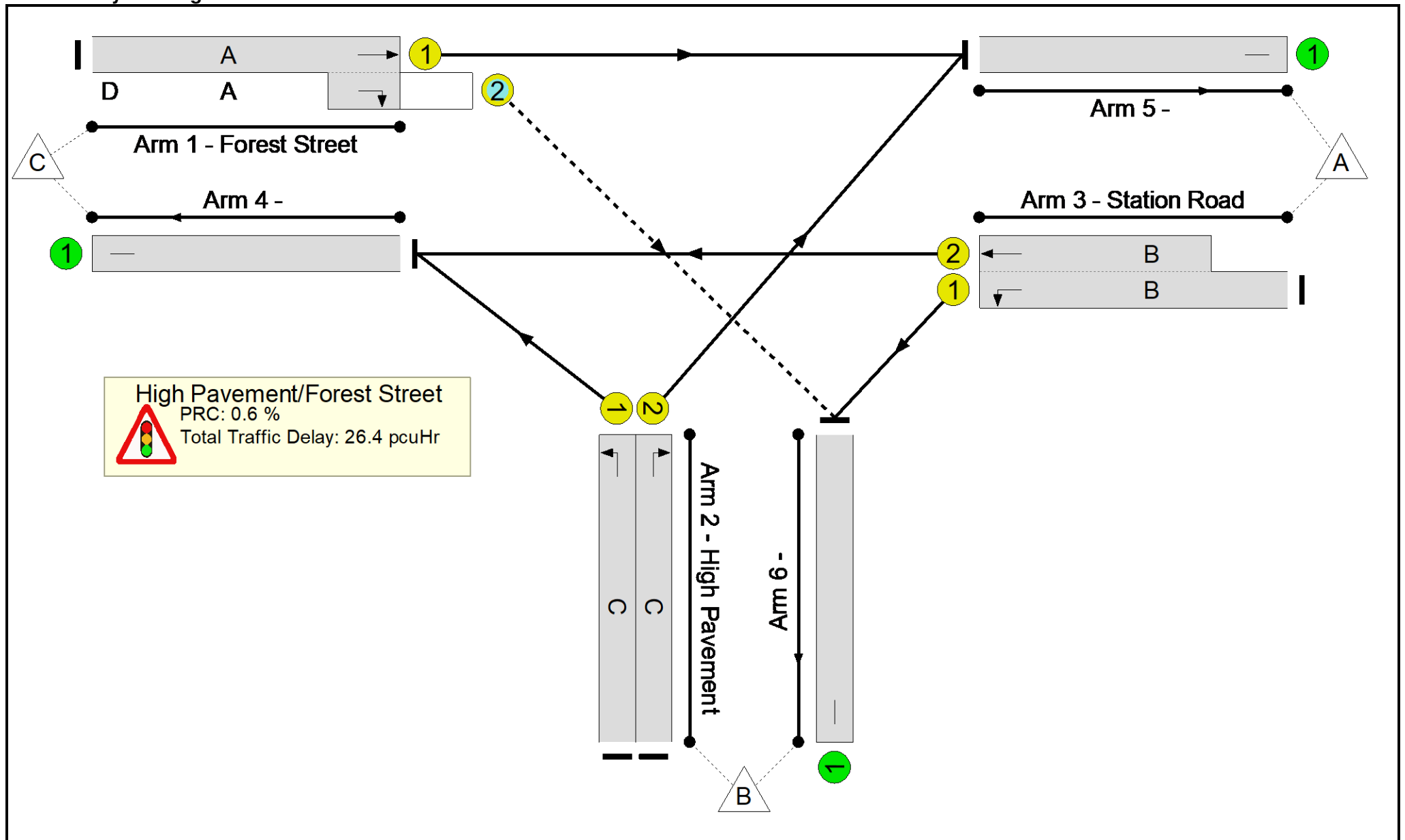
Stage Timings

Stage	1	2	3
Duration	41	4	19
Change Point	0	47	61

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: High Pavement - Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	89.5%
High Pavement/Forest Street	-	-	N/A	-	-		-	-	-	-	-	-	89.5%
1/1+1/2	Forest Street Ahead Right	U+O	N/A	N/A	A	D	1	55	9	580	1915:1741	289+366	88.6 : 88.6%
2/1	High Pavement Left	U	N/A	N/A	C		1	23	-	314	1724	460	68.3%
2/2	High Pavement Right	U	N/A	N/A	C		1	23	-	408	1764	470	86.7%
3/1+3/2	Station Road Ahead Left	U	N/A	N/A	B		1	41	-	915	1687:2080	685+338	89.5 : 89.5%
4/1		U	N/A	N/A	-		-	-	-	616	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	664	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	937	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

Junction 9 A38 Kings Mill Road/Station Road

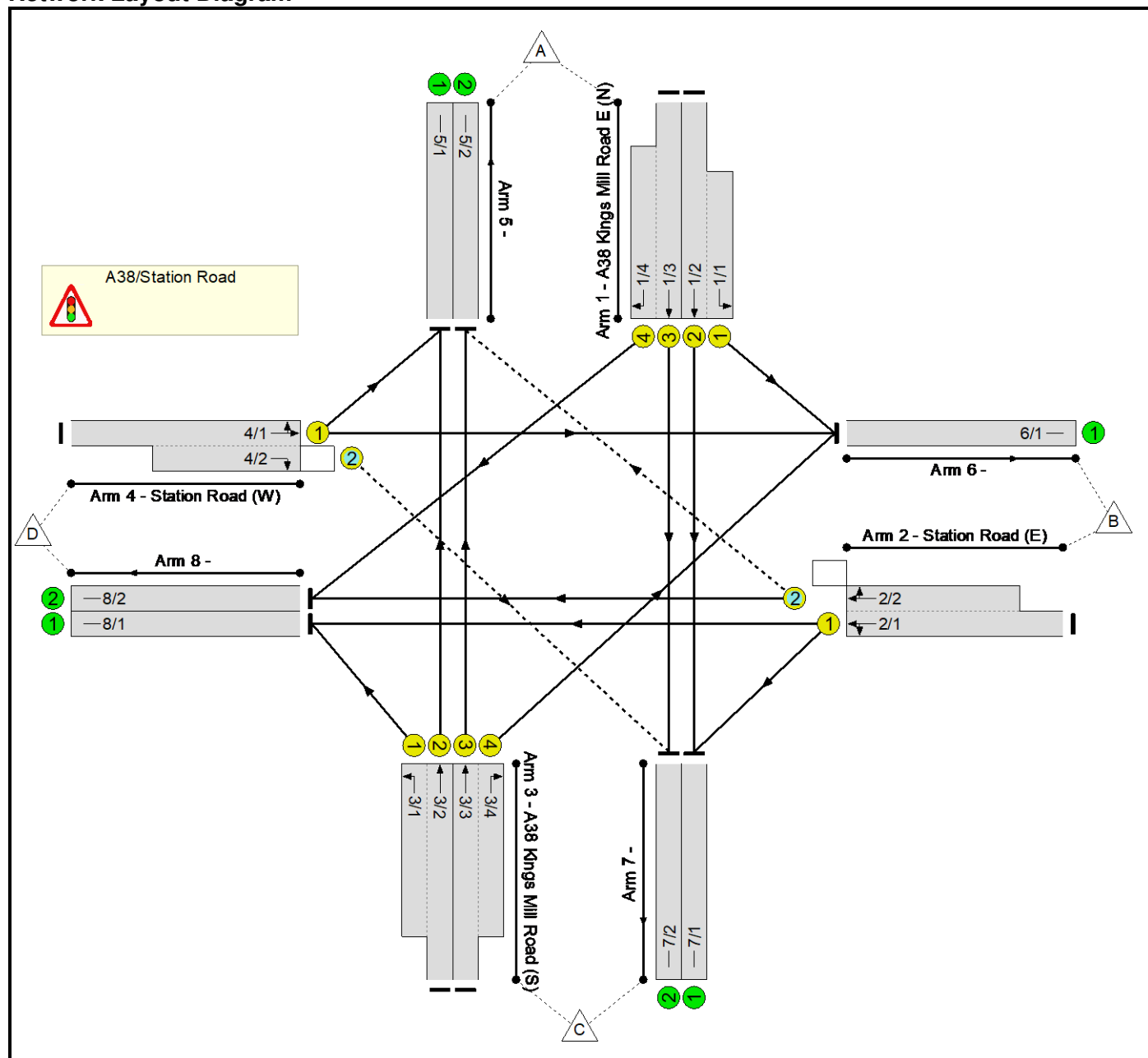
Full Input Data And Results

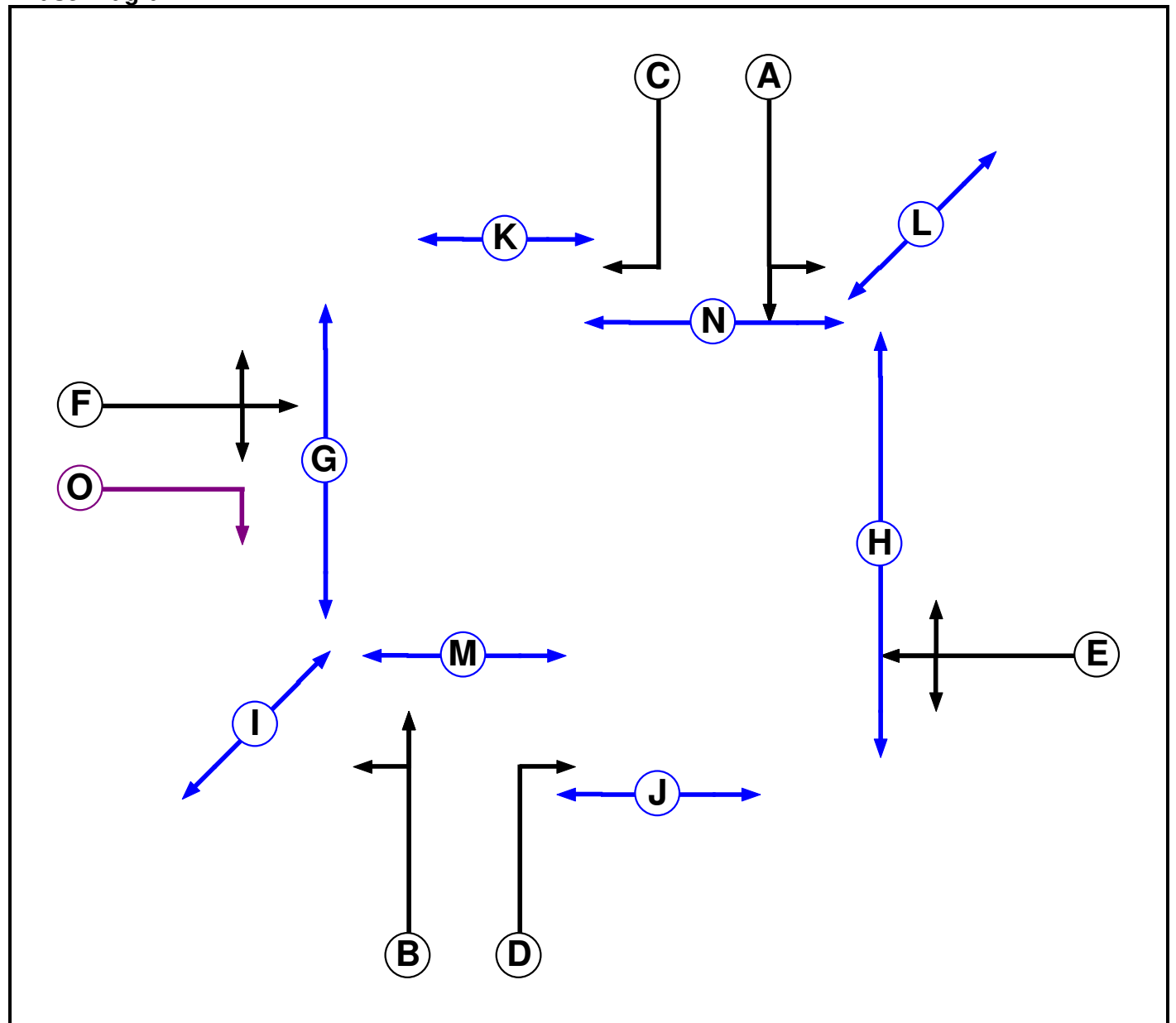
Full Input Data And Results

User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	A38 - Station Road
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J9 A38-Station Road V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram





Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7
N	Pedestrian		7	7
O	Ind. Arrow	F	4	4

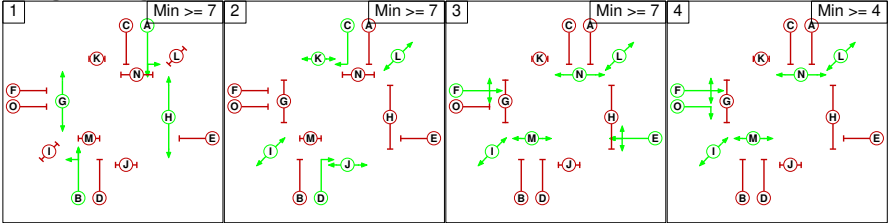
Phase Intergreens Matrix

Terminating Phase	Starting Phase															
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	A		-	-	7	8	8	-	-	-	11	-	7	-	7	7
	B	-		7	-	8	8	-	-	7	-	11	-	7	-	8
	C	-	12		-	7	7	11	-	-	-	-	-	-	5	5
	D	12	-	-		7	7	-	12	-	-	-	-	5	-	5
	E	5	9	5	5		-	9	5	-	10	11	-	-	-	5
	F	9	5	5	5	-		5	9	-	10	8	-	-	-	-
	G	-	-	13	-	14	12		-	-	-	-	-	-	-	12
	H	-	-	-	12	12	14	-		-	-	-	-	-	-	-
	I	-	9	-	-	-	-	-	-		-	-	-	-	-	-
	J	6	-	-	-	7	7	-	-	-		-	-	-	-	7
	K	-	6	-	-	7	7	-	-	-	-		-	-	-	-
	L	7	-	-	-	-	-	-	-	-	-	-		-	-	-
	M	-	9	-	9	-	-	-	-	-	-	-	-		-	-
	N	9	-	9	-	-	-	-	-	-	-	-	-	-		-
	O	5	5	5	5	5	-	5	-	-	11	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		13	14	X
	2	12		7	7
	3	9	11		5
	4	9	11	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A38/Station Road											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/2 (Station Road (E))	5/2 (Right)	1440	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
4/2 (Station Road (W))	7/2 (Right)	1440	0	2/2	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: A38/Station Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A38 Kings Mill Road E (N))	U	A	2	3	8.7	User	1800	-	-	-	-	-
1/2 (A38 Kings Mill Road E (N))	U	A	2	3	60.0	User	1900	-	-	-	-	-
1/3 (A38 Kings Mill Road E (N))	U	A	2	3	22.6	User	2000	-	-	-	-	-
1/4 (A38 Kings Mill Road E (N))	U	C	2	3	13.9	User	1800	-	-	-	-	-
2/1 (Station Road (E))	U	E	2	3	60.0	User	1900	-	-	-	-	-
2/2 (Station Road (E))	O	E	2	3	12.2	User	1800	-	-	-	-	-
3/1 (A38 Kings Mill Road (S))	U	B	2	3	27.8	User	1800	-	-	-	-	-
3/2 (A38 Kings Mill Road (S))	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/3 (A38 Kings Mill Road (S))	U	B	2	3	27.8	User	2000	-	-	-	-	-
3/4 (A38 Kings Mill Road (S))	U	D	2	3	173.9	User	1800	-	-	-	-	-
4/1 (Station Road (W))	U	F	2	3	60.0	User	1900	-	-	-	-	-
4/2 (Station Road (W))	O	F O	2	3	8.7	User	1800	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Validation'	08:00	09:00	01:00	
2: '2030 Bkgd AM'	08:00	09:00	01:00	
3: '2030 Bkgd PM'	17:00	18:00	01:00	
4: '2030 With Dev AM'	08:00	09:00	01:00	
5: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	86	1224	213	1523
	B	72	0	69	342	483
	C	1167	62	0	133	1362
	D	224	329	162	0	715
	Tot.	1463	477	1455	688	4083

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: A38/Station Road	
1/1 (short)	86
1/2 (with short)	673(In) 587(Out)
1/3 (with short)	850(In) 637(Out)
1/4 (short)	213
2/1 (with short)	483(In) 248(Out)
2/2 (short)	235
3/1 (short)	133
3/2 (with short)	690(In) 557(Out)
3/3 (with short)	672(In) 610(Out)
3/4 (short)	62
4/1 (with short)	715(In) 553(Out)
4/2 (short)	162
5/1	781
5/2	682
6/1	477
7/1	656
7/2	799
8/1	312
8/2	376

Lane Saturation Flows

Junction: A38/Station Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A38 Kings Mill Road E (N) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 Kings Mill Road E (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A38 Kings Mill Road E (N) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road E (N) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (E) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (S) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 Kings Mill Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A38 Kings Mill Road (S) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road (S) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (W) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	86	1224	221	1531
	B	72	0	69	343	484
	C	1167	62	0	133	1362
	D	244	331	162	0	737
	Tot.	1483	479	1455	697	4114

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: A38/Station Road	
1/1 (short)	86
1/2 (with short)	676(In) 590(Out)
1/3 (with short)	855(In) 634(Out)
1/4 (short)	221
2/1 (with short)	484(In) 249(Out)
2/2 (short)	235
3/1 (short)	133
3/2 (with short)	697(In) 564(Out)
3/3 (with short)	665(In) 603(Out)
3/4 (short)	62
4/1 (with short)	737(In) 575(Out)
4/2 (short)	162
5/1	808
5/2	675
6/1	479
7/1	659
7/2	796
8/1	313
8/2	384

Lane Saturation Flows

Junction: A38/Station Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A38 Kings Mill Road E (N) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 Kings Mill Road E (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A38 Kings Mill Road E (N) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road E (N) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (E) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (S) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 Kings Mill Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A38 Kings Mill Road (S) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road (S) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (W) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	83	1155	280	1518
	B	66	0	42	313	421
	C	1216	104	0	187	1507
	D	223	276	117	0	616
	Tot.	1505	463	1314	780	4062

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: A38/Station Road	
1/1 (short)	83
1/2 (with short)	635(In) 552(Out)
1/3 (with short)	883(In) 603(Out)
1/4 (short)	280
2/1 (with short)	421(In) 216(Out)
2/2 (short)	205
3/1 (short)	187
3/2 (with short)	774(In) 587(Out)
3/3 (with short)	733(In) 629(Out)
3/4 (short)	104
4/1 (with short)	616(In) 499(Out)
4/2 (short)	117
5/1	810
5/2	695
6/1	463
7/1	594
7/2	720
8/1	361
8/2	419

Lane Saturation Flows

Junction: A38/Station Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A38 Kings Mill Road E (N) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 Kings Mill Road E (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A38 Kings Mill Road E (N) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road E (N) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (E) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (S) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 Kings Mill Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A38 Kings Mill Road (S) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road (S) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (W) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	83	1155	300	1538
	B	66	0	42	316	424
	C	1216	104	0	187	1507
	D	235	278	117	0	630
	Tot.	1517	465	1314	803	4099

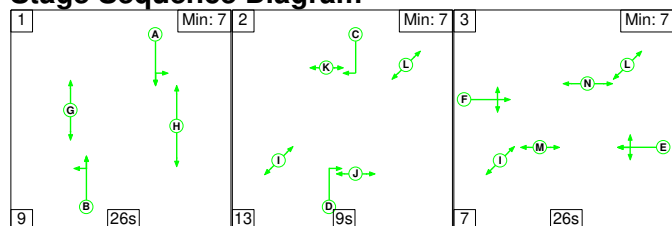
Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2030 Wlth Dev PM
Junction: A38/Station Road	
1/1 (short)	83
1/2 (with short)	631(In) 548(Out)
1/3 (with short)	907(In) 607(Out)
1/4 (short)	300
2/1 (with short)	424(In) 218(Out)
2/2 (short)	206
3/1 (short)	187
3/2 (with short)	774(In) 587(Out)
3/3 (with short)	733(In) 629(Out)
3/4 (short)	104
4/1 (with short)	630(In) 513(Out)
4/2 (short)	117
5/1	822
5/2	695
6/1	465
7/1	590
7/2	724
8/1	363
8/2	440

Lane Saturation Flows

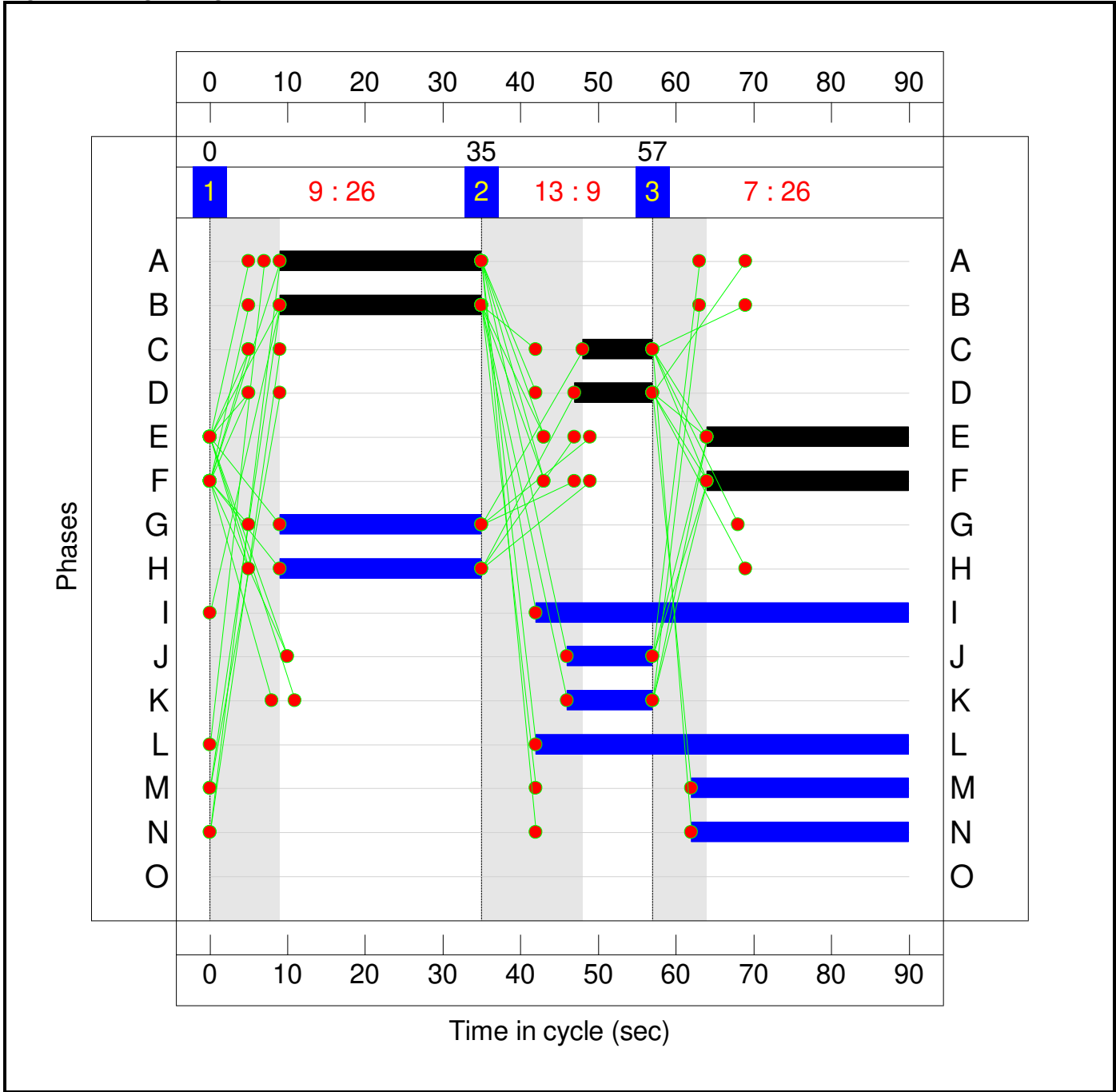
Junction: A38/Station Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A38 Kings Mill Road E (N) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A38 Kings Mill Road E (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
1/3 (A38 Kings Mill Road E (N) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
1/4 (A38 Kings Mill Road E (N) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Station Road (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/2 (Station Road (E) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A38 Kings Mill Road (S) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A38 Kings Mill Road (S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A38 Kings Mill Road (S) Lane 3)	This lane uses a directly entered Saturation Flow						2000	2000
3/4 (A38 Kings Mill Road (S) Lane 4)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Station Road (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (Station Road (W) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
8/2	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram**

Stage Timings

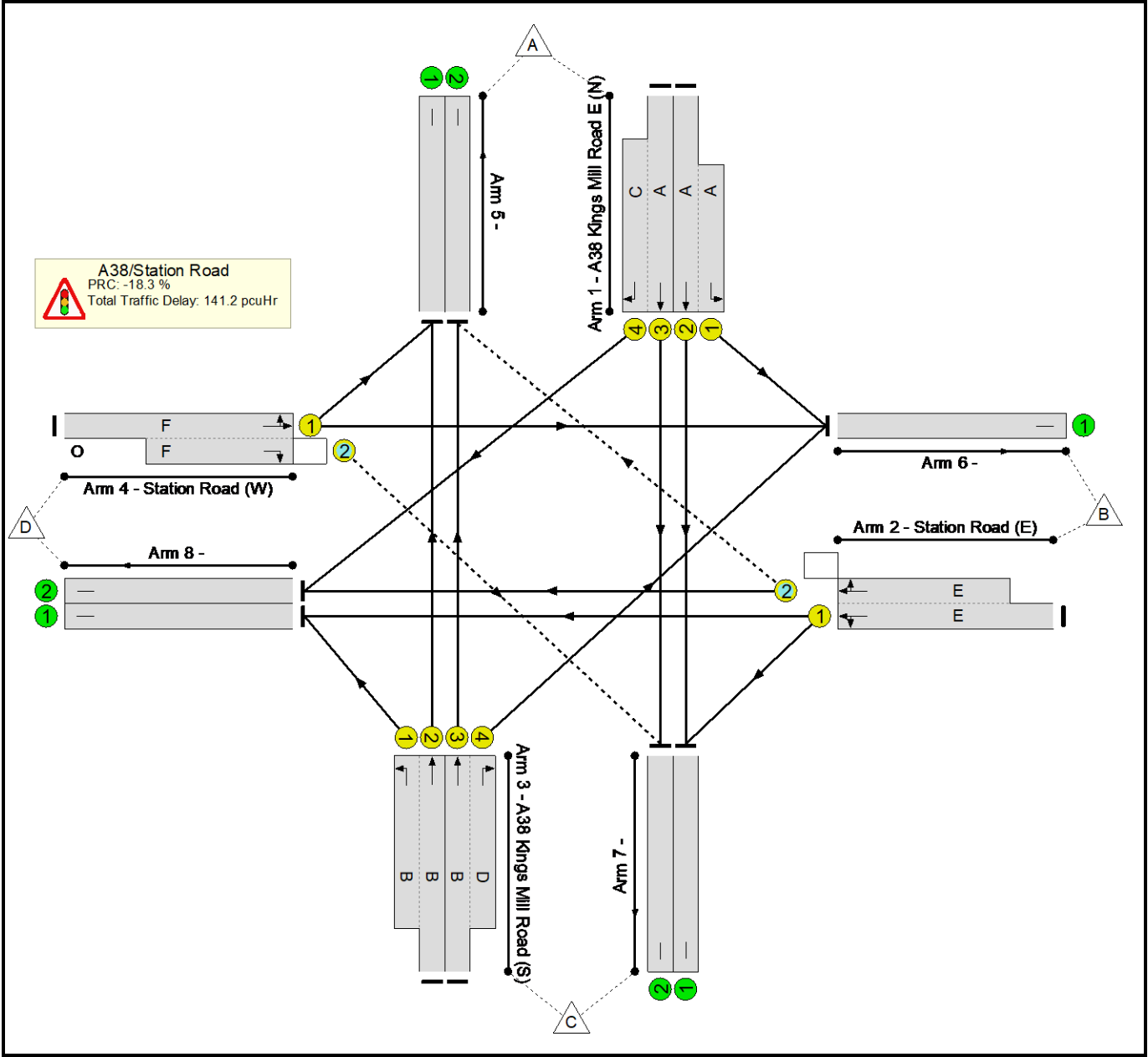
Stage	1	2	3
Duration	26	9	26
Change Point	0	35	57

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: A38 - Station Road	-	-	N/A	-	-		-	-	-	-	-	-	106.5%
A38/Station Road	-	-	N/A	-	-		-	-	-	-	-	-	106.5%
1/2+1/1	A38 Kings Mill Road E (N) Left Ahead	U	N/A	N/A	A		1	26	-	673	1900:1800	555+81	105.7 : 105.7%
1/3+1/4	A38 Kings Mill Road E (N) Ahead Right	U	N/A	N/A	A C		1	26:9	-	850	2000:1800	600+200	106.2 : 106.5%
2/1+2/2	Station Road (E) Right Left Ahead	U+O	N/A	N/A	E		1	26	-	483	1900:1800	276+261	90.0 : 90.0%
3/2+3/1	A38 Kings Mill Road (S) Ahead Left	U	N/A	N/A	B		1	26	-	690	1900:1800	570+136	97.7 : 97.7%
3/3+3/4	A38 Kings Mill Road (S) Ahead Right	U	N/A	N/A	B D		1	26:10	-	672	2000:1800	600+136	101.7 : 45.6%
4/1+4/2	Station Road (W) Left Ahead Right	U+O	N/A	N/A	F	O	1	26	0	715	1900:1800	531+156	104.1 : 104.1%
5/1		U	N/A	N/A	-		-	-	-	781	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	656	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	799	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	312	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	376	Inf	Inf	0.0%

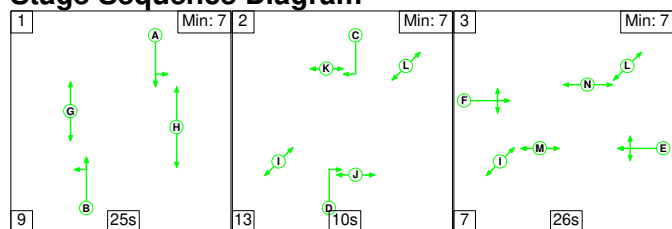
Full Input Data And Results

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: A38 - Station Road	-	-	156	0	72	38.4	102.1	0.7	141.2	-	-	-	-
A38/Station Road	-	-	156	0	72	38.4	102.1	0.7	141.2	-	-	-	-
1/2+1/1	673	637	-	-	-	7.4	25.0	-	32.3 (28.3+4.1)	173.0 (173.3:170.5)	17.4	25.0	42.4
1/3+1/4	850	800	-	-	-	10.0	31.7	-	41.7 (30.7+11.0)	176.6 (173.5:185.9)	19.6	31.7	51.3
2/1+2/2	483	483	0	0	72	3.4	3.9	0.4	7.8 (3.8+4.0)	57.9 (54.6:61.3)	5.0	3.9	8.9
3/2+3/1	690	690	-	-	-	5.7	9.7	-	15.4 (12.7+2.8)	80.4 (81.9:74.5)	13.8	9.7	23.5
3/3+3/4	672	588	-	-	-	5.1	9.6	-	14.7 (13.9+0.8)	78.7 (81.8:47.5)	12.9	9.6	22.5
4/1+4/2	715	687	156	0	0	6.9	22.2	0.2	29.3 (22.5+6.8)	147.4 (146.5:150.5)	15.7	22.2	37.9
5/1	772	772	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	614	614	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	444	444	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	624	624	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	756	756	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	312	312	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%): -18.3 PRC Over All Lanes (%): -18.3		Total Delay for Signalled Lanes (pcuHr): 141.17 Total Delay Over All Lanes(pcuHr): 141.17		Cycle Time (s): 90						

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

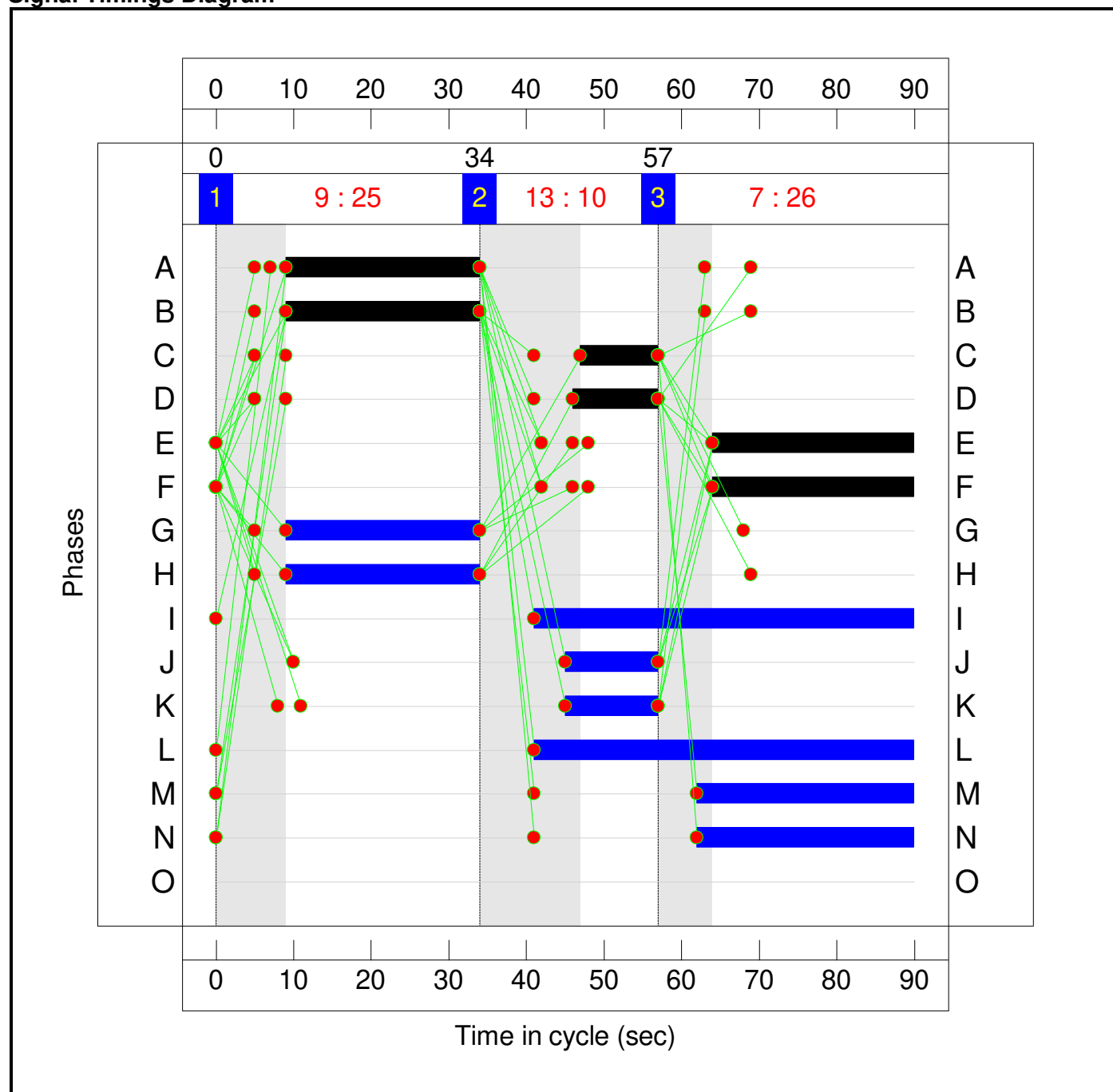
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	25	10	26
Change Point	0	34	57

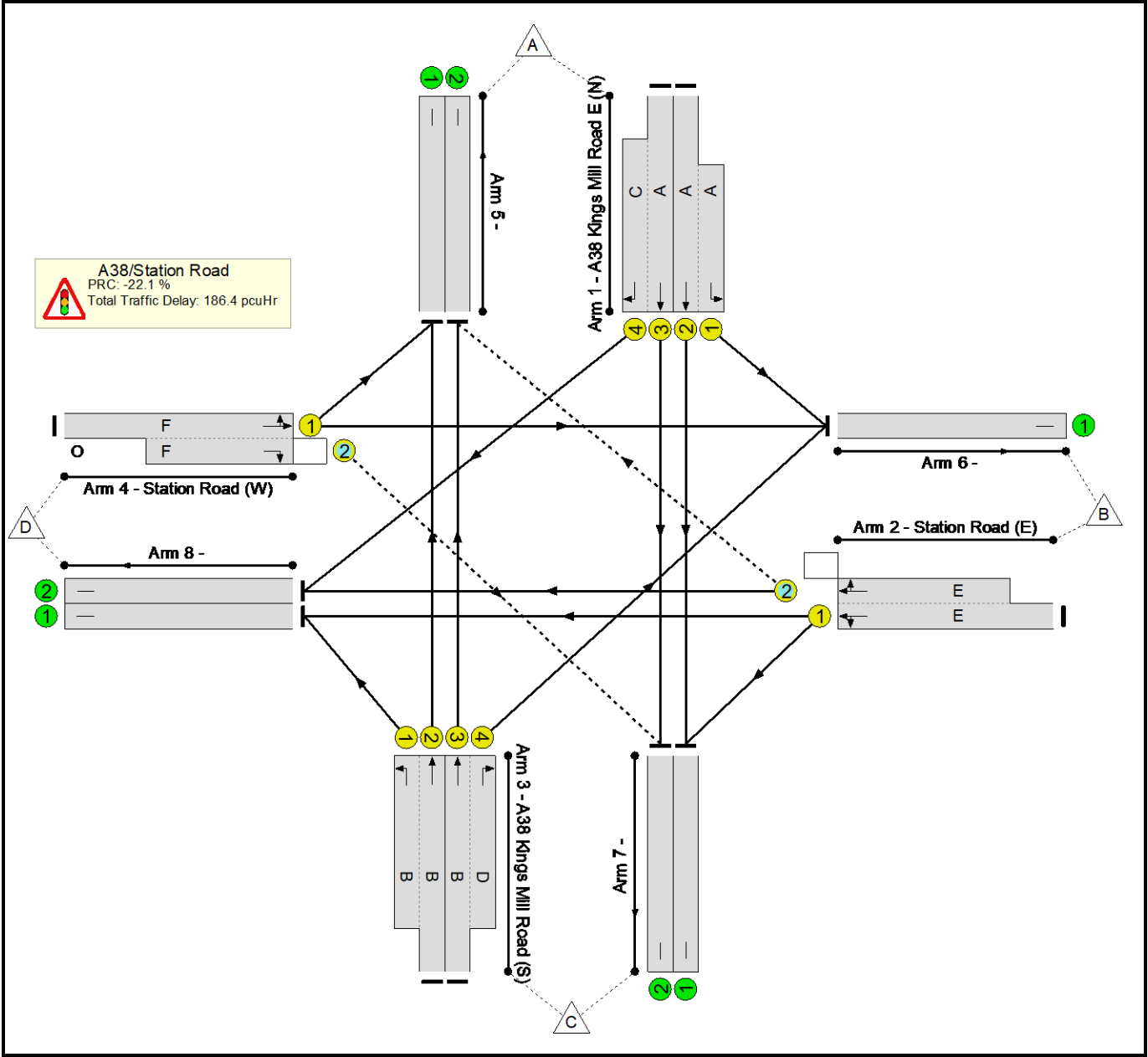
Signal Timings Diagram



Full Input Data And Results

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: A38 - Station Road	-	-	N/A	-	-		-	-	-	-	-	-	109.9%
A38/Station Road	-	-	N/A	-	-		-	-	-	-	-	-	109.9%
1/2+1/1	A38 Kings Mill Road E (N) Left Ahead	U	N/A	N/A	A		1	25	-	676	1900:1800	537+78	109.9 : 109.9%
1/3+1/4	A38 Kings Mill Road E (N) Ahead Right	U	N/A	N/A	A C		1	25:10	-	855	2000:1800	578+220	109.7 : 100.5%
2/1+2/2	Station Road (E) Right Left Ahead	U+O	N/A	N/A	E		1	26	-	484	1900:1800	277+261	90.0 : 90.0%
3/2+3/1	A38 Kings Mill Road (S) Ahead Left	U	N/A	N/A	B		1	25	-	697	1900:1800	549+129	102.8 : 102.8%
3/3+3/4	A38 Kings Mill Road (S) Ahead Right	U	N/A	N/A	B D		1	25:11	-	665	2000:1800	578+137	104.4 : 45.1%
4/1+4/2	Station Road (W) Left Ahead Right	U+O	N/A	N/A	F	O	1	26	0	737	1900:1800	533+150	107.9 : 107.9%
5/1		U	N/A	N/A	-		-	-	-	808	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	675	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	796	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	313	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%

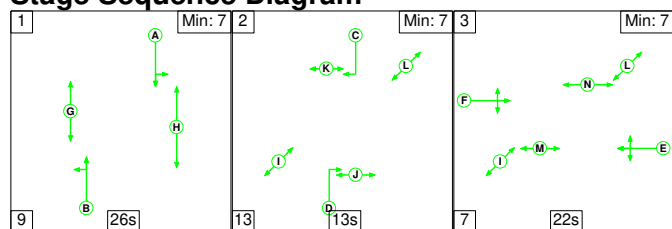
Full Input Data And Results

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: A38 - Station Road	-	-	150	0	72	42.5	143.3	0.7	186.4	-	-	-	-
A38/Station Road	-	-	150	0	72	42.5	143.3	0.7	186.4	-	-	-	-
1/2+1/1	676	615	-	-	-	8.5	35.2	-	43.7 (38.2+5.5)	232.7 (233.1:230.3)	18.5	35.2	53.6
1/3+1/4	855	798	-	-	-	10.5	34.8	-	45.3 (40.8+4.5)	190.7 (231.4:74.1)	20.8	34.8	55.6
2/1+2/2	484	484	0	0	72	3.4	3.9	0.4	7.8 (3.8+4.0)	57.8 (54.6:61.3)	5.0	3.9	8.9
3/2+3/1	697	682	-	-	-	6.6	18.7	-	25.2 (20.8+4.5)	130.4 (132.6:121.0)	14.5	18.7	33.1
3/3+3/4	665	575	-	-	-	5.1	18.1	-	23.2 (22.3+0.9)	125.4 (133.0:51.7)	12.6	18.1	30.6
4/1+4/2	737	683	150	0	0	8.3	32.7	0.2	41.2 (32.0+9.2)	201.3 (200.5:204.3)	17.5	32.7	50.2
5/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	601	601	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	606	606	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	728	728	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	313	313	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):		-22.1 -22.1	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):		186.41 186.41	Cycle Time (s): 90				

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

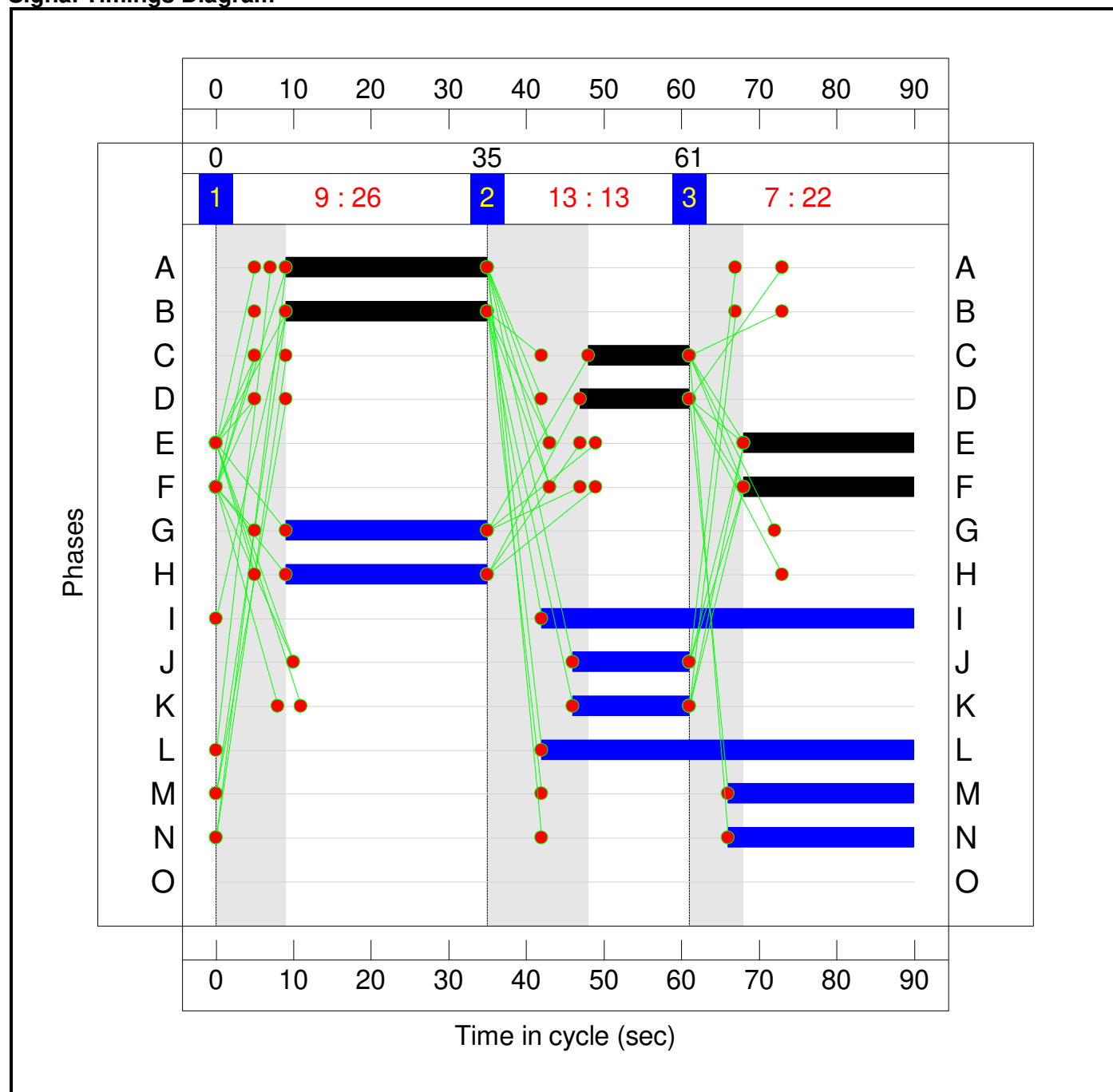
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	13	22
Change Point	0	35	61

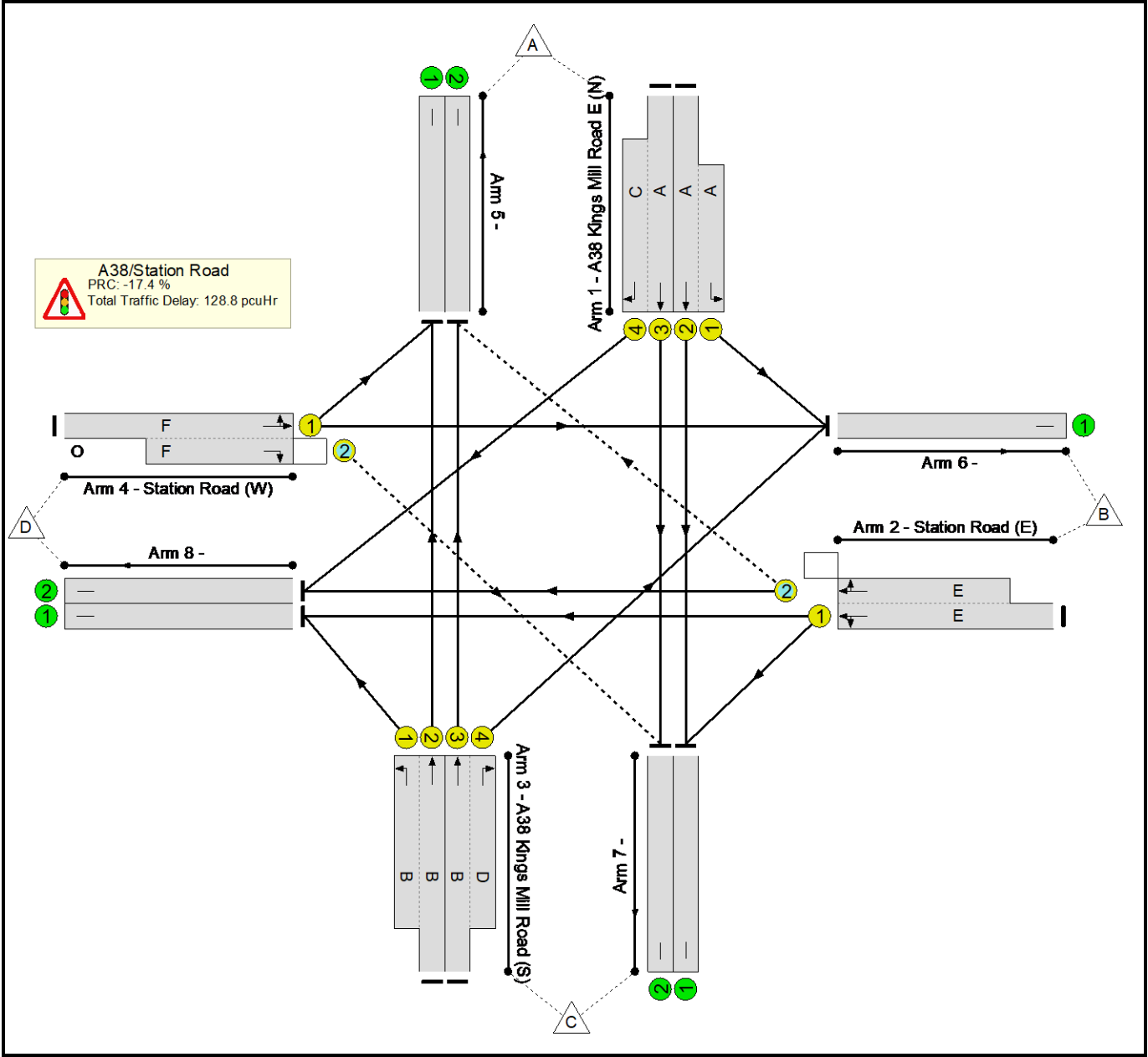
Signal Timings Diagram



Full Input Data And Results

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: A38 - Station Road	-	-	N/A	-	-		-	-	-	-	-	-	105.6%
A38/Station Road	-	-	N/A	-	-		-	-	-	-	-	-	105.6%
1/2+1/1	A38 Kings Mill Road E (N) Left Ahead	U	N/A	N/A	A		1	26	-	635	1900:1800	554+83	99.6 : 99.6%
1/3+1/4	A38 Kings Mill Road E (N) Ahead Right	U	N/A	N/A	A C		1	26:13	-	883	2000:1800	600+280	100.5 : 100.0%
2/1+2/2	Station Road (E) Right Left Ahead	U+O	N/A	N/A	E		1	22	-	421	1900:1800	262+248	82.5 : 82.5%
3/2+3/1	A38 Kings Mill Road (S) Ahead Left	U	N/A	N/A	B		1	26	-	774	1900:1800	570+182	103.0 : 103.0%
3/3+3/4	A38 Kings Mill Road (S) Ahead Right	U	N/A	N/A	B D		1	26:14	-	733	2000:1800	600+220	104.8 : 47.2%
4/1+4/2	Station Road (W) Left Ahead Right	U+O	N/A	N/A	F	O	1	22	0	616	1900:1800	472+111	105.6 : 105.6%
5/1		U	N/A	N/A	-		-	-	-	810	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	695	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	463	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	720	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	361	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	419	Inf	Inf	0.0%

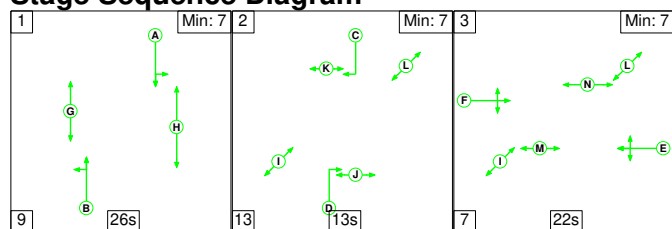
Full Input Data And Results

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: A38 - Station Road	-	-	111	0	66	36.4	91.8	0.5	128.8	-	-	-	-
A38/Station Road	-	-	111	0	66	36.4	91.8	0.5	128.8	-	-	-	-
1/2+1/1	635	635	-	-	-	5.4	11.9	-	17.3 (15.1+2.2)	98.3 (98.7:95.5)	14.4	11.9	26.3
1/3+1/4	883	880	-	-	-	8.4	15.6	-	24.0 (16.6+7.4)	97.8 (98.8:95.6)	15.9	15.6	31.5
2/1+2/2	421	421	0	0	66	3.3	2.2	0.3	5.9 (2.8+3.0)	50.3 (47.3:53.4)	4.5	2.2	6.7
3/2+3/1	774	757	-	-	-	7.2	20.6	-	27.8 (21.5+6.3)	129.1 (131.8:120.4)	15.1	20.6	35.7
3/3+3/4	733	641	-	-	-	5.5	18.4	-	23.9 (22.7+1.2)	117.3 (130.0:41.0)	13.5	18.4	31.8
4/1+4/2	616	583	111	0	0	6.6	23.1	0.2	29.9 (24.2+5.8)	175.0 (174.4:177.7)	13.8	23.1	37.0
5/1	781	781	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	426	426	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	711	711	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	361	361	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	419	419	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -17.4 Total Delay for Signalled Lanes (pcuHr): 128.79 Cycle Time (s): 90 PRC Over All Lanes (%): -17.4 Total Delay Over All Lanes(pcuHr): 128.79													

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

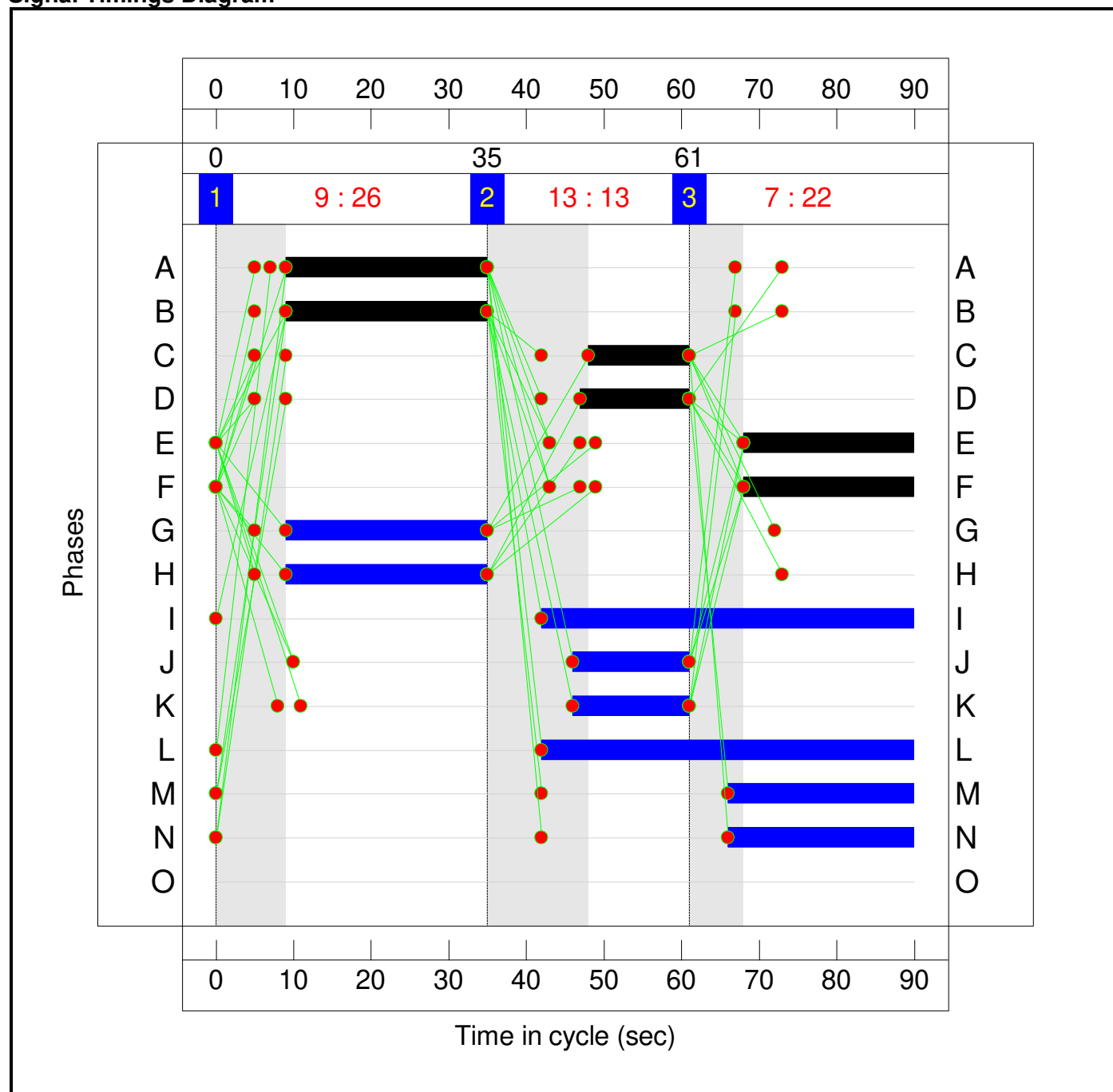
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	13	22
Change Point	0	35	61

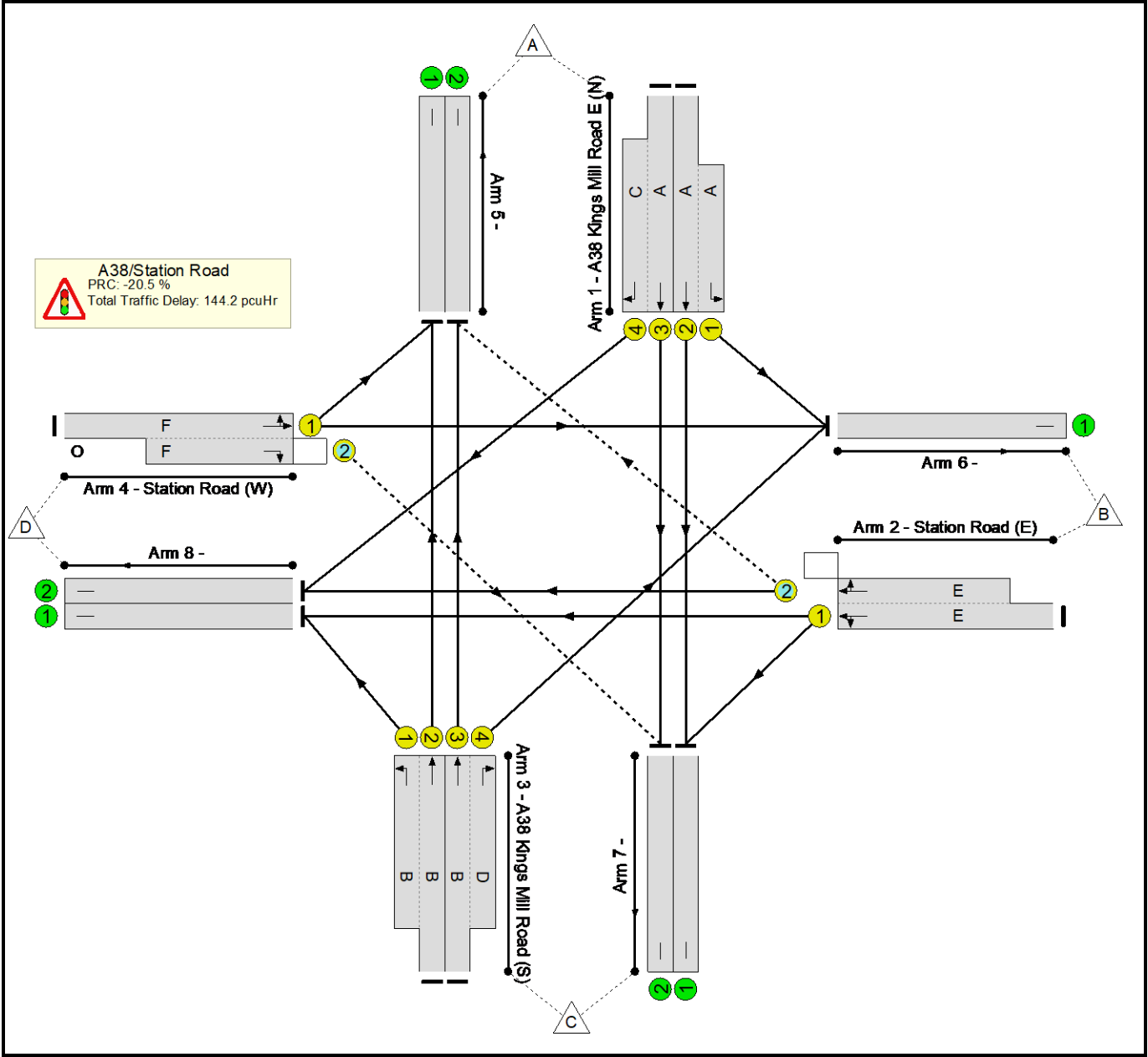
Signal Timings Diagram



Full Input Data And Results

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: A38 - Station Road	-	-	N/A	-	-		-	-	-	-	-	-	108.5%
A38/Station Road	-	-	N/A	-	-		-	-	-	-	-	-	108.5%
1/2+1/1	A38 Kings Mill Road E (N) Left Ahead	U	N/A	N/A	A		1	26	-	631	1900:1800	554+84	98.9 : 98.9%
1/3+1/4	A38 Kings Mill Road E (N) Ahead Right	U	N/A	N/A	A C		1	26:13	-	907	2000:1800	600+280	101.2 : 107.1%
2/1+2/2	Station Road (E) Right Left Ahead	U+O	N/A	N/A	E		1	22	-	424	1900:1800	264+250	82.5 : 82.5%
3/2+3/1	A38 Kings Mill Road (S) Ahead Left	U	N/A	N/A	B		1	26	-	774	1900:1800	570+182	103.0 : 103.0%
3/3+3/4	A38 Kings Mill Road (S) Ahead Right	U	N/A	N/A	B D		1	26:14	-	733	2000:1800	600+220	104.8 : 47.2%
4/1+4/2	Station Road (W) Left Ahead Right	U+O	N/A	N/A	F	O	1	22	0	630	1900:1800	473+108	108.5 : 108.5%
5/1		U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	695	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	465	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	590	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	724	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
8/2		U	N/A	N/A	-		-	-	-	440	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: A38 - Station Road	-	-	108	0	66	38.4	105.2	0.5	144.2	-	-	-	-
A38/Station Road	-	-	108	0	66	38.4	105.2	0.5	144.2	-	-	-	-
1/2+1/1	631	631	-	-	-	5.4	10.9	-	16.2 (14.2+2.1)	92.7 (93.2:89.5)	14.3	10.9	25.2
1/3+1/4	907	880	-	-	-	9.5	23.3	-	32.7 (15.6+17.1)	129.9 (92.8:204.9)	16.4	23.3	39.7
2/1+2/2	424	424	0	0	66	3.3	2.2	0.3	5.9 (2.9+3.0)	50.2 (47.2:53.3)	4.5	2.2	6.8
3/2+3/1	774	757	-	-	-	7.2	20.6	-	27.8 (21.5+6.3)	129.1 (131.8:120.4)	15.1	20.6	35.7
3/3+3/4	733	641	-	-	-	5.5	18.4	-	23.9 (22.7+1.2)	117.3 (130.0:41.0)	13.5	18.4	31.8
4/1+4/2	630	581	108	0	0	7.6	29.8	0.2	37.6 (30.6+7.1)	215.1 (214.5:217.6)	15.2	29.8	45.0
5/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	590	590	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	708	708	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	420	420	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%): -20.5 PRC Over All Lanes (%): -20.5		Total Delay for Signalled Lanes (pcuHr): 144.15 Total Delay Over All Lanes(pcuHr): 144.15				Cycle Time (s): 90				

Junctions 10 & 11 Mansfield Road/Stoneyford Road/Dalestorth Street

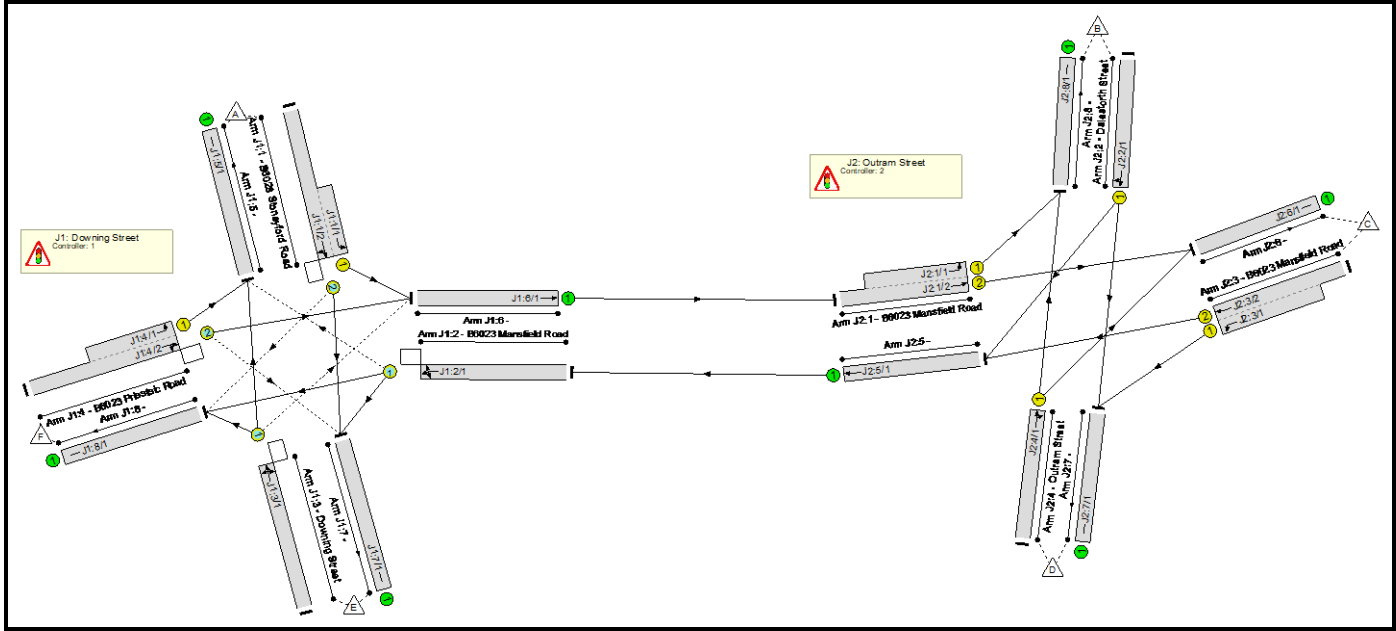
Full Input Data And Results

Full Input Data And Results

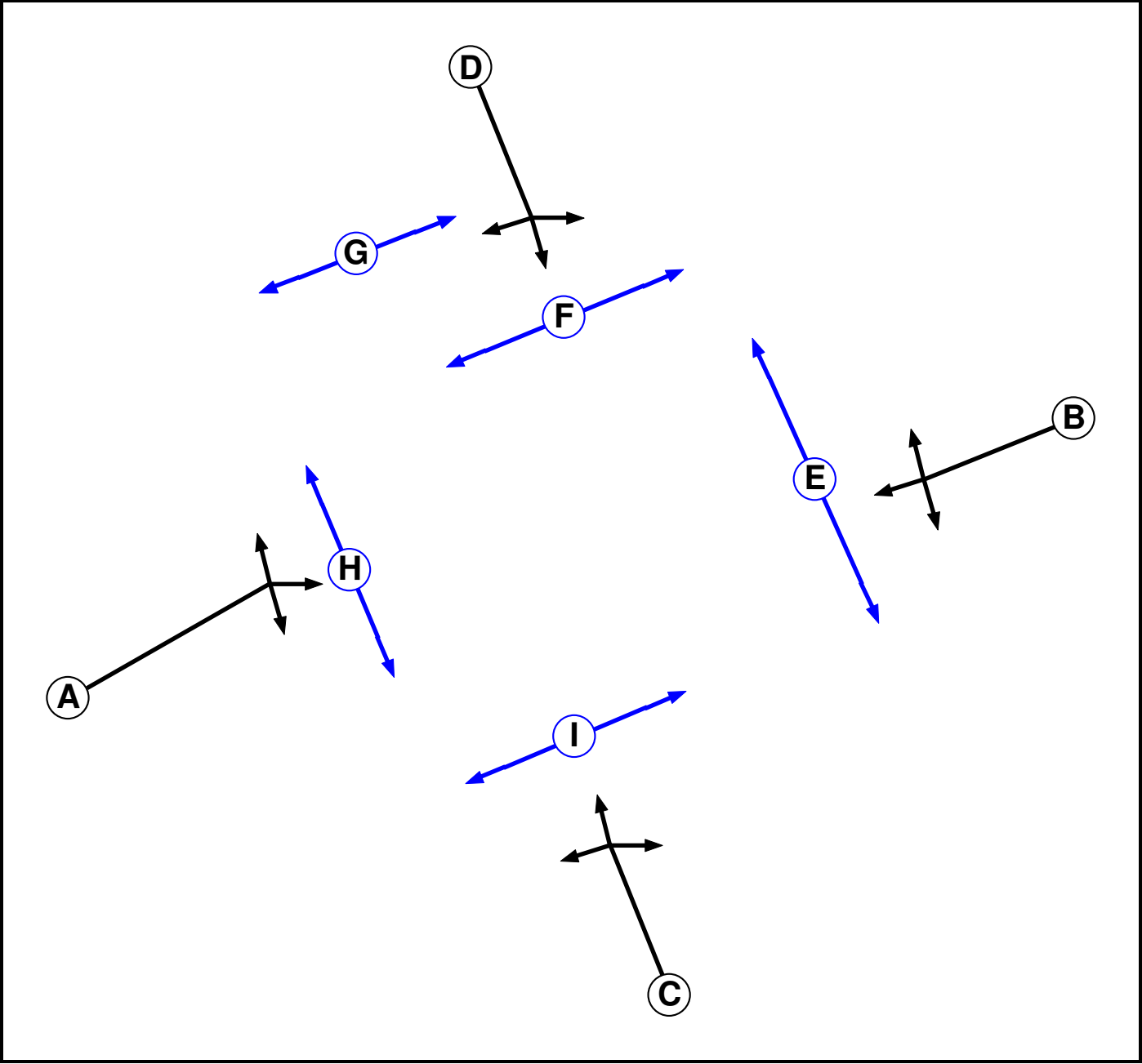
User and Project Details

Project:	Ashland Road, Sutton in Ashfield
Title:	Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street
Location:	
Client:	Bellway Homes
Additional detail:	
File name:	J10-11 Mansfield Road-Stoneyford Road-Dalestorth Street (Network) V2.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	King Edward Court, King Edward Street, Nottingham

Network Layout Diagram



C1
Phase Diagram



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		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Pedestrian		6	6

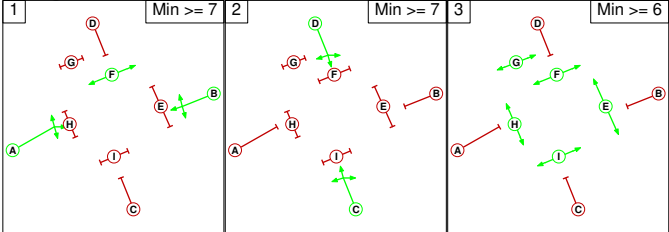
Phase Intergreens Matrix

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		-	7	7	9	-	10	8	10
	B	-		7	7	9	-	10	8	10
	C	7	7		-	10	5	8	10	8
	D	7	7	-		10	5	8	10	8
	E	8	8	8	8		-	-	-	-
	F	-	-	9	9	-		-	-	-
	G	8	8	8	8	-	-		-	-
	H	8	8	8	8	-	-	-		-
	I	9	9	9	9	-	-	-	-	

Phases in Stage

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

Stage Diagram



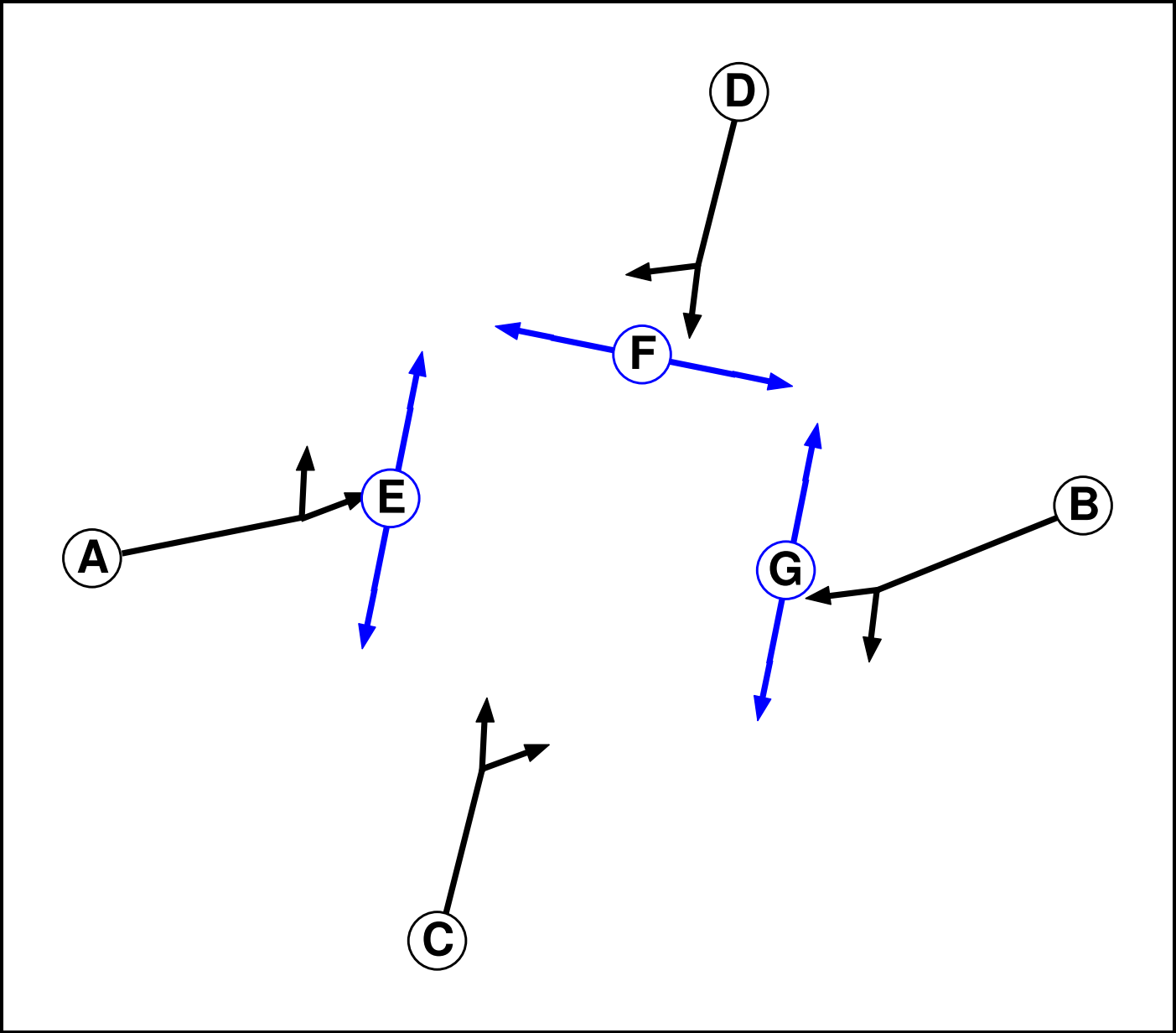
Phase Delays

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

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
	1	9	12
	2	7	10
3	9	9	

C2
Phase Diagram



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		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6

Full Input Data And Results

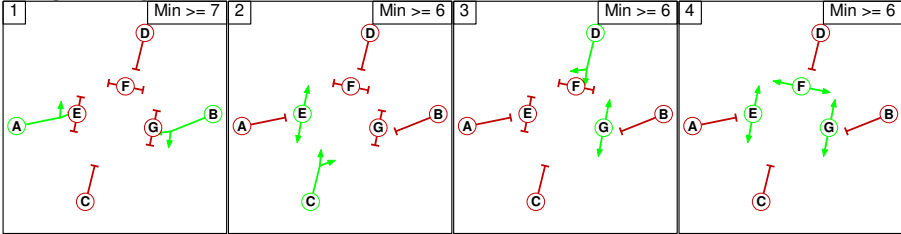
Phase Intergreens Matrix

Terminating Phase	Starting Phase							
		A	B	C	D	E	F	G
	A		-	7	7	5	8	8
	B	-		7	7	8	10	5
	C	7	7		5	-	10	8
	D	7	7	5		8	8	-
	E	8	8	-	8		-	-
	F	8	8	8	8	-		-
	G	8	8	8	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Downing Street											
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)
J1:1/2 (B6028 Stoneyford Road)	J1:8/1 (Right)	1439	0	J1:3/1	1.09	To J1:5/1 (Ahead) To J1:8/1 (Left)	2.00	2.00	0.50	2	2.00
J1:2/1 (B6023 Mansfield Road)	J1:5/1 (Right)	1439	0	J1:4/1	1.09	All	2.00	2.00	0.50	2	2.00
				J1:4/2	1.09	To J1:6/1 (Ahead)					
	J1:6/1 (Right)	1439	0	J1:1/1	1.09	All	2.00	2.00	0.50	2	2.00
				J1:1/2	1.09	To J1:7/1 (Ahead)					
J1:4/2 (B6023 Priestsic Road)	J1:7/1 (Right)	1439	0	J1:2/1	1.09	To J1:7/1 (Left) To J1:8/1 (Ahead)	2.00	2.00	0.50	2	2.00

Junction: J2: Outram Street
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: Downing Street												
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)
J1:1/1 (B6028 Stoneyford Road)	U	D	2	3	7.0	Geom	-	3.00	0.00	Y	Arm J1:6 Left	12.00
J1:1/2 (B6028 Stoneyford Road)	O	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:7 Ahead	Inf
											Arm J1:8 Right	20.00
J1:2/1 (B6023 Mansfield Road)	O	B	2	3	31.3	Geom	-	4.50	0.00	Y	Arm J1:5 Right	12.00
											Arm J1:7 Left	12.00
											Arm J1:8 Ahead	Inf
											Arm J1:5 Ahead	Inf
J1:3/1 (Downing Street)	O	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm J1:6 Right	20.00
											Arm J1:8 Left	6.00
J1:4/1 (B6023 Priestsic Road)	U	A	2	3	9.0	Geom	-	2.75	0.00	Y	Arm J1:5 Left	15.00
J1:4/2 (B6023 Priestsic Road)	O	A	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Right	18.00
J1:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1	U		2	3	3.5	Inf	-	-	-	-	-	-
J1:7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Outram Street												
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)
J2:1/1 (B6023 Mansfield Road)	U	A	2	3	13.9	User	1800	-	-	-	-	-
J2:1/2 (B6023 Mansfield Road)	U	A	2	3	34.8	User	1800	-	-	-	-	-
J2:2/1 (Dalestorth Street)	U	D	2	3	60.0	User	1800	-	-	-	-	-
J2:3/1 (B6023 Mansfield Road)	U	B	2	3	13.9	User	1800	-	-	-	-	-
J2:3/2 (B6023 Mansfield Road)	U	B	2	3	60.0	User	1800	-	-	-	-	-
J2:4/1 (Outram Street)	U	C	2	3	60.0	User	1800	-	-	-	-	-
J2:5/1	U		2	3	3.5	Inf	-	-	-	-	-	-
J2:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Validation'	17:00	18:00	01:00	
2: '2030 Bkgd AM'	08:00	09:00	01:00	
3: '2030 Bkgd PM'	17:00	18:00	01:00	
4: '2030 With Dev AM'	08:00	09:00	01:00	
5: '2030 With Dev PM'	17:00	18:00	01:00	

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
		A	B	C	D	E	F	Tot.
Origin	A	0	69	154	0	65	310	598
	B	67	0	0	216	0	264	547
	C	72	0	0	280	0	280	632
	D	0	129	294	0	0	0	423
	E	67	1	3	0	0	22	93
	F	254	162	325	0	17	0	758
	Tot.	460	361	776	496	82	876	3051

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2030 Bkgd AM
Junction: J1: Downing Street	
J1:1/1 (short)	223
J1:1/2 (with short)	598(In) 375(Out)
J1:2/1	683
J1:3/1	93
J1:4/1 (short)	254
J1:4/2 (with short)	758(In) 504(Out)
J1:5/1	460
J1:6/1	714
J1:7/1	82
J1:8/1	876
Junction: J2: Outram Street	
J2:1/1 (short)	232
J2:1/2 (with short)	714(In) 482(Out)
J2:2/1	547
J2:3/1 (short)	280
J2:3/2 (with short)	632(In) 352(Out)
J2:4/1	423
J2:5/1	683
J2:6/1	776
J2:7/1	496
J2:8/1	361

Lane Saturation Flows

Junction: J1: Downing Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:6 Left	12.00	100.0 %	1702	1702
J1:1/2 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:7 Ahead	Inf	17.3 %	1803	1803
				Arm J1:8 Right	20.00	82.7 %		
J1:2/1 (B6023 Mansfield Road)	4.50	0.00	Y	Arm J1:5 Right	12.00	20.4 %	2014	2014
				Arm J1:7 Left	12.00	0.0 %		
				Arm J1:8 Ahead	Inf	79.6 %		
J1:3/1 (Downing Street)	4.00	0.00	Y	Arm J1:5 Ahead	Inf	72.0 %	1897	1897
				Arm J1:6 Right	20.00	4.3 %		
				Arm J1:8 Left	6.00	23.7 %		
J1:4/1 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:5 Left	15.00	100.0 %	1718	1718
J1:4/2 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:6 Ahead	Inf	96.6 %	1885	1885
				Arm J1:7 Right	18.00	3.4 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				Infinite Saturation Flow			Inf	Inf
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf

Junction: J2: Outram Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:1/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:2/1 (Dalestorth Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:4/1 (Outram Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:5/1				Infinite Saturation Flow			Inf	Inf
J2:6/1				Infinite Saturation Flow			Inf	Inf
J2:7/1				Infinite Saturation Flow			Inf	Inf
J2:8/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
Origin		A	B	C	D	E	F	Tot.
	A	0	70	154	0	65	310	599
	B	67	0	0	216	0	268	551
	C	72	0	0	280	0	284	636
	D	0	129	294	0	0	0	423
	E	67	1	3	0	0	22	93
	F	254	171	336	0	17	0	778
	Tot.	460	371	787	496	82	884	3080

Traffic Lane Flows

Lane	Scenario 2: 2030 With Dev AM
Junction: J1: Downing Street	
J1:1/1 (short)	224
J1:1/2 (with short)	599(In) 375(Out)
J1:2/1	691
J1:3/1	93
J1:4/1 (short)	254
J1:4/2 (with short)	778(In) 524(Out)
J1:5/1	460
J1:6/1	735
J1:7/1	82
J1:8/1	884
Junction: J2: Outram Street	
J2:1/1 (short)	242
J2:1/2 (with short)	735(In) 493(Out)
J2:2/1	551
J2:3/1 (short)	280
J2:3/2 (with short)	636(In) 356(Out)
J2:4/1	423
J2:5/1	691
J2:6/1	787
J2:7/1	496
J2:8/1	371

Lane Saturation Flows

Junction: J1: Downing Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:6 Left	12.00	100.0 %	1702	1702
J1:1/2 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:7 Ahead	Inf	17.3 %	1803	1803
				Arm J1:8 Right	20.00	82.7 %		
J1:2/1 (B6023 Mansfield Road)	4.50	0.00	Y	Arm J1:5 Right	12.00	20.1 %	2014	2014
				Arm J1:7 Left	12.00	0.0 %		
				Arm J1:8 Ahead	Inf	79.9 %		
J1:3/1 (Downing Street)	4.00	0.00	Y	Arm J1:5 Ahead	Inf	72.0 %	1897	1897
				Arm J1:6 Right	20.00	4.3 %		
				Arm J1:8 Left	6.00	23.7 %		
J1:4/1 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:5 Left	15.00	100.0 %	1718	1718
J1:4/2 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:6 Ahead	Inf	96.8 %	1885	1885
				Arm J1:7 Right	18.00	3.2 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				Infinite Saturation Flow			Inf	Inf
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf

Junction: J2: Outram Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:1/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:2/1 (Dalestorth Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:4/1 (Outram Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:5/1				Infinite Saturation Flow			Inf	Inf
J2:6/1				Infinite Saturation Flow			Inf	Inf
J2:7/1				Infinite Saturation Flow			Inf	Inf
J2:8/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
Origin		A	B	C	D	E	F	Tot.
	A	0	53	62	0	110	178	403
	B	55	0	0	217	232	1	505
	C	76	0	0	355	300	1	732
	D	0	268	284	0	0	0	552
	E	186	5	7	0	0	47	245
	F	350	300	339	0	23	0	1012
	Tot.	667	626	692	572	665	227	3449

Traffic Lane Flows

Lane	Scenario 3: 2030 Bkgd PM
Junction: J1: Downing Street	
J1:1/1 (short)	115
J1:1/2 (with short)	403(In) 288(Out)
J1:2/1	665
J1:3/1	245
J1:4/1 (short)	350
J1:4/2 (with short)	1012(In) 662(Out)
J1:5/1	667
J1:6/1	766
J1:7/1	665
J1:8/1	227
Junction: J2: Outram Street	
J2:1/1 (short)	358
J2:1/2 (with short)	766(In) 408(Out)
J2:2/1	505
J2:3/1 (short)	355
J2:3/2 (with short)	732(In) 377(Out)
J2:4/1	552
J2:5/1	665
J2:6/1	692
J2:7/1	572
J2:8/1	626

Lane Saturation Flows

Junction: J1: Downing Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:6 Left	12.00	100.0 %	1702	1702
J1:1/2 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:7 Ahead	Inf	38.2 %	1830	1830
				Arm J1:8 Right	20.00	61.8 %		
J1:2/1 (B6023 Mansfield Road)	4.50	0.00	Y	Arm J1:5 Right	12.00	19.7 %	1836	1836
				Arm J1:7 Left	12.00	80.0 %		
				Arm J1:8 Ahead	Inf	0.3 %		
J1:3/1 (Downing Street)	4.00	0.00	Y	Arm J1:5 Ahead	Inf	75.9 %	1916	1916
				Arm J1:6 Right	20.00	4.9 %		
				Arm J1:8 Left	6.00	19.2 %		
J1:4/1 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:5 Left	15.00	100.0 %	1718	1718
J1:4/2 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:6 Ahead	Inf	96.5 %	1885	1885
				Arm J1:7 Right	18.00	3.5 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				Infinite Saturation Flow			Inf	Inf
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf

Junction: J2: Outram Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:1/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:2/1 (Dalestorth Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:4/1 (Outram Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:5/1				Infinite Saturation Flow			Inf	Inf
J2:6/1				Infinite Saturation Flow			Inf	Inf
J2:7/1				Infinite Saturation Flow			Inf	Inf
J2:8/1				Infinite Saturation Flow			Inf	Inf

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination							
Origin		A	B	C	D	E	F	Tot.
	A	0	52	62	0	111	178	403
	B	55	0	0	217	242	1	515
	C	76	0	0	355	311	1	743
	D	0	283	269	0	0	0	552
	E	185	5	7	0	0	47	244
	F	350	306	344	0	23	0	1023
	Tot.	666	646	682	572	687	227	3480

Traffic Lane Flows

Lane	Scenario 4: 2030 With Dev PM
Junction: J1: Downing Street	
J1:1/1 (short)	114
J1:1/2 (with short)	403(In) 289(Out)
J1:2/1	686
J1:3/1	244
J1:4/1 (short)	350
J1:4/2 (with short)	1023(In) 673(Out)
J1:5/1	666
J1:6/1	776
J1:7/1	687
J1:8/1	227
Junction: J2: Outram Street	
J2:1/1 (short)	363
J2:1/2 (with short)	776(In) 413(Out)
J2:2/1	515
J2:3/1 (short)	355
J2:3/2 (with short)	743(In) 388(Out)
J2:4/1	552
J2:5/1	686
J2:6/1	682
J2:7/1	572
J2:8/1	646

Lane Saturation Flows

Junction: J1: Downing Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:6 Left	12.00	100.0 %	1702	1702
J1:1/2 (B6028 Stoneyford Road)	3.00	0.00	Y	Arm J1:7 Ahead	Inf	38.4 %	1830	1830
				Arm J1:8 Right	20.00	61.6 %		
J1:2/1 (B6023 Mansfield Road)	4.50	0.00	Y	Arm J1:5 Right	12.00	19.1 %	1836	1836
				Arm J1:7 Left	12.00	80.6 %		
				Arm J1:8 Ahead	Inf	0.3 %		
J1:3/1 (Downing Street)	4.00	0.00	Y	Arm J1:5 Ahead	Inf	75.8 %	1916	1916
				Arm J1:6 Right	20.00	4.9 %		
				Arm J1:8 Left	6.00	19.3 %		
J1:4/1 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:5 Left	15.00	100.0 %	1718	1718
J1:4/2 (B6023 Priestsic Road)	2.75	0.00	Y	Arm J1:6 Ahead	Inf	96.6 %	1885	1885
				Arm J1:7 Right	18.00	3.4 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				Infinite Saturation Flow			Inf	Inf
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf

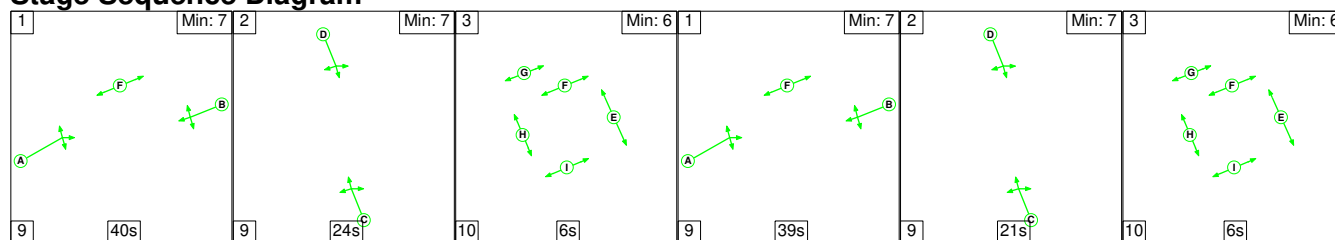
Junction: J2: Outram Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:1/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:2/1 (Dalestorth Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/1 (B6023 Mansfield Road Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:3/2 (B6023 Mansfield Road Lane 2)				This lane uses a directly entered Saturation Flow			1800	1800
J2:4/1 (Outram Street Lane 1)				This lane uses a directly entered Saturation Flow			1800	1800
J2:5/1				Infinite Saturation Flow			Inf	Inf
J2:6/1				Infinite Saturation Flow			Inf	Inf
J2:7/1				Infinite Saturation Flow			Inf	Inf
J2:8/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 1: '2030 Bkgd AM' (FG2: '2030 Bkgd AM', Plan 1: 'Network Control Plan 1')

C1

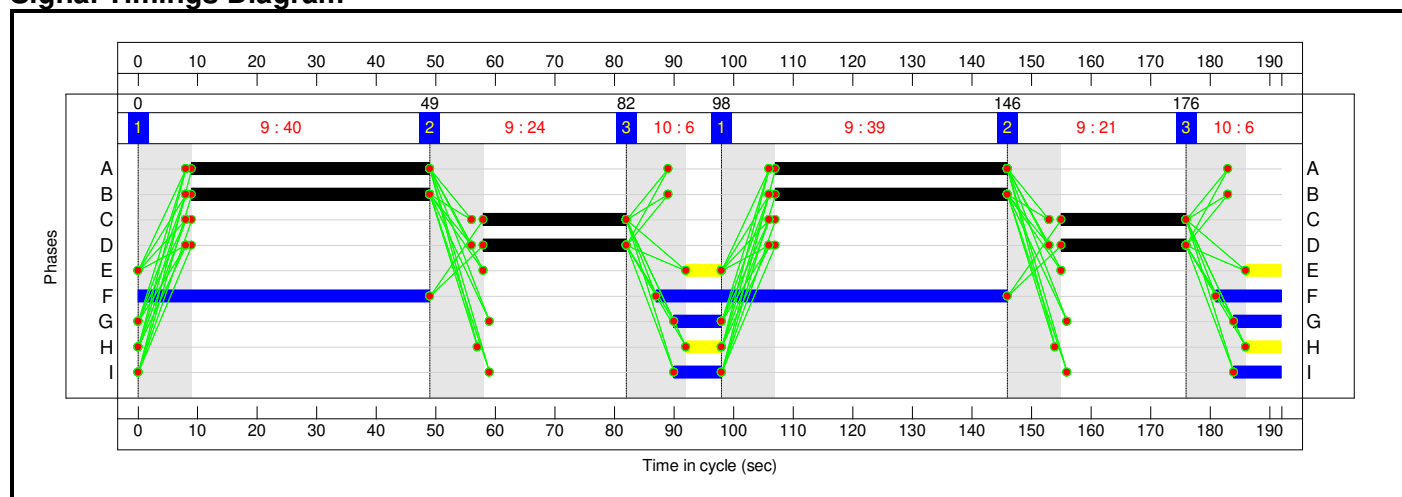
Stage Sequence Diagram



Stage Timings

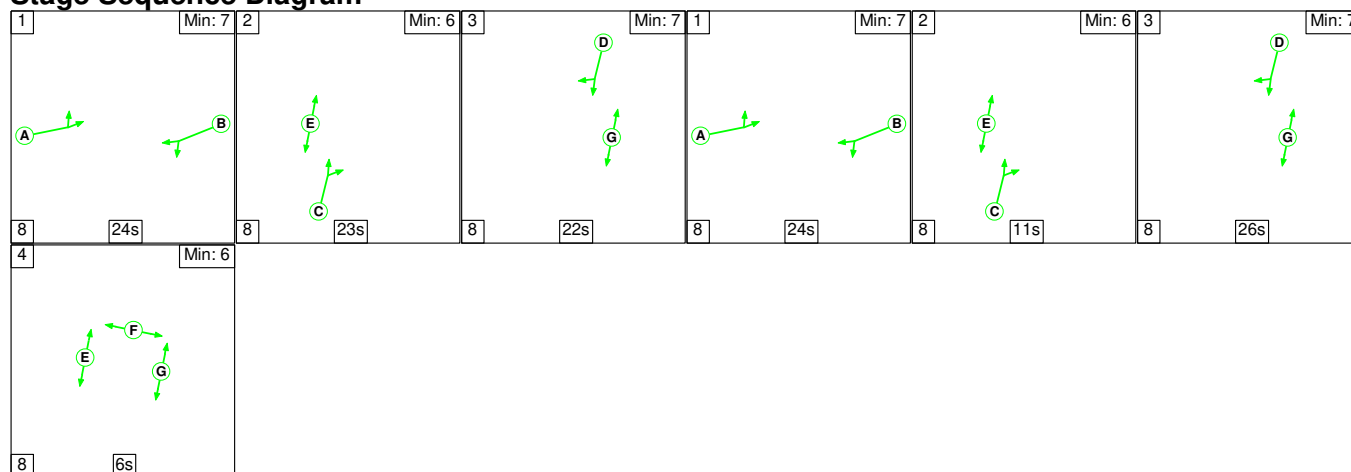
Stage	1	2	3	1	2	3
Duration	40	24	6	39	21	6
Change Point	0	49	82	98	146	176

Signal Timings Diagram



C2

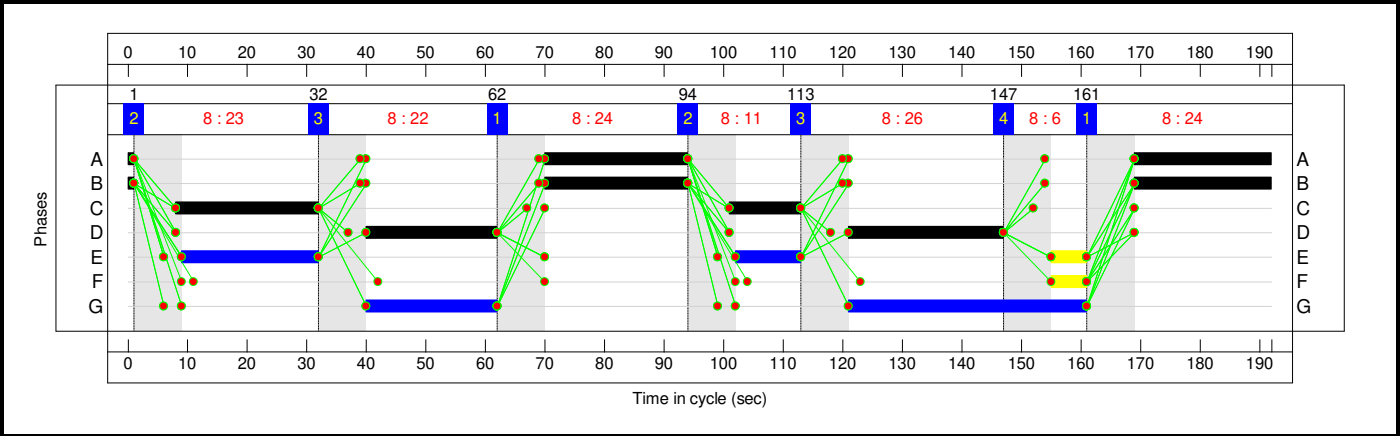
Stage Sequence Diagram



Stage Timings

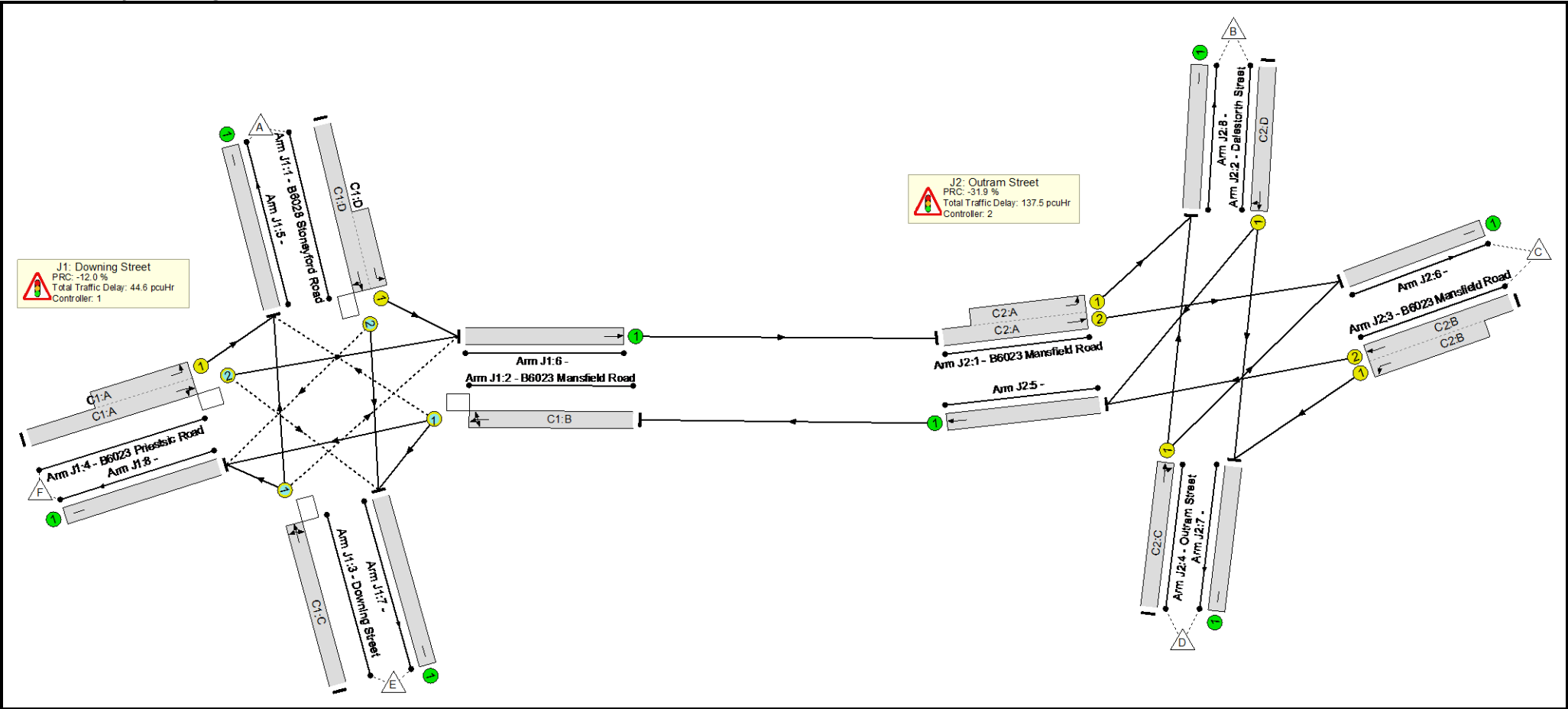
Stage	1	2	3	1	2	3	4
Duration	24	23	22	24	11	26	6
Change Point	161	1	32	62	94	113	147

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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	N/A	-	-		-	-	-	-	-	-	118.7%
J1: Downing Street	-	-	N/A	-	-		-	-	-	-	-	-	100.8%
1/2+1/1	B6028 Stoneyford Road Left Ahead Right	O+U	N/A	N/A	C1:D		2	45	-	598	1803:1702	372+221	100.8 : 100.8%
2/1	B6023 Mansfield Road Right Left Ahead	O	N/A	N/A	C1:B		2	79	-	683	2014	655	97.1%
3/1	Downing Street Ahead Right Left	O	N/A	N/A	C1:C		2	45	-	93	1897	464	20.0%
4/2+4/1	B6023 Priestsic Road Left Ahead Right	O+U	N/A	N/A	C1:A		2	79	-	758	1885:1718	635+320	79.4 : 79.4%
5/1		U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	82	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	876	Inf	Inf	0.0%
J2: Outram Street	-	-	N/A	-	-		-	-	-	-	-	-	118.7%
1/2+1/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:A		2	48	-	714	1800:1800	469+226	102.6 : 102.6%
2/1	Dalestorth Street Right Ahead	U	N/A	N/A	C2:D		2	48	-	547	1800	469	116.7%
3/2+3/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:B		2	48	-	632	1800:1800	469+373	75.1 : 75.1%
4/1	Outram Street Right Ahead	U	N/A	N/A	C2:C		2	36	-	423	1800	356	118.7%

Full Input Data And Results

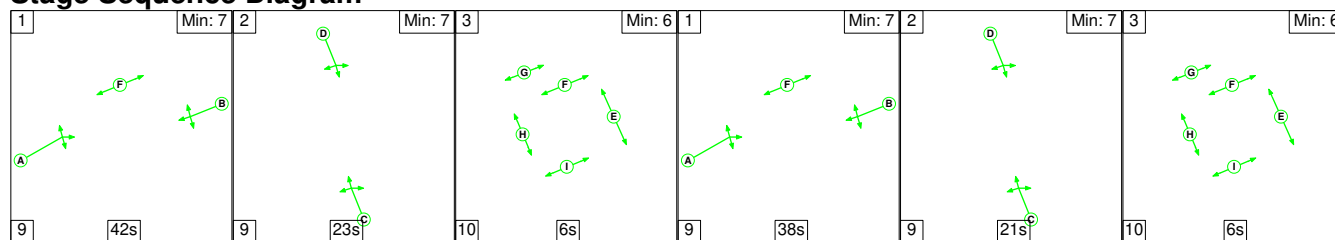
5/1	Ahead	U	N/A	N/A	-		-	-	-	683	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	496	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	361	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	402	0	56	58.4	122.9	0.8	182.1	-	-	-	-
J1: Downing Street	-	-	402	0	56	19.6	24.2	0.8	44.6	-	-	-	-
1/2+1/1	598	593	273	0	35	6.6	13.5	0.3	20.4	123.0	13.1	13.5	26.6
2/1	636	636	109	0	20	7.7	8.7	0.5	16.9	95.8	19.4	8.7	28.1
3/1	93	93	4	0	0	0.7	0.1	0.0	0.9	33.8	2.0	0.1	2.1
4/2+4/1	758	758	16	0	1	4.5	1.9	0.0	6.4	30.3	12.3	1.9	14.2
5/1	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	712	712	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	81	81	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	836	836	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Outram Street	-	-	0	0	0	38.8	98.7	0.0	137.5	-	-	-	-
1/2+1/1	712	698	-	-	-	7.3	18.5	-	25.8	130.5	14.3	18.5	32.8
2/1	547	469	-	-	-	13.0	42.4	-	55.3	364.0	21.8	42.4	64.2
3/2+3/1	632	632	-	-	-	5.6	1.5	-	7.1	40.5	8.9	1.5	10.4
4/1	423	356	-	-	-	13.0	36.3	-	49.3	419.2	19.6	36.3	55.9
5/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	716	716	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	465	465	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	338	338	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 C2 PRC for Signalled Lanes (%): -12.0 Total Delay for Signalled Lanes (pcuHr): 44.60 Cycle Time (s): 192 PRC for Signalled Lanes (%): -31.9 Total Delay for Signalled Lanes (pcuHr): 137.49 Cycle Time (s): 192 PRC Over All Lanes (%): -31.9 Total Delay Over All Lanes(pcuHr): 182.09													

Full Input Data And Results

Scenario 2: '2030 With Dev AM' (FG4: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

C1

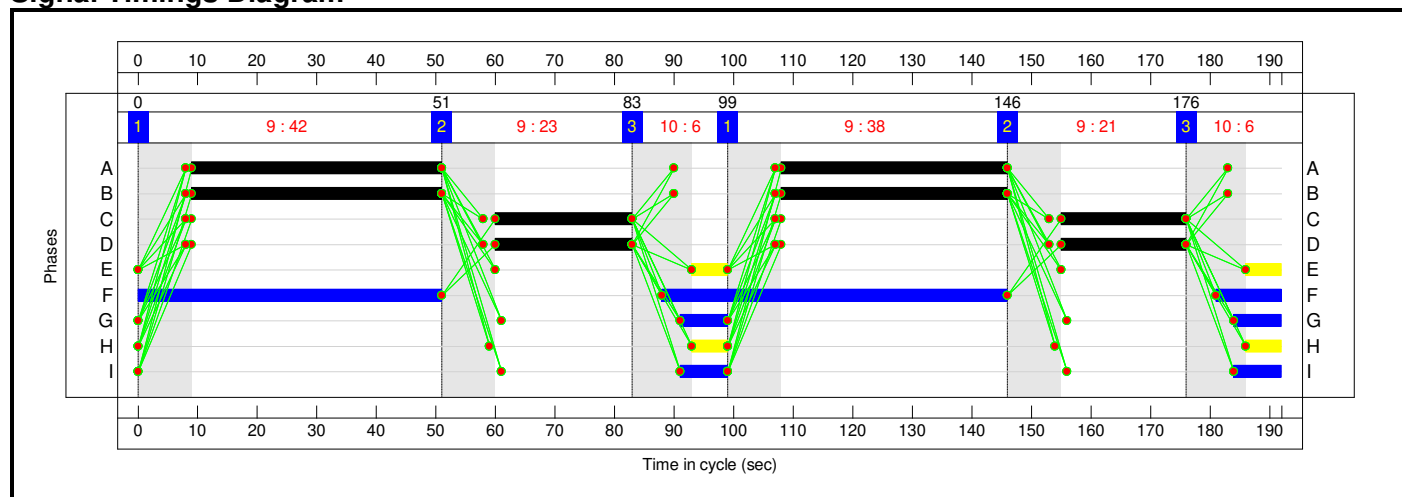
Stage Sequence Diagram



Stage Timings

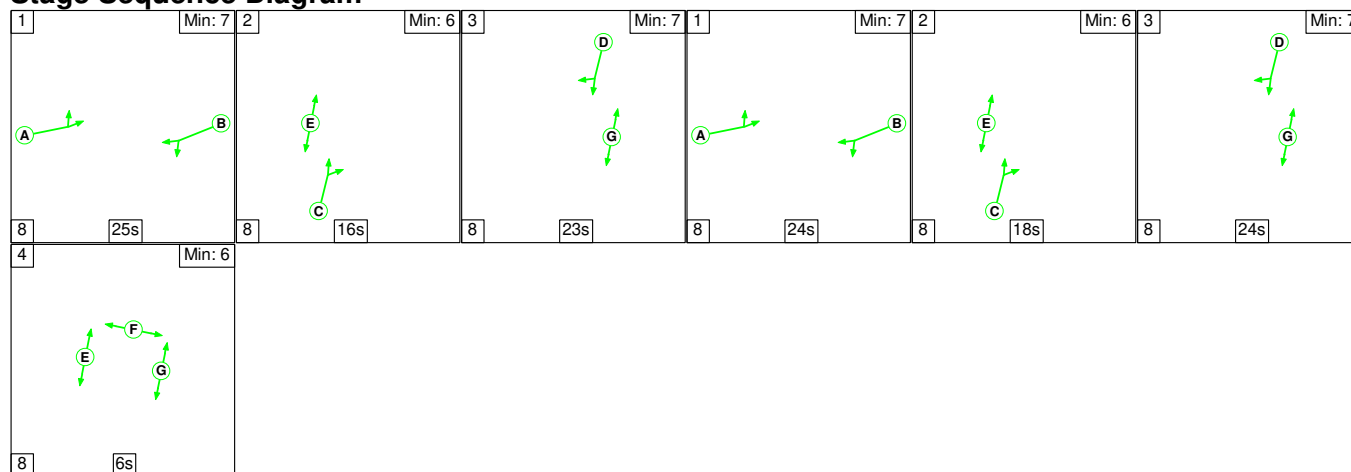
Stage	1	2	3	1	2	3
Duration	42	23	6	38	21	6
Change Point	0	51	83	99	146	176

Signal Timings Diagram



C2

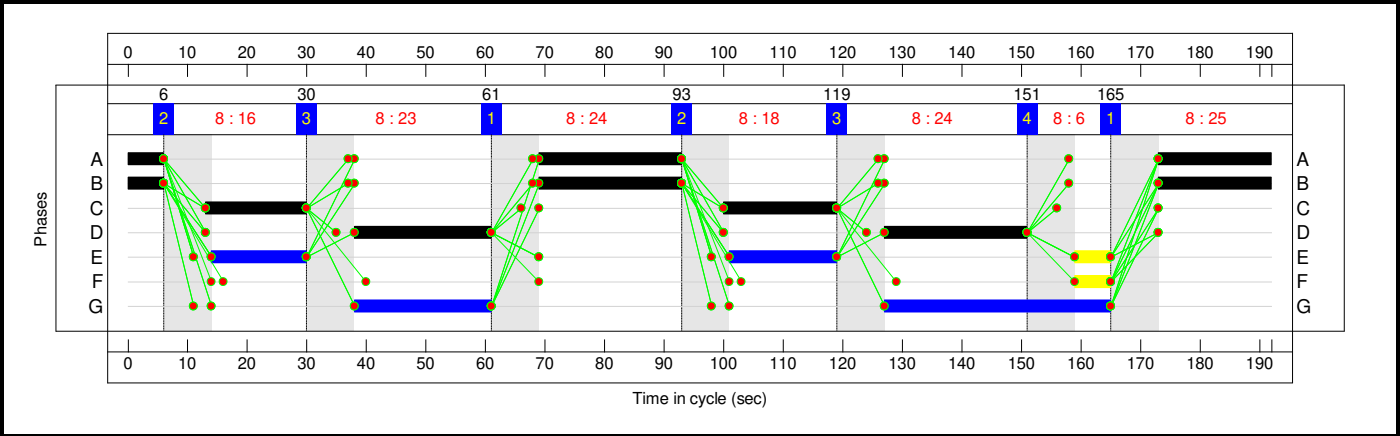
Stage Sequence Diagram



Stage Timings

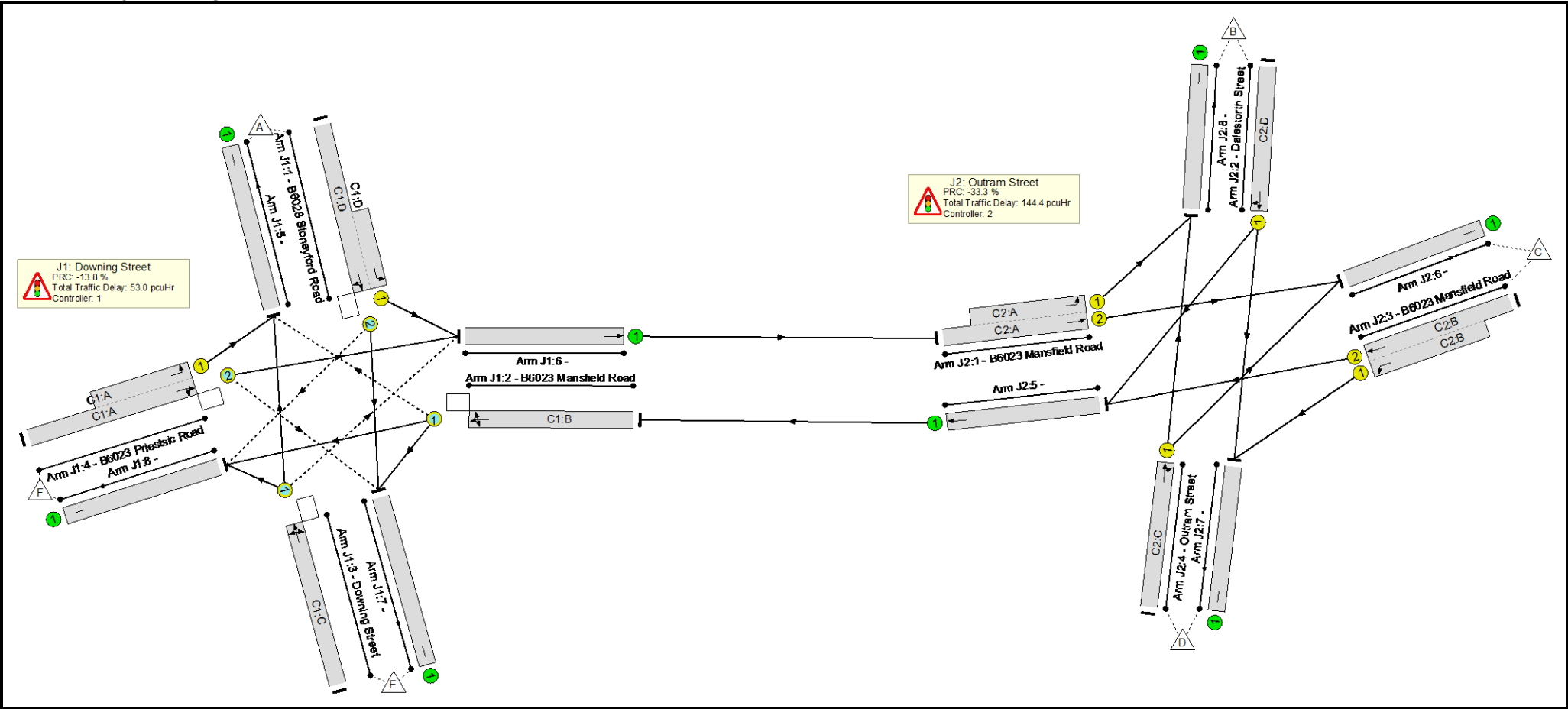
Stage	1	2	3	1	2	3	4
Duration	25	16	23	24	18	24	6
Change Point	165	6	30	61	93	119	151

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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	N/A	-	-		-	-	-	-	-	-	119.9%
J1: Downing Street	-	-	N/A	-	-		-	-	-	-	-	-	102.5%
1/2+1/1	B6028 Stoneyford Road Left Ahead Right	O+U	N/A	N/A	C1:D		2	44	-	599	1803:1702	366+219	102.5 : 102.5%
2/1	B6023 Mansfield Road Right Left Ahead	O	N/A	N/A	C1:B		2	80	-	691	2014	634	100.3%
3/1	Downing Street Ahead Right Left	O	N/A	N/A	C1:C		2	44	-	93	1897	454	20.5%
4/2+4/1	B6023 Priestsic Road Left Ahead Right	O+U	N/A	N/A	C1:A		2	80	-	778	1885:1718	645+313	81.2 : 81.2%
5/1		U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	82	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%
J2: Outram Street	-	-	N/A	-	-		-	-	-	-	-	-	119.9%
1/2+1/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:A		2	49	-	735	1800:1800	478+235	102.3 : 102.4%
2/1	Dalestorth Street Right Ahead	U	N/A	N/A	C2:D		2	47	-	551	1800	459	119.9%
3/2+3/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:B		2	49	-	636	1800:1800	478+376	74.5 : 74.5%
4/1	Outram Street Right Ahead	U	N/A	N/A	C2:C		2	36	-	423	1800	356	118.7%

Full Input Data And Results

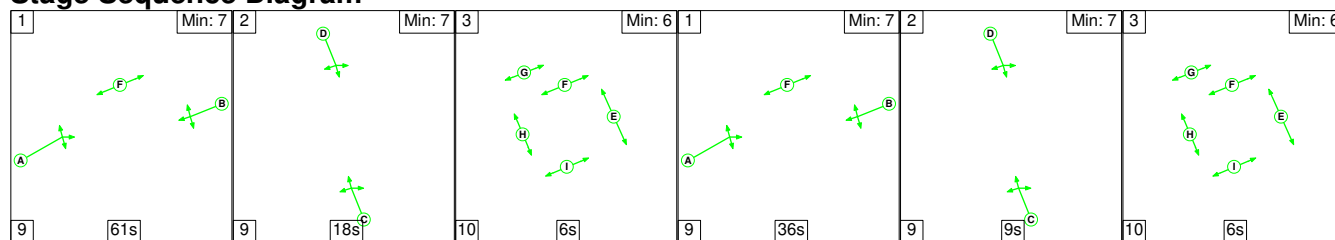
5/1	Ahead	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	787	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	496	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	371	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	382	0	69	60.2	136.3	0.9	197.4	-	-	-	-
J1: Downing Street	-	-	382	0	69	20.6	31.6	0.9	53.0	-	-	-	-
1/2+1/1	599	585	266	0	36	7.4	16.3	0.3	24.1	144.7	14.1	16.3	30.4
2/1	635	635	97	0	31	7.8	13.0	0.6	21.3	121.0	18.5	13.0	31.5
3/1	93	93	4	0	0	0.8	0.1	0.0	0.9	34.3	2.0	0.1	2.1
4/2+4/1	778	778	15	0	2	4.6	2.1	0.0	6.7	31.1	13.1	2.1	15.3
5/1	449	449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	730	730	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	80	80	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	831	831	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Outram Street	-	-	0	0	0	39.6	104.7	0.0	144.4	-	-	-	-
1/2+1/1	730	714	-	-	-	7.8	18.3	-	26.2	129.2	14.7	18.3	33.0
2/1	551	459	-	-	-	14.6	48.6	-	63.3	413.5	23.5	48.6	72.2
3/2+3/1	636	636	-	-	-	5.7	1.4	-	7.1	40.2	9.7	1.4	11.1
4/1	423	356	-	-	-	11.5	36.3	-	47.8	406.6	17.6	36.3	53.9
5/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	726	726	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	344	344	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -13.8 Total Delay for Signalled Lanes (pcuHr): 53.02 Cycle Time (s): 192													
C2 PRC for Signalled Lanes (%): -33.3 Total Delay for Signalled Lanes (pcuHr): 144.35 Cycle Time (s): 192													
PRC Over All Lanes (%): -33.3 Total Delay Over All Lanes(pcuHr): 197.38													

Full Input Data And Results

Scenario 3: '2030 Bkgd PM' (FG3: '2030 Bkgd PM', Plan 1: 'Network Control Plan 1')

C1

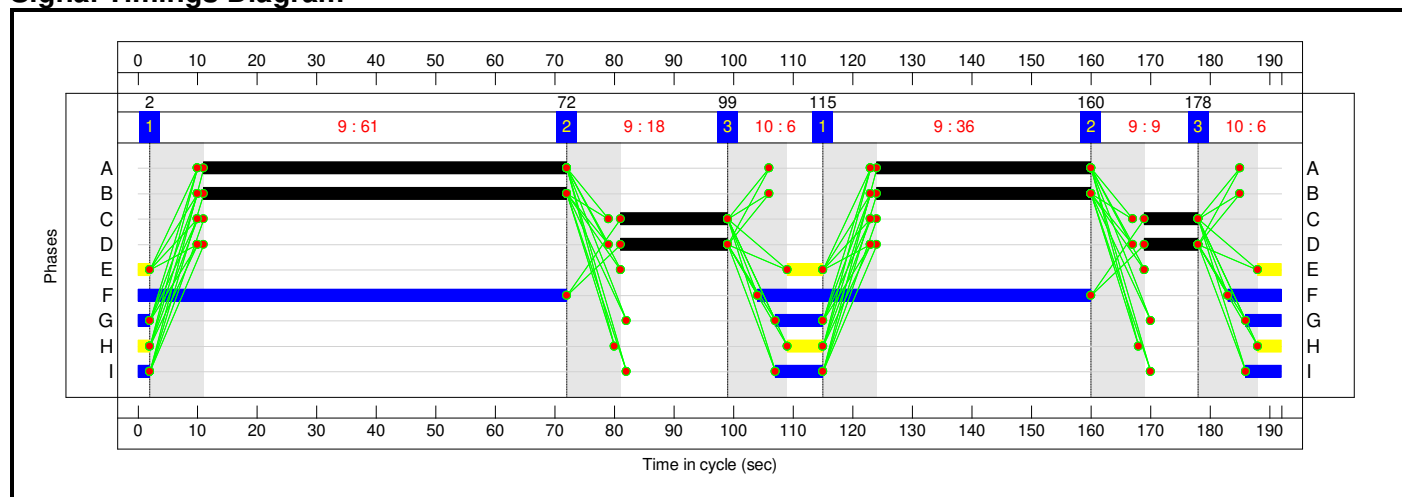
Stage Sequence Diagram



Stage Timings

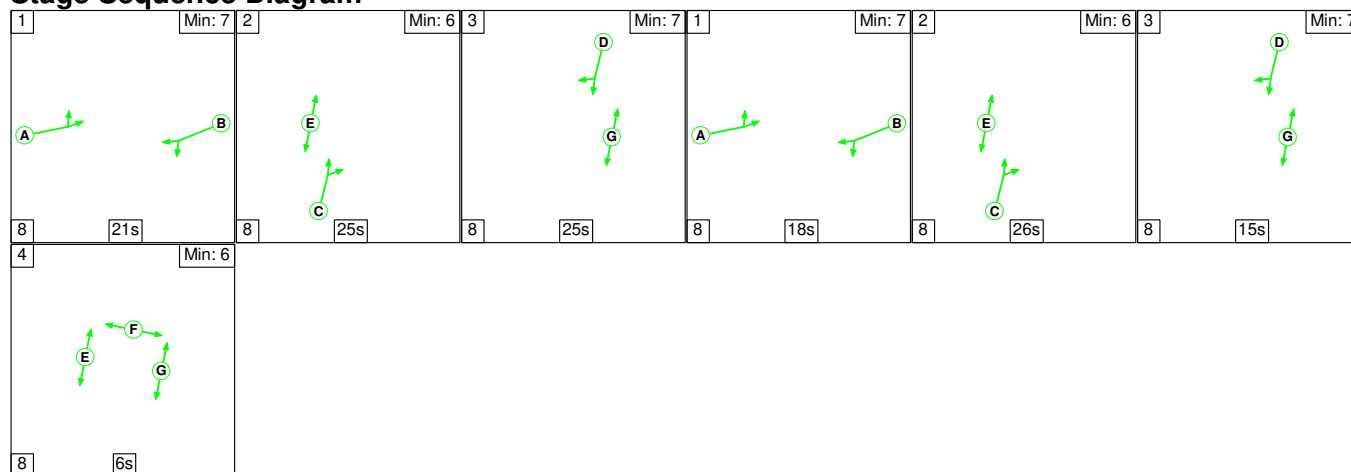
Stage	1	2	3	1	2	3
Duration	61	18	6	36	9	6
Change Point	2	72	99	115	160	178

Signal Timings Diagram



C2

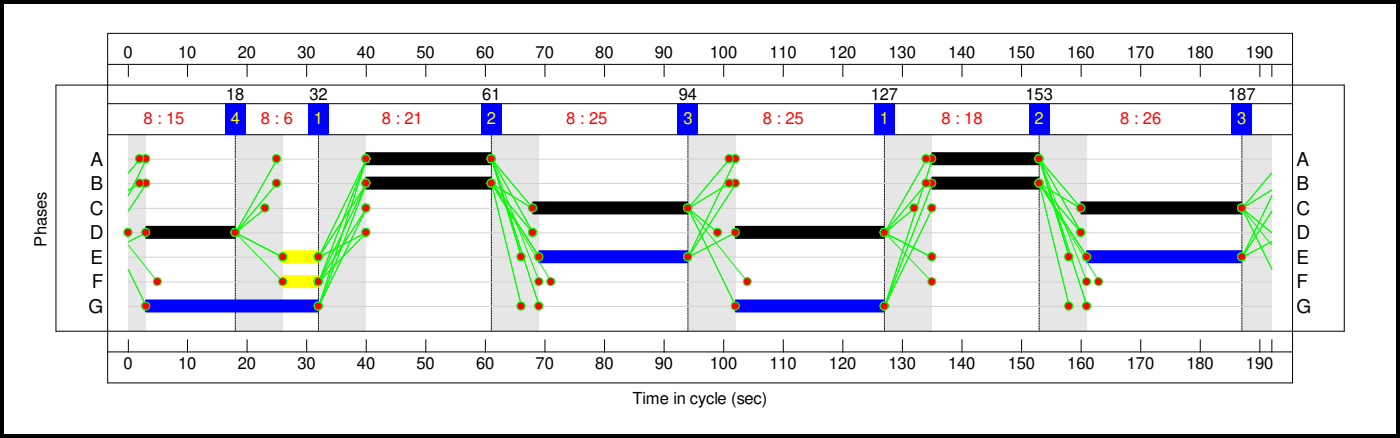
Stage Sequence Diagram



Stage Timings

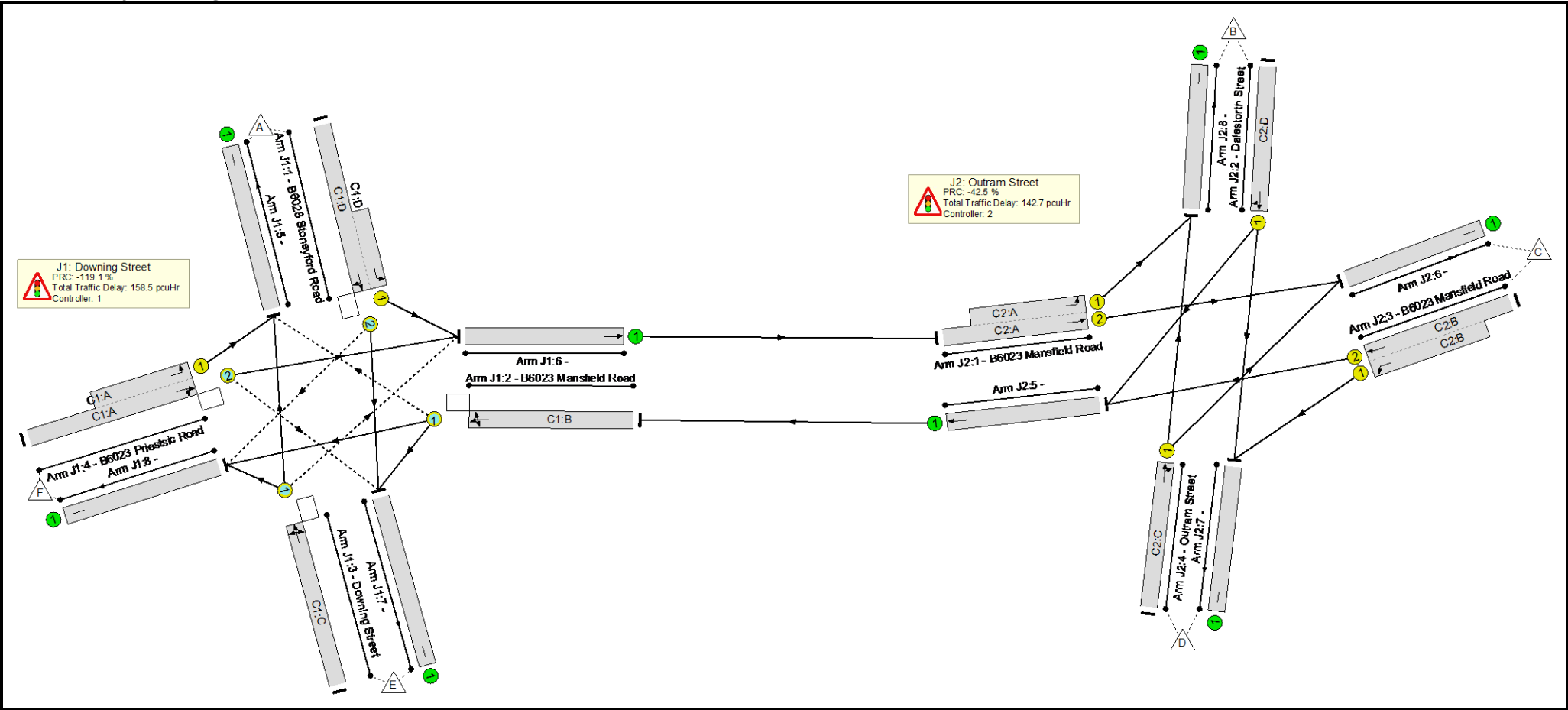
Stage	1	2	3	1	2	3	4
Duration	21	25	25	18	26	15	6
Change Point	32	61	94	127	153	187	18

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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	N/A	-	-		-	-	-	-	-	-	197.2%
J1: Downing Street	-	-	N/A	-	-		-	-	-	-	-	-	197.2%
1/2+1/1	B6028 Stoneyford Road Left Ahead Right	O+U	N/A	N/A	C1:D		2	27	-	403	1830:1702	146+58	197.2 : 197.2%
2/1	B6023 Mansfield Road Right Left Ahead	O	N/A	N/A	C1:B		2	97	-	665	1836	597	100.7%
3/1	Downing Street Ahead Right Left	O	N/A	N/A	C1:C		2	27	-	245	1916	289	84.7%
4/2+4/1	B6023 Priestsic Road Left Ahead Right	O+U	N/A	N/A	C1:A		2	97	-	1012	1885:1718	741+392	89.3 : 89.3%
5/1		U	N/A	N/A	-		-	-	-	667	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	766	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	227	Inf	Inf	0.0%
J2: Outram Street	-	-	N/A	-	-		-	-	-	-	-	-	128.3%
1/2+1/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:A		2	39	-	766	1800:1800	384+337	98.2 : 98.4%
2/1	Dalestorth Street Right Ahead	U	N/A	N/A	C2:D		2	40	-	505	1800	394	128.3%
3/2+3/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:B		2	39	-	732	1800:1800	384+379	98.1 : 93.7%
4/1	Outram Street Right Ahead	U	N/A	N/A	C2:C		2	53	-	552	1800	516	107.1%

Full Input Data And Results

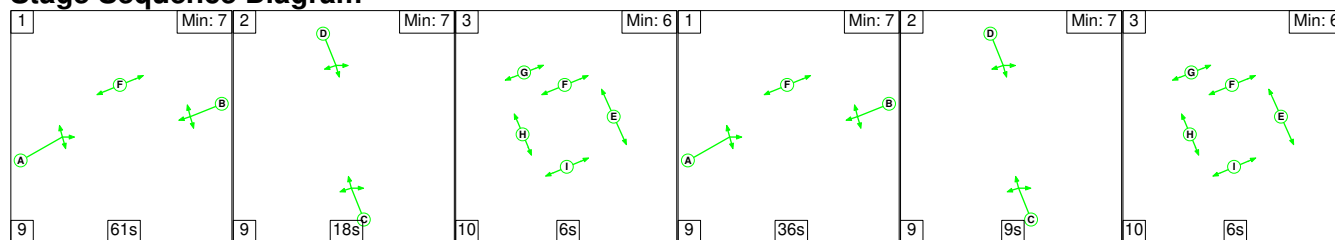
5/1	Ahead	U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	692	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	572	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	626	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	116	0	127	79.8	220.3	1.1	301.1	-	-	-	-
J1: Downing Street	-	-	116	0	127	37.3	120.1	1.1	158.5	-	-	-	-
1/2+1/1	403	204	31	0	59	25.8	100.3	0.2	126.4	1128.8	32.3	100.3	132.6
2/1	602	597	52	0	66	3.3	13.4	0.8	17.5	104.8	21.7	13.4	35.1
3/1	245	245	12	0	0	2.8	2.5	0.0	5.3	77.5	7.3	2.5	9.8
4/2+4/1	1012	1012	21	0	2	5.3	3.9	0.0	9.3	33.1	20.8	3.9	24.7
5/1	654	654	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Outram Street	-	-	0	0	0	42.5	100.2	0.0	142.7	-	-	-	-
1/2+1/1	709	709	-	-	-	7.2	10.6	-	17.8	90.1	18.4	10.6	29.0
2/1	505	394	-	-	-	17.9	57.8	-	75.7	539.5	27.2	57.8	85.0
3/2+3/1	732	732	-	-	-	7.7	7.8	-	15.5	76.2	10.5	7.8	18.3
4/1	552	516	-	-	-	9.8	23.9	-	33.8	220.2	19.5	23.9	43.5
5/1	602	602	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	643	643	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	524	524	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 C2 PRC for Signalled Lanes (%): -119.1 Total Delay for Signalled Lanes (pcuHr): 158.46 Cycle Time (s): 192 PRC for Signalled Lanes (%): -42.5 Total Delay for Signalled Lanes (pcuHr): 142.69 Cycle Time (s): 192 PRC Over All Lanes (%): -119.1 Total Delay Over All Lanes(pcuHr): 301.15													

Full Input Data And Results

Scenario 4: '2030 With Dev PM' (FG5: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

C1

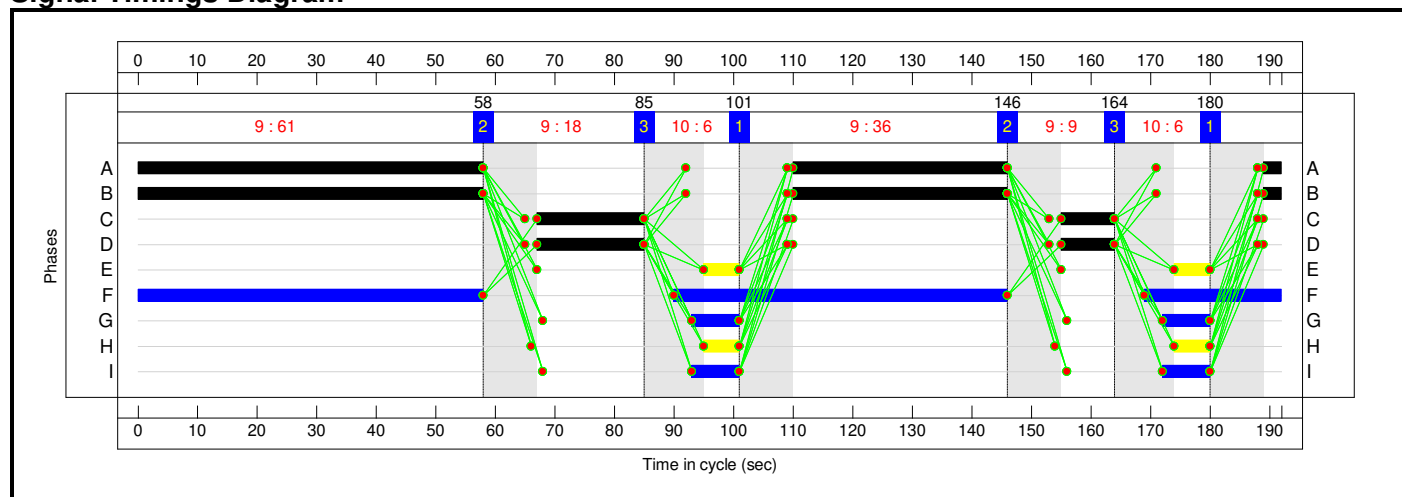
Stage Sequence Diagram



Stage Timings

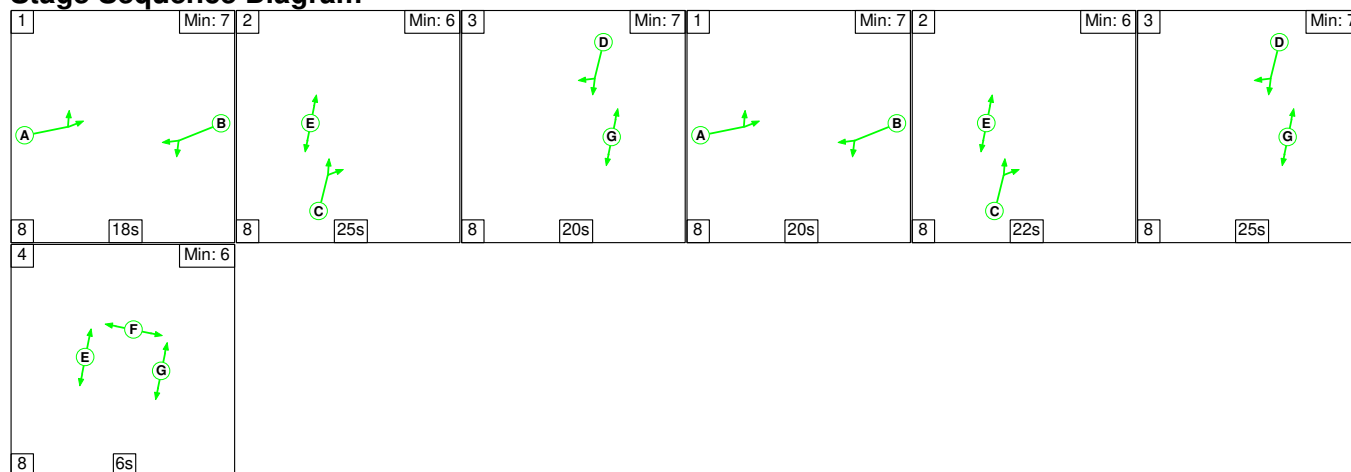
Stage	1	2	3	1	2	3
Duration	61	18	6	36	9	6
Change Point	180	58	85	101	146	164

Signal Timings Diagram



C2

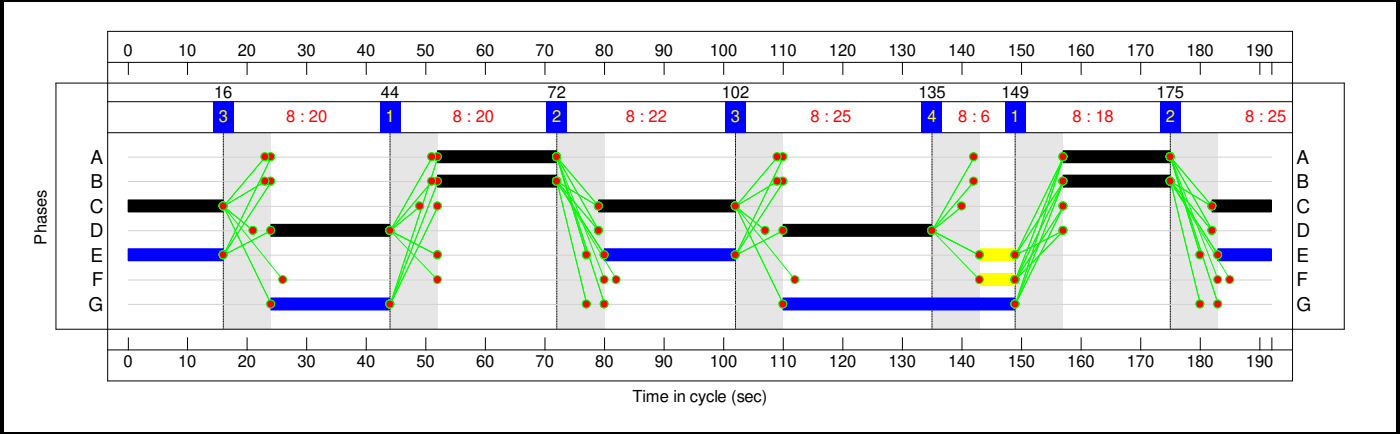
Stage Sequence Diagram



Stage Timings

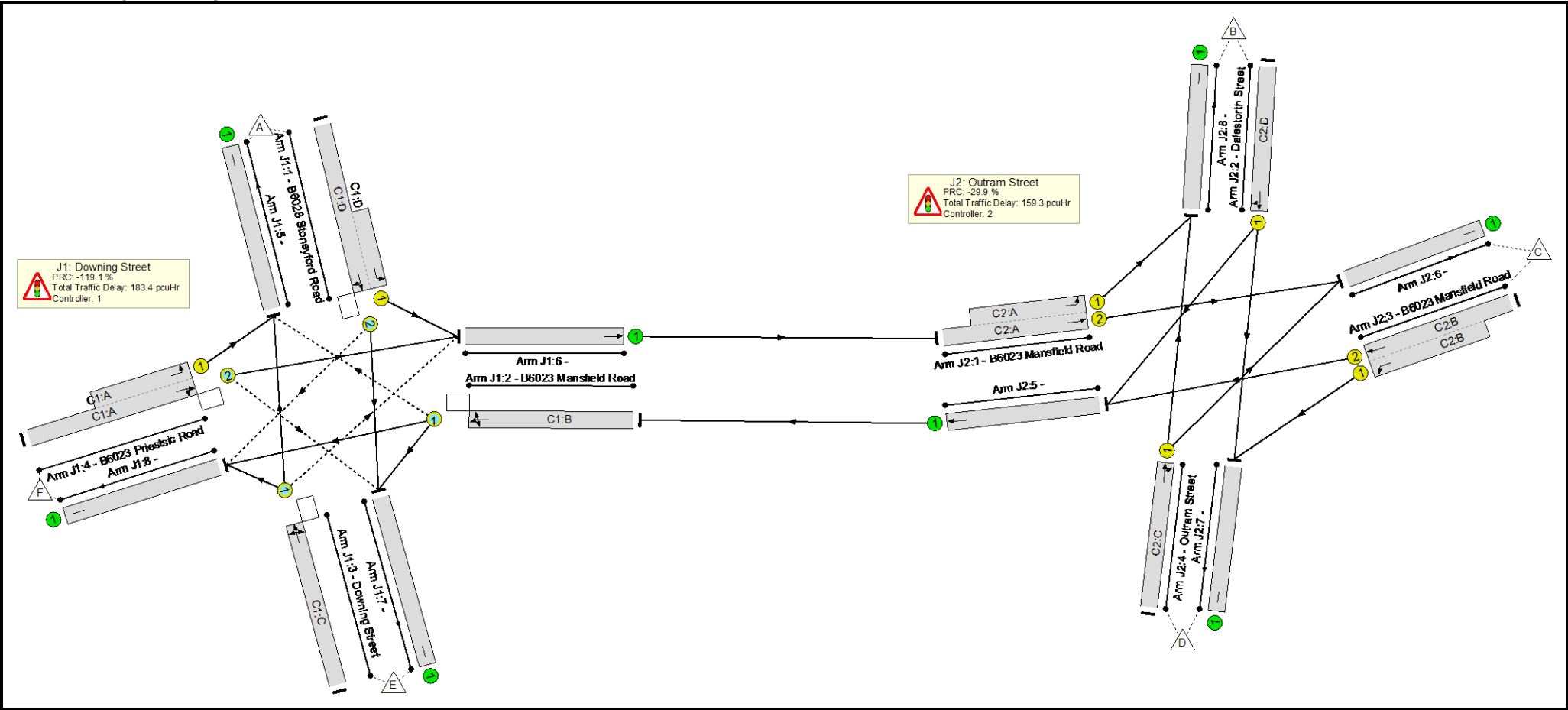
Stage	1	2	3	1	2	3	4
Duration	18	25	20	20	22	25	6
Change Point	149	175	16	44	72	102	135

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

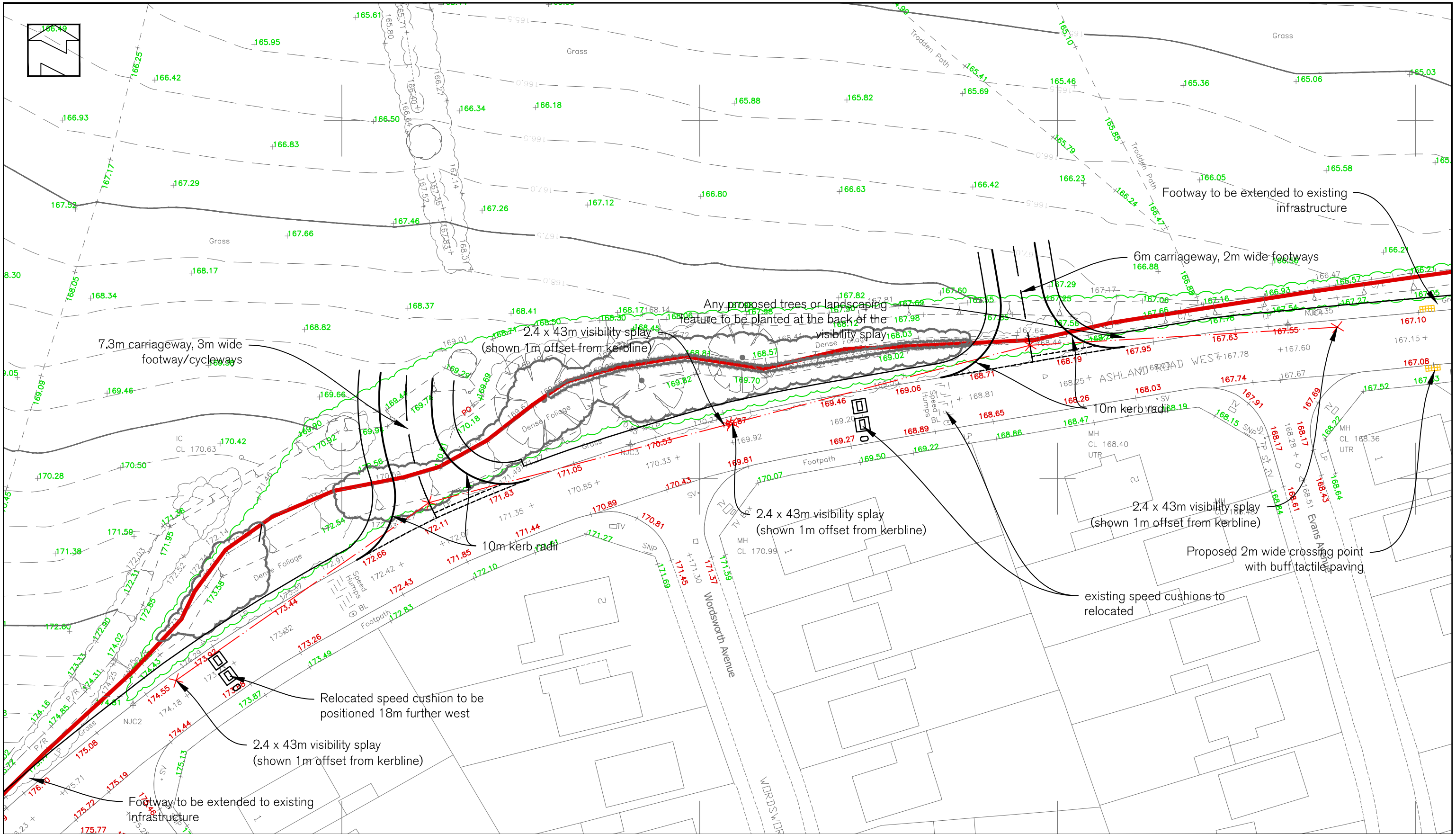
Network Results

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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	N/A	-	-		-	-	-	-	-	-	197.2%
J1: Downing Street	-	-	N/A	-	-		-	-	-	-	-	-	197.2%
1/2+1/1	B6028 Stoneyford Road Left Ahead Right	O+U	N/A	N/A	C1:D		2	27	-	403	1830:1702	147+58	197.2 : 197.2%
2/1	B6023 Mansfield Road Right Left Ahead	O	N/A	N/A	C1:B		2	97	-	686	1836	581	108.4%
3/1	Downing Street Ahead Right Left	O	N/A	N/A	C1:C		2	27	-	244	1916	289	84.3%
4/2+4/1	B6023 Priestsic Road Left Ahead Right	O+U	N/A	N/A	C1:A		2	97	-	1023	1885:1718	744+387	90.5 : 90.5%
5/1		U	N/A	N/A	-		-	-	-	666	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	687	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	227	Inf	Inf	0.0%
J2: Outram Street	-	-	N/A	-	-		-	-	-	-	-	-	116.9%
1/2+1/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:A		2	38	-	776	1800:1800	375+330	102.0 : 102.4%
2/1	Dalestorth Street Right Ahead	U	N/A	N/A	C2:D		2	45	-	515	1800	441	116.9%
3/2+3/1	B6023 Mansfield Road Ahead Left	U	N/A	N/A	C2:B		2	38	-	743	1800:1800	375+353	103.5 : 100.6%
4/1	Outram Street Right Ahead	U	N/A	N/A	C2:C		2	49	-	552	1800	478	115.5%

Full Input Data And Results

5/1	Ahead	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	572	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	646	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: Mansfield Road-Stoneyford Road-Downing Street-Dalestorth Street	-	-	110	0	127	88.3	253.2	1.1	342.6	-	-	-	-
J1: Downing Street	-	-	110	0	127	45.5	136.8	1.1	183.4	-	-	-	-
1/2+1/1	403	204	31	0	59	25.0	100.3	0.2	125.6	1122.2	30.8	100.3	131.1
2/1	630	584	45	0	66	12.1	29.6	0.8	42.5	242.8	25.7	29.6	55.3
3/1	244	244	12	0	0	2.8	2.4	0.0	5.2	76.7	7.3	2.4	9.7
4/2+4/1	1023	1023	22	0	1	5.6	4.4	0.0	10.0	35.4	21.7	4.4	26.1
5/1	646	646	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Outram Street	-	-	0	0	0	42.8	116.4	0.0	159.3	-	-	-	-
1/2+1/1	720	712	-	-	-	6.5	17.7	-	24.2	121.2	14.0	17.7	31.7
2/1	515	441	-	-	-	12.4	40.4	-	52.8	369.0	21.0	40.4	61.3
3/2+3/1	743	730	-	-	-	10.0	18.0	-	28.0	135.6	12.5	18.0	30.4
4/1	552	478	-	-	-	13.9	40.4	-	54.3	353.8	22.4	40.4	62.8
5/1	630	630	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	541	541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 C2 PRC for Signalled Lanes (%): -119.1 Total Delay for Signalled Lanes (pcuHr): 183.36 Cycle Time (s): 192 PRC for Signalled Lanes (%): -29.9 Total Delay for Signalled Lanes (pcuHr): 159.27 Cycle Time (s): 192 PRC Over All Lanes (%): -119.1 Total Delay Over All Lanes(pcuHr): 342.63													

APPENDIX B
DRAWING ADC1032-DR-001-P8



P8	Western access widened	12/11/20
P7	Access re-aligned	06/03/20
P6	Labels updated	05/03/20
P5	Access moved to align with masterplan	21/02/20
P4	Revised following comments	11/02/20
P3	Amendments following NCC comments	05/03/15
Rev	Description	Date

Project:	Proposed Residential Development Ashland Road, Sutton in Ashfield
Title:	
	Proposed Access Junction Layout

Client:	Bellway Homes (East Midlands) Ltd

<div>ADC</div> <div>INFRASTRUCTURE</div>		
Drg Size:	Scale:	Date:
A3	1:500	31/07/2014
Drawing No:		Rev:
ADC1032-DR-001		P8

APPENDIX C P19-1014-007D AMENDED MASTERPLAN

