



Memorandum

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FROM : Charles & Associates Consulting Engineers
TO : HCC Highways
SUBJECT : Petersfield Road - Bartons Road Proposed Improvement Scheme
(Land West of the Havant Crematorium)
REF : 17-055-010
DATE : 06 September 2019

1.0 Introduction

- 1.1 This note has been prepared by Charles & Associates Consulting Engineers Ltd (C&A) as an overview of the potential improvement scheme to mitigate the traffic impact arising from the proposed residential development (72 dwellings) on a site known as Land West of Havant Crematorium at the signalised junction between Petersfield Road and Bartons Road.
- 1.2 Following the submission of the planning application, a number of technical notes addressing the consultation highways and transport concerns have been submitted to the Hampshire County Council's (HCC) Highway Authority (HA).
- 1.3 In the HCC HA's last email correspondence dated 30th August 2019, all highways and transport concerns, except the traffic impact of the proposed development on this junction, have been agreed. The HA requested that further work is undertaken to investigate an improvement scheme at this junction to bring the junction back within capacity under the future year scenario.
- 1.4 As in the submitted Transport Assessment (TA) and the subsequent technical notes, a sensitivity test has also been undertaken to consider the impact of the potential development to the north of the proposed development site, which although is not part of this application, will result in a combined total of 150 dwellings if it comes forward.

2.0 Proposed Improvement Scheme

- 2.1 The proposed improvement scheme at this junction is illustrated in **Drawing No. 17-055-046**. It includes lengthening of left turn short lane on Bartons Road from 18m to 28m. The footway running alongside on the southern edge of the carriageway is to be aligned and the street furniture are to be relocated as required.

3.0 Capacity Assessment Results

- 3.1 The capacity assessment results are summarised below. The “2023 Baseline” scenario has been modelled with the existing junction layout only, whereas the “with Development” scenarios have been modelled with both, the existing layout and the proposed improvement scheme implemented layout.
- 3.2 The inputs within the model file for the existing junction remain unchanged from that submitted to the HA which was considered acceptable, whereas the physical lane length input has been changed from 18m to 28m in the model with the proposed improvement scheme.
- 3.3 Full LinSig output reports are provided in **Appendix A**. It should be noted that traffic flows used in this assessment have been amended to include passenger car units (pcu) as per the LinSig guide rather than total vehicles used in the previous submissions. Therefore, the results presented in this note are not comparable to the results from the previous submissions.
- 3.4 The “2023 Baseline” capacity assessment results are tabulated in **Table 3.1**. The results indicate that only the Petersfield Road (S) Ahead movement in the AM peak and the Petersfield Road (N) Left Ahead and the Petersfield Road (S) Ahead in the PM peak would operate below 90% DoS.

Table 3.1: 2023 Baseline Results

Arm	AM Peak			PM Peak		
	DoS (%)	Queue (pcu)	Delay (seconds)	DoS (%)	Queue (pcu)	Delay (seconds)
Petersfield Road (N) Left Ahead	92.1	20.2	53.9	89.2	13.7	61.5
Bartons Road	93.0	14.7	53.8	92.7	16.5	41.9
Petersfield Road (S) Ahead	23.8	2.9	5.5	46.0	7.7	12.3
Petersfield Road (S) Right	90.9	15.5	62.7	93.0	16.3	70.9
	PRC = -3.4%			PRC = -3.3%		

- 3.5 The “2023 Baseline + Development (72 Dwellings)” capacity assessment results are tabulated in **Table 3.2**. The results indicate that with the proposed development all but the Petersfield Road (S) Ahead movement would operate below 90% DoS in both the peak hours.

Table 3.2: 2023 Baseline + Development (72 Dwellings) Results – Existing Layout

Arm	AM Peak			PM Peak		
	DoS (%)	Queue (pcu)	Delay (seconds)	DoS (%)	Queue (pcu)	Delay (seconds)
Petersfield Road (N) Left Ahead	92.3	20.4	54.6	94.0	16.1	78.1
Bartons Road	92.8	15.0	52.5	93.3	16.8	43.1
Petersfield Road (S) Ahead	24.2	3.0	5.9	46.0	7.7	12.3
Petersfield Road (S) Right	95.2	18.0	80.2	91.3	15.7	63.7
	PRC = -5.7%			PRC = -4.4%		

- 3.6 The “2023 Baseline + Development (72 Dwellings)” capacity assessment results with the improvement scheme implemented are tabulated in **Table 3.3**. The results indicate that the junction operation improves significantly as the result of the lengthening of the Bartons Road left turn lane. As can be seen DoS for all movements are less than 90% and lower than “2023 Baseline” results. These suggest that the scheme will not only mitigate for the proposed development but will also provide a significant reduction in delays and queues relative to the forecast “2023 Baseline”.

Table 3.3: 2023 Baseline + Development (72 Dwellings) Results – Proposed Layout

Arm	AM Peak			PM Peak		
	DoS (%)	Queue (pcu)	Delay (seconds)	DoS (%)	Queue (pcu)	Delay (seconds)
Petersfield Road (N) Left Ahead	89.6	18.8	47.3	79.4	11.7	44.5
Bartons Road	78.3	10.8	32.2	81.9	13.3	28.2
Petersfield Road (S) Ahead	23.1	2.6	4.9	40.1	5.9	7.8
Petersfield Road (S) Right	88.4	14.6	55.5	79.5	12.5	41.0
	PRC = 0.4%			PRC = 9.9%		

- 3.7 The “2023 Baseline + Development (150 Dwellings)” capacity assessment results for the sensitivity test are tabulated in **Table 3.4**. The results indicate that with the development of a combined 150 dwellings, all but the Petersfield Road (S) Ahead movement would operate below 90% DoS in both the peak hours.

Table 3.4: 2023 Baseline + Development (150 Dwellings) Results – Existing Layout

Arm	AM Peak			PM Peak		
	DoS (%)	Queue (pcu)	Delay (seconds)	DoS (%)	Queue (pcu)	Delay (seconds)
Petersfield Road (N) Left Ahead	95.3	22.6	66.4	94.5	16.5	80.4
Bartons Road	95.5	16.9	62.3	94.3	17.6	46.4
Petersfield Road (S) Ahead	24.2	3.0	5.9	46.0	7.7	12.3
Petersfield Road (S) Right	92.4	16.4	67.3	93.0	16.8	69.3
	PRC = -6.1%			PRC = -5.0%		

- 3.8 The “2023 Baseline + Development (150 Dwellings)” capacity assessment results with the improvement scheme implemented are tabulated in **Table 3.5**. The results indicate that the junction operation improves significantly as the result of the improvement scheme. As can be seen DoS for all movements are less than 90% and lower than “2023 Baseline” results which suggest that the scheme more than mitigates the impact of the proposed development.

Table 3.5: 2023 Baseline + Development (150 Dwellings) Results – Proposed Layout

Arm	AM Peak			PM Peak		
	DoS (%)	Queue (pcu)	Delay (seconds)	DoS (%)	Queue (pcu)	Delay (seconds)
Petersfield Road (N) Left Ahead	89.8	18.9	47.6	79.9	11.8	44.8
Bartons Road	80.6	11.3	33.6	82.8	13.8	28.8
Petersfield Road (S) Ahead	23.1	2.6	4.9	40.1	5.9	7.8
Petersfield Road (S) Right	89.1	14.9	57.0	81.0	12.9	42.2
	PRC = 0.3%			PRC = 8.7%		

4.0 Conclusion

- 4.1 Following the above assessment, it is concluded that the identified improvement scheme not only mitigates for the proposed development, but also results in junction operation with reduced delays and queues compared to the “2023 Baseline” without the proposed development.
- 4.2 Furthermore, the sensitivity test results show that the junction, with the improvement scheme implemented, will have sufficient spare capacity to accommodate the traffic from the potential development of additional 78 dwellings on the land north of the proposed development site.

Drawing No. 17-055-046 Proposed Petersfield Road / Bartons Road Improvement Scheme

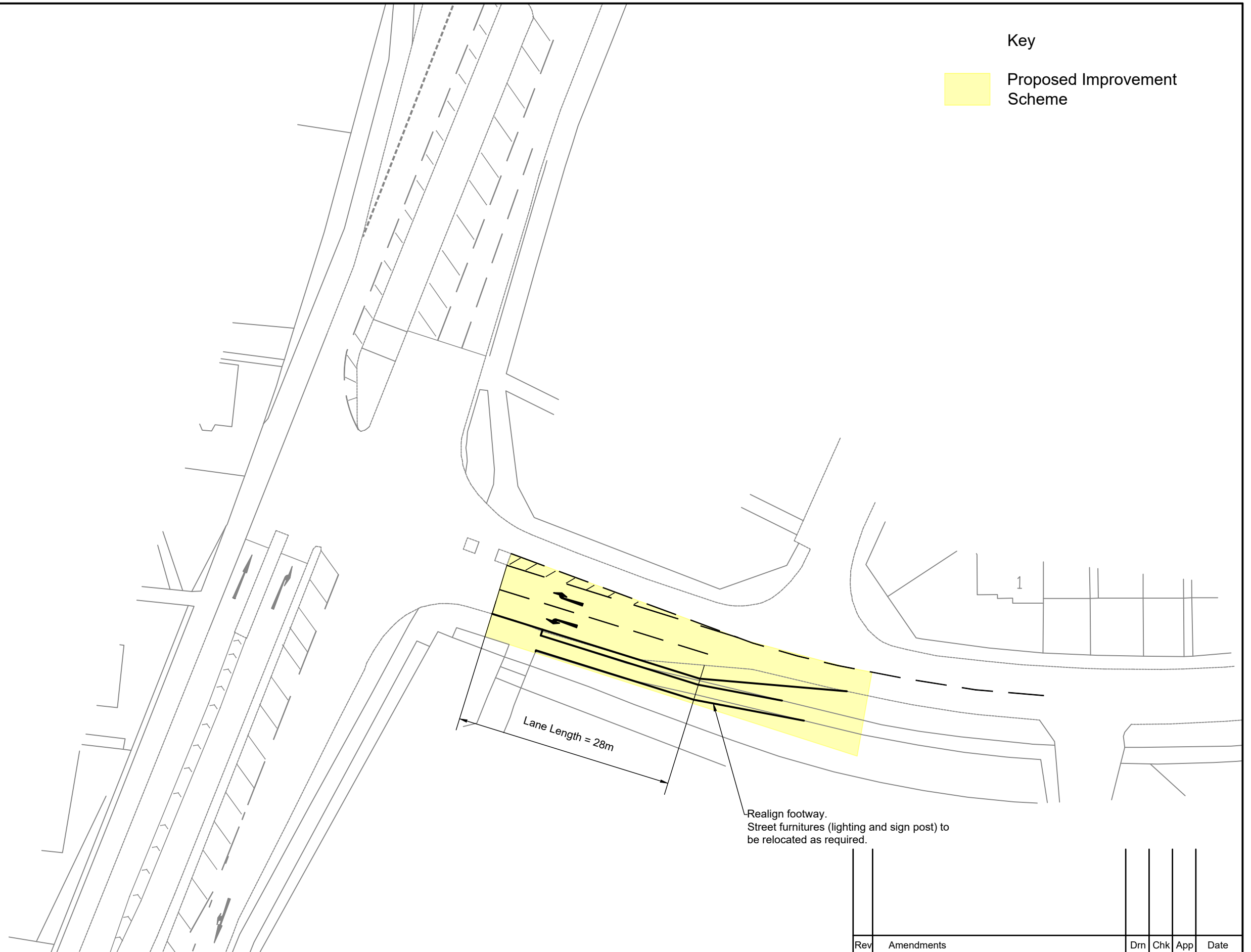




Key



Proposed Improvement Scheme



Rev	Amendments	Drn	Chk	App	Date



Charles & Associates



Park House, Park Farm
East Malling Trust Estate
Bradbourne Lane
Aylesford Kent ME20 6SN
01732 448120

Issued by ☒

Landmark House
Station Road
Hook
Hampshire
RG27 9HA
01256 630420

Job Title

Land West of the Havant Crematorium
Bartons Road

Drawing Title

Petersfield Road / Bartons Road
Proposed Improvement Scheme

Client

Chidden Farms

Scale
1:500@A3

Date
Sep 19

Designed
PL

Drawn
PL

Checked
GAC

Approved
GAC

Job No
17-055

Drawing No
17-055-046

Rev
-

Appendix A – LinSig Output Reports



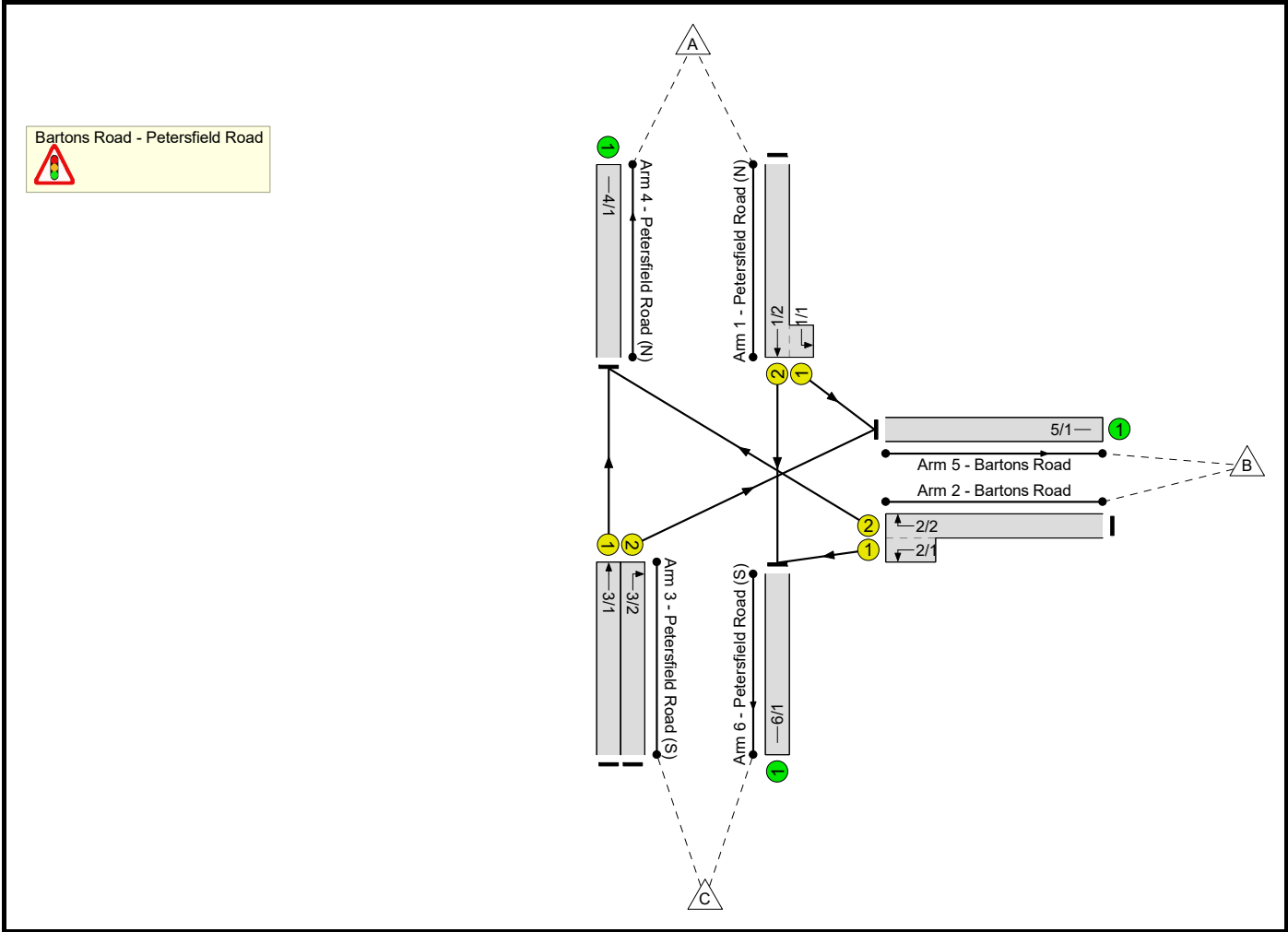
Full Input Data And Results

Full Input Data And Results

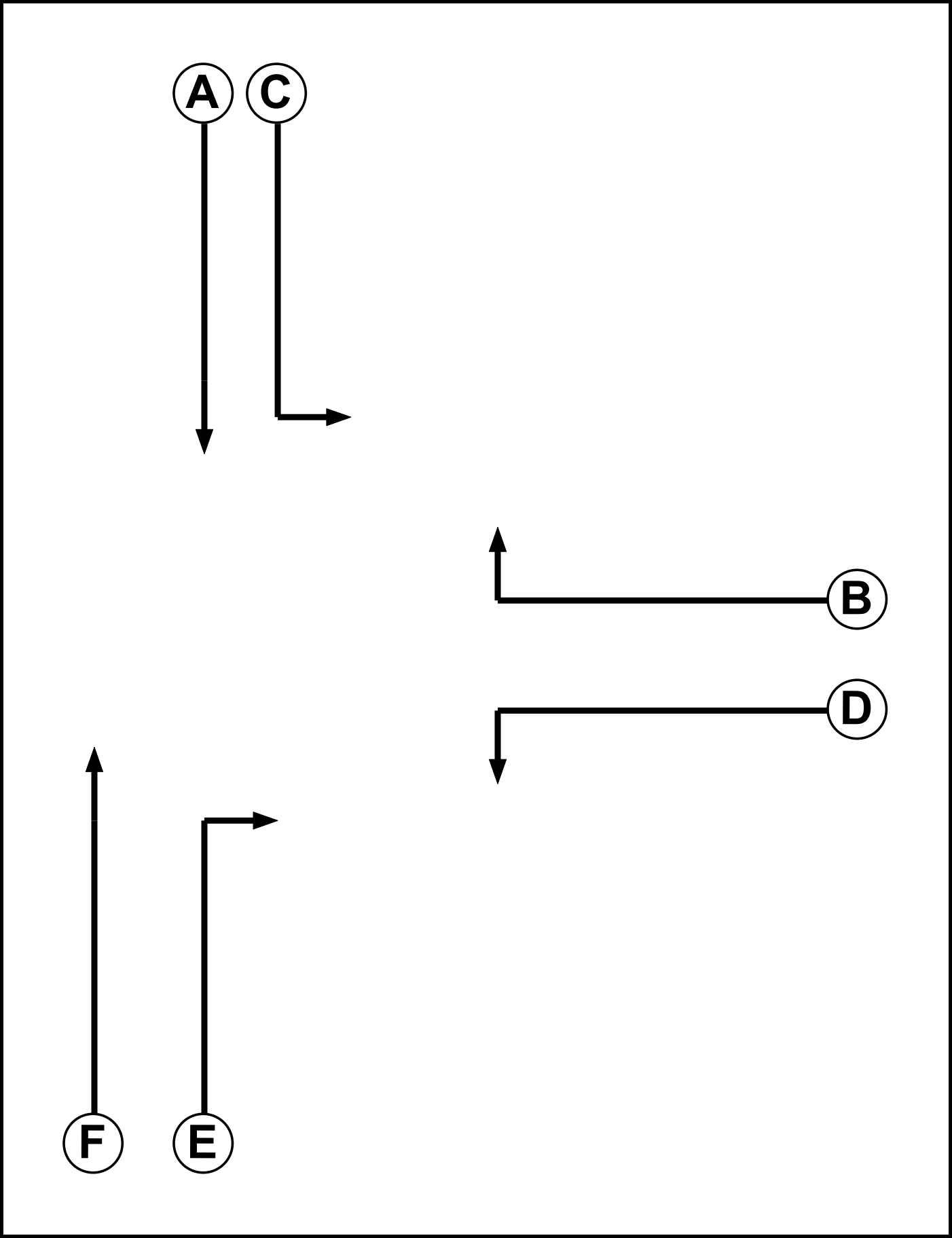
User and Project Details

Project:	17-055 Camp Field
Title:	
Location:	
Design Layout Ref:	Existing Layout
Additional detail:	
File name:	2019-09-05 Bartons Road - Petersfield Road.lsg3x
Author:	PL
Company:	C&A
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

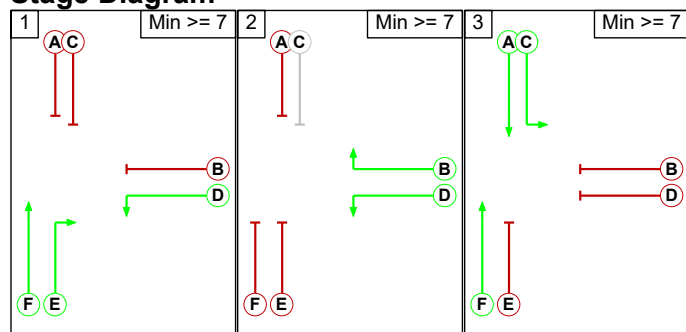
Phase Intergreens Matrix

	Starting Phase						
Terminating Phase		A	B	C	D	E	F
	A		9	-	9	9	-
	B	7		-	-	7	7
	C	-	-		-	9	-
	D	7	-	-		-	-
	E	9	9	9	-		-
	F	-	9	-	-	-	

Phases in Stage

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

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		9	9
2	7		7
3	9	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Bartons Road - Petersfield Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	U	C	2	3	2.0	Geom	-	3.25	0.00	Y	Arm 5 Left	13.70
1/2 (Petersfield Road (N))	U	A	2	3	60.0	Geom	-	3.40	0.00	N	Arm 6 Ahead	Inf
2/1 (Bartons Road)	U	D	2	3	3.1	Geom	-	3.25	0.00	Y	Arm 6 Left	13.30
2/2 (Bartons Road)	U	B	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Right	23.00
3/1 (Petersfield Road (S))	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/2 (Petersfield Road (S))	U	E	2	3	17.4	Geom	-	3.25	0.00	Y	Arm 5 Right	12.00
4/1 (Petersfield Road (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Bartons Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Petersfield Road (S))	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2018 AM'	07:45	08:45	01:00	
2: '2018 PM'	17:00	18:00	01:00	
3: '2023 + Committed AM'	07:45	08:45	01:00	
4: '2023 + Committed PM'	17:00	18:00	01:00	
5: '2023 + Committed + Dev AM'	07:45	08:45	01:00	
6: '2023 + Committed + Dev PM'	17:00	18:00	01:00	
7: '2023 + Committed + Sensitivity AM'	07:45	08:45	01:00	
8: '2023 + Committed + Sensitivity PM'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: '2018 AM' (FG1: '2018 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	165	418	583
	B	112	0	371	483
	C	303	398	0	701
	Tot.	415	563	789	1767

Traffic Lane Flows

Lane	Scenario 1: 2018 AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	165
1/2 (with short)	583(In) 418(Out)
2/1 (short)	371
2/2 (with short)	483(In) 112(Out)
3/1	303
3/2	398
4/1	415
5/1	563
6/1	789

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2018 PM' (FG2: '2018 PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination				
		A	B	C	Tot.
	A	0	93	300	393
	B	156	0	500	656
	C	476	384	0	860
	Tot.	632	477	800	1909

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2018 PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	93
1/2 (with short)	393(In) 300(Out)
2/1 (short)	500
2/2 (with short)	656(In) 156(Out)
3/1	476
3/2	384
4/1	632
5/1	477
6/1	800

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2023 Baseline AM' (FG3: '2023 + Committed AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	190	481	671
	B	132	0	451	583
	C	339	470	0	809
	Tot.	471	660	932	2063

Traffic Lane Flows

Lane	Scenario 3: 2023 Baseline AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	190
1/2 (with short)	671(In) 481(Out)
2/1 (short)	451
2/2 (with short)	583(In) 132(Out)
3/1	339
3/2	470
4/1	471
5/1	660
6/1	932

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2023 Baseline PM' (FG4: '2023 + Committed PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	112	339	451
	B	180	0	583	763
	C	545	463	0	1008
	Tot.	725	575	922	2222

Traffic Lane Flows

Lane	Scenario 4: 2023 Baseline PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	112
1/2 (with short)	451(In) 339(Out)
2/1 (short)	583
2/2 (with short)	763(In) 180(Out)
3/1	545
3/2	463
4/1	725
5/1	575
6/1	922

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Baseline + Development 72 Units AM' (FG5: '2023 + Committed + Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	192	481	673
	B	136	0	461	597
	C	339	474	0	813
	Tot.	475	666	942	2083

Traffic Lane Flows

Lane	Scenario 5: 2023 Baseline + Development 72 Units AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	192
1/2 (with short)	673(In) 481(Out)
2/1 (short)	461
2/2 (with short)	597(In) 136(Out)
3/1	339
3/2	474
4/1	475
5/1	666
6/1	942

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2023 Baseline + Development 72 Units PM' (FG6: '2023 + Committed + Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	116	339	455
	B	181	0	588	769
	C	545	472	0	1017
	Tot.	726	588	927	2241

Traffic Lane Flows

Lane	Scenario 6: 2023 Baseline + Development 72 Units PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	116
1/2 (with short)	455(In) 339(Out)
2/1 (short)	588
2/2 (with short)	769(In) 181(Out)
3/1	545
3/2	472
4/1	726
5/1	588
6/1	927

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2023 Baseline + Sensitivity AM' (FG7: '2023 + Committed + Sensitivity AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	193	481	674
	B	140	0	472	612
	C	339	478	0	817
	Tot.	479	671	953	2103

Traffic Lane Flows

Lane	Scenario 7: 2023 Baseline + Sensitivity AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	193
1/2 (with short)	674(In) 481(Out)
2/1 (short)	472
2/2 (with short)	612(In) 140(Out)
3/1	339
3/2	478
4/1	479
5/1	671
6/1	953

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '2023 Baseline + Sensitivity PM' (FG8: '2023 + Committed + Sensitivity PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

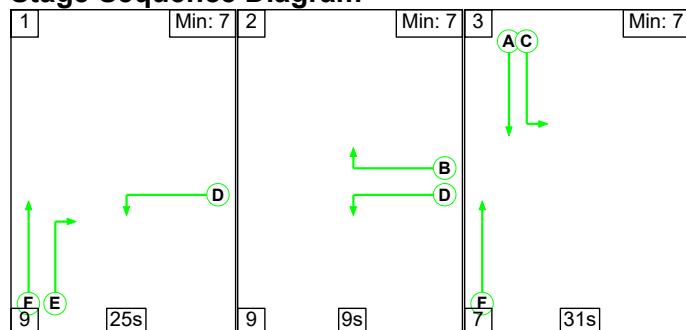
	Destination				
Origin		A	B	C	Tot.
	A	0	119	339	458
	B	183	0	594	777
	C	545	481	0	1026
	Tot.	728	600	933	2261

Traffic Lane Flows

Lane	Scenario 8: 2023 Baseline + Sensitivity PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	119
1/2 (with short)	458(In) 339(Out)
2/1 (short)	594
2/2 (with short)	777(In) 183(Out)
3/1	545
3/2	481
4/1	728
5/1	600
6/1	933

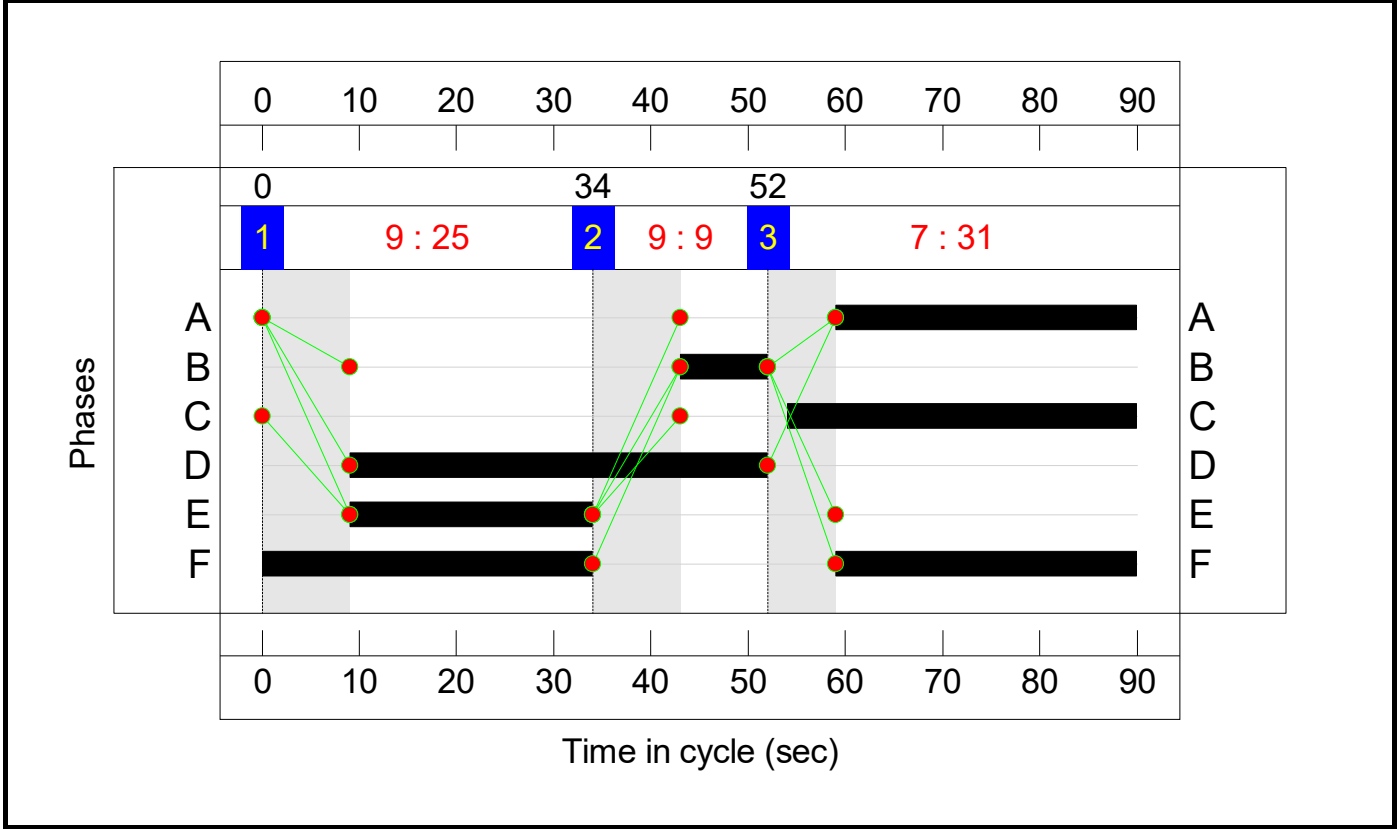
Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2018 AM' (FG1: '2018 AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3
Duration	25	9	31
Change Point	0	34	52

Signal Timings Diagram

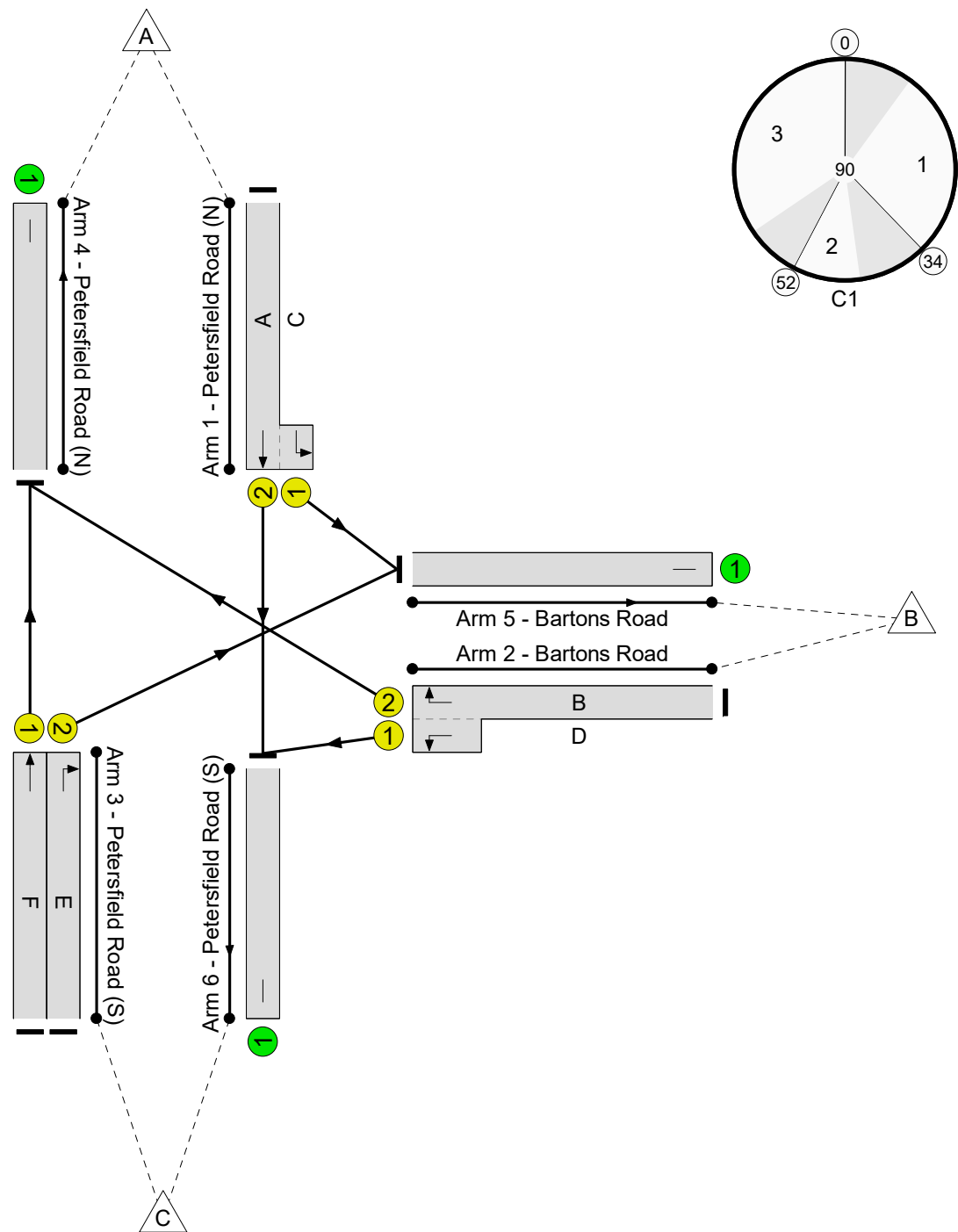




Bartons Road - Petersfield Road

PRC: 12.6 %

Total Traffic Delay: 15.9 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	79.9%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	79.9%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	31:36	-	583	2095:1749	538+213	77.6 : 77.6%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	9:43	-	483	1953:1743	142+471	78.7 : 78.7%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	65	-	303	1940	1423	21.3%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	25	-	398	1724	498	79.9%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	789	Inf	Inf	0.0%

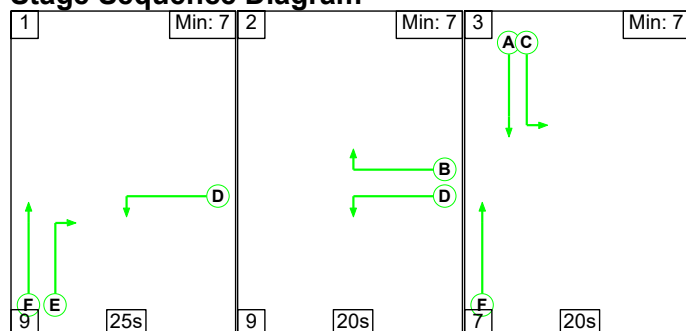
Full Input Data And Results

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	-	-	0	0	0	10.3	5.6	0.0	15.9	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	10.3	5.6	0.0	15.9	-	-	-	-
1/2+1/1	583	583	-	-	-	4.0	1.7	-	5.7	35.2	12.0	1.7	13.7
2/2+2/1	483	483	-	-	-	2.7	1.8	-	4.5	33.8	7.1	1.8	8.9
3/1	303	303	-	-	-	0.3	0.1	-	0.5	5.4	2.4	0.1	2.5
3/2	398	398	-	-	-	3.3	1.9	-	5.2	46.9	9.2	1.9	11.1
4/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	563	563	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 12.6 Total Delay for Signalled Lanes (pcuHr): 15.87 Cycle Time (s): 90 PRC Over All Lanes (%): 12.6 Total Delay Over All Lanes(pcuHr): 15.87													

Full Input Data And Results

Scenario 2: '2018 PM' (FG2: '2018 PM', Plan 1: 'Network Control Plan 1')

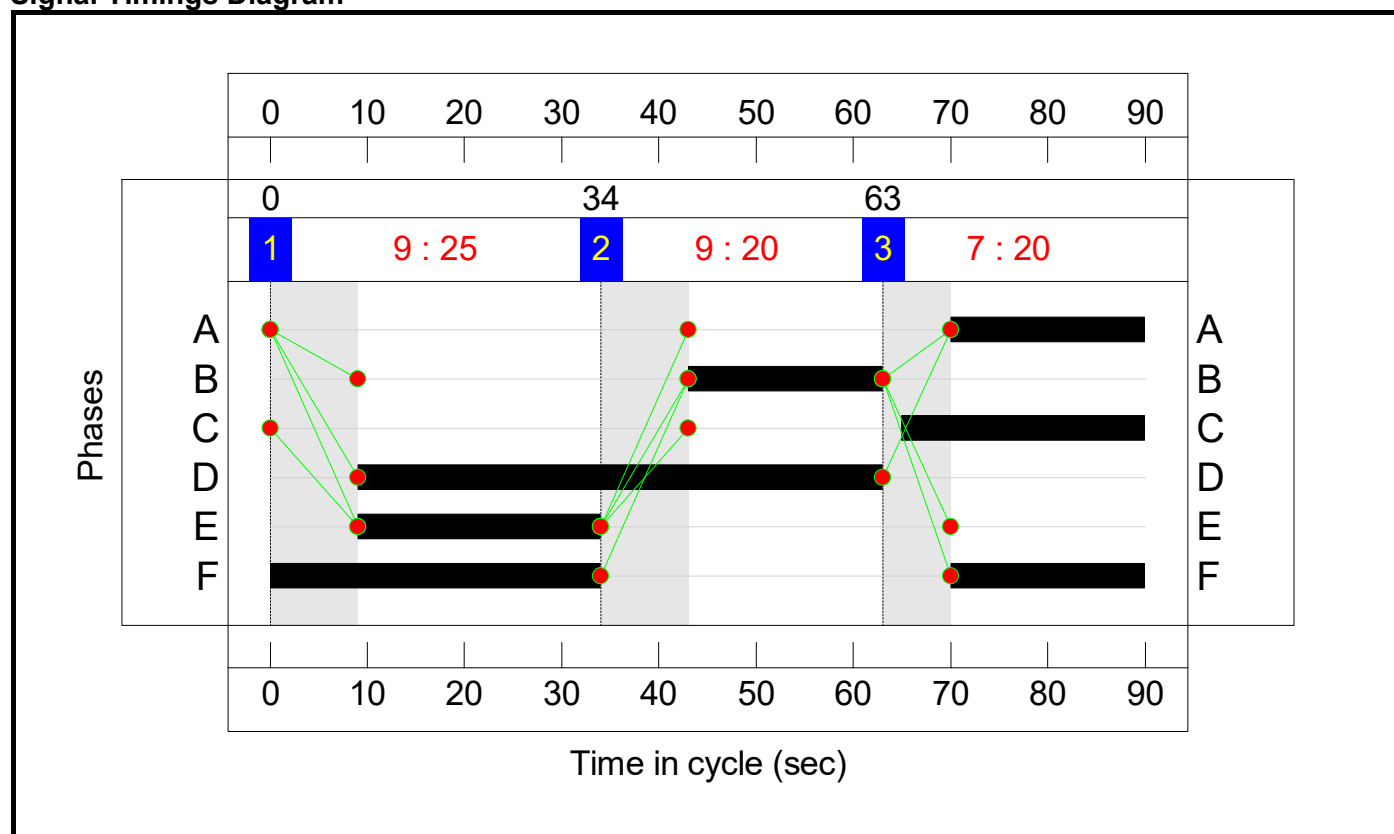
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	25	20	20
Change Point	0	34	63

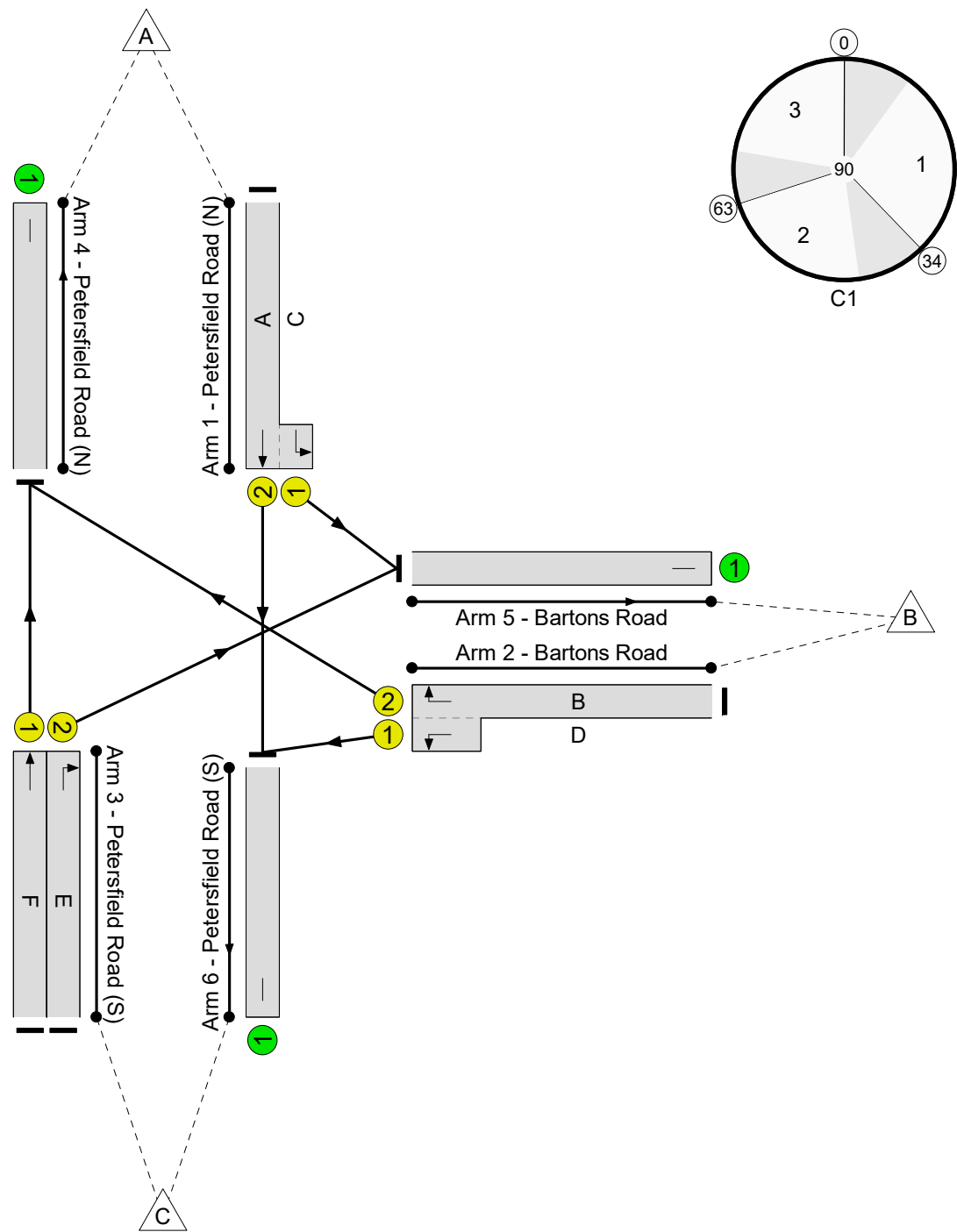
Signal Timings Diagram



Bartons Road - Petersfield Road

PRC: 12.4 %

Total Traffic Delay: 16.0 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	80.1%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	80.1%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	20:25	-	393	2095:1749	386+120	77.8 : 77.8%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	20:54	-	656	1953:1743	195+624	80.1 : 80.1%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	54	-	476	1940	1186	40.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	25	-	384	1724	498	77.1%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	800	Inf	Inf	0.0%

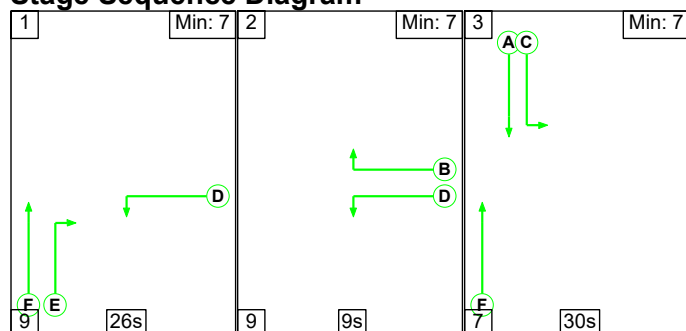
Full Input Data And Results

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	-	-	0	0	0	10.4	5.6	0.0	16.0	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	10.4	5.6	0.0	16.0	-	-	-	-
1/2+1/1	393	393	-	-	-	3.4	1.7	-	5.1	46.9	8.4	1.7	10.1
2/2+2/1	656	656	-	-	-	2.6	2.0	-	4.6	25.2	8.3	2.0	10.3
3/1	476	476	-	-	-	1.2	0.3	-	1.5	11.6	6.1	0.3	6.4
3/2	384	384	-	-	-	3.1	1.6	-	4.8	44.6	8.7	1.6	10.4
4/1	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 12.4 Total Delay for Signalled Lanes (pcuHr): 16.00 Cycle Time (s): 90 PRC Over All Lanes (%): 12.4 Total Delay Over All Lanes(pcuHr): 16.00													

Full Input Data And Results

Scenario 3: '2023 Baseline AM' (FG3: '2023 + Committed AM', Plan 1: 'Network Control Plan 1')

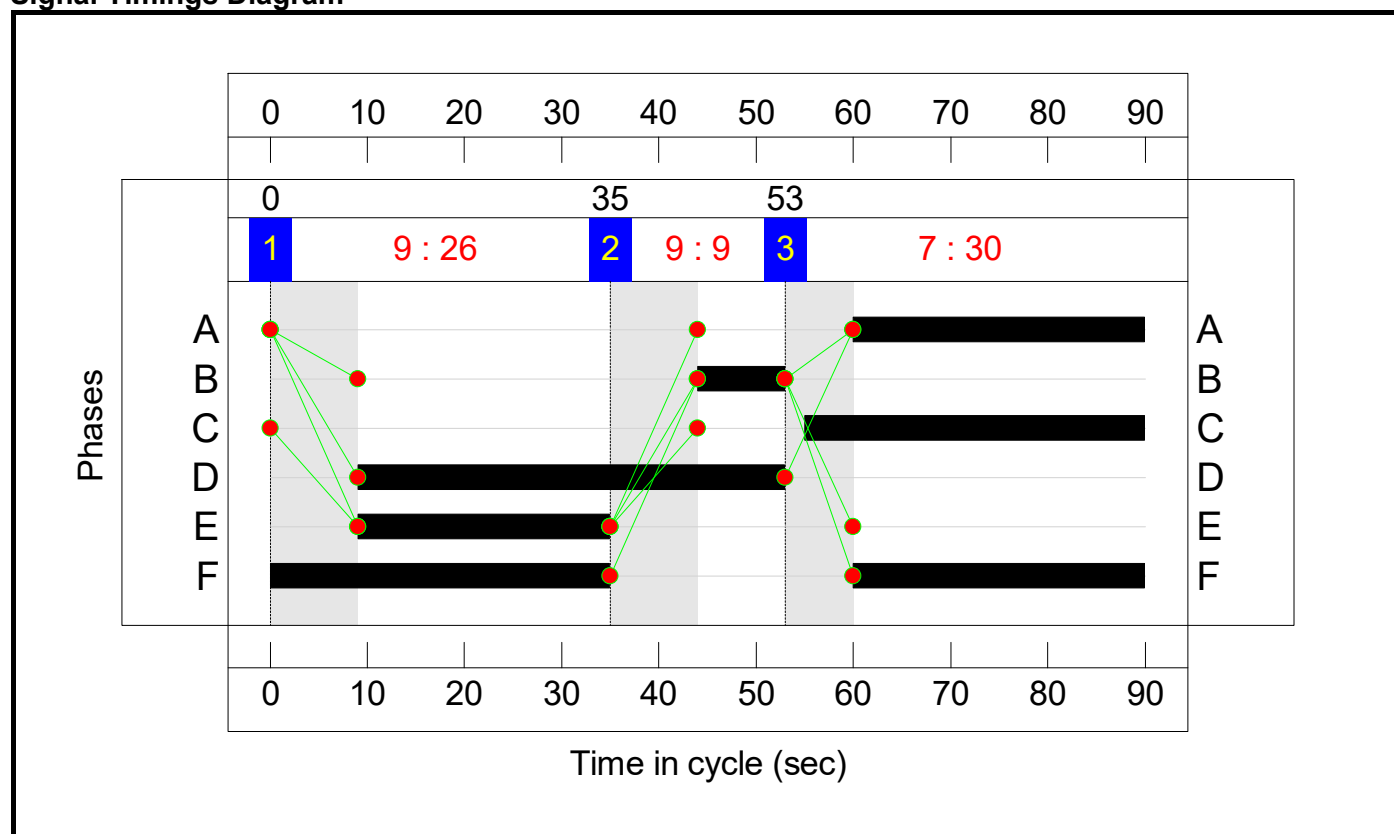
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	9	30
Change Point	0	35	53

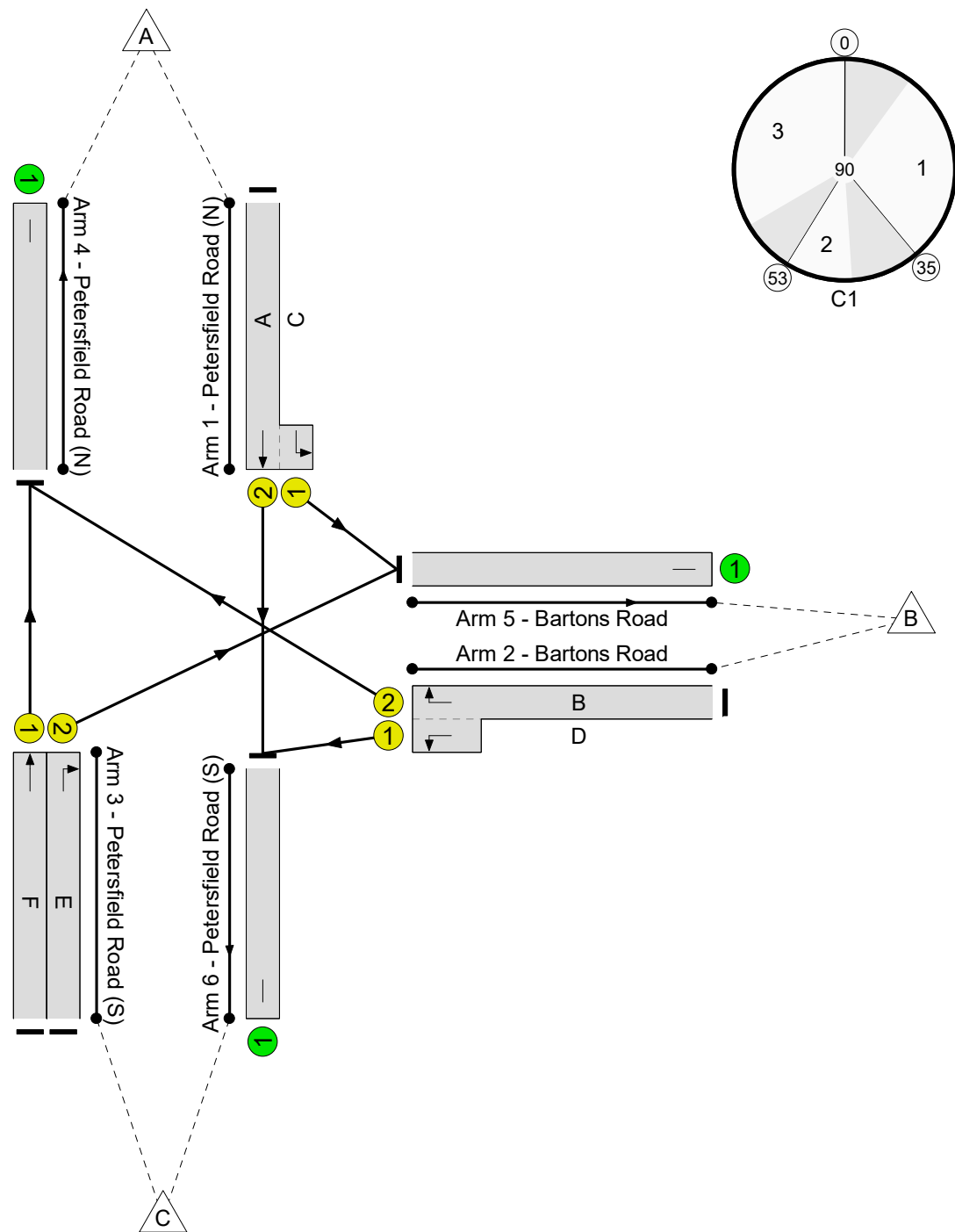
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road
PRC: -3.4 %
Total Traffic Delay: 27.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	93.0%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	93.0%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	30:35	-	671	2095:1749	522+206	92.1 : 92.1%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	9:44	-	583	1953:1743	142+485	93.0 : 93.0%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	65	-	339	1940	1423	23.8%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	26	-	470	1724	517	90.9%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	932	Inf	Inf	0.0%

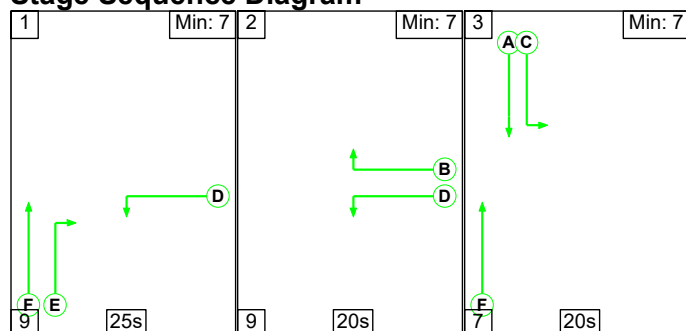
Full Input Data And Results

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	-	-	0	0	0	12.8	14.7	0.0	27.5	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	12.8	14.7	0.0	27.5	-	-	-	-
1/2+1/1	671	671	-	-	-	5.1	5.0	-	10.0	53.9	15.2	5.0	20.2
2/2+2/1	583	583	-	-	-	3.4	5.4	-	8.7	53.8	9.3	5.4	14.7
3/1	339	339	-	-	-	0.4	0.2	-	0.5	5.5	2.7	0.2	2.9
3/2	470	470	-	-	-	4.0	4.2	-	8.2	62.7	11.2	4.2	15.5
4/1	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	660	660	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	932	932	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -3.4 Total Delay for Signalled Lanes (pcuHr): 27.46 Cycle Time (s): 90 PRC Over All Lanes (%): -3.4 Total Delay Over All Lanes(pcuHr): 27.46													

Full Input Data And Results

Scenario 4: '2023 Baseline PM' (FG4: '2023 + Committed PM', Plan 1: 'Network Control Plan 1')

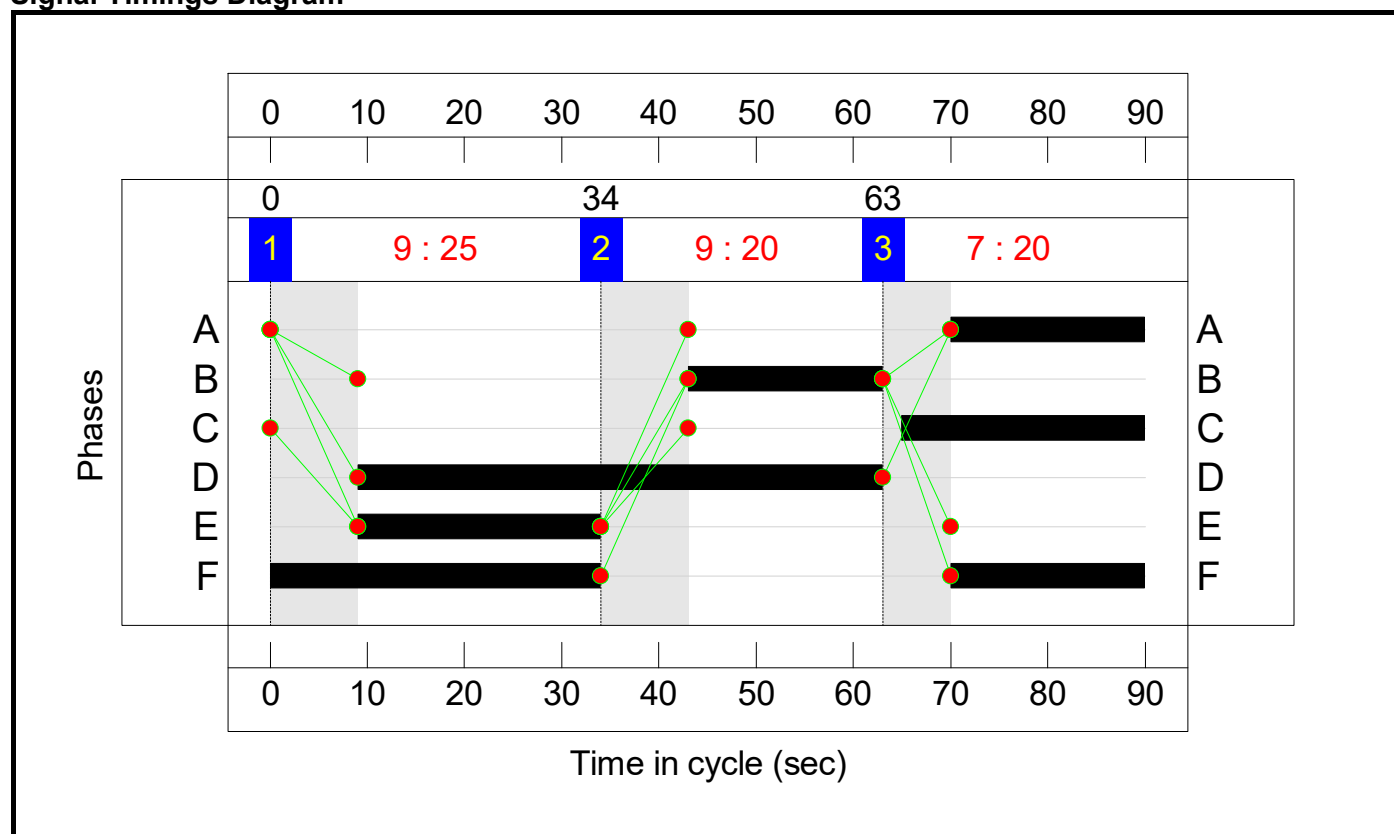
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	25	20	20
Change Point	0	34	63

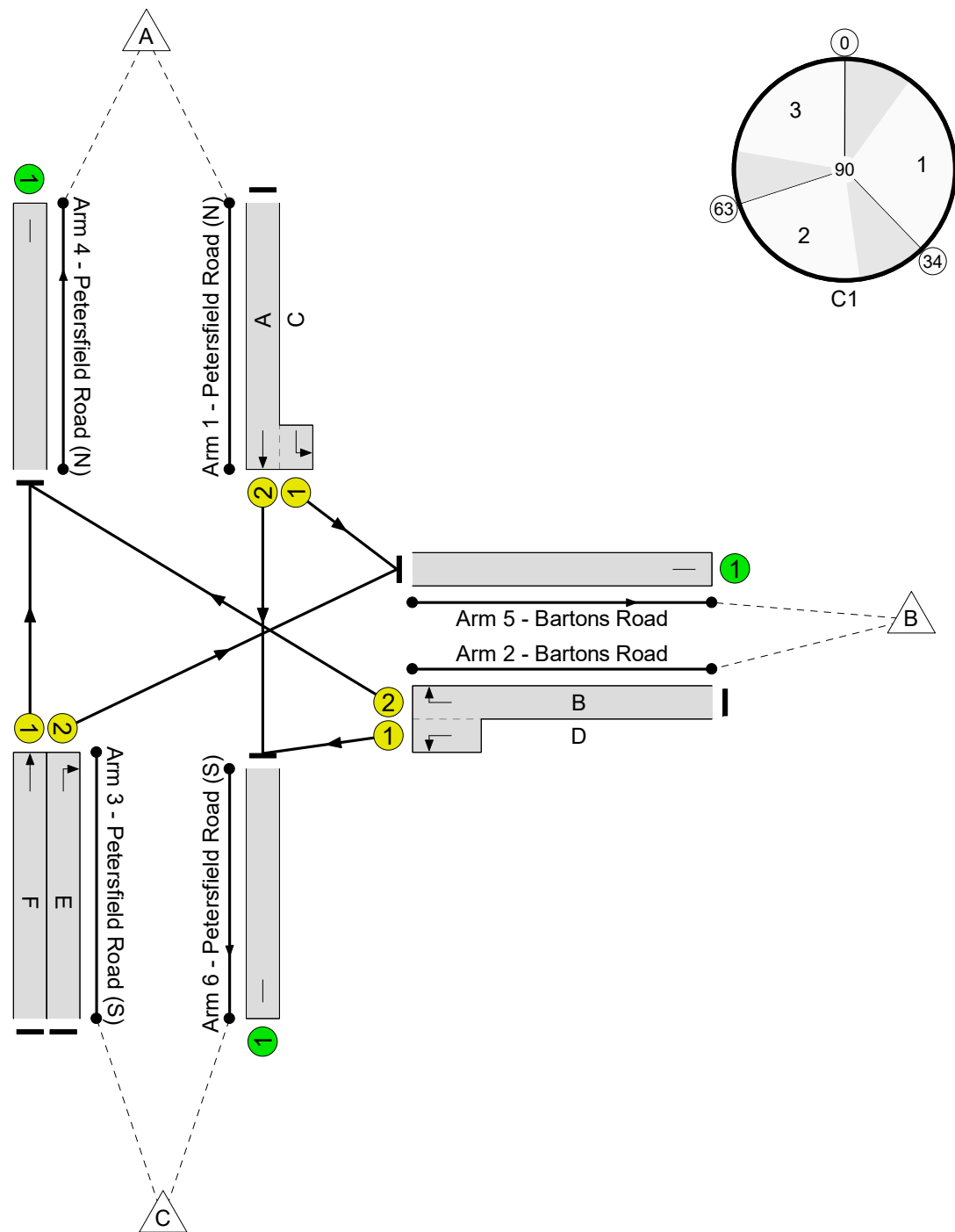
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road
PRC: -3.3 %
Total Traffic Delay: 27.5 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	93.0%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	93.0%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	20:25	-	451	2095:1749	380+126	89.2 : 89.2%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	20:54	-	763	1953:1743	194+629	92.7 : 92.7%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	54	-	545	1940	1186	46.0%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	25	-	463	1724	498	93.0%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	922	Inf	Inf	0.0%

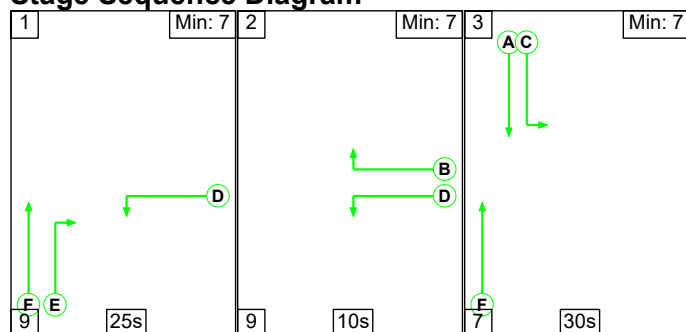
Full Input Data And Results

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	-	-	0	0	0	13.0	14.5	0.0	27.5	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	13.0	14.5	0.0	27.5	-	-	-	-
1/2+1/1	451	451	-	-	-	4.1	3.6	-	7.7	61.5	10.1	3.6	13.7
2/2+2/1	763	763	-	-	-	3.5	5.4	-	8.9	41.9	11.1	5.4	16.5
3/1	545	545	-	-	-	1.4	0.4	-	1.9	12.3	7.3	0.4	7.7
3/2	463	463	-	-	-	4.0	5.1	-	9.1	70.9	11.2	5.1	16.3
4/1	725	725	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	922	922	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -3.3 Total Delay for Signalled Lanes (pcuHr): 27.55 Cycle Time (s): 90 PRC Over All Lanes (%): -3.3 Total Delay Over All Lanes(pcuHr): 27.55													

Full Input Data And Results

Scenario 5: '2023 Baseline + Development 72 Units AM' (FG5: '2023 + Committed + Dev AM', Plan 1: 'Network Control Plan 1')

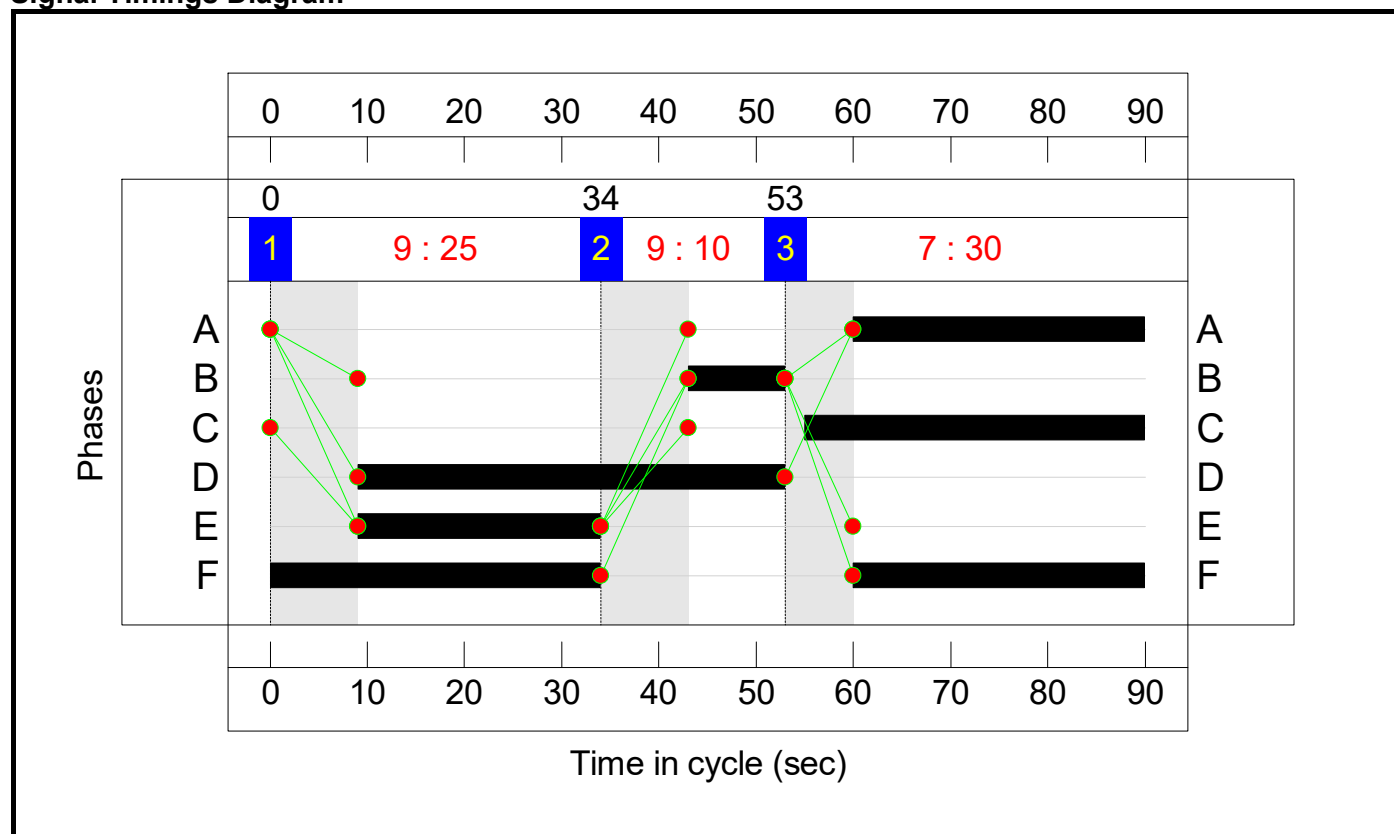
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	25	10	30
Change Point	0	34	53

Signal Timings Diagram



Full Input Data And Results

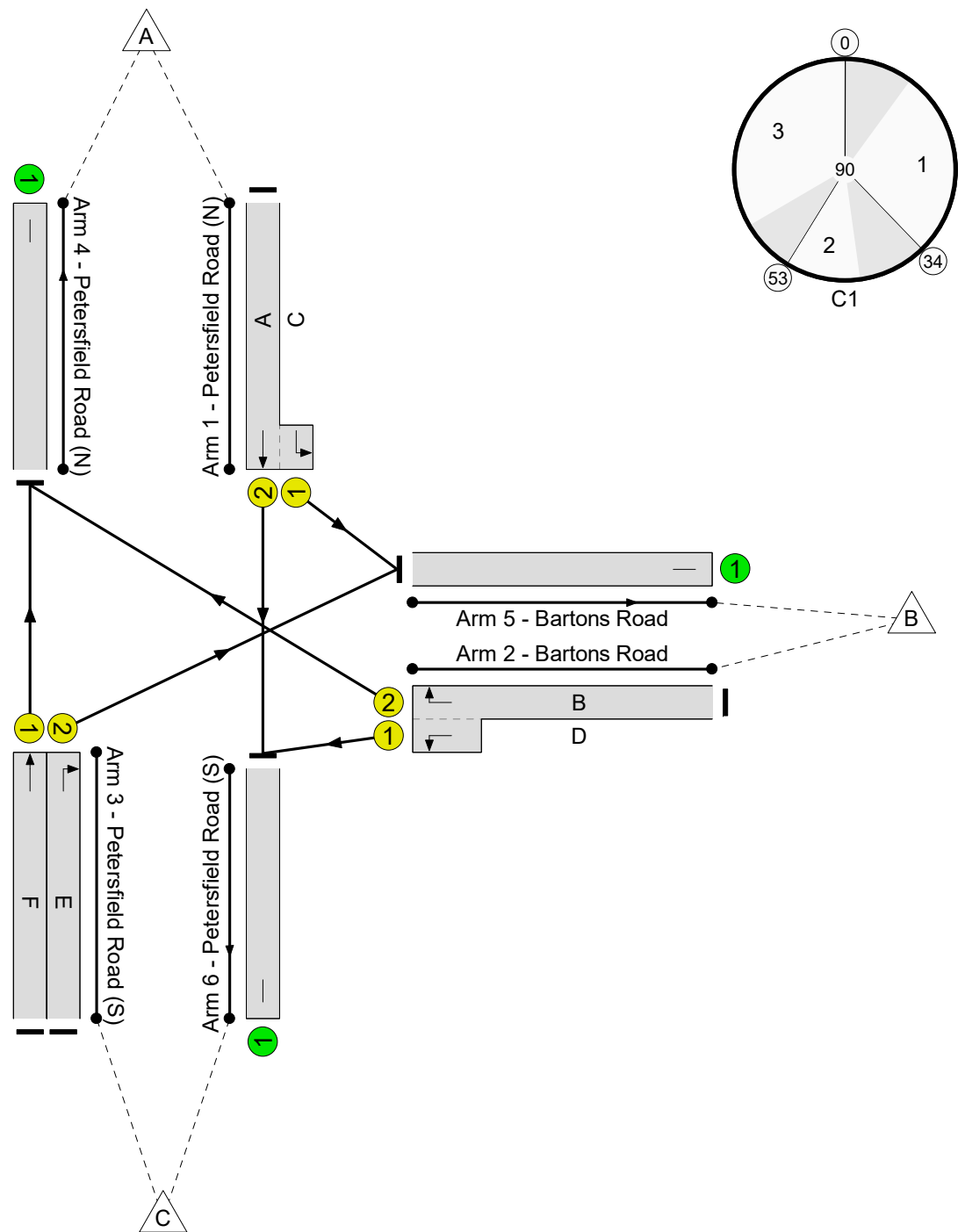
Network Layout Diagram



Bartons Road - Petersfield Road

PRC: -5.7 %

Total Traffic Delay: 30.0 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	95.2%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	95.2%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	30:35	-	673	2095:1749	521+208	92.3 : 92.3%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	10:44	-	597	1953:1743	147+497	92.8 : 92.8%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	64	-	339	1940	1401	24.2%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	25	-	474	1724	498	95.2%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	475	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	666	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	942	Inf	Inf	0.0%

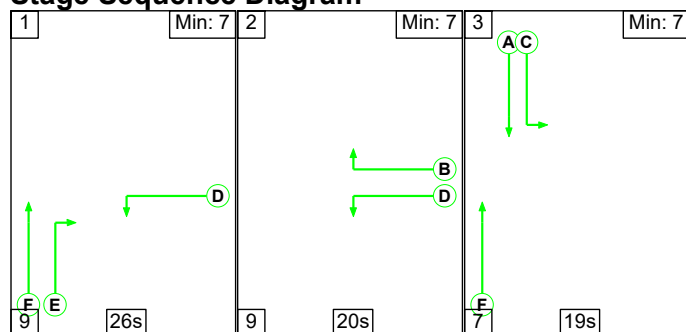
Full Input Data And Results

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	-	-	0	0	0	13.1	16.9	0.0	30.0	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	13.1	16.9	0.0	30.0	-	-	-	-
1/2+1/1	673	673	-	-	-	5.1	5.1	-	10.2	54.6	15.3	5.1	20.4
2/2+2/1	597	597	-	-	-	3.4	5.3	-	8.7	52.5	9.7	5.3	15.0
3/1	339	339	-	-	-	0.4	0.2	-	0.6	5.9	2.8	0.2	3.0
3/2	474	474	-	-	-	4.1	6.4	-	10.6	80.2	11.6	6.4	18.0
4/1	475	475	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	666	666	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	942	942	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -5.7 Total Delay for Signalled Lanes (pcuHr): 30.01 Cycle Time (s): 90 PRC Over All Lanes (%): -5.7 Total Delay Over All Lanes(pcuHr): 30.01													

Full Input Data And Results

Scenario 6: '2023 Baseline + Development 72 Units PM' (FG6: '2023 + Committed + Dev PM', Plan 1: 'Network Control Plan 1')

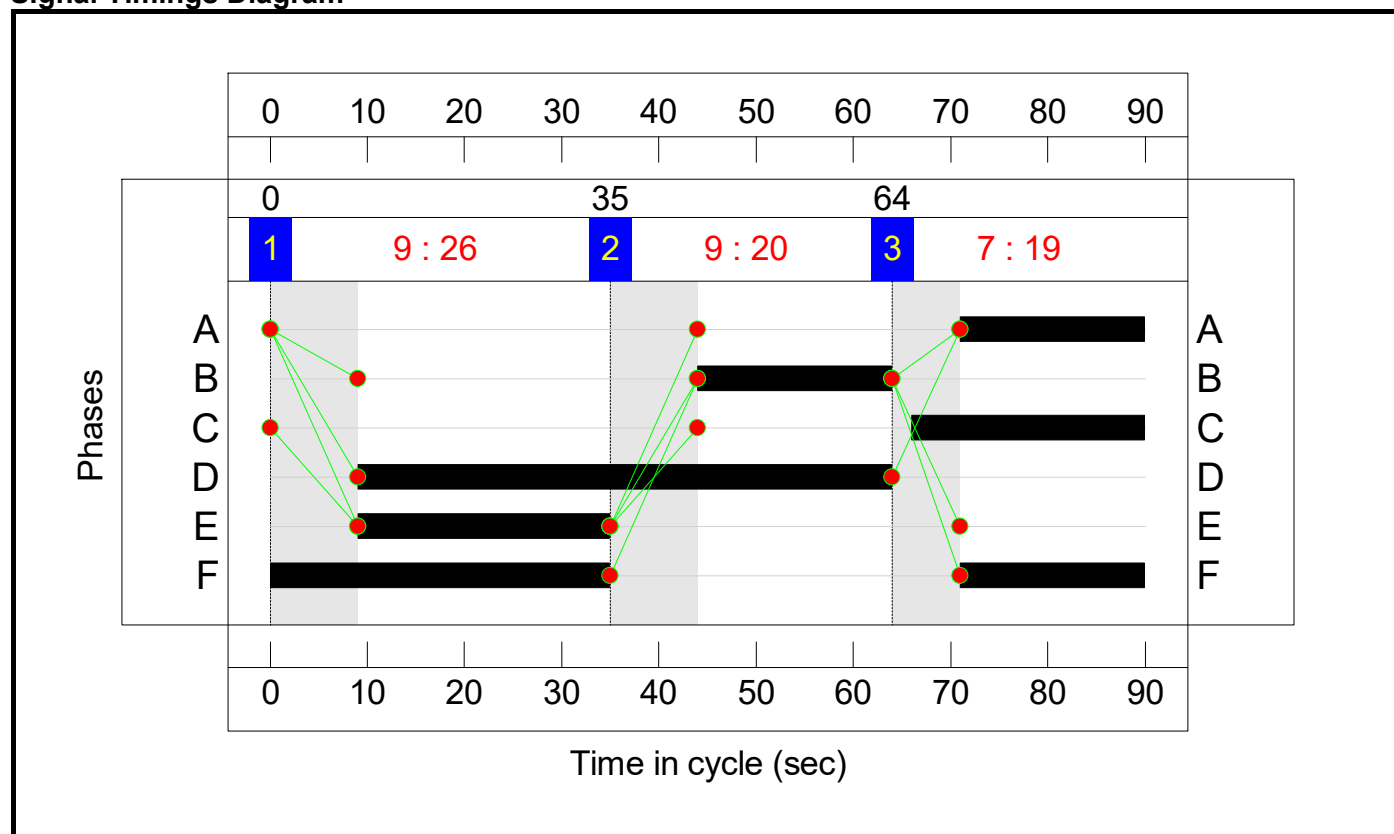
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	20	19
Change Point	0	35	64

Signal Timings Diagram



Full Input Data And Results

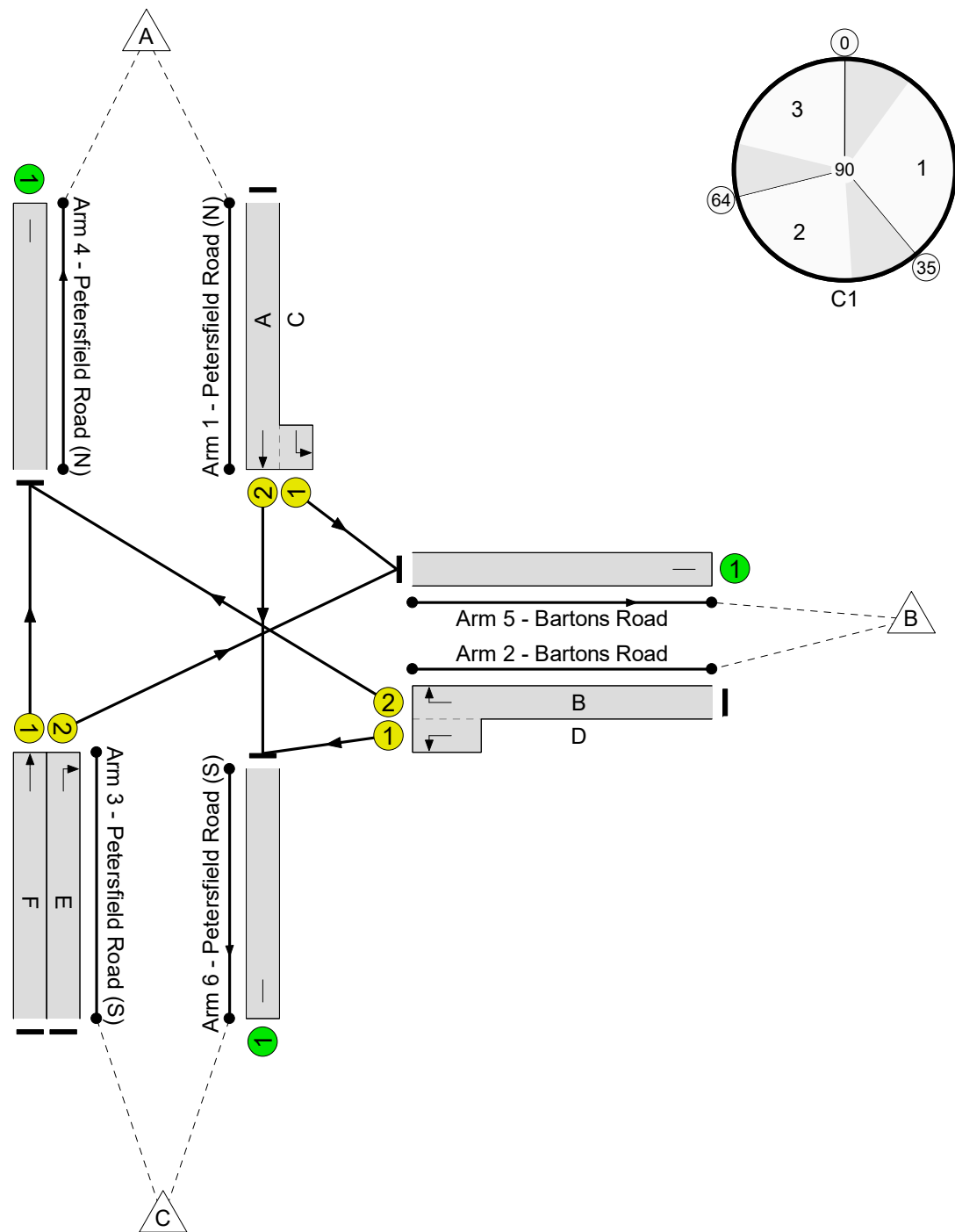
Network Layout Diagram



Bartons Road - Petersfield Road

PRC: -4.4 %

Total Traffic Delay: 29.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	94.0%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	94.0%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	19:24	-	455	2095:1749	361+123	94.0 : 94.0%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	20:55	-	769	1953:1743	194+630	93.3 : 93.3%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	54	-	545	1940	1186	46.0%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	26	-	472	1724	517	91.3%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	726	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	588	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	927	Inf	Inf	0.0%

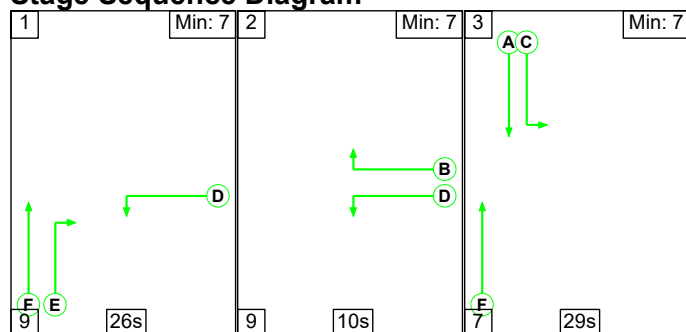
Full Input Data And Results

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	-	-	0	0	0	13.1	16.2	0.0	29.3	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	13.1	16.2	0.0	29.3	-	-	-	-
1/2+1/1	455	455	-	-	-	4.2	5.6	-	9.9	78.1	10.4	5.6	16.1
2/2+2/1	769	769	-	-	-	3.5	5.7	-	9.2	43.1	11.0	5.7	16.8
3/1	545	545	-	-	-	1.4	0.4	-	1.9	12.3	7.3	0.4	7.7
3/2	472	472	-	-	-	4.0	4.4	-	8.4	63.7	11.3	4.4	15.7
4/1	726	726	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	927	927	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -4.4 Total Delay for Signalled Lanes (pcuHr): 29.28 Cycle Time (s): 90 PRC Over All Lanes (%): -4.4 Total Delay Over All Lanes(pcuHr): 29.28													

Full Input Data And Results

Scenario 7: '2023 Baseline + Sensitivity AM' (FG7: '2023 + Committed + Sensitivity AM', Plan 1: 'Network Control Plan 1')

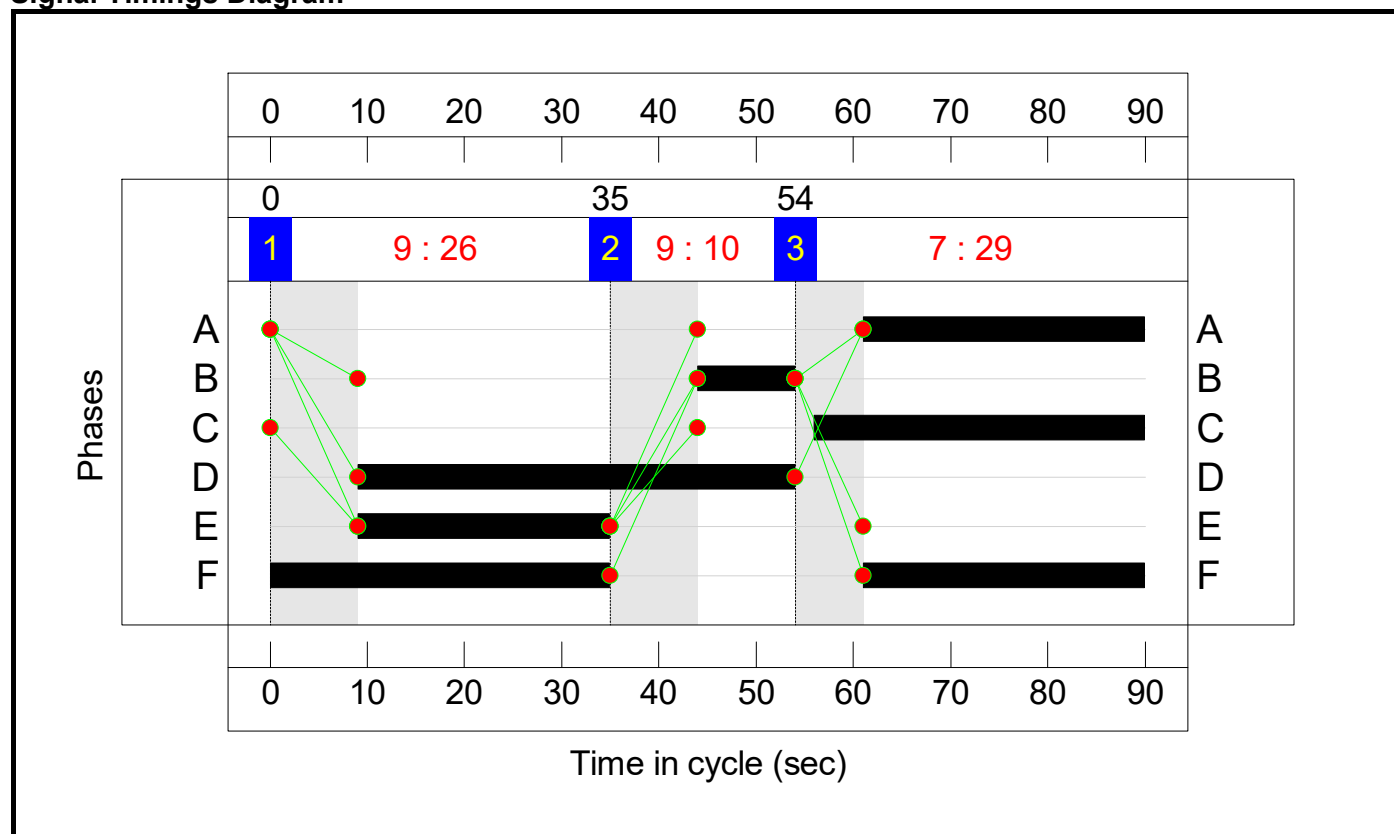
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	10	29
Change Point	0	35	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	95.5%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	95.5%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	29:34	-	674	2095:1749	504+202	95.3 : 95.3%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	10:45	-	612	1953:1743	147+494	95.5 : 95.5%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	64	-	339	1940	1401	24.2%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	26	-	478	1724	517	92.4%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%

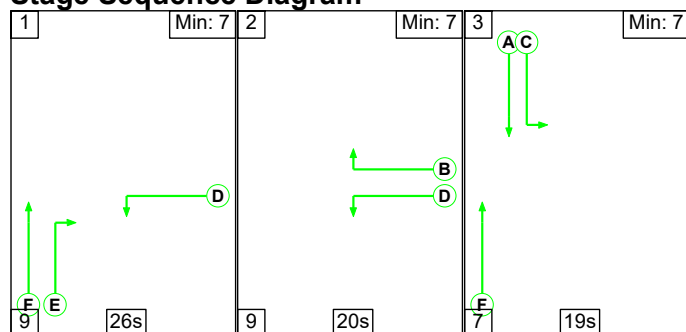
Full Input Data And Results

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	-	-	0	0	0	13.2	19.3	0.0	32.5	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	13.2	19.3	0.0	32.5	-	-	-	-
1/2+1/1	674	674	-	-	-	5.3	7.1	-	12.4	66.4	15.5	7.1	22.6
2/2+2/1	612	612	-	-	-	3.5	7.1	-	10.6	62.3	9.8	7.1	16.9
3/1	339	339	-	-	-	0.4	0.2	-	0.6	5.9	2.8	0.2	3.0
3/2	478	478	-	-	-	4.1	4.9	-	8.9	67.3	11.6	4.9	16.4
4/1	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -6.1 Total Delay for Signalled Lanes (pcuHr): 32.51 Cycle Time (s): 90 PRC Over All Lanes (%): -6.1 Total Delay Over All Lanes(pcuHr): 32.51													

Full Input Data And Results

Scenario 8: '2023 Baseline + Sensitivity PM' (FG8: '2023 + Committed + Sensitivity PM', Plan 1: 'Network Control Plan 1')

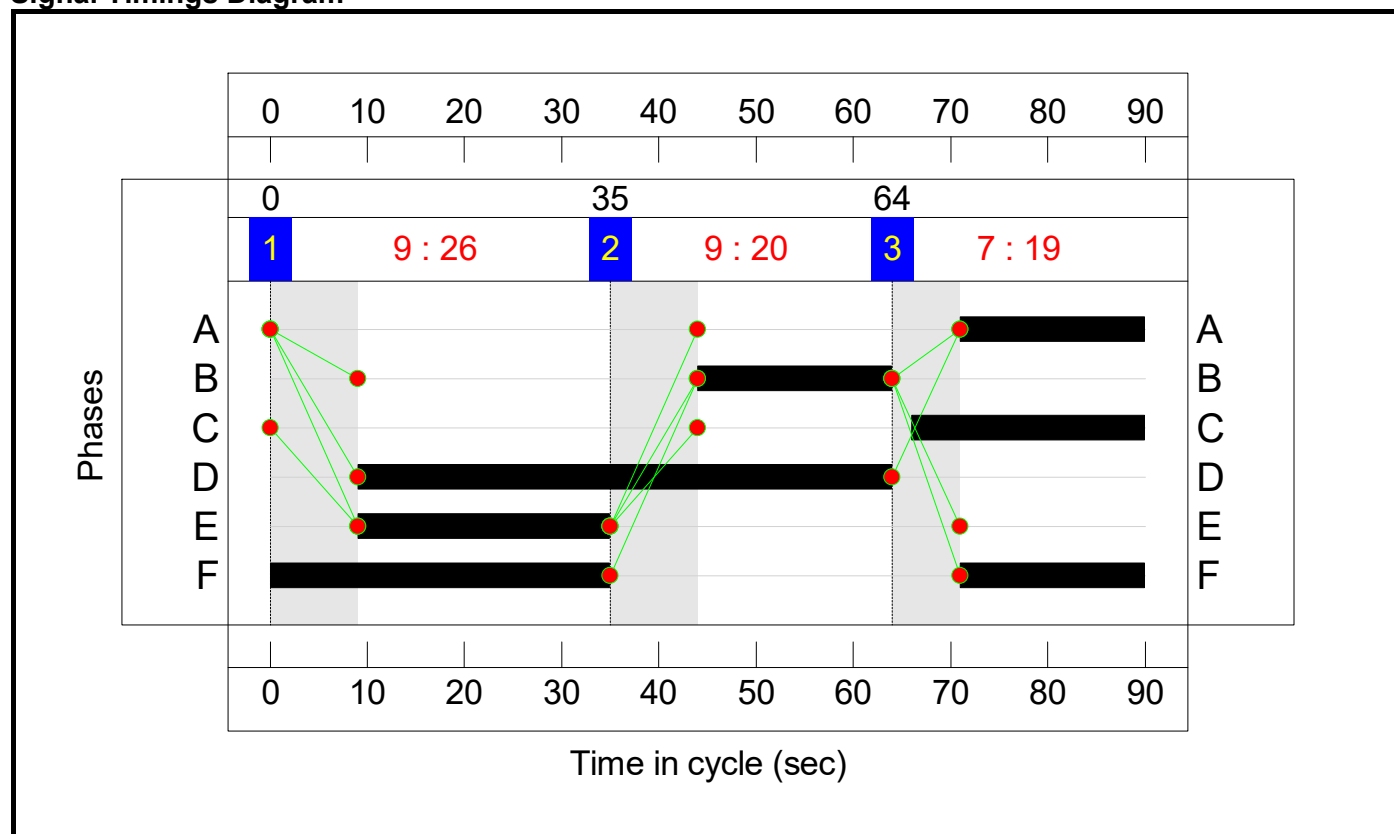
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	20	19
Change Point	0	35	64

Signal Timings Diagram



Full Input Data And Results

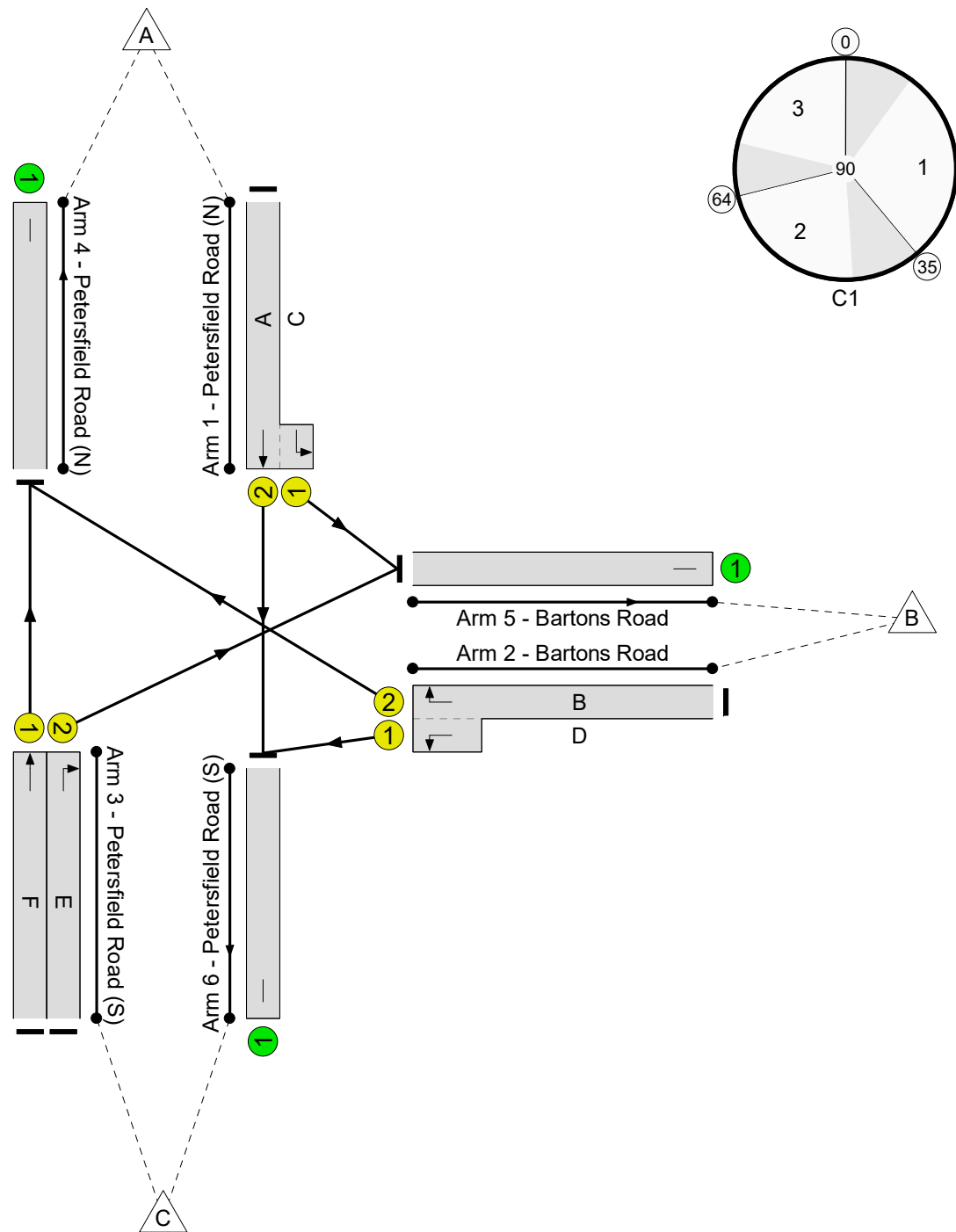
Network Layout Diagram



Bartons Road - Petersfield Road

PRC: -5.0 %

Total Traffic Delay: 31.4 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	94.5%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	94.5%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	19:24	-	458	2095:1749	359+126	94.5 : 94.5%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	20:55	-	777	1953:1743	194+630	94.3 : 94.3%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	54	-	545	1940	1186	46.0%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	26	-	481	1724	517	93.0%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	728	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	933	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	-	-	0	0	0	13.3	18.0	0.0	31.4	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	13.3	18.0	0.0	31.4	-	-	-	-
1/2+1/1	458	458	-	-	-	4.3	6.0	-	10.2	80.4	10.5	6.0	16.5
2/2+2/1	777	777	-	-	-	3.5	6.5	-	10.0	46.4	11.1	6.5	17.6
3/1	545	545	-	-	-	1.4	0.4	-	1.9	12.3	7.3	0.4	7.7
3/2	481	481	-	-	-	4.1	5.2	-	9.3	69.3	11.6	5.2	16.8
4/1	728	728	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	933	933	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): -5.0 Total Delay for Signalled Lanes (pcuHr): 31.36 Cycle Time (s): 90 PRC Over All Lanes (%): -5.0 Total Delay Over All Lanes(pcuHr): 31.36													

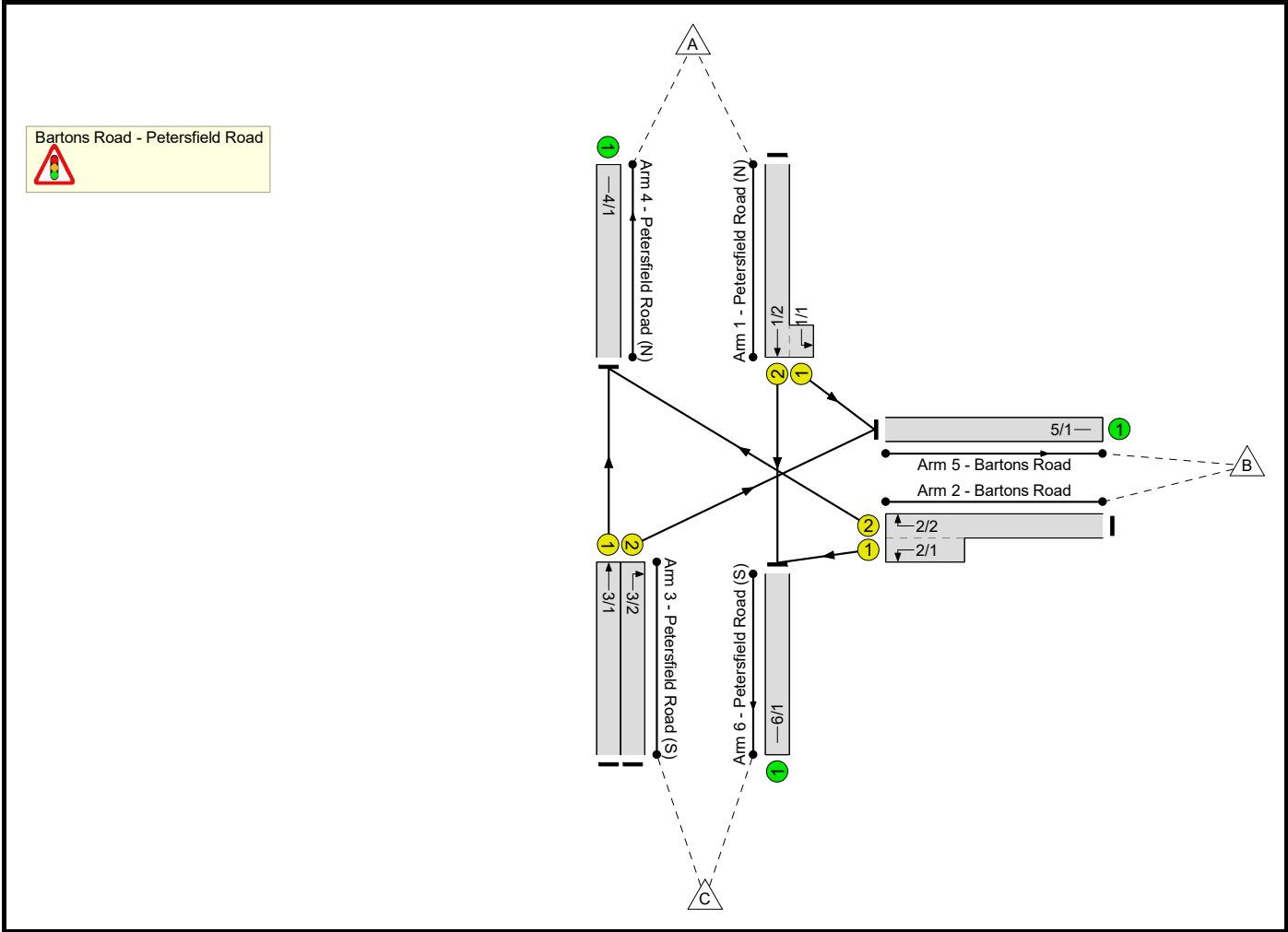
Full Input Data And Results

Full Input Data And Results

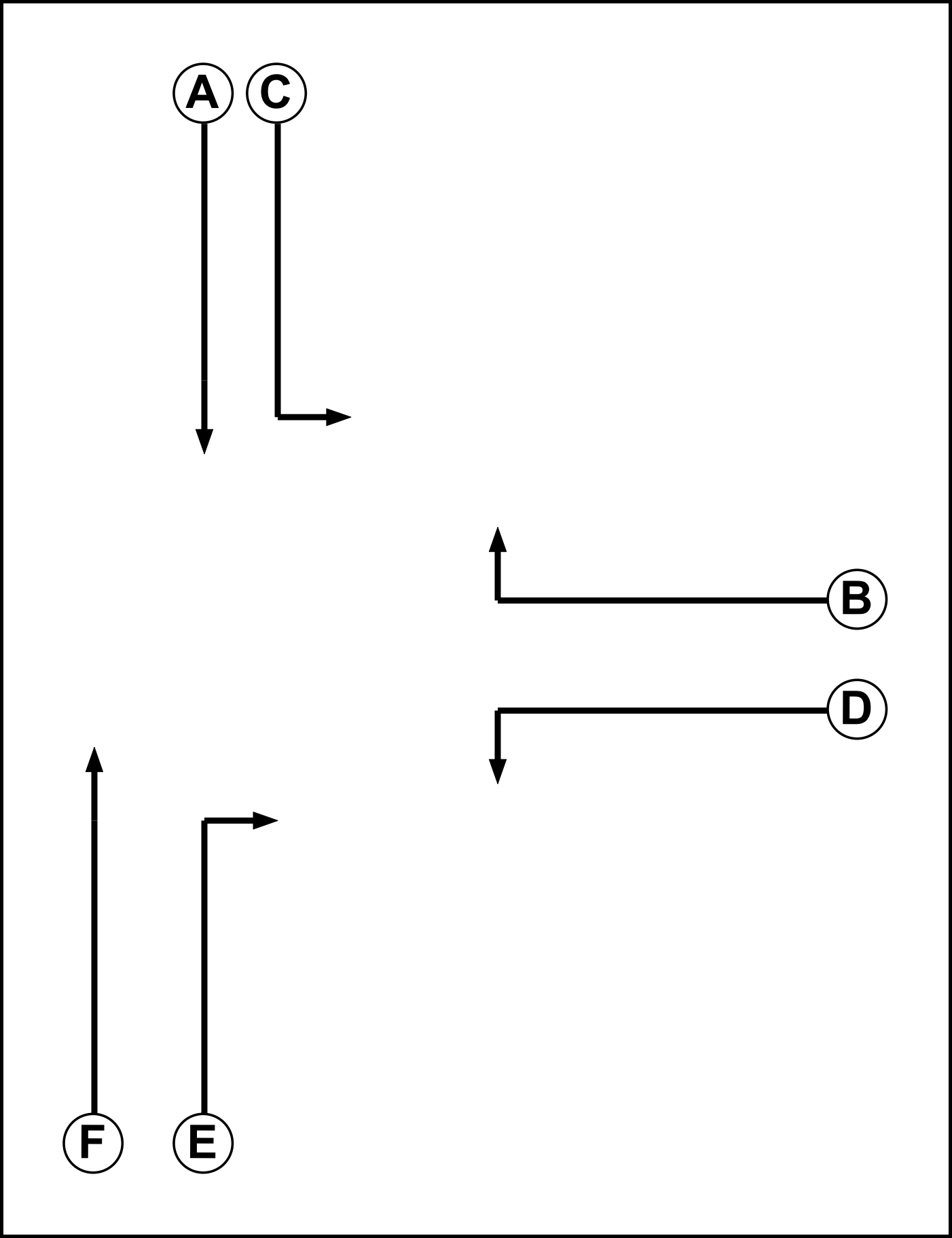
User and Project Details

Project:	17-055 Camp Field
Title:	
Location:	
Design Layout Ref:	Improvement Scheme
Additional detail:	
File name:	2019-09-05 Proposed Petersfield Rd Bartons Rd Improvement Scheme.lsg3x
Author:	PL
Company:	C&A
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

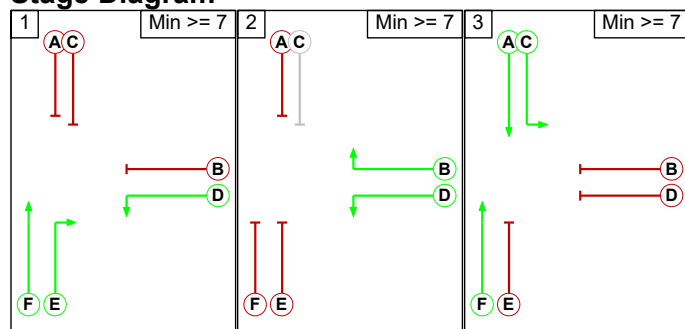
Phase Intergreens Matrix

	Starting Phase						
Terminating Phase		A	B	C	D	E	F
	A		9	-	9	9	-
	B	7		-	-	7	7
	C	-	-		-	9	-
	D	7	-	-		-	-
	E	9	9	9	-		-
	F	-	9	-	-	-	

Phases in Stage

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

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		9	9
2	7		7
3	9	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Bartons Road - Petersfield Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	U	C	2	3	2.0	Geom	-	3.25	0.00	Y	Arm 5 Left	13.70
1/2 (Petersfield Road (N))	U	A	2	3	60.0	Geom	-	3.40	0.00	N	Arm 6 Ahead	Inf
2/1 (Bartons Road)	U	D	2	3	4.9	Geom	-	3.25	0.00	Y	Arm 6 Left	13.30
2/2 (Bartons Road)	U	B	2	3	60.0	Geom	-	3.25	0.00	N	Arm 4 Right	23.00
3/1 (Petersfield Road (S))	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
3/2 (Petersfield Road (S))	U	E	2	3	17.4	Geom	-	3.25	0.00	Y	Arm 5 Right	12.00
4/1 (Petersfield Road (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Bartons Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Petersfield Road (S))	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2018 AM'	07:45	08:45	01:00	
2: '2018 PM'	17:00	18:00	01:00	
3: '2023 + Committed AM'	07:45	08:45	01:00	
4: '2023 + Committed PM'	17:00	18:00	01:00	
5: '2023 + Committed + Dev AM'	07:45	08:45	01:00	
6: '2023 + Committed + Dev PM'	17:00	18:00	01:00	
7: '2023 + Committed + Sensitivity AM'	07:45	08:45	01:00	
8: '2023 + Committed + Sensitivity PM'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: '2018 AM' (FG1: '2018 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	165	418	583
	B	112	0	371	483
	C	303	398	0	701
	Tot.	415	563	789	1767

Traffic Lane Flows

Lane	Scenario 1: 2018 AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	165
1/2 (with short)	583(In) 418(Out)
2/1 (short)	371
2/2 (with short)	483(In) 112(Out)
3/1	303
3/2	398
4/1	415
5/1	563
6/1	789

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2018 PM' (FG2: '2018 PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination				
		A	B	C	Tot.
	A	0	93	300	393
	B	156	0	500	656
	C	476	384	0	860
	Tot.	632	477	800	1909

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2018 PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	93
1/2 (with short)	393(In) 300(Out)
2/1 (short)	500
2/2 (with short)	656(In) 156(Out)
3/1	476
3/2	384
4/1	632
5/1	477
6/1	800

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2023 Baseline AM' (FG3: '2023 + Committed AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	190	481	671
	B	132	0	451	583
	C	339	470	0	809
	Tot.	471	660	932	2063

Traffic Lane Flows

Lane	Scenario 3: 2023 Baseline AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	190
1/2 (with short)	671(In) 481(Out)
2/1 (short)	451
2/2 (with short)	583(In) 132(Out)
3/1	339
3/2	470
4/1	471
5/1	660
6/1	932

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '2023 Baseline PM' (FG4: '2023 + Committed PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	112	339	451
	B	180	0	583	763
	C	545	463	0	1008
	Tot.	725	575	922	2222

Traffic Lane Flows

Lane	Scenario 4: 2023 Baseline PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	112
1/2 (with short)	451(In) 339(Out)
2/1 (short)	583
2/2 (with short)	763(In) 180(Out)
3/1	545
3/2	463
4/1	725
5/1	575
6/1	922

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2023 Baseline + Development 72 Units AM' (FG5: '2023 + Committed + Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	192	481	673
	B	136	0	461	597
	C	339	474	0	813
	Tot.	475	666	942	2083

Traffic Lane Flows

Lane	Scenario 5: 2023 Baseline + Development 72 Units AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	192
1/2 (with short)	673(In) 481(Out)
2/1 (short)	461
2/2 (with short)	597(In) 136(Out)
3/1	339
3/2	474
4/1	475
5/1	666
6/1	942

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2023 Baseline + Development 72 Units PM' (FG6: '2023 + Committed + Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	116	339	455
	B	181	0	588	769
	C	545	472	0	1017
	Tot.	726	588	927	2241

Traffic Lane Flows

Lane	Scenario 6: 2023 Baseline + Development 72 Units PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	116
1/2 (with short)	455(In) 339(Out)
2/1 (short)	588
2/2 (with short)	769(In) 181(Out)
3/1	545
3/2	472
4/1	726
5/1	588
6/1	927

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2023 Baseline + Sensitivity AM' (FG7: '2023 + Committed + Sensitivity AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	193	481	674
	B	140	0	472	612
	C	339	478	0	817
	Tot.	479	671	953	2103

Traffic Lane Flows

Lane	Scenario 7: 2023 Baseline + Sensitivity AM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	193
1/2 (with short)	674(In) 481(Out)
2/1 (short)	472
2/2 (with short)	612(In) 140(Out)
3/1	339
3/2	478
4/1	479
5/1	671
6/1	953

Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '2023 Baseline + Sensitivity PM' (FG8: '2023 + Committed + Sensitivity PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

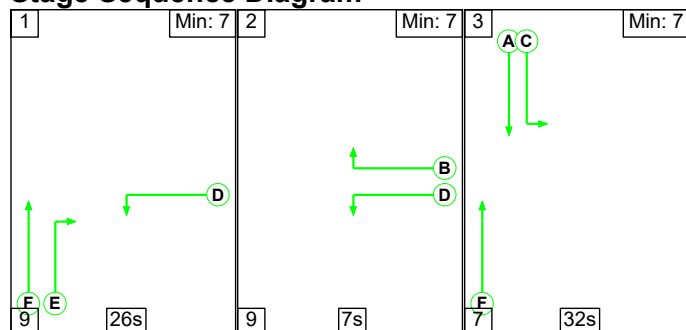
	Destination				
Origin		A	B	C	Tot.
	A	0	119	339	458
	B	183	0	594	777
	C	545	481	0	1026
	Tot.	728	600	933	2261

Traffic Lane Flows

Lane	Scenario 8: 2023 Baseline + Sensitivity PM
Junction: Bartons Road - Petersfield Road	
1/1 (short)	119
1/2 (with short)	458(In) 339(Out)
2/1 (short)	594
2/2 (with short)	777(In) 183(Out)
3/1	545
3/2	481
4/1	728
5/1	600
6/1	933

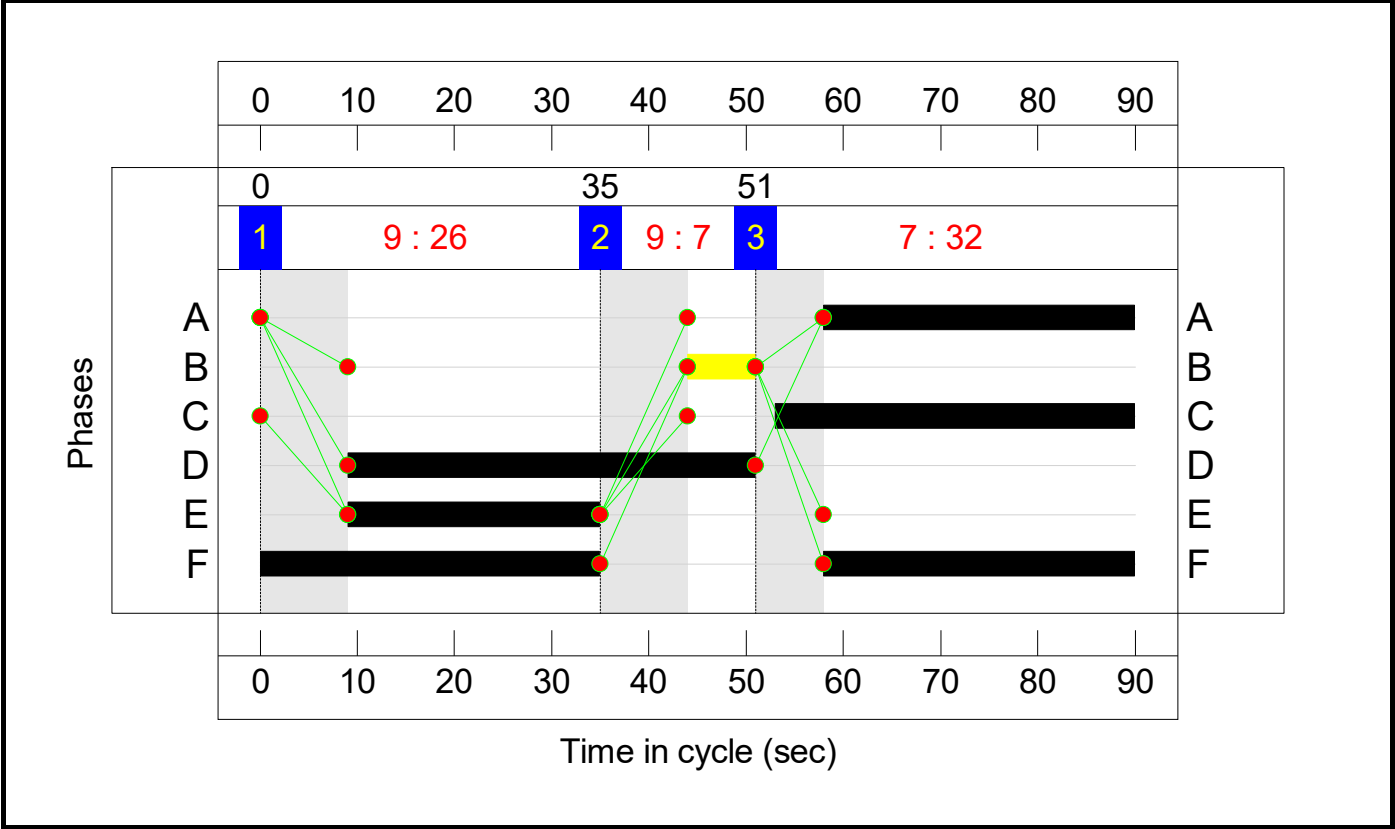
Lane Saturation Flows

Junction: Bartons Road - Petersfield 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 (Petersfield Road (N))	3.25	0.00	Y	Arm 5 Left	13.70	100.0 %	1749	1749
1/2 (Petersfield Road (N))	3.40	0.00	N	Arm 6 Ahead	Inf	100.0 %	2095	2095
2/1 (Bartons Road)	3.25	0.00	Y	Arm 6 Left	13.30	100.0 %	1743	1743
2/2 (Bartons Road)	3.25	0.00	N	Arm 4 Right	23.00	100.0 %	1953	1953
3/1 (Petersfield Road (S))	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
3/2 (Petersfield Road (S))	3.25	0.00	Y	Arm 5 Right	12.00	100.0 %	1724	1724
4/1 (Petersfield Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Bartons Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Petersfield Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2018 AM' (FG1: '2018 AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	3
Duration	26	7	32
Change Point	0	35	51

Signal Timings Diagram

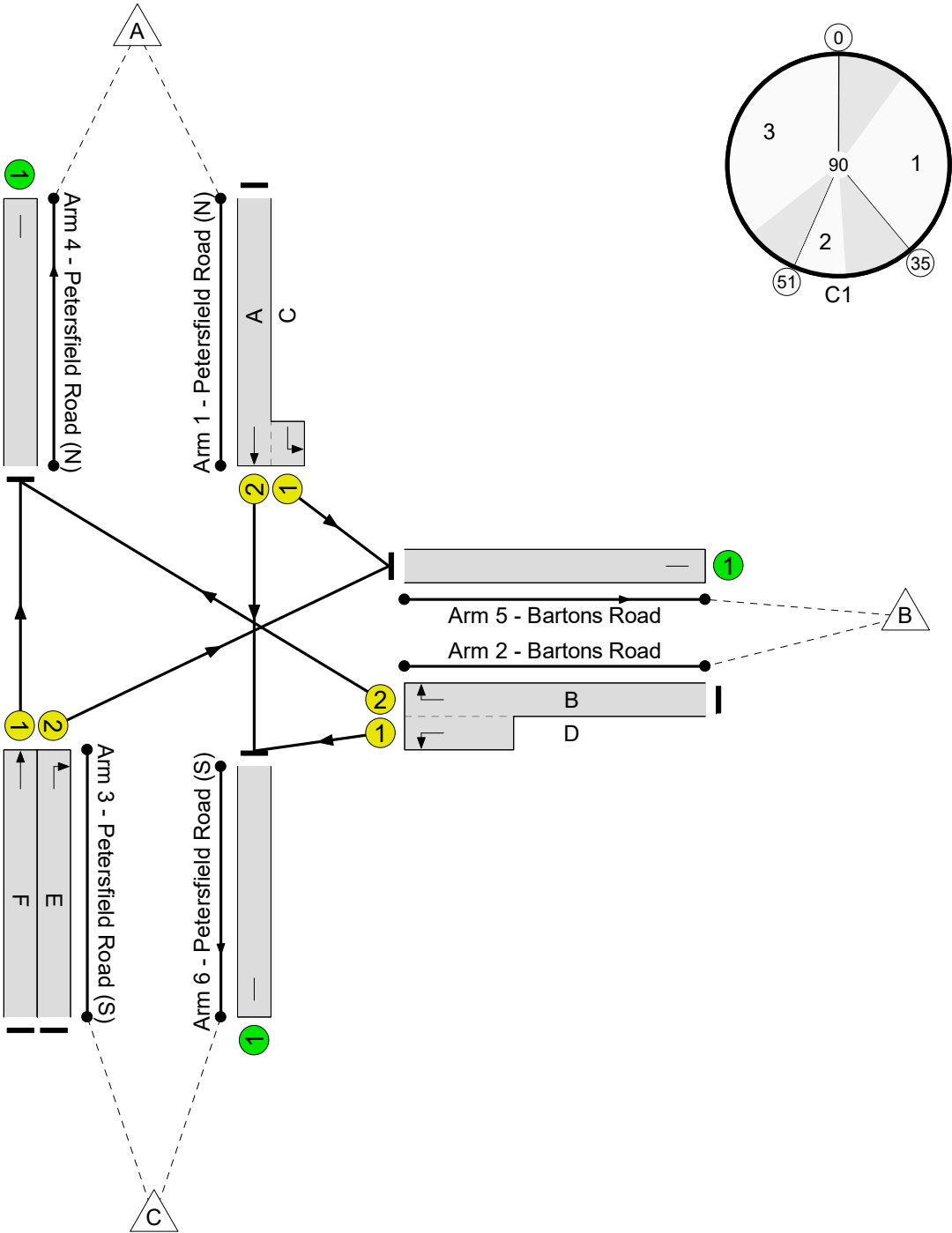


Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road

PRC: 17.0 %
Total Traffic Delay: 14.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	77.0%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	77.0%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	32:37	-	583	2095:1749	554+219	75.4 : 75.4%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	7:42	-	483	1953:1743	174+575	64.5 : 64.5%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	67	-	303	1940	1466	20.7%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	26	-	398	1724	517	77.0%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	789	Inf	Inf	0.0%

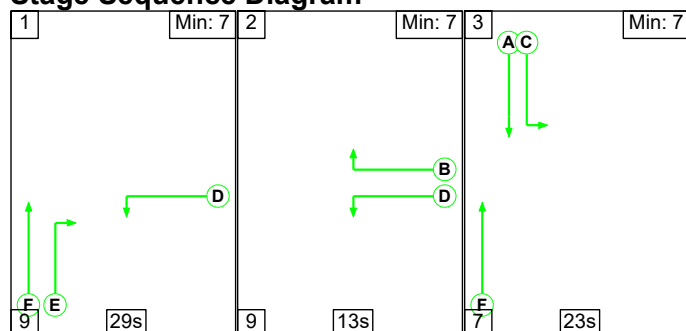
Full Input Data And Results

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	-	-	0	0	0	10.1	4.2	0.0	14.3	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	10.1	4.2	0.0	14.3	-	-	-	-
1/2+1/1	583	583	-	-	-	3.9	1.5	-	5.4	33.1	11.7	1.5	13.2
2/2+2/1	483	483	-	-	-	2.8	0.9	-	3.7	27.9	6.3	0.9	7.2
3/1	303	303	-	-	-	0.3	0.1	-	0.4	4.7	2.2	0.1	2.3
3/2	398	398	-	-	-	3.2	1.6	-	4.8	43.4	9.0	1.6	10.6
4/1	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	563	563	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 17.0 Total Delay for Signalled Lanes (pcuHr): 14.30 Cycle Time (s): 90 PRC Over All Lanes (%): 17.0 Total Delay Over All Lanes(pcuHr): 14.30													

Full Input Data And Results

Scenario 2: '2018 PM' (FG2: '2018 PM', Plan 1: 'Network Control Plan 1')

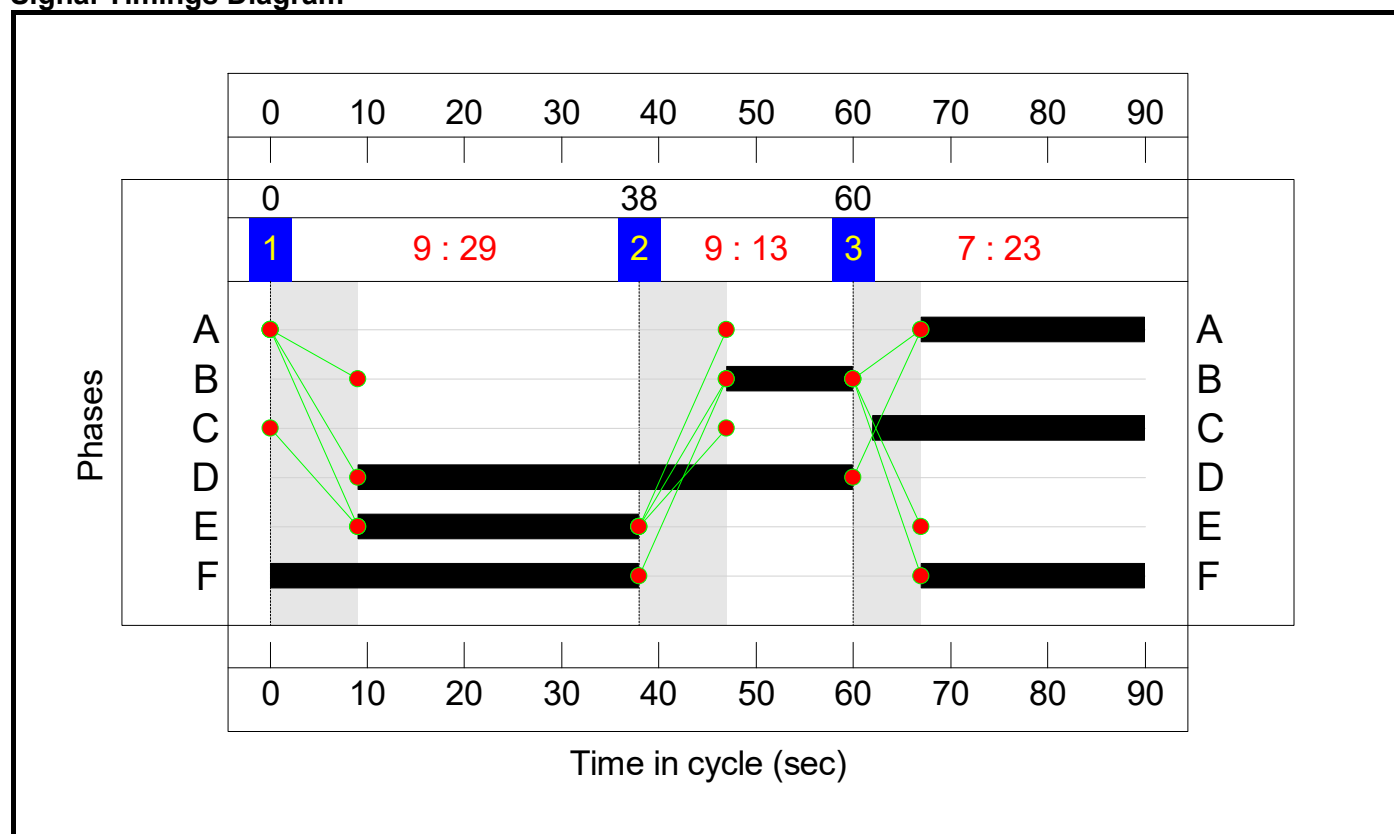
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	29	13	23
Change Point	0	38	60

Signal Timings Diagram



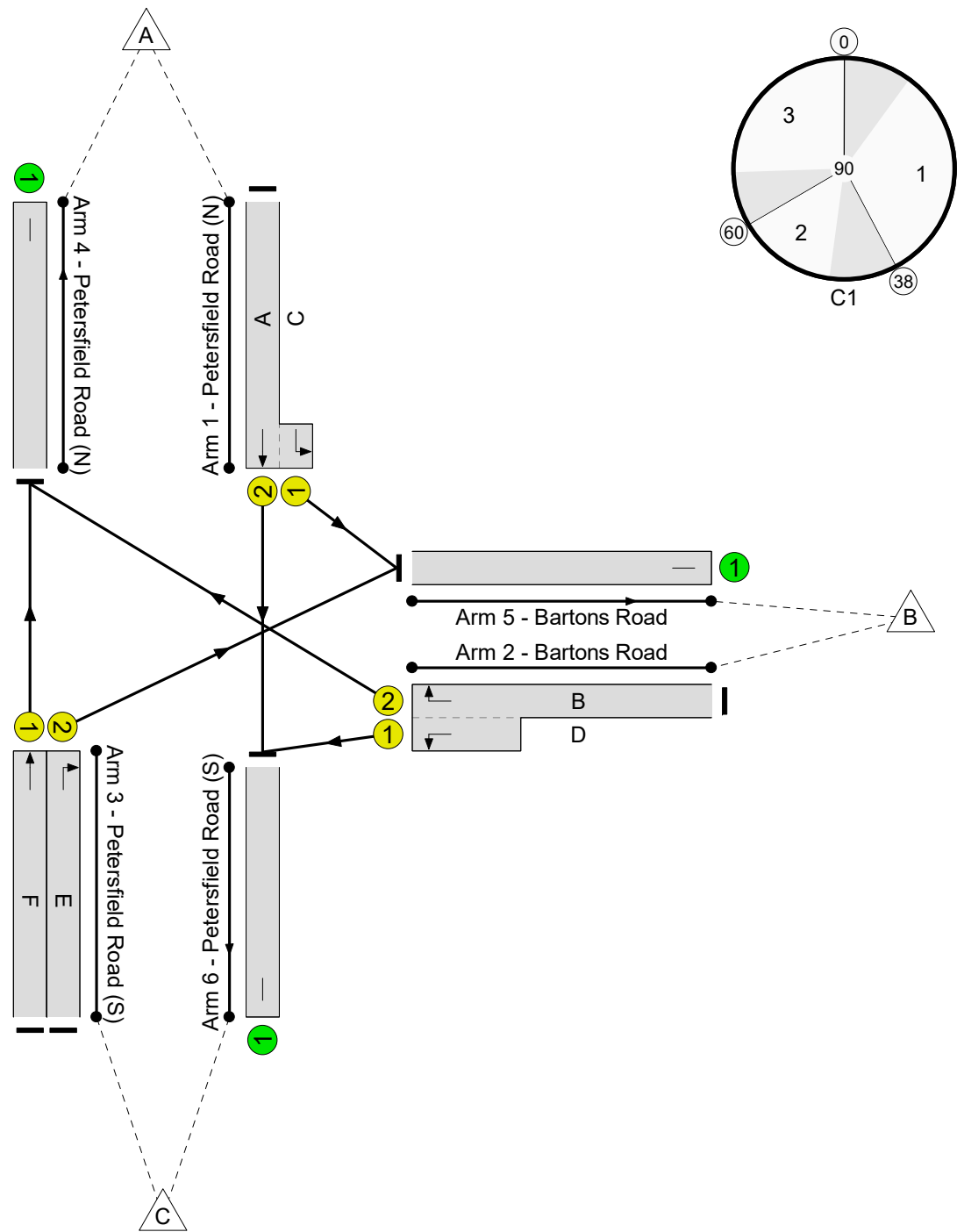
Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road

PRC: 30.4 %

Total Traffic Delay: 13.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	69.0%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	69.0%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	23:28	-	393	2095:1749	436+135	68.7 : 68.7%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	13:51	-	656	1953:1743	226+724	69.0 : 69.0%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	61	-	476	1940	1336	35.6%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	29	-	384	1724	575	66.8%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	800	Inf	Inf	0.0%

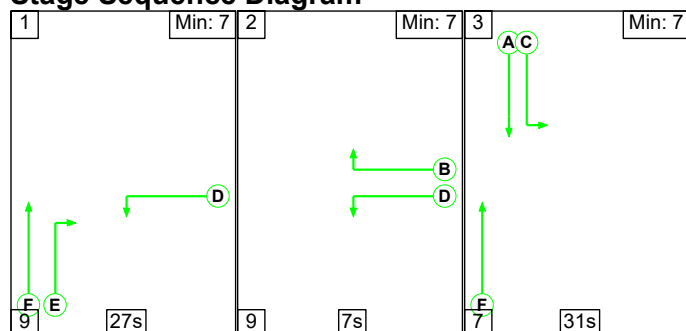
Full Input Data And Results

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	-	-	0	0	0	9.7	3.5	0.0	13.2	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	9.7	3.5	0.0	13.2	-	-	-	-
1/2+1/1	393	393	-	-	-	3.1	1.1	-	4.2	38.5	8.0	1.1	9.1
2/2+2/1	656	656	-	-	-	3.1	1.1	-	4.2	22.9	8.1	1.1	9.2
3/1	476	476	-	-	-	0.8	0.3	-	1.0	7.9	4.9	0.3	5.2
3/2	384	384	-	-	-	2.7	1.0	-	3.7	35.1	8.2	1.0	9.2
4/1	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 30.4 Total Delay for Signalled Lanes (pcuHr): 13.17 Cycle Time (s): 90 PRC Over All Lanes (%): 30.4 Total Delay Over All Lanes(pcuHr): 13.17													

Full Input Data And Results

Scenario 3: '2023 Baseline AM' (FG3: '2023 + Committed AM', Plan 1: 'Network Control Plan 1')

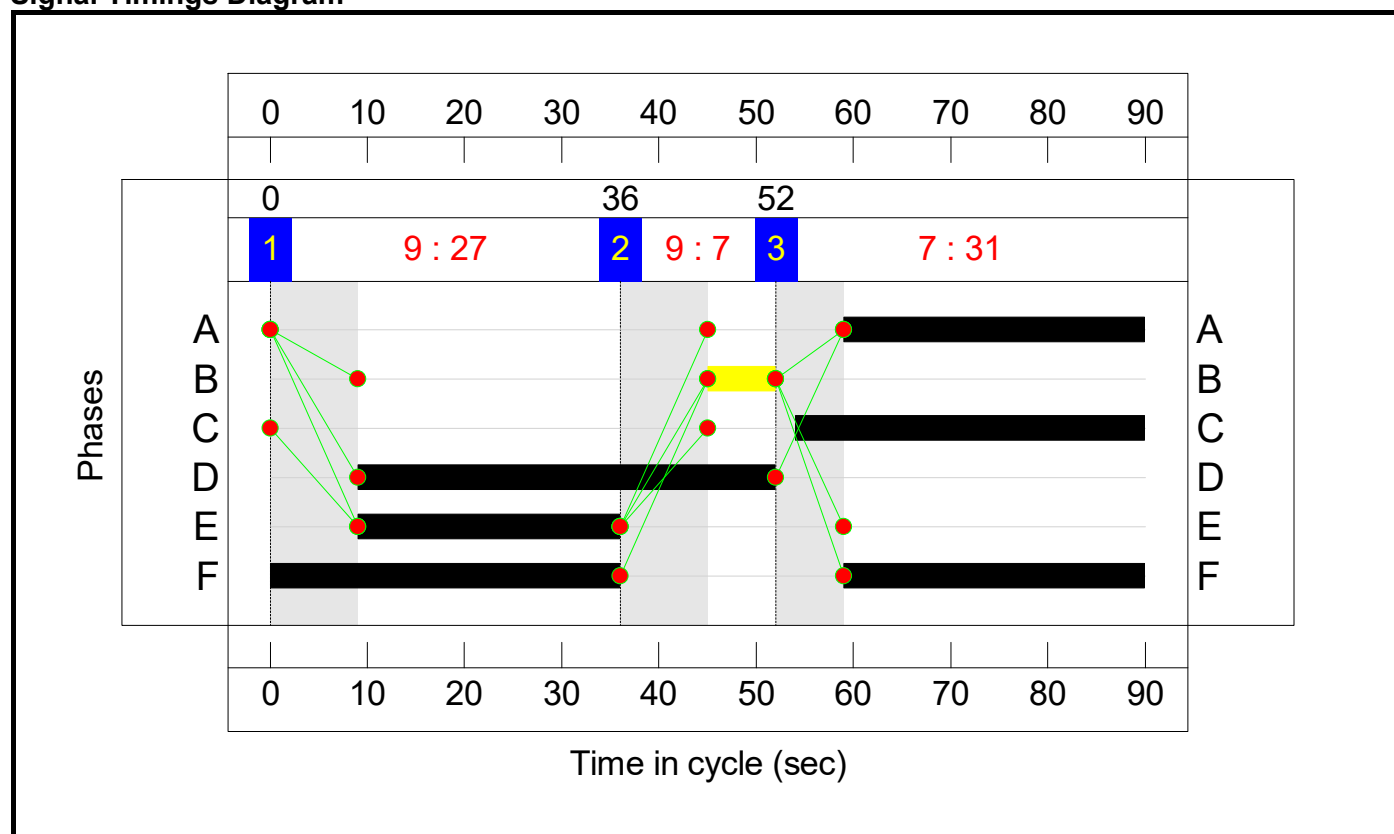
Stage Sequence Diagram



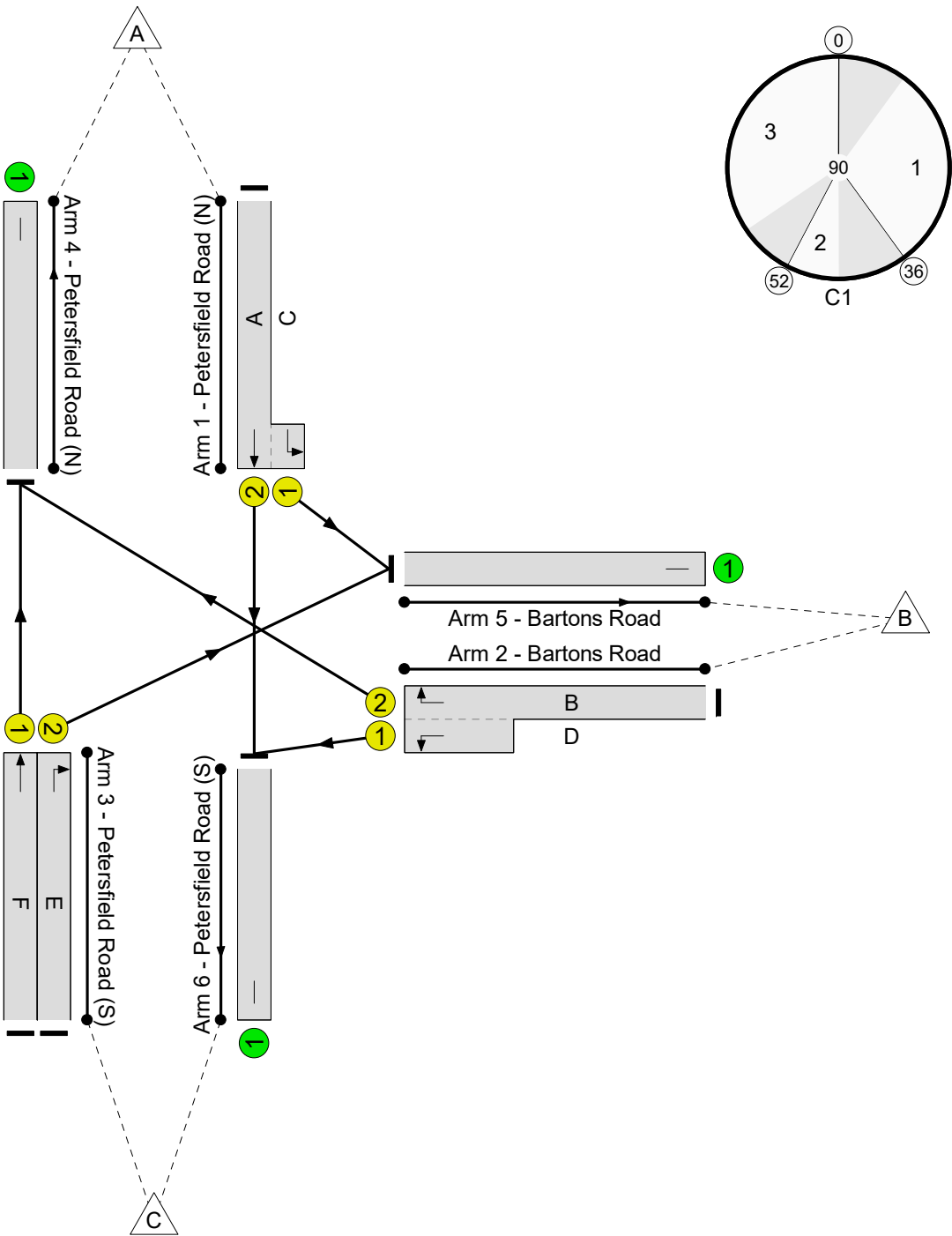
Stage Timings

Stage	1	2	3
Duration	27	7	31
Change Point	0	36	52

Signal Timings Diagram



Bartons Road - Petersfield Road
PRC: 0.7 %
Total Traffic Delay: 21.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	89.4%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	89.4%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	31:36	-	671	2095:1749	538+213	89.4 : 89.4%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	7:43	-	583	1953:1743	174+593	76.0 : 76.0%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	67	-	339	1940	1466	23.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	27	-	470	1724	536	87.6%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	471	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	932	Inf	Inf	0.0%

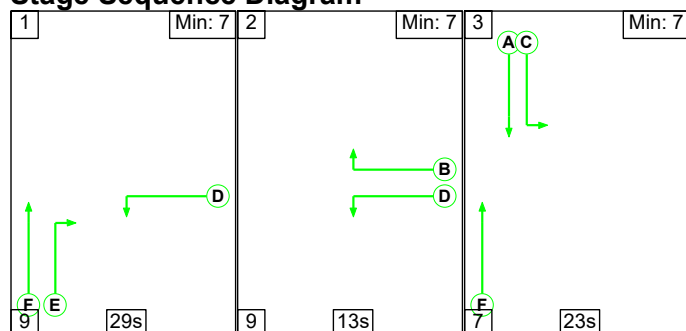
Full Input Data And Results

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	-	-	0	0	0	12.5	8.8	0.0	21.3	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	12.5	8.8	0.0	21.3	-	-	-	-
1/2+1/1	671	671	-	-	-	4.9	3.8	-	8.7	46.9	14.9	3.8	18.7
2/2+2/1	583	583	-	-	-	3.5	1.6	-	5.0	31.0	8.6	1.6	10.2
3/1	339	339	-	-	-	0.3	0.2	-	0.5	4.9	2.4	0.2	2.6
3/2	470	470	-	-	-	3.8	3.2	-	7.1	54.1	11.1	3.2	14.3
4/1	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	660	660	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	932	932	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 0.7 Total Delay for Signalled Lanes (pcuHr): 21.28 Cycle Time (s): 90 PRC Over All Lanes (%): 0.7 Total Delay Over All Lanes(pcuHr): 21.28													

Full Input Data And Results

Scenario 4: '2023 Baseline PM' (FG4: '2023 + Committed PM', Plan 1: 'Network Control Plan 1')

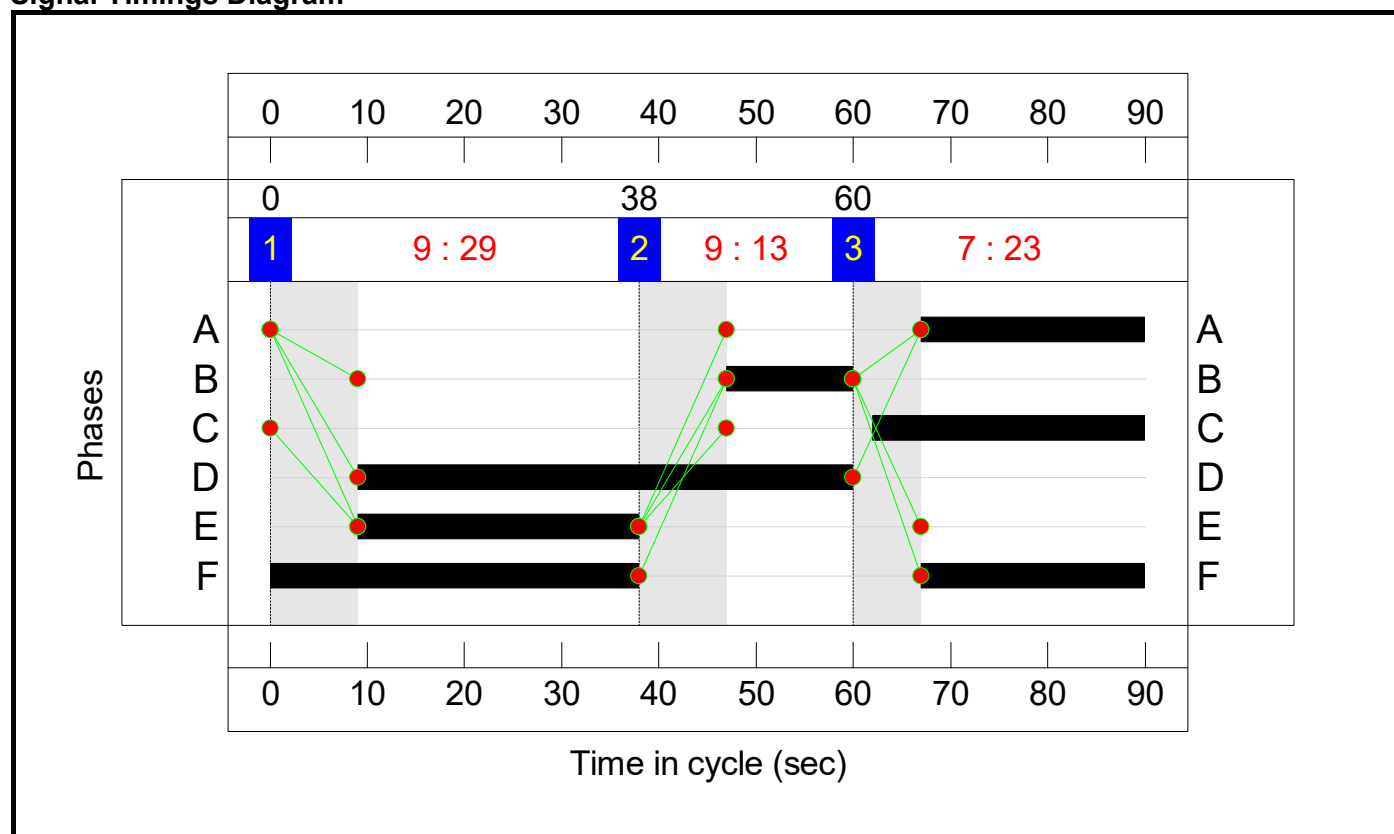
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	29	13	23
Change Point	0	38	60

Signal Timings Diagram



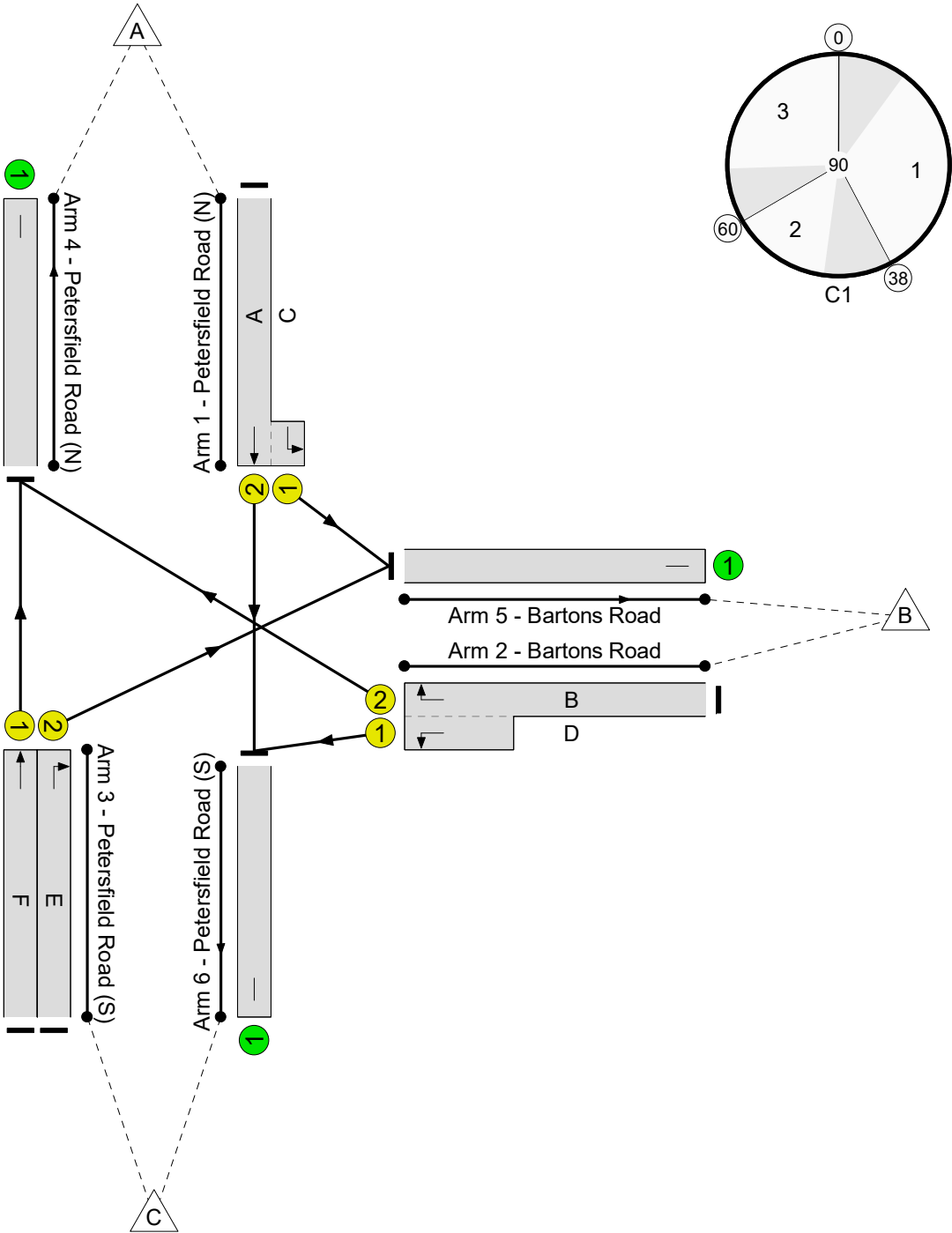
Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road



PRC: 11.7 %
Total Traffic Delay: 18.0 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	80.6%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	80.6%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	23:28	-	451	2095:1749	430+142	78.8 : 78.8%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	13:51	-	763	1953:1743	226+731	79.7 : 79.7%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	61	-	545	1940	1336	40.8%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	29	-	463	1724	575	80.6%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	922	Inf	Inf	0.0%

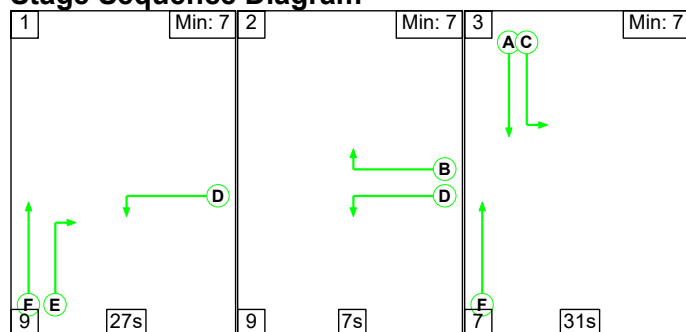
Full Input Data And Results

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	-	-	0	0	0	11.9	6.1	0.0	18.0	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	11.9	6.1	0.0	18.0	-	-	-	-
1/2+1/1	451	451	-	-	-	3.7	1.8	-	5.5	44.0	9.6	1.8	11.4
2/2+2/1	763	763	-	-	-	3.7	1.9	-	5.7	26.7	11.0	1.9	12.9
3/1	545	545	-	-	-	0.9	0.3	-	1.3	8.3	5.8	0.3	6.1
3/2	463	463	-	-	-	3.5	2.0	-	5.5	42.9	10.5	2.0	12.5
4/1	725	725	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	922	922	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 11.7 Total Delay for Signalled Lanes (pcuHr): 17.96 Cycle Time (s): 90 PRC Over All Lanes (%): 11.7 Total Delay Over All Lanes(pcuHr): 17.96													

Full Input Data And Results

Scenario 5: '2023 Baseline + Development 72 Units AM' (FG5: '2023 + Committed + Dev AM', Plan 1: 'Network Control Plan 1')

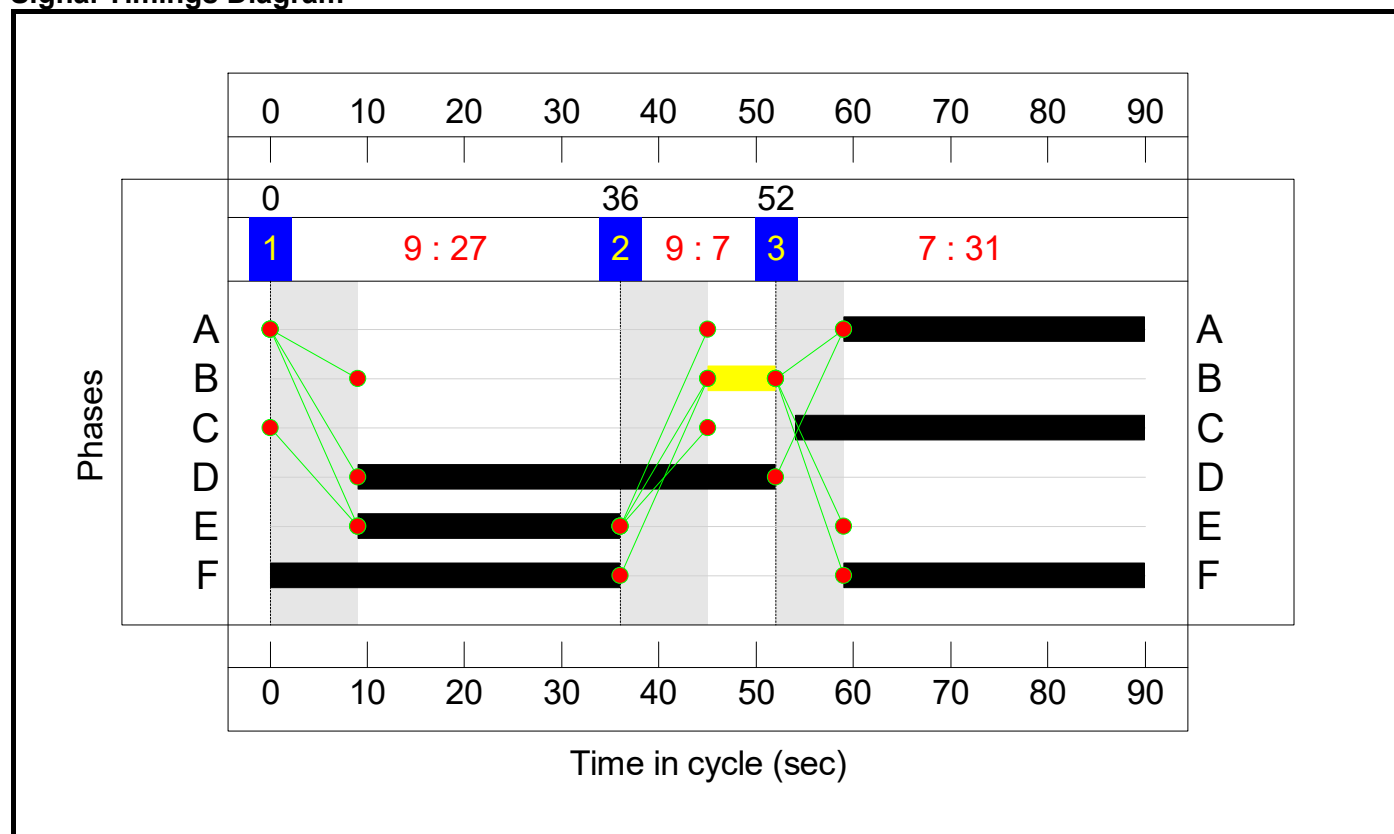
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	27	7	31
Change Point	0	36	52

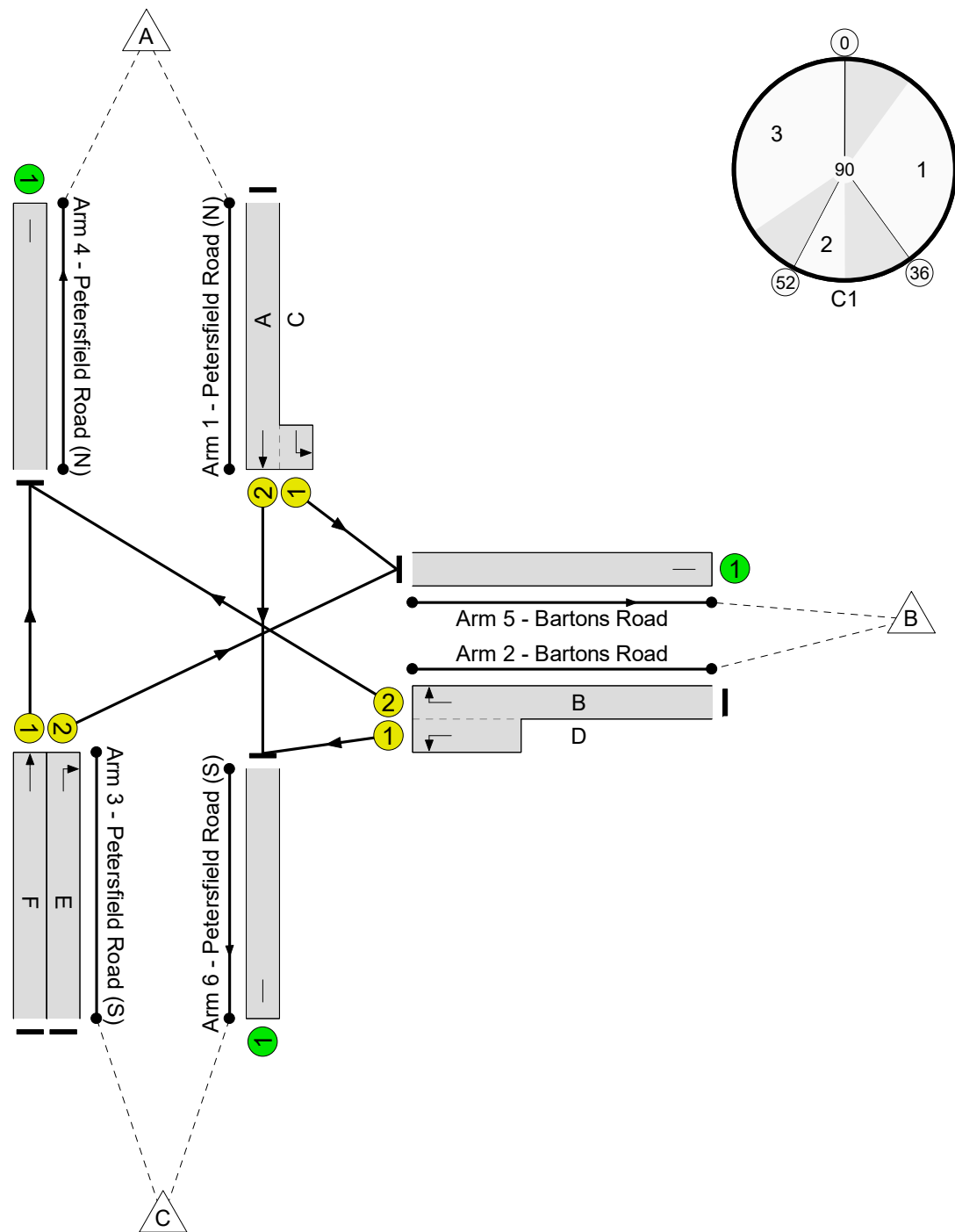
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road
PRC: 0.4 %
Total Traffic Delay: 21.9 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	89.6%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	89.6%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	31:36	-	673	2095:1749	537+214	89.6 : 89.6%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	7:43	-	597	1953:1743	174+588	78.3 : 78.3%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	67	-	339	1940	1466	23.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	27	-	474	1724	536	88.4%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	475	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	666	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	942	Inf	Inf	0.0%

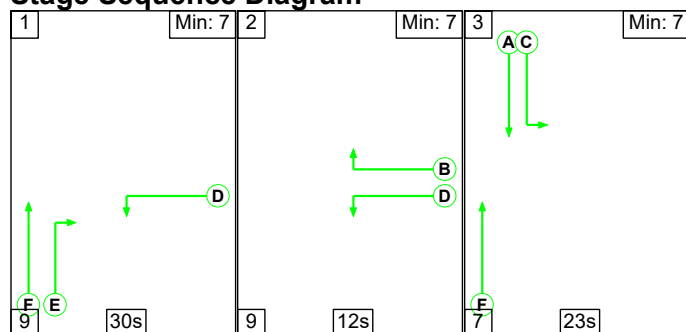
Full Input Data And Results

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	-	-	0	0	0	12.7	9.3	0.0	21.9	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	12.7	9.3	0.0	21.9	-	-	-	-
1/2+1/1	673	673	-	-	-	4.9	3.9	-	8.9	47.3	14.9	3.9	18.8
2/2+2/1	597	597	-	-	-	3.6	1.8	-	5.3	32.2	9.0	1.8	10.8
3/1	339	339	-	-	-	0.3	0.2	-	0.5	4.9	2.4	0.2	2.6
3/2	474	474	-	-	-	3.9	3.4	-	7.3	55.5	11.2	3.4	14.6
4/1	475	475	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	666	666	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	942	942	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 0.4 Total Delay for Signalled Lanes (pcuHr): 21.95 Cycle Time (s): 90 PRC Over All Lanes (%): 0.4 Total Delay Over All Lanes(pcuHr): 21.95													

Full Input Data And Results

Scenario 6: '2023 Baseline + Development 72 Units PM' (FG6: '2023 + Committed + Dev PM', Plan 1: 'Network Control Plan 1')

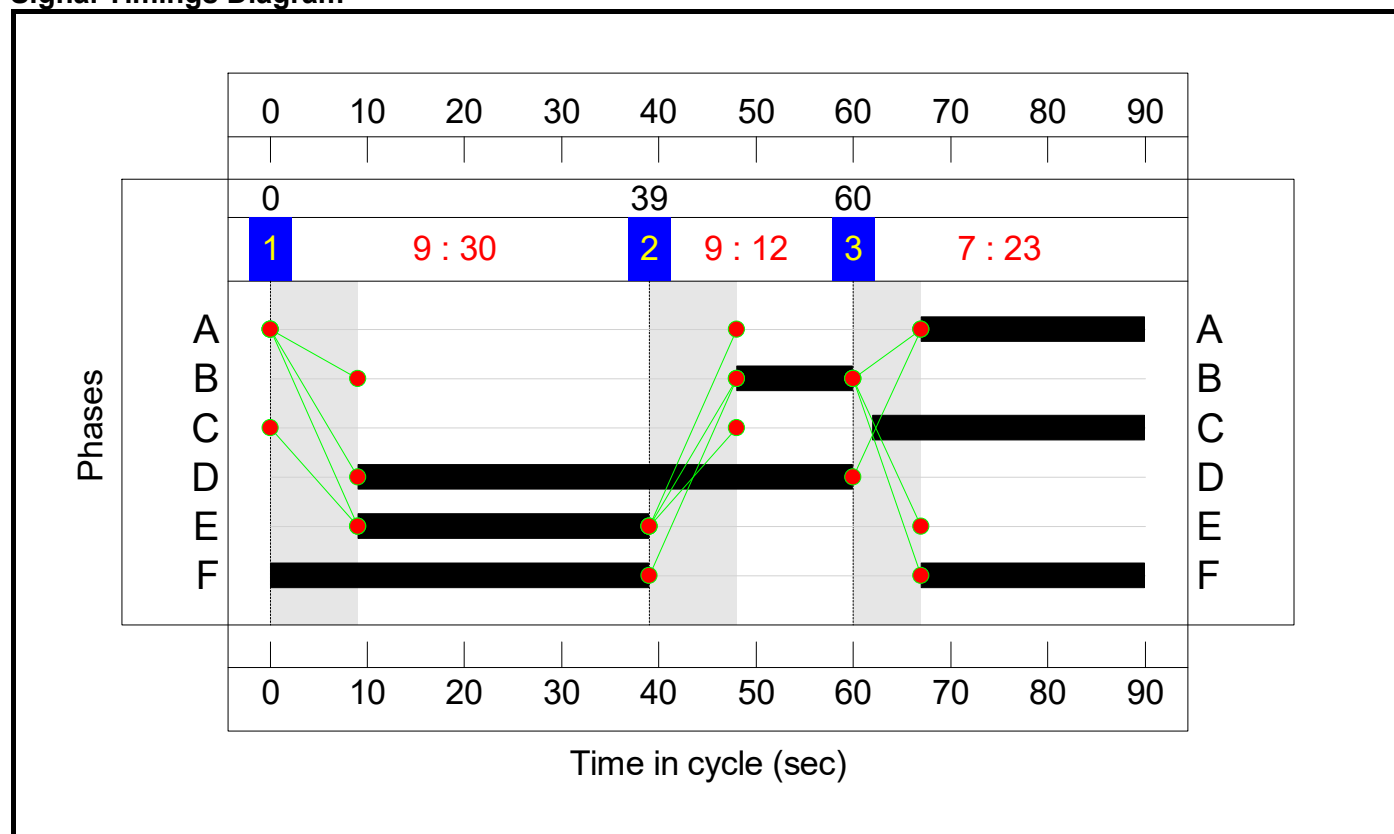
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	30	12	23
Change Point	0	39	60

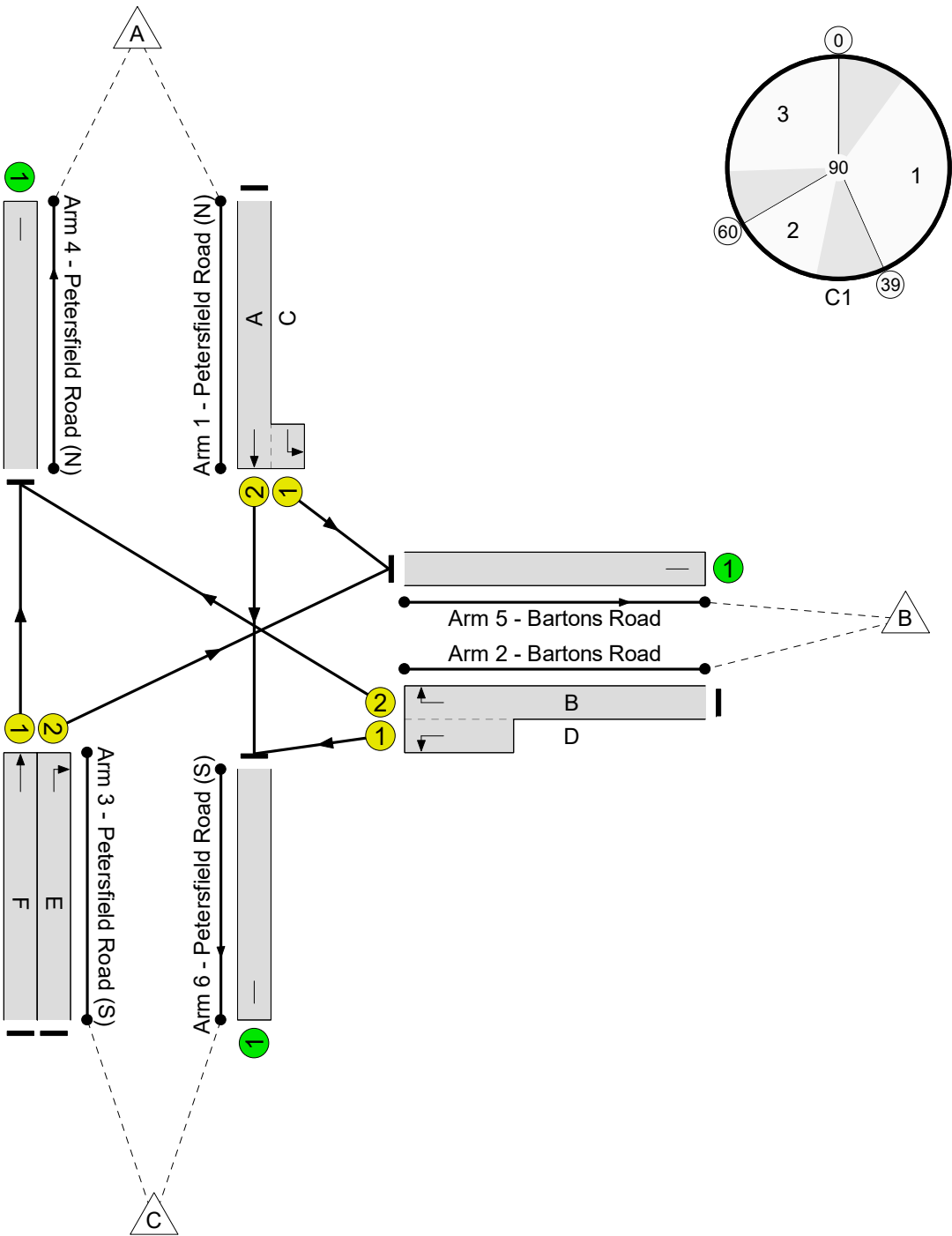
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road
PRC: 9.9 %
Total Traffic Delay: 18.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	81.9%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	81.9%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	23:28	-	455	2095:1749	427+146	79.4 : 79.4%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	12:51	-	769	1953:1743	221+718	81.9 : 81.9%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	62	-	545	1940	1358	40.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	30	-	472	1724	594	79.5%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	726	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	588	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	927	Inf	Inf	0.0%

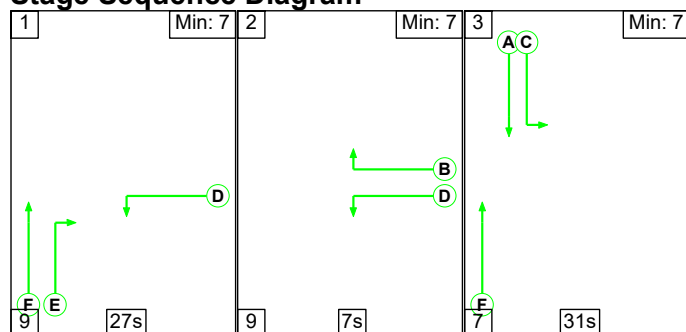
Full Input Data And Results

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	-	-	0	0	0	11.9	6.3	0.0	18.2	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	11.9	6.3	0.0	18.2	-	-	-	-
1/2+1/1	455	455	-	-	-	3.7	1.9	-	5.6	44.5	9.8	1.9	11.7
2/2+2/1	769	769	-	-	-	3.8	2.2	-	6.0	28.2	11.1	2.2	13.3
3/1	545	545	-	-	-	0.9	0.3	-	1.2	7.8	5.6	0.3	5.9
3/2	472	472	-	-	-	3.5	1.9	-	5.4	41.0	10.6	1.9	12.5
4/1	726	726	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	927	927	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 9.9 Total Delay for Signalled Lanes (pcuHr): 18.21 Cycle Time (s): 90 PRC Over All Lanes (%): 9.9 Total Delay Over All Lanes(pcuHr): 18.21													

Full Input Data And Results

Scenario 7: '2023 Baseline + Sensitivity AM' (FG7: '2023 + Committed + Sensitivity AM', Plan 1: 'Network Control Plan 1')

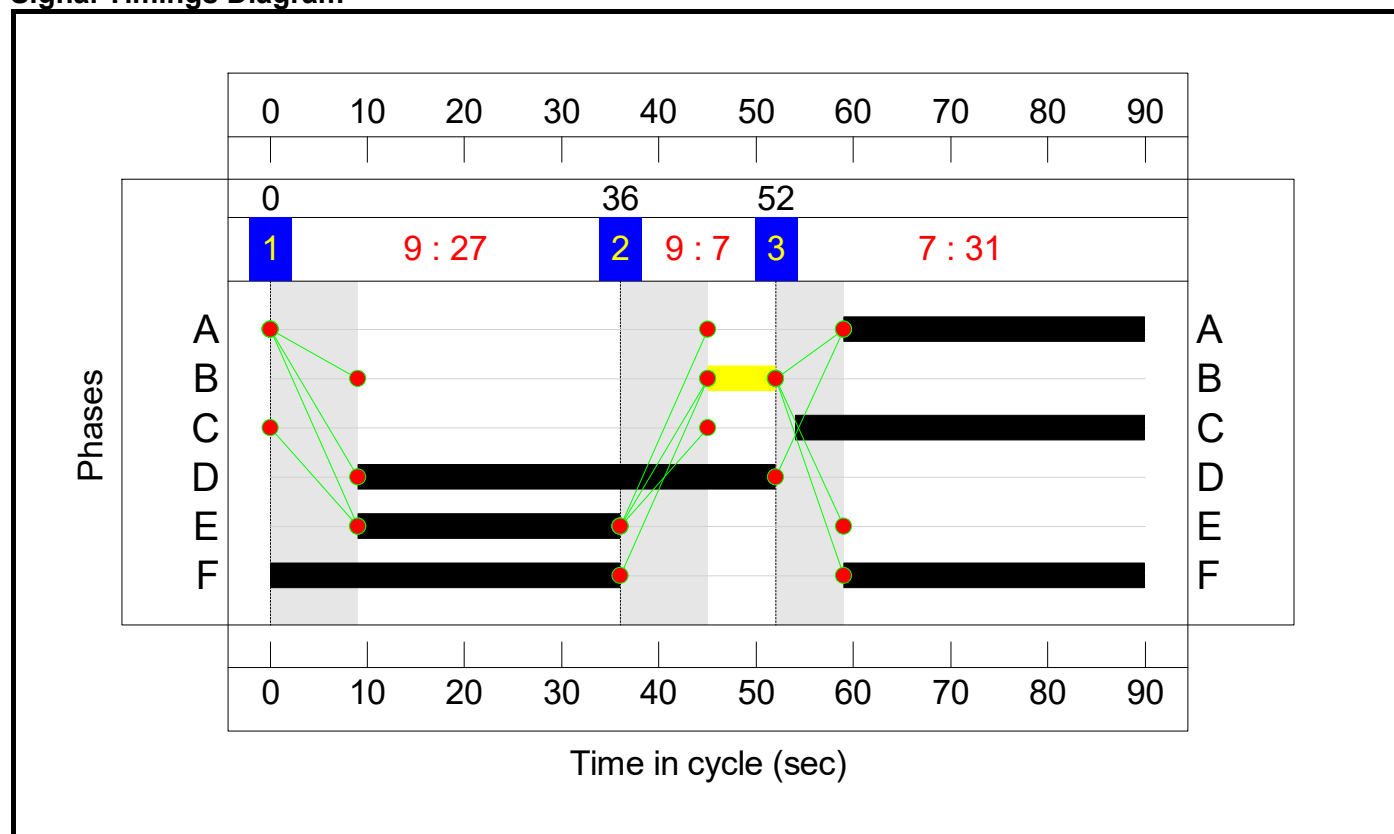
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	27	7	31
Change Point	0	36	52

Signal Timings Diagram



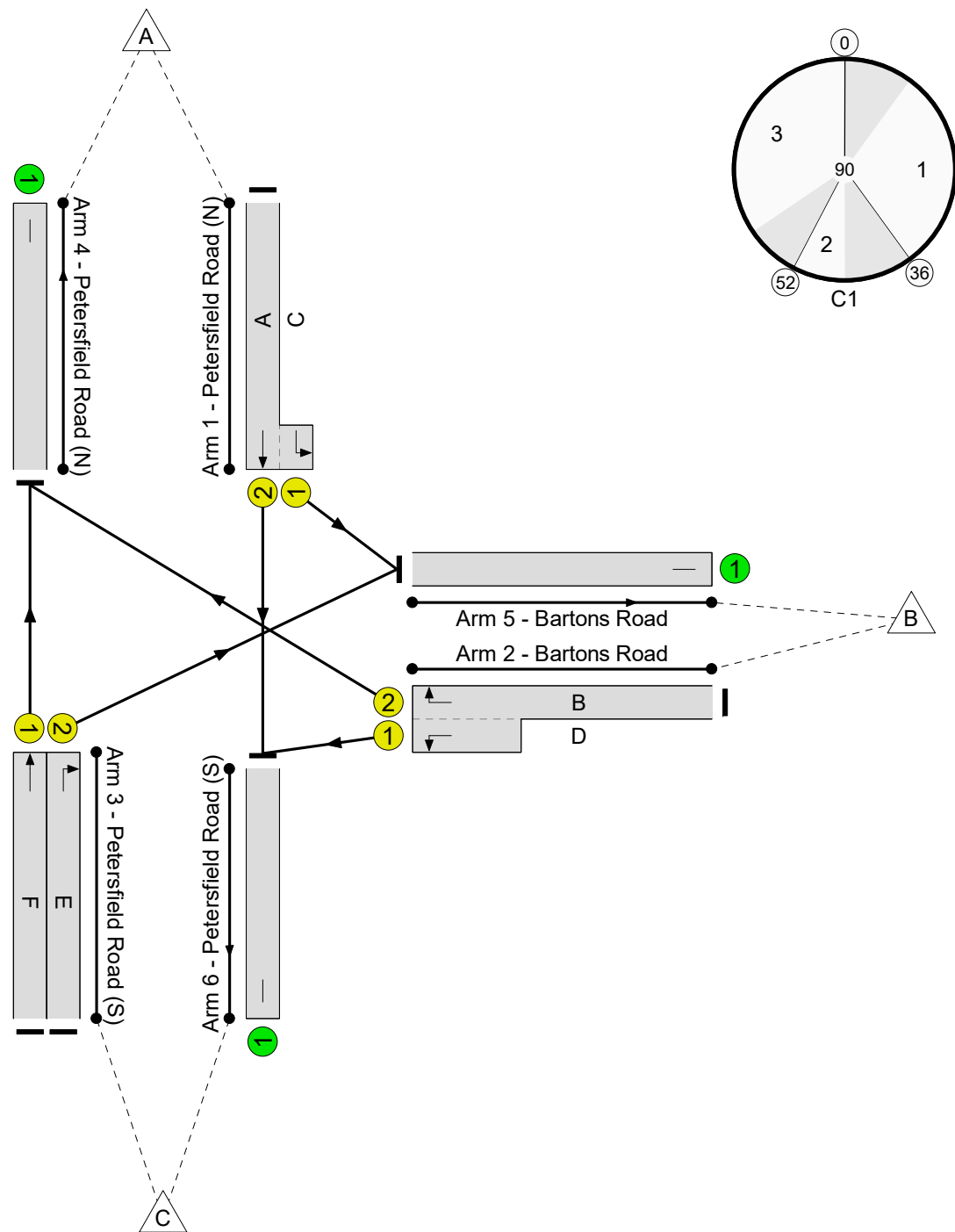
Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road

PRC: 0.3 %

Total Traffic Delay: 22.6 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	31:36	-	674	2095:1749	536+215	89.8 : 89.8%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	7:43	-	612	1953:1743	174+585	80.6 : 80.6%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	67	-	339	1940	1466	23.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	27	-	478	1724	536	89.1%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%

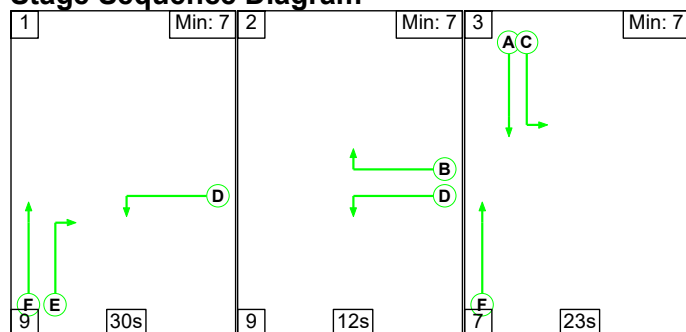
Full Input Data And Results

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	-	-	0	0	0	12.9	9.8	0.0	22.6	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	12.9	9.8	0.0	22.6	-	-	-	-
1/2+1/1	674	674	-	-	-	4.9	4.0	-	8.9	47.6	14.9	4.0	18.9
2/2+2/1	612	612	-	-	-	3.7	2.0	-	5.7	33.6	9.3	2.0	11.3
3/1	339	339	-	-	-	0.3	0.2	-	0.5	4.9	2.4	0.2	2.6
3/2	478	478	-	-	-	3.9	3.6	-	7.6	57.0	11.3	3.6	14.9
4/1	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 0.3 Total Delay for Signalled Lanes (pcuHr): 22.64 Cycle Time (s): 90 PRC Over All Lanes (%): 0.3 Total Delay Over All Lanes(pcuHr): 22.64													

Full Input Data And Results

Scenario 8: '2023 Baseline + Sensitivity PM' (FG8: '2023 + Committed + Sensitivity PM', Plan 1: 'Network Control Plan 1')

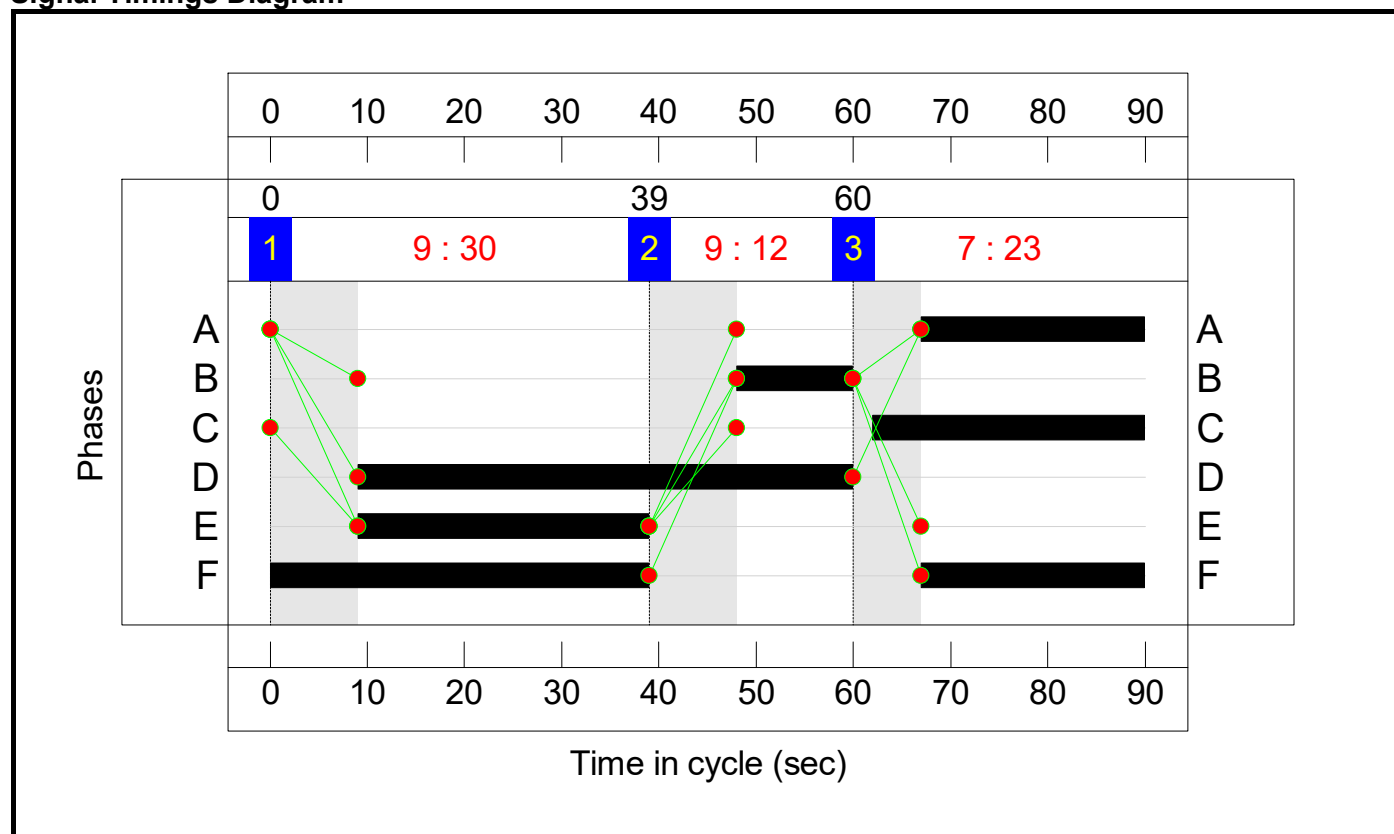
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	30	12	23
Change Point	0	39	60

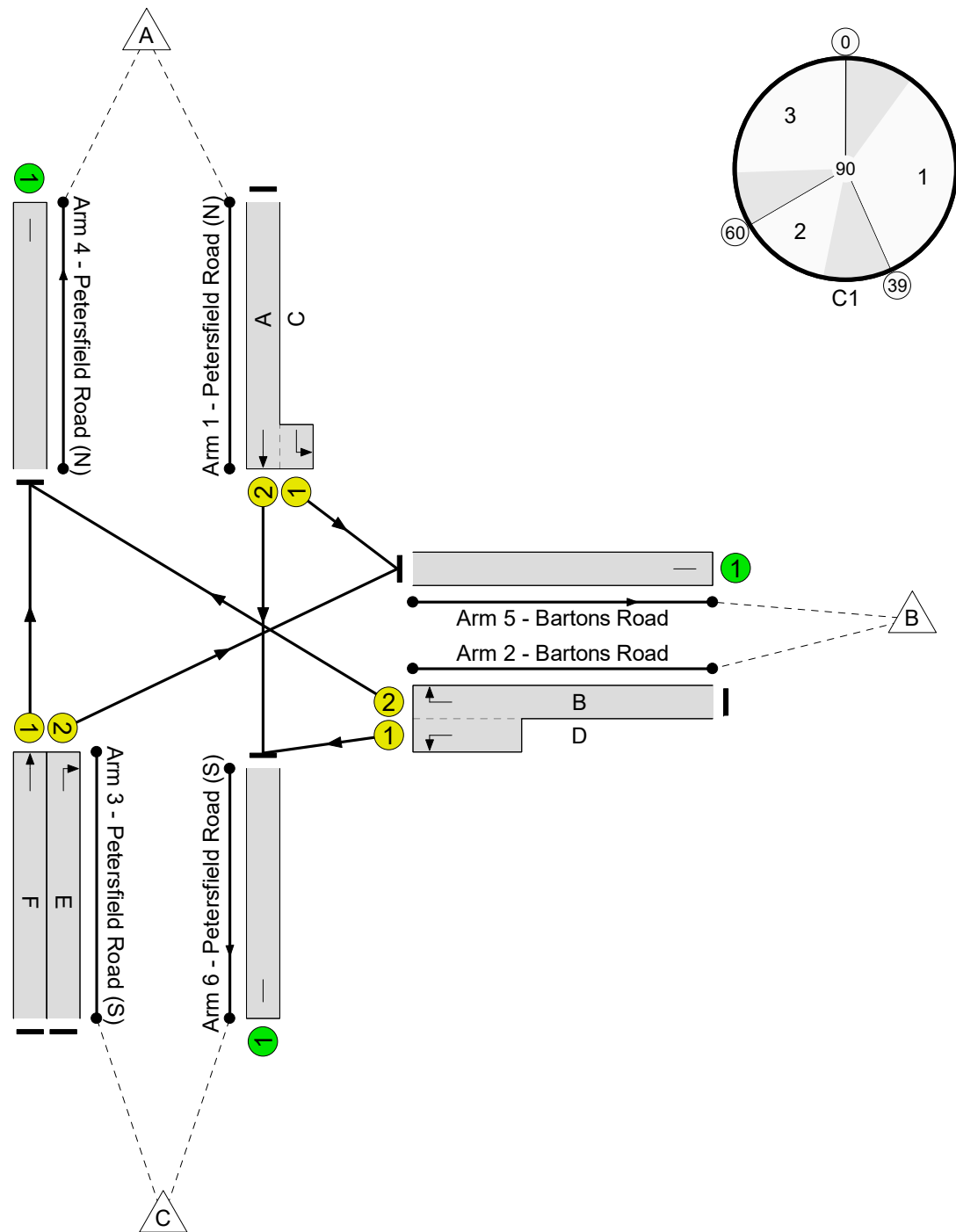
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Bartons Road - Petersfield Road
PRC: 8.7 %
Total Traffic Delay: 18.8 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	82.8%
Bartons Road - Petersfield Road	-	-	N/A	-	-		-	-	-	-	-	-	82.8%
1/2+1/1	Petersfield Road (N) Left Ahead	U	N/A	N/A	A C		1	23:28	-	458	2095:1749	424+149	79.9 : 79.9%
2/2+2/1	Bartons Road Right Left	U	N/A	N/A	B D		1	12:51	-	777	1953:1743	221+717	82.8 : 82.8%
3/1	Petersfield Road (S) Ahead	U	N/A	N/A	F		1	62	-	545	1940	1358	40.1%
3/2	Petersfield Road (S) Right	U	N/A	N/A	E		1	30	-	481	1724	594	81.0%
4/1	Petersfield Road (N)	U	N/A	N/A	-		-	-	-	728	Inf	Inf	0.0%
5/1	Bartons Road	U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%
6/1	Petersfield Road (S)	U	N/A	N/A	-		-	-	-	933	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	-	-	0	0	0	12.1	6.7	0.0	18.8	-	-	-	-
Bartons Road - Petersfield Road	-	-	0	0	0	12.1	6.7	0.0	18.8	-	-	-	-
1/2+1/1	458	458	-	-	-	3.8	1.9	-	5.7	44.8	9.9	1.9	11.8
2/2+2/1	777	777	-	-	-	3.9	2.3	-	6.2	28.8	11.4	2.3	13.8
3/1	545	545	-	-	-	0.9	0.3	-	1.2	7.8	5.6	0.3	5.9
3/2	481	481	-	-	-	3.6	2.1	-	5.6	42.2	10.8	2.1	12.9
4/1	728	728	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	933	933	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 8.7 Total Delay for Signalled Lanes (pcuHr): 18.75 Cycle Time (s): 90 PRC Over All Lanes (%): 8.7 Total Delay Over All Lanes(pcuHr): 18.75													