

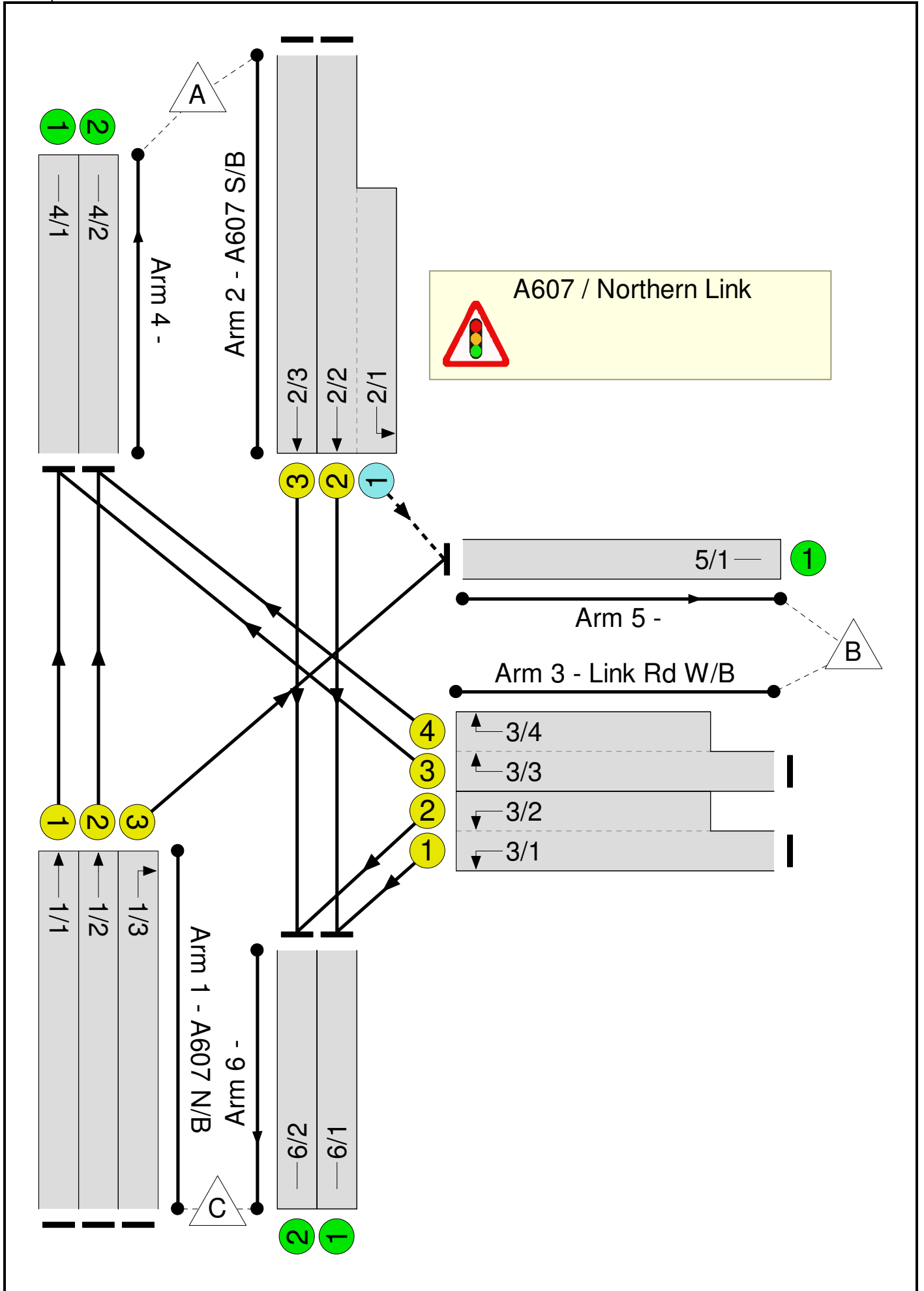
**Full Input Data And Results**

**User and Project Details**

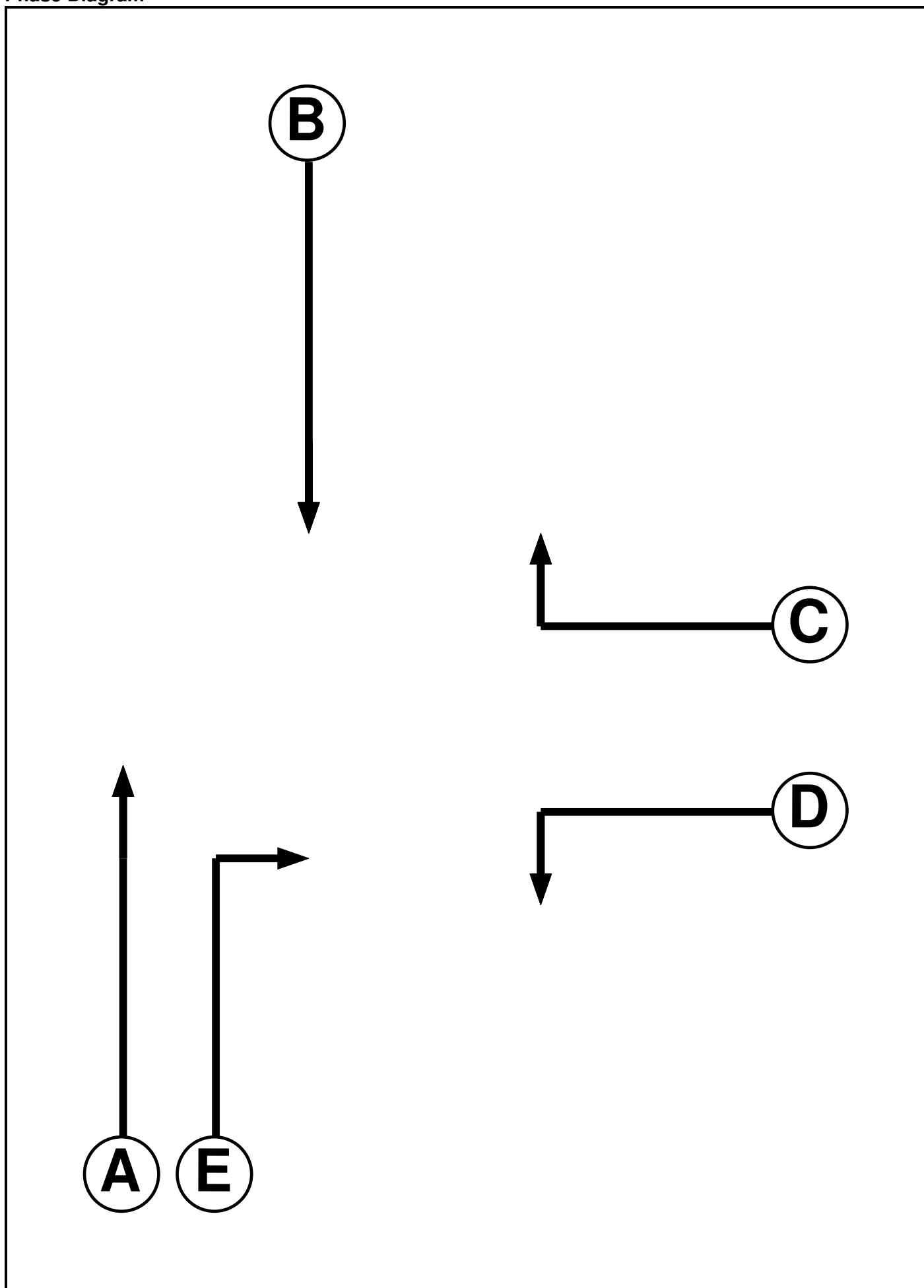
<b>Project:</b>	<b>North-East Leicester SUE</b>
<b>Title:</b>	<b>A607 / Northern Link Road Junction</b>
<b>Location:</b>	
<b>File name:</b>	A46980-7 A607 - Northern Link Rd_2.lsg3x
<b>Author:</b>	R Bishop
<b>Company:</b>	WYG
<b>Address:</b>	Leicester
<b>Notes:</b>	Closure scenarios refer to Melton Road being potentially closed to the north of Barkby Thorpe Road (ASDA/Costco) roundabout.

Full Input Data And Results

## **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

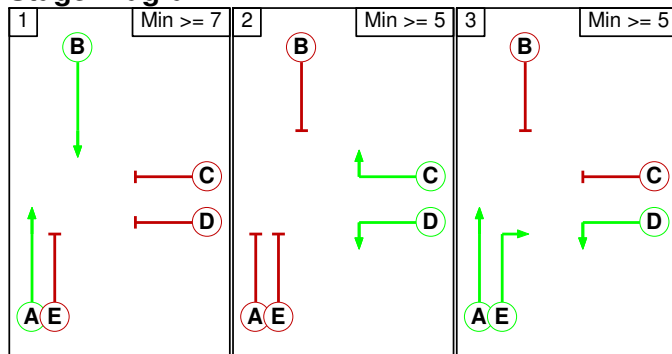
**Phase Intergreens Matrix**

		Starting Phase				
		A	B	C	D	E
Terminating Phase	A	-	-	7	-	-
	B	-	-	7	9	7
	C	6	6	-	-	7
	D	-	6	-	-	-
	E	-	6	6	-	-

**Phases in Stage**

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

**Stage Diagram**



**Phase Delays**

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

Full Input Data And Results

**Prohibited Stage Change**

From Stage	To Stage		
	1	2	3
1		9	9
2	6		7
3	6	7	

Full Input Data And Results

**Give-Way Lane Input Data**

Junction: A607 / Northern Link											
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)
2/1 (A607 S/B)	5/1 (Left)	1000	0	1/1	0.50	All	-	-	-	-	-

Full Input Data And Results

**Lane Input Data**

Junction: A607 / Northern Link												
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 (A607 N/B)	U	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 4 Ahead	Inf
1/2 (A607 N/B)	U	A	2	3	60.0	Geom	-	3.65	0.00	N	Arm 4 Ahead	Inf
1/3 (A607 N/B)	U	E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Right	20.00
2/1 (A607 S/B)	O		2	3	10.0	Inf	-	-	-	-	-	-
2/2 (A607 S/B)	U	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
2/3 (A607 S/B)	U	B	2	3	60.0	Geom	-	3.65	0.00	N	Arm 6 Ahead	Inf
3/1 (Link Rd W/B)	U	D	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	20.00
3/2 (Link Rd W/B)	U	D	2	3	16.0	Geom	-	3.65	0.00	N	Arm 6 Left	20.00
3/3 (Link Rd W/B)	U	C	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 4 Right	30.00
3/4 (Link Rd W/B)	U	C	2	3	14.0	Geom	-	3.65	0.00	Y	Arm 4 Right	30.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2	U		2	3	60.0	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: '2031 AM Base + Comm + Dev (+TM)'	08:00	09:00	01:00	
2: '2031 PM Base + Comm + Dev (+TM)'	17:00	18:00	01:00	



Full Input Data And Results

**Scenario 1: '2031 AM All Dev (Stage 2 Mitigation)'** (FG1: '2031 AM Base + Comm + Dev (+TM)', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination			
		A	B	C	Tot.
Origin	A	0	258	1845	2103
	B	315	0	0	315
	C	1275	0	0	1275
	Tot.	1590	258	1845	3693

**Traffic Lane Flows**

Lane	Scenario 1: 2031 AM All Dev (Stage 2 Mitigation)
<b>Junction: A607 / Northern Link</b>	
1/1	599
1/2	676
1/3	0
2/1 (short)	258
2/2 (with short)	1148(In) 890(Out)
2/3	955
3/1 (with short)	0(In) 0(Out)
3/2 (short)	0
3/3 (with short)	315(In) 158(Out)
3/4 (short)	157
4/1	757
4/2	833
5/1	258
6/1	890
6/2	955

Full Input Data And Results

**Lane Saturation Flows**

Junction: A607 / Northern Link								
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 (A607 N/B)	3.65	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1980	1980
1/2 (A607 N/B)	3.65	0.00	N	Arm 4 Ahead	Inf	100.0 %	2120	2120
1/3 (A607 N/B)	3.65	0.00	Y	Arm 5 Right	20.00	0.0 %	1980	1980
2/1 (A607 S/B Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A607 S/B)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/3 (A607 S/B)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
3/1 (Link Rd W/B)	3.65	0.00	Y	Arm 6 Left	20.00	0.0 %	1980	1980
3/2 (Link Rd W/B)	3.65	0.00	N	Arm 6 Left	20.00	0.0 %	2120	2120
3/3 (Link Rd W/B)	3.65	0.00	Y	Arm 4 Right	30.00	100.0 %	1886	1886
3/4 (Link Rd W/B)	3.65	0.00	Y	Arm 4 Right	30.00	100.0 %	1886	1886
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 2: '2031 PM All Dev (Stage 2 Mitigation)'** (FG2: '2031 PM Base + Comm + Dev (+TM)', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination				
	A	B	C	Tot.	
Origin	A	0	367	1246	1613
	B	300	0	0	300
	C	1854	0	0	1854
	Tot.	2154	367	1246	3767

Full Input Data And Results

**Traffic Lane Flows**

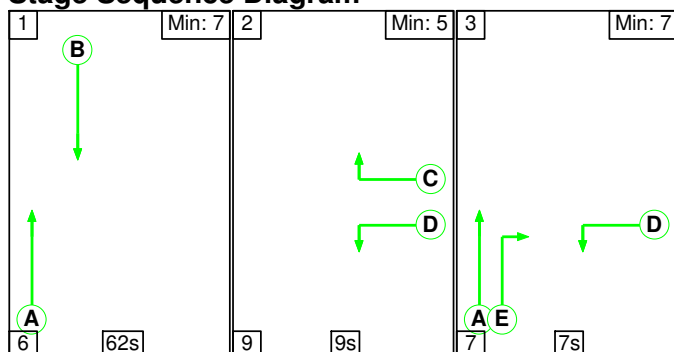
Lane	Scenario 2: 2031 PM All Dev (Stage 2 Mitigation)
<b>Junction: A607 / Northern Link</b>	
1/1	882
1/2	972
1/3	0
2/1 (short)	367
2/2 (with short)	986(In) 619(Out)
2/3	627
3/1 (with short)	0(In) 0(Out)
3/2 (short)	0
3/3 (with short)	300(In) 150(Out)
3/4 (short)	150
4/1	1032
4/2	1122
5/1	367
6/1	619
6/2	627

**Lane Saturation Flows**

Junction: A607 / Northern Link								
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 (A607 N/B)	3.65	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1980	1980
1/2 (A607 N/B)	3.65	0.00	N	Arm 4 Ahead	Inf	100.0 %	2120	2120
1/3 (A607 N/B)	3.65	0.00	Y	Arm 5 Right	20.00	0.0 %	1980	1980
2/1 (A607 S/B Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A607 S/B)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
2/3 (A607 S/B)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120
3/1 (Link Rd W/B)	3.65	0.00	Y	Arm 6 Left	20.00	0.0 %	1980	1980
3/2 (Link Rd W/B)	3.65	0.00	N	Arm 6 Left	20.00	0.0 %	2120	2120
3/3 (Link Rd W/B)	3.65	0.00	Y	Arm 4 Right	30.00	100.0 %	1886	1886
3/4 (Link Rd W/B)	3.65	0.00	Y	Arm 4 Right	30.00	100.0 %	1886	1886
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: '2031 AM All Dev (Stage 2 Mitigation)'** (FG1: '2031 AM Base + Comm + Dev (+TM)', Plan 1: 'Network Control Plan 1')

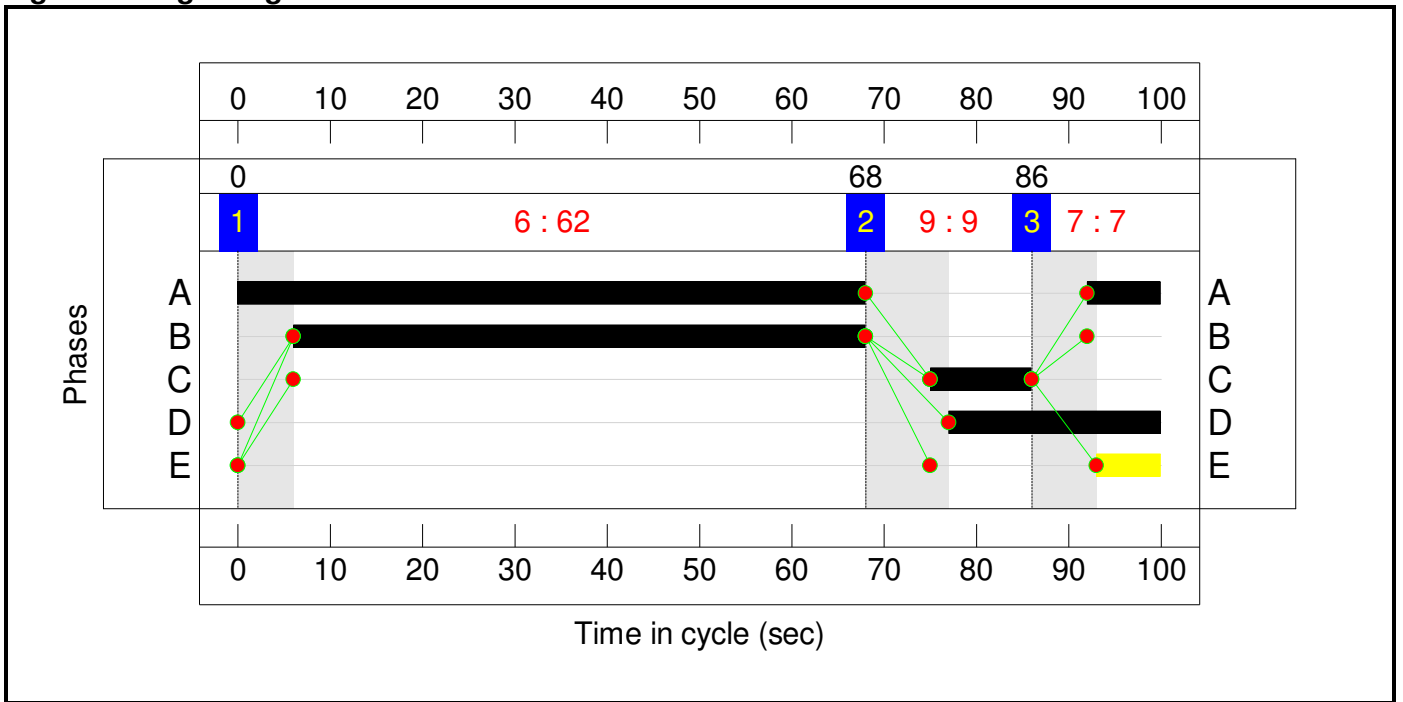
**Stage Sequence Diagram**



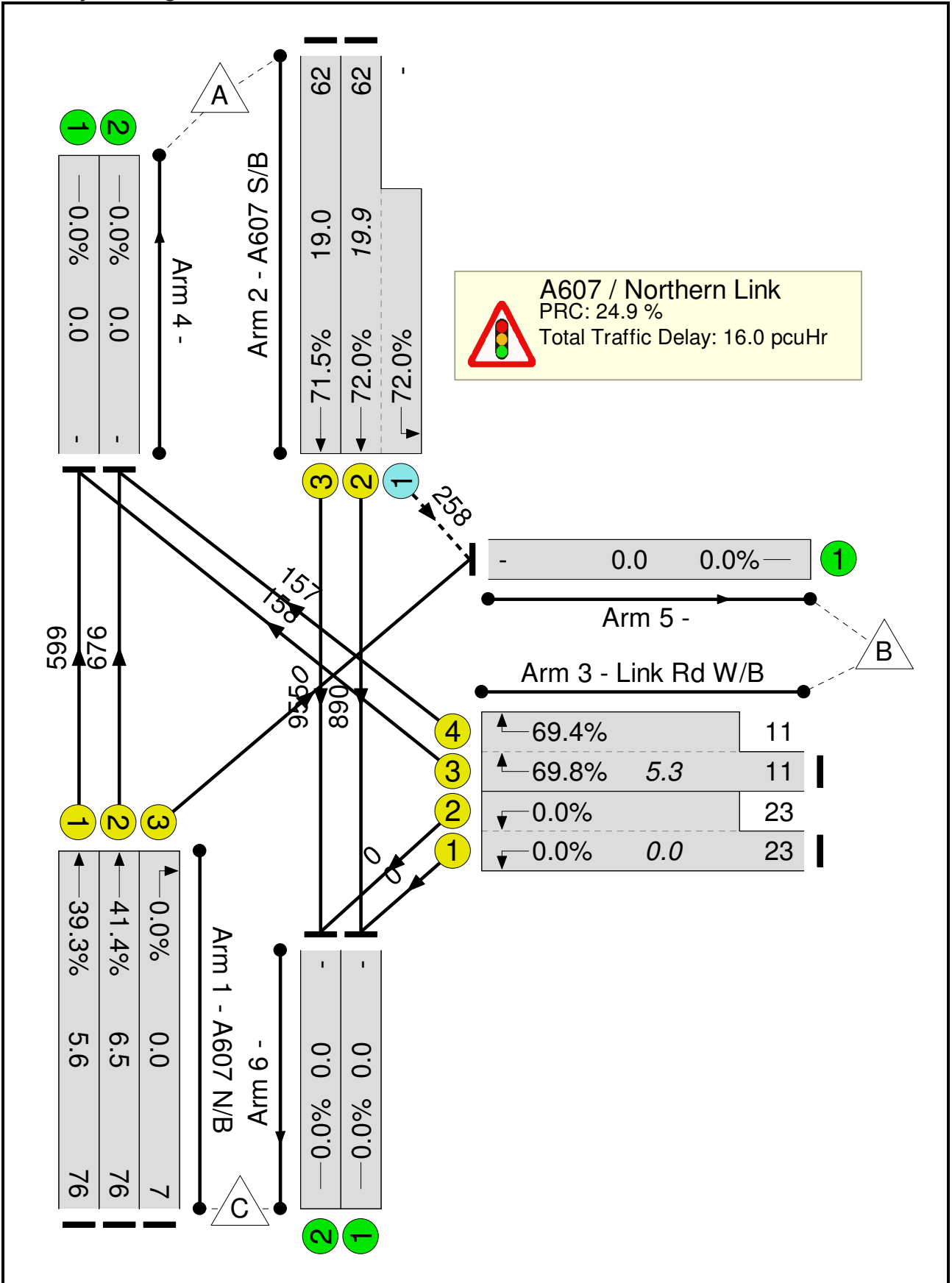
**Stage Timings**

Stage	1	2	3
Duration	62	9	7
Change Point	0	68	86

### Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A607 / Northern Link Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	72.0%
A607 / Northern Link	-	-	N/A	-	-		-	-	-	-	-	-	72.0%
1/1	A607 N/B Ahead	U	N/A	N/A	A		1	76	-	599	1980	1525	39.3%
1/2	A607 N/B Ahead	U	N/A	N/A	A		1	76	-	676	2120	1632	41.4%
1/3	A607 N/B Right	U	N/A	N/A	E		1	7	-	0	1980	158	0.0%
2/2+2/1	A607 S/B Left Ahead	U+O	N/A	N/A	B -		1	62	-	1148	1980: Inf	1235+358	72.0 : 72.0%
2/3	A607 S/B Ahead	U	N/A	N/A	B		1	62	-	955	2120	1336	71.5%
3/1+3/2	Link Rd W/B Left	U	N/A	N/A	D		1	23	-	0	1980:2120	475+509	0.0 : 0.0%
3/3+3/4	Link Rd W/B Right	U	N/A	N/A	C		1	11	-	315	1886:1886	226+226	69.8 : 69.4%
4/1		U	N/A	N/A	-		-	-	-	757	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	955	Inf	Inf	0.0%

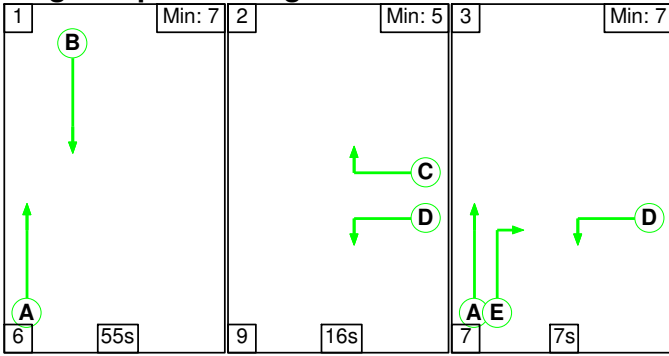




Full Input Data And Results

**Scenario 2: '2031 PM All Dev (Stage 2 Mitigation)'** (FG2: '2031 PM Base + Comm + Dev (+TM)', Plan 1: 'Network Control Plan 1')

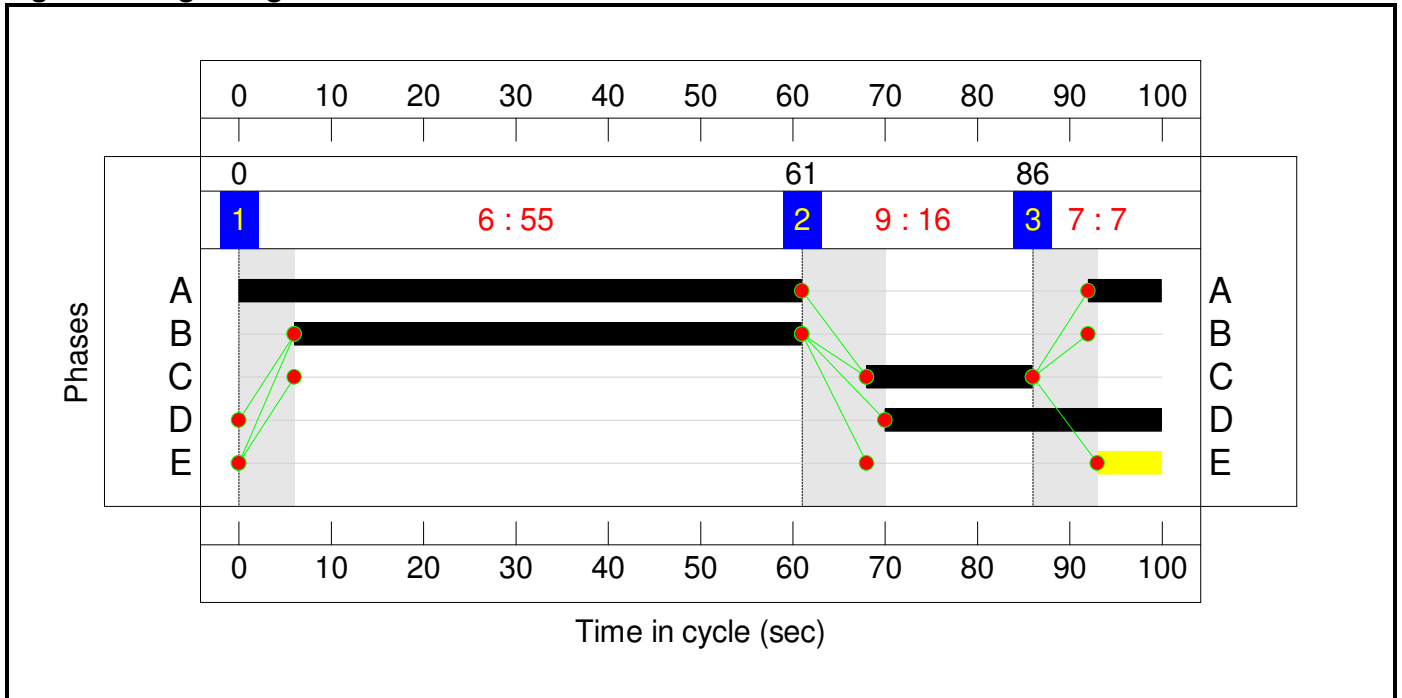
**Stage Sequence Diagram**



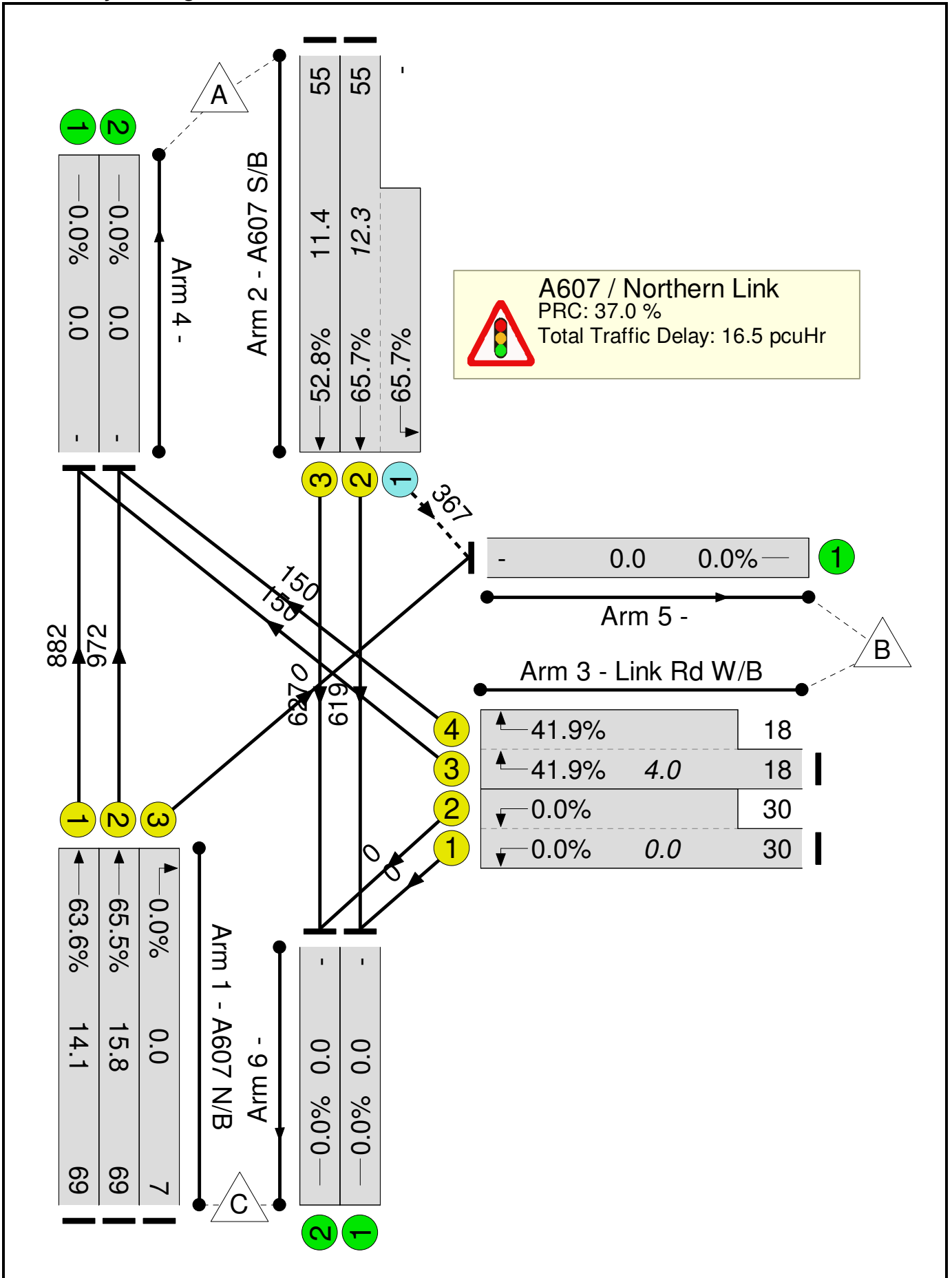
**Stage Timings**

Stage	1	2	3
Duration	55	16	7
Change Point	0	61	86

**Signal Timings Diagram**



Network Layout Diagram



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: A607 / Northern Link Road Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	65.7%
<b>A607 / Northern Link</b>	-	-	N/A	-	-		-	-	-	-	-	-	65.7%
1/1	A607 N/B Ahead	U	N/A	N/A	A		1	69	-	882	1980	1386	63.6%
1/2	A607 N/B Ahead	U	N/A	N/A	A		1	69	-	972	2120	1484	65.5%
1/3	A607 N/B Right	U	N/A	N/A	E		1	7	-	0	1980	158	0.0%
2/2+2/1	A607 S/B Left Ahead	U+O	N/A	N/A	B -		1	55	-	986	1980: Inf	943+559	65.7 : 65.7%
2/3	A607 S/B Ahead	U	N/A	N/A	B		1	55	-	627	2120	1187	52.8%
3/1+3/2	Link Rd W/B Left	U	N/A	N/A	D		1	30	-	0	1980:2120	596+596	0.0 : 0.0%
3/3+3/4	Link Rd W/B Right	U	N/A	N/A	C		1	18	-	300	1886:1886	358+358	41.9 : 41.9%
4/1		U	N/A	N/A	-		-	-	-	1032	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	1122	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	367	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	619	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	627	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)
<b>Network: A607 / Northern Link Road Junction</b>	-	-	257	110	0	12.8	3.7	0.0	16.5	-	-	-	-
<b>A607 / Northern Link</b>	-	-	257	110	0	12.8	3.7	0.0	16.5	-	-	-	-
1/1	882	882	-	-	-	2.0	0.9	-	2.9	11.7	13.2	0.9	14.1
1/2	972	972	-	-	-	2.2	0.9	-	3.2	11.8	14.8	0.9	15.8
1/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2+2/1	986	986	257	110	0	3.2	1.0	-	4.2	15.3	11.4	1.0	12.3
2/3	627	627	-	-	-	2.4	0.6	-	3.0	17.0	10.8	0.6	11.4
3/1+3/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/3+3/4	300	300	-	-	-	3.0	0.4	-	3.3	40.0	3.6	0.4	4.0
4/1	1032	1032	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	1122	1122	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	619	619	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		37.0	Total Delay for Signalled Lanes (pcuHr):			16.53	Cycle Time (s): 100			
			PRC Over All Lanes (%):		37.0	Total Delay Over All Lanes(pcuHr):			16.53				