

TRANSYT 15
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**Filename:** M23 J11 Existing Layout v05.t15

**Path:** J:\48559 Crawley Transport Study\Transport\Working Documents\Junction Modelling\HE SRN Junction Data\M23 J 11 Model

**Report generation date:** 19/10/2021 16:33:02

- »A1 - 2015 Base AM : D1 - 2015 Base AM\* :
- »A2 - 2015 Base PM : D2 - 2015 Base PM\* :
- »A3 - 2035 Reference Case AM : D3 - 2035 Reference Case AM\* :
- »A4 - 2035 Reference Case PM : D4 - 2035 Reference Case PM\* :
- »A5 - LP Scenario 2 With Mit AM : D5 - LP Scenario 2 With Mit AM\* :
- »A6 - LP Scenario 2 With Mit PM : D6 - LP Scenario 2 With Mit PM\* :

**File summary**

**File description**

<b>File title</b>	M23 J11 Existing Layout
<b>Location</b>	Crawley
<b>Site number</b>	2
<b>UTCRegion</b>	UTC +1
<b>Driving side</b>	Left
<b>Date</b>	30/09/2021
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	330610079
<b>Enumerator</b>	CORP\dansmith
<b>Description</b>	

**Model and Results**

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber
			✓		✓	✓	✓	✓	✓	✓	✓		

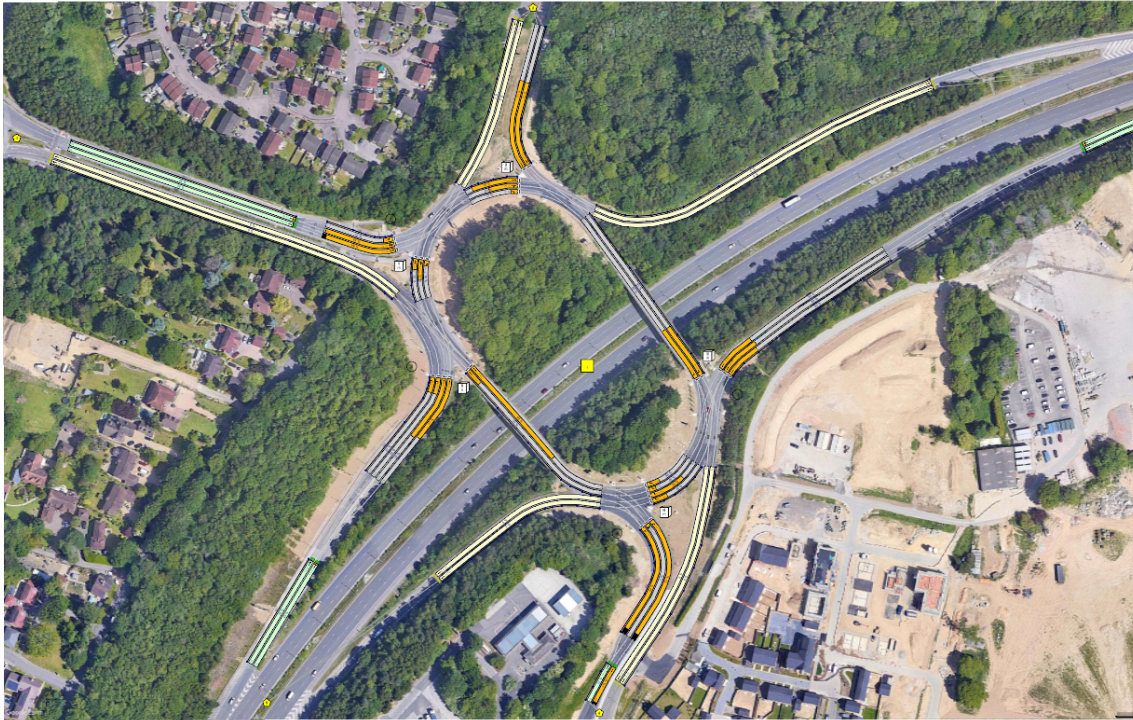
**Units**

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

**Sorting**

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

## Network Diagrams



M23 J11 Existing Layout  
Cyclotime 53s / 60s , Timesteps 51 / 60  
4, 4  
Diagram produced using TRANSYT 15.5.3.7

# A1 - 2015 Base AM

## D1 - 2015 Base AM\*

### Summary

#### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

#### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
1	19/10/2021 15:31:54	19/10/2021 15:31:55	08:00	60	753.10	46.32	75.92	111/2	0	0	111/2	101/1	111

#### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2015 Base AM		D1	✓	

#### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2015 Base AM				08:00	

### Local OD Matrix - Local Matrix: 1

#### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

#### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	377	923	7	587
	2	10	102	56	22	620
	3	727	102	0	296	0
	4	4	74	123	0	69
	5	431	842	0	5	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	208
	6		2	3	201/1, 321/1	Normal	28
	10		2	4	201/1, 311/1, 421/1	Normal	11
	15		3	4	301/1, 302/1, 421/1	Normal	296
	16		4	5	401/1, 402/1, 521/1	Normal	35
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	62
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	37
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	314
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	0
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	51
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	51
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	51
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	0
	40		4	5	401/1, 402/1, 521/2	Normal	35
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	51
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	37
	52		2	4	201/1, 311/1, 421/2	Normal	11
	53		2	3	201/1, 321/2	Normal	28
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	306
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	5
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	4
	60		3	4	301/2, 302/2, 421/2	Normal	0
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	310
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Normal	62
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	223
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	423
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	419
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	3
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	3	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81		1	2	101/1, 102/1, 221/1	Normal	377	

82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	747
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	294
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	4
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	4
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	176
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	294
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	0
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	0
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	5
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	417
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

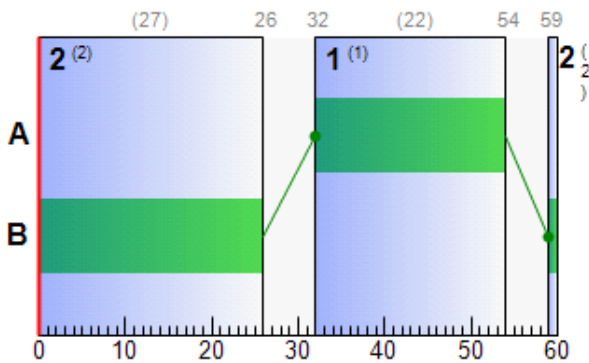
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	32	54	22	1	7
	2	✓	2	B	59	26	27	1	7

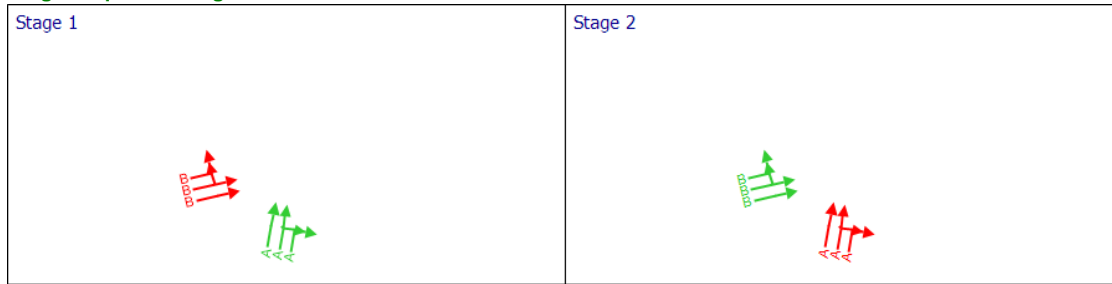
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	59	26	27
102	2	1	1	B	59	26	27
102	3	1	1	B	59	26	27
111	1	1	1	A	32	54	22
111	2	1	1	A	32	54	22
111	3	1	1	A	32	54	22

### Phase Timings Diagram for Controller Stream 1



**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

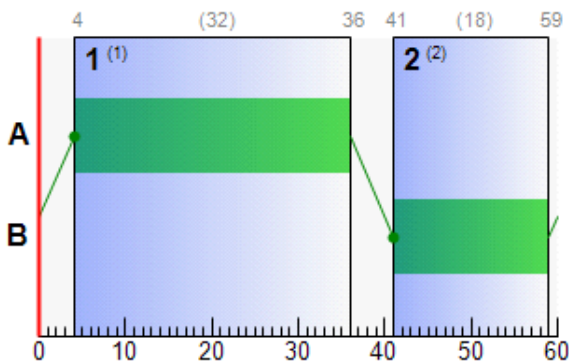
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	4	36	32	1	7
	2	✓	2	B	41	59	18	1	7

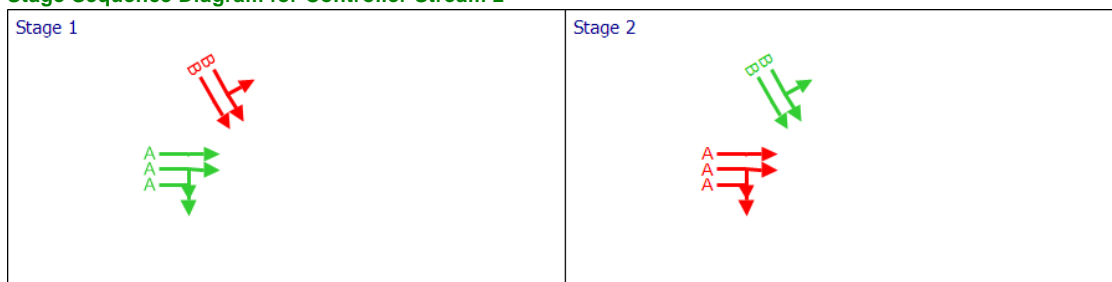
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	41	59	18
201	2	2	2	B	41	59	18
211	1	2	2	A	4	36	32
211	2	2	2	A	4	36	32
211	3	2	2	A	4	36	32

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

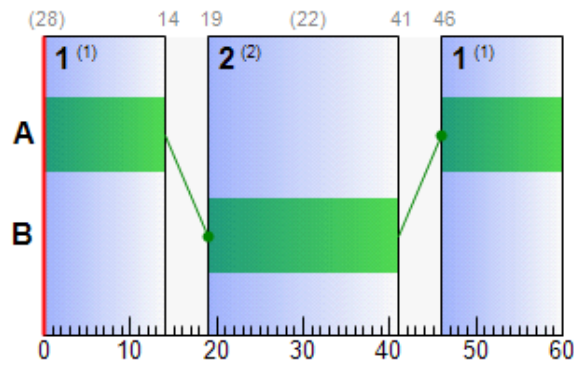
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	46	14	28	1	7
	2	✓	2	B	19	41	22	1	7

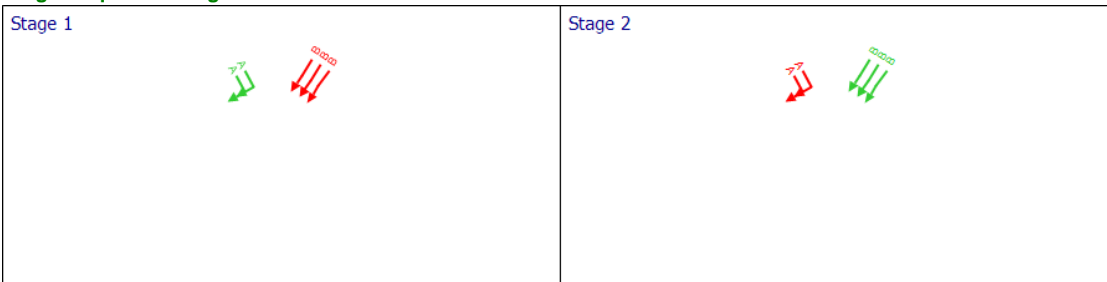
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	19	41	22
302	2	3	3	B	19	41	22
302	3	3	3	B	19	41	22
311	1	3	3	A	46	14	28
311	2	3	3	A	46	14	28

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

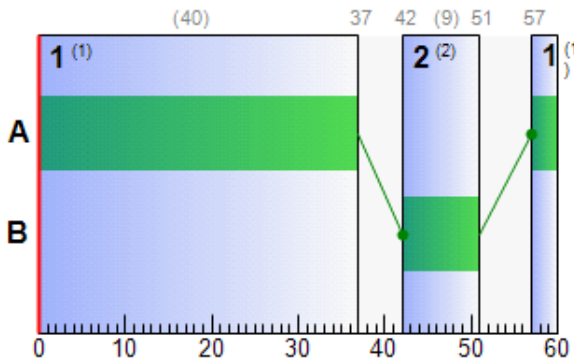
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	57	37	40	1	7
	2	✓	2	B	42	51	9	1	7

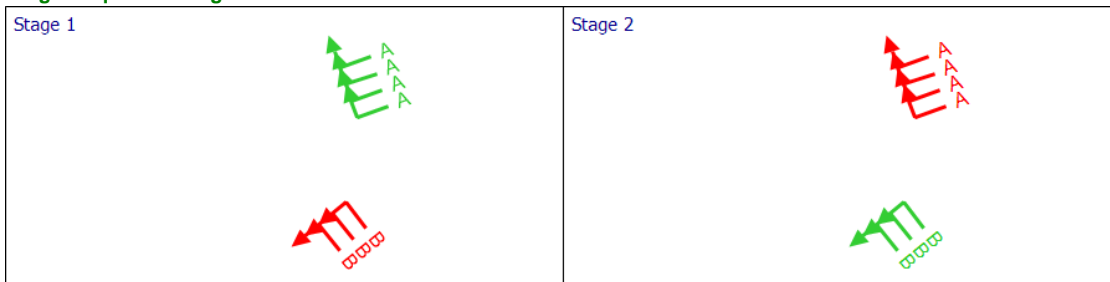
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	42	51	9
402	2	4	4	B	42	51	9
402	3	4	4	B	42	51	9
411	1	4	4	A	57	37	40
411	2	4	4	A	57	37	40
411	3	4	4	A	57	37	40
411	4	4	4	A	57	37	40

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

**Resultant Stages**

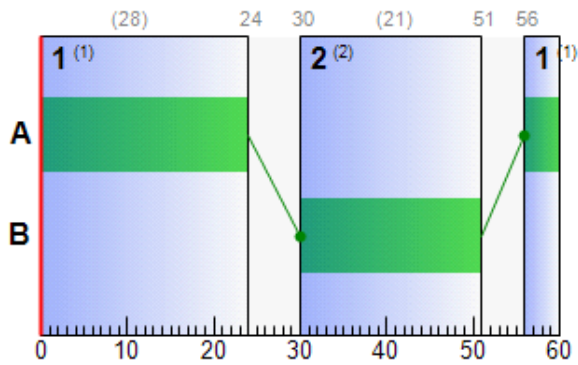
Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	56	24	28	1	7
	2	✓	2	B	30	51	21	1	7



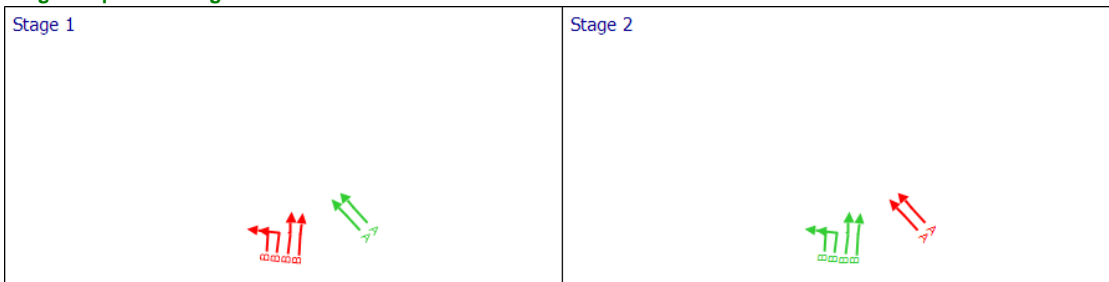
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	30	51	21
502	2	5	5	B	30	51	21
502	3	5	5	B	30	51	21
502	4	5	5	B	30	51	21
511	1	5	5	A	56	24	28
511	2	5	5	A	56	24	28

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**



## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
08:00-09:00	101	1	70	29	1124	2036	60	5.32	9.23	35.70	23.59	6.13	29.72	
		2	45	100	772	2148	60	2.53	4.26	16.47	7.72	2.67	10.39	
	102	1	42	115	377	1929	27	12.44	3.79	47.34	18.49	2.85	21.34	
		2	75	21	747	2153	27	18.26	8.28	103.53	53.79	6.21	60.01	
		3	74	21	772	2222	27	18.25	9.07	113.25	55.58	6.81	62.39	
	111	1	74	22	562	1991	22	14.42	4.33	40.92	31.96	3.01	34.98	
		2	76	19	619	2127	22	15.88	5.21	46.90	38.77	3.89	42.66	
		3	8	970	67	2077	22	13.68	1.16	11.01	3.62	0.78	4.39	
	121	1	0	Unrestricted	634	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	538	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	63	44	392	1980	18	22.21	6.07	38.68	34.35	4.39	38.74	
		2	63	44	418	2108	18	21.95	6.44	39.80	36.20	4.67	40.86	
	211	1	74	22	808	1986	32	5.99	2.14	18.42	19.09	1.53	20.62	
		2	48	89	545	2076	32	4.02	1.38	11.67	8.65	1.00	9.65	
		3	26	245	294	2051	32	0.56	0.05	0.41	0.65	0.00	0.65	
	221	1	0	Unrestricted	939	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	558	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	15	509	296	2002	60	0.16	0.01	0.11	0.18	0.00	0.18	
		2	38	134	829	2159	60	0.52	0.12	1.04	1.70	0.00	1.70	
	302	1	39	133	296	2000	22	15.00	3.49	9.19	17.52	2.63	20.14	
		2	51	76	417	2125	22	17.00	5.48	14.42	27.96	4.12	32.08	
		3	51	76	412	2101	22	16.98	5.42	14.26	27.60	4.07	31.67	
	311	1	69	30	644	1928	28	10.35	6.11	25.69	26.29	4.59	30.88	
		2	69	30	712	2146	28	9.59	6.09	25.11	26.94	4.63	31.57	
	321	1	0	Unrestricted	836	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	265	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	4	2321	74	1991	60	0.03	0.00	0.02	0.01	0.00	0.01	
		2	9	871	196	2114	60	0.09	0.00	0.10	0.07	0.00	0.07	
	402	1	21	326	70	1986	9	23.08	1.42	8.90	6.37	0.75	7.13	
		2	1	7156	4	1935	9	21.32	0.06	0.35	0.34	0.04	0.38	
		3	56	61	196	2109	9	29.55	3.29	20.55	22.84	2.47	25.31	
	411	1	46	97	608	1947	40	1.14	0.19	1.51	2.73	0.00	2.73	
		2	42	112	600	2073	40	0.93	0.16	1.21	2.21	0.00	2.21	
		3	30	202	422	2089	40	5.88	2.41	19.36	9.78	1.90	11.69	
		4	37	145	519	2070	40	4.94	2.52	21.25	10.11	1.89	12.01	
	421	1	0	Unrestricted	314	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	
		2	0	Unrestricted	18	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	
	501	1	22	306	431	1946	60	0.26	0.03	0.24	0.45	0.00	0.45	
		2	39	132	848	2183	60	0.52	0.12	0.95	1.75	0.00	1.75	
	502	1	29	208	208	1940	21	14.64	2.37	14.26	12.01	1.87	13.88	
2		29	207	223	2072	21	14.71	3.06	18.18	12.94	2.00	14.94		
3		54	66	423	2140	21	18.43	6.32	37.10	30.74	4.48	35.22		
4		54	67	425	2150	21	18.40	6.31	36.56	30.85	4.50	35.35		
511	1	44	103	426	1984	28	8.22	4.93	25.06	13.81	3.70	17.52		
	2	70	28	715	2102	28	14.22	10.33	50.30	40.09	7.76	47.85		
521	1	0	Unrestricted	643	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00		
	2	0	Unrestricted	635	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00		

## Final Prediction Table

**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUE
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			1124	2036	60	12.55	70	29	23.16	5.32	43.48	9.23
	2	A264	1			772	2148	60	12.19	45	100	20.38	2.53	27.63	4.26
102	1	A264	1	1	B	377	1929	27	6.00	42	115	20.02	12.44	60.28	3.79
	2	A264	1	1	B	747 <	2153	27	0.08	75	21	26.03	18.26	66.35	8.28 +
	3	A264	1	1	B	772 <	2222	27	0.00	74	21	26.26	18.25	70.32	9.07 +
111	1	A264 Circulatory	1	1	A	562	1991	22	1.00	74	22	23.98	14.42	42.77	4.33
	2	A264 Circulatory	1	1	A	619	2127	22	0.00	76	19	25.27	15.88	50.14	5.21
	3	A264 Circulatory	1	1	A	67	2077	22	21.00	8	970	22.80	13.68	92.29	1.16
121	1	A264 Exit				634	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				538	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	392	1980	18	0.00	63	44	33.04	22.21	89.40	6.07
	2	A23 Brighton Road	2	2	B	418	2108	18	0.00	63	44	33.12	21.95	89.05	6.44
211	1	A23 Circulatory	2	2	A	808	1986	32	3.00	74	22	16.52	5.99	15.11	2.14
	2	A23 Circulatory	2	2	A	545	2076	32	3.00	48	89	14.20	4.02	14.65	1.38
	3	A23 Circulatory	2	2	A	294	2051	32	5.00	26	245	10.43	0.56	0.00	0.05
221	1	A23 Exit				939	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				558	Unrestricted	60	20.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			296	2002	60	0.00	15	509	8.11	0.16	0.00	0.01
	2	M23 Southbound Off-slip	3			829	2159	60	0.00	38	134	8.49	0.52	0.00	0.12
302	1	M23 Southbound Off-slip	3	3	B	296	2000	22	0.00	39	133	46.70	15.00	70.77	3.49
	2	M23 Southbound Off-slip	3	3	B	417	2125	22	0.03	51	76	48.94	17.00	78.79	5.48
	3	M23 Southbound Off-slip	3	3	B	412	2101	22	0.03	51	76	49.13	16.98	78.82	5.42
311	1	M23 Southbound Off-slip Circulatory	3	3	A	644	1928	28	4.00	69	30	30.93	10.35	56.83	6.11
	2	M23 Southbound Off-slip Circulatory	3	3	A	712	2146	28	5.27	69	30	29.94	9.59	51.91	6.09
321	1	M23 Southbound Off-slip Exit				836	Unrestricted	60	8.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				265	Unrestricted	60	1.00	0	Unrestricted	34.31	0.00	0.00	0.00
401	1	B2114 Brighton Road	4			74	1991	60	0.00	4	2321	3.21	0.03	0.00	0.00
		B2114													

	2	Brighton Road	4			196	2114	60	0.00	9	871	3.23	0.09	0.00	0.00
402	1	B2114 Brighton Road	4	4	B	70	1986	9	0.00	21	326	34.55	23.08	85.75	1.42
	2	B2114 Brighton Road	4	4	B	4	1935	9	9.00	1	7156	33.28	21.32	83.45	0.06
	3	B2114 Brighton Road	4	4	B	196	2109	9	0.01	56	61	42.04	29.55	100.37	3.29
411	1	B2114 Brighton Road Circulatory	4	4	A	608	1947	40	16.00	46	97	12.89	1.14	0.00	0.19
	2	B2114 Brighton Road Circulatory	4	4	A	600	2073	40	17.00	42	112	12.09	0.93	0.00	0.16
	3	B2114 Brighton Road Circulatory	4	4	A	422	2089	40	27.30	30	202	16.60	5.88	35.98	2.41
	4	B2114 Brighton Road Circulatory	4	4	A	519	2070	40	13.00	37	145	15.24	4.94	29.11	2.52
421	1	B2114 Brighton Road Exit				314	Unrestricted	60	28.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				18	Unrestricted	60	60.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			431	1946	60	0.00	22	306	9.26	0.26	0.00	0.03
	2	M23 Northbound Off-Slip	5			848	2183	60	0.00	39	132	9.52	0.52	0.00	0.12
502	1	M23 Northbound Off-Slip	5	5	B	208	1940	21	0.00	29	208	31.28	14.64	71.73	2.37
	2	M23 Northbound Off-Slip	5	5	B	223	2072	21	0.00	29	207	31.55	14.71	71.63	3.06
	3	M23 Northbound Off-Slip	5	5	B	423	2140	21	0.07	54	66	35.45	18.43	84.45	6.32
	4	M23 Northbound Off-Slip	5	5	B	425	2150	21	0.00	54	67	35.67	18.40	84.38	6.31
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	426	1984	28	15.00	44	103	26.05	8.22	69.35	4.93
	2	M23 Northbound Off-Slip Circulatory	5	5	A	715	2102	28	7.00	70	28	31.81	14.22	86.59	10.33
521	1	M23 Northbound Off-Slip Exit				643	Unrestricted	60	12.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				635	Unrestricted	60	5.00	0	Unrestricted	18.12	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	2766.89	138.55	19.97	33.37	12.95	657.73	95.36	0.00	753.10
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	2766.89	138.55	19.97	33.37	12.95	657.73	95.36	0.00	753.10

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

# A2 - 2015 Base PM

## D2 - 2015 Base PM\*

### Summary

#### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

#### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
2	19/10/2021 15:32:08	19/10/2021 15:32:09	17:00	60	646.02	39.77	78.84	311/2	0	0	311/2	301/2	311

#### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2015 Base PM		D2	✓	

#### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2015 Base PM				17:00	

### Local OD Matrix - Local Matrix: 1

#### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

#### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	95	760	7	444
	2	30	41	80	40	953
	3	978	101	0	279	0
	4	2	66	34	0	23
	5	249	788	0	2	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	120
	6		2	3	201/1, 321/1	Normal	40
	10		2	4	201/1, 311/1, 421/1	Normal	20
	15		3	4	301/1, 302/1, 421/1	Normal	279
	16		4	5	401/1, 402/1, 521/1	Normal	12
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	17
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	33
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	434
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	0
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	21
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	51
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	51
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	0
	40		4	5	401/1, 402/1, 521/2	Normal	12
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	21
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	33
	52		2	4	201/1, 311/1, 421/2	Normal	20
	53		2	3	201/1, 321/2	Normal	40
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	519
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	15
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	2
	60		3	4	301/2, 302/2, 421/2	Normal	0
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	435
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Normal	17
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	129
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	394
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	394
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	1
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	1	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81			1	2	101/1, 102/1, 221/1	Normal	95

82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	596
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	222
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	4
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	4
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	164
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	222
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	0
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	0
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	15
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	543
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

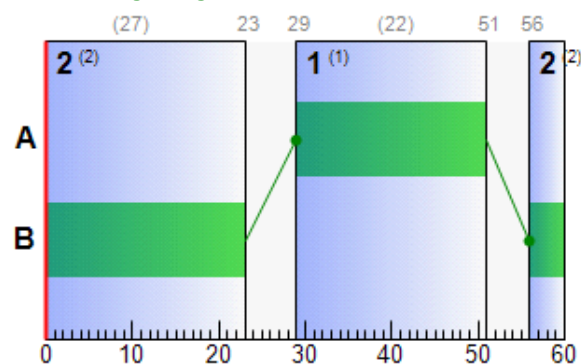
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	29	51	22	1	7
	2	✓	2	B	56	23	27	1	7

### Traffic Stream Green Times

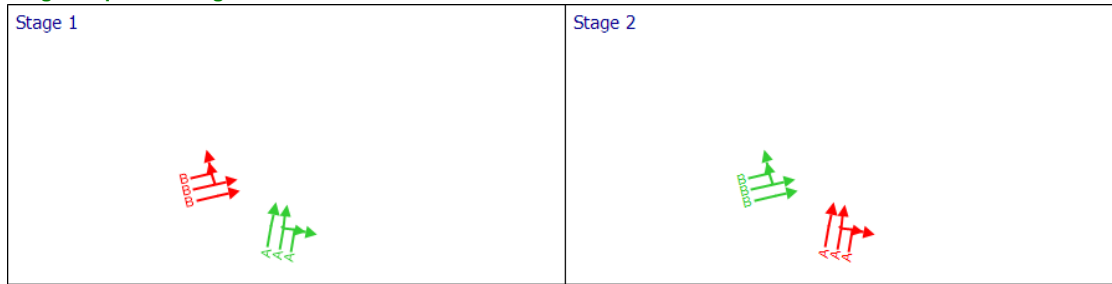
Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	56	23	27
102	2	1	1	B	56	23	27
102	3	1	1	B	56	23	27
111	1	1	1	A	29	51	22
111	2	1	1	A	29	51	22
111	3	1	1	A	29	51	22

### Phase Timings Diagram for Controller Stream 1





**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

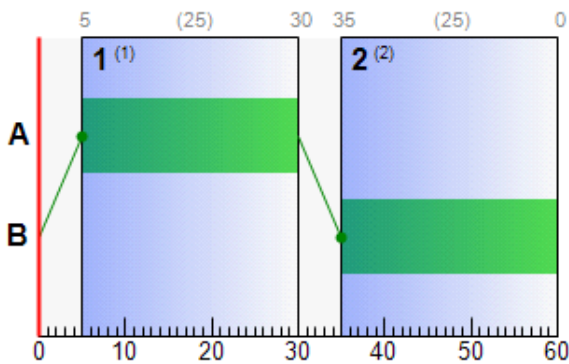
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	5	30	25	1	7
	2	✓	2	B	35	0	25	1	7

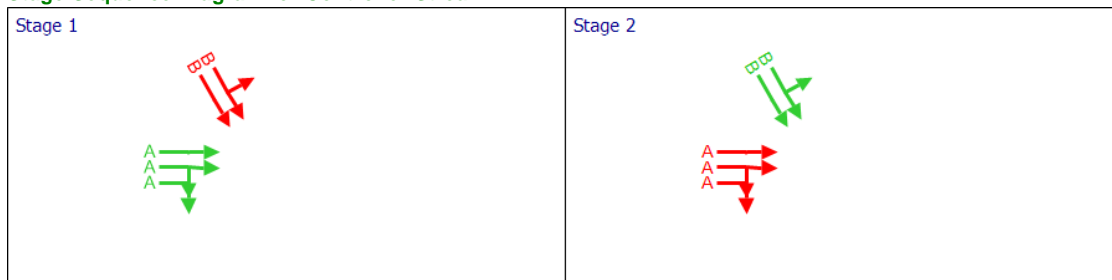
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	35	0	25
201	2	2	2	B	35	0	25
211	1	2	2	A	5	30	25
211	2	2	2	A	5	30	25
211	3	2	2	A	5	30	25

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

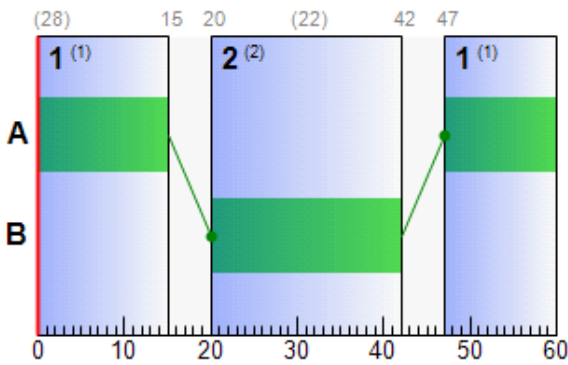
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	47	15	28	1	7
	2	✓	2	B	20	42	22	1	7

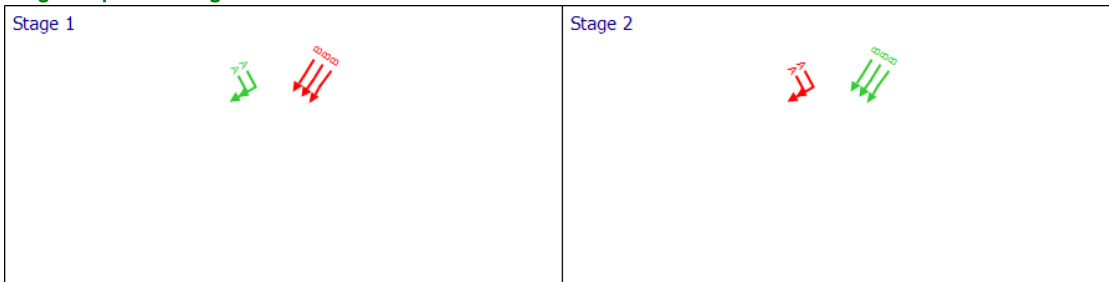
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	20	42	22
302	2	3	3	B	20	42	22
302	3	3	3	B	20	42	22
311	1	3	3	A	47	15	28
311	2	3	3	A	47	15	28

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

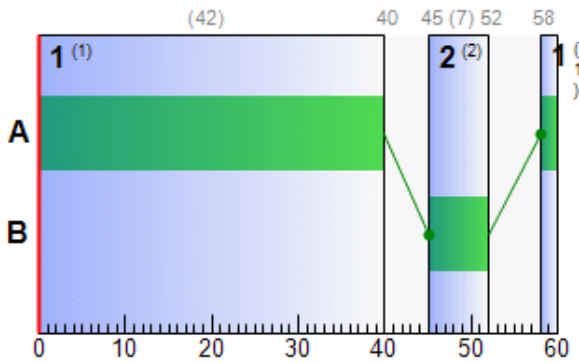
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	58	40	42	1	7
	2	✓	2	B	45	52	7	1	7

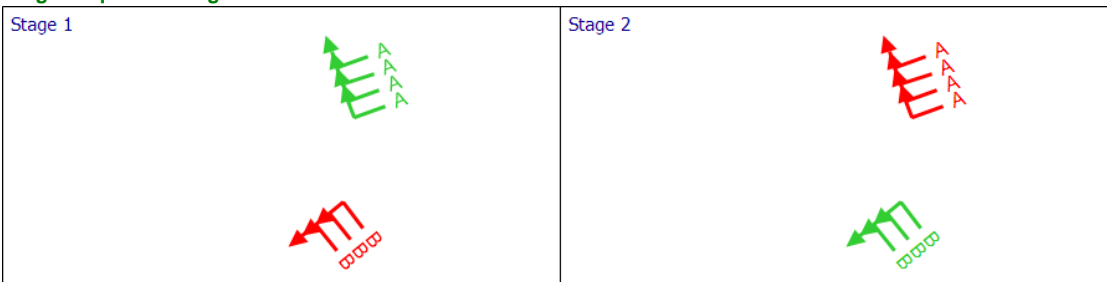
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	45	52	7
402	2	4	4	B	45	52	7
402	3	4	4	B	45	52	7
411	1	4	4	A	58	40	42
411	2	4	4	A	58	40	42
411	3	4	4	A	58	40	42
411	4	4	4	A	58	40	42

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

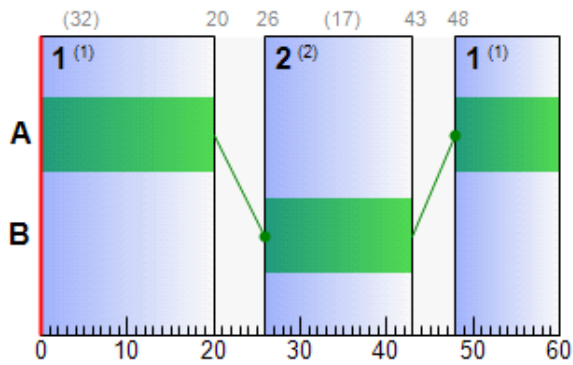
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	48	20	32	1	7
	2	✓	2	B	26	43	17	1	7

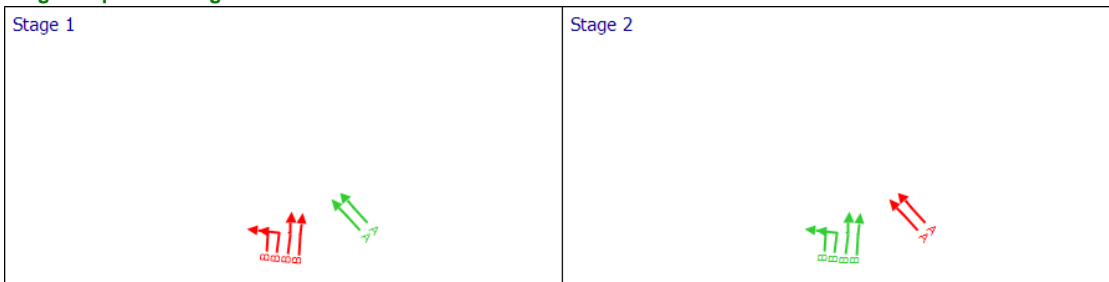
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	26	43	17
502	2	5	5	B	26	43	17
502	3	5	5	B	26	43	17
502	4	5	5	B	26	43	17
511	1	5	5	A	48	20	32
511	2	5	5	A	48	20	32

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**



## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
17:00-18:00	101	1	36	152	691	2036	60	0.62	0.87	3.35	1.68	0.40	2.08	
		2	30	205	616	2148	60	0.39	0.40	1.56	0.94	0.14	1.08	
	102	1	11	753	95	1929	27	9.25	1.06	13.27	3.47	0.64	4.11	
		2	59	51	596	2153	27	15.24	7.64	95.45	35.83	5.74	41.57	
		3	59	52	616	2222	27	15.47	8.43	105.29	37.58	6.24	43.83	
	111	1	65	38	499	1991	22	9.28	2.82	26.69	18.26	1.85	20.12	
		2	63	42	516	2131	22	9.08	2.90	26.14	18.49	2.01	20.50	
		3	2	3671	19	2077	22	15.15	0.28	2.70	1.14	0.21	1.35	
	121	1	0	Unrestricted	680	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	579	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	65	39	554	1980	25	17.17	7.82	49.81	37.52	5.63	43.15	
		2	65	39	591	2108	25	16.97	8.30	51.31	39.57	5.99	45.56	
	211	1	71	26	613	1986	25	7.46	4.18	35.97	18.05	1.48	19.53	
		2	46	96	413	2076	25	4.42	1.36	11.47	7.19	0.63	7.82	
		3	25	260	222	2051	25	1.79	0.16	1.47	1.57	0.12	1.69	
	221	1	0	Unrestricted	594	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	499	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	14	546	279	2002	60	0.15	0.01	0.10	0.16	0.00	0.16	0.16
		2	50	80	1080	2159	60	0.83	0.25	2.16	3.55	0.00	3.55	3.55
	302	1	36	147	279	2000	22	14.73	3.28	8.64	16.21	2.47	18.68	18.68
		2	67	35	543	2125	22	20.55	8.12	21.37	44.02	6.06	50.08	50.08
		3	67	35	537	2101	22	20.54	8.03	21.14	43.50	5.97	49.48	49.48
	311	1	76	19	706	1928	28	12.96	5.88	24.69	36.08	4.32	40.41	40.41
		2	79	14	813	2146	28	12.65	6.21	25.59	40.56	4.53	45.10	45.10
	321	1	0	Unrestricted	653	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	221	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	1	6792	26	1991	60	0.01	0.00	0.00	0.00	0.00	0.00	0.00
		2	5	1803	100	2114	60	0.04	0.00	0.03	0.02	0.00	0.02	0.02
	402	1	9	893	24	1986	7	23.64	0.35	2.19	2.24	0.26	2.50	2.50
		2	1	11510	2	1935	7	23.02	0.03	0.18	0.18	0.02	0.20	0.20
		3	36	153	100	2109	7	27.22	1.60	9.99	10.74	1.20	11.94	11.94
	411	1	47	91	656	1947	42	1.14	0.21	1.64	2.96	0.00	2.96	2.96
		2	50	80	741	2073	42	1.20	0.25	1.93	3.52	0.00	3.52	3.52
		3	38	139	558	2089	42	6.62	3.57	28.71	14.57	2.82	17.39	17.39
		4	40	125	594	2070	42	6.15	3.58	30.25	14.41	2.68	17.09	17.09
	421	1	0	Unrestricted	304	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	25	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	501	1	13	603	249	1946	60	0.14	0.01	0.07	0.13	0.00	0.13	0.13
		2	36	149	790	2183	60	0.47	0.10	0.79	1.46	0.00	1.46	1.46
	502	1	21	337	120	1940	17	16.53	1.49	8.98	7.83	1.12	8.95	8.95
		2	21	334	129	2072	17	16.58	2.03	12.04	8.43	1.21	9.64	9.64
		3	62	46	394	2140	17	23.29	6.49	38.12	36.20	4.64	40.84	40.84
		4	61	47	396	2150	17	23.24	6.48	37.55	36.30	4.66	40.96	40.96
	511	1	51	75	560	1984	32	3.45	6.26	31.87	7.62	3.49	11.11	11.11
		2	60	50	694	2102	32	4.65	7.46	36.29	12.72	4.76	17.48	17.48
	521	1	0	Unrestricted	668	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	753	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Final Prediction Table

**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			691	2036	60	3.09	36	152	18.46	0.62	4.63	0.87
	2	A264	1			616	2148	60	1.78	30	205	18.23	0.39	1.81	0.40
102	1	A264	1	1	B	95	1929	27	3.00	11	753	16.83	9.25	53.73	1.06
	2	A264	1	1	B	596	2153	27	0.08	59	51	23.01	15.24	76.83	7.64
	3	A264	1	1	B	616 <	2222	27	0.00	59	52	23.48	15.47	80.84	8.43 +
111	1	A264 Circulatory	1	1	A	499	1991	22	2.00	65	38	18.84	9.28	29.58	2.82
	2	A264 Circulatory	1	1	A	516	2131	22	2.00	63	42	18.48	9.08	31.07	2.90
	3	A264 Circulatory	1	1	A	19	2077	22	22.00	2	3671	24.27	15.15	89.74	0.28
121	1	A264 Exit				680	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				579	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	554	1980	25	0.00	65	39	28.00	17.17	81.02	7.82
	2	A23 Brighton Road	2	2	B	591	2108	25	0.00	65	39	28.14	16.97	80.78	8.30
211	1	A23 Circulatory	2	2	A	613	1986	25	0.00	71	26	18.00	7.46	19.22	4.18
	2	A23 Circulatory	2	2	A	413	2076	25	0.00	46	96	14.59	4.42	12.17	1.36
	3	A23 Circulatory	2	2	A	222	2051	25	0.00	25	260	11.66	1.79	4.45	0.16
221	1	A23 Exit				594	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				499	Unrestricted	60	21.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			279	2002	60	0.00	14	546	8.10	0.15	0.00	0.01
	2	M23 Southbound Off-slip	3			1080	2159	60	0.00	50	80	8.80	0.83	0.00	0.25
302	1	M23 Southbound Off-slip	3	3	B	279	2000	22	0.00	36	147	46.43	14.73	70.56	3.28
	2	M23 Southbound Off-slip	3	3	B	543	2125	22	0.03	67	35	52.49	20.55	89.01	8.12
	3	M23 Southbound Off-slip	3	3	B	537	2101	22	0.03	67	35	52.69	20.54	88.73	8.03
311	1	M23 Southbound Off-slip Circulatory	3	3	A	706	1928	28	0.00	76	19	33.54	12.96	48.85	5.88
	2	M23 Southbound Off-slip Circulatory	3	3	A	813	2146	28	0.17	79	14	33.00	12.65	44.46	6.21
321	1	M23 Southbound Off-slip Exit				653	Unrestricted	60	11.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				221	Unrestricted	60	3.00	0	Unrestricted	34.31	0.00	0.00	0.00
401	1	B2114 Brighton Road	4			26	1991	60	60.00	1	6792	3.19	0.01	0.00	0.00
		B2114													

	2	Brighton Road	4			100	2114	60	0.00	5	1803	3.18	0.04	0.00	0.00
402	1	B2114 Brighton Road	4	4	B	24	1986	7	7.00	9	893	35.11	23.64	87.79	0.35
	2	B2114 Brighton Road	4	4	B	2	1935	7	7.00	1	11510	34.99	23.02	86.76	0.03
	3	B2114 Brighton Road	4	4	B	100	2109	7	0.01	36	153	39.72	27.22	95.78	1.60
411	1	B2114 Brighton Road Circulatory	4	4	A	656	1947	42	14.00	47	91	12.90	1.14	0.00	0.21
	2	B2114 Brighton Road Circulatory	4	4	A	741	2073	42	14.00	50	80	12.36	1.20	0.00	0.25
	3	B2114 Brighton Road Circulatory	4	4	A	558	2089	42	25.40	38	139	17.35	6.62	40.26	3.57
	4	B2114 Brighton Road Circulatory	4	4	A	594	2070	42	12.00	40	125	16.45	6.15	35.95	3.58
421	1	B2114 Brighton Road Exit				304	Unrestricted	60	16.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				25	Unrestricted	60	55.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			249	1946	60	0.00	13	603	9.13	0.14	0.00	0.01
	2	M23 Northbound Off-Slip	5			790	2183	60	0.00	36	149	9.46	0.47	0.00	0.10
502	1	M23 Northbound Off-Slip	5	5	B	120	1940	17	0.00	21	337	33.17	16.53	74.67	1.49
	2	M23 Northbound Off-Slip	5	5	B	129	2072	17	0.00	21	334	33.41	16.58	74.59	2.03
	3	M23 Northbound Off-Slip	5	5	B	394	2140	17	0.07	62	46	40.32	23.29	93.99	6.49
	4	M23 Northbound Off-Slip	5	5	B	396	2150	17	0.01	61	47	40.51	23.24	93.87	6.48
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	560	1984	32	15.00	51	75	21.28	3.45	49.65	6.26
	2	M23 Northbound Off-Slip Circulatory	5	5	A	694	2102	32	7.00	60	50	22.24	4.65	54.71	7.46
521	1	M23 Northbound Off-Slip Exit				668	Unrestricted	60	18.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				753	Unrestricted	60	11.00	0	Unrestricted	18.12	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	2672.49	128.85	20.74	28.34	11.42	564.71	81.31	0.00	646.02
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	2672.49	128.85	20.74	28.34	11.42	564.71	81.31	0.00	646.02

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**



# A3 - 2035 Reference Case AM

## D3 - 2035 Reference Case AM\*

### Summary

#### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

#### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
3	19/10/2021 15:52:16	19/10/2021 15:52:17	08:00	60	2063.47	134.81	121.62	401/2	2	4	511/2	401/2	401

#### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2035 Reference Case AM		D3	✓	

#### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2035 Reference Case AM				08:00	

### Local OD Matrix - Local Matrix: 1

#### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

#### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	3	322	1012	16	361
	2	10	69	78	86	577
	3	575	94	0	725	0
	4	19	250	418	0	430
	5	669	814	0	17	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	323
	6		2	3	201/1, 321/1	Normal	39
	10		2	4	201/1, 311/1, 421/1	Normal	43
	15		3	4	301/1, 302/1, 421/1	Normal	448
	16		4	5	401/1, 402/1, 521/1	Normal	215
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	84
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	125
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	233
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	0
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	35
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	47
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	47
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	0
	40		4	5	401/1, 402/1, 521/2	Normal	215
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	35
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	125
	52		2	4	201/1, 311/1, 421/2	Normal	43
	53		2	3	201/1, 321/2	Normal	39
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	344
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	5
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	19
	60		3	4	301/2, 302/2, 421/2	Normal	277
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	376
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Percentage	334
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	346
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	415
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	399
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	9
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	9	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81		1	2	101/1, 102/1, 221/1	Normal	322	

82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	685
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	181
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	8
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	8
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	327
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	181
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	2
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	2
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	5
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	199
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

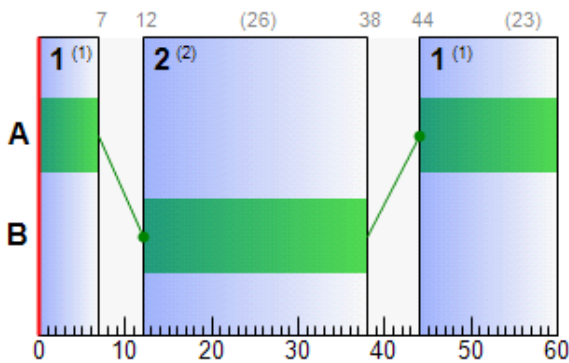
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	44	7	23	1	7
	2	✓	2	B	12	38	26	1	7

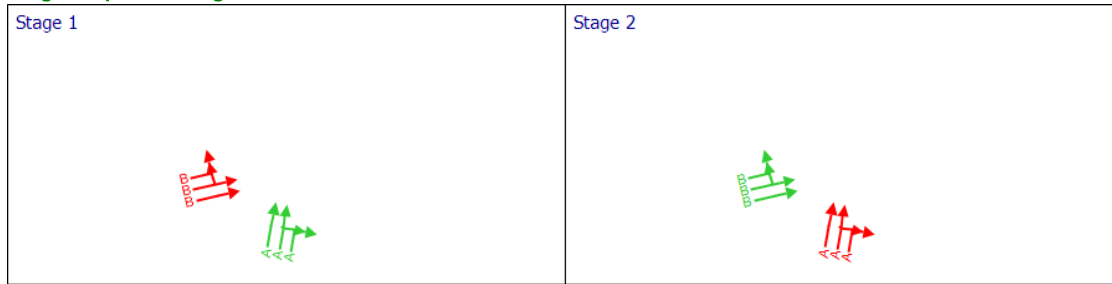
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	12	38	26
102	2	1	1	B	12	38	26
102	3	1	1	B	12	38	26
111	1	1	1	A	44	7	23
111	2	1	1	A	44	7	23
111	3	1	1	A	44	7	23

### Phase Timings Diagram for Controller Stream 1



**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

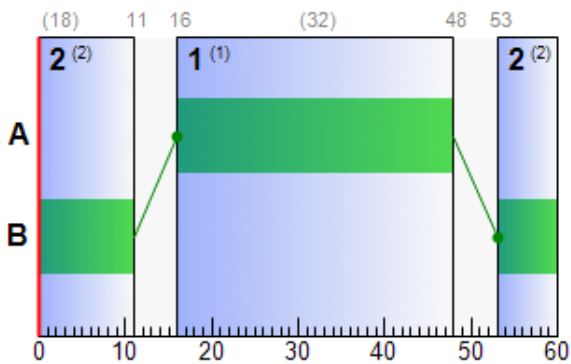
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	16	48	32	1	7
	2	✓	2	B	53	11	18	1	7

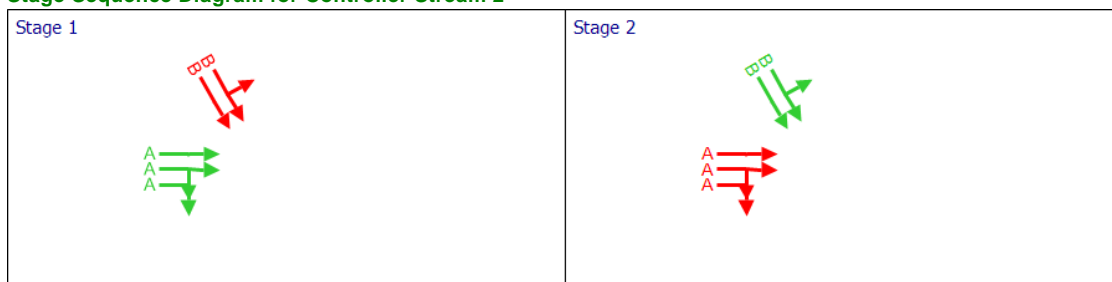
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	53	11	18
201	2	2	2	B	53	11	18
211	1	2	2	A	16	48	32
211	2	2	2	A	16	48	32
211	3	2	2	A	16	48	32

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

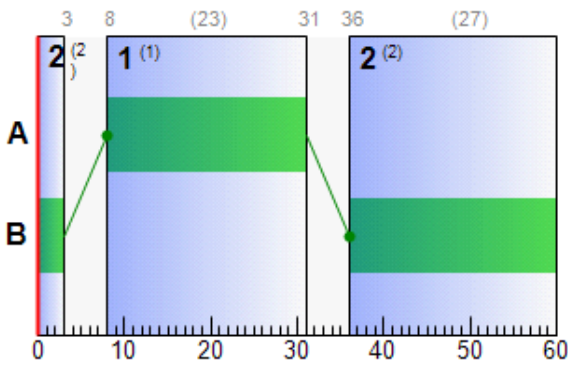
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	8	31	23	1	7
	2	✓	2	B	36	3	27	1	7

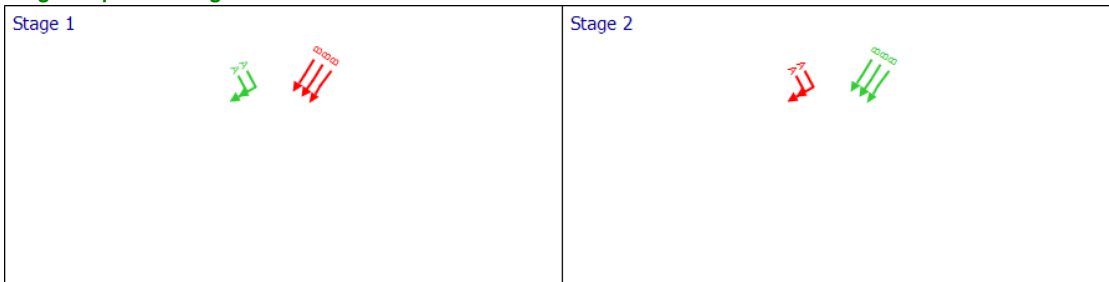
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	36	3	27
302	2	3	3	B	36	3	27
302	3	3	3	B	36	3	27
311	1	3	3	A	8	31	23
311	2	3	3	A	8	31	23

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

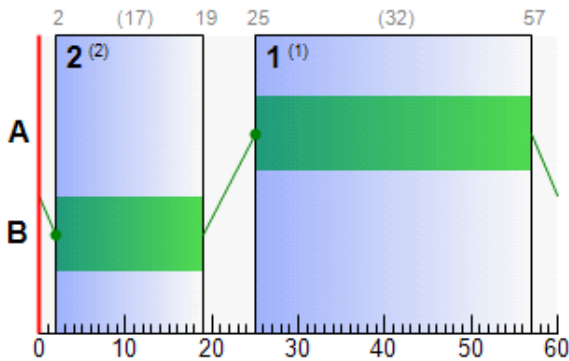
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	25	57	32	1	7
	2	✓	2	B	2	19	17	1	7

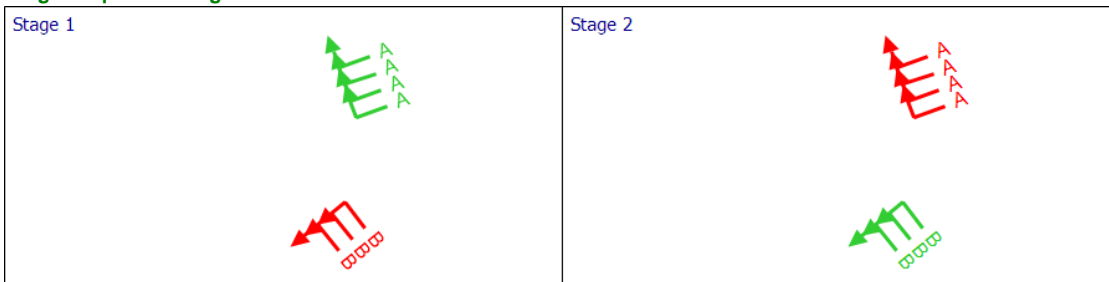
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	2	19	17
402	2	4	4	B	2	19	17
402	3	4	4	B	2	19	17
411	1	4	4	A	25	57	32
411	2	4	4	A	25	57	32
411	3	4	4	A	25	57	32
411	4	4	4	A	25	57	32

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

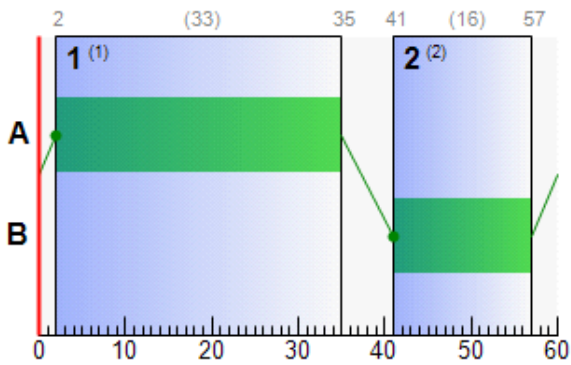
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	2	35	33	1	7
	2	✓	2	B	41	57	16	1	7

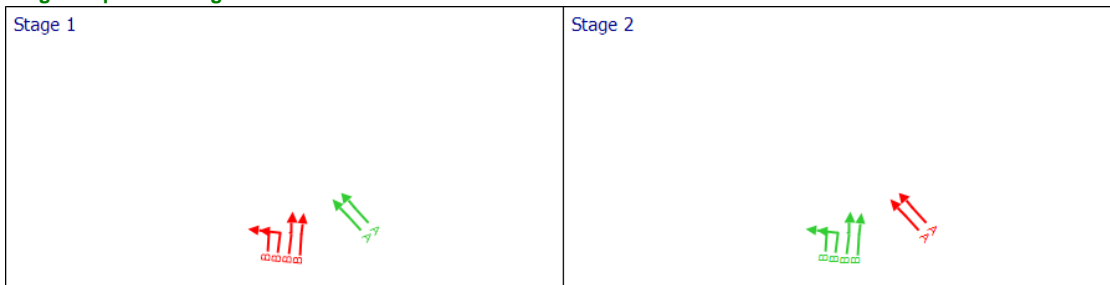
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	41	57	16
502	2	5	5	B	41	57	16
502	3	5	5	B	41	57	16
502	4	5	5	B	41	57	16
511	1	5	5	A	2	35	33
511	2	5	5	A	2	35	33

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**



## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
08:00-09:00	101	1	59	53	1007	2036	60	2.91	5.74	22.18	11.54	3.45	14.99	
		2	39	129	709	2148	60	1.62	2.88	11.15	4.52	1.74	6.26	
	102	1	37	143	322	1929	26	12.20	3.50	43.71	15.49	2.63	18.12	
		2	71	27	685	2153	26	17.89	8.06	100.76	48.32	6.05	54.38	
		3	71	27	709	2222	26	18.34	8.85	110.57	51.28	6.65	57.93	
	111	1	75	20	600	1991	23	12.64	4.45	42.02	29.90	3.14	33.05	
		2	77	17	653	2126	23	13.97	8.34	75.18	35.97	4.63	40.60	
		3	35	156	293	2077	23	13.35	4.71	44.79	15.41	3.52	18.93	
	121	1	0	Unrestricted	548	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	729	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	63	42	397	1978	18	22.46	6.17	39.30	35.17	4.49	39.66	
		2	64	42	424	2108	18	22.19	6.55	40.49	37.12	4.78	41.89	
	211	1	69	30	754	1986	32	5.33	1.91	16.47	15.86	1.43	17.29	
		2	71	27	817	2094	32	11.76	7.83	66.20	37.88	5.36	43.24	
		3	16	449	185	2051	32	0.31	0.02	0.14	0.23	0.00	0.23	
	221	1	0	Unrestricted	922	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	584	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	22	302	448	2002	60	0.26	0.03	0.28	0.46	0.00	0.46	
		2	44	105	946	2159	60	0.65	0.17	1.48	2.42	0.00	2.42	
	302	1	48	88	448	2000	27	13.02	5.20	13.69	23.00	3.86	26.87	
		2	48	88	476	2125	27	13.11	5.51	14.50	24.62	4.14	28.76	
		3	48	88	470	2101	27	13.10	5.44	14.32	24.28	4.09	28.37	
	311	1	69	30	534	1928	23	12.79	7.71	32.41	26.95	4.15	31.10	
		2	71	27	609	2146	23	10.57	9.22	37.99	25.38	3.15	28.52	
	321	1	0	Unrestricted	793	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	641	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	23	299	449	1991	60	0.26	0.03	0.71	0.47	0.00	0.47	
		2	122	-26	549	2114	60	425.60	68.26	1499.63	922.08	18.93	941.01	
	402	1	72	25	430	1986	17	26.76	6.96	43.48	45.39	5.20	50.59	
		2	3	2650	19	1935	17	15.15	0.22	1.39	1.14	0.17	1.30	
		3	87	4	549	2109	17	87.30	18.01	112.56	189.15	13.41	202.56	
	411	1	39	133	414	1947	32	5.13	6.61	51.99	8.38	4.91	13.29	
		2	46	95	525	2073	32	6.45	8.47	65.91	13.36	6.44	19.80	
		3	18	401	206	2089	32	5.53	1.18	9.48	4.49	0.71	5.21	
		4	48	87	547	2070	32	6.47	2.74	23.13	13.96	2.22	16.18	
	421	1	0	Unrestricted	508	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	337	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	501	1	34	162	669	1946	60	0.48	0.09	0.69	1.28	0.00	1.28	
		2	38	136	832	2183	60	0.51	0.12	0.90	1.67	0.00	1.67	
	502	1	59	53	323	1940	16	23.41	5.42	32.55	29.82	3.75	33.57	
		2	59	53	346	2072	16	23.43	5.42	32.19	31.98	4.07	36.05	
		3	69	31	415	2140	16	26.47	6.97	40.93	43.34	5.31	48.65	
		4	68	31	417	2150	16	26.36	6.99	40.46	43.36	5.33	48.69	
	511	1	20	350	225	1984	33	5.74	1.28	6.50	5.09	0.89	5.98	
		2	92	-2	1096	2102	33	21.63	14.37	69.94	93.52	10.59	104.11	
	521	1	0	Unrestricted	629	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	740	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Final Prediction Table



**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUE
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			1007	2036	60	9.65	59	53	20.75	2.91	27.34	5.74
	2	A264	1			709	2148	60	9.61	39	129	19.46	1.62	19.55	2.88
102	1	A264	1	1	B	322	1929	26	7.00	37	143	19.78	12.20	65.14	3.50
	2	A264	1	1	B	685 <	2153	26	0.08	71	27	25.66	17.89	70.47	8.06 +
	3	A264	1	1	B	709 <	2222	26	0.00	71	27	26.34	18.34	74.81	8.85 +
111	1	A264 Circulatory	1	1	A	600	1991	23	1.00	75	20	22.21	12.64	41.77	4.45
	2	A264 Circulatory	1	1	A	653 <	2126	23	1.00	77	17	23.36	13.97	56.50	8.34 +
	3	A264 Circulatory	1	1	A	293	2077	23	5.00	35	156	22.47	13.35	95.90	4.71
121	1	A264 Exit				548	Unrestricted	60	13.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				729	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	397	1978	18	0.00	63	42	33.28	22.46	90.25	6.17
	2	A23 Brighton Road	2	2	B	424	2108	18	0.00	64	42	33.36	22.19	89.85	6.55
211	1	A23 Circulatory	2	2	A	754	1986	32	3.00	69	30	15.87	5.33	15.14	1.91
	2	A23 Circulatory	2	2	A	817 <	2094	32	0.00	71	27	21.94	11.76	52.39	7.83 +
	3	A23 Circulatory	2	2	A	185	2051	32	6.00	16	449	10.18	0.31	0.00	0.02
221	1	A23 Exit				922	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				584	Unrestricted	60	20.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			448	2002	60	0.00	22	302	8.21	0.26	0.00	0.03
	2	M23 Southbound Off-slip	3			946	2159	60	0.00	44	105	8.62	0.65	0.00	0.17
302	1	M23 Southbound Off-slip	3	3	B	448	2000	27	0.00	48	88	44.72	13.02	68.79	5.20
	2	M23 Southbound Off-slip	3	3	B	476	2125	27	0.00	48	88	45.05	13.11	69.40	5.51
	3	M23 Southbound Off-slip	3	3	B	470	2101	27	0.03	48	88	45.25	13.10	69.43	5.44
311	1	M23 Southbound Off-slip Circulatory	3	3	A	534	1928	23	0.00	69	30	33.38	12.79	62.00	7.71
	2	M23 Southbound Off-slip Circulatory	3	3	A	609	2146	23	0.06	71	27	30.92	10.57	41.19	9.22
321	1	M23 Southbound Off-slip Exit				793	Unrestricted	60	5.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				641	Unrestricted	60	0.00	0	Unrestricted	34.31	0.00	0.00	0.00
1	B2114 Brighton	4				449	1991	60	0.00	23	299	3.44	0.26	0.00	0.03

401		Road													
	2	B2114 Brighton Road	4			549 <	2114	60	44.41	122	-26	428.74	425.60	274.85	68.26 +
402	1	B2114 Brighton Road	4	4	B	430	1986	17	0.00	72	25	38.23	26.76	96.43	6.96
	2	B2114 Brighton Road	4	4	B	19	1935	17	17.00	3	2650	27.12	15.15	70.17	0.22
	3	B2114 Brighton Road	4	4	B	549 <	2109	17	0.01	87	4	99.80	87.30	194.64	18.01 +
411	1	B2114 Brighton Road Circulatory	4	4	A	414	1947	32	15.00	39	133	16.89	5.13	94.57	6.61
	2	B2114 Brighton Road Circulatory	4	4	A	525	2073	32	15.00	46	95	17.61	6.45	97.86	8.47
	3	B2114 Brighton Road Circulatory	4	4	A	206	2089	32	19.05	18	401	16.26	5.53	27.66	1.18
	4	B2114 Brighton Road Circulatory	4	4	A	547	2070	32	4.00	48	87	16.77	6.47	32.36	2.74
421	1	B2114 Brighton Road Exit				508	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				337	Unrestricted	60	1.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			669	1946	60	0.00	34	162	9.48	0.48	0.00	0.09
	2	M23 Northbound Off-Slip	5			832	2183	60	0.00	38	136	9.50	0.51	0.00	0.12
502	1	M23 Northbound Off-Slip	5	5	B	323	1940	16	0.00	59	53	40.04	23.41	92.56	5.42
	2	M23 Northbound Off-Slip	5	5	B	346	2072	16	0.00	59	53	40.27	23.43	93.77	5.42
	3	M23 Northbound Off-Slip	5	5	B	415	2140	16	0.07	69	31	43.50	26.47	102.14	6.97
	4	M23 Northbound Off-Slip	5	5	B	417	2150	16	0.00	68	31	43.63	26.36	101.93	6.99
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	225	1984	33	20.00	20	350	23.56	5.74	31.53	1.28
	2	M23 Northbound Off-Slip Circulatory	5	5	A	1096	2102	33	0.00	92	-2	39.22	21.63	77.01	14.37
521	1	M23 Northbound Off-Slip Exit				629	Unrestricted	60	11.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				740	Unrestricted	60	3.00	0	Unrestricted	18.12	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	3190.85	241.17	13.23	51.74	83.07	1914.28	149.19	0.00	2063.47
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	3190.85	241.17	13.23	51.74	83.07	1914.28	149.19	0.00	2063.47

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

# A4 - 2035 Reference Case PM

## D4 - 2035 Reference Case PM\*

### Summary

#### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

#### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
4	19/10/2021 16:00:12	19/10/2021 16:00:15	17:00	60	3600.47	242.37	178.83	401/2	2	4	402/1	401/2	401

#### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2035 Reference Case PM		D4	✓	

#### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2035 Reference Case PM				17:00	

### Local OD Matrix - Local Matrix: 1

#### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

#### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	85	670	31	293
	2	16	89	120	424	654
	3	790	91	0	739	3
	4	29	201	511	0	403
	5	347	909	0	30	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	168
	6		2	3	201/1, 321/1	Normal	60
	10		2	4	201/1, 311/1, 421/1	Normal	212
	15		3	4	301/1, 302/1, 421/1	Normal	521
	16		4	5	401/1, 402/1, 521/1	Normal	202
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	256
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	101
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	87
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	2
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	45
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	46
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	46
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	2
	40		4	5	401/1, 402/1, 521/2	Normal	202
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	45
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	101
	52		2	4	201/1, 311/1, 421/2	Normal	212
	53		2	3	201/1, 321/2	Normal	60
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	567
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	8
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	29
	60		3	4	301/2, 302/2, 421/2	Normal	218
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	457
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Normal	256
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	179
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	468
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	441
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	15
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	15	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81		1	2	101/1, 102/1, 221/1	Normal	85	

82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	489
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	147
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	16
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	16
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	181
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	147
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	0
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	0
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	8
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	333
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

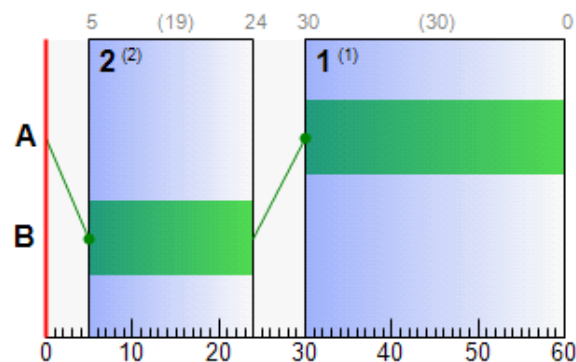
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	30	0	30	1	7
	2	✓	2	B	5	24	19	1	7

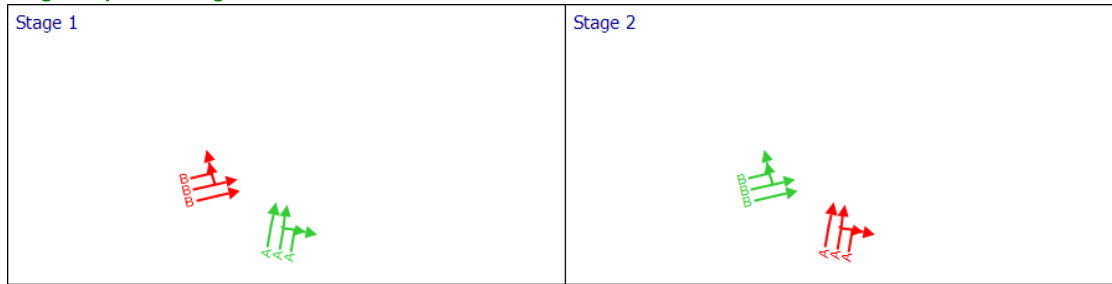
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	5	24	19
102	2	1	1	B	5	24	19
102	3	1	1	B	5	24	19
111	1	1	1	A	30	0	30
111	2	1	1	A	30	0	30
111	3	1	1	A	30	0	30

### Phase Timings Diagram for Controller Stream 1



**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

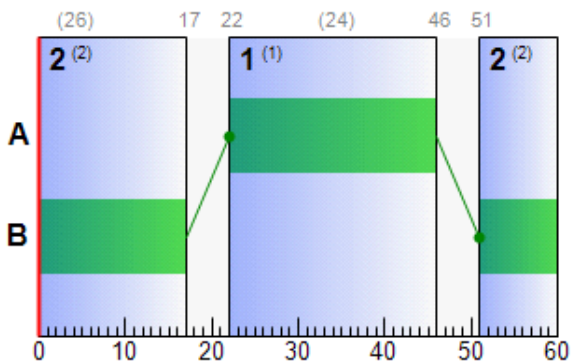
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	22	46	24	1	7
	2	✓	2	B	51	17	26	1	7

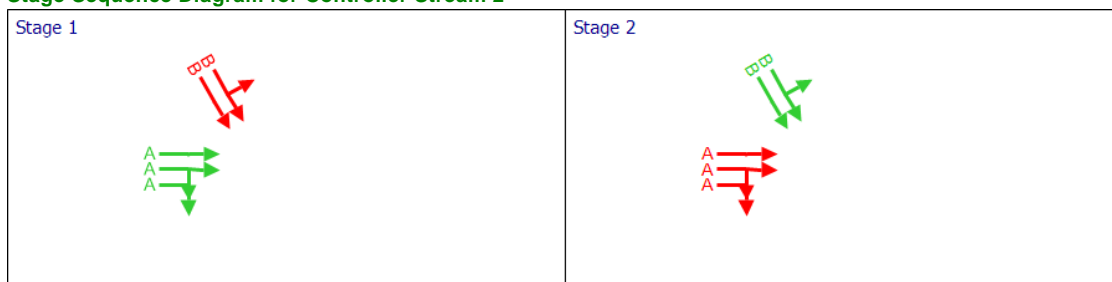
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	51	17	26
201	2	2	2	B	51	17	26
211	1	2	2	A	22	46	24
211	2	2	2	A	22	46	24
211	3	2	2	A	22	46	24

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

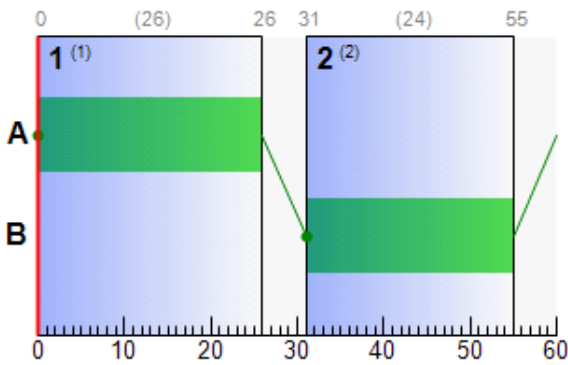
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	0	26	26	1	7
	2	✓	2	B	31	55	24	1	7

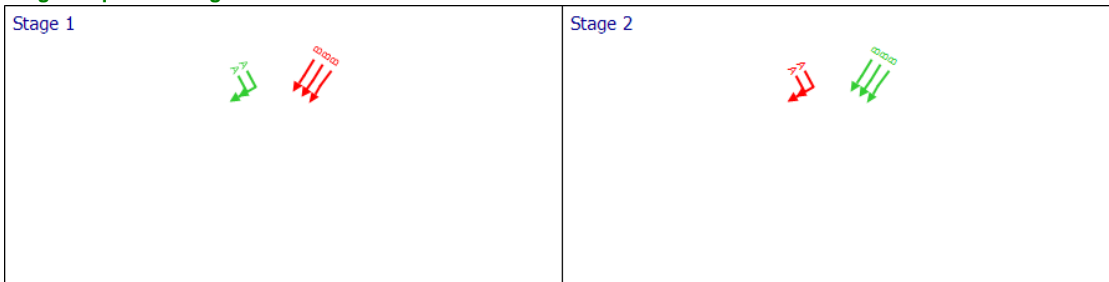
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	31	55	24
302	2	3	3	B	31	55	24
302	3	3	3	B	31	55	24
311	1	3	3	A	0	26	26
311	2	3	3	A	0	26	26

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

**Resultant Stages**

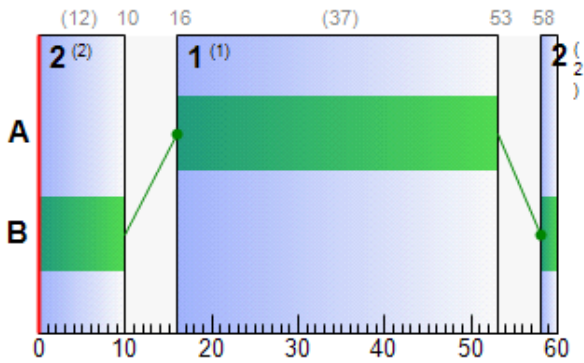
Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	16	53	37	1	7
	2	✓	2	B	58	10	12	1	7



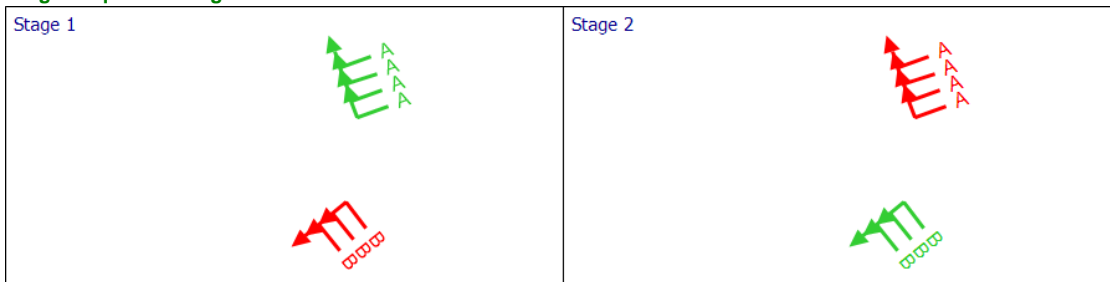
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	58	10	12
402	2	4	4	B	58	10	12
402	3	4	4	B	58	10	12
411	1	4	4	A	16	53	37
411	2	4	4	A	16	53	37
411	3	4	4	A	16	53	37
411	4	4	4	A	16	53	37

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

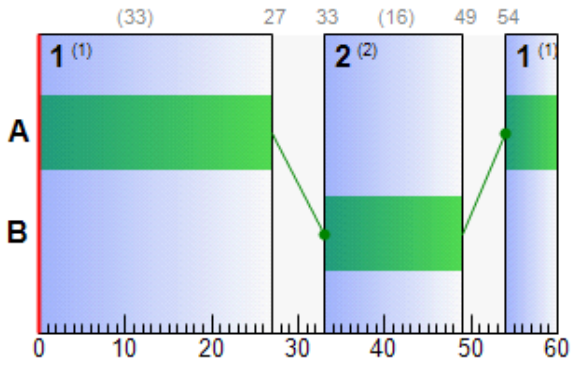
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	54	27	33	1	7
	2	✓	2	B	33	49	16	1	7

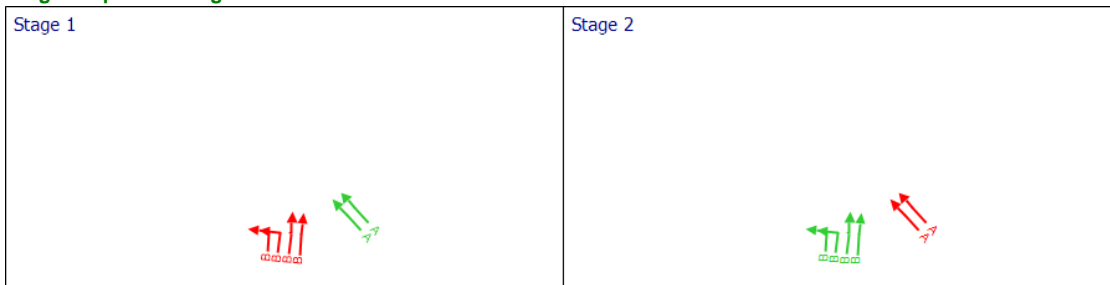
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	33	49	16
502	2	5	5	B	33	49	16
502	3	5	5	B	33	49	16
502	4	5	5	B	33	49	16
511	1	5	5	A	54	27	33
511	2	5	5	A	54	27	33

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**



## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
17:00-18:00	101	1	29	210	574	2036	60	0.39	0.22	0.85	0.88	0.11	0.98	
		2	24	281	507	2148	60	0.26	0.04	0.14	0.52	0.00	0.52	
	102	1	13	581	85	1929	19	14.40	1.07	13.32	4.83	0.72	5.55	
		2	68	32	489	2153	19	23.62	7.79	97.43	45.56	5.85	51.42	
		3	68	31	507	2222	19	23.76	8.73	109.05	47.52	6.26	53.78	
	111	1	60	50	615	1991	30	5.95	2.66	25.10	14.46	1.94	16.40	
		2	67	35	732	2117	30	7.23	5.51	49.69	20.85	4.04	24.89	
		3	16	458	173	2077	30	2.11	1.51	14.31	1.44	1.12	2.55	
	121	1	0	Unrestricted	538	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	644	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	71	27	631	1979	26	18.18	9.26	59.03	45.26	6.70	51.96	
		2	71	27	673	2108	26	17.92	9.83	60.73	47.56	7.12	54.68	
	211	1	76	18	632	1986	24	14.10	10.04	86.37	35.16	7.41	42.57	
		2	61	47	533	2089	24	7.59	6.68	56.52	15.95	5.02	20.97	
		3	17	423	147	2051	24	3.01	1.47	13.06	1.74	1.10	2.85	
	221	1	0	Unrestricted	700	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	588	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	26	246	521	2002	60	0.32	0.05	0.40	0.65	0.00	0.65	
		2	51	76	1104	2159	60	0.87	0.27	2.31	3.79	0.00	3.79	
	302	1	63	44	521	2000	24	17.80	7.07	18.61	36.57	5.31	41.88	
		2	63	44	555	2125	24	17.96	7.84	20.64	39.32	5.76	45.08	
		3	63	43	549	2101	24	17.97	7.76	20.43	38.91	5.68	44.60	
	311	1	83	8	720	1928	26	19.01	7.00	29.39	53.99	5.20	59.19	
		2	85	6	820	2146	26	18.40	7.12	29.36	59.51	5.13	64.65	
	321	1	0	Unrestricted	692	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	384	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	22	314	433	1991	60	0.25	0.03	0.66	0.43	0.00	0.43	
		2	179	-50	399	2114	60	1450.56	163.53	3592.66	2284.50	20.94	2305.44	
	402	1	94	-4	404	1986	12	113.53	17.64	110.27	180.92	12.61	193.52	
		2	7	1201	29	1935	12	19.12	0.38	2.38	2.19	0.29	2.47	
		3	87	3	399	2109	12	132.18	18.07	112.93	208.16	13.30	221.46	
	411	1	19	370	236	1947	37	1.36	3.27	25.70	1.27	1.33	2.60	
		2	55	65	716	2073	37	3.53	8.39	65.28	9.97	4.38	14.35	
		3	26	248	341	2089	37	5.75	1.65	13.25	7.74	1.24	8.98	
		4	49	82	647	2070	37	6.21	3.09	26.05	15.86	2.32	18.18	
	421	1	0	Unrestricted	764	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	461	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	501	1	18	405	347	1946	60	0.20	0.02	0.15	0.27	0.00	0.27	
		2	43	109	939	2183	60	0.62	0.16	1.24	2.30	0.00	2.30	
	502	1	31	194	168	1940	16	18.44	2.17	13.03	12.22	1.70	13.92	
		2	30	195	179	2072	16	18.44	2.30	13.69	13.02	1.81	14.83	
		3	78	16	468	2140	16	30.78	9.30	54.60	56.83	6.51	63.34	
4		77	16	471	2150	16	30.64	9.28	53.73	56.93	6.54	63.47		
511	1	33	173	370	1984	33	6.44	1.79	9.13	9.41	1.35	10.75		
	2	88	2	1046	2102	33	15.78	13.79	67.15	65.13	10.07	75.20		
521	1	0	Unrestricted	435	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	2	0	Unrestricted	915	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

## Final Prediction Table

**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			574	2036	60	1.70	29	210	18.23	0.39	1.49	0.22
	2	A264	1			507	2148	60	0.00	24	281	18.10	0.26	0.00	0.04
102	1	A264	1	1	B	85	1929	19	1.00	13	581	21.98	14.40	67.38	1.07
	2	A264	1	1	B	489	2153	19	0.08	68	32	31.39	23.62	95.44	7.79
	3	A264	1	1	B	507 <	2222	19	0.00	68	31	31.77	23.76	98.50	8.73 +
111	1	A264 Circulatory	1	1	A	615	1991	30	7.00	60	50	15.52	5.95	25.12	2.66
	2	A264 Circulatory	1	1	A	732	2117	30	5.00	67	35	16.62	7.23	44.06	5.51
	3	A264 Circulatory	1	1	A	173	2077	30	9.00	16	458	11.22	2.11	51.36	1.51
121	1	A264 Exit				538	Unrestricted	60	6.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				644	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	631	1979	26	0.00	71	27	29.01	18.18	84.73	9.26
	2	A23 Brighton Road	2	2	B	673	2108	26	0.00	71	27	29.09	17.92	84.35	9.83
211	1	A23 Circulatory	2	2	A	632 <	1986	24	4.00	76	18	24.64	14.10	93.48	10.04 +
	2	A23 Circulatory	2	2	A	533	2089	24	5.02	61	47	17.76	7.59	75.13	6.68
	3	A23 Circulatory	2	2	A	147	2051	24	13.00	17	423	12.87	3.01	59.90	1.47
221	1	A23 Exit				700	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				588	Unrestricted	60	13.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			521	2002	60	0.00	26	246	8.27	0.32	0.00	0.05
	2	M23 Southbound Off-slip	3			1104	2159	60	0.00	51	76	8.84	0.87	0.00	0.27
302	1	M23 Southbound Off-slip	3	3	B	521	2000	24	0.00	63	44	49.50	17.80	81.29	7.07
	2	M23 Southbound Off-slip	3	3	B	555	2125	24	0.00	63	44	49.90	17.96	82.82	7.84
	3	M23 Southbound Off-slip	3	3	B	549	2101	24	0.03	63	43	50.12	17.97	82.58	7.76
311	1	M23 Southbound Off-slip Circulatory	3	3	A	720	1928	26	1.00	83	8	39.59	19.01	57.65	7.00
	2	M23 Southbound Off-slip Circulatory	3	3	A	820	2146	26	3.10	85	6	38.75	18.40	49.92	7.12
321	1	M23 Southbound Off-slip Exit				692	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				384	Unrestricted	60	0.00	0	Unrestricted	34.31	0.00	0.00	0.00
1	B2114 Brighton	4				433	1991	60	0.00	22	314	3.43	0.25	0.00	0.03

401		Road													
	2	B2114 Brighton Road	4			399 <	2114	60	48.67	179	-50	1453.70	1450.56	418.28	163.53 +
402	1	B2114 Brighton Road	4	4	B	404 <	1986	12	0.00	94	-4	124.99	113.53	252.06	17.64 +
	2	B2114 Brighton Road	4	4	B	29	1935	12	12.00	7	1201	31.08	19.12	78.86	0.38
	3	B2114 Brighton Road	4	4	B	399 <	2109	12	0.01	87	3	144.67	132.18	265.69	18.07 +
411	1	B2114 Brighton Road Circulatory	4	4	A	236	1947	37	16.00	19	370	13.12	1.36	44.91	3.27
	2	B2114 Brighton Road Circulatory	4	4	A	716	2073	37	16.00	55	65	14.69	3.53	48.79	8.39
	3	B2114 Brighton Road Circulatory	4	4	A	341	2089	37	22.10	26	248	16.48	5.75	29.01	1.65
	4	B2114 Brighton Road Circulatory	4	4	A	647	2070	37	4.00	49	82	16.52	6.21	28.60	3.09
421	1	B2114 Brighton Road Exit				764	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				461	Unrestricted	60	0.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			347	1946	60	0.00	18	405	9.20	0.20	0.00	0.02
	2	M23 Northbound Off-Slip	5			939	2183	60	0.00	43	109	9.62	0.62	0.00	0.16
502	1	M23 Northbound Off-Slip	5	5	B	168	1940	16	0.00	31	194	35.07	18.44	80.72	2.17
	2	M23 Northbound Off-Slip	5	5	B	179	2072	16	0.00	30	195	35.28	18.44	80.56	2.30
	3	M23 Northbound Off-Slip	5	5	B	468 <	2140	16	0.07	78	16	47.81	30.78	110.94	9.30 +
	4	M23 Northbound Off-Slip	5	5	B	471 <	2150	16	0.00	77	16	47.91	30.64	110.66	9.28 +
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	370	1984	33	16.00	33	173	24.27	6.44	29.08	1.79
	2	M23 Northbound Off-Slip Circulatory	5	5	A	1046	2102	33	2.00	88	2	33.37	15.78	76.74	13.79
521	1	M23 Northbound Off-Slip Exit				435	Unrestricted	60	15.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				915	Unrestricted	60	2.00	0	Unrestricted	18.12	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	3100.03	345.70	8.97	57.74	184.62	3441.61	158.86	0.00	3600.47
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	3100.03	345.70	8.97	57.74	184.62	3441.61	158.86	0.00	3600.47

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

# A5 - LP Scenario 2 With Mit AM D5 - LP Scenario 2 With Mit AM\*

## Summary

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
5	19/10/2021 15:53:20	19/10/2021 15:53:21	08:00	60	2217.80	145.67	125.62	401/2	2	4	511/2	401/2	401

### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
LP Scenario 2 With Mit AM		D5	✓	

### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
LP Scenario 2 With Mit AM				08:00	

## Local OD Matrix - Local Matrix: 1

### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	298	1007	16	351
	2	9	68	85	93	602
	3	628	91	0	676	0
	4	19	261	428	0	414
	5	636	847	0	16	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	308
	6		2	3	201/1, 321/1	Normal	43
	10		2	4	201/1, 311/1, 421/1	Normal	47
	15		3	4	301/1, 302/1, 421/1	Normal	448
	16		4	5	401/1, 402/1, 521/1	Normal	207
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	86
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	131
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	237
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	0
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	34
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	46
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	46
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	0
	40		4	5	401/1, 402/1, 521/2	Normal	207
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	34
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	131
	52		2	4	201/1, 311/1, 421/2	Normal	47
	53		2	3	201/1, 321/2	Normal	43
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	365
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	5
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	19
	60		3	4	301/2, 302/2, 421/2	Normal	228
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	380
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Percentage	342
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	328
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	430
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	417
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	8
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	8	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81		1	2	101/1, 102/1, 221/1	Normal	298	



82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	676
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	176
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	8
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	8
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	331
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	176
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	0
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	0
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	5
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	248
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

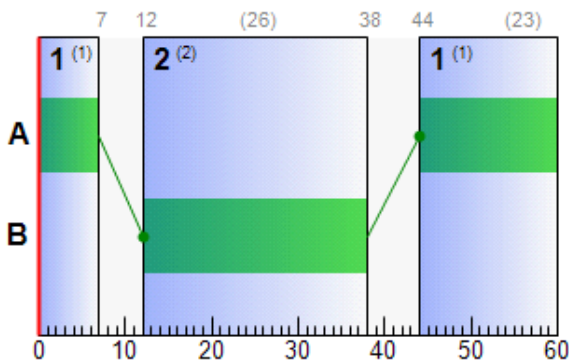
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	44	7	23	1	7
	2	✓	2	B	12	38	26	1	7

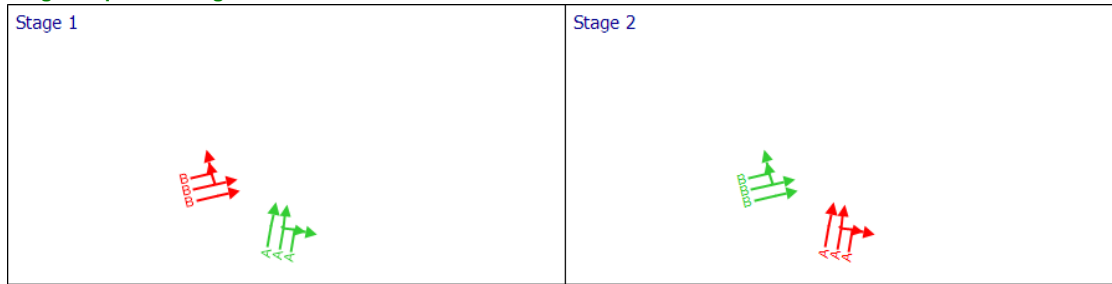
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	12	38	26
102	2	1	1	B	12	38	26
102	3	1	1	B	12	38	26
111	1	1	1	A	44	7	23
111	2	1	1	A	44	7	23
111	3	1	1	A	44	7	23

### Phase Timings Diagram for Controller Stream 1



**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

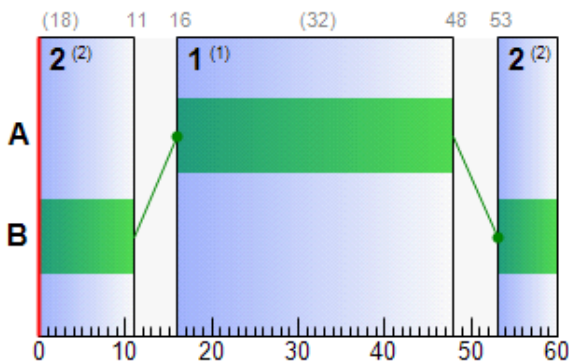
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	16	48	32	1	7
	2	✓	2	B	53	11	18	1	7

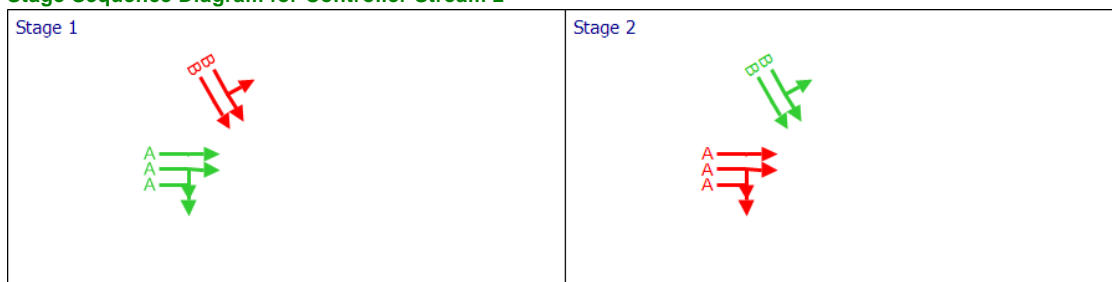
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	53	11	18
201	2	2	2	B	53	11	18
211	1	2	2	A	16	48	32
211	2	2	2	A	16	48	32
211	3	2	2	A	16	48	32

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

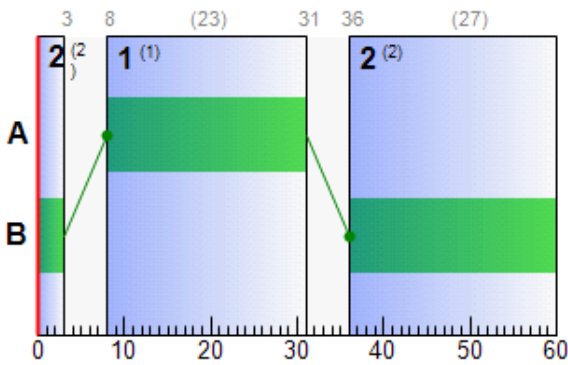
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	8	31	23	1	7
	2	✓	2	B	36	3	27	1	7

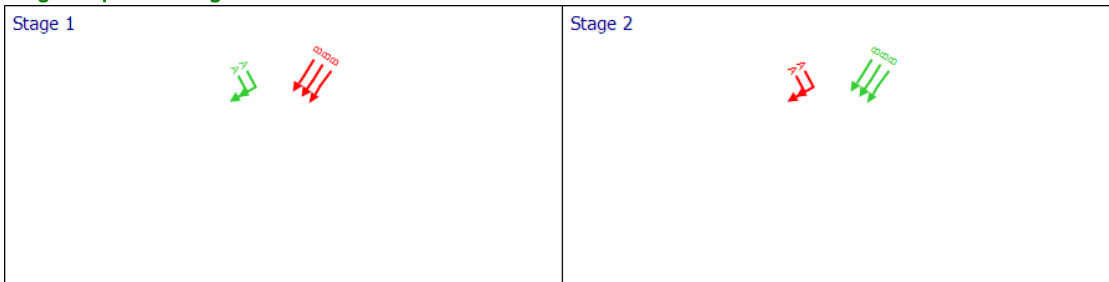
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	36	3	27
302	2	3	3	B	36	3	27
302	3	3	3	B	36	3	27
311	1	3	3	A	8	31	23
311	2	3	3	A	8	31	23

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

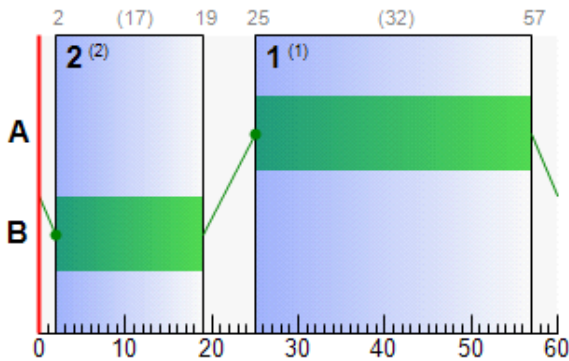
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	25	57	32	1	7
	2	✓	2	B	2	19	17	1	7

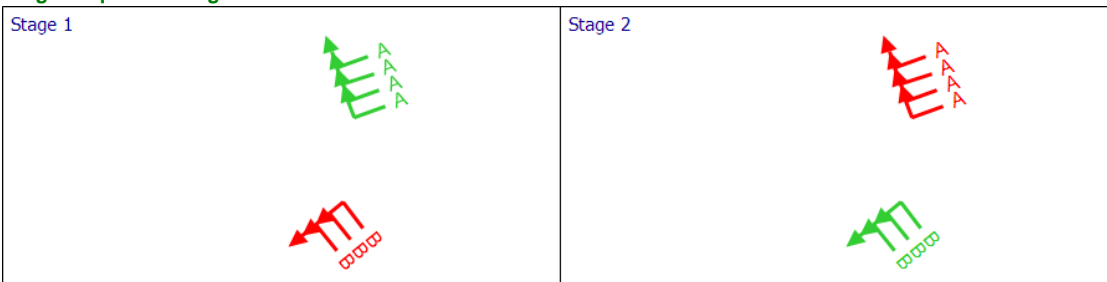
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	2	19	17
402	2	4	4	B	2	19	17
402	3	4	4	B	2	19	17
411	1	4	4	A	25	57	32
411	2	4	4	A	25	57	32
411	3	4	4	A	25	57	32
411	4	4	4	A	25	57	32

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

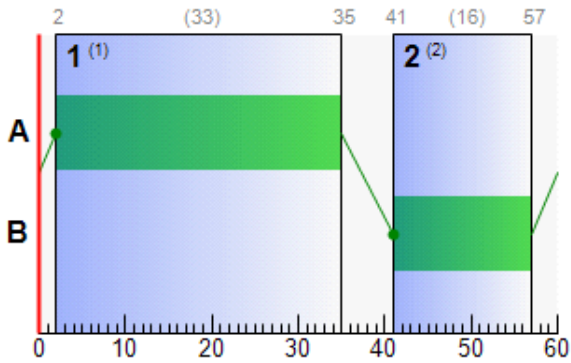
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	2	35	33	1	7
	2	✓	2	B	41	57	16	1	7

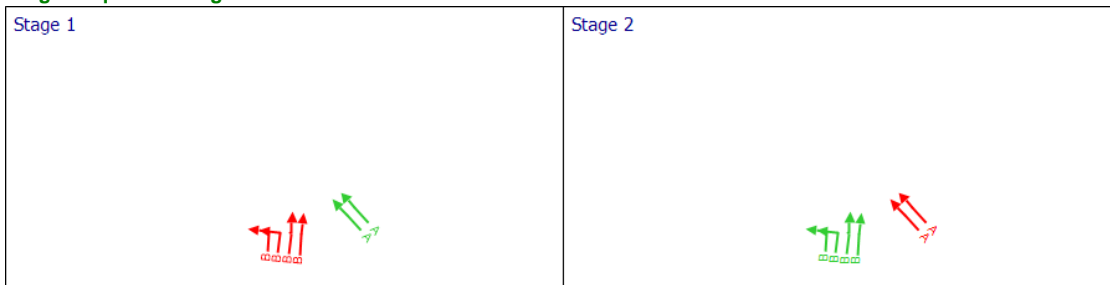
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	41	57	16
502	2	5	5	B	41	57	16
502	3	5	5	B	41	57	16
502	4	5	5	B	41	57	16
511	1	5	5	A	2	35	33
511	2	5	5	A	2	35	33

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**



## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
08:00-09:00	101	1	56	60	974	2036	60	2.54	4.96	19.18	9.78	3.01	12.79	
		2	38	137	699	2148	60	1.43	2.45	9.46	3.94	1.54	5.48	
	102	1	34	162	298	1929	26	11.91	3.27	40.83	14.00	2.38	16.38	
		2	70	29	676	2153	26	17.71	8.01	100.17	47.22	6.02	53.24	
		3	70	29	699	2222	26	18.14	8.80	109.93	50.01	6.61	56.62	
	111	1	77	17	614	1991	23	13.13	4.59	43.39	31.83	3.24	35.06	
		2	79	14	670	2126	23	14.52	8.53	76.82	38.36	4.73	43.09	
		3	35	159	288	2077	23	13.37	4.71	44.75	15.20	3.48	18.68	
	121	1	0	Unrestricted	580	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	713	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	67	35	417	1978	18	23.40	6.56	41.81	38.50	4.81	43.30	
		2	66	36	443	2108	18	23.00	6.92	42.77	40.18	5.07	45.26	
	211	1	68	32	744	1986	32	5.20	1.86	16.04	15.26	1.39	16.66	
		2	70	28	811	2094	32	11.60	7.80	65.99	37.12	5.22	42.34	
		3	16	477	176	2051	32	0.29	0.01	0.13	0.20	0.00	0.20	
	221	1	0	Unrestricted	912	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	601	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	22	302	448	2002	60	0.26	0.03	0.28	0.46	0.00	0.46	
		2	44	105	948	2159	60	0.65	0.17	1.49	2.44	0.00	2.44	
	302	1	48	88	448	2000	27	13.02	5.20	13.69	23.00	3.86	26.87	
		2	48	88	476	2125	27	13.11	5.51	14.50	24.62	4.14	28.76	
		3	48	87	472	2101	27	13.13	5.47	14.39	24.44	4.11	28.55	
	311	1	70	29	539	1928	23	12.53	6.65	27.95	26.63	3.87	30.50	
		2	73	24	619	2146	23	10.58	4.53	18.66	25.82	2.93	28.75	
	321	1	0	Unrestricted	787	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	646	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	22	314	433	1991	60	0.25	0.03	0.66	0.43	0.00	0.43	
		2	126	-28	549	2114	60	495.59	78.94	1734.26	1073.74	19.79	1093.53	
	402	1	69	30	414	1986	17	25.63	6.60	41.23	41.85	4.89	46.74	
		2	3	2650	19	1935	17	15.15	0.22	1.39	1.14	0.17	1.30	
		3	87	4	549	2109	17	87.30	18.01	112.56	189.15	13.41	202.56	
	411	1	39	133	413	1947	32	5.08	6.61	51.99	8.28	4.87	13.15	
		2	47	90	541	2073	32	6.53	9.43	73.37	13.94	6.64	20.58	
		3	22	307	253	2089	32	5.69	1.19	9.57	5.68	0.86	6.54	
		4	48	88	545	2070	32	6.46	2.70	22.80	13.90	2.18	16.07	
	421	1	0	Unrestricted	511	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	291	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	501	1	33	175	636	1946	60	0.45	0.08	0.61	1.13	0.00	1.13	
		2	40	128	863	2183	60	0.54	0.13	0.99	1.83	0.00	1.83	
	502	1	56	61	308	1940	16	22.73	4.63	27.85	27.61	3.54	31.16	
		2	56	61	328	2072	16	22.69	5.35	31.78	29.36	3.76	33.11	
		3	71	26	430	2140	16	27.49	7.86	46.19	46.62	5.57	52.19	
		4	71	27	433	2150	16	27.42	7.86	45.50	46.83	5.60	52.43	
	511	1	24	272	272	1984	33	5.82	1.54	7.82	6.24	1.16	7.40	
		2	92	-2	1094	2102	33	21.25	14.24	69.31	91.72	10.50	102.22	
	521	1	0	Unrestricted	620	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	748	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Final Prediction Table

**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUE
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			974	2036	60	8.92	56	60	20.39	2.54	24.67	4.96
	2	A264	1			699	2148	60	8.58	38	137	19.27	1.43	17.56	2.45
102	1	A264	1	1	B	298	1929	26	7.00	34	162	19.49	11.91	63.68	3.27
	2	A264	1	1	B	676 <	2153	26	0.08	70	29	25.48	17.71	71.00	8.01 +
	3	A264	1	1	B	699 <	2222	26	0.00	70	29	26.15	18.14	75.45	8.80 +
111	1	A264 Circulatory	1	1	A	614	1991	23	1.00	77	17	22.70	13.13	42.05	4.59
	2	A264 Circulatory	1	1	A	670 <	2126	23	1.00	79	14	23.91	14.52	56.29	8.53 +
	3	A264 Circulatory	1	1	A	288	2077	23	5.00	35	159	22.49	13.37	96.36	4.71
121	1	A264 Exit				580	Unrestricted	60	13.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				713	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	417	1978	18	0.00	67	35	34.23	23.40	91.96	6.56
	2	A23 Brighton Road	2	2	B	443	2108	18	0.00	66	36	34.17	23.00	91.31	6.92
211	1	A23 Circulatory	2	2	A	744	1986	32	3.00	68	32	15.73	5.20	14.94	1.86
	2	A23 Circulatory	2	2	A	811 <	2094	32	0.00	70	28	21.78	11.60	51.35	7.80 +
	3	A23 Circulatory	2	2	A	176	2051	32	6.00	16	477	10.16	0.29	0.00	0.01
221	1	A23 Exit				912	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				601	Unrestricted	60	19.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			448	2002	60	0.00	22	302	8.21	0.26	0.00	0.03
	2	M23 Southbound Off-slip	3			948	2159	60	0.00	44	105	8.62	0.65	0.00	0.17
302	1	M23 Southbound Off-slip	3	3	B	448	2000	27	0.00	48	88	44.72	13.02	68.79	5.20
	2	M23 Southbound Off-slip	3	3	B	476	2125	27	0.00	48	88	45.05	13.11	69.40	5.51
	3	M23 Southbound Off-slip	3	3	B	472	2101	27	0.03	48	87	45.28	13.13	69.46	5.47
311	1	M23 Southbound Off-slip Circulatory	3	3	A	539	1928	23	0.00	70	29	33.11	12.53	57.27	6.65
	2	M23 Southbound Off-slip Circulatory	3	3	A	619	2146	23	0.17	73	24	30.93	10.58	37.73	4.53
321	1	M23 Southbound Off-slip Exit				787	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				646	Unrestricted	60	0.00	0	Unrestricted	34.31	0.00	0.00	0.00
1	B2114 Brighton	4				433	1991	60	0.00	22	314	3.43	0.25	0.00	0.03

401		Road													
	2	B2114 Brighton Road	4			549 <	2114	60	44.41	126	-28	498.73	495.59	287.32	78.94 +
402	1	B2114 Brighton Road	4	4	B	414	1986	17	0.00	69	30	37.09	25.63	94.15	6.60
	2	B2114 Brighton Road	4	4	B	19	1935	17	17.00	3	2650	27.12	15.15	70.17	0.22
	3	B2114 Brighton Road	4	4	B	549 <	2109	17	0.01	87	4	99.80	87.30	194.64	18.01 +
411	1	B2114 Brighton Road Circulatory	4	4	A	413	1947	32	15.00	39	133	16.84	5.08	94.10	6.61
	2	B2114 Brighton Road Circulatory	4	4	A	541 <	2073	32	15.00	47	90	17.69	6.53	97.86	9.43 +
	3	B2114 Brighton Road Circulatory	4	4	A	253	2089	32	18.10	22	307	16.41	5.69	27.18	1.19
	4	B2114 Brighton Road Circulatory	4	4	A	545	2070	32	4.00	48	88	16.77	6.46	31.87	2.70
421	1	B2114 Brighton Road Exit				511	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				291	Unrestricted	60	0.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			636	1946	60	0.00	33	175	9.44	0.45	0.00	0.08
	2	M23 Northbound Off-Slip	5			863	2183	60	0.00	40	128	9.53	0.54	0.00	0.13
502	1	M23 Northbound Off-Slip	5	5	B	308	1940	16	0.00	56	61	39.36	22.73	91.79	4.63
	2	M23 Northbound Off-Slip	5	5	B	328	2072	16	0.00	56	61	39.53	22.69	91.32	5.35
	3	M23 Northbound Off-Slip	5	5	B	430	2140	16	0.07	71	26	44.51	27.49	103.38	7.86
	4	M23 Northbound Off-Slip	5	5	B	433	2150	16	0.00	71	27	44.69	27.42	103.21	7.86
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	272	1984	33	20.00	24	272	23.65	5.82	33.90	1.54
	2	M23 Northbound Off-Slip Circulatory	5	5	A	1094	2102	33	0.00	92	-2	38.84	21.25	76.50	14.24
521	1	M23 Northbound Off-Slip Exit				620	Unrestricted	60	11.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				748	Unrestricted	60	2.00	0	Unrestricted	18.12	0.00	0.00	0.00



### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	3190.95	252.03	12.66	51.60	94.06	2068.45	149.35	0.00	2217.80
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	3190.95	252.03	12.66	51.60	94.06	2068.45	149.35	0.00	2217.80

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

# A6 - LP Scenario 2 With Mit PM

## D6 - LP Scenario 2 With Mit PM\*

### Summary

#### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 1	Arm 302 - Traffic Stream 1 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 2	Arm 302 - Traffic Stream 2 is over 200m. Recommend the use of PDM to model platooning effects.
Warning	Traffic Stream Data	Arm 302 - Traffic Stream 3	Arm 302 - Traffic Stream 3 is over 200m. Recommend the use of PDM to model platooning effects.

#### Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst over PR
6	19/10/2021 15:17:29	19/10/2021 15:20:09	17:00	60	3600.52	243.09	182.33	401/2	2	4	402/1	401/2	401

#### Analysis Set Details

Name	Description	Demand set	Include in report	Locked
LP Scenario 2 With Mit PM		D6	✓	

#### Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
LP Scenario 2 With Mit PM				17:00	

### Local OD Matrix - Local Matrix: 1

#### Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

#### Normal Input Flows (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	89	699	32	309
	2	10	83	85	349	650
	3	869	86	0	668	1
	4	26	208	519	0	388
	5	355	984	0	34	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

**Locations**

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	A264	101/1, 101/2	121/1, 121/2	#0000FF
	2	A23	201/1, 201/2	221/1, 221/2	#FF0000
	3	M23 - SB OFF	301/2, 301/1	321/1, 321/2	#00FF00
	4	B2114	401/1, 401/2	421/1, 421/2	#FFFF00
	5	M23 NB Off-Slip	501/1, 501/2	521/1, 521/2	#00FFFF

**Normal Paths and Flows**

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		5	1	501/1, 502/1, 121/1	Normal	172
	6		2	3	201/1, 321/1	Normal	43
	10		2	4	201/1, 311/1, 421/1	Normal	175
	15		3	4	301/1, 302/1, 421/1	Normal	522
	16		4	5	401/1, 402/1, 521/1	Normal	194
	19		4	3	401/2, 402/3, 511/2, 111/2, 211/1, 321/1	Normal	260
	20		4	2	401/2, 402/3, 511/2, 111/2, 221/2	Normal	104
	21		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/1	Normal	0
	22		4	4	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 421/2	Normal	0
	24		2	5	201/1, 311/1, 411/1, 521/1	Normal	136
	25		3	5	301/2, 302/2, 411/1, 521/1	Normal	1
	32		2	2	201/2, 311/2, 411/4, 511/2, 111/2, 221/2	Normal	42
	33		3	3	301/2, 302/3, 411/4, 511/2, 111/2, 211/1, 321/1	Normal	0
	34		3	2	301/2, 302/3, 411/4, 511/2, 111/2, 221/2	Normal	43
	35		3	3	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 321/2	Normal	0
	37		3	2	301/2, 302/3, 411/4, 511/2, 111/1, 221/1	Normal	43
	39		3	5	301/2, 302/2, 411/2, 521/2	Normal	1
	40		4	5	401/1, 402/1, 521/2	Normal	194
	42		2	2	201/2, 311/2, 411/4, 511/2, 111/1, 221/1	Normal	42
	43		4	2	401/2, 402/3, 511/2, 111/1, 221/1	Normal	104
	52		2	4	201/1, 311/1, 421/2	Normal	175
	53		2	3	201/1, 321/2	Normal	43
	54		2	5	201/2, 311/2, 411/2, 521/2	Normal	514
	56		2	1	201/2, 311/2, 411/4, 511/2, 121/2	Normal	5
	57		2	3	201/2, 311/2, 411/4, 511/2, 111/2, 211/1, 321/1	Disabled	0
	58		2	3	201/2, 311/2, 411/4, 511/2, 111/3, 211/2, 321/2	Disabled	0
	59		4	1	401/1, 402/2, 511/1, 121/1	Normal	26
	60		3	4	301/2, 302/2, 421/2	Normal	146
	61		3	1	301/2, 302/3, 411/4, 511/2, 121/2	Normal	462
	62		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/1	Disabled	0
	63		3	4	301/2, 302/3, 411/4, 511/2, 111/3, 211/2, 311/1, 421/2	Disabled	0
	65		4	1	401/2, 402/3, 511/2, 121/2	Normal	0
	66		4	5	401/2, 402/3, 511/2, 111/3, 211/2, 311/1, 411/1, 521/1	Disabled	0
	67		4	3	401/2, 402/3, 511/2, 111/3, 211/2, 321/2	Normal	260
	68		4	5	401/2, 402/3, 511/2, 111/3, 211/3, 311/2, 411/2, 521/2	Disabled	0
	69		5	1	501/1, 502/2, 121/2	Normal	183
	70		5	2	501/2, 502/3, 111/1, 221/1	Normal	508
	71		5	3	501/2, 502/4, 111/2, 211/1, 321/1	Normal	0
	72		5	2	501/2, 502/4, 111/2, 221/2	Normal	476
	73		5	5	501/2, 502/4, 111/3, 211/2, 311/1, 411/1, 521/1	Normal	0
	74		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/1	Normal	17
75		5	4	501/2, 502/4, 111/3, 211/2, 311/1, 421/2	Normal	17	
76		5	3	501/2, 502/4, 111/3, 211/2, 321/2	Normal	0	
77		5	5	501/2, 502/4, 111/3, 211/3, 311/2, 411/2, 521/2	Normal	0	
80		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/4, 511/2, 121/2	Disabled	0	
81		1	2	101/1, 102/1, 221/1	Normal	89	

82		1	2	101/1, 102/2, 221/2	Normal	0
83		1	3	101/1, 102/2, 211/1, 321/1	Normal	512
84		1	5	101/2, 102/3, 211/2, 311/1, 411/1, 521/1	Normal	155
85		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	16
86		1	4	101/2, 102/3, 211/2, 311/1, 421/2	Normal	16
87		1	3	101/2, 102/3, 211/2, 321/2	Normal	187
88		1	5	101/2, 102/3, 211/3, 311/2, 411/2, 521/2	Normal	155
91		1	1	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 121/2	Normal	0
92		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/1, 221/1	Disabled	0
93		1	2	101/2, 102/3, 211/3, 311/2, 411/4, 511/2, 111/2, 221/2	Disabled	0
94		1	1	101/2, 102/3, 211/3, 311/2, 411/3, 511/1, 121/1	Normal	0
95		2	1	201/2, 311/2, 411/3, 511/1, 121/1	Normal	5
96		3	1	301/2, 302/2, 411/3, 511/1, 121/1	Normal	407
97		5	1	501/2, 502/4, 111/3, 211/3, 311/2, 411/3, 511/1, 121/1	Disabled	0

## Signal Timings

Network Default: 60s cycle time; 60 steps

### Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	6	

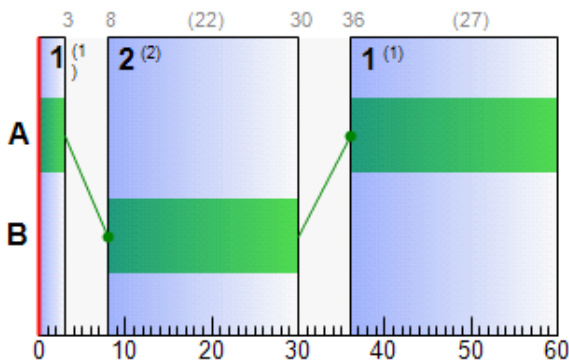
### Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	36	3	27	1	7
	2	✓	2	B	8	30	22	1	7

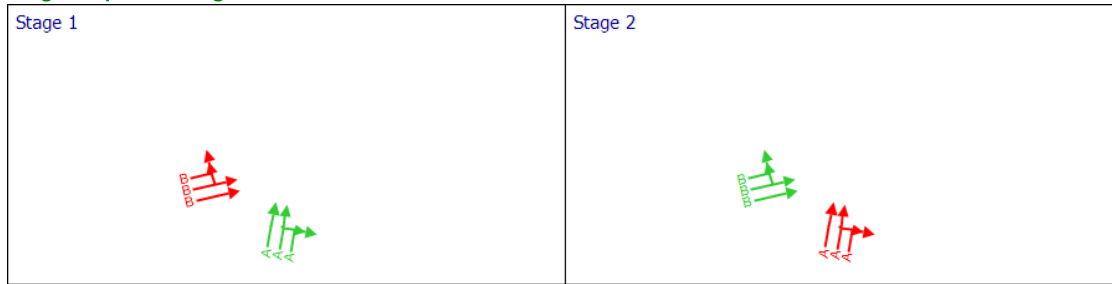
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	8	30	22
102	2	1	1	B	8	30	22
102	3	1	1	B	8	30	22
111	1	1	1	A	36	3	27
111	2	1	1	A	36	3	27
111	3	1	1	A	36	3	27

### Phase Timings Diagram for Controller Stream 1



**Stage Sequence Diagram for Controller Stream 1**



**Intergreen Matrix for Controller Stream 2**

		To	
		A	B
From	A		5
	B	5	

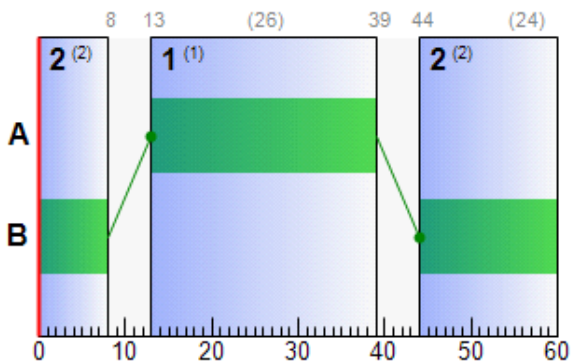
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	13	39	26	1	7
	2	✓	2	B	44	8	24	1	7

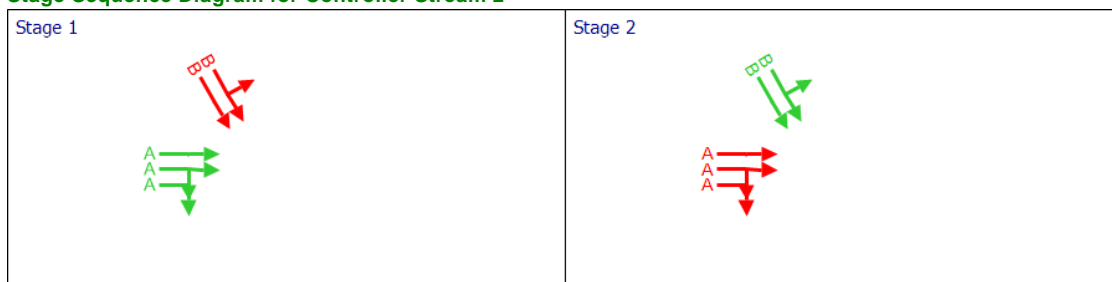
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
201	1	2	2	B	44	8	24
201	2	2	2	B	44	8	24
211	1	2	2	A	13	39	26
211	2	2	2	A	13	39	26
211	3	2	2	A	13	39	26

**Phase Timings Diagram for Controller Stream 2**



**Stage Sequence Diagram for Controller Stream 2**



**Intergreen Matrix for Controller Stream 3**

		To	
		A	B
From	A		5
	B	5	

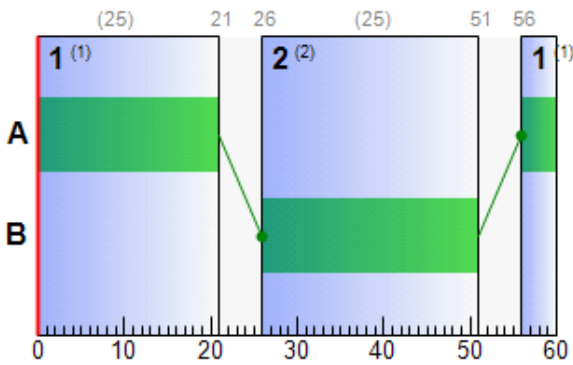
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	56	21	25	1	7
	2	✓	2	B	26	51	25	1	7

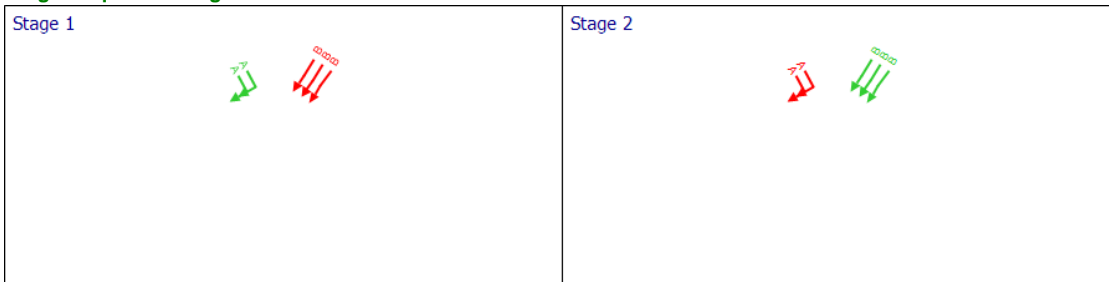
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	26	51	25
302	2	3	3	B	26	51	25
302	3	3	3	B	26	51	25
311	1	3	3	A	56	21	25
311	2	3	3	A	56	21	25

**Phase Timings Diagram for Controller Stream 3**



**Stage Sequence Diagram for Controller Stream 3**



**Intergreen Matrix for Controller Stream 4**

		To	
		A	B
From	A		5
	B	6	

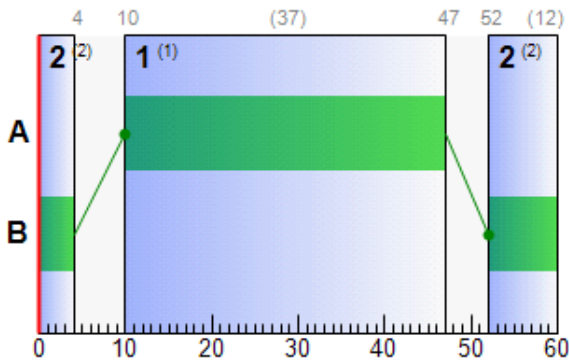
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	10	47	37	1	7
	2	✓	2	B	52	4	12	1	7

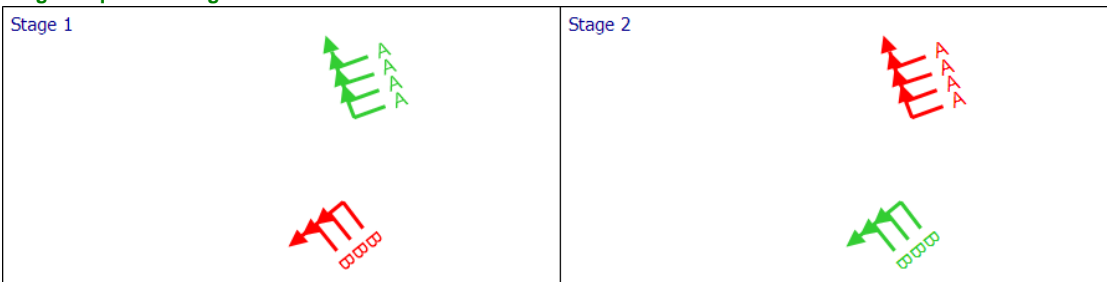
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	52	4	12
402	2	4	4	B	52	4	12
402	3	4	4	B	52	4	12
411	1	4	4	A	10	47	37
411	2	4	4	A	10	47	37
411	3	4	4	A	10	47	37
411	4	4	4	A	10	47	37

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Intergreen Matrix for Controller Stream 5**

		To	
		A	B
From	A		6
	B	5	

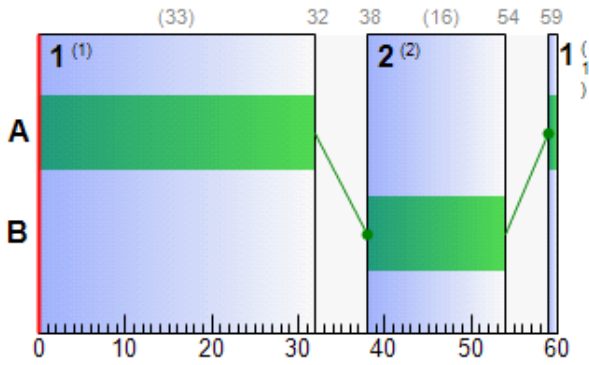
**Resultant Stages**

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
5	1	✓	1	A	59	32	33	1	7
	2	✓	2	B	38	54	16	1	7

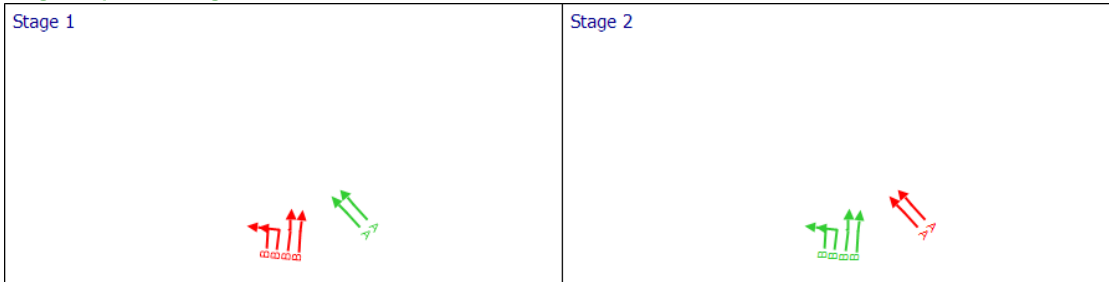
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
502	1	5	5	B	38	54	16
502	2	5	5	B	38	54	16
502	3	5	5	B	38	54	16
502	4	5	5	B	38	54	16
511	1	5	5	A	59	32	33
511	2	5	5	A	59	32	33

**Phase Timings Diagram for Controller Stream 5**



**Stage Sequence Diagram for Controller Stream 5**





## Traffic Stream Results

### Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)	
17:00-18:00	101	1	30	201	601	2036	60	0.39	0.23	0.89	0.92	0.07	0.99	
		2	25	265	529	2148	60	0.27	0.04	0.16	0.57	0.00	0.57	
	102	1	12	648	89	1929	22	12.32	1.06	13.30	4.33	0.69	5.02	
		2	62	45	512	2153	22	19.47	7.48	93.48	39.33	5.62	44.95	
		3	62	45	529	2222	22	19.59	8.51	106.20	40.87	6.01	46.88	
	111	1	70	29	650	1991	27	7.95	3.02	28.53	20.38	2.14	22.52	
		2	77	17	761	2117	27	11.91	6.01	54.14	35.74	4.50	40.23	
		3	18	394	177	2077	27	10.08	2.40	22.79	7.02	1.80	8.83	
	121	1	0	Unrestricted	610	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	650	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	69	30	572	1980	24	19.24	8.56	54.55	43.40	6.17	49.57	
		2	69	30	608	2108	24	18.91	9.05	55.89	45.35	6.52	51.86	
	211	1	73	23	655	1986	26	11.28	3.51	30.18	29.13	2.62	31.75	
		2	59	54	551	2089	26	10.86	3.46	29.26	23.58	2.60	26.18	
		3	17	436	155	2051	26	0.39	0.02	0.15	0.24	0.00	0.24	
	221	1	0	Unrestricted	739	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	618	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	301	1	26	245	522	2002	60	0.32	0.05	0.40	0.65	0.00	0.65	
		2	51	76	1101	2159	60	0.87	0.26	2.29	3.76	0.00	3.76	
	302	1	60	49	522	2000	25	16.56	6.87	18.09	34.09	5.16	39.24	
		2	60	50	553	2125	25	16.64	7.60	20.01	36.30	5.46	41.76	
		3	60	49	548	2101	25	16.67	7.18	18.90	36.04	5.40	41.44	
	311	1	85	6	707	1928	25	18.86	8.04	33.77	52.60	5.24	57.84	
		2	82	9	763	2146	25	14.66	5.64	23.26	44.12	4.26	48.37	
	321	1	0	Unrestricted	698	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	373	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	21	333	414	1991	60	0.24	0.03	0.59	0.39	0.00	0.39	
		2	182	-51	399	2114	60	1513.44	170.50	3745.87	2383.52	21.29	2404.82	
	402	1	90	0	388	1986	12	55.07	9.42	58.85	84.28	6.76	91.04	
		2	6	1351	26	1935	12	19.08	0.34	2.13	1.96	0.26	2.21	
		3	87	3	399	2109	12	132.18	18.07	112.93	208.16	13.30	221.46	
	411	1	24	281	291	1947	37	0.72	2.20	17.30	0.83	0.44	1.27	
		2	51	77	669	2073	37	2.55	8.33	64.80	6.72	3.94	10.66	
		3	31	187	412	2089	37	6.88	2.36	18.97	11.18	1.78	12.95	
		4	49	85	637	2070	37	6.96	3.68	31.05	17.48	2.58	20.07	
	421	1	0	Unrestricted	730	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	354	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	501	1	18	393	355	1946	60	0.21	0.02	0.16	0.29	0.00	0.29	
		2	47	93	1018	2183	60	0.72	0.20	1.56	2.89	0.00	2.89	
	502	1	31	188	172	1940	16	18.53	2.22	13.35	12.57	1.74	14.31	
		2	31	189	183	2072	16	18.52	2.36	14.01	13.37	1.85	15.22	
		3	84	7	508	2140	16	36.35	10.29	60.41	72.83	7.75	80.58	
		4	84	8	510	2150	16	35.85	10.25	59.36	72.13	7.73	79.86	
	511	1	39	131	438	1984	33	3.86	4.69	23.87	6.66	3.53	10.19	
		2	87	3	1036	2102	33	14.23	16.79	81.75	58.17	11.45	69.62	
	521	1	0	Unrestricted	485	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	863	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Final Prediction Table

**Traffic Stream Results**

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QU
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
101	1	A264	1			601	2036	60	0.81	30	201	18.23	0.39	0.97	0.23
	2	A264	1			529	2148	60	0.00	25	265	18.12	0.27	0.00	0.04
102	1	A264	1	1	B	89	1929	22	1.00	12	648	19.90	12.32	62.22	1.06
	2	A264	1	1	B	512	2153	22	0.08	62	45	27.24	19.47	87.55	7.48
	3	A264	1	1	B	529 <	2222	22	0.00	62	45	27.60	19.59	90.65	8.51 +
111	1	A264 Circulatory	1	1	A	650	1991	27	5.00	70	29	17.51	7.95	26.29	3.02
	2	A264 Circulatory	1	1	A	761 <	2117	27	2.00	77	17	21.30	11.91	47.16	6.01 +
	3	A264 Circulatory	1	1	A	177	2077	27	6.00	18	394	19.20	10.08	81.44	2.40
121	1	A264 Exit				610	Unrestricted	60	5.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A264 Exit				650	Unrestricted	60	0.00	0	Unrestricted	35.59	0.00	0.00	0.00
201	1	A23 Brighton Road	2	2	B	572	1980	24	0.00	69	30	30.06	19.24	86.07	8.56
	2	A23 Brighton Road	2	2	B	608	2108	24	0.00	69	30	30.08	18.91	85.47	9.05
211	1	A23 Circulatory	2	2	A	655	1986	26	0.00	73	23	21.81	11.28	31.95	3.51
	2	A23 Circulatory	2	2	A	551	2089	26	0.00	59	54	21.04	10.86	37.64	3.46
	3	A23 Circulatory	2	2	A	155	2051	26	4.00	17	436	10.26	0.39	0.00	0.02
221	1	A23 Exit				739	Unrestricted	60	4.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	A23 Exit				618	Unrestricted	60	13.00	0	Unrestricted	19.99	0.00	0.00	0.00
301	1	M23 Southbound Off-slip	3			522	2002	60	0.00	26	245	8.27	0.32	0.00	0.05
	2	M23 Southbound Off-slip	3			1101	2159	60	0.00	51	76	8.84	0.87	0.00	0.26
302	1	M23 Southbound Off-slip	3	3	B	522	2000	25	0.00	60	49	48.26	16.56	78.77	6.87
	2	M23 Southbound Off-slip	3	3	B	553	2125	25	0.00	60	50	48.58	16.64	78.69	7.60
	3	M23 Southbound Off-slip	3	3	B	548	2101	25	0.03	60	49	48.82	16.67	78.57	7.18
311	1	M23 Southbound Off-slip Circulatory	3	3	A	707	1928	25	0.00	85	6	39.44	18.86	59.12	8.04
	2	M23 Southbound Off-slip Circulatory	3	3	A	763	2146	25	1.14	82	9	35.01	14.66	44.49	5.64
321	1	M23 Southbound Off-slip Exit				698	Unrestricted	60	8.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Southbound Off-slip Exit				373	Unrestricted	60	0.00	0	Unrestricted	34.31	0.00	0.00	0.00
1	B2114 Brighton	4				414	1991	60	0.00	21	333	3.41	0.24	0.00	0.03

401		Road													
	2	B2114 Brighton Road	4			399 <	2114	60	48.67	182	-51	1516.58	1513.44	425.35	170.50 +
402	1	B2114 Brighton Road	4	4	B	388	1986	12	0.00	90	0	66.53	55.07	138.89	9.42
	2	B2114 Brighton Road	4	4	B	26	1935	12	12.00	6	1351	31.05	19.08	78.81	0.34
	3	B2114 Brighton Road	4	4	B	399 <	2109	12	0.01	87	3	144.67	132.18	265.69	18.07 +
411	1	B2114 Brighton Road Circulatory	4	4	A	291	1947	37	15.00	24	281	12.48	0.72	12.17	2.20
	2	B2114 Brighton Road Circulatory	4	4	A	669	2073	37	15.00	51	77	13.70	2.55	46.99	8.33
	3	B2114 Brighton Road Circulatory	4	4	A	412	2089	37	21.20	31	187	17.60	6.88	34.39	2.36
	4	B2114 Brighton Road Circulatory	4	4	A	637	2070	37	4.00	49	85	17.26	6.96	32.31	3.68
421	1	B2114 Brighton Road Exit				730	Unrestricted	60	0.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	B2114 Brighton Road Exit				354	Unrestricted	60	0.00	0	Unrestricted	24.90	0.00	0.00	0.00
501	1	M23 Northbound Off-Slip	5			355	1946	60	0.00	18	393	9.20	0.21	0.00	0.02
	2	M23 Northbound Off-Slip	5			1018	2183	60	0.00	47	93	9.71	0.72	0.00	0.20
502	1	M23 Northbound Off-Slip	5	5	B	172	1940	16	0.00	31	188	35.17	18.53	80.80	2.22
	2	M23 Northbound Off-Slip	5	5	B	183	2072	16	0.00	31	189	35.36	18.52	80.63	2.36
	3	M23 Northbound Off-Slip	5	5	B	508 <	2140	16	0.07	84	7	53.37	36.35	121.67	10.29 +
	4	M23 Northbound Off-Slip	5	5	B	510 <	2150	16	0.00	84	8	53.12	35.85	120.90	10.25 +
511	1	M23 Northbound Off-Slip Circulatory	5	5	A	438	1984	33	19.00	39	131	21.68	3.86	64.25	4.69
	2	M23 Northbound Off-Slip Circulatory	5	5	A	1036	2102	33	4.00	87	3	31.82	14.23	88.15	16.79
521	1	M23 Northbound Off-Slip Exit				485	Unrestricted	60	14.00	0	Unrestricted	12.00	0.00	0.00	0.00
	2	M23 Northbound Off-Slip Exit				863	Unrestricted	60	3.00	0	Unrestricted	18.12	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
<b>Normal traffic</b>	3114.15	346.89	8.98	52.00	191.09	3451.85	148.67	0.00	3600.52
<b>Bus</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Tram</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Pedestrians</b>									
<b>TOTAL</b>	3114.15	346.89	8.98	52.00	191.09	3451.85	148.67	0.00	3600.52

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

