

## B.SIDRA OUTPUTS

B

# USER REPORT FOR SITE



**Project: 201208-V198070-Sunbury Growth ICP Modelling**

**Template: GTA Appendix**



**Site: 103 [LR-IN-04-AM Peak - 75% (Option 5) - PSP Interim Design ]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

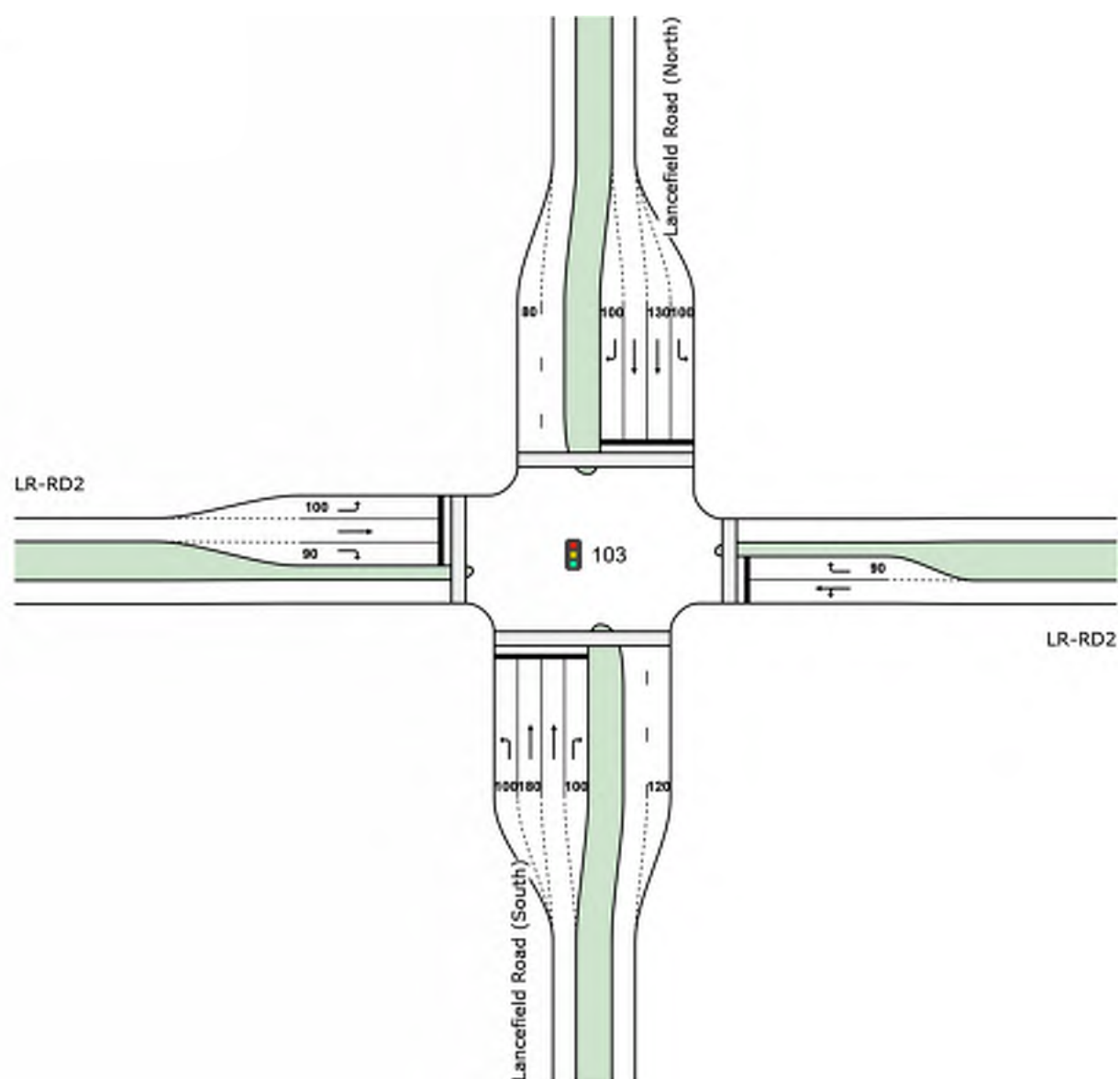
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D1\***

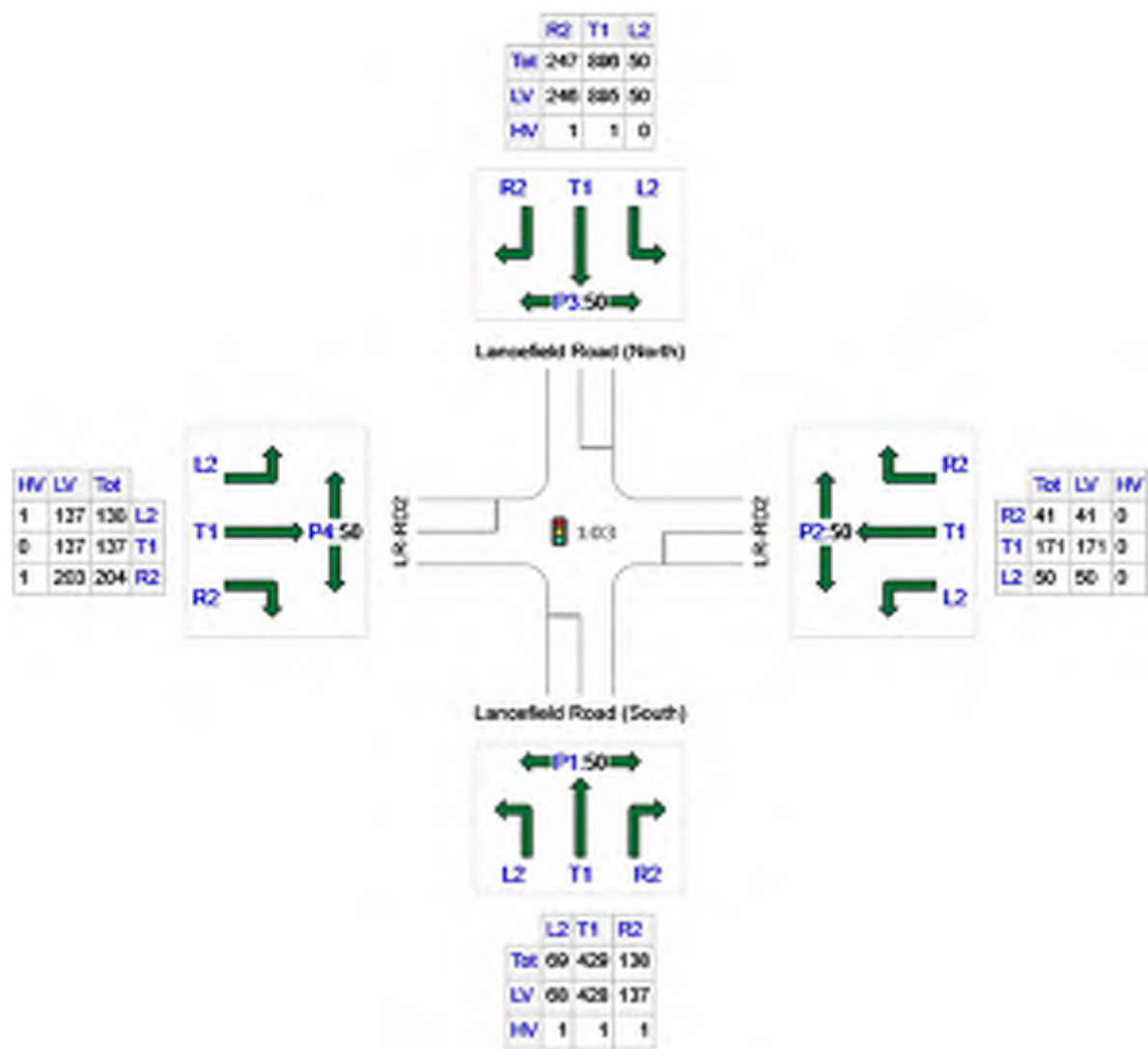
(\* Variable Phase)

## Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	636	633	3
E: LR-RD2	262	262	0
N: Lancefield Road (North)	1193	1191	2
W: LR-RD2	479	477	2
Total	2570	2563	7

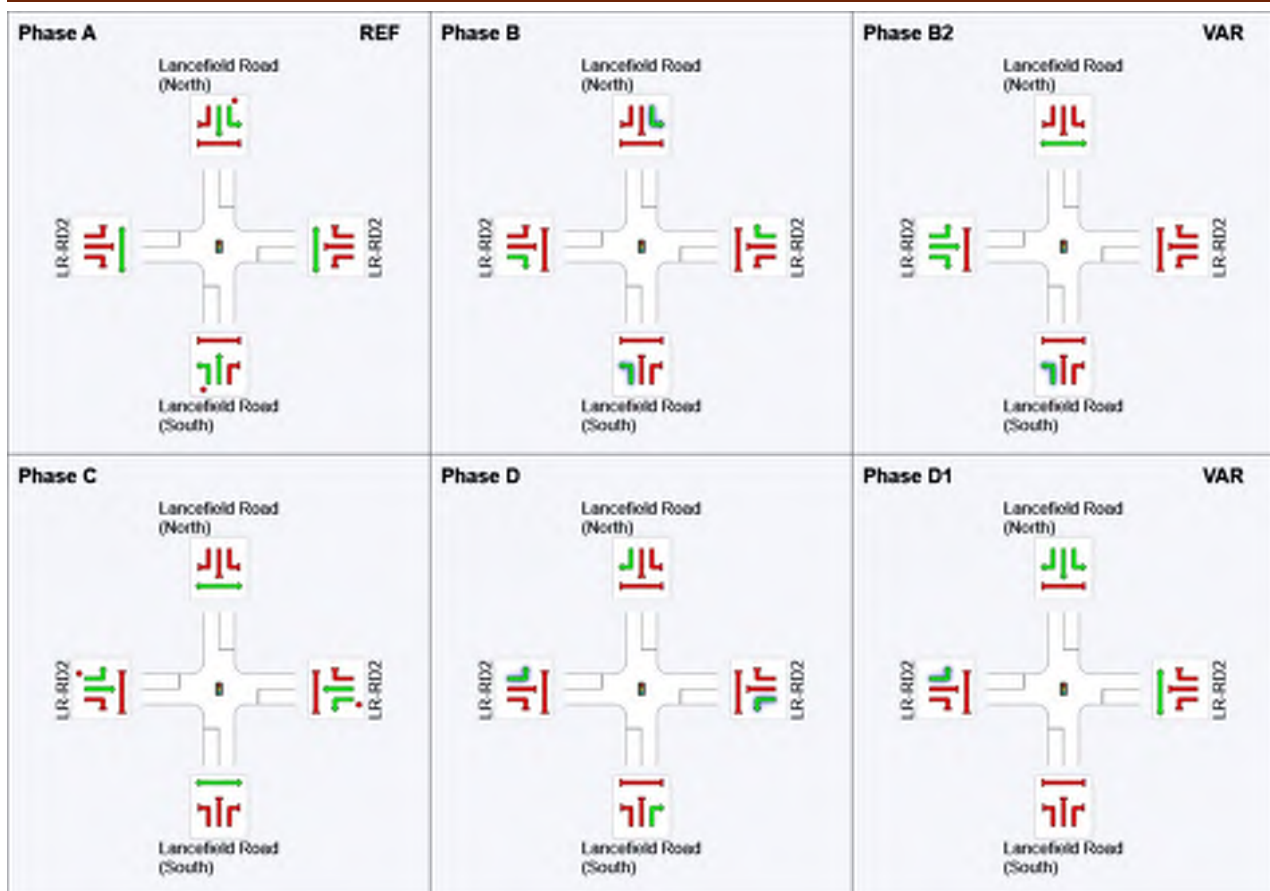
## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	0	26	39	44	67	81
Green Time (sec)	20	7	***	17	8	3
Phase Time (sec)	26	13	5	23	14	9
Phase Split	29%	14%	6%	26%	16%	10%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

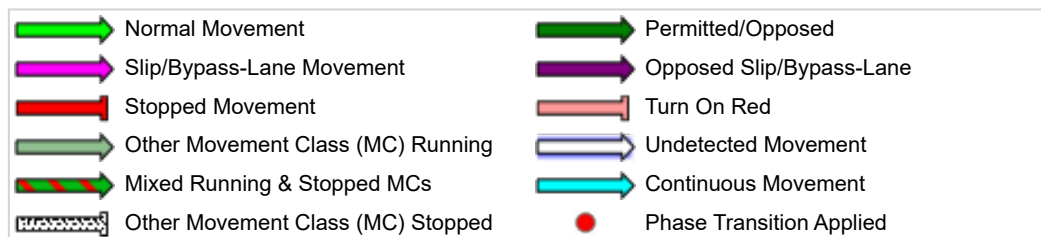
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	69	1.4	654	0.106	100	22.8	LOS C	1.8	13.1	Short	100	0.0	NA
Lane 2	135	0.2	433	0.312	46 <sup>6</sup>	32.0	LOS C	5.0	35.3	Short	180	0.0	NA
Lane 3	294	0.2	433	0.679	100	35.7	LOS D	12.2	85.7	Full	500	0.0	0.0
Lane 4	138	0.7	164	0.840	100	56.9	LOS E	6.8	48.1	Short	100	0.0	NA
Approach	636	0.5		0.840		38.1	LOS D	12.2	85.7				
East: LR-RD2													
Lane 1	221	0.0	376	0.588	100	34.0	LOS C	8.5	59.8	Full	500	0.0	0.0
Lane 2	41	0.0	144	0.284	100	50.3	LOS D	1.8	12.6	Short	90	0.0	NA
Approach	262	0.0		0.588		36.5	LOS D	8.5	59.8				
North: Lancefield Road (North)													
Lane 1	50	0.0	743	0.067	100	19.9	LOS B	1.2	8.4	Short	100	0.0	NA
Lane 2	355	0.1	628	0.566	66 <sup>6</sup>	27.4	LOS C	13.0	91.3	Short	130	0.0	NA
Lane 3	541	0.1	628	0.862	100	39.0	LOS D	25.8	181.0	Full	500	0.0	0.0
Lane 4	247	0.4	350	0.706	100	44.7	LOS D	10.7	75.4	Short	100	0.0	NA
Approach	1193	0.2		0.862		35.9	LOS D	25.8	181.0				
West: LR-RD2													
Lane 1	138	0.7	801	0.172	100	19.1	LOS B	3.3	23.4	Short	100	0.0	NA
Lane 2	137	0.0	477	0.287	100	30.1	LOS C	4.9	34.6	Full	500	0.0	0.0
Lane 3	204	0.5	247	0.827	100	53.4	LOS D	9.9	69.3	Short	90	0.0	NA
Approach	479	0.4		0.827		36.8	LOS D	9.9	69.3				
Intersection	2570	0.3		0.862		36.7	LOS D	25.8	181.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 103 [LR-IN-04-AM Peak - 75% (Option 2a) - PSP Interim Design]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

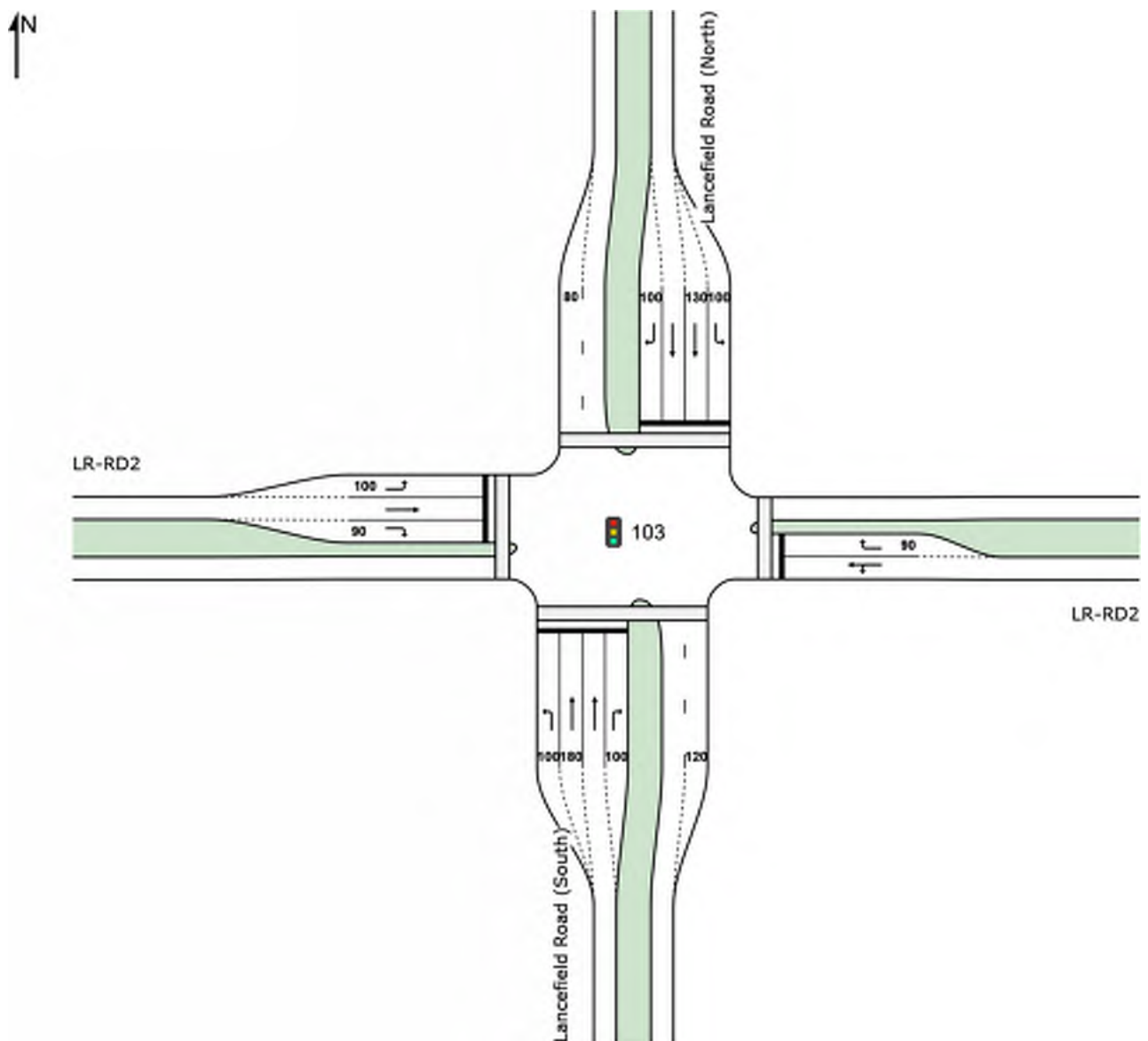
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D1\***

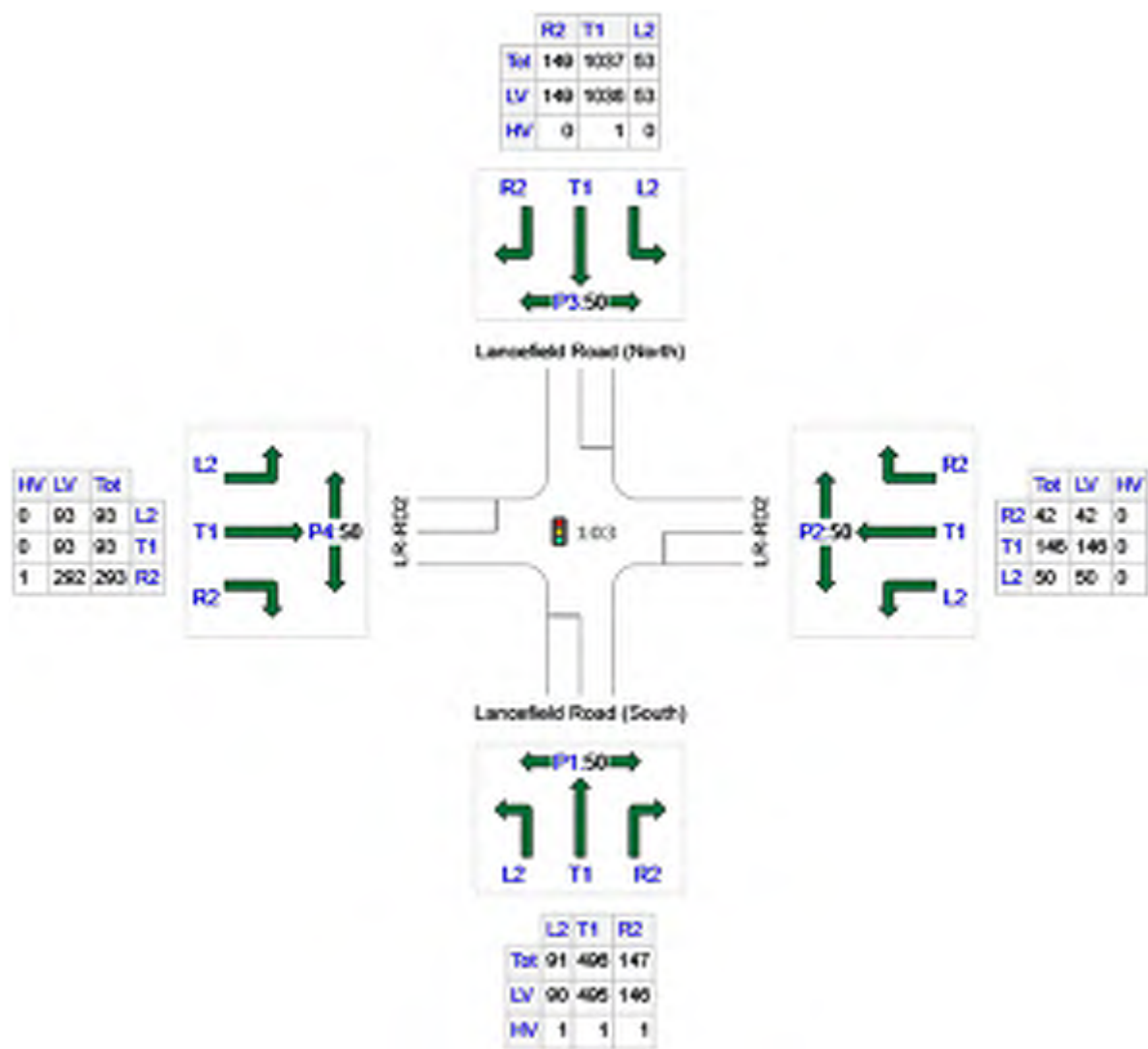
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	734	731	3
E: LR-RD2	238	238	0
N: Lancefield Road (North)	1239	1238	1
W: LR-RD2	479	478	1
Total	2690	2685	5

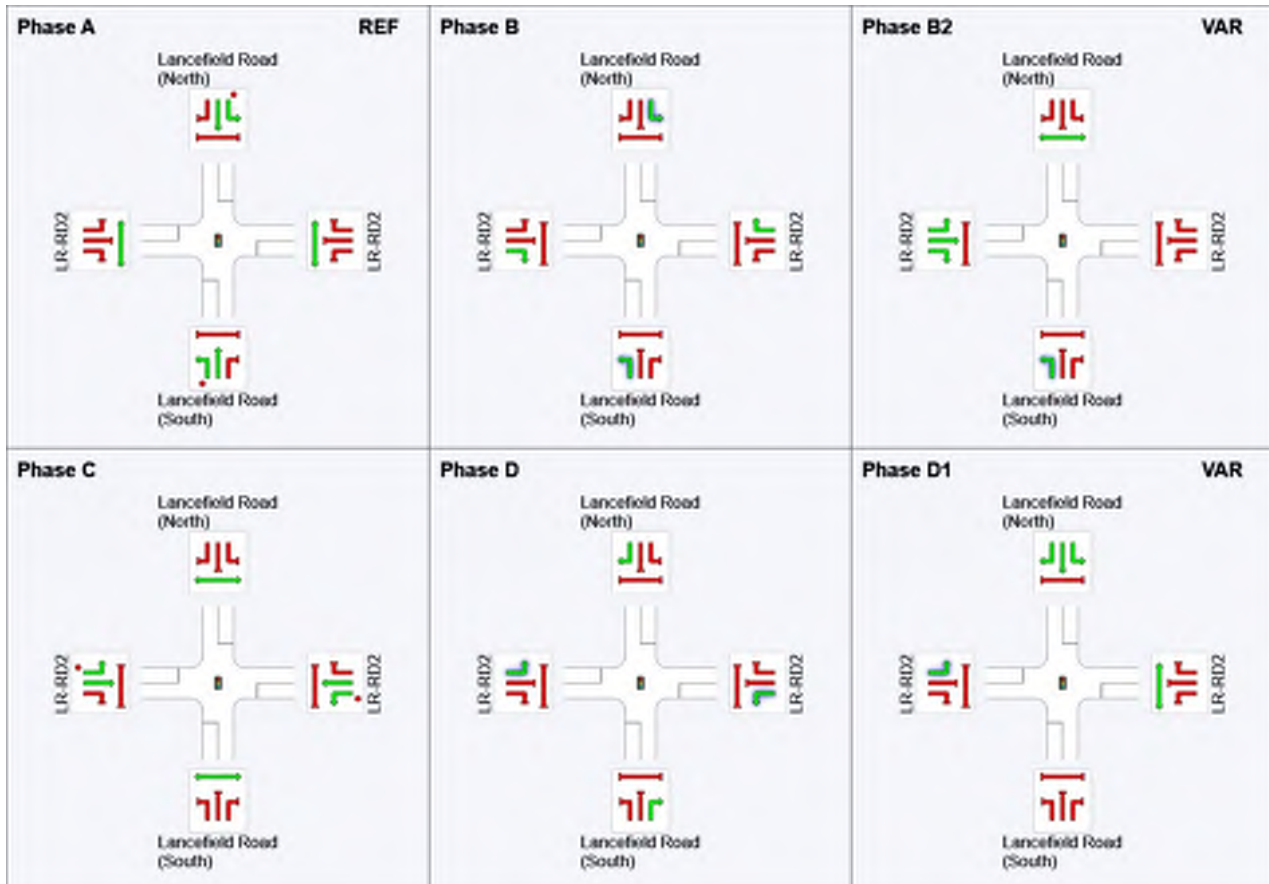


## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	0	48	68	77	104	122
Green Time (sec)	42	14	3	21	12	2
Phase Time (sec)	48	20	9	27	18	8
Phase Split	37%	15%	7%	21%	14%	6%

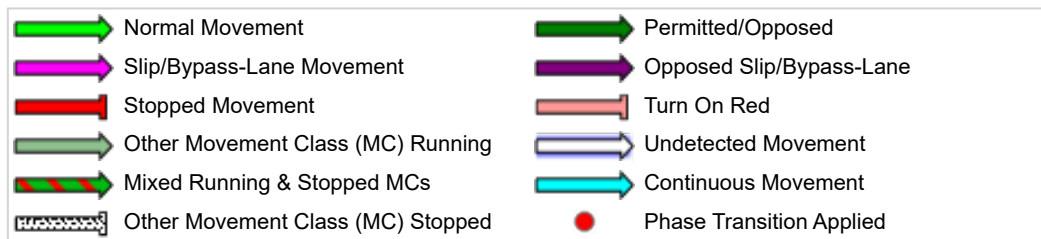
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	91	1.1	921	0.099	100	20.7	LOS C	2.7	19.2	Short	100	0.0	NA
Lane 2	156	0.2	629	0.248	46 <sup>6</sup>	34.5	LOS C	7.2	50.6	Short	180	0.0	NA
Lane 3	340	0.2	629	0.540	100	38.6	LOS D	17.6	123.3	Full	500	0.0	0.0
Lane 4	147	0.7	171	0.862	100	78.1	LOS E	10.3	72.7	Short	100	0.0	NA
Approach	734	0.4		0.862		43.4	LOS D	17.6	123.3				
East: LR-RD2													
Lane 1	196	0.0	321	0.612	100	51.1	LOS D	11.1	77.9	Full	500	0.0	0.0
Lane 2	42	0.0	200	0.210	100	63.9	LOS E	2.5	17.4	Short	90	0.0	NA
Approach	238	0.0		0.612		53.4	LOS D	11.1	77.9				
North: Lancefield Road (North)													
Lane 1	53	0.0	914	0.058	100	20.7	LOS C	1.6	11.0	Short	100	0.0	NA
Lane 2	437	0.1	750	0.583	66 <sup>6</sup>	33.8	LOS C	21.8	152.5	Short	130	0.0	NA
Lane 3	600	0.1	676 <sup>1</sup>	0.888	100	49.4	LOS D	39.0	272.9	Full	500	0.0	0.0
Lane 4	149	0.0	286	0.521	100	61.1	LOS E	8.9	62.0	Short	100	0.0	NA
Approach	1239	0.1		0.888		44.1	LOS D	39.0	272.9				
West: LR-RD2													
Lane 1	93	0.0	714	0.130	100	29.5	LOS C	3.5	24.7	Short	100	0.0	NA
Lane 2	93	0.0	450	0.207	100	43.3	LOS D	4.8	33.3	Full	500	0.0	0.0
Lane 3	293	0.3	328	0.894	100	75.1	LOS E	21.0	147.6	Short	90	0.0	NA
Approach	479	0.2		0.894		60.1	LOS E	21.0	147.6				
Intersection	2690	0.2		0.894		47.6	LOS D	39.0	272.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 103 [LR-IN-04-AM Peak - 75% (Option 2a) - GTA Design]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

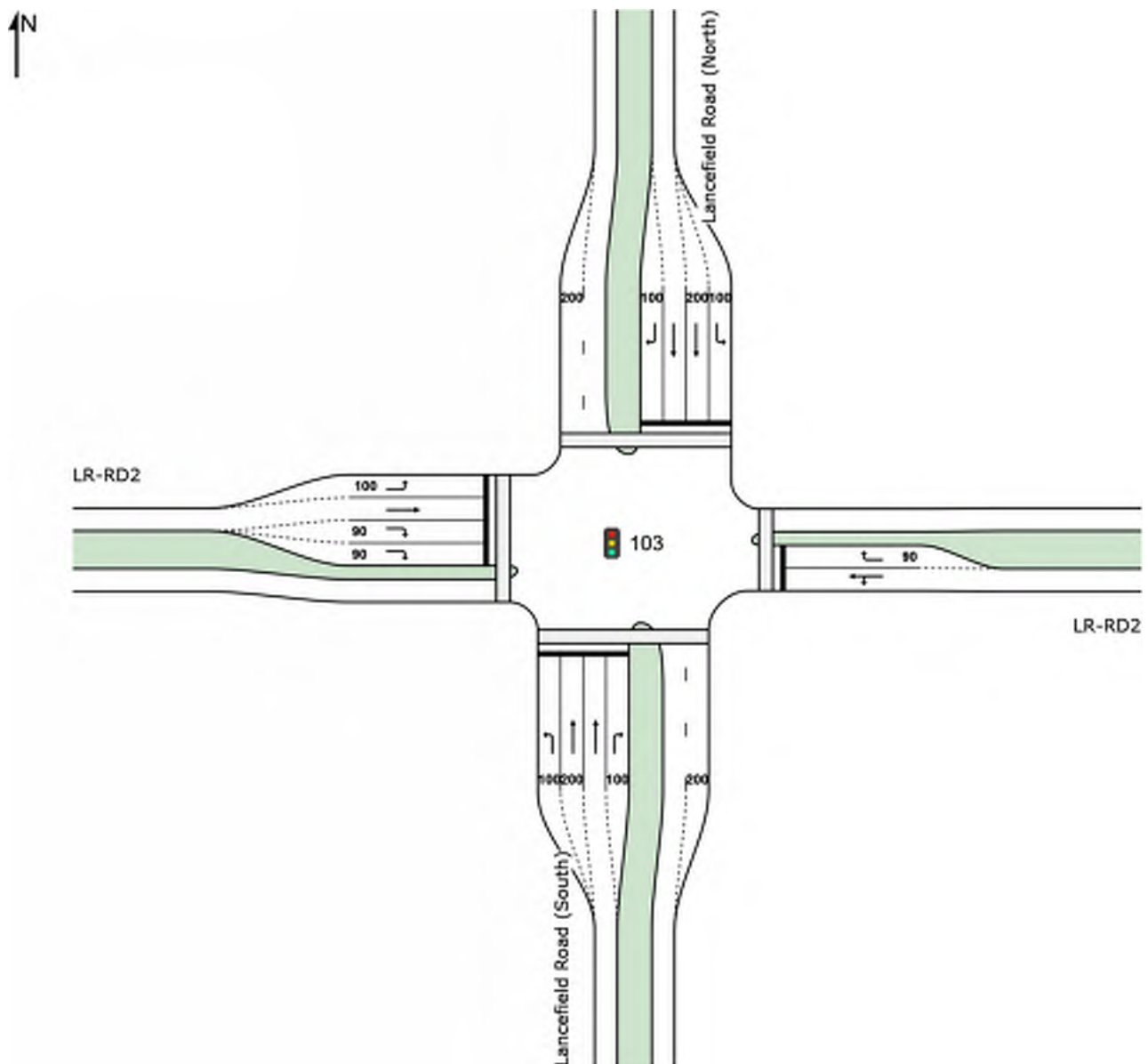
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D**

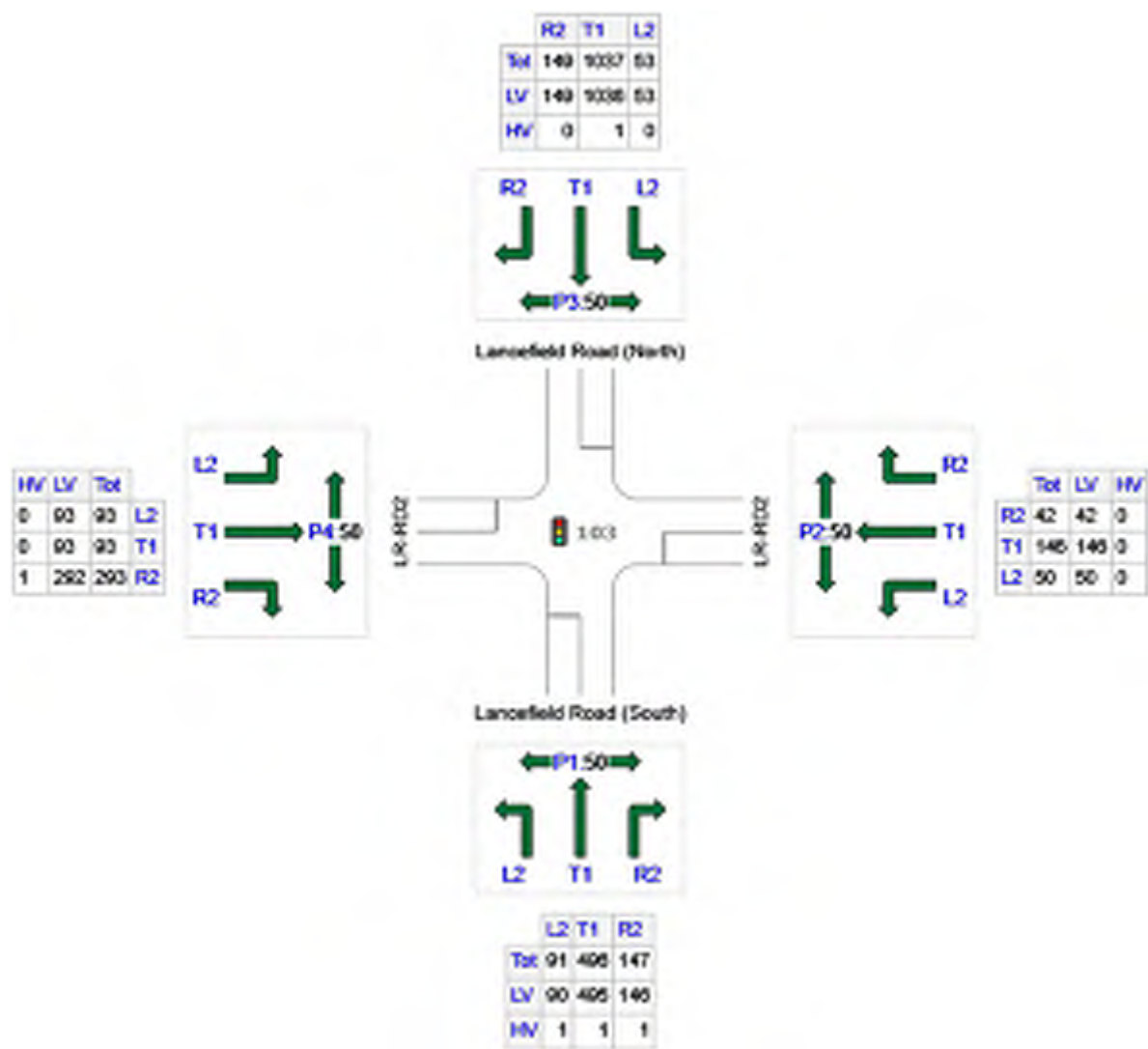
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



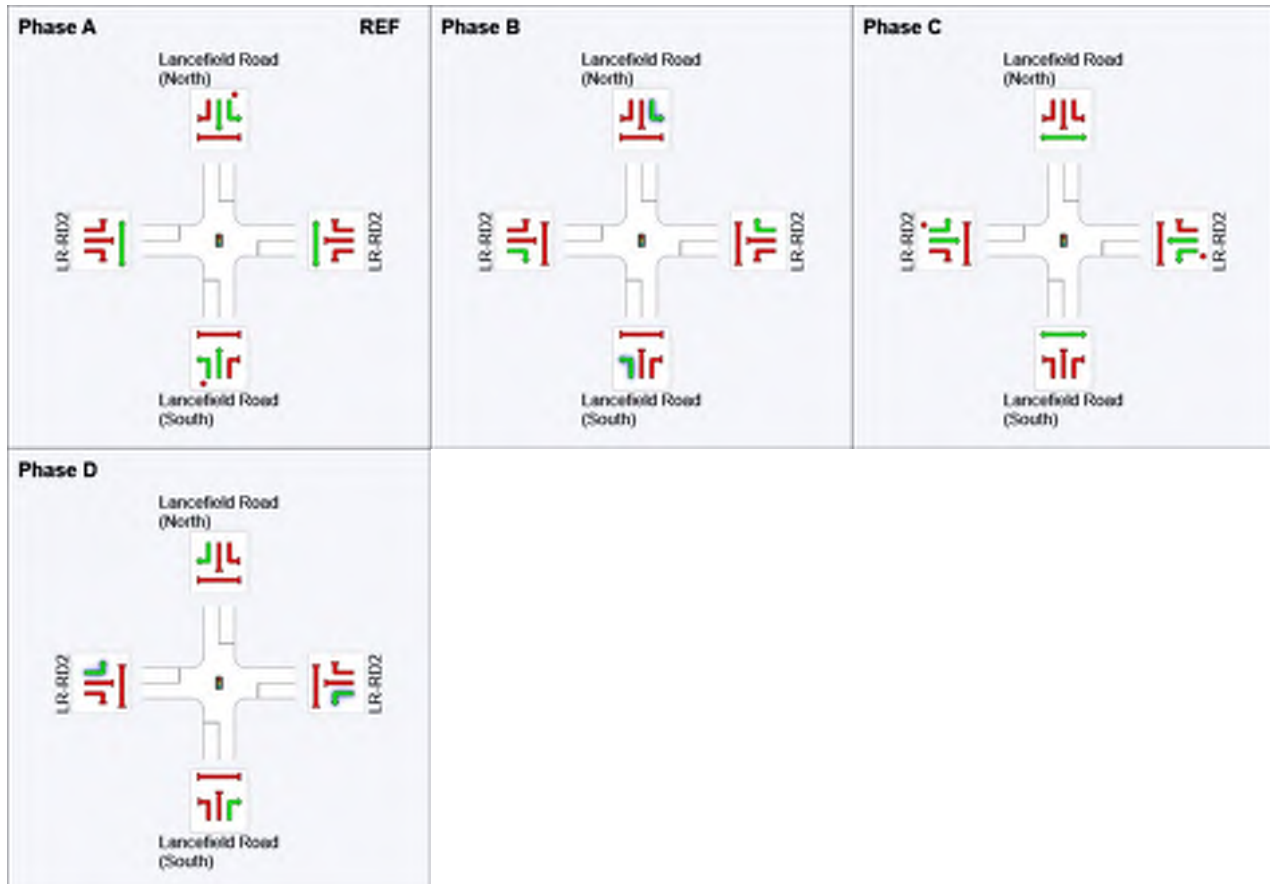
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	734	731	3
E: LR-RD2	238	238	0
N: Lancefield Road (North)	1239	1238	1
W: LR-RD2	479	478	1
Total	2690	2685	5

## Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	37	52	75
Green Time (sec)	31	9	17	9
Phase Time (sec)	37	15	23	15
Phase Split	41%	17%	26%	17%

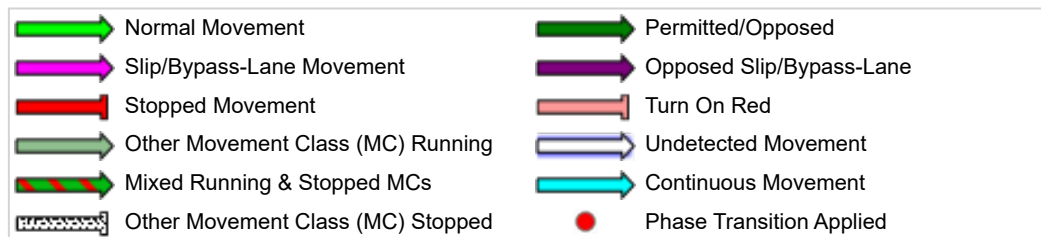
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	91	1.1	819	0.111	100	17.9	LOS B	2.1	14.5	Short	100	0.0	NA
Lane 2	248	0.2	671	0.370	100	23.9	LOS C	8.2	57.5	Short	200	0.0	NA
Lane 3	248	0.2	671	0.370	100	23.9	LOS C	8.2	57.5	Full	500	0.0	0.0
Lane 4	147	0.7	185	0.795	100	54.1	LOS D	7.1	49.7	Short	100	0.0	NA
Approach	734	0.4		0.795		29.2	LOS C	8.2	57.5				
East: LR-RD2													
Lane 1	196	0.0	377	0.519	100	32.2	LOS C	7.3	51.1	Full	500	0.0	0.0
Lane 2	42	0.0	186	0.226	100	47.6	LOS D	1.8	12.4	Short	90	0.0	NA
Approach	238	0.0		0.519		34.9	LOS C	7.3	51.1				
North: Lancefield Road (North)													
Lane 1	53	0.0	825	0.064	100	17.6	LOS B	1.2	8.2	Short	100	0.0	NA
Lane 2	519	0.1	671	0.772	100	30.6	LOS C	21.4	150.1	Short	200	0.0	NA
Lane 3	519	0.1	671	0.772	100	30.6	LOS C	21.4	150.1	Full	500	0.0	0.0
Lane 4	149	0.0	186	0.802	100	54.4	LOS D	7.2	50.2	Short	100	0.0	NA
Approach	1239	0.1		0.802		32.9	LOS C	21.4	150.1				
West: LR-RD2													
Lane 1	93	0.0	537	0.173	100	27.4	LOS C	2.8	19.8	Short	100	0.0	NA
Lane 2	93	0.0	368	0.252	100	34.1	LOS C	3.5	24.8	Full	500	0.0	0.0
Lane 3	147	0.3	185	0.791	100	54.0	LOS D	7.0	49.2	Short	90	0.0	NA
Lane 4	147	0.3	185	0.791	100	54.0	LOS D	7.0	49.2	Short	90	0.0	NA
Approach	479	0.2		0.791		45.0	LOS D	7.0	49.2				
Intersection	2690	0.2		0.802		34.2	LOS C	21.4	150.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 103 [LR-IN-04-PM Peak - 75% (Option 5) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

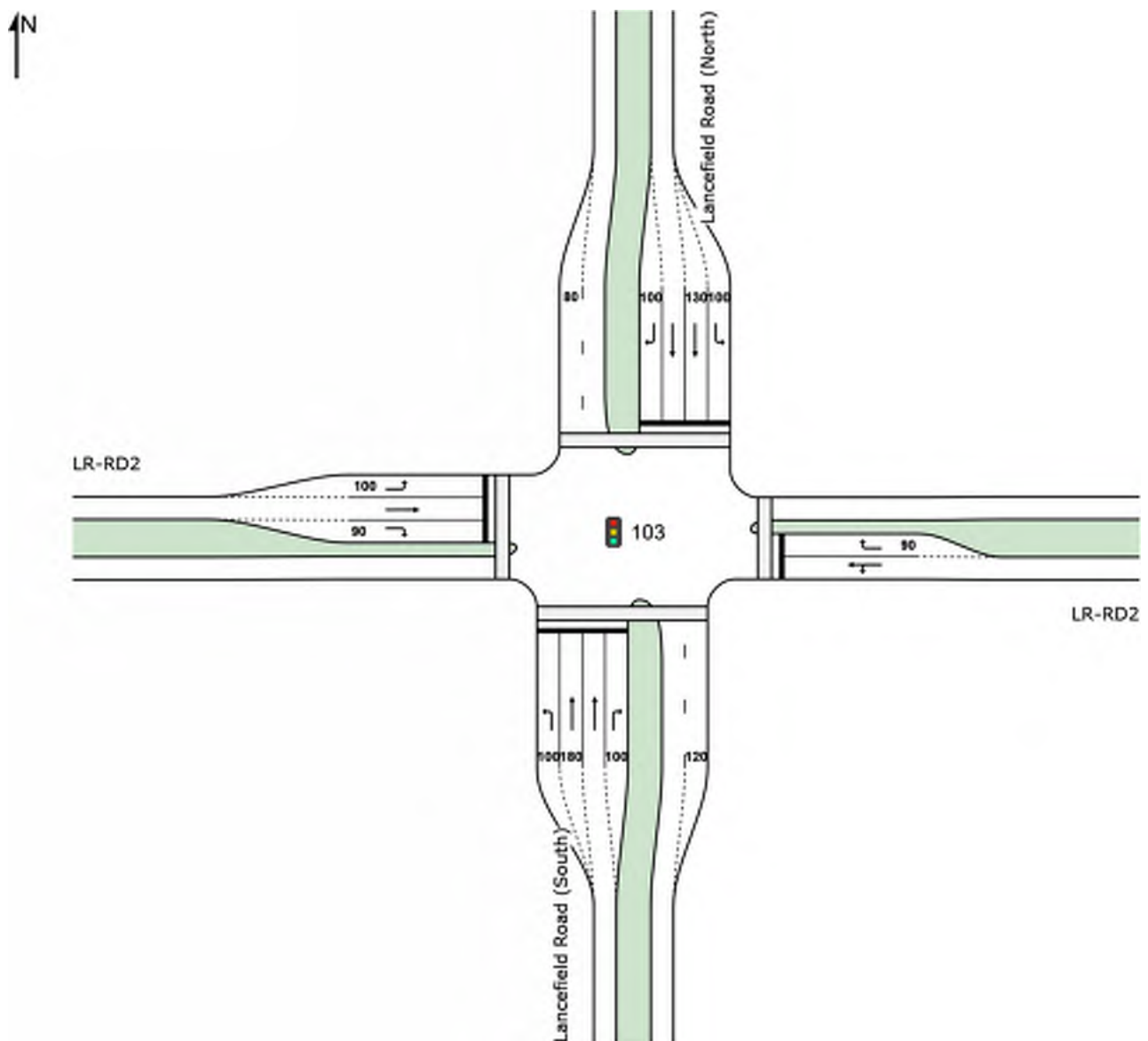
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D2\***

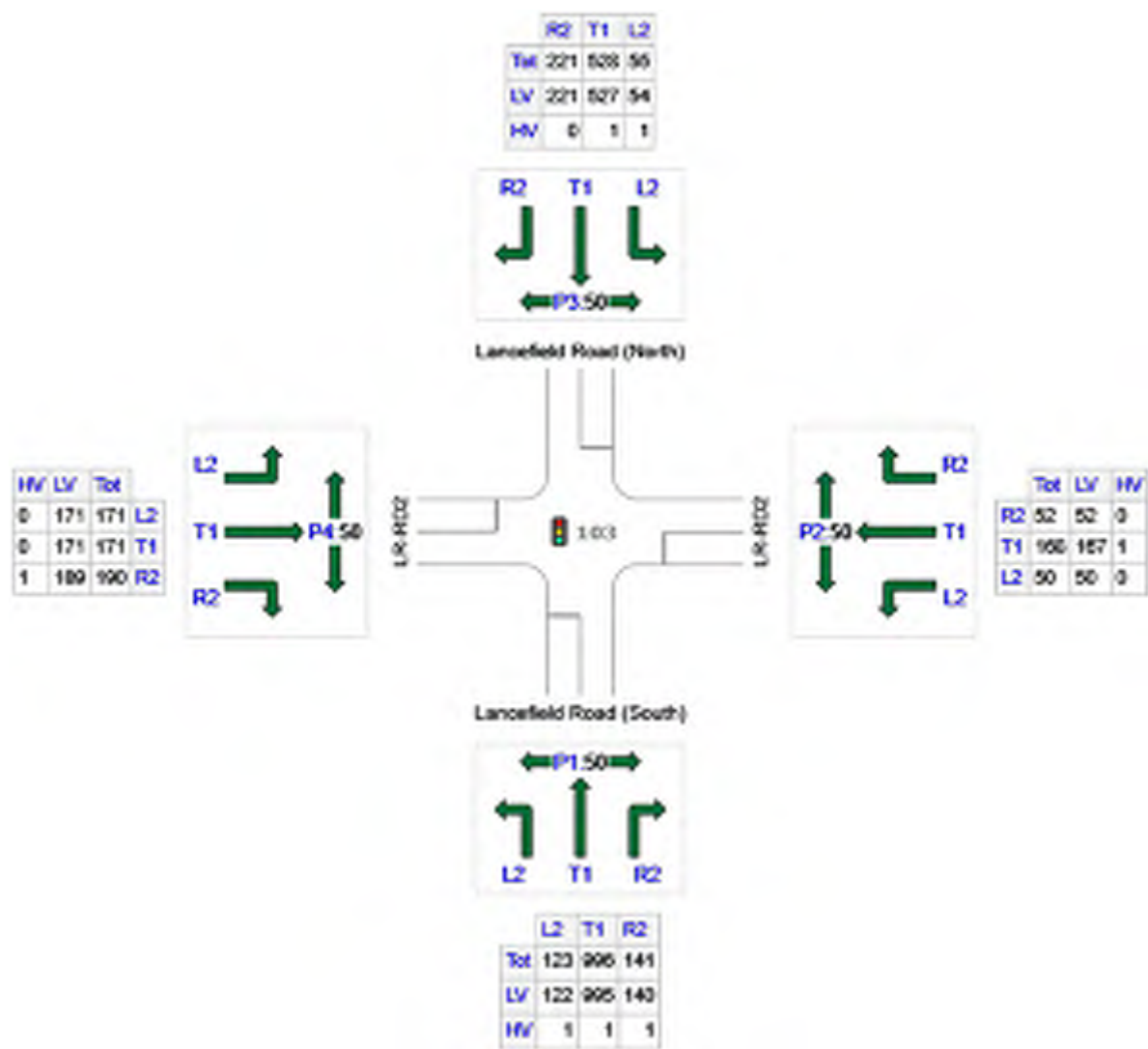
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1260	1257	3
E: LR-RD2	270	269	1
N: Lancefield Road (North)	804	802	2
W: LR-RD2	532	531	1
Total	2866	2859	7



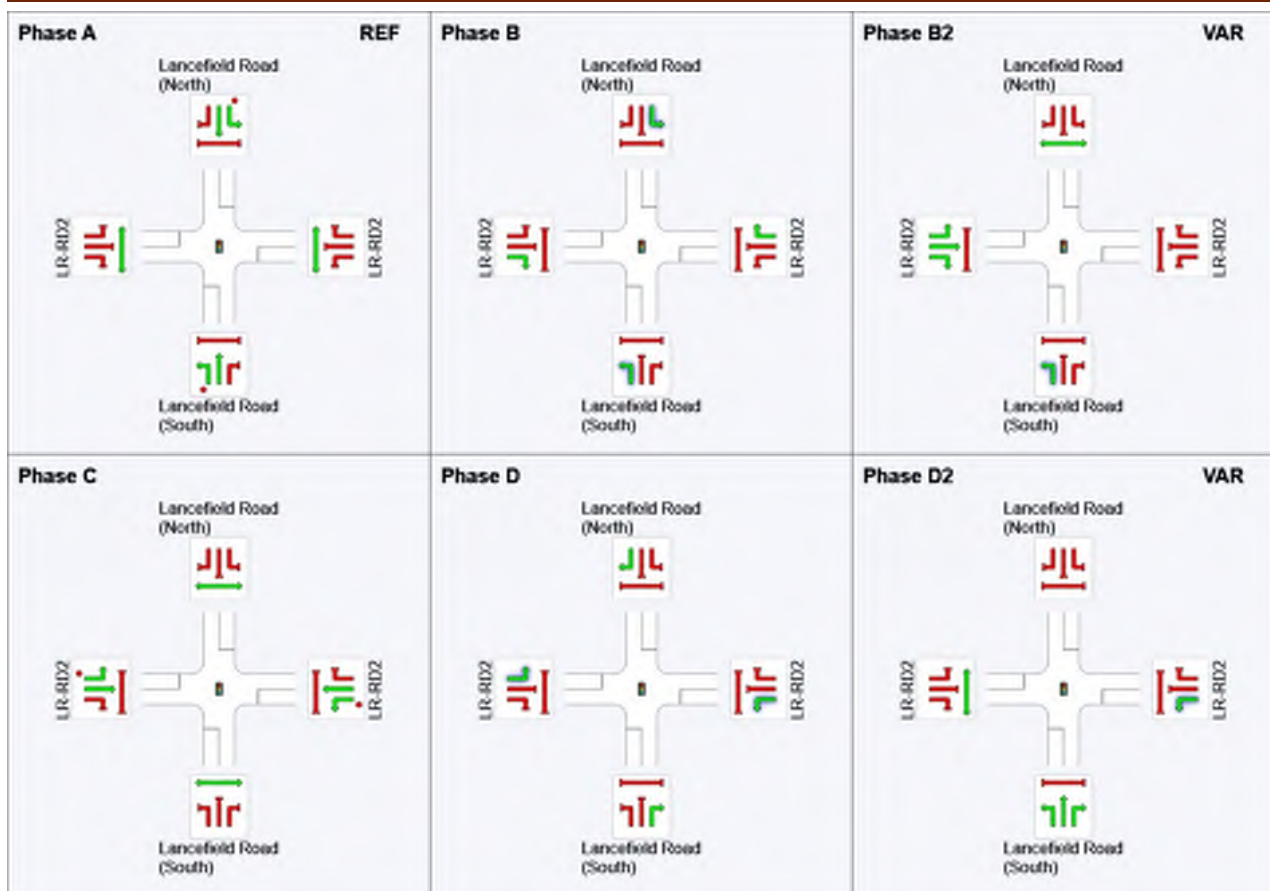
## Phase Timing Summary

Phase	A	B	B2	C	D	D2
Phase Change Time (sec)	0	59	74	81	109	134
Green Time (sec)	53	9	1	22	19	***
Phase Time (sec)	59	15	7	28	25	6
Phase Split	42%	11%	5%	20%	18%	4%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

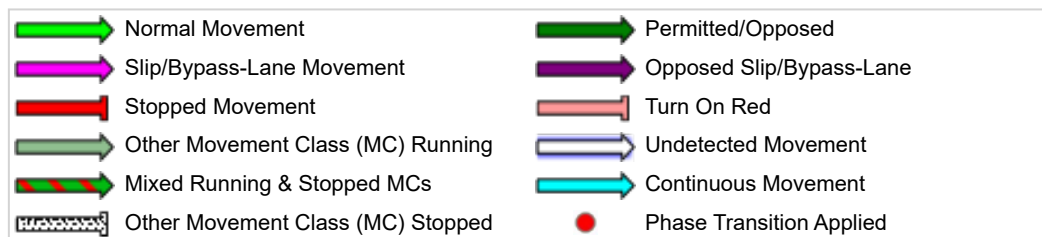
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	123	0.8	989	0.124	100	19.8	LOS B	3.7	26.2	Short	100	0.0	NA
Lane 2	337	0.1	821	0.410	46 <sup>6</sup>	30.0	LOS C	15.9	111.1	Short	180	0.0	NA
Lane 3	659	0.1	738 <sup>1</sup>	0.893	100	49.3	LOS D	44.9	314.8	Full	500	0.0	0.0
Lane 4	141	0.7	330	0.427	100	61.1	LOS E	8.6	60.9	Short	100	0.0	NA
Approach	1260	0.2		0.893		42.6	LOS D	44.9	314.8				
East: LR-RD2													
Lane 1	218	0.5	310	0.704	100	58.6	LOS E	13.9	98.0	Full	500	0.0	0.0
Lane 2	52	0.0	119	0.436	100	76.8	LOS E	3.6	25.1	Short	90	0.0	NA
Approach	270	0.4		0.704		62.1	LOS E	13.9	98.0				
North: Lancefield Road (North)													
Lane 1	55	1.8	812	0.068	100	25.8	LOS C	2.0	13.9	Short	100	0.0	NA
Lane 2	209	0.2	737	0.284	66 <sup>6</sup>	32.1	LOS C	9.8	68.7	Short	130	0.0	NA
Lane 3	319	0.2	737	0.432	100	34.3	LOS C	16.0	112.0	Full	500	0.0	0.0
Lane 4	221	0.0	252	0.877	100	80.6	LOS F	16.7	116.7	Short	100	0.0	NA
Approach	804	0.2		0.877		45.9	LOS D	16.7	116.7				
West: LR-RD2													
Lane 1	171	0.0	637	0.269	100	37.2	LOS D	7.9	55.6	Short	100	0.0	NA
Lane 2	171	0.0	404	0.423	100	52.0	LOS D	10.2	71.2	Full	500	0.0	0.0
Lane 3	190	0.5	211	0.899	100	85.4	LOS F	14.7	103.5	Short	90	0.0	NA
Approach	532	0.2		0.899		59.2	LOS E	14.7	103.5				
Intersection	2866	0.2		0.899		48.4	LOS D	44.9	314.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 103 [LR-IN-04-PM Peak - 75% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

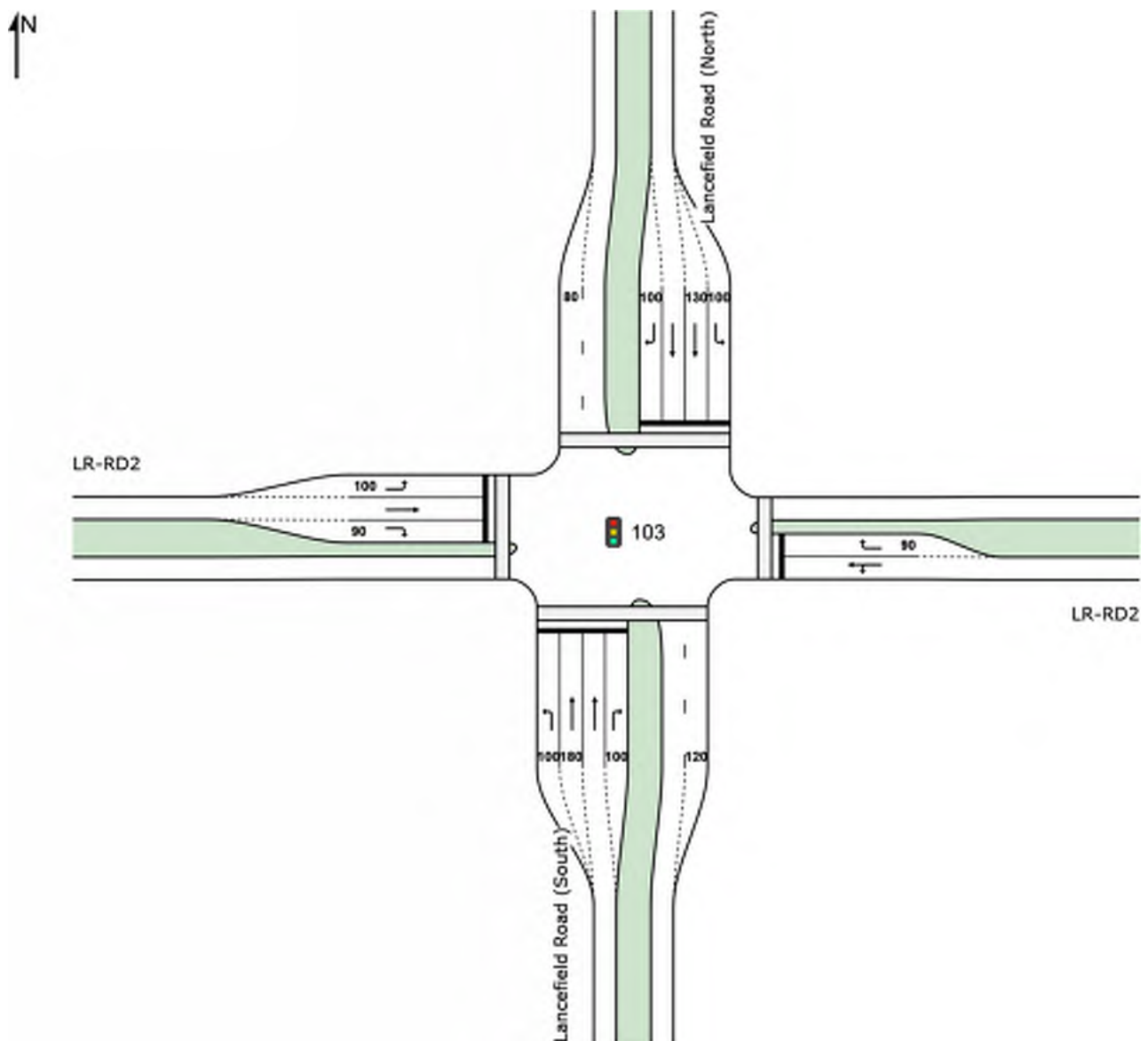
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D2\***

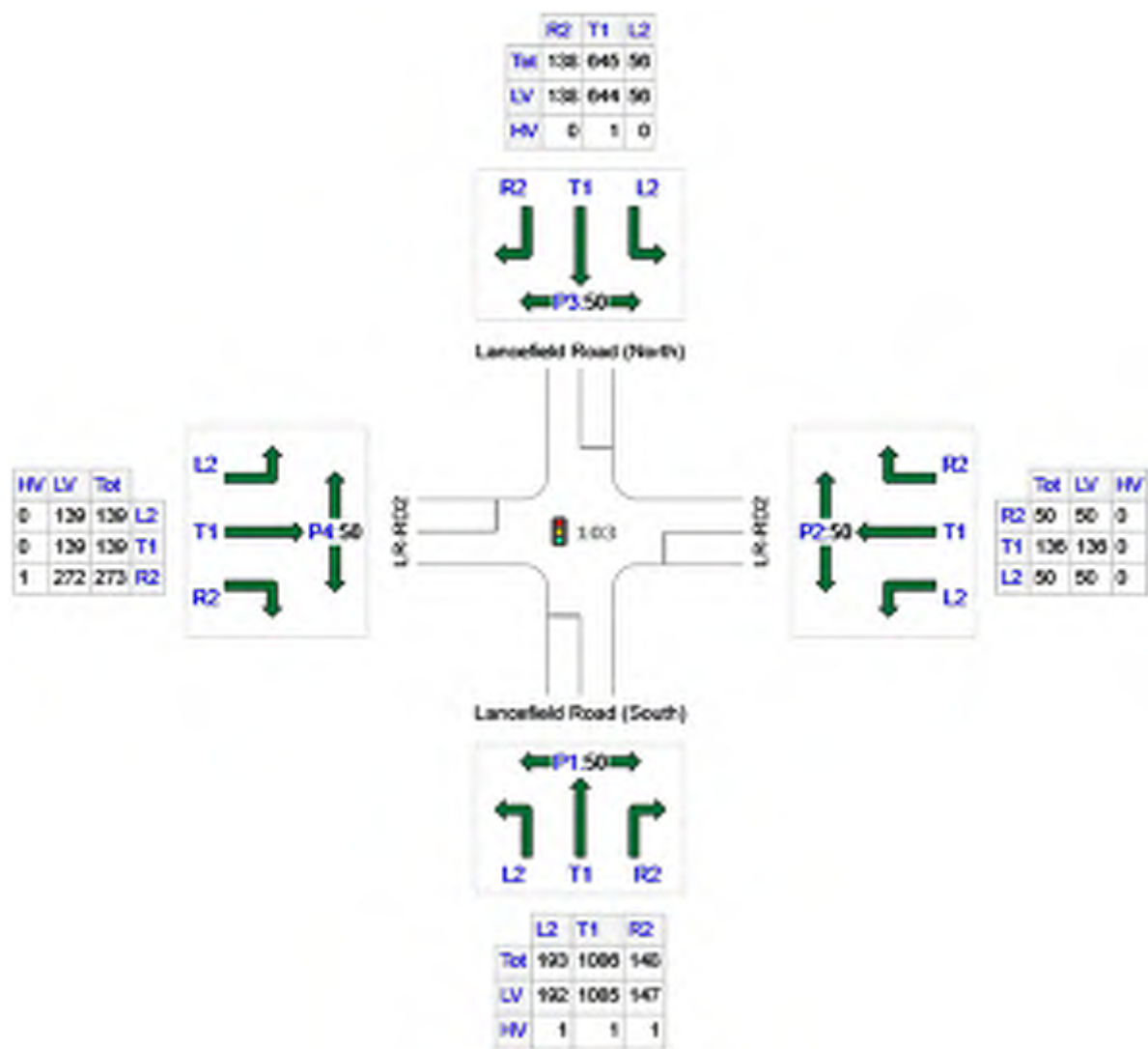
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



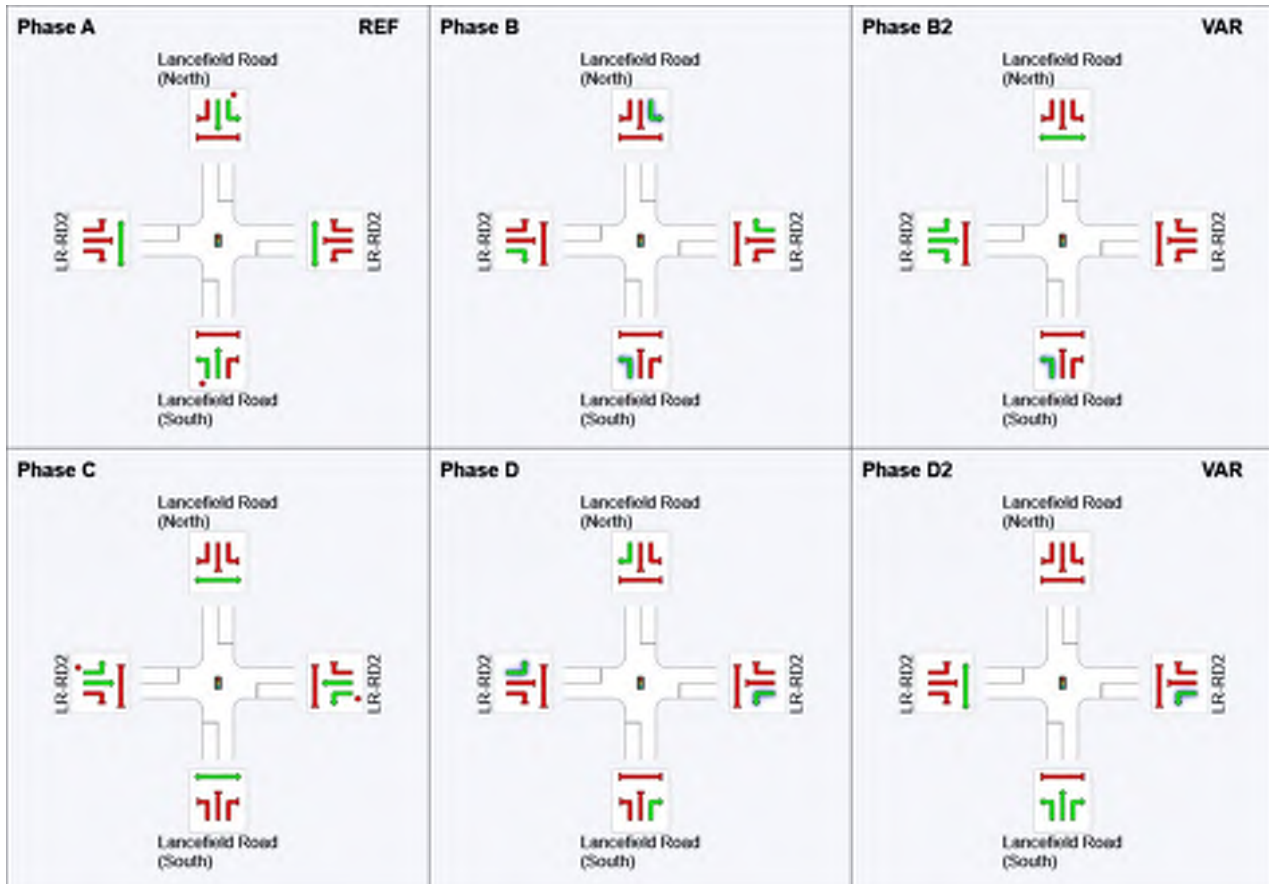
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1427	1424	3
E: LR-RD2	236	236	0
N: Lancefield Road (North)	839	838	1
W: LR-RD2	551	550	1
Total	3053	3048	5

## Phase Timing Summary

Phase	A	B	B2	C	D	D2
Phase Change Time (sec)	0	57	75	85	113	130
Green Time (sec)	51	12	4	22	11	4
Phase Time (sec)	57	18	10	28	17	10
Phase Split	41%	13%	7%	20%	12%	7%

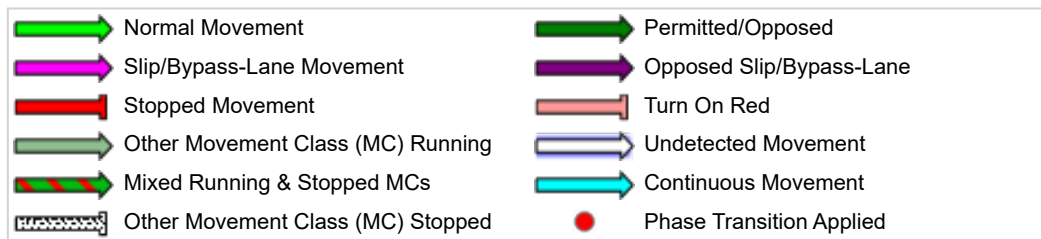
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	193	0.5	1097	0.176	100	16.7	LOS B	5.3	37.0	Short	100	0.0	NA
Lane 2	367	0.1	849	0.433	46 <sup>6</sup>	29.1	LOS C	17.2	120.3	Short	180	0.0	NA
Lane 3	719	0.1	763 <sup>1</sup>	0.942	100	61.9	LOS E	55.6	389.5	Full	500	0.0	0.0
Lane 4	148	0.7	277	0.534	100	65.7	LOS E	9.5	66.9	Short	100	0.0	NA
Approach	1427	0.2		0.942		47.7	LOS D	55.6	389.5				
East: LR-RD2													
Lane 1	186	0.0	312	0.597	100	54.9	LOS D	11.3	79.2	Full	500	0.0	0.0
Lane 2	50	0.0	159	0.314	100	72.5	LOS E	3.3	23.2	Short	90	0.0	NA
Approach	236	0.0		0.597		58.6	LOS E	11.3	79.2				
North: Lancefield Road (North)													
Lane 1	56	0.0	836	0.067	100	25.3	LOS C	2.0	13.7	Short	100	0.0	NA
Lane 2	256	0.2	710	0.360	66 <sup>6</sup>	34.6	LOS C	12.6	88.4	Short	130	0.0	NA
Lane 3	389	0.2	710	0.549	100	37.6	LOS D	20.9	146.5	Full	500	0.0	0.0
Lane 4	138	0.0	146	0.946	100	96.8	LOS F	11.4	79.5	Short	100	0.0	NA
Approach	839	0.1		0.946		45.6	LOS D	20.9	146.5				
West: LR-RD2													
Lane 1	139	0.0	570	0.244	100	40.1	LOS D	6.7	46.7	Short	100	0.0	NA
Lane 2	139	0.0	446	0.312	100	48.2	LOS D	7.9	55.1	Full	500	0.0	0.0
Lane 3	273	0.4	291	0.938	100	90.5	LOS F	22.5	157.7	Short	90	0.0	NA
Approach	551	0.2		0.938		67.1	LOS E	22.5	157.7				
Intersection	3053	0.2		0.946		51.5	LOS D	55.6	389.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## **Site: 103 [LR-IN-04-PM Peak - 75% (Option 2a) - GTA Design]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

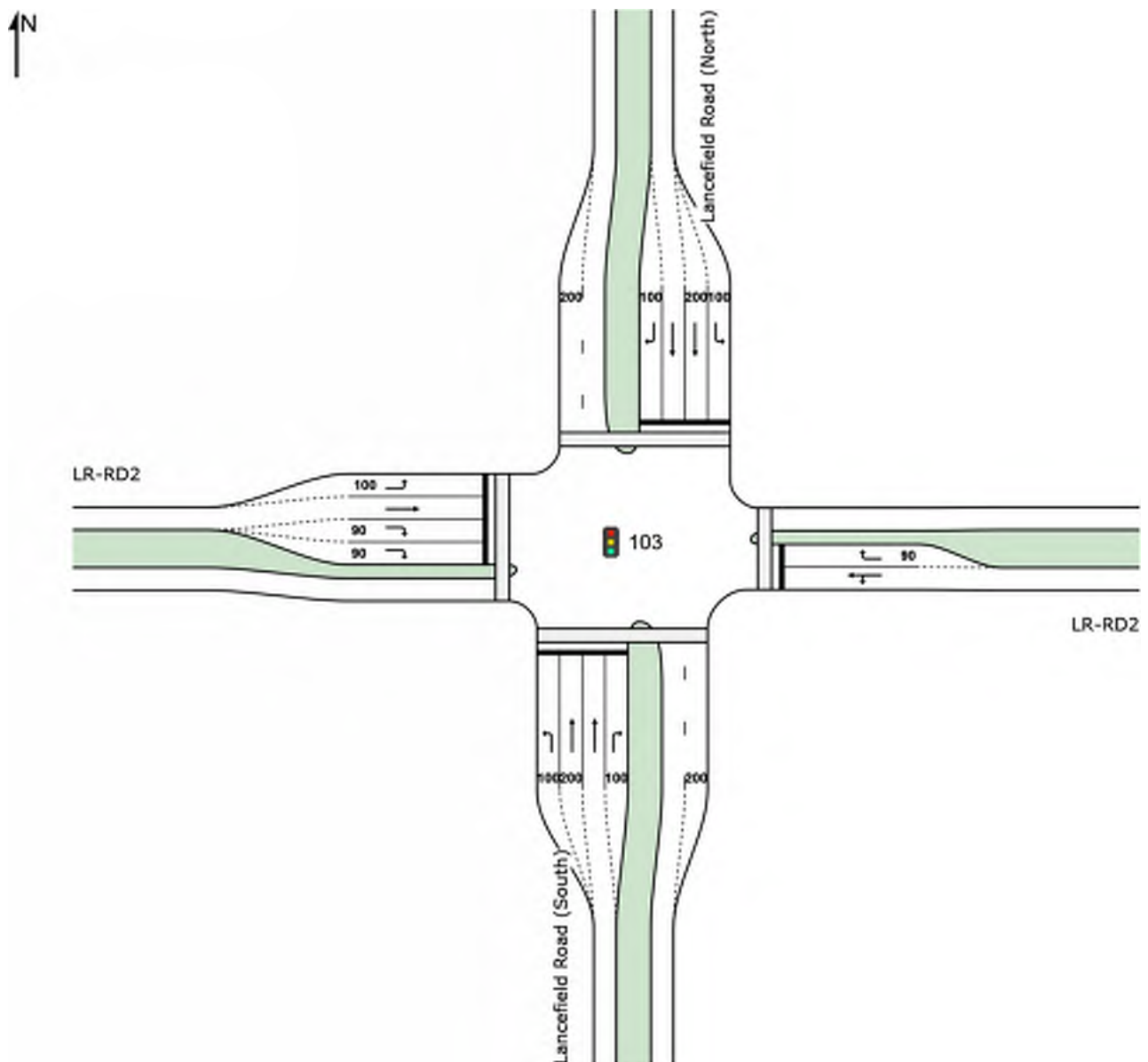
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D2\***

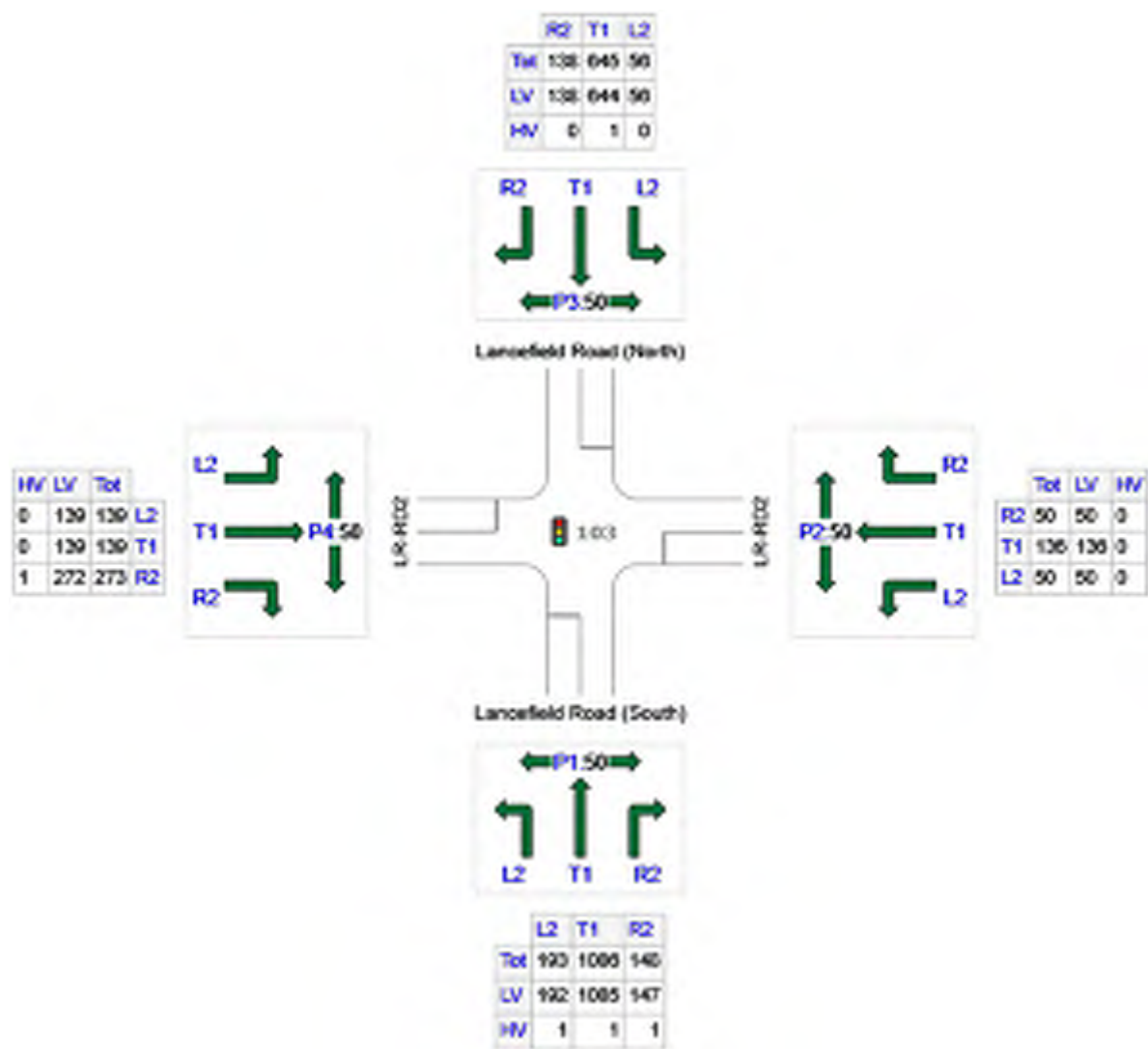
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1427	1424	3
E: LR-RD2	236	236	0
N: Lancefield Road (North)	839	838	1
W: LR-RD2	551	550	1
Total	3053	3048	5



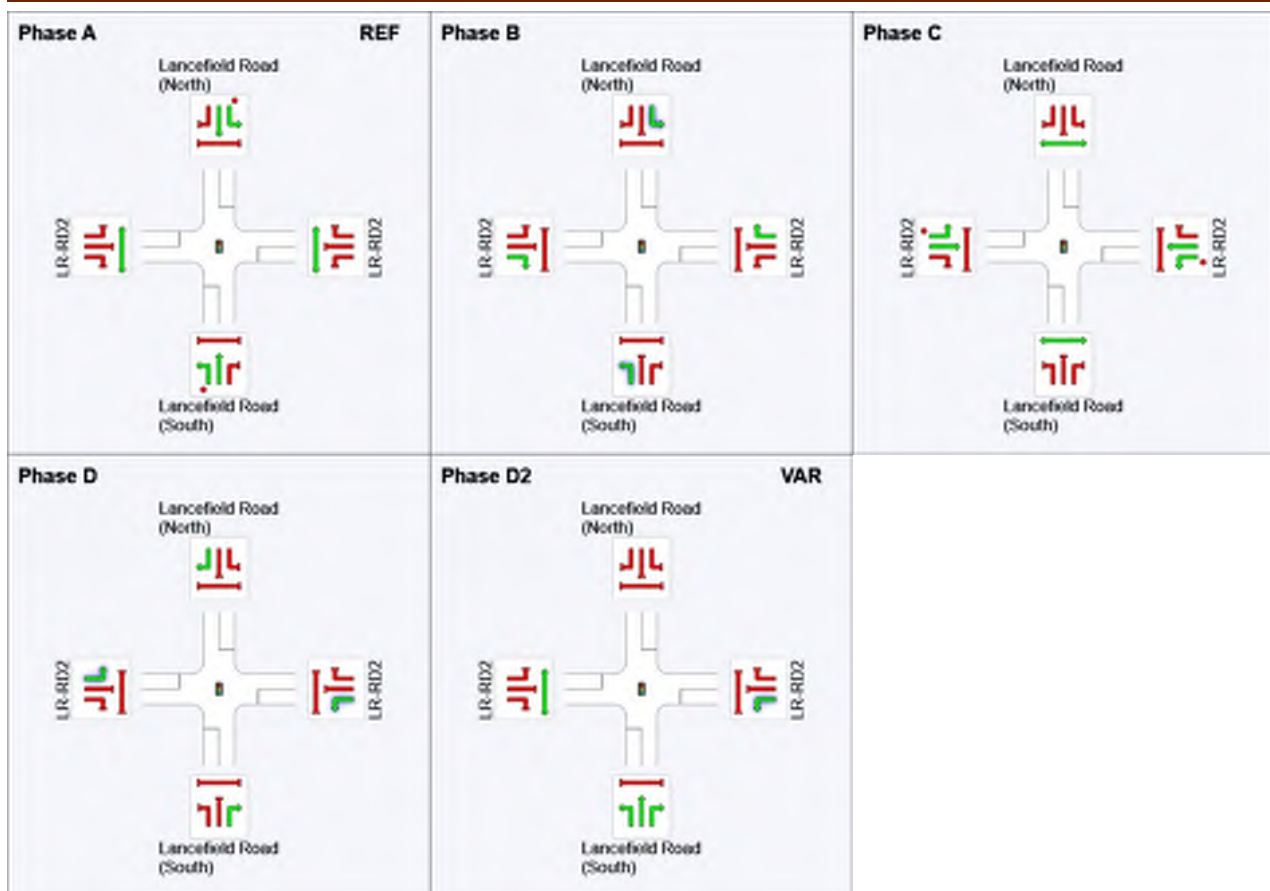
## Phase Timing Summary

Phase	A	B	C	D	D2
Phase Change Time (sec)	0	28	41	63	76
Green Time (sec)	22	7	16	7	***
Phase Time (sec)	28	13	22	13	4
Phase Split	35%	16%	28%	16%	5%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

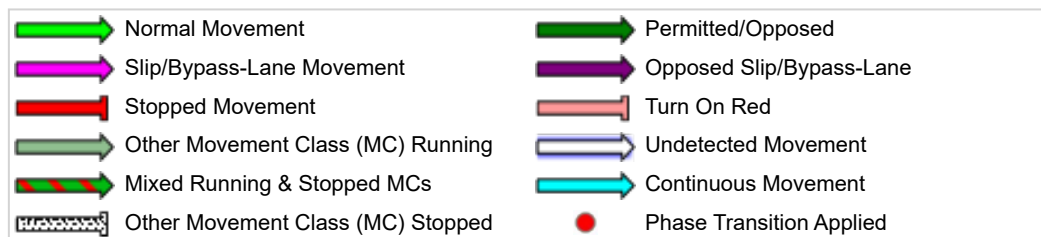
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	193	0.5	763	0.253	100	18.6	LOS B	4.4	30.6	Short	100	0.0	NA
Lane 2	543	0.1	633	0.857	100	35.1	LOS D	23.3	163.0	Short	200	0.0	NA
Lane 3	543	0.1	633	0.857	100	35.1	LOS D	23.3	163.0	Full	500	0.0	0.0
Lane 4	148	0.7	254	0.582	100	42.2	LOS D	5.7	40.2	Short	100	0.0	NA
Approach	1427	0.2		0.857		33.6	LOS C	23.3	163.0				
East: LR-RD2													
Lane 1	186	0.0	401	0.463	100	26.8	LOS C	5.9	41.3	Full	500	0.0	0.0
Lane 2	50	0.0	163	0.308	100	44.8	LOS D	1.9	13.6	Short	90	0.0	NA
Approach	236	0.0		0.463		30.6	LOS C	5.9	41.3				
North: Lancefield Road (North)													
Lane 1	56	0.0	673	0.083	100	20.0	LOS B	1.3	8.9	Short	100	0.0	NA
Lane 2	323	0.2	536	0.602	100	27.6	LOS C	11.1	78.1	Short	200	0.0	NA
Lane 3	323	0.2	536	0.602	100	27.6	LOS C	11.1	78.1	Full	500	0.0	0.0
Lane 4	138	0.0	163	0.849	100	52.5	LOS D	6.2	43.3	Short	100	0.0	NA
Approach	839	0.1		0.849		31.2	LOS C	11.1	78.1				
West: LR-RD2													
Lane 1	139	0.0	534	0.260	100	25.3	LOS C	3.8	26.9	Short	100	0.0	NA
Lane 2	139	0.0	390	0.356	100	30.4	LOS C	4.8	33.6	Full	500	0.0	0.0
Lane 3	137	0.4	162	0.842	100	52.1	LOS D	6.1	42.7	Short	90	0.0	NA
Lane 4	137	0.4	162	0.842	100	52.1	LOS D	6.1	42.7	Short	90	0.0	NA
Approach	551	0.2		0.842		39.9	LOS D	6.1	42.7				
Intersection	3053	0.2		0.857		33.9	LOS C	23.3	163.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Site: 101 [LR-IN-03-AM Peak - 75% (Option 5) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

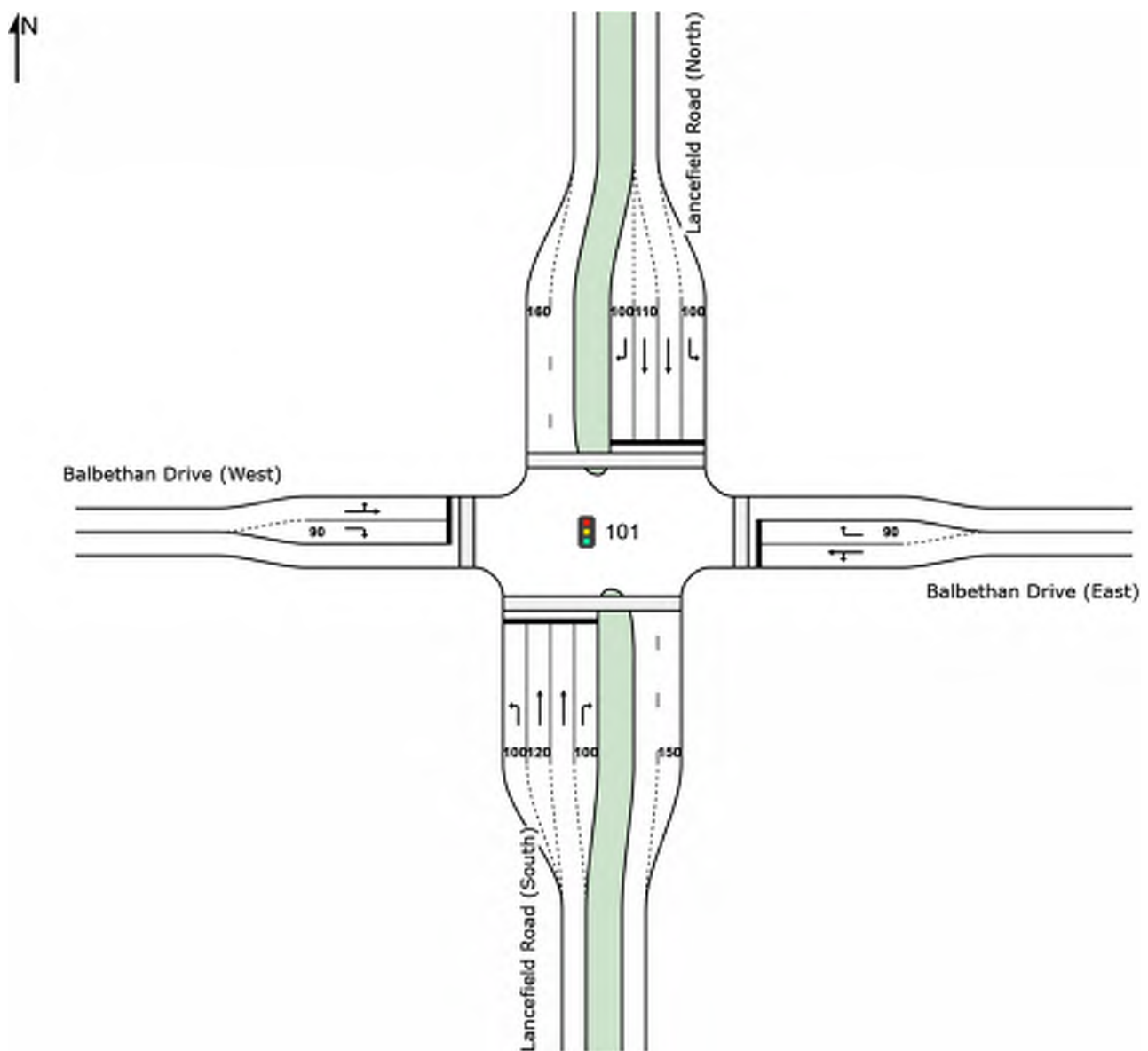
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

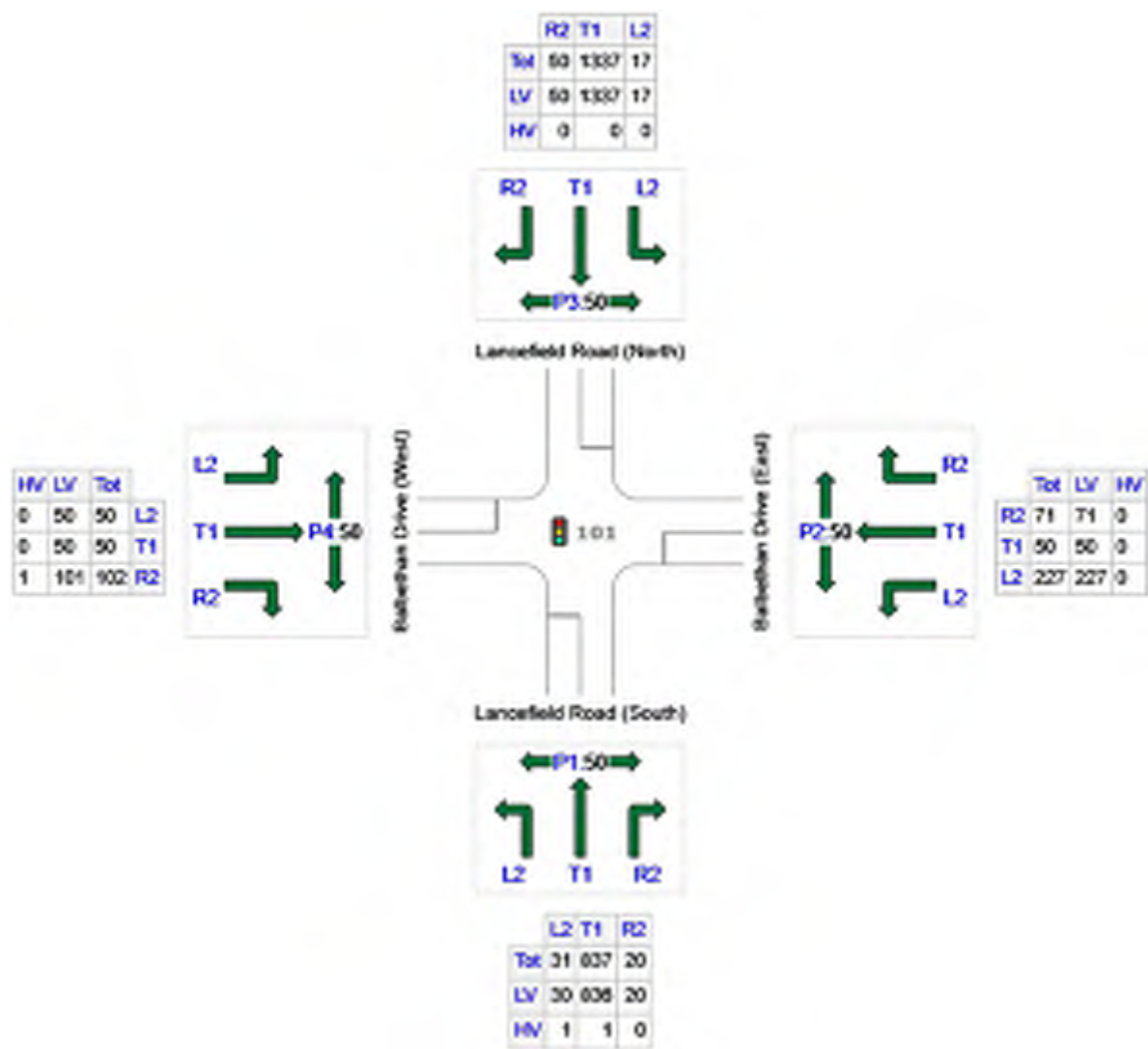
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



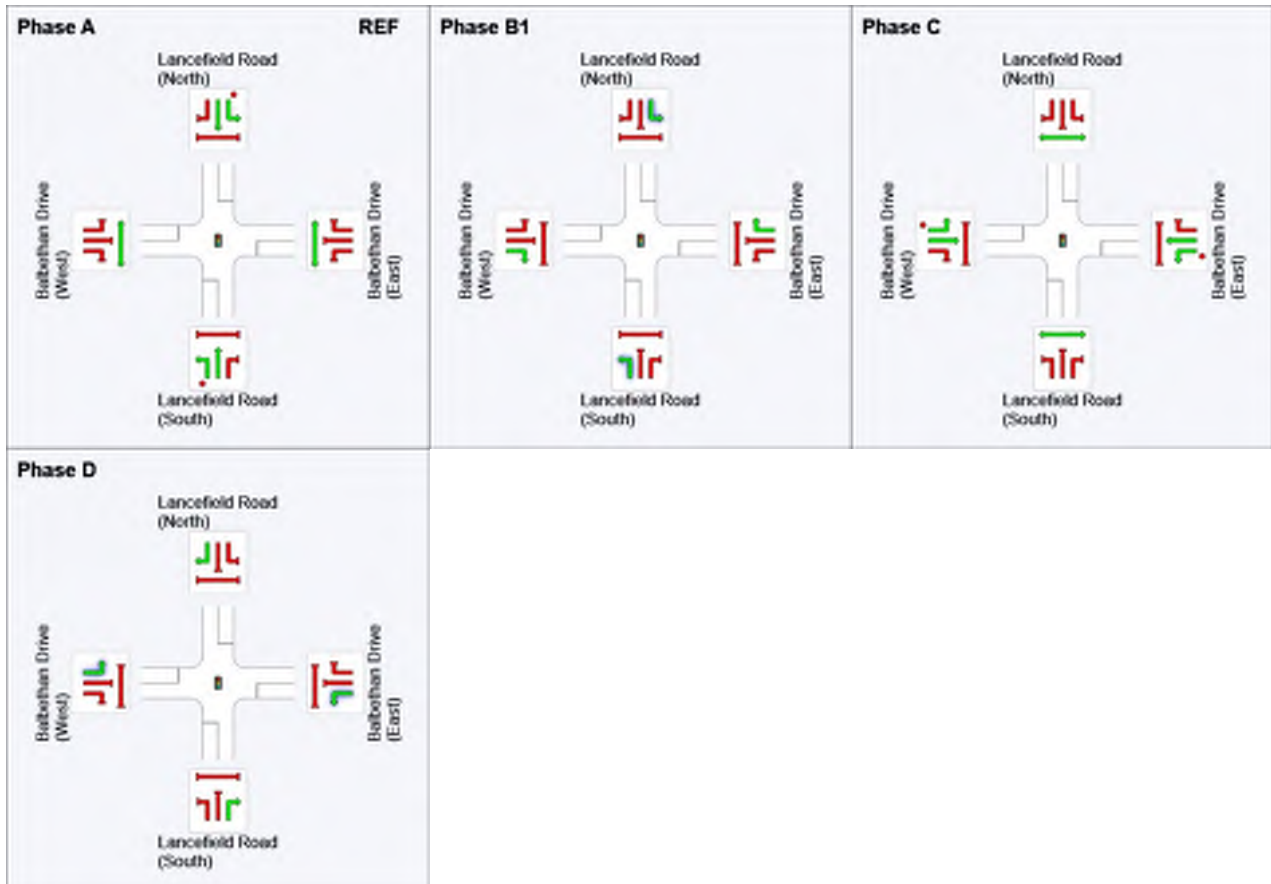
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	888	886	2
E: Balbethan Drive (East)	348	348	0
N: Lancefield Road (North)	1404	1404	0
W: Balbethan Drive (West)	202	201	1
Total	2842	2839	3

## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	59	72	98
Green Time (sec)	53	7	20	6
Phase Time (sec)	59	13	26	12
Phase Split	54%	12%	24%	11%

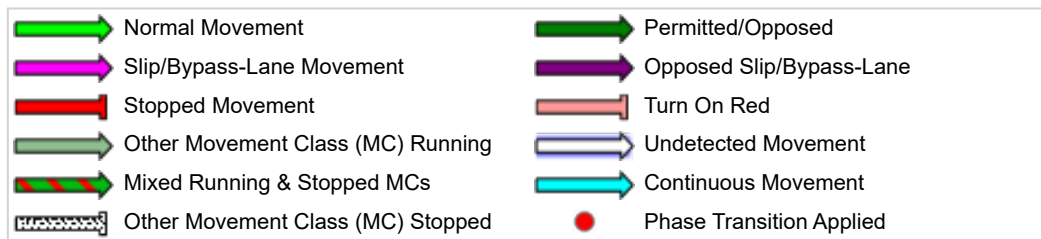
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	31	3.2	990	0.031	100	15.2	LOS B	0.7	4.8	Short	100	0.0	NA
Lane 2	385	0.1	939	0.410	85 <sup>6</sup>	19.6	LOS B	13.2	92.3	Short	120	0.0	NA
Lane 3	452	0.1	939	0.482	100	20.5	LOS C	16.2	113.5	Full	500	0.0	0.0
Lane 4	20	0.0	101	0.197	100	62.4	LOS E	1.1	7.6	Short	100	0.0	NA
Approach	888	0.2		0.482		20.8	LOS C	16.2	113.5				
East: Balbethan Drive (East)													
Lane 1	277	0.0	417	0.665	100	41.5	LOS D	12.8	89.8	Full	500	0.0	0.0
Lane 2	71	0.0	118	0.601	100	63.7	LOS E	4.0	28.0	Short	90	0.0	NA
Approach	348	0.0		0.665		46.0	LOS D	12.8	89.8				
North: Lancefield Road (North)													
Lane 1	17	0.0	1013	0.017	100	15.0	LOS B	0.4	2.5	Short	100	0.0	NA
Lane 2	636	0.0	938 <sup>1</sup>	0.678	80 <sup>6</sup>	23.4	LOS C	26.0	182.2	Full	500	0.0	0.0
Lane 3	701	0.0	824 <sup>1</sup>	0.851	100	30.9	LOS C	33.9	237.2	Short	110	0.0	NA
Lane 4	50	0.0	101	0.494	100	64.1	LOS E	2.8	19.6	Short	100	0.0	NA
Approach	1404	0.0		0.851		28.5	LOS C	33.9	237.2				
West: Balbethan Drive (West)													
Lane 1	100	0.0	376	0.266	100	38.2	LOS D	4.3	30.0	Full	500	0.0	0.0
Lane 2	102	1.0	117	0.869	100	70.9	LOS E	6.2	44.0	Short	90	0.0	NA
Approach	202	0.5		0.869		54.7	LOS D	6.2	44.0				
Intersection	2842	0.1		0.869		30.1	LOS C	33.9	237.2				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 101 [LR-IN-03-AM Peak - 75% (Option 2a) - PSP Interim Design]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

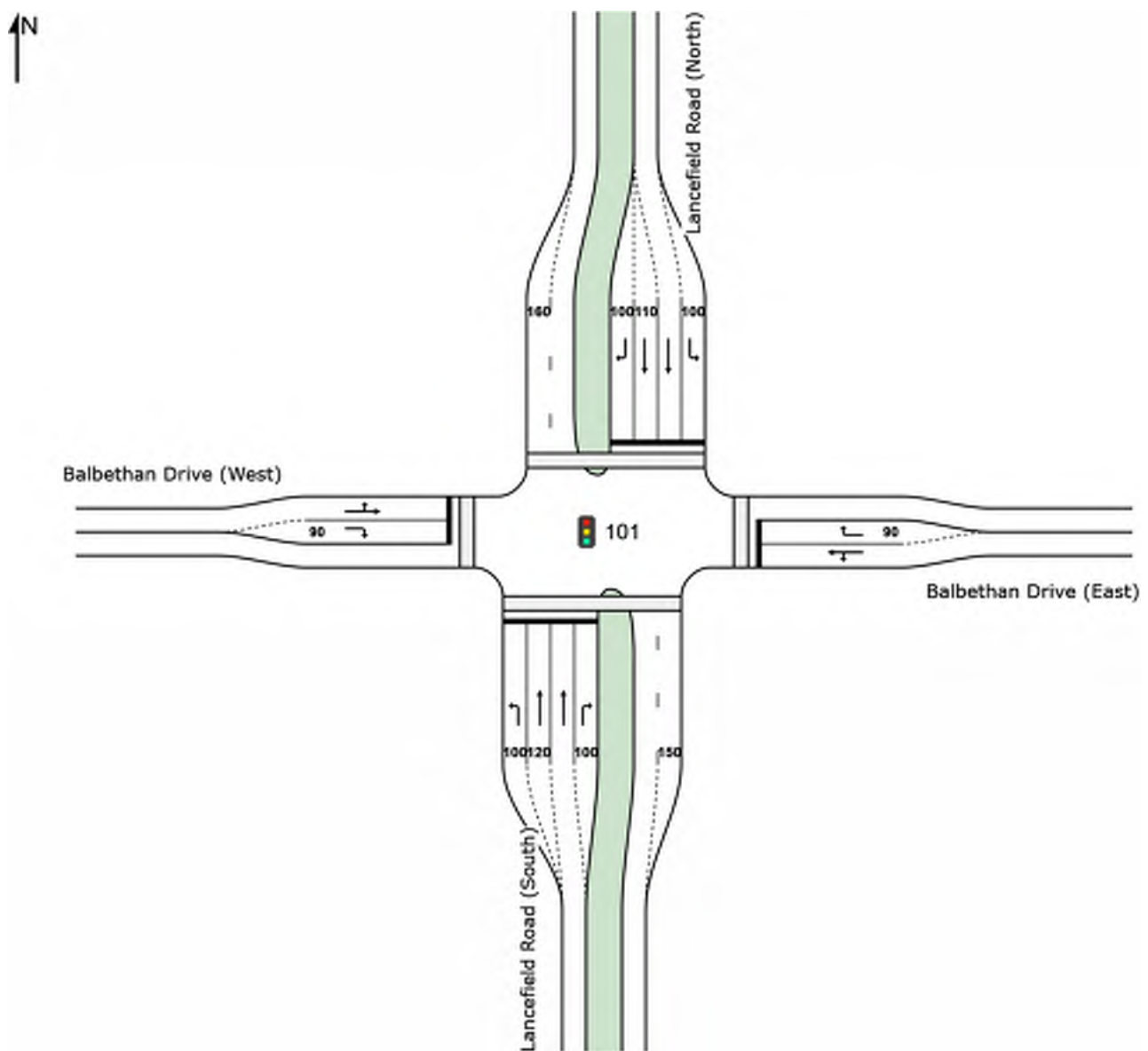
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

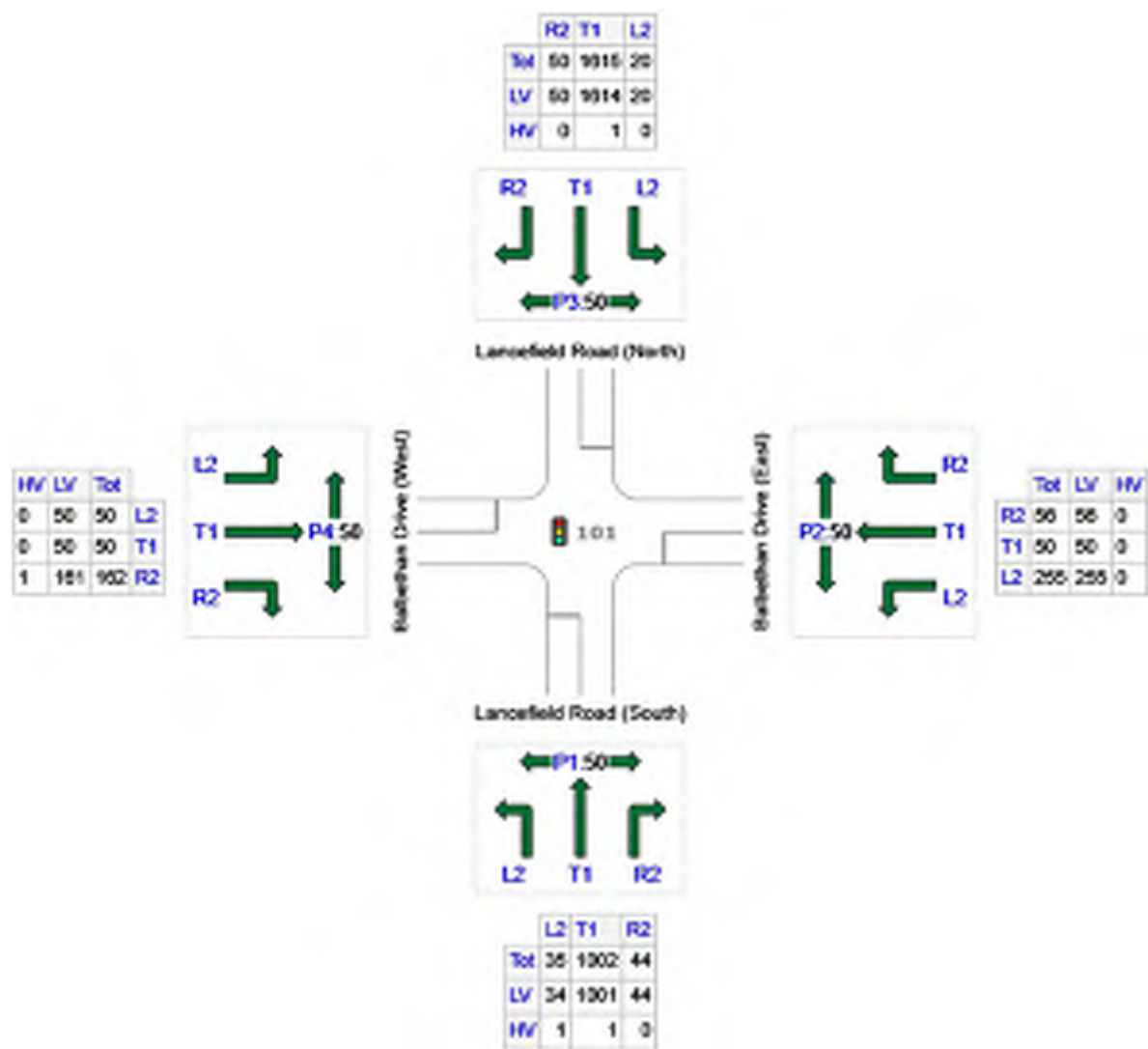
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1081	1079	2
E: Balbethan Drive (East)	361	361	0
N: Lancefield Road (North)	1685	1684	1
W: Balbethan Drive (West)	262	261	1
Total	3389	3385	4

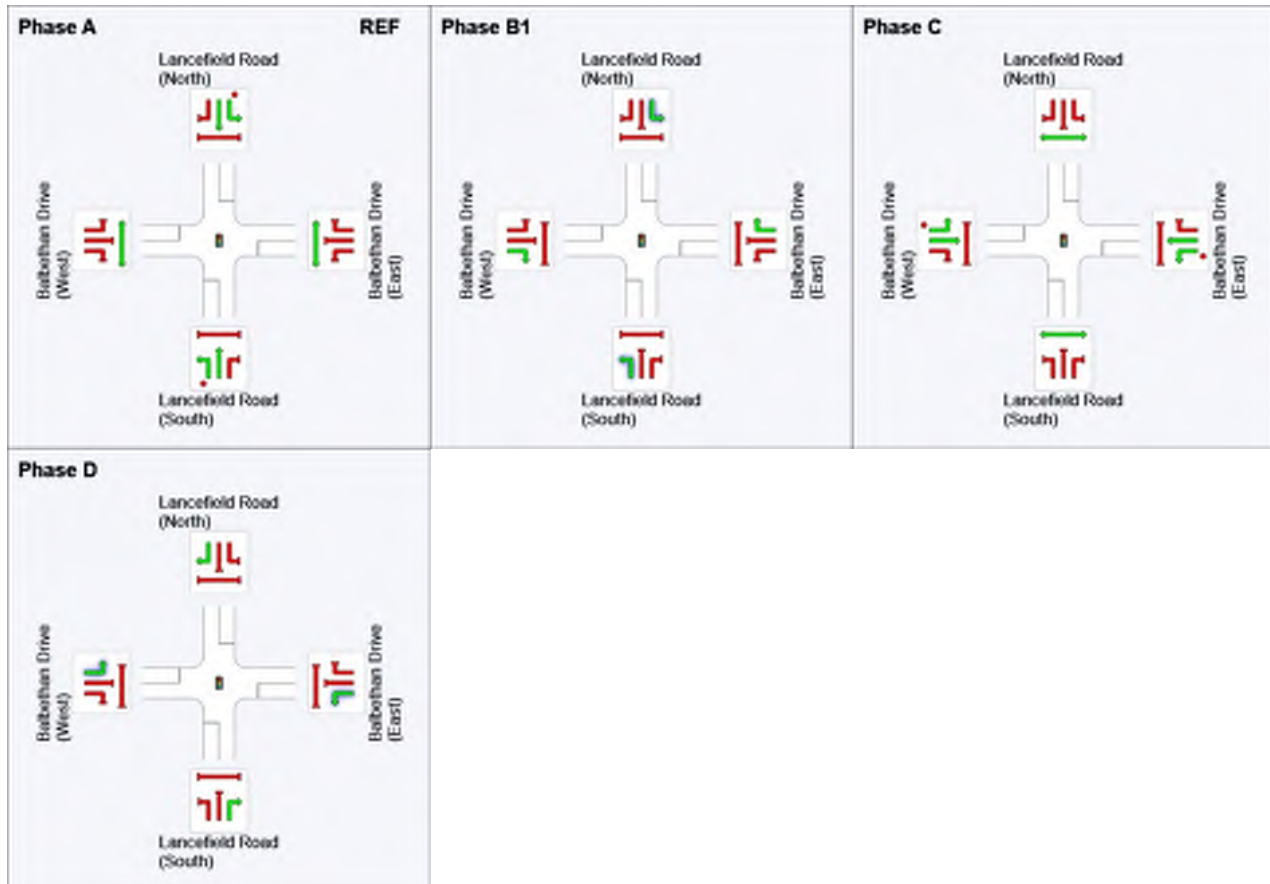


## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	83	100	128
Green Time (sec)	77	11	22	6
Phase Time (sec)	83	17	28	12
Phase Split	59%	12%	20%	9%

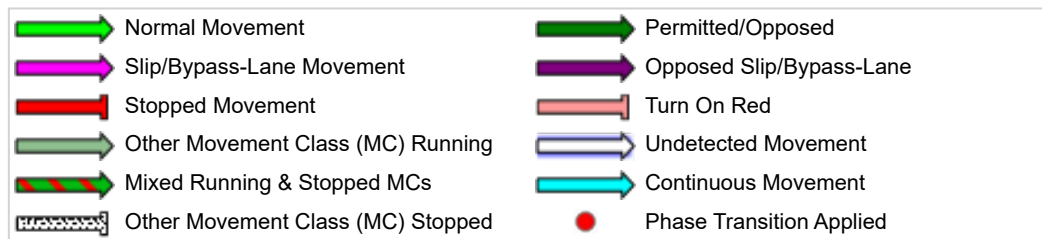
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	35	2.9	1144	0.031	100	13.8	LOS B	0.8	5.6	Short	100	0.0	NA
Lane 2	461	0.1	1072	0.430	85 <sup>6</sup>	19.6	LOS B	18.2	127.2	Short	120	0.0	NA
Lane 3	541	0.1	1072	0.505	100	20.7	LOS C	22.6	158.1	Full	500	0.0	0.0
Lane 4	44	0.0	80	0.553	100	81.7	LOS F	3.2	22.2	Short	100	0.0	NA
Approach	1081	0.2		0.553		22.5	LOS C	22.6	158.1				
East: Balbethan Drive (East)													
Lane 1	305	0.0	357	0.855	100	66.2	LOS E	21.2	148.5	Full	500	0.0	0.0
Lane 2	56	0.0	146	0.384	100	74.1	LOS E	3.8	26.4	Short	90	0.0	NA
Approach	361	0.0		0.855		67.4	LOS E	21.2	148.5				
North: Lancefield Road (North)													
Lane 1	20	0.0	1167	0.017	100	13.6	LOS B	0.4	3.1	Short	100	0.0	NA
Lane 2	674	0.1	714 <sup>1</sup>	0.945	80 <sup>6</sup>	55.0	LOS E	45.8	320.9	Full	500	0.0	69.7 <sup>8</sup>
Lane 3	941	0.1	793 <sup>1</sup>	1.186	100	232.0	LOS F	143.4	1004.3	Short	110	0.0	NA
Lane 4	50	0.0	80	0.628	100	82.4	LOS F	3.6	25.5	Short	100	0.0	NA
Approach	1685	0.1		1.186		154.2	LOS F	143.4	1004.3				
West: Balbethan Drive (West)													
Lane 1	100	0.0	323	0.310	100	52.5	LOS D	5.7	40.1	Full	500	0.0	0.0
Lane 2	162	0.6	145	1.115	100	192.4	LOS F	19.9	140.1	Short	90	0.0	NA
Approach	262	0.4		1.115		139.0	LOS F	19.9	140.1				
Intersection	3389	0.1		1.186		101.7	LOS F	143.4	1004.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>8</sup> Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

## Site: 101 [LR-IN-03-AM Peak - 75% (Option 2a) - GTA Design - DRT from West]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

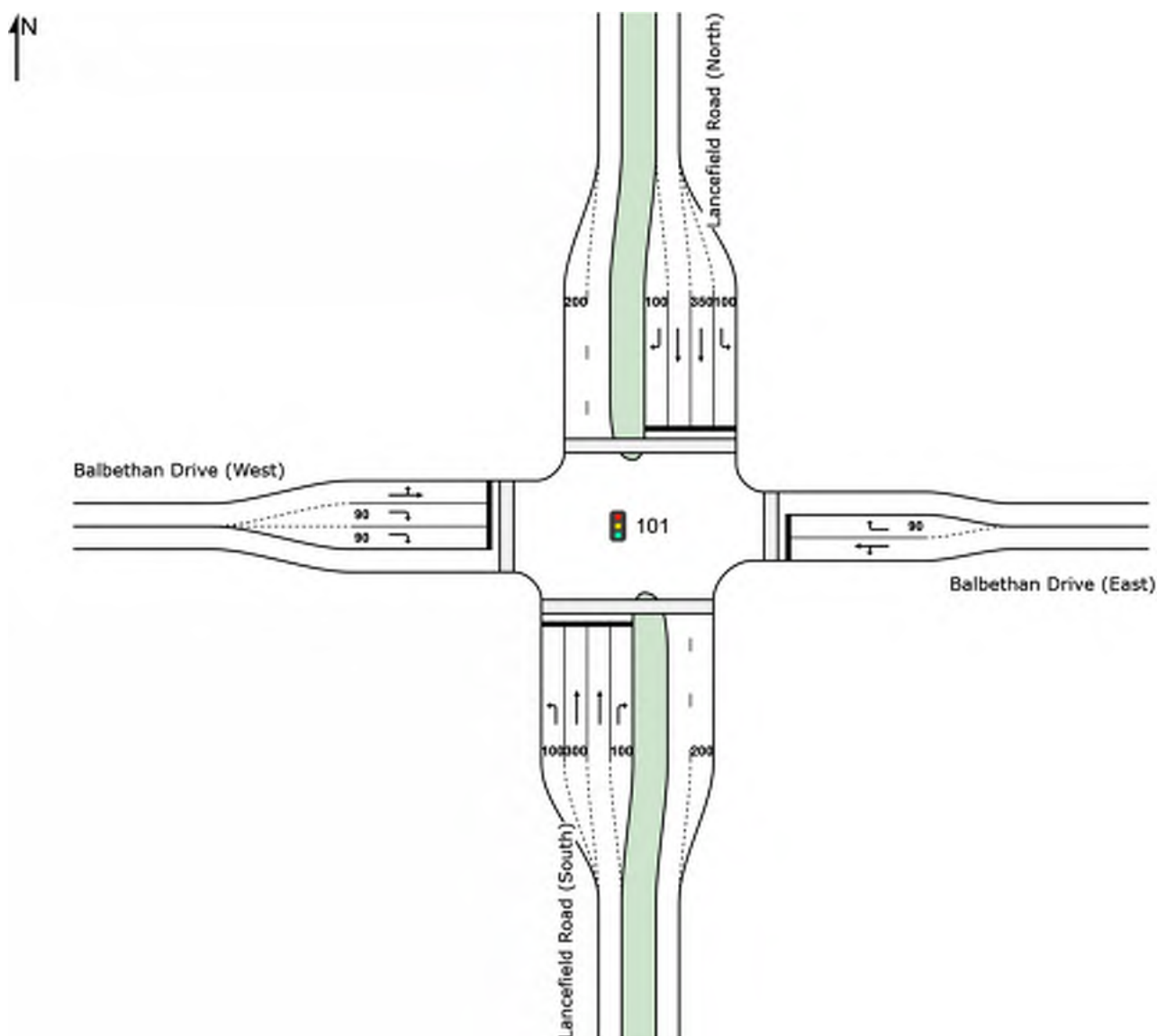
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

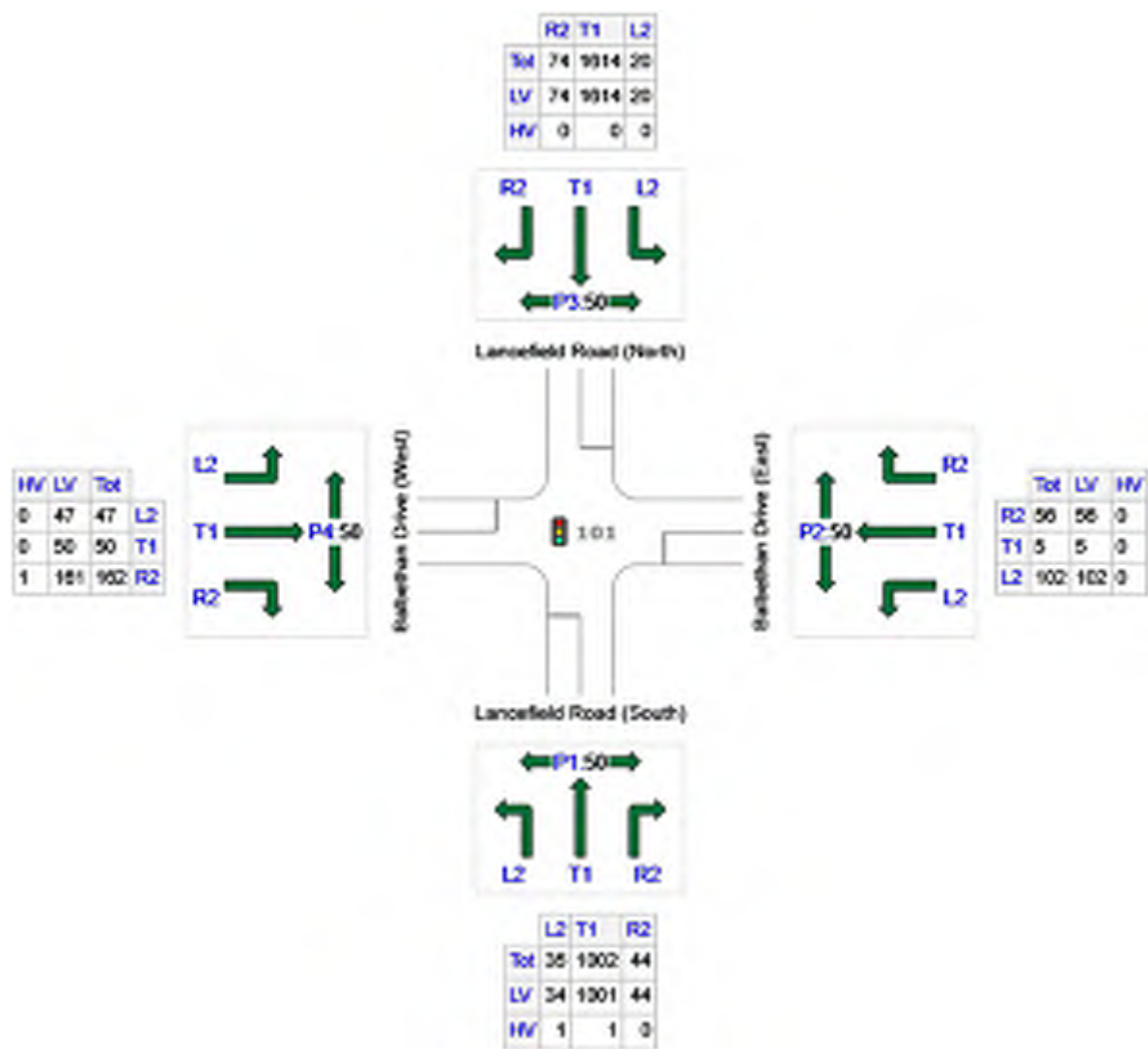
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



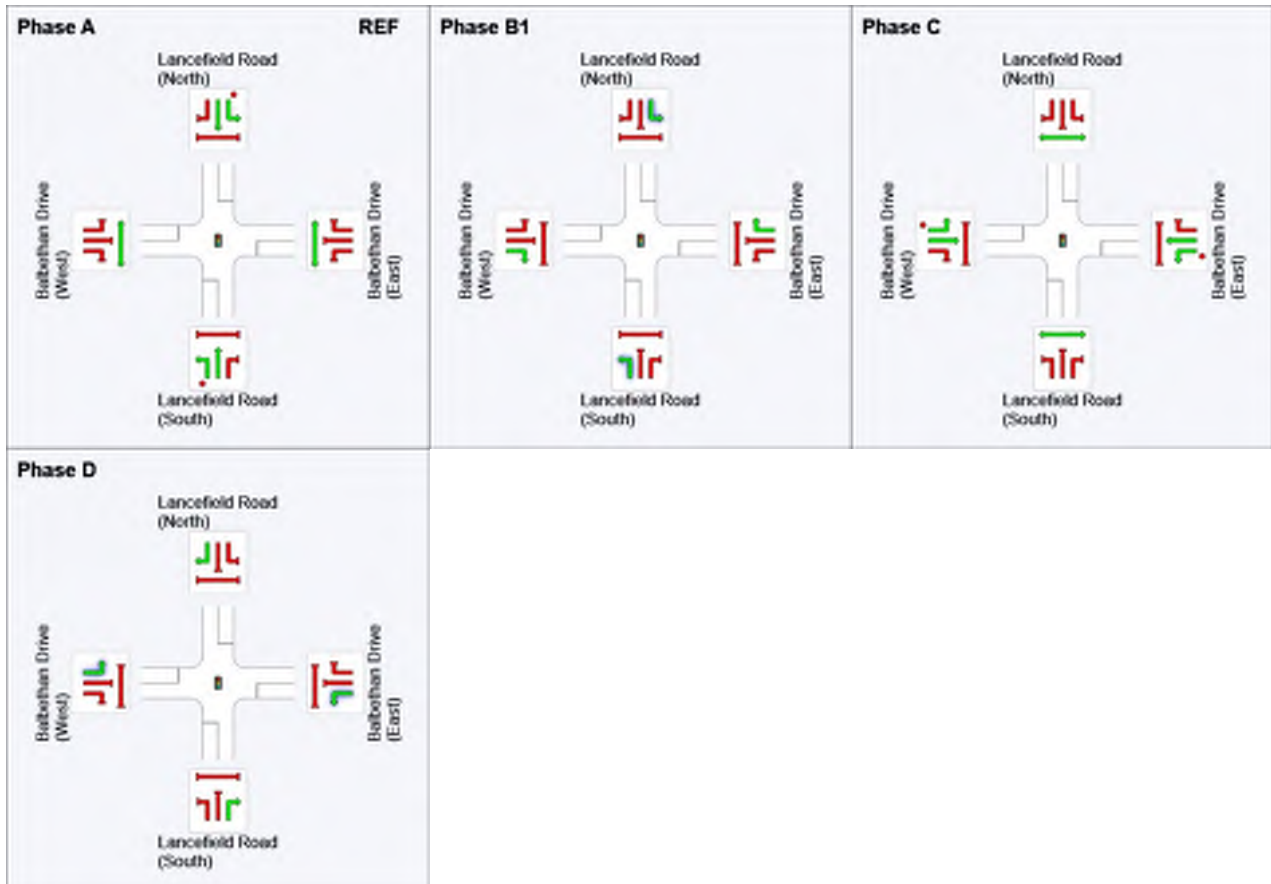
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1081	1079	2
E: Balbethan Drive (East)	163	163	0
N: Lancefield Road (North)	1708	1708	0
W: Balbethan Drive (West)	259	258	1
Total	3211	3208	3

## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	60	72	98
Green Time (sec)	54	6	20	6
Phase Time (sec)	60	12	26	12
Phase Split	55%	11%	24%	11%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	35	2.9	993	0.035	100	15.2	LOS B	0.7	5.4	Short	100	0.0	NA
Lane 2	501	0.1	957	0.524	100	20.4	LOS C	18.2	127.7	Short	300	0.0	NA
Lane 3	501	0.1	957	0.524	100	20.4	LOS C	18.2	127.7	Full	500	0.0	0.0
Lane 4	44	0.0	101	0.434	100	63.8	LOS E	2.5	17.2	Short	100	0.0	NA
Approach	1081	0.2		0.524		22.0	LOS C	18.2	127.7				
East: Balbethan Drive (East)													
Lane 1	107	0.0	444	0.241	100	36.8	LOS D	4.3	30.3	Full	500	0.0	0.0
Lane 2	56	0.0	101	0.553	100	64.6	LOS E	3.2	22.2	Short	90	0.0	NA
Approach	163	0.0		0.553		46.3	LOS D	4.3	30.3				
North: Lancefield Road (North)													
Lane 1	20	0.0	1013	0.020	100	15.1	LOS B	0.4	3.0	Short	100	0.0	NA
Lane 2	822	0.0	949 <sup>1</sup>	0.867	100	32.8	LOS C	43.0	301.3	Short	350	0.0	NA
Lane 3	792	0.0	914 <sup>1</sup>	0.867	100	32.6	LOS C	40.8	285.3	Full	500	0.0	0.0
Lane 4	74	0.0	101	0.731	100	66.7	LOS E	4.3	30.2	Short	100	0.0	NA
Approach	1708	0.0		0.867		34.0	LOS C	43.0	301.3				
West: Balbethan Drive (West)													
Lane 1	97	0.0	375	0.259	100	38.1	LOS D	4.1	29.0	Full	500	0.0	0.0
Lane 2	81	0.6	101	0.803	100	68.6	LOS E	4.8	33.9	Short	90	0.0	NA
Lane 3	81	0.6	101	0.803	100	68.6	LOS E	4.8	33.9	Short	90	0.0	NA
Approach	259	0.4		0.803		57.2	LOS E	4.8	33.9				
Intersection	3211	0.1		0.867		32.5	LOS C	43.0	301.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

- <sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

## Site: 101 [LR-IN-03-PM Peak - 75% (Option 5) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

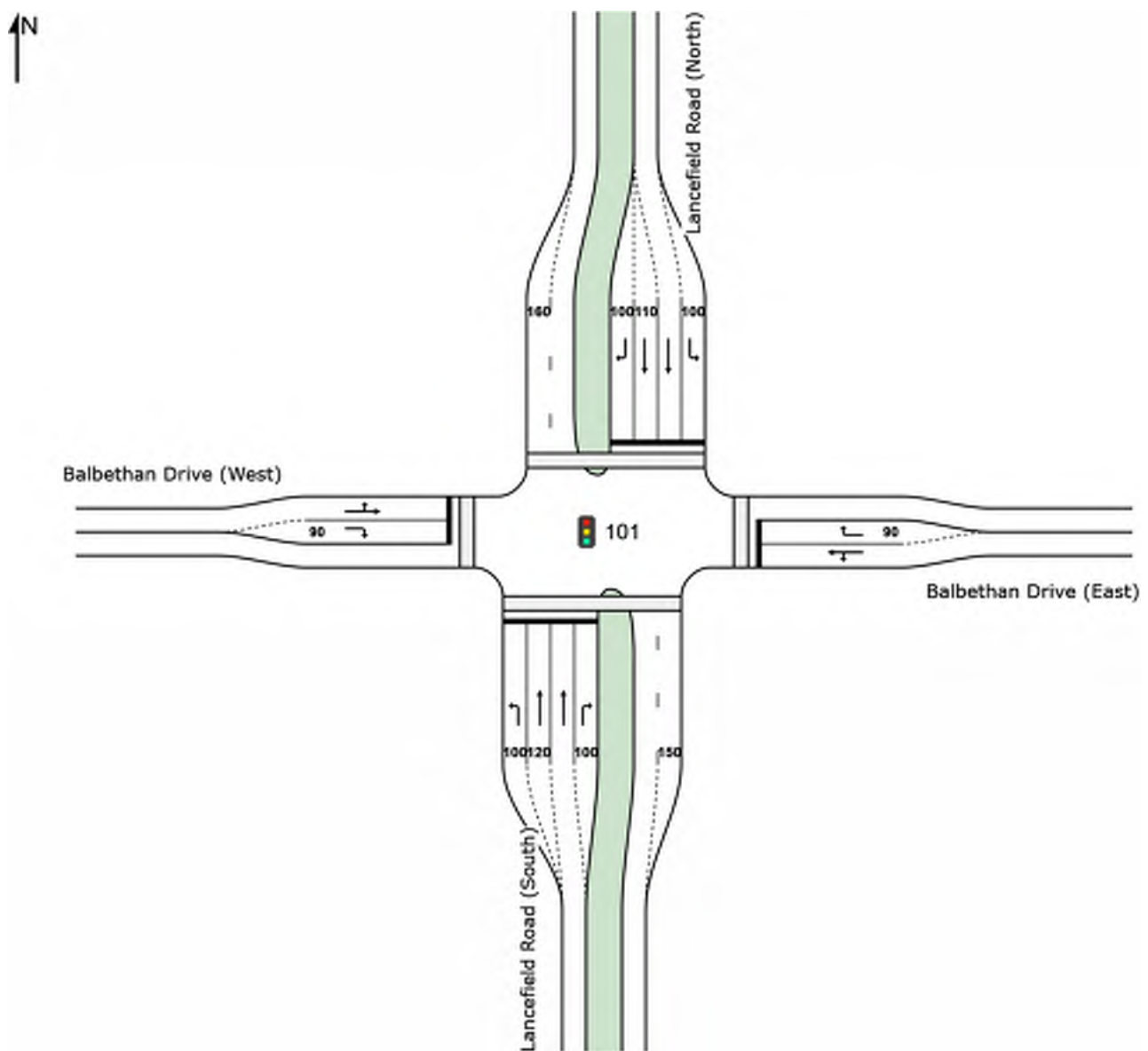
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D, D2\***

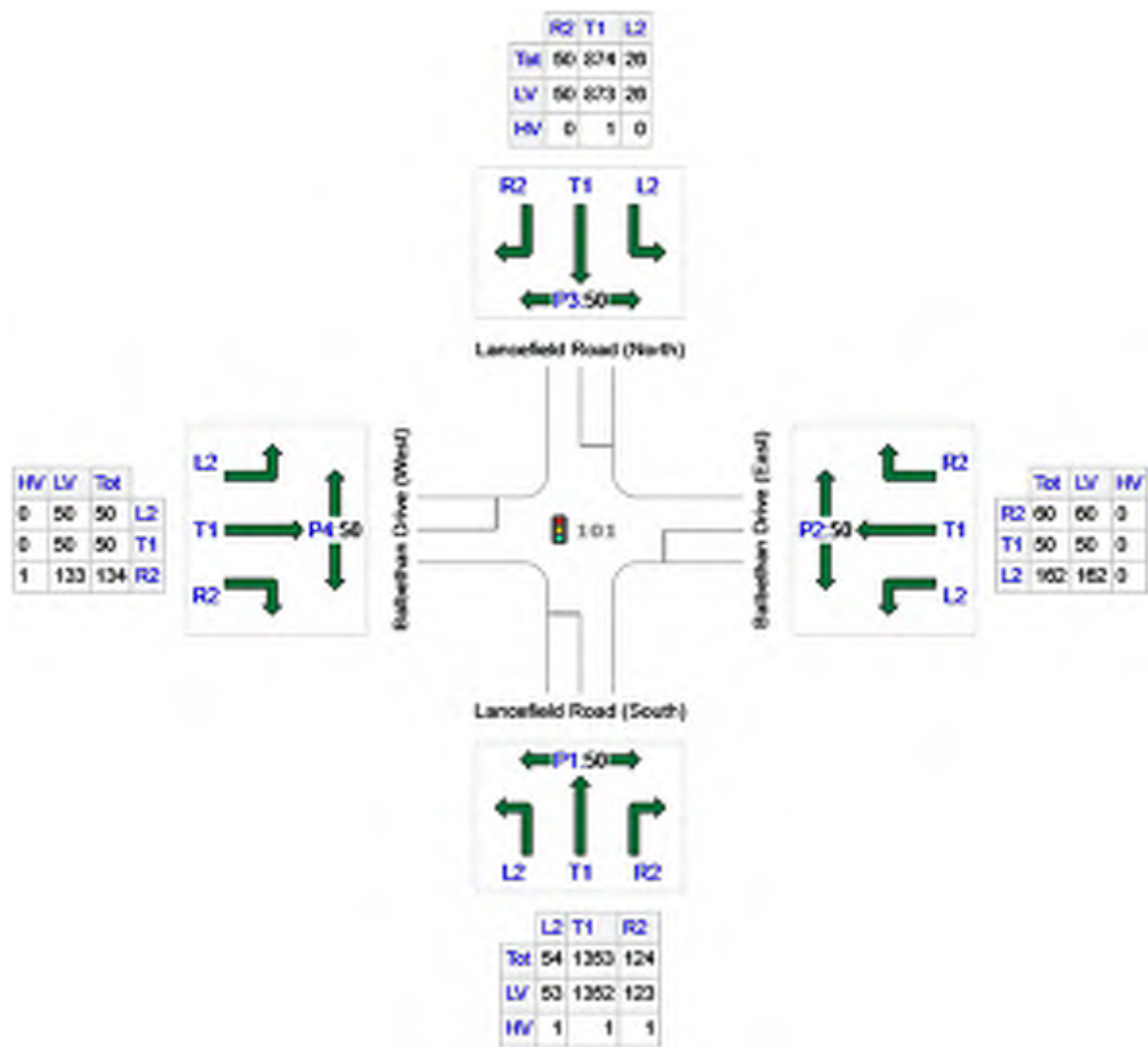
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1531	1528	3
E: Balbethan Drive (East)	272	272	0
N: Lancefield Road (North)	950	949	1
W: Balbethan Drive (West)	234	233	1
Total	2987	2982	5



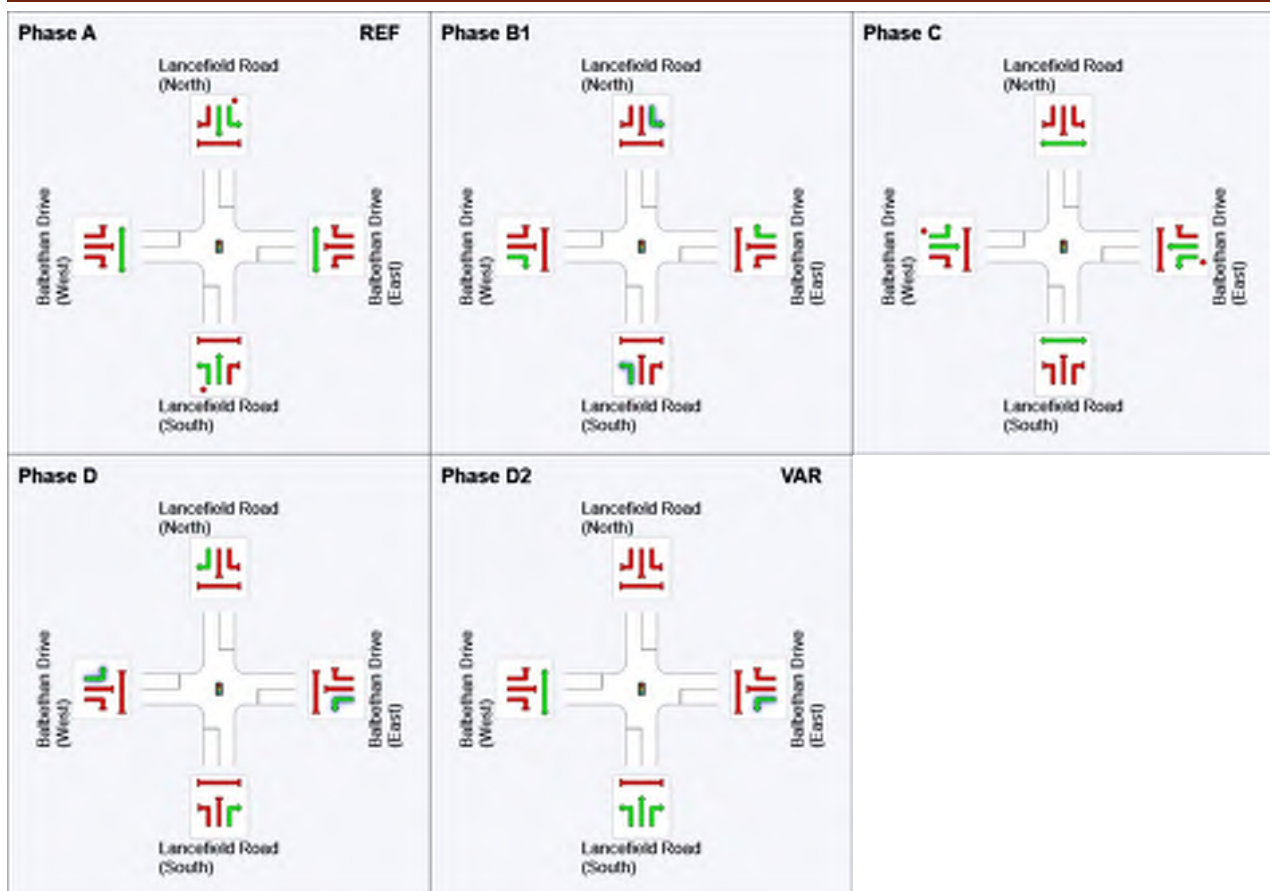
## Phase Timing Summary

Phase	A	B1	C	D	D2
Phase Change Time (sec)	0	51	66	92	104
Green Time (sec)	45	9	20	6	***
Phase Time (sec)	51	15	26	12	6
Phase Split	46%	14%	24%	11%	5%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

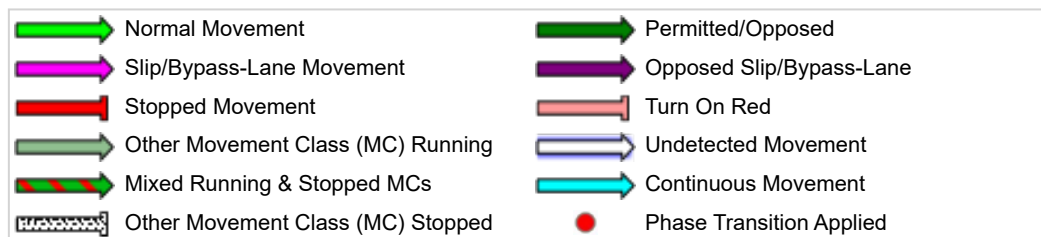
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	54	1.9	1000	0.054	100	15.3	LOS B	1.2	8.3	Short	100	0.0	NA
Lane 2	644	0.1	868 <sup>1</sup>	0.742	85 <sup>6</sup>	25.2	LOS C	27.5	192.3	Short	120	0.0	NA
Lane 3	709	0.1	814 <sup>1</sup>	0.871	100	35.3	LOS D	36.9	258.5	Full	500	0.0	0.0
Lane 4	124	0.8	201	0.616	100	58.4	LOS E	6.7	47.0	Short	100	0.0	NA
Approach	1531	0.2		0.871		32.2	LOS C	36.9	258.5				
East: Balbethan Drive (East)													
Lane 1	212	0.0	430	0.493	100	38.7	LOS D	9.3	65.0	Full	500	0.0	0.0
Lane 2	60	0.0	152	0.395	100	59.8	LOS E	3.2	22.5	Short	90	0.0	NA
Approach	272	0.0		0.493		43.4	LOS D	9.3	65.0				
North: Lancefield Road (North)													
Lane 1	26	0.0	912	0.029	100	17.9	LOS B	0.6	4.4	Short	100	0.0	NA
Lane 2	388	0.1	797	0.486	80 <sup>6</sup>	25.6	LOS C	15.2	106.8	Full	500	0.0	0.0
Lane 3	486	0.1	797	0.610	100	27.4	LOS C	20.4	143.3	Short	110	0.0	NA
Lane 4	50	0.0	101	0.494	100	64.1	LOS E	2.8	19.6	Short	100	0.0	NA
Approach	950	0.1		0.610		28.3	LOS C	20.4	143.3				
West: Balbethan Drive (West)													
Lane 1	100	0.0	376	0.266	100	38.2	LOS D	4.3	30.0	Full	500	0.0	0.0
Lane 2	134	0.7	151	0.887	100	71.1	LOS E	8.3	58.3	Short	90	0.0	NA
Approach	234	0.4		0.887		57.1	LOS E	8.3	58.3				
Intersection	2987	0.2		0.887		34.0	LOS C	36.9	258.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 101 [LR-IN-03-PM Peak - 75% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

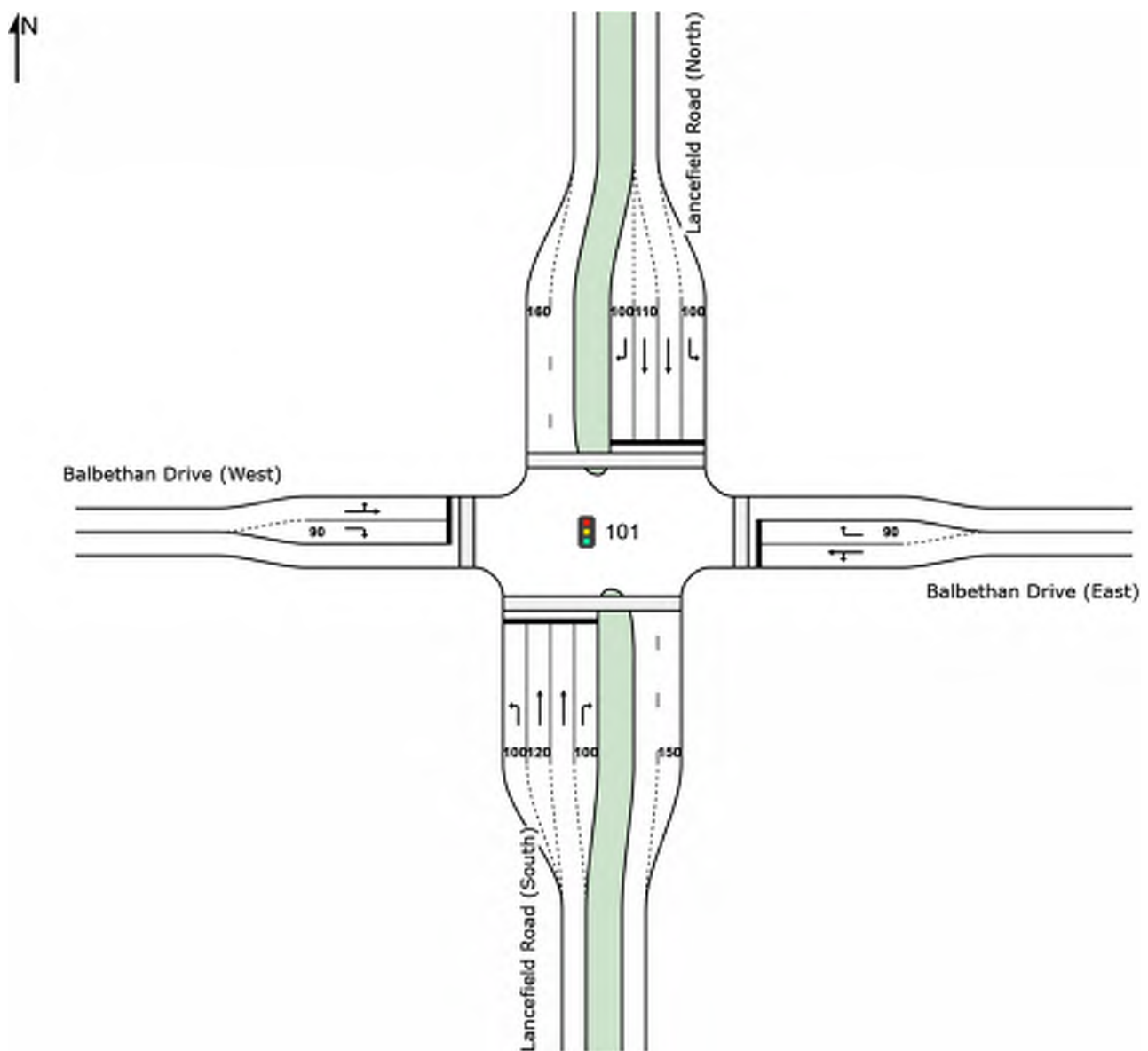
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, B3\*, C, D, D2\***

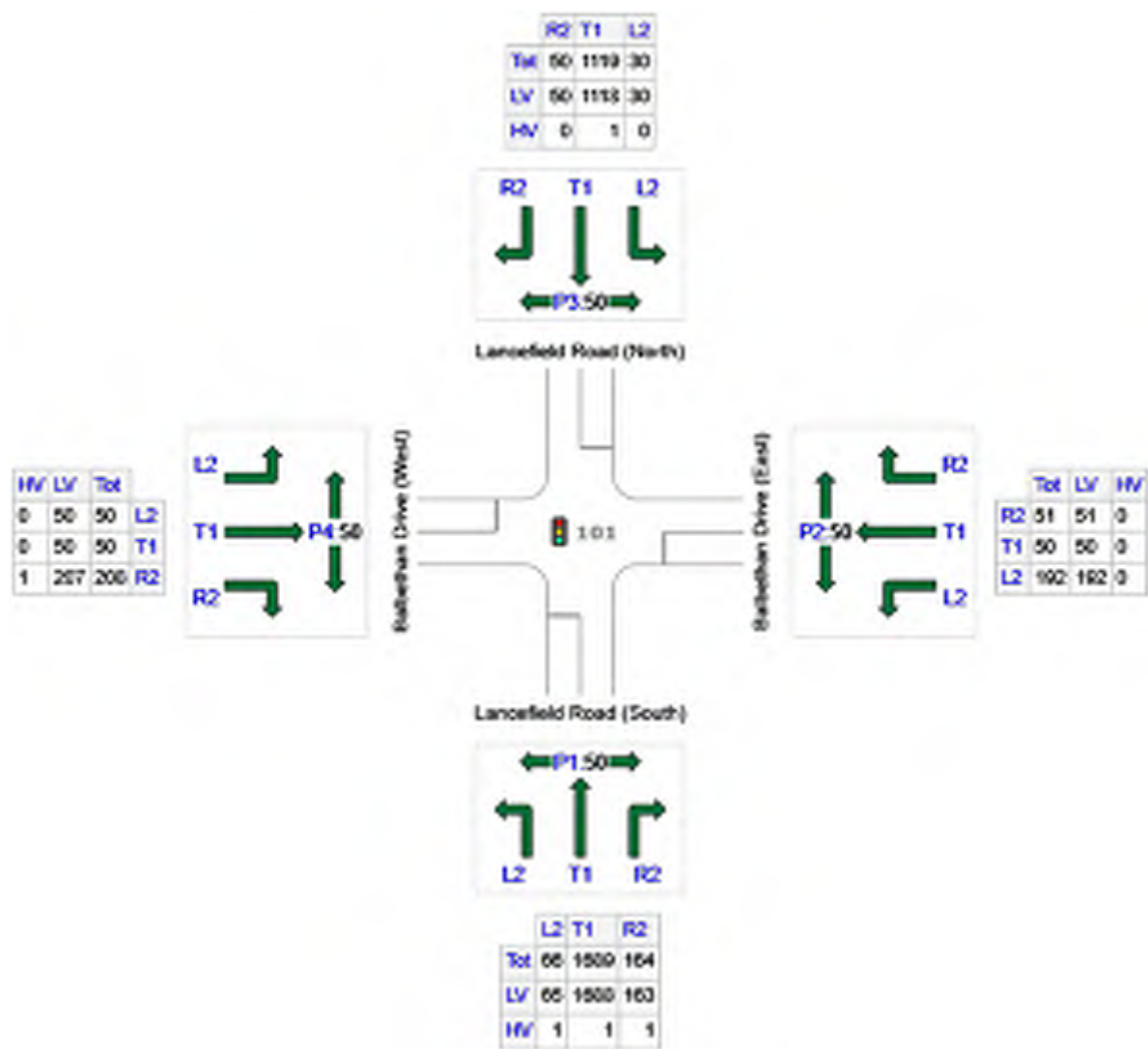
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1919	1916	3
E: Balbethan Drive (East)	293	293	0
N: Lancefield Road (North)	1199	1198	1
W: Balbethan Drive (West)	308	307	1
Total	3719	3714	5

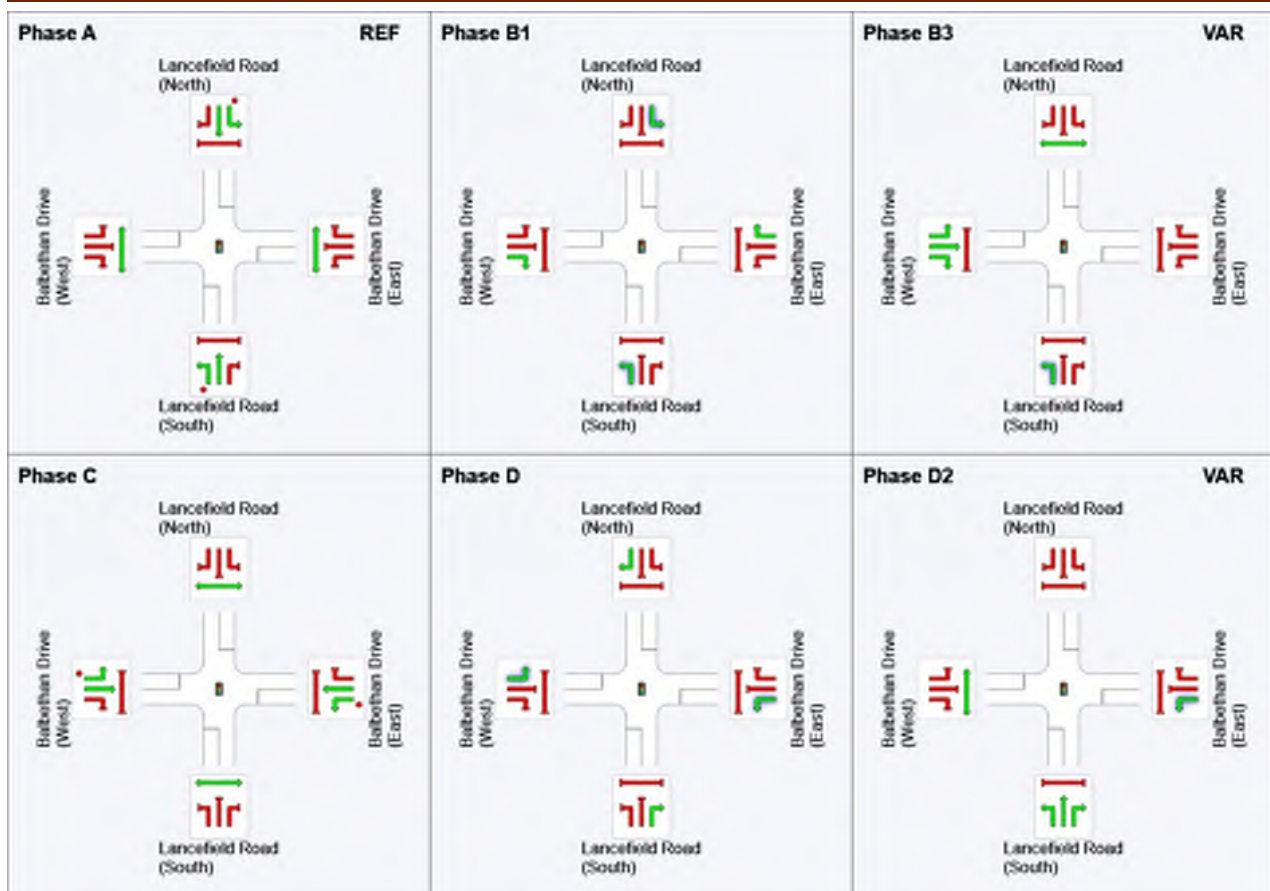
## Phase Timing Summary

Phase	A	B1	B3	C	D	D2
Phase Change Time (sec)	0	70	88	89	117	129
Green Time (sec)	64	12	***	22	6	5
Phase Time (sec)	70	18	1	28	12	11
Phase Split	50%	13%	1%	20%	9%	8%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

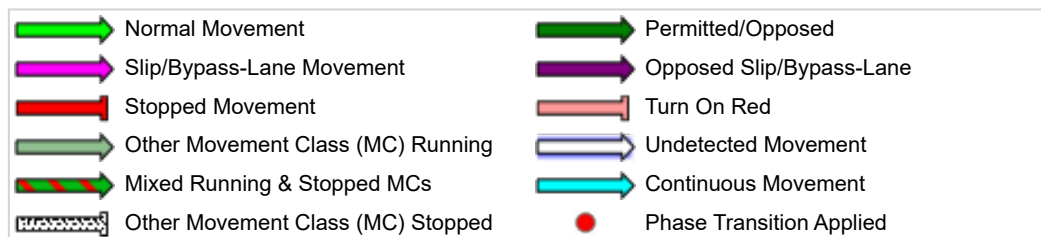
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	66	1.5	1155	0.057	100	13.9	LOS B	1.5	10.6	Short	100	0.0	NA
Lane 2	731	0.1	702 <sup>1</sup>	1.041	85 <sup>6</sup>	121.3	LOS F	83.0	581.2	Short	120	0.0	NA
Lane 3	958	0.1	783 <sup>1</sup>	1.224	100	264.6	LOS F	155.0	1085.7	Full	500	0.0	77.3
Lane 4	164	0.6	225	0.730	100	72.8	LOS E	11.3	79.8	Short	100	0.0	NA
Approach	1919	0.2		1.224		185.0	LOS F	155.0	1085.7				
East: Balbethan Drive (East)													
Lane 1	242	0.0	382	0.634	100	54.1	LOS D	14.5	101.5	Full	500	0.0	0.0
Lane 2	51	0.0	159	0.320	100	72.5	LOS E	3.4	23.7	Short	90	0.0	NA
Approach	293	0.0		0.634		57.3	LOS E	14.5	101.5				
North: Lancefield Road (North)													
Lane 1	30	0.0	1008	0.030	100	18.5	LOS B	0.8	5.9	Short	100	0.0	NA
Lane 2	535	0.1	887 <sup>1</sup>	0.603	80 <sup>6</sup>	30.1	LOS C	26.9	188.4	Full	500	0.0	0.0
Lane 3	584	0.1	772 <sup>1</sup>	0.757	100	31.2	LOS C	30.5	213.6	Short	110	0.0	NA
Lane 4	50	0.0	80	0.628	100	82.4	LOS F	3.6	25.5	Short	100	0.0	NA
Approach	1199	0.1		0.757		32.6	LOS C	30.5	213.6				
West: Balbethan Drive (West)													
Lane 1	100	0.0	336	0.297	100	51.6	LOS D	5.7	39.6	Full	500	0.0	0.0
Lane 2	208	0.5	172	1.210	100	268.6	LOS F	31.1	218.3	Short	90	0.0	NA
Approach	308	0.3		1.210		198.1	LOS F	31.1	218.3				
Intersection	3719	0.1		1.224		126.9	LOS F	155.0	1085.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 101 [LR-IN-03-PM Peak - 75% (Option 2a)- GTA Design - DRT from West]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

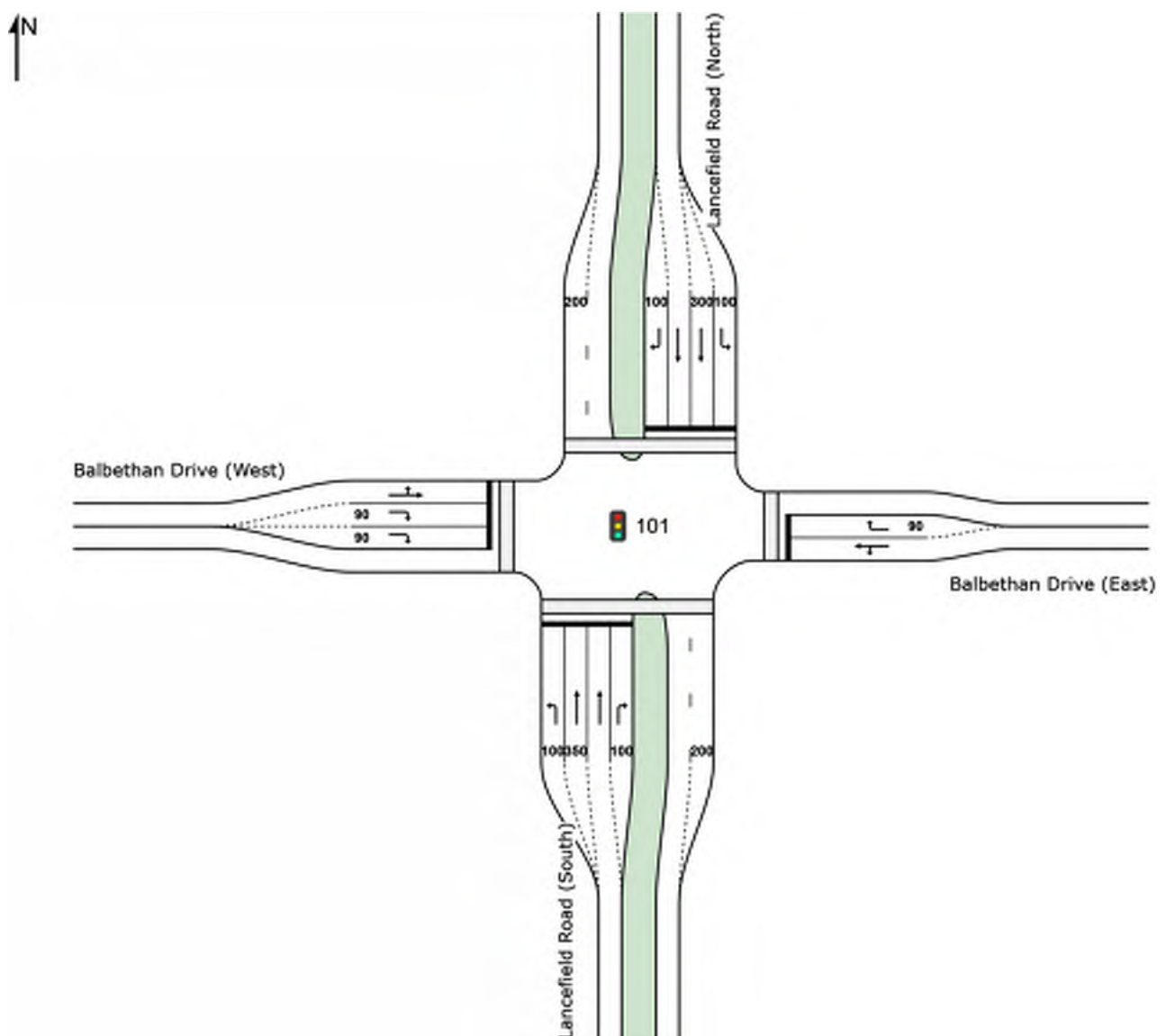
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D, D2\***

(\* Variable Phase)

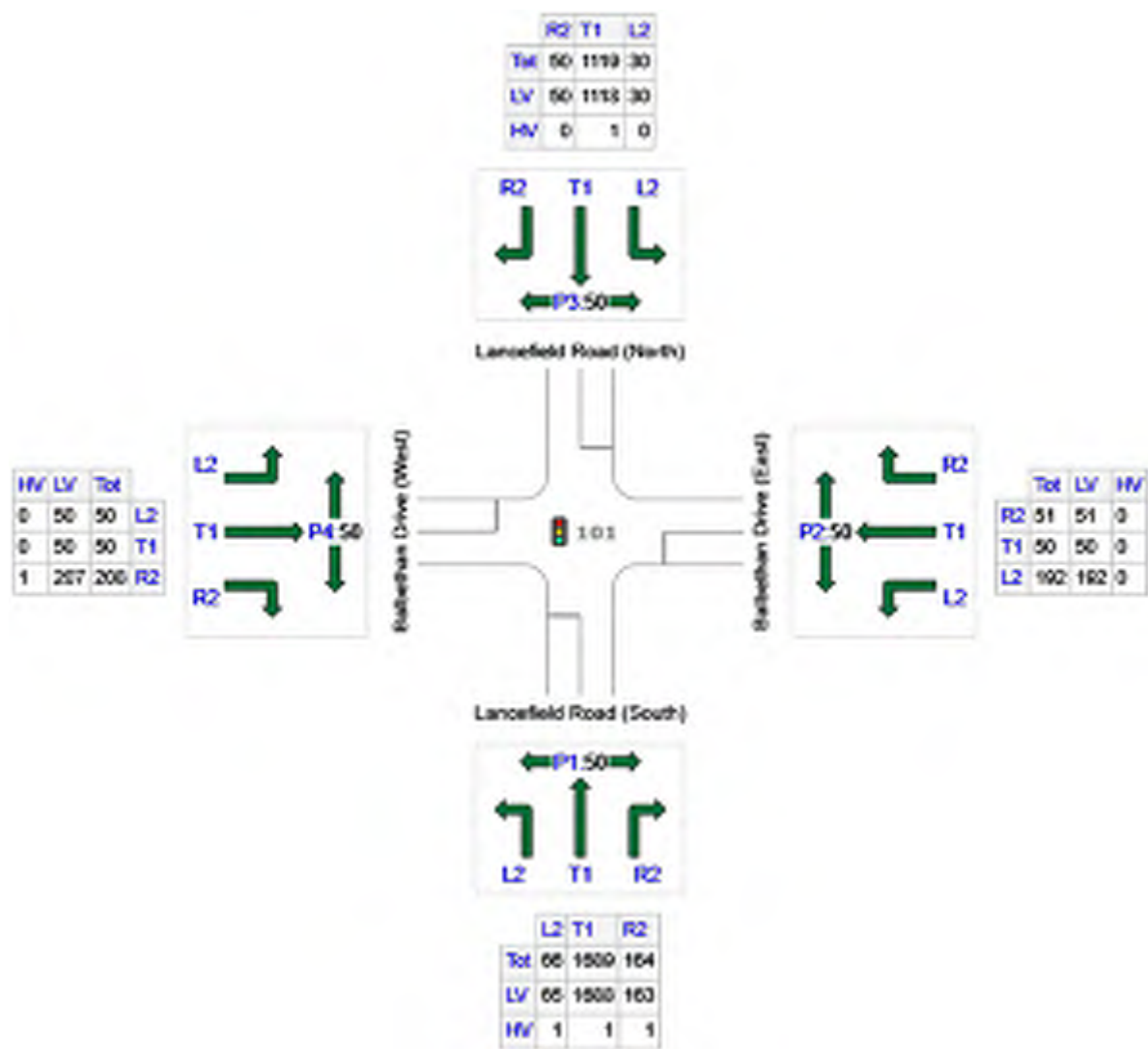
### Site Layout





Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1919	1916	3
E: Balbethan Drive (East)	293	293	0
N: Lancefield Road (North)	1199	1198	1
W: Balbethan Drive (West)	308	307	1
Total	3719	3714	5

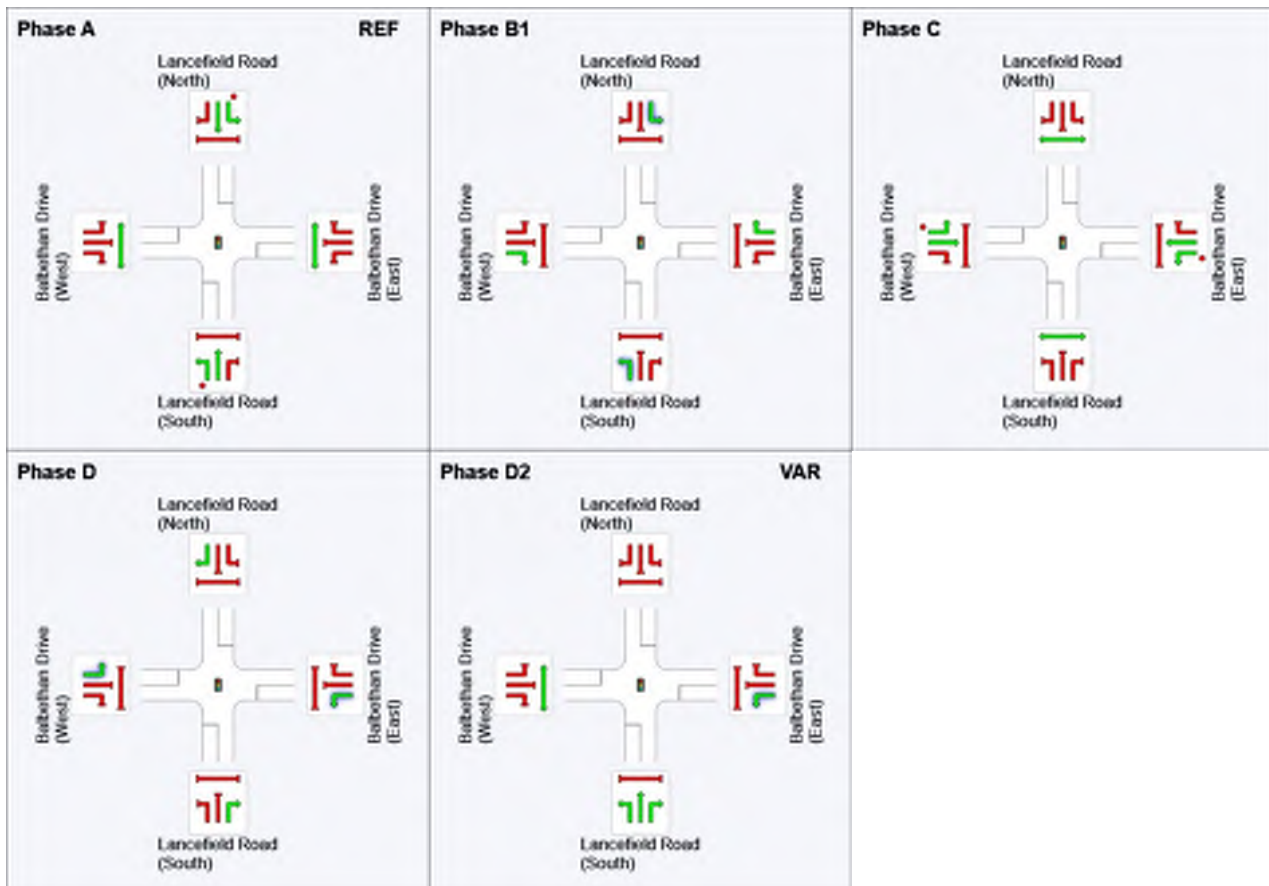


## Phase Timing Summary

Phase	A	B1	C	D	D2
Phase Change Time (sec)	0	64	79	106	118
Green Time (sec)	58	9	21	6	6
Phase Time (sec)	64	15	27	12	12
Phase Split	49%	12%	21%	9%	9%

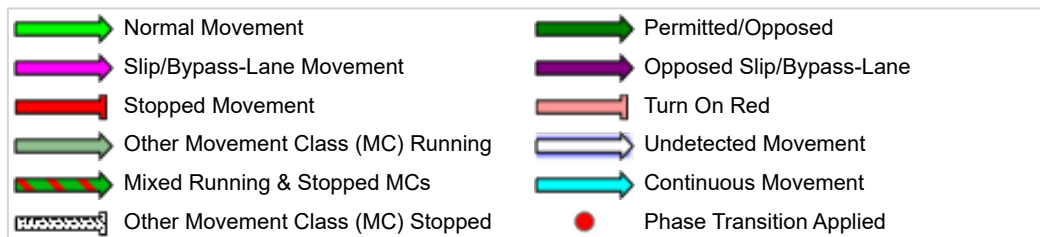
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	66	1.5	1117	0.059	100	14.2	LOS B	1.5	10.4	Short	100	0.0	NA
Lane 2	873	0.1	1001 <sup>1</sup>	0.872	100	32.0	LOS C	49.7	347.9	Short	350	0.0	NA
Lane 3	816	0.1	935 <sup>1</sup>	0.872	100	31.8	LOS C	45.0	315.1	Full	500	0.0	0.0
Lane 4	164	0.6	256	0.641	100	64.1	LOS E	10.1	71.1	Short	100	0.0	NA
Approach	1919	0.2		0.872		34.0	LOS C	49.7	347.9				
East: Balbethan Drive (East)													
Lane 1	242	0.0	398	0.608	100	49.3	LOS D	13.3	93.0	Full	500	0.0	0.0
Lane 2	51	0.0	129	0.397	100	71.0	LOS E	3.2	22.7	Short	90	0.0	NA
Approach	293	0.0		0.608		53.1	LOS D	13.3	93.0				
North: Lancefield Road (North)													
Lane 1	30	0.0	957	0.031	100	19.0	LOS B	0.8	5.8	Short	100	0.0	NA
Lane 2	571	0.1	864 <sup>1</sup>	0.661	100	30.0	LOS C	28.0	196.5	Short	300	0.0	NA
Lane 3	548	0.1	828 <sup>1</sup>	0.661	100	29.5	LOS C	26.4	185.1	Full	500	0.0	0.0
Lane 4	50	0.0	86	0.583	100	76.3	LOS E	3.4	23.5	Short	100	0.0	NA
Approach	1199	0.1		0.661		31.4	LOS C	28.0	196.5				
West: Balbethan Drive (West)													
Lane 1	100	0.0	333	0.301	100	48.1	LOS D	5.3	36.9	Full	500	0.0	0.0
Lane 2	104	0.5	128	0.812	100	77.4	LOS E	7.2	50.4	Short	90	0.0	NA
Lane 3	104	0.5	128	0.812	100	77.4	LOS E	7.2	50.4	Short	90	0.0	NA
Approach	308	0.3		0.812		67.9	LOS E	7.2	50.4				
Intersection	3719	0.1		0.872		37.5	LOS D	49.7	347.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

- <sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

## **Site: 105 [SS-IN-03-AM Peak - 75% (Option 5) - PSP Interim Design ]**

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New Site

Site Category: (None)

Signals - Fixed Time Isolated    Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

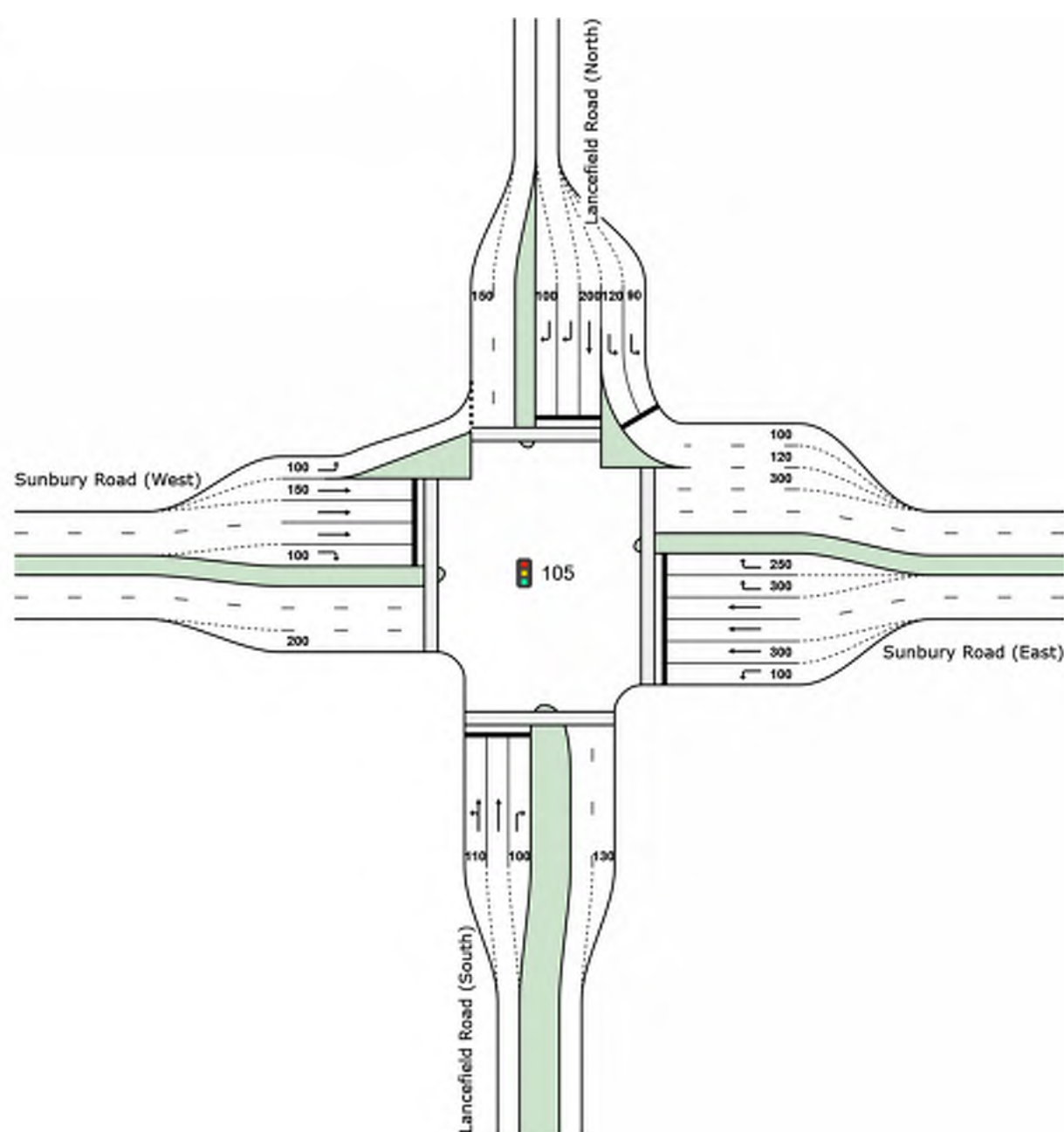
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D1\***

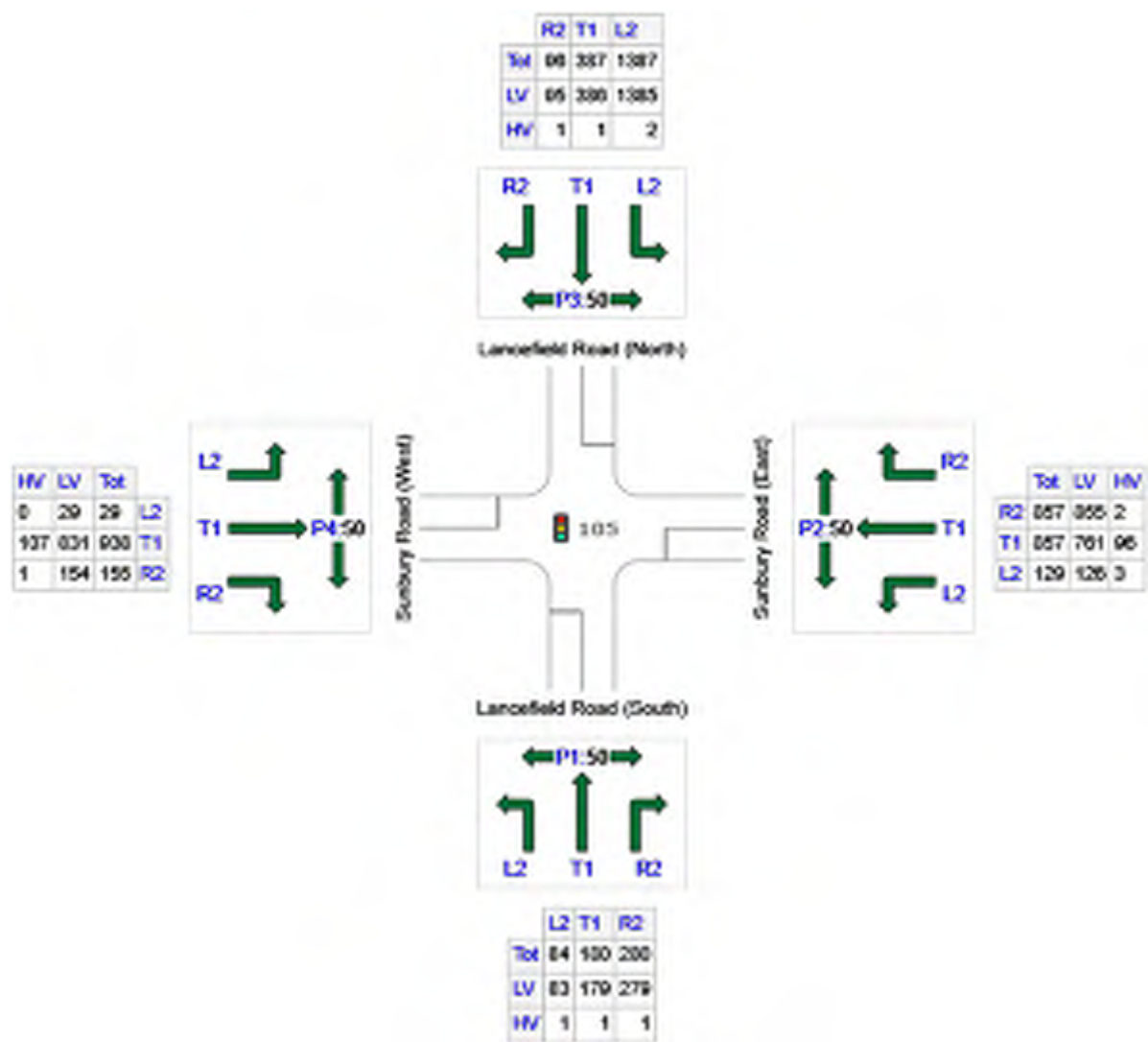
(\* Variable Phase)

### **Site Layout**



Input Volumes

Volume Display Method: Separate



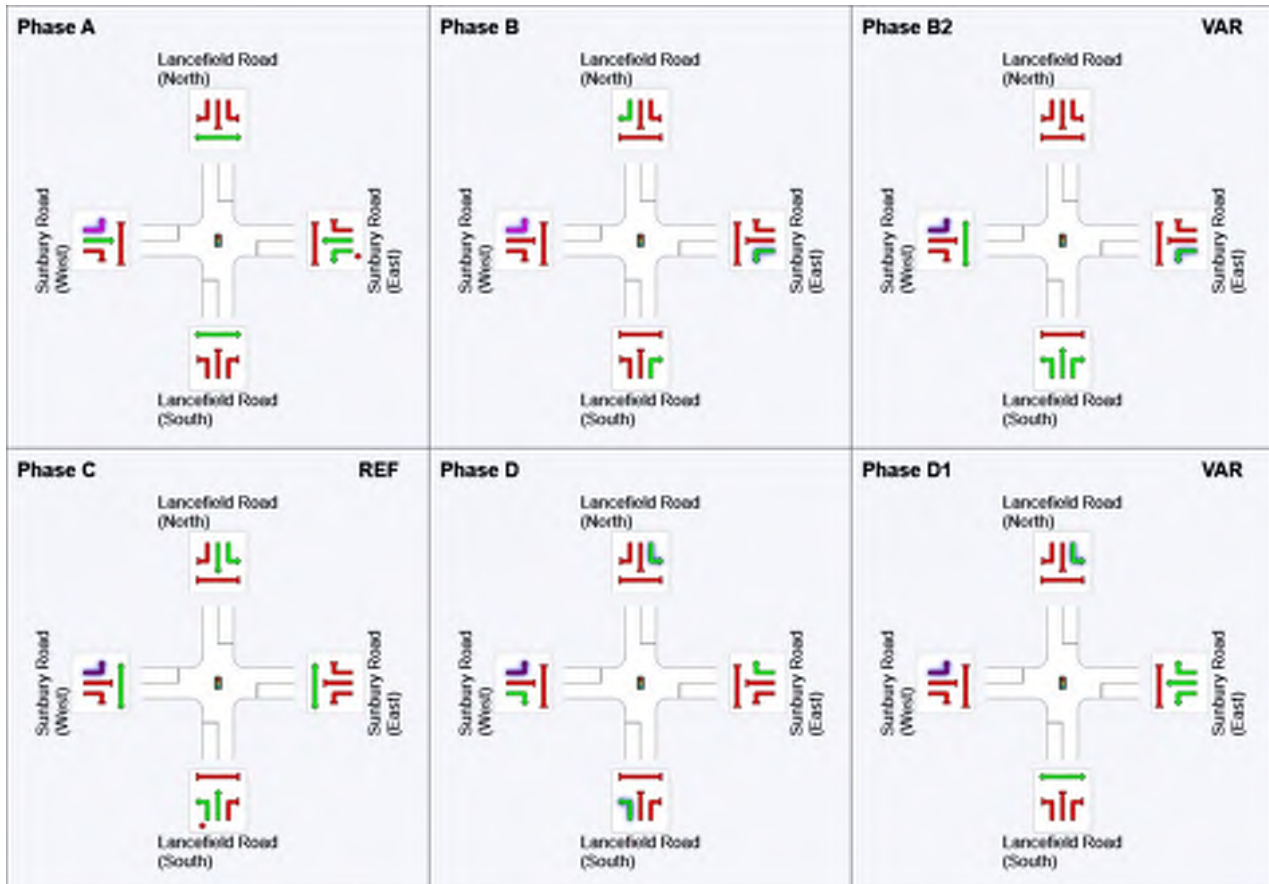
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	544	541	3
E: Sunbury Road (East)	1843	1742	101
N: Lancefield Road (North)	1870	1866	4
W: Sunbury Road (West)	1122	1014	108
Total	5379	5163	216

## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	85	114	126	0	39	63
Green Time (sec)	23	6	8	33	18	16
Phase Time (sec)	29	12	14	39	24	22
Phase Split	21%	9%	10%	28%	17%	16%

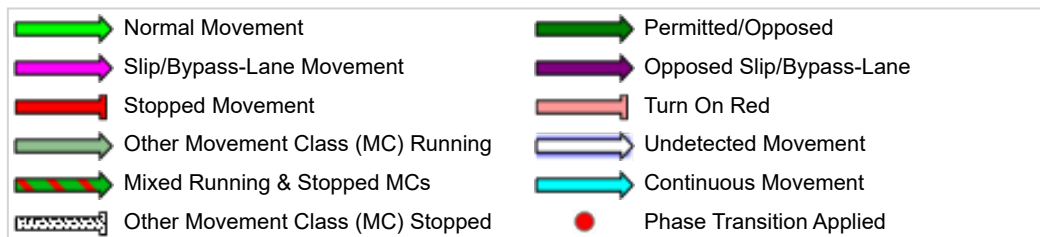
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	130	1.0	676	0.193	94 <sup>6</sup>	31.8	LOS C	5.6	39.5	Short	110	0.0	NA
Lane 2	134	0.6	652	0.205	100	35.2	LOS D	6.4	45.1	Full	500	0.0	0.0
Lane 3	280	0.4	265	1.058	100	150.3	LOS F	30.5	214.0	Short	100	0.0	NA
Approach	544	0.6		1.058		93.6	LOS F	30.5	214.0				
East: Sunbury Road (East)													
Lane 1	129	2.3	848	0.152	100	25.2	LOS C	4.6	33.0	Short	100	0.0	NA
Lane 2	286	11.2	584	0.489	100	40.9	LOS D	15.6	119.8	Short	300	0.0	NA
Lane 3	286	11.2	584	0.489	100	40.9	LOS D	15.6	119.8	Full	500	0.0	0.0
Lane 4	286	11.2	584	0.489	100	40.9	LOS D	15.6	119.8	Full	500	0.0	0.0
Lane 5	405	0.2	530	0.764	89 <sup>6</sup>	55.8	LOS E	25.6	179.8	Short	300	0.0	NA
Lane 6	452	0.2	530	0.854	100	63.4	LOS E	31.8	222.8	Short	250	0.0	NA
Approach	1843	5.5		0.854		48.6	LOS D	31.8	222.8				
North: Lancefield Road (North)													
Lane 1	633	0.1	703 <sup>1</sup>	0.899	86 <sup>6</sup>	44.6	LOS D	36.6	256.2	Short	90	0.0	NA
Lane 2	754	0.1	720 <sup>1</sup>	1.047	100	130.1	LOS F	87.4	612.6	Short	120	0.0	NA
Lane 3	387	0.3	459	0.843	100	61.1	LOS E	27.2	190.8	Short	200	0.0	NA
Lane 4	48	1.0	79	0.608	100	82.3	LOS F	3.5	24.6	Full	500	0.0	23.4 <sup>8</sup>
Lane 5	48	1.0	79	0.608	100	82.3	LOS F	3.5	24.6	Short	100	0.0	NA
Approach	1870	0.2		1.047		84.4	LOS F	87.4	612.6				
West: Sunbury Road (West)													
Lane 1	29	0.0	1062	0.027	100	12.2	LOS B	0.6	4.1	Short	100	0.0	NA
Lane 2	313	11.4	298	1.048	100	138.1	LOS F	33.5	257.1	Short	150	0.0	NA
Lane 3	313	11.4	298	1.048	100	138.1	LOS F	33.5	257.1	Full	500	0.0	0.0
Lane 4	313	11.4	298	1.048	100	138.1	LOS F	33.5	257.1	Full	500	0.0	0.0
Lane 5	155	0.6	238	0.652	100	69.9	LOS E	10.4	72.9	Short	100	0.0	NA
Approach	1122	9.6		1.048		125.4	LOS F	33.5	257.1				
Intersection	5379	4.0		1.058		81.6	LOS F	87.4	612.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>8</sup> Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

## **Site: 105 [SS-IN-03-AM Peak - 75% (Option 2a) - PSP Interim Design]**

---

New Site

Site Category: (None)

Signals - Fixed Time Isolated   Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

**Reference Phase: Phase C**

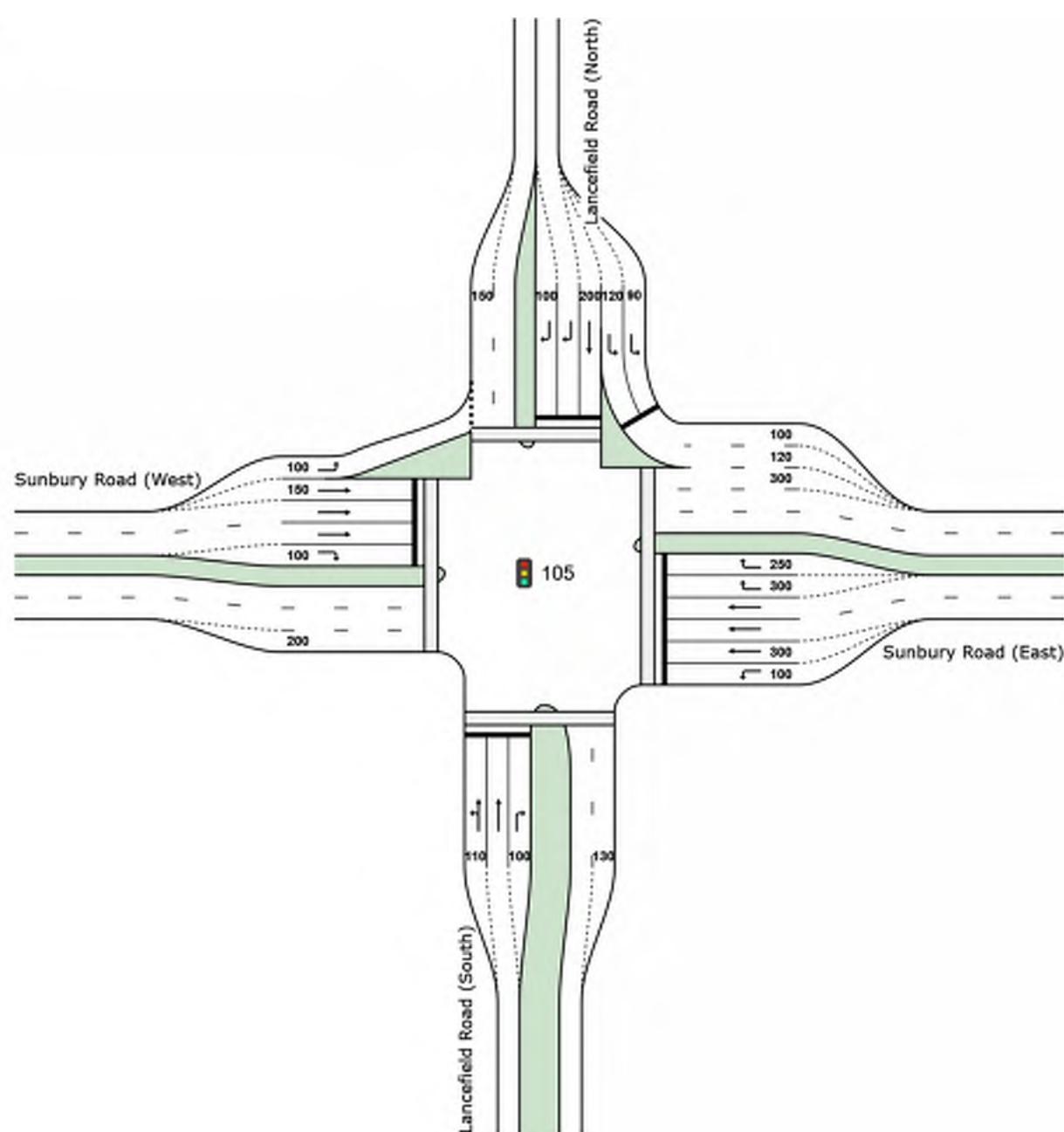
**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

(\* Variable Phase)

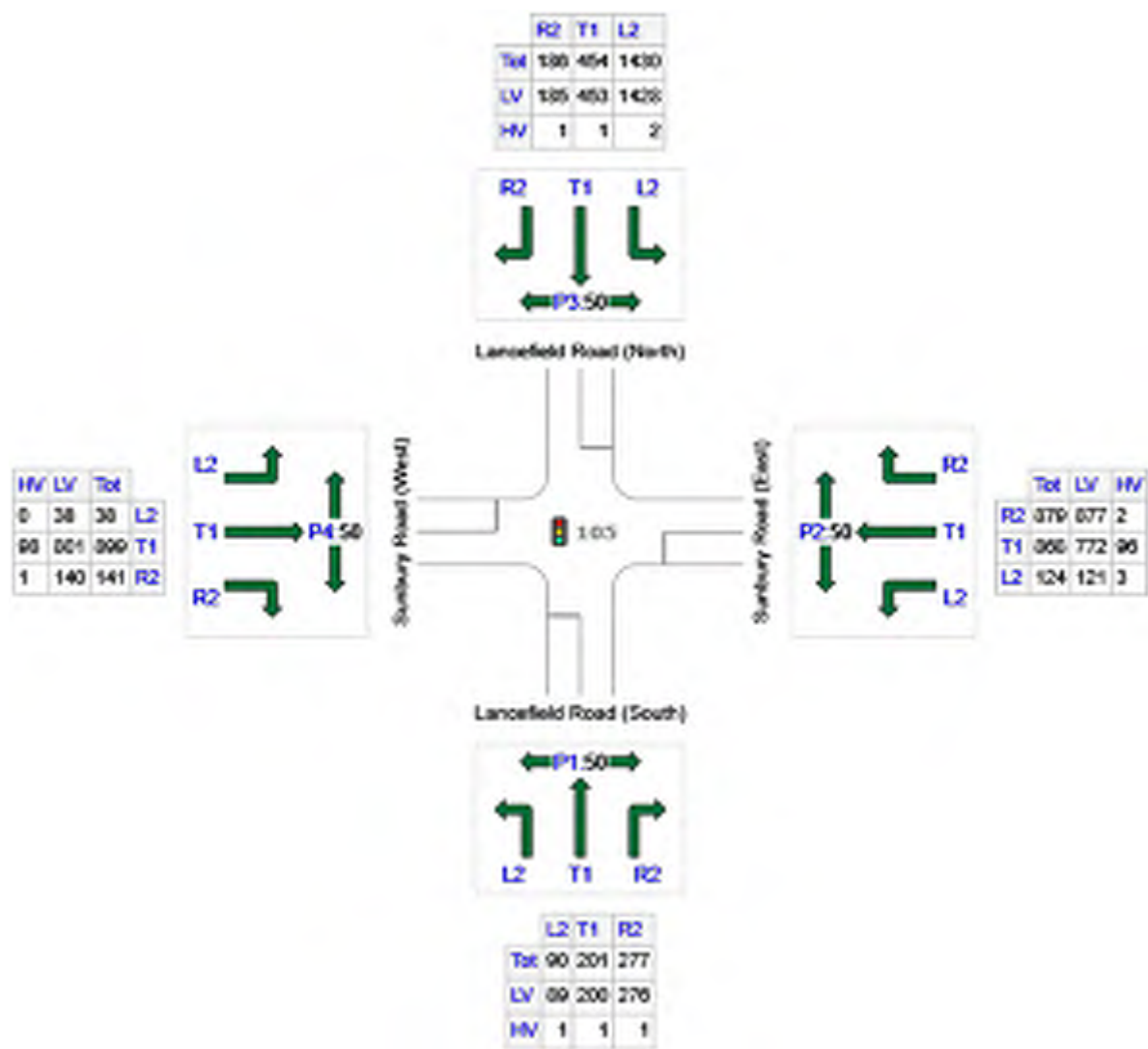
### **Site Layout**





Input Volumes

Volume Display Method: Separate



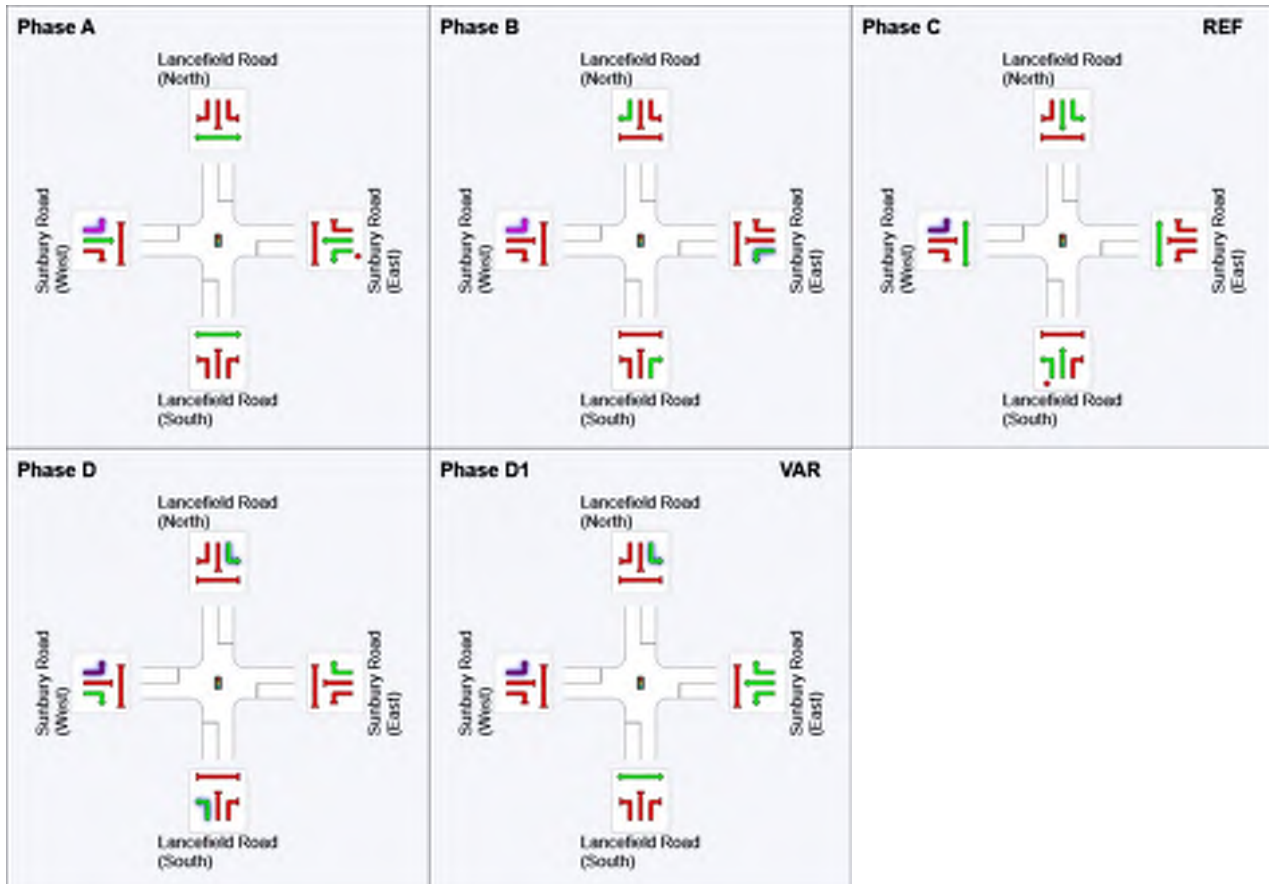
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	568	565	3
E: Sunbury Road (East)	1871	1770	101
N: Lancefield Road (North)	2070	2066	4
W: Sunbury Road (West)	1078	979	99
Total	5587	5380	207

## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	86	114	0	42	64
Green Time (sec)	22	20	36	16	16
Phase Time (sec)	28	26	42	22	22
Phase Split	20%	19%	30%	16%	16%

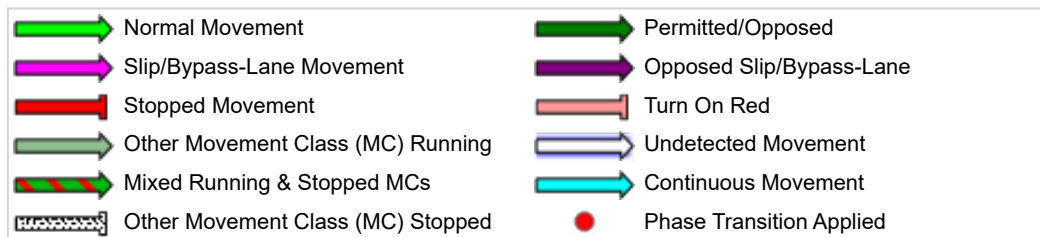
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	145	0.9	525	0.276	94 <sup>6</sup>	40.3	LOS D	7.2	50.5	Short	110	0.0	NA
Lane 2	146	0.5	500	0.293	100	44.7	LOS D	8.0	56.1	Full	500	0.0	0.0
Lane 3	277	0.4	265	1.047	100	142.9	LOS F	29.3	205.8	Short	100	0.0	NA
Approach	568	0.5		1.047		91.4	LOS F	29.3	205.8				
East: Sunbury Road (East)													
Lane 1	124	2.4	835	0.149	100	25.7	LOS C	4.5	32.1	Short	100	0.0	NA
Lane 2	289	11.1	572	0.506	100	41.9	LOS D	16.0	122.8	Short	300	0.0	NA
Lane 3	289	11.1	572	0.506	100	41.9	LOS D	16.0	122.8	Full	500	0.0	0.0
Lane 4	289	11.1	572	0.506	100	41.9	LOS D	16.0	122.8	Full	500	0.0	0.0
Lane 5	415	0.2	503	0.825	89 <sup>6</sup>	61.7	LOS E	28.2	198.1	Short	300	0.0	NA
Lane 6	464	0.2	503	0.922	100	77.4	LOS E	36.9	258.5	Short	250	0.0	NA
Approach	1871	5.4		0.922		54.0	LOS D	36.9	258.5				
North: Lancefield Road (North)													
Lane 1	639	0.1	691 <sup>1</sup>	0.925	86 <sup>6</sup>	52.6	LOS D	40.0	280.1	Short	90	0.0	NA
Lane 2	791	0.1	734 <sup>1</sup>	1.078	100	151.6	LOS F	98.3	688.9	Short	120	0.0	NA
Lane 3	454	0.2	501	0.907	100	68.6	LOS E	34.8	244.3	Short	200	0.0	NA
Lane 4	93	0.5	264	0.352	100	64.8	LOS E	5.8	40.9	Full	500	0.0	34.2 <sup>8</sup>
Lane 5	93	0.5	264	0.352	100	64.8	LOS E	5.8	40.9	Short	100	0.0	NA
Approach	2070	0.2		1.078		95.0	LOS F	98.3	688.9				
West: Sunbury Road (West)													
Lane 1	38	0.0	1081	0.035	100	13.3	LOS B	0.8	5.8	Short	100	0.0	NA
Lane 2	300	10.9	286	1.047	100	137.5	LOS F	31.9	244.2	Short	150	0.0	NA
Lane 3	300	10.9	286	1.047	100	137.5	LOS F	31.9	244.2	Full	500	0.0	0.0
Lane 4	300	10.9	286	1.047	100	137.5	LOS F	31.9	244.2	Full	500	0.0	0.0
Lane 5	141	0.7	211	0.668	100	72.1	LOS E	9.6	67.5	Short	100	0.0	NA
Approach	1078	9.2		1.047		124.6	LOS F	31.9	244.2				
Intersection	5587	3.7		1.078		86.6	LOS F	98.3	688.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>8</sup> Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

## **Site: 105 [SS-IN-03-AM Peak - 75% (Option 2a) - GTA Design]**

---

New Site

Site Category: (None)

Signals - Fixed Time Isolated   Cycle Time = 100 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

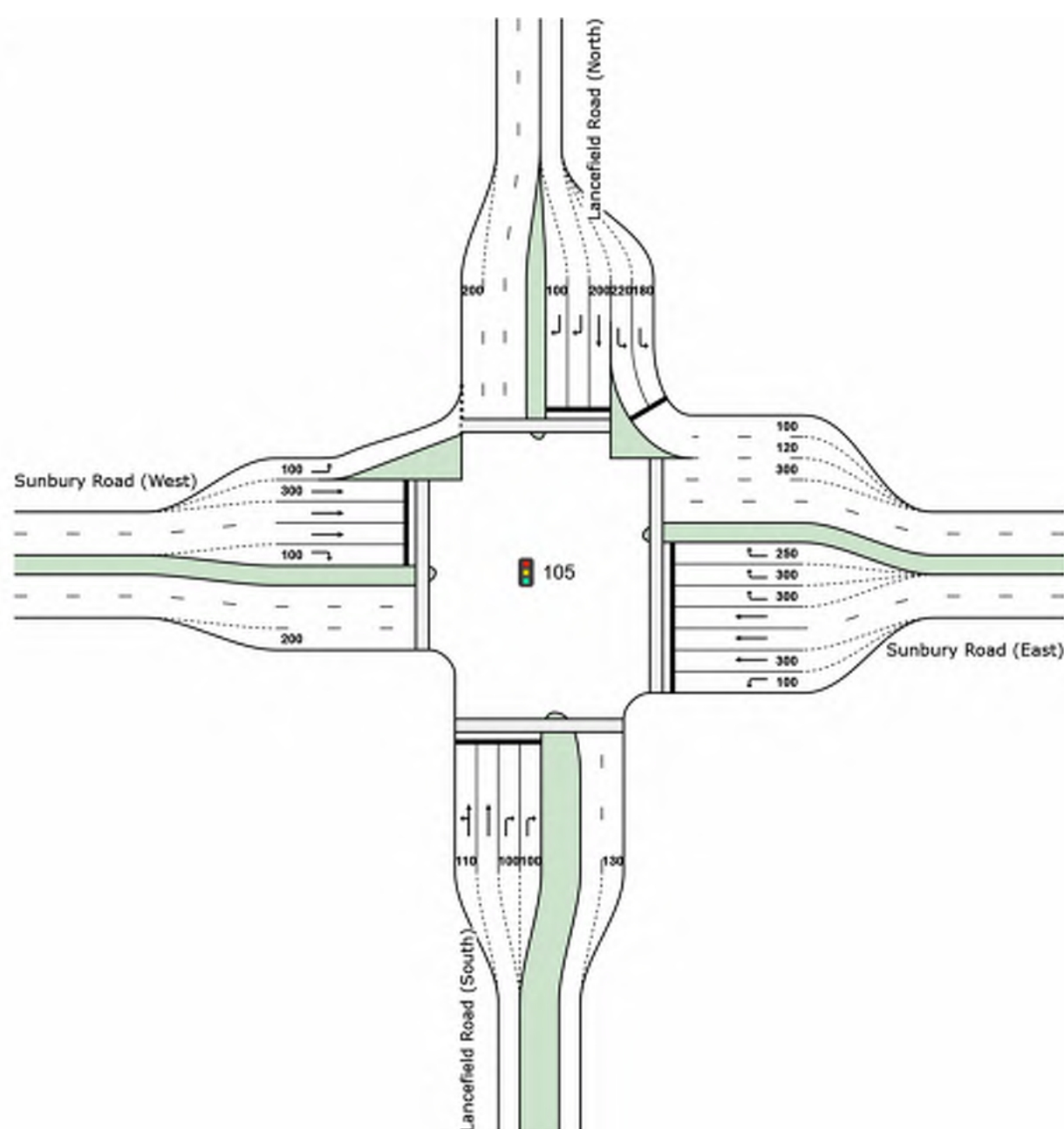
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

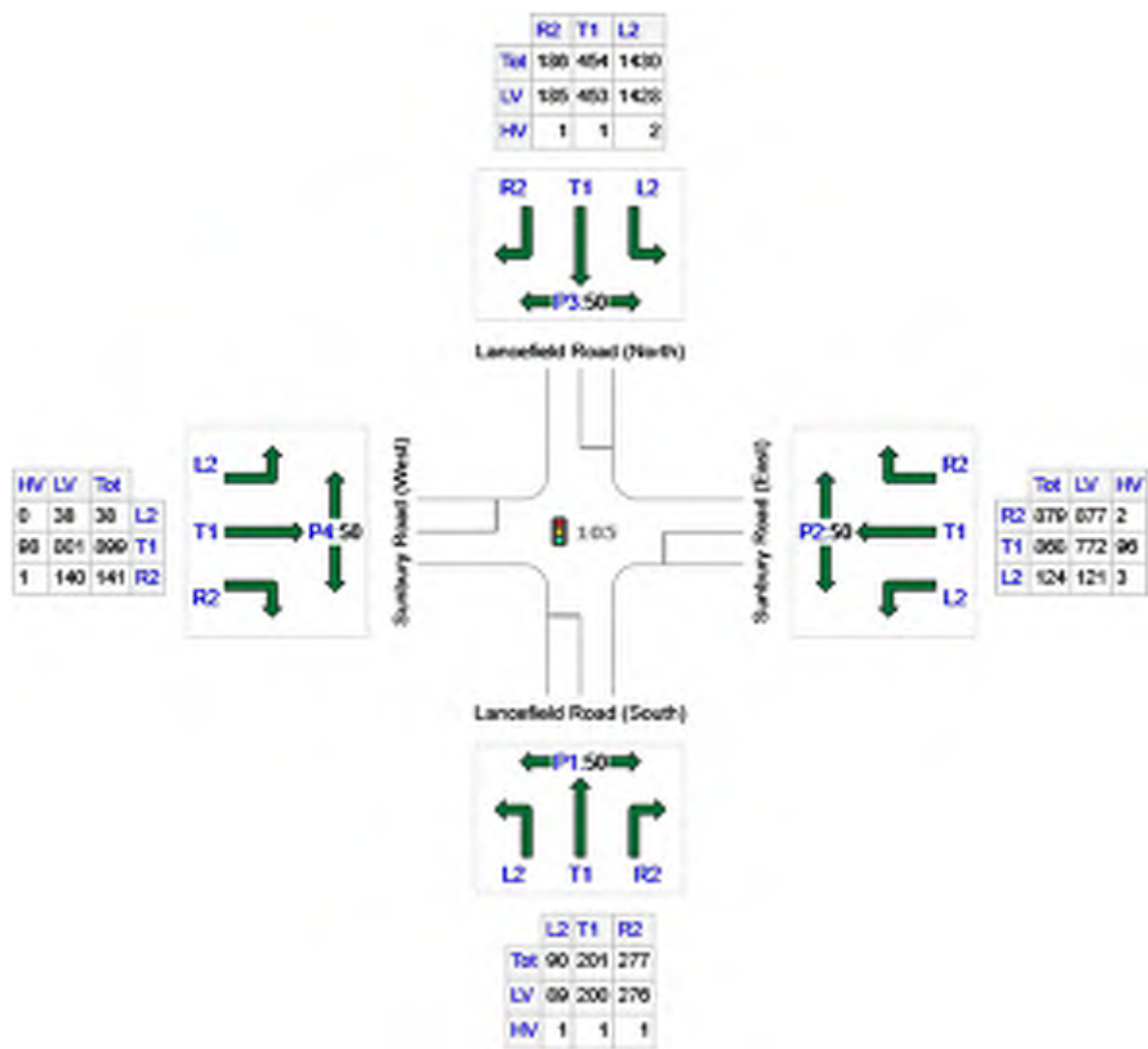
(\* Variable Phase)

### **Site Layout**



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	568	565	3
E: Sunbury Road (East)	1871	1770	101
N: Lancefield Road (North)	2070	2066	4
W: Sunbury Road (West)	1078	979	99
Total	5587	5380	207

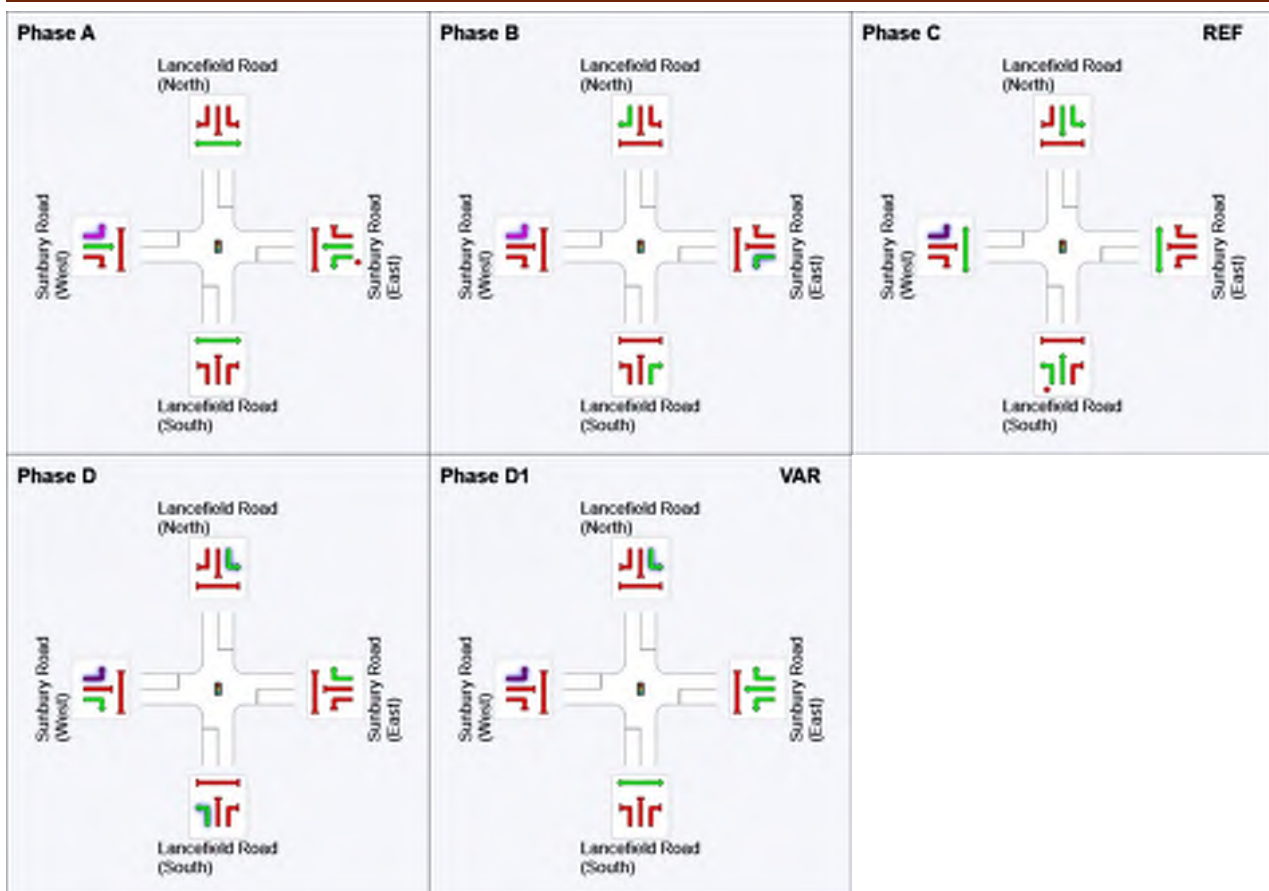
## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	60	85	0	36	54
Green Time (sec)	19	9	30	12	***
Phase Time (sec)	25	15	36	18	6
Phase Split	25%	15%	36%	18%	6%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

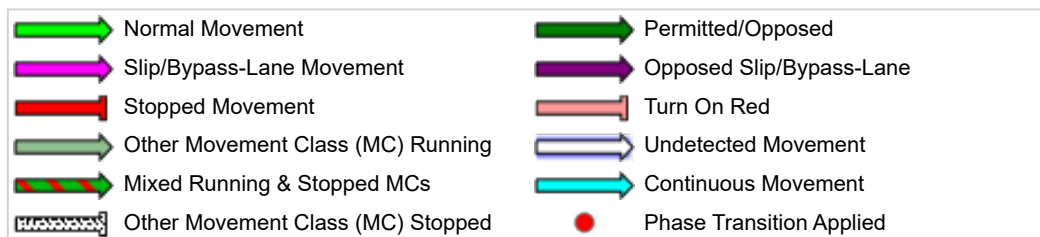
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	150	0.9	617	0.242	100	25.4	LOS C	4.8	34.2	Short	110	0.0	NA
Lane 2	141	0.5	583	0.242	100	28.4	LOS C	5.2	36.6	Full	500	0.0	0.0
Lane 3	139	0.4	167	0.831	100	61.4	LOS E	7.5	52.6	Short	100	0.0	NA
Lane 4	139	0.4	167	0.831	100	61.4	LOS E	7.5	52.6	Short	100	0.0	NA
Approach	568	0.5		0.831		43.7	LOS D	7.5	52.6				
East: Sunbury Road (East)													
Lane 1	124	2.4	621	0.200	100	26.8	LOS C	3.9	28.1	Short	100	0.0	NA
Lane 2	289	11.1	455	0.636	100	36.6	LOS D	12.8	98.0	Short	300	0.0	NA
Lane 3	289	11.1	455	0.636	100	36.6	LOS D	12.8	98.0	Full	500	0.0	0.0
Lane 4	289	11.1	455	0.636	100	36.6	LOS D	12.8	98.0	Full	500	0.0	0.0
Lane 5	293	0.2	334	0.878	100	59.4	LOS E	16.3	114.4	Short	300	0.0	NA
Lane 6	293	0.2	334	0.878	100	59.4	LOS E	16.3	114.4	Short	300	0.0	NA
Lane 7	293	0.2	334	0.878	100	59.4	LOS E	16.3	114.4	Short	250	0.0	NA
Approach	1871	5.4		0.878		46.7	LOS D	16.3	114.4				
North: Lancefield Road (North)													
Lane 1	661	0.1	1002	0.659	86 <sup>6</sup>	23.2	LOS C	22.9	160.2	Short	180	0.0	NA
Lane 2	769	0.1	1002	0.768	100	24.9	LOS C	29.3	205.4	Short	220	0.0	NA
Lane 3	454	0.2	584	0.777	100	36.9	LOS D	21.3	149.3	Short	200	0.0	NA
Lane 4	93	0.5	167	0.559	100	55.3	LOS E	4.6	32.4	Full	500	0.0	0.0
Lane 5	93	0.5	167	0.559	100	55.3	LOS E	4.6	32.4	Short	100	0.0	NA
Approach	2070	0.2		0.777		29.7	LOS C	29.3	205.4				
West: Sunbury Road (West)													
Lane 1	38	0.0	1194	0.032	100	8.7	LOS A	0.4	3.0	Short	100	0.0	NA
Lane 2	300	10.9	346	0.866	100	52.0	LOS D	16.4	125.7	Short	300	0.0	NA
Lane 3	300	10.9	346	0.866	100	52.0	LOS D	16.4	125.7	Full	500	0.0	0.0
Lane 4	300	10.9	346	0.866	100	52.0	LOS D	16.4	125.7	Full	500	0.0	0.0
Lane 5	141	0.7	222	0.636	100	53.2	LOS D	6.9	48.6	Short	100	0.0	NA
Approach	1078	9.2		0.866		50.6	LOS D	16.4	125.7				
Intersection	5587	3.7		0.878		40.9	LOS D	29.3	205.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## **Site: 105 [SS-IN-03-PM Peak - 75% (Option 5) - PSP Interim Design ]**

---

New Site

Site Category: (None)

Signals - Fixed Time Isolated    Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

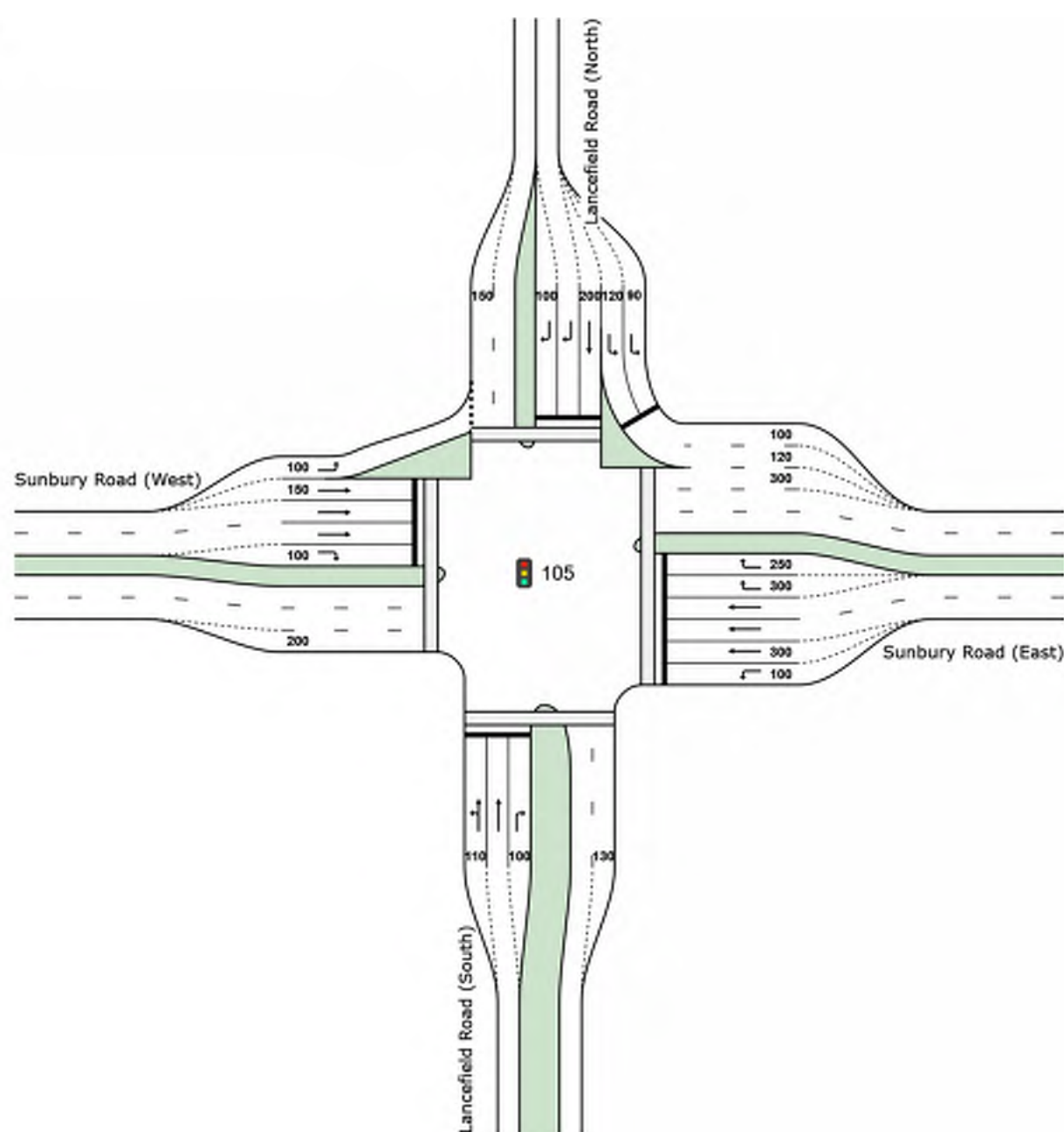
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D1\***

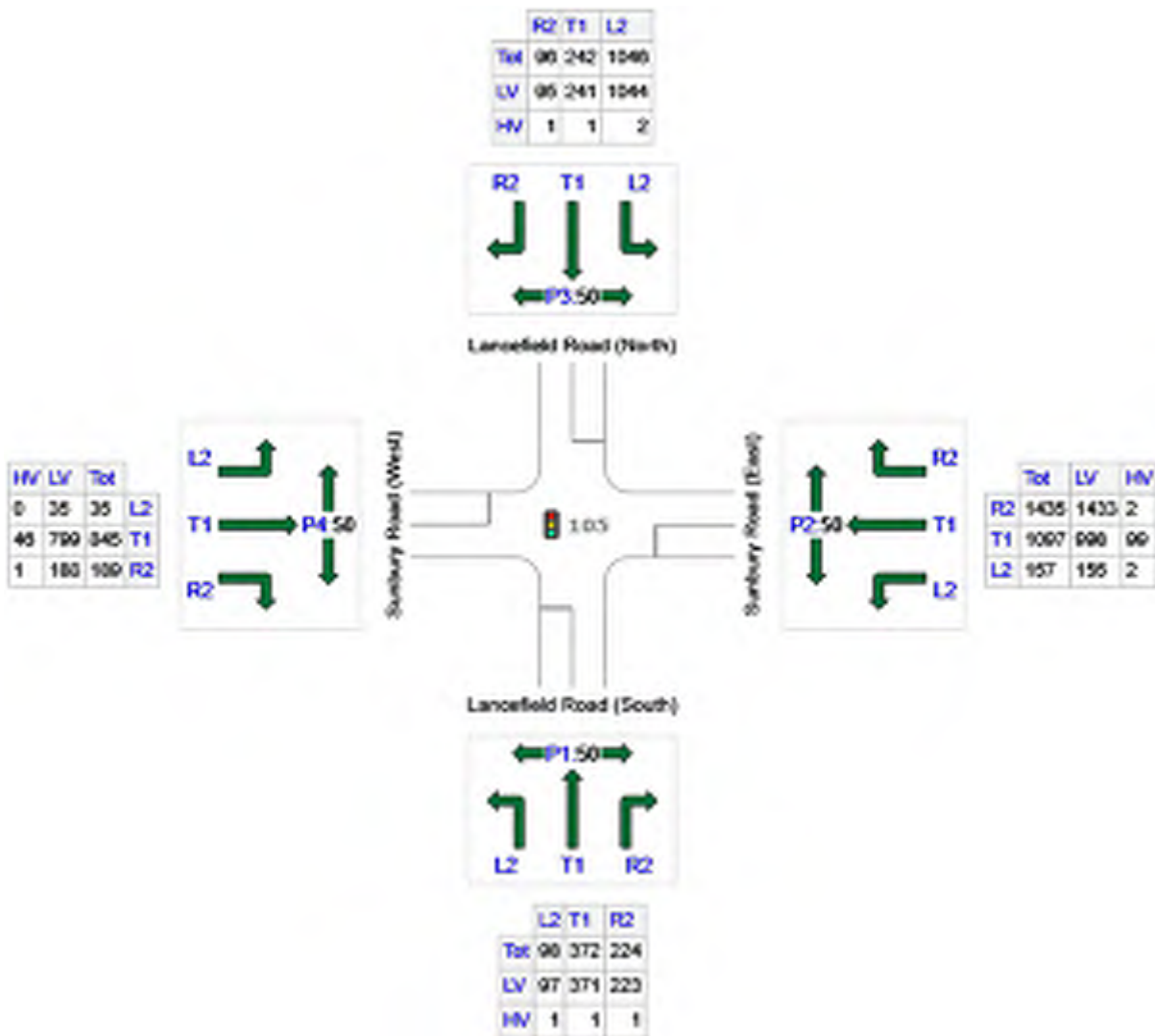
(\* Variable Phase)

### **Site Layout**



## Input Volumes

Volume Display Method: Separate



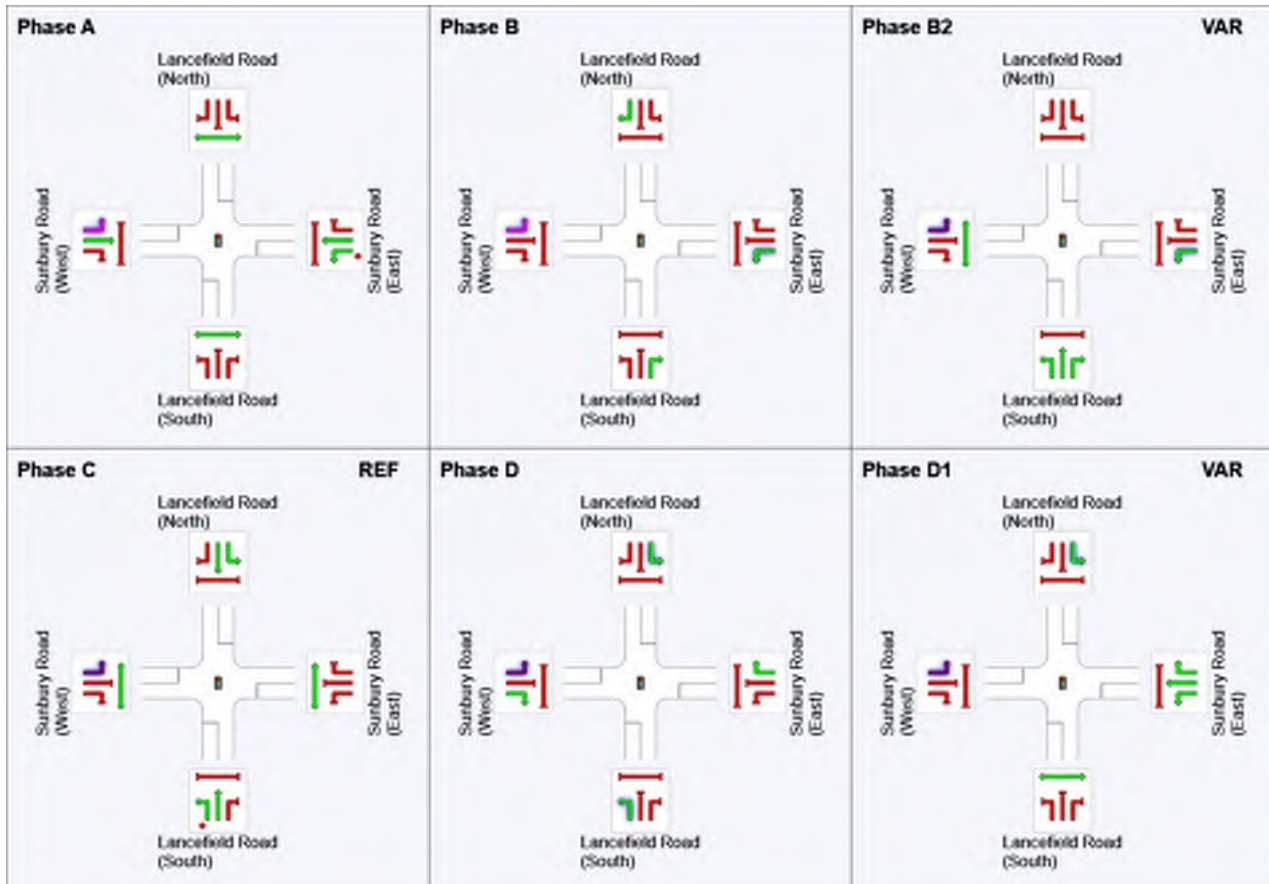
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	694	691	3
E: Sunbury Road (East)	2689	2586	103
N: Lancefield Road (North)	1384	1380	4
W: Sunbury Road (West)	1069	1022	47
Total	5836	5679	157

## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	94	119	133	0	38	67
Green Time (sec)	19	8	1	32	23	21
Phase Time (sec)	25	14	7	38	29	27
Phase Split	18%	10%	5%	27%	21%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	229	0.6	549	0.418	94 <sup>6</sup>	40.2	LOS D	11.8	82.9	Short	110	0.0	NA
Lane 2	241	0.3	542	0.444	100	44.5	LOS D	13.5	94.4	Full	500	0.0	0.0
Lane 3	224	0.4	198	1.129	100	203.3	LOS F	28.6	201.0	Short	100	0.0	NA
Approach	694	0.4		1.129		94.3	LOS F	28.6	201.0				
East: Sunbury Road (East)													
Lane 1	157	1.3	802	0.196	100	27.9	LOS C	6.0	42.8	Short	100	0.0	NA
Lane 2	366	9.0	605	0.604	100	42.1	LOS D	20.8	156.9	Short	300	0.0	NA
Lane 3	366	9.0	605	0.604	100	42.1	LOS D	20.8	156.9	Full	500	0.0	0.0
Lane 4	366	9.0	605	0.604	100	42.1	LOS D	20.8	156.9	Full	500	0.0	39.0 <sup>8</sup>
Lane 5	678	0.1	663	1.023	89 <sup>6</sup>	117.5	LOS F	69.9	489.9	Short	300	0.0	NA
Lane 6	757	0.1	663	1.143	100	206.4	LOS F	103.5	725.7	Short	250	0.0	NA
Approach	2689	3.8		1.143		106.6	LOS F	103.5	725.7				
North: Lancefield Road (North)													
Lane 1	483	0.2	1166	0.415	86 <sup>6</sup>	19.4	LOS B	16.2	113.6	Short	90	0.0	NA
Lane 2	563	0.2	1166	0.483	100	20.2	LOS C	20.0	140.6	Short	120	0.0	NA
Lane 3	242	0.4	445	0.544	100	51.3	LOS D	14.6	102.5	Short	200	0.0	NA
Lane 4	48	1.0	105	0.456	100	78.3	LOS E	3.4	23.7	Full	500	0.0	0.0
Lane 5	48	1.0	105	0.456	100	78.3	LOS E	3.4	23.7	Short	100	0.0	NA
Approach	1384	0.3		0.544		29.4	LOS C	20.0	140.6				
West: Sunbury Road (West)													
Lane 1	35	0.0	818	0.043	100	23.8	LOS C	1.2	8.3	Short	100	0.0	NA
Lane 2	282	5.4	256	1.102	100	176.1	LOS F	34.0	249.1	Short	150	0.0	NA
Lane 3	282	5.4	256	1.102	100	176.1	LOS F	34.0	249.1	Full	500	0.0	0.0
Lane 4	282	5.4	256	1.102	100	176.1	LOS F	34.0	249.1	Full	500	0.0	0.0
Lane 5	189	0.5	304	0.622	100	65.1	LOS E	12.2	85.8	Short	100	0.0	NA
Approach	1069	4.4		1.102		151.5	LOS F	34.0	249.1				
Intersection	5836	2.7		1.143		95.0	LOS F	103.5	725.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>8</sup> Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

## **Site: 105 [SS-IN-03-PM Peak - 75% (Option 2a) - PSP Interim Design ]**

---

New Site

Site Category: (None)

Signals - Fixed Time Isolated    Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

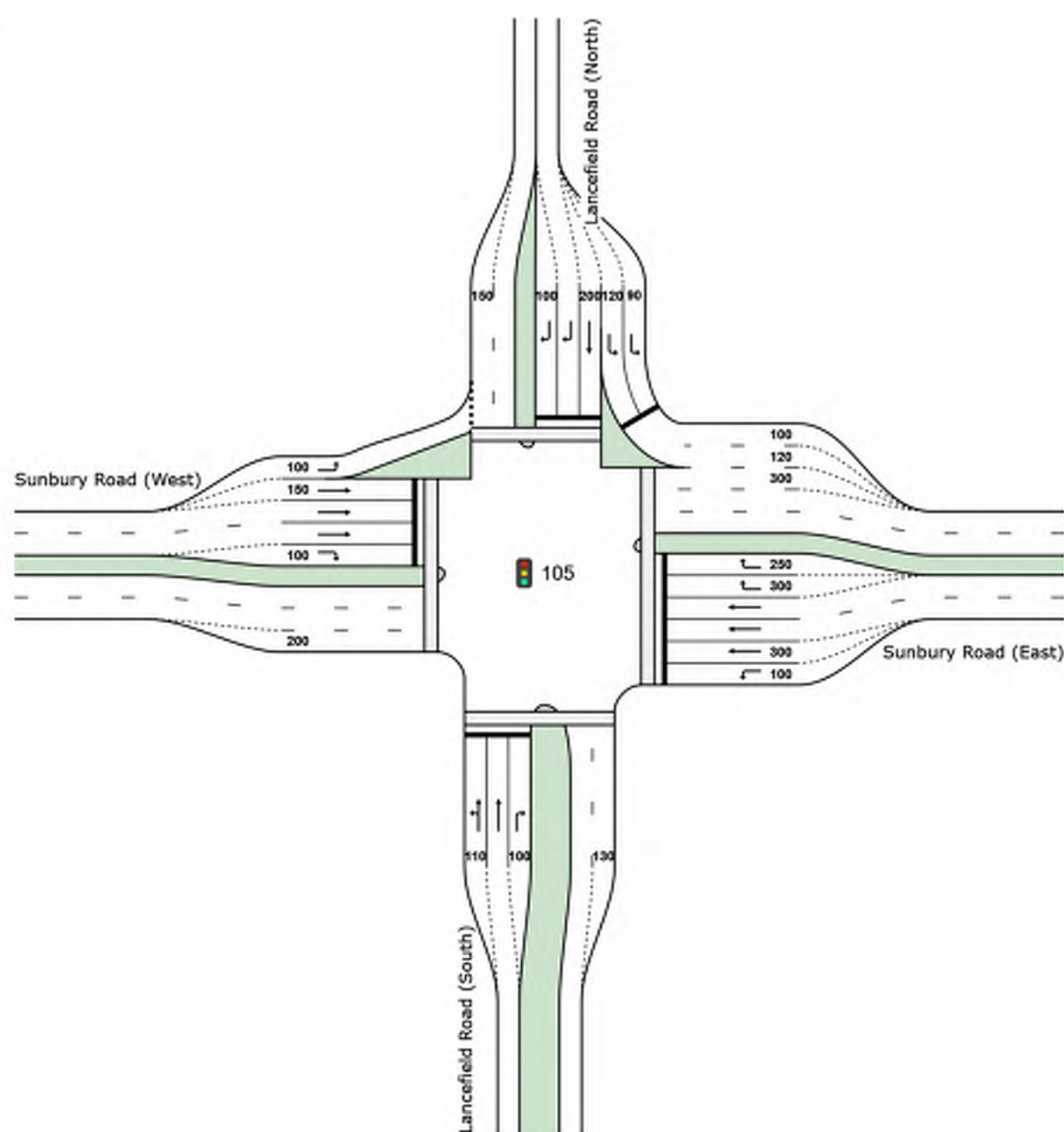
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

(\* Variable Phase)

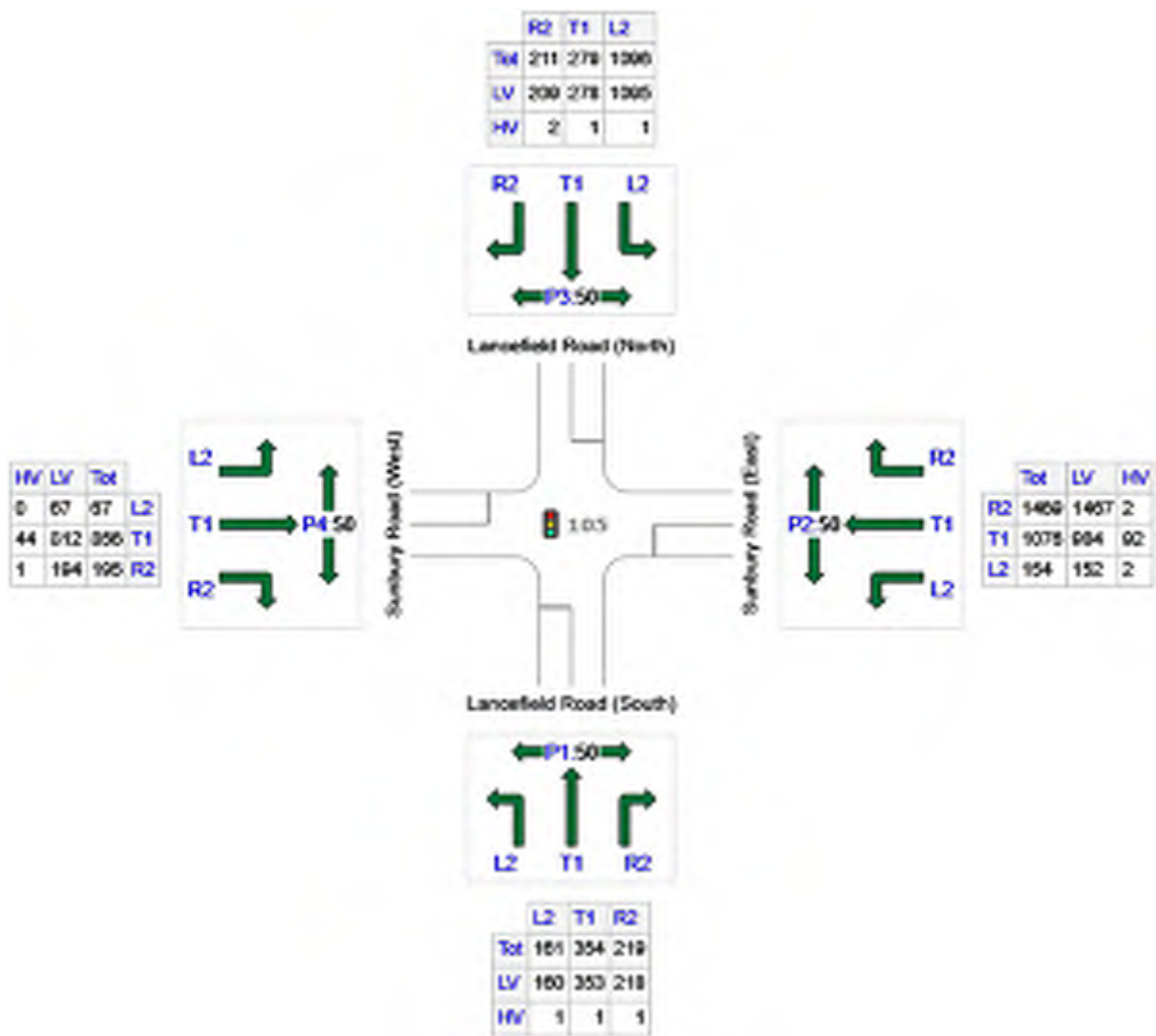
### **Site Layout**





## Input Volumes

Volume Display Method: Separate



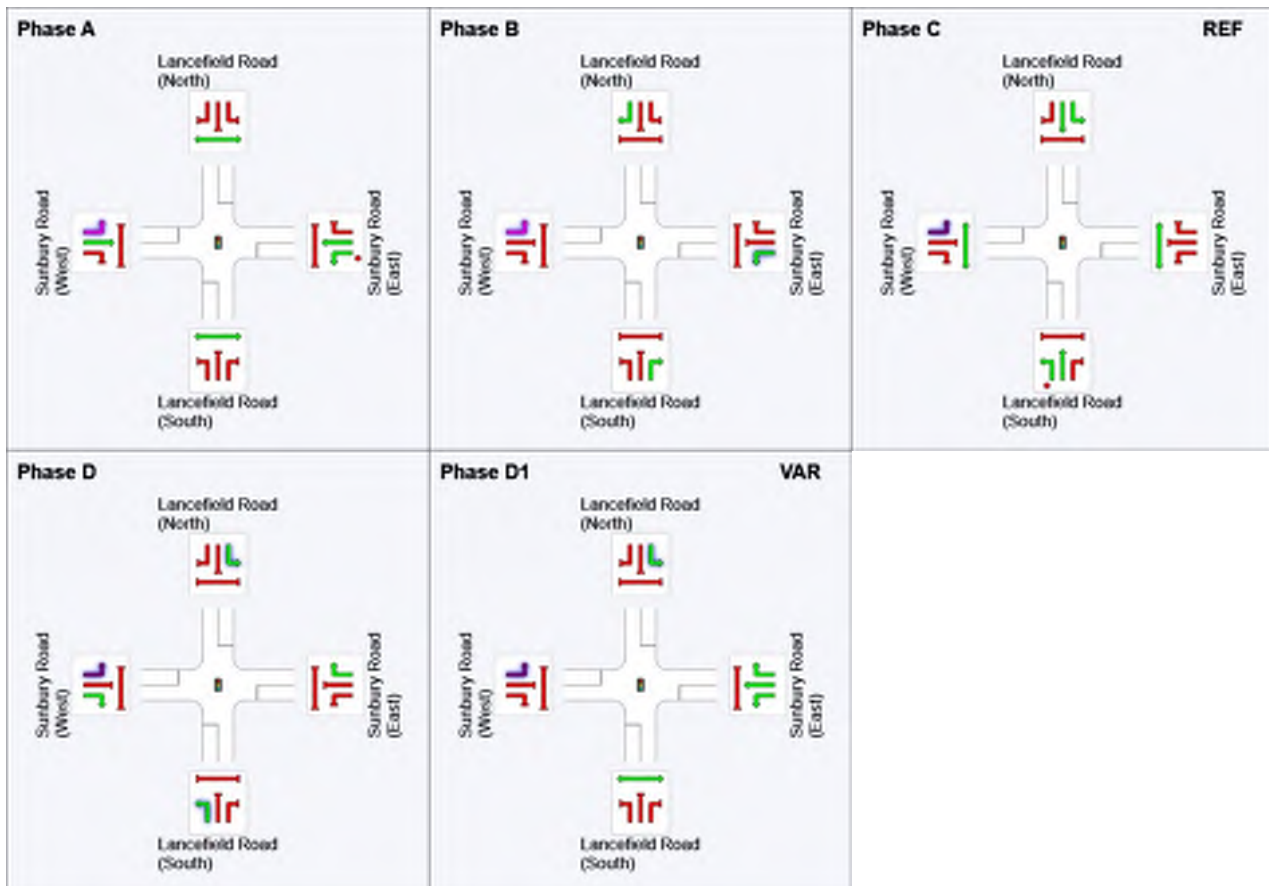
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	734	731	3
E: Sunbury Road (East)	2699	2603	96
N: Lancefield Road (North)	1586	1582	4
W: Sunbury Road (West)	1118	1073	45
Total	6137	5989	148

## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	96	120	0	38	69
Green Time (sec)	18	14	32	25	21
Phase Time (sec)	24	20	38	31	27
Phase Split	17%	14%	27%	22%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	258	0.5	473	0.544	94 <sup>6</sup>	46.6	LOS D	14.3	100.7	Short	110	0.0	NA
Lane 2	257	0.3	445	0.578	100	51.8	LOS D	15.7	109.8	Full	500	0.0	0.0
Lane 3	219	0.5	185	1.183	100	246.2	LOS F	31.2	219.0	Short	100	0.0	NA
Approach	734	0.4		1.183		108.0	LOS F	31.2	219.0				
East: Sunbury Road (East)													
Lane 1	154	1.3	775	0.199	100	29.1	LOS C	6.1	43.1	Short	100	0.0	NA
Lane 2	359	8.6	594	0.604	100	42.8	LOS D	20.5	154.2	Short	300	0.0	NA
Lane 3	359	8.6	594	0.604	100	42.8	LOS D	20.5	154.2	Full	500	0.0	0.0
Lane 4	359	8.6	594	0.604	100	42.8	LOS D	20.5	154.2	Full	500	0.0	37.9 <sup>8</sup>
Lane 5	694	0.1	689	1.006	89 <sup>6</sup>	107.1	LOS F	68.7	481.4	Short	300	0.0	NA
Lane 6	775	0.1	689	1.125	100	191.4	LOS F	102.3	717.1	Short	250	0.0	NA
Approach	2699	3.6		1.125		101.2	LOS F	102.3	717.1				
North: Lancefield Road (North)													
Lane 1	506	0.1	1193	0.424	86 <sup>6</sup>	18.5	LOS B	16.6	116.3	Short	90	0.0	NA
Lane 2	590	0.1	1193	0.494	100	19.4	LOS B	20.6	144.4	Short	120	0.0	NA
Lane 3	279	0.4	445	0.627	100	52.5	LOS D	17.2	120.8	Short	200	0.0	NA
Lane 4	106	0.9	184	0.572	100	72.5	LOS E	7.1	50.2	Full	500	0.0	0.0
Lane 5	106	0.9	184	0.572	100	72.5	LOS E	7.1	50.2	Short	100	0.0	NA
Approach	1586	0.3		0.627		32.0	LOS C	20.6	144.4				
West: Sunbury Road (West)													
Lane 1	67	0.0	791	0.085	100	25.6	LOS C	2.4	16.9	Short	100	0.0	NA
Lane 2	285	5.1	243	1.176	100	234.4	LOS F	40.2	293.9	Short	150	0.0	NA
Lane 3	285	5.1	243	1.176	100	234.4	LOS F	40.2	293.9	Full	500	0.0	0.0
Lane 4	285	5.1	243	1.176	100	234.4	LOS F	40.2	293.9	Full	500	0.0	0.0
Lane 5	195	0.5	330	0.590	100	63.1	LOS E	12.4	87.0	Short	100	0.0	NA
Approach	1118	4.0		1.176		192.0	LOS F	40.2	293.9				
Intersection	6137	2.4		1.183		100.7	LOS F	102.3	717.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>8</sup> Probability of Blockage has been set on the basis of a queue that overflows from a short lane.

## **Site: 105 [SS-IN-03-PM Peak - 75% (Option 2a) - GTA Design]**

---

New Site

Site Category: (None)

Signals - Fixed Time Isolated    Cycle Time = 130 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

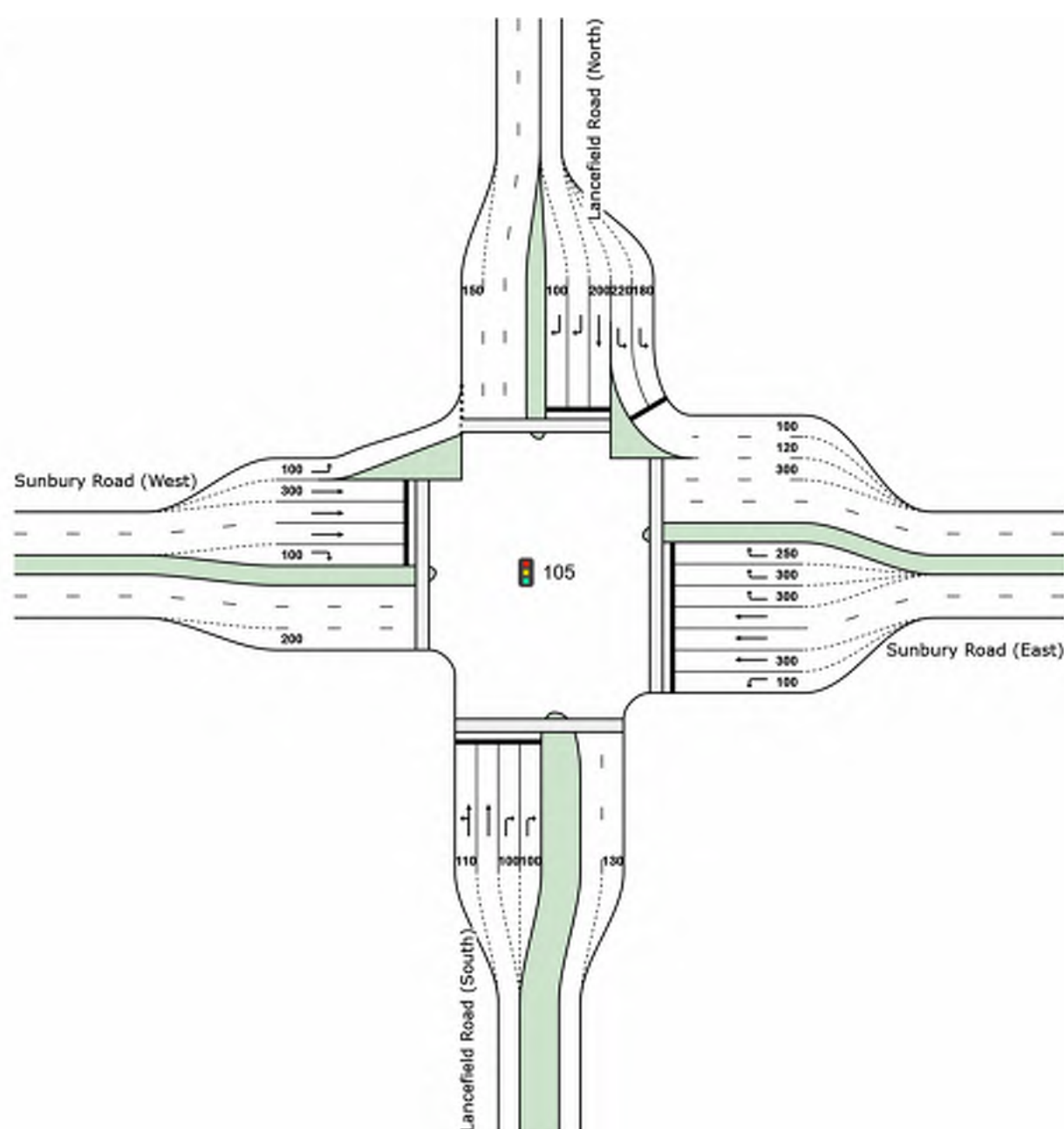
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B1\*, C, D, D1\***

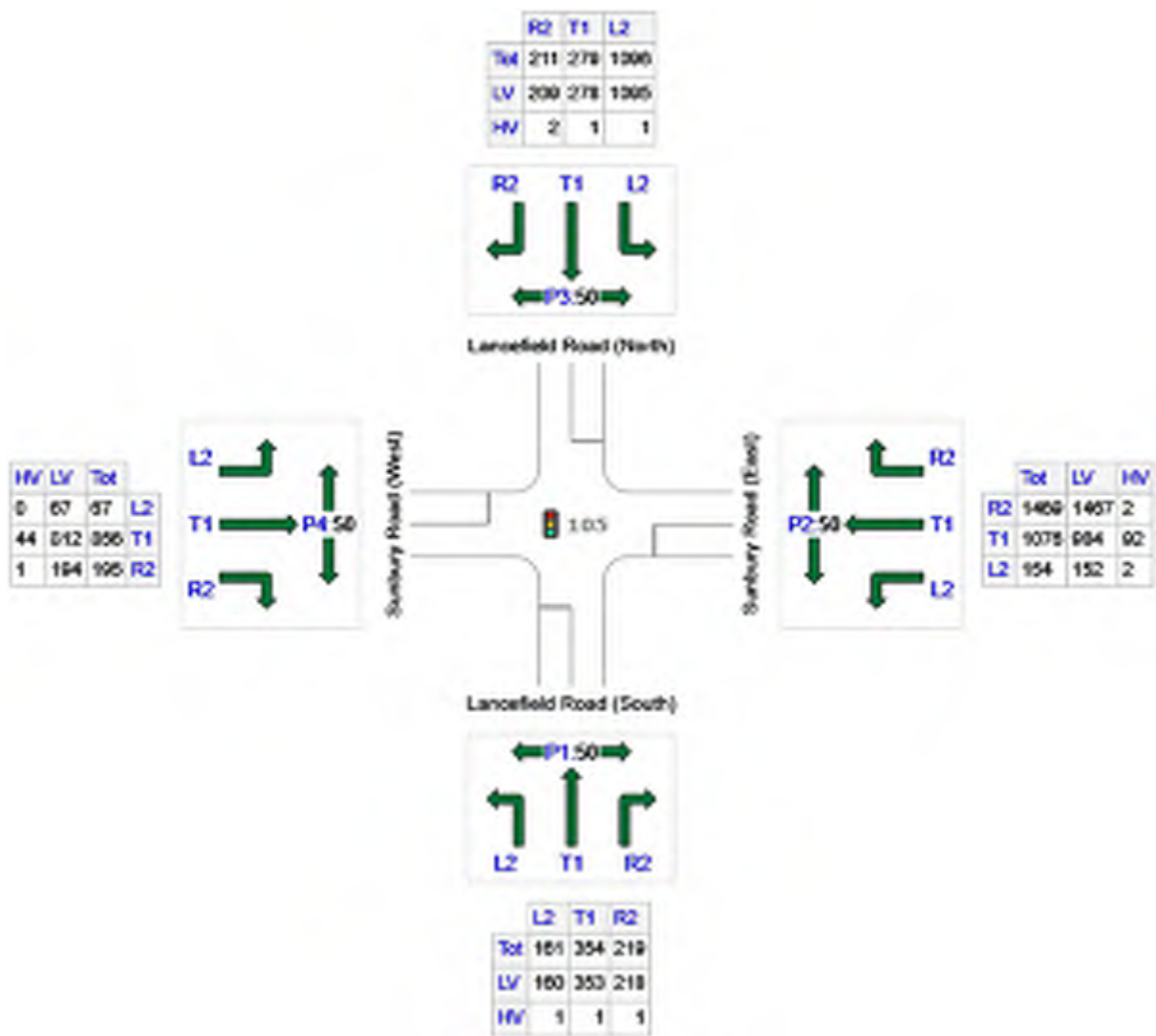
(\* Variable Phase)

### **Site Layout**



## Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	734	731	3
E: Sunbury Road (East)	2699	2603	96
N: Lancefield Road (North)	1586	1582	4
W: Sunbury Road (West)	1118	1073	45
Total	6137	5989	148

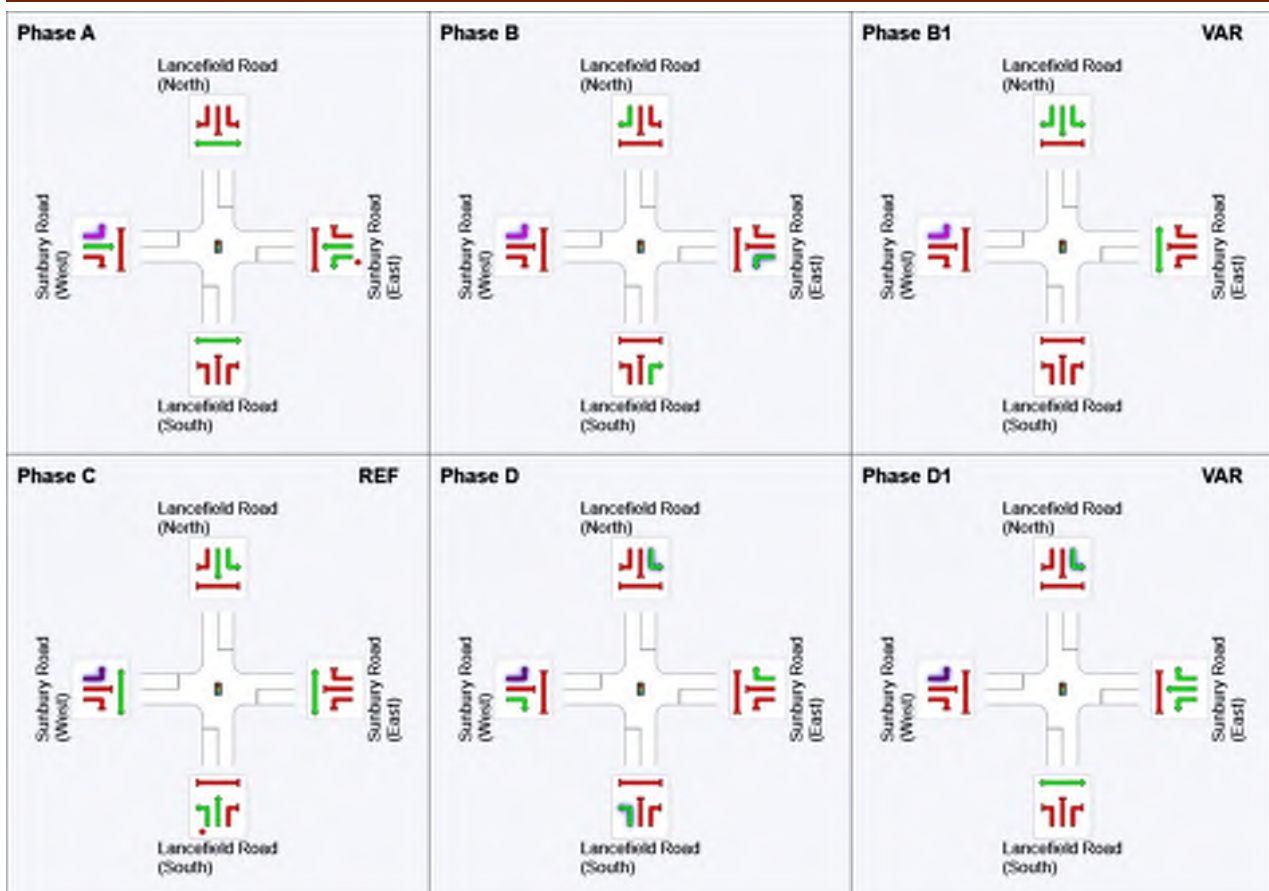
## Phase Timing Summary

Phase	A	B	B1	C	D	D1
Phase Change Time (sec)	82	111	126	0	36	64
Green Time (sec)	23	9	***	30	22	12
Phase Time (sec)	29	15	4	36	28	18
Phase Split	22%	12%	3%	28%	22%	14%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

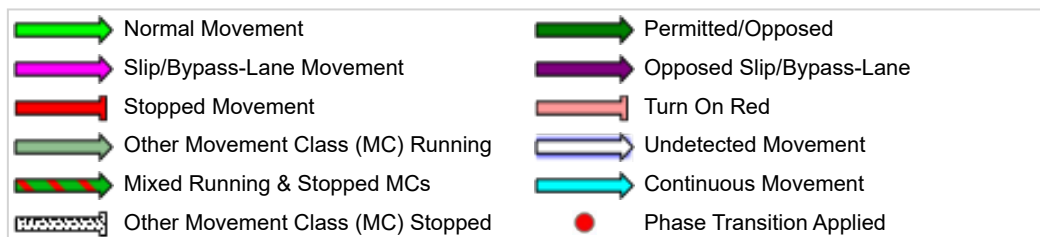
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	261	0.5	480	0.544	96 <sup>6</sup>	42.8	LOS D	13.4	93.9	Short	110	0.0	NA
Lane 2	254	0.3	449	0.566	100	47.8	LOS D	14.3	100.6	Full	500	0.0	0.0
Lane 3	110	0.5	128	0.854	100	79.8	LOS E	7.7	54.1	Short	100	0.0	NA
Lane 4	110	0.5	128	0.854	100	79.8	LOS E	7.7	54.1	Short	100	0.0	NA
Approach	734	0.4		0.854		55.6	LOS E	14.3	100.6				
East: Sunbury Road (East)													
Lane 1	154	1.3	708	0.218	100	30.3	LOS C	6.0	42.6	Short	100	0.0	NA
Lane 2	359	8.6	583	0.616	100	40.6	LOS D	19.3	144.9	Short	300	0.0	NA
Lane 3	359	8.6	583	0.616	100	40.6	LOS D	19.3	144.9	Full	500	0.0	0.0
Lane 4	359	8.6	583	0.616	100	40.6	LOS D	19.3	144.9	Full	500	0.0	0.0
Lane 5	454	0.1	571	0.795	89 <sup>6</sup>	52.5	LOS D	27.4	192.0	Short	300	0.0	NA
Lane 6	508	0.1	571	0.889	100	63.4	LOS E	35.2	246.7	Short	300	0.0	NA
Lane 7	508	0.1	571	0.889	100	63.4	LOS E	35.2	246.7	Short	250	0.0	NA
Approach	2699	3.6		0.889		50.6	LOS D	35.2	246.7				
North: Lancefield Road (North)													
Lane 1	506	0.1	1142	0.443	86 <sup>6</sup>	19.6	LOS B	16.6	116.6	Short	180	0.0	NA
Lane 2	590	0.1	1142	0.516	100	20.5	LOS C	20.7	144.9	Short	220	0.0	NA
Lane 3	279	0.4	509	0.548	100	44.6	LOS D	15.3	107.2	Short	200	0.0	NA
Lane 4	106	0.9	184	0.572	100	68.0	LOS E	6.6	46.8	Full	500	0.0	0.0
Lane 5	106	0.9	184	0.572	100	68.0	LOS E	6.6	46.8	Short	100	0.0	NA
Approach	1586	0.3		0.572		30.7	LOS C	20.7	144.9				
West: Sunbury Road (West)													
Lane 1	67	0.0	925	0.072	100	16.8	LOS B	1.7	12.2	Short	100	0.0	NA
Lane 2	285	5.1	334	0.855	100	64.3	LOS E	19.5	142.2	Short	300	0.0	NA
Lane 3	285	5.1	334	0.855	100	64.3	LOS E	19.5	142.2	Full	500	0.0	0.0
Lane 4	285	5.1	334	0.855	100	64.3	LOS E	19.5	142.2	Full	500	0.0	0.0
Lane 5	195	0.5	313	0.623	100	60.5	LOS E	11.7	82.2	Short	100	0.0	NA
Approach	1118	4.0		0.855		60.8	LOS E	19.5	142.2				
Intersection	6137	2.4		0.889		47.9	LOS D	35.2	246.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



# USER REPORT FOR SITE



Project: 201208-V198070-Sunbury Growth ICP Modelling

Template: GTA Appendix

## Site: 103 [LR-IN-04-AM Peak - 50% (Option 2a) - PSP Interim Design]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Variable Phasing

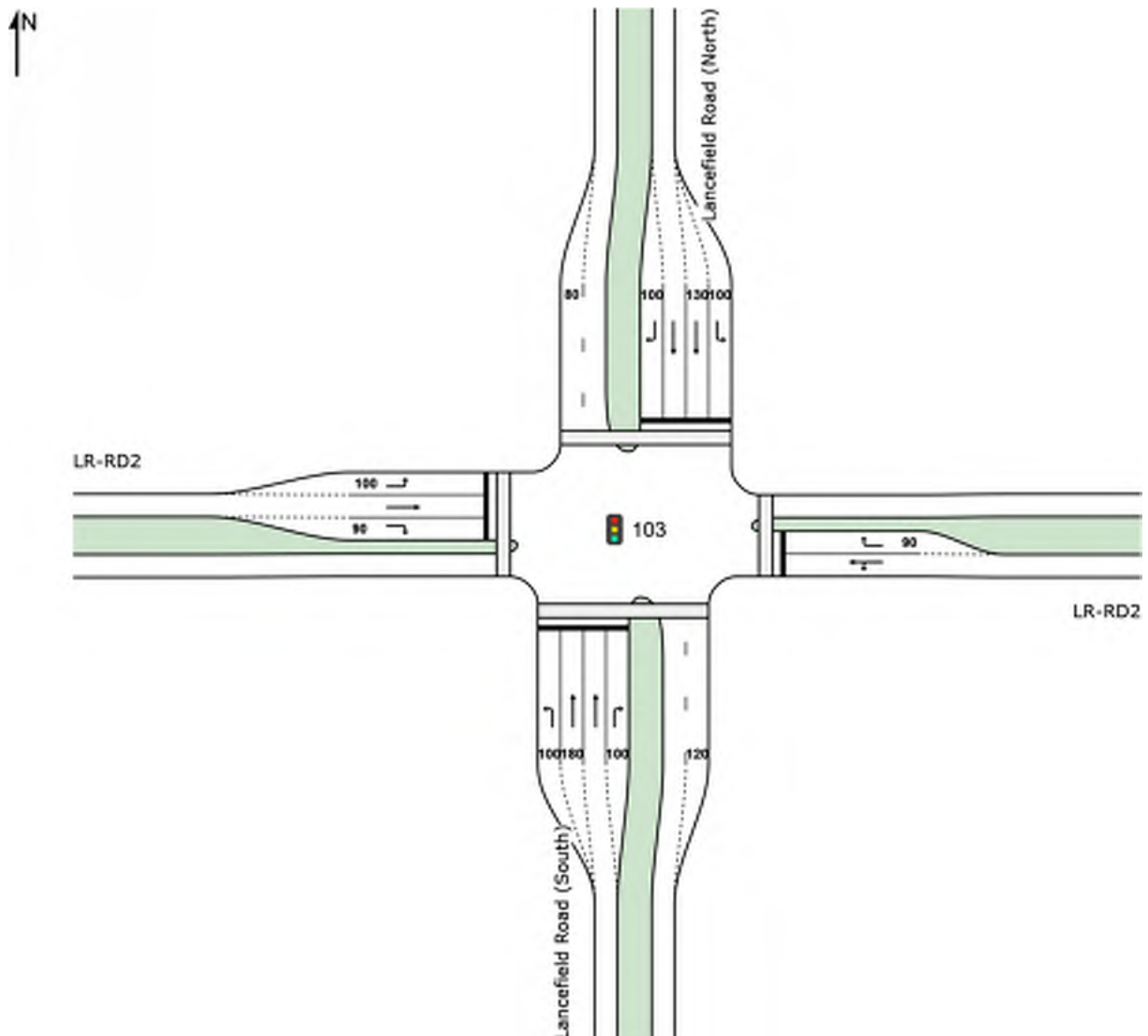
Reference Phase: Phase A

Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\*

Output Phase Sequence: A, B, B2\*, C, D

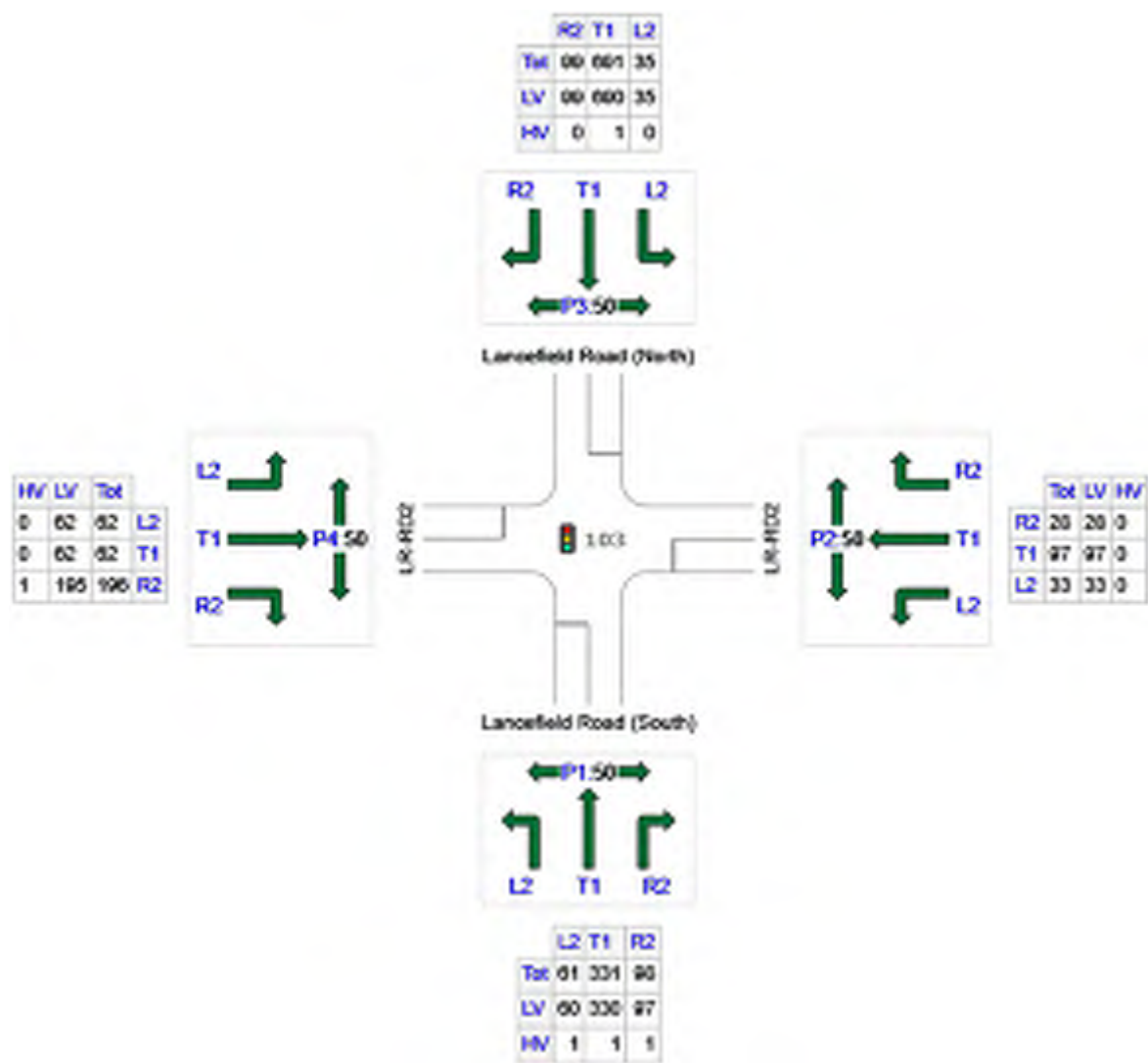
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	490	487	3
E: LR-RD2	158	158	0
N: Lancefield Road (North)	825	824	1
W: LR-RD2	320	319	1
Total	1793	1788	5

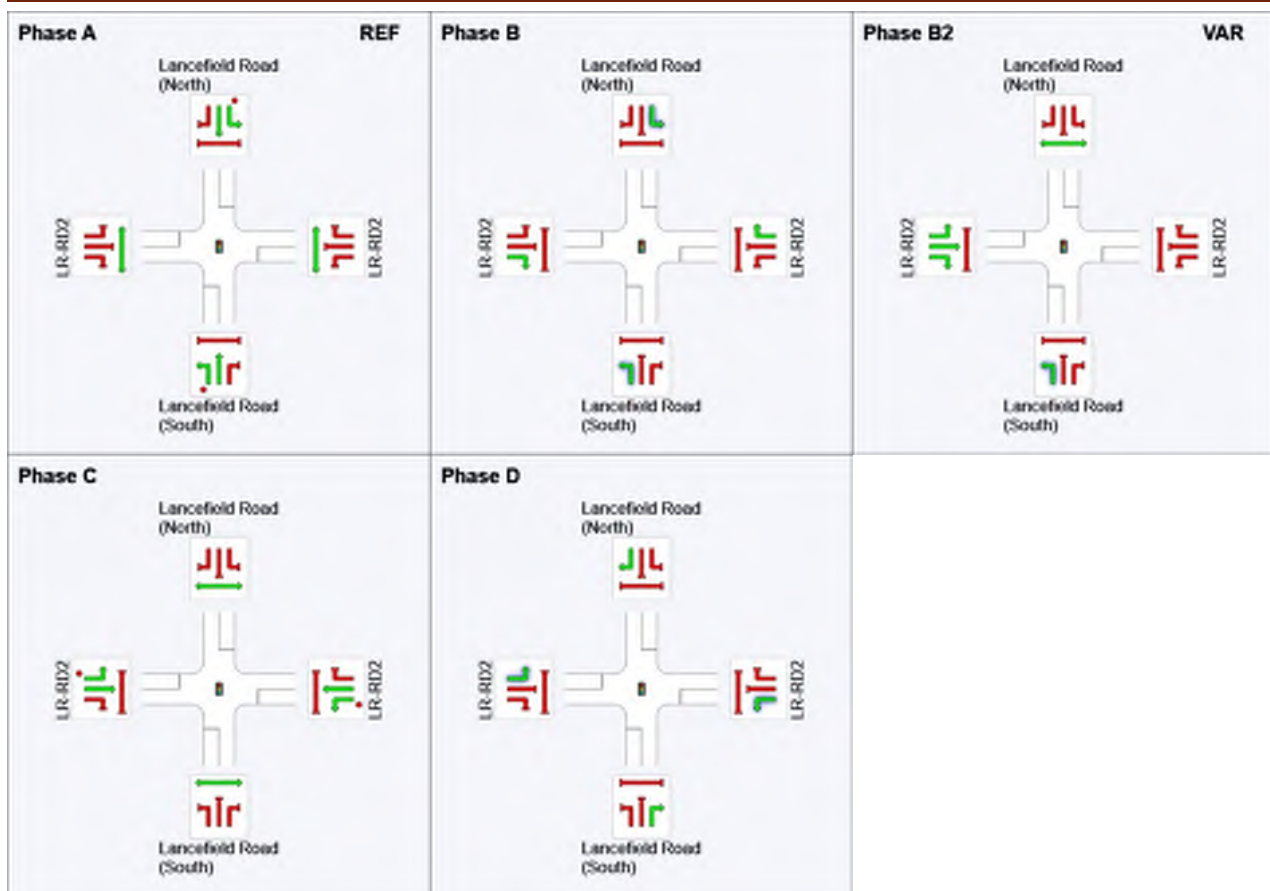
## Phase Timing Summary

Phase	A	B	B2	C	D
Phase Change Time (sec)	0	23	36	38	58
Green Time (sec)	17	7	***	14	6
Phase Time (sec)	23	13	2	20	12
Phase Split	33%	19%	3%	29%	17%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

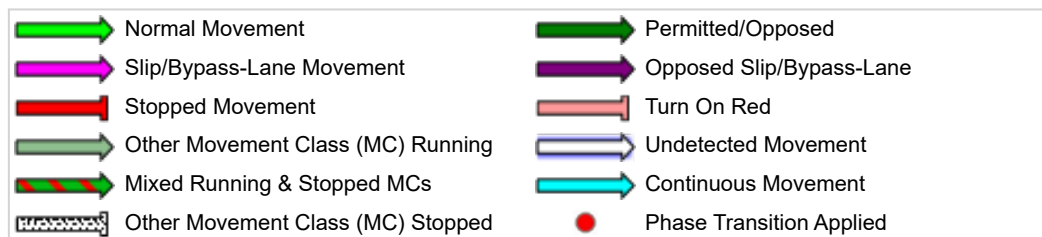
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	61	1.6	682	0.089	100	17.6	LOS B	1.2	8.5	Short	100	0.0	NA
Lane 2	104	0.3	473	0.220	46 <sup>6</sup>	23.3	LOS C	2.9	20.4	Short	180	0.0	NA
Lane 3	227	0.3	473	0.480	100	25.1	LOS C	6.8	47.9	Full	500	0.0	0.0
Lane 4	98	1.0	158	0.620	100	42.2	LOS D	3.6	25.1	Short	100	0.0	NA
Approach	490	0.6		0.620		27.2	LOS C	6.8	47.9				
East: LR-RD2													
Lane 1	130	0.0	402	0.323	100	22.3	LOS C	3.4	24.1	Full	500	0.0	0.0
Lane 2	28	0.0	186	0.151	100	38.4	LOS D	0.9	6.5	Short	90	0.0	NA
Approach	158	0.0		0.323		25.1	LOS C	3.4	24.1				
North: Lancefield Road (North)													
Lane 1	35	0.0	637	0.055	100	18.5	LOS B	0.7	4.9	Short	100	0.0	NA
Lane 2	274	0.1	473	0.579	66 <sup>6</sup>	25.9	LOS C	8.5	59.5	Short	130	0.0	NA
Lane 3	417	0.1	473	0.882	100	37.9	LOS D	17.0	118.8	Full	500	0.0	0.0
Lane 4	99	0.0	159	0.622	100	42.2	LOS D	3.6	25.1	Short	100	0.0	NA
Approach	825	0.1		0.882		33.6	LOS C	17.0	118.8				
West: LR-RD2													
Lane 1	62	0.0	584	0.106	100	20.2	LOS C	1.3	9.4	Short	100	0.0	NA
Lane 2	62	0.0	446	0.139	100	23.6	LOS C	1.7	12.0	Full	500	0.0	0.0
Lane 3	196	0.5	238	0.824	100	44.0	LOS D	7.5	53.0	Short	90	0.0	NA
Approach	320	0.3		0.824		35.5	LOS D	7.5	53.0				
Intersection	1793	0.3		0.882		31.4	LOS C	17.0	118.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 103 [LR-IN-04-PM Peak - 50% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

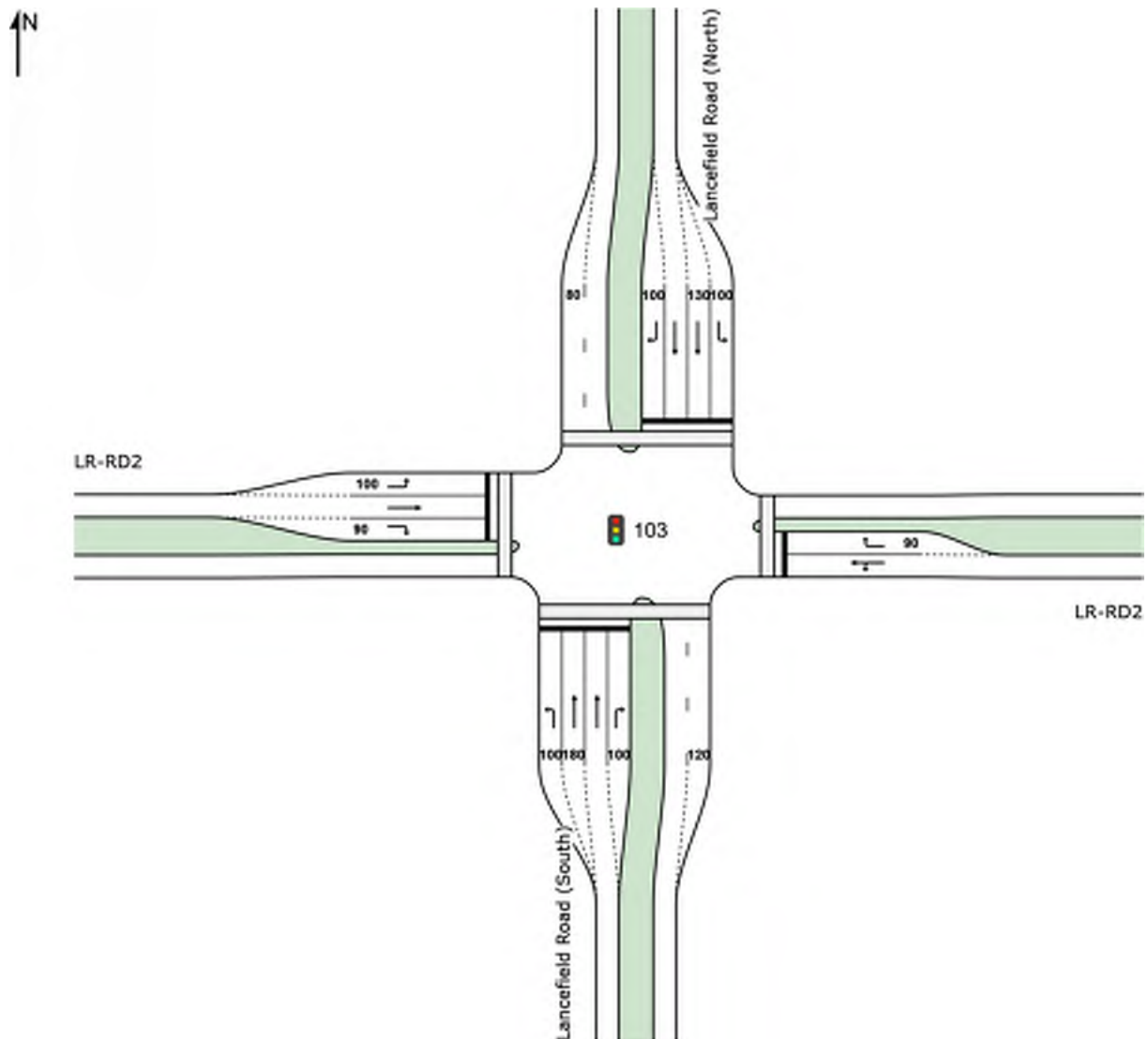
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D**

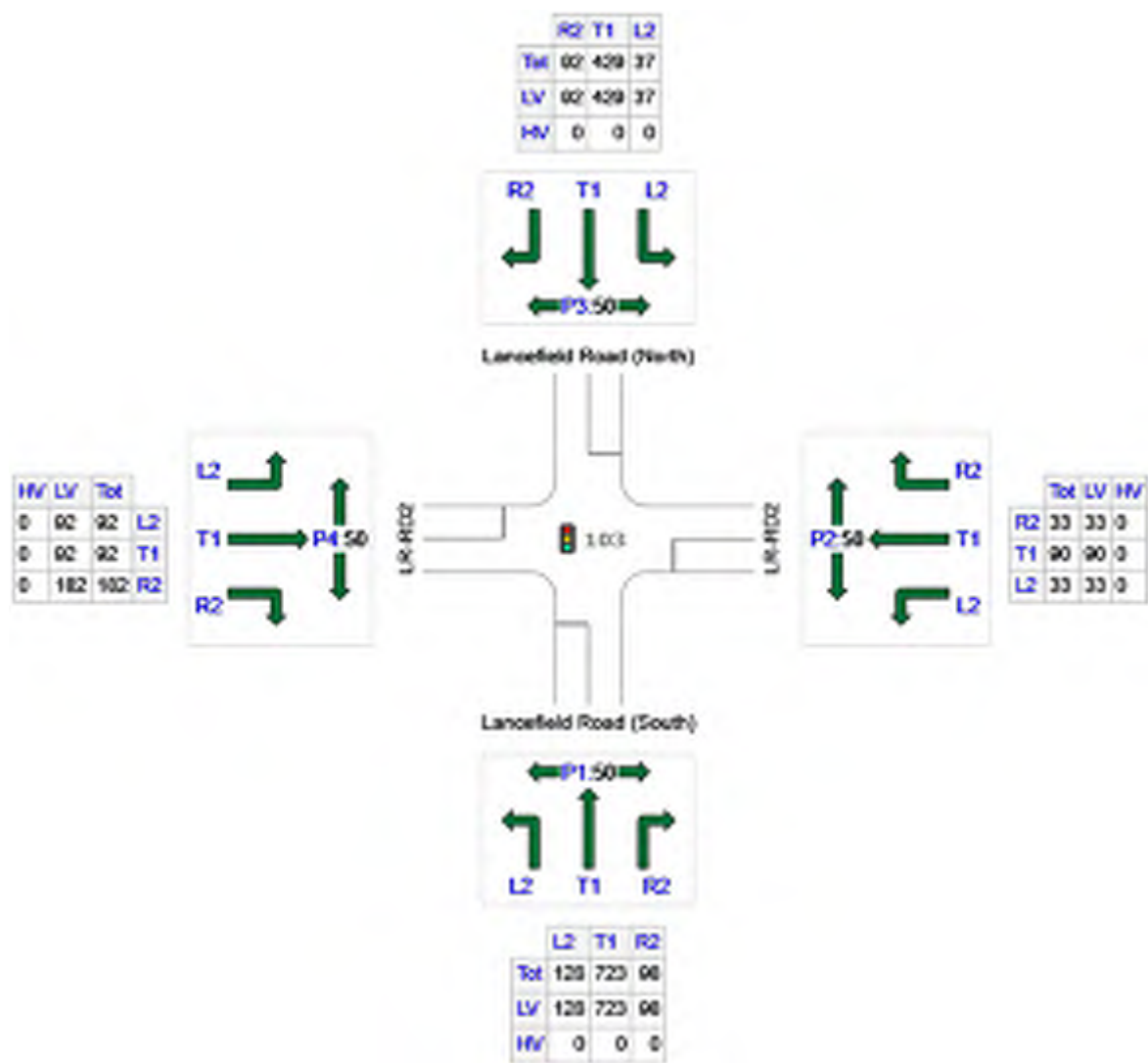
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	949	949	0
E: LR-RD2	156	156	0
N: Lancefield Road (North)	558	558	0
W: LR-RD2	366	366	0
Total	2029	2029	0

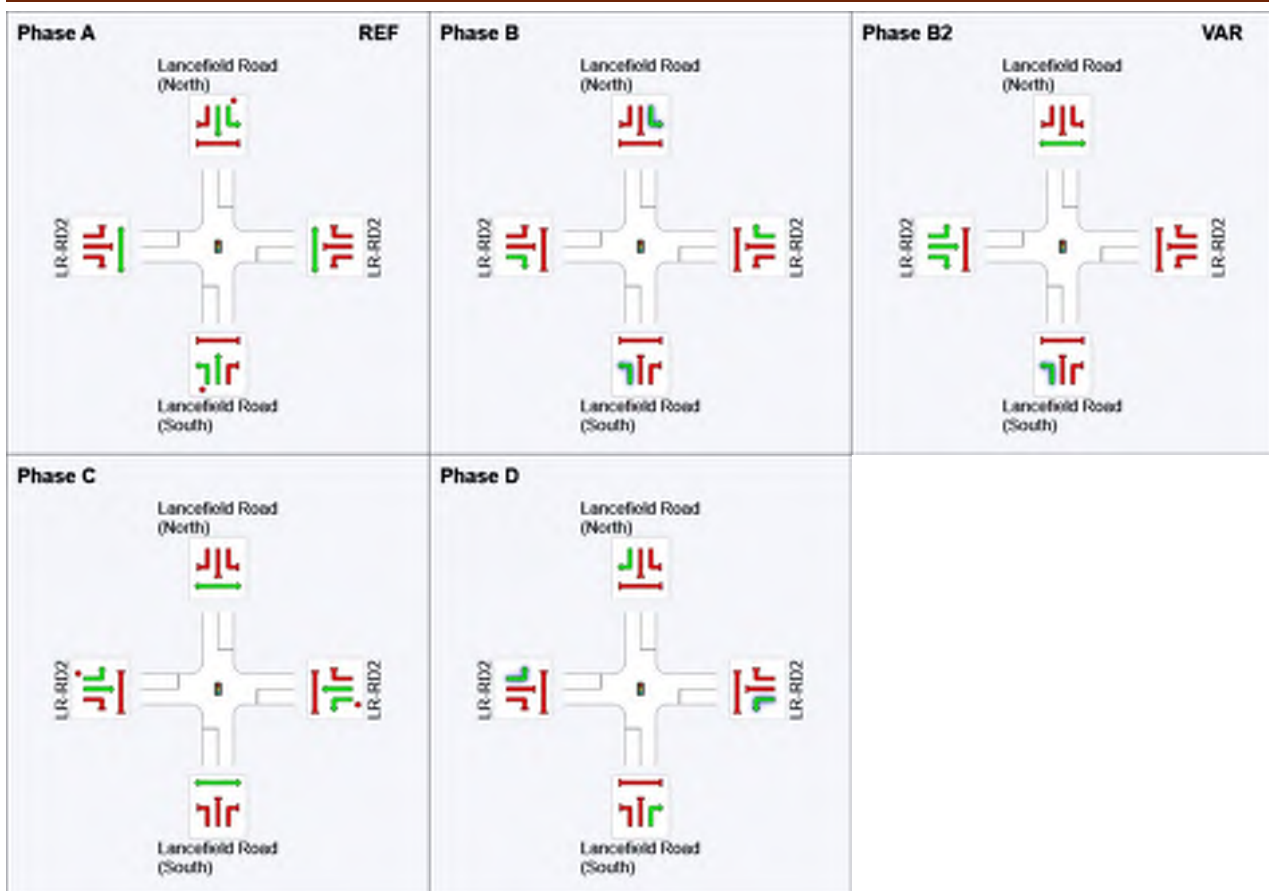
## Phase Timing Summary

Phase	A	B	B2	C	D
Phase Change Time (sec)	0	30	44	46	68
Green Time (sec)	24	8	***	16	6
Phase Time (sec)	30	14	2	22	12
Phase Split	38%	18%	3%	28%	15%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

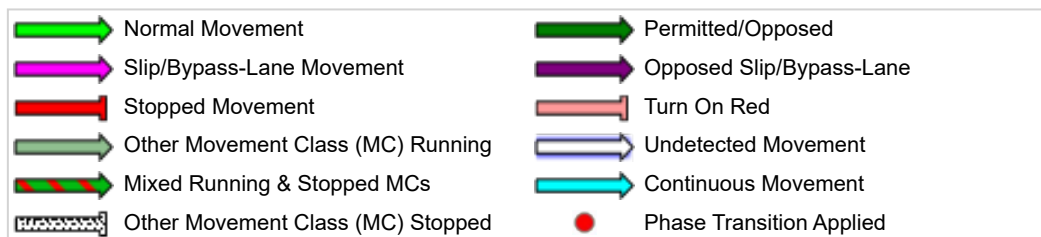
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	128	0.0	789	0.162	100	17.5	LOS B	2.7	19.0	Short	100	0.0	NA
Lane 2	228	0.0	585	0.389	46 <sup>6</sup>	24.2	LOS C	7.1	49.9	Short	180	0.0	NA
Lane 3	495	0.0	585	0.847	100	35.4	LOS D	21.0	147.0	Full	500	0.0	0.0
Lane 4	98	0.0	139	0.704	100	49.0	LOS D	4.1	29.0	Short	100	0.0	NA
Approach	949	0.0		0.847		31.7	LOS C	21.0	147.0				
East: LR-RD2													
Lane 1	123	0.0	401	0.307	100	25.8	LOS C	3.7	26.2	Full	500	0.0	0.0
Lane 2	33	0.0	186	0.178	100	42.9	LOS D	1.2	8.7	Short	90	0.0	NA
Approach	156	0.0		0.307		29.4	LOS C	3.7	26.2				
North: Lancefield Road (North)													
Lane 1	37	0.0	743	0.050	100	17.9	LOS B	0.8	5.4	Short	100	0.0	NA
Lane 2	170	0.0	585	0.291	66 <sup>6</sup>	23.3	LOS C	5.1	36.0	Short	130	0.0	NA
Lane 3	259	0.0	585	0.443	100	24.7	LOS C	8.3	57.9	Full	500	0.0	0.0
Lane 4	92	0.0	139	0.661	100	48.4	LOS D	3.9	27.0	Short	100	0.0	NA
Approach	558	0.0		0.661		27.7	LOS C	8.3	57.9				
West: LR-RD2													
Lane 1	92	0.0	557	0.165	100	23.9	LOS C	2.4	16.9	Short	100	0.0	NA
Lane 2	92	0.0	439	0.210	100	27.6	LOS C	3.0	20.8	Full	500	0.0	0.0
Lane 3	182	0.0	232	0.784	100	47.3	LOS D	7.7	53.9	Short	90	0.0	NA
Approach	366	0.0		0.784		36.4	LOS D	7.7	53.9				
Intersection	2029	0.0		0.847		31.3	LOS C	21.0	147.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



## Site: 101 [LR-IN-03-AM Peak - 50% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

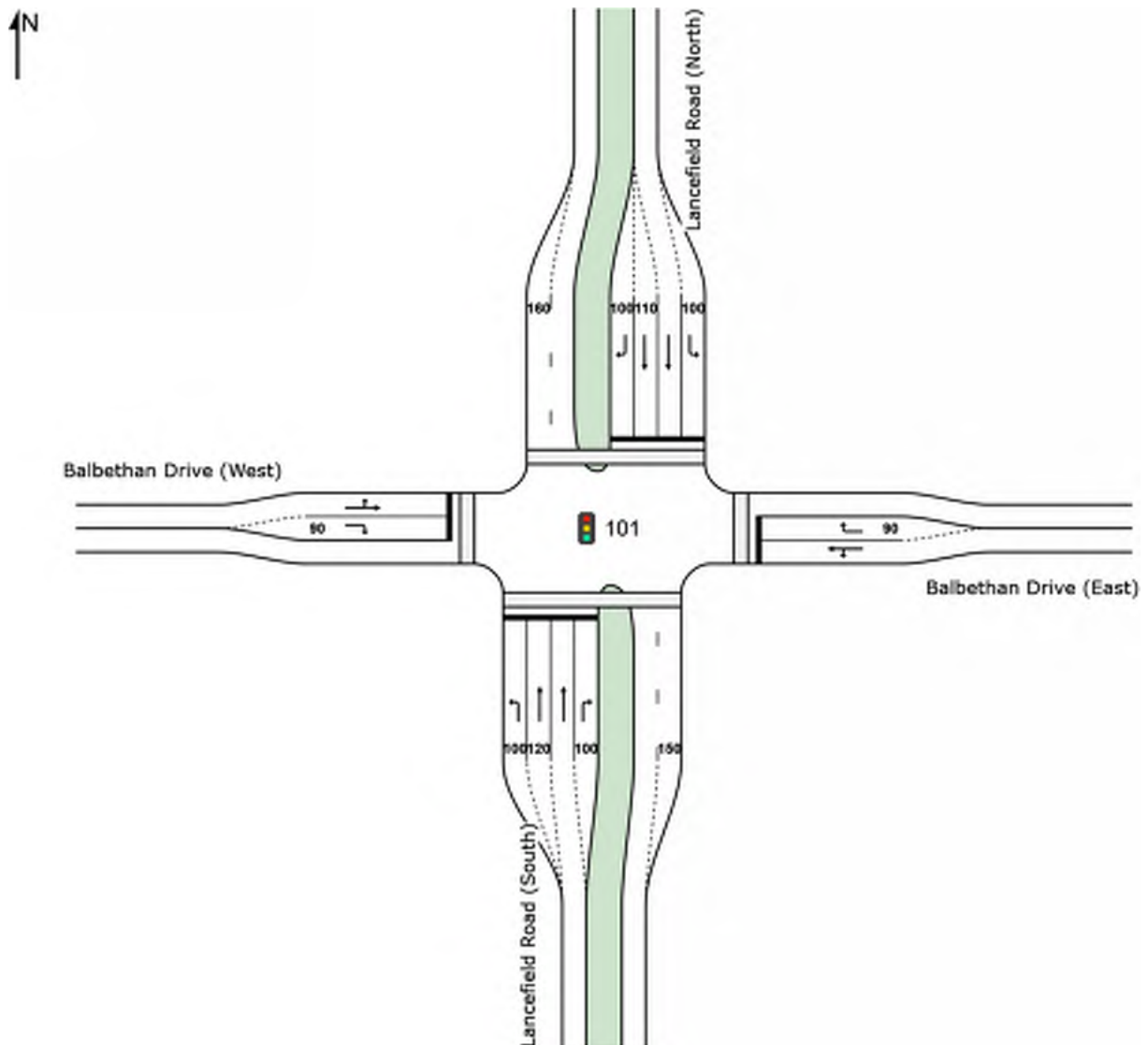
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

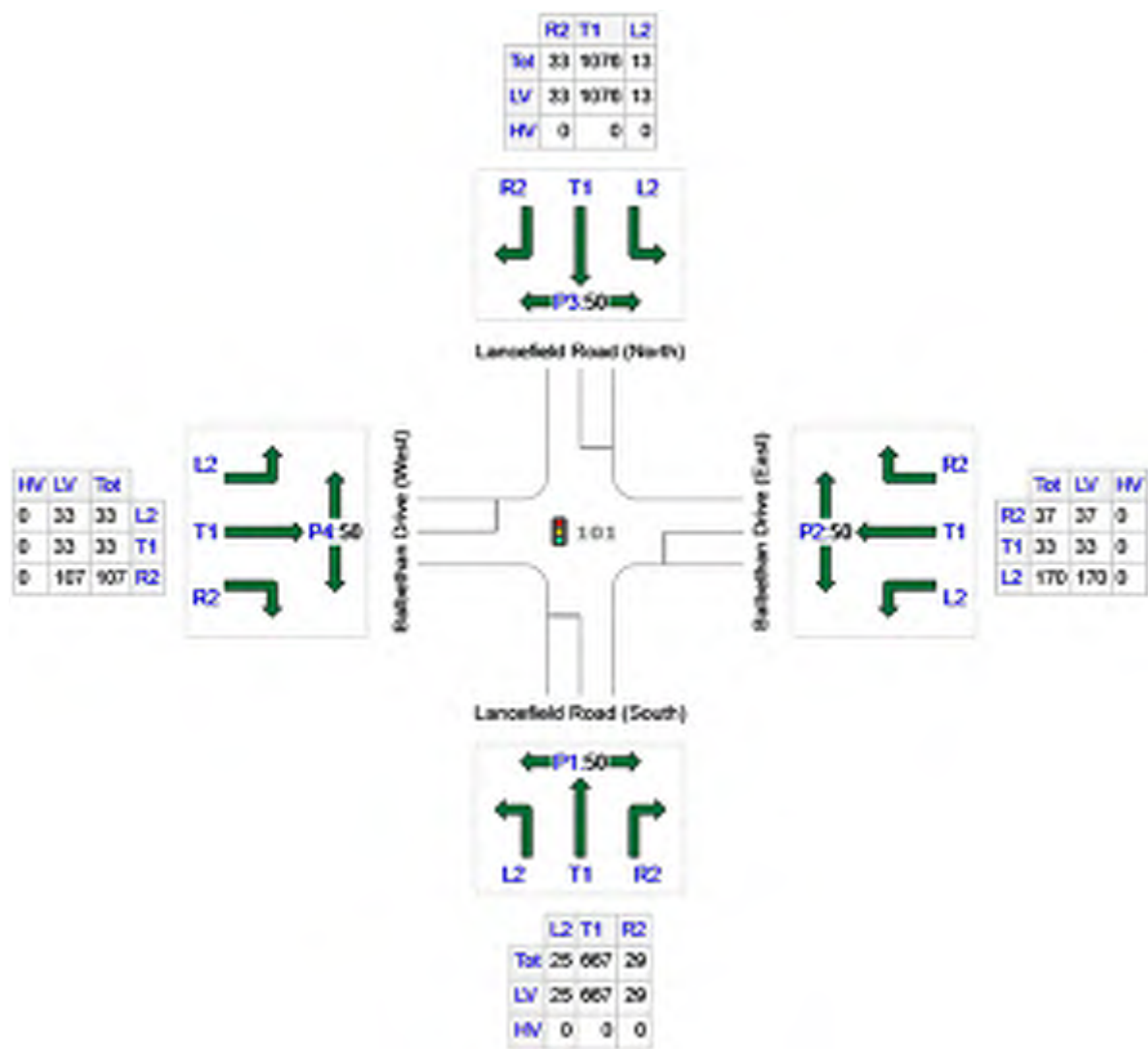
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



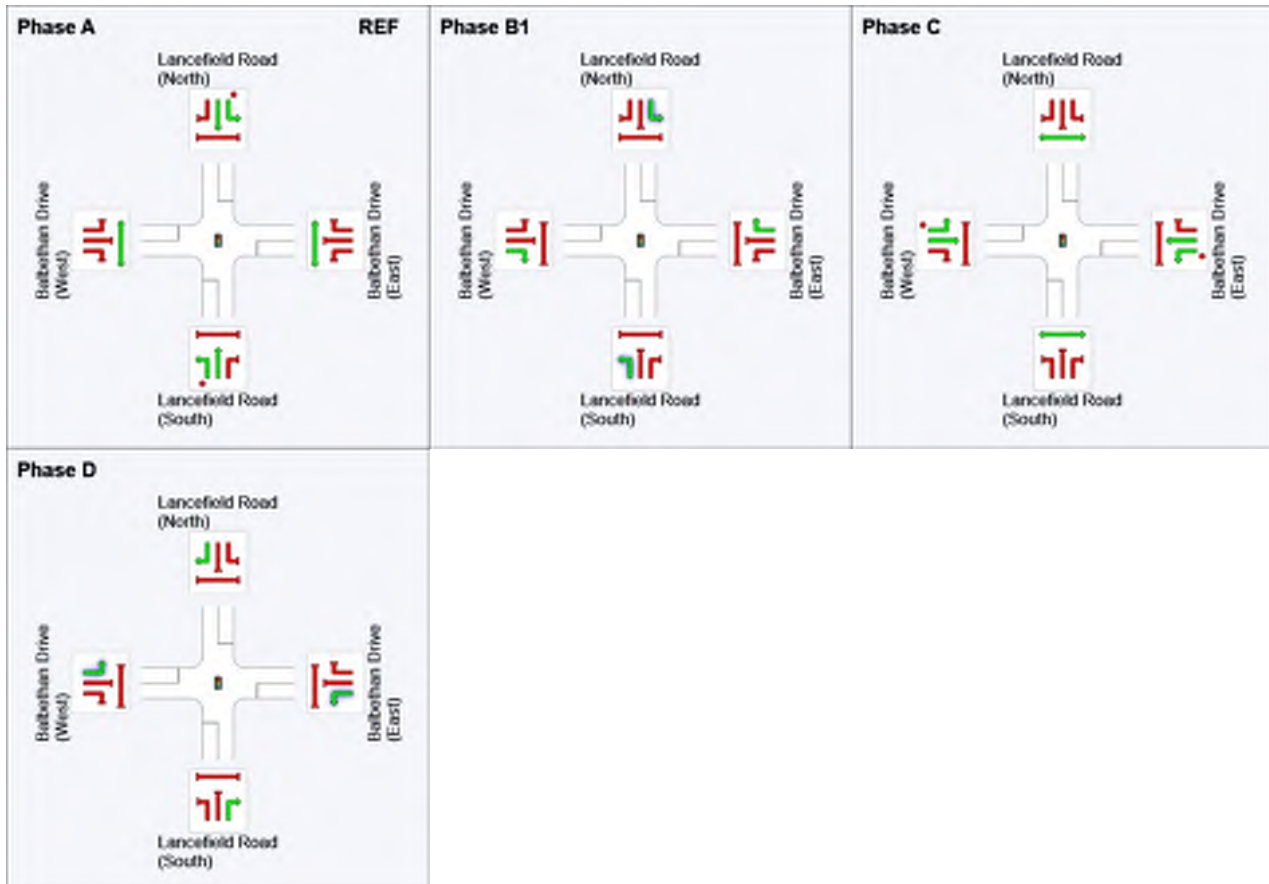
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	721	721	0
E: Balbethan Drive (East)	240	240	0
N: Lancefield Road (North)	1122	1122	0
W: Balbethan Drive (West)	173	173	0
Total	2256	2256	0

## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	34	46	68
Green Time (sec)	28	6	16	6
Phase Time (sec)	34	12	22	12
Phase Split	43%	15%	28%	15%

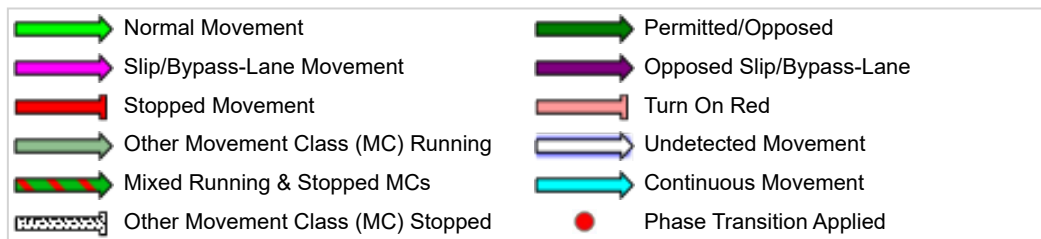
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	25	0.0	789	0.032	100	16.6	LOS B	0.5	3.4	Short	100	0.0	NA
Lane 2	307	0.0	682	0.449	85 <sup>6</sup>	21.8	LOS C	9.3	65.2	Short	120	0.0	NA
Lane 3	360	0.0	683	0.528	100	22.5	LOS C	11.3	79.3	Full	500	0.0	0.0
Lane 4	29	0.0	139	0.208	100	45.5	LOS D	1.1	8.0	Short	100	0.0	NA
Approach	721	0.0		0.528		22.9	LOS C	11.3	79.3				
East: Balbethan Drive (East)													
Lane 1	203	0.0	484	0.419	100	26.8	LOS C	6.1	42.5	Full	500	0.0	0.0
Lane 2	37	0.0	139	0.266	100	45.9	LOS D	1.5	10.2	Short	90	0.0	NA
Approach	240	0.0		0.419		29.8	LOS C	6.1	42.5				
North: Lancefield Road (North)													
Lane 1	13	0.0	789	0.016	100	16.5	LOS B	0.3	1.8	Short	100	0.0	NA
Lane 2	477	0.0	683	0.699	80 <sup>6</sup>	24.6	LOS C	16.3	114.2	Full	500	0.0	0.0
Lane 3	599	0.0	683	0.877	100	36.3	LOS D	26.6	186.0	Short	110	0.0	NA
Lane 4	33	0.0	139	0.237	100	45.7	LOS D	1.3	9.1	Short	100	0.0	NA
Approach	1122	0.0		0.877		31.3	LOS C	26.6	186.0				
West: Balbethan Drive (West)													
Lane 1	66	0.0	422	0.156	100	25.4	LOS C	1.9	13.3	Full	500	0.0	0.0
Lane 2	107	0.0	139	0.768	100	50.3	LOS D	4.6	32.4	Short	90	0.0	NA
Approach	173	0.0		0.768		40.8	LOS D	4.6	32.4				
Intersection	2256	0.0		0.877		29.2	LOS C	26.6	186.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## **Site: 101 [LR-IN-03-PM Peak - 50% (Option 2a) - PSP Interim Design ]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

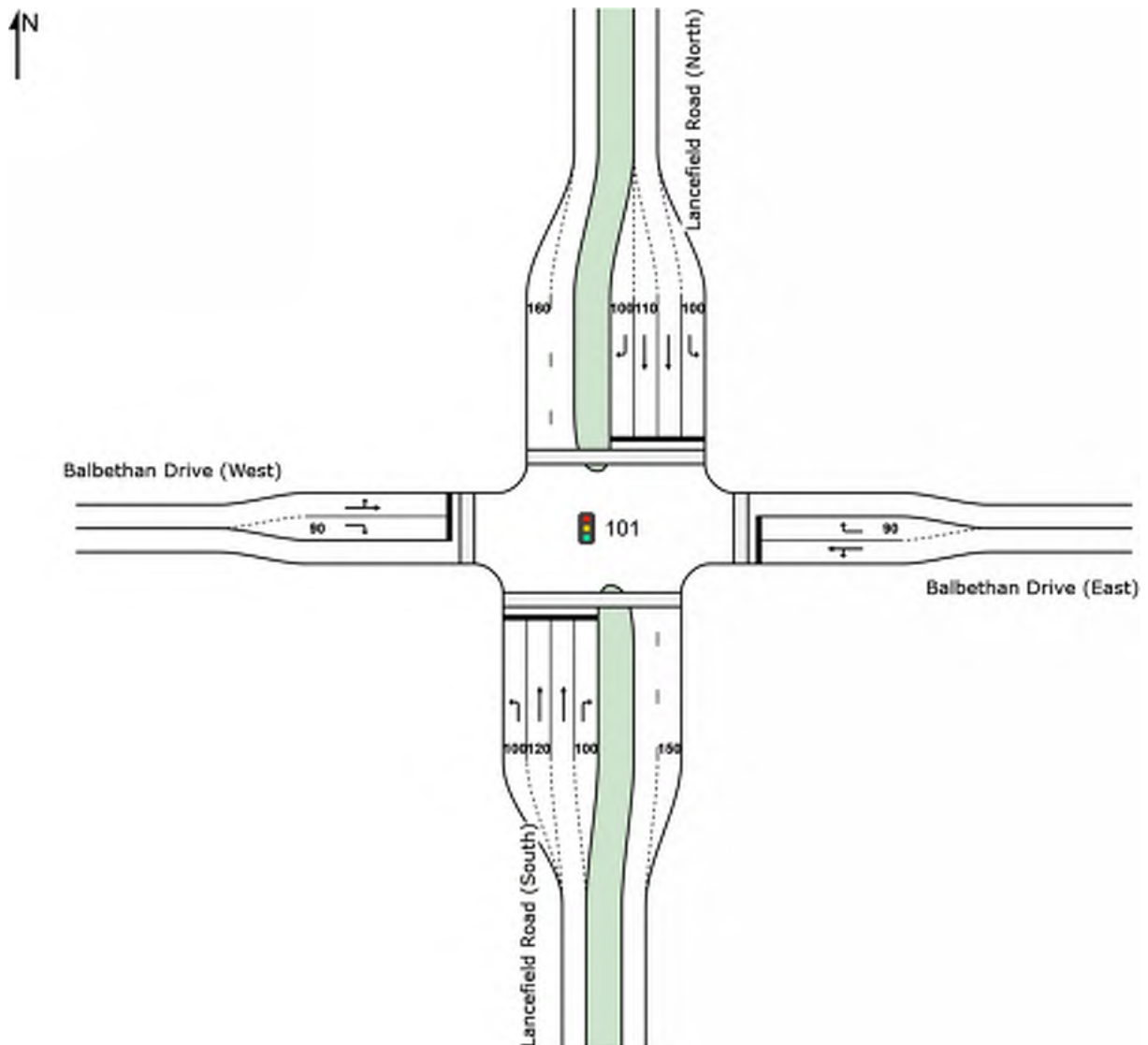
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

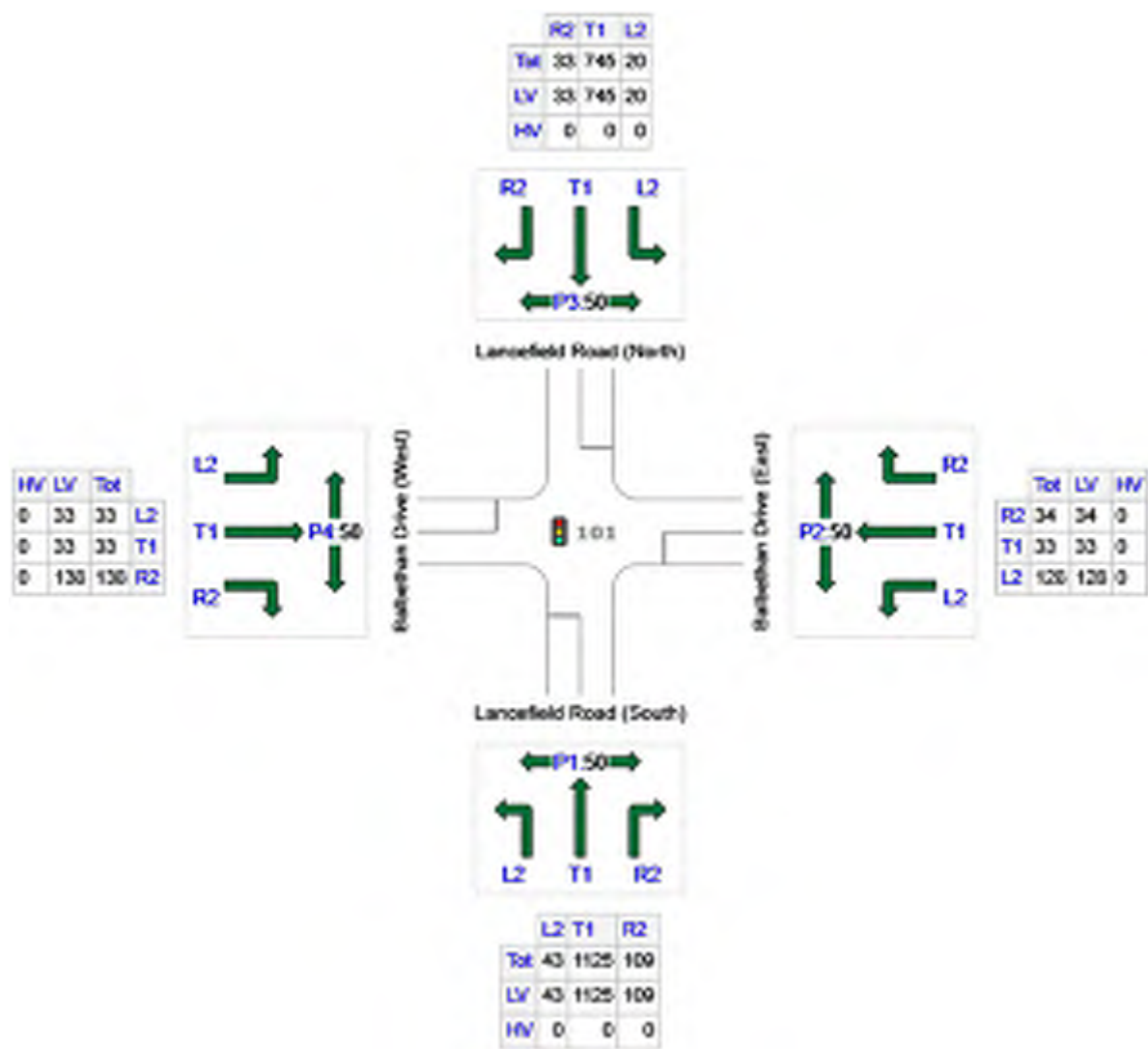
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



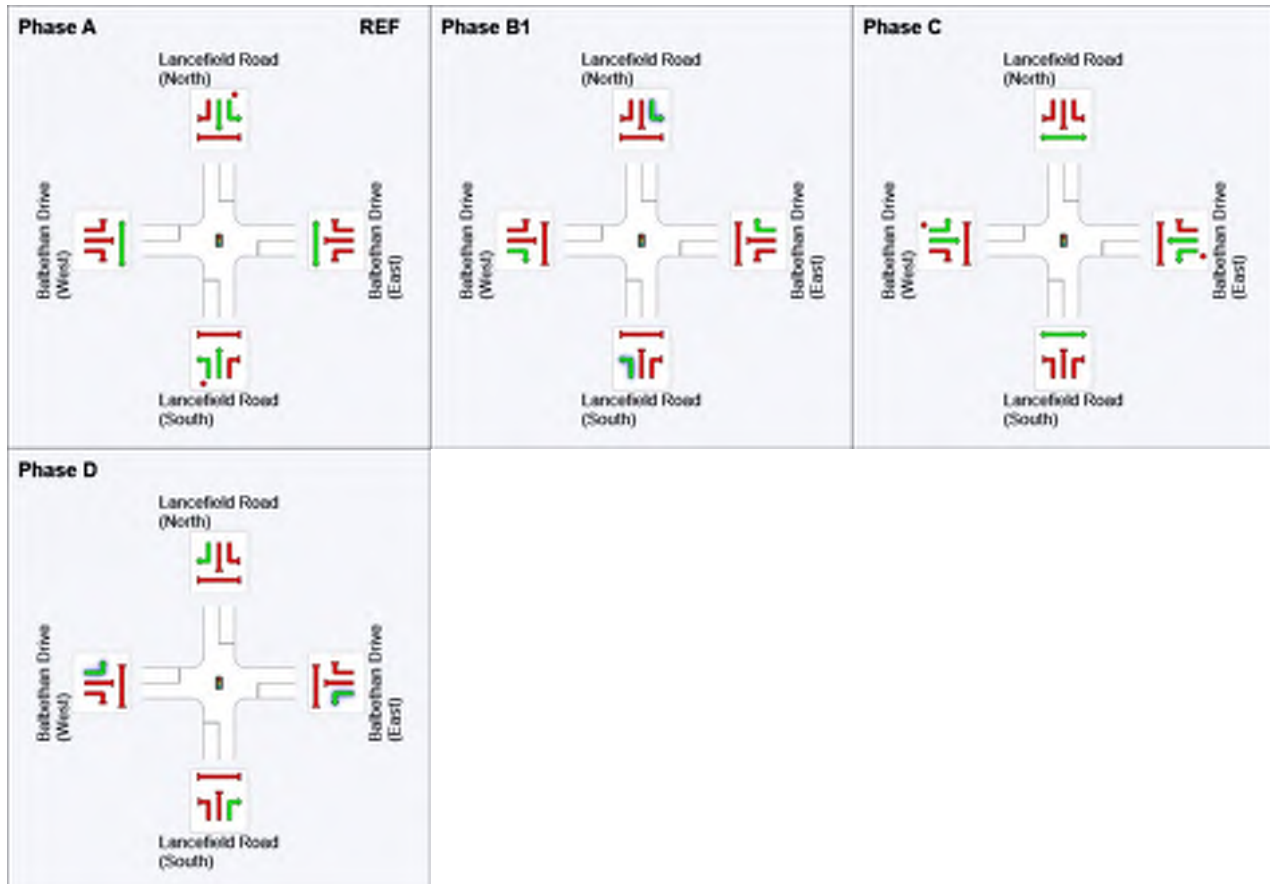
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1277	1277	0
E: Balbethan Drive (East)	195	195	0
N: Lancefield Road (North)	798	798	0
W: Balbethan Drive (West)	204	204	0
Total	2474	2474	0

## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	40	54	77
Green Time (sec)	34	8	17	7
Phase Time (sec)	40	14	23	13
Phase Split	44%	16%	26%	14%

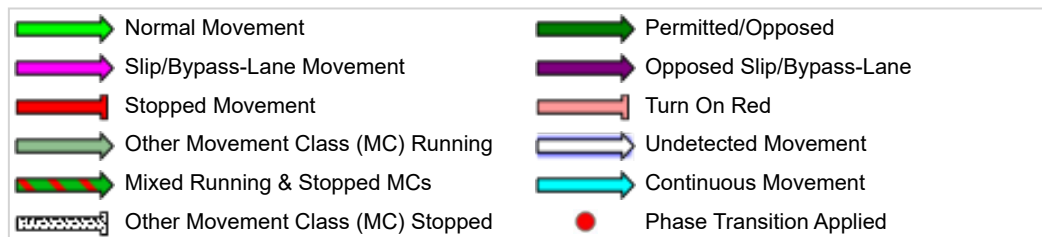
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	43	0.0	867	0.050	100	16.5	LOS B	0.9	6.3	Short	100	0.0	NA
Lane 2	517	0.0	737	0.702	85 <sup>6</sup>	25.6	LOS C	19.3	135.3	Short	120	0.0	NA
Lane 3	608	0.0	737	0.825	100	31.9	LOS C	26.6	185.9	Full	500	0.0	0.0
Lane 4	109	0.0	144	0.755	100	54.7	LOS D	5.2	36.5	Short	100	0.0	NA
Approach	1277	0.0		0.825		30.8	LOS C	26.6	185.9				
East: Balbethan Drive (East)													
Lane 1	161	0.0	449	0.358	100	30.5	LOS C	5.5	38.3	Full	500	0.0	0.0
Lane 2	34	0.0	165	0.206	100	48.7	LOS D	1.5	10.2	Short	90	0.0	NA
Approach	195	0.0		0.358		33.7	LOS C	5.5	38.3				
North: Lancefield Road (North)													
Lane 1	20	0.0	867	0.023	100	16.3	LOS B	0.4	2.9	Short	100	0.0	NA
Lane 2	330	0.0	737	0.449	80 <sup>6</sup>	22.6	LOS C	10.9	76.2	Full	500	0.0	0.0
Lane 3	415	0.0	737	0.563	100	23.9	LOS C	14.4	101.0	Short	110	0.0	NA
Lane 4	33	0.0	144	0.228	100	50.0	LOS D	1.4	10.1	Short	100	0.0	NA
Approach	798	0.0		0.563		24.3	LOS C	14.4	101.0				
West: Balbethan Drive (West)													
Lane 1	66	0.0	397	0.166	100	29.7	LOS C	2.2	15.4	Full	500	0.0	0.0
Lane 2	138	0.0	165	0.836	100	56.7	LOS E	6.8	47.7	Short	90	0.0	NA
Approach	204	0.0		0.836		48.0	LOS D	6.8	47.7				
Intersection	2474	0.0		0.836		30.3	LOS C	26.6	185.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



## Site: 105 [SS-IN-03-AM Peak - 50% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

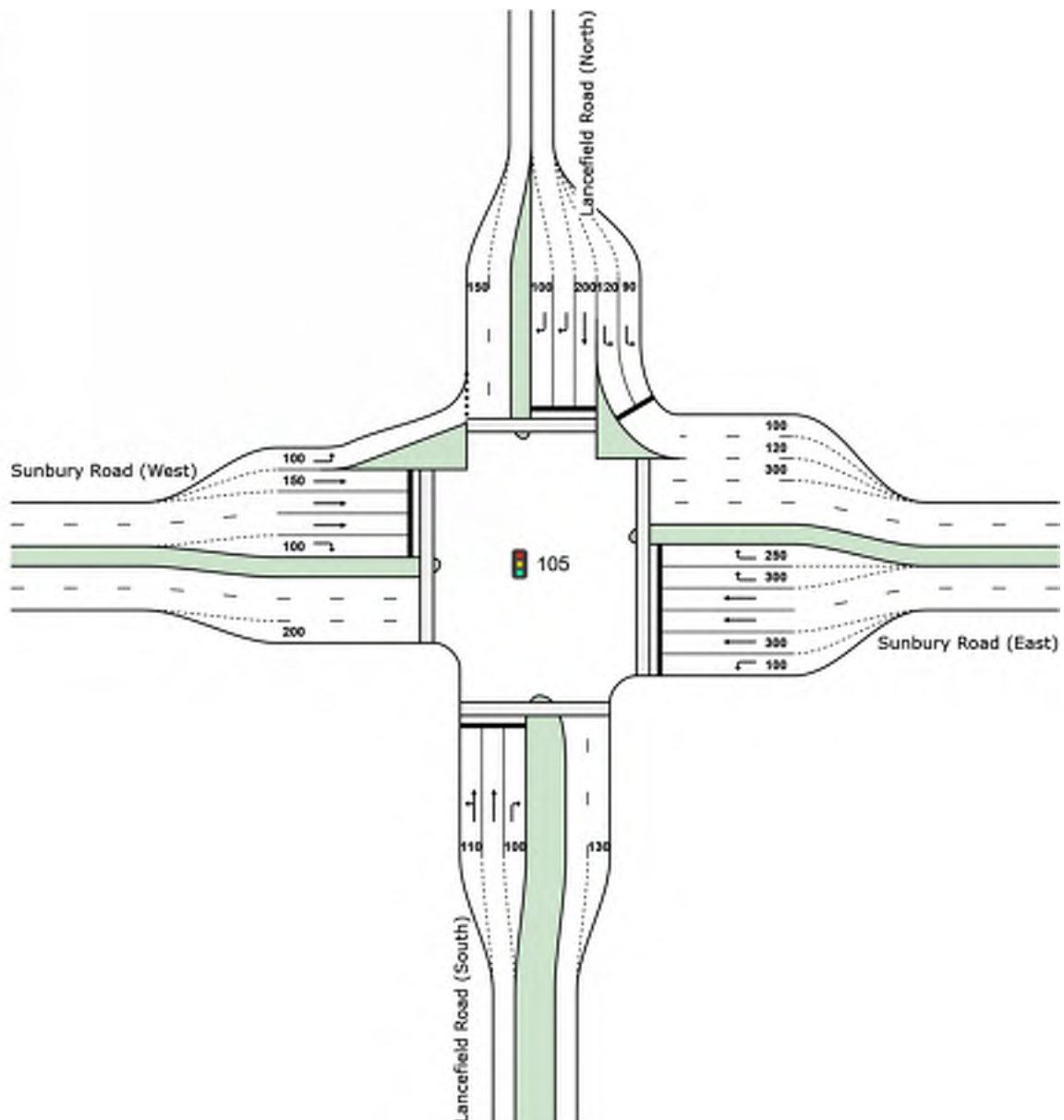
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

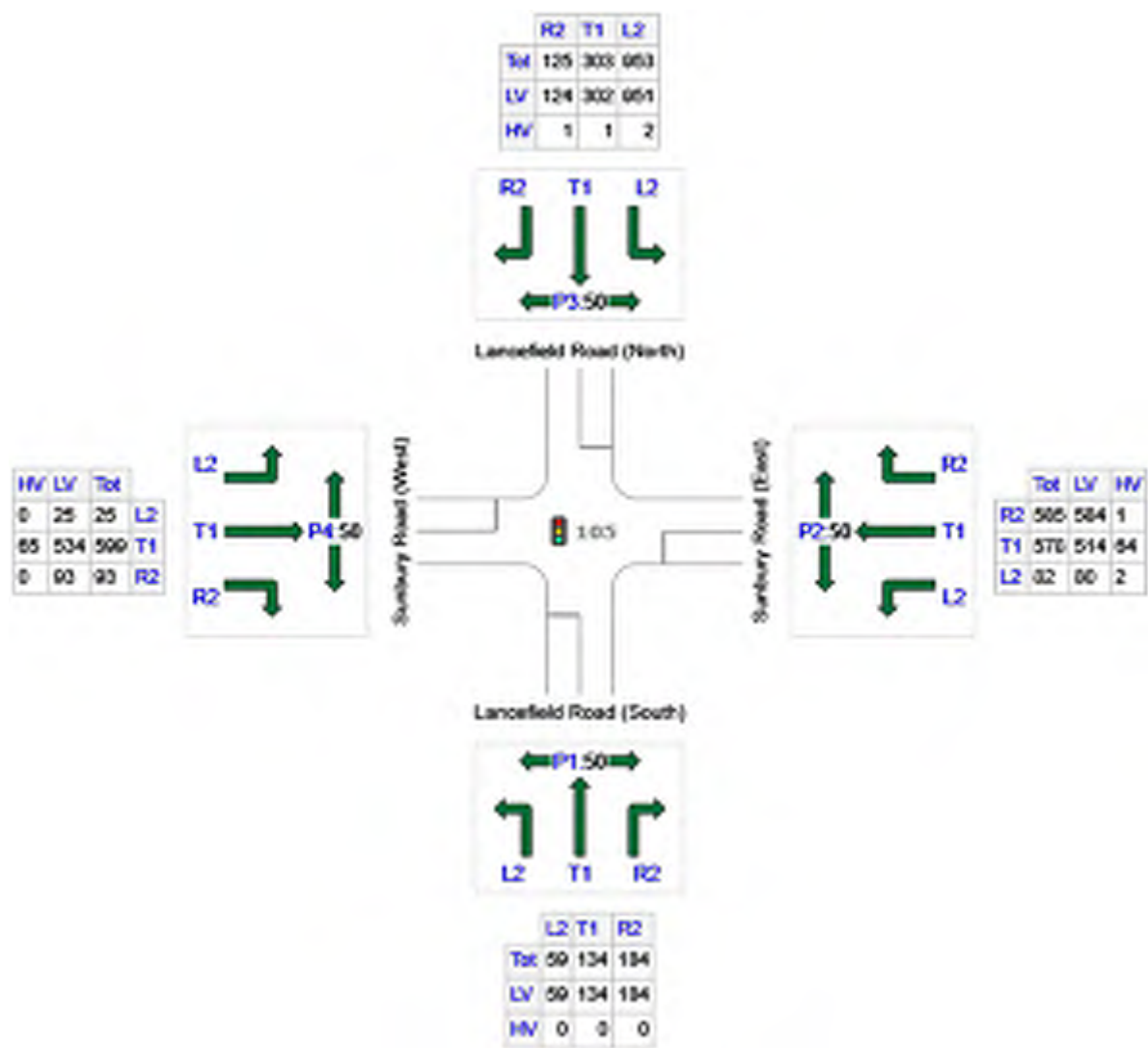
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



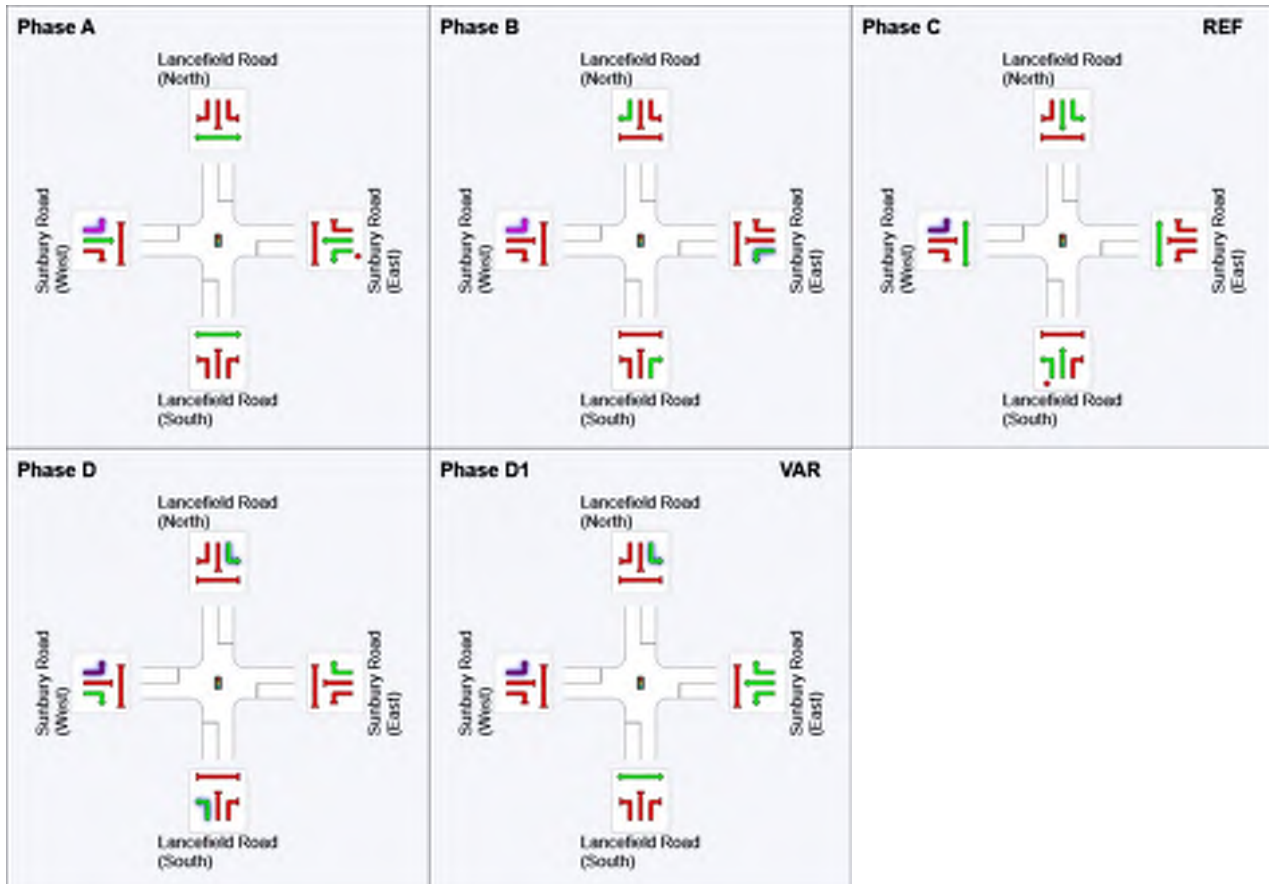
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	377	377	0
E: Sunbury Road (East)	1245	1178	67
N: Lancefield Road (North)	1381	1377	4
W: Sunbury Road (West)	717	652	65
Total	3720	3584	136

## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	61	82	0	34	52
Green Time (sec)	15	12	28	12	3
Phase Time (sec)	21	18	34	18	9
Phase Split	21%	18%	34%	18%	9%

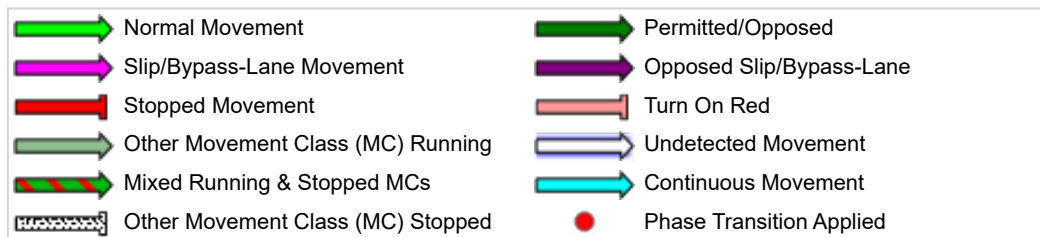
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	97	0.0	584	0.166	94 <sup>6</sup>	26.1	LOS C	3.1	22.0	Short	110	0.0	NA
Lane 2	96	0.0	546	0.176	100	29.3	LOS C	3.6	24.9	Full	500	0.0	0.0
Lane 3	184	0.0	223	0.826	100	58.9	LOS E	9.8	68.7	Short	100	0.0	NA
Approach	377	0.0		0.826		42.9	LOS D	9.8	68.7				
East: Sunbury Road (East)													
Lane 1	82	2.4	657	0.125	100	24.9	LOS C	2.4	17.5	Short	100	0.0	NA
Lane 2	193	11.1	437	0.441	100	35.3	LOS D	8.1	62.1	Short	300	0.0	NA
Lane 3	193	11.1	437	0.441	100	35.3	LOS D	8.1	62.1	Full	500	0.0	0.0
Lane 4	193	11.1	437	0.441	100	35.3	LOS D	8.1	62.1	Full	500	0.0	0.0
Lane 5	276	0.2	390	0.709	89 <sup>6</sup>	47.0	LOS D	13.0	91.4	Short	300	0.0	NA
Lane 6	309	0.2	390	0.793	100	50.4	LOS D	15.5	108.7	Short	250	0.0	NA
Approach	1245	5.4		0.793		40.9	LOS D	15.5	108.7				
North: Lancefield Road (North)													
Lane 1	440	0.2	1020	0.432	86 <sup>6</sup>	19.8	LOS B	12.5	88.0	Short	90	0.0	NA
Lane 2	513	0.2	1020	0.503	100	20.5	LOS C	15.4	108.1	Short	120	0.0	NA
Lane 3	303	0.3	545	0.556	100	33.3	LOS C	12.7	89.2	Short	200	0.0	NA
Lane 4	63	0.8	222	0.282	100	50.3	LOS D	2.9	20.3	Full	500	0.0	0.0
Lane 5	63	0.8	222	0.282	100	50.3	LOS D	2.9	20.3	Short	100	0.0	NA
Approach	1381	0.3		0.556		25.8	LOS C	15.4	108.1				
West: Sunbury Road (West)													
Lane 1	25	0.0	1207	0.021	100	8.4	LOS A	0.3	1.9	Short	100	0.0	NA
Lane 2	200	10.9	273	0.731	100	47.0	LOS D	9.9	76.1	Short	150	0.0	NA
Lane 3	200	10.9	273	0.731	100	47.0	LOS D	9.9	76.1	Full	500	0.0	0.0
Lane 4	200	10.9	273	0.731	100	47.0	LOS D	9.9	76.1	Full	500	0.0	0.0
Lane 5	93	0.0	223	0.417	100	51.2	LOS D	4.4	30.6	Short	100	0.0	NA
Approach	717	9.1		0.731		46.2	LOS D	9.9	76.1				
Intersection	3720	3.7		0.826		36.5	LOS D	15.5	108.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 105 [SS-IN-03-PM Peak - 50% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

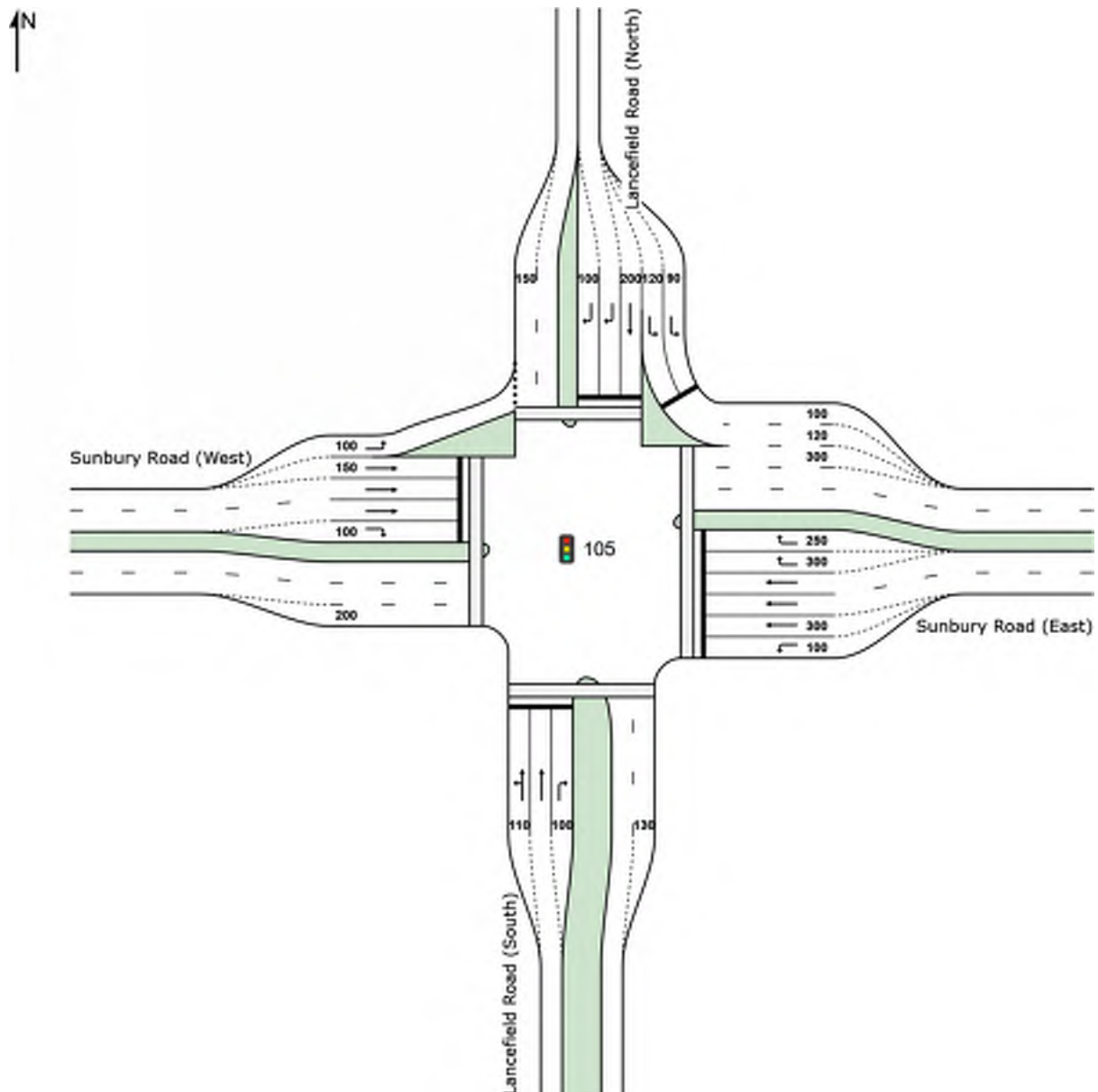
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

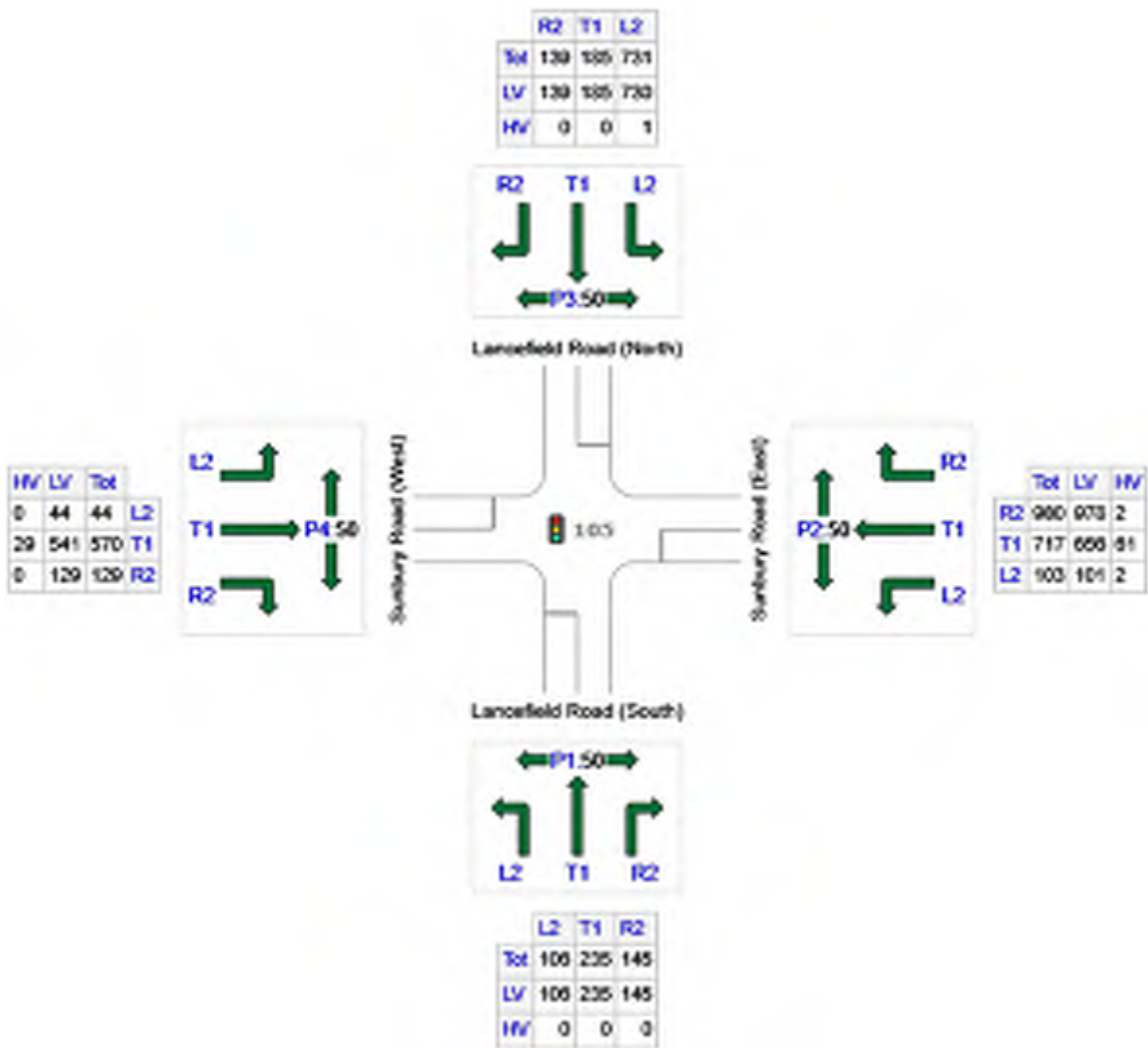
(\* Variable Phase)

### Site Layout



## Input Volumes

Volume Display Method: Separate



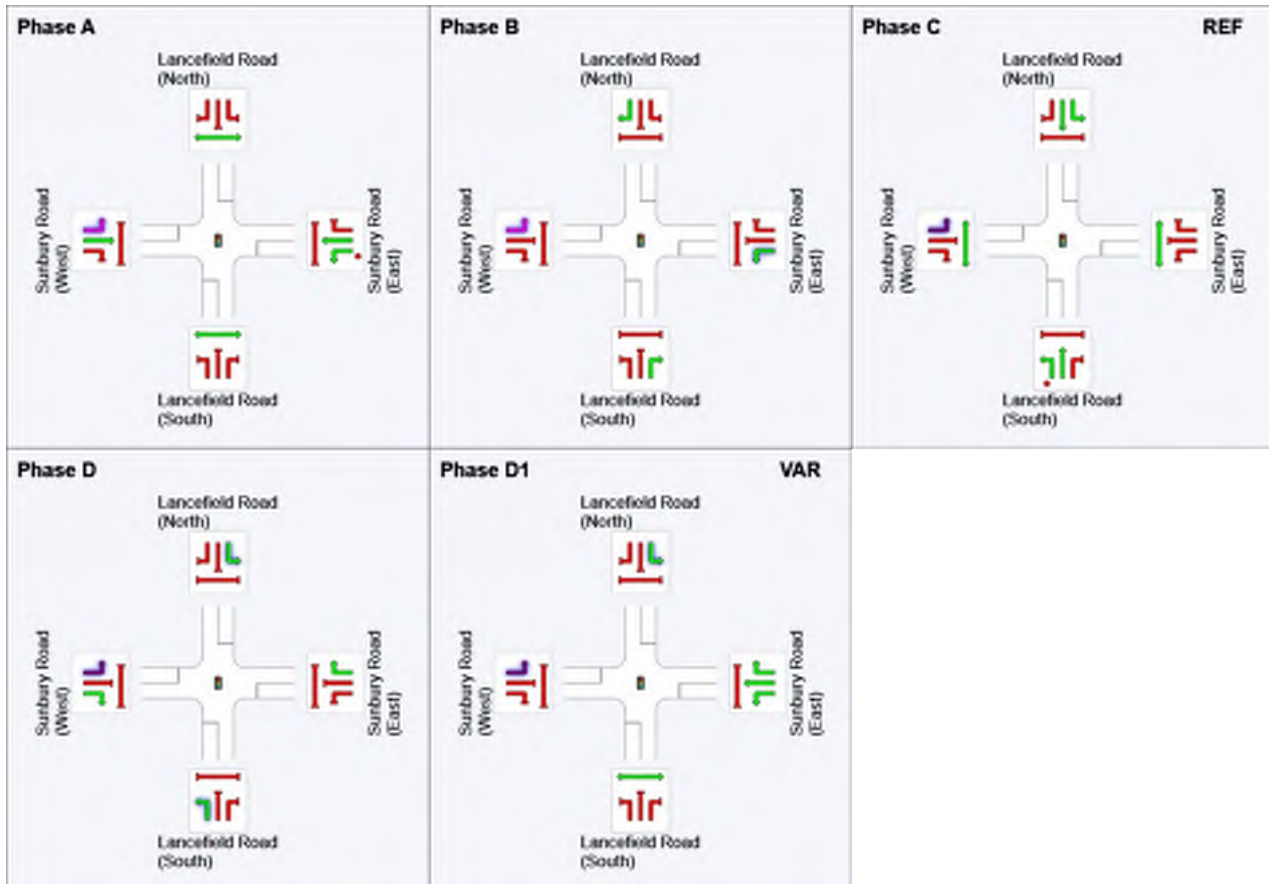
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	486	486	0
E: Sunbury Road (East)	1800	1735	65
N: Lancefield Road (North)	1055	1054	1
W: Sunbury Road (West)	743	714	29
Total	4084	3989	95

## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	81	103	0	36	61
Green Time (sec)	16	11	30	19	14
Phase Time (sec)	22	17	36	25	20
Phase Split	18%	14%	30%	21%	17%

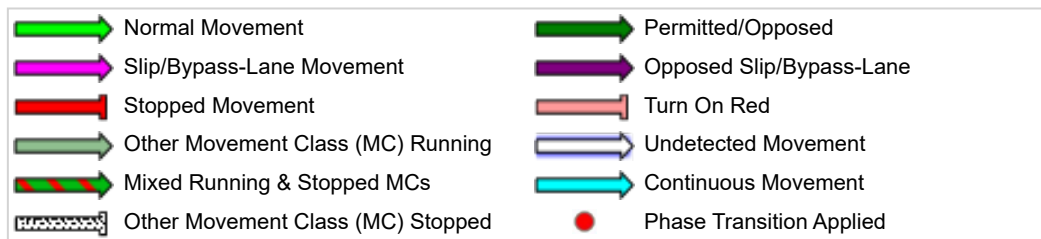
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
South: Lancefield Road (South)													
Lane 1	171	0.0	521	0.328	94 <sup>6</sup>	35.3	LOS D	7.4	51.5	Short	110	0.0	NA
Lane 2	170	0.0	488	0.349	100	39.8	LOS D	8.2	57.3	Full	500	0.0	0.0
Lane 3	145	0.0	170	0.852	100	72.4	LOS E	9.4	65.7	Short	100	0.0	NA
Approach	486	0.0		0.852		48.0	LOS D	9.4	65.7				
East: Sunbury Road (East)													
Lane 1	103	1.9	717	0.144	100	27.0	LOS C	3.5	25.2	Short	100	0.0	NA
Lane 2	239	8.5	554	0.431	100	36.3	LOS D	11.2	84.5	Short	300	0.0	NA
Lane 3	239	8.5	554	0.431	100	36.3	LOS D	11.2	84.5	Full	500	0.0	0.0
Lane 4	239	8.5	554	0.431	100	36.3	LOS D	11.2	84.5	Full	500	0.0	0.0
Lane 5	463	0.2	603	0.768	89 <sup>6</sup>	46.2	LOS D	25.0	175.0	Short	300	0.0	NA
Lane 6	517	0.2	603	0.858	100	54.0	LOS D	31.5	221.1	Short	250	0.0	NA
Approach	1800	3.6		0.858		43.4	LOS D	31.5	221.1				
North: Lancefield Road (North)													
Lane 1	338	0.1	1160	0.291	86 <sup>6</sup>	16.5	LOS B	8.9	62.2	Short	90	0.0	NA
Lane 2	393	0.1	1160	0.339	100	16.9	LOS B	10.7	75.3	Short	120	0.0	NA
Lane 3	185	0.0	488	0.379	100	40.2	LOS D	9.0	62.9	Short	200	0.0	NA
Lane 4	70	0.0	170	0.408	100	63.3	LOS E	4.0	28.0	Full	500	0.0	0.0
Lane 5	70	0.0	170	0.408	100	63.3	LOS E	4.0	28.0	Short	100	0.0	NA
Approach	1055	0.1		0.408		27.0	LOS C	10.7	75.3				
West: Sunbury Road (West)													
Lane 1	44	0.0	967	0.046	100	13.5	LOS B	0.9	6.3	Short	100	0.0	NA
Lane 2	190	5.1	252	0.755	100	57.9	LOS E	11.4	83.3	Short	150	0.0	NA
Lane 3	190	5.1	252	0.755	100	57.9	LOS E	11.4	83.3	Full	500	0.0	0.0
Lane 4	190	5.1	252	0.755	100	57.9	LOS E	11.4	83.3	Full	500	0.0	0.0
Lane 5	129	0.0	294	0.439	100	55.7	LOS E	7.0	48.8	Short	100	0.0	NA
Approach	743	3.9		0.755		54.9	LOS D	11.4	83.3				
Intersection	4084	2.3		0.858		41.8	LOS D	31.5	221.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



# USER REPORT FOR SITE



Project: 201208-V198070-Sunbury Growth ICP Modelling

Template: GTA Appendix

## Site: 103 [LR-IN-04-AM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Variable Phasing

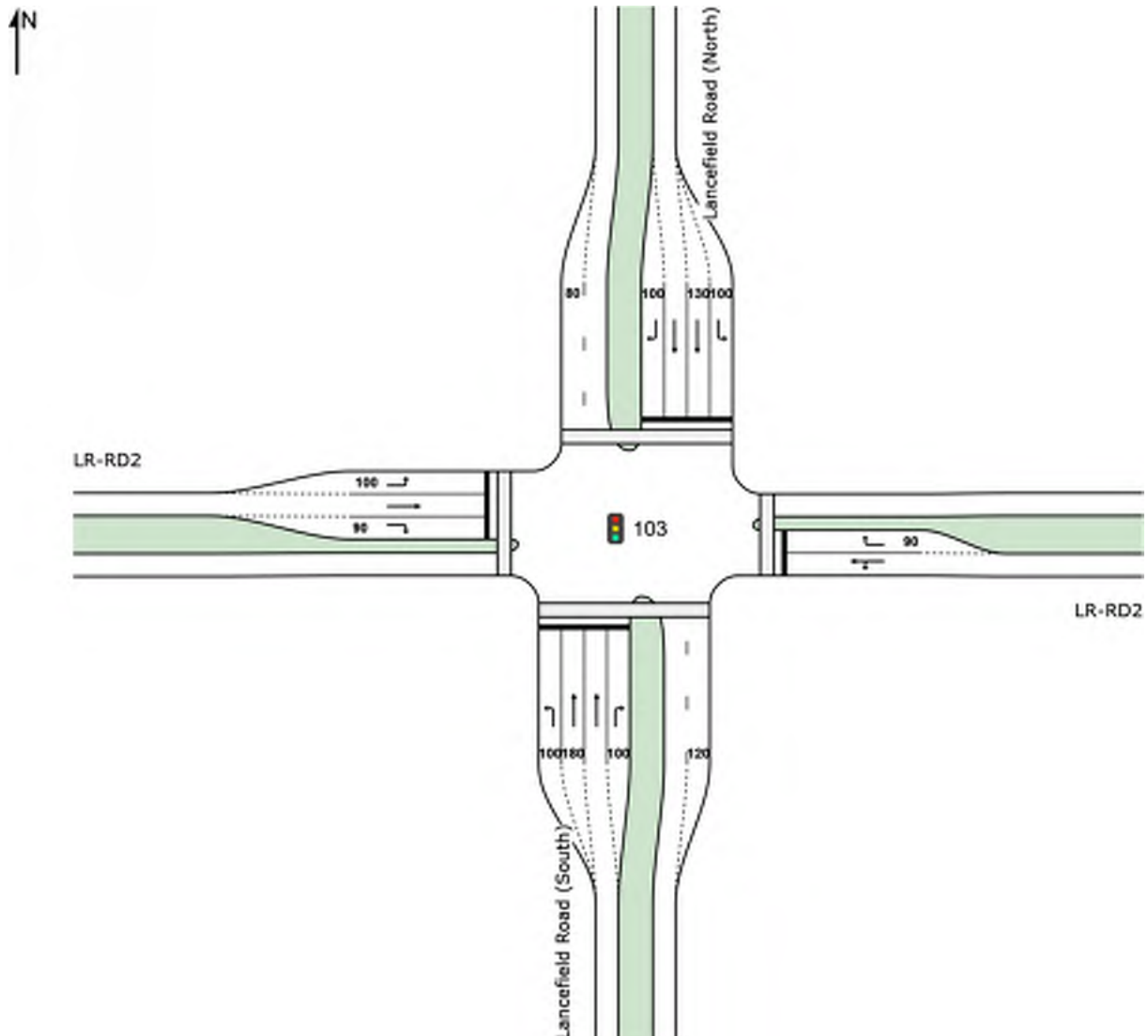
Reference Phase: Phase A

Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\*

Output Phase Sequence: A, B, B2\*, C, D, D1\*

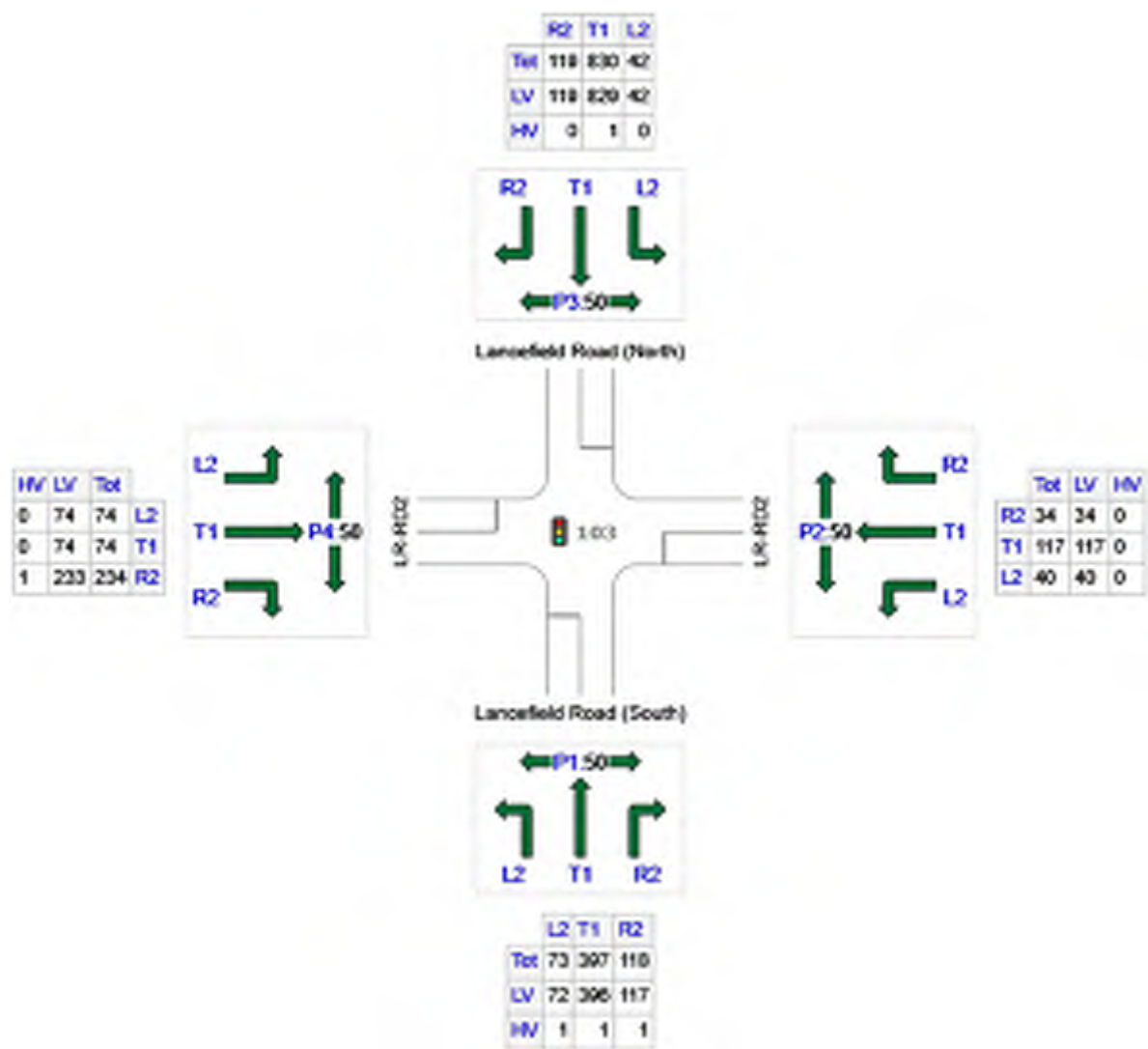
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	588	585	3
E: LR-RD2	191	191	0
N: Lancefield Road (North)	991	990	1
W: LR-RD2	382	381	1
Total	2152	2147	5

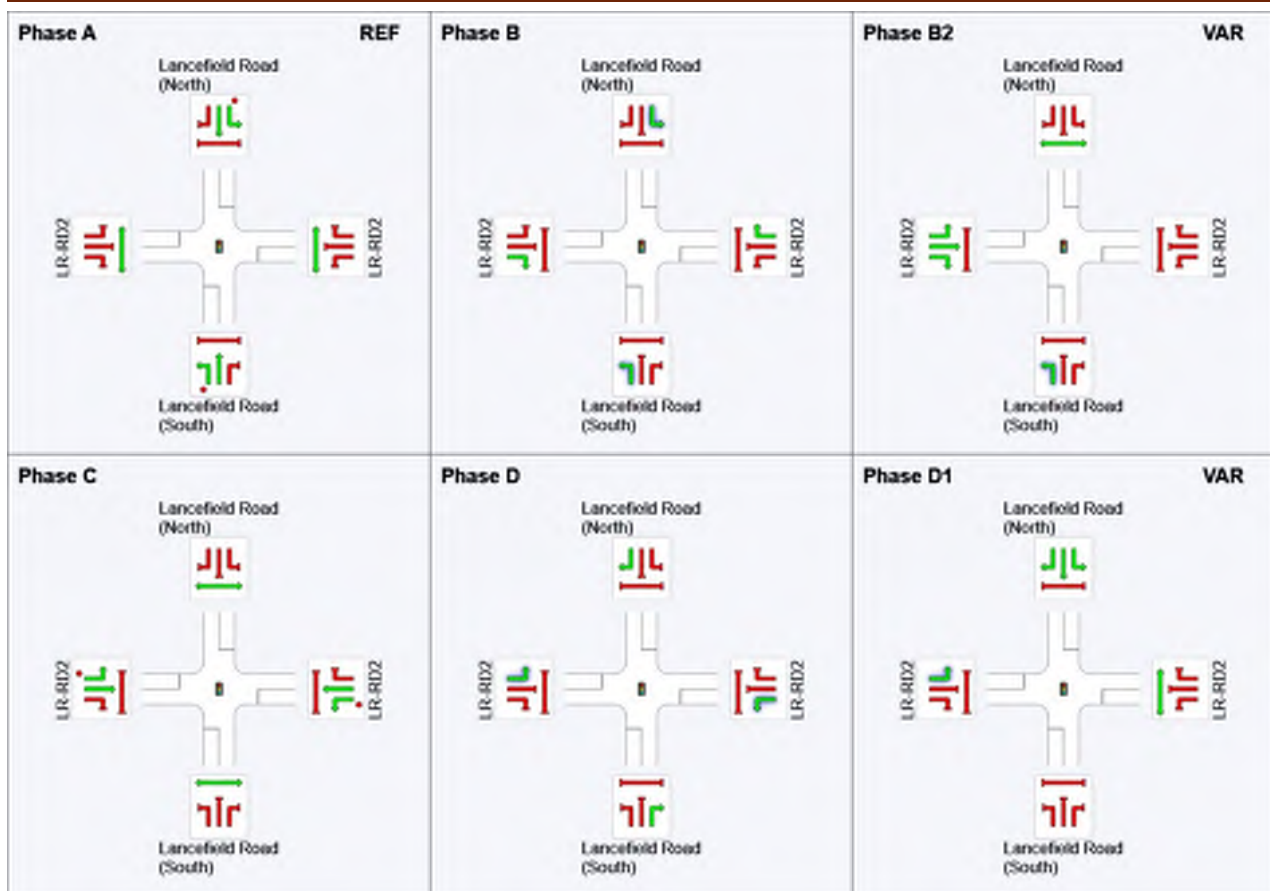
## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	0	30	46	50	73	86
Green Time (sec)	24	10	***	17	7	***
Phase Time (sec)	30	16	4	23	13	4
Phase Split	33%	18%	4%	26%	14%	4%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	73	1.4	777	0.094	100	19.0	LOS B	1.7	12.2	Short	100	0.0	NA
Lane 2	125	0.3	519	0.241	46 <sup>6</sup>	28.0	LOS C	4.3	30.4	Short	180	0.0	NA
Lane 3	272	0.3	519	0.524	100	30.7	LOS C	10.3	72.4	Full	500	0.0	0.0
Lane 4	118	0.8	144	0.822	100	56.8	LOS E	5.8	40.9	Short	100	0.0	NA
Approach	588	0.5		0.822		33.9	LOS C	10.3	72.4				
East: LR-RD2													
Lane 1	157	0.0	377	0.416	100	30.8	LOS C	5.6	39.5	Full	500	0.0	0.0
Lane 2	34	0.0	206	0.165	100	46.1	LOS D	1.4	9.8	Short	90	0.0	NA
Approach	191	0.0		0.416		33.6	LOS C	5.6	39.5				
North: Lancefield Road (North)													
Lane 1	42	0.0	784	0.054	100	18.7	LOS B	1.0	6.7	Short	100	0.0	NA
Lane 2	329	0.1	606	0.543	66 <sup>6</sup>	27.9	LOS C	12.1	84.6	Short	130	0.0	NA
Lane 3	501	0.1	606	0.827	100	36.3	LOS D	22.7	158.9	Full	500	0.0	0.0
Lane 4	119	0.0	227	0.524	100	47.3	LOS D	5.1	35.9	Short	100	0.0	NA
Approach	991	0.1		0.827		34.1	LOS C	22.7	158.9				
West: LR-RD2													
Lane 1	74	0.0	660	0.112	100	22.8	LOS C	2.0	13.8	Short	100	0.0	NA
Lane 2	74	0.0	455	0.163	100	29.8	LOS C	2.6	18.3	Full	500	0.0	0.0
Lane 3	234	0.4	288	0.812	100	51.1	LOS D	11.1	78.0	Short	90	0.0	NA
Approach	382	0.3		0.812		41.5	LOS D	11.1	78.0				
Intersection	2152	0.2		0.827		35.3	LOS D	22.7	158.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 103 [LR-IN-04-PM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

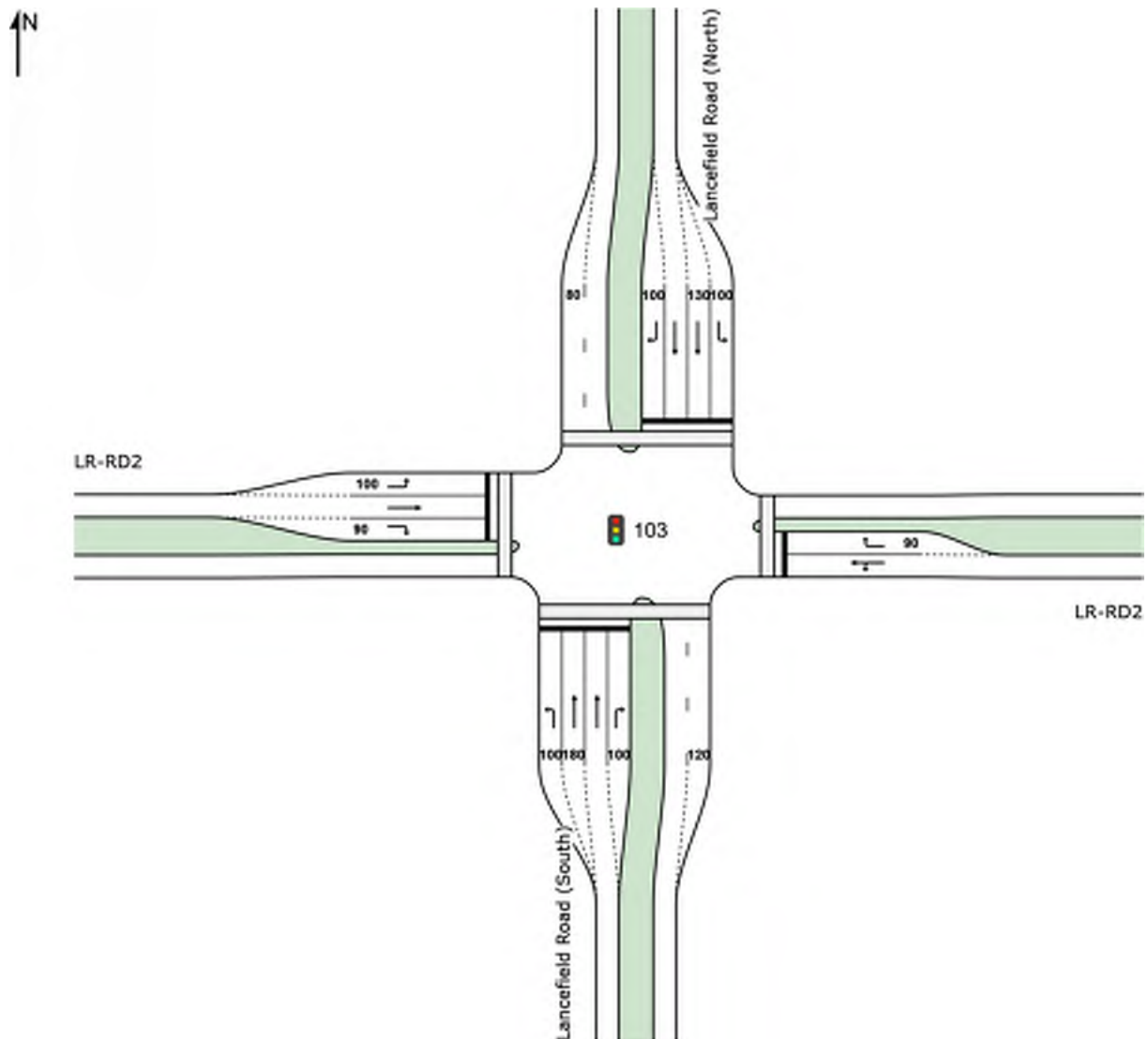
**Reference Phase: Phase A**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, B2\*, C, D, D2\***

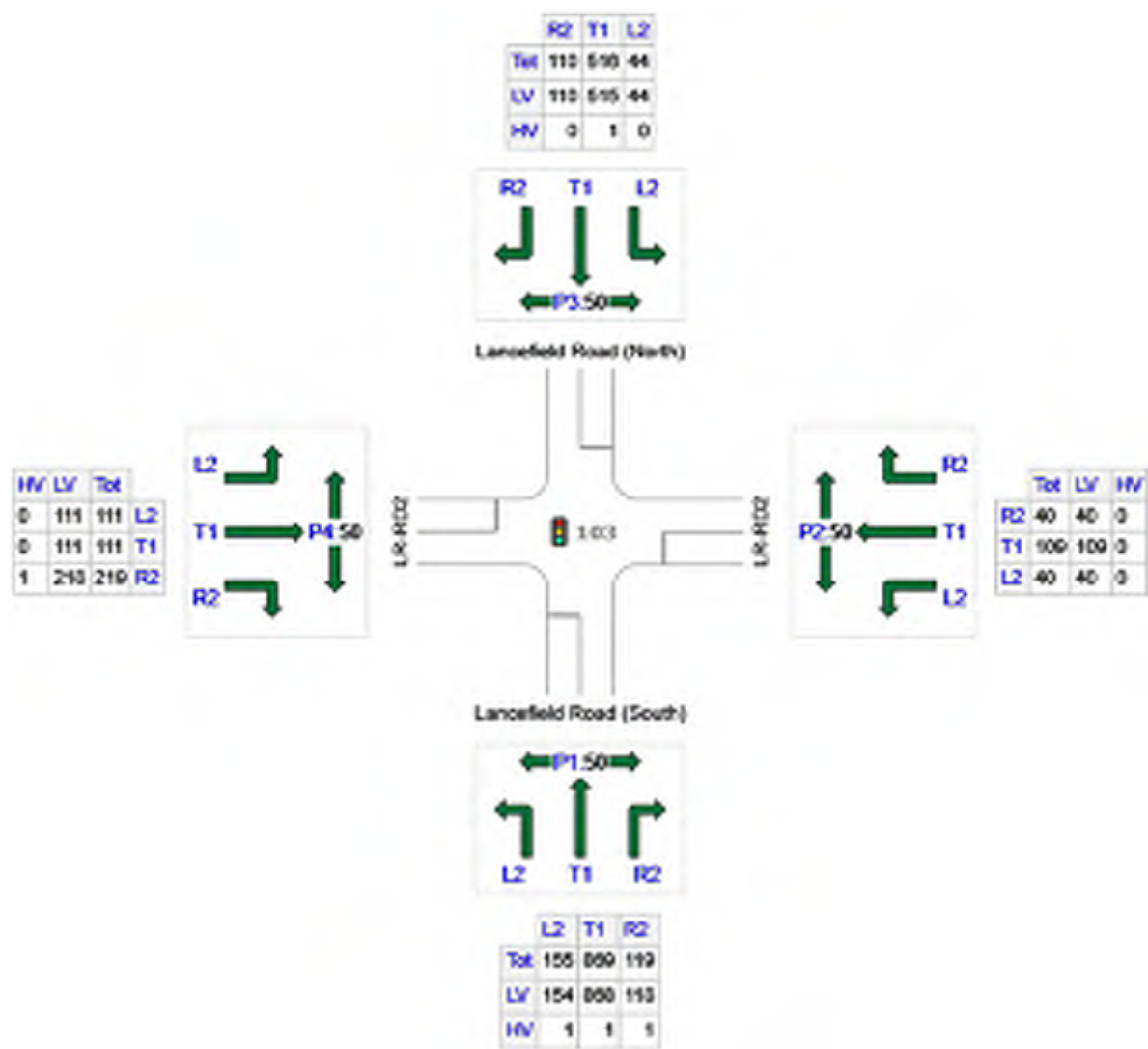
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1143	1140	3
E: LR-RD2	189	189	0
N: Lancefield Road (North)	670	669	1
W: LR-RD2	441	440	1
Total	2443	2438	5

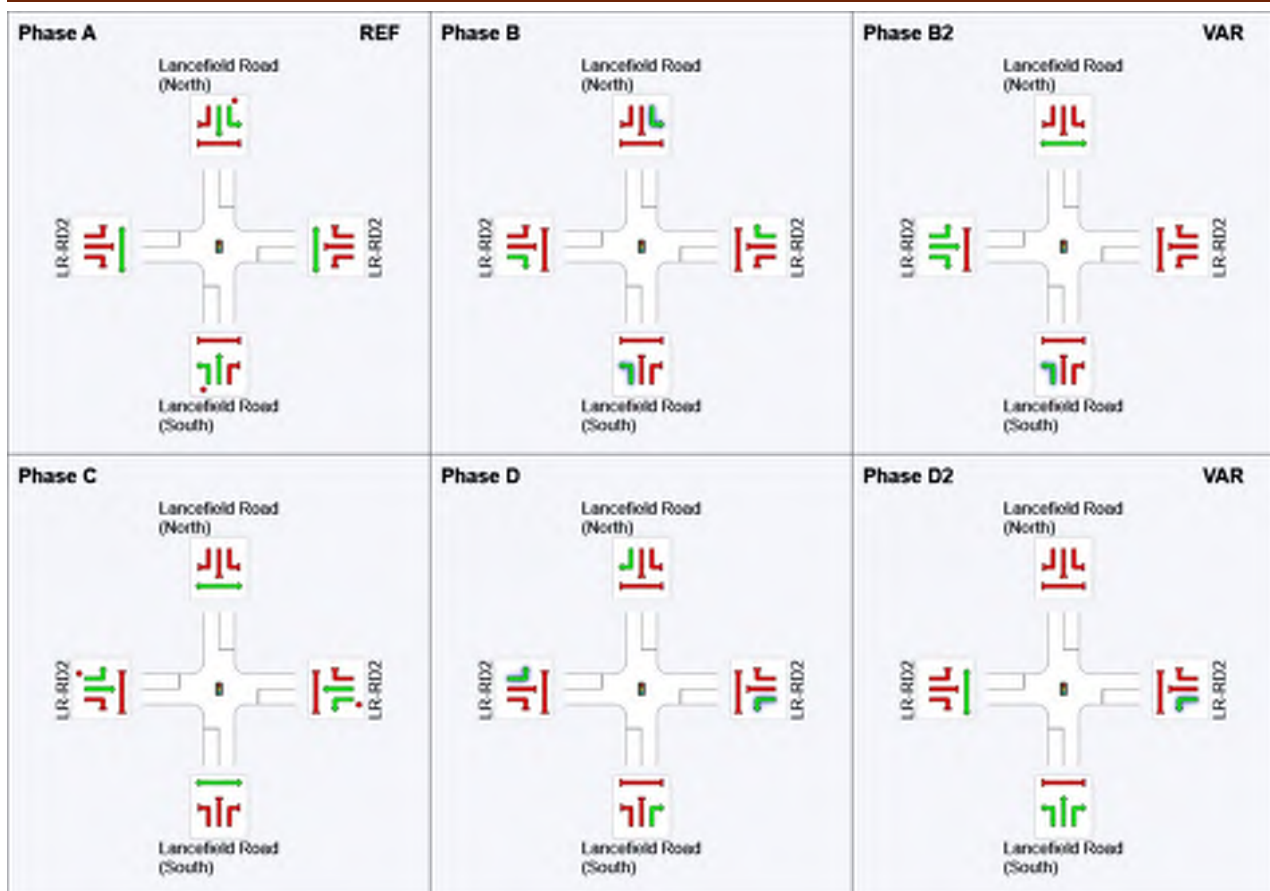
## Phase Timing Summary

Phase	A	B	B2	C	D	D2
Phase Change Time (sec)	0	32	46	50	73	85
Green Time (sec)	26	8	***	17	6	***
Phase Time (sec)	32	14	4	23	12	5
Phase Split	36%	16%	4%	26%	13%	6%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

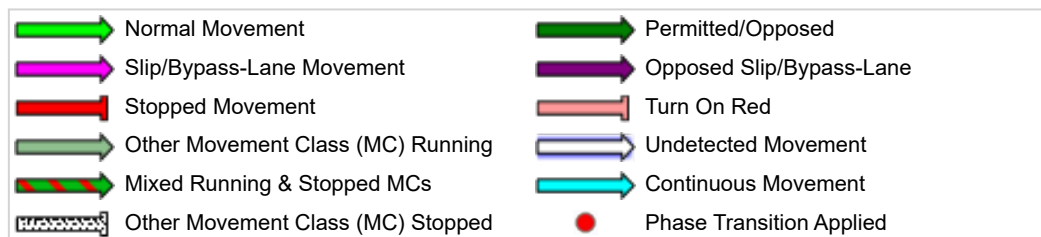
\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	155	0.6	883	0.175	100	16.8	LOS B	3.4	23.9	Short	100	0.0	NA
Lane 2	274	0.1	671	0.408	46 <sup>6</sup>	24.3	LOS C	9.2	64.4	Short	180	0.0	NA
Lane 3	595	0.1	671	0.887	100	41.3	LOS D	29.8	208.9	Full	500	0.0	0.0
Lane 4	119	0.8	226	0.527	100	47.4	LOS D	5.1	36.2	Short	100	0.0	NA
Approach	1143	0.3		0.887		34.5	LOS C	29.8	208.9				
East: LR-RD2													
Lane 1	149	0.0	378	0.394	100	30.8	LOS C	5.3	37.3	Full	500	0.0	0.0
Lane 2	40	0.0	165	0.242	100	48.9	LOS D	1.7	12.1	Short	90	0.0	NA
Approach	189	0.0		0.394		34.6	LOS C	5.3	37.3				
North: Lancefield Road (North)													
Lane 1	44	0.0	702	0.063	100	21.1	LOS C	1.1	7.7	Short	100	0.0	NA
Lane 2	204	0.2	563	0.363	66 <sup>6</sup>	27.6	LOS C	7.2	50.4	Short	130	0.0	NA
Lane 3	312	0.2	563	0.554	100	29.5	LOS C	11.7	82.1	Full	500	0.0	0.0
Lane 4	110	0.0	124	0.888	100	61.5	LOS E	5.7	39.8	Short	100	0.0	NA
Approach	670	0.1		0.888		33.6	LOS C	11.7	82.1				
West: LR-RD2													
Lane 1	111	0.0	557	0.199	100	26.7	LOS C	3.3	23.3	Short	100	0.0	NA
Lane 2	111	0.0	455	0.244	100	30.5	LOS C	4.0	28.1	Full	500	0.0	0.0
Lane 3	219	0.5	247	0.887	100	58.3	LOS E	11.3	79.2	Short	90	0.0	NA
Approach	441	0.2		0.887		43.4	LOS D	11.3	79.2				
Intersection	2443	0.2		0.888		35.9	LOS D	29.8	208.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



## Site: 101 [LR-IN-03-AM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

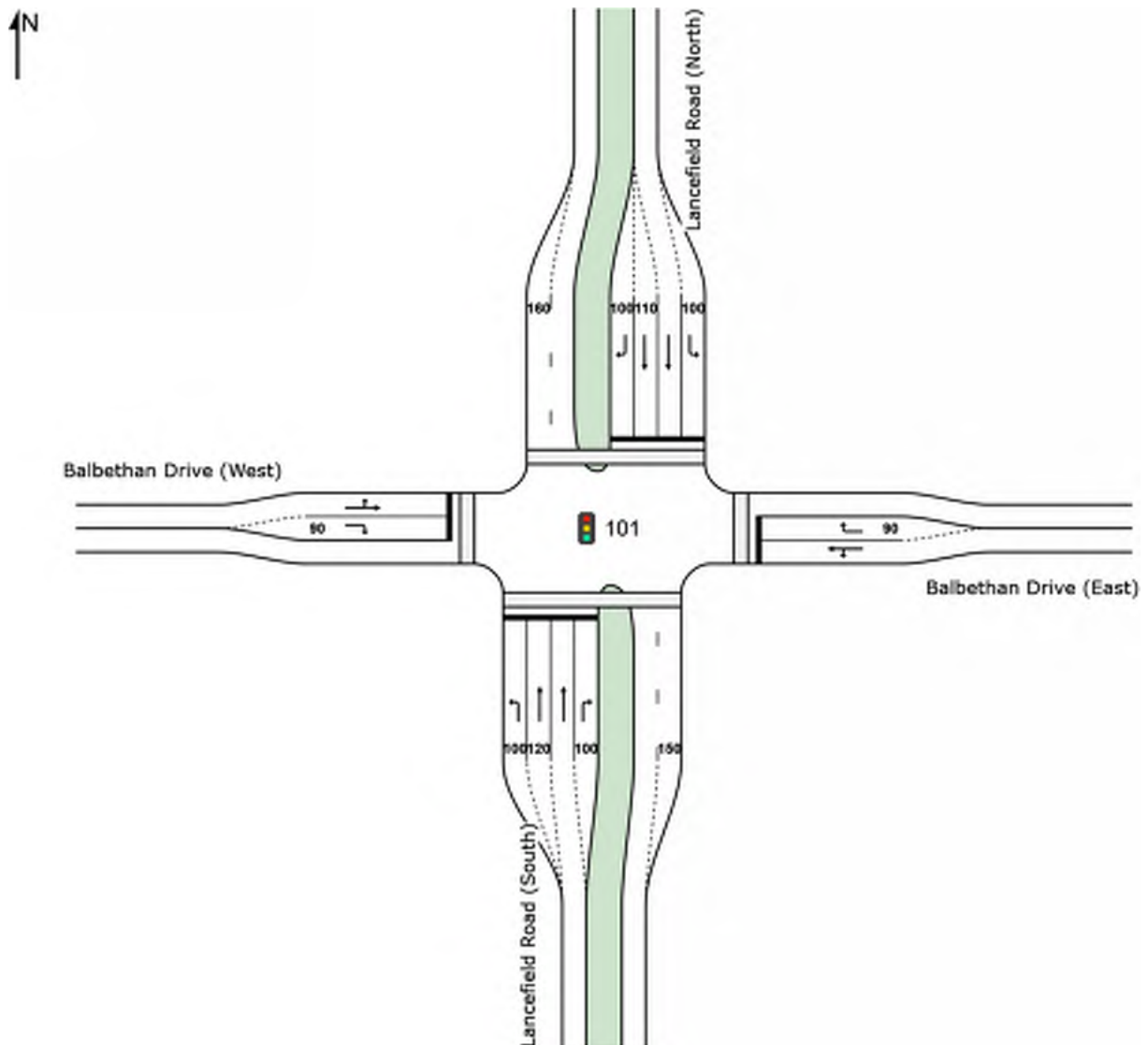
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D**

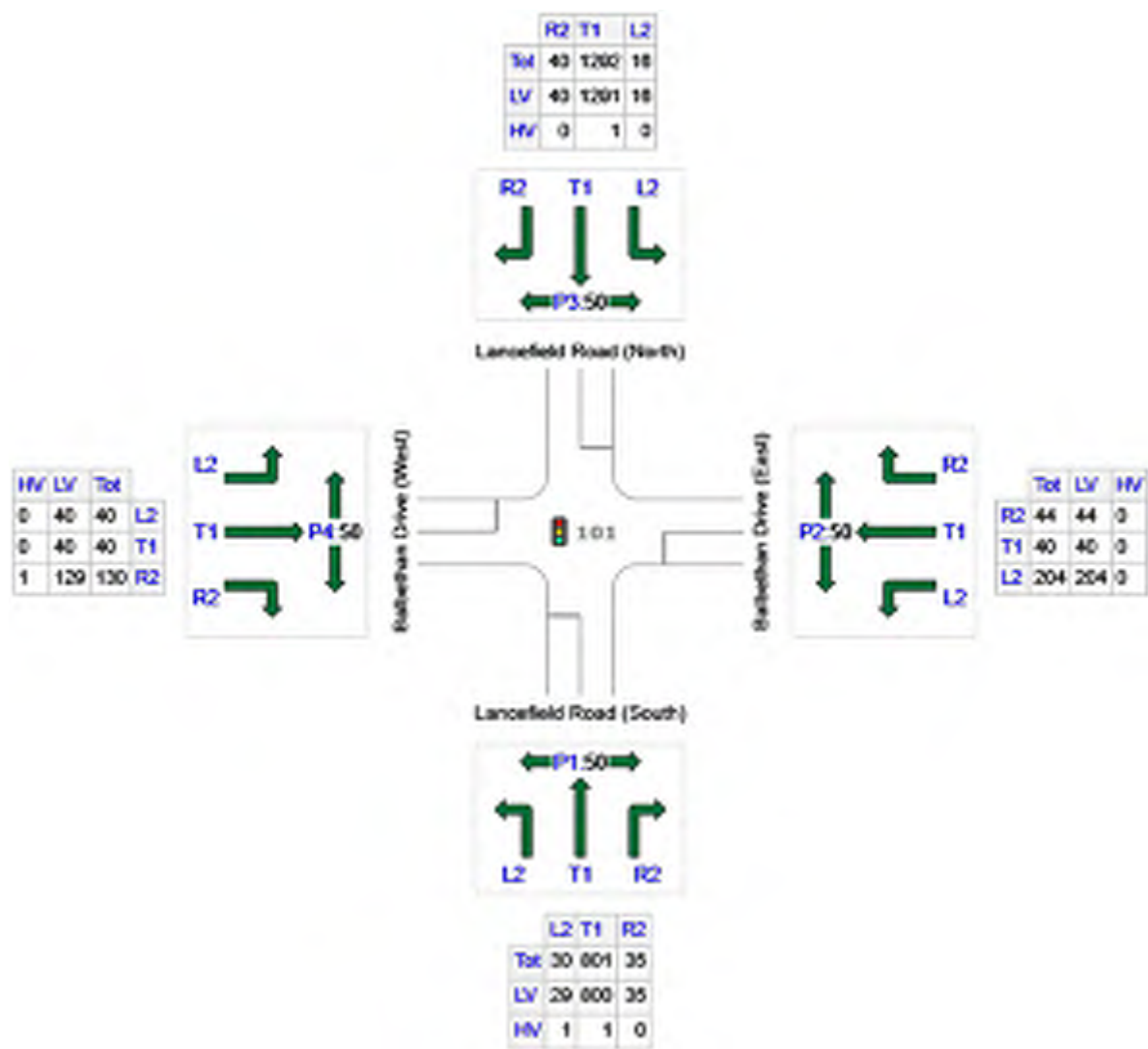
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



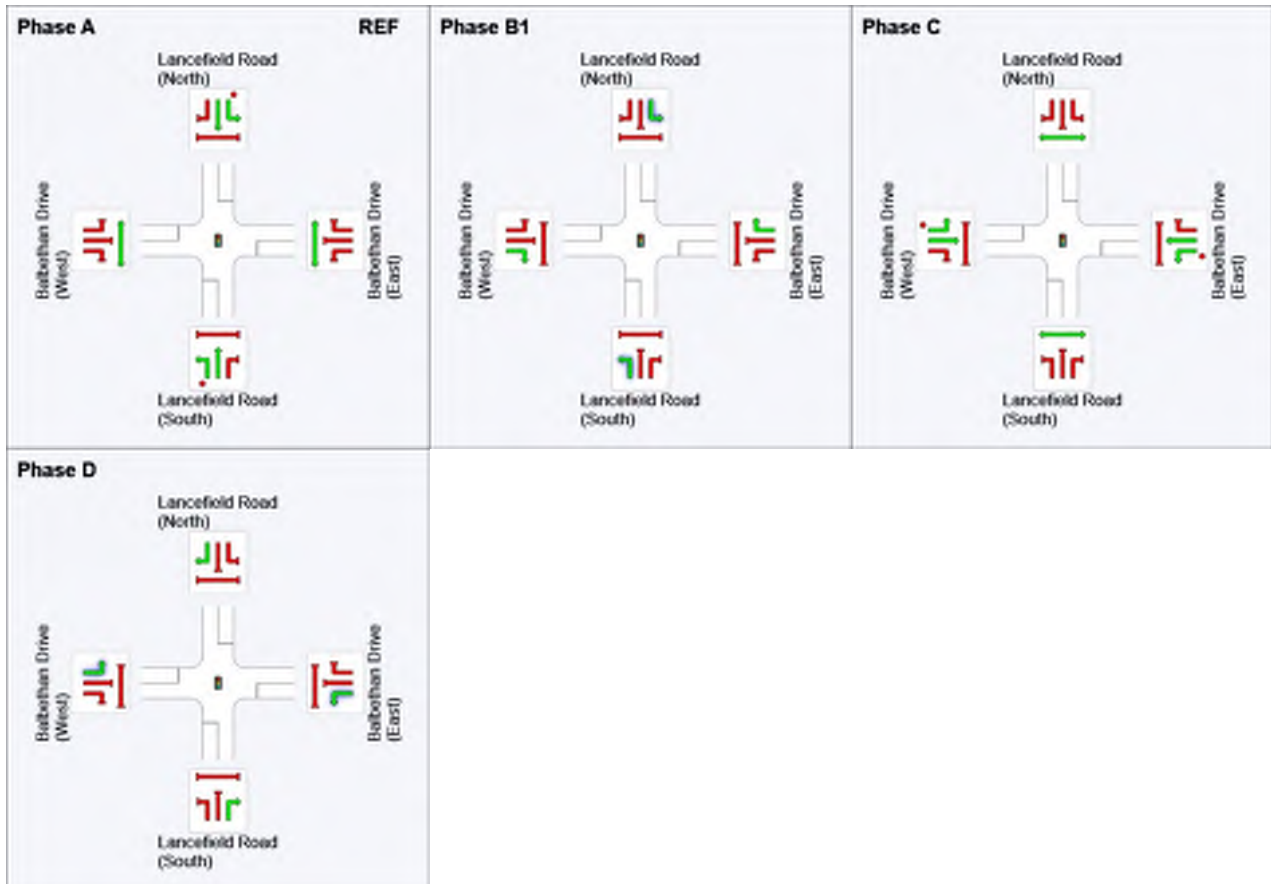
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	866	864	2
E: Balbethan Drive (East)	288	288	0
N: Lancefield Road (North)	1348	1347	1
W: Balbethan Drive (West)	210	209	1
Total	2712	2708	4

## Phase Timing Summary

Phase	A	B1	C	D
Phase Change Time (sec)	0	49	63	88
Green Time (sec)	43	8	19	6
Phase Time (sec)	49	14	25	12
Phase Split	49%	14%	25%	12%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	30	3.3	925	0.032	100	15.7	LOS B	0.6	4.5	Short	100	0.0	NA
Lane 2	368	0.1	838	0.440	85 <sup>6</sup>	21.4	LOS C	12.6	88.0	Short	120	0.0	NA
Lane 3	433	0.1	838	0.516	100	22.4	LOS C	15.4	107.9	Full	500	0.0	0.0
Lane 4	35	0.0	111	0.314	100	57.5	LOS E	1.8	12.3	Short	100	0.0	NA
Approach	866	0.2		0.516		23.2	LOS C	15.4	107.9				
East: Balbethan Drive (East)													
Lane 1	244	0.0	443	0.551	100	36.0	LOS D	9.8	68.8	Full	500	0.0	0.0
Lane 2	44	0.0	149	0.296	100	54.8	LOS D	2.1	14.9	Short	90	0.0	NA
Approach	288	0.0		0.551		38.9	LOS D	9.8	68.8				
North: Lancefield Road (North)													
Lane 1	16	0.0	947	0.017	100	15.6	LOS B	0.3	2.3	Short	100	0.0	NA
Lane 2	605	0.1	838	0.722	80 <sup>6</sup>	25.3	LOS C	24.4	170.6	Full	500	0.0	0.0
Lane 3	687	0.1	758 <sup>1</sup>	0.906	100	42.3	LOS D	37.2	260.7	Short	110	0.0	NA
Lane 4	40	0.0	111	0.359	100	57.7	LOS E	2.0	14.1	Short	100	0.0	NA
Approach	1348	0.1		0.906		34.8	LOS C	37.2	260.7				
West: Balbethan Drive (West)													
Lane 1	80	0.0	395	0.203	100	33.4	LOS C	3.0	21.1	Full	500	0.0	0.0
Lane 2	130	0.8	148	0.880	100	65.4	LOS E	7.3	51.6	Short	90	0.0	NA
Approach	210	0.5		0.880		53.2	LOS D	7.3	51.6				
Intersection	2712	0.1		0.906		32.9	LOS C	37.2	260.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 101 [LR-IN-03-PM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

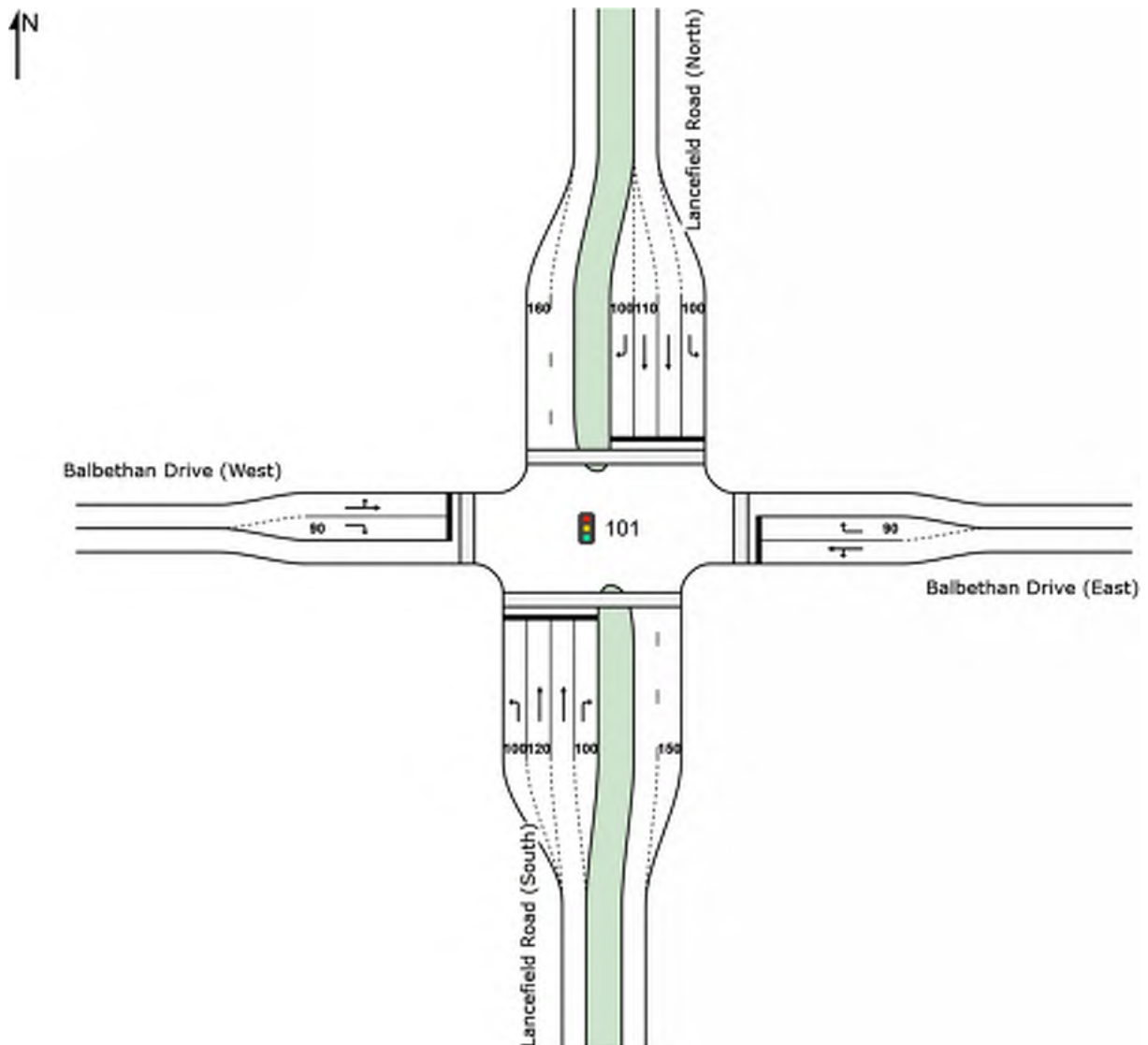
**Reference Phase: Phase A**

**Input Phase Sequence: A, B1, B2\*, B3\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B1, C, D, D2\***

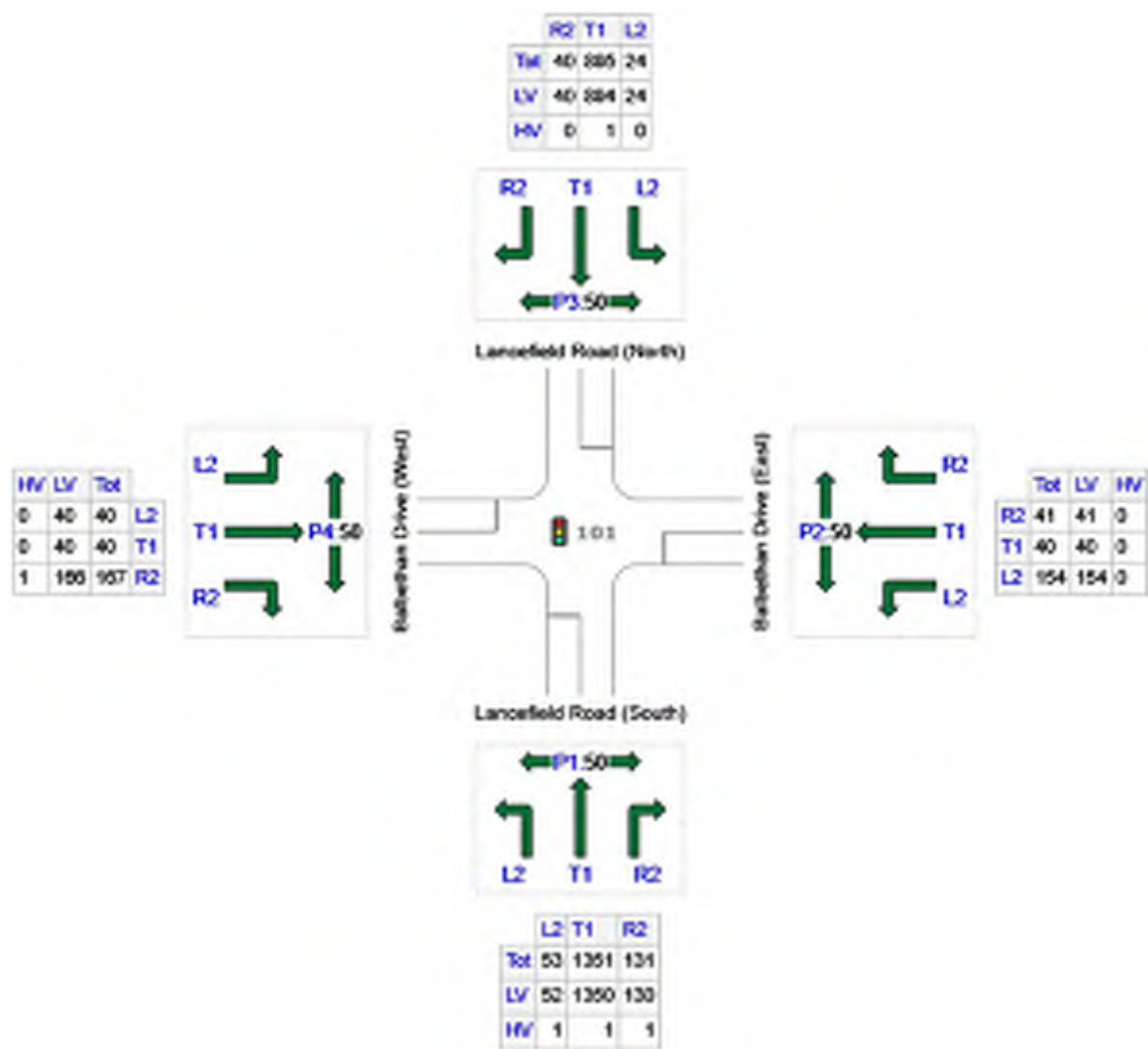
(\* Variable Phase)

### Site Layout



Input Volumes

Volume Display Method: Separate



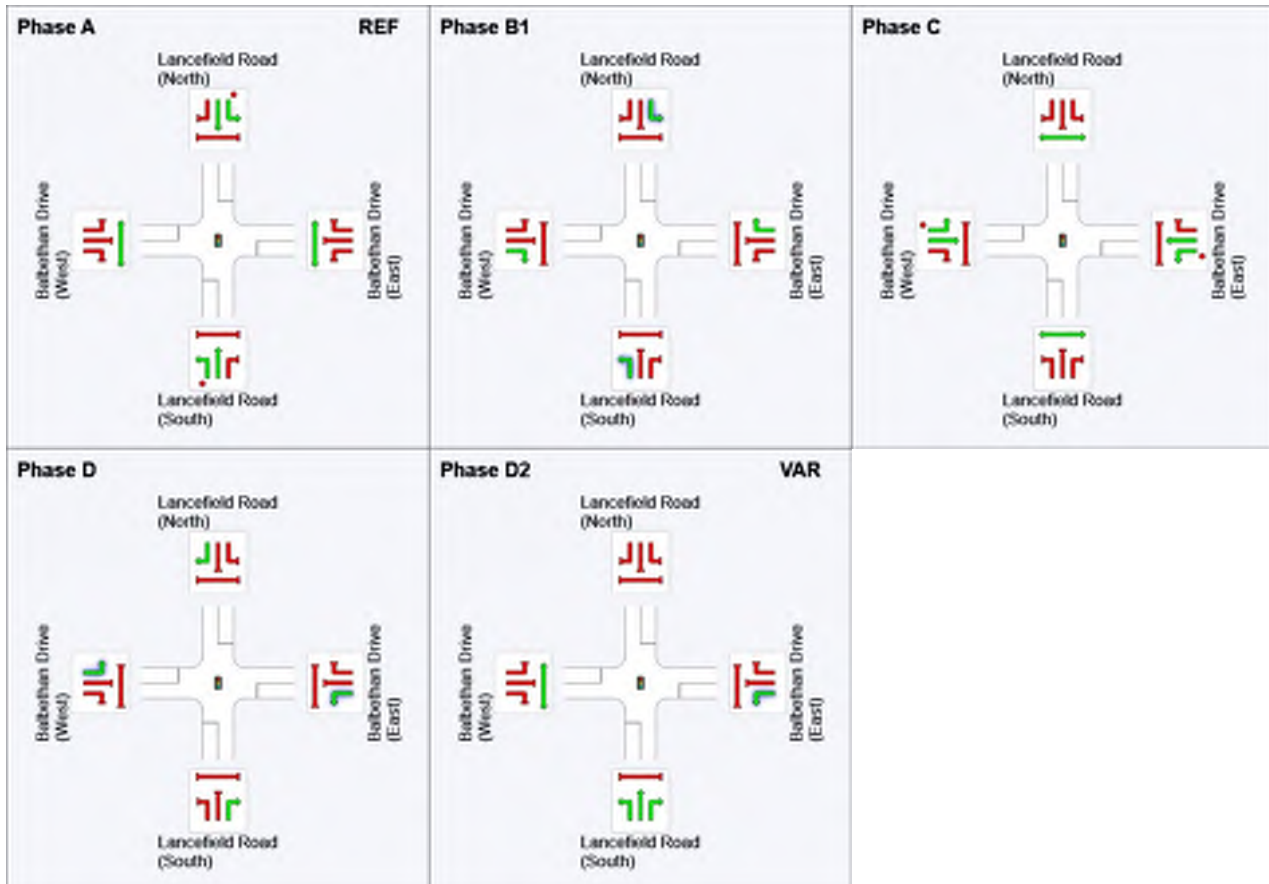
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	1535	1532	3
E: Balbethan Drive (East)	235	235	0
N: Lancefield Road (North)	959	958	1
W: Balbethan Drive (West)	247	246	1
Total	2976	2971	5

## Phase Timing Summary

Phase	A	B1	C	D	D2
Phase Change Time (sec)	0	55	73	100	112
Green Time (sec)	49	12	21	6	2
Phase Time (sec)	55	18	27	12	8
Phase Split	46%	15%	23%	10%	7%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
								Veh	Dist m				
South: Lancefield Road (South)													
Lane 1	53	1.9	1054	0.050	100	14.9	LOS B	1.2	8.3	Short	100	0.0	NA
Lane 2	657	0.1	875 <sup>1</sup>	0.750	85 <sup>6</sup>	26.6	LOS C	30.1	211.0	Short	120	0.0	NA
Lane 3	694	0.1	788 <sup>1</sup>	0.881	100	37.9	LOS D	38.6	270.7	Full	500	0.0	0.0
Lane 4	131	0.8	215	0.608	100	61.8	LOS E	7.6	53.3	Short	100	0.0	NA
Approach	1535	0.2		0.881		34.3	LOS C	38.6	270.7				
East: Balbethan Drive (East)													
Lane 1	194	0.0	424	0.457	100	42.3	LOS D	9.2	64.7	Full	500	0.0	0.0
Lane 2	41	0.0	186	0.221	100	60.7	LOS E	2.3	15.9	Short	90	0.0	NA
Approach	235	0.0		0.457		45.5	LOS D	9.2	64.7				
North: Lancefield Road (North)													
Lane 1	24	0.0	944	0.025	100	18.2	LOS B	0.6	4.3	Short	100	0.0	NA
Lane 2	397	0.1	796	0.499	80 <sup>6</sup>	28.1	LOS C	17.1	119.9	Full	500	0.0	0.0
Lane 3	498	0.1	796	0.626	100	30.1	LOS C	23.0	161.1	Short	110	0.0	NA
Lane 4	40	0.0	93	0.431	100	69.5	LOS E	2.4	17.1	Short	100	0.0	NA
Approach	959	0.1		0.626		30.6	LOS C	23.0	161.1				
West: Balbethan Drive (West)													
Lane 1	80	0.0	360	0.222	100	42.1	LOS D	3.7	26.2	Full	500	0.0	0.0
Lane 2	167	0.6	185	0.903	100	77.1	LOS E	11.3	79.7	Short	90	0.0	NA
Approach	247	0.4		0.903		65.8	LOS E	11.3	79.7				
Intersection	2976	0.2		0.903		36.6	LOS D	38.6	270.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>6</sup> Lane under-utilisation due to downstream effects



## Site: 105 [SS-IN-03-AM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

**Timings based on settings in the Site Phasing & Timing dialog**

**Phase Times determined by the program**

**Phase Sequence: Variable Phasing**

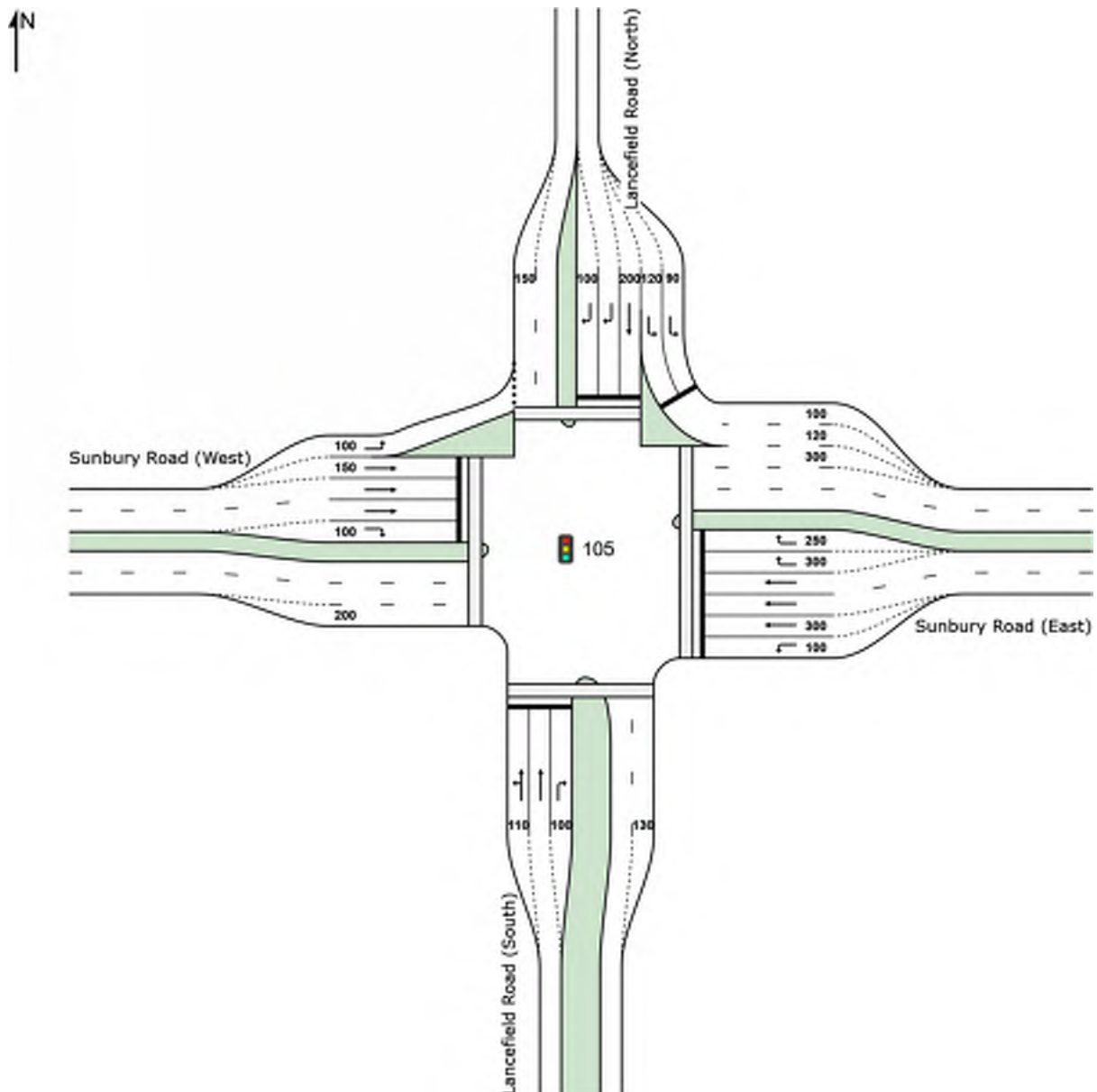
**Reference Phase: Phase C**

**Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\***

**Output Phase Sequence: A, B, C, D, D1\***

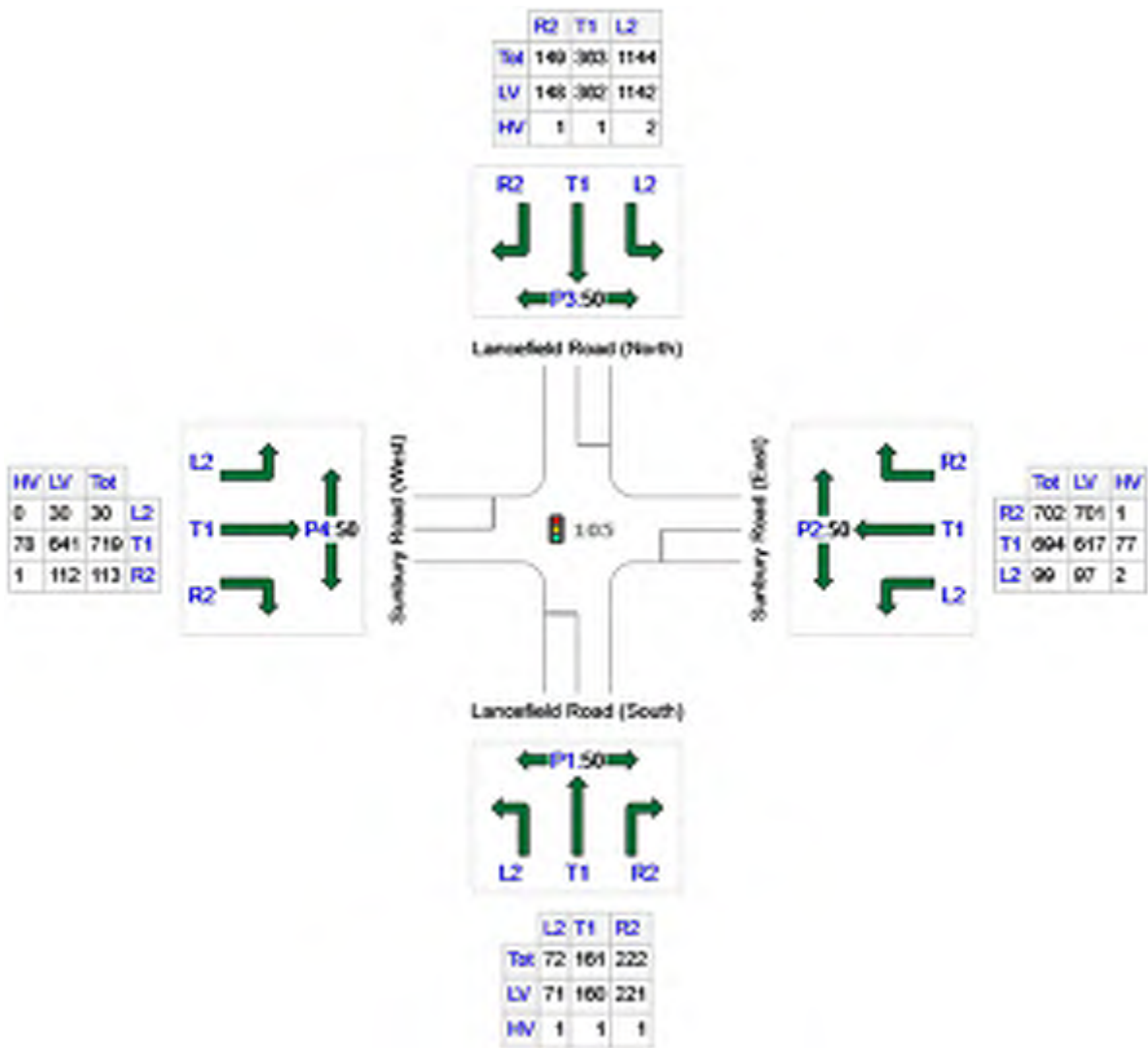
(\* Variable Phase)

### Site Layout



## Input Volumes

Volume Display Method: Separate



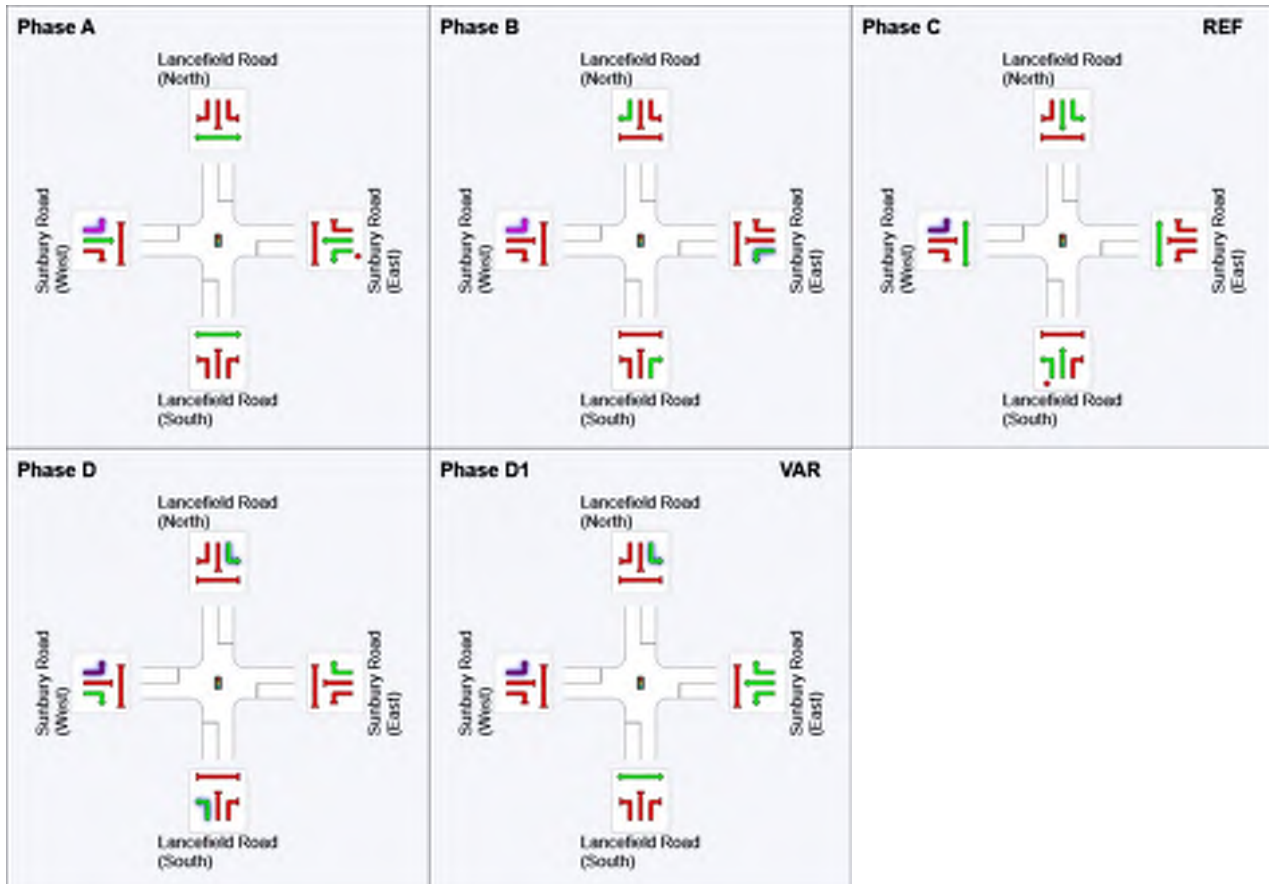
	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	455	452	3
E: Sunbury Road (East)	1495	1415	80
N: Lancefield Road (North)	1656	1652	4
W: Sunbury Road (West)	862	783	79
Total	4468	4302	166

## Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	66	89	0	35	55
Green Time (sec)	17	15	29	14	5
Phase Time (sec)	23	21	35	20	11
Phase Split	21%	19%	32%	18%	10%

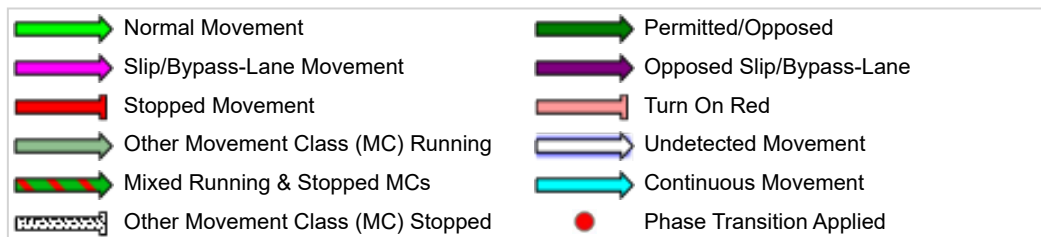
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Flows		Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total	HV						Veh	Dist				
	veh/h	%	veh/h	v/c	%	sec			m		m	%	%
South: Lancefield Road (South)													
Lane 1	117	1.1	546	0.214	94 <sup>6</sup>	30.0	LOS C	4.3	30.5	Short	110	0.0	NA
Lane 2	116	0.6	512	0.227	100	34.1	LOS C	4.9	34.4	Full	500	0.0	0.0
Lane 3	222	0.5	252	0.879	100	66.9	LOS E	13.5	95.1	Short	100	0.0	NA
Approach	455	0.7		0.879		49.1	LOS D	13.5	95.1				
East: Sunbury Road (East)													
Lane 1	99	2.0	716	0.138	100	25.1	LOS C	3.1	22.2	Short	100	0.0	NA
Lane 2	231	11.1	463	0.500	100	38.0	LOS D	10.7	82.1	Short	300	0.0	NA
Lane 3	231	11.1	463	0.500	100	38.0	LOS D	10.7	82.1	Full	500	0.0	0.0
Lane 4	231	11.1	463	0.500	100	38.0	LOS D	10.7	82.1	Full	500	0.0	0.0
Lane 5	331	0.1	422	0.786	89 <sup>6</sup>	52.5	LOS D	17.9	125.3	Short	300	0.0	NA
Lane 6	371	0.1	422	0.879	100	60.7	LOS E	22.3	156.3	Short	250	0.0	NA
Approach	1495	5.4		0.879		46.0	LOS D	22.3	156.3				
North: Lancefield Road (North)													
Lane 1	529	0.2	1012	0.522	86 <sup>6</sup>	22.5	LOS C	17.8	124.9	Short	90	0.0	NA
Lane 2	615	0.2	1012	0.608	100	23.7	LOS C	22.2	155.8	Short	120	0.0	NA
Lane 3	363	0.3	513	0.707	100	40.1	LOS D	17.9	125.4	Short	200	0.0	NA
Lane 4	75	0.7	252	0.296	100	52.8	LOS D	3.7	26.0	Full	500	0.0	0.0
Lane 5	75	0.7	252	0.296	100	52.8	LOS D	3.7	26.0	Short	100	0.0	NA
Approach	1656	0.2		0.707		29.5	LOS C	22.2	155.8				
West: Sunbury Road (West)													
Lane 1	30	0.0	1165	0.026	100	9.7	LOS A	0.4	2.9	Short	100	0.0	NA
Lane 2	240	10.8	282	0.851	100	57.3	LOS E	14.1	108.2	Short	150	0.0	NA
Lane 3	240	10.8	282	0.851	100	57.3	LOS E	14.1	108.2	Full	500	0.0	0.0
Lane 4	240	10.8	282	0.851	100	57.3	LOS E	14.1	108.2	Full	500	0.0	0.0
Lane 5	113	0.9	235	0.481	100	55.3	LOS E	5.8	41.1	Short	100	0.0	NA
Approach	862	9.2		0.851		55.4	LOS E	14.1	108.2				
Intersection	4468	3.7		0.879		42.0	LOS D	22.3	156.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects

## Site: 105 [SS-IN-03-PM Peak - 60% (Option 2a) - PSP Interim Design ]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Practical Cycle Time)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Variable Phasing

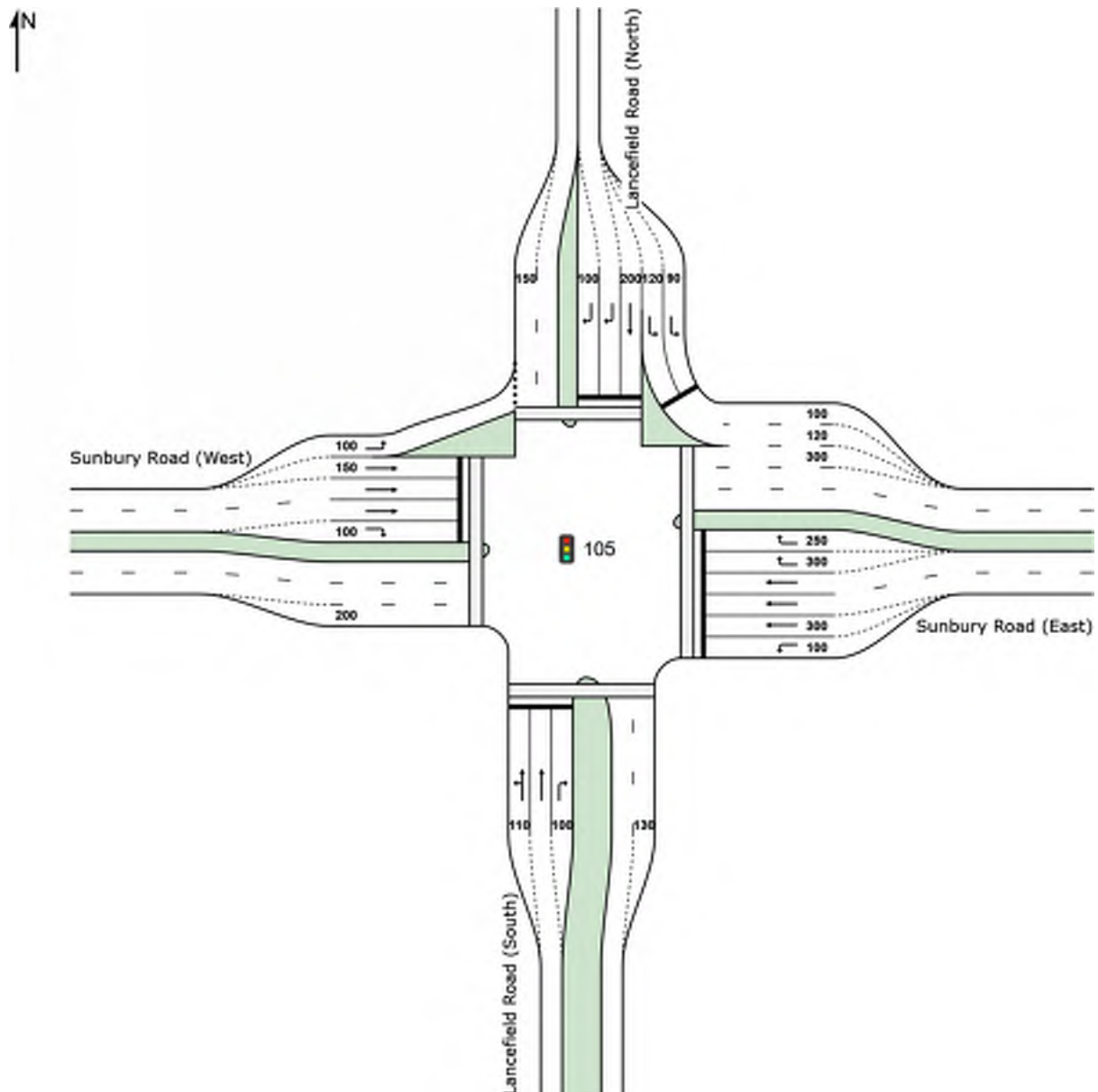
Reference Phase: Phase C

Input Phase Sequence: A, B, B1\*, B2\*, C, D, D1\*, D2\*

Output Phase Sequence: A, B, B2\*, C, D, D1\*

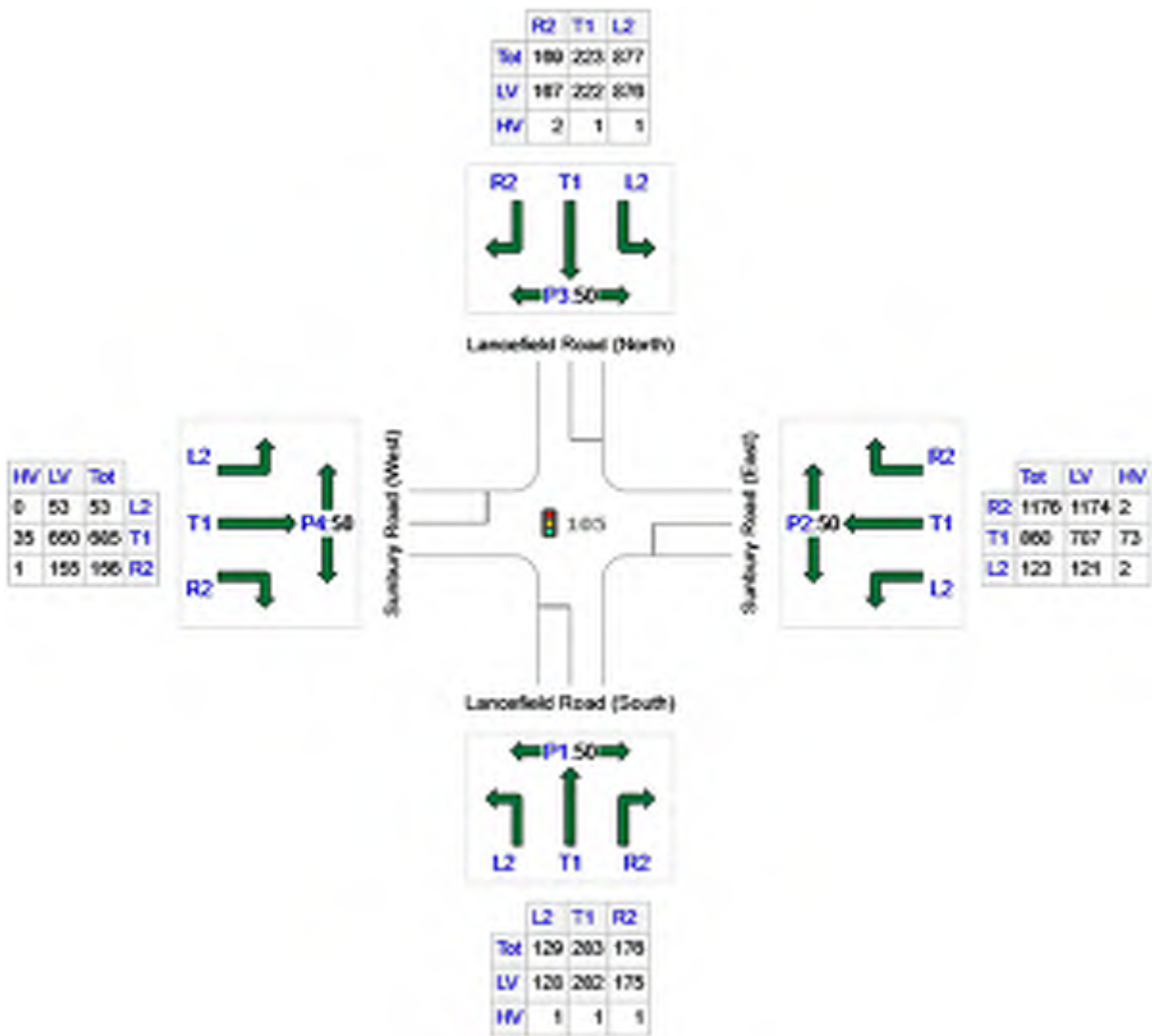
(\* Variable Phase)

### Site Layout



## Input Volumes

Volume Display Method: Separate



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Lancefield Road (South)	588	585	3
E: Sunbury Road (East)	2159	2082	77
N: Lancefield Road (North)	1269	1265	4
W: Sunbury Road (West)	894	858	36
Total	4910	4790	120

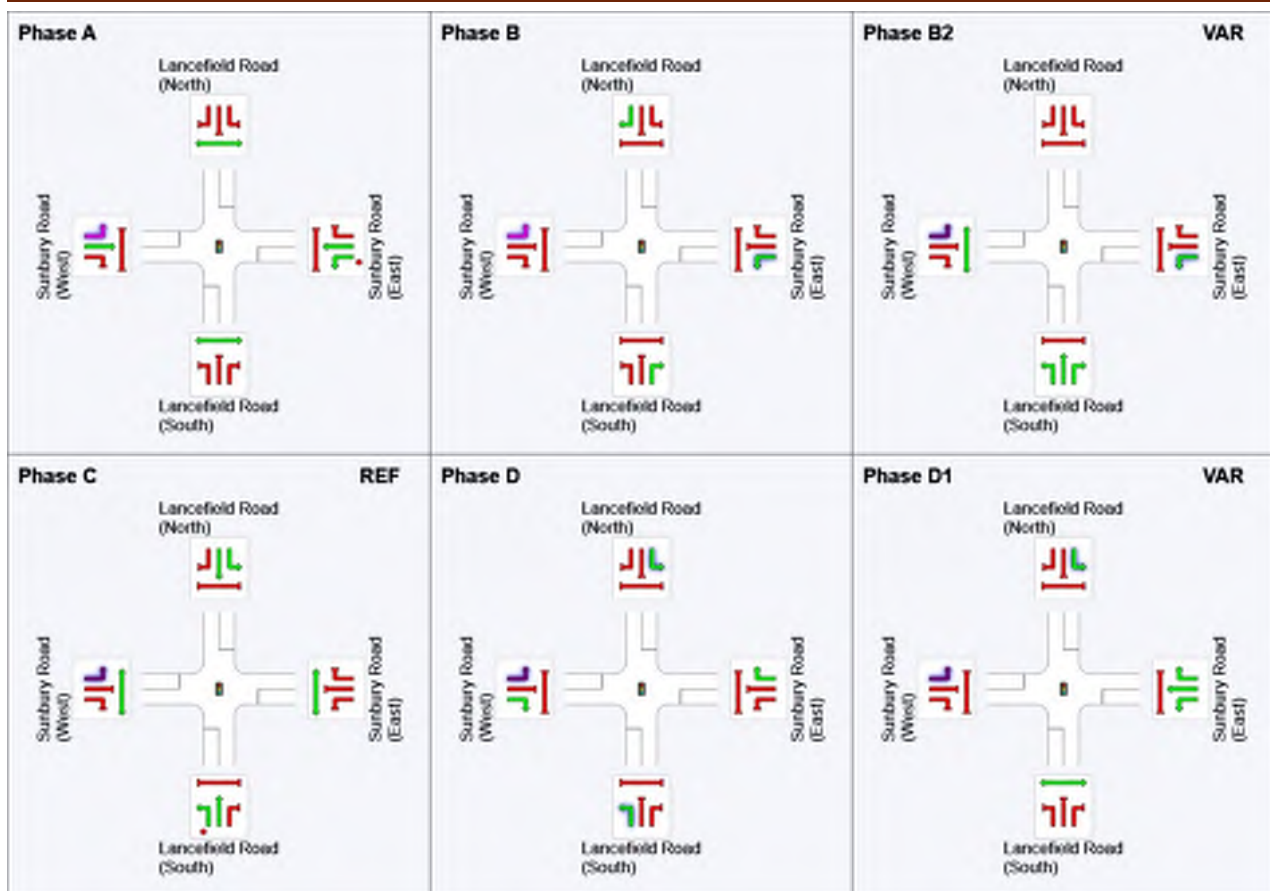
## Phase Timing Summary

Phase	A	B	B2	C	D	D1
Phase Change Time (sec)	94	119	139	0	38	68
Green Time (sec)	19	14	***	32	24	20
Phase Time (sec)	25	20	1	38	30	26
Phase Split	18%	14%	1%	27%	21%	19%

See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

\*\*\* No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

## Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Lane Use and Performance													
	Demand Total	Flows HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	veh/h	%	veh/h	v/c	%	sec		Veh	Dist m		m	%	%
South: Lancefield Road (South)													
Lane 1	206	0.6	487	0.423	94 <sup>6</sup>	44.3	LOS D	11.0	77.1	Short	110	0.0	NA
Lane 2	206	0.4	459	0.449	100	49.2	LOS D	12.0	84.4	Full	500	0.0	0.0
Lane 3	176	0.6	198	0.888	100	84.5	LOS F	13.5	94.9	Short	100	0.0	NA
Approach	588	0.5		0.888		58.1	LOS E	13.5	94.9				
East: Sunbury Road (East)													
Lane 1	123	1.6	787	0.156	100	28.0	LOS C	4.7	33.4	Short	100	0.0	NA
Lane 2	287	8.5	594	0.483	100	40.8	LOS D	15.6	117.3	Short	300	0.0	NA
Lane 3	287	8.5	594	0.483	100	40.8	LOS D	15.6	117.3	Full	500	0.0	0.0
Lane 4	287	8.5	594	0.483	100	40.8	LOS D	15.6	117.3	Full	500	0.0	0.0
Lane 5	555	0.2	662	0.838	89 <sup>6</sup>	54.2	LOS D	36.7	257.4	Short	300	0.0	NA
Lane 6	621	0.2	662	0.937	100	74.5	LOS E	50.4	353.5	Short	250	0.0	NA
Approach	2159	3.6		0.937		53.2	LOS D	50.4	353.5				
North: Lancefield Road (North)													
Lane 1	405	0.1	1166	0.347	86 <sup>6</sup>	18.6	LOS B	12.8	90.0	Short	90	0.0	NA
Lane 2	472	0.1	1166	0.405	100	19.2	LOS B	15.7	109.9	Short	120	0.0	NA
Lane 3	223	0.4	444	0.502	100	50.7	LOS D	13.3	93.4	Short	200	0.0	NA
Lane 4	85	1.2	184	0.459	100	71.6	LOS E	5.6	39.7	Full	500	0.0	0.0
Lane 5	85	1.2	184	0.459	100	71.6	LOS E	5.6	39.7	Short	100	0.0	NA
Approach	1269	0.3		0.502		31.5	LOS C	15.7	109.9				
West: Sunbury Road (West)													
Lane 1	53	0.0	876	0.060	100	19.7	LOS B	1.6	11.1	Short	100	0.0	NA
Lane 2	228	5.1	256	0.891	100	76.8	LOS E	17.5	127.7	Short	150	0.0	NA
Lane 3	228	5.1	256	0.891	100	76.8	LOS E	17.5	127.7	Full	500	0.0	0.0
Lane 4	228	5.1	256	0.891	100	76.8	LOS E	17.5	127.7	Full	500	0.0	0.0
Lane 5	156	0.6	317	0.492	100	62.8	LOS E	9.8	68.7	Short	100	0.0	NA
Approach	894	4.0		0.891		70.9	LOS E	17.5	127.7				
Intersection	4910	2.4		0.937		51.4	LOS D	50.4	353.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

<sup>6</sup> Lane under-utilisation due to downstream effects



