

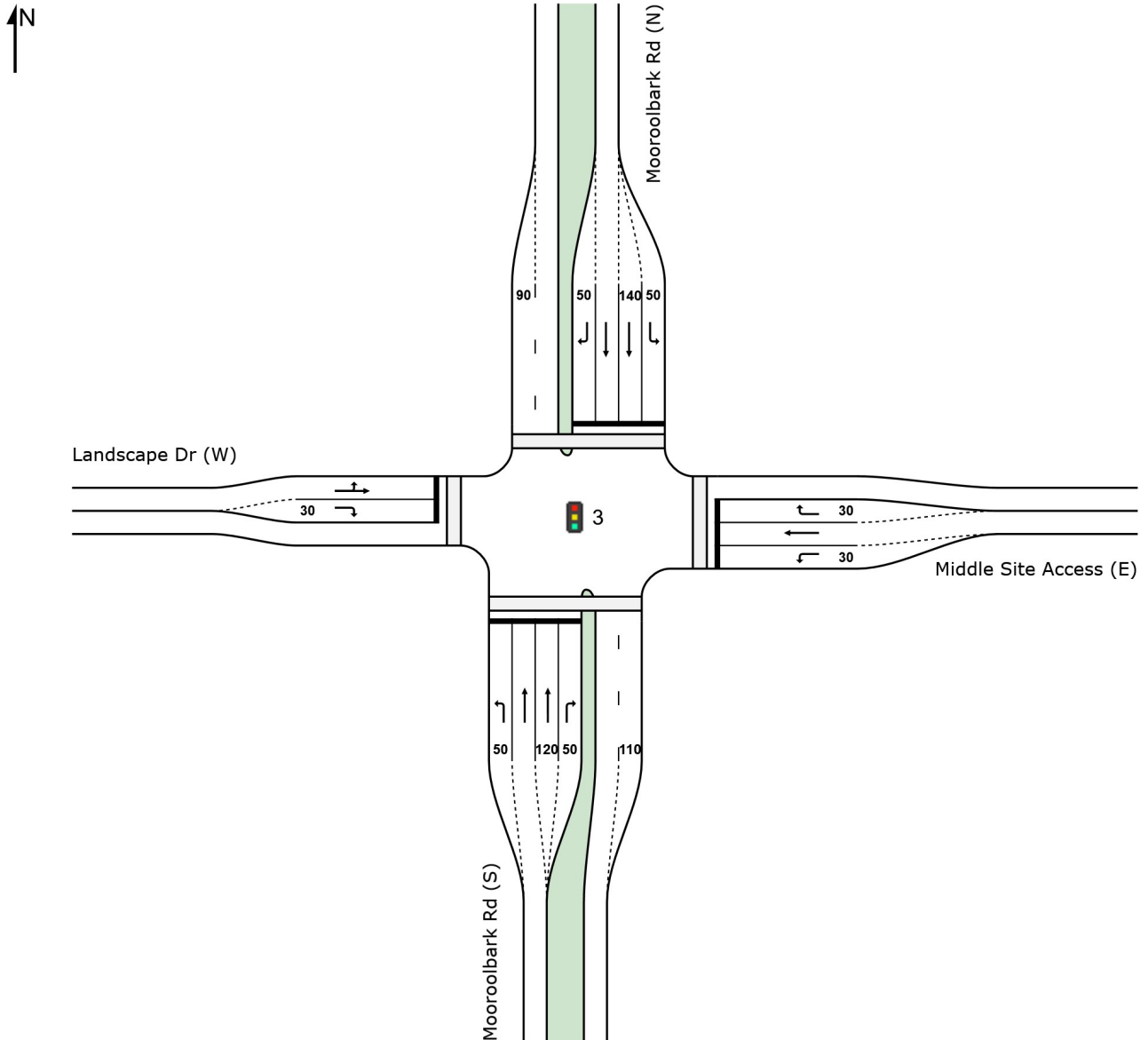
SITE LAYOUT

 **Site: 3 [MoLaAM - Proposed - 2030Vol+DEV]**

Mooroolbark Road / Middle Site Access / Landscape Drive

Site Category: (None)

Signals - Fixed Time Isolated



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Organisation: CARDNO (QLD) PTY LTD | Created: Friday, 9 October 2020 2:17:34 PM

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LANE SUMMARY

Site: 3 [MoLaAM - Proposed - 2030Vol+DEV]

Mooroolbark Road / Middle Site Access / Landscape Drive

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Mooroolbark Rd (S)													
Lane 1	63	2.0	969	0.065	100	16.7	LOS B	1.3	8.9	Short	50	0.0	NA
Lane 2	286	5.0	755	0.379	51 ⁶	19.4	LOS B	8.4	61.4	Full	280	0.0	0.0
Lane 3	548	5.0	733 ¹	0.747	100	24.4	LOS C	19.9	145.0	Short	120	0.0	NA
Lane 4	27	2.0	129	0.212	100	49.4	LOS D	1.1	8.1	Short	50	0.0	NA
Approach	924	4.7		0.747		23.1	LOS C	19.9	145.0				
East: Middle Site Access (E)													
Lane 1	48	2.0	517	0.094	100	28.9	LOS C	1.5	10.6	Short	30	0.0	NA
Lane 2	11	2.0	317	0.033	100	32.4	LOS C	0.4	2.6	Full	500	0.0	0.0
Lane 3	114	2.0	151	0.754	100	50.9	LOS D	5.1	36.6	Short	30	0.0	NA
Approach	173	2.0		0.754		43.6	LOS D	5.1	36.6				
North: Mooroolbark Rd (N)													
Lane 1	61	2.0	969	0.063	100	16.7	LOS B	1.2	8.6	Short	50	0.0	NA
Lane 2	224	5.0	755	0.296	61 ⁶	18.7	LOS B	6.3	46.2	Short	140	0.0	NA
Lane 3	370	5.0	755	0.489	100	20.6	LOS C	11.5	83.8	Full	500	0.0	0.0
Lane 4	63	2.0	129	0.489	100	50.6	LOS D	2.7	19.4	Short	50	0.0	NA
Approach	718	4.5		0.489		22.3	LOS C	11.5	83.8				
West: Landscape Dr (W)													
Lane 1	66	2.0	414	0.160	100	32.1	LOS C	2.2	15.8	Full	500	0.0	0.0
Lane 2	65	2.0	151	0.433	100	47.3	LOS D	2.8	19.6	Short	30	0.0	NA
Approach	132	2.0		0.433		39.6	LOS D	2.8	19.6				
Intersection	1946	4.2		0.754		25.7	LOS C	19.9	145.0				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

Site: 3 [MoLaAM - Proposed - 2030Vol+DEV]

Mooroolbark Road / Middle Site Access / Landscape Drive

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: DDO - User-Given - Copy

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

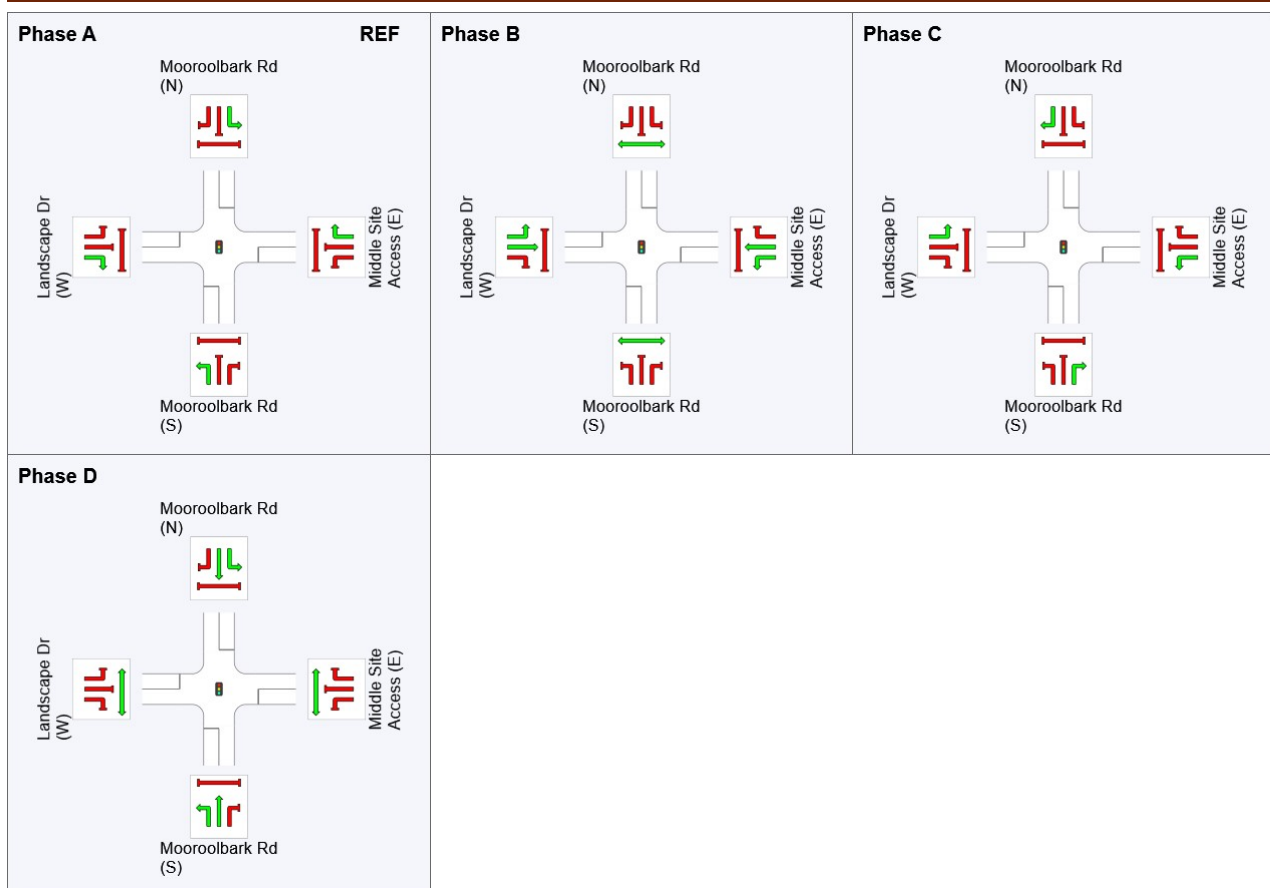
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	13	33	45
Green Time (sec)	7	14	6	34
Phase Time (sec)	13	20	12	40
Phase Split	15%	24%	14%	47%

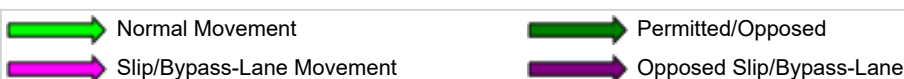
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

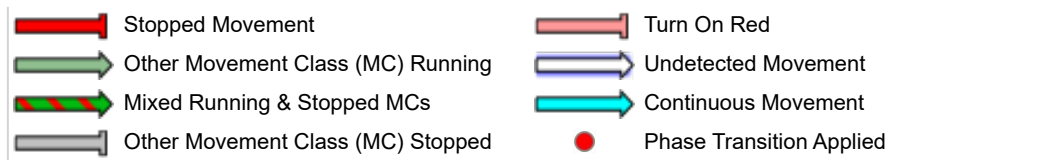
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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LANE SUMMARY

Site: 3 [MoLaPM - Proposed - 2030Vol+DEV]

Mooroolbark Road / Middle Site Access / Landscape Drive

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Mooroolbark Rd (S)													
Lane 1	51	2.0	969	0.052	100	16.6	LOS B	1.0	7.1	Short	50	0.0	NA
Lane 2	240	5.0	755	0.318	51 ⁶	18.9	LOS B	6.9	50.1	Full	280	0.0	0.0
Lane 3	453	5.0	722 ¹	0.628	100	21.8	LOS C	14.9	108.9	Short	120	0.0	NA
Lane 4	34	2.0	129	0.261	100	49.6	LOS D	1.4	10.1	Short	50	0.0	NA
Approach	778	4.7		0.628		21.8	LOS C	14.9	108.9				
East: Middle Site Access (E)													
Lane 1	34	2.0	517	0.065	100	28.6	LOS C	1.0	7.3	Short	30	0.0	NA
Lane 2	11	2.0	317	0.033	100	32.4	LOS C	0.4	2.6	Full	500	0.0	0.0
Lane 3	92	2.0	151	0.607	100	48.5	LOS D	4.0	28.3	Short	30	0.0	NA
Approach	136	2.0		0.607		42.3	LOS D	4.0	28.3				
North: Mooroolbark Rd (N)													
Lane 1	94	2.0	969	0.097	100	16.9	LOS B	1.9	13.5	Short	50	0.0	NA
Lane 2	295	5.0	755	0.390	61 ⁶	19.6	LOS B	8.7	63.6	Short	140	0.0	NA
Lane 3	463	5.0	718 ¹	0.645	100	21.9	LOS C	15.3	112.0	Full	500	0.0	0.0
Lane 4	39	2.0	129	0.301	100	49.7	LOS D	1.6	11.7	Short	50	0.0	NA
Approach	891	4.6		0.645		21.8	LOS C	15.3	112.0				
West: Landscape Dr (W)													
Lane 1	31	2.0	352	0.087	100	33.2	LOS C	1.0	7.4	Full	500	0.0	0.0
Lane 2	28	2.0	151	0.188	100	46.0	LOS D	1.2	8.3	Short	30	0.0	NA
Approach	59	2.0		0.188		39.4	LOS D	1.2	8.3				
Intersection	1863	4.3		0.645		23.9	LOS C	15.3	112.0				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

Site: 3 [MoLaPM - Proposed - 2030Vol+DEV]

Mooroolbark Road / Middle Site Access / Landscape Drive

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: DDO - User-Given - Copy

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

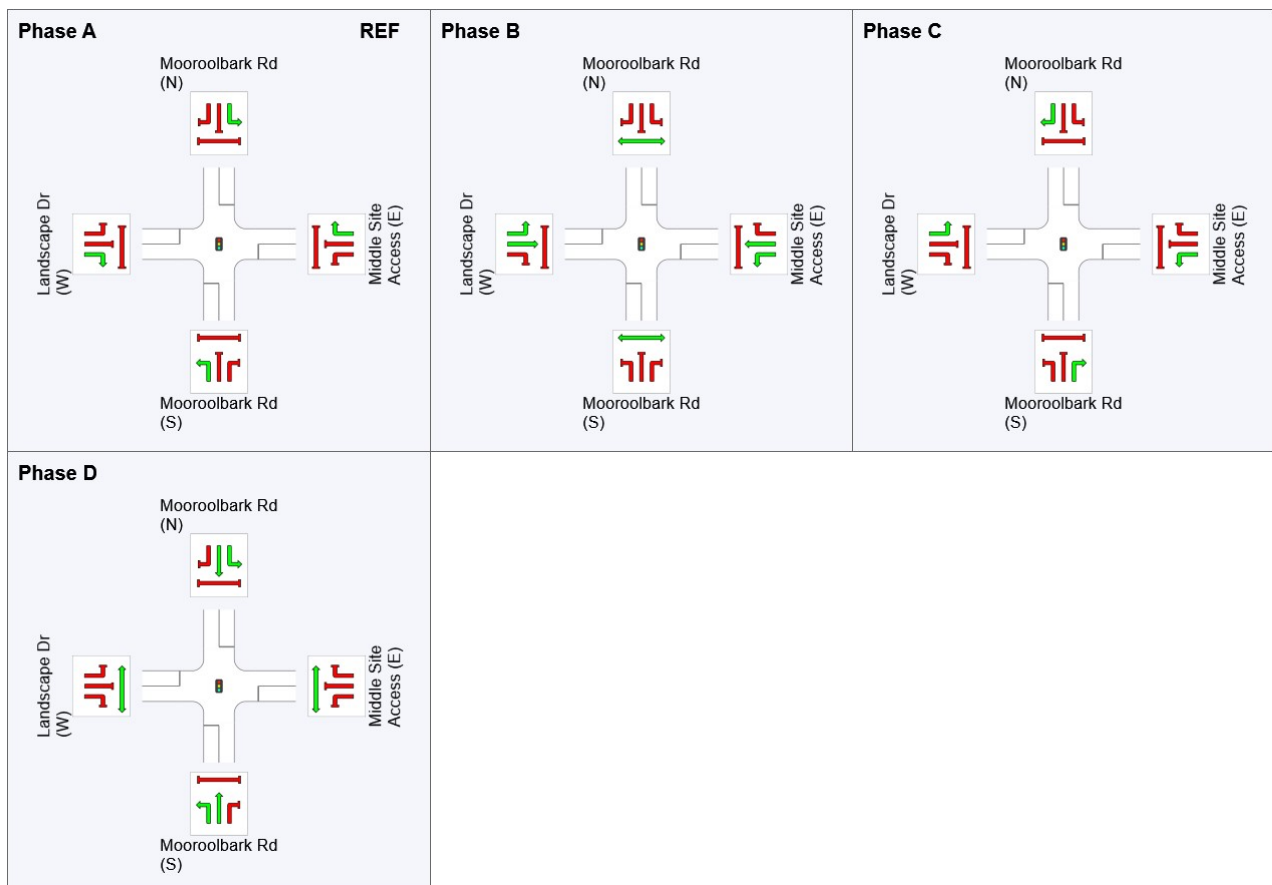
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	13	33	45
Green Time (sec)	7	14	6	34
Phase Time (sec)	13	20	12	40
Phase Split	15%	24%	14%	47%

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%.

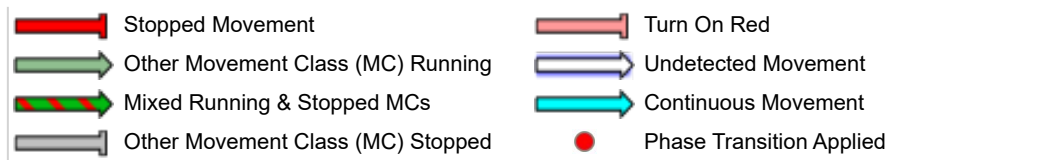
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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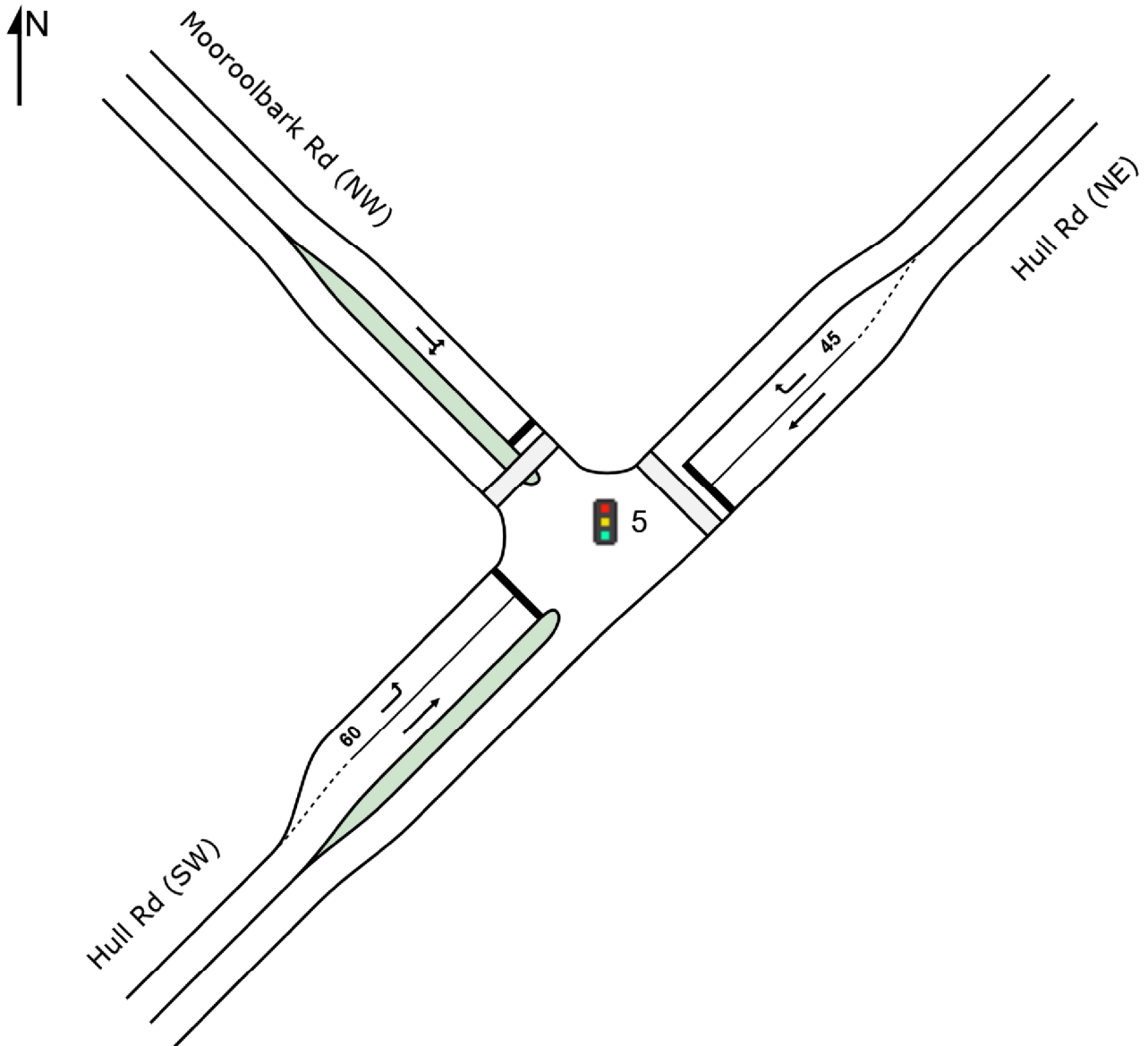
SITE LAYOUT

 **Site: 5 [MoHuPM - Existing - 2020 Vol]**

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated



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LANE SUMMARY

 **Site: 5 [MoHuAM - Existing - 2020 Vol - DOS>1]**

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
NorthEast: Hull Rd (NE)													
Lane 1	458	5.0	676 ¹	0.678	100	12.8	LOS B	11.2	81.6	Full	500	0.0	0.0
Lane 2	499	5.0	502 ¹	0.994	100	70.8	LOS E	27.1	198.1	Short	45	0.0	NA
Approach	957	5.0		0.994		43.1	LOS D	27.1	198.1				
NorthWest: Mooroolbark Rd (NW)													
Lane 1	632	5.0	563	1.122	100	167.5	LOS F	62.2	454.2	Full	500	0.0	0.0
Approach	632	5.0		1.122		167.5	LOS F	62.2	454.2				
SouthWest: Hull Rd (SW)													
Lane 1	269	5.0	247	1.093	100	145.1	LOS F	23.2	169.6	Short	60	0.0	NA
Lane 2	243	5.0	307	0.792	100	39.6	LOS D	10.2	74.2	Full	500	0.0	0.0
Approach	513	5.0		1.093		95.1	LOS F	23.2	169.6				
Intersection	2101	5.0		1.122		93.2	LOS F	62.2	454.2				

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.

¹ 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.

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PHASING SUMMARY

 **Site: 5 [MoHuAM - Existing - 2020 Vol - DOS>1]**

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Op sheet

Reference Phase: Phase A

Input Phase Sequence: A, B, C

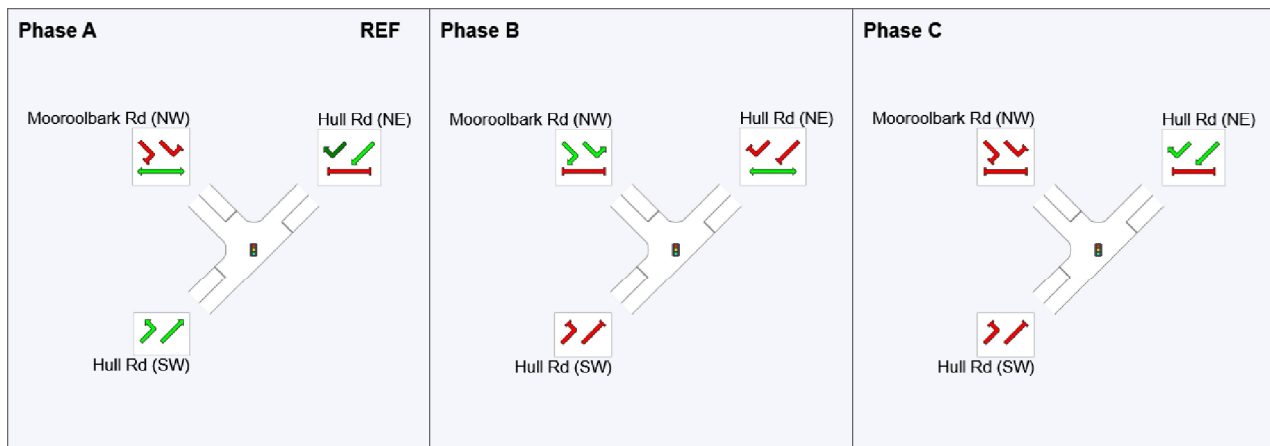
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	19	51
Green Time (sec)	13	26	23
Phase Time (sec)	19	32	29
Phase Split	24%	40%	36%

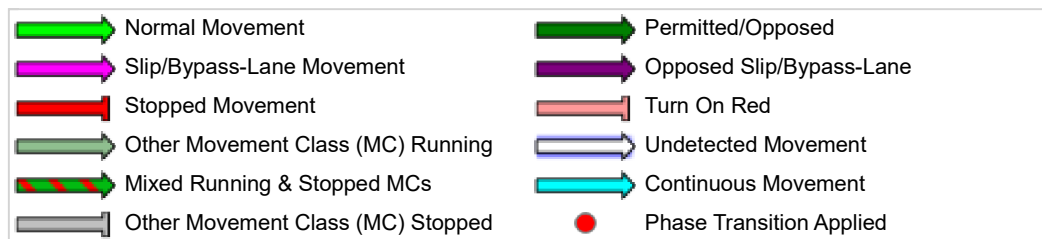
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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LANE SUMMARY

Site: 5 [MoHuPM - Existing - 2020 Vol]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
NorthEast: Hull Rd (NE)													
Lane 1	236	5.0	923	0.255	100	14.3	LOS B	6.0	43.8	Full	500	0.0	0.0
Lane 2	274	5.0	282	0.970	100	61.8	LOS E	13.0	94.6	Short	45	0.0	NA
Approach	509	5.0		0.970		39.9	LOS D	13.0	94.6				
NorthWest: Mooroolbark Rd (NW)													
Lane 1	631	5.0	656	0.962	100	67.2	LOS E	39.7	289.5	Full	500	0.0	0.0
Approach	631	5.0		0.962		67.2	LOS E	39.7	289.5				
SouthWest: Hull Rd (SW)													
Lane 1	354	5.0	558	0.634	100	34.6	LOS C	13.5	98.6	Short	60	0.0	NA
Lane 2	480	5.0	508 ¹	0.945	100	56.4	LOS E	27.3	199.2	Full	500	0.0	0.0
Approach	834	5.0		0.945		47.2	LOS D	27.3	199.2				
Intersection	1974	5.0		0.970		51.7	LOS D	39.7	289.5				

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.

¹ 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.

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PHASING SUMMARY

Site: 5 [MoHuPM - Existing - 2020 Vol]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Op sheet

Reference Phase: Phase A

Input Phase Sequence: A, B, C

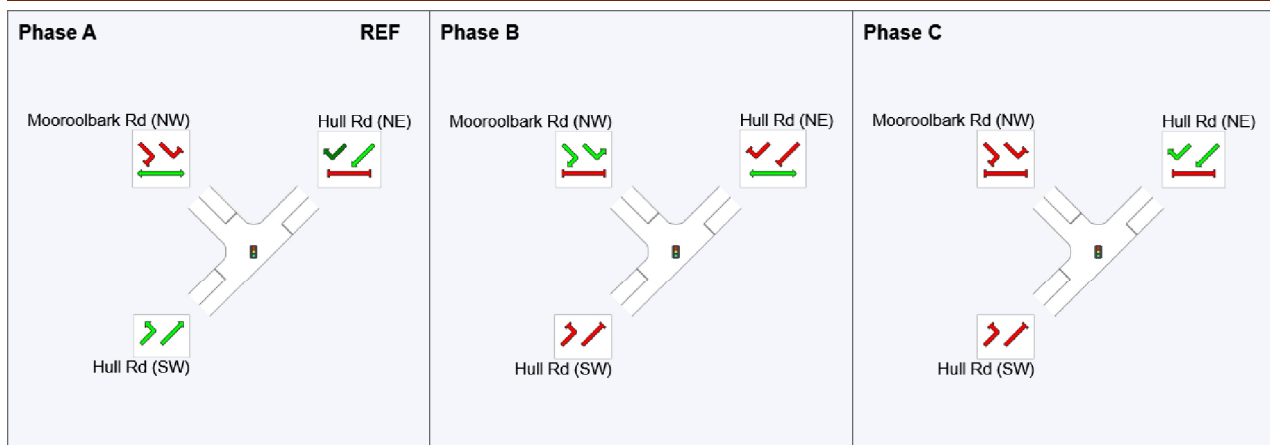
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	36	76
Green Time (sec)	30	34	8
Phase Time (sec)	36	40	14
Phase Split	40%	44%	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



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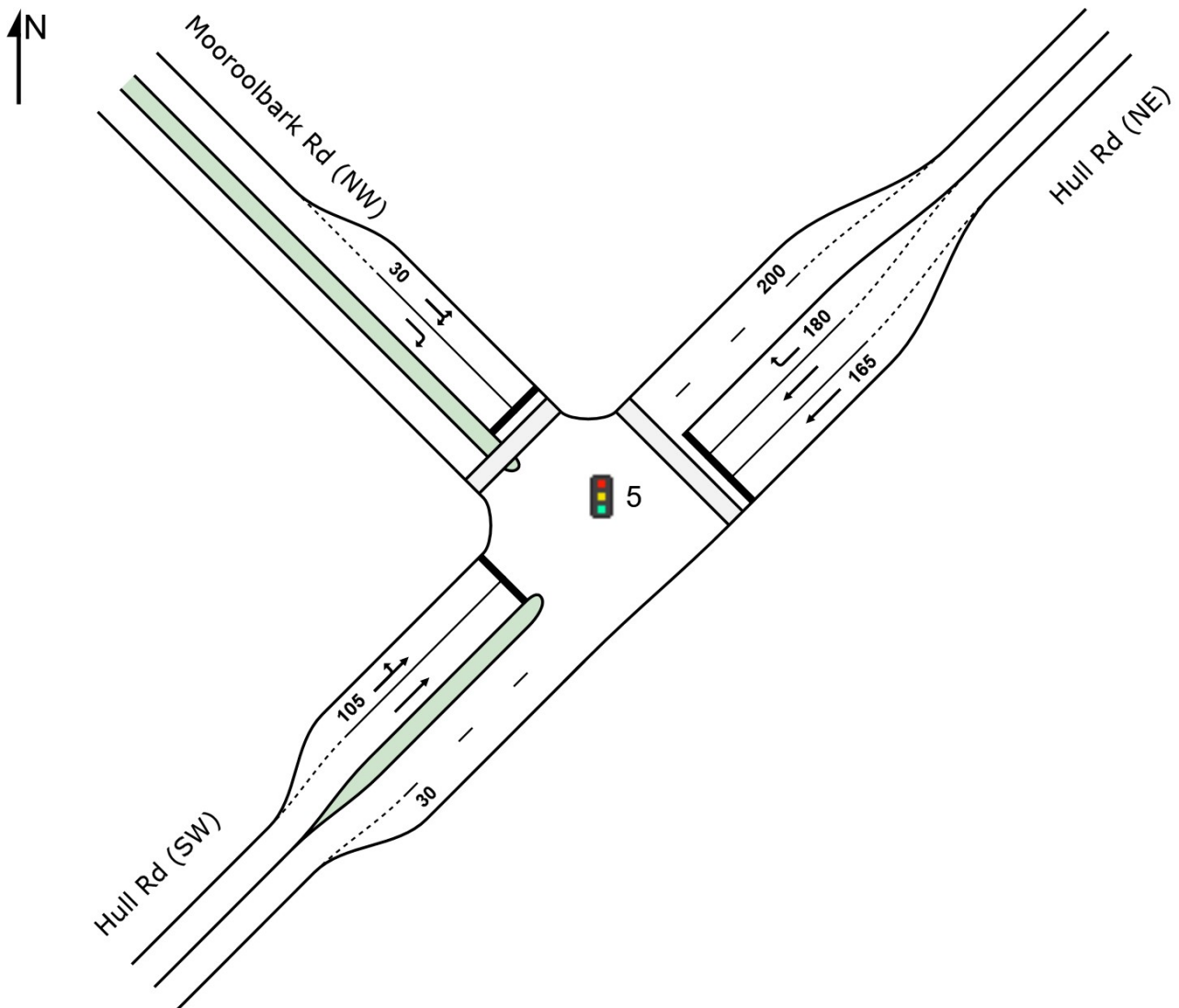
SITE LAYOUT

 **Site: 5 [MoHuAM - Proposed - 2020 Vol+DEV]**

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated



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V12 Sep 2020 Vols\161623SID005 - Mooroolbark-Hull - Spreadsheet V12 Sep 2020 Vols.sip8

LANE SUMMARY

Site: 5 [MoHuAM - Proposed - 2020 Vol+DEV]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 115 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
NorthEast: Hull Rd (NE)													
Lane 1	174	5.0	1051	0.165	24 ⁶	13.1	LOS B	4.7	34.0	Short	165	0.0	NA
Lane 2	732	5.0	1051	0.696	100	19.6	LOS B	29.3	214.2	Full	500	0.0	0.0
Lane 3	560	5.0	530	1.056	100	133.6	LOS F	55.4	404.3	Short	180	0.0	NA
Approach	1465	5.0		1.056		62.4	LOS E	55.4	404.3				
NorthWest: Mooroolbark Rd (NW)													
Lane 1	324	5.0	343 ¹	0.946	89 ⁵	74.5	LOS E	21.8	159.2	Short	30	0.0	NA
Lane 2	424	5.0	400 ¹	1.059	100	141.5	LOS F	43.8	319.9	Full	500	0.0	0.0
Approach	748	5.0		1.059		112.4	LOS F	43.8	319.9				
SouthWest: Hull Rd (SW)													
Lane 1	387	5.0	378	1.024	100	113.9	LOS F	34.2	249.9	Short	105	0.0	NA
Lane 2	403	5.0	394	1.024	100	108.7	LOS F	35.5	259.5	Full	500	0.0	0.0
Approach	791	5.0		1.024		111.3	LOS F	35.5	259.5				
Intersectio n	3004	5.0		1.059		87.7	LOS F	55.4	404.3				

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.

¹ 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.

⁵ Lane under-utilisation found by the program

⁶ Lane under-utilisation due to downstream effects

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Organisation: CARDNO (QLD) PTY LTD | Processed: Wednesday, 7 October 2020 5:03:29 PM

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PHASING SUMMARY

Site: 5 [MoHuAM - Proposed - 2020 Vol+DEV]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 115 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C

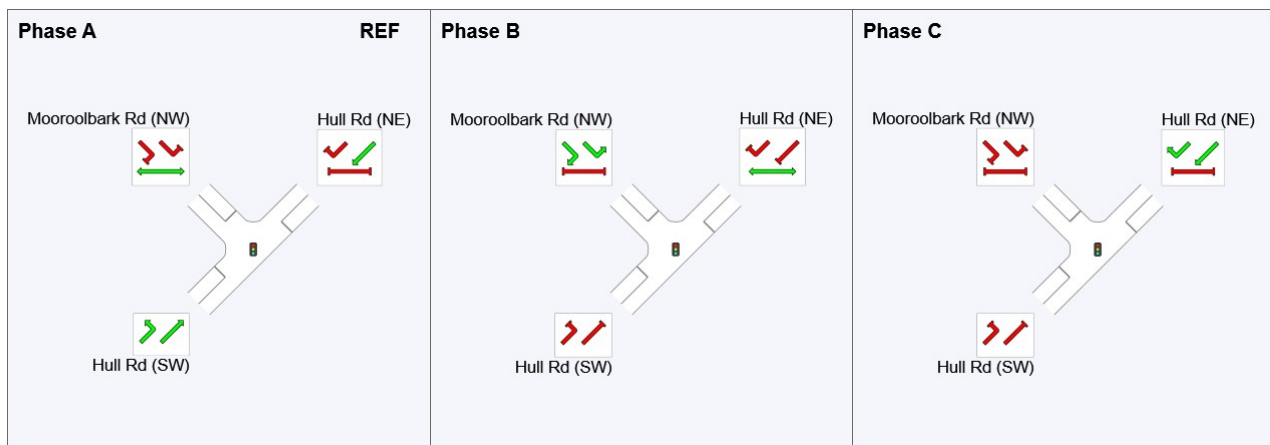
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	30	75
Green Time (sec)	24	39	34
Phase Time (sec)	30	45	40
Phase Split	26%	39%	35%

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



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LANE SUMMARY

Site: 5 [MoHuPM - Proposed - 2020 Vol+DEV]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
NorthEast: Hull Rd (NE)													
Lane 1	119	5.0	1110	0.107	24 ⁶	7.7	LOS A	2.0	14.7	Short	165	0.0	NA
Lane 2	502	5.0	1110	0.452	100	9.9	LOS A	10.9	79.9	Full	500	0.0	0.0
Lane 3	318	5.0	314	1.013	100	91.3	LOS F	20.9	152.7	Short	180	0.0	NA
Approach	939	5.0		1.013		37.2	LOS D	20.9	152.7				
NorthWest: Mooroolbark Rd (NW)													
Lane 1	401	5.0	648 ¹	0.619	59 ⁵	18.8	LOS B	9.8	71.8	Short	30	0.0	NA
Lane 2	332	5.0	314 ¹	1.055	100	122.4	LOS F	26.7	194.8	Full	500	0.0	0.0
Approach	733	5.0		1.055		65.7	LOS E	26.7	194.8				
SouthWest: Hull Rd (SW)													
Lane 1	631	5.0	617	1.023	100	93.3	LOS F	45.2	330.0	Short	105	0.0	NA
Lane 2	652	5.0	637	1.023	100	89.2	LOS F	46.6	339.9	Full	500	0.0	0.0
Approach	1283	5.0		1.023		91.2	LOS F	46.6	339.9				
Intersection	2955	5.0		1.055		67.7	LOS E	46.6	339.9				

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.

¹ 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.

⁵ Lane under-utilisation found by the program

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

Site: 5 [MoHuPM - Proposed - 2020 Vol+DEV]

Mooroolbark Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C

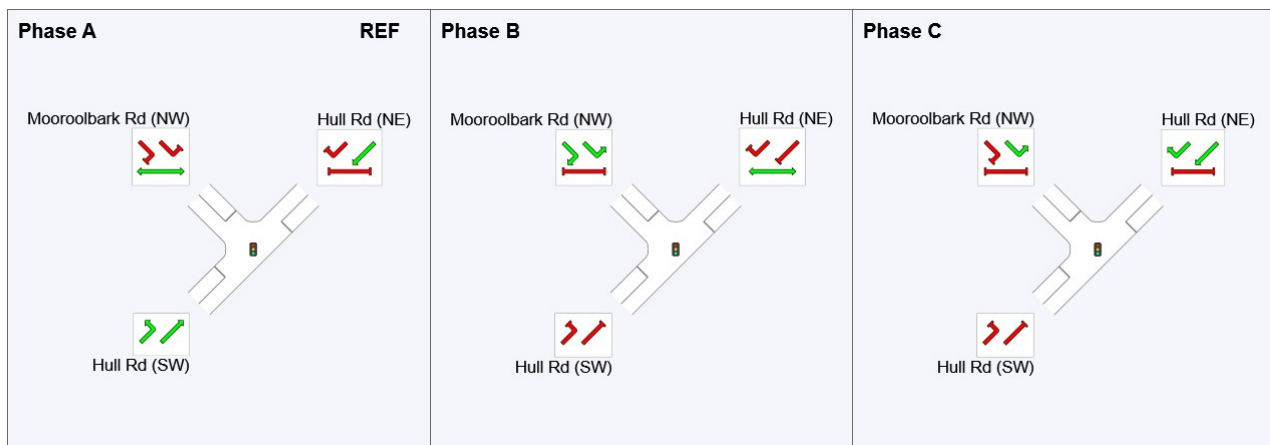
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	33	60
Green Time (sec)	27	21	14
Phase Time (sec)	33	27	20
Phase Split	41%	34%	25%






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

 Normal Movement	 Permitted/Opposed
 Slip/Bypass-Lane Movement	 Opposed Slip/Bypass-Lane
 Stopped Movement	 Turn On Red
 Other Movement Class (MC) Running	 Undetected Movement
 Mixed Running & Stopped MCs	 Continuous Movement
 Other Movement Class (MC) Stopped	 Phase Transition Applied

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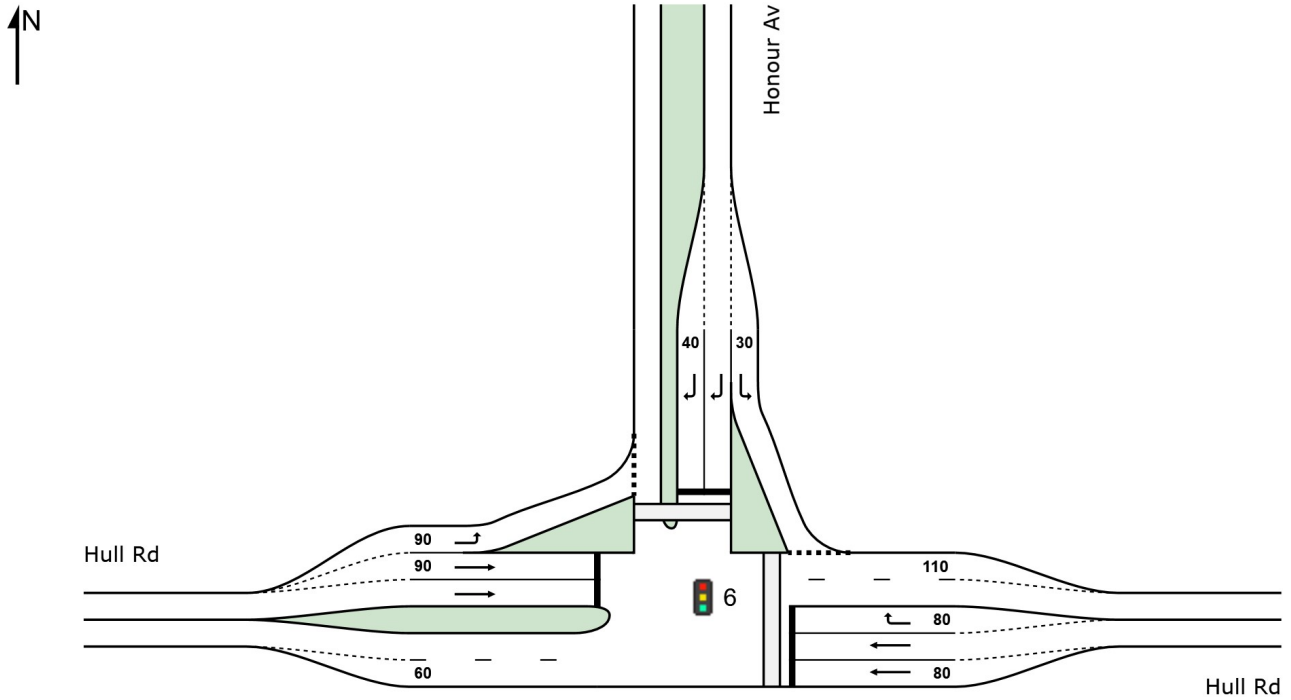
Organisation: CARDNO (QLD) PTY LTD | Processed: Wednesday, 7 October 2020 5:03:37 PM

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SITE LAYOUT

 **Site: 6 [HuHoAM - Proposed - 2020 Vol+DEV]**

Hull Road / Honour Avenue
Site Category: (None)
Signals - Fixed Time Isolated



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LANE SUMMARY

Site: 6 [HuHoAM - Proposed - 2020 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
East: Hull Rd													
Lane 1	243	5.0	1070	0.227	37 ⁶	7.0	LOS A	3.5	25.8	Short	80	0.0	NA
Lane 2	657	5.0	1070	0.614	100	9.4	LOS A	12.9	94.2	Full	500	0.0	0.0
Lane 3	208	2.0	244	0.854	100	40.7	LOS D	7.2	51.2	Short	80	0.0	NA
Approach	1108	4.4		0.854		14.7	LOS B	12.9	94.2				
North: Honour Av													
Lane 1	376	2.0	955	0.393	100	11.9	LOS B	5.3	38.1	Short	30	0.0	NA
Lane 2	132	2.0	427	0.308	37 ⁶	26.8	LOS C	3.3	23.5	Full	500	0.0	0.0
Lane 3	357	2.0	426 ¹	0.837	100	36.0	LOS D	11.9	84.6	Short	40	0.0	NA
Approach	864	2.0		0.837		24.1	LOS C	11.9	84.6				
West: Hull Rd													
Lane 1	249	2.0	1274	0.196	100	7.9	LOS A	1.8	12.7	Short	90	0.0	NA
Lane 2	322	5.0	630	0.512	61 ⁶	17.7	LOS B	7.8	56.8	Short	90	0.0	NA
Lane 3	532	5.0	630	0.846	100	27.2	LOS C	17.5	128.0	Full	500	0.0	0.0
Approach	1104	4.3		0.846		20.1	LOS C	17.5	128.0				
Intersection	3077	3.7		0.854		19.3	LOS B	17.5	128.0				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

Site: 6 [HuHoAM - Proposed - 2020 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Sequence1

Reference Phase: Phase A

Input Phase Sequence: A, B, C

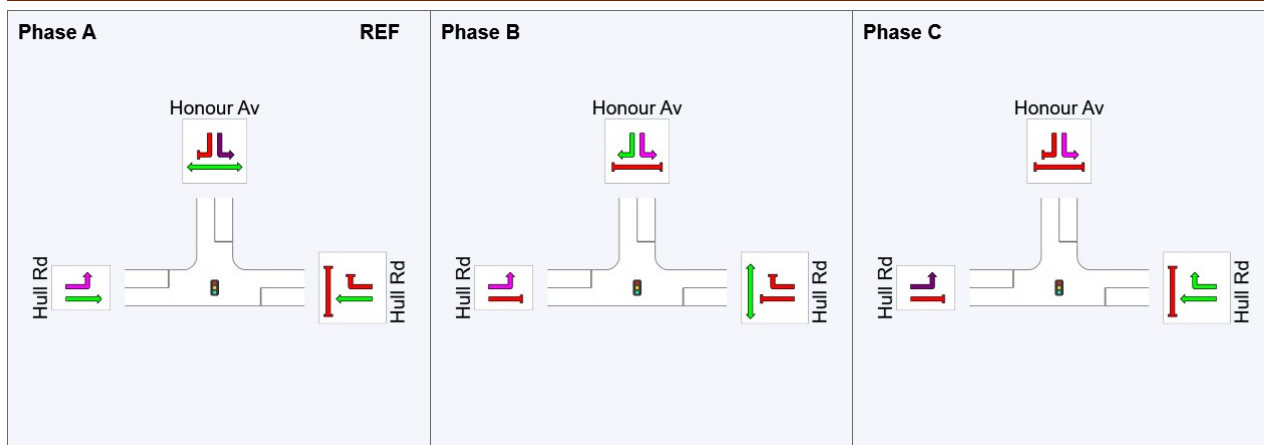
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	26	46
Green Time (sec)	20	14	8
Phase Time (sec)	26	20	14
Phase Split	43%	33%	23%

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



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LANE SUMMARY

Site: 6 [HuHoPM - Proposed - 2020 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
East: Hull Rd													
Lane 1	146	5.0	1102	0.133	37 ⁶	6.1	LOS A	1.9	14.0	Short	80	0.0	NA
Lane 2	396	5.0	1102	0.359	100	7.1	LOS A	6.1	44.8	Full	500	0.0	0.0
Lane 3	323	2.0	458	0.706	100	29.8	LOS C	9.3	66.4	Short	80	0.0	NA
Approach	865	3.9		0.706		15.4	LOS B	9.3	66.4				
North: Honour Av													
Lane 1	317	2.0	1152	0.275	100	9.0	LOS A	3.0	21.5	Short	30	0.0	NA
Lane 2	109	2.0	397	0.274	37 ⁶	27.4	LOS C	2.8	19.6	Full	500	0.0	0.0
Lane 3	295	2.0	397	0.745	100	32.4	LOS C	9.0	63.9	Short	40	0.0	NA
Approach	721	2.0		0.745		21.4	LOS C	9.0	63.9				
West: Hull Rd													
Lane 1	429	2.0	1138	0.377	100	9.3	LOS A	4.5	31.9	Short	90	0.0	NA
Lane 2	191	5.0	441	0.434	61 ⁶	21.9	LOS C	5.0	36.2	Short	90	0.0	NA
Lane 3	316	5.0	441	0.717	100	25.2	LOS C	9.3	67.7	Full	500	0.0	0.0
Approach	937	3.6		0.717		17.2	LOS B	9.3	67.7				
Intersection	2523	3.2		0.745		17.8	LOS B	9.3	67.7				

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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

 **Site: 6 [HuHoPM - Proposed - 2020 Vol+DEV]**

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Sequence1

Reference Phase: Phase A

Input Phase Sequence: A, B, C

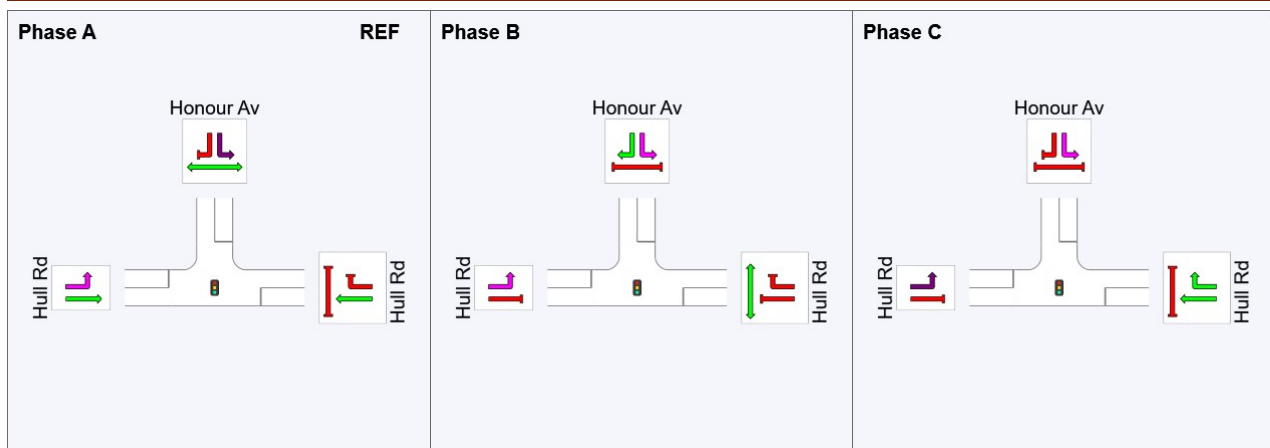
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	20	39
Green Time (sec)	14	13	15
Phase Time (sec)	20	19	21
Phase Split	33%	32%	35%

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



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LANE SUMMARY

Site: 6 [HuHoAM - Proposed - 2030 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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				
East: Hull Rd													
Lane 1	270	5.0	1102	0.245	37 ⁶	6.5	LOS A	3.8	28.1	Short	80	0.0	NA
Lane 2	732	5.0	1102	0.665	100	9.2	LOS A	14.7	107.3	Full	500	0.0	0.0
Lane 3	208	2.0	244	0.854	100	40.7	LOS D	7.2	51.2	Short	80	0.0	NA
Approach	1211	4.5		0.854		14.0	LOS B	14.7	107.3				
North: Honour Av													
Lane 1	376	2.0	914	0.411	100	13.3	LOS B	5.6	39.7	Short	30	0.0	NA
Lane 2	133	2.0	397	0.334	37 ⁶	27.8	LOS C	3.4	24.3	Full	500	0.0	0.0
Lane 3	356	2.0	393 ¹	0.907	100	43.7	LOS D	13.5	95.8	Short	40	0.0	NA
Approach	864	2.0		0.907		28.1	LOS C	13.5	95.8				
West: Hull Rd													
Lane 1	249	2.0	1274	0.196	100	7.9	LOS A	1.8	12.7	Short	90	0.0	NA
Lane 2	358	5.0	661	0.542	61 ⁶	17.2	LOS B	8.6	62.8	Short	90	0.0	NA
Lane 3	591	5.0	661	0.895	100	32.3	LOS C	21.8	158.8	Full	500	0.0	0.0
Approach	1199	4.4		0.895		22.7	LOS C	21.8	158.8				
Intersection	3274	3.8		0.907		20.9	LOS C	21.8	158.8				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

Site: 6 [HuHoAM - Proposed - 2030 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Sequence1

Reference Phase: Phase A

Input Phase Sequence: A, B, C

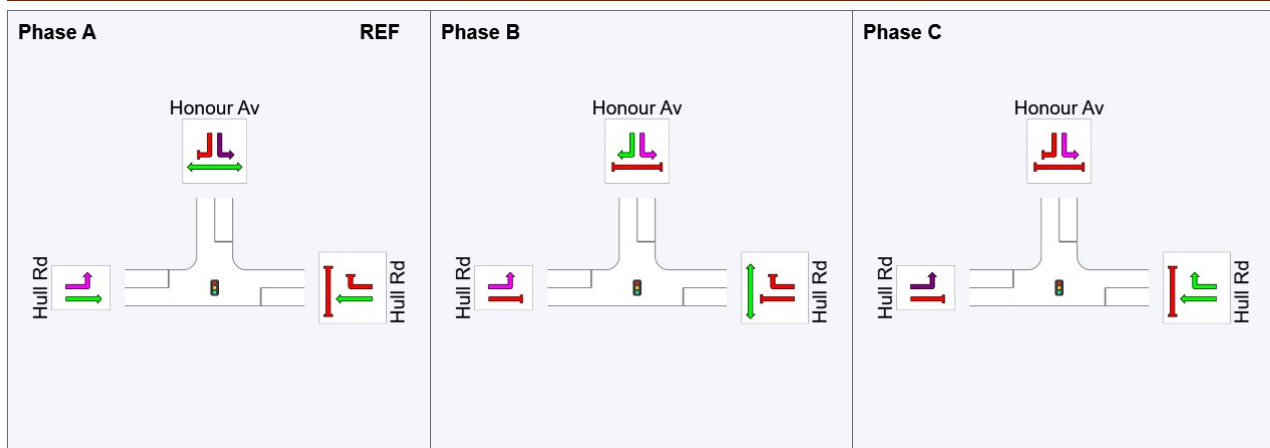
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	27	46
Green Time (sec)	21	13	8
Phase Time (sec)	27	19	14
Phase Split	45%	32%	23%

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



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LANE SUMMARY

Site: 6 [HuHoPM - Proposed - 2030 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows		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. %
	Total veh/h	HV %						Veh	Dist m				
East: Hull Rd													
Lane 1	162	5.0	1102	0.147	37 ⁶	6.1	LOS A	2.2	15.8	Short	80	0.0	NA
Lane 2	440	5.0	1102	0.399	100	7.3	LOS A	7.0	51.3	Full	500	0.0	0.0
Lane 3	323	2.0	427	0.756	100	32.1	LOS C	9.8	70.0	Short	80	0.0	NA
Approach	925	4.0		0.756		15.8	LOS B	9.8	70.0				
North: Honour Av													
Lane 1	317	2.0	1120	0.283	100	9.3	LOS A	3.2	23.0	Short	30	0.0	NA
Lane 2	109	2.0	397	0.274	37 ⁶	27.4	LOS C	2.8	19.6	Full	500	0.0	0.0
Lane 3	295	2.0	397	0.745	100	32.4	LOS C	9.0	63.9	Short	40	0.0	NA
Approach	721	2.0		0.745		21.5	LOS C	9.0	63.9				
West: Hull Rd													
Lane 1	429	2.0	1146	0.375	100	9.2	LOS A	4.5	31.7	Short	90	0.0	NA
Lane 2	212	5.0	472	0.449	61 ⁶	21.2	LOS C	5.4	39.6	Short	90	0.0	NA
Lane 3	350	5.0	472	0.742	100	25.1	LOS C	10.4	75.8	Full	500	0.0	0.0
Approach	992	3.7		0.742		17.4	LOS B	10.4	75.8				
Intersection	2638	3.3		0.756		18.0	LOS B	10.4	75.8				

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.

⁶ Lane under-utilisation due to downstream effects

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V12 Sep 2020 Vols\161623SID013 - Hull-Honour - Spreadsheet V12 - Sep 2020 Vols.sip8

PHASING SUMMARY

Site: 6 [HuHoPM - Proposed - 2030 Vol+DEV]

Hull Road / Honour Avenue

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Sequence1

Reference Phase: Phase A

Input Phase Sequence: A, B, C

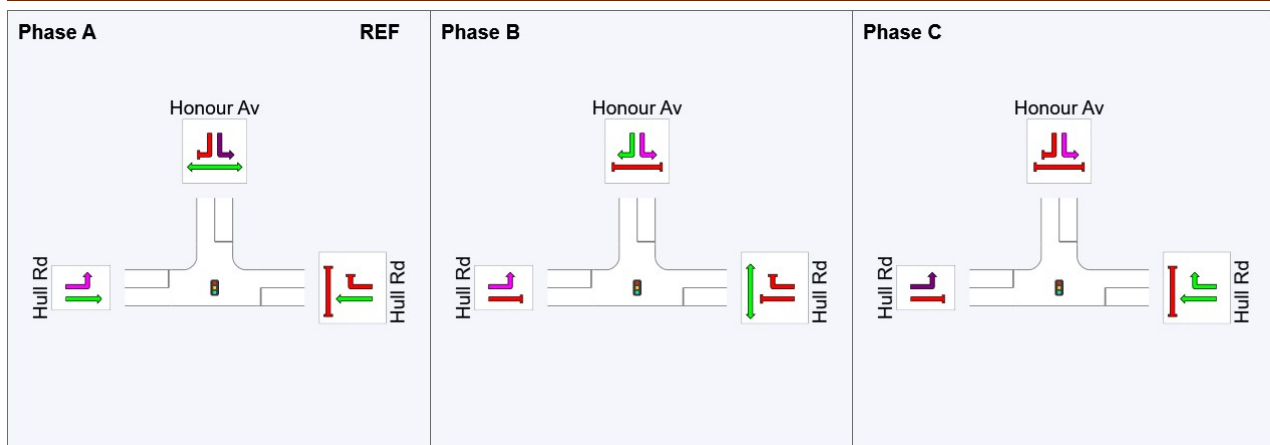
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	21	40
Green Time (sec)	15	13	14
Phase Time (sec)	21	19	20
Phase Split	35%	32%	33%

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



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Swansea Road / Hull Road
Site Category: (None)
Signals - Fixed Time Isolated



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LANE SUMMARY

Site: 10 [SwHuAM - Existing - 2020 Vol]

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Swansea Rd (S)													
Lane 1	562	5.0	668	0.841	100	36.2	LOS D	24.4	178.4	Full	350	0.0	0.0
Lane 2	559	5.0	665 ¹	0.841	100	33.7	LOS C	24.3	177.5	Full	350	0.0	0.0
Lane 3	1	5.0	254	0.004	100	38.3	LOS D	0.0	0.3	Short	30	0.0	NA
Approach	1122	5.0		0.841		35.0	LOS C	24.4	178.4				
North: Swansea Rd (N)													
Lane 1	433	5.0	667	0.650	100	25.1	LOS C	15.2	111.2	Full	500	0.0	0.0
Lane 2	423	5.0	650 ¹	0.650	100	24.9	LOS C	14.8	107.7	Full	500	0.0	0.0
Lane 3	278	5.0	338	0.823	100	49.2	LOS D	12.6	91.7	Short	60	0.0	NA
Approach	1134	5.0		0.823		30.9	LOS C	15.2	111.2				
West: Hull Road (W)													
Lane 1	266	5.0	907	0.294	100	19.5	LOS B	6.4	46.6	Full	500	0.0	0.0
Lane 2	375	5.0	443	0.846	100	47.1	LOS D	17.1	125.1	Short	170	0.0	NA
Approach	641	5.0		0.846		35.6	LOS D	17.1	125.1				
Intersection	2897	5.0		0.846		33.5	LOS C	24.4	178.4				

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.

¹ 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.

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PHASING SUMMARY

 **Site: 10 [SwHuAM - Existing - 2020 Vol]**

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 85 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

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C1*, C2*, C3*

Output Phase Sequence: A, B, C1*

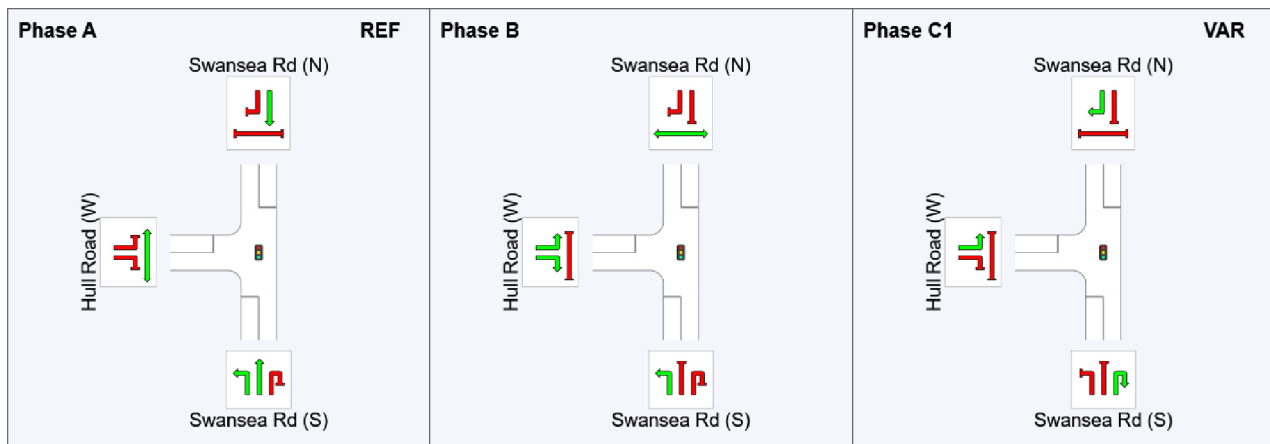
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C1
Phase Change Time (sec)	0	36	63
Green Time (sec)	30	21	16
Phase Time (sec)	36	27	22
Phase Split	42%	32%	26%

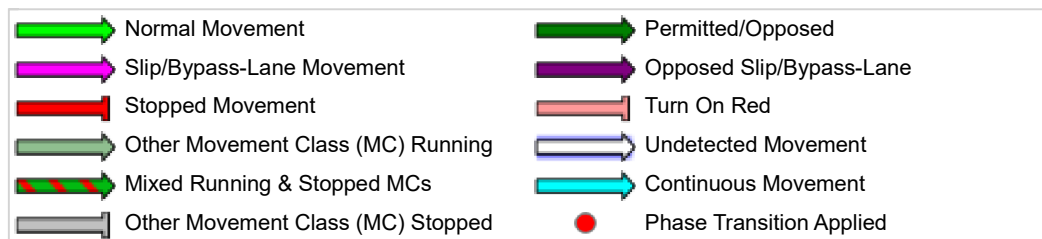
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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LANE SUMMARY

Site: 10 [SwHuPM - Existing - 2020 Vol]

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Swansea Rd (S)													
Lane 1	644	5.0	786	0.819	100	28.4	LOS C	23.4	170.9	Full	350	0.0	0.0
Lane 2	638	5.0	779 ¹	0.819	100	25.7	LOS C	23.3	170.4	Full	350	0.0	0.0
Lane 3	1	5.0	234	0.005	100	35.9	LOS D	0.0	0.2	Short	30	0.0	NA
Approach	1283	5.0		0.819		27.1	LOS C	23.4	170.9				
North: Swansea Rd (N)													
Lane 1	412	5.0	781	0.527	100	17.9	LOS B	11.4	83.2	Full	500	0.0	0.0
Lane 2	412	5.0	781	0.527	100	17.9	LOS B	11.4	83.2	Full	500	0.0	0.0
Lane 3	259	5.0	311	0.833	100	46.3	LOS D	10.6	77.5	Short	60	0.0	NA
Approach	1082	5.0		0.833		24.7	LOS C	11.4	83.2				
West: Hull Road (W)													
Lane 1	302	5.0	765	0.395	100	22.5	LOS C	7.7	56.0	Full	500	0.0	0.0
Lane 2	257	5.0	311	0.826	100	45.3	LOS D	10.5	76.3	Short	170	0.0	NA
Approach	559	5.0		0.826		33.0	LOS C	10.5	76.3				
Intersection	2924	5.0		0.833		27.3	LOS C	23.4	170.9				

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.

¹ 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.

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PHASING SUMMARY

 **Site: 10 [SwHuPM - Existing - 2020 Vol]**

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 75 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

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C1*, C2*, C3*

Output Phase Sequence: A, B, C1*

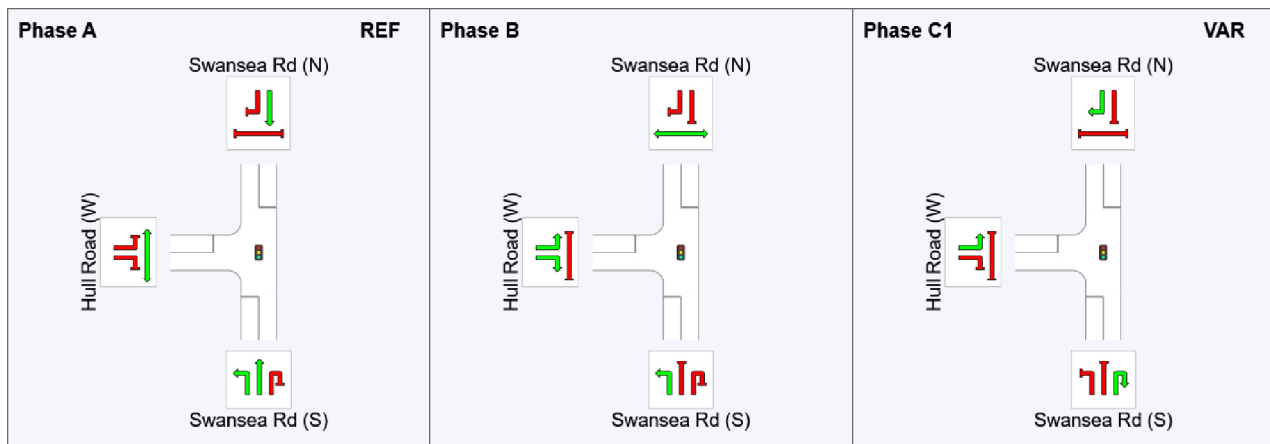
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C1
Phase Change Time (sec)	0	37	56
Green Time (sec)	31	13	13
Phase Time (sec)	37	19	19
Phase Split	49%	25%	25%

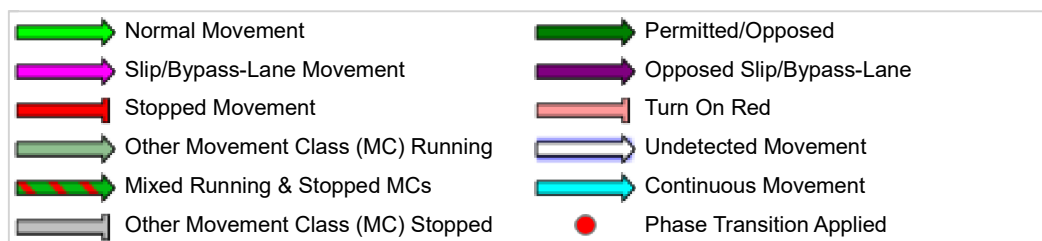
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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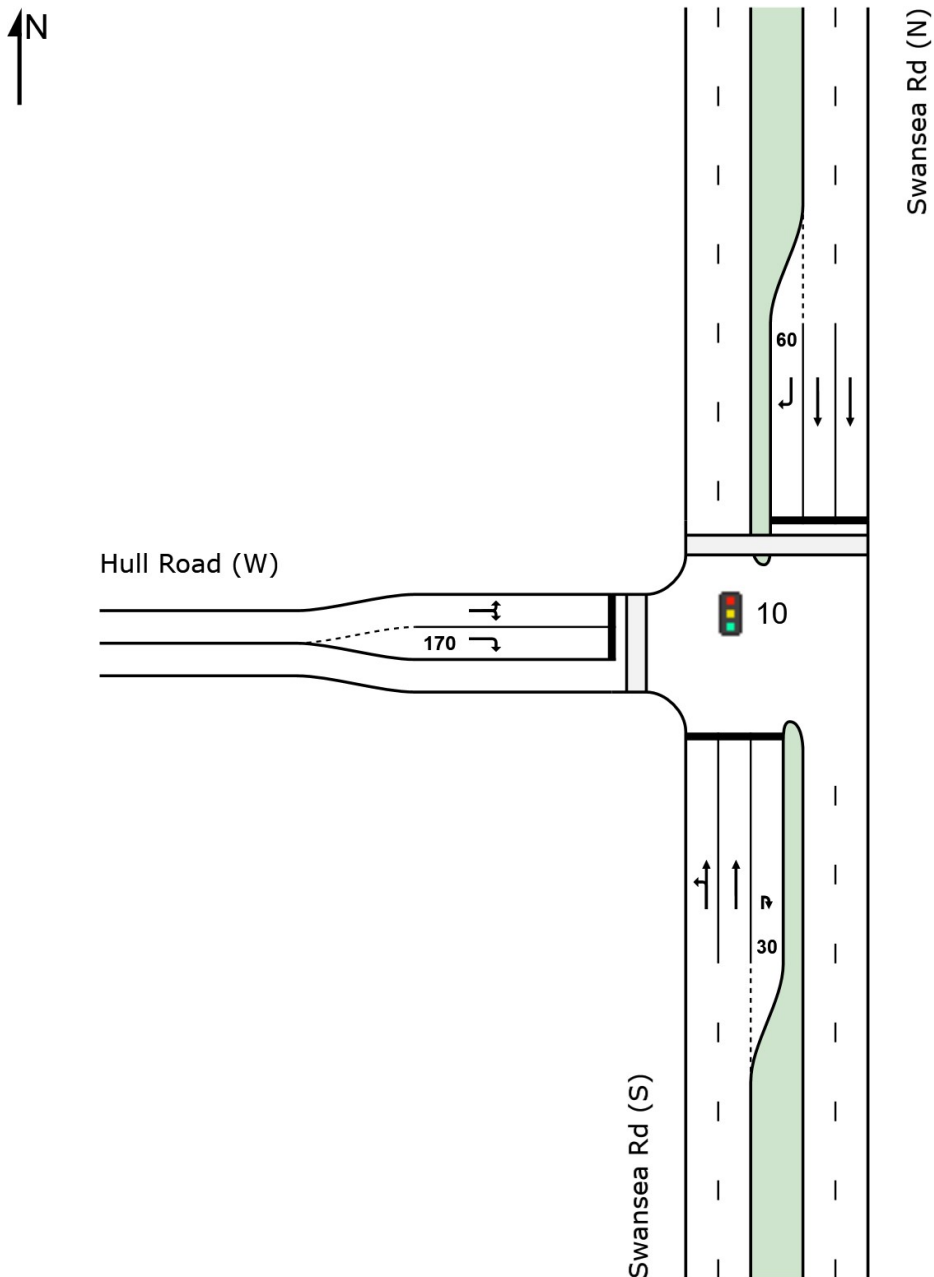
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SITE LAYOUT

 **Site: 10 [SwHuAM - Proposed - 2020 Vol+DEV]**

Swansea Road / Hull Road
Site Category: (None)
Signals - Fixed Time Isolated



LANE SUMMARY

Site: 10 [SwHuAM - Proposed - 2020 Vol+DEV]

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 105 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Swansea Rd (S)													
Lane 1	686	5.0	725	0.947	100	63.9	LOS E	46.1	336.7	Full	350	0.0	1.5
Lane 2	663	5.0	700 ¹	0.947	100	59.8	LOS E	44.1	322.3	Full	350	0.0	0.0
Lane 3	1	5.0	218	0.005	100	47.8	LOS D	0.0	0.3	Short	30	0.0	NA
Approach	1351	5.0		0.947		61.9	LOS E	46.1	336.7				
North: Swansea Rd (N)													
Lane 1	466	5.0	701	0.665	100	29.7	LOS C	19.9	145.6	Full	500	0.0	0.0
Lane 2	390	5.0	586 ¹	0.665	100	28.1	LOS C	15.8	115.3	Full	500	0.0	0.0
Lane 3	278	5.0	290	0.957	100	81.0	LOS F	18.8	137.2	Short	60	0.0	NA
Approach	1134	5.0		0.957		41.7	LOS D	19.9	145.6				
West: Hull Road (W)													
Lane 1	543	5.0	562	0.965	100	77.5	LOS E	38.5	281.2	Full	500	0.0	0.0
Lane 2	511	5.0	529	0.965	100	78.3	LOS E	36.2	264.2	Short	170	0.0	NA
Approach	1054	5.0		0.965		77.9	LOS E	38.5	281.2				
Intersection	3538	5.0		0.965		60.2	LOS E	46.1	336.7				

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.

- ¹ 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.

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PHASING SUMMARY

 **Site: 10 [SwHuAM - Proposed - 2020 Vol+DEV]**

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 105 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

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C1*, C2*, C3*

Output Phase Sequence: A, B, C1*

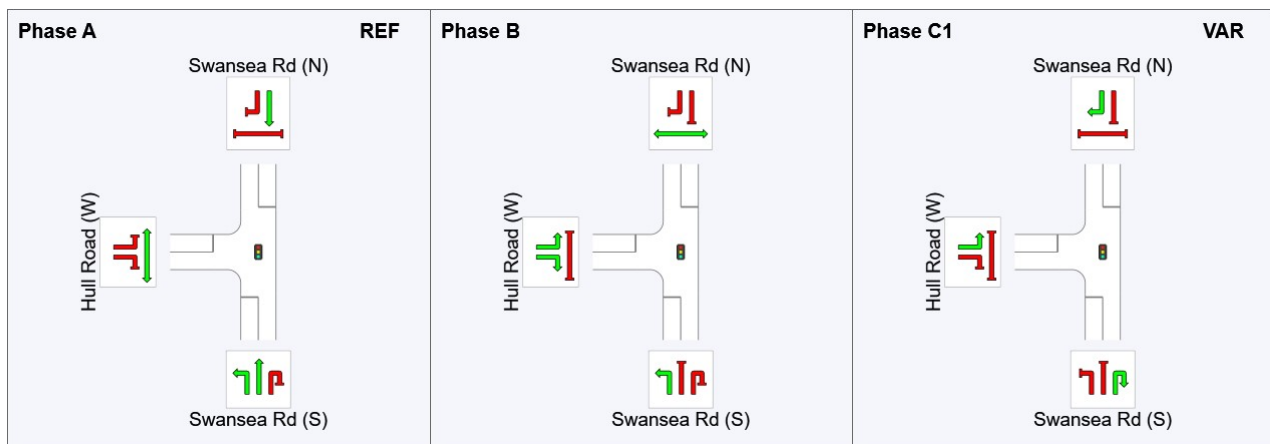
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C1
Phase Change Time (sec)	0	45	82
Green Time (sec)	39	31	17
Phase Time (sec)	45	37	23
Phase Split	43%	35%	22%

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



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LANE SUMMARY

Site: 10 [SwHuPM - Proposed - 2020 Vol+DEV]

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Swansea Rd (S)													
Lane 1	843	5.0	881	0.957	100	64.3	LOS E	60.1	439.0	Full	350	0.0	25.6
Lane 2	787	5.0	823 ¹	0.957	100	61.2	LOS E	55.8	407.2	Full	350	0.0	18.7
Lane 3	1	5.0	208	0.005	100	50.4	LOS D	0.0	0.3	Short	30	0.0	NA
Approach	1632	5.0		0.957		62.8	LOS E	60.1	439.0				
North: Swansea Rd (N)													
Lane 1	432	5.0	824	0.525	100	24.2	LOS C	16.8	122.9	Full	500	0.0	0.0
Lane 2	391	5.0	745 ¹	0.525	100	23.5	LOS C	14.8	108.0	Full	500	0.0	0.0
Lane 3	259	5.0	277	0.934	100	77.2	LOS E	17.3	126.1	Short	60	0.0	NA
Approach	1082	5.0		0.934		36.6	LOS D	17.3	126.1				
West: Hull Road (W)													
Lane 1	478	5.0	496	0.964	100	80.7	LOS F	35.0	255.3	Full	500	0.0	0.0
Lane 2	424	5.0	440	0.964	100	82.1	LOS F	30.8	224.9	Short	170	0.0	NA
Approach	902	5.0		0.964		81.4	LOS F	35.0	255.3				
Intersection	3616	5.0		0.964		59.6	LOS E	60.1	439.0				

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.

- ¹ 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.

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PHASING SUMMARY

 **Site: 10 [SwHuPM - Proposed - 2020 Vol+DEV]**

Swansea Road / Hull Road

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 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

Green Split Priority has been specified

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B, C1*, C2*, C3*

Output Phase Sequence: A, B, C1*

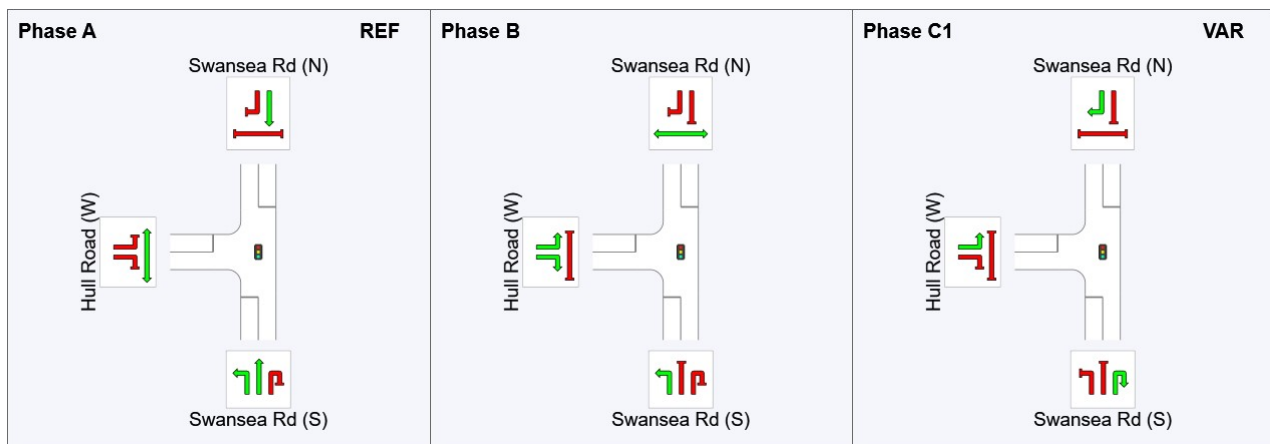
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C1
Phase Change Time (sec)	0	54	87
Green Time (sec)	48	27	17
Phase Time (sec)	54	33	23
Phase Split	49%	30%	21%

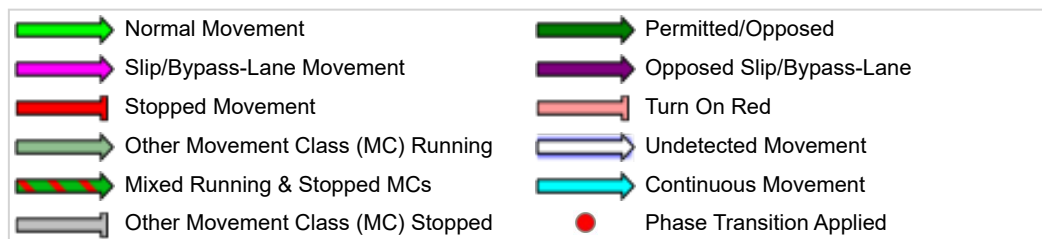
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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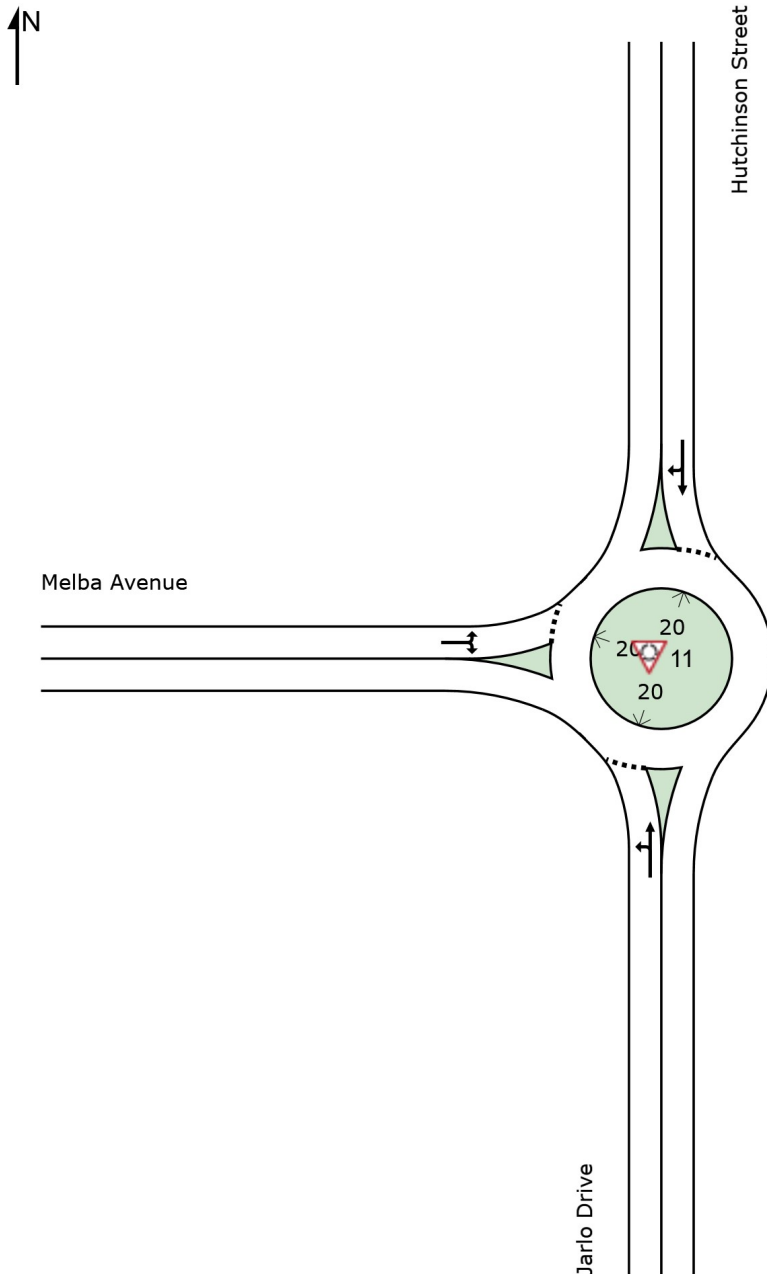
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SITE LAYOUT

 **Site: 11 [HuMeAMF1- 2030vol + Dev]**

Melba Avenue / Hutchinson Street
Commuter AM peak
Site Category: -
Roundabout



LANE SUMMARY

 **Site: 11 [HuMeAMF1- 2030vol + Dev]**

Melba Avenue / Hutchinson Street
Commuter AM peak
Site Category: -
Roundabout

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: Jarlo Drive													
Lane 1 ^d	724	3.0	1415	0.512	100	4.5	LOS A	5.0	35.6	Full	500	0.0	0.0
Approach	724	3.0		0.512		4.5	LOS A	5.0	35.6				
North: Hutchinson Street													
Lane 1 ^d	271	3.0	743	0.364	100	10.1	LOS B	2.6	18.3	Full	300	0.0	0.0
Approach	271	3.0		0.364		10.1	LOS B	2.6	18.3				
West: Melba Avenue													
Lane 1 ^d	702	3.0	1239	0.567	100	10.0	LOS A	4.9	35.2	Full	500	0.0	0.0
Approach	702	3.0		0.567		10.0	LOS A	4.9	35.2				
Intersection	1697	3.0		0.567		7.7	LOS A	5.0	35.6				

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

Roundabout LOS Method: SIDRA Roundabout LOS.

Lane LOS values are based on average delay per lane.

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

Roundabout Capacity Model: SIDRA Standard.

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.

^d Dominant lane on roundabout approach

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Organisation: CARDNO (QLD) PTY LTD | Processed: Friday, 9 October 2020 2:39:15 PM

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LANE SUMMARY

 **Site: 11 [HuMePMF1- 2030vol + Dev]**

Melba Avenue / Hutchinson Street
Commuter AM peak
Site Category: -
Roundabout

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: Jarlo Drive													
Lane 1 ^d	703	3.0	1553	0.453	100	4.1	LOS A	4.0	28.8	Full	500	0.0	0.0
Approach	703	3.0		0.453		4.1	LOS A	4.0	28.8				
North: Hutchinson Street													
Lane 1 ^d	72	3.0	867	0.083	100	9.5	LOS A	0.4	3.2	Full	300	0.0	0.0
Approach	72	3.0		0.083		9.5	LOS A	0.4	3.2				
West: Melba Avenue													
Lane 1 ^d	631	3.0	1575	0.400	100	8.6	LOS A	2.9	20.9	Full	500	0.0	0.0
Approach	631	3.0		0.400		8.6	LOS A	2.9	20.9				
Intersection	1405	3.0		0.453		6.4	LOS A	4.0	28.8				

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

Roundabout LOS Method: SIDRA Roundabout LOS.

Lane LOS values are based on average delay per lane.

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

Roundabout Capacity Model: SIDRA Standard.

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.

^d Dominant lane on roundabout approach

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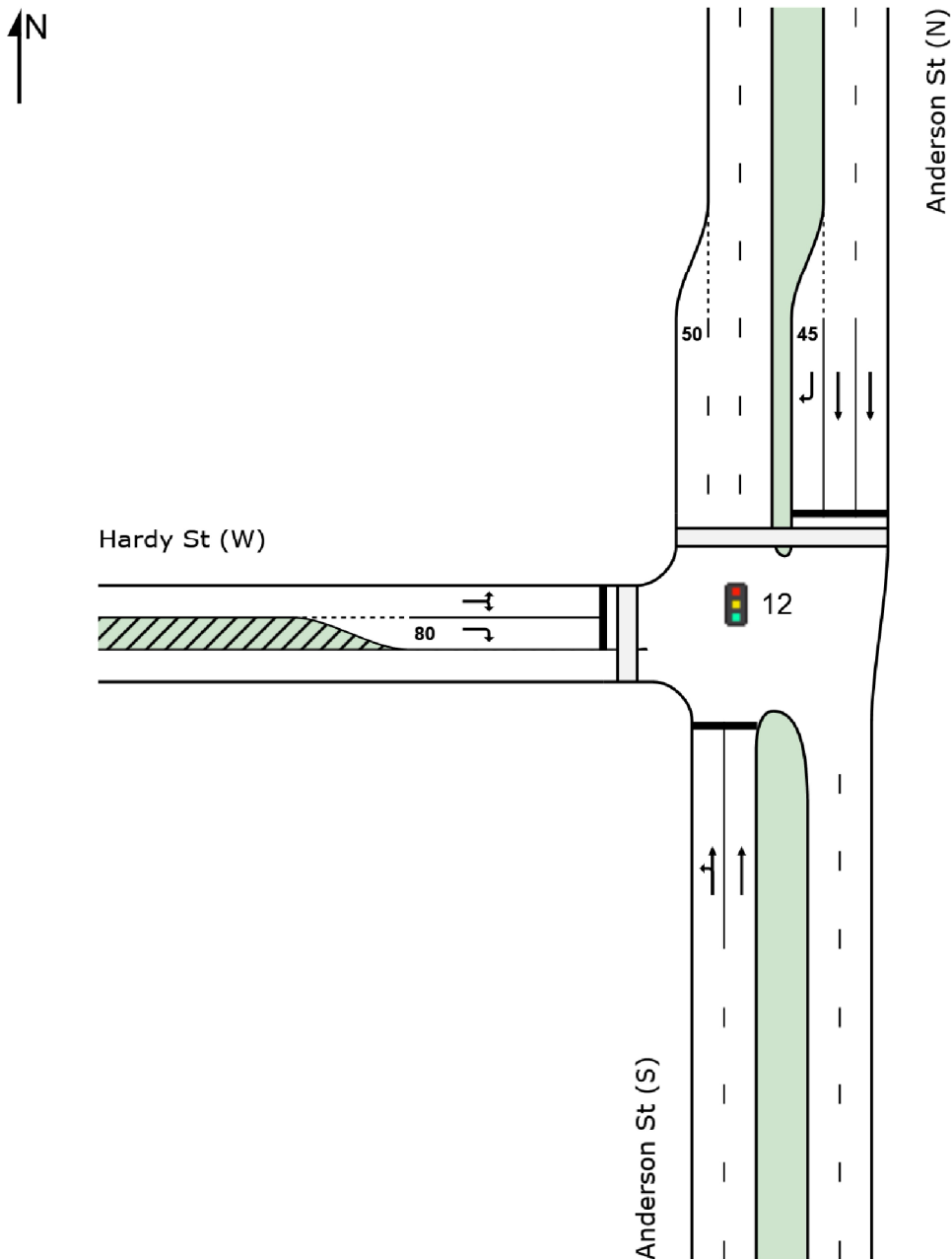
SITE LAYOUT

 **Site: 12 [AnHaAM - Existing - 2020Vol - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

Signals - Fixed Time Isolated



LANE SUMMARY

 **Site: 12 [AnHaAM - Existing - 2020Vol - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

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

Lane Use and Performance													
	Demand Flows Total veh/h	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: Anderson St (S)													
Lane 1	617	2.0	1322	0.466	46 ⁵	8.7	LOS A	11.2	79.7	Full	30	0.0	97.3
Lane 2	943	5.0	923	1.021	100	87.4	LOS F	73.6	537.5	Full	30	0.0	100.0
Approach	1560	3.8		1.021		56.2	LOS E	73.6	537.5				
North: Anderson St (N)													
Lane 1	398	5.0	1322	0.301	100	5.4	LOS A	6.5	47.8	Full	125	0.0	0.0
Lane 2	398	5.0	1322	0.301	100	5.4	LOS A	6.5	47.8	Full	125	0.0	0.0
Lane 3	254	2.0	264	0.959	100	72.6	LOS E	15.1	107.4	Short	45	0.0	NA
Approach	1051	4.3		0.959		21.6	LOS C	15.1	107.4				
West: Hardy St (W)													
Lane 1	314	2.0	376	0.835	100	48.4	LOS D	15.0	107.0	Full	380	0.0	0.0
Lane 2	255	2.0	305	0.835	100	50.9	LOS D	12.3	87.6	Short	80	0.0	NA
Approach	568	2.0		0.835		49.5	LOS D	15.0	107.0				
Intersection	3179	3.6		1.021		43.6	LOS D	73.6	537.5				

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.

5 Lane under-utilisation found by the program

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PHASING SUMMARY

 **Site: 12 [AnHaAM - Existing - 2020Vol - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

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

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C

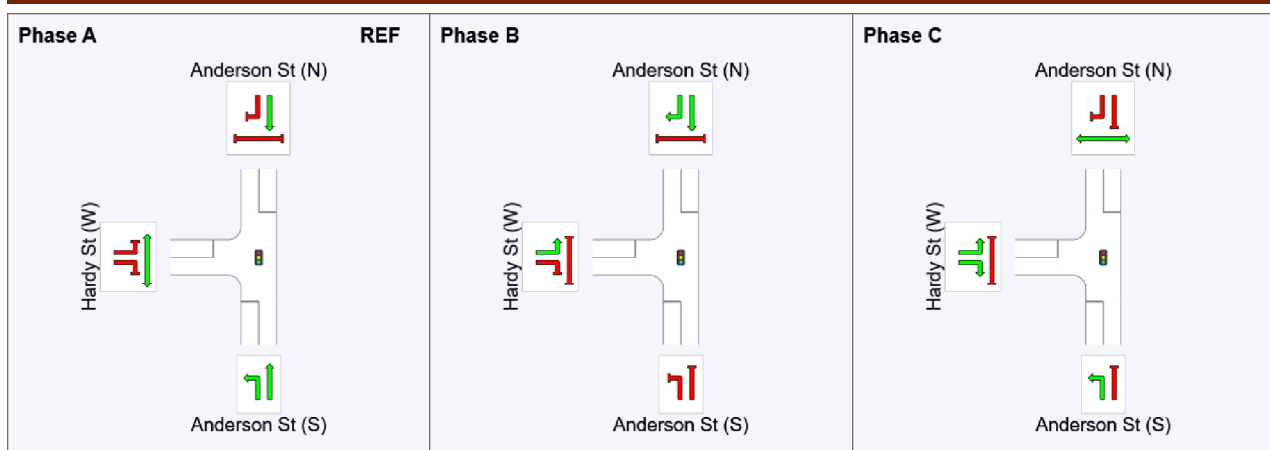
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	50	69
Green Time (sec)	44	13	15
Phase Time (sec)	50	19	21
Phase Split	56%	21%	23%



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

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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LANE SUMMARY

 **Site: 12 [AnHaPM - Existing - 2020Vol - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Anderson St (S)													
Lane 1	333	2.0	1001	0.333	31 ⁶	19.5	LOS B	8.8	62.9	Full	30	0.0	73.8
Lane 2	880	5.0	826	1.064	100	114.8	LOS F	73.6	537.6	Full	30	0.0	100.0
Approach	1213	4.2		1.064		88.6	LOS F	73.6	537.6				
North: Anderson St (N)													
Lane 1	469	5.0	1110	0.423	100	9.7	LOS A	10.0	72.9	Full	125	0.0	0.0
Lane 2	469	5.0	1110	0.423	100	9.7	LOS A	10.0	72.9	Full	125	0.0	0.0
Lane 3	142	2.0	137	1.035	100	101.9	LOS F	9.6	68.5	Short	45	0.0	NA
Approach	1080	4.6		1.035		21.8	LOS C	10.0	72.9				
West: Hardy St (W)													
Lane 1	563	2.0	541 ¹	1.042	100	107.6	LOS F	43.0	306.4	Full	380	0.0	0.0
Lane 2	501	2.0	481	1.042	100	107.4	LOS F	37.6	268.0	Short	80	0.0	NA
Approach	1064	2.0		1.042		107.5	LOS F	43.0	306.4				
Intersection	3357	3.6		1.064		73.1	LOS E	73.6	537.6				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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Organisation: CARDNO (QLD) PTY LTD | Processed: Wednesday, 4 March 2020 11:18:33 AM

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PHASING SUMMARY

 **Site: 12 [AnHaPM - Existing - 2020Vol - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C

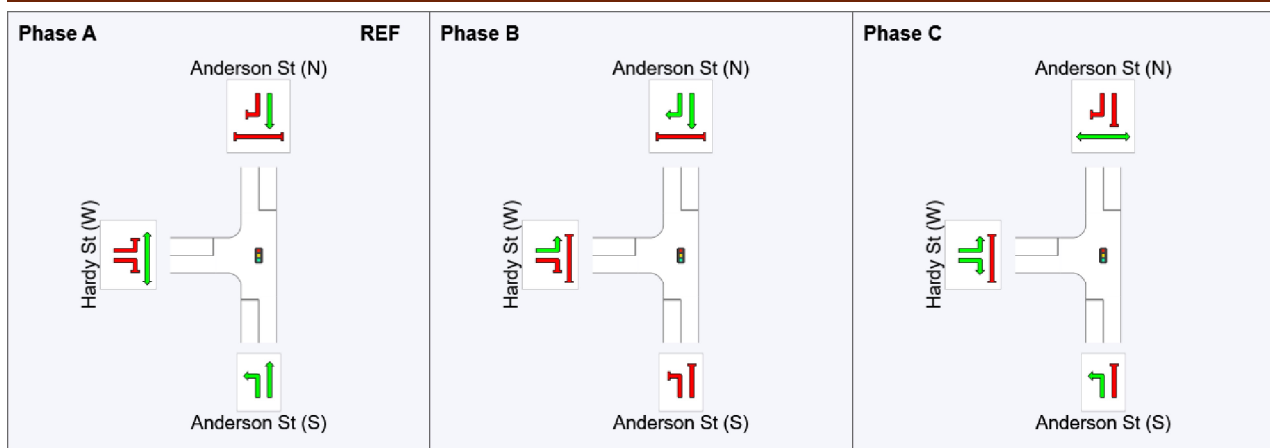
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	41	53
Green Time (sec)	35	6	21
Phase Time (sec)	41	12	27
Phase Split	51%	15%	34%

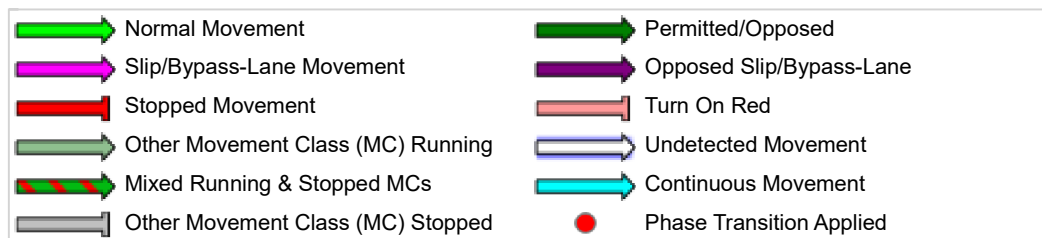
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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Project: M:\2016\1501_2000V161623_Lilydale_Quarry_-_Intrapac\Traffic\Engineering\SIDRA\Spreadsheet V12 Vols\V161623SID009 - Anderson (Swansea)-Hardy - Spreadsheet V12 Vols.sip8

LANE SUMMARY

 **Site: 12 [AnHaAM - Existing - 2020Vol+DEV - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

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

Lane Use and Performance													
	Demand Flows		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. %
	Total	HV						Veh	Dist m				
	veh/h	%											
South: Anderson St (S)													
Lane 1	617	2.0	1302	0.474	45 ⁵	9.1	LOS A	11.7	83.0	Full	30	0.0	100.0
Lane 2	943	5.0	902	1.045	100	103.5	LOS F	79.6	580.8	Full	30	0.0	100.0
Approach	1560	3.8		1.045		66.2	LOS E	79.6	580.8				
North: Anderson St (N)													
Lane 1	398	5.0	1322	0.301	100	5.4	LOS A	6.5	47.8	Full	125	0.0	0.0
Lane 2	398	5.0	1322	0.301	100	5.4	LOS A	6.5	47.8	Full	125	0.0	22.0 ⁸
Lane 3	276	2.0	266 ¹	1.036	100	110.9	LOS F	21.2	150.7	Short	45	0.0	NA
Approach	1073	4.2		1.036		32.6	LOS C	21.2	150.7				
West: Hardy St (W)													
Lane 1	353	2.0	403	0.876	100	51.7	LOS D	17.8	126.8	Full	380	0.0	0.0
Lane 2	267	2.0	305	0.876	100	54.5	LOS D	13.5	96.4	Short	80	0.0	NA
Approach	620	2.0		0.876		52.9	LOS D	17.8	126.8				
Intersection	3253	3.6		1.045		52.6	LOS D	79.6	580.8				

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.

¹ 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.

⁵ Lane under-utilisation found by the program

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

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PHASING SUMMARY

 **Site: 12 [AnHaAM - Existing - 2020Vol+DEV - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

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

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C

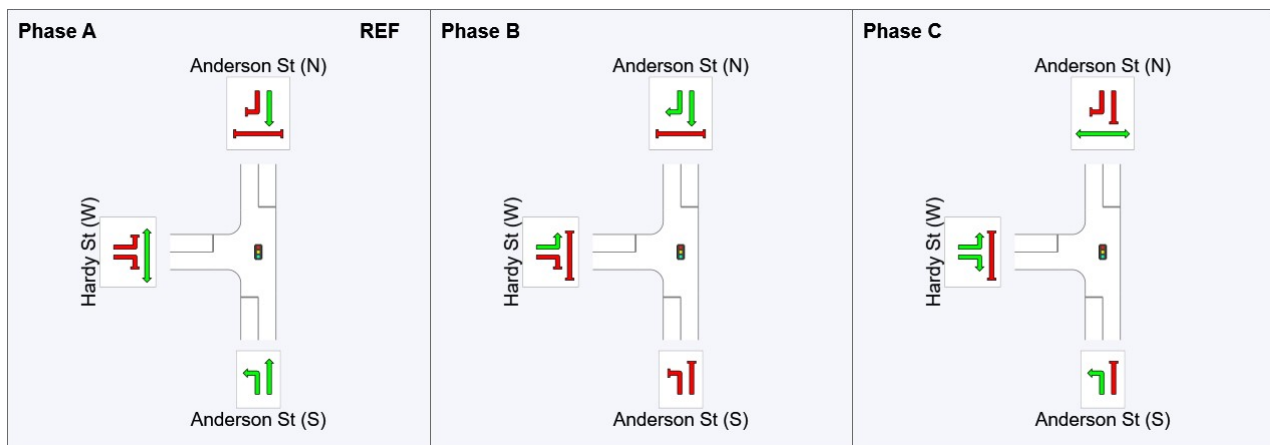
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	49	69
Green Time (sec)	43	14	15
Phase Time (sec)	49	20	21
Phase Split	54%	22%	23%

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



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LANE SUMMARY

 **Site: 12 [AnHaPM - Existing - 2020Vol+DEV - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Phase Times)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Anderson St (S)													
Lane 1	331	2.0	802	0.412	36 ⁵	6.3	LOS A	3.9	27.6	Full	30	0.0	0.0
Lane 2	882	5.0	779	1.132	100	168.1	LOS F	90.2	658.2	Full	30	0.0	100.0
Approach	1213	4.2		1.132		124.0	LOS F	90.2	658.2				
North: Anderson St (N)													
Lane 1	469	5.0	1110	0.423	100	9.7	LOS A	10.0	72.9	Full	125	0.0	0.0
Lane 2	469	5.0	1110	0.423	100	9.7	LOS A	10.0	72.9	Full	125	0.0	4.3 ⁸
Lane 3	201	2.0	183	1.098	100	148.4	LOS F	17.4	124.0	Short	45	0.0	NA
Approach	1139	4.5		1.098		34.2	LOS C	17.4	124.0				
West: Hardy St (W)													
Lane 1	597	2.0	553 ¹	1.080	100	134.1	LOS F	51.8	369.1	Full	380	0.0	2.4
Lane 2	519	2.0	481	1.080	100	133.8	LOS F	44.3	315.2	Short	80	0.0	NA
Approach	1116	2.0		1.080		134.0	LOS F	51.8	369.1				
Intersection	3467	3.6		1.132		97.7	LOS F	90.2	658.2				

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.

¹ 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.

⁵ Lane under-utilisation found by the program

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

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PHASING SUMMARY

 **Site: 12 [AnHaPM - Existing - 2020Vol+DEV - DOS>1]**

Anderson Street / Hardy Street

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C

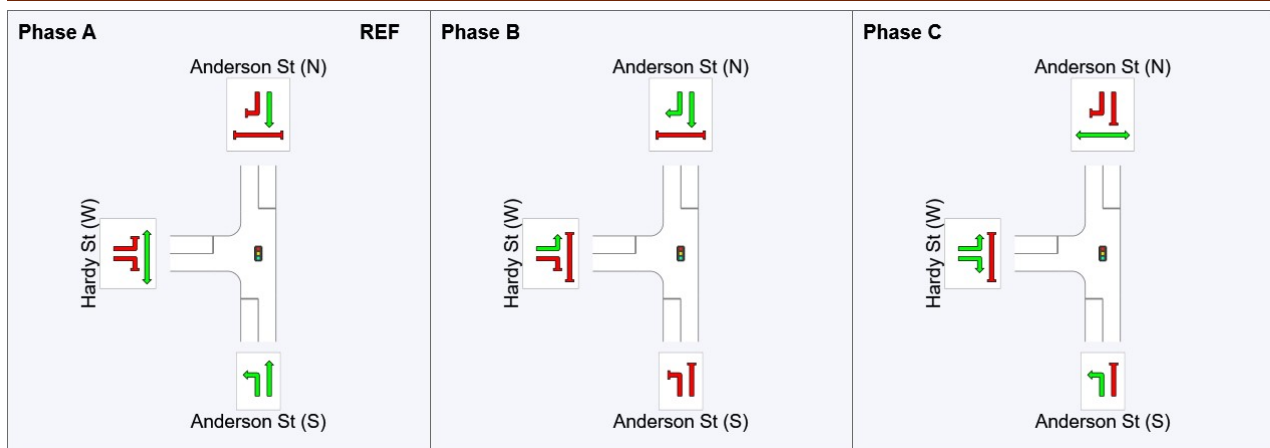
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	39	53
Green Time (sec)	33	8	21
Phase Time (sec)	39	14	27
Phase Split	49%	18%	34%

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



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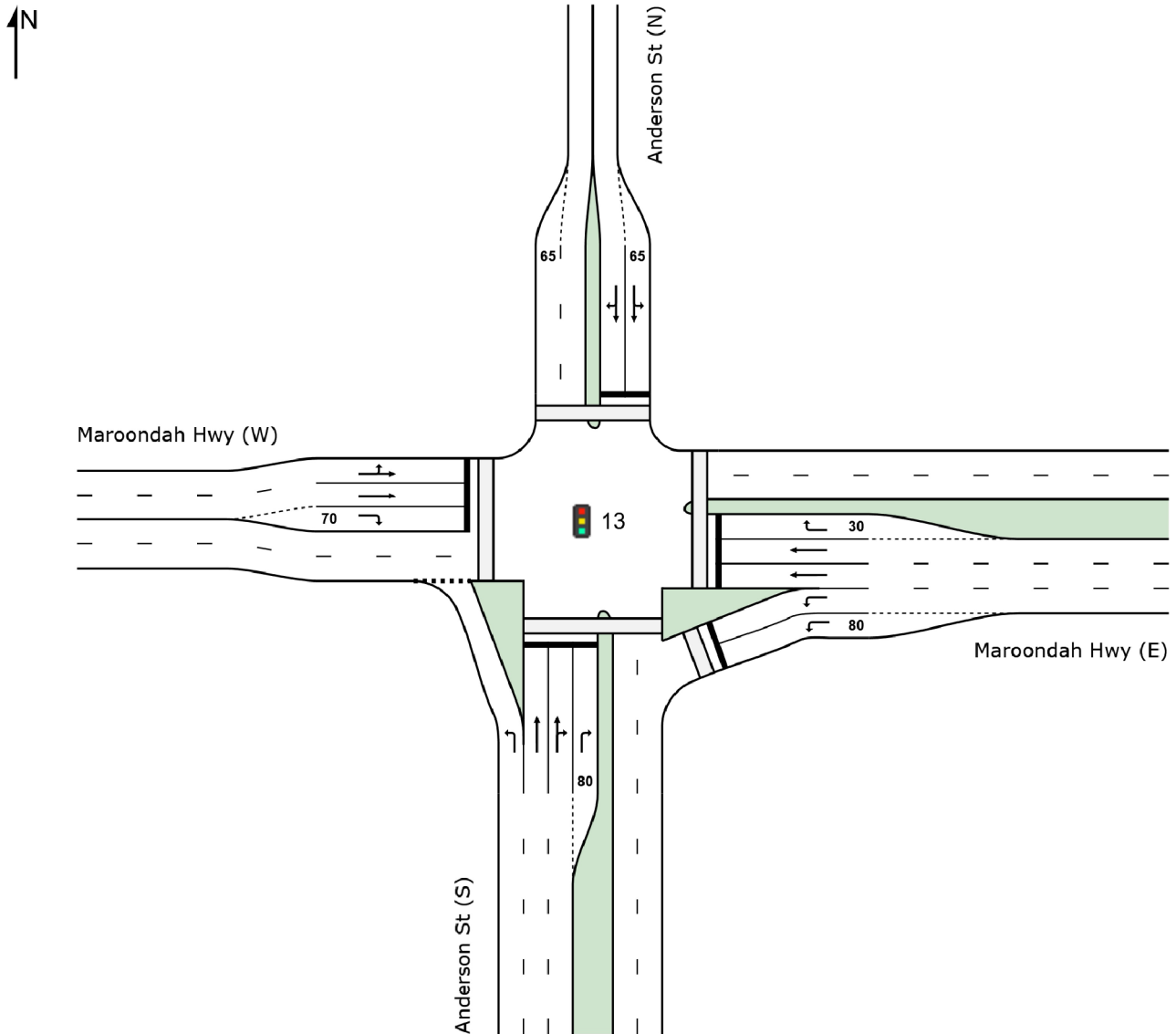
SITE LAYOUT

 **Site: 13 [MaAnAM - Existing - 2020Vol]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated



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Organisation: CARDNO (QLD) PTY LTD | Created: Friday, 20 March 2020 4:38:52 PM

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Anderson-Maroondah - Spreadsheet V12 Vols.sip8

LANE SUMMARY

Site: 13 [MaAnAM - Existing - 2020Vol]

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Anderson St (S)													
Lane 1	295	5.0	819	0.360	100	20.7	LOS C	9.4	68.3	Full	125	0.0	0.0
Lane 2	151	5.0	378	0.401	44 ⁶	45.4	LOS D	7.8	56.9	Full	125	0.0	0.0
Lane 3	338	5.0	367 ¹	0.920	100	69.2	LOS E	23.5	171.5	Full	125	0.0	33.9
Lane 4	330	5.0	359	0.920	100	74.6	LOS E	23.1	168.7	Short	80	0.0	NA
Approach	1114	5.0		0.920		54.7	LOS D	23.5	171.5				
East: Maroondah Hwy (E)													
Lane 1	259	5.0	1151	0.225	100	15.1	LOS B	6.2	45.4	Short	80	0.0	NA
Lane 2	259	5.0	1151	0.225	100	15.1	LOS B	6.2	45.4	Full	500	0.0	0.0
Lane 3	680	5.0	740	0.919	100	55.4	LOS E	46.1	336.8	Full	500	0.0	0.0
Lane 4	435	5.0	474 ¹	0.919	100	56.7	LOS E	27.3	199.3	Full	500	0.0	0.0
Lane 5	172	5.0	343 ¹	0.501	100	35.5	LOS D	7.6	55.8	Short	30	0.0	NA
Approach	1804	5.0		0.919		42.3	LOS D	46.1	336.8				
North: Anderson St (N)													
Lane 1	136	5.0	248	0.549	100	55.4	LOS E	7.7	56.0	Short	65	0.0	NA
Lane 2	134	5.0	245	0.549	100	57.0	LOS E	7.6	55.3	Full	500	0.0	0.0
Approach	271	5.0		0.549		56.2	LOS E	7.7	56.0				
West: Maroondah Hwy (W)													
Lane 1	237	5.0	975	0.243	100	16.7	LOS B	7.4	54.2	Full	500	0.0	0.0
Lane 2	238	5.0	976	0.243	100	16.9	LOS B	7.6	55.1	Full	500	0.0	0.0
Lane 3	116	5.0	134	0.861	100	73.8	LOS E	7.6	55.5	Short	70	0.0	NA
Approach	591	5.0		0.861		28.0	LOS C	7.6	55.5				
Intersection	3779	5.0		0.920		44.7	LOS D	46.1	336.8				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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Anderson-Marondah - Spreadsheet V12 Vols.sip8

PHASING SUMMARY

 **Site: 13 [MaAnAM - Existing - 2020Vol]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 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

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D1*, D2*, D3*

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

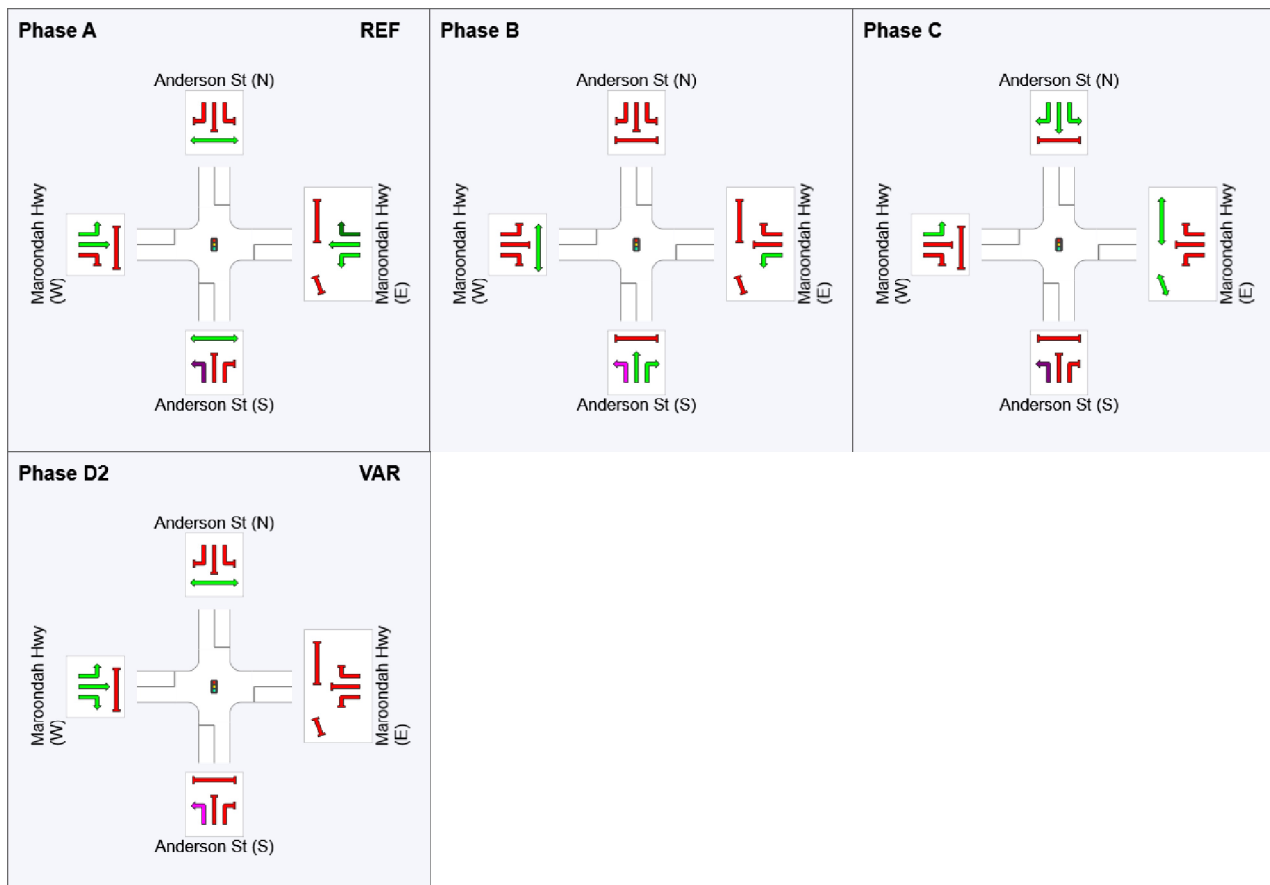
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C	D2
Phase Change Time (sec)	0	53	83	105
Green Time (sec)	47	24	16	9
Phase Time (sec)	53	30	22	15
Phase Split	44%	25%	18%	13%

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

 Normal Movement

 Permitted/Opposed

	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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LANE SUMMARY

Site: 13 [MaAnPM - Existing - 2020Vol]

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site Optimum Cycle Time - Minimum Delay)

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

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: Anderson St (S)													
Lane 1	188	5.0	1069	0.176	100	12.1	LOS B	3.7	26.9	Full	125	0.0	0.0
Lane 2	221	5.0	551	0.401	44 ⁶	36.7	LOS D	10.4	75.6	Full	125	0.0	0.0
Lane 3	415	5.0	451 ¹	0.920	100	66.0	LOS E	28.1	205.3	Full	125	0.0	50.6
Lane 4	411	5.0	447 ¹	0.920	100	68.4	LOS E	28.0	204.1	Short	80	0.0	NA
Approach	1235	5.0		0.920		53.3	LOS D	28.1	205.3				
East: Maroondah Hwy (E)													
Lane 1	191	5.0	1091	0.175	100	16.5	LOS B	4.8	34.9	Short	80	0.0	NA
Lane 2	191	5.0	1091	0.175	100	16.5	LOS B	4.8	34.9	Full	500	0.0	0.0
Lane 3	421	5.0	504	0.836	100	51.9	LOS D	25.4	185.1	Full	500	0.0	0.0
Lane 4	350	5.0	418 ¹	0.836	100	51.1	LOS D	20.5	149.4	Full	500	0.0	0.0
Lane 5	138	5.0	244	0.566	100	37.0	LOS D	5.3	39.0	Short	30	0.0	NA
Approach	1289	5.0		0.836		39.6	LOS D	25.4	185.1				
North: Anderson St (N)													
Lane 1	164	5.0	261	0.629	100	56.3	LOS E	9.3	68.2	Short	65	0.0	NA
Lane 2	165	5.0	262	0.629	100	55.9	LOS E	9.4	68.4	Full	500	0.0	0.0
Approach	329	5.0		0.629		56.1	LOS E	9.4	68.4				
West: Maroondah Hwy (W)													
Lane 1	469	5.0	504	0.932	100	75.2	LOS E	33.6	245.4	Full	500	0.0	0.0
Lane 2	409	5.0	439 ¹	0.932	100	66.9	LOS E	28.6	208.7	Full	500	0.0	0.0
Lane 3	167	5.0	179	0.933	100	81.8	LOS F	11.9	86.8	Short	70	0.0	NA
Approach	1045	5.0		0.933		73.0	LOS E	33.6	245.4				
Intersection	3899	5.0		0.933		54.3	LOS D	33.6	245.4				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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Anderson-Marondah - Spreadsheet V12 Vols.sip8

PHASING SUMMARY

 **Site: 13 [MaAnPM - Existing - 2020Vol]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 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

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D1*, D2*, D3*

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

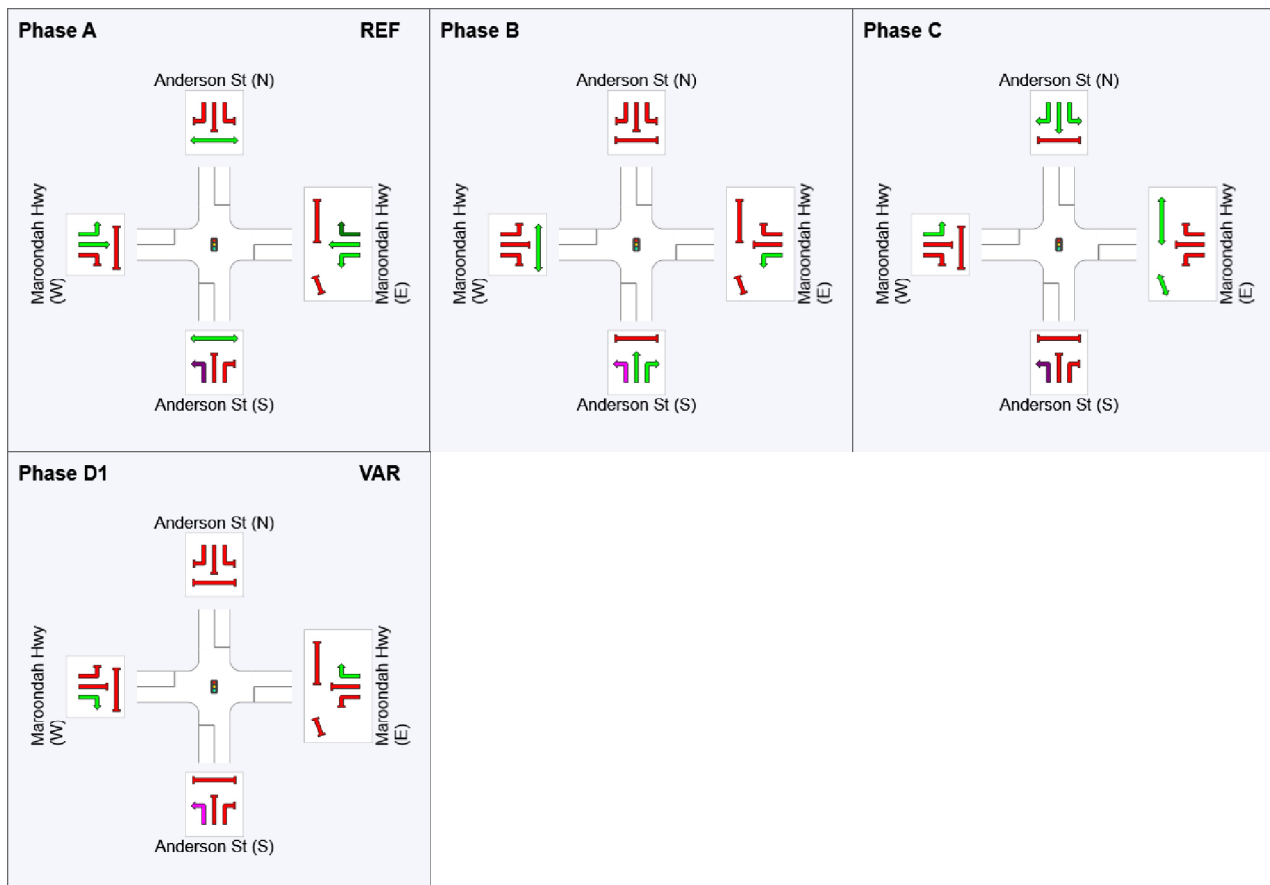
(* Variable Phase)

Phase Timing Summary

Phase	A	B	C	D1
Phase Change Time (sec)	0	38	79	102
Green Time (sec)	32	35	17	12
Phase Time (sec)	38	41	23	18
Phase Split	32%	34%	19%	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

 Normal Movement  Permitted/Opposed

	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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LANE SUMMARY

 **Site: 13 [MaAnAM - Existing - 2020Vol+DEV]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Anderson St (S)													
Lane 1	295	5.0	801	0.368	100	23.1	LOS C	10.1	73.6	Full	125	0.0	0.0
Lane 2	163	5.0	456	0.356	44 ⁶	40.8	LOS D	7.9	57.8	Full	125	0.0	0.0
Lane 3	359	5.0	440 ¹	0.817	100	52.6	LOS D	21.4	155.9	Full	125	0.0	25.1
Lane 4	350	5.0	428 ¹	0.817	100	57.2	LOS E	20.9	152.6	Short	80	0.0	NA
Approach	1166	5.0		0.817		44.9	LOS D	21.4	155.9				
East: Maroondah Hwy (E)													
Lane 1	270	5.0	1285	0.210	100	11.6	LOS B	5.1	37.6	Short	80	0.0	NA
Lane 2	270	5.0	1285	0.210	100	11.6	LOS B	5.1	37.6	Full	500	0.0	0.0
Lane 3	740	5.0	803	0.921	100	53.5	LOS D	50.1	365.9	Full	500	0.0	0.0
Lane 4	449	5.0	487 ¹	0.921	100	55.5	LOS E	27.7	202.4	Full	500	0.0	0.0
Lane 5	172	5.0	325 ¹	0.528	100	33.5	LOS C	7.6	55.2	Short	30	0.0	NA
Approach	1900	5.0		0.921		40.3	LOS D	50.1	365.9				
North: Anderson St (N)													
Lane 1	136	5.0	155	0.878	100	71.2	LOS E	9.0	65.9	Short	65	0.0	NA
Lane 2	134	5.0	153	0.878	100	72.9	LOS E	8.9	65.0	Full	500	0.0	0.0
Approach	271	5.0		0.878		72.1	LOS E	9.0	65.9				
West: Maroondah Hwy (W)													
Lane 1	311	5.0	1038	0.300	100	15.1	LOS B	9.5	69.3	Full	500	0.0	0.0
Lane 2	312	5.0	1039	0.300	100	15.4	LOS B	9.7	70.5	Full	500	0.0	0.0
Lane 3	116	5.0	134	0.861	100	73.8	LOS E	7.6	55.5	Short	70	0.0	NA
Approach	739	5.0		0.861		24.4	LOS C	9.7	70.5				
Intersection	4076	5.0		0.921		40.8	LOS D	50.1	365.9				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

 **Site: 13 [MaAnAM - Existing - 2020Vol+DEV]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Op sheet - Copy

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D2

Output Phase Sequence: A, B, C, D2

Phase Timing Summary

Phase	A	B	C	D2
Phase Change Time (sec)	0	57	92	108
Green Time (sec)	51	29	10	9
Phase Time (sec)	57	35	13	15
Phase Split	48%	29%	11%	13%

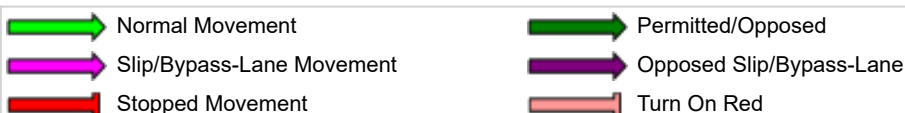
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

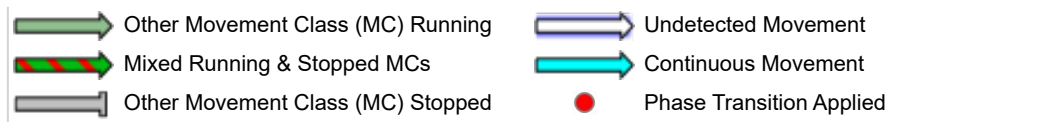
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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LANE SUMMARY

 **Site: 13 [MaAnPM - Existing - 2020Vol+DEV]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Anderson St (S)													
Lane 1	188	5.0	1018	0.185	100	14.1	LOS B	4.2	31.0	Full	125	0.0	0.0
Lane 2	234	5.0	614	0.382	44 ⁶	33.5	LOS C	10.5	76.9	Full	125	0.0	0.0
Lane 3	434	5.0	495 ¹	0.877	100	54.5	LOS D	26.4	193.0	Full	125	0.0	44.8
Lane 4	430	5.0	491 ¹	0.877	100	56.5	LOS E	26.3	192.1	Short	80	0.0	NA
Approach	1286	5.0		0.877		45.4	LOS D	26.4	193.0				
East: Maroondah Hwy (E)													
Lane 1	220	5.0	1225	0.180	100	12.9	LOS B	4.5	33.1	Short	80	0.0	NA
Lane 2	220	5.0	1225	0.180	100	12.9	LOS B	4.5	33.1	Full	500	0.0	0.0
Lane 3	509	5.0	582	0.874	100	53.0	LOS D	32.0	233.5	Full	500	0.0	0.0
Lane 4	431	5.0	493 ¹	0.874	100	52.4	LOS D	26.3	191.9	Full	500	0.0	0.0
Lane 5	138	5.0	242	0.569	100	35.6	LOS D	5.0	36.2	Short	30	0.0	NA
Approach	1518	5.0		0.874		39.6	LOS D	32.0	233.5				
North: Anderson St (N)													
Lane 1	164	5.0	169	0.972	100	90.9	LOS F	12.5	91.6	Short	65	0.0	NA
Lane 2	165	5.0	170	0.972	100	90.5	LOS F	12.6	91.9	Full	500	0.0	0.0
Approach	329	5.0		0.972		90.7	LOS F	12.6	91.9				
West: Maroondah Hwy (W)													
Lane 1	556	5.0	582	0.955	100	81.8	LOS F	42.3	308.7	Full	500	0.0	0.0
Lane 2	481	5.0	503 ¹	0.955	100	72.2	LOS E	35.5	259.2	Full	500	0.0	0.0
Lane 3	167	5.0	179	0.933	100	81.8	LOS F	11.9	86.8	Short	70	0.0	NA
Approach	1204	5.0		0.955		78.0	LOS E	42.3	308.7				
Intersection	4338	5.0		0.972		55.9	LOS E	42.3	308.7				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

 **Site: 13 [MaAnPM - Existing - 2020Vol+DEV]**

Anderson Street / Maroondah Highway

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Op sheet - Copy

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D1

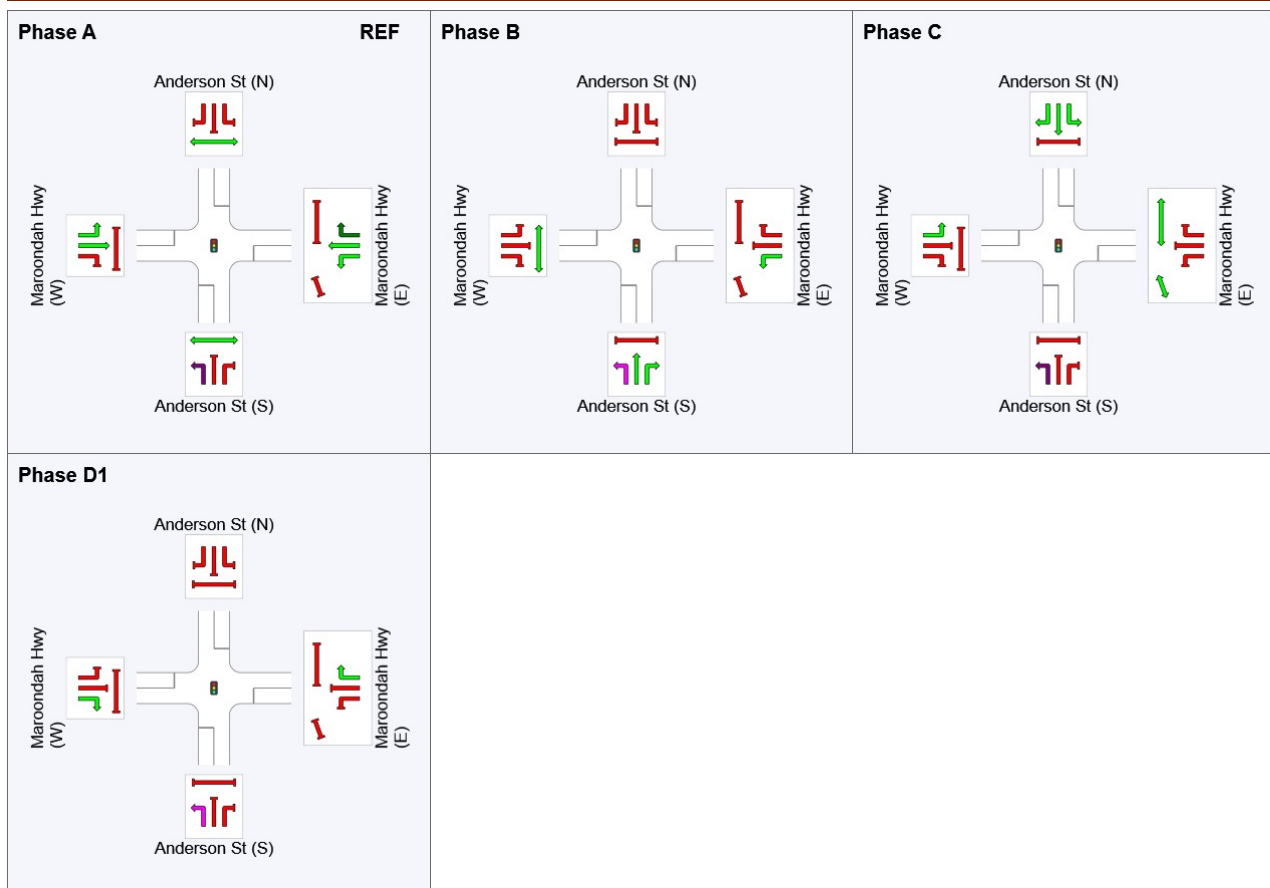
Output Phase Sequence: A, B, C, D1

Phase Timing Summary

Phase	A	B	C	D1
Phase Change Time (sec)	0	43	88	105
Green Time (sec)	37	39	11	12
Phase Time (sec)	43	45	14	18
Phase Split	36%	38%	12%	15%

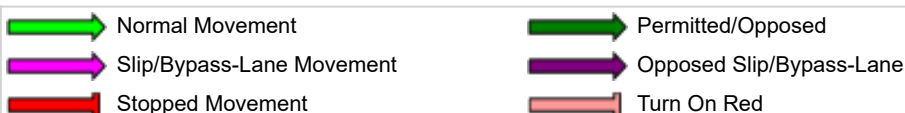
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

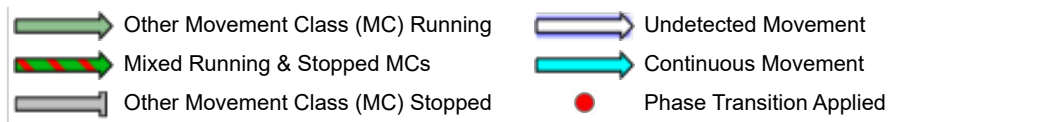
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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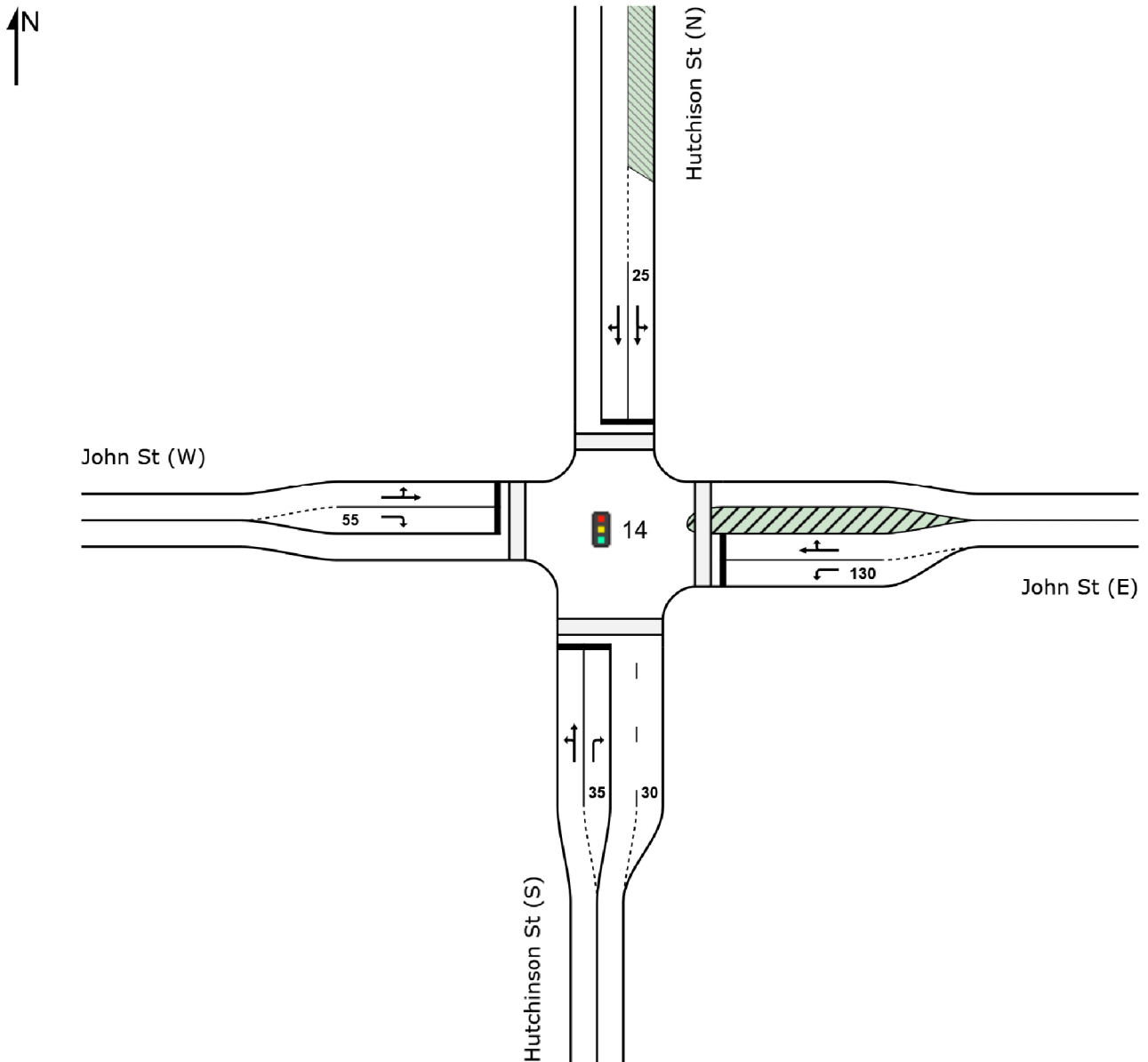
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V12 Sep 2020 Vols\V161623SID010 - Anderson-Maroonah - Spreadsheet V12 Sep 2020 Vols.sip8

SITE LAYOUT

 **Site: 14 [HuJoAM - Existing - 2020Vol]**

Hutchinson Street / John Street
(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)
Site Category: (None)
Signals - Fixed Time Isolated



LANE SUMMARY

 **Site: 14 [HuJoAM - Existing - 2020Vol]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

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: Hutchinson St (S)													
Lane 1	167	2.0	656	0.255	100	28.6	LOS C	6.3	44.6	Full	500	0.0	0.0
Lane 2	263	2.0	346 ¹	0.760	100	39.0	LOS D	12.0	85.7	Short	35	0.0	NA
Approach	431	2.0		0.760		35.0	LOS C	12.0	85.7				
East: John St (E)													
Lane 1	305	2.0	633	0.483	100	35.0	LOS D	12.9	91.6	Short	130	0.0	NA
Lane 2	274	2.0	366	0.748	100	48.4	LOS D	14.6	103.9	Full	155	0.0	0.0
Approach	579	2.0		0.748		41.3	LOS D	14.6	103.9				
North: Hutchison St (N)													
Lane 1	40	2.0	312	0.130	24 ⁶	25.6	LOS C	1.0	7.4	Short (P)	25	0.0	NA
Lane 2	153	2.0	280 ¹	0.547	100	48.7	LOS D	7.8	55.2	Full	120	0.0	0.0
Approach	194	2.0		0.547		43.9	LOS D	7.8	55.2				
West: John St (W)													
Lane 1	287	2.0	591	0.486	100	33.5	LOS C	12.6	89.4	Full	185	0.0	0.0
Lane 2	137	2.0	566	0.242	100	35.1	LOS D	5.5	39.0	Short	55	0.0	NA
Approach	424	2.0		0.486		34.0	LOS C	12.6	89.4				
Intersection	1627	2.0		0.760		38.0	LOS D	14.6	103.9				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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Organisation: CARDNO (QLD) PTY LTD | Processed: Thursday, 12 March 2020 4:34:10 PM

Project: M:\2016\1501_2000\161623_Lilydale_Quarry_-_Intrapac\Traffic\Engineering\SIDRA\Spreadsheet V12 Vols\161623SID007 - Hutchinson-John - Spreadsheet V12 Vols_IDM_XXX.sip8

PHASING SUMMARY

 **Site: 14 [HuJoAM - Existing - 2020Vol]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

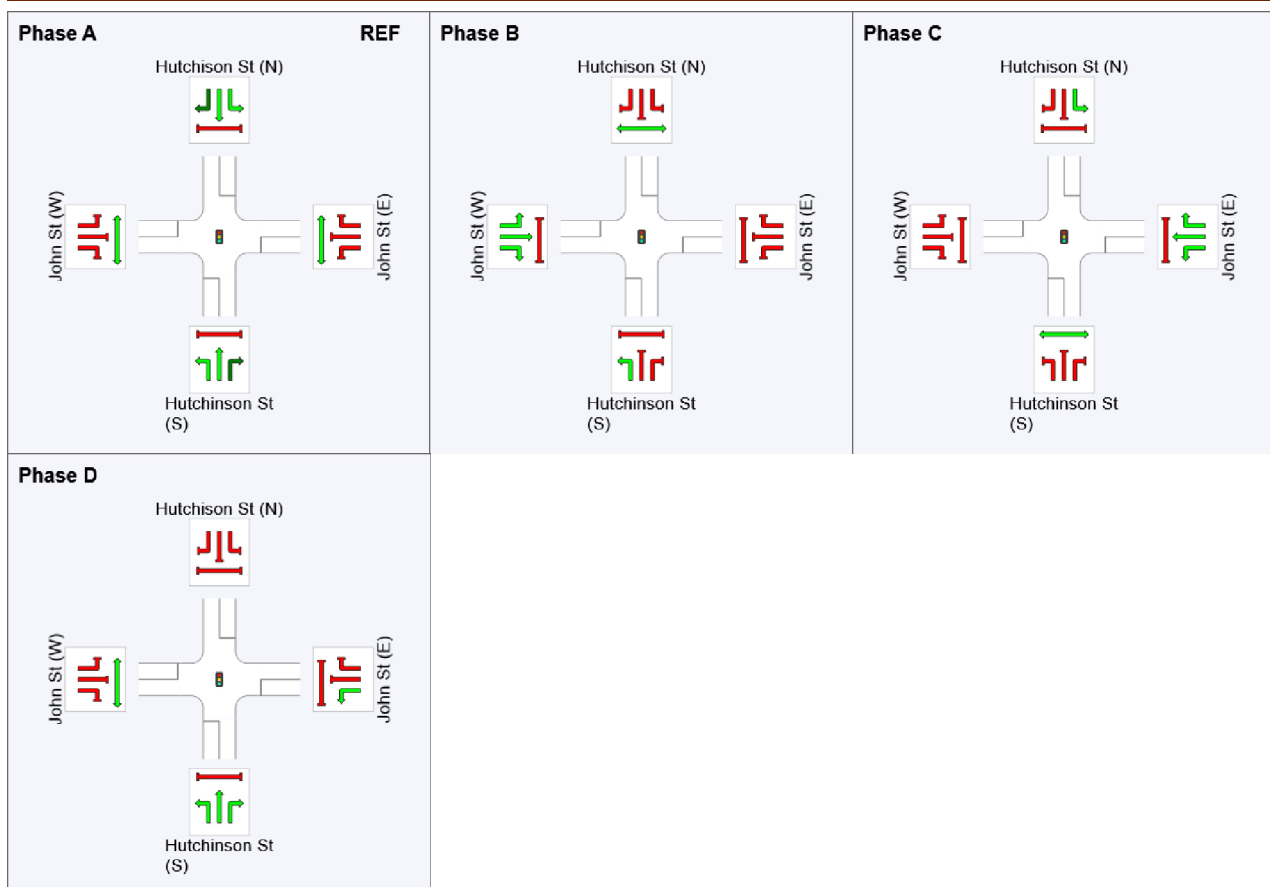
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	23	63	90
Green Time (sec)	17	34	21	14
Phase Time (sec)	23	40	27	20
Phase Split	21%	36%	25%	18%

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



	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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LANE SUMMARY

 **Site: 14 [HuJoPM - Existing - 2020Vol]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

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: Hutchinson St (S)													
Lane 1	245	2.0	469 ¹	0.523	100	31.2	LOS C	9.8	70.0	Full	500	0.0	0.0
Lane 2	175	2.0	374	0.467	100	36.6	LOS D	7.5	53.2	Short	35	0.0	NA
Approach	420	2.0		0.523		33.5	LOS C	9.8	70.0				
East: John St (E)													
Lane 1	65	2.0	583	0.112	100	32.9	LOS C	2.5	17.5	Short	130	0.0	NA
Lane 2	253	2.0	330	0.765	100	50.8	LOS D	13.8	97.9	Full	155	0.0	0.0
Approach	318	2.0		0.765		47.1	LOS D	13.8	97.9				
North: Hutchison St (N)													
Lane 1	67	2.0	516	0.131	36 ⁵	22.1	LOS C	1.8	12.6	Short (P)	25	0.0	NA
Lane 2	94	2.0	258	0.363	100	49.6	LOS D	4.7	33.4	Full	120	0.0	0.0
Approach	161	2.0		0.363		38.1	LOS D	4.7	33.4				
West: John St (W)													
Lane 1	425	2.0	606 ¹	0.702	100	31.0	LOS C	18.7	132.8	Full	185	0.0	0.0
Lane 2	196	2.0	666	0.294	100	31.3	LOS C	7.5	53.0	Short	55	0.0	NA
Approach	621	2.0		0.702		31.1	LOS C	18.7	132.8				
Intersection	1520	2.0		0.765		35.9	LOS D	18.7	132.8				

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.

¹ 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.

⁵ Lane under-utilisation found by the program

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PHASING SUMMARY

 **Site: 14 [HuJoPM - Existing - 2020Vol]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times specified by the user

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

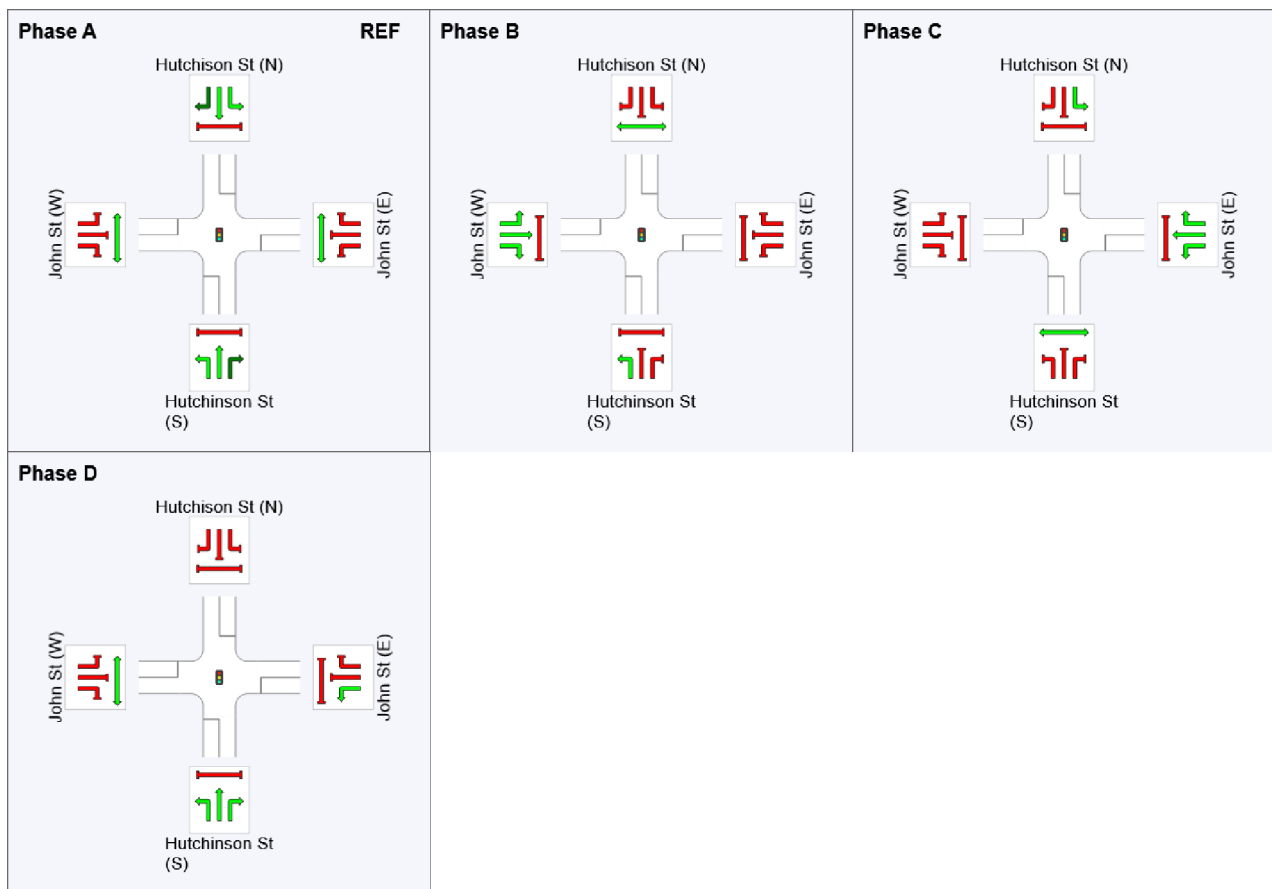
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	21	66	91
Green Time (sec)	15	40	19	13
Phase Time (sec)	20	46	25	19
Phase Split	18%	42%	23%	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



	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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SITE LAYOUT

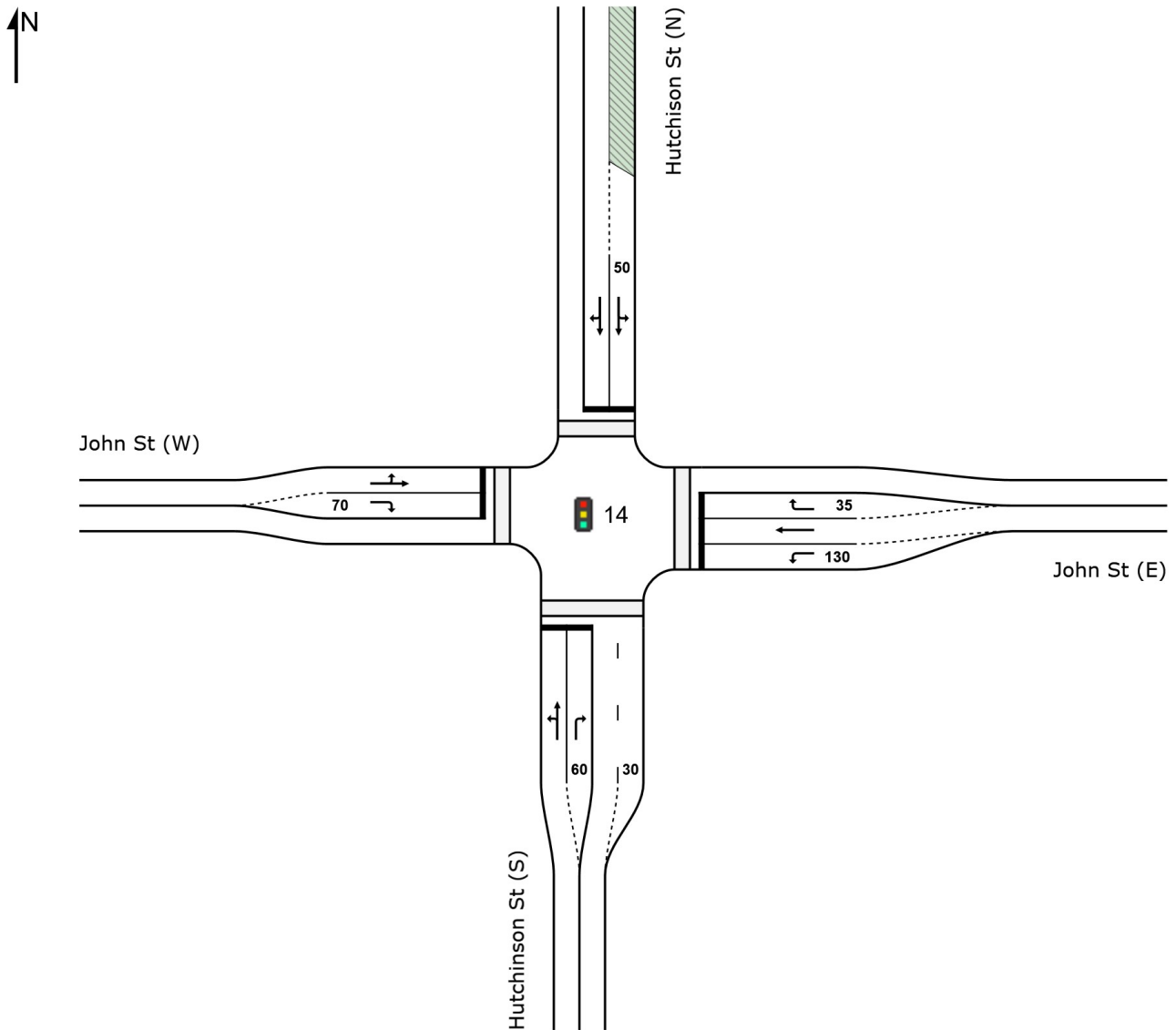
 **Site: 14 [HuJoAM - Proposed - 2020Vol+DEV]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated



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LANE SUMMARY

 **Site: 14 [HuJoAM - Proposed - 2020Vol+DEV]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Hutchinson St (S)													
Lane 1	652	2.0	711 ¹	0.916	100	40.4	LOS D	29.8	212.1	Full	500	0.0	0.0
Lane 2	315	2.0	502	0.626	100	21.4	LOS C	8.4	60.1	Short	60	0.0	NA
Approach	966	2.0		0.916		34.2	LOS C	29.8	212.1				
East: John St (E)													
Lane 1	328	2.0	755	0.435	100	22.8	LOS C	9.2	65.7	Short	130	0.0	NA
Lane 2	251	2.0	286 ¹	0.876	100	45.6	LOS D	11.4	81.0	Full	155	0.0	0.0
Lane 3	23	2.0	275	0.084	100	36.9	LOS D	0.8	5.7	Short	35	0.0	NA
Approach	602	2.0		0.876		32.8	LOS C	11.4	81.0				
North: Hutchison St (N)													
Lane 1	61	2.0	320	0.192	25 ⁶	19.6	LOS B	1.3	8.9	Short (P)	50	0.0	NA
Lane 2	235	2.0	305	0.773	100	40.3	LOS D	9.7	69.1	Full	120	0.0	0.0
Approach	297	2.0		0.773		36.0	LOS D	9.7	69.1				
West: John St (W)													
Lane 1	287	2.0	334	0.860	100	43.3	LOS D	12.8	91.1	Full	185	0.0	0.0
Lane 2	253	2.0	320	0.788	100	43.4	LOS D	10.5	74.8	Short	70	0.0	NA
Approach	540	2.0		0.860		43.4	LOS D	12.8	91.1				
Intersection	2405	2.0		0.916		36.2	LOS D	29.8	212.1				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

 **Site: 14 [HuJoAM - Proposed - 2020Vol+DEV]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

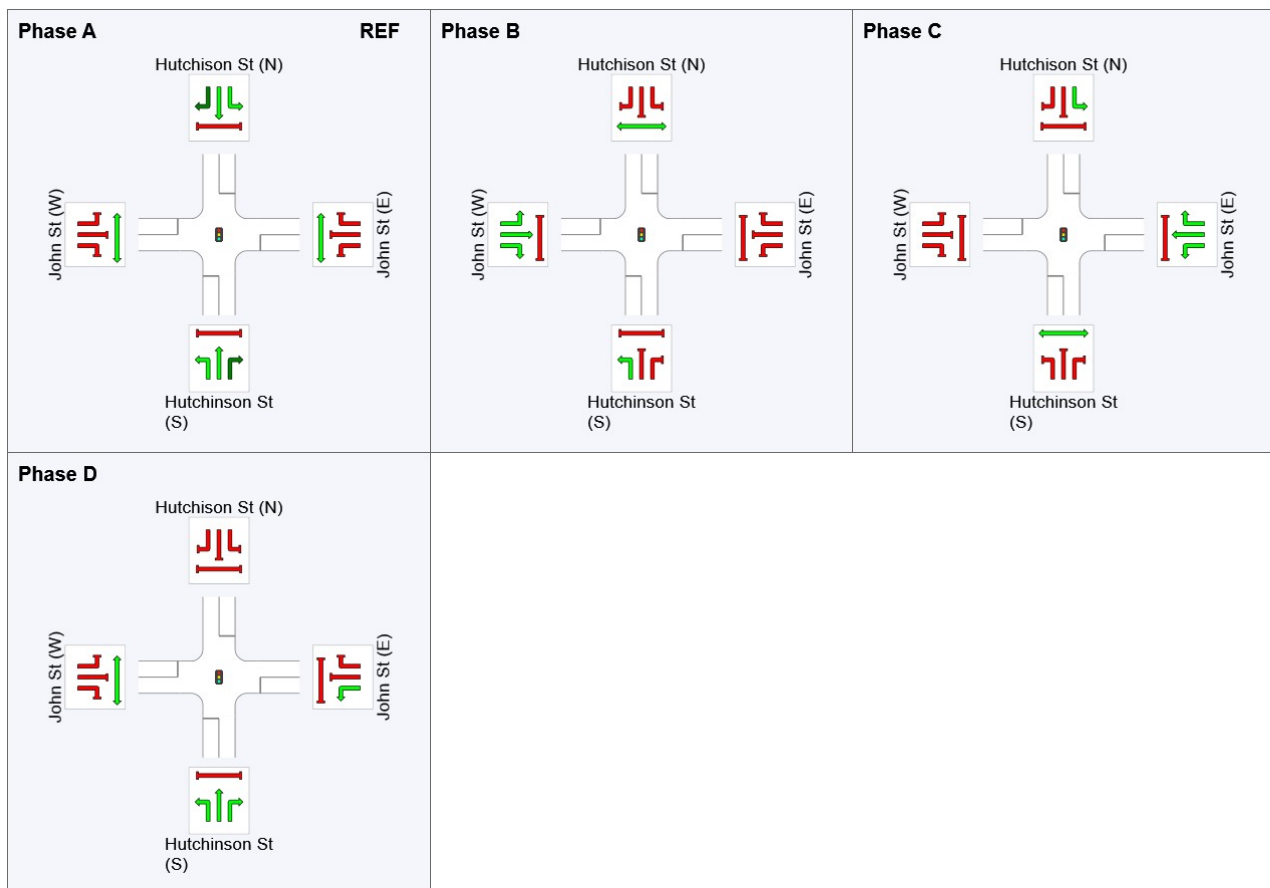
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	19	39	57
Green Time (sec)	13	14	12	17
Phase Time (sec)	19	20	18	23
Phase Split	24%	25%	23%	29%

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%.

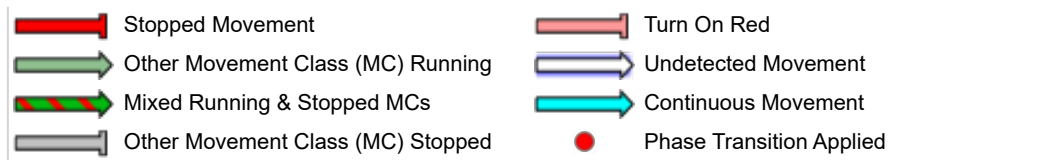
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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LANE SUMMARY

 **Site: 14 [HuJoPM - Proposed - 2020Vol+DEV]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Hutchinson St (S)													
Lane 1	649	2.0	689 ¹	0.942	100	50.1	LOS D	33.7	239.9	Full	500	0.0	0.0
Lane 2	220	2.0	349	0.631	100	24.7	LOS C	6.3	44.7	Short	60	0.0	NA
Approach	869	2.0		0.942		43.7	LOS D	33.7	239.9				
East: John St (E)													
Lane 1	116	2.0	549	0.211	100	27.3	LOS C	3.4	24.3	Short	130	0.0	NA
Lane 2	222	2.0	241	0.923	100	52.7	LOS D	10.9	77.4	Full	155	0.0	0.0
Lane 3	31	2.0	229	0.133	100	39.4	LOS D	1.1	7.8	Short	35	0.0	NA
Approach	368	2.0		0.923		43.6	LOS D	10.9	77.4				
North: Hutchison St (N)													
Lane 1	94	2.0	434	0.216	25 ⁶	17.6	LOS B	1.8	12.5	Short (P)	50	0.0	NA
Lane 2	293	2.0	338	0.869	100	45.2	LOS D	13.3	94.6	Full	120	0.0	0.0
Approach	387	2.0		0.869		38.5	LOS D	13.3	94.6				
West: John St (W)													
Lane 1	425	2.0	478	0.891	100	43.3	LOS D	19.8	140.6	Full	185	0.0	0.0
Lane 2	419	2.0	458	0.915	100	52.4	LOS D	20.7	147.1	Short	70	0.0	NA
Approach	844	2.0		0.915		47.8	LOS D	20.7	147.1				
Intersection	2469	2.0		0.942		44.3	LOS D	33.7	239.9				

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.

¹ 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.

⁶ Lane under-utilisation due to downstream effects

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PHASING SUMMARY

 **Site: 14 [HuJoPM - Proposed - 2020Vol+DEV]**

Hutchinson Street / John Street

(East approach parking - No Stopping 8-9.30am & 3-6pm Mon-Fri)

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: Variable Phasing

Reference Phase: Phase A

Input Phase Sequence: A, B, C, D

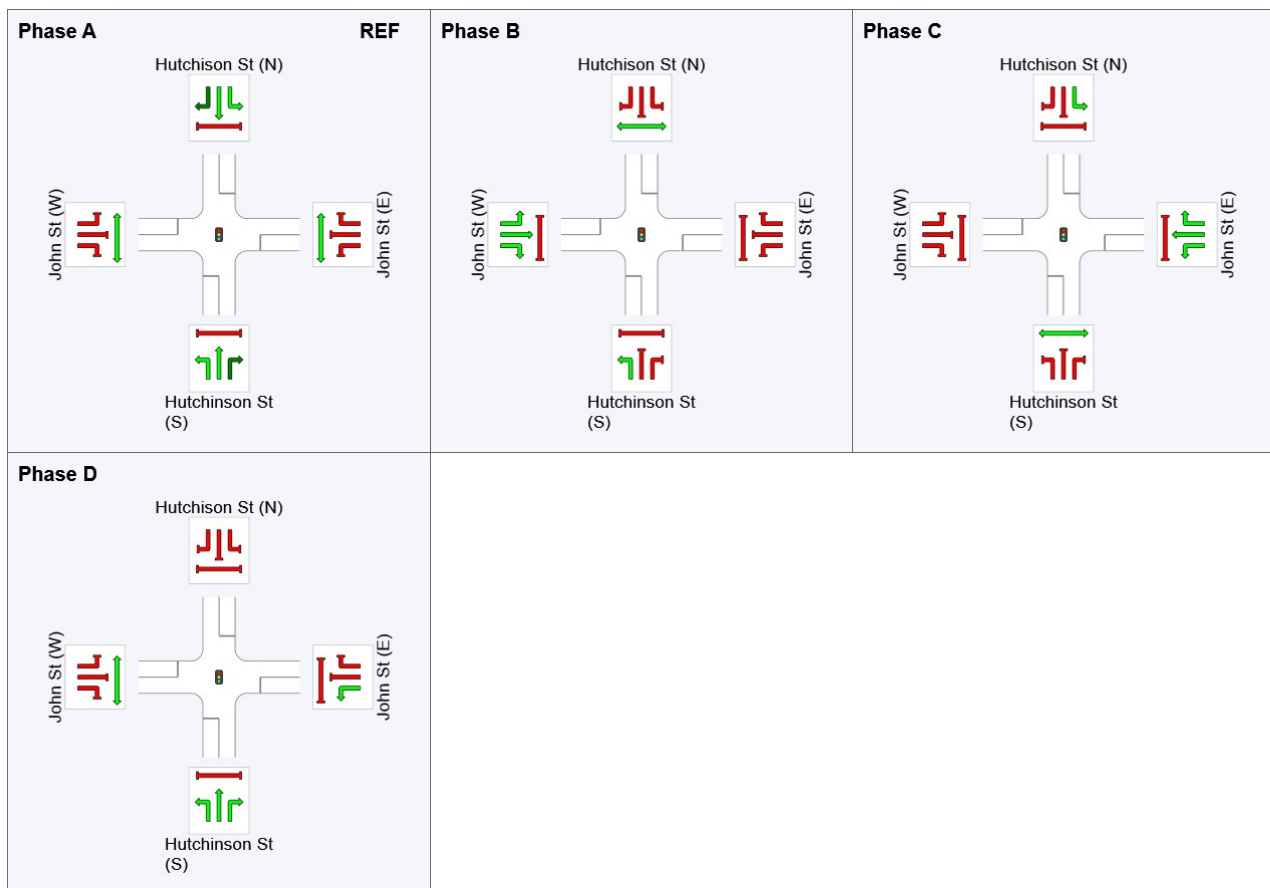
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	22	48	64
Green Time (sec)	16	20	10	10
Phase Time (sec)	22	26	16	16
Phase Split	28%	33%	20%	20%

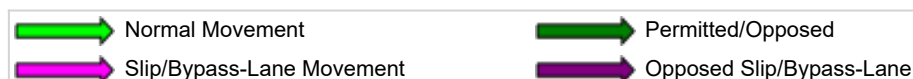
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

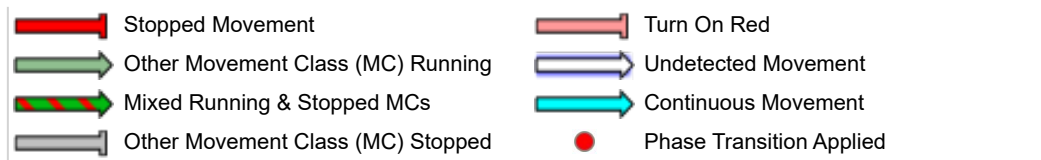
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase





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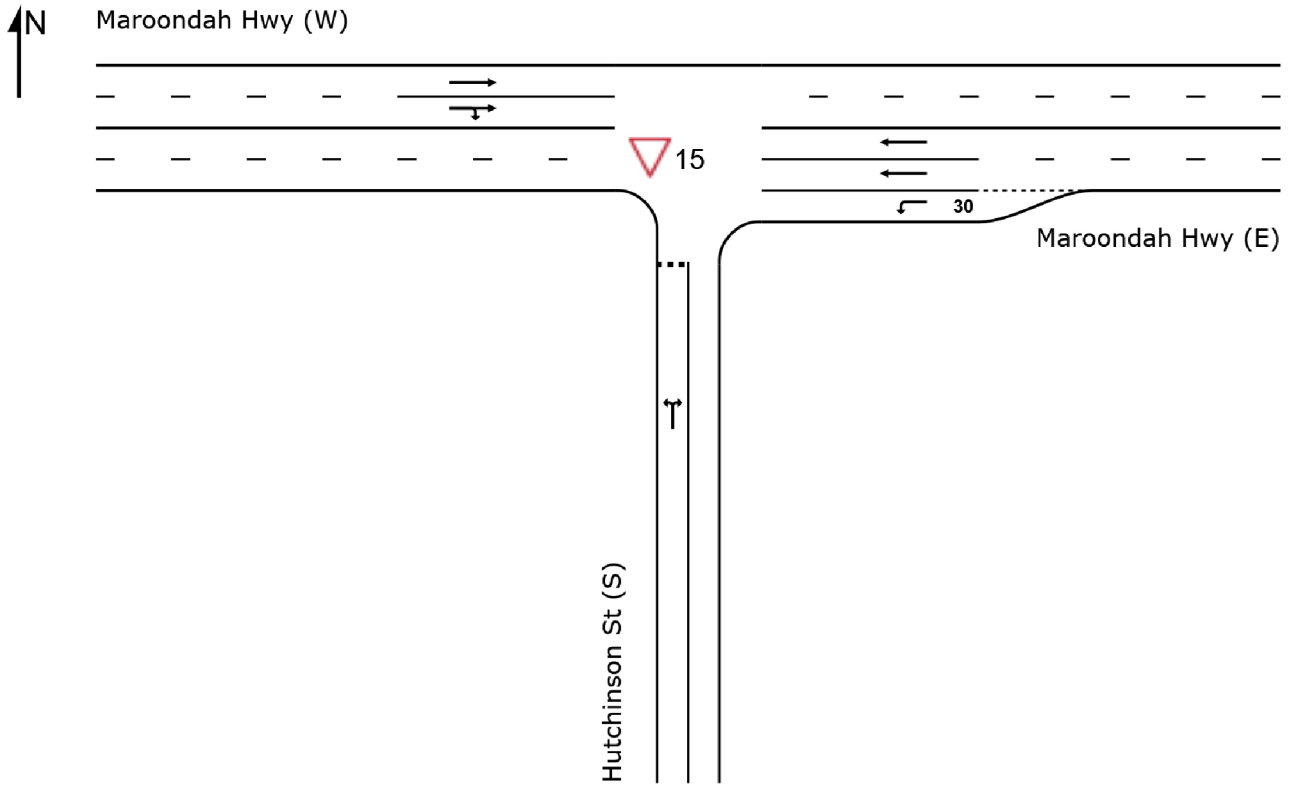
SITE LAYOUT

▽ Site: 15 [MaHuAM - Existing - 2020Vol]

Maroondah Highway / Hutchinson Street

Site Category: (None)

Giveway / Yield (Two-Way)



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Organisation: CARDNO (QLD) PTY LTD | Created: Friday, 20 March 2020 4:31:37 PM

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LANE SUMMARY

▽ Site: 15 [MaHuAM - Existing - 2020Vol]

Maroondah Highway / Hutchinson Street
 Site Category: (None)
 Giveway / Yield (Two-Way)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson St (S)													
Lane 1	75	2.0	291	0.257	100	16.5	LOS C	0.7	5.3	Full	120	0.0	0.0
Approach	75	2.0		0.257		16.5	LOS C	0.7	5.3				
East: Maroondah Hwy (E)													
Lane 1	174	2.0	1831	0.095	100	4.6	LOS A	0.0	0.0	Short	30	0.0	NA
Lane 2	456	5.0	1889	0.241	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	456	5.0	1889	0.241	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	1085	4.5		0.241		0.8	NA	0.0	0.0				
West: Maroondah Hwy (W)													
Lane 1	420	5.0	1889	0.223	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	318	4.5	1427	0.223	100	3.7	LOS A	1.1	7.8	Full	500	0.0	0.0
Approach	738	4.8		0.223		1.6	NA	1.1	7.8				
Intersection	1898	4.5		0.257		1.7	NA	1.1	7.8				

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.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road 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.

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LANE SUMMARY

▽ Site: 15 [MaHuPM - Existing - 2020Vol]

Maroondah Highway / Hutchinson Street
Site Category: (None)
Giveway / Yield (Two-Way)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson St (S)													
Lane 1	64	2.0	232	0.277	100	20.7	LOS C	0.8	5.6	Full	120	0.0	0.0
Approach	64	2.0		0.277		20.7	LOS C	0.8	5.6				
East: Maroondah Hwy (E)													
Lane 1	93	2.0	1831	0.051	100	4.6	LOS A	0.0	0.0	Short	30	0.0	NA
Lane 2	447	5.0	1889	0.237	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 3	447	5.0	1889	0.237	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	986	4.7		0.237		0.5	NA	0.0	0.0				
West: Maroondah Hwy (W)													
Lane 1	512	5.0	1889	0.271	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	441	4.7	1628	0.271	100	2.1	LOS A	0.9	6.5	Full	500	0.0	0.0
Approach	954	4.9		0.271		1.0	NA	0.9	6.5				
Intersection	2004	4.7		0.277		1.3	NA	0.9	6.5				

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.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road 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.

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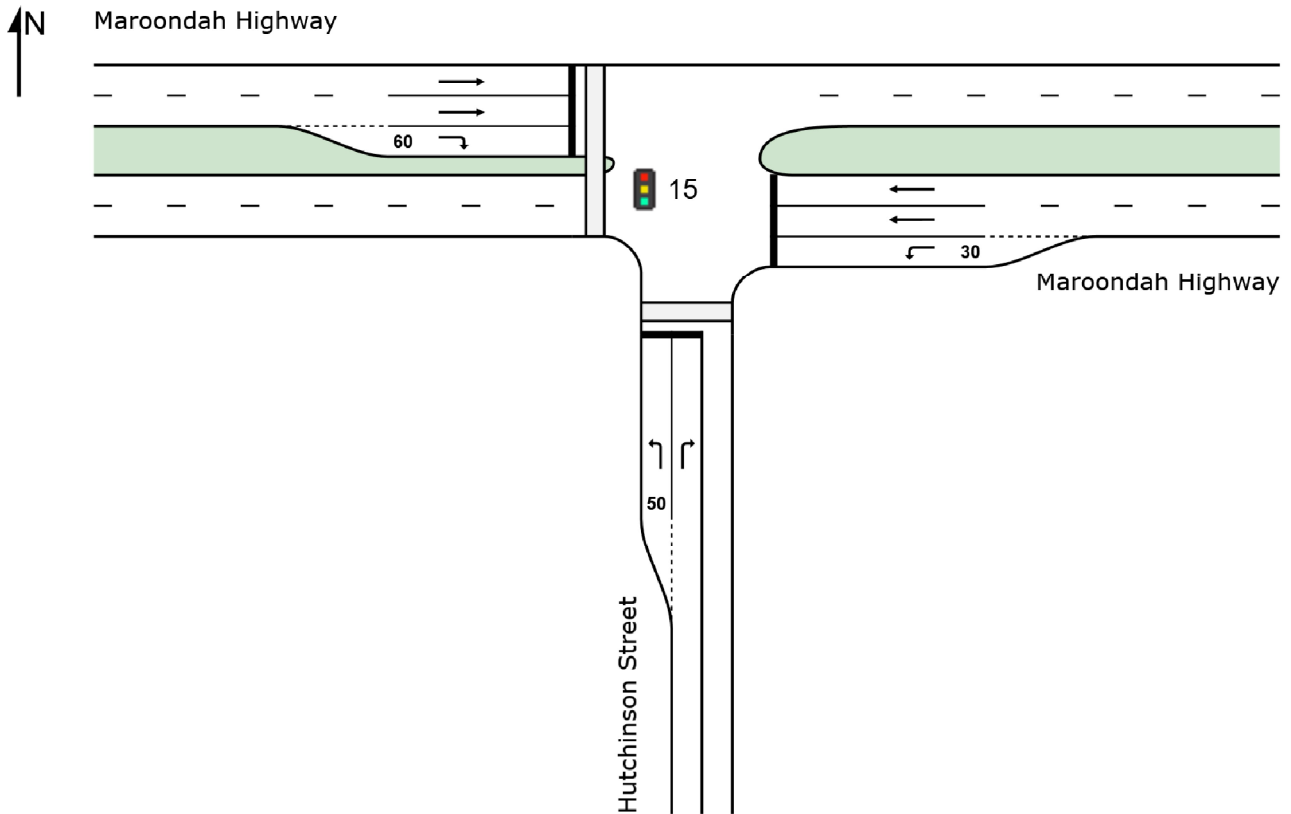
SITE LAYOUT

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated



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LANE SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	176	2.0	521	0.337	100	45.0	LOS A	8.8	62.6	Short	50	0.0	NA
Lane 2	103	2.0	239	0.431	100	62.9	LOS A	6.2	43.9	Full	120	0.0	0.0
Approach	279	2.0		0.431		51.7	LOS A	8.8	62.6				
East: Maroondah Highway													
Lane 1	217	2.0	1380	0.157	100	10.2	LOS A	3.7	26.6	Short	30	0.0	NA
Lane 2	413	5.0	892 ¹	0.463	100	14.0	LOS A	13.1	95.8	Full	500	0.0	0.0
Lane 3	524	5.0	1133	0.463	100	15.2	LOS A	18.0	131.7	Full	500	0.0	0.0
Approach	1154	4.4		0.463		13.8	LOS A	18.0	131.7				
West: Maroondah Highway													
Lane 1	364	5.0	1467	0.248	100	4.2	LOS A	6.2	45.2	Full	500	0.0	0.0
Lane 2	364	5.0	1467	0.248	100	4.2	LOS A	6.2	45.2	Full	500	0.0	0.0
Lane 3	106	2.0	239	0.444	100	63.0	LOS A	6.4	45.4	Short	60	0.0	NA
Approach	834	4.6		0.444		11.7	LOS A	6.4	45.4				
Intersection	2266	4.2		0.463		17.7	LOS A	18.0	131.7				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

- ¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

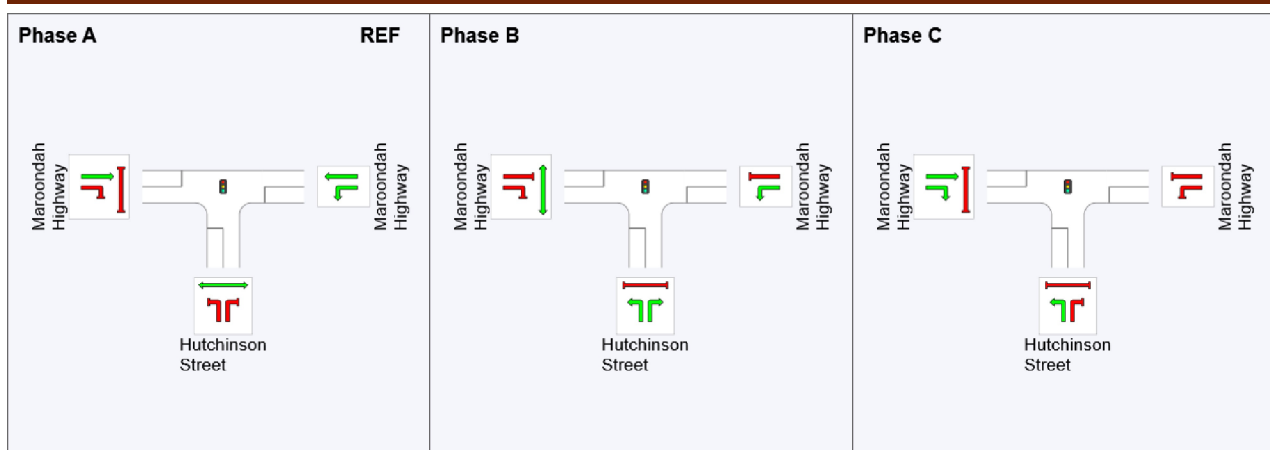
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	84	107
Green Time (sec)	78	17	17
Phase Time (sec)	84	23	23
Phase Split	65%	18%	18%

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



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LANE SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	144	2.0	577	0.250	100	40.9	LOS A	6.7	48.0	Short	50	0.0	NA
Lane 2	113	2.0	239	0.470	100	63.3	LOS A	6.8	48.3	Full	120	0.0	0.0
Approach	257	2.0		0.470		50.7	LOS A	6.8	48.3				
East: Maroondah Highway													
Lane 1	199	2.0	1324	0.150	100	11.4	LOS A	3.8	27.1	Short	30	0.0	NA
Lane 2	415	5.0	850 ¹	0.488	100	16.3	LOS A	14.2	104.0	Full	500	0.0	0.0
Lane 3	525	5.0	1075	0.488	100	17.6	LOS A	19.5	142.4	Full	500	0.0	0.0
Approach	1139	4.5		0.488		16.1	LOS A	19.5	142.4				
West: Maroondah Highway													
Lane 1	482	5.0	1467	0.329	100	4.6	LOS A	8.9	65.1	Full	500	0.0	0.0
Lane 2	482	5.0	1467	0.329	100	4.6	LOS A	8.9	65.1	Full	500	0.0	0.0
Lane 3	140	2.0	296	0.473	100	59.7	LOS A	8.2	58.4	Short	60	0.0	NA
Approach	1104	4.6		0.473		11.5	LOS A	8.9	65.1				
Intersection	2500	4.3		0.488		17.6	LOS A	19.5	142.4				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

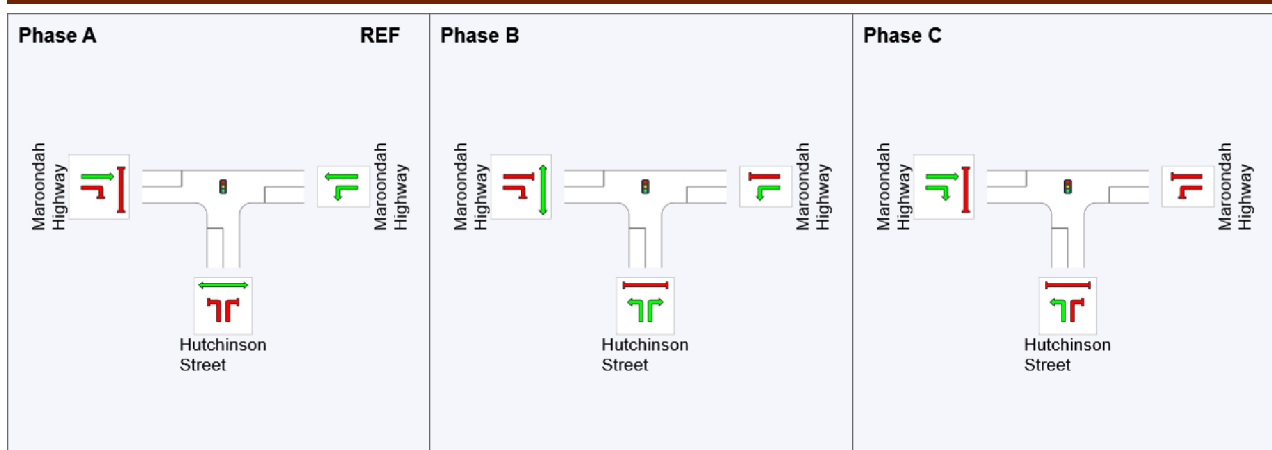
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	80	103
Green Time (sec)	74	17	21
Phase Time (sec)	80	23	27
Phase Split	62%	18%	21%

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



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LANE SUMMARY

Site: 15 [MaHuAM - Proposed - 2030Vol+DEV]

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	182	2.0	507	0.359	100	46.1	LOS A	9.3	65.9	Short	50	0.0	NA
Lane 2	105	2.0	239	0.440	100	63.0	LOS A	6.3	44.9	Full	120	0.0	0.0
Approach	287	2.0		0.440		52.3	LOS A	9.3	65.9				
East: Maroondah Highway													
Lane 1	237	2.0	1394	0.170	100	10.0	LOS A	4.0	28.5	Short	30	0.0	NA
Lane 2	453	5.0	883 ¹	0.513	100	13.9	LOS A	14.5	106.1	Full	500	0.0	0.0
Lane 3	589	5.0	1148	0.513	100	15.3	LOS A	20.9	152.4	Full	500	0.0	0.0
Approach	1279	4.4		0.513		13.8	LOS A	20.9	152.4				
West: Maroondah Highway													
Lane 1	404	5.0	1467	0.275	100	4.3	LOS A	7.1	51.6	Full	500	0.0	0.0
Lane 2	404	5.0	1467	0.275	100	4.3	LOS A	7.1	51.6	Full	500	0.0	0.0
Lane 3	112	2.0	225	0.495	100	64.4	LOS A	6.8	48.4	Short	60	0.0	NA
Approach	919	4.6		0.495		11.6	LOS A	7.1	51.6				
Intersection	2485	4.2		0.513		17.5	LOS A	20.9	152.4				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

- ¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

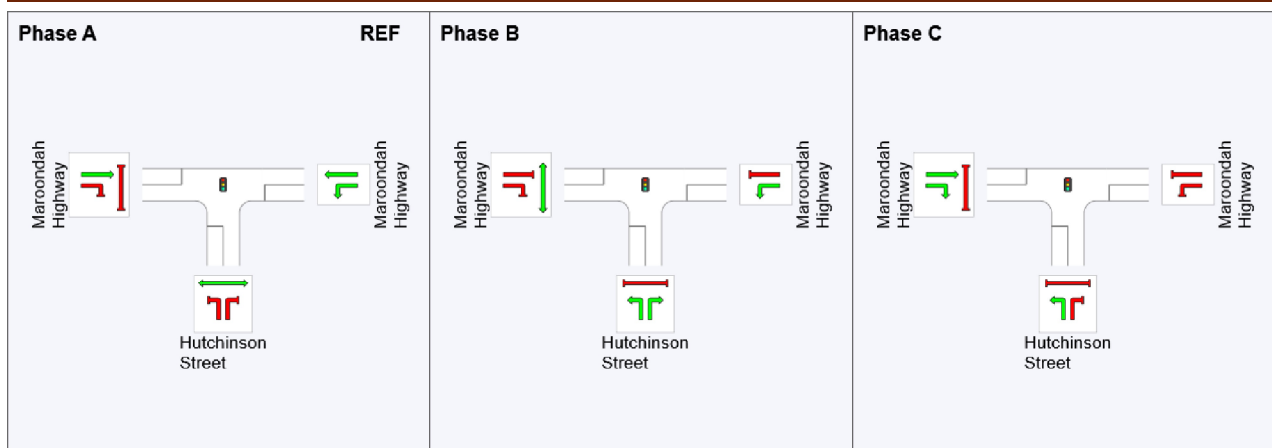
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	85	108
Green Time (sec)	79	17	16
Phase Time (sec)	85	23	22
Phase Split	65%	18%	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



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LANE SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	149	2.0	563	0.265	100	41.8	LOS A	7.1	50.5	Short	50	0.0	NA
Lane 2	114	2.0	239	0.475	100	63.3	LOS A	6.8	48.8	Full	120	0.0	0.0
Approach	263	2.0		0.475		51.1	LOS A	7.1	50.5				
East: Maroondah Highway													
Lane 1	209	2.0	1338	0.157	100	11.1	LOS A	3.9	28.0	Short	30	0.0	NA
Lane 2	458	5.0	852 ¹	0.537	100	16.2	LOS A	15.9	116.1	Full	500	0.0	0.0
Lane 3	585	5.0	1090	0.537	100	17.8	LOS A	22.4	163.2	Full	500	0.0	0.0
Approach	1253	4.5		0.537		16.1	LOS A	22.4	163.2				
West: Maroondah Highway													
Lane 1	535	5.0	1467	0.364	100	4.7	LOS A	10.3	75.1	Full	500	0.0	0.0
Lane 2	535	5.0	1467	0.364	100	4.7	LOS A	10.3	75.1	Full	500	0.0	0.0
Lane 3	144	2.0	282	0.512	100	61.0	LOS A	8.6	61.0	Short	60	0.0	NA
Approach	1214	4.6		0.512		11.4	LOS A	10.3	75.1				
Intersection	2729	4.3		0.537		17.4	LOS A	22.4	163.2				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

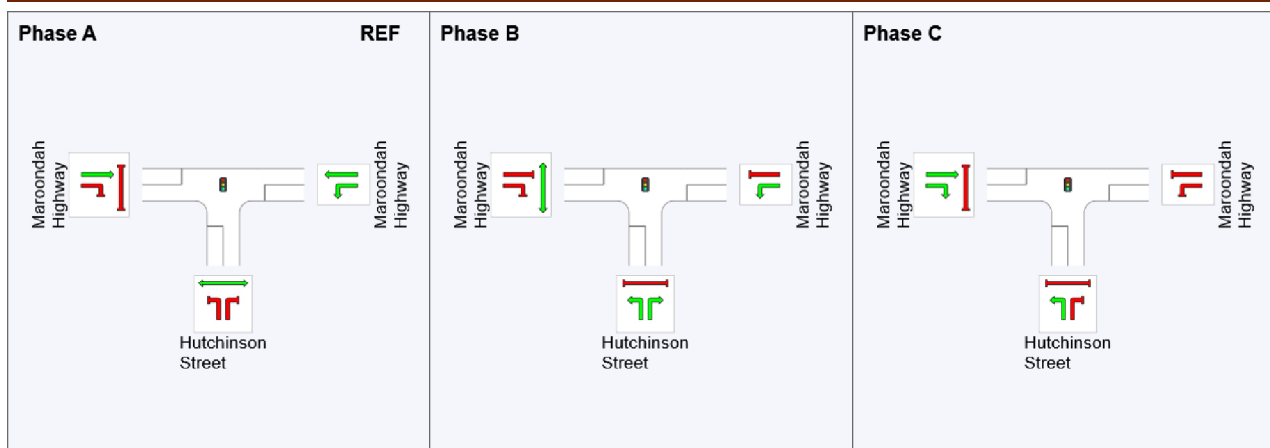
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	81	104
Green Time (sec)	75	17	20
Phase Time (sec)	81	23	26
Phase Split	62%	18%	20%


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

 Normal Movement	 Permitted/Opposed
 Slip/Bypass-Lane Movement	 Opposed Slip/Bypass-Lane
 Stopped Movement	 Turn On Red
 Other Movement Class (MC) Running	 Undetected Movement
 Mixed Running & Stopped MCs	 Continuous Movement
 Other Movement Class (MC) Stopped	 Phase Transition Applied

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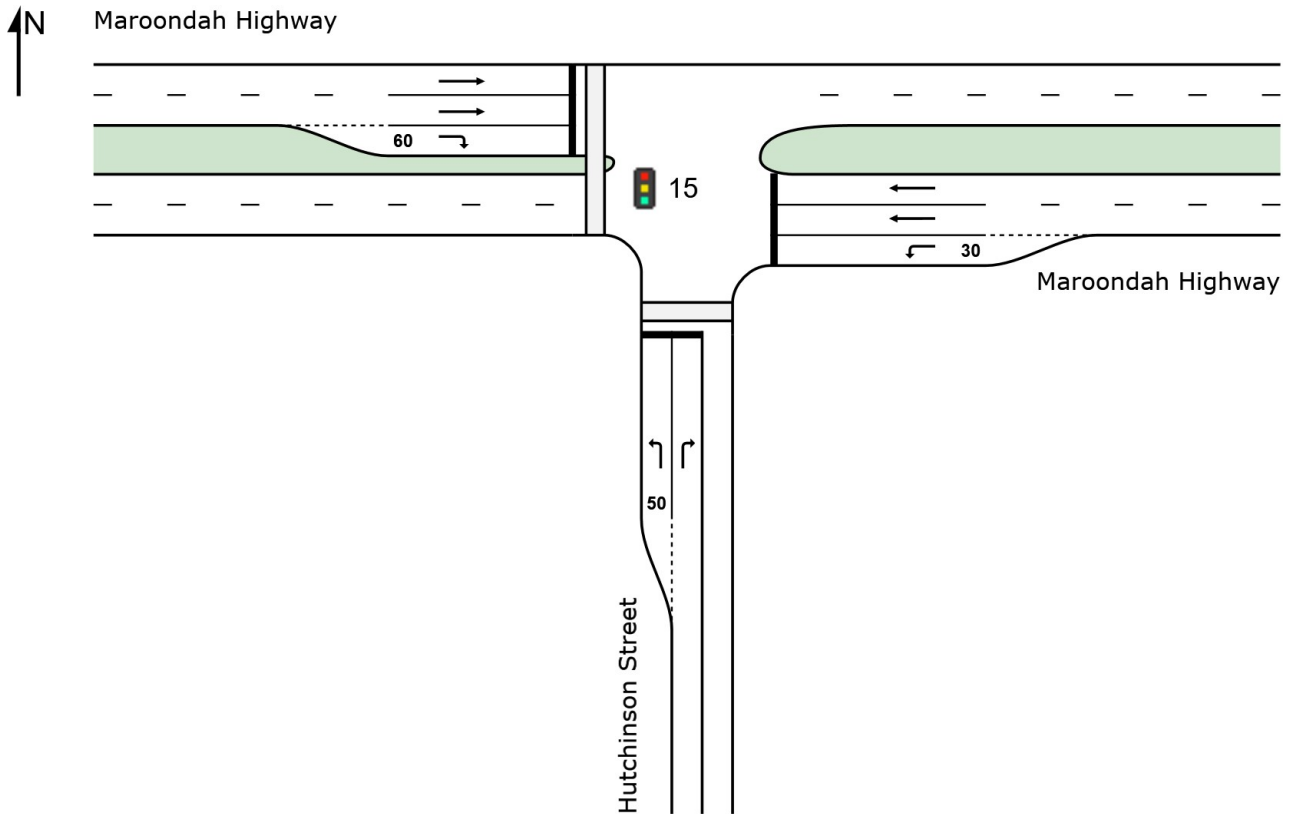
SITE LAYOUT

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated



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LANE SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 125 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

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: Hutchinson Street													
Lane 1	188	2.0	527	0.357	100	43.5	LOS A	9.1	64.8	Short	50	0.0	NA
Lane 2	114	2.0	249	0.457	100	60.4	LOS A	6.5	46.6	Full	120	0.0	0.0
Approach	302	2.0		0.457		49.9	LOS A	9.1	64.8				
East: Maroondah Highway													
Lane 1	219	2.0	1377	0.159	100	10.1	LOS A	3.7	26.0	Short	30	0.0	NA
Lane 2	414	5.0	882 ¹	0.470	100	14.1	LOS A	12.9	94.4	Full	500	0.0	0.0
Lane 3	525	5.0	1118	0.470	100	15.2	LOS A	17.8	129.6	Full	500	0.0	0.0
Approach	1158	4.4		0.470		13.8	LOS A	17.8	129.6				
West: Maroondah Highway													
Lane 1	367	5.0	1450	0.253	100	4.4	LOS A	6.3	45.9	Full	500	0.0	0.0
Lane 2	367	5.0	1450	0.253	100	4.4	LOS A	6.3	45.9	Full	500	0.0	0.0
Lane 3	109	2.0	234	0.467	100	61.5	LOS A	6.4	45.3	Short	60	0.0	NA
Approach	844	4.6		0.467		11.8	LOS A	6.4	45.9				
Intersection	2304	4.2		0.470		17.8	LOS A	17.8	129.6				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 125 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

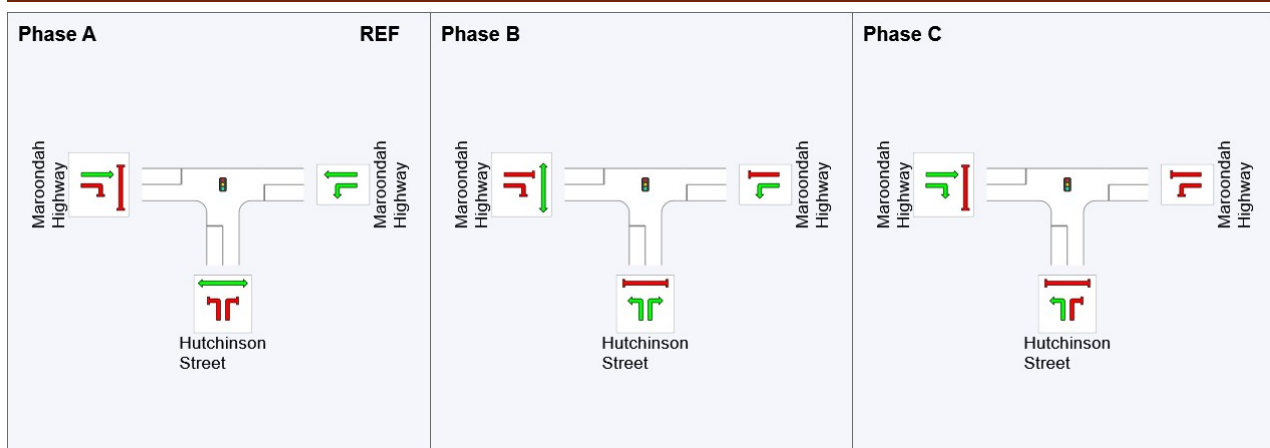
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	80	103
Green Time (sec)	74	17	16
Phase Time (sec)	80	23	22
Phase Split	64%	18%	18%

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



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LANE SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	151	2.0	592	0.254	100	40.2	LOS A	7.0	49.7	Short	50	0.0	NA
Lane 2	119	2.0	239	0.497	100	63.5	LOS A	7.2	51.2	Full	120	0.0	0.0
Approach	269	2.0		0.497		50.5	LOS A	7.2	51.2				
East: Maroondah Highway													
Lane 1	209	2.0	1310	0.160	100	11.8	LOS A	4.2	29.6	Short	30	0.0	NA
Lane 2	414	5.0	825 ¹	0.502	100	16.9	LOS A	14.5	105.6	Full	500	0.0	0.0
Lane 3	532	5.0	1061	0.502	100	18.4	LOS A	20.2	147.7	Full	500	0.0	0.0
Approach	1156	4.5		0.502		16.7	LOS A	20.2	147.7				
West: Maroondah Highway													
Lane 1	484	5.0	1467	0.330	100	4.6	LOS A	9.0	65.5	Full	500	0.0	0.0
Lane 2	484	5.0	1467	0.330	100	4.6	LOS A	9.0	65.5	Full	500	0.0	0.0
Lane 3	149	2.0	310	0.482	100	59.0	LOS A	8.7	62.0	Short	60	0.0	NA
Approach	1118	4.6		0.482		11.8	LOS A	9.0	65.5				
Intersection	2543	4.3		0.502		18.1	LOS A	20.2	147.7				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2020Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

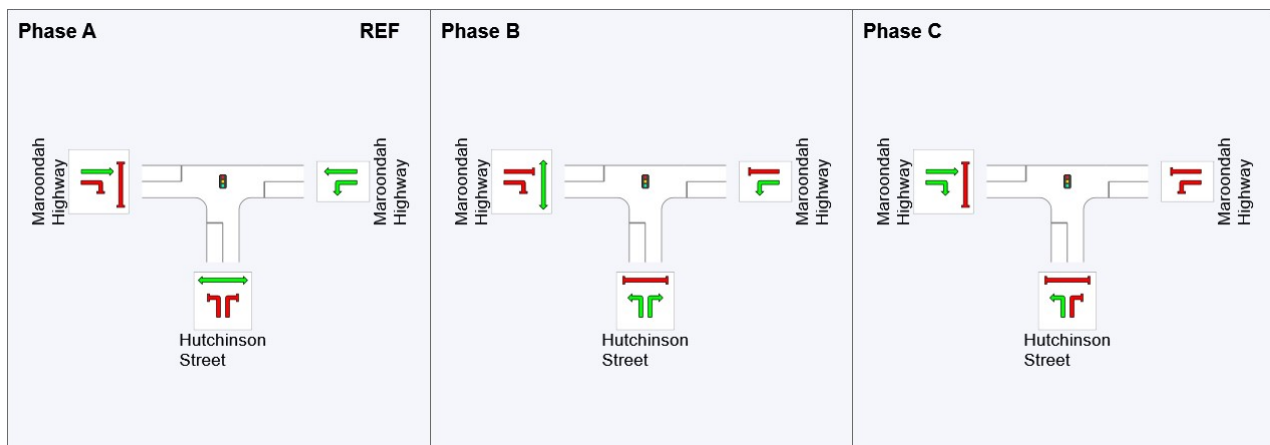
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	79	102
Green Time (sec)	73	17	22
Phase Time (sec)	79	23	28
Phase Split	61%	18%	22%

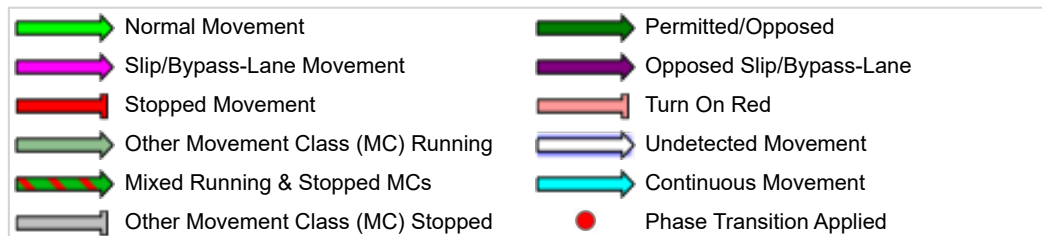
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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LANE SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	196	2.0	507	0.386	100	46.5	LOS A	10.0	71.5	Short	50	0.0	NA
Lane 2	116	2.0	239	0.484	100	63.4	LOS A	7.0	49.7	Full	120	0.0	0.0
Approach	312	2.0		0.484		52.8	LOS A	10.0	71.5				
East: Maroondah Highway													
Lane 1	239	2.0	1394	0.171	100	10.0	LOS A	4.0	28.8	Short	30	0.0	NA
Lane 2	454	5.0	881 ¹	0.515	100	13.9	LOS A	14.5	106.2	Full	500	0.0	0.0
Lane 3	591	5.0	1148	0.515	100	15.4	LOS A	21.0	153.1	Full	500	0.0	0.0
Approach	1283	4.4		0.515		13.8	LOS A	21.0	153.1				
West: Maroondah Highway													
Lane 1	407	5.0	1467	0.277	100	4.3	LOS A	7.1	52.1	Full	500	0.0	0.0
Lane 2	407	5.0	1467	0.277	100	4.3	LOS A	7.1	52.1	Full	500	0.0	0.0
Lane 3	115	2.0	225	0.509	100	64.6	LOS A	7.0	49.8	Short	60	0.0	NA
Approach	928	4.6		0.509		11.8	LOS A	7.1	52.1				
Intersection	2523	4.2		0.515		17.9	LOS A	21.0	153.1				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

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PHASING SUMMARY

 **Site: 15 [MaHuAM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

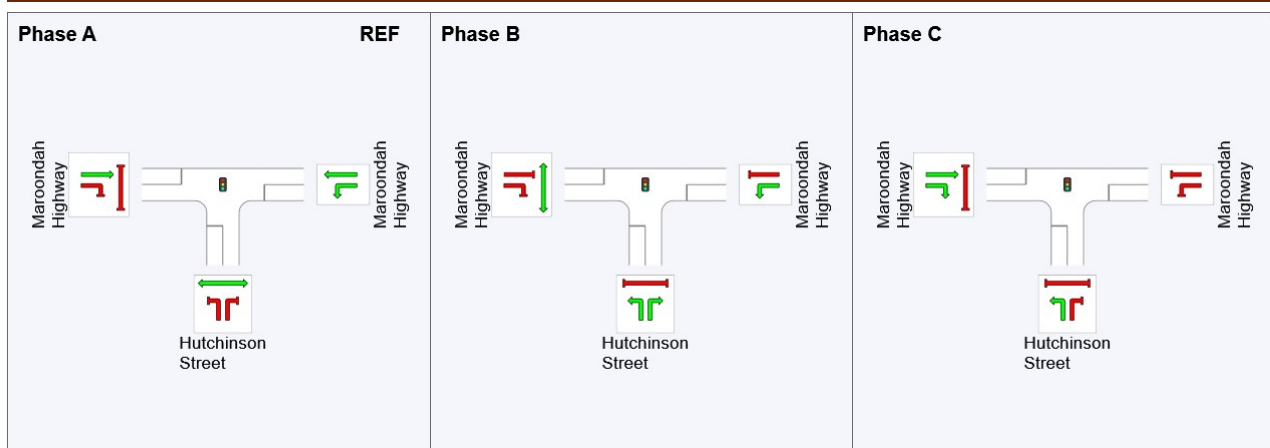
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	85	108
Green Time (sec)	79	17	16
Phase Time (sec)	85	23	22
Phase Split	65%	18%	17%

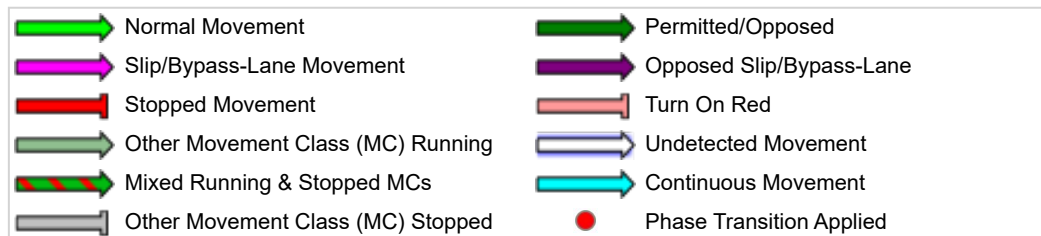
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Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



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LANE SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Lane Use and Performance													
	Demand Flows Total veh/h	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: Hutchinson Street													
Lane 1	156	2.0	563	0.277	100	42.0	LOS A	7.4	52.9	Short	50	0.0	NA
Lane 2	121	2.0	239	0.506	100	63.6	LOS A	7.3	52.2	Full	120	0.0	0.0
Approach	277	2.0		0.506		51.4	LOS A	7.4	52.9				
East: Maroondah Highway													
Lane 1	220	2.0	1338	0.164	100	11.2	LOS A	4.2	29.6	Short	30	0.0	NA
Lane 2	458	5.0	842 ¹	0.543	100	16.2	LOS A	15.9	116.0	Full	500	0.0	0.0
Lane 3	592	5.0	1090	0.543	100	17.9	LOS A	22.7	165.8	Full	500	0.0	0.0
Approach	1269	4.5		0.543		16.1	LOS A	22.7	165.8				
West: Maroondah Highway													
Lane 1	537	5.0	1467	0.366	100	4.7	LOS A	10.4	75.6	Full	500	0.0	0.0
Lane 2	537	5.0	1467	0.366	100	4.7	LOS A	10.4	75.6	Full	500	0.0	0.0
Lane 3	154	2.0	282	0.546	100	61.3	LOS A	9.2	65.4	Short	60	0.0	NA
Approach	1228	4.6		0.546		11.8	LOS A	10.4	75.6				
Intersection	2775	4.3		0.546		17.7	LOS A	22.7	165.8				

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

Lane LOS values are based on degree of saturation per lane.

Intersection and Approach LOS values are based on worst degree of saturation for any lane.

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.

¹ 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.

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PHASING SUMMARY

 **Site: 15 [MaHuPM - Proposed - 2030Vol+DEV]**

Maroondah Highway / Hutchinson Street

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Site Optimum Cycle Time - Minimum Degree of Saturation)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Green Split Priority has been specified

Phase Sequence: SD

Reference Phase: Phase A

Input Phase Sequence: A, B, C

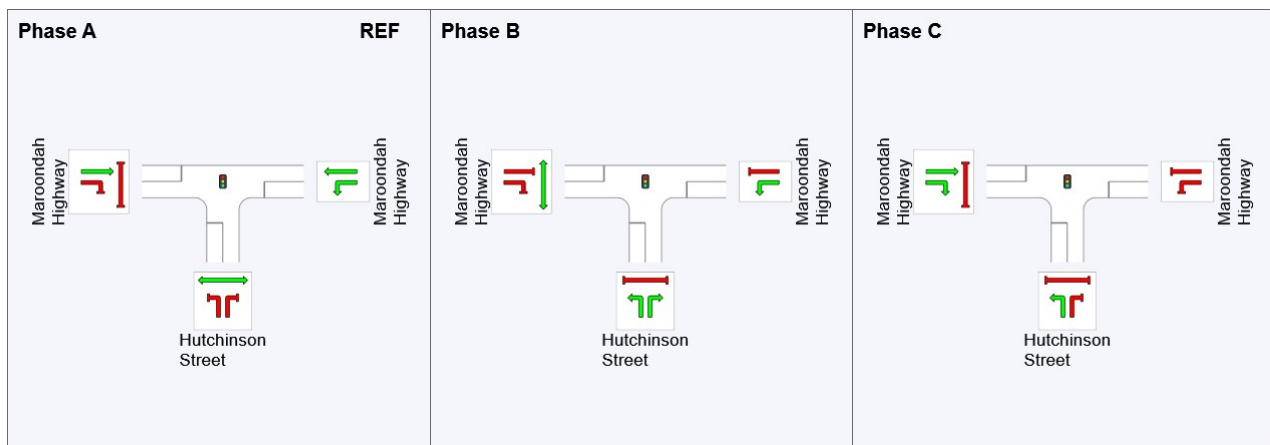
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	81	104
Green Time (sec)	75	17	20
Phase Time (sec)	81	23	26
Phase Split	62%	18%	20%

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



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