

Appendix E Traffic and Transport Impact Assessment



Appendix I

2028 SIDRA results with and without Moorebank IMT



I-01 Intersection of the Hume Highway and Orange Grove Road

AM BASE

MOVEMENT SUMMARY



Site: I-01 2028 BASE AM

Hume Highway / Orange Grove Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
NorthEast: Hume Highway (NE)											
25	T1	926	11.4	0.658	23.0	LOS B	18.6	143.0	0.82	0.75	36.6
26	R2	380	10.0	0.940	91.9	LOS F	17.3	131.6	1.00	0.97	23.0
Approach		1306	11.0	0.940	43.0	LOS D	18.6	143.0	0.88	0.81	29.7
NorthWest: Orange Grove Road (NW)											
27	L2	587	6.5	0.705	15.4	LOS B	15.9	117.5	0.45	0.77	46.9
29	R2	1266	6.7	0.934	75.0	LOS F	36.5	270.0	1.00	0.94	23.0
Approach		1854	6.6	0.934	56.1	LOS D	36.5	270.0	0.82	0.88	28.0
SouthWest: Hume Highway (SW)											
30	L2	1221	6.5	0.426	11.1	LOS A	12.8	94.6	0.32	0.69	52.6
31	T1	2132	4.9	0.765	20.6	LOS B	35.2	256.9	0.65	0.60	41.9
Approach		3353	5.5	0.765	17.2	LOS B	35.2	256.9	0.53	0.63	45.9
All Vehicles		6513	6.9	0.940	33.5	LOS C	36.5	270.0	0.68	0.74	34.9

PHASING SUMMARY



Site: I-01 2028 BASE AM

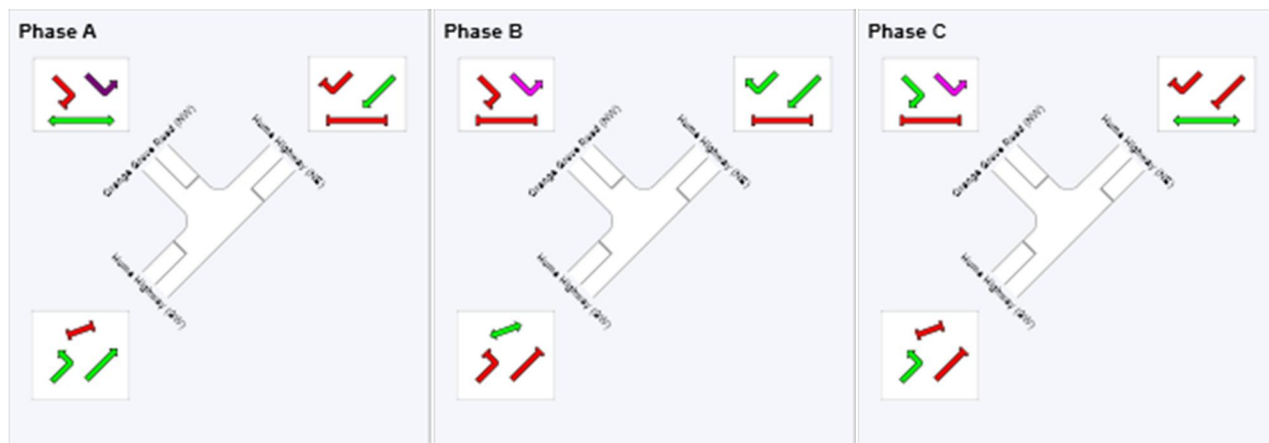
Hume Highway / Orange Grove Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	86	109
Green Time (sec)	79	16	35
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	86	22	42
Phase Split	57 %	15 %	28 %



PM BASE

MOVEMENT SUMMARY



Site: I-01 2028 BASE PM

Hume Highway / Orange Grove Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1758	3.2	0.915	43.1	LOS D	49.2	354.2	0.90	0.96	27.3
26	R2	805	2.6	0.944	62.9	LOS E	23.2	166.3	1.00	1.02	28.8
Approach		2563	3.0	0.944	49.3	LOS D	49.2	354.2	0.93	0.98	27.9
NorthWest: Orange Grove Road (NW)											
27	L2	384	4.1	0.358	12.4	LOS A	6.5	47.2	0.27	0.63	49.4
29	R2	1348	3.1	1.033	115.6	LOS F	50.4	362.4	1.00	1.09	17.4
Approach		1733	3.3	1.033	92.7	LOS F	50.4	362.4	0.84	0.99	20.8
SouthWest: Hume Highway (SW)											
30	L2	1264	2.9	0.736	19.1	LOS B	19.1	137.0	0.77	0.83	46.1
31	T1	1081	5.3	0.971	86.3	LOS F	37.1	271.3	1.00	1.12	18.4
Approach		2345	4.0	0.971	50.1	LOS D	37.1	271.3	0.87	0.96	29.0
All Vehicles		6641	3.5	1.033	60.9	LOS E	50.4	362.4	0.89	0.98	25.6

PHASING SUMMARY



Site: I-01 2028 BASE PM

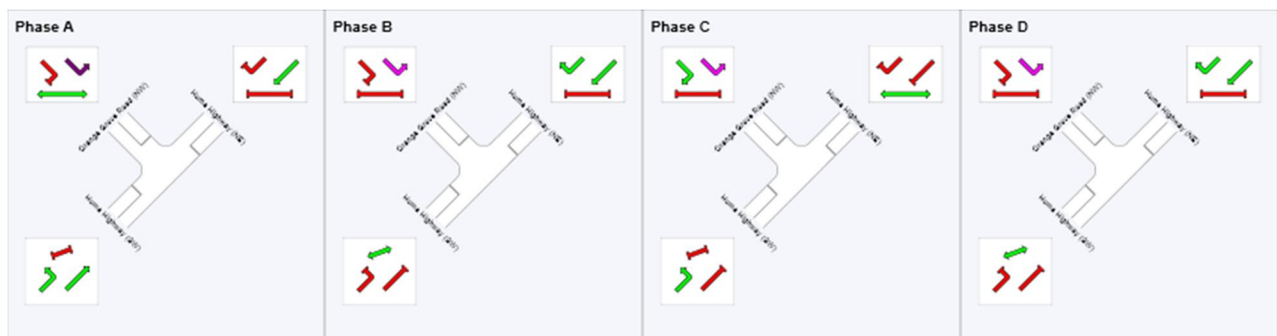
Hume Highway / Orange Grove Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	80	124
Green Time (sec)	47	20	38	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	54	26	45	25
Phase Split	36 %	17 %	30 %	17 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-01 2028 MIMT AM

Hume Highway / Orange Grove Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	935	11.3	0.664	23.1	LOS B	18.9	144.9	0.83	0.75	36.5
26	R2	380	10.0	0.940	91.9	LOS F	17.3	131.6	1.00	0.97	23.0
Approach		1315	10.9	0.940	43.0	LOS D	18.9	144.9	0.88	0.82	29.7
NorthWest: Orange Grove Road (NW)											
27	L2	587	6.5	0.705	15.4	LOS B	15.9	117.5	0.45	0.77	46.9
29	R2	1311	9.3	1.010	122.3	LOS F	46.2	356.5	1.00	1.09	16.6
Approach		1898	8.4	1.063	89.2	LOS F	46.2	356.5	0.83	0.99	21.4
SouthWest: Hume Highway (SW)											
30	L2	1258	9.2	0.454	11.3	LOS A	13.7	105.5	0.33	0.70	50.2
31	T1	2132	4.9	0.765	20.6	LOS B	35.2	256.9	0.65	0.60	41.9
Approach		3390	6.5	0.765	17.2	LOS B	35.2	256.9	0.53	0.63	45.2
All Vehicles		6604	7.9	1.063	43.0	LOS D	46.2	356.5	0.69	0.77	30.7

PHASING SUMMARY



Site: I-01 2028 MIMT AM

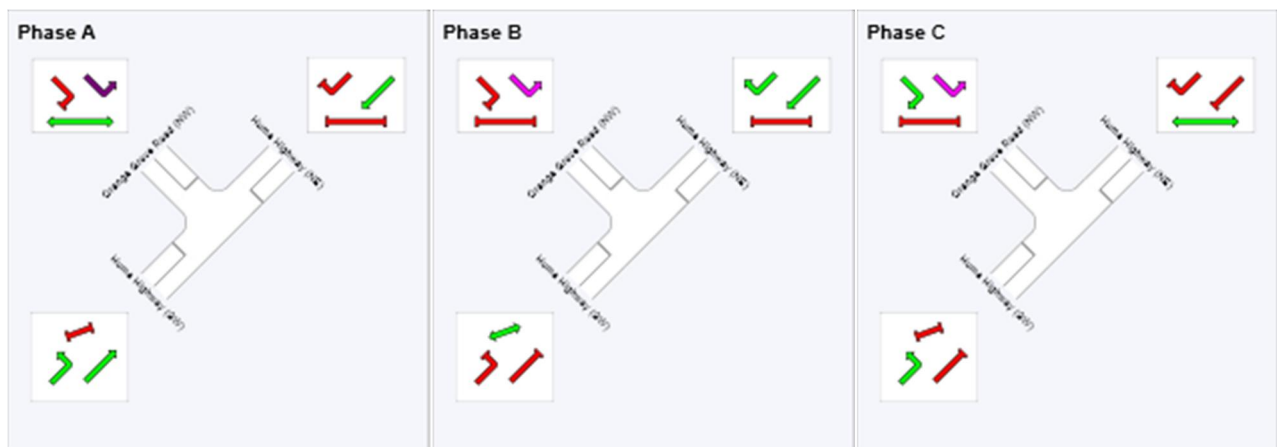
Hume Highway / Orange Grove Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	86	109
Green Time (sec)	79	16	35
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	86	22	42
Phase Split	57 %	15 %	28 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-01 2028 MIMT PM

Hume Highway / Orange Grove Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1762	3.5	0.920	44.7	LOS D	50.2	362.7	0.91	0.98	26.7
26	R2	805	2.6	0.944	62.9	LOS E	23.2	166.3	1.00	1.02	28.8
Approach		2567	3.2	0.944	50.4	LOS D	50.2	362.7	0.94	0.99	27.6
NorthWest: Orange Grove Road (NW)											
27	L2	384	4.1	0.360	12.4	LOS A	6.6	47.5	0.27	0.63	49.3
29	R2	1392	6.2	1.107	166.4	LOS F	62.5	472.0	1.00	1.22	13.3
Approach		1776	5.7	1.107	133.1	LOS F	62.5	472.0	0.84	1.09	16.2
SouthWest: Hume Highway (SW)											
30	L2	1313	5.9	0.793	19.8	LOS B	21.0	158.6	0.81	0.84	44.4
31	T1	1093	5.5	0.985	92.0	LOS F	38.9	285.7	1.00	1.14	17.5
Approach		2406	5.7	0.985	52.6	LOS D	38.9	285.7	0.89	0.98	27.9
All Vehicles		6749	4.8	1.107	72.9	LOS F	62.5	472.0	0.90	1.01	22.9

PHASING SUMMARY



Site: I-01 2028 MIMT PM

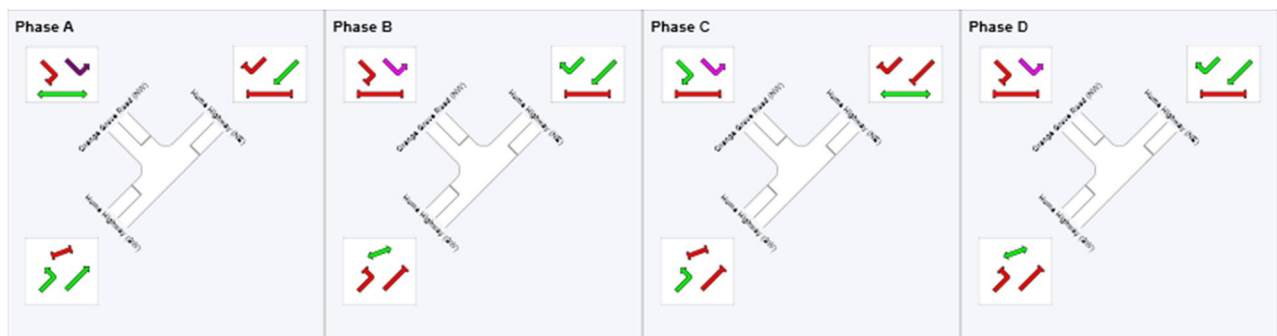
Hume Highway / Orange Grove Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	80	124
Green Time (sec)	47	20	38	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	54	26	45	25
Phase Split	36 %	17 %	30 %	17 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-01 2028 MIMT AM - Upgrade

Hume Highway / Orange Grove Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	935	11.3	0.671	23.8	LOS B	19.0	146.1	0.83	0.76	36.1
26	R2	380	10.0	0.885	84.4	LOS F	16.1	122.7	1.00	0.92	24.3
Approach		1315	10.9	0.885	41.3	LOS C	19.0	146.1	0.88	0.81	30.4
NorthWest: Orange Grove Road (NW)											
27	L2	587	6.5	0.672	7.2	LOS A	3.7	27.3	0.10	0.62	53.1
29	R2	1311	9.3	0.990	111.6	LOS F	44.2	341.3	1.00	1.07	17.8
Approach		1898	8.4	1.042	79.3	LOS F	44.2	341.3	0.72	0.93	23.1
SouthWest: Hume Highway (SW)											
30	L2	1258	9.2	0.458	11.7	LOS A	14.1	109.2	0.34	0.70	49.9
31	T1	2132	4.9	0.694	19.9	LOS B	29.1	212.1	0.57	0.51	42.5
Approach		3390	6.5	0.694	16.9	LOS B	29.1	212.1	0.48	0.58	45.4
All Vehicles		6603	7.9	1.042	39.7	LOS C	44.2	341.3	0.63	0.73	32.1

PHASING SUMMARY



Site: I-01 2028 MIMT AM - Upgrade

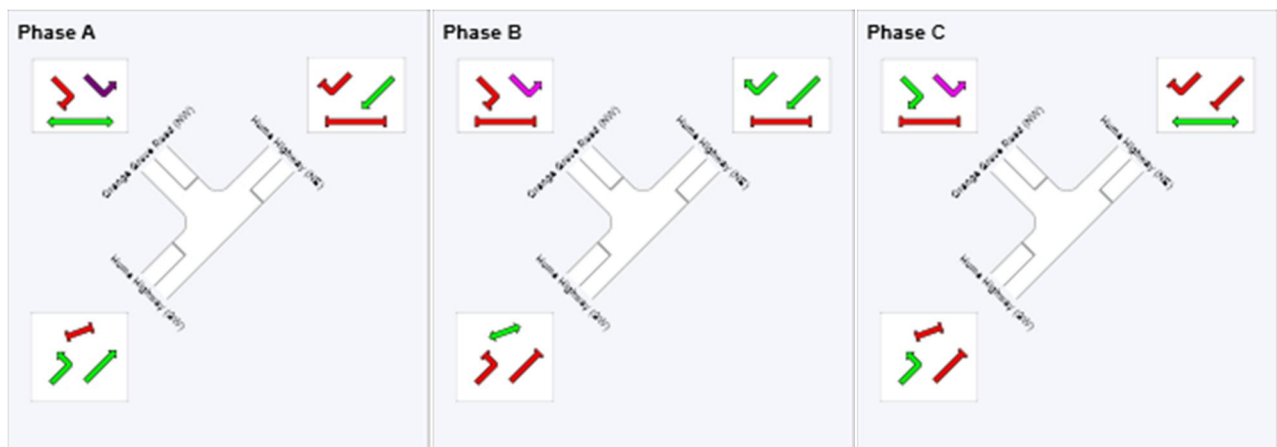
Hume Highway / Orange Grove Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	84	108
Green Time (sec)	77	17	36
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	84	23	43
Phase Split	56 %	15 %	29 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-01 2028 MIMT PM - Upgrade

Hume Highway / Orange Grove Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1762	3.5	0.969	68.2	LOS E	61.0	440.2	0.99	1.15	20.7
26	R2	805	2.6	0.944	62.7	LOS E	22.2	158.9	1.00	1.02	29.0
Approach		2567	3.2	0.969	66.5	LOS E	61.0	440.2	0.99	1.11	23.5
NorthWest: Orange Grove Road (NW)											
27	L2	384	4.1	0.334	8.3	LOS A	3.2	23.4	0.14	0.59	52.5
29	R2	1392	6.2	0.984	88.5	LOS F	46.6	351.9	0.99	1.02	20.9
Approach		1776	5.7	0.984	71.1	LOS F	46.6	351.9	0.81	0.93	24.5
SouthWest: Hume Highway (SW)											
30	L2	1313	5.9	0.793	19.8	LOS B	20.9	157.8	0.81	0.84	44.4
31	T1	1093	5.5	0.893	68.0	LOS E	25.6	188.4	0.98	0.98	21.8
Approach		2406	5.7	0.893	41.7	LOS C	25.6	188.4	0.89	0.91	31.7
All Vehicles		6749	4.8	0.984	58.9	LOS E	61.0	440.2	0.91	0.99	26.1

PHASING SUMMARY



Site: I-01 2028 MIMT PM - Upgrade

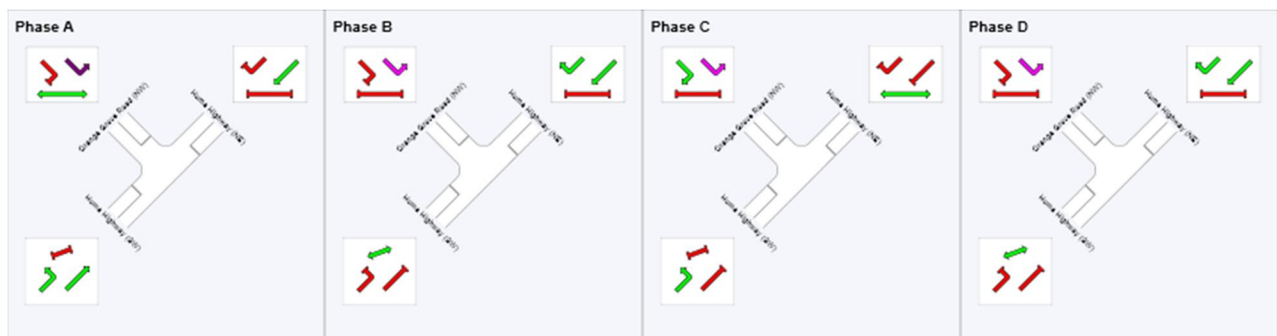
Hume Highway / Orange Grove Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	48	75	124
Green Time (sec)	42	20	43	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	49	26	50	25
Phase Split	33 %	17 %	33 %	17 %



I-02 Intersection of the Hume Highway and Elizabeth Drive

AM BASE

MOVEMENT SUMMARY



Site: I-02 2028 BASE AM

Hume Highway / Elizabeth Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV %	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	v/c			veh		per veh	km/h
South: Hume Highway (S)									
1	L2	132	4.8	0.145	21.2	LOS B	3.4	0.38	37.4
2	T1	2293	6.3	0.886	42.8	LOS D	53.1	0.92	24.7
Approach		2424	6.3	0.904	41.6	LOS C	53.1	0.89	25.3
East: Elizabeth Drive (E)									
4	L2	38	5.6	0.425	60.4	LOS E	10.2	0.92	18.4
5	T1	486	5.6	0.425	56.6	LOS E	11.6	0.90	23.5
6	R2	152	2.1	0.731	77.3	LOS F	11.2	1.00	14.9
Approach		676	4.8	0.731	61.5	LOS E	11.6	0.93	21.0
North: Hume Highway (N)									
7	L2	79	2.7	0.606	24.4	LOS B	21.4	0.56	32.5
8	T1	1688	8.8	0.606	18.4	LOS B	21.7	0.55	37.0
9	R2	343	9.5	1.233	304.1	LOS F	27.3	1.00	6.4
Approach		2111	8.7	1.233	65.1	LOS E	27.3	0.63	19.3
West: Elizabeth Drive (W)									
10	L2	612	5.3	1.031	123.4	LOS F	64.3	1.00	13.3
11	T1	1059	3.1	1.050	136.1	LOS F	57.8	1.00	11.9
12	R2	498	6.6	1.106	324.8	LOS F	53.0	1.00	6.1
Approach		2168	4.5	1.106	175.8	LOS F	64.3	1.00	9.9
All Vehicles		7379	6.3	1.233	89.6	LOS F	64.3	0.85	15.8

PHASING SUMMARY



Site: I-02 2028 BASE AM

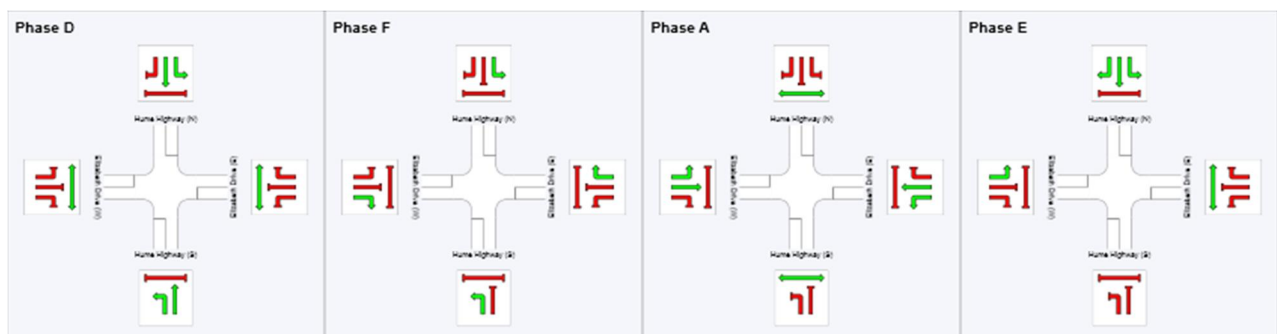
Hume Highway / Elizabeth Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	68	91	132
Green Time (sec)	62	17	35	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	68	23	41	18
Phase Split	45 %	15 %	27 %	12 %



PM BASE

MOVEMENT SUMMARY



Site: I-02 2028 BASE PM

Hume Highway / Elizabeth Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	314	4.0	0.465	40.5	LOS C	14.8	107.4	0.70	0.78	28.2
2	T1	1491	4.7	0.864	55.9	LOS D	36.3	264.3	0.96	0.92	21.0
Approach		1804	4.6	0.864	53.2	LOS D	36.3	264.3	0.92	0.89	22.1
East: Elizabeth Drive (E)											
4	L2	124	0.8	0.939	90.6	LOS F	30.6	217.9	1.00	1.07	13.8
5	T1	1069	2.5	0.939	86.0	LOS F	38.1	272.2	1.00	1.09	17.5
6	R2	167	0.0	1.127	213.7	LOS F	22.0	153.9	1.00	1.41	6.6
Approach		1361	2.0	1.127	102.1	LOS F	38.1	272.2	1.00	1.13	14.8
North: Hume Highway (N)											
7	L2	65	4.8	0.848	22.1	LOS B	38.0	272.6	0.69	0.66	34.4
8	T1	2427	2.9	0.848	16.2	LOS B	38.6	277.0	0.69	0.65	38.8
9	R2	953	3.0	0.909	75.5	LOS F	37.0	265.9	1.00	0.95	19.7
Approach		3445	2.9	0.909	32.7	LOS C	38.6	277.0	0.78	0.73	29.6
West: Elizabeth Drive (W)											
10	L2	324	6.2	0.427	33.3	LOS C	13.3	98.1	0.61	0.76	30.0
11	T1	523	4.4	0.668	60.5	LOS E	17.1	124.1	0.94	0.81	21.1
12	R2	304	2.4	1.041	148.8	LOS F	16.4	116.9	1.00	1.18	11.8
Approach		1152	4.4	1.041	76.2	LOS F	17.1	124.1	0.86	0.89	18.7
All Vehicles		7762	3.4	1.127	56.1	LOS D	38.6	277.0	0.86	0.86	21.9

PHASING SUMMARY



Site: I-02 2028 BASE PM

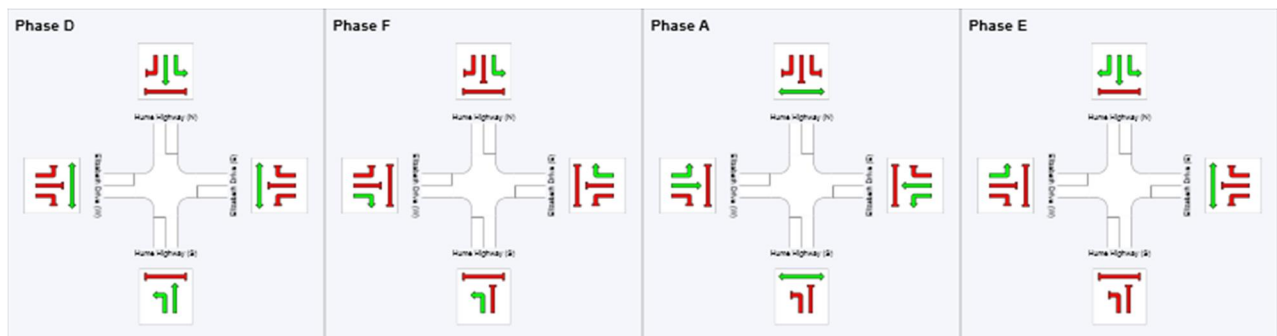
Hume Highway / Elizabeth Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	71	108
Green Time (sec)	47	12	31	36
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	53	18	37	42
Phase Split	35 %	12 %	25 %	28 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-02 2028 MIMT AM

Hume Highway / Elizabeth Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	132	4.8	0.145	21.2	LOS B	3.4	24.6	0.38	0.67	37.4
2	T1	2330	7.8	0.917	48.7	LOS D	58.7	443.9	0.95	0.95	22.9
Approach		2461	7.7	0.936	47.2	LOS D	58.7	443.9	0.92	0.93	23.4
East: Elizabeth Drive (E)											
4	L2	38	5.6	0.425	60.4	LOS E	10.2	75.2	0.92	0.82	18.4
5	T1	486	5.6	0.425	56.6	LOS E	11.6	85.1	0.90	0.82	23.5
6	R2	152	2.1	0.731	77.3	LOS F	11.2	80.1	1.00	0.86	14.9
Approach		676	4.8	0.731	61.5	LOS E	11.6	85.1	0.93	0.83	21.0
North: Hume Highway (N)											
7	L2	79	2.7	0.637	24.9	LOS B	23.0	177.1	0.58	0.56	32.2
8	T1	1742	10.7	0.637	18.8	LOS B	23.3	180.8	0.57	0.53	36.7
9	R2	343	9.5	1.233	304.1	LOS F	27.3	206.5	1.00	1.48	6.4
Approach		2164	10.2	1.233	64.3	LOS E	27.3	206.5	0.64	0.68	19.4
West: Elizabeth Drive (W)											
10	L2	612	5.3	1.031	123.4	LOS F	64.3	470.5	1.00	1.09	13.3
11	T1	1059	3.1	1.050	136.1	LOS F	57.8	415.1	1.00	1.34	11.9
12	R2	504	7.4	1.118	353.3	LOS F	56.9	426.2	1.00	1.56	5.6
Approach		2175	4.7	1.118	182.9	LOS F	64.3	470.5	1.00	1.32	9.6
All Vehicles		7476	7.3	1.233	92.9	LOS F	64.3	470.5	0.86	0.96	15.3

PHASING SUMMARY



Site: I-02 2028 MIMT AM

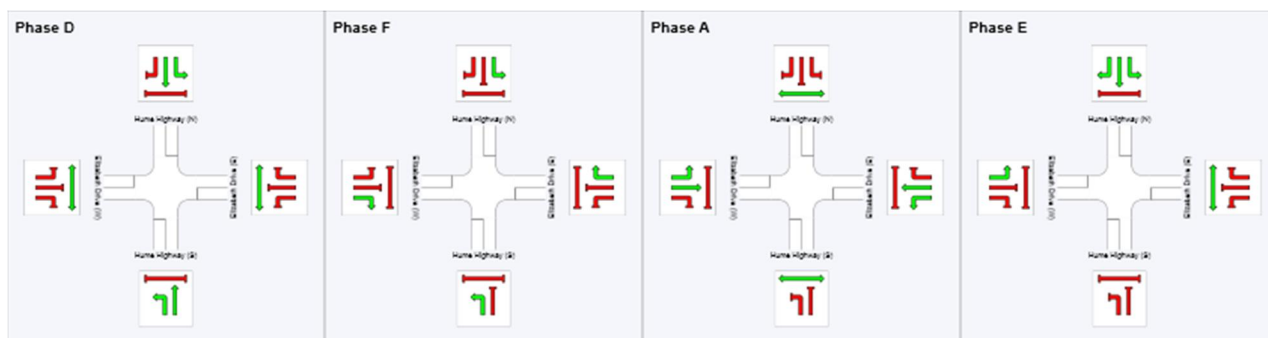
Hume Highway / Elizabeth Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	68	91	132
Green Time (sec)	62	17	35	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	68	23	41	18
Phase Split	45 %	15 %	27 %	12 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-02 2028 MIMT PM

Hume Highway / Elizabeth Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	321	5.6	0.486	40.9	LOS C	15.4	114.4	0.71	0.78	27.9
2	T1	1551	7.4	0.948	73.6	LOS F	46.1	351.3	0.98	1.06	17.4
Approach		1872	7.1	0.948	68.0	LOS E	46.1	351.3	0.94	1.01	18.8
East: Elizabeth Drive (E)											
4	L2	124	0.8	0.939	90.6	LOS F	30.6	217.9	1.00	1.07	13.8
5	T1	1069	2.5	0.939	86.0	LOS F	38.1	272.2	1.00	1.09	17.5
6	R2	167	0.0	1.127	213.7	LOS F	22.0	153.9	1.00	1.41	6.6
Approach		1361	2.0	1.127	102.1	LOS F	38.1	272.2	1.00	1.13	14.8
North: Hume Highway (N)											
7	L2	65	4.8	0.882	26.9	LOS B	45.1	333.5	0.75	0.74	31.2
8	T1	2475	4.7	0.882	21.0	LOS B	45.8	339.1	0.75	0.73	35.2
9	R2	953	3.0	0.909	75.5	LOS F	37.0	265.9	1.00	0.95	19.7
Approach		3493	4.3	0.909	36.0	LOS C	45.8	339.1	0.82	0.79	28.2
West: Elizabeth Drive (W)											
10	L2	324	6.2	0.427	33.3	LOS C	13.3	98.1	0.61	0.76	30.0
11	T1	523	4.4	0.668	60.5	LOS E	17.1	124.1	0.94	0.81	21.1
12	R2	304	2.4	1.041	148.8	LOS F	16.4	116.9	1.00	1.18	11.8
Approach		1152	4.4	1.041	76.2	LOS F	17.1	124.1	0.86	0.89	18.7
All Vehicles		7878	4.6	1.127	60.9	LOS E	46.1	351.3	0.88	0.92	20.8

PHASING SUMMARY



Site: I-02 2028 MIMT PM

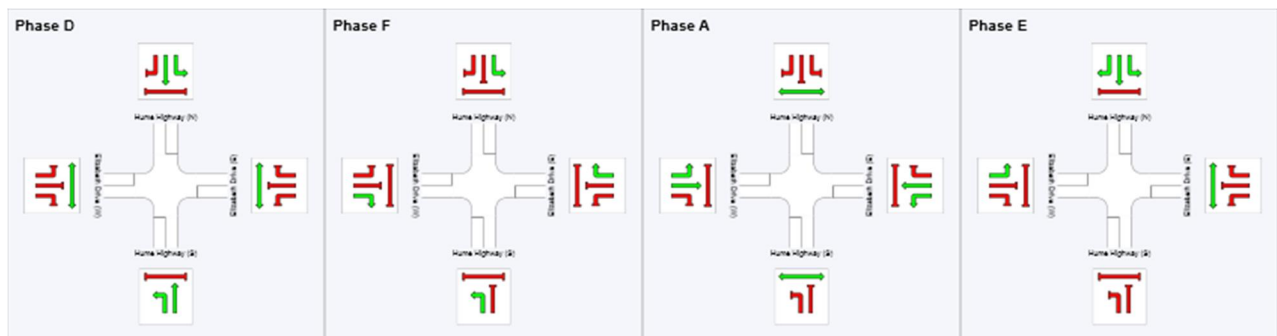
Hume Highway / Elizabeth Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	71	108
Green Time (sec)	47	12	31	36
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	53	18	37	42
Phase Split	35 %	12 %	25 %	28 %



I-03 Intersection of the Hume Highway and Memorial Avenue

AM BASE

MOVEMENT SUMMARY



Site: I-03 2028 BASE AM

Hume Highway / Memorial Avenue

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	sec		veh	m		per veh	km/h	
South: Hume Highway (S)											
1	L2	154	1.4	0.931	57.2	LOS E	60.0	441.7	0.99	1.01	29.4
2	T1	2051	7.3	0.931	49.1	LOS D	60.7	451.2	0.92	0.95	28.1
3	R2	259	0.0	1.101	192.5	LOS F	32.5	227.4	1.00	1.24	10.6
Approach		2463	6.2	1.101	64.7	LOS E	60.7	451.2	0.93	0.98	24.2
East: Memorial Avenue (E)											
4	L2	25	16.7	1.137	223.4	LOS F	21.5	158.9	1.00	1.47	9.5
5	T1	156	4.7	1.137	218.7	LOS F	21.5	158.9	1.00	1.46	9.3
6	R2	123	12.0	1.137	223.5	LOS F	19.5	149.1	1.00	1.45	6.7
Approach		304	8.7	1.137	221.1	LOS F	21.5	158.9	1.00	1.46	8.3
North: Hume Highway (N)											
7	L2	117	5.4	0.099	12.3	LOS A	2.5	18.5	0.36	0.64	39.5
8	T1	1686	11.1	0.711	27.7	LOS B	29.4	225.4	0.71	0.64	36.7
9	R2	96	3.3	0.417	71.8	LOS F	6.6	47.4	0.97	0.78	21.4
Approach		1899	10.4	0.711	29.0	LOS C	29.4	225.4	0.70	0.65	35.5
West: Memorial Avenue (W)											
10	L2	124	2.5	1.145	211.2	LOS F	43.0	305.9	1.00	1.49	10.0
11	T1	451	1.4	1.145	214.1	LOS F	54.0	384.3	1.00	1.54	9.4
12	R2	158	2.7	1.145	225.8	LOS F	54.0	384.3	1.00	1.59	12.0
Approach		733	1.9	1.145	216.1	LOS F	54.0	384.3	1.00	1.55	10.1
All Vehicles		5399	7.2	1.145	81.5	LOS F	60.7	451.2	0.86	0.97	20.5

PHASING SUMMARY



Site: I-03 2028 BASE AM

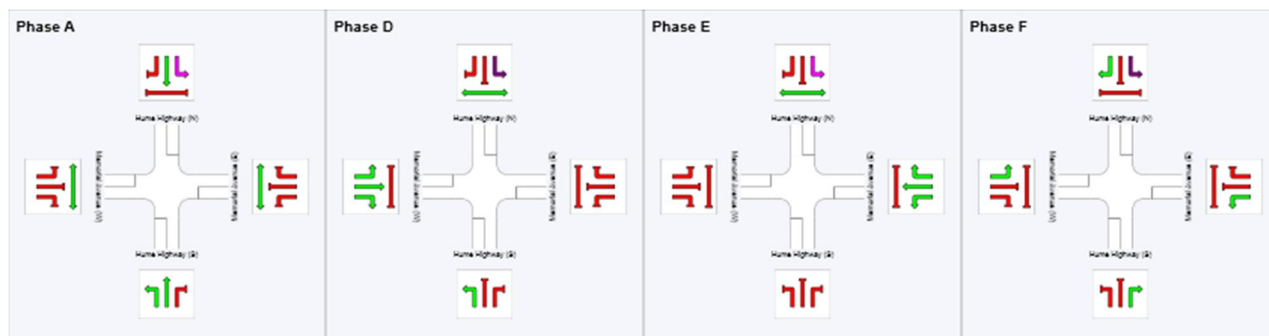
Hume Highway / Memorial Avenue

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	75	108	125
Green Time (sec)	69	27	11	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	75	33	17	25
Phase Split	50 %	22 %	11 %	17 %



PM BASE

MOVEMENT SUMMARY



Site: I-03 2028 BASE PM

Hume Highway / Memorial Avenue

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	119	0.9	0.755	41.5	LOS C	32.5	236.5	0.84	0.79	34.0
2	T1	1601	5.7	0.755	33.5	LOS C	33.0	242.6	0.80	0.73	33.8
3	R2	115	0.0	0.772	84.2	LOS F	8.8	61.8	1.00	0.86	19.5
Approach		1835	5.0	0.772	37.2	LOS C	33.0	242.6	0.82	0.74	32.4
East: Memorial Avenue (E)											
4	L2	52	0.0	1.345	403.1	LOS F	52.5	373.2	1.00	2.02	5.7
5	T1	283	2.2	1.345	398.6	LOS F	52.5	373.2	1.00	2.00	5.6
6	R2	206	5.6	1.345	403.5	LOS F	48.5	354.0	1.00	1.90	3.9
Approach		541	3.3	1.345	400.9	LOS F	52.5	373.2	1.00	1.96	5.0
North: Hume Highway (N)											
7	L2	152	2.8	0.090	8.4	LOS A	2.1	14.7	0.24	0.61	43.5
8	T1	2916	3.1	0.903	14.0	LOS A	51.5	370.1	0.60	0.58	45.4
9	R2	212	2.0	0.802	55.8	LOS D	9.7	69.4	1.00	0.92	24.7
Approach		3279	3.0	0.903	16.4	LOS B	51.5	370.1	0.61	0.60	43.0
West: Memorial Avenue (W)											
10	L2	81	1.3	0.885	79.8	LOS F	16.0	112.7	1.00	1.04	20.3
11	T1	206	1.0	0.885	76.8	LOS F	19.7	138.2	1.00	1.02	19.4
12	R2	166	0.0	0.885	83.9	LOS F	19.7	138.2	1.00	0.99	23.4
Approach		454	0.7	0.885	80.0	LOS F	19.7	138.2	1.00	1.01	21.1
All Vehicles		6108	3.5	1.345	61.4	LOS E	52.5	373.2	0.74	0.80	24.4

PHASING SUMMARY



Site: I-03 2028 BASE PM

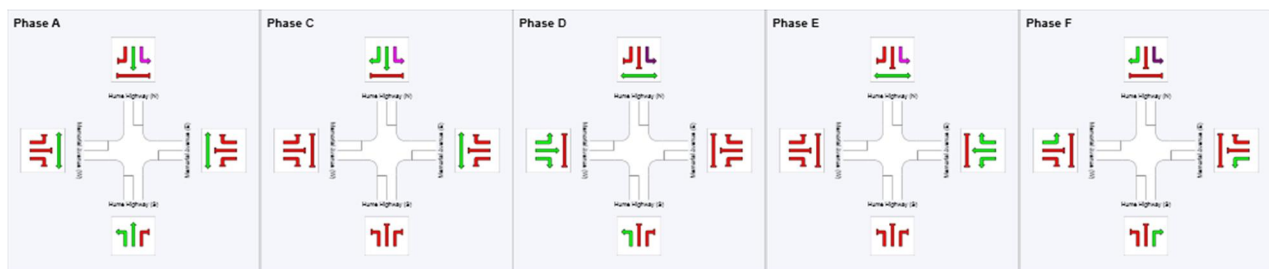
Hume Highway / Memorial Avenue

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D	E	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	70	82	110	132
Green Time (sec)	64	6	22	16	12
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	70	12	28	22	18
Phase Split	47 %	8 %	19 %	15 %	12 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-03 2028 MIMT AM

Hume Highway / Memorial Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	154	1.4	0.961	68.6	LOS E	67.8	510.6	1.00	1.07	26.8
2	T1	2087	8.9	0.961	60.5	LOS E	68.7	524.7	0.94	1.03	25.0
3	R2	259	0.0	1.101	192.5	LOS F	32.5	227.4	1.00	1.24	10.6
Approach		2500	7.5	1.101	74.7	LOS F	68.7	524.7	0.95	1.05	22.2
East: Memorial Avenue (E)											
4	L2	25	16.7	1.137	223.4	LOS F	21.5	158.9	1.00	1.47	9.5
5	T1	156	4.7	1.137	218.7	LOS F	21.5	158.9	1.00	1.46	9.3
6	R2	123	12.0	1.137	223.5	LOS F	19.5	149.1	1.00	1.45	6.7
Approach		304	8.7	1.137	221.1	LOS F	21.5	158.9	1.00	1.46	8.3
North: Hume Highway (N)											
7	L2	117	5.4	0.099	12.3	LOS A	2.5	18.5	0.36	0.64	39.5
8	T1	1747	13.1	0.755	28.5	LOS B	32.1	254.1	0.74	0.67	36.3
9	R2	96	3.3	0.417	71.8	LOS F	6.6	47.4	0.97	0.78	21.4
Approach		1959	12.2	0.755	29.6	LOS C	32.1	254.1	0.73	0.68	35.2
West: Memorial Avenue (W)											
10	L2	124	2.5	1.147	213.0	LOS F	43.3	308.0	1.00	1.50	10.0
11	T1	451	1.4	1.147	215.9	LOS F	54.3	386.5	1.00	1.55	9.4
12	R2	159	2.6	1.147	227.6	LOS F	54.3	386.5	1.00	1.60	11.9
Approach		734	1.9	1.147	217.9	LOS F	54.3	386.5	1.00	1.55	10.0
All Vehicles		5498	8.5	1.147	85.9	LOS F	68.7	524.7	0.88	1.01	19.9

PHASING SUMMARY



Site: I-03 2028 MIMT AM

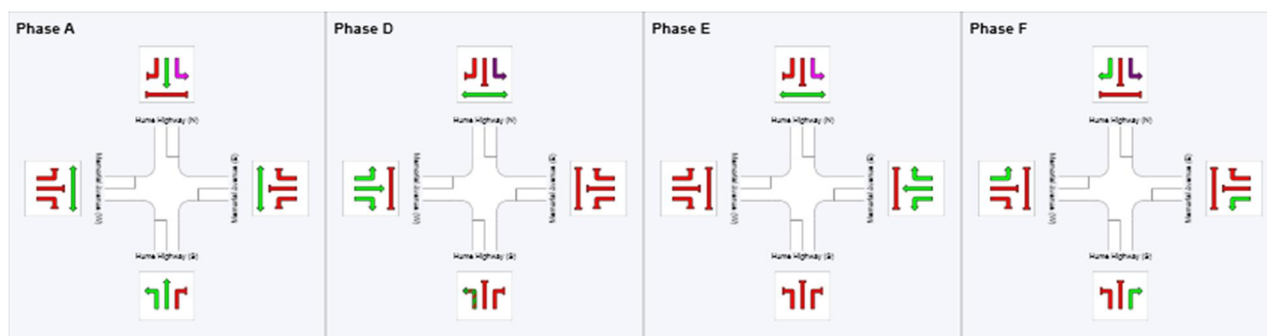
Hume Highway / Memorial Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	75	108	125
Green Time (sec)	69	27	11	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	75	33	17	25
Phase Split	50 %	22 %	11 %	17 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-03 2028 MIMT PM

Hume Highway / Memorial Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	120	0.9	0.807	43.2	LOS D	35.8	271.0	0.88	0.83	33.5
2	T1	1669	8.5	0.807	35.3	LOS C	36.2	278.5	0.84	0.77	33.0
3	R2	115	0.0	0.772	84.2	LOS F	8.8	61.8	1.00	0.86	19.5
Approach		1904	7.5	0.807	38.7	LOS C	36.2	278.5	0.85	0.78	31.8
East: Memorial Avenue (E)											
4	L2	52	0.0	1.345	403.1	LOS F	52.5	373.2	1.00	2.02	5.7
5	T1	283	2.2	1.345	398.6	LOS F	52.5	373.2	1.00	2.00	5.6
6	R2	206	5.6	1.345	403.5	LOS F	48.5	354.0	1.00	1.90	3.9
Approach		541	3.3	1.345	400.9	LOS F	52.5	373.2	1.00	1.96	5.0
North: Hume Highway (N)											
7	L2	152	2.8	0.090	8.4	LOS A	2.1	14.7	0.24	0.61	43.5
8	T1	2963	4.6	0.935	19.1	LOS B	62.5	460.7	0.66	0.66	41.7
9	R2	212	2.0	0.802	55.8	LOS D	9.7	69.4	1.00	0.92	24.7
Approach		3327	4.4	0.935	21.0	LOS B	62.5	460.7	0.66	0.68	40.0
West: Memorial Avenue (W)											
10	L2	81	1.3	0.885	79.8	LOS F	16.0	112.7	1.00	1.04	20.3
11	T1	206	1.0	0.885	76.8	LOS F	19.7	138.2	1.00	1.02	19.4
12	R2	166	0.0	0.885	83.9	LOS F	19.7	138.2	1.00	0.99	23.4
Approach		454	0.7	0.885	80.0	LOS F	19.7	138.2	1.00	1.01	21.1
All Vehicles		6225	5.0	1.345	63.7	LOS E	62.5	460.7	0.78	0.85	23.9

PHASING SUMMARY



Site: I-03 2028 MIMT PM

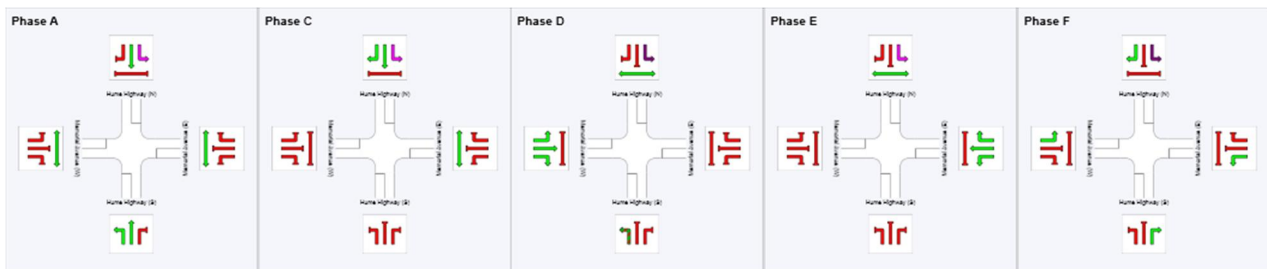
Hume Highway / Memorial Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D	E	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	70	82	110	132
Green Time (sec)	64	6	22	16	12
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	70	12	28	22	18
Phase Split	47 %	8 %	19 %	15 %	12 %



I-04 Intersection of the Hume Highway and Hoxton Park Drive

AM BASE

MOVEMENT SUMMARY



Site: I-04 2028 BASE AM

Hume Highway / Hoxton Park Road / Macquarie Street

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles										
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec	veh	m		per veh	km/h
South: Hume Highway (S)										
1	L2	100	6.3	0.082	8.4	LOS A	0.7	5.5	0.11	51.2
2	T1	2083	5.1	0.782	26.1	LOS B	36.9	269.7	0.75	40.4
3	R2	1161	1.8	1.016	104.2	LOS F	46.7	332.0	1.00	17.0
Approach		3344	4.0	1.016	52.7	LOS D	46.7	332.0	0.82	29.0
East: Macquarie Street (E)										
4	L2	347	5.8	0.225	21.9	LOS B	5.4	40.0	0.66	38.7
5	T1	520	4.7	1.084	173.8	LOS F	31.4	228.5	1.00	13.0
Approach		867	5.1	1.084	112.9	LOS F	31.4	228.5	0.87	17.1
North: Hume Highway (N)										
7	L2	228	15.7	0.902	69.7	LOS E	41.4	317.4	1.00	23.9
8	T1	1394	8.2	0.902	62.2	LOS E	43.4	324.8	0.97	27.7
9	R2	238	19.0	1.212	288.7	LOS F	37.2	302.7	1.00	10.2
Approach		1860	10.5	1.212	92.1	LOS F	43.4	324.8	0.98	22.0
West: Hoxton Park Road (W)										
10	L2	324	16.2	0.562	48.2	LOS D	19.1	152.5	0.87	32.2
11	T1	1300	4.1	1.105	206.6	LOS F	61.6	446.6	1.00	11.3
12	R2	375	2.8	1.103	153.6	LOS F	25.2	180.8	1.00	15.9
Approach		1999	5.8	1.105	171.0	LOS F	61.6	446.6	0.98	13.8
All Vehicles		8071	6.1	1.212	97.5	LOS F	61.6	446.6	0.90	20.4

PHASING SUMMARY



Site: I-04 2028 BASE AM

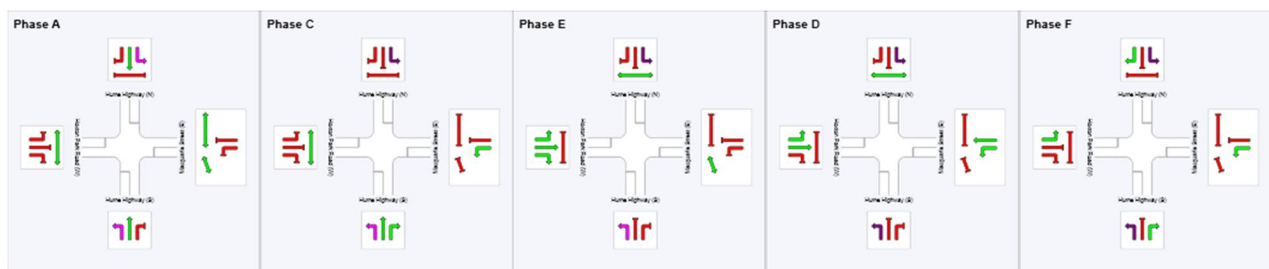
Hume Highway / Hoxton Park Road / Macquarie Street

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	D	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	51	79	101	126
Green Time (sec)	45	22	16	19	18
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	51	28	22	25	24
Phase Split	34 %	19 %	15 %	17 %	16 %



PM BASE

MOVEMENT SUMMARY



Site: I-04 2028 BASE PM

Hume Highway / Hoxton Park Road / Macquarie Street

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	193	5.5	0.160	9.2	LOS A	1.8	13.3	0.14	0.58	50.6
2	T1	1545	5.2	0.595	22.7	LOS B	22.5	164.4	0.60	0.54	42.2
3	R2	436	1.2	0.965	105.0	LOS F	19.6	138.6	1.00	1.05	16.9
Approach		2174	4.4	0.965	38.0	LOS C	22.5	164.4	0.64	0.64	34.4
East: Macquarie Street (E)											
4	L2	774	1.4	1.027	165.8	LOS F	39.4	279.3	0.99	1.11	12.0
5	T1	697	3.3	1.072	156.3	LOS F	39.8	286.6	1.00	1.35	14.1
Approach		1471	2.3	1.072	161.3	LOS F	39.8	286.6	0.99	1.23	13.0
North: Hume Highway (N)											
7	L2	99	5.3	0.915	23.3	LOS B	55.1	395.2	0.77	0.78	41.9
8	T1	2748	2.6	0.915	18.3	LOS B	57.5	411.6	0.70	0.69	44.7
9	R2	279	6.0	1.469	515.9	LOS F	59.0	434.7	1.00	1.90	6.2
Approach		3126	3.0	1.469	62.8	LOS E	59.0	434.7	0.73	0.80	27.8
West: Hoxton Park Road (W)											
10	L2	258	2.0	0.406	45.2	LOS D	14.2	101.1	0.81	0.80	33.4
11	T1	711	4.0	0.435	46.6	LOS D	14.0	101.5	0.87	0.73	30.4
12	R2	374	2.5	1.195	209.0	LOS F	30.4	217.6	1.00	1.32	12.5
Approach		1342	3.2	1.195	91.5	LOS F	30.4	217.6	0.89	0.91	21.7
All Vehicles		8113	3.3	1.469	78.8	LOS F	59.0	434.7	0.78	0.85	23.6

PHASING SUMMARY



Site: I-04 2028 BASE PM

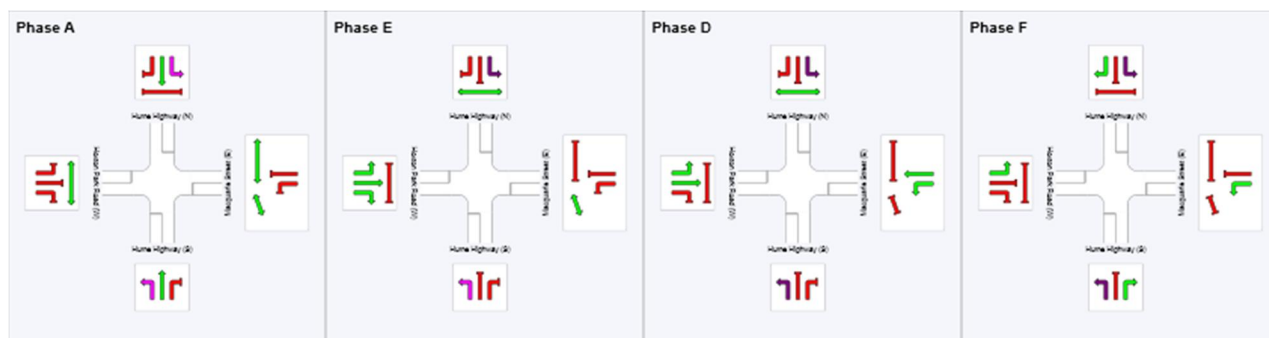
Hume Highway / Hoxton Park Road / Macquarie Street

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	D	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	79	99	128
Green Time (sec)	73	14	23	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	79	20	29	22
Phase Split	53 %	13 %	19 %	15 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-04 2028 MIMT AM

Hume Highway / Hoxton Park Road / Macquarie Street

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	108	13.5	0.096	8.5	LOS A	0.8	6.8	0.12	0.57	50.8
2	T1	2120	6.8	0.816	26.9	LOS B	39.6	297.0	0.78	0.71	40.0
3	R2	1161	1.8	1.016	104.2	LOS F	46.7	332.0	1.00	1.14	17.0
Approach		3389	5.3	1.016	52.8	LOS D	46.7	332.0	0.83	0.85	29.0
East: Macquarie Street (E)											
4	L2	347	5.8	0.225	21.9	LOS B	5.4	40.0	0.66	0.73	38.7
5	T1	520	4.7	1.084	173.8	LOS F	31.4	228.5	1.00	1.38	13.0
Approach		867	5.1	1.084	112.9	LOS F	31.4	228.5	0.87	1.12	17.1
North: Hume Highway (N)											
7	L2	228	15.7	0.959	85.5	LOS F	50.3	395.2	1.00	1.20	21.1
8	T1	1455	10.7	0.959	77.7	LOS F	51.2	399.6	0.98	1.10	24.5
9	R2	238	19.0	1.212	288.7	LOS F	37.2	302.7	1.00	1.52	10.2
Approach		1922	12.3	1.212	104.8	LOS F	51.2	399.6	0.98	1.16	20.3
West: Hoxton Park Road (W)											
10	L2	324	16.2	0.562	48.2	LOS D	19.1	152.5	0.87	0.83	32.2
11	T1	1300	4.1	1.108	209.1	LOS F	61.7	447.4	1.00	1.56	11.2
12	R2	380	3.9	1.144	178.0	LOS F	28.2	205.6	1.00	1.25	14.2
Approach		2004	6.0	1.144	177.2	LOS F	61.7	447.4	0.98	1.39	13.4
All Vehicles		8183	7.1	1.212	101.9	LOS F	61.7	447.4	0.91	1.08	19.8

PHASING SUMMARY



Site: I-04 2028 MIMT AM

Hume Highway / Hoxton Park Road / Macquarie Street

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase times specified by the user

Sequence: TCS 405 AM - Modified

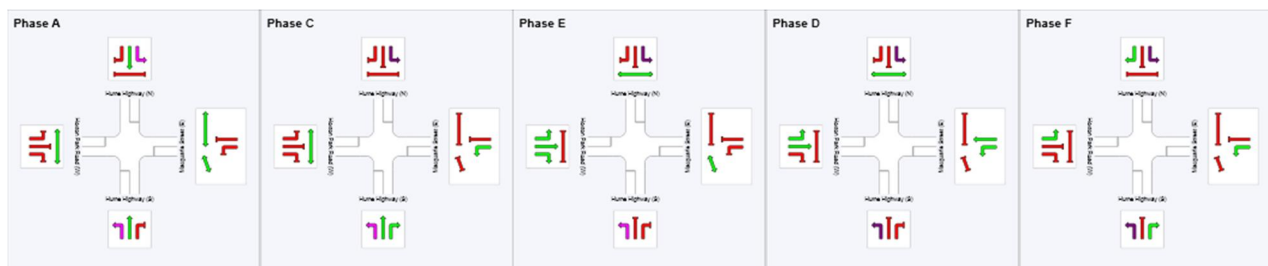
Movement Class: All Movement Classes

Input Sequence: A, C, E, D, F

Output Sequence: A, C, E, D, F

Phase Timing Results

Phase	A	C	E	D	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	51	79	101	126
Green Time (sec)	45	22	16	19	18
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	51	28	22	25	24
Phase Split	34 %	19 %	15 %	17 %	16 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-04 2028 MIMT PM

Hume Highway / Hoxton Park Road / Macquarie Street

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	198	7.5	0.169	9.2	LOS A	1.9	14.3	0.14	0.58	50.5
2	T1	1615	8.0	0.647	23.5	LOS B	25.0	192.0	0.63	0.57	41.8
3	R2	436	1.2	0.965	105.0	LOS F	19.6	138.6	1.00	1.05	16.9
Approach		2249	6.7	0.965	38.0	LOS C	25.0	192.0	0.66	0.66	34.5
East: Macquarie Street (E)											
4	L2	774	1.4	1.027	165.8	LOS F	39.4	279.3	0.99	1.11	12.0
5	T1	697	3.3	1.072	156.3	LOS F	39.8	286.6	1.00	1.35	14.1
Approach		1471	2.3	1.072	161.3	LOS F	39.8	286.6	0.99	1.23	13.0
North: Hume Highway (N)											
7	L2	99	5.3	0.946	29.4	LOS C	66.5	489.3	0.86	0.90	38.4
8	T1	2796	4.3	0.946	24.5	LOS B	68.4	503.2	0.77	0.79	41.1
9	R2	279	6.0	1.469	515.9	LOS F	59.0	434.7	1.00	1.90	6.2
Approach		3174	4.5	1.469	67.9	LOS E	68.4	503.2	0.79	0.89	26.6
West: Hoxton Park Road (W)											
10	L2	262	3.6	0.418	45.4	LOS D	14.5	104.6	0.81	0.80	33.3
11	T1	711	4.0	0.435	46.6	LOS D	14.0	101.5	0.87	0.73	30.4
12	R2	379	4.0	1.249	249.7	LOS F	33.8	250.0	1.00	1.41	10.9
Approach		1352	3.9	1.249	103.3	LOS F	33.8	250.0	0.89	0.94	20.0
All Vehicles		8245	4.6	1.469	82.2	LOS F	68.4	503.2	0.81	0.90	23.1

PHASING SUMMARY



Site: I-04 2028 MIMT PM

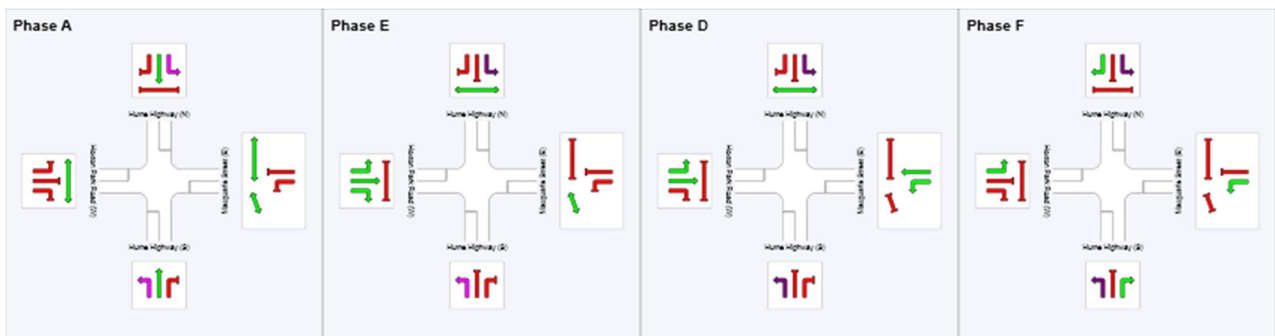
Hume Highway / Hoxton Park Road / Macquarie Street

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	D	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	79	99	128
Green Time (sec)	73	14	23	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	79	20	29	22
Phase Split	53 %	13 %	19 %	15 %



I-05 Intersection of the Hume Highway and Reilly Street

AM BASE

MOVEMENT SUMMARY



Site: I-05 2028 BASE AM

Hume Highway / Reilly Street

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows	Deg.	Satn	Average	Level of	95% Back of Queue	Prop.	Effective	Average
	v	Total	HV		Delay	Service	Vehicles	Queued	Stop Rate	Speed
		veh/h	%	v/c	sec		veh	m	per veh	km/h
South: Hume Highway (S)										
1	L2	79	2.7	0.906	24.0	LOS B	57.4	414.2	0.75	40.1
2	T1	3103	3.6	0.906	17.8	LOS B	57.4	414.2	0.71	41.0
3	R2	13	8.3	0.087	21.3	LOS B	0.4	3.2	0.46	37.8
Approach		3195	3.6	0.906	17.9	LOS B	57.4	414.2	0.71	40.9
East: Congressional Drive (E)										
4	L2	47	2.2	0.263	60.0	LOS E	5.8	41.6	0.89	24.3
5	T1	45	4.7	0.263	55.4	LOS D	5.8	41.6	0.89	23.8
6	R2	88	3.6	0.423	68.0	LOS E	6.0	43.3	0.95	18.6
Approach		181	3.5	0.423	62.7	LOS E	6.0	43.3	0.92	21.4
North: Hume Highway (N)										
7	L2	32	3.3	0.533	16.0	LOS B	23.3	172.8	0.50	41.0
8	T1	1765	7.2	0.533	9.9	LOS A	23.4	173.7	0.48	47.6
9	R2	96	1.1	0.675	49.2	LOS D	5.6	39.9	1.00	25.2
Approach		1893	6.8	0.675	12.0	LOS A	23.4	173.7	0.50	45.4
West: Reilly Street (W)										
10	L2	116	3.6	0.262	50.2	LOS D	7.2	52.5	0.83	24.5
11	T1	12	9.1	0.262	45.6	LOS D	7.2	52.5	0.83	25.6
12	R2	232	1.8	1.038	153.8	LOS F	26.0	184.6	1.00	14.2
Approach		359	2.6	1.038	116.9	LOS F	26.0	184.6	0.94	16.3
All Vehicles		5627	4.6	1.038	23.7	LOS B	57.4	414.2	0.66	36.9

PHASING SUMMARY



Site: I-05 2028 BASE AM

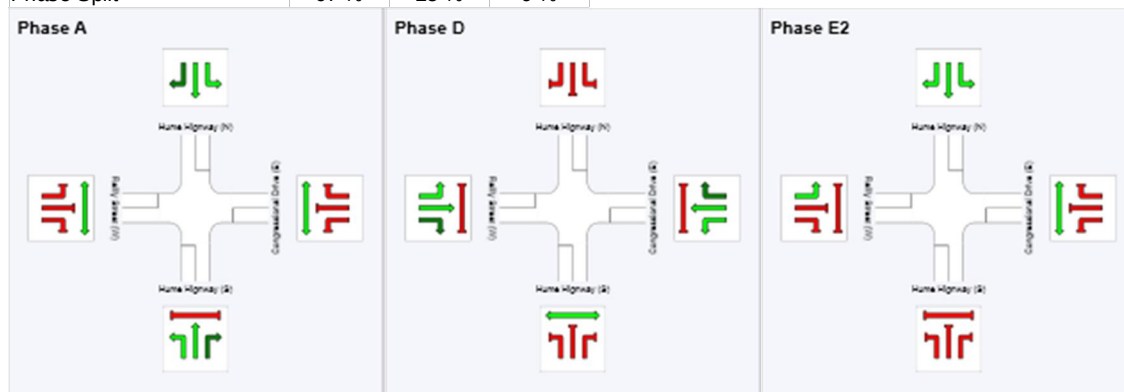
Hume Highway / Reilly Street

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	100	137
Green Time (sec)	94	31	7
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	100	37	13
Phase Split	67 %	25 %	9 %



PM BASE

MOVEMENT SUMMARY



Site: I-05 2028 BASE PM

Hume Highway / Reilly Street

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	220	0.5	0.644	19.4	LOS B	24.7	178.1	0.51	0.56	42.0
2	T1	2006	4.5	0.644	11.4	LOS A	24.7	178.1	0.44	0.43	45.9
3	R2	21	5.0	0.388	34.8	LOS C	1.1	8.0	0.66	0.74	31.6
Approach		2247	4.1	0.644	12.4	LOS A	24.7	178.1	0.45	0.44	45.2
East: Congressional Drive (E)											
4	L2	40	2.6	0.184	59.8	LOS E	4.0	28.1	0.88	0.72	24.2
5	T1	24	0.0	0.184	55.2	LOS D	4.0	28.1	0.88	0.72	23.8
6	R2	49	0.0	0.209	63.4	LOS E	3.2	22.2	0.90	0.74	19.5
Approach		114	0.9	0.209	60.4	LOS E	4.0	28.1	0.89	0.73	22.1
North: Hume Highway (N)											
7	L2	66	0.0	0.990	43.5	LOS D	110.4	786.9	0.93	1.04	26.0
8	T1	3608	2.2	0.990	39.9	LOS C	110.4	786.9	0.72	0.86	29.5
9	R2	174	1.2	0.852	64.4	LOS E	12.5	88.4	1.00	1.04	21.7
Approach		3848	2.2	0.990	41.0	LOS C	110.4	786.9	0.74	0.87	28.9
West: Reilly Street (W)											
10	L2	65	0.0	0.222	54.3	LOS D	5.7	39.9	0.85	0.73	23.9
11	T1	32	0.0	0.222	49.7	LOS D	5.7	39.9	0.85	0.73	24.9
12	R2	256	1.6	1.032	148.6	LOS F	28.3	200.9	1.00	1.21	14.6
Approach		353	1.2	1.032	122.3	LOS F	28.3	200.9	0.96	1.08	16.1
All Vehicles		6562	2.8	1.032	35.9	LOS C	110.4	786.9	0.66	0.73	31.0

PHASING SUMMARY



Site: I-05 2028 BASE PM

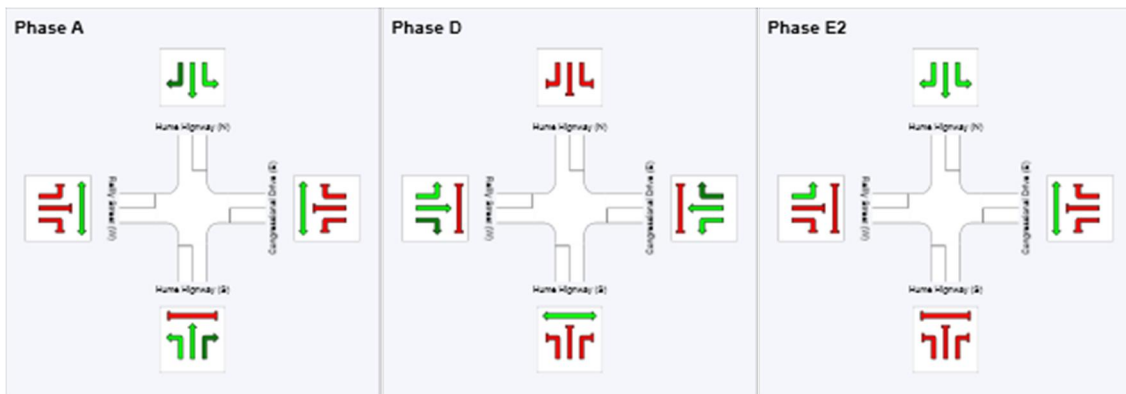
Hume Highway / Reilly Street

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	98	135
Green Time (sec)	92	31	9
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	98	37	15
Phase Split	65 %	25 %	10 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-05 2028 MIMT AM

Hume Highway / Reilly Street

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	79	2.7	0.938	32.6	LOS C	71.2	524.3	0.84	0.86	35.9
2	T1	3148	5.0	0.938	26.4	LOS B	71.2	524.3	0.78	0.81	35.6
3	R2	13	8.3	0.098	22.5	LOS B	0.4	3.3	0.48	0.67	37.1
Approach		3240	5.0	0.938	26.5	LOS B	71.2	524.3	0.78	0.81	35.6
East: Congressional Drive (E)											
4	L2	47	2.2	0.263	60.0	LOS E	5.8	41.6	0.89	0.74	24.3
5	T1	45	4.7	0.263	55.4	LOS D	5.8	41.6	0.89	0.74	23.8
6	R2	88	3.6	0.423	68.0	LOS E	6.0	43.3	0.95	0.78	18.6
Approach		181	3.5	0.423	62.7	LOS E	6.0	43.3	0.92	0.76	21.4
North: Hume Highway (N)											
7	L2	32	3.3	0.552	16.3	LOS B	24.1	185.3	0.51	0.49	40.8
8	T1	1833	9.5	0.552	10.2	LOS A	24.2	186.4	0.49	0.45	47.4
9	R2	96	1.1	0.681	53.0	LOS D	5.6	39.5	1.00	0.89	24.2
Approach		1960	9.0	0.681	12.3	LOS A	24.2	186.4	0.51	0.47	45.1
West: Reilly Street (W)											
10	L2	116	3.6	0.262	50.2	LOS D	7.2	52.5	0.83	0.76	24.5
11	T1	12	9.1	0.262	45.6	LOS D	7.2	52.5	0.83	0.76	25.6
12	R2	233	1.8	1.044	157.5	LOS F	26.4	188.0	1.00	1.24	14.0
Approach		360	2.6	1.044	119.4	LOS F	26.4	188.0	0.94	1.07	16.1
All Vehicles		5741	6.1	1.044	28.6	LOS C	71.2	524.3	0.70	0.71	34.3

PHASING SUMMARY



Site: I-05 2028 MIMT AM

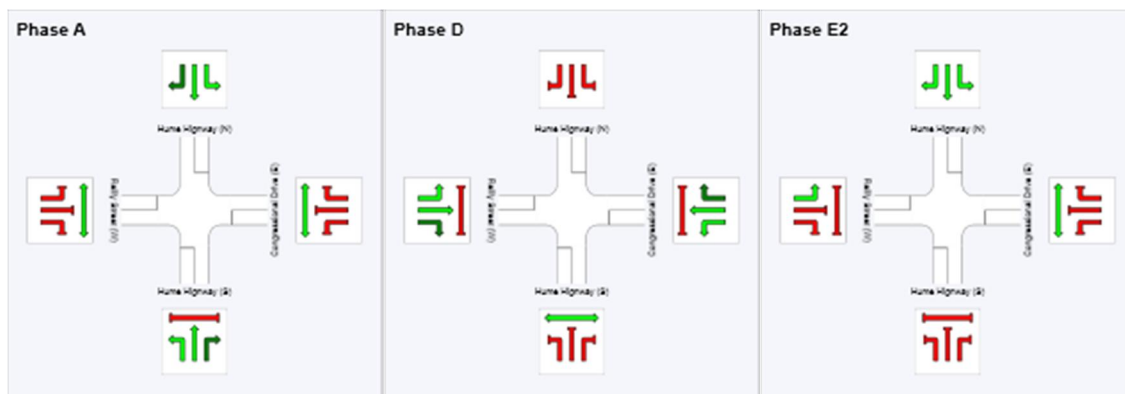
Hume Highway / Reilly Street

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	100	137
Green Time (sec)	94	31	7
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	100	37	13
Phase Split	67 %	25 %	9 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-05 2028 MIMT PM

Hume Highway / Reilly Street

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Hignway (S)											
1	L2	221	0.5	0.683	19.9	LOS B	27.1	201.1	0.54	0.58	41.7
2	T1	2081	7.0	0.683	11.9	LOS A	27.1	201.1	0.47	0.46	45.5
3	R2	21	5.0	0.394	41.2	LOS C	1.2	8.7	0.72	0.75	29.3
Approach		2324	6.3	0.683	12.9	LOS A	27.1	201.1	0.48	0.47	44.8
East: Congressional Drive (E)											
4	L2	40	2.6	0.184	59.8	LOS E	4.0	28.1	0.88	0.72	24.2
5	T1	24	0.0	0.184	55.2	LOS D	4.0	28.1	0.88	0.72	23.8
6	R2	49	0.0	0.209	63.4	LOS E	3.2	22.2	0.90	0.74	19.5
Approach		114	0.9	0.209	60.4	LOS E	4.0	28.1	0.89	0.73	22.1
North: Hume Highway (N)											
7	L2	66	0.0	1.017	62.0	LOS E	137.7	1006.3	1.00	1.19	20.9
8	T1	3666	3.8	1.017	58.9	LOS E	137.9	1009.5	0.81	1.02	23.7
9	R2	174	1.2	0.895	83.5	LOS F	13.7	97.2	1.00	1.10	18.5
Approach		3906	3.6	1.017	60.0	LOS E	137.9	1009.5	0.82	1.03	23.4
West: Reilly Street (W)											
10	L2	65	0.0	0.222	54.3	LOS D	5.7	39.9	0.85	0.73	23.9
11	T1	32	0.0	0.222	49.7	LOS D	5.7	39.9	0.85	0.73	24.9
12	R2	256	1.6	1.032	148.6	LOS F	28.3	200.9	1.00	1.21	14.6
Approach		353	1.2	1.032	122.3	LOS F	28.3	200.9	0.96	1.08	16.1
All Vehicles		6696	4.4	1.032	47.0	LOS D	137.9	1009.5	0.71	0.83	27.1

PHASING SUMMARY



Site: I-05 2028 MIMT PM

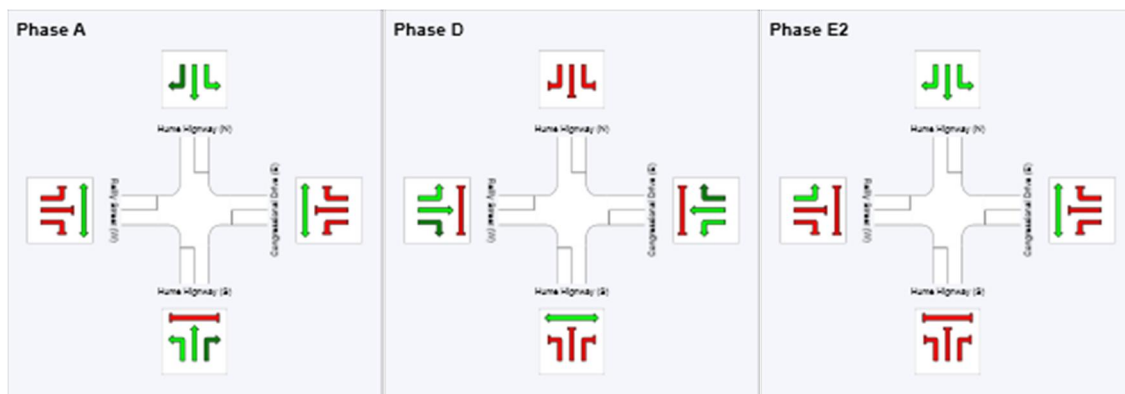
Hume Highway / Reilly Street

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	98	135
Green Time (sec)	92	31	9
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	98	37	15
Phase Split	65 %	25 %	10 %



I-06 Intersection of Newbridge Road and Moorebank Avenue

AM BASE

MOVEMENT SUMMARY



Site: I-06 2028 BASE AM



Network: 2028 BASE AM

Newbridge Road / Moorebank Avenue

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	1449	3.2	1259	3.2	0.649	19.3	LOS B	14.4	103.7	0.58	0.83	42.1
3	R2	1296	9.0	1125	9.0	0.661	15.0	LOS B	13.7	103.6	0.41	0.68	52.7
Approach		2745	5.9	2384 ^{N1}	5.9	0.661	17.3	LOS B	14.4	103.7	0.50	0.76	47.8
East: Newbridge Road (E)													
4	L2	669	19.8	669	19.8	0.556	18.5	LOS B	8.0	65.9	0.71	0.80	51.9
5	T1	945	5.2	945	5.2	1.235	289.3	LOS F	72.8	532.4	1.00	1.85	15.5
Approach		1615	11.3	1615	11.3	1.235	177.0	LOS F	72.8	532.4	0.88	1.41	19.9
West: Newbridge Road (W)													
11	T1	1513	6.5	1513	6.5	0.814	10.4	LOS A	25.7	190.1	0.57	0.53	62.2
12	R2	802	7.3	802	7.3	1.499	442.0	LOS F	78.7	585.2	1.00	1.74	4.6
Approach		2315	6.8	2315	6.8	1.499	160.0	LOS F	78.7	585.2	0.72	0.95	20.2
All Vehicles		6675	7.5	6313 ^{N1}	8.0	1.499	110.4	LOS F	78.7	585.2	0.68	0.99	24.1

PHASING SUMMARY



Site: I-06 2028 BASE AM



Network: 2028 BASE AM

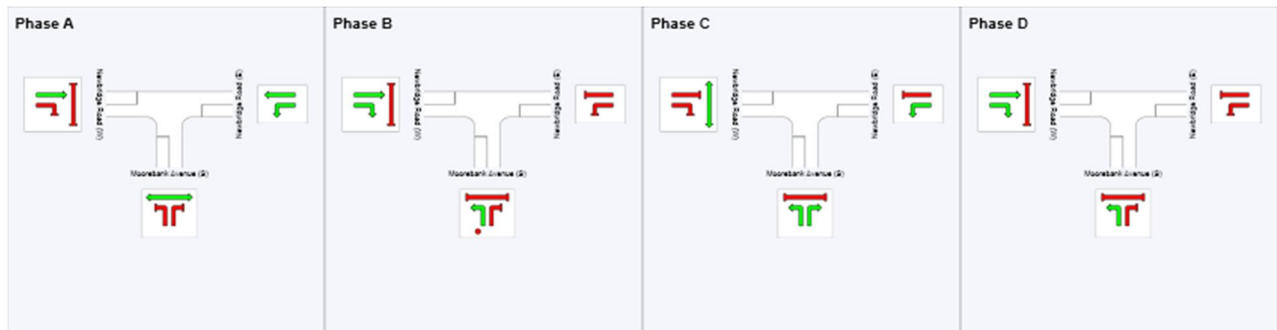
Newbridge Road / Moorebank Avenue

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	116
Green Time (sec)	27	16	55	11
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	61	17
Phase Split	25 %	17 %	46 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-06 2028 BASE PM



Network: 2028 BASE PM

Newbridge Road / Moorebank Avenue

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	964	3.4	865	3.5	0.494	22.4	LOS B	12.7	91.3	0.56	0.75	39.9
3	R2	915	10.7	822	11.0	1.065	122.7	LOS F	17.0	130.6	1.00	1.23	21.7
Approach		1879	6.9	1687 ^{N1}	7.2	1.065	71.2	LOS F	17.0	130.6	0.78	0.98	26.4
East: Newbridge Road (E)													
4	L2	1212	5.1	1212	5.1	1.030	132.4	LOS F	62.0	452.9	1.00	1.16	19.8
5	T1	1342	4.8	1342	4.8	0.903	47.3	LOS D	39.7	289.6	1.00	1.00	44.5
Approach		2554	4.9	2554	4.9	1.030	87.6	LOS F	62.0	452.9	1.00	1.08	30.6
West: Newbridge Road (W)													
11	T1	1088	3.8	1088	3.8	0.425	9.2	LOS A	13.8	100.1	0.50	0.45	63.0
12	R2	1073	2.6	1073	2.6	1.148	188.3	LOS F	64.0	457.9	1.00	1.36	9.9
Approach		2161	3.2	2161	3.2	1.148	98.1	LOS F	64.0	457.9	0.75	0.90	25.7
All Vehicles		6594	4.9	6402 ^{N1}	5.1	1.148	86.9	LOS F	64.0	457.9	0.85	0.99	28.0

PHASING SUMMARY



Site: I-06 2028 BASE PM



Network: 2028 BASE PM

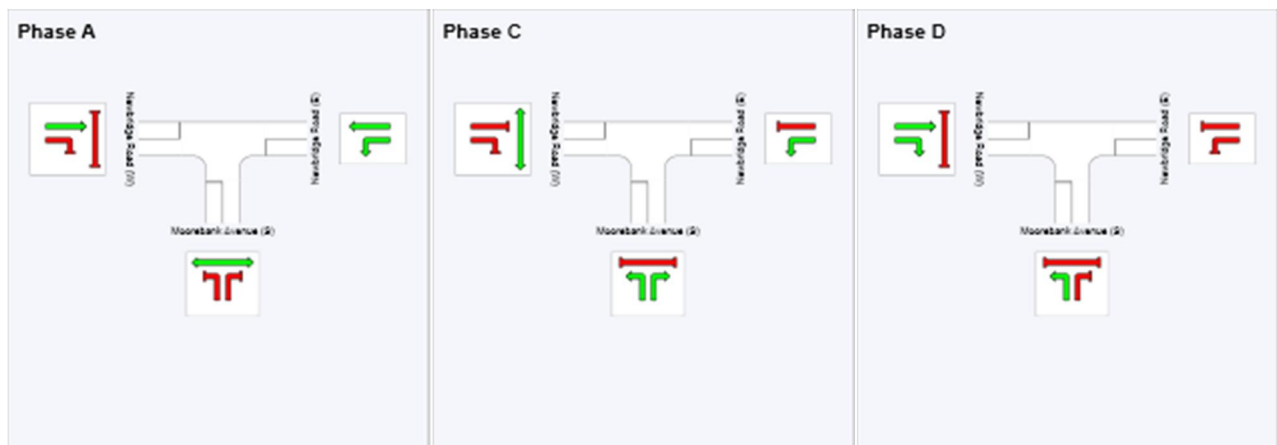
Newbridge Road / Moorebank Avenue

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	76
Green Time (sec)	38	26	34
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	32	40
Phase Split	38 %	28 %	34 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-06 2028 MIMT AM



Network: 2028 MIMT AM

Newbridge Road / Moorebank Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	1452	3.3	1188	3.4	0.614	18.6	LOS B	12.6	90.8	0.55	0.81	42.6
3	R2	1350	12.7	1106	12.8	0.679	15.1	LOS B	14.0	112.2	0.42	0.69	52.3
Approach		2802	7.8	2294 ^{N1}	7.9	0.679	16.9	LOS B	14.0	112.2	0.49	0.75	47.9
East: Newbridge Road (E)													
4	L2	703	22.5	703	22.5	0.640	19.3	LOS B	9.3	79.4	0.75	0.81	51.4
5	T1	945	5.2	945	5.2	1.235	289.3	LOS F	72.8	532.4	1.00	1.85	15.5
Approach		1648	12.6	1648	12.6	1.235	174.1	LOS F	72.8	532.4	0.90	1.40	20.0
West: Newbridge Road (W)													
11	T1	1513	6.5	1513	6.5	0.814	10.4	LOS A	25.7	190.1	0.57	0.53	62.2
12	R2	813	7.5	813	7.5	1.545	546.7	LOS F	83.7	624.6	1.00	1.86	3.7
Approach		2326	6.8	2326	6.8	1.545	197.9	LOS F	83.7	624.6	0.72	0.99	17.2
All Vehicles		6776	8.7	6268 ^{N1}	9.4	1.545	125.4	LOS F	83.7	624.6	0.68	1.01	22.2

PHASING SUMMARY



Site: I-06 2028 MIMT AM



Network: 2028 MIMT AM

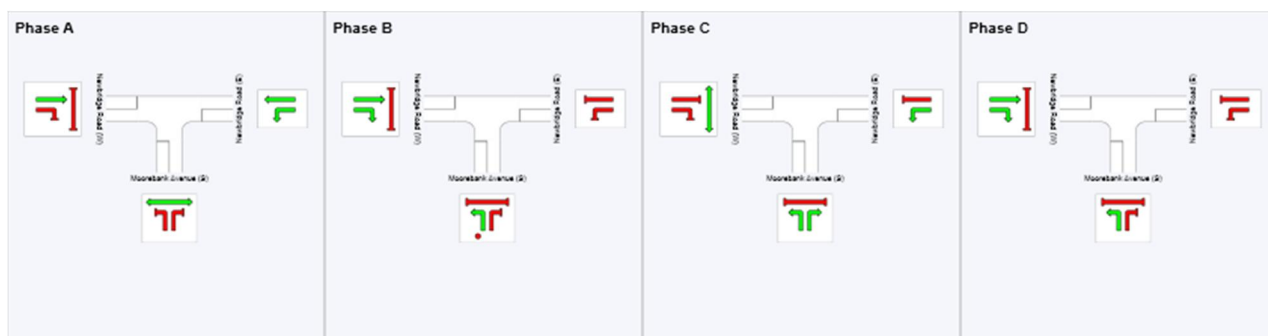
Newbridge Road / Moorebank Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	116
Green Time (sec)	27	16	55	11
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	61	17
Phase Split	25 %	17 %	46 %	13 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-06 2028 MIMT PM



Network: 2028 MIMT PM

Newbridge Road / Moorebank Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	973	3.4	873	3.5	0.499	22.4	LOS B	12.8	92.6	0.56	0.75	39.9
3	R2	952	13.4	859	14.0	1.153	196.0	LOS F	16.2	130.6	1.00	1.44	15.5
Approach		1925	8.3	1732 ^{N1}	8.7	1.153	108.5	LOS F	16.2	130.6	0.78	1.09	20.2
East: Newbridge Road (E)													
4	L2	1255	8.4	1255	8.4	1.132	211.0	LOS F	82.6	637.2	1.00	1.35	13.9
5	T1	1342	4.8	1342	4.8	0.903	47.3	LOS D	39.7	289.6	1.00	1.00	44.5
Approach		2597	6.5	2597	6.5	1.132	126.4	LOS F	82.6	637.2	1.00	1.17	24.5
West: Newbridge Road (W)													
11	T1	1088	3.8	1088	3.8	0.425	9.2	LOS A	13.8	100.1	0.50	0.45	63.0
12	R2	1073	2.6	1073	2.6	1.166	203.7	LOS F	67.3	481.9	1.00	1.40	9.2
Approach		2161	3.2	2161	3.2	1.166	105.7	LOS F	67.3	481.9	0.75	0.92	24.5
All Vehicles		6684	6.0	6491 ^{N1}	6.2	1.166	114.7	LOS F	82.6	637.2	0.86	1.07	23.5

PHASING SUMMARY



Site: I-06 2028 MIMT PM



Network: 2028 MIMT PM

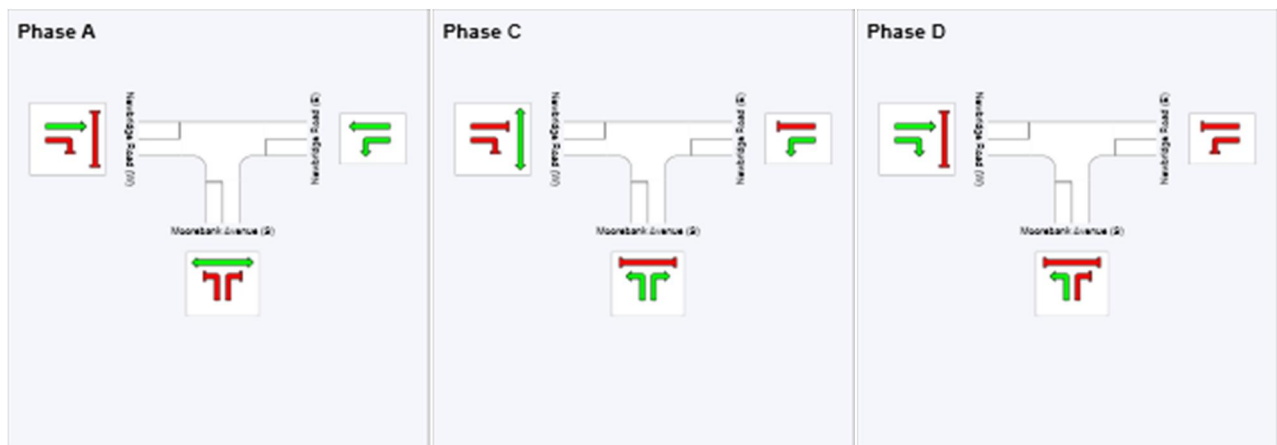
Newbridge Road / Moorebank Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	76
Green Time (sec)	38	26	34
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	32	40
Phase Split	38 %	28 %	34 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-06 2028 MIMT AM



Network: 2028 MIMT AM -
Upgrade Option

Newbridge Road / Moorebank Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles veh	Distance m			
		veh/h	%	veh/h	%								
South: Moorebank Avenue (S)													
1	L2	1452	3.3	1219	3.4	0.630	18.9	LOS B	13.3	95.9	0.56	0.82	42.3
3	R2	1350	12.7	1134	12.7	0.695	15.2	LOS B	14.8	118.4	0.44	0.69	52.2
Approach		2802	7.8	2353 ^{N1}	7.9	0.695	17.1	LOS B	14.8	118.4	0.50	0.76	47.8
East: Newbridge Road (E)													
4	L2	703	22.5	703	22.5	0.616	19.1	LOS B	9.0	77.2	0.74	0.81	51.5
5	T1	945	5.2	945	5.2	1.235	289.3	LOS F	72.8	532.4	1.00	1.85	15.5
Approach		1648	12.6	1648	12.6	1.235	174.0	LOS F	72.8	532.4	0.89	1.40	20.0
West: Newbridge Road (W)													
11	T1	1513	6.5	1513	6.5	0.814	10.4	LOS A	25.7	190.1	0.57	0.53	62.2
12	R2	813	7.5	813	7.5	1.506	511.7	LOS F	79.2	591.4	1.00	1.82	4.0
Approach		2326	6.8	2326	6.8	1.506	185.7	LOS F	79.2	591.4	0.72	0.98	18.1
All Vehicles		6776	8.7	6328 ^{N1}	9.3	1.506	120.0	LOS F	79.2	591.4	0.68	1.01	22.8

PHASING SUMMARY



Site: I-06 2028 MIMT AM



Network: 2028 MIMT AM -
Upgrade Option

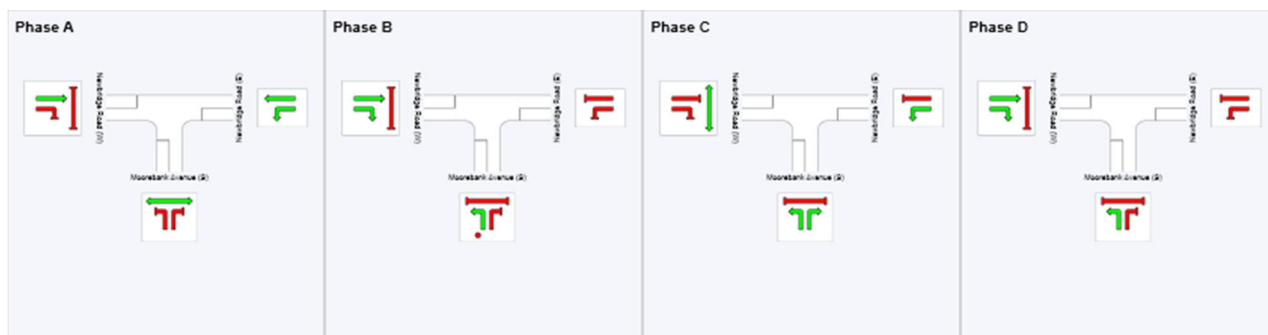
Newbridge Road / Moorebank Avenue

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	116
Green Time (sec)	27	16	55	11
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	61	17
Phase Split	25 %	17 %	46 %	13 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-06 2028 MIMT PM - Upgrade Option



Network: 2028 MIMT PM - Upgrade Option

Newbridge Road / Moorebank Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV	Total	HV		sec		Vehicles	Distance		per veh	km/h
		veh/h	%	veh/h	%	v/c			veh	m			
South: Moorebank Avenue (S)													
1	L2	973	3.4	916	3.4	0.533	23.6	LOS B	14.3	102.7	0.60	0.76	39.2
3	R2	952	13.4	899	13.7	0.978	64.6	LOS E	16.3	130.6	1.00	1.04	31.6
Approach		1925	8.3	1815 ^{N1}	8.5	0.978	43.9	LOS D	16.3	130.6	0.80	0.90	34.2
East: Newbridge Road (E)													
4	L2	1255	8.4	1255	8.4	1.041	138.7	LOS F	67.0	516.9	1.00	1.19	19.2
5	T1	1342	4.8	1342	4.8	0.903	47.3	LOS D	39.7	289.6	1.00	1.00	44.5
Approach		2597	6.5	2597	6.5	1.041	91.5	LOS F	67.0	516.9	1.00	1.09	29.8
West: Newbridge Road (W)													
11	T1	1088	3.8	1088	3.8	0.461	12.4	LOS A	16.1	116.1	0.57	0.51	60.9
12	R2	1073	2.6	1073	2.6	1.361	379.8	LOS F	94.8	678.7	1.00	1.75	5.3
Approach		2161	3.2	2161	3.2	1.361	194.8	LOS F	94.8	678.7	0.78	1.13	15.8
All Vehicles		6684	6.0	6574 ^{N1}	6.1	1.361	112.3	LOS F	94.8	678.7	0.87	1.05	23.7

PHASING SUMMARY



Site: I-06 2028 MIMT PM - Upgrade Option



Network: 2028 MIMT PM - Upgrade Option

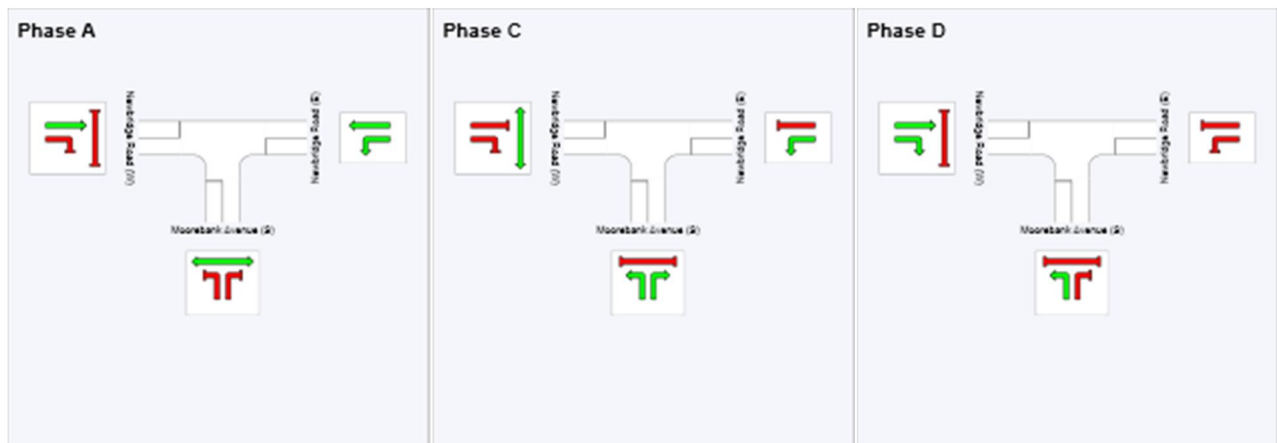
Newbridge Road / Moorebank Avenue

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	82
Green Time (sec)	38	32	28
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	38	34
Phase Split	38 %	33 %	29 %



I-07 Intersection of Moorebank Avenue and Heathcote Road

AM BASE

MOVEMENT SUMMARY



Site: I-07 2028 BASE AM



Network: 2028 BASE AM

Moorebank Avenue / Heathcote Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
2	T1	1883	5.7	1873	5.7	1.196	196.3	LOS F	60.0	440.6	1.00	1.85	4.9
3	R2	23	18.2	23	18.2	0.207	71.9	LOS F	1.5	12.0	0.98	0.71	30.5
Approach		1906	5.9	1896 ^{N1}	5.9	1.196	194.8	LOS F	60.0	440.6	1.00	1.84	5.1
East: Heathcote Road (E)													
4	L2	28	59.3	28	59.3	1.365	413.5	LOS F	93.3	704.0	1.00	1.83	7.8
6	R2	926	6.0	926	6.0	1.365	353.1	LOS F	93.3	704.0	1.00	1.72	8.9
Approach		955	7.6	955	7.6	1.365	354.9	LOS F	93.3	704.0	1.00	1.72	8.9
North: Moorebank Avenue (N)													
7	L2	754	7.7	632	8.3	0.391	10.7	LOS A	12.6	94.9	0.54	0.71	51.4
8	T1	732	17.0	618	18.3	0.352	21.1	LOS B	11.9	96.4	0.65	0.56	13.3
Approach		1485	12.3	1250 ^{N1}	13.2	0.391	15.8	LOS B	12.6	96.4	0.59	0.64	41.7
All Vehicles		4346	8.4	4101 ^{N1}	8.9	1.365	177.5	LOS F	93.3	704.0	0.88	1.44	9.6

PHASING SUMMARY



Site: I-07 2028 BASE AM



Network: 2028 BASE AM

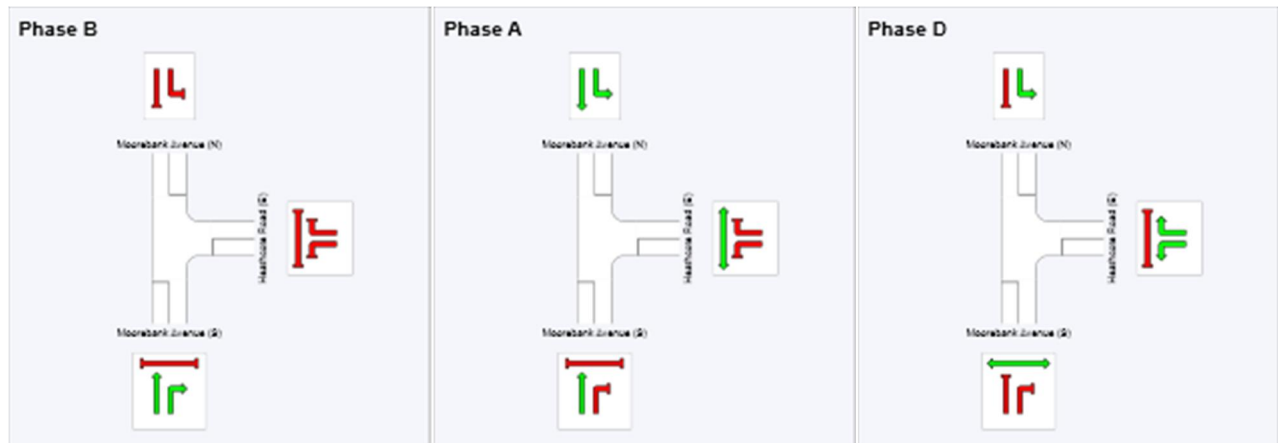
Moorebank Avenue / Heathcote Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	88
Green Time (sec)	9	67	39
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	73	45
Phase Split	11 %	55 %	34 %



PM BASE

MOVEMENT SUMMARY



Site: I-07 2028 BASE PM



Network: 2028 BASE PM

Moorebank Avenue / Heathcote Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1124	8.3	1124	8.3	0.872	33.7	LOS C	36.0	270.0	0.86	0.93	20.4
3	R2	47	6.7	47	6.7	0.387	64.5	LOS E	2.7	20.1	0.99	0.74	32.2
Approach		1172	8.3	1172	8.3	0.872	35.0	LOS C	36.0	270.0	0.87	0.92	21.7
East: Heathcote Road (E)													
4	L2	74	18.6	74	18.6	1.360	380.8	LOS F	87.0	646.0	1.00	1.89	8.3
6	R2	802	5.1	802	5.1	1.360	380.2	LOS F	87.0	646.0	1.00	1.90	8.3
Approach		876	6.3	876	6.3	1.360	380.3	LOS F	87.0	646.0	1.00	1.89	8.3
North: Moorebank Avenue (N)													
7	L2	871	3.5	804	3.6	0.396	7.5	LOS A	5.5	39.6	0.24	0.61	53.8
8	T1	1429	4.1	1321	4.1	0.672	6.3	LOS A	12.1	87.8	0.35	0.32	29.3
Approach		2300	3.8	2125 ^{N1}	3.9	0.672	6.7	LOS A	12.1	87.8	0.31	0.43	48.5
All Vehicles		4347	5.5	4173 ^{N1}	5.8	1.360	93.1	LOS F	87.0	646.0	0.61	0.88	15.8

PHASING SUMMARY



Site: I-07 2028 BASE PM



Network: 2028 BASE PM

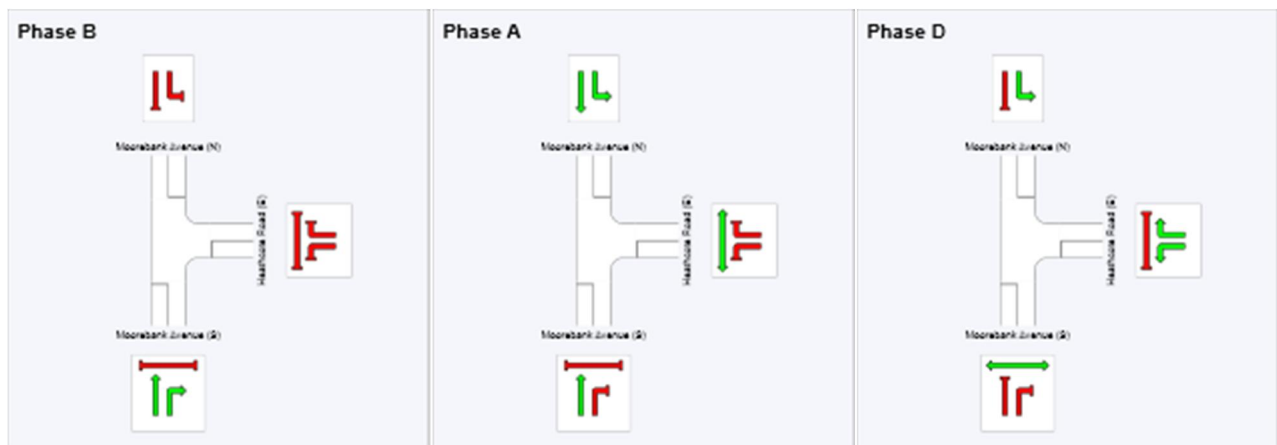
Moorebank Avenue / Heathcote Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-07 2028 MIMT AM



Network: 2028 MIMT AM

Moorebank Avenue / Heathcote Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1940	8.4	1732	8.6	1.133	147.5	LOS F	57.4	440.6	1.00	1.64	6.3
3	R2	23	18.2	21	18.4	0.187	71.8	LOS F	1.3	10.8	0.98	0.71	30.6
Approach		1963	8.6	1753 ^{N1}	8.7	1.133	146.6	LOS F	57.4	440.6	1.00	1.63	6.6
East: Heathcote Road (E)													
4	L2	28	59.3	28	59.3	1.439	479.0	LOS F	105.5	794.9	1.00	1.94	6.8
6	R2	926	6.0	926	6.0	1.439	418.9	LOS F	105.5	794.9	1.00	1.84	7.7
Approach		955	7.6	955	7.6	1.439	420.7	LOS F	105.5	794.9	1.00	1.84	7.6
North: Moorebank Avenue (N)													
7	L2	754	7.7	610	8.5	0.376	10.7	LOS A	12.1	90.7	0.54	0.71	51.4
8	T1	776	19.6	638	21.6	0.377	21.4	LOS B	12.5	106.7	0.66	0.57	13.1
Approach		1530	13.7	1248 ^{N1}	15.2	0.377	16.2	LOS B	12.5	106.7	0.60	0.64	41.1
All Vehicles		4447	10.1	3956 ^{N1}	11.4	1.439	171.6	LOS F	105.5	794.9	0.87	1.37	9.9

PHASING SUMMARY



Site: I-07 2028 MIMT AM



Network: 2028 MIMT AM

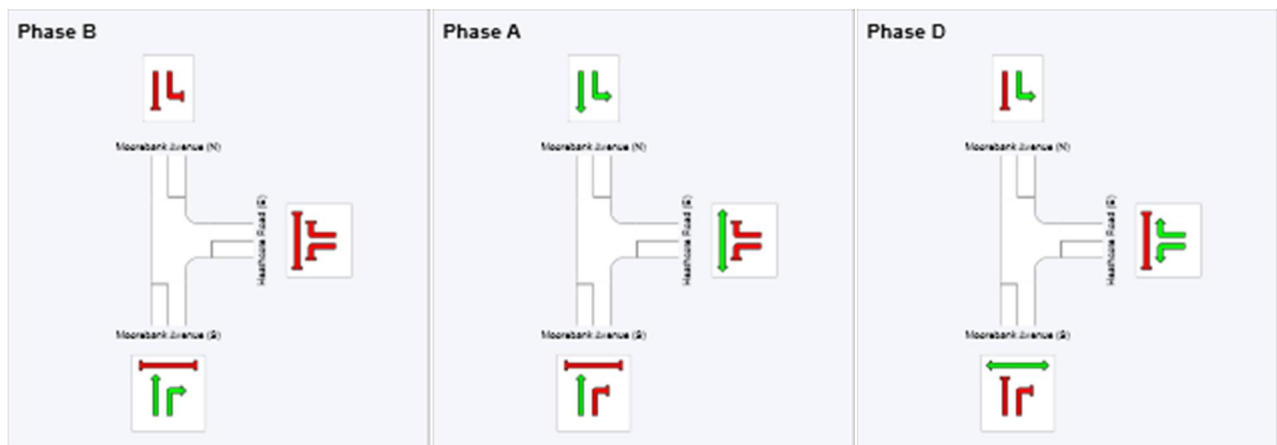
Moorebank Avenue / Heathcote Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	88
Green Time (sec)	9	67	39
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	73	45
Phase Split	11 %	55 %	34 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-07 2028 MIMT PM



Network: 2028 MIMT PM

Moorebank Avenue / Heathcote Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1171	10.5	1171	10.5	0.933	54.4	LOS D	47.5	369.8	0.95	1.14	14.5
3	R2	47	6.7	47	6.7	0.387	64.5	LOS E	2.7	20.1	0.99	0.74	32.2
Approach		1218	10.4	1218	10.4	0.933	54.8	LOS D	47.5	369.8	0.95	1.12	15.9
East: Heathcote Road (E)													
4	L2	74	18.6	74	18.6	1.504	509.3	LOS F	110.0	815.6	1.00	2.13	6.5
6	R2	802	5.1	802	5.1	1.504	400.1	LOS F	110.0	815.6	1.00	1.91	8.0
Approach		876	6.3	876	6.2	1.504	409.3	LOS F	110.0	815.6	1.00	1.93	7.8
North: Moorebank Avenue (N)													
7	L2	871	3.5	760	3.5	0.355	7.5	LOS A	5.0	36.2	0.24	0.61	53.8
8	T1	1473	6.9	1286	6.9	0.676	6.3	LOS A	11.9	90.4	0.36	0.32	29.2
Approach		2344	5.6	2046 ^{N1}	5.7	0.676	6.7	LOS A	11.9	90.4	0.31	0.43	48.4
All Vehicles		4437	7.1	4140 ^{N1}	7.6	1.504	106.0	LOS F	110.0	815.6	0.64	0.95	14.2

PHASING SUMMARY



Site: I-07 2028 MIMT PM



Network: 2028 MIMT PM

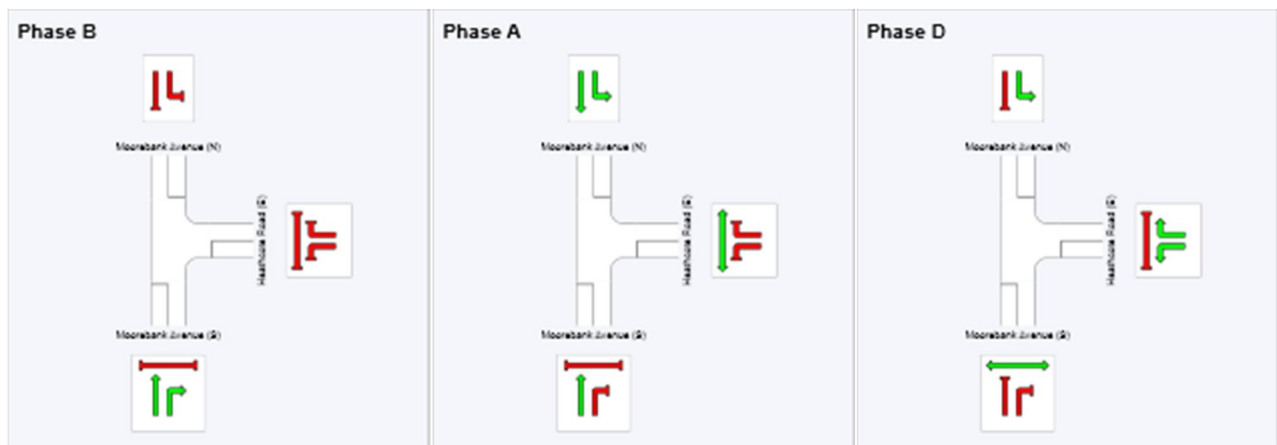
Moorebank Avenue / Heathcote Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-07 2028 MIMT AM - Upgrade Option



Network: 2028 MIMT AM - Upgrade Option

Moorebank Avenue / Heathcote Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV %	Total	HV %	v/c	sec		Vehicles	Distance		per veh	km/h
		veh/h		veh/h					veh	m			
South: Moorebank Avenue (S)													
2	T1	1940	8.4	1757	8.5	1.157	167.0	LOS F	57.4	440.6	1.00	1.74	5.7
3	R2	23	18.2	21	18.4	0.189	71.8	LOS F	1.3	10.9	0.98	0.71	30.7
Approach		1963	8.6	1778 ^{N1}	8.7	1.157	165.9	LOS F	57.4	440.6	1.00	1.72	6.0
East: Heathcote Road (E)													
4	L2	28	59.3	28	59.3	1.295	376.6	LOS F	56.5	431.7	1.00	1.71	8.4
6	R2	926	6.0	926	6.0	1.295	325.6	LOS F	56.5	431.7	1.00	1.64	9.5
Approach		955	7.6	955	7.6	1.295	327.1	LOS F	56.5	431.7	1.00	1.64	9.5
North: Moorebank Avenue (N)													
7	L2	754	7.7	617	8.5	0.381	10.7	LOS A	12.3	92.0	0.54	0.71	51.4
8	T1	776	19.6	645	21.4	0.364	19.6	LOS B	12.1	102.9	0.63	0.55	14.4
Approach		1530	13.7	1261 ^{N1}	15.1	0.381	15.2	LOS B	12.3	102.9	0.58	0.63	41.9
All Vehicles		4447	10.1	3994 ^{N1}	11.3	1.295	156.9	LOS F	57.4	440.6	0.87	1.36	10.7

PHASING SUMMARY



Site: I-07 2028 MIMT AM - Upgrade Option



Network: 2028 MIMT AM - Upgrade Option

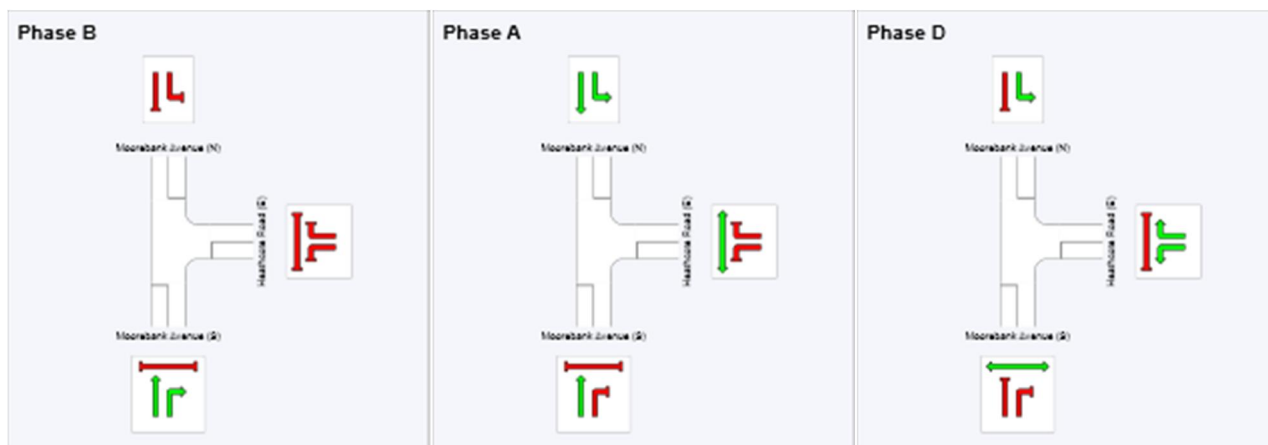
Moorebank Avenue / Heathcote Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	91
Green Time (sec)	9	70	36
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	76	42
Phase Split	11 %	57 %	32 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-07 2028 MIMT PM - Upgrade Option



Network: 2028 MIMT PM - Upgrade Option

Moorebank Avenue / Heathcote Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV %	Total	HV %	v/c	sec		Vehicles	Distance		per veh	km/h
		veh/h		veh/h					veh	m			
South: Moorebank Avenue (S)													
2	T1	1171	10.5	1171	10.5	0.872	33.0	LOS C	38.6	300.0	0.87	0.93	20.9
3	R2	47	6.7	47	6.7	0.387	64.5	LOS E	2.7	20.1	0.99	0.74	32.3
Approach		1218	10.4	1218	10.4	0.872	34.2	LOS C	38.6	300.0	0.87	0.92	22.0
East: Heathcote Road (E)													
4	L2	74	18.6	74	18.6	1.350	387.3	LOS F	56.6	423.2	1.00	1.86	8.2
6	R2	802	5.1	802	5.1	1.350	305.4	LOS F	56.6	423.2	1.00	1.69	10.0
Approach		876	6.3	876	6.3	1.350	312.3	LOS F	56.6	423.2	1.00	1.71	9.9
North: Moorebank Avenue (N)													
7	L2	871	3.5	746	3.7	0.344	7.4	LOS A	4.9	35.4	0.23	0.61	53.8
8	T1	1473	6.9	1266	7.4	0.668	6.3	LOS A	11.5	88.0	0.35	0.32	29.8
Approach		2344	5.6	2011 ^{N1}	6.0	0.668	6.7	LOS A	11.5	88.0	0.31	0.42	48.5
All Vehicles		4437	7.1	4105 ^{N1}	7.6	1.350	80.1	LOS F	56.6	423.2	0.62	0.85	17.5

PHASING SUMMARY



Site: I-07 2028 MIMT PM - Upgrade Option



Network: 2028 MIMT PM - Upgrade Option

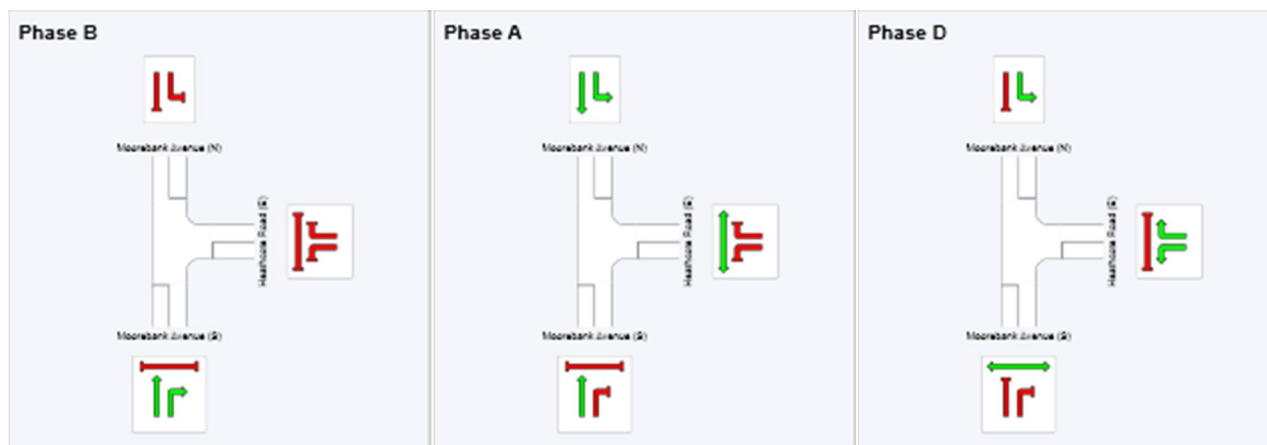
Moorebank Avenue / Heathcote Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



I-08 Intersection of Moorebank Avenue and Industry Park Access

AM BASE

MOVEMENT SUMMARY



Site: I-08 2028 BASE AM



Network: 2028 BASE AM

Moorebank Avenue / Industry Park Access

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (Network Cycle Time)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	87	1.2	87	1.2	0.053	6.1	LOS A	0.4	2.7	0.12	0.58	43.1
2	T1	1884	4.9	1884	4.9	1.173	218.7	LOS F	145.8	1062.9	1.00	1.94	7.2
Approach		1972	4.7	1972	4.7	1.173	209.3	LOS F	145.8	1062.9	0.96	1.88	7.6
North: Moorebank Avenue (N)													
8	T1	677	16.0	570	17.0	0.191	1.9	LOS A	3.2	25.8	0.19	0.17	57.6
9	R2	64	39.3	55	41.0	1.042	136.5	LOS F	5.3	49.7	1.00	1.09	10.4
Approach		741	18.0	624 ^{N1}	19.1	1.042	13.7	LOS A	5.3	49.7	0.26	0.25	45.1
West: Industry Park Access (W)													
10	L2	31	62.1	31	62.1	0.458	67.7	LOS E	2.1	22.4	0.97	0.71	9.3
12	R2	53	72.0	53	72.0	0.509	72.5	LOS F	2.6	29.2	0.99	0.74	19.2
Approach		83	68.4	83	68.4	0.509	70.7	LOS F	2.6	29.2	0.99	0.73	16.3
All Vehicles		2796	10.1	2679 ^{N1}	10.6	1.173	159.4	LOS F	145.8	1062.9	0.80	1.47	10.4

PHASING SUMMARY



Site: I-08 2028 BASE AM



Network: 2028 BASE AM

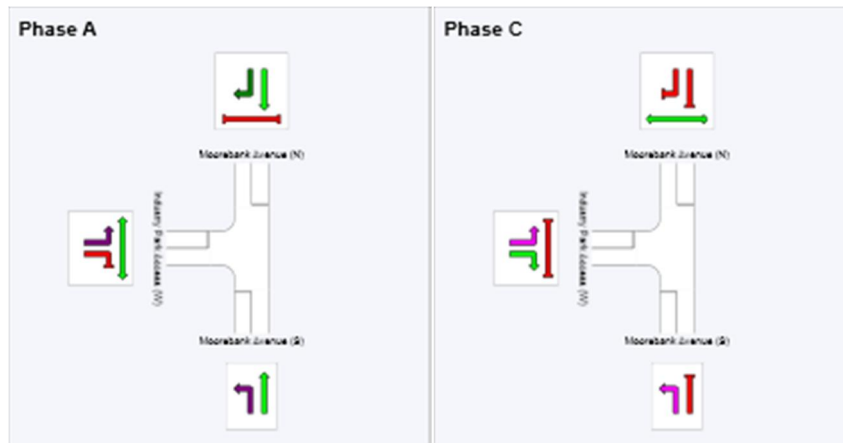
Moorebank Avenue / Industry Park Access

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (Network Cycle Time)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	119
Green Time (sec)	113	8
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	119	14
Phase Split	89 %	11 %



PM BASE

MOVEMENT SUMMARY



Site: I-08 2028 BASE PM



Network: 2028 BASE PM

Moorebank Avenue / Industry Park Access

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 65 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	7	14.3	7	14.3	0.006	6.5	LOS A	0.0	0.2	0.21	0.57	42.8
2	T1	1116	7.5	1116	7.5	0.434	4.7	LOS A	7.8	57.8	0.47	0.42	51.8
Approach		1123	7.6	1123	7.6	0.434	4.7	LOS A	7.8	57.8	0.47	0.42	51.7
North: Moorebank Avenue (N)													
8	T1	1484	3.8	1360	3.8	0.516	5.1	LOS A	10.3	74.4	0.52	0.47	54.0
9	R2	23	63.6	21	63.3	0.115	13.8	LOS A	0.3	3.6	0.48	0.66	33.2
Approach		1507	4.7	1381 ^{N1}	4.7	0.516	5.3	LOS A	10.3	74.4	0.52	0.47	53.6
West: Industry Park Access (W)													
10	L2	33	12.9	33	12.9	0.061	3.6	LOS A	0.2	1.9	0.34	0.41	26.8
12	R2	182	8.7	182	8.7	0.423	32.3	LOS C	2.9	21.5	0.97	0.76	28.2
Approach		215	9.3	215	9.3	0.423	27.9	LOS B	2.9	21.5	0.87	0.71	28.1
All Vehicles		2845	6.2	2719 ^{N1}	6.5	0.516	6.8	LOS A	10.3	74.4	0.53	0.47	49.4

PHASING SUMMARY



Site: I-08 2028 BASE PM



Network: 2028 BASE PM

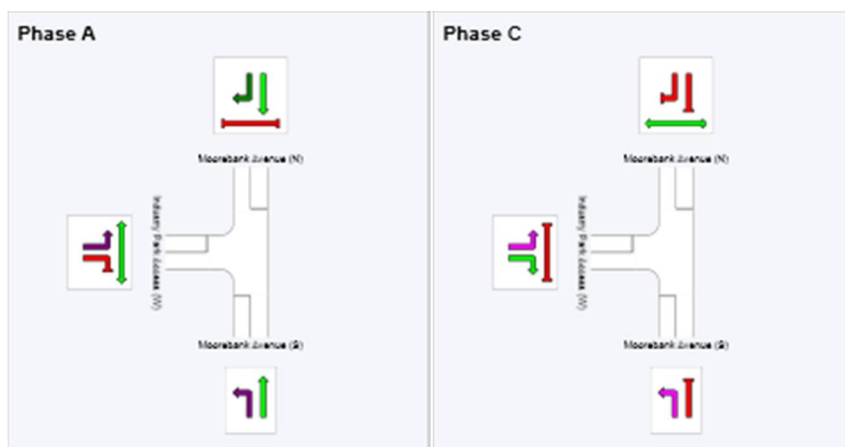
Moorebank Avenue / Industry Park Access

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 65 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	51
Green Time (sec)	45	8
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	51	14
Phase Split	78 %	22 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-08 2028 MIMT AM



Network: 2028 MIMT AM

Moorebank Avenue / Industry Park Access

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	90	3.7	90	3.7	0.056	6.1	LOS A	0.4	3.0	0.12	0.58	43.1
2	T1	1941	7.6	1941	7.6	1.280	314.8	LOS F	175.7	1340.1	1.00	2.30	5.2
Approach		2030	7.5	2030	7.5	1.280	301.2	LOS F	175.7	1340.1	0.96	2.22	5.5
North: Moorebank Avenue (N)													
8	T1	721	18.9	591	20.5	0.212	2.5	LOS A	3.9	33.2	0.22	0.20	56.9
9	R2	64	39.3	53	41.6	1.016	118.6	LOS F	4.7	44.8	1.00	1.05	11.6
Approach		786	20.5	644 ^{N1}	22.3	1.016	12.2	LOS A	4.7	44.8	0.29	0.27	46.4
West: Industry Park Access (W)													
10	L2	31	62.1	31	62.1	0.376	64.3	LOS E	2.0	21.9	0.95	0.70	9.6
12	R2	55	73.3	55	73.3	0.397	68.0	LOS E	2.6	30.2	0.98	0.73	19.8
Approach		86	69.3	86	69.3	0.397	66.7	LOS E	2.6	30.2	0.97	0.72	16.9
All Vehicles		2902	12.8	2760 ^{N1}	13.5	1.280	226.5	LOS F	175.7	1340.1	0.80	1.72	7.8

PHASING SUMMARY



Site: I-08 2028 MIMT AM



Network: 2028 MIMT AM

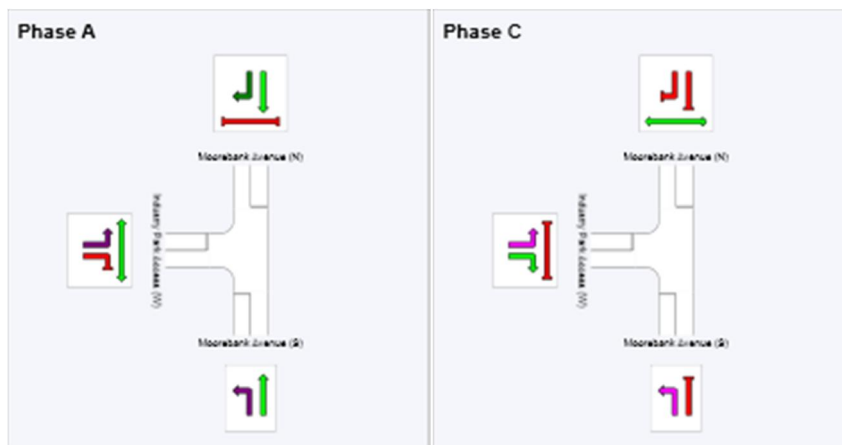
Moorebank Avenue / Industry Park Access

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	116
Green Time (sec)	110	11
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	116	17
Phase Split	87 %	13 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-08 2028 MIMT PM



Network: 2028 MIMT PM

Moorebank Avenue / Industry Park Access

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	10	37.3	10	37.3	0.010	6.6	LOS A	0.0	0.5	0.13	0.56	43.0
2	T1	1162	9.8	1162	9.8	0.424	4.3	LOS A	10.8	83.4	0.35	0.32	52.5
Approach		1172	10.0	1172	10.0	0.424	4.3	LOS A	10.8	83.4	0.35	0.32	52.4
North: Moorebank Avenue (N)													
8	T1	1528	6.6	1321	6.5	0.456	4.4	LOS A	12.3	92.9	0.36	0.33	54.7
9	R2	23	63.6	20	63.1	0.140	13.8	LOS A	0.4	4.5	0.37	0.65	33.2
Approach		1551	7.4	1341 ^{N1}	7.3	0.456	4.6	LOS A	12.3	92.9	0.36	0.34	54.4
West: Industry Park Access (W)													
10	L2	33	12.9	33	12.9	0.073	3.3	LOS A	0.3	2.5	0.23	0.36	27.0
12	R2	185	10.1	185	10.1	0.481	56.1	LOS D	5.1	39.4	0.98	0.78	22.4
Approach		218	10.6	218	10.6	0.481	48.2	LOS D	5.1	39.4	0.87	0.71	22.6
All Vehicles		2941	8.7	2730 ^{N1}	9.4	0.481	7.9	LOS A	12.3	92.9	0.40	0.36	48.2

PHASING SUMMARY



Site: I-08 2028 MIMT PM



Network: 2028 MIMT PM

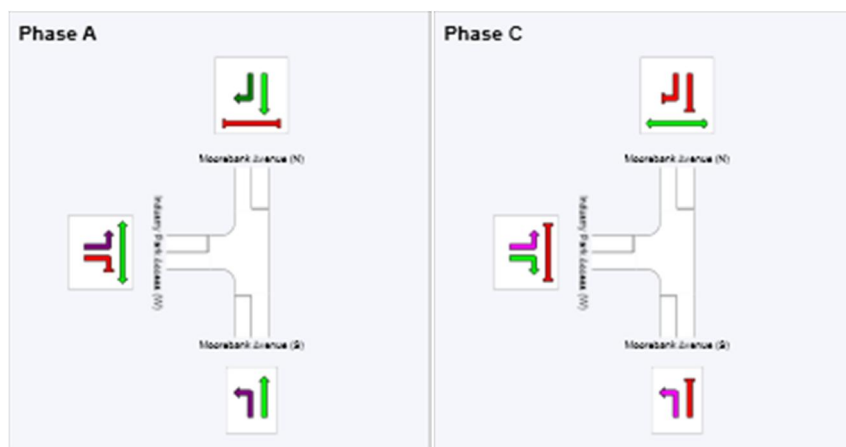
Moorebank Avenue / Industry Park Access

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	97
Green Time (sec)	91	13
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	97	19
Phase Split	84 %	16 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-08 2028 MIMT AM



Network: 2028 MIMT AM -
Upgrade Option

Moorebank Avenue / Industry Park Access

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV %	Total	HV %	v/c	sec		Vehicles	Distance		per veh	km/h
		veh/h		veh/h					veh	m			
South: Moorebank Avenue (S)													
1	L2	90	3.7	90	3.7	0.056	6.1	LOS A	0.4	3.0	0.12	0.58	43.1
2	T1	1941	7.6	1941	7.6	1.280	314.8	LOS F	175.7	1340.1	1.00	2.30	5.2
Approach		2030	7.5	2030	7.5	1.280	301.2	LOS F	175.7	1340.1	0.96	2.22	5.5
North: Moorebank Avenue (N)													
8	T1	721	18.9	598	20.5	0.214	2.5	LOS A	4.0	33.7	0.23	0.20	56.9
9	R2	64	39.3	54	41.6	1.030	127.7	LOS F	5.0	47.4	1.00	1.07	11.0
Approach		786	20.5	653 ^{N1}	22.3	1.030	12.9	LOS A	5.0	47.4	0.29	0.27	45.8
West: Industry Park Access (W)													
10	L2	31	62.1	31	62.1	0.376	64.3	LOS E	2.0	21.9	0.95	0.70	9.6
12	R2	55	73.3	55	73.3	0.397	68.0	LOS E	2.6	30.2	0.98	0.73	19.8
Approach		86	69.3	86	69.3	0.397	66.7	LOS E	2.6	30.2	0.97	0.72	16.9
All Vehicles		2902	12.8	2769 ^{N1}	13.4	1.280	226.0	LOS F	175.7	1340.1	0.80	1.72	7.8

PHASING SUMMARY



Site: I-08 2028 MIMT AM



Network: 2028 MIMT AM -
Upgrade Option

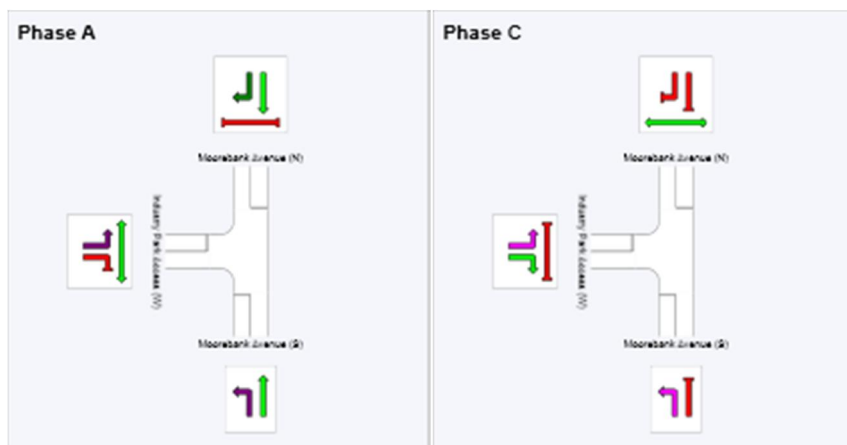
Moorebank Avenue / Industry Park Access

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	116
Green Time (sec)	110	11
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	116	17
Phase Split	87 %	13 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-08 2028 MIMT PM



Network: 2028 MIMT PM -
Upgrade Option

Moorebank Avenue / Industry Park Access

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV	Total	HV	v/c	sec		Vehicles	Distance	per veh	km/h
		veh/h	%	veh/h	%				veh	m		
South: Moorebank Avenue (S)												
1	L2	10	37.3	10	37.3	0.010	6.6	LOS A	0.0	0.5	0.13	43.0
2	T1	1162	9.8	1162	9.8	0.409	4.2	LOS A	10.2	79.0	0.34	52.6
Approach		1172	10.0	1172	10.0	0.409	4.2	LOS A	10.2	79.0	0.34	52.5
North: Moorebank Avenue (N)												
8	T1	1528	6.6	1308	6.9	0.454	4.4	LOS A	12.1	92.2	0.36	54.8
9	R2	23	63.6	20	64.5	0.143	13.4	LOS A	0.4	4.6	0.36	33.4
Approach		1551	7.4	1329 ^{N1}	7.8	0.454	4.5	LOS A	12.1	92.2	0.36	54.4
West: Industry Park Access (W)												
10	L2	33	12.9	33	12.9	0.068	3.1	LOS A	0.3	2.3	0.22	27.2
12	R2	185	10.1	185	10.1	0.481	56.1	LOS D	5.1	39.4	0.98	22.4
Approach		218	10.6	218	10.6	0.481	48.1	LOS D	5.1	39.4	0.87	22.7
All Vehicles		2941	8.7	2718 ^{N1}	9.4	0.481	7.9	LOS A	12.1	92.2	0.39	48.3

PHASING SUMMARY



Site: I-08 2028 MIMT PM



Network: 2028 MIMT PM -
Upgrade Option

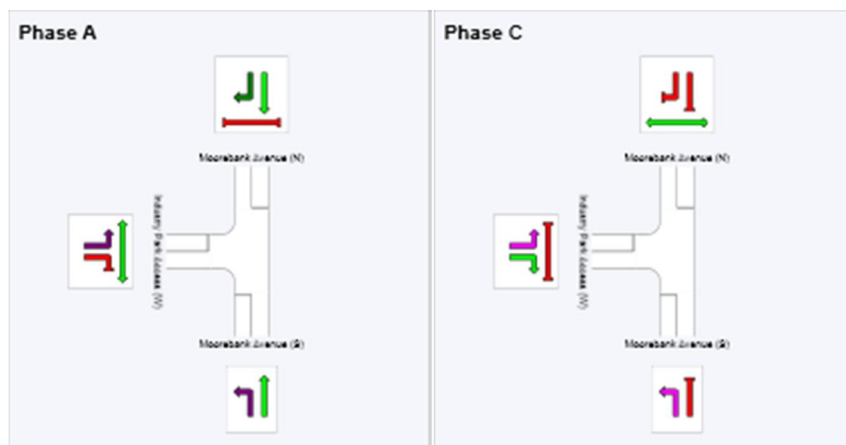
Moorebank Avenue / Industry Park Access

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	97
Green Time (sec)	91	13
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	97	19
Phase Split	84 %	16 %



I-09 Intersection of Moorebank Avenue and Church Road

AM BASE

MOVEMENT SUMMARY



Site: I-09 2028 BASE AM

Moorebank Avenue / Church Road
2028 BASE AM PEAK 7:45 am - 8:45 am
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Moorebank Avenue (S)											
2	T1	2076	6.4	0.719	4.0	LOS A	10.8	80.1	0.19	0.11	55.7
3	R2	280	7.5	0.719	23.9	LOS B	10.8	80.1	1.00	0.57	41.1
Approach		2356	6.5	0.899	6.4	NA	10.8	80.1	0.29	0.16	53.4
East: Church Road (E)											
4	L2	196	14.5	0.235	7.0	LOS A	0.9	7.3	0.47	0.69	47.6
6	R2	6	0.0	0.810	767.5	LOS F	2.0	13.8	1.00	1.04	4.3
Approach		202	14.1	0.810	30.8	LOS C	2.0	13.8	0.49	0.70	36.3
North: Moorebank Avenue (N)											
7	L2	34	0.0	0.211	5.6	LOS A	0.0	0.0	0.00	0.06	57.7
8	T1	694	21.1	0.211	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		727	20.1	0.211	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		3285	10.0	0.899	6.5	NA	10.8	80.1	0.23	0.17	53.0

PM BASE

MOVEMENT SUMMARY



Site: I-09 2028 BASE PM

Moorebank Avenue / Church Road
2028 BASE PM PEAK 4:30 pm - 5:30 pm
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Moorebank Avenue (S)											
2	T1	1167	11.9	0.580	3.9	LOS A	6.1	47.0	0.10	0.06	56.0
3	R2	107	11.8	0.580	42.9	LOS D	6.1	47.0	1.00	0.61	33.7
Approach		1275	11.9	0.580	7.1	NA	6.1	47.0	0.18	0.11	53.0
East: Church Road (E)											
4	L2	413	4.1	1.222	268.3	LOS F	66.7	483.1	1.00	4.47	10.7
6	R2	1	0.0	0.109	333.0	LOS F	0.3	1.9	0.99	1.00	9.0
Approach		414	4.1	1.222	268.5	LOS F	66.7	483.1	1.00	4.46	10.7
North: Moorebank Avenue (N)											
7	L2	13	8.3	0.879	6.6	LOS A	0.0	0.0	0.00	0.01	56.0
8	T1	1654	4.4	0.879	1.2	LOS A	0.0	0.0	0.00	0.00	57.7
Approach		1666	4.4	0.879	1.2	NA	0.0	0.0	0.00	0.00	57.7
All Vehicles		3355	7.2	1.222	36.4	NA	66.7	483.1	0.19	0.59	36.3

AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY

▽ Site: I-09 2028 MIMT AM

Moorebank Avenue / Church Road
2028 MIMT AM PEAK 7:45 am - 8:45 am
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	2135	9.0	0.789	7.2	LOS A	12.5	96.3	0.16	0.11	53.1
3	R2	286	9.3	0.789	30.7	LOS C	12.5	96.3	1.00	0.70	38.1
Approach		2420	9.0	0.986	10.0	NA	12.5	96.3	0.26	0.18	50.7
East: Church Road (E)											
4	L2	201	16.6	0.262	7.5	LOS A	1.0	8.5	0.51	0.73	47.2
6	R2	6	0.0	0.810	778.3	LOS F	2.0	14.0	1.00	1.04	4.3
Approach		207	16.1	0.810	31.1	LOS C	2.0	14.0	0.52	0.74	36.1
North: Moorebank Avenue (N)											
7	L2	34	0.0	0.232	5.6	LOS A	0.0	0.0	0.00	0.05	57.7
8	T1	741	23.8	0.232	0.0	LOS A	0.0	0.0	0.00	0.02	59.6
Approach		774	22.8	0.232	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		3402	12.6	0.986	9.0	NA	12.5	96.3	0.22	0.18	51.1

PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY

▽ Site: I-09 2028 MIMT PM

Moorebank Avenue / Church Road
2028 MIMT PM PEAK 4:30 pm - 5:30 pm
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%				v/c	sec			
South: Moorebank Avenue (S)											
2	T1	1216	14.1	0.689	0.2	LOS A	0.0	0.0	0.00	0.00	59.6
3	R2	113	16.0	0.742	59.3	LOS E	3.7	30.5	0.97	1.21	28.6
Approach		1329	14.2	0.742	5.2	NA	3.7	30.5	0.08	0.10	54.4
East: Church Road (E)											
4	L2	418	5.4	1.362	385.1	LOS F	85.9	635.9	1.00	5.23	8.0
6	R2	1	0.0	0.214	743.3	LOS F	0.5	3.6	1.00	1.00	4.4
Approach		419	5.4	1.362	386.0	LOS F	85.9	635.9	1.00	5.22	8.0
North: Moorebank Avenue (N)											
7	L2	13	8.3	0.931	7.4	LOS A	0.0	0.0	0.00	0.01	54.5
8	T1	1700	7.0	0.931	2.1	LOS A	0.0	0.0	0.00	0.00	55.9
Approach		1713	7.0	0.931	2.2	NA	0.0	0.0	0.00	0.00	55.9
All Vehicles		3461	9.6	1.362	49.8	NA	85.9	635.9	0.15	0.67	31.8

AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY

Site: I-09 2028 MIMT AM - Upgrade Option

Moorebank Avenue / Church Road
2028 MIMT AM PEAK 7:45 am - 8:45 am
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	2135	9.0	0.789	7.2	LOS A	12.5	96.3	0.16	0.11	53.1
3	R2	286	9.3	0.789	30.7	LOS C	12.5	96.3	1.00	0.70	37.9
Approach		2420	9.0	0.986	9.9	NA	12.5	96.3	0.26	0.18	50.6
East: Church Road (E)											
4	L2	201	16.6	0.262	7.5	LOS A	1.0	8.5	0.51	0.73	47.2
Approach		201	16.6	0.262	7.5	LOS A	1.0	8.5	0.51	0.73	47.2
North: Moorebank Avenue (N)											
7	L2	34	0.0	0.232	5.6	LOS A	0.0	0.0	0.00	0.05	57.7
8	T1	741	23.8	0.232	0.0	LOS A	0.0	0.0	0.00	0.02	59.6
Approach		774	22.8	0.232	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		3395	12.6	0.986	7.6	NA	12.5	96.3	0.21	0.18	52.2

PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY

Site: I-09 2028 MIMT PM - Upgrade Option

Moorebank Avenue / Church Road
2028 MIMT PM PEAK 4:30 pm - 5:30 pm
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	1216	14.1	0.687	0.3	LOS A	3.7	30.8	0.00	0.00	59.7
3	R2	113	16.0	0.687	52.8	LOS D	3.7	30.8	0.99	1.16	30.0
Approach		1329	14.2	0.687	4.8	NA	3.7	30.8	0.09	0.10	54.9
East: Church Road (E)											
4	L2	418	5.4	1.361	383.8	LOS F	85.7	634.6	1.00	5.22	8.0
Approach		418	5.4	1.361	383.8	LOS F	85.7	634.6	1.00	5.22	8.0
North: Moorebank Avenue (N)											
7	L2	13	8.3	0.931	7.4	LOS A	0.0	0.0	0.00	0.01	54.5
8	T1	1700	7.0	0.931	2.1	LOS A	0.0	0.0	0.00	0.00	55.9
Approach		1713	7.0	0.931	2.2	NA	0.0	0.0	0.00	0.00	55.9
All Vehicles		3460	9.6	1.361	49.3	NA	85.7	634.6	0.15	0.67	31.9

I-10 Intersection of Heathcote Road and Nuwarra Road

AM BASE

MOVEMENT SUMMARY



Site: I-10 2028 BASE AM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Prop. Queued	Effective Stop Rate	Average Speed		
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
SouthEast: Heathcote Road (SE)											
4	L2	241	0.9	0.166	8.2	LOS A	3.2	22.2	0.27	0.63	48.3
5	T1	1971	5.2	1.198	235.5	LOS F	138.4	1012.4	1.00	1.95	12.1
6	R2	626	3.2	1.078	234.3	LOS F	41.5	298.6	1.00	1.47	12.5
Approach		2838	4.4	1.198	215.9	LOS F	138.4	1012.4	0.94	1.73	12.8
NorthEast: Nuwarra Road (NE)											
7	L2	408	4.6	0.474	23.9	LOS B	16.0	116.2	0.70	0.78	42.7
8	T1	240	8.3	0.386	52.9	LOS D	6.9	51.9	0.94	0.75	26.3
9	R2	495	6.0	1.399	443.8	LOS F	46.6	343.1	1.00	1.87	7.0
Approach		1143	6.0	1.399	211.7	LOS F	46.6	343.1	0.88	1.25	12.6
NorthWest: Heathcote Road (NW)											
10	L2	249	11.8	0.329	21.5	LOS B	7.7	59.0	0.69	0.76	42.7
11	T1	1038	11.6	0.952	53.5	LOS D	41.9	322.3	0.90	0.96	31.6
12	R2	234	6.3	0.783	75.3	LOS F	8.0	58.8	1.00	0.88	19.9
Approach		1521	10.8	0.952	51.6	LOS D	41.9	322.3	0.88	0.91	31.1
SouthWest: Wattle Grove Drive (SW)											
1	L2	620	2.0	0.823	49.2	LOS D	29.3	209.0	0.98	1.12	25.5
2	T1	532	4.4	0.794	60.5	LOS E	18.8	136.5	1.00	0.92	24.1
3	R2	263	4.0	1.277	332.6	LOS F	42.3	306.5	1.00	1.80	6.6
Approach		1415	3.3	1.277	106.2	LOS F	42.3	306.5	0.99	1.17	16.2
All Vehicles		6917	5.8	1.399	156.7	LOS F	138.4	1012.4	0.93	1.36	15.3

PHASING SUMMARY



Site: I-10 2028 BASE AM

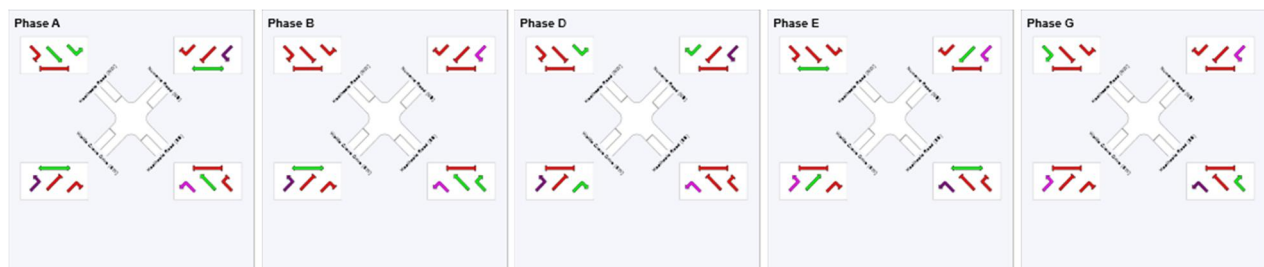
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	D	E	G
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	54	67	86	114
Green Time (sec)	48	7	13	22	11
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Split (sec)	54	13	19	28	17
Phase Split	41 %	10 %	15 %	21 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-10 2028 BASE PM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
SouthEast: Heathcote Road (SE)											
4	L2	331	2.2	0.280	15.6	LOS B	9.0	64.4	0.46	0.69	42.2
5	T1	1311	5.5	1.005	95.2	LOS F	63.7	466.7	1.00	1.23	23.1
6	R2	459	3.0	1.096	183.7	LOS F	27.1	194.8	1.00	1.31	15.0
Approach		2100	4.4	1.096	102.0	LOS F	63.7	466.7	0.91	1.16	21.5
NorthEast: Nuwarra Road (NE)											
7	L2	632	2.5	0.893	61.2	LOS E	38.5	275.2	1.00	1.15	29.9
8	T1	616	1.0	0.944	79.3	LOS F	26.0	183.9	1.00	1.07	20.5
9	R2	545	6.0	1.091	159.6	LOS F	32.9	242.4	1.00	1.25	16.1
Approach		1793	3.1	1.091	97.4	LOS F	38.5	275.2	1.00	1.15	21.3
NorthWest: Heathcote Road (NW)											
10	L2	251	5.5	0.230	22.2	LOS B	8.5	62.1	0.55	0.73	42.5
11	T1	1654	2.7	1.174	227.0	LOS F	117.0	837.6	1.00	1.81	12.5
12	R2	457	1.6	1.008	108.6	LOS F	22.0	156.0	1.00	1.08	15.5
Approach		2361	2.8	1.174	182.4	LOS F	117.0	837.6	0.95	1.55	13.9
SouthWest: Wattle Grove Drive (SW)											
1	L2	302	1.4	0.385	37.4	LOS C	13.7	97.3	0.76	0.88	29.3
2	T1	317	1.0	0.431	56.3	LOS D	9.7	68.1	0.94	0.77	25.0
3	R2	346	0.9	1.281	345.1	LOS F	57.8	408.0	1.00	1.76	6.4
Approach		965	1.1	1.281	154.0	LOS F	57.8	408.0	0.91	1.16	12.3
All Vehicles		7219	3.1	1.281	134.1	LOS F	117.0	837.6	0.95	1.29	17.0

PHASING SUMMARY



Site: I-10 2028 BASE PM

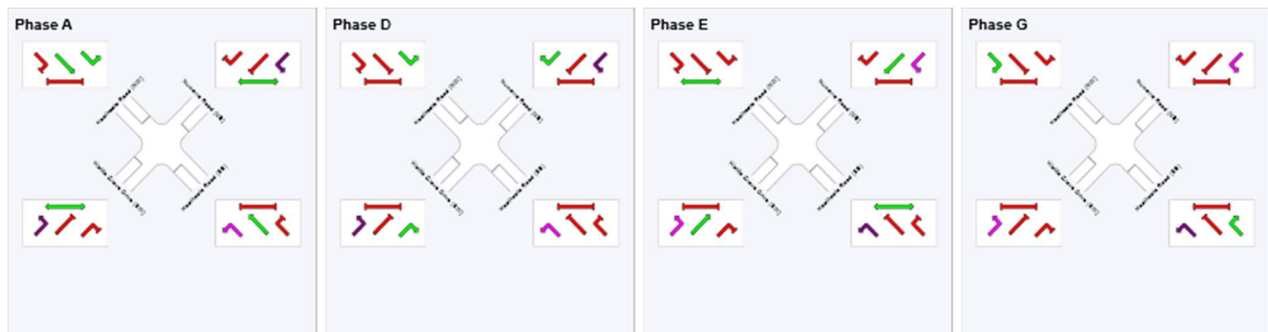
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	61	87	117
Green Time (sec)	55	20	24	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	61	26	30	22
Phase Split	44 %	19 %	22 %	16 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-10 2028 MIMT AM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
SouthEast: Heathcote Road (SE)											
4	L2	251	0.8	0.173	8.2	LOS A	3.3	23.4	0.27	0.63	48.3
5	T1	1971	5.3	1.201	238.2	LOS F	139.5	1020.9	1.00	1.96	12.0
6	R2	626	3.2	1.078	234.3	LOS F	41.5	298.6	1.00	1.47	12.5
Approach		2848	4.4	1.201	217.1	LOS F	139.5	1020.9	0.94	1.73	12.7
NorthEast: Nuwarra Road (NE)											
7	L2	408	4.6	0.474	24.4	LOS B	16.0	116.7	0.71	0.78	42.5
8	T1	253	7.9	0.406	53.1	LOS D	7.3	54.7	0.94	0.76	26.2
9	R2	495	6.0	1.399	443.8	LOS F	46.6	343.1	1.00	1.87	7.0
Approach		1156	5.9	1.399	210.1	LOS F	46.6	343.1	0.88	1.24	12.6
NorthWest: Heathcote Road (NW)											
10	L2	249	11.8	0.329	21.5	LOS B	7.7	59.0	0.69	0.76	42.7
11	T1	1039	11.6	0.953	53.9	LOS D	42.1	324.3	0.90	0.96	31.5
12	R2	234	6.3	0.783	75.3	LOS F	8.0	58.8	1.00	0.88	19.9
Approach		1522	10.8	0.953	51.8	LOS D	42.1	324.3	0.88	0.92	31.0
SouthWest: Wattle Grove Drive (SW)											
1	L2	620	2.0	0.823	49.2	LOS D	29.3	209.0	0.98	1.12	25.5
2	T1	532	4.4	0.794	60.5	LOS E	18.8	136.5	1.00	0.92	24.1
3	R2	263	4.0	1.277	332.6	LOS F	42.3	306.5	1.00	1.80	6.6
Approach		1415	3.3	1.277	106.2	LOS F	42.3	306.5	0.99	1.17	16.2
All Vehicles		6941	5.8	1.399	157.1	LOS F	139.5	1020.9	0.93	1.36	15.2

PHASING SUMMARY



Site: I-10 2028 MIMT AM

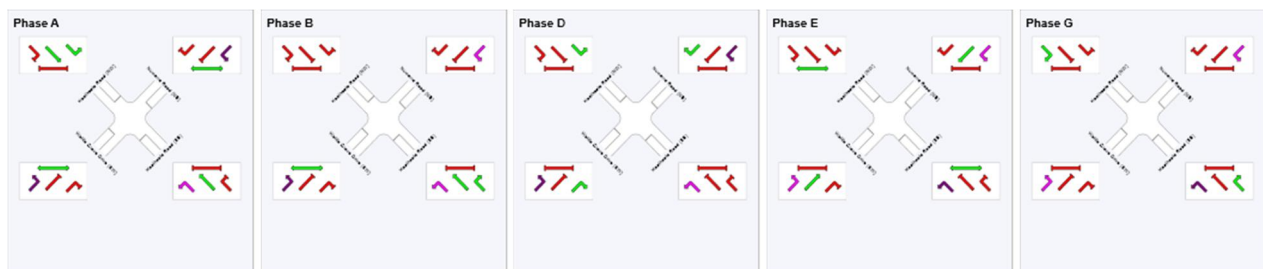
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	D	E	G
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	54	67	86	114
Green Time (sec)	48	7	13	22	11
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	54	13	19	28	17
Phase Split	41 %	10 %	15 %	21 %	13 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-10 2028 MIMT PM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
SouthEast: Heathcote Road (SE)											
4	L2	331	2.2	0.280	15.6	LOS B	9.0	64.4	0.46	0.69	42.2
5	T1	1311	5.5	1.006	96.0	LOS F	64.0	469.1	1.00	1.23	23.0
6	R2	459	3.0	1.096	183.7	LOS F	27.1	194.8	1.00	1.31	15.0
Approach		2101	4.4	1.096	102.5	LOS F	64.0	469.1	0.91	1.16	21.4
NorthEast: Nuwarra Road (NE)											
7	L2	632	2.5	0.893	61.2	LOS E	38.5	275.2	1.00	1.15	29.9
8	T1	616	1.0	0.944	79.3	LOS F	26.0	183.9	1.00	1.07	20.5
9	R2	545	6.0	1.091	159.6	LOS F	32.9	242.4	1.00	1.25	16.1
Approach		1793	3.1	1.091	97.4	LOS F	38.5	275.2	1.00	1.15	21.3
NorthWest: Heathcote Road (NW)											
10	L2	251	5.5	0.230	22.2	LOS B	8.5	62.1	0.55	0.73	42.5
11	T1	1654	2.7	1.174	227.7	LOS F	117.2	839.5	1.00	1.81	12.4
12	R2	457	1.6	1.008	108.6	LOS F	22.0	156.0	1.00	1.08	15.5
Approach		2362	2.8	1.174	182.8	LOS F	117.2	839.5	0.95	1.55	13.9
SouthWest: Wattle Grove Drive (SW)											
1	L2	302	1.4	0.385	37.4	LOS C	13.7	97.3	0.76	0.88	29.3
2	T1	330	1.0	0.448	56.5	LOS D	10.1	71.2	0.95	0.78	25.0
3	R2	356	0.9	1.319	378.2	LOS F	62.5	441.0	1.00	1.83	5.9
Approach		988	1.1	1.319	166.6	LOS F	62.5	441.0	0.91	1.19	11.6
All Vehicles		7243	3.1	1.319	136.2	LOS F	117.2	839.5	0.95	1.29	16.8

PHASING SUMMARY



Site: I-10 2028 MIMT PM

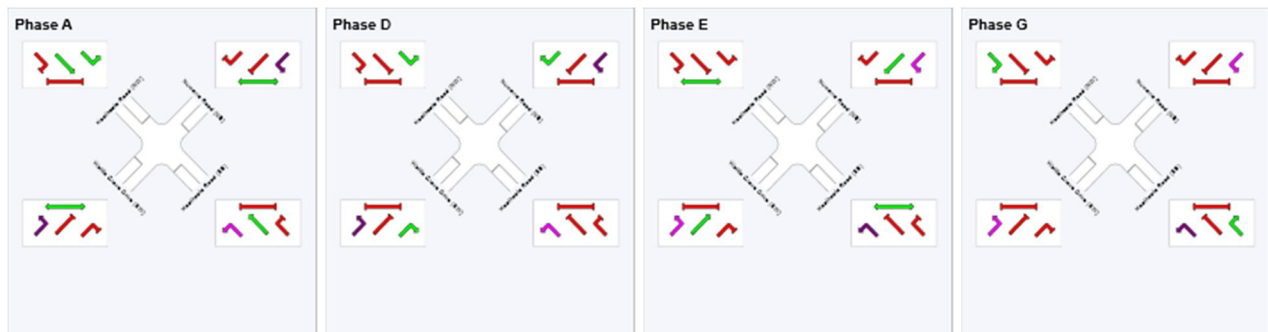
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	61	87	117
Green Time (sec)	55	20	24	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	61	26	30	22
Phase Split	44 %	19 %	22 %	16 %



I-11 Intersection of Newbridge Road and Nuwarra Road

AM BASE

MOVEMENT SUMMARY



Site: I-11 2028 BASE AM

Newbridge Road / Nuwarra Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand	Flows	Deg.	Satn	Average	Level of	95% Back of Queue	Prop.	Effective	Average
	v	Total	HV		v/c	Delay	Service	Vehicles	Queued	Stop Rate	Speed
		veh/h	%			sec		veh	m	per veh	km/h
South: Nuwarra Road (S)											
1	L2	36	5.9	0.799	52.6	LOS D	23.1	164.4	0.91	0.87	36.6
2	T1	343	1.5	0.799	49.6	LOS D	23.1	164.4	0.91	0.87	30.4
3	R2	805	6.7	1.170	248.8	LOS F	62.1	459.2	1.00	1.43	13.0
Approach		1184	5.2	1.170	185.2	LOS F	62.1	459.2	0.97	1.25	16.0
East: Newbridge Road (E)											
4	L2	336	17.9	0.616	27.3	LOS B	20.7	164.1	0.72	0.77	45.3
5	T1	1242	11.3	0.616	23.2	LOS B	21.5	165.3	0.66	0.61	51.3
Approach		1578	12.7	0.616	24.1	LOS B	21.5	165.3	0.67	0.65	50.0
North: Nuwarra Road (N)											
7	L2	6	0.0	0.939	94.5	LOS F	10.0	70.5	1.00	1.14	24.2
8	T1	149	0.7	1.174	128.8	LOS F	23.6	169.7	1.00	1.26	19.5
9	R2	135	3.9	1.174	247.8	LOS F	23.6	169.7	1.00	1.64	13.6
Approach		291	2.2	1.174	183.3	LOS F	23.6	169.7	1.00	1.43	16.2
West: Newbridge Road (W)											
10	L2	289	1.8	1.109	172.1	LOS F	103.5	764.4	1.00	1.49	18.0
11	T1	2235	8.9	1.180	196.2	LOS F	127.0	956.8	1.00	1.71	17.4
Approach		2524	8.1	1.180	193.4	LOS F	127.0	956.8	1.00	1.69	17.5
All Vehicles		5577	8.5	1.180	143.2	LOS F	127.0	956.8	0.90	1.29	20.9

PHASING SUMMARY



Site: I-11 2028 BASE AM

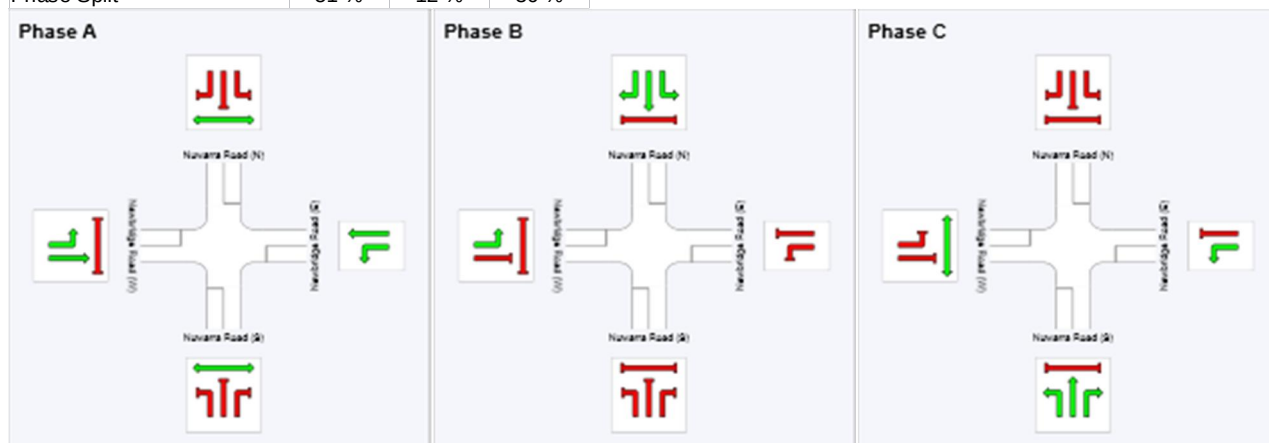
Newbridge Road / Nuwarra Road

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	72	89
Green Time (sec)	66	11	45
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	72	17	51
Phase Split	51 %	12 %	36 %



PM BASE

MOVEMENT SUMMARY



Site: I-11 2028 BASE PM

Newbridge Road / Nuwarra Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	54	5.9	0.729	69.2	LOS E	14.0	99.9	1.00	0.86	32.3
2	T1	154	0.7	0.729	64.9	LOS E	14.0	99.9	1.00	0.86	29.3
3	R2	555	6.1	1.039	140.8	LOS F	28.9	212.9	1.00	1.17	19.8
Approach		762	5.0	1.039	120.4	LOS F	28.9	212.9	1.00	1.08	21.9
East: Newbridge Road (E)											
4	L2	760	4.4	0.741	15.1	LOS B	25.1	183.1	0.47	0.73	52.1
5	T1	2179	5.7	0.741	13.7	LOS A	34.4	253.0	0.57	0.56	57.5
Approach		2939	5.4	0.741	14.0	LOS A	34.4	253.0	0.54	0.60	56.1
North: Nuwarra Road (N)											
7	L2	18	0.0	0.919	85.3	LOS F	18.7	131.6	1.00	1.09	27.4
8	T1	294	0.7	1.149	118.8	LOS F	37.8	266.9	1.00	1.20	21.3
9	R2	207	1.0	1.149	232.0	LOS F	37.8	266.9	1.00	1.51	14.8
Approach		519	0.8	1.149	162.9	LOS F	37.8	266.9	1.00	1.32	18.1
West: Newbridge Road (W)											
10	L2	100	0.0	0.511	19.3	LOS B	15.2	112.5	0.45	0.47	49.6
11	T1	1648	7.7	0.581	12.3	LOS A	17.3	129.2	0.44	0.42	58.6
Approach		1748	7.3	0.581	12.7	LOS A	17.3	129.2	0.44	0.42	58.0
All Vehicles		5968	5.5	1.149	40.2	LOS C	37.8	266.9	0.61	0.67	41.4

PHASING SUMMARY



Site: I-11 2028 BASE PM

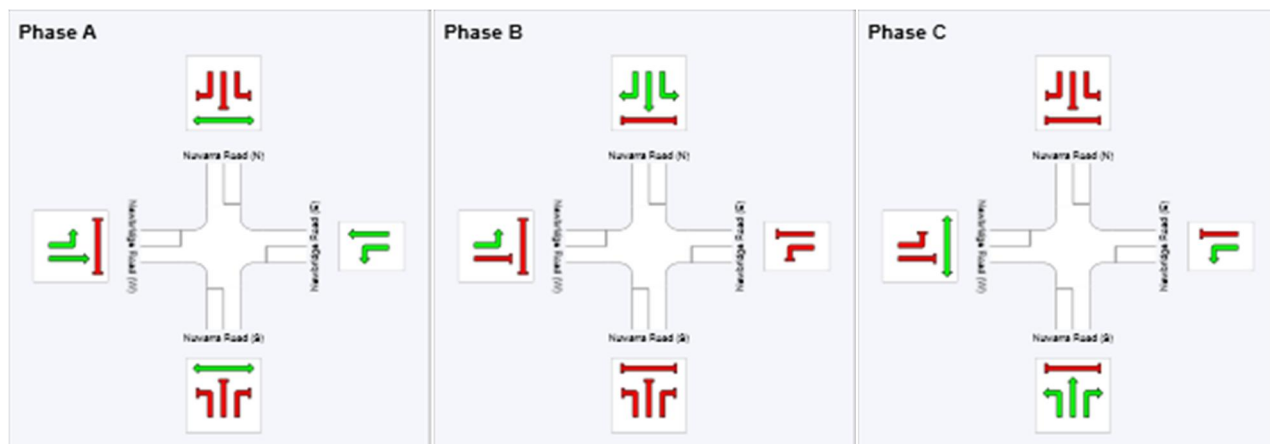
Newbridge Road / Nuwarra Road

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	87	113
Green Time (sec)	81	20	21
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	87	26	27
Phase Split	62 %	19 %	19 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-11 2028 MIMT AM

Newbridge Road / Nuwarra Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	36	5.9	0.799	52.6	LOS D	23.1	164.4	0.91	0.87	36.6
2	T1	343	1.5	0.799	49.6	LOS D	23.1	164.4	0.91	0.87	30.4
3	R2	805	6.7	1.170	248.8	LOS F	62.1	459.2	1.00	1.43	13.0
Approach		1184	5.2	1.170	185.2	LOS F	62.1	459.2	0.97	1.25	16.0
East: Newbridge Road (E)											
4	L2	342	17.5	0.636	27.9	LOS B	21.9	174.4	0.73	0.78	45.0
5	T1	1268	12.7	0.636	23.6	LOS B	22.4	175.9	0.68	0.63	51.1
Approach		1610	13.7	0.636	24.5	LOS B	22.4	175.9	0.69	0.66	49.8
North: Nuwarra Road (N)											
7	L2	6	0.0	0.950	97.2	LOS F	10.3	72.4	1.00	1.16	23.8
8	T1	152	0.7	1.187	134.3	LOS F	24.4	175.9	1.00	1.28	19.0
9	R2	135	3.9	1.187	259.0	LOS F	24.4	175.9	1.00	1.67	13.2
Approach		294	2.1	1.187	190.9	LOS F	24.4	175.9	1.00	1.46	15.7
West: Newbridge Road (W)											
10	L2	289	1.8	1.155	210.3	LOS F	116.7	880.9	1.00	1.62	15.7
11	T1	2286	11.0	1.228	236.8	LOS F	140.4	1093.2	1.00	1.87	15.1
Approach		2575	10.0	1.228	233.8	LOS F	140.4	1093.2	1.00	1.84	15.2
All Vehicles		5664	9.6	1.228	161.9	LOS F	140.4	1093.2	0.91	1.36	19.2

PHASING SUMMARY



Site: I-11 2028 MIMT AM

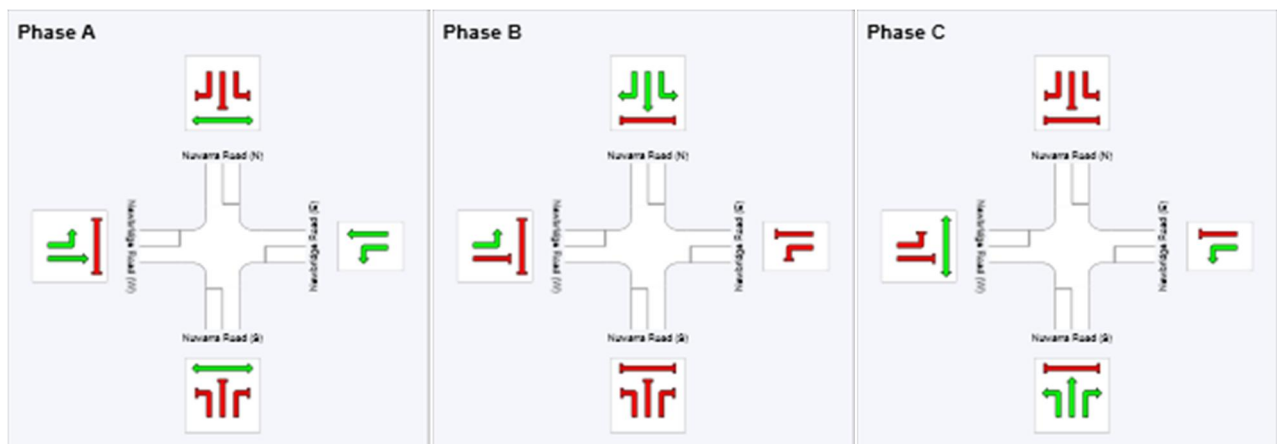
Newbridge Road / Nuwarra Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	72	89
Green Time (sec)	66	11	45
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	72	17	51
Phase Split	51 %	12 %	36 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-11 2028 MIMT PM

Newbridge Road / Nuwarra Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	54	5.9	0.791	72.9	LOS F	14.8	105.1	1.00	0.91	31.5
2	T1	156	0.7	0.791	68.5	LOS E	14.8	105.1	1.00	0.91	28.6
3	R2	561	6.0	1.050	148.8	LOS F	30.1	221.5	1.00	1.19	19.1
Approach		771	4.9	1.050	127.2	LOS F	30.1	221.5	1.00	1.11	21.1
East: Newbridge Road (E)											
4	L2	760	4.4	0.764	16.1	LOS B	28.5	209.3	0.51	0.75	51.5
5	T1	2222	7.6	0.764	14.0	LOS A	36.4	275.4	0.59	0.58	57.2
Approach		2982	6.8	0.764	14.6	LOS B	36.4	275.4	0.57	0.63	55.8
North: Nuwarra Road (N)											
7	L2	18	0.0	0.919	85.3	LOS F	18.7	131.6	1.00	1.09	27.4
8	T1	294	0.7	1.149	118.8	LOS F	37.8	266.9	1.00	1.20	21.3
9	R2	207	1.0	1.149	232.0	LOS F	37.8	266.9	1.00	1.51	14.8
Approach		519	0.8	1.149	162.9	LOS F	37.8	266.9	1.00	1.32	18.1
West: Newbridge Road (W)											
10	L2	101	0.0	0.529	19.5	LOS B	15.9	119.8	0.46	0.48	49.5
11	T1	1681	9.2	0.601	12.6	LOS A	18.2	139.0	0.45	0.43	58.5
Approach		1782	8.7	0.601	12.9	LOS A	18.2	139.0	0.45	0.43	57.9
All Vehicles		6054	6.6	1.149	41.1	LOS C	37.8	275.4	0.63	0.69	41.0

PHASING SUMMARY



Site: I-11 2028 MIMT PM

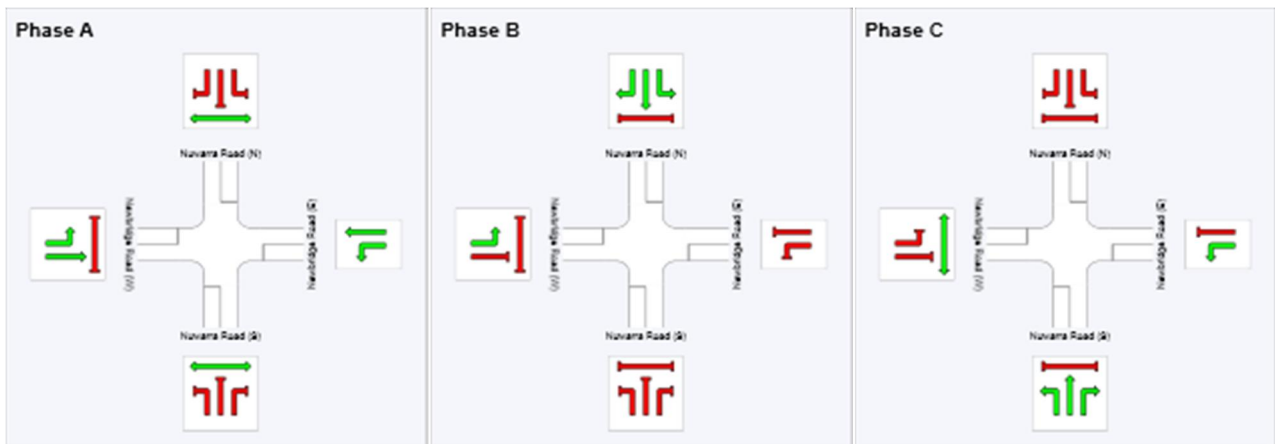
Newbridge Road / Nuwarra Road

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	87	113
Green Time (sec)	81	20	21
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	87	26	27
Phase Split	62 %	19 %	19 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-11 2028 MIMT AM - Upgrade Option

Newbridge Road / Nuwarra Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	36	5.9	0.871	62.5	LOS E	25.8	183.3	0.93	0.96	33.8
2	T1	343	1.5	0.871	59.5	LOS E	25.8	183.3	0.93	0.96	28.4
3	R2	805	6.7	1.216	288.0	LOS F	66.3	490.7	1.00	1.51	11.6
Approach		1184	5.2	1.216	215.0	LOS F	66.3	490.7	0.98	1.33	14.4
East: Newbridge Road (E)											
4	L2	342	17.5	0.618	26.5	LOS B	20.9	166.8	0.70	0.77	45.7
5	T1	1268	12.7	0.618	21.8	LOS B	21.2	166.9	0.64	0.60	52.1
Approach		1610	13.7	0.618	22.8	LOS B	21.2	166.9	0.66	0.64	50.7
North: Nuwarra Road (N)											
7	L2	6	0.0	0.950	97.2	LOS F	10.3	72.4	1.00	1.16	23.8
8	T1	152	0.7	1.187	134.3	LOS F	24.4	175.9	1.00	1.28	19.0
9	R2	135	3.9	1.187	259.0	LOS F	24.4	175.9	1.00	1.67	13.2
Approach		294	2.1	1.187	190.9	LOS F	24.4	175.9	1.00	1.46	15.7
West: Newbridge Road (W)											
10	L2	289	1.8	1.120	180.3	LOS F	109.0	823.3	1.00	1.53	17.5
11	T1	2286	11.0	1.192	204.9	LOS F	132.2	1029.9	1.00	1.75	16.9
Approach		2575	10.0	1.192	202.1	LOS F	132.2	1029.9	1.00	1.73	16.9
All Vehicles		5664	9.6	1.216	153.2	LOS F	132.2	1029.9	0.90	1.32	20.0

PHASING SUMMARY



Site: I-11 2028 MIMT AM - Upgrade Option

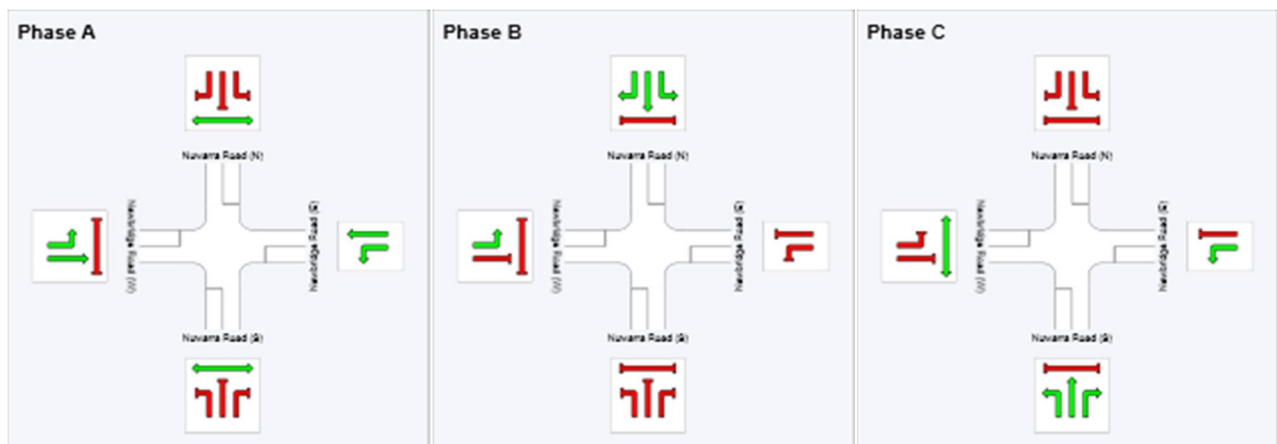
Newbridge Road / Nuwarra Road

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	74	91
Green Time (sec)	68	11	43
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	74	17	49
Phase Split	53 %	12 %	35 %



I-12 Intersection of Newbridge Road and Governor Macquarie Drive

AM BASE

MOVEMENT SUMMARY



Site: I-12 2028 BASE AM

Newbridge Road / Governor Macquarie Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Prop. Queued Distance	Effective Stop Rate	Average Speed		
		veh/h	%	v/c	sec	veh	m	per veh	km/h		
South: Brickmakers Drive (S)											
1	L2	13	0.0	0.890	81.7	LOS F	16.6	117.0	1.00	1.04	24.6
2	T1	204	1.0	0.890	77.3	LOS F	16.6	117.0	1.00	1.04	24.3
3	R2	706	0.9	1.213	278.8	LOS F	52.5	370.6	1.00	1.62	13.4
Approach		923	0.9	1.213	231.5	LOS F	52.5	370.6	1.00	1.48	14.6
East: Newbridge Road (E)											
4	L2	234	2.3	0.170	7.9	LOS A	2.1	14.9	0.19	0.63	58.1
5	T1	1396	11.0	0.407	13.7	LOS A	15.5	118.8	0.54	0.48	60.1
6	R2	673	10.3	1.035	143.8	LOS F	34.3	261.1	1.00	1.13	24.9
Approach		2302	9.9	1.035	51.1	LOS D	34.3	261.1	0.64	0.69	42.2
North: Governor Macquarie Drive (N)											
7	L2	763	9.0	0.729	52.9	LOS D	23.3	176.0	0.96	0.86	40.1
8	T1	133	2.4	0.537	64.1	LOS E	8.7	61.8	0.98	0.79	27.0
9	R2	180	35.1	1.060	159.7	LOS F	19.8	180.6	1.00	1.24	18.5
Approach		1076	12.5	1.060	72.1	LOS F	23.3	180.6	0.97	0.91	33.5
West: Newbridge Road (W)											
10	L2	132	30.4	1.171	221.1	LOS F	140.7	1069.6	1.00	1.74	15.1
11	T1	2901	6.9	1.171	213.4	LOS F	144.7	1073.2	1.00	1.78	19.5
12	R2	4	25.0	0.034	32.8	LOS C	0.2	1.5	0.60	0.67	37.9
Approach		3037	8.0	1.171	213.5	LOS F	144.7	1073.2	1.00	1.77	19.3
All Vehicles		7338	8.4	1.213	144.1	LOS F	144.7	1073.2	0.88	1.27	24.2

PHASING SUMMARY



Site: I-12 2028 BASE AM

Newbridge Road / Governor Macquarie Drive

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	66	88	112
Green Time (sec)	60	16	18	22
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	66	22	24	28
Phase Split	47 %	16 %	17 %	20 %



PM BASE

MOVEMENT SUMMARY



Site: I-12 2028 BASE PM

Newbridge Road / Governor Macquarie Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	8	0.0	0.510	69.1	LOS E	6.8	49.4	0.99	0.78	27.1
2	T1	95	4.4	0.510	65.0	LOS E	6.8	49.4	0.99	0.78	26.8
3	R2	265	0.8	0.628	70.1	LOS E	8.9	62.8	1.00	0.81	32.6
Approach		368	1.7	0.628	68.8	LOS E	8.9	62.8	1.00	0.80	31.1
East: Newbridge Road (E)											
4	L2	673	1.3	0.475	9.4	LOS A	7.8	55.3	0.29	0.69	57.1
5	T1	2692	4.4	0.813	25.8	LOS B	49.7	361.1	0.73	0.73	53.3
6	R2	737	11.3	1.196	272.1	LOS F	54.8	420.7	1.00	1.41	16.1
Approach		4101	5.1	1.196	67.4	LOS E	54.8	420.7	0.71	0.85	37.5
North: Governor Macquarie Drive (N)											
7	L2	575	3.7	0.452	48.6	LOS D	15.8	114.4	0.87	0.81	41.5
8	T1	307	0.7	1.021	121.2	LOS F	29.1	204.6	1.00	1.24	18.4
9	R2	237	18.7	1.119	202.6	LOS F	29.6	240.4	1.00	1.32	15.7
Approach		1119	6.0	1.119	101.1	LOS F	29.6	240.4	0.93	1.04	26.8
West: Newbridge Road (W)											
10	L2	174	17.0	0.793	38.7	LOS C	38.4	288.8	0.86	0.80	41.8
11	T1	2011	6.1	0.793	31.0	LOS C	39.0	286.9	0.84	0.77	50.7
12	R2	3	0.0	0.052	51.4	LOS D	0.2	1.2	0.77	0.68	31.2
Approach		2187	6.9	0.793	31.7	LOS C	39.0	288.8	0.84	0.77	50.0
All Vehicles		7776	5.6	1.196	62.3	LOS E	54.8	420.7	0.79	0.85	38.1

PHASING SUMMARY



Site: I-12 2028 BASE PM

Newbridge Road / Governor Macquarie Drive

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	110
Green Time (sec)	61	16	15	24
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	21	30
Phase Split	48 %	16 %	15 %	21 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-12 2028 MIMT AM

Newbridge Road / Governor Macquarie Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	13	0.0	0.890	81.7	LOS F	16.6	117.0	1.00	1.04	24.6
2	T1	204	1.0	0.890	77.3	LOS F	16.6	117.0	1.00	1.04	24.3
3	R2	706	0.9	1.213	278.8	LOS F	52.5	370.6	1.00	1.62	13.4
Approach		923	0.9	1.213	231.5	LOS F	52.5	370.6	1.00	1.48	14.6
East: Newbridge Road (E)											
4	L2	234	2.3	0.170	7.9	LOS A	2.1	14.9	0.19	0.63	58.1
5	T1	1428	12.3	0.422	13.8	LOS A	16.1	125.7	0.55	0.49	59.9
6	R2	673	10.3	1.035	143.8	LOS F	34.3	261.1	1.00	1.13	24.9
Approach		2334	10.7	1.035	50.7	LOS D	34.3	261.1	0.64	0.69	42.3
North: Governor Macquarie Drive (N)											
7	L2	763	9.0	0.729	52.9	LOS D	23.3	176.0	0.96	0.86	40.1
8	T1	133	2.4	0.537	64.1	LOS E	8.7	61.8	0.98	0.79	27.0
9	R2	181	35.0	1.063	161.6	LOS F	20.0	182.2	1.00	1.24	18.4
Approach		1076	12.5	1.063	72.5	LOS F	23.3	182.2	0.97	0.92	33.4
West: Newbridge Road (W)											
10	L2	132	30.8	1.211	256.2	LOS F	154.2	1198.7	1.00	1.87	13.4
11	T1	2951	8.5	1.211	248.7	LOS F	158.3	1204.7	1.00	1.91	17.4
12	R2	4	25.0	0.036	32.9	LOS C	0.2	1.5	0.60	0.67	37.8
Approach		3088	9.5	1.211	248.7	LOS F	158.3	1204.7	1.00	1.91	17.3
All Vehicles		7421	9.2	1.213	158.7	LOS F	158.3	1204.7	0.88	1.33	22.8

PHASING SUMMARY



Site: I-12 2028 MIMT AM

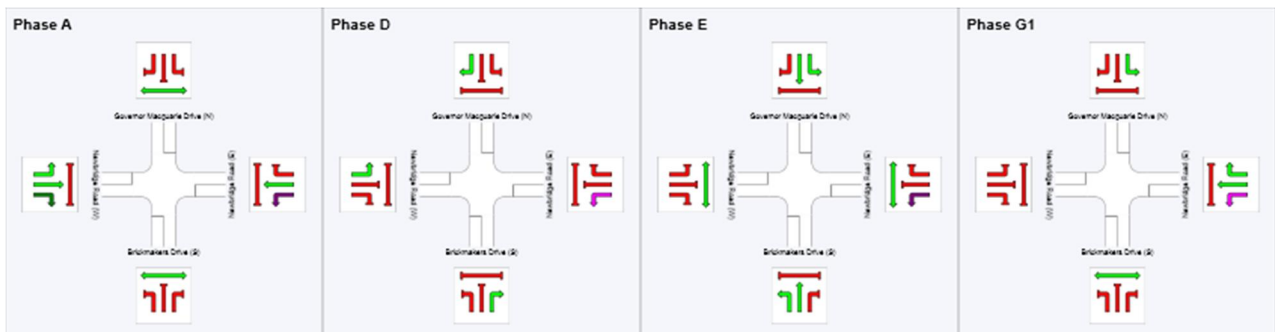
Newbridge Road / Governor Macquarie Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	66	88	112
Green Time (sec)	60	16	18	22
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	66	22	24	28
Phase Split	47 %	16 %	17 %	20 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-12 2028 MIMT PM

Newbridge Road / Governor Macquarie Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	8	0.0	0.525	70.1	LOS E	6.9	49.7	0.99	0.78	26.9
2	T1	95	4.4	0.525	66.0	LOS E	6.9	49.7	0.99	0.78	26.6
3	R2	265	0.8	0.628	70.1	LOS E	8.9	62.8	1.00	0.81	32.6
Approach		368	1.7	0.628	69.1	LOS E	8.9	62.8	1.00	0.80	31.1
East: Newbridge Road (E)											
4	L2	673	1.3	0.471	9.4	LOS A	7.8	55.2	0.29	0.69	57.1
5	T1	2731	5.8	0.927	31.2	LOS C	53.4	397.1	0.75	0.78	50.8
6	R2	737	11.3	1.196	272.1	LOS F	54.8	420.7	1.00	1.41	16.1
Approach		4140	6.0	1.196	70.5	LOS F	54.8	420.7	0.72	0.88	36.7
North: Governor Macquarie Drive (N)											
7	L2	575	3.7	0.452	48.6	LOS D	15.8	114.4	0.87	0.81	41.5
8	T1	307	0.7	1.021	121.5	LOS F	29.1	204.8	1.00	1.24	18.4
9	R2	240	19.9	1.152	230.3	LOS F	32.3	267.1	1.00	1.38	14.3
Approach		1122	6.3	1.152	107.5	LOS F	32.3	267.1	0.93	1.05	25.9
West: Newbridge Road (W)											
10	L2	178	18.6	0.817	39.6	LOS C	40.1	308.1	0.88	0.82	41.5
11	T1	2046	7.2	0.817	31.6	LOS C	40.7	305.4	0.86	0.79	50.4
12	R2	3	0.0	0.053	54.9	LOS D	0.2	1.3	0.80	0.68	30.2
Approach		2227	8.1	0.817	32.3	LOS C	40.7	308.1	0.86	0.79	49.7
All Vehicles		7858	6.4	1.196	64.9	LOS E	54.8	420.7	0.81	0.87	37.4

PHASING SUMMARY



Site: I-12 2028 MIMT PM

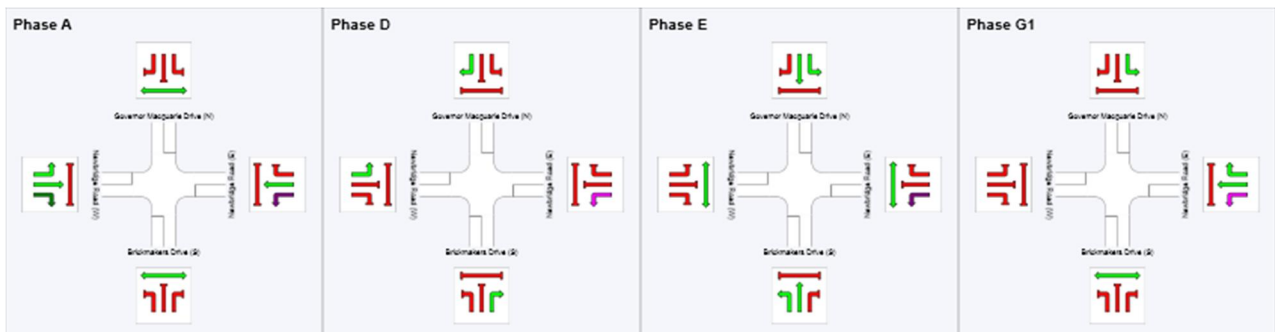
Newbridge Road / Governor Macquarie Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	110
Green Time (sec)	61	16	15	24
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	21	30
Phase Split	48 %	16 %	15 %	21 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-12 2028 MIMT AM - Upgrade Option

Newbridge Road / Governor Macquarie Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	13	0.0	0.890	81.7	LOS F	16.6	117.0	1.00	1.04	24.6
2	T1	204	1.0	0.890	77.3	LOS F	16.6	117.0	1.00	1.04	24.3
3	R2	706	0.9	1.079	164.3	LOS F	39.5	278.5	1.00	1.32	19.8
Approach		923	0.9	1.079	143.9	LOS F	39.5	278.5	1.00	1.25	20.5
East: Newbridge Road (E)											
4	L2	234	2.3	0.171	7.8	LOS A	2.0	14.5	0.20	0.64	58.1
5	T1	1428	12.3	0.422	13.8	LOS A	16.1	125.7	0.55	0.49	59.9
6	R2	673	10.3	1.064	163.3	LOS F	36.8	280.5	1.00	1.18	23.0
Approach		2334	10.7	1.064	56.3	LOS D	36.8	280.5	0.64	0.70	40.6
North: Governor Macquarie Drive (N)											
7	L2	763	9.0	0.927	71.9	LOS F	22.9	172.4	1.00	1.08	35.4
8	T1	133	2.4	0.834	74.6	LOS F	12.6	95.4	1.00	0.94	24.7
9	R2	181	35.0	0.834	80.4	LOS F	12.6	95.4	1.00	0.93	28.4
Approach		1076	12.5	0.927	73.6	LOS F	22.9	172.4	1.00	1.04	33.2
West: Newbridge Road (W)											
10	L2	132	30.8	1.191	238.2	LOS F	149.0	1158.6	1.00	1.81	14.2
11	T1	2951	8.5	1.191	230.6	LOS F	153.0	1163.9	1.00	1.85	18.4
12	R2	4	25.0	0.035	32.3	LOS C	0.2	1.5	0.59	0.67	38.1
Approach		3088	9.5	1.191	230.6	LOS F	153.0	1163.9	1.00	1.84	18.3
All Vehicles		7421	9.2	1.191	142.2	LOS F	153.0	1163.9	0.89	1.29	24.4

PHASING SUMMARY



Site: I-12 2028 MIMT AM - Upgrade Option

Newbridge Road / Governor Macquarie Drive

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D*	E*	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	113
Green Time (sec)	61	16	18	21
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	24	27
Phase Split	48 %	16 %	17 %	19 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-12 2028 MIMT PM - Upgrade Option 2

Newbridge Road / Governor Macquarie Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	8	0.0	0.654	74.7	LOS F	7.2	51.9	1.00	0.82	25.9
2	T1	95	4.4	0.654	70.5	LOS F	7.2	51.9	1.00	0.82	25.6
3	R2	265	0.8	0.838	80.8	LOS F	9.8	69.3	1.00	0.95	30.4
Approach		368	1.7	0.838	78.0	LOS F	9.8	69.3	1.00	0.91	29.2
East: Newbridge Road (E)											
4	L2	673	1.3	0.479	9.6	LOS A	11.7	82.5	0.35	0.69	56.9
5	T1	2731	5.8	0.962	40.5	LOS C	66.5	494.2	0.75	0.83	46.9
6	R2	737	11.3	1.073	175.1	LOS F	42.5	326.3	1.00	1.21	22.0
Approach		4140	6.0	1.073	59.5	LOS E	66.5	494.2	0.73	0.88	39.6
North: Governor Macquarie Drive (N)											
7	L2	575	3.7	0.441	33.3	LOS C	12.4	89.6	0.85	0.80	46.6
8	T1	307	0.7	0.962	89.5	LOS F	27.5	196.1	1.00	1.12	22.3
9	R2	240	19.9	0.962	99.7	LOS F	27.5	196.1	1.00	1.06	25.3
Approach		1122	6.3	0.962	62.9	LOS E	27.5	196.1	0.93	0.94	34.1
West: Newbridge Road (W)											
10	L2	178	18.6	0.859	46.2	LOS D	44.6	342.3	0.94	0.89	39.0
11	T1	2046	7.2	0.859	38.0	LOS C	45.4	340.4	0.92	0.86	47.7
12	R2	3	0.0	0.053	57.6	LOS E	0.2	1.3	0.82	0.68	29.4
Approach		2227	8.1	0.859	38.7	LOS C	45.4	342.3	0.92	0.87	47.1
All Vehicles		7858	6.4	1.073	54.9	LOS D	66.5	494.2	0.82	0.88	40.1

PHASING SUMMARY



Site: I-12 2028 MIMT PM - Upgrade Option 2

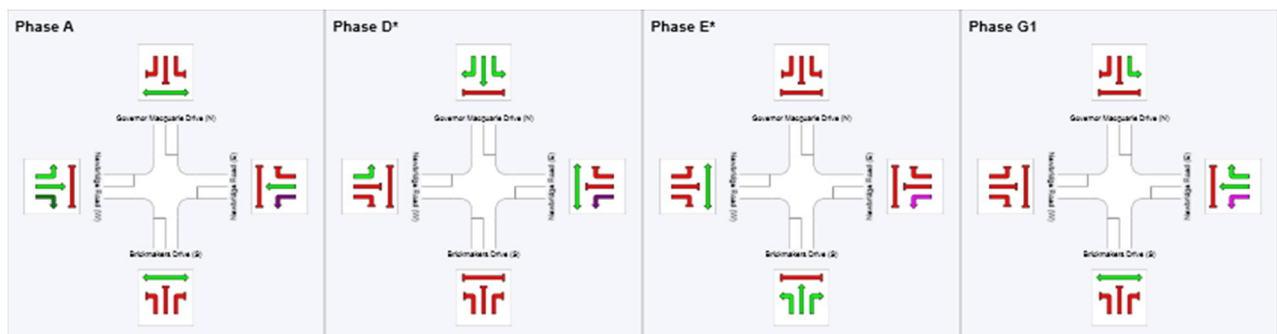
Newbridge Road / Governor Macquarie Drive

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D*	E*	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	64	87	105
Green Time (sec)	58	17	12	29
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	64	23	18	35
Phase Split	46 %	16 %	13 %	25 %



I-13 Intersection of Moorebank Avenue and M5 Motorway

AM BASE

MOVEMENT SUMMARY



Site: I-13 2028 BASE AM

Moorebank Avenue / the M5 Motorway

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles veh	Distance m			
		veh/h	%								
South: Moorebank Avenue (S)											
1	L2	274	10.8	0.236	9.2	LOS A	3.1	23.8	0.42	0.66	50.4
2	T1	664	4.1	0.761	32.0	LOS C	12.2	88.6	0.99	0.92	38.0
3	R2	300	2.5	0.417	33.1	LOS C	5.3	37.7	0.90	0.78	36.9
Approach		1238	5.2	0.761	27.2	LOS B	12.2	88.6	0.84	0.83	39.9
East: M5 Motorway on&off ramp (E)											
4	L2	240	7.0	0.240	8.1	LOS A	1.9	13.8	0.39	0.66	51.5
6	R2	236	5.8	0.245	28.8	LOS C	3.4	24.9	0.82	0.75	40.4
Approach		476	6.4	0.245	18.4	LOS B	3.4	24.9	0.61	0.71	45.0
North: Moorebank Avenue (N)											
7	L2	52	49.0	0.051	7.7	LOS A	0.3	3.3	0.28	0.60	51.2
8	T1	189	12.2	0.228	25.5	LOS B	2.8	22.0	0.85	0.67	41.0
9	R2	451	26.6	0.771	37.8	LOS C	9.9	85.3	0.97	0.88	36.3
Approach		692	24.4	0.771	32.2	LOS C	9.9	85.3	0.89	0.80	38.3
West: M5 Motorway on&off ramp (W)											
10	L2	1718	8.1	0.979	8.3	LOS A	0.0	0.0	0.00	0.49	50.9
12	R2	392	4.3	0.402	30.0	LOS C	5.9	43.0	0.86	0.79	38.5
Approach		2109	7.4	0.979	12.4	LOS A	5.9	43.0	0.16	0.55	48.3
All Vehicles		4515	9.3	0.979	20.1	LOS B	12.2	88.6	0.51	0.68	43.8

PHASING SUMMARY



Site: I-13 2028 BASE AM

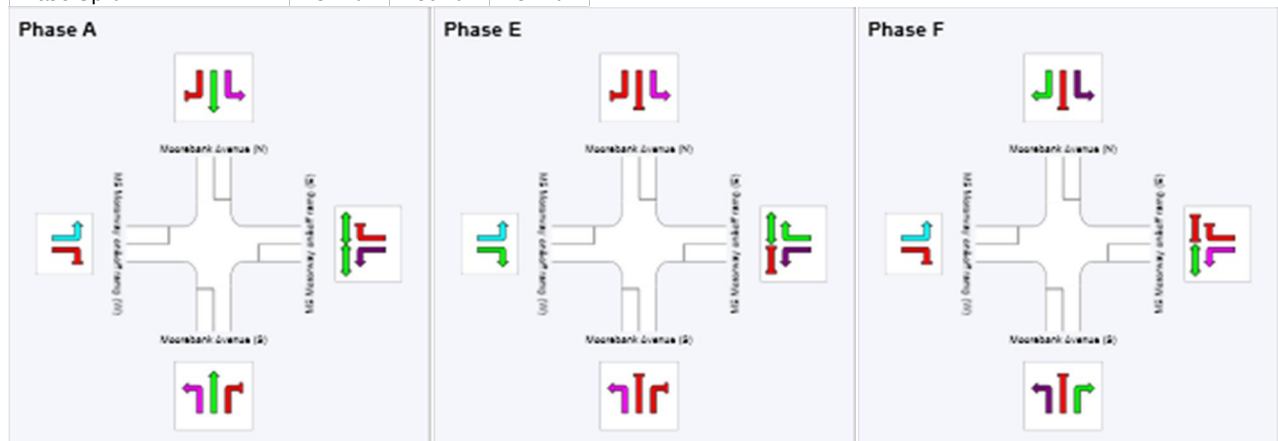
Moorebank Avenue / the M5 Motorway

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	F
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	24	51
Green Time (sec)	17	20	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	24	27	23
Phase Split	32 %	36 %	31 %



PM BASE

MOVEMENT SUMMARY



Site: I-13 2028 BASE PM

Moorebank Avenue / the M5 Motorway

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	300	2.8	0.367	19.9	LOS B	7.9	56.8	0.70	0.76	43.5
2	T1	177	7.1	0.446	44.5	LOS D	4.0	29.7	0.98	0.76	33.2
3	R2	296	1.8	0.244	28.0	LOS B	5.2	37.0	0.73	0.75	39.1
Approach		773	3.4	0.446	28.6	LOS C	7.9	56.8	0.78	0.76	39.1
East: M5 Motorway on&off ramp (E)											
4	L2	433	2.7	0.457	12.0	LOS A	7.0	50.3	0.55	0.74	48.7
6	R2	93	21.6	0.169	42.7	LOS D	1.9	15.5	0.89	0.73	34.9
Approach		525	6.0	0.457	17.4	LOS B	7.0	50.3	0.61	0.74	45.2
North: Moorebank Avenue (N)											
7	L2	139	6.1	0.109	6.9	LOS A	0.9	6.9	0.24	0.61	53.0
8	T1	714	3.7	0.766	38.5	LOS C	16.2	117.1	0.99	0.91	35.3
9	R2	1474	7.4	0.982	71.4	LOS F	46.6	347.2	1.00	1.20	27.4
Approach		2326	6.2	0.982	57.5	LOS E	46.6	347.2	0.95	1.07	30.2
West: M5 Motorway on&off ramp (W)											
10	L2	626	15.3	0.374	5.8	LOS A	0.0	0.0	0.00	0.52	54.3
12	R2	253	3.3	0.409	44.2	LOS D	5.3	38.3	0.94	0.78	33.1
Approach		879	11.9	0.409	16.8	LOS B	5.3	38.3	0.27	0.60	46.4
All Vehicles		4503	6.8	0.982	39.9	LOS C	46.6	347.2	0.75	0.89	35.3

PHASING SUMMARY



Site: I-13 2028 BASE PM

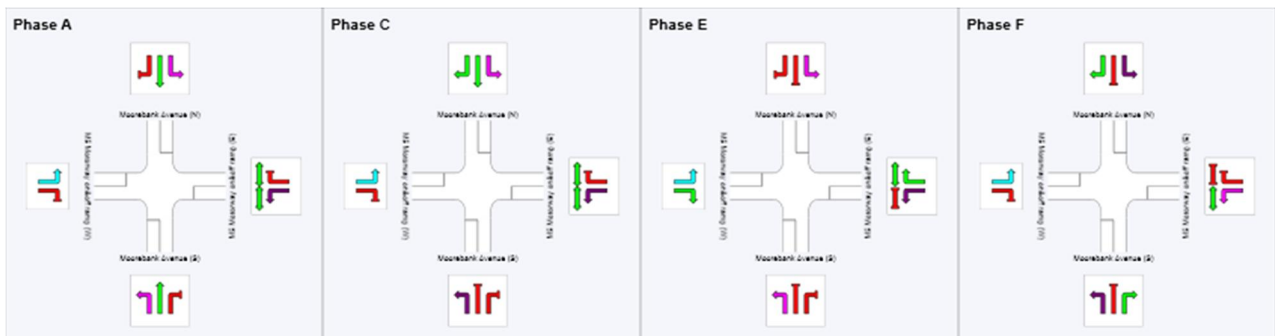
Moorebank Avenue / the M5 Motorway

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	17	30	53
Green Time (sec)	10	6	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	17	13	23	41
Phase Split	18 %	14 %	24 %	44 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-13 2028 MIMT AM

Moorebank Avenue / the M5 Motorway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	423	42.3	0.495	11.0	LOS A	5.4	63.0	0.51	0.72	48.0
2	T1	728	12.6	0.914	46.2	LOS D	16.9	139.5	1.00	1.16	32.7
3	R2	317	7.6	0.467	33.6	LOS C	5.7	43.9	0.91	0.79	36.5
Approach		1468	20.1	0.914	33.3	LOS C	16.9	139.5	0.84	0.96	36.9
East: M5 Motorway on&off ramp (E)											
4	L2	309	18.4	0.426	11.8	LOS A	4.5	39.7	0.62	0.74	48.2
6	R2	236	5.8	0.245	28.8	LOS C	3.4	24.9	0.82	0.75	40.4
Approach		545	12.9	0.426	19.2	LOS B	4.5	39.7	0.71	0.75	44.3
North: Moorebank Avenue (N)											
7	L2	52	49.0	0.052	7.9	LOS A	0.4	3.6	0.29	0.60	51.1
8	T1	241	24.0	0.330	26.4	LOS B	3.7	34.8	0.88	0.70	40.6
9	R2	451	26.6	0.771	37.8	LOS C	9.9	85.3	0.97	0.88	36.3
Approach		743	27.3	0.771	32.0	LOS C	9.9	85.3	0.89	0.80	38.3
West: M5 Motorway on&off ramp (W)											
10	L2	1718	8.1	0.979	8.3	LOS A	0.0	0.0	0.00	0.49	50.9
12	R2	631	27.2	0.829	41.3	LOS C	12.8	128.2	1.00	0.99	33.7
Approach		2348	13.3	0.979	17.2	LOS B	12.8	128.2	0.27	0.63	45.2
All Vehicles		5105	17.2	0.979	24.2	LOS B	16.9	139.5	0.57	0.76	41.5

PHASING SUMMARY



Site: I-13 2028 MIMT AM

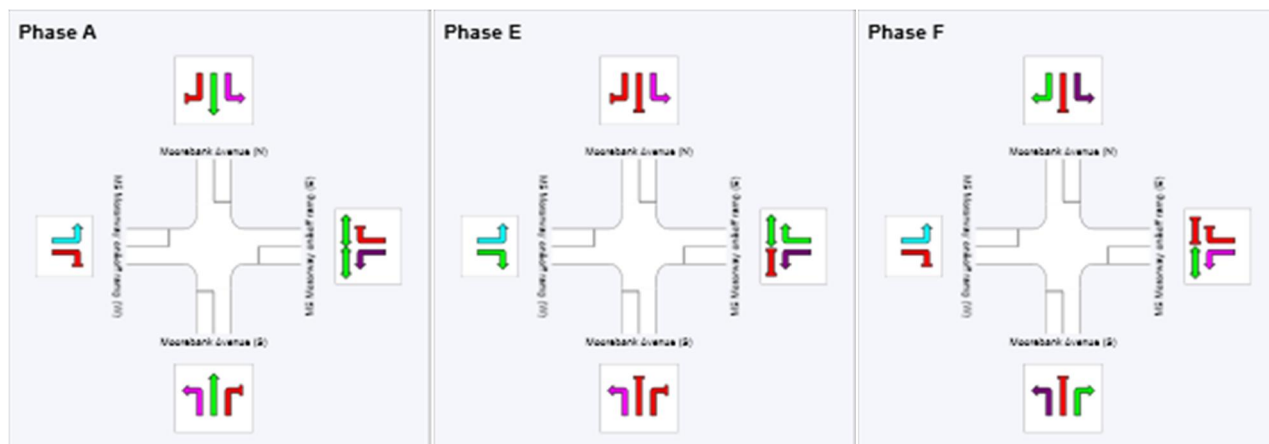
Moorebank Avenue / the M5 Motorway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	F
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	24	51
Green Time (sec)	17	20	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	24	27	23
Phase Split	32 %	36 %	31 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-13 2028 MIMT PM

Moorebank Avenue / the M5 Motorway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	560	32.9	0.919	48.8	LOS D	29.6	321.3	1.00	1.05	31.2
2	T1	231	21.5	0.678	47.5	LOS D	5.5	51.1	1.00	0.85	32.3
3	R2	383	16.5	0.374	29.5	LOS C	7.2	63.8	0.77	0.78	38.0
Approach		1174	25.3	0.919	42.2	LOS C	29.6	321.3	0.92	0.92	33.3
East: M5 Motorway on&off ramp (E)											
4	L2	467	9.9	0.989	82.5	LOS F	32.6	261.9	1.00	1.26	23.9
6	R2	93	21.6	0.169	42.7	LOS D	1.9	15.5	0.89	0.73	34.9
Approach		560	11.8	0.989	75.9	LOS F	32.6	261.9	0.98	1.17	25.3
North: Moorebank Avenue (N)											
7	L2	139	6.1	0.116	7.7	LOS A	1.3	9.3	0.29	0.63	52.4
8	T1	766	10.3	0.885	49.0	LOS D	20.4	163.9	1.00	1.07	31.8
9	R2	1474	7.4	0.982	71.4	LOS F	46.6	347.2	1.00	1.20	27.4
Approach		2379	8.3	0.982	60.5	LOS E	46.6	347.2	0.96	1.12	29.5
West: M5 Motorway on&off ramp (W)											
10	L2	626	15.3	0.374	5.8	LOS A	0.0	0.0	0.00	0.52	54.3
12	R2	435	44.3	1.059	136.3	LOS F	19.1	233.6	1.00	1.44	17.1
Approach		1061	27.2	1.059	59.3	LOS E	19.1	233.6	0.41	0.90	29.6
All Vehicles		5174	16.4	1.059	57.8	LOS E	46.6	347.2	0.84	1.04	29.7

PHASING SUMMARY



Site: I-13 2028 MIMT PM

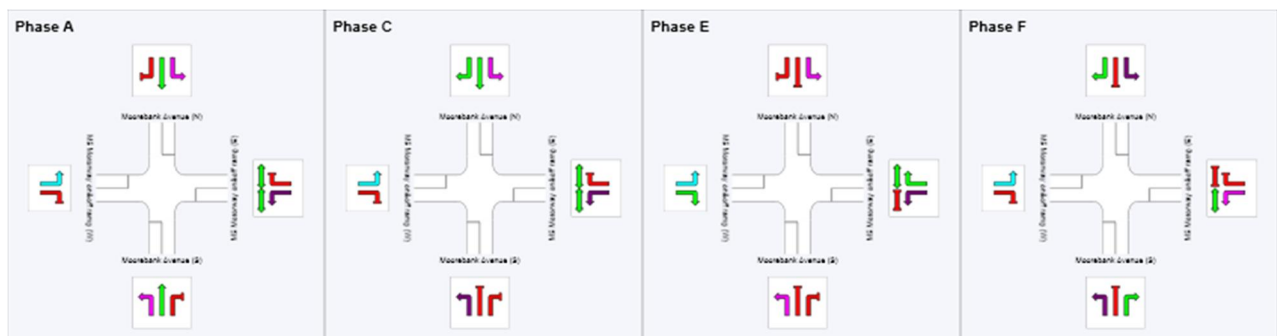
Moorebank Avenue / the M5 Motorway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	17	30	53
Green Time (sec)	10	6	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	17	13	23	41
Phase Split	18 %	14 %	24 %	44 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-13 2028 MIMT PM - Upgrade

Moorebank Avenue / the M5 Motorway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	560	32.9	0.935	54.3	LOS D	31.5	342.0	1.00	1.09	29.6
2	T1	231	21.5	0.754	50.2	LOS D	5.7	53.0	1.00	0.90	31.4
3	R2	383	16.5	0.374	29.5	LOS C	7.2	63.8	0.77	0.78	38.0
Approach		1174	25.3	0.935	45.4	LOS D	31.5	342.0	0.93	0.95	32.3
East: M5 Motorway on&off ramp (E)											
4	L2	467	9.9	0.989	82.5	LOS F	32.6	261.9	1.00	1.26	23.9
6	R2	93	21.6	0.169	42.7	LOS D	1.9	15.5	0.89	0.73	34.9
Approach		560	11.8	0.989	75.9	LOS F	32.6	261.9	0.98	1.17	25.3
North: Moorebank Avenue (N)											
7	L2	139	6.1	0.116	7.7	LOS A	1.3	9.3	0.29	0.63	52.4
8	T1	766	10.3	0.885	49.0	LOS D	20.4	163.9	1.00	1.07	31.8
9	R2	1474	7.4	0.958	58.9	LOS E	41.5	309.1	1.00	1.14	30.2
Approach		2379	8.3	0.958	52.7	LOS D	41.5	309.1	0.96	1.09	31.5
West: M5 Motorway on&off ramp (W)											
10	L2	626	15.3	0.374	5.8	LOS A	0.0	0.0	0.00	0.52	54.3
12	R2	435	44.3	1.059	136.3	LOS F	19.1	233.6	1.00	1.44	17.1
Approach		1061	27.2	1.059	59.3	LOS E	19.1	233.6	0.41	0.90	29.6
All Vehicles		5174	16.4	1.059	54.9	LOS D	41.5	342.0	0.84	1.03	30.5

PHASING SUMMARY



Site: I-13 2028 MIMT PM - Upgrade

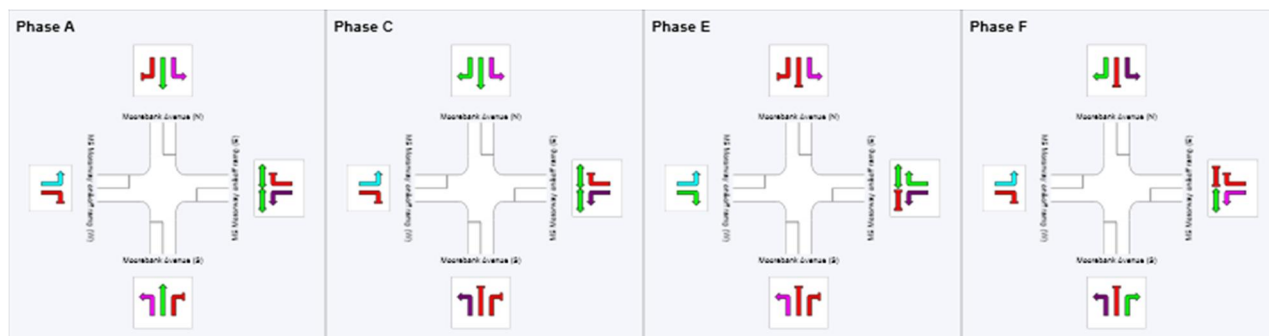
Moorebank Avenue / the M5 Motorway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	16	30	53
Green Time (sec)	9	7	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	16	14	23	41
Phase Split	17 %	15 %	24 %	44 %



I-14 Intersection of M5 Motorway and Hume Highway

AM BASE

MOVEMENT SUMMARY



Site: I-14 2028 BASE AM

M5 Motorway / Hume Highway

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles										
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	sec		veh	m		per veh	km/h
South: Hume Highway (S)										
2	T1	4174	4.5	1.006	LOS D	140.0	1017.3	1.00	1.14	37.5
3	R2	624	4.2	0.860	LOS C	16.5	119.4	0.99	0.89	38.3
Approach		4798	4.4	1.006	LOS D	140.0	1017.3	1.00	1.11	37.6
East: M5 Motorway on&off-ramp (E)										
4	L2	320	6.3	0.127	LOS C	4.5	33.4	0.59	0.71	42.0
6	R2	1112	3.9	1.143	LOS F	54.1	391.3	1.00	1.32	10.5
Approach		1432	4.4	1.143	LOS F	54.1	391.3	0.91	1.18	13.5
North: Hume Highway (N)										
7	L2	682	5.9	0.515	LOS A	17.6	129.7	0.44	0.70	47.6
8	T1	1207	7.0	0.490	LOS B	17.8	131.9	0.62	0.55	43.3
Approach		1889	6.6	0.515	LOS B	17.8	131.9	0.56	0.60	44.4
All Vehicles		8119	4.9	1.143	LOS E	140.0	1017.3	0.88	1.00	30.9

PHASING SUMMARY



Site: I-14 2028 BASE AM

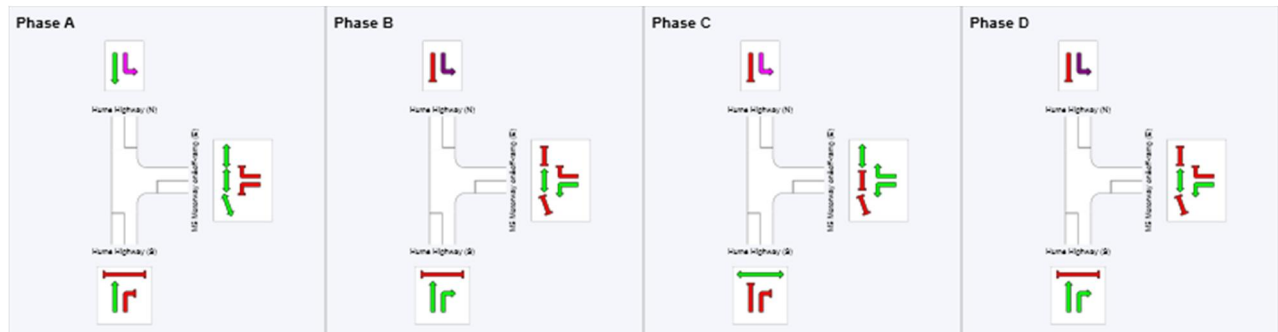
M5 Motorway / Hume Highway

2028 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-14 2028 BASE PM

M5 Motorway / Hume Highway

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	2508	3.7	0.612	2.1	LOS A	6.7	48.7	0.12	0.11	58.3
3	R2	397	1.6	1.011	114.5	LOS F	19.6	138.9	1.00	1.05	23.5
Approach		2905	3.4	1.011	17.5	LOS B	19.6	138.9	0.24	0.24	48.5
East: M5 Motorway on&off-ramp (E)											
4	L2	1448	3.6	1.092	208.1	LOS F	85.6	618.0	1.00	1.26	15.6
6	R2	1143	3.6	1.121	214.3	LOS F	54.5	393.1	1.00	1.28	11.2
Approach		2592	3.6	1.121	210.8	LOS F	85.6	618.0	1.00	1.27	13.7
North: Hume Highway (N)											
7	L2	845	2.0	0.637	12.9	LOS A	26.3	187.4	0.56	0.78	46.9
8	T1	2808	2.7	0.863	20.1	LOS B	50.0	358.3	0.77	0.71	47.2
Approach		3654	2.5	0.863	18.4	LOS B	50.0	358.3	0.72	0.73	47.1
All Vehicles		9151	3.1	1.121	72.6	LOS F	85.6	618.0	0.65	0.73	29.0

PHASING SUMMARY



Site: I-14 2028 BASE PM

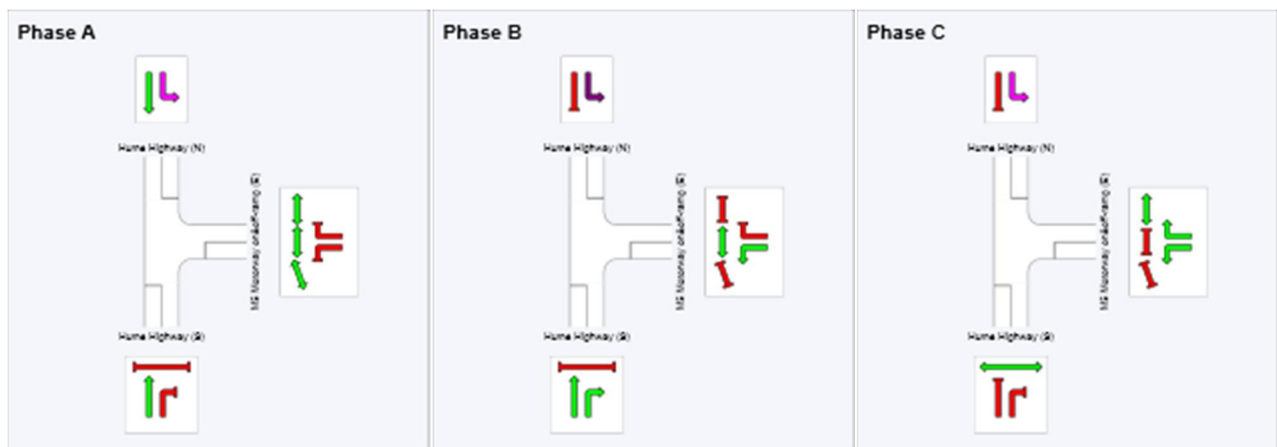
M5 Motorway / Hume Highway

2028 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	97	121
Green Time (sec)	90	17	31
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	97	24	38
Phase Split	61 %	15 %	24 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-14 2028 MIMT AM

M5 Motorway / Hume Highway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	4174	4.5	1.006	44.1	LOS D	140.0	1017.3	1.00	1.14	37.5
3	R2	642	4.1	0.884	43.2	LOS D	17.5	126.7	1.00	0.90	37.7
Approach		4816	4.4	1.006	44.0	LOS D	140.0	1017.3	1.00	1.11	37.6
East: M5 Motorway on&off-ramp (E)											
4	L2	320	6.3	0.127	30.4	LOS C	4.5	33.4	0.59	0.71	42.0
6	R2	1157	7.6	1.251	325.5	LOS F	67.6	519.8	1.00	1.48	7.9
Approach		1477	7.3	1.251	261.5	LOS F	67.6	519.8	0.91	1.32	10.3
North: Hume Highway (N)											
7	L2	752	11.6	0.608	12.9	LOS A	22.4	180.9	0.50	0.73	46.5
8	T1	1207	7.0	0.490	28.5	LOS B	17.8	131.9	0.62	0.55	43.3
Approach		1959	8.8	0.608	22.5	LOS B	22.4	180.9	0.58	0.62	44.2
All Vehicles		8252	6.0	1.251	77.8	LOS F	140.0	1017.3	0.88	1.03	27.9

PHASING SUMMARY



Site: I-14 2028 MIMT AM

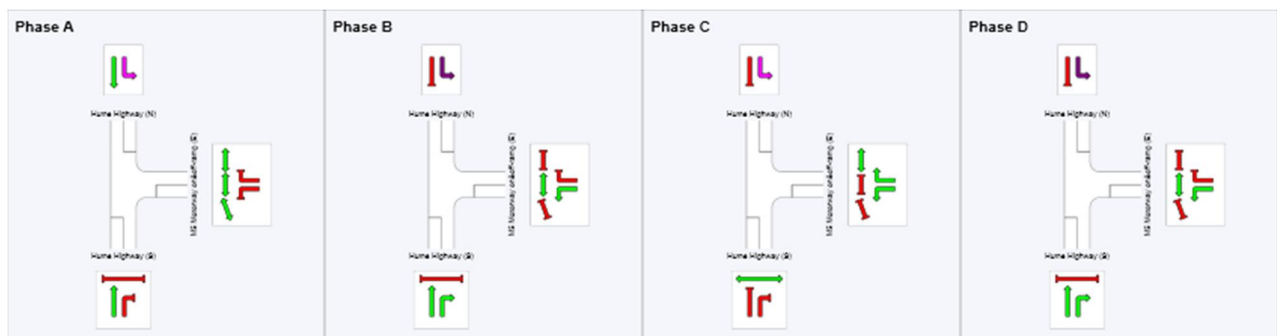
M5 Motorway / Hume Highway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-14 2028 MIMT PM

M5 Motorway / Hume Highway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows	Deg. Satn	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
		Total	HV			Vehicles	Distance				
		veh/h	%			v/c	veh				m
South: Hume Highway (S)											
2	T1	2508	3.7	0.612	2.1	LOS A	6.7	48.7	0.12	0.11	58.3
3	R2	397	1.6	1.011	114.5	LOS F	19.6	138.9	1.00	1.05	23.5
Approach		2905	3.4	1.011	17.5	LOS B	19.6	138.9	0.24	0.24	48.5
East: M5 Motorway on&off-ramp (E)											
4	L2	1466	3.6	1.105	218.5	LOS F	89.1	642.8	1.00	1.28	15.0
6	R2	1220	7.9	1.266	340.6	LOS F	74.6	577.2	1.00	1.51	7.6
Approach		2686	5.5	1.266	274.0	LOS F	89.1	642.8	1.00	1.38	11.1
North: Hume Highway (N)											
7	L2	903	8.3	0.735	15.6	LOS B	28.3	222.8	0.64	0.84	44.8
8	T1	2808	2.7	0.863	20.1	LOS B	50.0	358.3	0.77	0.71	47.2
Approach		3712	4.1	0.863	19.0	LOS B	50.0	358.3	0.74	0.74	46.7
All Vehicles		9303	4.3	1.266	92.1	LOS F	89.1	642.8	0.66	0.77	25.4

PHASING SUMMARY



Site: I-14 2028 MIMT PM

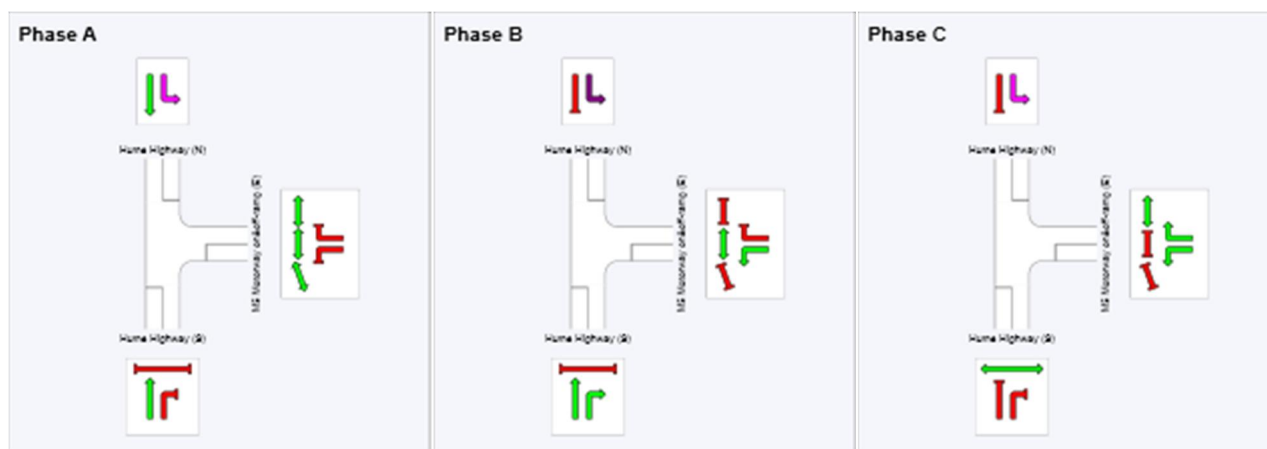
M5 Motorway / Hume Highway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	97	121
Green Time (sec)	90	17	31
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	97	24	38
Phase Split	61 %	15 %	24 %



AM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-14 2028 MIMT AM - Upgrade

M5 Motorway / Hume Highway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	4174	4.5	1.006	44.1	LOS D	140.0	1017.3	1.00	1.14	37.5
3	R2	642	4.1	0.884	43.2	LOS D	17.5	126.7	1.00	0.90	37.7
Approach		4816	4.4	1.006	44.0	LOS D	140.0	1017.3	1.00	1.11	37.6
East: M5 Motorway on&off-ramp (E)											
4	L2	320	6.3	0.127	30.4	LOS C	4.5	33.4	0.59	0.71	42.0
6	R2	1157	7.6	1.223	299.8	LOS F	63.6	488.5	1.00	1.44	8.4
Approach		1477	7.3	1.223	241.4	LOS F	63.6	488.5	0.91	1.28	11.0
North: Hume Highway (N)											
7	L2	752	11.6	0.608	12.9	LOS A	22.4	180.9	0.50	0.73	46.5
8	T1	1207	7.0	0.490	28.5	LOS B	17.8	131.9	0.62	0.55	43.3
Approach		1959	8.8	0.608	22.5	LOS B	22.4	180.9	0.58	0.62	44.2
All Vehicles		8252	6.0	1.223	74.2	LOS F	140.0	1017.3	0.88	1.02	28.6

PHASING SUMMARY



Site: I-14 2028 MIMT AM - Upgrade

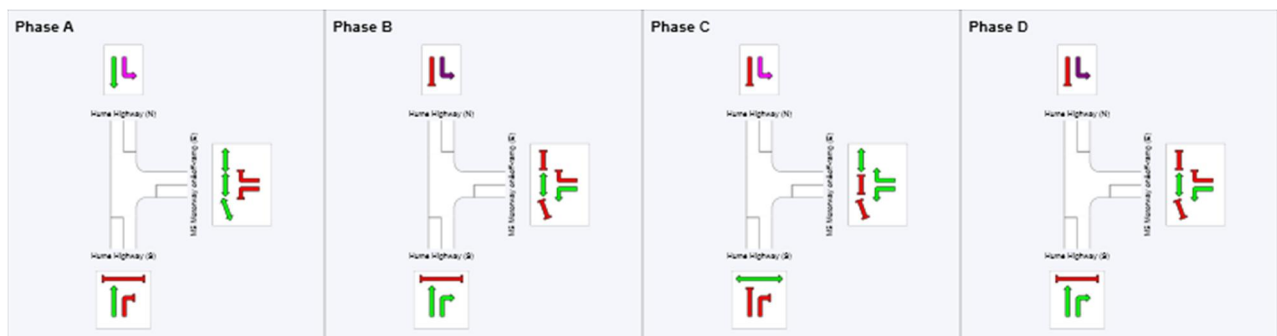
M5 Motorway / Hume Highway

2028 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-14 2028 MIMT PM - Upgrade

M5 Motorway / Hume Highway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	2508	3.7	0.623	3.1	LOS A	9.3	67.1	0.16	0.15	57.6
3	R2	397	1.6	1.074	160.0	LOS F	23.0	163.4	1.00	1.16	18.9
Approach		2905	3.4	1.074	24.5	LOS B	23.0	163.4	0.28	0.29	45.0
East: M5 Motorway on&off-ramp (E)											
4	L2	1466	3.6	1.090	206.4	LOS F	86.2	622.3	1.00	1.25	15.7
6	R2	1220	7.9	1.139	226.5	LOS F	58.3	451.1	1.00	1.32	10.7
Approach		2686	5.5	1.139	215.5	LOS F	86.2	622.3	1.00	1.28	13.4
North: Hume Highway (N)											
7	L2	903	8.3	0.734	15.1	LOS B	28.7	225.9	0.64	0.83	45.1
8	T1	2808	2.7	0.873	21.8	LOS B	52.4	375.0	0.79	0.74	46.3
Approach		3712	4.1	0.873	20.1	LOS B	52.4	375.0	0.76	0.76	46.1
All Vehicles		9303	4.3	1.139	77.9	LOS F	86.2	622.3	0.68	0.76	27.9

PHASING SUMMARY



Site: I-14 2028 MIMT PM - Upgrade

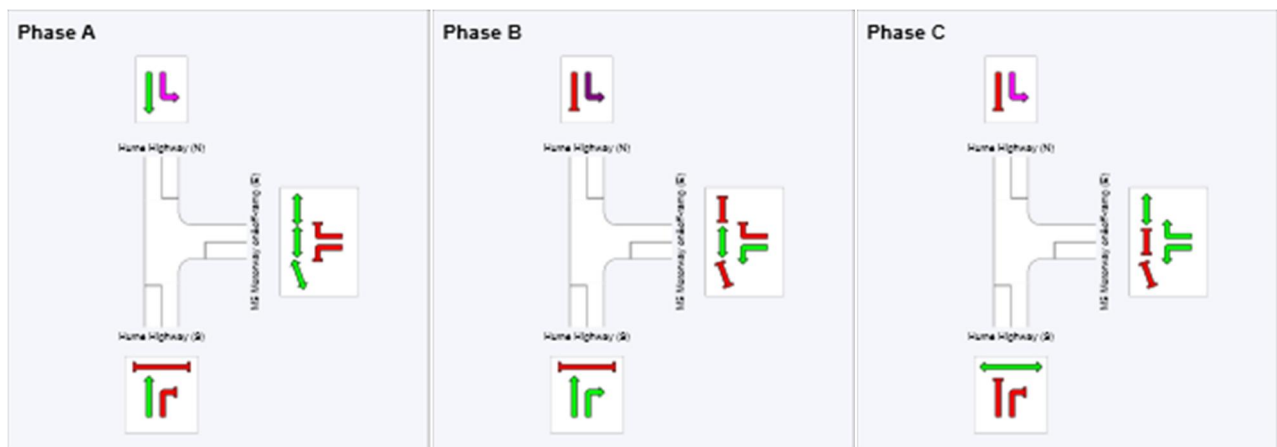
M5 Motorway / Hume Highway

2028 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	96	119
Green Time (sec)	89	16	33
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	96	23	40
Phase Split	60 %	14 %	25 %



I-15 Intersection of Cambridge Avenue and Canterbury Road

AM + PM BASE

MOVEMENT SUMMARY



Site: I-15 2028 BASE AM

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 BASE AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	Deg. Satn HV %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Canterbury Road (S)											
1	L2	440	3.6	0.484	5.9	LOS A	3.0	21.3	0.59	0.68	52.9
2	T1	6	0.0	0.809	8.1	LOS A	11.0	78.6	0.83	0.86	50.6
3	R2	986	2.1	0.809	13.5	LOS A	11.0	78.6	0.83	0.86	50.8
Approach		1433	2.6	0.809	11.2	LOS A	11.0	78.6	0.76	0.81	51.3
East: Cambridge Avenue (E)											
4	L2	300	2.8	0.159	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	79	6.7	0.085	5.5	LOS A	0.5	3.8	0.57	0.59	53.1
6	R2	51	8.3	0.085	10.7	LOS A	0.5	3.8	0.58	0.61	53.5
Approach		429	4.2	0.159	4.7	LOS A	0.5	3.8	0.17	0.48	55.5
North: Railway Parade (N)											
7	L2	314	2.7	0.723	32.1	LOS C	8.0	57.4	1.00	1.30	39.1
8	T1	3	33.3	0.588	27.9	LOS B	4.4	33.2	0.96	1.14	39.9
9	R2	177	8.3	0.588	33.1	LOS C	4.4	33.2	0.96	1.14	38.3
Approach		494	4.9	0.723	32.5	LOS C	8.0	57.4	0.99	1.24	38.8
West: Glenfield Road (W)											
10	L2	382	5.2	1.051	111.1	LOS F	40.8	299.8	1.00	2.50	19.3
11	T1	195	7.0	1.051	112.1	LOS F	40.8	299.8	1.00	2.45	19.5
12	R2	353	5.7	1.051	119.8	LOS F	34.1	250.4	1.00	2.34	19.3
Approach		929	5.8	1.051	114.6	LOS F	40.8	299.8	1.00	2.43	19.3
All Vehicles		3285	4.0	1.051	42.8	LOS D	40.8	299.8	0.78	1.29	34.9

MOVEMENT SUMMARY



Site: I-15 2028 BASE PM

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 BASE PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	Deg. Satn HV %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Canterbury Road (S)											
1	L2	327	2.6	0.444	8.3	LOS A	2.7	19.5	0.76	0.90	51.4
2	T1	5	0.0	0.381	6.9	LOS A	2.2	15.8	0.73	0.88	51.3
3	R2	326	1.0	0.381	12.2	LOS A	2.2	15.8	0.73	0.88	51.5
Approach		659	1.8	0.444	10.2	LOS A	2.7	19.5	0.75	0.89	51.4
East: Cambridge Avenue (E)											
4	L2	1094	2.2	0.577	3.5	LOS A	0.0	0.0	0.00	0.43	56.4
5	T1	284	7.8	0.427	7.0	LOS A	3.3	23.4	0.74	0.74	52.1
6	R2	317	0.7	0.427	12.1	LOS A	3.3	23.4	0.78	0.77	52.4
Approach		1695	2.9	0.577	5.7	LOS A	3.3	23.4	0.27	0.55	54.9
North: Railway Parade (N)											
7	L2	122	0.9	0.182	7.7	LOS A	0.9	6.4	0.68	0.78	52.9
8	T1	0	0.0	0.000	0.0	NA	0.0	0.0	0.00	0.00	0.0
9	R2	229	7.8	0.276	12.6	LOS A	1.6	11.6	0.71	0.85	50.1
Approach		352	5.4	0.276	10.9	LOS A	1.6	11.6	0.70	0.83	51.1
West: Glenfield Road (W)											
10	L2	266	4.7	0.413	8.1	LOS A	2.6	18.8	0.73	0.82	51.5
11	T1	54	0.0	0.413	8.0	LOS A	2.6	18.8	0.73	0.82	53.4
12	R2	444	3.8	0.481	13.3	LOS A	3.6	25.8	0.76	0.88	49.7
Approach		764	3.9	0.481	11.1	LOS A	3.6	25.8	0.75	0.85	50.5
All Vehicles		3469	3.1	0.577	8.3	LOS A	3.6	25.8	0.51	0.71	52.9

AM + PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-15 2028 MIMT AM

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 MIMT AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	440	3.6	0.491	6.0	LOS A	3.0	22.0	0.60	0.69	52.9
2	T1	6	0.0	0.844	9.0	LOS A	13.0	92.5	0.88	0.90	50.1
3	R2	1031	2.0	0.844	14.4	LOS A	13.0	92.5	0.88	0.90	50.2
Approach		1477	2.5	0.844	11.9	LOS A	13.0	92.5	0.80	0.84	50.9
East: Cambridge Avenue (E)											
4	L2	300	2.8	0.159	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	79	6.7	0.082	5.4	LOS A	0.5	3.5	0.54	0.58	53.3
6	R2	51	8.3	0.082	10.6	LOS A	0.5	3.5	0.54	0.60	53.6
Approach		429	4.2	0.159	4.7	LOS A	0.5	3.5	0.16	0.48	55.6
North: Railway Parade (N)											
7	L2	325	2.6	0.786	39.4	LOS C	9.7	69.8	1.00	1.38	36.3
8	T1	3	33.3	0.619	30.0	LOS C	4.8	35.9	0.98	1.16	39.1
9	R2	177	8.3	0.619	35.3	LOS C	4.8	35.9	0.98	1.16	37.4
Approach		505	4.8	0.786	37.9	LOS C	9.7	69.8	0.99	1.30	36.7
West: Glenfield Road (W)											
10	L2	382	5.2	1.177	207.2	LOS F	68.2	500.7	1.00	3.41	12.2
11	T1	203	6.7	1.177	208.1	LOS F	68.2	500.7	1.00	3.31	12.3
12	R2	353	5.7	1.177	215.5	LOS F	56.0	411.9	1.00	3.11	12.4
Approach		938	5.7	1.177	210.5	LOS F	68.2	500.7	1.00	3.27	12.3
All Vehicles		3349	4.0	1.177	70.5	LOS E	68.2	500.7	0.80	1.54	27.4

MOVEMENT SUMMARY



Site: I-15 2028 MIMT PM

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 MIMT PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	327	2.6	0.452	8.5	LOS A	2.8	20.2	0.77	0.91	51.2
2	T1	5	0.0	0.387	7.0	LOS A	2.3	16.3	0.75	0.89	51.3
3	R2	326	1.0	0.387	12.4	LOS A	2.3	16.3	0.75	0.89	51.4
Approach		659	1.8	0.452	10.4	LOS A	2.8	20.2	0.76	0.90	51.3
East: Cambridge Avenue (E)											
4	L2	1138	2.1	0.600	3.6	LOS A	0.0	0.0	0.00	0.43	56.3
5	T1	293	7.6	0.442	7.0	LOS A	3.4	24.5	0.74	0.74	52.1
6	R2	328	0.6	0.442	12.2	LOS A	3.4	24.5	0.79	0.77	52.4
Approach		1759	2.8	0.600	5.7	LOS A	3.4	24.5	0.27	0.55	54.8
North: Railway Parade (N)											
7	L2	122	0.9	0.182	7.7	LOS A	0.9	6.4	0.68	0.78	52.9
8	T1	1	0.0	0.278	7.1	LOS A	1.6	11.7	0.71	0.85	51.3
9	R2	229	7.8	0.278	12.6	LOS A	1.6	11.7	0.71	0.85	50.2
Approach		353	5.4	0.278	10.9	LOS A	1.6	11.7	0.70	0.83	51.1
West: Glenfield Road (W)											
10	L2	266	4.7	0.418	8.3	LOS A	2.7	19.3	0.74	0.83	51.4
11	T1	54	0.0	0.418	8.1	LOS A	2.7	19.3	0.74	0.83	53.3
12	R2	444	3.8	0.487	13.5	LOS A	3.7	26.6	0.78	0.89	49.6
Approach		764	3.9	0.487	11.3	LOS A	3.7	26.6	0.76	0.86	50.4
All Vehicles		3535	3.1	0.600	8.3	LOS A	3.7	26.6	0.51	0.71	52.9

AM + PM with Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-15 2028 MIMT AM - Upgrade

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 MIMT AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		Total	HV			Vehicles	Distance				
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Canterbury Road (S)											
1	L2	440	3.6	0.639	6.0	LOS A	5.4	39.1	0.65	0.73	51.1
2	T1	6	0.0	0.639	5.9	LOS A	5.4	39.1	0.65	0.73	53.8
3	R2	1031	2.0	0.639	11.6	LOS A	5.4	39.1	0.66	0.77	52.3
Approach		1477	2.5	0.639	9.9	LOS A	5.4	39.1	0.66	0.76	52.0
East: Cambridge Avenue (E)											
4	L2	300	2.8	0.159	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	79	6.7	0.085	5.6	LOS A	0.5	3.8	0.57	0.60	53.1
6	R2	51	8.3	0.085	10.8	LOS A	0.5	3.8	0.58	0.62	53.5
Approach		429	4.2	0.159	4.7	LOS A	0.5	3.8	0.17	0.48	55.5
North: Railway Parade (N)											
7	L2	325	2.6	0.535	13.6	LOS A	3.9	27.9	0.90	1.05	48.7
8	T1	3	33.3	0.430	14.7	LOS B	2.4	18.1	0.85	1.01	46.3
9	R2	177	8.3	0.430	19.9	LOS B	2.4	18.1	0.85	1.01	45.2
Approach		505	4.8	0.535	15.8	LOS B	3.9	27.9	0.88	1.04	47.5
West: Glenfield Road (W)											
10	L2	382	5.2	0.696	11.5	LOS A	6.0	43.7	0.90	1.08	48.9
11	T1	203	6.7	0.696	11.9	LOS A	6.0	43.7	0.89	1.08	49.1
12	R2	353	5.7	0.696	18.5	LOS B	5.4	39.9	0.88	1.10	46.6
Approach		938	5.7	0.696	14.2	LOS A	6.0	43.7	0.89	1.09	48.0
All Vehicles		3349	4.0	0.696	11.4	LOS A	6.0	43.7	0.69	0.86	50.6

MOVEMENT SUMMARY



Site: I-15 2028 MIMT PM - Upgrade

Canterbury Road / Cambridge Avenue / Glenfield Road
2028 MIMT PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Canterbury Road (S)											
1	L2	327	2.6	0.420	7.4	LOS A	2.6	18.7	0.76	0.87	51.8
2	T1	5	0.0	0.420	7.3	LOS A	2.6	18.7	0.76	0.87	54.5
3	R2	326	1.0	0.420	13.4	LOS A	2.6	18.7	0.76	0.94	51.0
Approach		659	1.8	0.420	10.4	LOS A	2.6	18.7	0.76	0.91	51.4
East: Cambridge Avenue (E)											
4	L2	1138	2.1	0.600	3.6	LOS A	0.0	0.0	0.00	0.43	56.3
5	T1	293	7.6	0.437	7.0	LOS A	3.3	23.9	0.73	0.74	52.1
6	R2	328	0.6	0.437	12.2	LOS A	3.3	23.9	0.78	0.77	52.4
Approach		1759	2.8	0.600	5.7	LOS A	3.3	23.9	0.27	0.55	54.9
North: Railway Parade (N)											
7	L2	122	0.9	0.175	7.5	LOS A	0.8	5.9	0.65	0.77	53.0
8	T1	1	0.0	0.267	6.9	LOS A	1.4	10.7	0.68	0.84	51.4
9	R2	229	7.8	0.267	12.4	LOS A	1.4	10.7	0.68	0.84	50.3
Approach		353	5.4	0.267	10.7	LOS A	1.4	10.7	0.67	0.82	51.3
West: Glenfield Road (W)											
10	L2	266	4.7	0.397	7.4	LOS A	2.3	16.3	0.69	0.79	52.0
11	T1	54	0.0	0.397	7.2	LOS A	2.3	16.3	0.69	0.79	54.0
12	R2	444	3.8	0.462	12.5	LOS A	3.0	21.9	0.71	0.87	50.3
Approach		764	3.9	0.462	10.3	LOS A	3.0	21.9	0.70	0.84	51.1
All Vehicles		3535	3.1	0.600	8.1	LOS A	3.3	23.9	0.49	0.70	53.1

I-0A Intersection of Moorebank Avenue and Anzac Road

AM BASE

MOVEMENT SUMMARY



Site: I-0A 2028 BASE AM

Intersection of Moorebank Avenue and Anzac Road

2028 BASE AM PEAK

Signals - Fixed Time Cycle Time = 103 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV	v/c	sec		veh	m		per veh	km/h
South: Moorebank Avenue (S)											
2	T1	1091	3.5	1.038	103.0	LOS F	101.5	732.0	1.00	1.51	15.9
3	R2	463	3.2	0.754	35.1	LOS C	18.8	135.1	0.95	0.98	37.3
Approach		1554	3.4	1.038	82.7	LOS F	101.5	732.0	0.99	1.35	20.8
East: Anzac Road (E)											
4	L2	249	3.4	0.301	24.4	LOS B	7.8	56.5	0.67	0.76	41.9
6	R2	219	13.5	0.832	58.8	LOS E	12.0	94.0	1.00	0.94	20.1
Approach		468	8.1	0.832	40.5	LOS C	12.0	94.0	0.82	0.84	30.4
North: Moorebank Avenue (N)											
7	L2	375	9.8	0.244	6.1	LOS A	1.4	10.6	0.16	0.59	49.8
8	T1	638	3.3	0.590	23.1	LOS B	18.4	132.7	0.78	0.68	36.9
Approach		1013	5.7	0.590	16.8	LOS B	18.4	132.7	0.55	0.65	40.9
All Vehicles		3035	4.9	1.038	54.2	LOS D	101.5	732.0	0.82	1.04	26.0

PHASING SUMMARY



Site: I-0A 2028 BASE AM

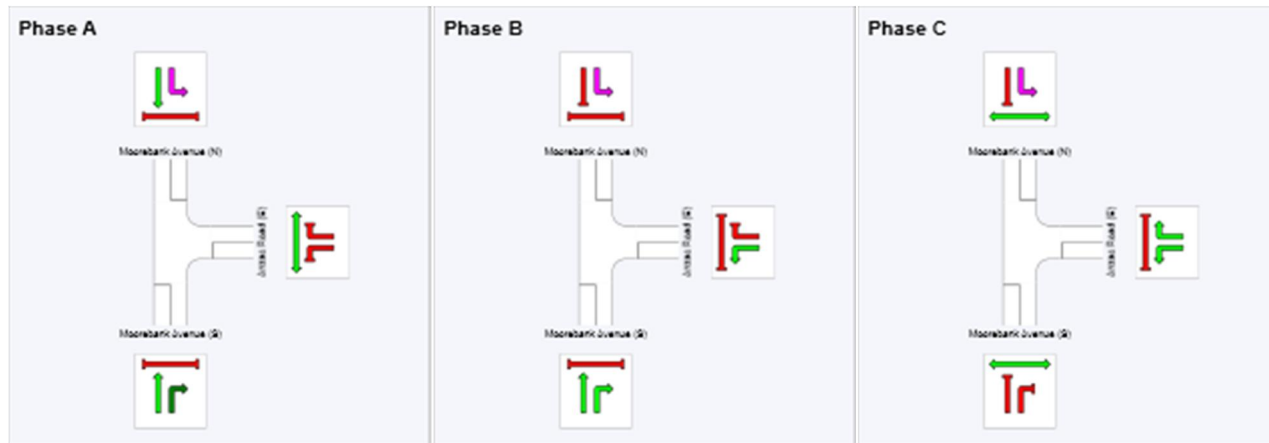
Intersection of Moorebank Avenue and Anzac Road

2028 BASE AM PEAK

Signals - Fixed Time Cycle Time = 103 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	50	78
Green Time (sec)	44	22	19
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	50	28	25
Phase Split	49 %	27 %	24 %



PM BASE

MOVEMENT SUMMARY



Site: I-0A 2028 BASE PM

Intersection of Moorebank Avenue and Anzac Road

2028 BASE PM PEAK

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

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	320	3.9	0.268	9.7	LOS A	7.5	54.6	0.48	0.42	47.5
3	R2	203	1.0	1.183	208.2	LOS F	24.8	175.0	1.00	1.34	13.5
Approach		523	2.8	1.183	86.8	LOS F	24.8	175.0	0.68	0.77	20.8
East: Anzac Road (E)											
4	L2	572	2.2	0.839	45.0	LOS D	30.7	218.8	0.98	0.93	33.9
6	R2	386	5.4	0.914	66.8	LOS E	24.9	182.3	1.00	1.01	18.7
Approach		958	3.5	0.914	53.8	LOS D	30.7	218.8	0.99	0.96	27.4
North: Moorebank Avenue (N)											
7	L2	349	3.9	0.217	6.0	LOS A	1.3	9.2	0.14	0.59	50.2
8	T1	1287	2.5	0.976	52.6	LOS D	73.0	521.8	0.91	1.05	24.8
Approach		1637	2.8	0.976	42.7	LOS D	73.0	521.8	0.74	0.95	27.8
All Vehicles		3118	3.0	1.183	53.5	LOS D	73.0	521.8	0.81	0.93	26.1

PHASING SUMMARY



Site: I-0A 2028 BASE PM

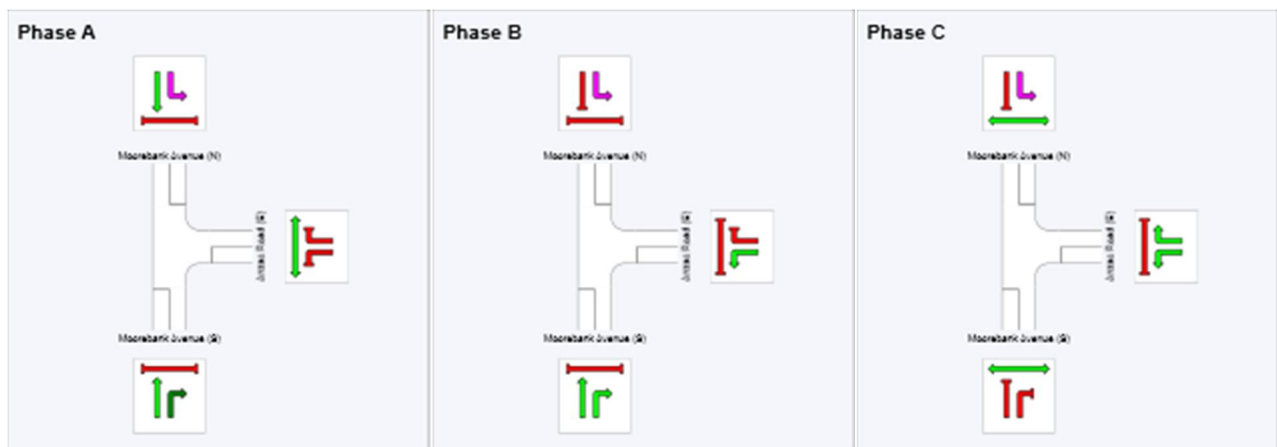
Intersection of Moorebank Avenue and Anzac Road

2028 BASE PM PEAK

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

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	63	75
Green Time (sec)	57	6	29
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	63	12	35
Phase Split	57 %	11 %	32 %



AM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-OA 2028 MINT AM

Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2028 MINT AM PEAK

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

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	83	0.0	0.749	32.6	LOS C	23.3	167.2	0.83	0.81	29.5
2	T1	1073	3.5	0.749	27.1	LOS B	23.8	171.4	0.84	0.77	37.2
3	R2	463	3.2	0.850	52.1	LOS D	26.2	188.4	1.00	0.95	28.8
Approach		1619	3.3	0.850	34.5	LOS C	26.2	188.4	0.88	0.83	33.8
East: Anzac Road (E)											
4	L2	207	4.1	0.222	11.4	LOS A	3.7	26.7	0.42	0.68	47.9
5	T1	26	0.0	0.148	52.5	LOS D	1.3	9.4	0.95	0.69	25.7
6	R2	216	13.7	0.701	62.5	LOS E	6.1	47.5	1.00	0.85	28.2
Approach		449	8.4	0.701	38.3	LOS C	6.1	47.5	0.73	0.76	34.2
North: Moorebank Avenue (N)											
7	L2	375	9.8	0.680	35.1	LOS C	20.4	153.3	0.87	0.82	37.5
8	T1	507	3.1	0.680	33.3	LOS C	20.4	153.3	0.87	0.77	34.1
9	R2	454	51.0	1.035	138.0	LOS F	21.2	275.6	1.00	1.33	12.0
Approach		1336	21.3	1.035	69.3	LOS E	21.2	275.6	0.91	0.97	23.3
West: MIMT Access Road (W)											
10	L2	234	99.1	0.478	27.3	LOS B	3.9	73.2	0.87	0.77	30.8
11	T1	1	0.0	0.007	52.0	LOS D	0.1	0.4	0.94	0.56	26.0
12	R2	1	0.0	0.008	56.3	LOS D	0.1	0.4	0.94	0.59	19.2
Approach		236	98.2	0.478	27.5	LOS B	3.9	73.2	0.87	0.77	30.7
All Vehicles		3640	16.7	1.035	47.3	LOS D	26.2	275.6	0.87	0.87	28.9

PHASING SUMMARY



Site: I-OA 2028 MINT AM

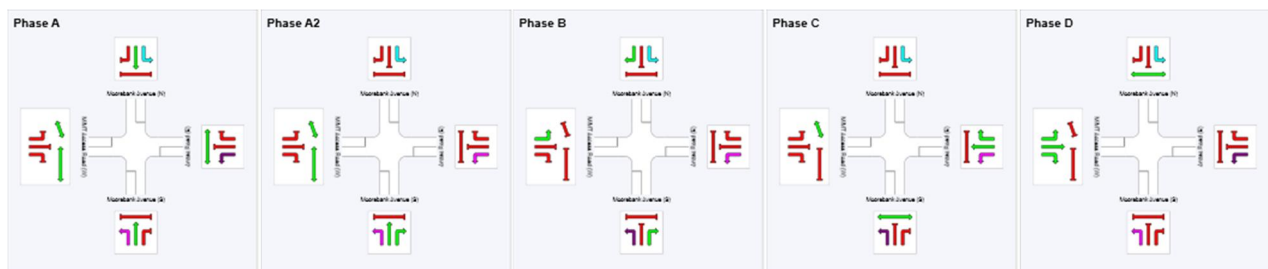
Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2028 MINT AM PEAK

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

Phase Timing Results

Phase	A	A2	B	C	D
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	41	50	80	96
Green Time (sec)	35	3	24	10	8
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	41	9	30	16	14
Phase Split	37 %	8 %	27 %	15 %	13 %



PM with Moorebank IMT – no upgrade

MOVEMENT SUMMARY



Site: I-0A 2028 MINT PM

Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2028 MINT PM PEAK

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

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	1	0.0	0.226	30.4	LOS C	4.8	34.5	0.60	0.50	31.2
2	T1	320	3.9	0.226	24.0	LOS B	4.8	35.0	0.60	0.50	39.0
3	R2	203	1.0	0.932	76.4	LOS F	13.4	94.4	1.00	1.06	23.3
Approach		524	2.8	0.932	44.3	LOS D	13.4	94.4	0.75	0.71	30.6
East: Anzac Road (E)											
4	L2	562	2.2	0.858	37.8	LOS C	31.0	221.1	1.00	0.99	33.6
5	T1	1	0.0	0.005	48.2	LOS D	0.1	0.4	0.91	0.56	26.9
6	R2	386	5.4	0.990	96.7	LOS F	14.5	106.5	1.00	1.17	22.0
Approach		949	3.5	0.990	61.8	LOS E	31.0	221.1	1.00	1.07	27.3
North: Moorebank Avenue (N)											
7	L2	343	4.0	0.912	39.1	LOS C	49.7	357.3	0.93	0.97	36.8
8	T1	1248	2.5	0.912	33.6	LOS C	49.7	357.3	0.83	0.88	33.9
9	R2	292	93.5	0.749	56.3	LOS D	8.2	149.2	0.98	0.92	21.2
Approach		1883	16.9	0.912	38.1	LOS C	49.7	357.3	0.87	0.91	32.1
West: MIMT Access Road (W)											
10	L2	503	54.4	0.755	31.2	LOS C	9.6	128.9	0.96	0.90	30.0
11	T1	29	0.0	0.208	54.4	LOS D	1.6	10.9	0.97	0.70	25.3
12	R2	74	0.0	0.546	60.9	LOS E	4.1	28.4	1.00	0.77	18.2
Approach		606	45.1	0.755	35.9	LOS C	9.6	128.9	0.97	0.87	28.0
All Vehicles		3963	16.1	0.990	44.3	LOS D	49.7	357.3	0.90	0.91	29.9

PHASING SUMMARY



Site: I-0A 2028 MINT PM

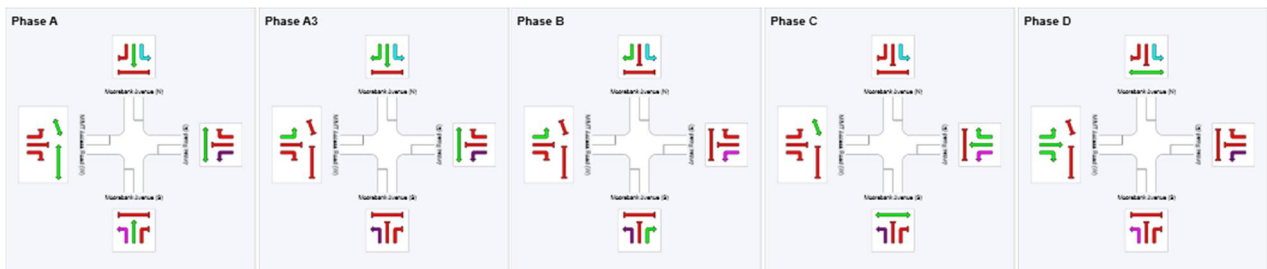
Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2028 MINT PM PEAK

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

Phase Timing Results

Phase	A	A3	B	C	D
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	47	59	78	96
Green Time (sec)	41	6	13	12	8
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	47	12	19	18	14
Phase Split	43 %	11 %	17 %	16 %	13 %



Appendix J

2030 SIDRA results with and without Moorebank IMT



I-01 Intersection of the Hume Highway and Orange Grove Road

AM BASE

MOVEMENT SUMMARY



Site: I-01 2030 BASE AM

Hume Highway / Orange Grove Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	953	11.3	0.683	24.2	LOS B	19.5	150.0	0.84	0.76	35.9
26	R2	389	10.0	0.907	86.6	LOS F	17.0	128.8	1.00	0.94	23.8
Approach		1342	10.9	0.907	42.3	LOS C	19.5	150.0	0.89	0.82	30.0
NorthWest: Orange Grove Road (NW)											
27	L2	603	6.6	0.715	18.9	LOS B	19.6	145.2	0.54	0.81	44.7
29	R2	1312	6.6	0.940	75.3	LOS F	38.2	282.7	1.00	0.94	23.0
Approach		1915	6.6	0.940	57.6	LOS E	38.2	282.7	0.86	0.90	27.7
SouthWest: Hume Highway (SW)											
30	L2	1252	6.5	0.441	11.5	LOS A	13.8	101.7	0.34	0.70	52.2
31	T1	2187	5.0	0.806	22.9	LOS B	39.5	288.4	0.71	0.65	40.1
Approach		3439	5.5	0.806	18.7	LOS B	39.5	288.4	0.57	0.67	44.6
All Vehicles		6696	6.9	0.940	34.6	LOS C	39.5	288.4	0.72	0.76	34.4

PHASING SUMMARY



Site: I-01 2030 BASE AM

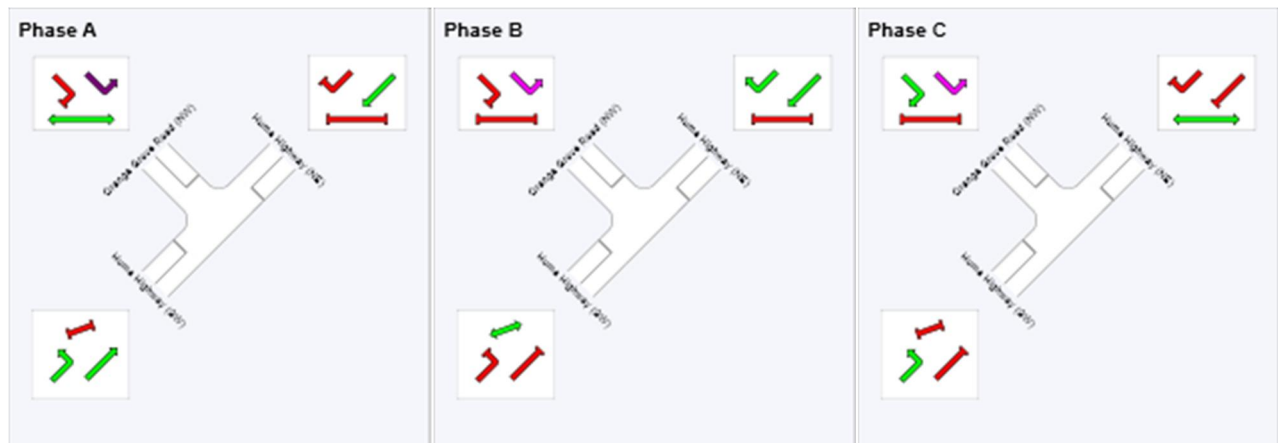
Hume Highway / Orange Grove Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	84	108
Green Time (sec)	77	17	36
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	84	23	43
Phase Split	56 %	15 %	29 %



PM BASE

MOVEMENT SUMMARY



Site: I-01 2030 BASE PM

Hume Highway / Orange Grove Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1762	3.3	0.918	44.0	LOS D	49.8	358.6	0.91	0.97	27.0
26	R2	816	2.8	0.958	68.1	LOS E	24.7	176.9	1.00	1.04	27.6
Approach		2578	3.1	0.958	51.6	LOS D	49.8	358.6	0.94	0.99	27.2
NorthWest: Orange Grove Road (NW)											
27	L2	391	4.3	0.365	12.4	LOS A	6.7	48.6	0.27	0.64	49.3
29	R2	1358	3.1	1.040	119.8	LOS F	51.7	371.7	1.00	1.10	17.0
Approach		1748	3.4	1.040	95.8	LOS F	51.7	371.7	0.84	1.00	20.3
SouthWest: Hume Highway (SW)											
30	L2	1278	3.0	0.745	19.2	LOS B	19.5	139.7	0.77	0.83	46.0
31	T1	1085	5.3	0.975	88.0	LOS F	37.6	275.5	1.00	1.12	18.1
Approach		2363	4.1	0.975	50.8	LOS D	37.6	275.5	0.88	0.97	28.8
All Vehicles		6689	3.5	1.040	62.9	LOS E	51.7	371.7	0.89	0.98	25.2

PHASING SUMMARY



Site: I-01 2030 BASE PM

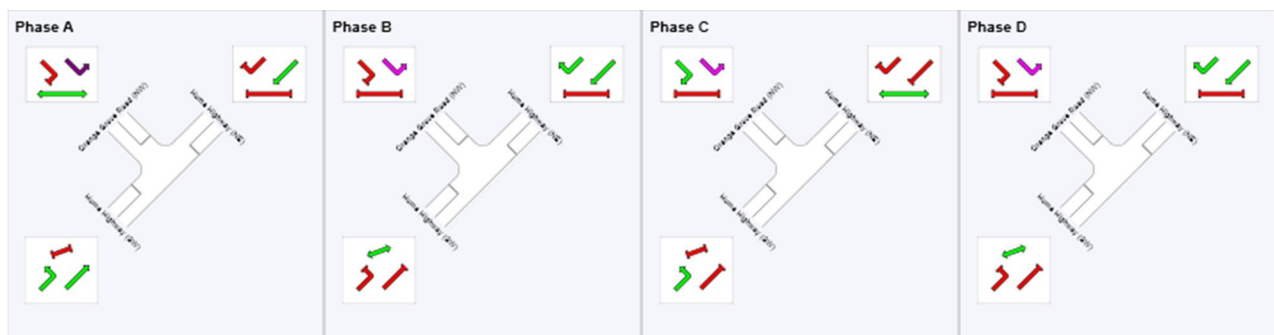
Hume Highway / Orange Grove Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	80	124
Green Time (sec)	47	20	38	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	54	26	45	25
Phase Split	36 %	17 %	30 %	17 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-01 2030 MIMT AM

Hume Highway / Orange Grove Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	956	11.2	0.686	24.2	LOS B	19.6	150.8	0.84	0.77	35.8
26	R2	389	10.0	0.907	86.6	LOS F	17.0	128.8	1.00	0.94	23.8
Approach		1346	10.9	0.907	42.3	LOS C	19.6	150.8	0.89	0.82	30.0
NorthWest: Orange Grove Road (NW)											
27	L2	602	6.5	0.712	18.8	LOS B	19.5	144.4	0.54	0.81	44.8
29	R2	1350	9.0	1.016	125.5	LOS F	48.5	375.0	1.00	1.10	16.3
Approach		1952	8.2	1.069	92.6	LOS F	48.5	375.0	0.86	1.01	20.9
SouthWest: Hume Highway (SW)											
30	L2	1287	9.1	0.469	11.7	LOS A	14.7	113.6	0.35	0.70	49.9
31	T1	2186	4.9	0.805	22.9	LOS B	39.5	287.9	0.71	0.65	40.2
Approach		3474	6.5	0.805	18.7	LOS B	39.5	287.9	0.57	0.67	43.9
All Vehicles		6771	7.8	1.069	44.7	LOS D	48.5	375.0	0.72	0.80	30.2

PHASING SUMMARY



Site: I-01 2030 MIMT AM

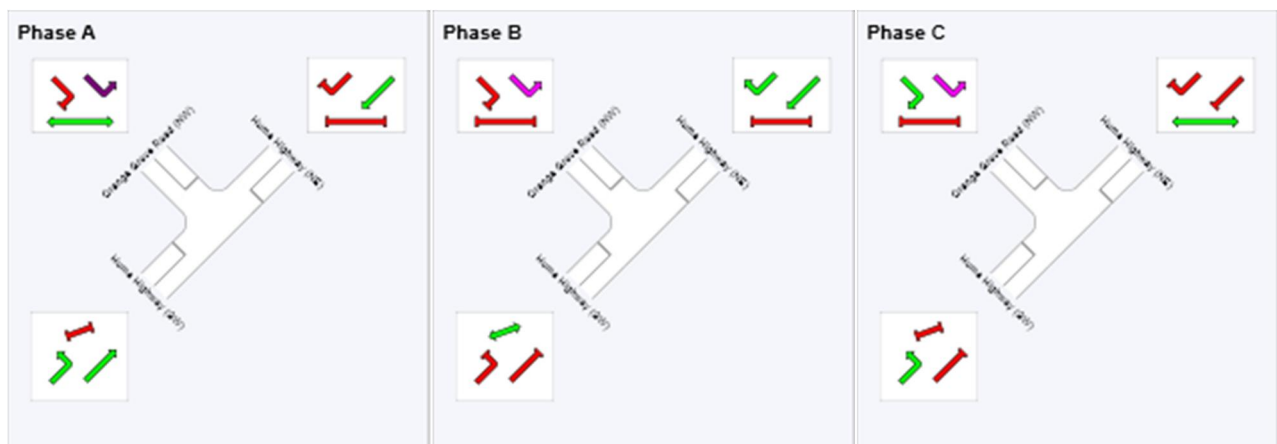
Hume Highway / Orange Grove Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	84	108
Green Time (sec)	77	17	36
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	84	23	43
Phase Split	56 %	15 %	29 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-01 2030 MIMT PM

Hume Highway / Orange Grove Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1767	3.6	0.923	46.0	LOS D	51.1	369.4	0.92	0.99	26.3
26	R2	816	2.8	0.958	68.1	LOS E	24.7	176.9	1.00	1.04	27.6
Approach		2583	3.3	0.958	53.0	LOS D	51.1	369.4	0.94	1.00	26.8
NorthWest: Orange Grove Road (NW)											
27	L2	391	4.3	0.366	12.4	LOS A	6.7	48.8	0.27	0.64	49.3
29	R2	1401	6.1	1.118	174.4	LOS F	64.4	488.3	1.00	1.24	12.8
Approach		1792	5.7	1.118	139.1	LOS F	64.4	488.3	0.84	1.11	15.6
SouthWest: Hume Highway (SW)											
30	L2	1322	6.0	0.801	19.9	LOS B	21.4	161.8	0.81	0.85	44.3
31	T1	1092	5.6	0.984	91.9	LOS F	38.8	285.6	1.00	1.14	17.6
Approach		2414	5.8	0.984	52.5	LOS D	38.8	285.6	0.90	0.98	28.0
All Vehicles		6789	4.8	1.118	75.5	LOS F	64.4	488.3	0.90	1.02	22.4

PHASING SUMMARY



Site: I-01 2030 MIMT PM

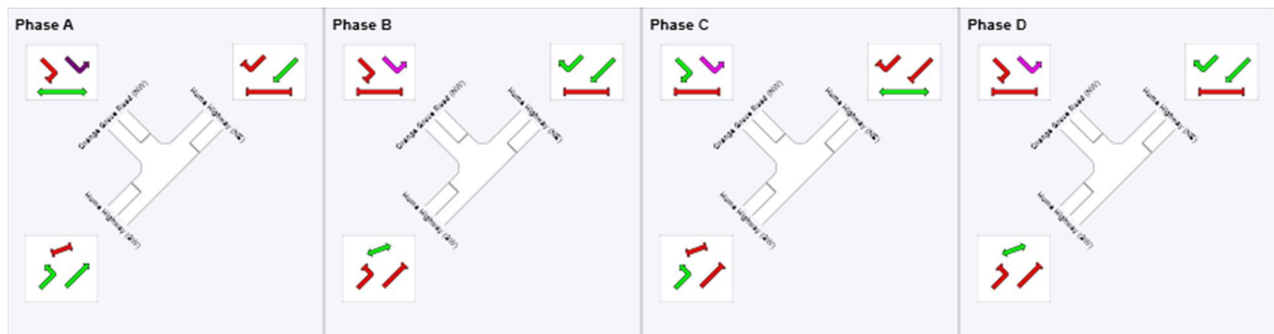
Hume Highway / Orange Grove Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	80	124
Green Time (sec)	47	20	38	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	54	26	45	25
Phase Split	36 %	17 %	30 %	17 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-01 2030 MIMT AM - Upgrade

Hume Highway / Orange Grove Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%				v/c	sec			
NorthEast: Hume Highway (NE)											
25	T1	956	11.2	0.686	24.2	LOS B	19.6	150.8	0.84	0.77	35.8
26	R2	389	10.0	0.907	86.6	LOS F	17.0	128.8	1.00	0.94	23.9
Approach		1346	10.9	0.907	42.3	LOS C	19.6	150.8	0.89	0.82	30.0
NorthWest: Orange Grove Road (NW)											
27	L2	602	6.5	0.694	7.3	LOS A	3.8	28.4	0.11	0.63	53.0
29	R2	1350	9.0	1.018	127.2	LOS F	49.0	378.7	1.00	1.11	16.3
Approach		1952	8.2	1.072	90.2	LOS F	49.0	378.7	0.72	0.96	21.3
SouthWest: Hume Highway (SW)											
30	L2	1287	9.1	0.469	11.7	LOS A	14.7	113.6	0.35	0.70	49.9
31	T1	2186	4.9	0.722	20.3	LOS B	31.4	229.3	0.58	0.53	42.2
Approach		3474	6.5	0.722	17.1	LOS B	31.4	229.3	0.50	0.59	45.3
All Vehicles		6771	7.8	1.072	43.2	LOS D	49.0	378.7	0.64	0.74	30.7

PHASING SUMMARY



Site: I-01 2030 MIMT AM - Upgrade

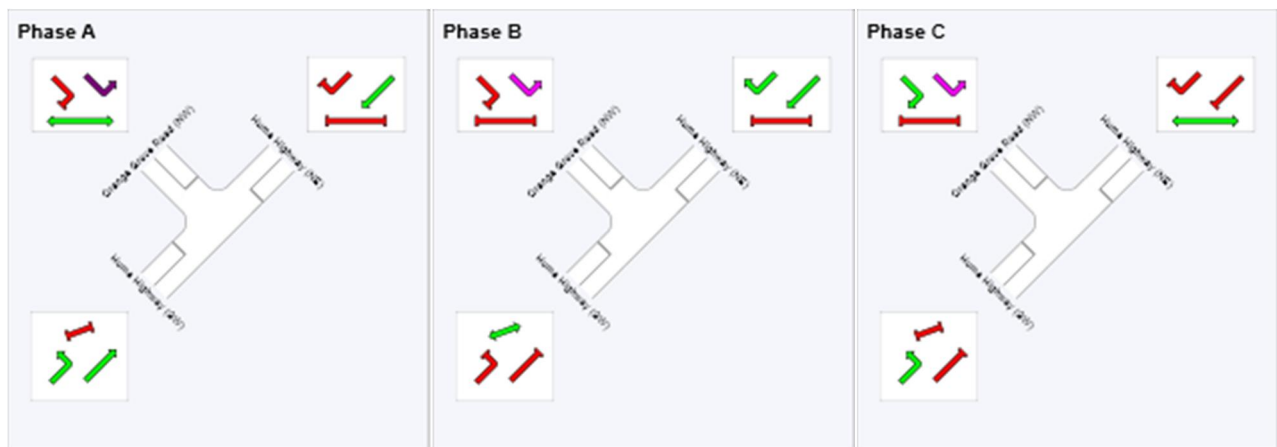
Hume Highway / Orange Grove Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	84	108
Green Time (sec)	77	17	36
Yellow Time (sec)	5	4	5
All-Red Time (sec)	2	2	2
Phase Time (sec)	84	23	43
Phase Split	56 %	15 %	29 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-01 2030 MIMT PM - Upgrade

Hume Highway / Orange Grove Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
NorthEast: Hume Highway (NE)											
25	T1	1767	3.6	0.972	70.1	LOS E	62.0	448.2	0.99	1.16	20.3
26	R2	816	2.8	0.958	67.9	LOS E	23.6	169.3	1.00	1.04	27.7
Approach		2583	3.3	0.972	69.4	LOS E	62.0	448.2	0.99	1.12	22.9
NorthWest: Orange Grove Road (NW)											
27	L2	391	4.3	0.340	8.3	LOS A	3.3	24.0	0.14	0.59	52.4
29	R2	1401	6.1	1.006	97.7	LOS F	50.4	382.2	0.99	1.05	19.6
Approach		1792	5.7	1.006	78.2	LOS F	50.4	382.2	0.81	0.95	23.1
SouthWest: Hume Highway (SW)											
30	L2	1322	6.0	0.801	19.9	LOS B	21.2	161.0	0.81	0.85	44.3
31	T1	1092	5.6	0.892	67.9	LOS E	25.6	188.3	0.98	0.98	21.8
Approach		2414	5.8	0.892	41.6	LOS C	25.6	188.3	0.89	0.91	31.7
All Vehicles		6789	4.8	1.006	61.9	LOS E	62.0	448.2	0.91	1.00	25.4

PHASING SUMMARY



Site: I-01 2030 MIMT PM - Upgrade

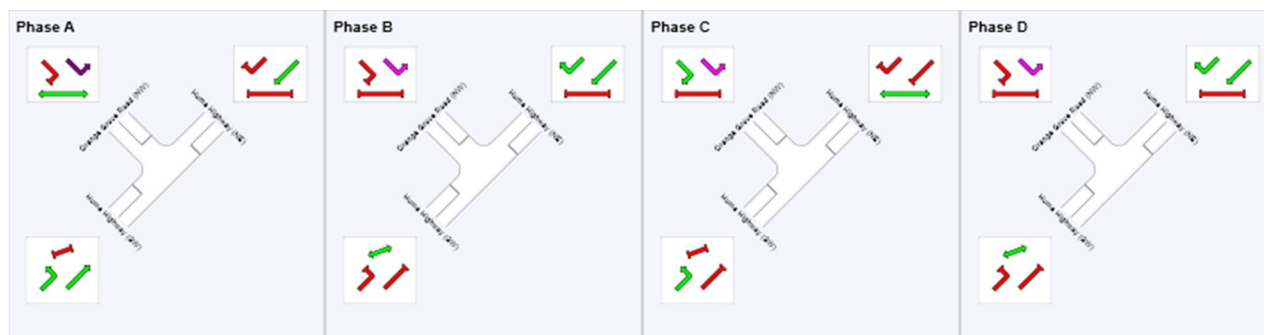
Hume Highway / Orange Grove Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	48	75	124
Green Time (sec)	42	20	43	19
Yellow Time (sec)	5	4	5	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	49	26	50	25
Phase Split	33 %	17 %	33 %	17 %



I-02 Intersection of the Hume Highway and Elizabeth Drive

AM BASE

MOVEMENT SUMMARY



Site: I-02 2030 BASE AM

Hume Highway / Elizabeth Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	Deg. Satn HV %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway (S)											
1	L2	137	5.4	0.151	21.3	LOS B	3.5	25.9	0.38	0.67	37.3
2	T1	2352	6.3	0.911	47.1	LOS D	58.1	428.7	0.95	0.93	23.4
Approach		2488	6.2	0.929	45.6	LOS D	58.1	428.7	0.91	0.92	23.9
East: Elizabeth Drive (E)											
4	L2	39	5.4	0.440	60.7	LOS E	10.6	78.2	0.92	0.82	18.4
5	T1	503	5.9	0.440	56.9	LOS E	12.0	88.5	0.91	0.83	23.5
6	R2	156	2.7	0.754	78.2	LOS F	11.7	83.5	1.00	0.87	14.8
Approach		698	5.1	0.754	61.8	LOS E	12.0	88.5	0.93	0.84	20.9
North: Hume Highway (N)											
7	L2	82	2.6	0.616	24.6	LOS B	22.1	164.8	0.57	0.55	32.4
8	T1	1715	8.7	0.616	18.5	LOS B	22.4	168.3	0.56	0.52	36.9
9	R2	353	9.6	1.268	334.6	LOS F	29.5	223.7	1.00	1.54	5.9
Approach		2149	8.6	1.268	70.6	LOS F	29.5	223.7	0.63	0.69	18.2
West: Elizabeth Drive (W)											
10	L2	627	5.2	1.057	141.9	LOS F	70.4	514.7	1.00	1.14	11.9
11	T1	1091	3.1	1.082	160.2	LOS F	64.4	462.4	1.00	1.44	10.4
12	R2	512	6.6	1.120	358.8	LOS F	58.3	431.0	1.00	1.57	5.6
Approach		2229	4.5	1.120	200.6	LOS F	70.4	514.7	1.00	1.38	8.9
All Vehicles		7565	6.3	1.268	99.9	LOS F	70.4	514.7	0.86	0.98	14.5

PHASING SUMMARY



Site: I-02 2030 BASE AM

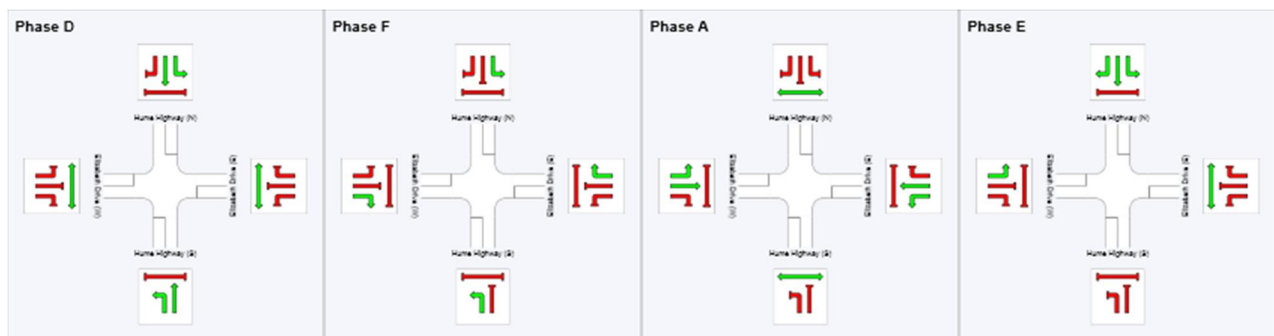
Hume Highway / Elizabeth Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	68	91	132
Green Time (sec)	62	17	35	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	68	23	41	18
Phase Split	45 %	15 %	27 %	12 %



PM BASE

MOVEMENT SUMMARY



Site: I-02 2030 BASE PM

Hume Highway / Elizabeth Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles veh	Distance m			
		veh/h	%								
South: Hume Highway (S)											
1	L2	316	4.3	0.470	40.6	LOS C	15.0	108.7	0.70	0.78	28.1
2	T1	1496	4.9	0.868	56.3	LOS D	36.7	267.3	0.97	0.92	20.8
Approach		1812	4.8	0.868	53.6	LOS D	36.7	267.3	0.92	0.90	22.0
East: Elizabeth Drive (E)											
4	L2	128	0.8	0.954	95.2	LOS F	31.8	226.3	1.00	1.10	13.2
5	T1	1083	2.4	0.954	90.8	LOS F	39.9	285.4	1.00	1.12	16.8
6	R2	172	0.0	1.155	237.7	LOS F	23.9	167.3	1.00	1.46	6.0
Approach		1383	2.0	1.155	109.5	LOS F	39.9	285.4	1.00	1.16	14.0
North: Hume Highway (N)											
7	L2	66	4.8	0.854	22.7	LOS B	39.2	281.8	0.70	0.68	33.9
8	T1	2444	2.9	0.854	16.9	LOS B	39.9	286.3	0.70	0.66	38.3
9	R2	961	3.0	0.917	76.9	LOS F	37.9	271.9	1.00	0.96	19.4
Approach		3472	2.9	0.917	33.6	LOS C	39.9	286.3	0.78	0.75	29.2
West: Elizabeth Drive (W)											
10	L2	327	6.4	0.432	33.3	LOS C	13.5	99.7	0.61	0.76	30.0
11	T1	532	4.8	0.680	60.7	LOS E	17.4	126.9	0.95	0.81	21.1
12	R2	311	2.7	1.065	166.0	LOS F	17.7	126.9	1.00	1.22	10.8
Approach		1169	4.7	1.065	81.0	LOS F	17.7	126.9	0.87	0.90	17.9
All Vehicles		7836	3.5	1.155	58.7	LOS E	39.9	286.3	0.87	0.88	21.3

PHASING SUMMARY



Site: I-02 2030 BASE PM

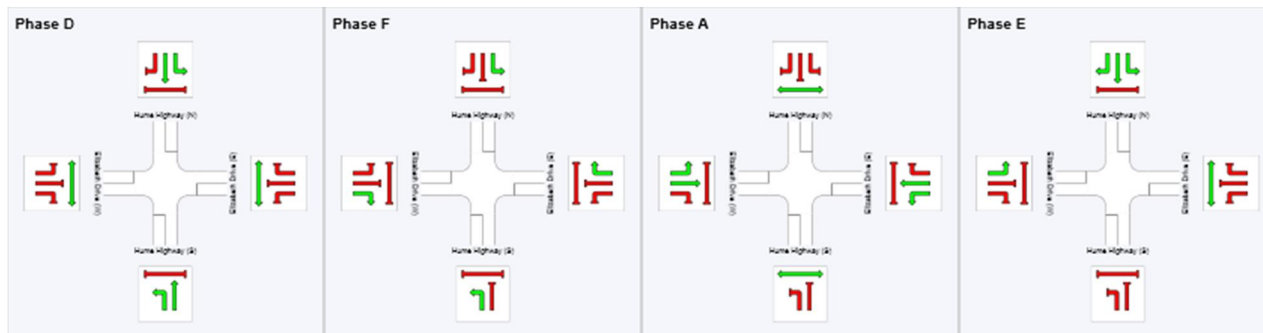
Hume Highway / Elizabeth Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	71	108
Green Time (sec)	47	12	31	36
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	53	18	37	42
Phase Split	35 %	12 %	25 %	28 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-02 2030 MIMT AM

Hume Highway / Elizabeth Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	137	5.4	0.151	21.3	LOS B	3.5	25.9	0.38	0.67	37.3
2	T1	2391	7.8	0.945	56.4	LOS D	65.7	497.7	0.97	1.01	20.8
Approach		2528	7.7	0.964	54.5	LOS D	65.7	497.7	0.94	0.99	21.4
East: Elizabeth Drive (E)											
4	L2	39	5.4	0.439	60.6	LOS E	10.6	77.9	0.92	0.82	18.4
5	T1	502	5.7	0.439	56.8	LOS E	12.0	88.1	0.91	0.82	23.5
6	R2	156	2.7	0.754	78.2	LOS F	11.7	83.5	1.00	0.87	14.8
Approach		697	5.0	0.754	61.8	LOS E	12.0	88.1	0.93	0.83	20.9
North: Hume Highway (N)											
7	L2	82	2.6	0.644	25.0	LOS B	23.5	180.4	0.59	0.57	32.1
8	T1	1757	10.5	0.644	18.9	LOS B	23.7	184.4	0.58	0.54	36.6
9	R2	353	9.6	1.268	334.6	LOS F	29.5	223.7	1.00	1.54	5.9
Approach		2191	10.1	1.268	70.0	LOS E	29.5	223.7	0.65	0.70	18.3
West: Elizabeth Drive (W)											
10	L2	627	5.2	1.057	141.9	LOS F	70.4	514.7	1.00	1.14	11.9
11	T1	1089	3.0	1.080	158.9	LOS F	64.0	459.7	1.00	1.44	10.5
12	R2	516	7.2	1.128	381.2	LOS F	61.2	458.5	1.00	1.60	5.3
Approach		2233	4.6	1.128	205.4	LOS F	70.4	514.7	1.00	1.39	8.7
All Vehicles		7649	7.2	1.268	103.6	LOS F	70.4	514.7	0.87	1.01	14.1

PHASING SUMMARY



Site: I-02 2030 MIMT AM

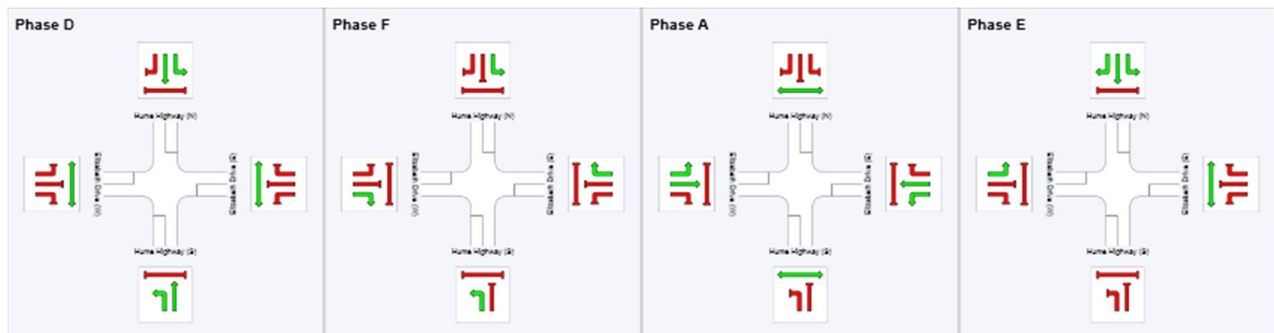
Hume Highway / Elizabeth Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	68	91	132
Green Time (sec)	62	17	35	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	68	23	41	18
Phase Split	45 %	15 %	27 %	12 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-02 2030 MIMT PM

Hume Highway / Elizabeth Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	322	5.9	0.489	41.0	LOS C	15.5	115.6	0.71	0.78	27.9
2	T1	1548	7.6	0.950	74.3	LOS F	46.3	354.7	0.98	1.07	17.2
Approach		1870	7.3	0.950	68.6	LOS E	46.3	354.7	0.94	1.02	18.7
East: Elizabeth Drive (E)											
4	L2	128	0.8	0.952	94.8	LOS F	31.7	225.4	1.00	1.10	13.3
5	T1	1082	2.3	0.952	90.4	LOS F	39.8	284.2	1.00	1.12	16.9
6	R2	172	0.0	1.155	237.7	LOS F	23.9	167.3	1.00	1.46	6.0
Approach		1382	1.9	1.155	109.1	LOS F	39.8	284.2	1.00	1.16	14.0
North: Hume Highway (N)											
7	L2	66	4.8	0.890	28.3	LOS B	47.2	350.1	0.77	0.77	30.3
8	T1	2493	4.8	0.890	22.4	LOS B	48.0	356.1	0.77	0.76	34.2
9	R2	961	3.0	0.917	76.9	LOS F	37.9	271.9	1.00	0.96	19.4
Approach		3520	4.3	0.917	37.4	LOS C	48.0	356.1	0.83	0.81	27.6
West: Elizabeth Drive (W)											
10	L2	325	5.8	0.428	33.3	LOS C	13.4	98.2	0.61	0.76	30.0
11	T1	529	4.4	0.676	60.6	LOS E	17.3	125.8	0.95	0.81	21.1
12	R2	309	2.4	1.059	161.4	LOS F	17.4	124.2	1.00	1.21	11.1
Approach		1164	4.2	1.059	79.8	LOS F	17.4	125.8	0.87	0.90	18.1
All Vehicles		7936	4.6	1.155	63.4	LOS E	48.0	356.1	0.89	0.93	20.2

PHASING SUMMARY



Site: I-02 2030 MIMT PM

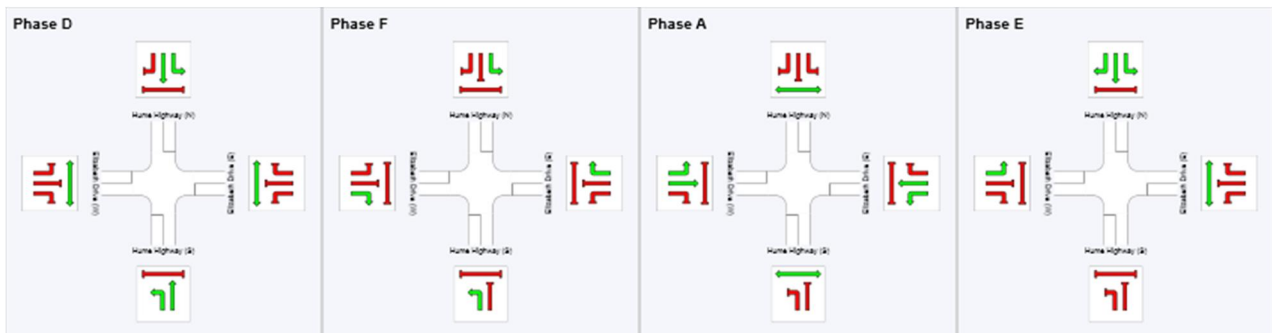
Hume Highway / Elizabeth Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	D	F	A	E
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	53	71	108
Green Time (sec)	47	12	31	36
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	53	18	37	42
Phase Split	35 %	12 %	25 %	28 %



I-03 Intersection of the Hume Highway and Memorial Avenue

AM BASE

MOVEMENT SUMMARY



Site: I-03 2030 BASE AM

Hume Highway / Memorial Avenue

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%				v/c	veh			
South: Hume Highway (S)											
1	L2	157	1.3	0.955	65.8	LOS E	66.8	491.9	1.00	1.06	27.4
2	T1	2104	7.3	0.955	57.6	LOS E	67.8	504.3	0.93	1.01	25.7
3	R2	267	0.0	1.137	222.0	LOS F	36.2	253.5	1.00	1.30	9.4
Approach		2528	6.1	1.137	75.5	LOS F	67.8	504.3	0.94	1.04	22.0
East: Memorial Avenue (E)											
4	L2	26	20.0	1.170	251.7	LOS F	23.5	175.1	1.00	1.53	8.6
5	T1	160	5.3	1.170	247.0	LOS F	23.5	175.1	1.00	1.53	8.4
6	R2	125	12.6	1.170	251.8	LOS F	21.4	164.2	1.00	1.52	6.0
Approach		312	9.5	1.170	249.3	LOS F	23.5	175.1	1.00	1.52	7.5
North: Hume Highway (N)											
7	L2	121	6.1	0.103	12.4	LOS A	2.6	19.4	0.36	0.64	39.4
8	T1	1715	11.1	0.725	27.9	LOS B	30.5	233.5	0.72	0.65	36.6
9	R2	101	3.1	0.439	72.0	LOS F	7.0	50.1	0.97	0.79	21.4
Approach		1937	10.4	0.725	29.2	LOS C	30.5	233.5	0.71	0.66	35.4
West: Memorial Avenue (W)											
10	L2	128	3.3	1.178	239.1	LOS F	47.3	337.1	1.00	1.56	9.1
11	T1	460	1.6	1.178	242.0	LOS F	58.9	420.6	1.00	1.62	8.5
12	R2	163	3.2	1.178	253.8	LOS F	58.9	420.6	1.00	1.67	10.9
Approach		752	2.2	1.178	244.1	LOS F	58.9	420.6	1.00	1.62	9.2
All Vehicles		5528	7.3	1.178	92.0	LOS F	67.8	504.3	0.87	1.01	19.0

PHASING SUMMARY



Site: I-03 2030 BASE AM

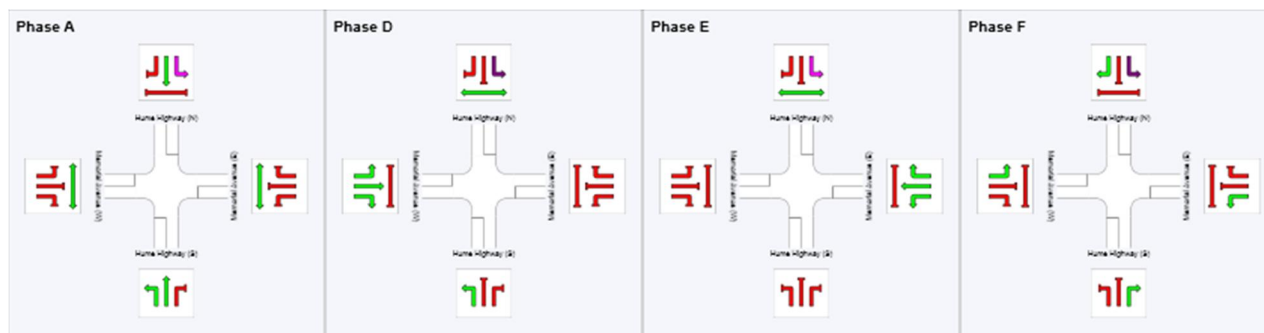
Hume Highway / Memorial Avenue

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	75	108	125
Green Time (sec)	69	27	11	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	75	33	17	25
Phase Split	50 %	22 %	11 %	17 %



PM BASE

MOVEMENT SUMMARY



Site: I-03 2030 BASE PM

Hume Highway / Memorial Avenue

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	119	0.9	0.756	41.5	LOS C	32.6	237.2	0.84	0.79	34.0
2	T1	1604	5.6	0.756	33.5	LOS C	33.2	243.3	0.80	0.73	33.8
3	R2	116	0.0	0.779	84.5	LOS F	8.9	62.5	1.00	0.87	19.4
Approach		1839	5.0	0.779	37.3	LOS C	33.2	243.3	0.82	0.74	32.4
East: Memorial Avenue (E)											
4	L2	55	0.0	1.388	441.6	LOS F	56.8	404.4	1.00	2.11	5.2
5	T1	291	2.5	1.388	437.1	LOS F	56.8	404.4	1.00	2.08	5.1
6	R2	212	6.5	1.388	442.0	LOS F	52.3	383.6	1.00	1.98	3.6
Approach		557	3.8	1.388	439.5	LOS F	56.8	404.4	1.00	2.05	4.6
North: Hume Highway (N)											
7	L2	152	2.8	0.090	8.4	LOS A	2.1	14.7	0.24	0.62	43.5
8	T1	2933	3.0	0.909	14.6	LOS B	53.3	382.7	0.61	0.59	44.9
9	R2	214	2.0	0.810	56.5	LOS D	9.9	70.4	1.00	0.92	24.5
Approach		3298	2.9	0.909	17.0	LOS B	53.3	382.7	0.62	0.61	42.6
West: Memorial Avenue (W)											
10	L2	82	1.3	0.901	82.5	LOS F	16.6	117.4	1.00	1.06	19.9
11	T1	209	1.0	0.901	79.5	LOS F	20.5	143.6	1.00	1.04	19.0
12	R2	171	0.0	0.901	86.5	LOS F	20.5	143.6	1.00	1.01	23.0
Approach		462	0.7	0.901	82.6	LOS F	20.5	143.6	1.00	1.04	20.7
All Vehicles		6156	3.5	1.388	66.2	LOS E	56.8	404.4	0.74	0.81	23.3

PHASING SUMMARY



Site: I-03 2030 BASE PM

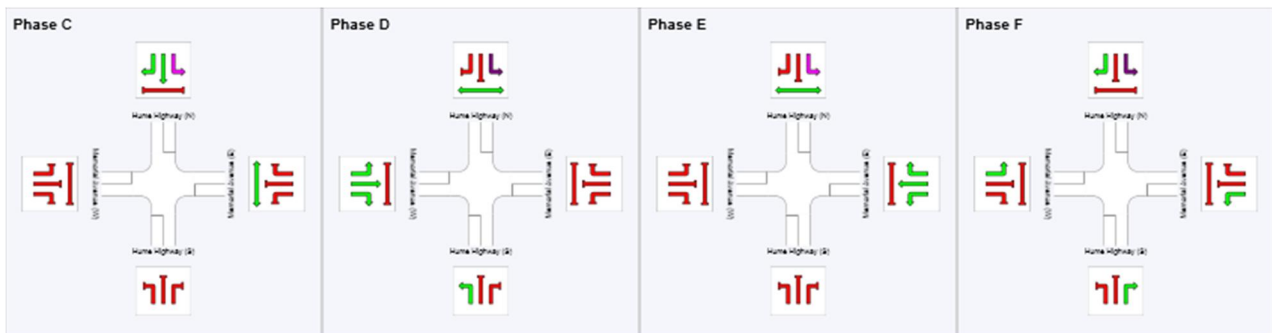
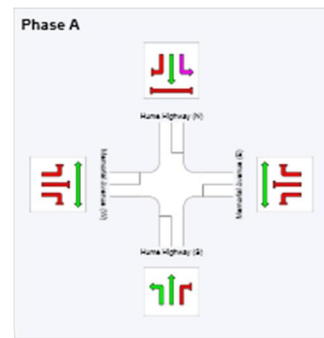
Hume Highway / Memorial Avenue

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D	E	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	70	82	110	132
Green Time (sec)	64	6	22	16	12
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	70	12	28	22	18
Phase Split	47 %	8 %	19 %	15 %	12 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-03 2030 MIMT AM

Hume Highway / Memorial Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	157	1.3	0.983	79.5	LOS F	75.1	565.5	1.00	1.12	24.7
2	T1	2136	8.6	0.983	71.3	LOS F	76.4	583.2	0.94	1.08	22.7
3	R2	267	0.0	1.137	222.0	LOS F	36.2	253.5	1.00	1.30	9.4
Approach		2560	7.3	1.137	87.5	LOS F	76.4	583.2	0.95	1.11	20.0
East: Memorial Avenue (E)											
4	L2	29	28.6	1.264	333.5	LOS F	29.0	222.7	1.00	1.72	6.7
5	T1	164	7.7	1.264	328.8	LOS F	29.0	222.7	1.00	1.71	6.6
6	R2	134	18.1	1.264	333.8	LOS F	26.0	208.4	1.00	1.69	4.7
Approach		327	13.8	1.264	331.2	LOS F	29.0	222.7	1.00	1.71	5.8
North: Hume Highway (N)											
7	L2	121	6.1	0.103	12.4	LOS A	2.6	19.4	0.36	0.64	39.4
8	T1	1764	13.2	0.766	28.7	LOS C	32.9	261.5	0.75	0.68	36.2
9	R2	101	3.1	0.439	72.0	LOS F	7.0	50.1	0.97	0.79	21.4
Approach		1986	12.2	0.766	29.9	LOS C	32.9	261.5	0.74	0.68	35.1
West: Memorial Avenue (W)											
10	L2	128	3.3	1.179	239.8	LOS F	47.4	337.9	1.00	1.57	9.0
11	T1	460	1.6	1.179	242.8	LOS F	59.1	421.5	1.00	1.62	8.5
12	R2	164	3.2	1.179	254.5	LOS F	59.1	421.5	1.00	1.68	10.9
Approach		752	2.2	1.179	244.8	LOS F	59.1	421.5	1.00	1.62	9.1
All Vehicles		5625	8.7	1.264	102.4	LOS F	76.4	583.2	0.89	1.06	17.6

PHASING SUMMARY



Site: I-03 2030 MIMT AM

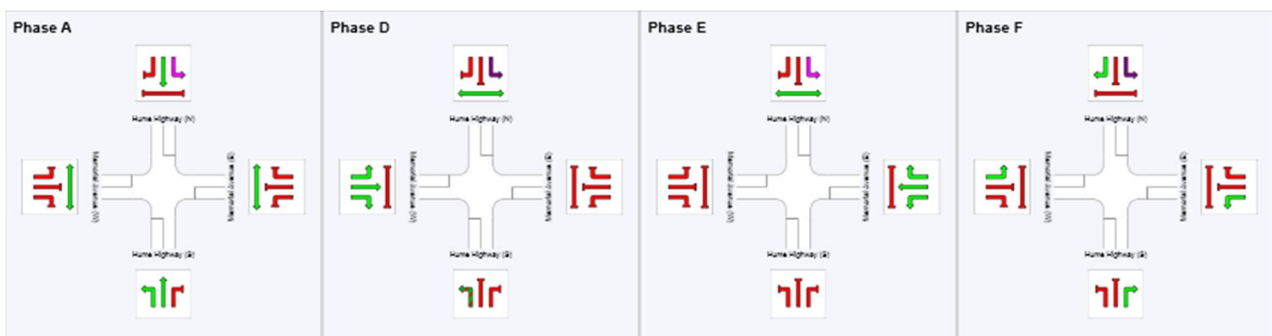
Hume Highway / Memorial Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	75	108	125
Green Time (sec)	69	27	11	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	75	33	17	25
Phase Split	50 %	22 %	11 %	17 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-03 2030 MIMT PM

Hume Highway / Memorial Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	119	0.9	0.801	42.8	LOS D	35.3	267.0	0.88	0.83	33.6
2	T1	1656	8.2	0.801	34.9	LOS C	35.7	274.6	0.84	0.77	33.2
3	R2	116	0.0	0.779	84.5	LOS F	8.9	62.5	1.00	0.87	19.4
Approach		1891	7.2	0.801	38.4	LOS C	35.7	274.6	0.85	0.78	31.9
East: Memorial Avenue (E)											
4	L2	55	0.0	1.379	433.9	LOS F	56.0	398.0	1.00	2.09	5.3
5	T1	289	2.2	1.379	429.4	LOS F	56.0	398.0	1.00	2.07	5.2
6	R2	211	6.0	1.379	434.3	LOS F	51.6	377.5	1.00	1.96	3.7
Approach		555	3.4	1.379	431.7	LOS F	56.0	398.0	1.00	2.03	4.7
North: Hume Highway (N)											
7	L2	152	2.8	0.090	8.4	LOS A	2.1	14.7	0.24	0.62	43.5
8	T1	2974	4.4	0.938	19.9	LOS B	64.0	472.3	0.67	0.67	41.2
9	R2	214	2.0	0.810	56.5	LOS D	9.9	70.4	1.00	0.92	24.5
Approach		3339	4.1	0.938	21.7	LOS B	64.0	472.3	0.67	0.69	39.5
West: Memorial Avenue (W)											
10	L2	82	1.3	0.901	82.5	LOS F	16.6	117.4	1.00	1.06	19.9
11	T1	209	1.0	0.901	79.5	LOS F	20.5	143.6	1.00	1.04	19.0
12	R2	171	0.0	0.901	86.5	LOS F	20.5	143.6	1.00	1.01	23.0
Approach		462	0.7	0.901	82.6	LOS F	20.5	143.6	1.00	1.04	20.7
All Vehicles		6247	4.7	1.379	67.7	LOS E	64.0	472.3	0.78	0.86	23.0

PHASING SUMMARY



Site: I-03 2030 MIMT PM

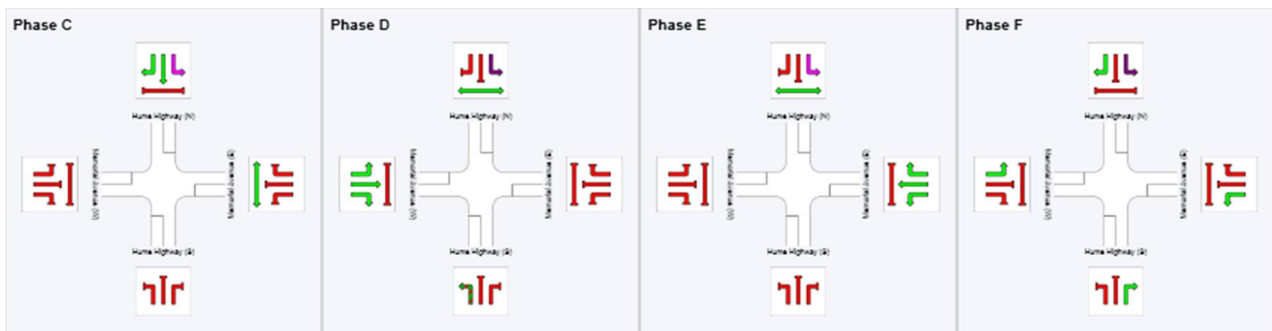
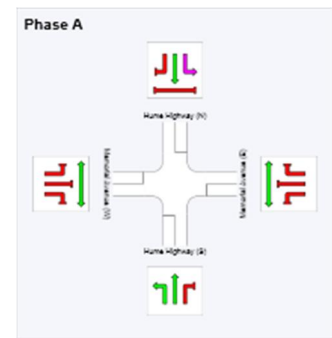
Hume Highway / Memorial Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D	E	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	70	82	110	132
Green Time (sec)	64	6	22	16	12
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	70	12	28	22	18
Phase Split	47 %	8 %	19 %	15 %	12 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-03 2030 MIMT AM - Upgraded

Hume Highway / Memorial Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV			Vehicles	Distance		
		veh/h	%	v/c	sec	veh	m	per veh	km/h
South: Hume Highway (S)									
1	L2	157	1.3	0.953	65.0	LOS E	65.2	490.4	1.00
2	T1	2136	8.6	0.953	56.7	LOS E	66.0	503.6	0.96
3	R2	267	0.0	0.568	73.3	LOS F	9.4	65.8	0.99
Approach		2560	7.3	0.953	59.0	LOS E	66.0	503.6	0.96
East: Memorial Avenue (E)									
4	L2	29	28.6	1.264	333.5	LOS F	29.0	222.7	1.00
5	T1	164	7.7	1.264	328.8	LOS F	29.0	222.7	1.00
6	R2	134	18.1	1.264	333.8	LOS F	26.0	208.4	1.00
Approach		327	13.8	1.264	331.2	LOS F	29.0	222.7	1.00
North: Hume Highway (N)									
7	L2	121	6.1	0.097	9.8	LOS A	2.0	15.1	0.29
8	T1	1764	13.2	0.765	28.7	LOS C	32.9	261.4	0.75
9	R2	101	3.1	0.439	72.0	LOS F	7.0	50.1	0.97
Approach		1986	12.2	0.765	29.7	LOS C	32.9	261.4	0.73
West: Memorial Avenue (W)									
10	L2	128	3.3	1.179	239.8	LOS F	47.4	337.9	1.00
11	T1	460	1.6	1.179	242.8	LOS F	59.1	421.5	1.00
12	R2	164	3.2	1.179	254.5	LOS F	59.1	421.5	1.00
Approach		752	2.2	1.179	244.8	LOS F	59.1	421.5	1.00
All Vehicles		5625	8.7	1.264	89.3	LOS F	66.0	503.6	0.89

PHASING SUMMARY



Site: I-03 2030 MIMT AM - Upgraded

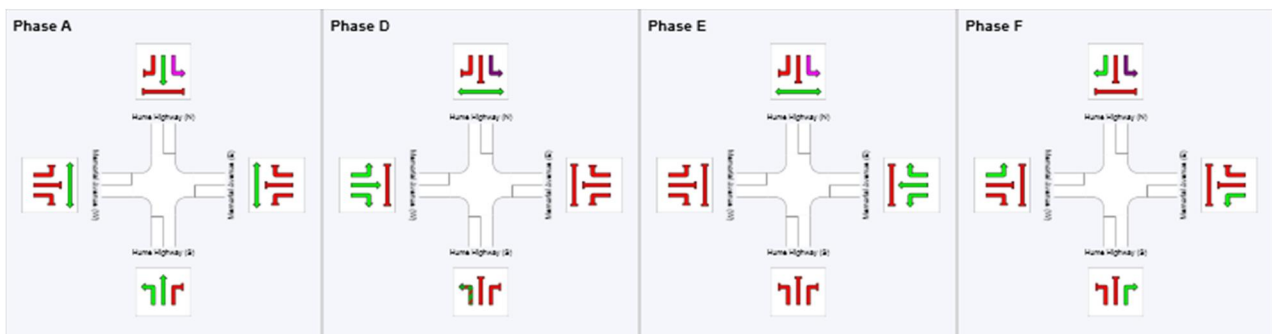
Hume Highway / Memorial Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	75	108	125
Green Time (sec)	69	27	11	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	75	33	17	25
Phase Split	50 %	22 %	11 %	17 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY

 **Site: I-03 2030 MIMT PM - Upgraded**

Hume Highway / Memorial Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	119	0.9	0.786	42.3	LOS C	34.0	257.2	0.87	0.82	33.7
2	T1	1656	8.2	0.786	34.5	LOS C	34.4	265.2	0.84	0.76	33.3
3	R2	116	0.0	0.468	81.4	LOS F	4.3	29.9	1.00	0.76	19.9
Approach		1891	7.2	0.786	37.9	LOS C	34.4	265.2	0.85	0.77	32.1
East: Memorial Avenue (E)											
4	L2	55	0.0	1.299	362.3	LOS F	50.9	362.0	1.00	1.96	6.3
5	T1	289	2.2	1.299	357.8	LOS F	50.9	362.0	1.00	1.93	6.1
6	R2	211	6.0	1.299	362.7	LOS F	47.0	343.9	1.00	1.82	4.3
Approach		555	3.4	1.299	360.1	LOS F	50.9	362.0	1.00	1.89	5.5
North: Hume Highway (N)											
7	L2	152	2.8	0.088	8.0	LOS A	1.9	13.5	0.23	0.61	43.9
8	T1	2974	4.4	0.925	16.3	LOS B	57.6	425.0	0.62	0.62	43.7
9	R2	214	2.0	0.858	55.5	LOS D	10.3	73.4	1.00	0.93	24.7
Approach		3339	4.1	0.925	18.5	LOS B	57.6	425.0	0.63	0.64	41.6
West: Memorial Avenue (W)											
10	L2	82	1.3	0.901	82.9	LOS F	16.6	117.5	1.00	1.06	19.9
11	T1	209	1.0	0.901	79.7	LOS F	20.5	143.7	1.00	1.05	19.0
12	R2	171	0.0	0.901	86.5	LOS F	20.5	143.7	1.00	1.02	23.1
Approach		462	0.7	0.901	82.8	LOS F	20.5	143.7	1.00	1.04	20.8
All Vehicles		6247	4.7	1.299	59.4	LOS E	57.6	425.0	0.75	0.82	24.9

PHASING SUMMARY

 **Site: I-03 2030 MIMT PM - Upgraded**

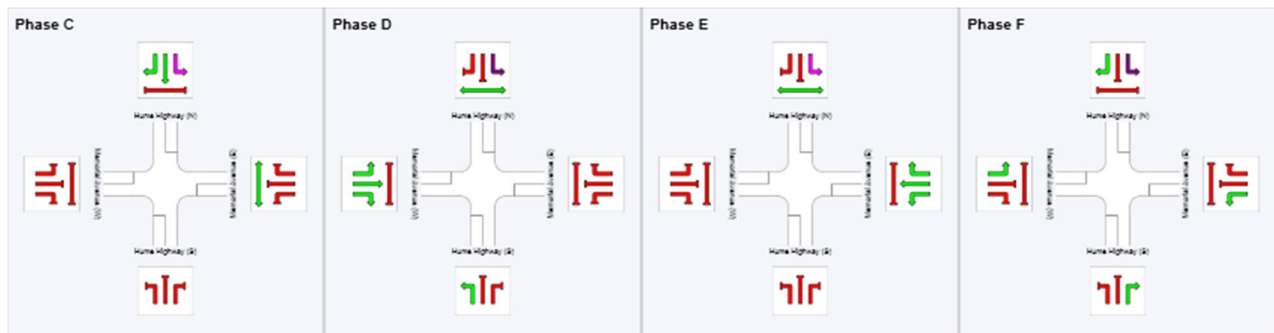
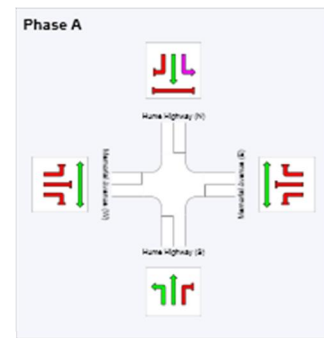
Hume Highway / Memorial Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D	E	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	70	83	111	134
Green Time (sec)	64	7	22	17	10
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	70	13	28	23	16
Phase Split	47 %	9 %	19 %	15 %	11 %



I-04 Intersection of the Hume Highway and Hoxton Park Drive

AM BASE

MOVEMENT SUMMARY



Site: I-04 2030 BASE AM

Hume Highway / Hoxton Park Road / Macquarie Street

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	102	7.2	0.084	8.4	LOS A	0.8	5.7	0.11	0.57	51.1
2	T1	2126	5.1	0.799	26.4	LOS B	38.6	281.8	0.77	0.70	40.3
3	R2	1213	1.9	1.079	138.1	LOS F	53.1	377.9	1.00	1.22	13.8
Approach		3441	4.0	1.079	65.3	LOS E	53.1	377.9	0.83	0.88	25.8
East: Macquarie Street (E)											
4	L2	361	5.8	0.234	22.0	LOS B	5.7	41.8	0.67	0.73	38.6
5	T1	545	4.6	1.137	216.5	LOS F	36.9	268.7	1.00	1.50	10.9
Approach		906	5.1	1.137	139.0	LOS F	36.9	268.7	0.87	1.20	14.7
North: Hume Highway (N)											
7	L2	236	15.6	0.926	74.7	LOS F	45.0	344.9	1.00	1.15	23.0
8	T1	1428	8.1	0.926	67.1	LOS E	46.8	350.0	0.97	1.03	26.6
9	R2	247	19.6	1.265	334.8	LOS F	41.9	342.5	1.00	1.61	9.1
Approach		1912	10.5	1.265	102.7	LOS F	46.8	350.0	0.98	1.12	20.5
West: Hoxton Park Road (W)											
10	L2	338	16.2	0.585	48.7	LOS D	20.1	160.6	0.88	0.83	32.1
11	T1	1363	4.2	1.159	251.3	LOS F	71.9	521.6	1.00	1.71	9.6
12	R2	384	3.3	1.143	177.1	LOS F	28.4	204.4	1.00	1.24	14.3
Approach		2085	6.0	1.159	204.8	LOS F	71.9	521.6	0.98	1.48	11.9
All Vehicles		8344	6.1	1.265	116.7	LOS F	71.9	521.6	0.90	1.12	18.1

PHASING SUMMARY



Site: I-04 2030 BASE AM

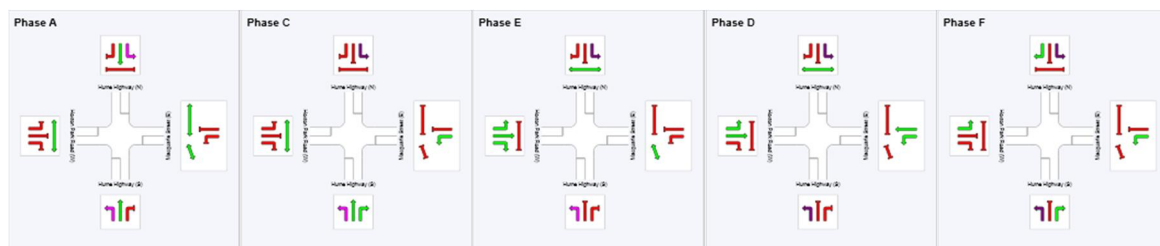
Hume Highway / Hoxton Park Road / Macquarie Street

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	D	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	51	79	101	126
Green Time (sec)	45	22	16	19	18
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	51	28	22	25	24
Phase Split	34 %	19 %	15 %	17 %	16 %



PM BASE

MOVEMENT SUMMARY



Site: I-04 2030 BASE PM

Hume Highway / Hoxton Park Road / Macquarie Street

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Hume Highway (S)											
1	L2	196	5.4	0.163	9.2	LOS A	1.9	13.6	0.14	0.58	50.6
2	T1	1549	5.2	0.598	22.7	LOS B	22.6	165.4	0.60	0.54	42.2
3	R2	448	1.2	0.992	116.8	LOS F	21.4	151.3	1.00	1.09	15.7
Approach		2194	4.4	0.992	40.7	LOS C	22.6	165.4	0.64	0.65	33.4
East: Macquarie Street (E)											
4	L2	785	1.5	1.043	176.8	LOS F	41.7	295.6	0.99	1.14	11.4
5	T1	706	3.3	1.087	167.6	LOS F	41.8	300.7	1.00	1.39	13.3
Approach		1492	2.3	1.087	172.5	LOS F	41.8	300.7	0.99	1.26	12.3
North: Hume Highway (N)											
7	L2	101	5.2	0.937	27.1	LOS B	63.3	454.4	0.83	0.86	39.7
8	T1	2813	2.7	0.937	22.1	LOS B	65.5	468.9	0.74	0.76	42.5
9	R2	284	6.7	1.503	546.6	LOS F	61.9	458.1	1.00	1.94	5.9
Approach		3198	3.1	1.503	68.9	LOS E	65.5	468.9	0.77	0.87	26.4
West: Hoxton Park Road (W)											
10	L2	251	3.8	0.400	45.1	LOS D	13.7	99.4	0.81	0.80	33.4
11	T1	714	3.8	0.436	46.6	LOS D	14.1	101.9	0.87	0.73	30.4
12	R2	380	1.7	1.207	217.5	LOS F	31.6	224.2	1.00	1.34	12.2
Approach		1344	3.2	1.207	94.6	LOS F	31.6	224.2	0.89	0.92	21.2
All Vehicles		8227	3.3	1.503	84.4	LOS F	65.5	468.9	0.80	0.89	22.7

PHASING SUMMARY



Site: I-04 2030 BASE PM

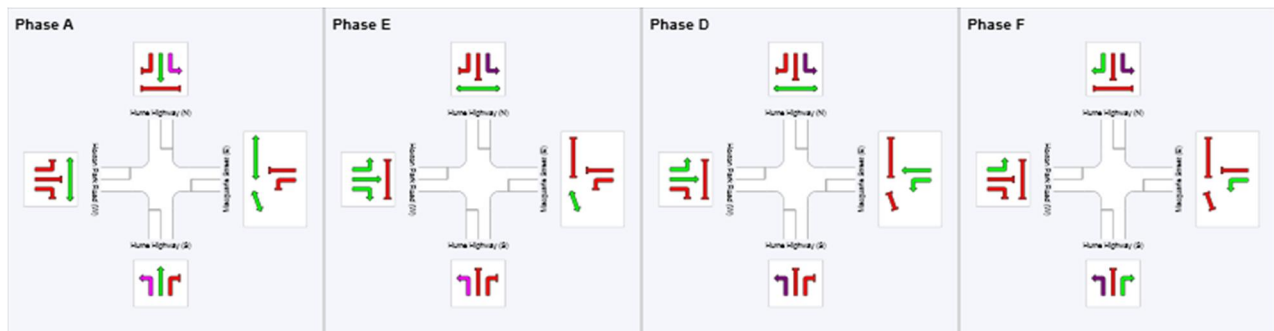
Hume Highway / Hoxton Park Road / Macquarie Street

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	D	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	79	99	128
Green Time (sec)	73	14	23	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	79	20	29	22
Phase Split	53 %	13 %	19 %	15 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-04 2030 MIMT AM

Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	110	14.0	0.099	8.5	LOS A	0.8	7.0	0.12	0.57	50.7
2	T1	2160	6.6	0.832	27.8	LOS B	41.5	311.9	0.80	0.73	39.6
3	R2	1213	1.9	1.079	138.1	LOS F	53.1	377.9	1.00	1.22	13.8
Approach		3483	5.2	1.079	65.6	LOS E	53.1	377.9	0.85	0.90	25.8
East: Macquarie Street (E)											
4	L2	361	5.8	0.234	22.0	LOS B	5.7	41.8	0.67	0.73	38.6
5	T1	545	4.6	1.137	216.5	LOS F	36.9	268.7	1.00	1.50	10.9
Approach		906	5.1	1.137	139.0	LOS F	36.9	268.7	0.87	1.20	14.7
North: Hume Highway (N)											
7	L2	236	15.6	0.976	93.2	LOS F	54.1	425.7	1.00	1.24	19.9
8	T1	1476	10.5	0.976	85.2	LOS F	54.6	427.5	0.98	1.14	23.2
9	R2	246	19.2	1.257	327.7	LOS F	41.2	336.2	1.00	1.59	9.2
Approach		1958	12.2	1.257	116.7	LOS F	54.6	427.5	0.98	1.21	18.9
West: Hoxton Park Road (W)											
10	L2	345	18.0	0.605	49.1	LOS D	20.8	167.8	0.88	0.84	32.0
11	T1	1372	4.8	1.173	263.5	LOS F	74.0	539.3	1.00	1.75	9.2
12	R2	391	4.8	1.195	215.1	LOS F	32.1	236.3	1.00	1.33	12.3
Approach		2108	7.0	1.195	219.4	LOS F	74.0	539.3	0.98	1.52	11.3
All Vehicles		8455	7.3	1.257	123.7	LOS F	74.0	539.3	0.91	1.16	17.4

PHASING SUMMARY



Site: I-04 2030 MIMT AM

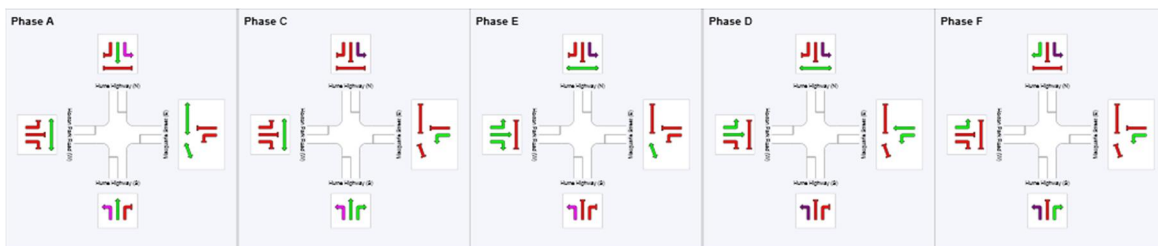
Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	D	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	51	79	101	126
Green Time (sec)	45	22	16	19	18
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	51	28	22	25	24
Phase Split	34 %	19 %	15 %	17 %	16 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-04 2030 MIMT PM

Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	201	7.4	0.171	9.2	LOS A	1.9	14.5	0.14	0.58	50.5
2	T1	1609	8.2	0.648	23.5	LOS B	25.0	192.8	0.63	0.57	41.8
3	R2	448	1.2	0.992	116.8	LOS F	21.4	151.3	1.00	1.09	15.7
Approach		2258	6.7	0.992	40.7	LOS C	25.0	192.8	0.66	0.67	33.4
East: Macquarie Street (E)											
4	L2	785	1.5	1.043	176.8	LOS F	41.7	295.6	0.99	1.14	11.4
5	T1	706	3.3	1.087	167.6	LOS F	41.8	300.7	1.00	1.39	13.3
Approach		1492	2.3	1.087	172.5	LOS F	41.8	300.7	0.99	1.26	12.3
North: Hume Highway (N)											
7	L2	101	5.2	0.967	35.9	LOS C	77.3	569.1	0.94	1.00	35.2
8	T1	2857	4.2	0.967	31.1	LOS C	78.7	579.6	0.82	0.88	38.0
9	R2	283	6.3	1.494	538.4	LOS F	61.2	451.8	1.00	1.93	6.0
Approach		3241	4.4	1.494	75.6	LOS F	78.7	579.6	0.84	0.97	25.0
West: Hoxton Park Road (W)											
10	L2	252	4.2	0.402	45.2	LOS D	13.8	100.2	0.81	0.80	33.3
11	T1	717	4.3	0.439	46.6	LOS D	14.2	102.8	0.87	0.73	30.4
12	R2	391	4.4	1.294	285.1	LOS F	37.1	276.4	1.00	1.48	9.7
Approach		1359	4.3	1.294	115.0	LOS F	37.1	276.4	0.89	0.96	18.6
All Vehicles		8351	4.6	1.494	89.9	LOS F	78.7	579.6	0.83	0.94	21.8

PHASING SUMMARY



Site: I-04 2030 MIMT PM

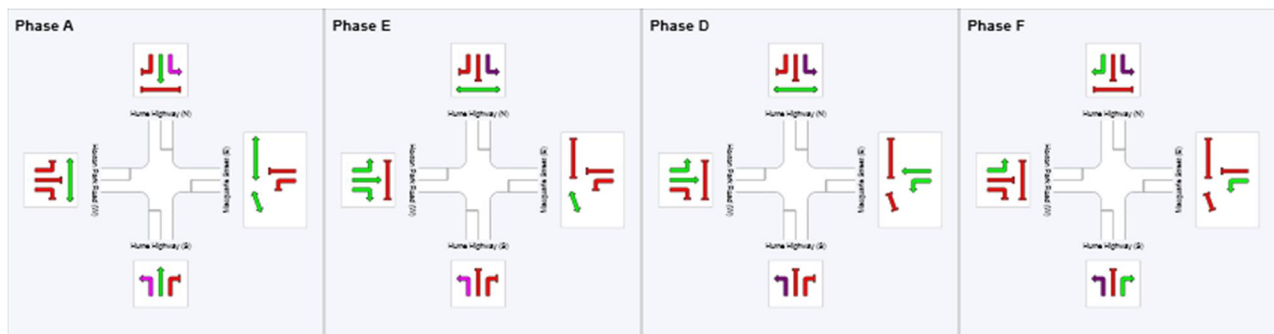
Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	D	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	79	99	128
Green Time (sec)	73	14	23	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	79	20	29	22
Phase Split	53 %	13 %	19 %	15 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-04 2030 MIMT AM - Upgrade

Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	110	14.0	0.102	9.5	LOS A	1.1	8.9	0.15	0.58	50.0
2	T1	2160	6.6	0.927	47.7	LOS D	58.7	440.6	0.90	0.92	31.9
3	R2	1213	1.9	1.079	138.0	LOS F	52.3	372.0	1.00	1.22	13.8
Approach		3483	5.2	1.079	77.9	LOS F	58.7	440.6	0.91	1.02	23.3
East: Macquarie Street (E)											
4	L2	361	5.8	0.230	21.1	LOS B	5.4	39.8	0.66	0.73	39.1
5	T1	545	4.6	1.080	170.2	LOS F	32.6	237.6	1.00	1.38	13.2
Approach		906	5.1	1.080	110.8	LOS F	32.6	237.6	0.86	1.12	17.4
North: Hume Highway (N)											
7	L2	236	15.6	1.039	83.8	LOS F	54.2	426.6	1.00	1.10	21.3
8	T1	1476	10.5	1.039	117.6	LOS F	64.2	502.8	1.00	1.26	18.8
9	R2	246	19.2	1.131	219.1	LOS F	33.3	271.1	1.00	1.38	12.8
Approach		1958	12.2	1.131	126.3	LOS F	64.2	502.8	1.00	1.25	17.9
West: Hoxton Park Road (W)											
10	L2	345	18.0	0.552	44.7	LOS D	19.7	158.8	0.84	0.83	33.3
11	T1	1372	4.8	1.111	211.8	LOS F	66.5	484.9	1.00	1.59	11.1
12	R2	391	4.8	1.101	154.6	LOS F	26.4	194.3	1.00	1.18	15.8
Approach		2108	7.0	1.111	173.8	LOS F	66.5	484.9	0.97	1.39	13.6
All Vehicles		8455	7.3	1.131	116.6	LOS F	66.5	502.8	0.94	1.18	18.1

PHASING SUMMARY



Site: I-04 2030 MIMT AM - Upgrade

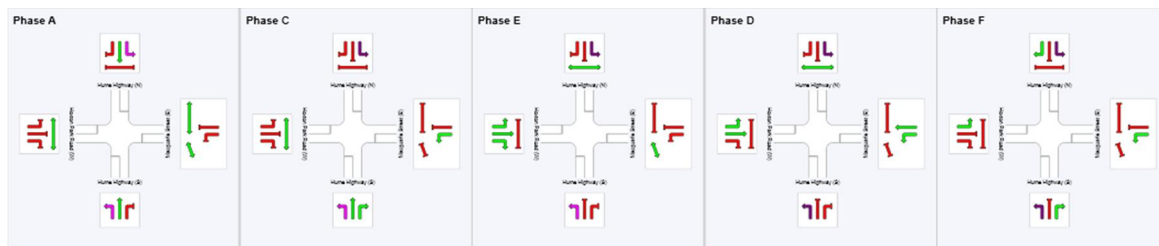
Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	D	F
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	48	74	98	124
Green Time (sec)	42	20	18	20	20
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	48	26	24	26	26
Phase Split	32 %	17 %	16 %	17 %	17 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-04 2030 MIMT PM - Upgrade

Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	201	7.4	0.173	9.6	LOS A	2.1	15.7	0.16	0.59	50.2
2	T1	1609	8.2	0.648	23.5	LOS B	25.0	192.8	0.63	0.57	41.8
3	R2	448	1.2	0.934	95.5	LOS F	19.1	135.2	1.00	1.00	18.1
Approach		2258	6.7	0.934	36.5	LOS C	25.0	192.8	0.66	0.66	35.0
East: Macquarie Street (E)											
4	L2	785	1.5	1.024	163.1	LOS F	39.7	281.3	0.98	1.11	12.1
5	T1	706	3.3	1.087	167.6	LOS F	41.8	300.7	1.00	1.39	13.3
Approach		1492	2.3	1.087	165.2	LOS F	41.8	300.7	0.99	1.24	12.7
North: Hume Highway (N)											
7	L2	101	5.2	0.967	35.9	LOS C	77.3	569.1	0.94	1.00	35.2
8	T1	2857	4.2	0.967	31.1	LOS C	78.7	579.6	0.82	0.88	38.0
9	R2	283	6.3	1.406	459.4	LOS F	56.5	417.3	1.00	1.82	6.9
Approach		3241	4.4	1.406	68.7	LOS E	78.7	579.6	0.84	0.96	26.4
West: Hoxton Park Road (W)											
10	L2	252	4.2	0.402	45.2	LOS D	13.8	100.2	0.81	0.80	33.3
11	T1	717	4.3	0.450	47.6	LOS D	14.3	103.8	0.88	0.74	30.1
12	R2	391	4.4	1.376	350.0	LOS F	40.9	304.3	1.00	1.60	8.2
Approach		1359	4.3	1.376	134.1	LOS F	40.9	304.3	0.90	1.00	16.7
All Vehicles		8351	4.6	1.406	87.9	LOS F	78.7	579.6	0.83	0.94	22.1

PHASING SUMMARY



Site: I-04 2030 MIMT PM - Upgrade

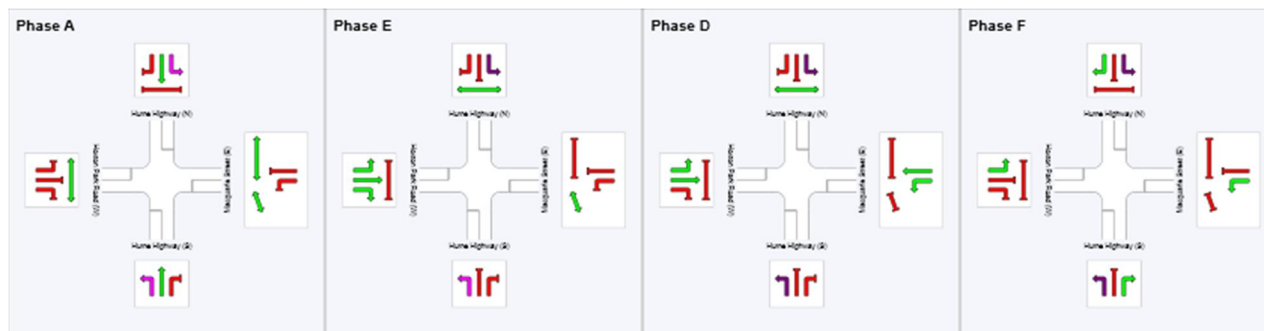
Hume Highway / Hoxton Park Road / Macquarie Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	D	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	79	98	127
Green Time (sec)	73	13	23	17
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	79	19	29	23
Phase Split	53 %	13 %	19 %	15 %



I-05 Intersection of the Hume Highway and Reilly Street

AM BASE

MOVEMENT SUMMARY



Site: I-05 2030 BASE AM

Hume Highway / Reilly Street

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	Deg. Satn HV %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway (S)											
1	L2	80	2.6	0.922	27.6	LOS B	64.0	461.6	0.80	0.80	38.2
2	T1	3145	3.6	0.922	21.3	LOS B	64.0	461.6	0.74	0.74	38.6
3	R2	14	7.7	0.098	21.9	LOS B	0.5	3.5	0.47	0.67	37.4
Approach		3239	3.6	0.922	21.4	LOS B	64.0	461.6	0.74	0.75	38.6
East: Congressional Drive (E)											
4	L2	49	2.1	0.272	60.1	LOS E	6.0	43.0	0.89	0.74	24.3
5	T1	46	4.5	0.272	55.5	LOS D	6.0	43.0	0.89	0.74	23.8
6	R2	91	4.7	0.446	68.4	LOS E	6.2	45.0	0.95	0.79	18.5
Approach		186	4.0	0.446	63.0	LOS E	6.2	45.0	0.92	0.76	21.4
North: Hume Highway (N)											
7	L2	32	3.3	0.542	16.1	LOS B	23.9	177.4	0.51	0.48	40.9
8	T1	1809	7.2	0.542	10.0	LOS A	24.0	178.4	0.48	0.45	47.5
9	R2	99	1.1	0.700	53.4	LOS D	5.9	41.6	1.00	0.90	24.1
Approach		1940	6.8	0.700	12.3	LOS A	24.0	178.4	0.51	0.47	45.1
West: Reilly Street (W)											
10	L2	121	4.3	0.281	51.2	LOS D	7.8	56.5	0.84	0.76	24.2
11	T1	14	7.7	0.281	46.6	LOS D	7.8	56.5	0.84	0.76	25.4
12	R2	235	1.8	1.061	170.1	LOS F	27.8	197.4	1.00	1.27	13.2
Approach		369	2.8	1.061	126.6	LOS F	27.8	197.4	0.94	1.08	15.4
All Vehicles		5735	4.7	1.061	26.5	LOS B	64.0	461.6	0.68	0.67	35.4

PHASING SUMMARY



Site: I-05 2030 BASE AM

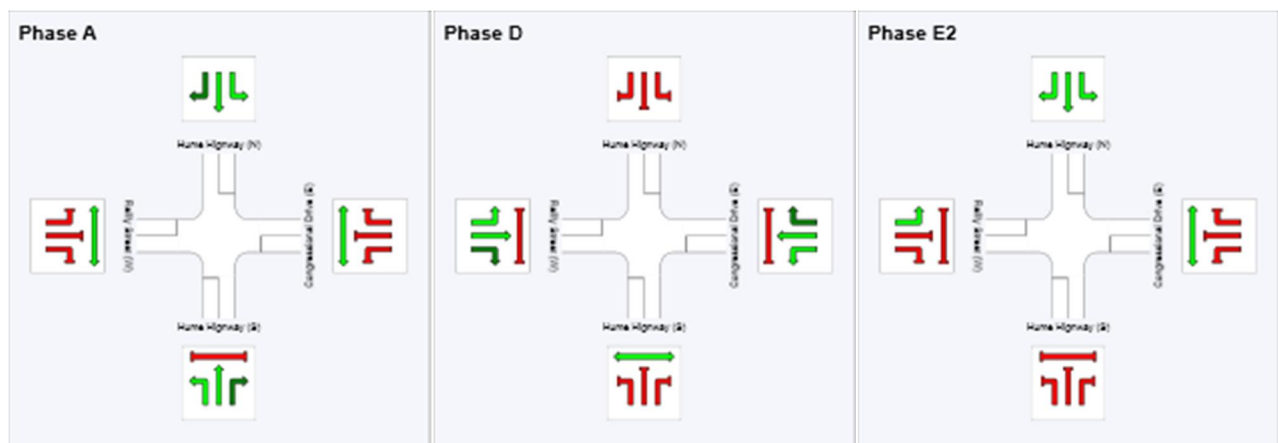
Hume Highway / Reilly Street

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	100	137
Green Time (sec)	94	31	7
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	100	37	13
Phase Split	67 %	25 %	9 %



PM BASE

MOVEMENT SUMMARY



Site: I-05 2030 BASE PM

Hume Highway / Reilly Street

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	223	0.5	0.645	19.5	LOS B	24.9	179.0	0.52	0.56	41.9
2	T1	2007	4.5	0.645	11.4	LOS A	24.9	179.0	0.44	0.43	45.9
3	R2	21	5.0	0.391	37.6	LOS C	1.1	8.4	0.69	0.74	30.5
Approach		2252	4.1	0.645	12.5	LOS A	24.9	179.0	0.45	0.45	45.1
East: Congressional Drive (E)											
4	L2	42	2.5	0.190	59.9	LOS E	4.1	29.0	0.88	0.73	24.2
5	T1	24	0.0	0.190	55.3	LOS D	4.1	29.0	0.88	0.73	23.7
6	R2	52	0.0	0.218	63.5	LOS E	3.3	23.2	0.90	0.75	19.5
Approach		118	0.9	0.218	60.5	LOS E	4.1	29.0	0.89	0.74	22.1
North: Hume Highway (N)											
7	L2	67	0.0	1.003	51.6	LOS D	131.6	938.2	1.00	1.14	23.5
8	T1	3665	2.2	1.003	48.8	LOS D	131.9	940.7	0.81	0.97	26.5
9	R2	178	1.2	0.874	71.9	LOS F	13.4	94.8	1.00	1.07	20.3
Approach		3911	2.2	1.003	49.9	LOS D	131.9	940.7	0.82	0.98	26.1
West: Reilly Street (W)											
10	L2	65	0.0	0.222	54.3	LOS D	5.7	39.9	0.85	0.73	23.9
11	T1	32	0.0	0.222	49.7	LOS D	5.7	39.9	0.85	0.73	24.9
12	R2	262	2.0	1.063	170.3	LOS F	31.2	221.9	1.00	1.27	13.2
Approach		359	1.5	1.063	138.6	LOS F	31.2	221.9	0.96	1.12	14.8
All Vehicles		6639	2.8	1.063	42.2	LOS C	131.9	940.7	0.70	0.80	28.7

PHASING SUMMARY



Site: I-05 2030 BASE PM

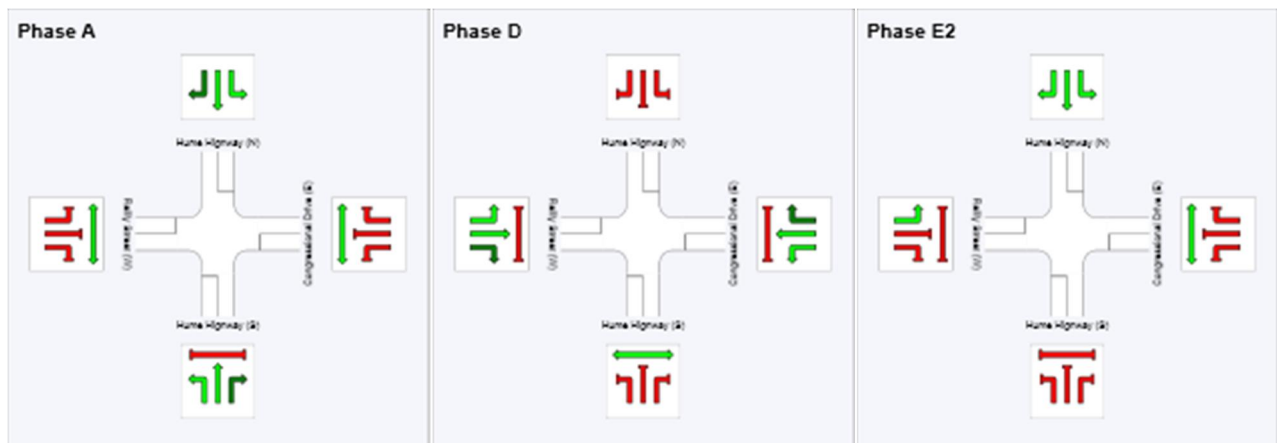
Hume Highway / Reilly Street

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	98	135
Green Time (sec)	92	31	9
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	98	37	15
Phase Split	65 %	25 %	10 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-05 2030 MIMT AM

Hume Highway / Reilly Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	80	2.6	0.950	36.9	LOS C	77.7	572.1	0.88	0.92	34.1
2	T1	3183	4.8	0.950	30.6	LOS C	77.7	572.1	0.81	0.85	33.4
3	R2	14	7.7	0.110	23.2	LOS B	0.5	3.7	0.49	0.67	36.7
Approach		3276	4.7	0.950	30.7	LOS C	77.7	572.1	0.81	0.86	33.4
East: Congressional Drive (E)											
4	L2	49	2.1	0.272	60.1	LOS E	6.0	43.0	0.89	0.74	24.3
5	T1	46	4.5	0.272	55.5	LOS D	6.0	43.0	0.89	0.74	23.8
6	R2	91	4.7	0.444	68.3	LOS E	6.2	45.0	0.95	0.79	18.5
Approach		186	4.0	0.444	63.0	LOS E	6.2	45.0	0.92	0.76	21.4
North: Hume Highway (N)											
7	L2	32	3.3	0.557	16.3	LOS B	24.4	188.0	0.52	0.49	40.7
8	T1	1865	9.5	0.557	10.2	LOS A	24.4	189.1	0.49	0.45	47.3
9	R2	99	1.1	0.706	56.5	LOS E	5.8	41.0	1.00	0.90	23.4
Approach		1995	9.0	0.706	12.6	LOS A	24.4	189.1	0.52	0.48	44.9
West: Reilly Street (W)											
10	L2	120	3.5	0.277	51.1	LOS D	7.7	55.7	0.84	0.76	24.3
11	T1	14	7.7	0.277	46.6	LOS D	7.7	55.7	0.84	0.76	25.4
12	R2	234	1.3	1.056	166.0	LOS F	27.4	193.7	1.00	1.26	13.4
Approach		368	2.3	1.056	124.1	LOS F	27.4	193.7	0.94	1.08	15.6
All Vehicles		5826	6.0	1.056	31.4	LOS C	77.7	572.1	0.72	0.74	32.9

PHASING SUMMARY



Site: I-05 2030 MIMT AM

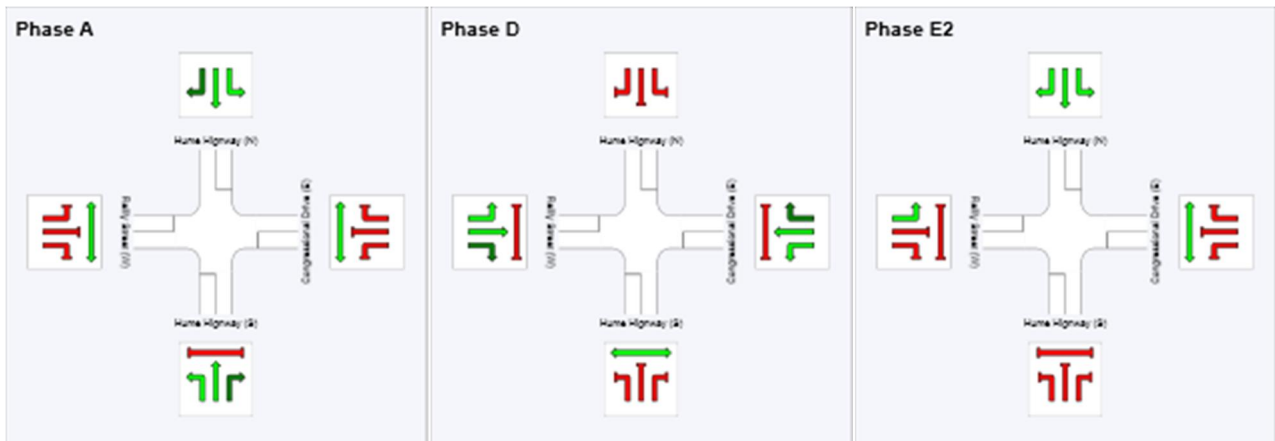
Hume Highway / Reilly Street

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	100	137
Green Time (sec)	94	31	7
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	100	37	13
Phase Split	67 %	25 %	9 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-05 2030 MIMT PM

Hume Highway / Reilly Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
1	L2	224	0.5	0.683	19.9	LOS B	27.1	201.5	0.54	0.58	41.7
2	T1	2072	7.1	0.683	11.9	LOS A	27.1	201.5	0.47	0.46	45.5
3	R2	21	5.0	0.397	44.9	LOS D	1.2	9.1	0.75	0.76	28.1
Approach		2317	6.4	0.683	13.0	LOS A	27.1	201.5	0.48	0.47	44.7
East: Congressional Drive (E)											
4	L2	42	2.5	0.190	59.9	LOS E	4.1	29.0	0.88	0.73	24.2
5	T1	24	0.0	0.190	55.3	LOS D	4.1	29.0	0.88	0.73	23.7
6	R2	52	0.0	0.218	63.5	LOS E	3.3	23.2	0.90	0.75	19.5
Approach		118	0.9	0.218	60.5	LOS E	4.1	29.0	0.89	0.74	22.1
North: Hume Highway (N)											
7	L2	67	0.0	1.029	70.8	LOS F	144.5	1056.6	1.00	1.23	19.1
8	T1	3719	3.6	1.029	67.5	LOS E	144.7	1060.1	0.81	1.06	21.8
9	R2	178	1.2	0.917	92.5	LOS F	14.7	104.2	1.00	1.12	17.3
Approach		3964	3.5	1.029	68.7	LOS E	144.7	1060.1	0.82	1.07	21.5
West: Reilly Street (W)											
10	L2	65	0.0	0.222	54.3	LOS D	5.7	39.9	0.85	0.73	23.9
11	T1	32	0.0	0.222	49.7	LOS D	5.7	39.9	0.85	0.73	24.9
12	R2	261	1.6	1.057	165.8	LOS F	30.6	217.2	1.00	1.26	13.5
Approach		358	1.2	1.057	135.2	LOS F	30.6	217.2	0.96	1.11	15.0
All Vehicles		6756	4.3	1.057	53.0	LOS D	144.7	1060.1	0.71	0.86	25.4

PHASING SUMMARY



Site: I-05 2030 MIMT PM

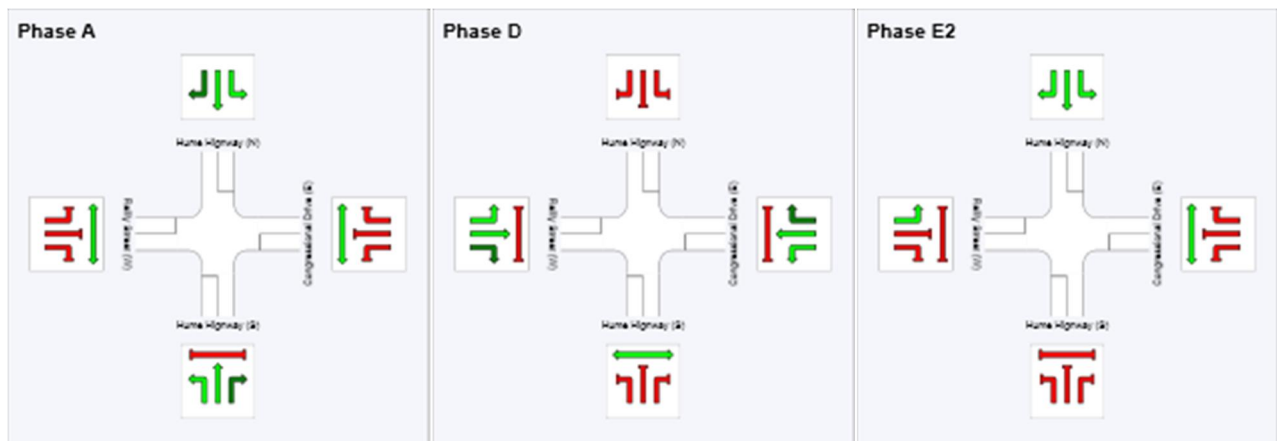
Hume Highway / Reilly Street

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 150 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E2
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	98	135
Green Time (sec)	92	31	9
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	98	37	15
Phase Split	65 %	25 %	10 %



I-06 Intersection of Newbridge Road and Moorebank Avenue

AM BASE

MOVEMENT SUMMARY



Site: I-06 2030 BASE AM



Network: 2030 BASE AM

Newbridge Road / Moorebank Avenue

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles													
Mov ID	ODMov	Demand Flows Total	Arrival Flows HV Total	Flows HV	Deg. Satn	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
South: Moorebank Avenue (S)													
1	L2	1535	3.2	1279	3.2	0.660	19.5	LOS B	15.0	108.2	0.58	0.83	41.9
3	R2	1365	9.0	1138	9.1	0.669	15.1	LOS B	14.1	106.4	0.42	0.69	52.7
Approach		2900	5.9	2417	N1	0.669	17.4	LOS B	15.0	108.2	0.51	0.76	47.7
East: Newbridge Road (E)													
4	L2	687	19.8	687	19.8	0.563	18.5	LOS B	8.3	68.3	0.71	0.80	51.9
5	T1	966	5.2	966	5.2	1.262	313.4	LOS F	77.6	567.9	1.00	1.91	14.6
Approach		1654	11.3	1654	11.3	1.262	190.8	LOS F	77.6	567.9	0.88	1.45	18.8
West: Newbridge Road (W)													
11	T1	1579	6.4	1579	6.4	0.850	12.2	LOS A	30.6	225.7	0.63	0.59	61.0
12	R2	867	7.4	867	7.4	1.577	575.4	LOS F	87.3	650.0	1.00	1.90	3.6
Approach		2446	6.8	2446	6.8	1.577	211.9	LOS F	87.3	650.0	0.76	1.06	16.3
All Vehicles		7000	7.5	6517	N1	1.577	134.4	LOS F	87.3	650.0	0.70	1.05	21.1

PHASING SUMMARY



Site: I-06 2030 BASE AM



Network: 2030 BASE AM

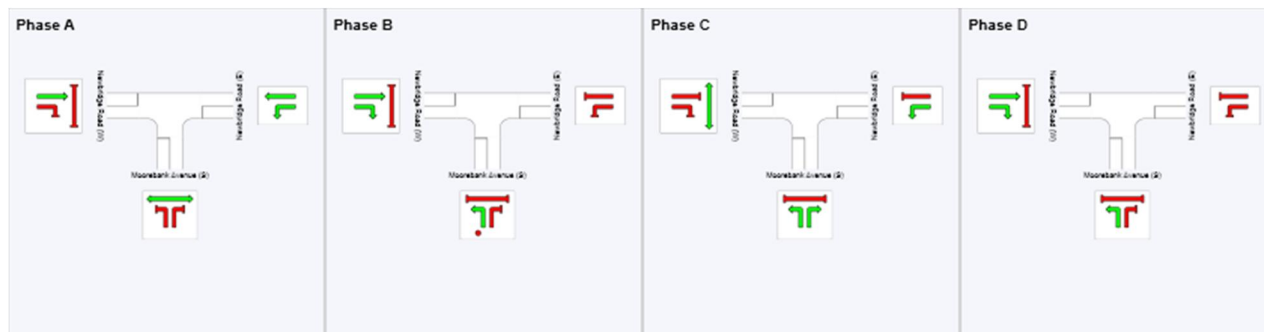
Newbridge Road / Moorebank Avenue

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	116
Green Time (sec)	27	16	55	11
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	61	17
Phase Split	25 %	17 %	46 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-06 2030 BASE PM



Network: 2030 BASE PM

Newbridge Road / Moorebank Avenue

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV	Total	HV				Vehicles	Distance		per veh	km/h
		veh/h	%	veh/h	%	v/c	sec		veh	m			
South: Moorebank Avenue (S)													
1	L2	1001	3.3	887	3.4	0.507	22.5	LOS B	13.1	94.7	0.57	0.75	39.8
3	R2	953	10.7	847	11.1	1.097	148.5	LOS F	17.0	130.6	1.00	1.30	19.0
Approach		1954	6.9	1734 ^{N1}	7.1	1.097	84.0	LOS F	17.0	130.6	0.78	1.02	23.9
East: Newbridge Road (E)													
4	L2	1243	5.1	1243	5.1	1.047	144.1	LOS F	66.2	483.9	1.00	1.19	18.6
5	T1	1371	4.7	1371	4.7	0.921	50.6	LOS D	42.4	308.7	1.00	1.03	43.4
Approach		2614	4.9	2614	4.9	1.047	95.1	LOS F	66.2	483.9	1.00	1.11	29.2
West: Newbridge Road (W)													
11	T1	1127	3.8	1127	3.8	0.441	9.3	LOS A	14.6	105.3	0.50	0.45	62.9
12	R2	1118	2.6	1118	2.6	1.188	222.8	LOS F	72.6	519.7	1.00	1.44	8.5
Approach		2245	3.2	2245	3.2	1.188	115.6	LOS F	72.6	519.7	0.75	0.95	23.1
All Vehicles		6813	4.9	6593 ^{N1}	5.1	1.188	99.2	LOS F	72.6	519.7	0.86	1.03	25.8

PHASING SUMMARY



Site: I-06 2030 BASE PM



Network: 2030 BASE PM

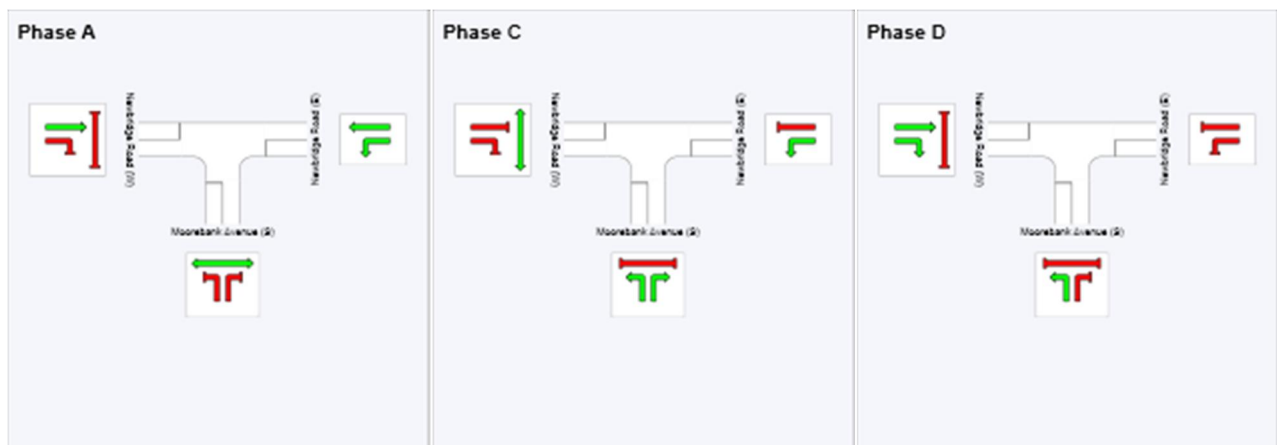
Newbridge Road / Moorebank Avenue

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	76
Green Time (sec)	38	26	34
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	32	40
Phase Split	38 %	28 %	34 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-06 2030 MIMT AM



Network: 2030 MIMT AM

Newbridge Road / Moorebank Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total	Arrival Flows HV	Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Moorebank Avenue (S)													
1	L2	1535	3.1	1211	3.2	0.626	18.8	LOS B	13.1	94.1	0.56	0.82	42.4
3	R2	1412	12.0	1117	12.3	0.685	15.2	LOS B	14.3	114.5	0.43	0.69	52.3
Approach		2946	7.4	2329 ^{N1}	7.6	0.685	17.1	LOS B	14.3	114.5	0.50	0.76	47.8
East: Newbridge Road (E)													
4	L2	712	22.1	712	22.1	0.666	19.6	LOS B	9.6	82.4	0.77	0.82	51.2
5	T1	965	5.1	965	5.1	1.260	311.5	LOS F	77.3	564.9	1.00	1.91	14.7
Approach		1678	12.3	1678	12.3	1.260	187.5	LOS F	77.3	564.9	0.90	1.44	19.0
West: Newbridge Road (W)													
11	T1	1581	6.5	1581	6.5	0.852	12.4	LOS A	30.8	227.8	0.63	0.60	60.9
12	R2	874	7.7	874	7.7	1.702	689.1	LOS F	101.5	759.4	1.00	2.00	3.0
Approach		2455	6.9	2455	6.9	1.702	253.3	LOS F	101.5	759.4	0.76	1.10	14.2
All Vehicles		7079	8.4	6461 ^{N1}	9.2	1.702	151.1	LOS F	101.5	759.4	0.70	1.06	19.5

PHASING SUMMARY



Site: I-06 2030 MIMT AM



Network: 2030 MIMT AM

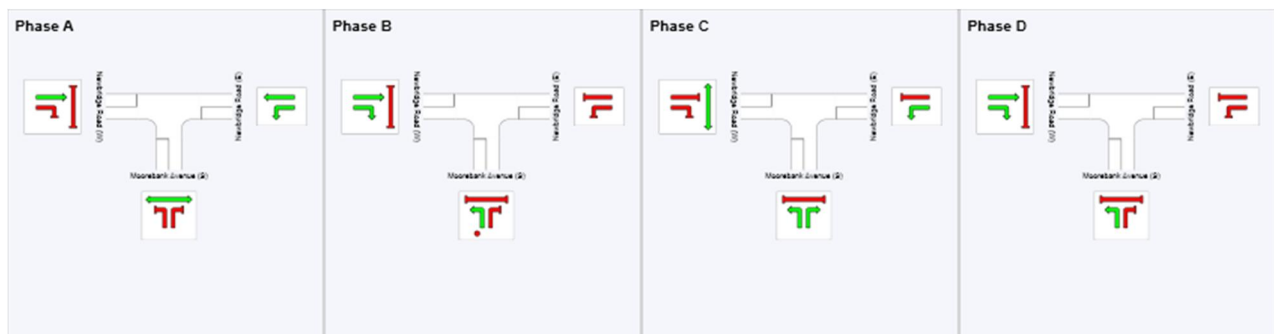
Newbridge Road / Moorebank Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	116
Green Time (sec)	27	16	55	11
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	61	17
Phase Split	25 %	17 %	46 %	13 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-06 2030 MIMT PM



Network: 2030 MIMT PM

Newbridge Road / Moorebank Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMov	Demand Flows Total veh/h	Arrival Flows HV %	Deg. Satn Total veh/h	HV %	Average Delay v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Prop. Queued Distance m	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)												
1	L2	1002	2.9	888	3.1	0.506	22.5	LOS B	13.2	94.5	0.57	39.9
3	R2	975	12.4	869	13.0	1.163	204.2	LOS F	16.3	130.6	1.00	15.0
Approach		1976	7.6	1757	8.0	1.163	112.4	LOS F	16.3	130.6	0.78	19.7
East: Newbridge Road (E)												
4	L2	1289	8.4	1289	8.4	1.156	231.1	LOS F	88.8	687.6	1.00	12.9
5	T1	1373	4.8	1373	4.8	0.923	51.1	LOS D	42.7	311.4	1.00	43.3
Approach		2661	6.6	2661	6.6	1.156	138.2	LOS F	88.8	687.6	1.00	23.1
West: Newbridge Road (W)												
11	T1	1129	4.0	1129	4.0	0.442	9.3	LOS A	14.6	105.8	0.50	62.9
12	R2	1120	2.8	1120	2.8	1.207	239.3	LOS F	76.1	545.5	1.00	8.0
Approach		2249	3.4	2249	3.4	1.207	123.8	LOS F	76.1	545.5	0.75	22.0
All Vehicles		6887	5.8	6668	6.0	1.207	126.6	LOS F	88.8	687.6	0.86	22.0

PHASING SUMMARY



Site: I-06 2030 MIMT PM



Network: 2030 MIMT PM

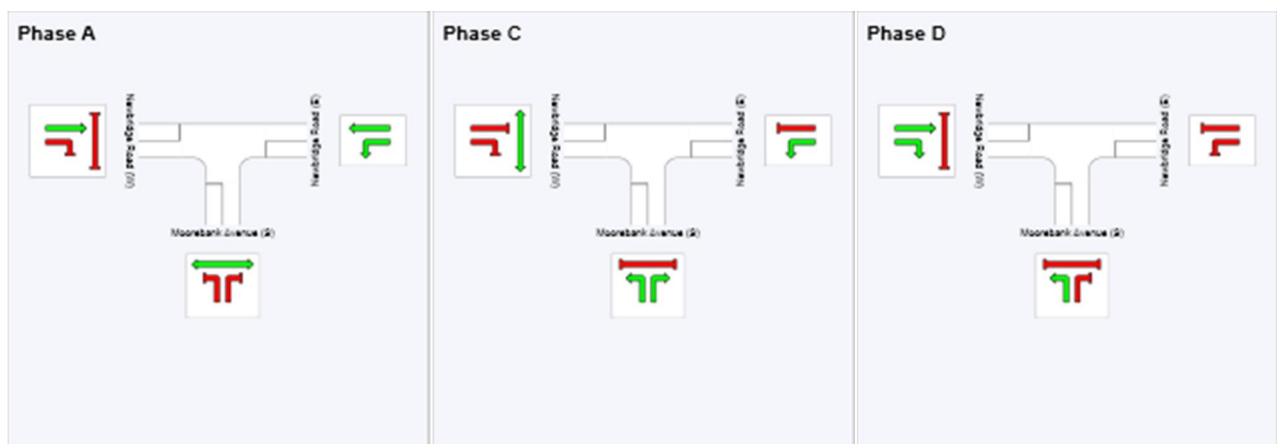
Newbridge Road / Moorebank Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	76
Green Time (sec)	38	26	34
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	32	40
Phase Split	38 %	28 %	34 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-06 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM -
Upgrade Option

Newbridge Road / Moorebank Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
1	L2	1535	3.1	1170	3.2	0.604	18.4	LOS B	12.3	88.9	0.54	0.81	42.7
3	R2	1412	12.0	1077	12.1	0.697	18.1	LOS B	16.4	130.6	0.52	0.72	50.4
Approach		2946	7.4	2247 ^{N1}	7.5	0.697	18.3	LOS B	16.4	130.6	0.53	0.77	47.0
East: Newbridge Road (E)													
4	L2	712	22.1	712	22.1	0.725	21.2	LOS B	10.7	91.4	0.82	0.83	50.0
5	T1	965	5.1	965	5.1	1.260	311.5	LOS F	77.3	564.9	1.00	1.91	14.7
Approach		1678	12.3	1678	12.3	1.260	188.2	LOS F	77.3	564.9	0.92	1.45	18.9
West: Newbridge Road (W)													
11	T1	1581	6.5	1581	6.5	0.815	7.9	LOS A	23.1	171.0	0.50	0.46	63.9
12	R2	874	7.7	874	7.7	1.596	594.6	LOS F	94.4	706.0	1.00	1.95	3.5
Approach		2455	6.9	2455	6.9	1.596	216.8	LOS F	94.4	706.0	0.68	0.99	16.0
All Vehicles		7079	8.4	6379 ^{N1}	9.3	1.596	139.4	LOS F	94.4	706.0	0.69	1.03	20.7

PHASING SUMMARY



Site: I-06 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM -
Upgrade Option

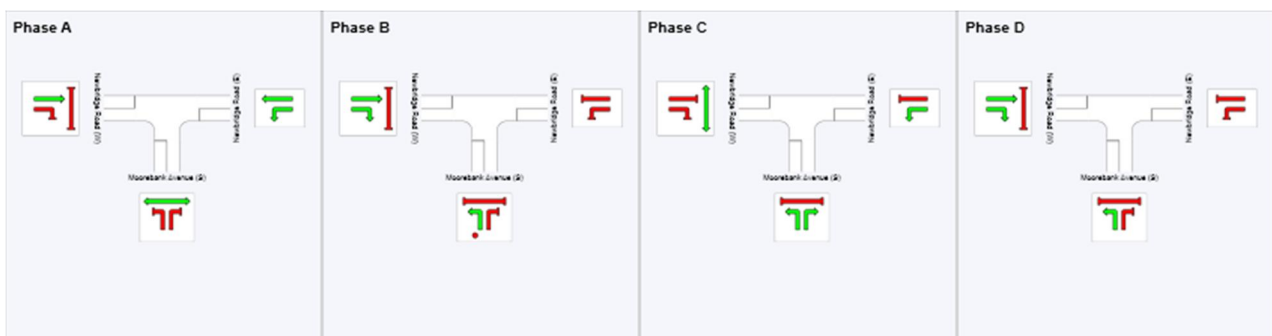
Newbridge Road / Moorebank Avenue

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	33	55	113
Green Time (sec)	27	16	52	14
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	22	58	20
Phase Split	25 %	17 %	44 %	15 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-06 2030 MIMT PM - Upgrade Option



Network: 2030 MIMT PM -
Upgrade Option

Newbridge Road / Moorebank Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	1002	2.9	933	3.0	0.541	23.7	LOS B	14.6	105.1	0.60	0.76	39.1
3	R2	975	12.4	911	12.8	1.090	140.8	LOS F	16.3	130.6	1.00	1.29	19.7
Approach		1976	7.6	1845 ^{N1}	7.8	1.090	81.5	LOS F	16.3	130.6	0.80	1.02	24.4
East: Newbridge Road (E)													
4	L2	1289	8.4	1289	8.4	1.111	193.4	LOS F	81.2	628.5	1.00	1.32	14.9
5	T1	1373	4.8	1373	4.8	0.923	51.1	LOS D	42.7	311.4	1.00	1.04	43.3
Approach		2661	6.6	2661	6.6	1.111	120.0	LOS F	81.2	628.5	1.00	1.17	25.3
West: Newbridge Road (W)													
11	T1	1129	4.0	1129	4.0	0.460	10.9	LOS A	15.8	114.2	0.54	0.49	61.8
12	R2	1120	2.8	1120	2.8	1.288	312.6	LOS F	89.6	642.7	1.00	1.63	6.3
Approach		2249	3.4	2249	3.4	1.288	161.1	LOS F	89.6	642.7	0.77	1.06	18.3
All Vehicles		6887	5.8	6756 ^{N1}	6.0	1.288	123.2	LOS F	89.6	642.7	0.87	1.09	22.3

PHASING SUMMARY



Site: I-06 2030 MIMT PM - Upgrade Option



Network: 2030 MIMT PM -
Upgrade Option

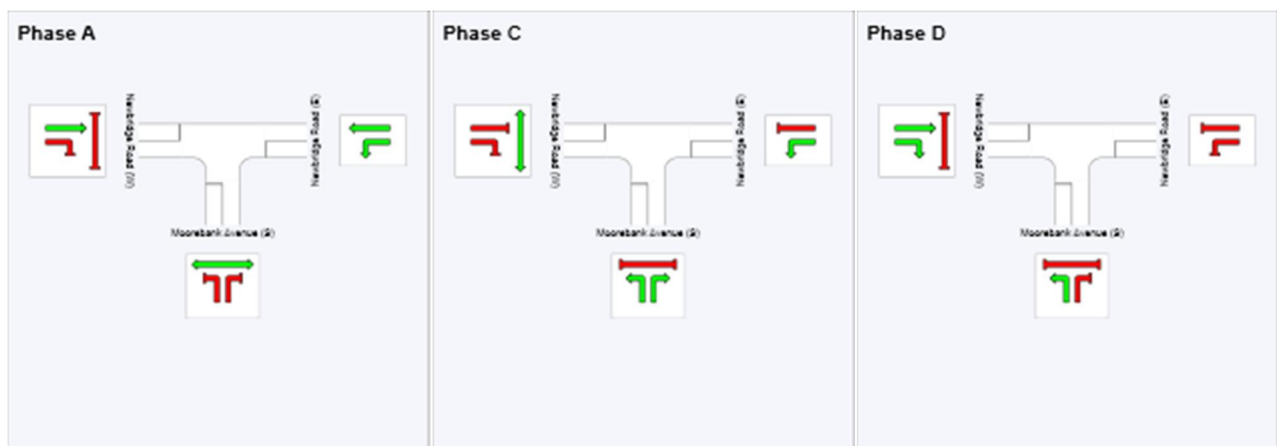
Newbridge Road / Moorebank Avenue

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	44	79
Green Time (sec)	38	29	31
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	44	35	37
Phase Split	38 %	30 %	32 %



I-07 Intersection of Moorebank Avenue and Heathcote Road

AM BASE

MOVEMENT SUMMARY



Site: I-07 2030 BASE AM



Network: 2030 BASE AM

Moorebank Avenue / Heathcote Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
2	T1	1920	5.6	1834	5.7	1.192	219.3	LOS F	60.0	440.6	1.00	1.95	4.4
3	R2	24	21.7	23	21.9	0.213	72.1	LOS F	1.5	12.4	0.98	0.71	30.5
Approach		1944	5.8	1857 ^{N1}	5.9	1.192	217.5	LOS F	60.0	440.6	1.00	1.93	4.6
East: Heathcote Road (E)													
4	L2	29	57.1	29	57.1	1.385	431.6	LOS F	92.8	700.6	1.00	1.86	7.5
6	R2	953	6.0	953	6.0	1.385	430.9	LOS F	95.9	705.9	1.00	1.87	7.5
Approach		982	7.5	982	7.5	1.385	430.9	LOS F	95.9	705.9	1.00	1.87	7.5
North: Moorebank Avenue (N)													
7	L2	794	7.8	632	8.7	0.393	10.7	LOS A	12.7	95.4	0.54	0.71	51.4
8	T1	783	16.9	631	18.6	0.360	21.2	LOS B	12.2	99.1	0.65	0.57	13.2
Approach		1577	12.3	1263 ^{N1}	13.6	0.393	15.9	LOS B	12.7	99.1	0.59	0.64	41.5
All Vehicles		4503	8.5	4102 ^{N1}	9.3	1.385	206.5	LOS F	95.9	705.9	0.88	1.52	8.5

PHASING SUMMARY



Site: I-07 2030 BASE AM



Network: 2030 BASE AM

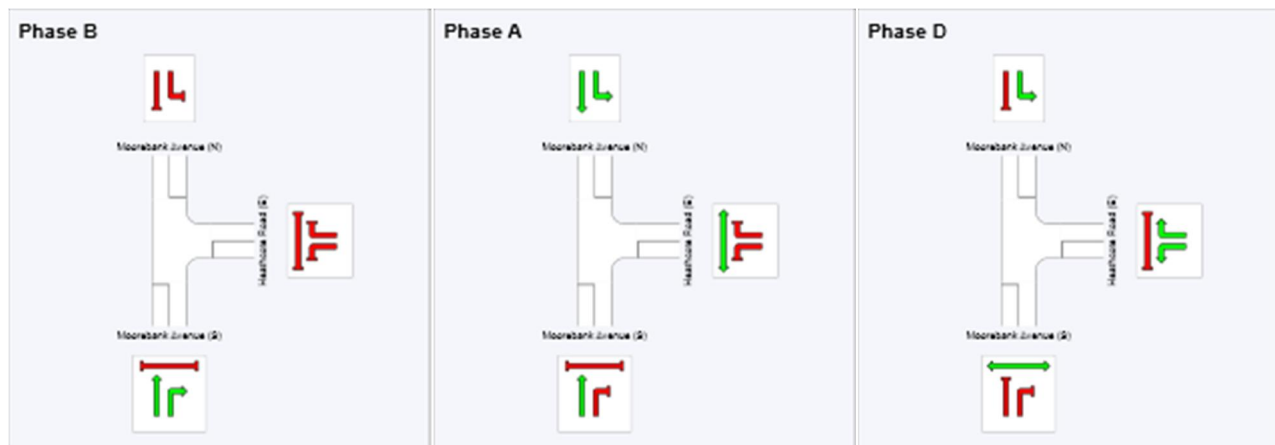
Moorebank Avenue / Heathcote Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	88
Green Time (sec)	9	67	39
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	73	45
Phase Split	11 %	55 %	34 %



PM BASE

MOVEMENT SUMMARY



Site: I-07 2030 BASE PM



Network: 2030 BASE PM

Moorebank Avenue / Heathcote Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1163	8.3	1163	8.3	0.910	45.1	LOS D	42.9	321.6	0.91	1.05	16.7
3	R2	48	8.7	48	8.7	0.401	64.7	LOS E	2.8	20.9	1.00	0.74	32.2
Approach		1212	8.3	1212	8.3	0.910	45.9	LOS D	42.9	321.6	0.92	1.04	18.0
East: Heathcote Road (E)													
4	L2	76	19.4	76	19.4	1.415	430.1	LOS F	92.9	690.4	1.00	1.99	7.5
6	R2	811	5.1	811	5.1	1.415	429.4	LOS F	92.9	690.4	1.00	1.99	7.5
Approach		886	6.3	886	6.3	1.415	429.5	LOS F	92.9	690.4	1.00	1.99	7.5
North: Moorebank Avenue (N)													
7	L2	883	3.6	796	3.6	0.389	7.5	LOS A	5.4	39.0	0.24	0.61	53.8
8	T1	1454	4.1	1310	4.2	0.667	6.3	LOS A	11.9	86.2	0.35	0.32	29.3
Approach		2337	3.9	2106 ^{N1}	4.0	0.667	6.7	LOS A	11.9	86.2	0.31	0.43	48.6
All Vehicles		4435	5.6	4204 ^{N1}	5.9	1.415	107.1	LOS F	92.9	690.4	0.63	0.93	14.2

PHASING SUMMARY



Site: I-07 2030 BASE PM



Network: 2030 BASE PM

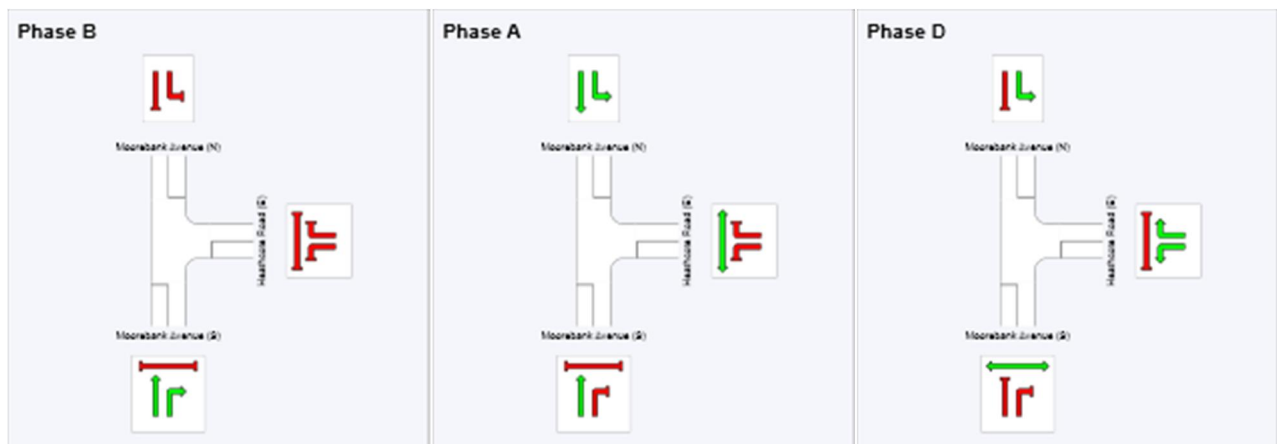
Moorebank Avenue / Heathcote Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-07 2030 MIMT AM



Network: 2030 MIMT AM

Moorebank Avenue / Heathcote Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1960	7.6	1744	7.7	1.149	182.7	LOS F	57.6	440.6	1.00	1.80	5.2
3	R2	23	18.2	21	18.5	0.186	71.8	LOS F	1.3	10.8	0.98	0.71	30.6
Approach		1983	7.7	1765 ^{N1}	7.8	1.149	181.4	LOS F	57.6	440.6	1.00	1.78	5.4
East: Heathcote Road (E)													
4	L2	29	57.1	29	57.1	1.450	489.4	LOS F	104.2	784.8	1.00	1.96	6.7
6	R2	952	5.9	952	5.9	1.450	489.4	LOS F	104.2	784.8	1.00	1.96	6.7
Approach		981	7.4	981	7.4	1.450	489.4	LOS F	104.2	784.8	1.00	1.96	6.7
North: Moorebank Avenue (N)													
7	L2	795	7.9	613	9.0	0.380	10.7	LOS A	12.2	91.8	0.54	0.71	51.4
8	T1	819	19.7	644	22.1	0.383	21.5	LOS B	12.7	109.0	0.66	0.58	13.1
Approach		1614	13.9	1257 ^{N1}	15.7	0.383	16.2	LOS B	12.7	109.0	0.60	0.64	41.0
All Vehicles		4578	9.8	4003 ^{N1}	11.2	1.450	205.0	LOS F	104.2	784.8	0.87	1.47	8.6

PHASING SUMMARY



Site: I-07 2030 MIMT AM



Network: 2030 MIMT AM

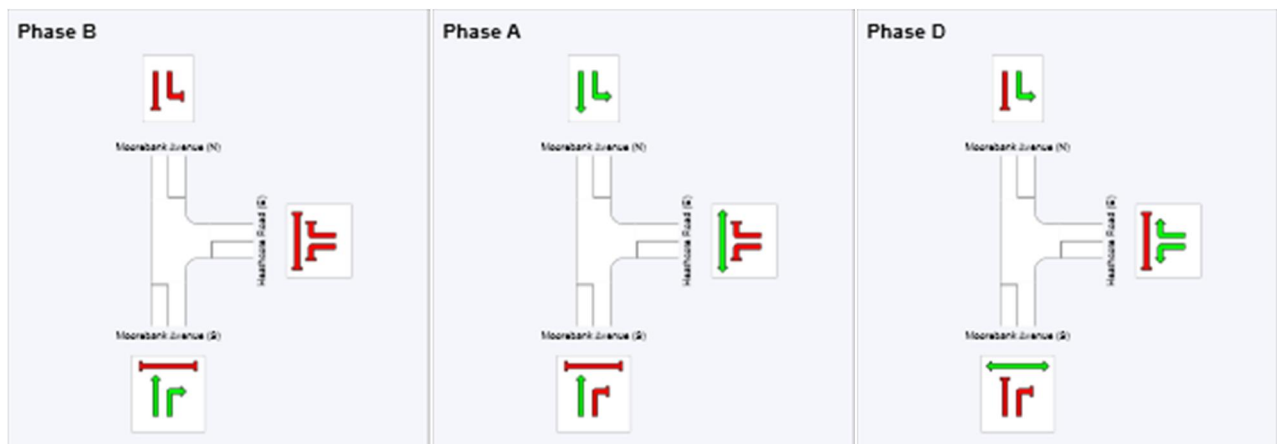
Moorebank Avenue / Heathcote Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	88
Green Time (sec)	9	67	39
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	73	45
Phase Split	11 %	55 %	34 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-07 2030 MIMT PM



Network: 2030 MIMT PM

Moorebank Avenue / Heathcote Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1194	10.1	1194	10.1	0.957	65.3	LOS E	53.1	412.9	0.98	1.23	12.6
3	R2	48	8.7	48	8.7	0.401	64.7	LOS E	2.8	20.9	1.00	0.74	32.2
Approach		1243	10.1	1243	10.1	0.957	65.3	LOS E	53.1	412.9	0.98	1.21	13.9
East: Heathcote Road (E)													
4	L2	76	19.4	76	19.4	1.415	430.1	LOS F	93.1	692.3	1.00	1.99	7.5
6	R2	812	5.2	812	5.2	1.415	429.3	LOS F	93.1	692.3	1.00	1.99	7.5
Approach		887	6.4	887	6.4	1.415	429.4	LOS F	93.1	692.3	1.00	1.99	7.5
North: Moorebank Avenue (N)													
7	L2	884	3.7	750	3.7	0.347	7.4	LOS A	4.9	35.5	0.23	0.61	53.8
8	T1	1499	7.0	1272	7.1	0.671	6.3	LOS A	11.6	88.9	0.35	0.32	29.3
Approach		2384	5.8	2022 ^{N1}	5.9	0.671	6.7	LOS A	11.6	88.9	0.31	0.43	48.4
All Vehicles		4514	7.1	4152 ^{N1}	7.7	1.415	114.6	LOS F	93.1	692.3	0.66	1.00	13.4

PHASING SUMMARY



Site: I-07 2030 MIMT PM



Network: 2030 MIMT PM

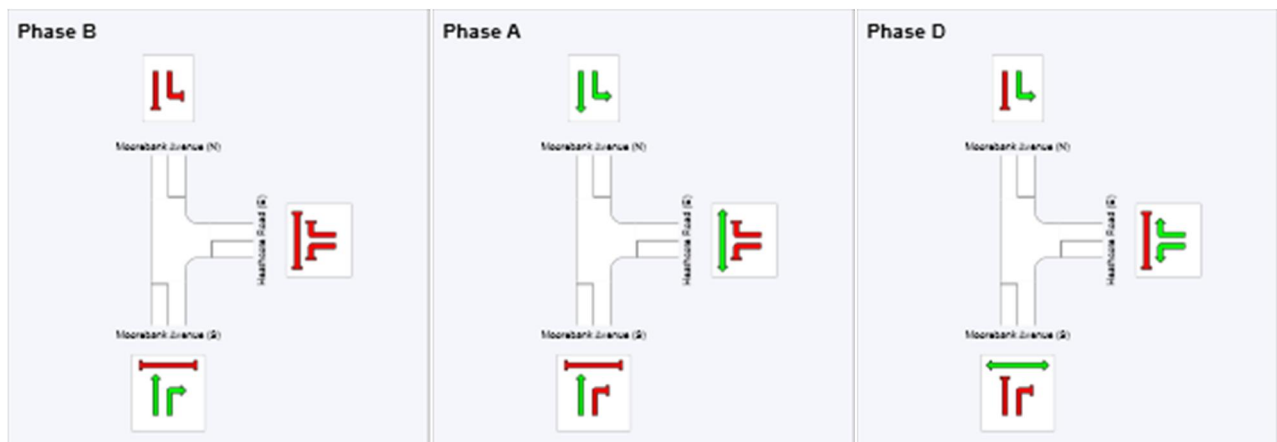
Moorebank Avenue / Heathcote Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-07 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM - Upgrade Option

Moorebank Avenue / Heathcote Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Moorebank Avenue (S)													
2	T1	1960	7.6	1821	7.6	1.231	253.8	LOS F	57.6	440.6	1.00	2.08	3.9
3	R2	23	18.2	22	18.4	0.194	71.8	LOS F	1.4	11.2	0.98	0.71	30.7
Approach		1983	7.7	1843 ^{N1}	7.8	1.231	251.6	LOS F	57.6	440.6	1.00	2.07	4.1
East: Heathcote Road (E)													
4	L2	29	57.1	29	57.1	1.299	384.7	LOS F	62.1	472.5	1.00	1.71	8.3
6	R2	952	5.9	952	5.9	1.299	371.3	LOS F	62.1	472.5	1.00	1.73	8.5
Approach		981	7.4	981	7.4	1.299	371.7	LOS F	62.1	472.5	1.00	1.73	8.5
North: Moorebank Avenue (N)													
7	L2	795	7.9	631	8.8	0.391	10.7	LOS A	12.8	96.1	0.54	0.71	51.4
8	T1	819	19.7	661	21.8	0.392	21.6	LOS B	13.1	112.2	0.66	0.58	13.3
Approach		1614	13.9	1292 ^{N1}	15.5	0.392	16.3	LOS B	13.1	112.2	0.60	0.64	41.0
All Vehicles		4578	9.8	4115 ^{N1}	10.9	1.299	206.4	LOS F	62.1	472.5	0.88	1.54	8.5

PHASING SUMMARY



Site: I-07 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM - Upgrade Option

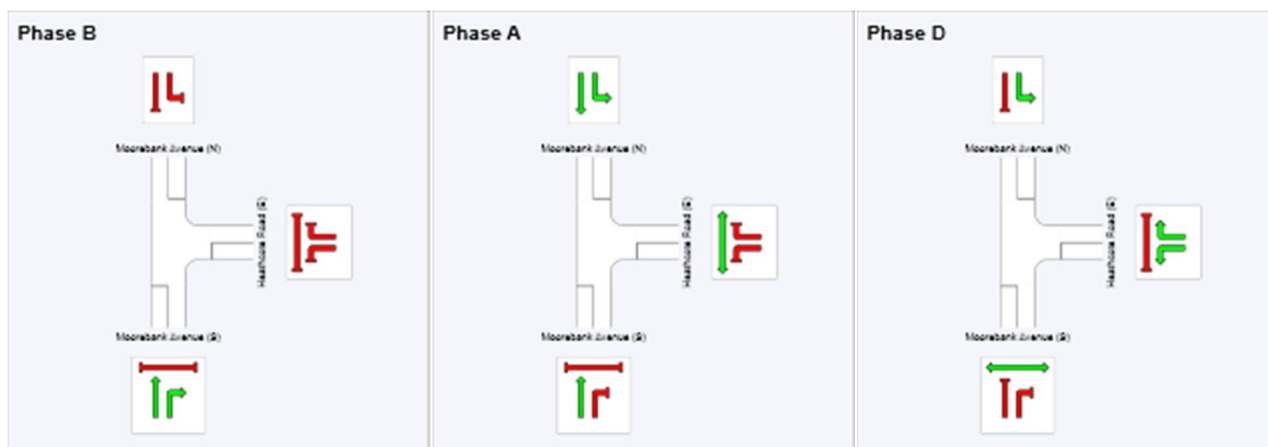
Moorebank Avenue / Heathcote Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	15	88
Green Time (sec)	9	67	39
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	15	73	45
Phase Split	11 %	55 %	34 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-07 2030 MIMT PM - Upgrade Option



Network: 2030 MIMT PM - Upgrade Option

Moorebank Avenue / Heathcote Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV %	Total	HV %	v/c	sec		Vehicles	Distance		per veh	km/h
		veh/h		veh/h					veh	m			
South: Moorebank Avenue (S)													
2	T1	1194	10.1	1194	10.1	0.906	42.8	LOS D	44.4	345.3	0.91	1.03	17.5
3	R2	48	8.7	48	8.7	0.401	64.7	LOS E	2.8	20.9	1.00	0.74	32.3
Approach		1243	10.1	1243	10.1	0.906	43.6	LOS D	44.4	345.3	0.91	1.02	18.8
East: Heathcote Road (E)													
4	L2	76	19.4	76	19.4	1.284	329.2	LOS F	48.5	364.3	1.00	1.73	9.4
6	R2	812	5.2	812	5.2	1.284	318.9	LOS F	48.5	364.3	1.00	1.75	9.7
Approach		887	6.4	887	6.4	1.284	319.8	LOS F	48.5	364.3	1.00	1.75	9.7
North: Moorebank Avenue (N)													
7	L2	884	3.7	745	3.8	0.344	7.4	LOS A	4.9	35.4	0.23	0.61	53.8
8	T1	1499	7.0	1265	7.3	0.669	6.3	LOS A	11.5	88.2	0.35	0.32	29.8
Approach		2384	5.8	2010 ^{N1}	6.0	0.669	6.7	LOS A	11.5	88.2	0.31	0.42	48.5
All Vehicles		4514	7.1	4140 ^{N1}	7.7	1.284	84.9	LOS F	48.5	364.3	0.64	0.89	16.8

PHASING SUMMARY



Site: I-07 2030 MIMT PM - Upgrade Option



Network: 2030 MIMT PM - Upgrade Option

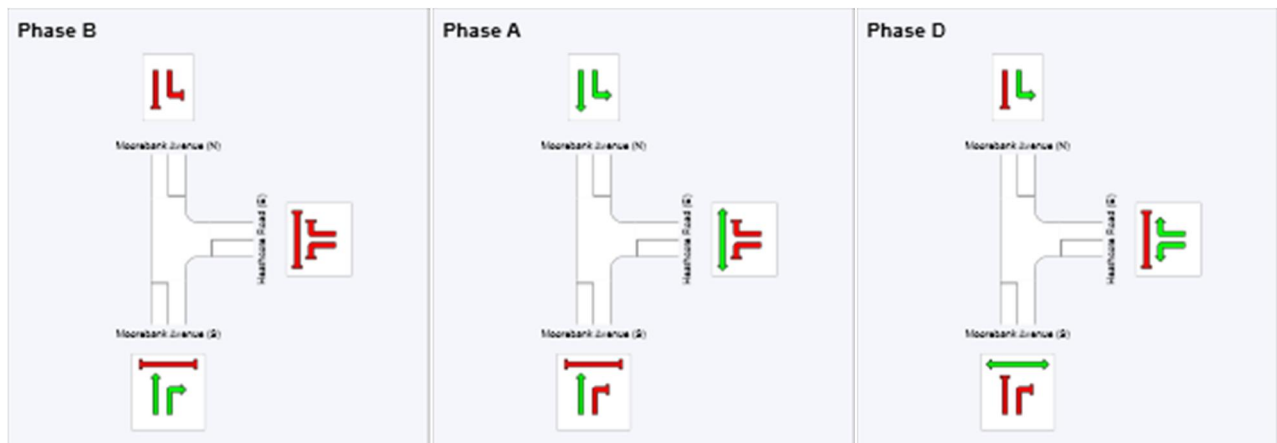
Moorebank Avenue / Heathcote Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	B	A	D
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	14	80
Green Time (sec)	8	60	30
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	66	36
Phase Split	12 %	57 %	31 %



I-08 Intersection of Moorebank Avenue and Industry Park Access

AM BASE

MOVEMENT SUMMARY



Site: I-08 2030 BASE AM



Network: 2030 BASE AM

Moorebank Avenue / Industry Park Access

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles veh	Distance m			
		veh/h	%	veh/h	%								
South: Moorebank Avenue (S)													
1	L2	88	1.2	88	1.2	0.053	6.1	LOS A	0.4	2.8	0.12	0.58	43.1
2	T1	1899	4.9	1899	4.9	1.215	256.5	LOS F	156.8	1144.3	1.00	2.09	6.2
Approach		1987	4.8	1987	4.8	1.215	245.3	LOS F	156.8	1144.3	0.96	2.02	6.6
North: Moorebank Avenue (N)													
8	T1	695	16.2	558	17.6	0.193	2.5	LOS A	3.6	29.1	0.22	0.19	56.9
9	R2	65	38.7	54	41.1	1.017	119.3	LOS F	4.7	44.9	1.00	1.06	11.5
Approach		760	18.1	612 ^{N1}	19.6	1.017	12.7	LOS A	4.7	44.9	0.29	0.27	45.9
West: Industry Park Access (W)													
10	L2	34	62.5	34	62.5	0.415	64.9	LOS E	2.3	24.3	0.95	0.73	9.6
12	R2	56	71.7	56	71.7	0.392	67.8	LOS E	2.6	29.5	0.98	0.73	19.9
Approach		89	68.2	89	68.2	0.415	66.7	LOS E	2.6	29.5	0.97	0.73	16.7
All Vehicles		2837	10.4	2688 ^{N1}	10.9	1.215	186.5	LOS F	156.8	1144.3	0.81	1.58	9.1

PHASING SUMMARY



Site: I-08 2030 BASE AM



Network: 2030 BASE AM

Moorebank Avenue / Industry Park Access

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase times specified by the user

Sequence: TCS 3736 AM - Modified 2

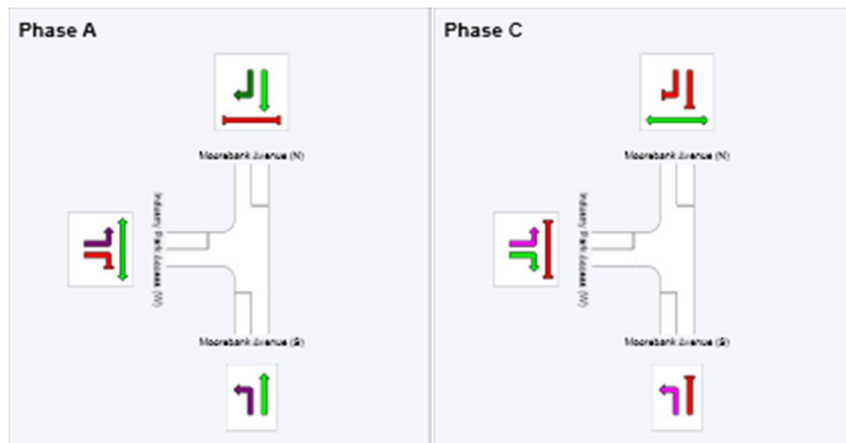
Movement Class: All Movement Classes

Input Sequence: A, C

Output Sequence: A, C

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	116
Green Time (sec)	110	11
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	116	17
Phase Split	87 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-08 2030 BASE PM



Network: 2030 BASE PM

Moorebank Avenue / Industry Park Access

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 65 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	8	12.5	8	12.5	0.007	6.6	LOS A	0.0	0.3	0.22	0.58	42.7
2	T1	1133	7.6	1133	7.6	0.440	4.8	LOS A	7.9	59.1	0.48	0.42	51.7
Approach		1141	7.7	1141	7.7	0.440	4.8	LOS A	7.9	59.1	0.47	0.43	51.6
North: Moorebank Avenue (N)													
8	T1	1527	3.9	1366	3.8	0.518	5.2	LOS A	10.4	75.0	0.52	0.47	54.0
9	R2	25	62.5	22	62.1	0.124	13.9	LOS A	0.4	3.8	0.48	0.67	33.2
Approach		1553	4.8	1388 ^{N1}	4.7	0.518	5.3	LOS A	10.4	75.0	0.52	0.47	53.6
West: Industry Park Access (W)													
10	L2	34	15.6	34	15.6	0.065	3.6	LOS A	0.3	2.0	0.34	0.42	26.7
12	R2	187	9.0	187	9.0	0.436	32.4	LOS C	2.9	22.2	0.97	0.76	28.2
Approach		221	10.0	221	10.0	0.436	28.0	LOS B	2.9	22.2	0.87	0.71	28.1
All Vehicles		2915	6.3	2750 ^{N1}	6.7	0.518	6.9	LOS A	10.4	75.0	0.53	0.47	49.3

PHASING SUMMARY



Site: I-08 2030 BASE PM



Network: 2030 BASE PM

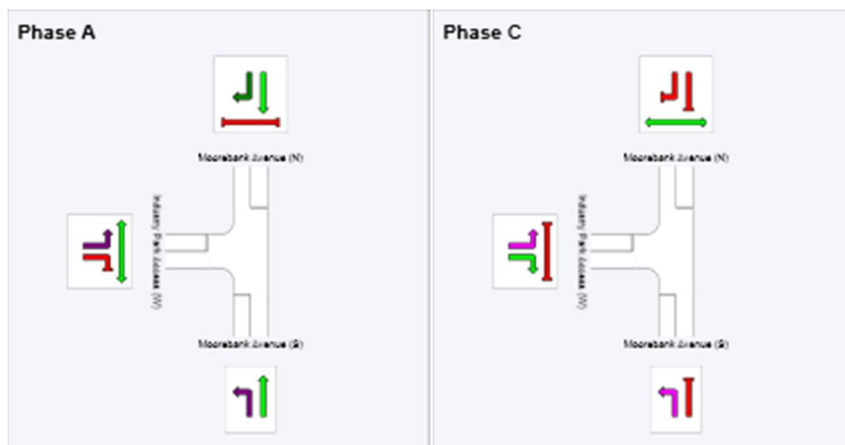
Moorebank Avenue / Industry Park Access

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 65 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	51
Green Time (sec)	45	8
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	51	14
Phase Split	78 %	22 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-08 2030 MIMT AM



Network: 2030 MIMT AM

Moorebank Avenue / Industry Park Access

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	91	3.6	91	3.6	0.056	6.1	LOS A	0.4	2.7	0.12	0.58	43.1
2	T1	1941	7.0	1941	7.0	1.278	313.2	LOS F	175.3	1335.4	1.00	2.29	5.2
Approach		2032	6.8	2032	6.8	1.278	299.5	LOS F	175.3	1335.4	0.96	2.22	5.5
North: Moorebank Avenue (N)													
8	T1	730	19.4	573	21.5	0.207	2.5	LOS A	3.8	32.5	0.22	0.20	56.9
9	R2	65	38.7	52	41.5	0.991	105.9	LOS F	4.3	41.0	1.00	1.02	12.6
Approach		796	21.0	625 ^{N1}	23.2	0.991	11.1	LOS A	4.3	41.0	0.29	0.27	47.2
West: Industry Park Access (W)													
10	L2	34	62.5	34	62.5	0.415	64.9	LOS E	2.3	24.3	0.95	0.73	9.6
12	R2	58	72.9	58	72.9	0.419	68.1	LOS E	2.7	32.0	0.98	0.74	19.8
Approach		92	69.1	92	69.1	0.419	66.9	LOS E	2.7	32.0	0.97	0.73	16.8
All Vehicles		2919	12.7	2749 ^{N1}	13.4	1.278	226.1	LOS F	175.3	1335.4	0.81	1.72	7.8

PHASING SUMMARY



Site: I-08 2030 MIMT AM



Network: 2030 MIMT AM

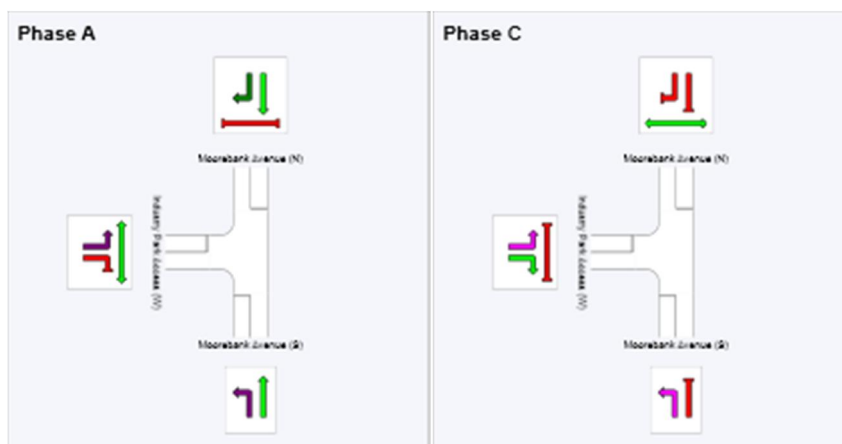
Moorebank Avenue / Industry Park Access

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	116
Green Time (sec)	110	11
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	116	17
Phase Split	87 %	13 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-08 2030 MIMT PM



Network: 2030 MIMT PM

Moorebank Avenue / Industry Park Access

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Arrival Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV	Total	HV				Vehicles	Distance			
		veh/h	%	veh/h	%				veh	m			
South: Moorebank Avenue (S)													
1	L2	11	33.8	11	33.8	0.011	6.7	LOS A	0.1	0.6	0.14	0.56	42.9
2	T1	1164	9.5	1164	9.5	0.445	4.4	LOS A	11.6	89.9	0.36	0.33	52.3
Approach		1175	9.7	1175	9.7	0.445	4.4	LOS A	11.6	89.9	0.36	0.33	52.2
North: Moorebank Avenue (N)													
8	T1	1573	6.7	1329	6.6	0.461	4.4	LOS A	12.4	94.3	0.37	0.33	54.7
9	R2	25	62.5	21	62.2	0.153	14.3	LOS A	0.5	5.0	0.38	0.65	32.9
Approach		1598	7.5	1350 ^{N1}	7.5	0.461	4.6	LOS A	12.4	94.3	0.37	0.34	54.3
West: Industry Park Access (W)													
10	L2	34	15.6	34	15.6	0.087	3.6	LOS A	0.4	2.9	0.25	0.37	26.8
12	R2	190	10.4	190	10.4	0.496	56.2	LOS D	5.3	40.8	0.98	0.78	22.4
Approach		224	11.2	224	11.2	0.496	48.3	LOS D	5.3	40.8	0.87	0.72	22.6
All Vehicles		2997	8.7	2749 ^{N1}	9.5	0.496	8.1	LOS A	12.4	94.3	0.40	0.37	48.1

PHASING SUMMARY



Site: I-08 2030 MIMT PM



Network: 2030 MIMT PM

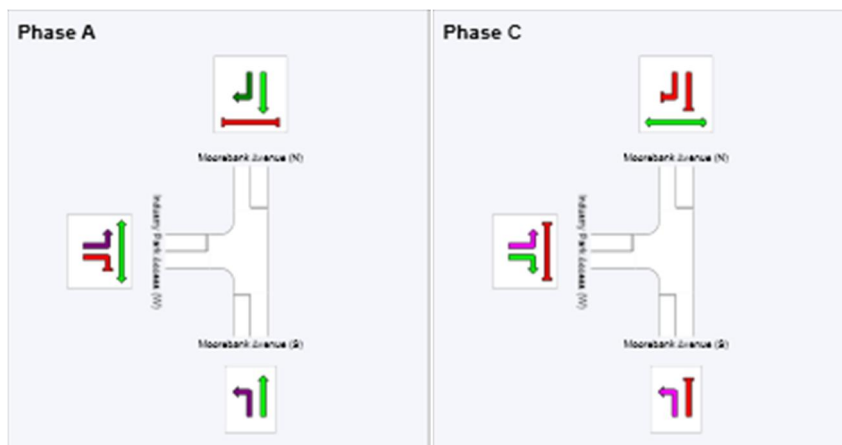
Moorebank Avenue / Industry Park Access

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 116 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	97
Green Time (sec)	91	13
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	97	19
Phase Split	84 %	16 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-08 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM - Upgrade Option

Moorebank Avenue / Industry Park Access

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	ODMo	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	V	Total	HV	Total	HV	v/c	sec		Vehicles	Distance	per veh	km/h
		veh/h	%	veh/h	%				veh	m		
South: Moorebank Avenue (S)												
1	L2	91	3.6	91	3.6	0.056	6.2	LOS A	0.4	3.0	0.12	43.1
2	T1	1941	7.0	1941	7.0	1.223	262.0	LOS F	163.0	1241.3	1.00	6.1
Approach		2032	6.8	2032	6.8	1.223	250.6	LOS F	163.0	1241.3	0.96	6.5
North: Moorebank Avenue (N)												
8	T1	730	19.4	590	21.3	0.204	1.5	LOS A	3.1	26.2	0.18	58.0
9	R2	65	38.7	54	41.2	1.018	119.6	LOS F	4.8	45.0	1.00	11.5
Approach		796	21.0	643 ^{N1}	23.0	1.018	11.4	LOS A	4.8	45.0	0.25	47.0
West: Industry Park Access (W)												
10	L2	34	62.5	34	62.5	0.591	71.7	LOS F	2.4	25.5	1.00	8.9
12	R2	58	72.9	58	72.9	0.768	78.8	LOS F	3.1	35.7	1.00	18.3
Approach		92	69.1	92	69.1	0.768	76.2	LOS F	3.1	35.7	1.00	15.6
All Vehicles		2919	12.7	2767 ^{N1}	13.3	1.223	189.2	LOS F	163.0	1241.3	0.80	9.1

PHASING SUMMARY



Site: I-08 2030 MIMT AM - Upgrade Option



Network: 2030 MIMT AM - Upgrade Option

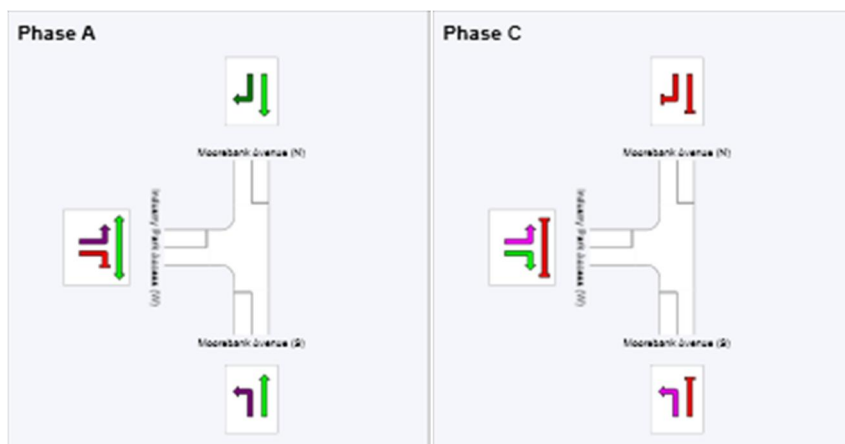
Moorebank Avenue / Industry Park Access

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 133 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C
Reference Phase	Yes	No
Phase Change Time (sec)	0	121
Green Time (sec)	115	6
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	121	12
Phase Split	91 %	9 %



I-09 Intersection of Moorebank Avenue and Church Road

AM BASE

MOVEMENT SUMMARY



Site: I-09 2030 BASE AM

Moorebank Avenue / Church Road
2030 BASE AM PEAK 7:45 am - 8:45 am
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	2101	6.4	0.737	4.3	LOS A	11.1	82.6	0.18	0.11	55.5
3	R2	282	7.8	0.737	25.5	LOS B	11.1	82.6	1.00	0.60	40.4
Approach		2383	6.6	0.921	6.8	NA	11.1	82.6	0.28	0.17	53.1
East: Church Road (E)											
4	L2	200	14.2	0.243	7.1	LOS A	1.0	7.6	0.48	0.70	47.6
6	R2	7	0.0	0.945	845.2	LOS F	2.5	17.2	1.00	1.07	4.0
Approach		207	13.7	0.945	36.9	LOS C	2.5	17.2	0.50	0.71	34.2
North: Moorebank Avenue (N)											
7	L2	37	0.0	0.219	5.6	LOS A	0.0	0.0	0.00	0.06	57.7
8	T1	717	21.1	0.219	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		754	20.1	0.219	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		3344	10.1	0.945	7.2	NA	11.1	82.6	0.23	0.17	52.5

PM BASE

MOVEMENT SUMMARY

▽ **Site: I-09 2030 BASE PM**

Moorebank Avenue / Church Road
2030 BASE PM PEAK 4:30 pm - 5:30 pm
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	1177	11.9	0.598	3.2	LOS A	5.8	44.3	0.08	0.05	56.7
3	R2	108	11.7	0.598	44.4	LOS D	5.8	44.3	1.00	0.68	33.1
Approach		1285	11.9	0.598	6.7	NA	5.8	44.3	0.16	0.11	53.4
East: Church Road (E)											
4	L2	424	4.5	1.291	324.8	LOS F	78.0	566.9	1.00	4.91	9.2
6	R2	1	0.0	0.124	374.1	LOS F	0.3	2.1	0.99	1.00	8.2
Approach		425	4.5	1.291	324.9	LOS F	78.0	566.9	1.00	4.90	9.2
North: Moorebank Avenue (N)											
7	L2	14	7.7	0.899	6.8	LOS A	0.0	0.0	0.00	0.01	55.6
8	T1	1687	4.6	0.899	1.4	LOS A	0.0	0.0	0.00	0.00	57.2
Approach		1701	4.6	0.899	1.5	NA	0.0	0.0	0.00	0.00	57.2
All Vehicles		3412	7.3	1.291	43.7	NA	78.0	566.9	0.18	0.65	33.7

AM With Moorebank IMT

MOVEMENT SUMMARY

▽ Site: I-09 2030 MIMT AM

Moorebank Avenue / Church Road
2030 MIMT AM PEAK 7:45 am - 8:45 am
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	2143	8.3	0.802	9.6	LOS A	12.7	97.3	0.15	0.11	51.3
3	R2	285	8.9	0.802	32.3	LOS C	12.7	97.3	1.00	0.74	37.4
Approach		2429	8.3	1.002	12.2	NA	12.7	97.3	0.25	0.18	49.1
East: Church Road (E)											
4	L2	205	16.2	0.272	7.7	LOS A	1.1	9.1	0.52	0.75	47.1
6	R2	7	0.0	0.945	768.4	LOS F	2.2	15.7	1.00	1.06	4.3
Approach		212	15.6	0.945	34.2	LOS C	2.2	15.7	0.54	0.76	35.0
North: Moorebank Avenue (N)											
7	L2	37	0.0	0.241	5.6	LOS A	0.0	0.0	0.00	0.05	57.7
8	T1	760	24.8	0.241	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		797	23.6	0.241	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		3438	12.3	1.002	10.8	NA	12.7	97.3	0.21	0.18	49.8

PM With Moorebank IMT

MOVEMENT SUMMARY

▽ Site: I-09 2030 MIMT PM

Moorebank Avenue / Church Road
2030 MIMT PM PEAK 4:30 pm - 5:30 pm
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	1201	13.1	0.678	0.2	LOS A	0.0	0.0	0.00	0.00	59.6
3	R2	113	15.1	0.808	73.2	LOS F	4.3	35.7	0.98	1.27	25.7
Approach		1314	13.3	0.808	6.5	NA	4.3	35.7	0.08	0.11	53.4
East: Church Road (E)											
4	L2	429	5.5	1.447	458.2	LOS F	98.3	729.4	1.00	5.64	6.9
6	R2	1	0.0	0.212	735.6	LOS F	0.5	3.5	1.00	1.00	4.5
Approach		430	5.5	1.447	458.9	LOS F	98.3	729.4	1.00	5.63	6.9
North: Moorebank Avenue (N)											
7	L2	14	7.7	0.955	8.2	LOS A	0.0	0.0	0.00	0.01	53.0
8	T1	1737	7.3	0.955	3.1	LOS A	0.0	0.0	0.00	0.00	54.3
Approach		1751	7.3	0.955	3.2	NA	0.0	0.0	0.00	0.00	54.2
All Vehicles		3494	9.3	1.447	60.5	NA	98.3	729.4	0.15	0.74	28.9

AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY

▽ Site: I-09 2030 MIMT AM - Upgrade Option

Moorebank Avenue / Church Road
2030 MIMT AM PEAK 7:45 am - 8:45 am
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	2143	8.3	0.802	9.5	LOS A	12.7	97.3	0.15	0.11	51.3
3	R2	285	8.9	0.802	32.3	LOS C	12.7	97.3	1.00	0.74	37.3
Approach		2429	8.3	1.002	12.2	NA	12.7	97.3	0.25	0.18	49.0
East: Church Road (E)											
4	L2	205	16.2	0.272	7.7	LOS A	1.1	9.1	0.52	0.75	47.1
Approach		205	16.2	0.272	7.7	LOS A	1.1	9.1	0.52	0.75	47.1
North: Moorebank Avenue (N)											
7	L2	37	0.0	0.241	5.6	LOS A	0.0	0.0	0.00	0.05	57.7
8	T1	760	24.8	0.241	0.0	LOS A	0.0	0.0	0.00	0.03	59.6
Approach		797	23.6	0.241	0.3	NA	0.0	0.0	0.00	0.03	59.5
All Vehicles		3430	12.3	1.002	9.2	NA	12.7	97.3	0.21	0.18	51.0

PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY

▽ Site: I-09 2030 MIMT PM - Upgrade Option

Moorebank Avenue / Church Road
2030 MIMT PM PEAK 4:30 pm - 5:30 pm
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	1201	13.1	0.678	0.2	LOS A	0.0	0.0	0.00	0.00	59.6
3	R2	113	15.1	0.808	73.2	LOS F	4.3	35.7	0.98	1.27	25.6
Approach		1314	13.3	0.808	6.5	NA	4.3	35.7	0.08	0.11	53.4
East: Church Road (E)											
4	L2	429	5.5	1.446	456.9	LOS F	98.1	728.1	1.00	5.63	6.9
Approach		429	5.5	1.446	456.9	LOS F	98.1	728.1	1.00	5.63	6.9
North: Moorebank Avenue (N)											
7	L2	14	7.7	0.955	8.2	LOS A	0.0	0.0	0.00	0.01	53.0
8	T1	1737	7.3	0.955	3.1	LOS A	0.0	0.0	0.00	0.00	54.3
Approach		1751	7.3	0.955	3.1	NA	0.0	0.0	0.00	0.00	54.2
All Vehicles		3493	9.3	1.446	60.1	NA	98.1	728.1	0.15	0.73	28.9

I-10 Intersection of Heathcote Road and Nuwarra Road

AM BASE

MOVEMENT SUMMARY



Site: I-10 2030 BASE AM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows Total veh/h	Deg. Satn HV %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Heathcote Road (SE)											
4	L2	249	1.3	0.173	8.2	LOS A	3.3	23.3	0.27	0.63	48.3
5	T1	2074	5.3	1.255	285.8	LOS F	161.5	1181.8	1.00	2.14	10.3
6	R2	647	3.3	1.268	267.3	LOS F	42.9	308.4	1.00	1.54	11.2
Approach		2971	4.5	1.268	258.4	LOS F	161.5	1181.8	0.94	1.88	11.1
NorthEast: Nuwarra Road (NE)											
7	L2	416	4.8	0.485	24.6	LOS B	16.5	120.4	0.71	0.78	42.4
8	T1	246	8.5	0.397	53.0	LOS D	7.1	53.4	0.94	0.75	26.2
9	R2	508	5.8	1.436	477.0	LOS F	49.8	365.8	1.00	1.93	6.6
Approach		1171	6.0	1.436	227.1	LOS F	49.8	365.8	0.88	1.27	11.9
NorthWest: Heathcote Road (NW)											
10	L2	255	12.0	0.336	21.5	LOS B	7.9	60.6	0.70	0.76	42.7
11	T1	1047	11.6	0.963	56.6	LOS E	44.0	338.3	0.91	0.98	30.7
12	R2	236	6.7	0.792	75.7	LOS F	8.1	59.7	1.00	0.89	19.9
Approach		1538	10.9	0.963	53.7	LOS D	44.0	338.3	0.89	0.93	30.5
SouthWest: Wattle Grove Drive (SW)											
1	L2	639	2.1	0.849	51.8	LOS D	31.9	227.1	0.99	1.15	24.8
2	T1	543	4.5	0.817	61.8	LOS E	19.6	142.7	1.00	0.94	23.7
3	R2	263	4.0	1.277	332.6	LOS F	42.3	306.5	1.00	1.80	6.6
Approach		1445	3.4	1.277	106.7	LOS F	42.3	306.5	0.99	1.19	16.1
All Vehicles		7124	5.9	1.436	178.3	LOS F	161.5	1181.8	0.93	1.44	13.9

PHASING SUMMARY



Site: I-10 2030 BASE AM

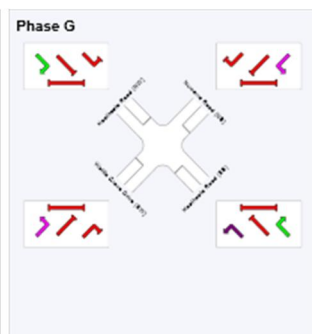
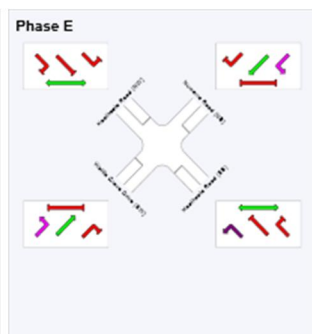
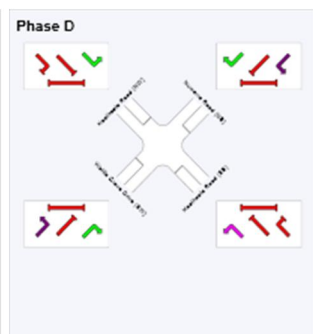
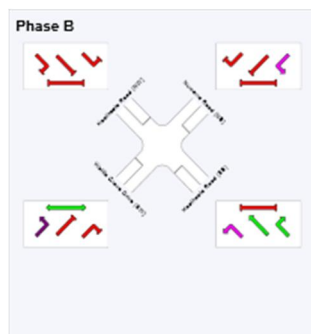
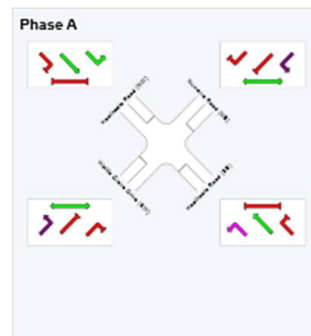
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	D	E	G
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	54	67	86	114
Green Time (sec)	48	7	13	22	11
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	54	13	19	28	17
Phase Split	41 %	10 %	15 %	21 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-10 2030 BASE PM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows	Deg. Satn	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	
		Total	HV			Vehicles veh	Distance m				
		veh/h	%								
SouthEast: Heathcote Road (SE)											
4	L2	337	2.5	0.286	15.8	LOS B	9.2	65.8	0.46	0.70	42.1
5	T1	1332	5.5	1.021	105.6	LOS F	67.7	496.4	1.00	1.28	21.6
6	R2	469	3.1	1.123	205.2	LOS F	29.5	212.0	1.00	1.36	13.8
Approach		2138	4.5	1.123	113.3	LOS F	67.7	496.4	0.92	1.21	20.1
NorthEast: Nuwarra Road (NE)											
7	L2	644	2.5	0.910	65.2	LOS E	41.3	295.4	1.00	1.16	29.0
8	T1	620	1.2	0.952	81.2	LOS F	26.6	188.3	1.00	1.09	20.2
9	R2	551	6.1	1.103	168.0	LOS F	34.2	251.7	1.00	1.27	15.5
Approach		1815	3.1	1.103	101.9	LOS F	41.3	295.4	1.00	1.17	20.7
NorthWest: Heathcote Road (NW)											
10	L2	258	6.1	0.238	22.3	LOS B	8.8	64.6	0.55	0.73	42.4
11	T1	1701	2.7	1.208	256.9	LOS F	128.4	919.5	1.00	1.92	11.3
12	R2	467	2.0	1.034	121.7	LOS F	24.0	171.3	1.00	1.13	14.2
Approach		2426	3.0	1.208	206.0	LOS F	128.4	919.5	0.95	1.64	12.7
SouthWest: Wattle Grove Drive (SW)											
1	L2	305	1.7	0.390	37.5	LOS C	13.9	98.6	0.76	0.88	29.2
2	T1	325	1.3	0.443	56.4	LOS D	9.9	70.3	0.94	0.78	25.0
3	R2	357	1.2	1.323	381.7	LOS F	63.0	445.2	1.00	1.84	5.8
Approach		987	1.4	1.323	168.1	LOS F	63.0	445.2	0.91	1.19	11.5
All Vehicles		7366	3.2	1.323	148.4	LOS F	128.4	919.5	0.95	1.34	15.8

PHASING SUMMARY



Site: I-10 2030 BASE PM

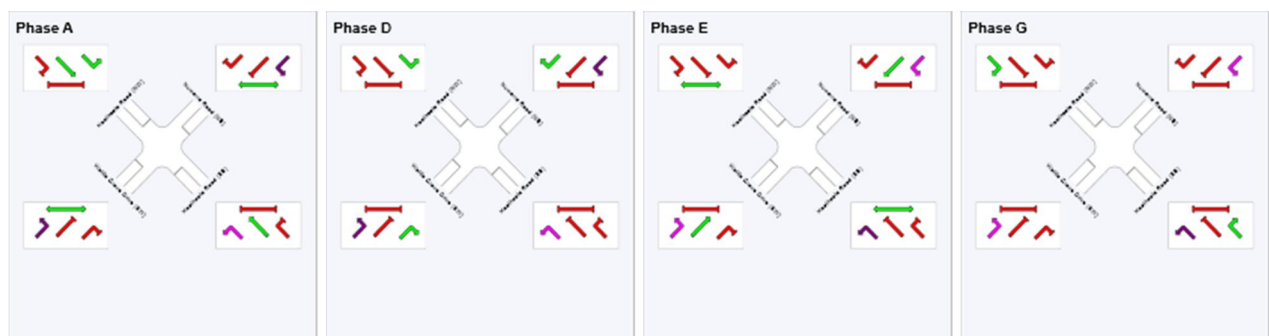
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	61	87	117
Green Time (sec)	55	20	24	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	61	26	30	22
Phase Split	44 %	19 %	22 %	16 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-10 2030 MIMT AM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
SouthEast: Heathcote Road (SE)											
4	L2	253	1.2	0.175	8.2	LOS A	3.4	23.8	0.27	0.63	48.2
5	T1	2073	5.3	1.256	286.3	LOS F	161.8	1183.6	1.00	2.15	10.3
6	R2	647	3.3	1.268	267.3	LOS F	42.9	308.4	1.00	1.54	11.2
Approach		2974	4.5	1.268	258.5	LOS F	161.8	1183.6	0.94	1.88	11.1
NorthEast: Nuwarra Road (NE)											
7	L2	416	4.8	0.484	24.5	LOS B	16.5	120.1	0.71	0.78	42.4
8	T1	252	8.4	0.405	53.1	LOS D	7.3	54.6	0.94	0.76	26.2
9	R2	508	5.8	1.436	477.0	LOS F	49.8	365.8	1.00	1.93	6.6
Approach		1176	6.0	1.436	226.3	LOS F	49.8	365.8	0.88	1.27	11.9
NorthWest: Heathcote Road (NW)											
10	L2	254	11.6	0.334	21.5	LOS B	7.8	60.1	0.70	0.76	42.7
11	T1	1044	11.3	0.958	54.9	LOS D	42.9	329.8	0.90	0.97	31.2
12	R2	235	6.3	0.786	75.4	LOS F	8.0	59.1	1.00	0.89	19.9
Approach		1532	10.6	0.958	52.5	LOS D	42.9	329.8	0.88	0.92	30.8
SouthWest: Wattle Grove Drive (SW)											
1	L2	639	2.1	0.849	51.8	LOS D	31.9	227.1	0.99	1.15	24.8
2	T1	543	4.5	0.817	61.8	LOS E	19.6	142.7	1.00	0.94	23.7
3	R2	263	4.0	1.277	332.6	LOS F	42.3	306.5	1.00	1.80	6.6
Approach		1445	3.4	1.277	106.7	LOS F	42.3	306.5	0.99	1.19	16.1
All Vehicles		7127	5.8	1.436	178.1	LOS F	161.8	1183.6	0.93	1.44	13.9

PHASING SUMMARY



Site: I-10 2030 MIMT AM

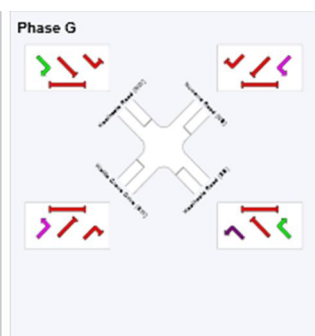
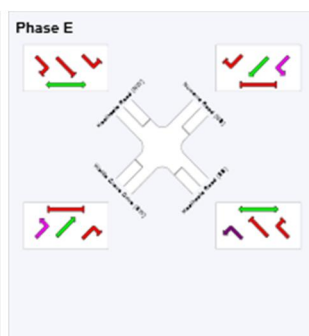
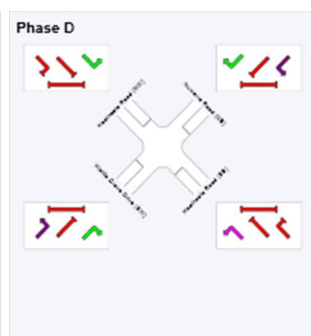
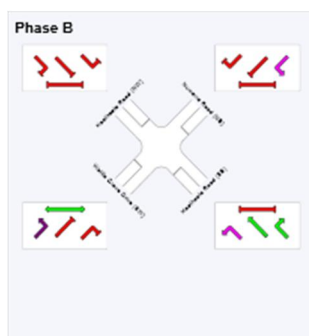
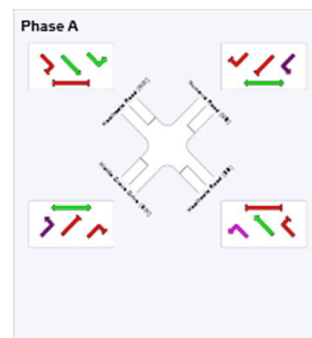
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 131 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	D	E	G
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	54	67	86	114
Green Time (sec)	48	7	13	22	11
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	54	13	19	28	17
Phase Split	41 %	10 %	15 %	21 %	13 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-10 2030 MIMT PM

Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles veh	Distance m			
		veh/h	%								
SouthEast: Heathcote Road (SE)											
4	L2	337	2.5	0.286	15.8	LOS B	9.2	65.9	0.46	0.70	42.1
5	T1	1331	5.4	1.021	105.7	LOS F	67.8	496.7	1.00	1.28	21.6
6	R2	469	3.1	1.123	205.2	LOS F	29.5	212.0	1.00	1.36	13.8
Approach		2138	4.5	1.123	113.4	LOS F	67.8	496.7	0.92	1.21	20.0
NorthEast: Nuwarra Road (NE)											
7	L2	646	2.8	0.915	66.5	LOS E	42.1	301.8	1.00	1.17	28.7
8	T1	621	1.4	0.954	81.9	LOS F	26.8	190.0	1.00	1.09	20.1
9	R2	556	7.0	1.120	181.1	LOS F	35.9	266.2	1.00	1.30	14.7
Approach		1823	3.6	1.120	106.7	LOS F	42.1	301.8	1.00	1.18	20.1
NorthWest: Heathcote Road (NW)											
10	L2	258	6.1	0.238	22.3	LOS B	8.8	64.6	0.55	0.73	42.4
11	T1	1702	2.8	1.209	257.6	LOS F	128.6	921.5	1.00	1.92	11.3
12	R2	467	2.0	1.034	121.7	LOS F	24.0	171.3	1.00	1.13	14.2
Approach		2427	3.0	1.209	206.4	LOS F	128.6	921.5	0.95	1.64	12.7
SouthWest: Wattle Grove Drive (SW)											
1	L2	305	1.7	0.390	37.5	LOS C	13.9	98.6	0.76	0.88	29.2
2	T1	330	1.3	0.450	56.5	LOS D	10.1	71.5	0.95	0.78	25.0
3	R2	361	1.2	1.338	395.0	LOS F	64.8	458.4	1.00	1.87	5.7
Approach		997	1.4	1.338	173.2	LOS F	64.8	458.4	0.91	1.20	11.2
All Vehicles		7384	3.3	1.338	150.4	LOS F	128.6	921.5	0.95	1.34	15.7

PHASING SUMMARY



Site: I-10 2030 MIMT PM

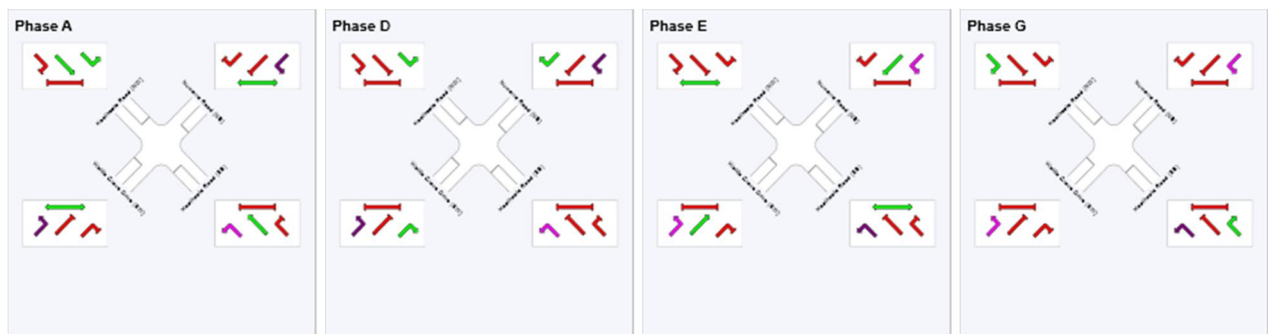
Heathcote Road / Nuwarra Road / Wattle Grove Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 139 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	61	87	117
Green Time (sec)	55	20	24	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	61	26	30	22
Phase Split	44 %	19 %	22 %	16 %



I-11 Intersection of Newbridge Road and Nuwarra Road

AM BASE

MOVEMENT SUMMARY



Site: I-11 2030 BASE AM

Newbridge Road / Nuwarra Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV			Vehicles	Distance		
		veh/h	%	v/c	sec	veh	m	per veh	km/h
South: Nuwarra Road (S)									
1	L2	37	8.6	0.900	67.1	LOS E	27.7	197.7	0.92
2	T1	353	1.8	0.900	64.1	LOS E	27.7	197.7	0.92
3	R2	857	6.8	1.245	312.8	LOS F	74.3	549.9	1.00
Approach		1246	5.4	1.245	235.2	LOS F	74.3	549.9	0.97
East: Newbridge Road (E)									
4	L2	347	17.9	0.636	27.8	LOS B	21.9	173.4	0.73
5	T1	1281	11.3	0.636	23.5	LOS B	22.7	174.2	0.68
Approach		1628	12.7	0.636	24.4	LOS B	22.7	174.2	0.69
North: Nuwarra Road (N)									
7	L2	8	0.0	0.981	108.4	LOS F	11.3	79.5	1.00
8	T1	153	0.7	1.227	149.0	LOS F	26.9	195.3	1.00
9	R2	141	5.2	1.227	293.8	LOS F	26.9	195.3	1.00
Approach		302	2.8	1.227	215.5	LOS F	26.9	195.3	1.00
West: Newbridge Road (W)									
10	L2	306	2.4	1.139	197.1	LOS F	113.0	835.4	1.00
11	T1	2284	8.9	1.212	222.8	LOS F	137.7	1037.8	1.00
Approach		2591	8.2	1.212	219.7	LOS F	137.7	1037.8	1.00
All Vehicles		5767	8.6	1.245	167.7	LOS F	137.7	1037.8	0.91

PHASING SUMMARY



Site: I-11 2030 BASE AM

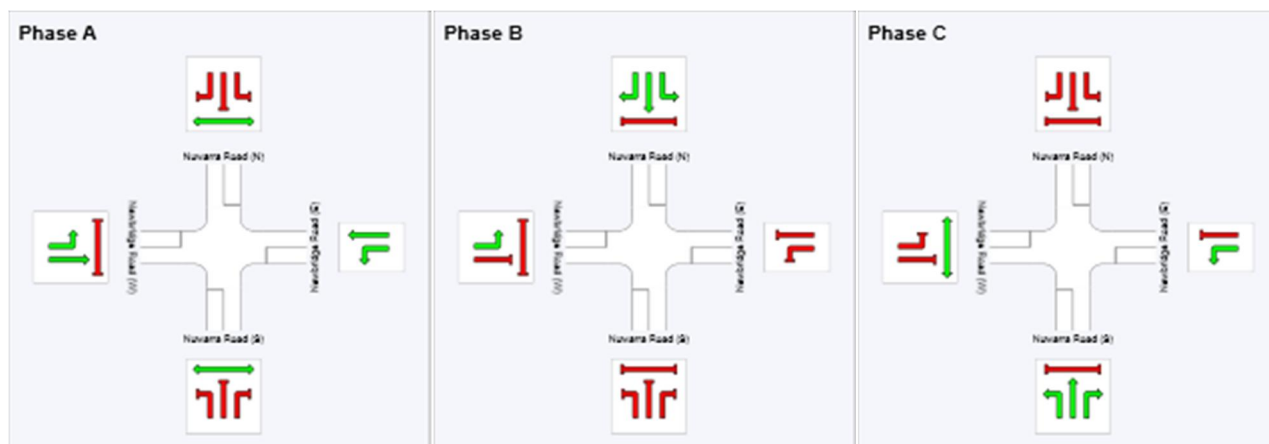
Newbridge Road / Nuwarra Road

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	72	89
Green Time (sec)	66	11	45
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	72	17	51
Phase Split	51 %	12 %	36 %



PM BASE

MOVEMENT SUMMARY



Site: I-11 2030 BASE PM

Newbridge Road / Nuwarra Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows	Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average	
		Total	HV	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Speed	
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Nuwarra Road (S)											
1	L2	58	7.3	0.810	74.1	LOS F	15.2	108.7	1.00	0.93	31.1
2	T1	156	0.7	0.810	69.7	LOS E	15.2	108.7	1.00	0.93	28.3
3	R2	564	6.2	1.057	153.7	LOS F	30.8	226.9	1.00	1.20	18.6
Approach		778	5.1	1.057	131.0	LOS F	30.8	226.9	1.00	1.12	20.7
East: Newbridge Road (E)											
4	L2	772	4.5	0.756	15.7	LOS B	27.4	200.0	0.50	0.74	51.7
5	T1	2224	5.8	0.756	13.9	LOS A	36.1	265.1	0.59	0.57	57.3
Approach		2996	5.4	0.756	14.4	LOS A	36.1	265.1	0.56	0.62	55.9
North: Nuwarra Road (N)											
7	L2	18	0.0	0.933	88.6	LOS F	19.2	135.0	1.00	1.12	26.8
8	T1	295	0.7	1.166	125.0	LOS F	39.8	280.7	1.00	1.23	20.7
9	R2	212	1.0	1.166	246.9	LOS F	39.8	280.7	1.00	1.55	14.2
Approach		524	0.8	1.166	173.0	LOS F	39.8	280.7	1.00	1.36	17.4
West: Newbridge Road (W)											
10	L2	102	0.0	0.519	19.4	LOS B	15.6	115.5	0.46	0.47	49.6
11	T1	1674	7.8	0.590	12.4	LOS A	17.8	133.0	0.45	0.42	58.5
Approach		1776	7.4	0.590	12.8	LOS A	17.8	133.0	0.45	0.42	57.9
All Vehicles		6074	5.6	1.166	42.6	LOS D	39.8	280.7	0.62	0.69	40.5

PHASING SUMMARY



Site: I-11 2030 BASE PM

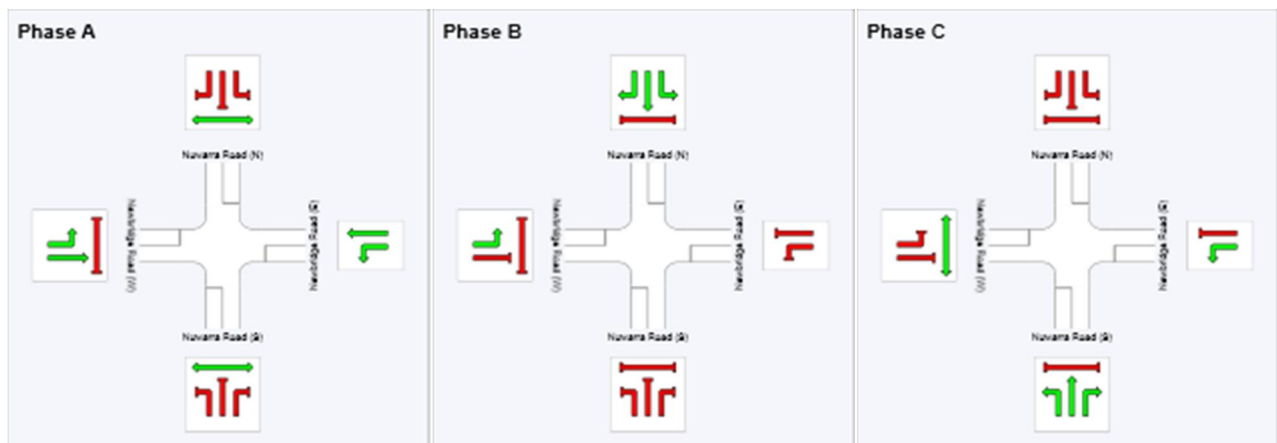
Newbridge Road / Nuwarra Road

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	87	113
Green Time (sec)	81	20	21
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	87	26	27
Phase Split	62 %	19 %	19 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-11 2030 MIMT AM

Newbridge Road / Nuwarra Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average					
	v	Total	HV				Delay	Service				Vehicles	Distance	Queued	Stop Rate	Speed
		veh/h	%				v/c	sec								per veh
South: Nuwarra Road (S)																
1	L2	37	8.6	0.884	63.6	LOS E	26.7	190.6	0.91	0.97	33.5					
2	T1	352	1.5	0.884	60.6	LOS E	26.7	190.6	0.91	0.97	28.2					
3	R2	852	6.2	1.232	301.9	LOS F	72.5	534.1	1.00	1.53	11.1					
Approach		1240	4.9	1.232	226.4	LOS F	72.5	534.1	0.97	1.36	13.8					
East: Newbridge Road (E)																
4	L2	347	17.0	0.648	28.3	LOS B	22.6	180.2	0.74	0.79	44.8					
5	T1	1296	12.2	0.648	23.8	LOS B	23.1	181.3	0.69	0.64	51.0					
Approach		1643	13.2	0.648	24.7	LOS B	23.1	181.3	0.70	0.67	49.6					
North: Nuwarra Road (N)																
7	L2	8	0.0	0.986	110.2	LOS F	11.4	80.5	1.00	1.23	22.2					
8	T1	154	0.7	1.232	151.8	LOS F	27.2	197.8	1.00	1.36	17.6					
9	R2	141	5.2	1.232	298.3	LOS F	27.2	197.8	1.00	1.77	11.9					
Approach		303	2.8	1.232	218.9	LOS F	27.2	197.8	1.00	1.54	14.3					
West: Newbridge Road (W)																
10	L2	305	2.1	1.173	225.9	LOS F	122.8	924.6	1.00	1.67	14.9					
11	T1	2317	10.2	1.247	253.3	LOS F	147.2	1143.0	1.00	1.93	14.3					
Approach		2622	9.3	1.247	250.1	LOS F	147.2	1143.0	1.00	1.90	14.4					
All Vehicles		5808	9.1	1.247	179.7	LOS F	147.2	1143.0	0.91	1.41	17.8					

PHASING SUMMARY



Site: I-11 2030 MIMT AM

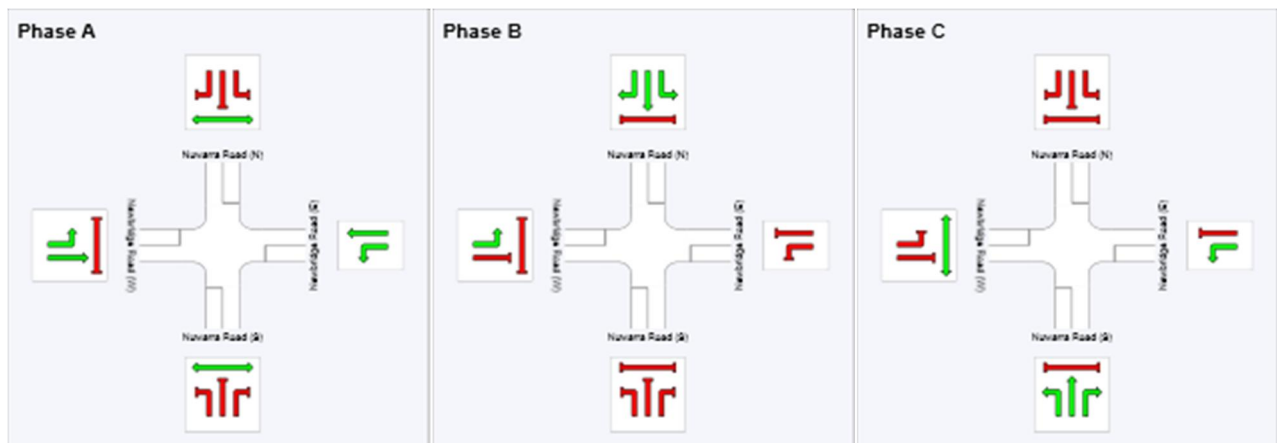
Newbridge Road / Nuwarra Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	72	89
Green Time (sec)	66	11	45
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	72	17	51
Phase Split	51 %	12 %	36 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-11 2030 MIMT PM

Newbridge Road / Nuwarra Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	58	7.3	0.814	74.3	LOS F	15.3	109.5	1.00	0.93	31.1
2	T1	157	0.7	0.814	69.9	LOS E	15.3	109.5	1.00	0.93	28.3
3	R2	568	6.3	1.065	159.5	LOS F	31.6	233.1	1.00	1.21	18.2
Approach		783	5.2	1.065	135.3	LOS F	31.6	233.1	1.00	1.13	20.3
East: Newbridge Road (E)											
4	L2	766	3.8	0.770	16.2	LOS B	29.3	214.3	0.52	0.75	51.5
5	T1	2248	6.8	0.770	14.1	LOS A	37.2	280.4	0.60	0.59	57.1
Approach		3014	6.0	0.770	14.6	LOS B	37.2	280.4	0.58	0.63	55.7
North: Nuwarra Road (N)											
7	L2	18	0.0	0.943	91.3	LOS F	19.5	137.8	1.00	1.14	26.4
8	T1	296	1.1	1.179	130.2	LOS F	41.0	290.5	1.00	1.25	20.2
9	R2	213	1.5	1.179	257.4	LOS F	41.0	290.5	1.00	1.58	13.7
Approach		526	1.2	1.179	180.3	LOS F	41.0	290.5	1.00	1.38	16.9
West: Newbridge Road (W)											
10	L2	102	0.0	0.534	19.5	LOS B	16.1	121.6	0.46	0.48	49.5
11	T1	1696	8.9	0.607	12.6	LOS A	18.5	141.3	0.46	0.43	58.4
Approach		1798	8.4	0.607	13.0	LOS A	18.5	141.3	0.46	0.43	57.8
All Vehicles		6122	6.2	1.179	43.8	LOS D	41.0	290.5	0.63	0.70	40.0

PHASING SUMMARY



Site: I-11 2030 MIMT PM

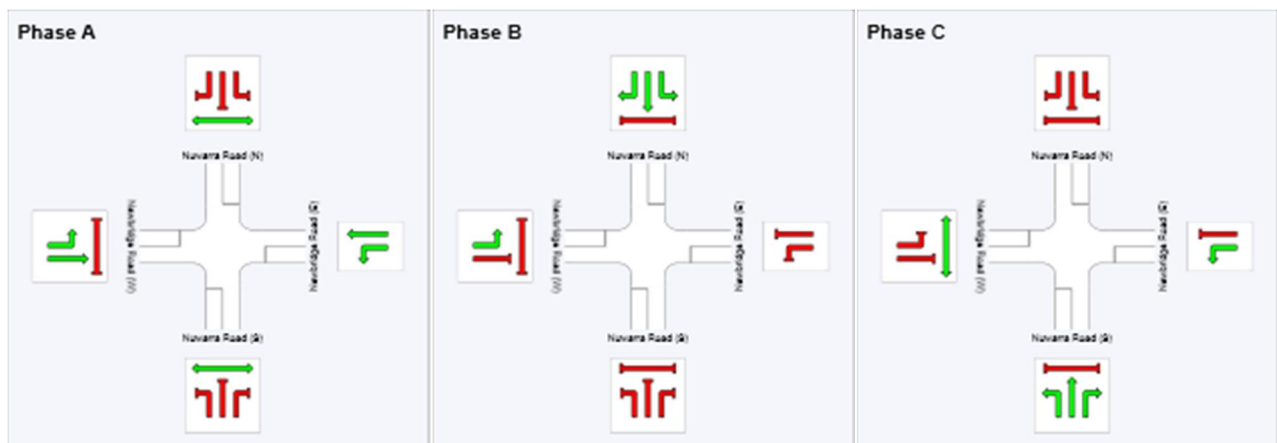
Newbridge Road / Nuwarra Road

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	87	113
Green Time (sec)	81	20	21
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	87	26	27
Phase Split	62 %	19 %	19 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-11 2030 MIMT AM - Upgrade Option

Newbridge Road / Nuwarra Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Nuwarra Road (S)											
1	L2	37	8.6	0.961	88.5	LOS F	32.0	228.3	0.93	1.12	28.2
2	T1	352	1.5	0.961	85.5	LOS F	32.0	228.3	0.93	1.12	24.1
3	R2	852	6.2	1.281	344.3	LOS F	76.8	566.4	1.00	1.61	10.0
Approach		1240	4.9	1.281	263.3	LOS F	76.8	566.4	0.98	1.46	12.3
East: Newbridge Road (E)											
4	L2	347	17.0	0.629	26.8	LOS B	21.7	172.3	0.71	0.77	45.5
5	T1	1296	12.2	0.629	22.0	LOS B	21.9	172.0	0.65	0.61	52.0
Approach		1643	13.2	0.629	23.0	LOS B	21.9	172.3	0.66	0.64	50.6
North: Nuwarra Road (N)											
7	L2	8	0.0	0.986	110.2	LOS F	11.4	80.5	1.00	1.23	22.2
8	T1	154	0.7	1.232	151.8	LOS F	27.2	197.8	1.00	1.36	17.6
9	R2	141	5.2	1.232	298.3	LOS F	27.2	197.8	1.00	1.77	11.9
Approach		303	2.8	1.232	218.9	LOS F	27.2	197.8	1.00	1.54	14.3
West: Newbridge Road (W)											
10	L2	305	2.1	1.138	195.1	LOS F	115.0	866.2	1.00	1.57	16.5
11	T1	2317	10.2	1.211	220.6	LOS F	139.0	1079.3	1.00	1.81	16.0
Approach		2622	9.3	1.211	217.7	LOS F	139.0	1079.3	1.00	1.78	16.0
All Vehicles		5808	9.1	1.281	172.4	LOS F	139.0	1079.3	0.90	1.38	18.4

PHASING SUMMARY



Site: I-11 2030 MIMT AM - Upgrade Option

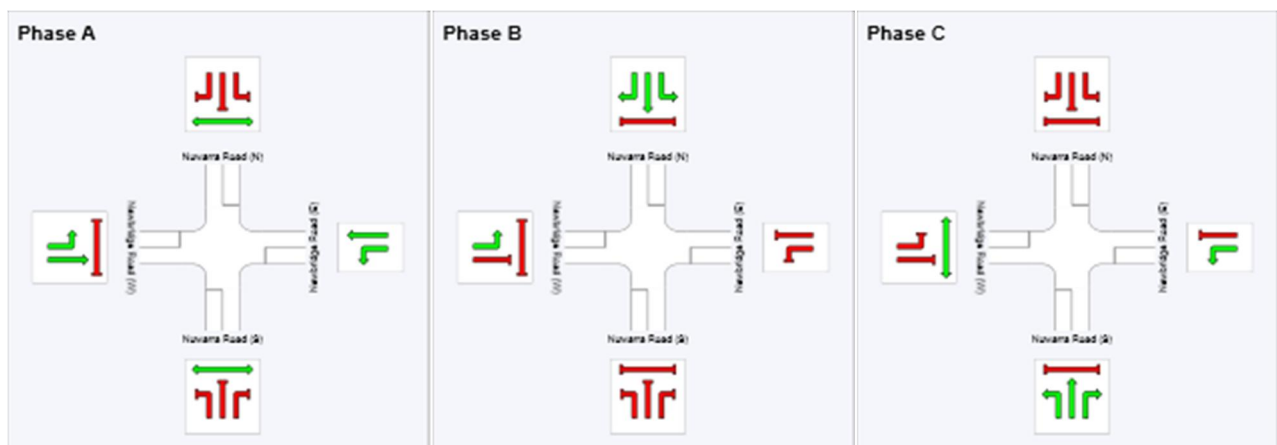
Newbridge Road / Nuwarra Road

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	74	91
Green Time (sec)	68	11	43
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	74	17	49
Phase Split	53 %	12 %	35 %



I-12 Intersection of Newbridge Road and Governor Macquarie Drive

AM BASE

MOVEMENT SUMMARY



Site: I-12 2030 BASE AM

Newbridge Road / Governor Macquarie Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		Total	HV			Vehicles	Distance				
		veh/h	%			v/c	sec				veh
South: Brickmakers Drive (S)											
1	L2	14	0.0	0.909	84.6	LOS F	17.3	122.1	1.00	1.07	24.1
2	T1	207	1.0	0.909	80.3	LOS F	17.3	122.1	1.00	1.07	23.8
3	R2	720	1.2	1.239	301.6	LOS F	55.9	395.6	1.00	1.68	12.6
Approach		941	1.1	1.239	249.7	LOS F	55.9	395.6	1.00	1.53	13.8
East: Newbridge Road (E)											
4	L2	242	3.0	0.178	7.9	LOS A	2.2	15.7	0.19	0.64	58.1
5	T1	1459	11.0	0.425	13.9	LOS A	16.5	126.1	0.55	0.49	59.9
6	R2	686	10.3	1.058	160.0	LOS F	37.1	282.3	1.00	1.17	23.3
Approach		2387	10.0	1.058	55.3	LOS D	37.1	282.3	0.64	0.70	40.9
North: Governor Macquarie Drive (N)											
7	L2	775	9.0	0.740	53.4	LOS D	23.9	180.2	0.96	0.86	40.0
8	T1	136	3.1	0.553	64.3	LOS E	8.9	63.9	0.99	0.80	27.0
9	R2	186	35.0	1.097	187.9	LOS F	22.4	204.1	1.00	1.30	16.5
Approach		1097	12.7	1.097	77.6	LOS F	23.9	204.1	0.97	0.93	32.3
West: Newbridge Road (W)											
10	L2	135	31.3	1.206	252.1	LOS F	154.7	1175.7	1.00	1.85	13.6
11	T1	2987	6.8	1.206	244.6	LOS F	159.4	1180.2	1.00	1.89	17.6
12	R2	5	20.0	0.043	32.9	LOS C	0.2	1.8	0.60	0.67	37.8
Approach		3127	7.8	1.206	244.6	LOS F	159.4	1180.2	1.00	1.89	17.5
All Vehicles		7553	8.4	1.239	161.1	LOS F	159.4	1180.2	0.88	1.33	22.5

PHASING SUMMARY



Site: I-12 2030 BASE AM

Newbridge Road / Governor Macquarie Drive

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	66	88	112
Green Time (sec)	60	16	18	22
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	66	22	24	28
Phase Split	47 %	16 %	17 %	20 %



PM BASE

MOVEMENT SUMMARY



Site: I-12 2030 BASE PM

Newbridge Road / Governor Macquarie Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	11	0.0	0.554	70.4	LOS E	7.2	52.4	1.00	0.79	26.8
2	T1	97	5.4	0.554	66.3	LOS E	7.2	52.4	1.00	0.79	26.5
3	R2	271	0.8	0.641	70.4	LOS E	9.1	64.3	1.00	0.81	32.5
Approach		378	1.9	0.641	69.3	LOS E	9.1	64.3	1.00	0.81	31.0
East: Newbridge Road (E)											
4	L2	689	1.5	0.487	9.5	LOS A	8.3	59.1	0.29	0.70	57.0
5	T1	2751	4.4	0.923	30.0	LOS C	52.5	381.4	0.75	0.77	51.3
6	R2	752	11.2	1.219	292.3	LOS F	58.2	446.2	1.00	1.45	15.2
Approach		4192	5.2	1.219	73.6	LOS F	58.2	446.2	0.72	0.88	36.0
North: Governor Macquarie Drive (N)											
7	L2	586	3.6	0.461	48.7	LOS D	16.2	117.0	0.87	0.82	41.5
8	T1	311	0.7	1.031	128.1	LOS F	30.2	212.7	1.00	1.27	17.8
9	R2	242	19.1	1.147	226.2	LOS F	32.2	262.1	1.00	1.37	14.5
Approach		1139	6.1	1.147	108.1	LOS F	32.2	262.1	0.93	1.06	25.8
West: Newbridge Road (W)											
10	L2	177	16.7	0.815	39.2	LOS C	40.4	303.4	0.88	0.82	41.7
11	T1	2064	6.1	0.815	31.4	LOS C	41.0	302.2	0.86	0.78	50.5
12	R2	4	0.0	0.070	54.4	LOS D	0.2	1.7	0.80	0.69	30.3
Approach		2245	6.9	0.815	32.1	LOS C	41.0	303.4	0.86	0.79	49.8
All Vehicles		7954	5.6	1.219	66.6	LOS E	58.2	446.2	0.80	0.87	36.9

PHASING SUMMARY



Site: I-12 2030 BASE PM

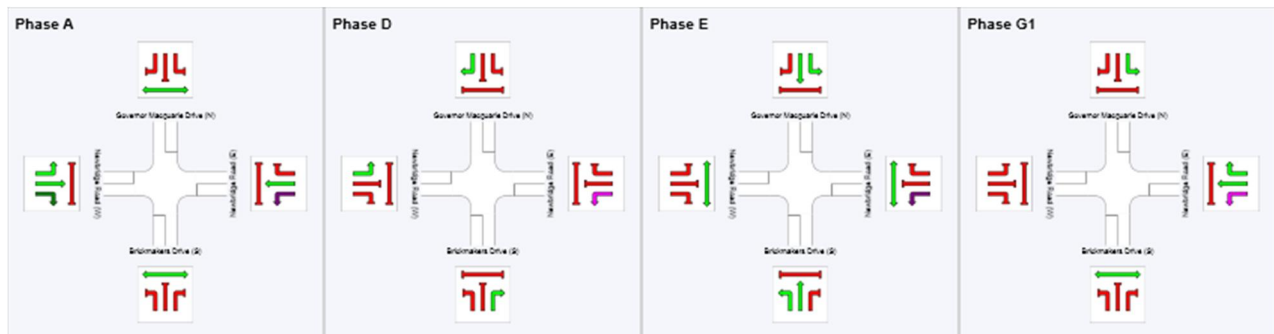
Newbridge Road / Governor Macquarie Drive

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	110
Green Time (sec)	61	16	15	24
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	21	30
Phase Split	48 %	16 %	15 %	21 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-12 2030 MIMT AM

Newbridge Road / Governor Macquarie Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average					
	v	Total	HV				Delay	Service				Vehicles	Distance	Queued	Stop Rate	Speed
		veh/h	%				v/c	sec								per veh
South: Brickmakers Drive (S)																
1	L2	14	0.0	0.909	84.6	LOS F	17.3	122.1	1.00	1.07	24.1					
2	T1	207	1.0	0.909	80.3	LOS F	17.3	122.1	1.00	1.07	23.8					
3	R2	720	1.2	1.239	301.6	LOS F	55.9	395.6	1.00	1.68	12.6					
Approach		941	1.1	1.239	249.7	LOS F	55.9	395.6	1.00	1.53	13.8					
East: Newbridge Road (E)																
4	L2	242	3.0	0.178	7.9	LOS A	2.2	15.7	0.19	0.64	58.1					
5	T1	1476	11.7	0.435	14.0	LOS A	16.8	131.2	0.55	0.50	59.8					
6	R2	683	9.9	1.050	154.1	LOS F	36.1	274.4	1.00	1.16	23.9					
Approach		2402	10.3	1.050	53.2	LOS D	36.1	274.4	0.64	0.70	41.5					
North: Governor Macquarie Drive (N)																
7	L2	765	7.8	0.725	52.8	LOS D	23.4	174.6	0.96	0.86	40.2					
8	T1	135	2.3	0.546	64.2	LOS E	8.8	62.9	0.99	0.79	27.0					
9	R2	178	31.9	1.030	138.6	LOS F	18.2	162.2	1.00	1.18	20.4					
Approach		1078	11.1	1.030	68.4	LOS E	23.4	174.6	0.97	0.90	34.3					
West: Newbridge Road (W)																
10	L2	132	30.0	1.235	277.5	LOS F	164.3	1271.1	1.00	1.94	12.6					
11	T1	3019	7.7	1.235	270.0	LOS F	168.7	1277.9	1.00	1.99	16.4					
12	R2	5	20.0	0.046	33.1	LOS C	0.2	1.8	0.60	0.68	37.8					
Approach		3156	8.7	1.235	269.9	LOS F	168.7	1277.9	1.00	1.98	16.2					
All Vehicles		7577	8.6	1.239	170.1	LOS F	168.7	1277.9	0.88	1.37	21.8					

PHASING SUMMARY



Site: I-12 2030 MIMT AM

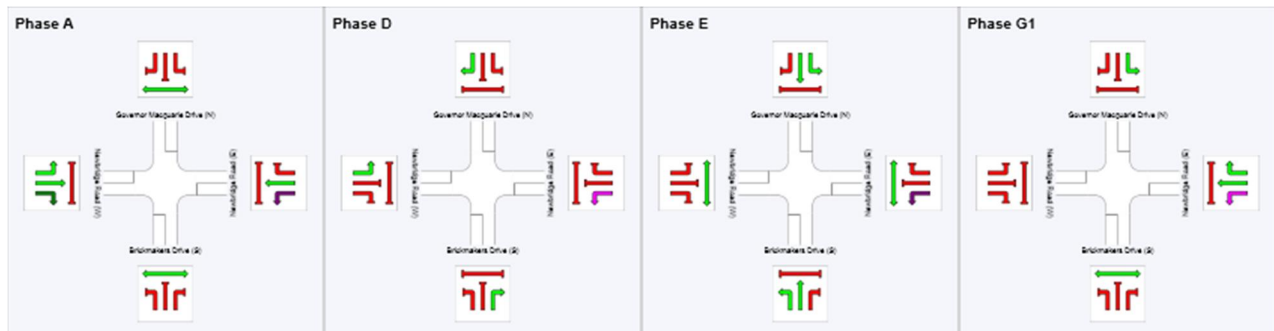
Newbridge Road / Governor Macquarie Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	66	88	112
Green Time (sec)	60	16	18	22
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	66	22	24	28
Phase Split	47 %	16 %	17 %	20 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-12 2030 MIMT PM

Newbridge Road / Governor Macquarie Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	11	0.0	0.554	70.4	LOS E	7.2	52.4	1.00	0.79	26.8
2	T1	97	5.4	0.554	66.3	LOS E	7.2	52.4	1.00	0.79	26.5
3	R2	271	0.8	0.641	70.4	LOS E	9.1	64.3	1.00	0.81	32.5
Approach		378	1.9	0.641	69.3	LOS E	9.1	64.3	1.00	0.81	31.0
East: Newbridge Road (E)											
4	L2	688	1.4	0.483	9.5	LOS A	8.2	58.4	0.29	0.70	57.0
5	T1	2779	5.4	0.942	35.1	LOS C	58.2	432.5	0.77	0.81	49.1
6	R2	744	10.3	1.200	275.1	LOS F	55.7	424.3	1.00	1.41	15.9
Approach		4212	5.6	1.200	73.3	LOS F	58.2	432.5	0.73	0.90	36.1
North: Governor Macquarie Drive (N)											
7	L2	614	7.9	0.497	49.3	LOS D	17.2	128.5	0.88	0.82	41.1
8	T1	314	1.7	1.055	145.8	LOS F	32.6	231.4	1.00	1.33	16.2
9	R2	307	36.2	1.617	644.9	LOS F	71.1	658.0	1.00	2.03	6.0
Approach		1234	13.3	1.617	221.9	LOS F	71.1	658.0	0.94	1.25	15.9
West: Newbridge Road (W)											
10	L2	175	15.8	0.822	39.8	LOS C	41.0	311.7	0.89	0.83	41.4
11	T1	2071	6.2	0.822	31.9	LOS C	41.4	308.9	0.86	0.79	50.3
12	R2	4	0.0	0.071	57.1	LOS E	0.2	1.7	0.82	0.69	29.6
Approach		2250	6.9	0.822	32.5	LOS C	41.4	311.7	0.87	0.79	49.6
All Vehicles		8074	7.0	1.617	84.5	LOS F	71.1	658.0	0.81	0.92	32.9

PHASING SUMMARY



Site: I-12 2030 MIMT PM

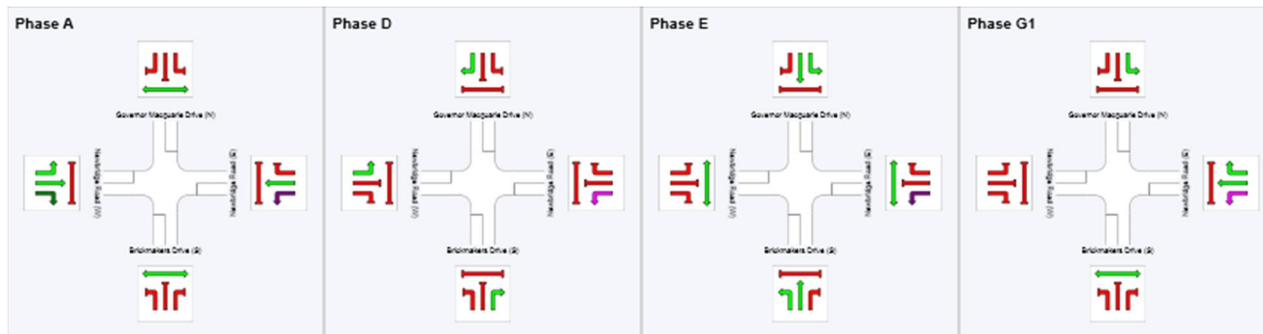
Newbridge Road / Governor Macquarie Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D	E	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	110
Green Time (sec)	61	16	15	24
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	21	30
Phase Split	48 %	16 %	15 %	21 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-12 2030 MIMT AM - Upgrade Option

Newbridge Road / Governor Macquarie Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Brickmakers Drive (S)											
1	L2	14	0.0	0.909	84.6	LOS F	17.3	122.1	1.00	1.07	24.1
2	T1	207	1.0	0.909	80.3	LOS F	17.3	122.1	1.00	1.07	23.8
3	R2	720	1.2	1.102	182.8	LOS F	42.6	301.3	1.00	1.37	18.4
Approach		941	1.1	1.102	158.8	LOS F	42.6	301.3	1.00	1.30	19.2
East: Newbridge Road (E)											
4	L2	242	3.0	0.179	7.9	LOS A	2.1	15.3	0.20	0.64	58.1
5	T1	1476	11.7	0.435	14.0	LOS A	16.8	131.2	0.55	0.50	59.8
6	R2	683	9.9	1.077	173.1	LOS F	38.6	293.2	1.00	1.20	22.1
Approach		2402	10.3	1.077	58.6	LOS E	38.6	293.2	0.64	0.71	39.9
North: Governor Macquarie Drive (N)											
7	L2	765	7.8	0.923	70.5	LOS E	22.7	169.3	1.00	1.08	35.8
8	T1	135	2.3	0.822	73.7	LOS F	12.4	93.2	1.00	0.93	24.9
9	R2	178	31.9	0.822	79.4	LOS F	12.4	93.2	1.00	0.92	28.6
Approach		1078	11.1	0.923	72.3	LOS F	22.7	169.3	1.00	1.03	33.5
West: Newbridge Road (W)											
10	L2	132	30.0	1.215	259.0	LOS F	159.1	1230.7	1.00	1.88	13.3
11	T1	3019	7.7	1.215	251.5	LOS F	163.2	1236.8	1.00	1.92	17.3
12	R2	5	20.0	0.045	32.4	LOS C	0.2	1.8	0.60	0.68	38.1
Approach		3156	8.7	1.215	251.4	LOS F	163.2	1236.8	1.00	1.92	17.1
All Vehicles		7577	8.6	1.215	153.3	LOS F	163.2	1236.8	0.89	1.33	23.3

PHASING SUMMARY



Site: I-12 2030 MIMT AM - Upgrade Option

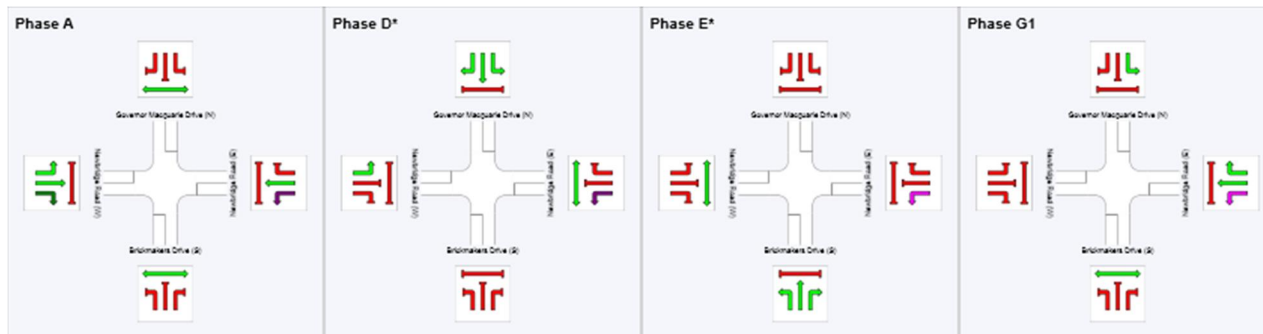
Newbridge Road / Governor Macquarie Drive

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D*	E*	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	67	89	113
Green Time (sec)	61	16	18	21
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	22	24	27
Phase Split	48 %	16 %	17 %	19 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-12 2030 MIMT PM - Upgrade Option 2

Newbridge Road / Governor Macquarie Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%				v/c	sec			
South: Brickmakers Drive (S)											
1	L2	11	0.0	0.689	75.4	LOS F	7.5	54.9	1.00	0.84	25.8
2	T1	97	5.4	0.689	71.3	LOS F	7.5	54.9	1.00	0.84	25.5
3	R2	271	0.8	0.854	82.0	LOS F	10.1	71.4	1.00	0.97	30.1
Approach		378	1.9	0.854	79.1	LOS F	10.1	71.4	1.00	0.93	29.0
East: Newbridge Road (E)											
4	L2	688	1.4	0.487	9.4	LOS A	11.7	82.9	0.35	0.69	57.0
5	T1	2779	5.4	0.981	47.6	LOS D	73.8	547.6	0.77	0.88	44.4
6	R2	744	10.3	1.077	178.7	LOS F	43.4	330.4	1.00	1.21	21.7
Approach		4212	5.6	1.077	64.5	LOS E	73.8	547.6	0.74	0.91	38.2
North: Governor Macquarie Drive (N)											
7	L2	614	7.9	0.485	33.9	LOS C	13.5	100.8	0.87	0.80	46.2
8	T1	314	1.7	1.091	170.3	LOS F	42.0	311.4	1.00	1.46	14.5
9	R2	307	36.2	1.091	298.6	LOS F	42.0	311.4	1.00	1.55	11.6
Approach		1234	13.3	1.091	134.3	LOS F	42.0	381.9	0.93	1.16	22.5
West: Newbridge Road (W)											
10	L2	175	15.8	0.863	46.5	LOS D	45.6	346.4	0.94	0.89	38.9
11	T1	2071	6.2	0.863	38.4	LOS C	46.3	344.9	0.92	0.87	47.6
12	R2	4	0.0	0.072	60.8	LOS E	0.3	1.8	0.84	0.69	28.6
Approach		2250	6.9	0.863	39.1	LOS C	46.3	346.4	0.92	0.87	46.9
All Vehicles		8074	7.0	1.091	68.8	LOS E	73.8	547.6	0.83	0.94	36.3

PHASING SUMMARY



Site: I-12 2030 MIMT PM - Upgrade Option 2

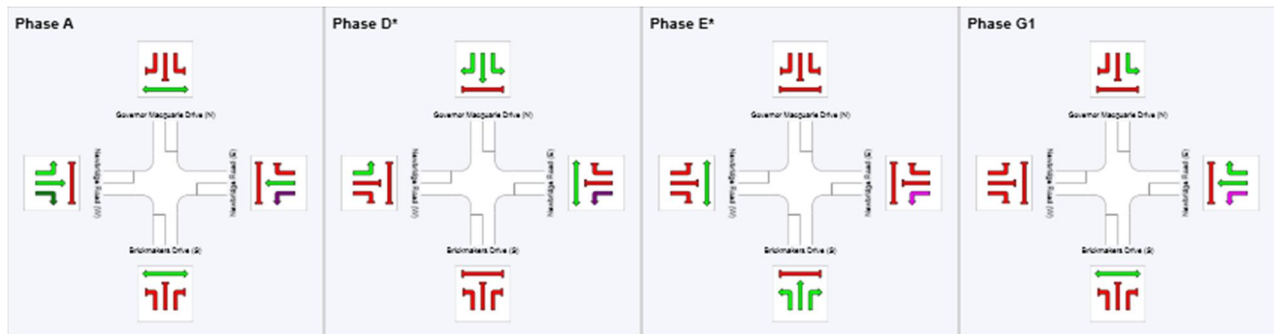
Newbridge Road / Governor Macquarie Drive

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 140 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	D*	E*	G1
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	64	87	105
Green Time (sec)	58	17	12	29
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	64	23	18	35
Phase Split	46 %	16 %	13 %	25 %



I-13 Intersection of Moorebank Avenue and M5 Motorway

AM BASE

MOVEMENT SUMMARY



Site: I-13 2030 BASE AM

Moorebank Avenue / the M5 Motorway

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles veh	Distance m			
		veh/h	%								
South: Moorebank Avenue (S)											
1	L2	285	11.1	0.247	9.2	LOS A	3.3	25.1	0.42	0.66	50.3
2	T1	669	4.2	0.768	32.3	LOS C	12.4	89.9	0.99	0.92	37.9
3	R2	307	2.7	0.428	33.2	LOS C	5.4	38.8	0.90	0.79	36.8
Approach		1262	5.4	0.768	27.3	LOS B	12.4	89.9	0.84	0.83	39.8
East: M5 Motorway on&off ramp (E)											
4	L2	231	7.3	0.231	8.1	LOS A	1.8	13.1	0.39	0.66	51.5
6	R2	237	6.2	0.246	28.8	LOS C	3.4	25.1	0.82	0.76	40.4
Approach		467	6.8	0.246	18.6	LOS B	3.4	25.1	0.61	0.71	44.9
North: Moorebank Avenue (N)											
7	L2	52	49.0	0.051	7.7	LOS A	0.3	3.3	0.28	0.60	51.2
8	T1	192	12.6	0.231	25.6	LOS B	2.9	22.4	0.85	0.67	41.0
9	R2	458	26.2	0.782	38.1	LOS C	10.2	87.3	0.98	0.88	36.2
Approach		701	24.2	0.782	32.4	LOS C	10.2	87.3	0.89	0.80	38.2
West: M5 Motorway on&off ramp (W)											
10	L2	1736	8.2	0.989	9.4	LOS A	0.0	0.0	0.00	0.48	49.5
12	R2	384	4.1	0.394	29.9	LOS C	5.8	42.0	0.86	0.79	38.6
Approach		2120	7.4	0.989	13.1	LOS A	5.8	42.0	0.16	0.54	47.3
All Vehicles		4551	9.4	0.989	20.6	LOS B	12.4	89.9	0.51	0.68	43.3

PHASING SUMMARY



Site: I-13 2030 BASE AM

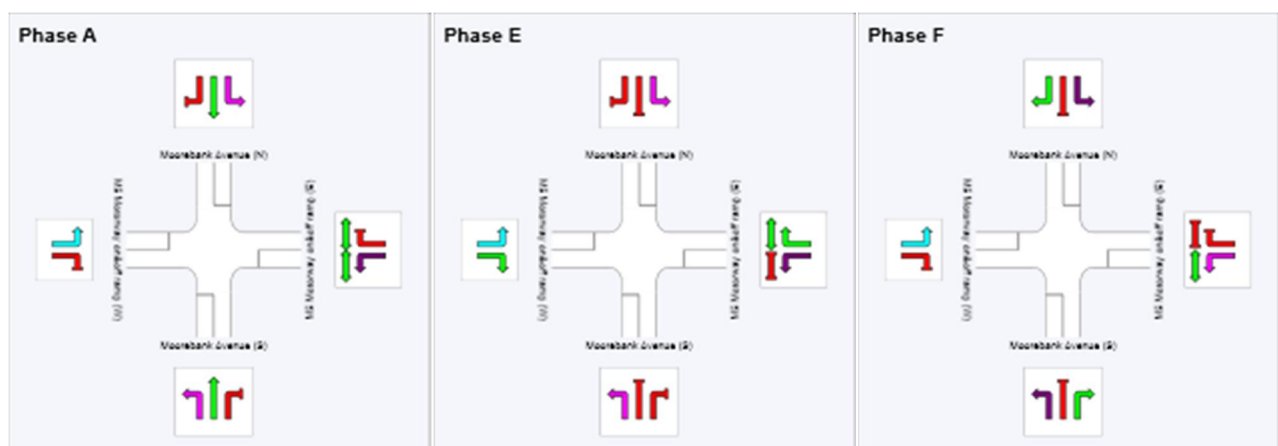
Moorebank Avenue / the M5 Motorway

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	F
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	24	51
Green Time (sec)	17	20	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	24	27	23
Phase Split	32 %	36 %	31 %



PM BASE

MOVEMENT SUMMARY



Site: I-13 2030 BASE PM

Moorebank Avenue / the M5 Motorway

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	306	3.1	0.377	20.6	LOS B	8.3	59.4	0.72	0.77	43.2
2	T1	180	7.6	0.455	44.6	LOS D	4.1	30.3	0.98	0.76	33.2
3	R2	298	2.1	0.247	28.0	LOS B	5.2	37.4	0.73	0.75	39.1
Approach		784	3.8	0.455	28.9	LOS C	8.3	59.4	0.78	0.76	38.9
East: M5 Motorway on&off ramp (E)											
4	L2	439	2.9	0.466	12.3	LOS A	7.2	51.3	0.55	0.74	48.4
6	R2	97	21.7	0.177	42.7	LOS D	2.0	16.2	0.89	0.73	34.9
Approach		536	6.3	0.466	17.8	LOS B	7.2	51.3	0.62	0.74	45.0
North: Moorebank Avenue (N)											
7	L2	140	6.8	0.111	6.9	LOS A	0.9	7.0	0.24	0.61	53.0
8	T1	726	3.6	0.779	39.2	LOS C	16.7	120.6	0.99	0.92	35.1
9	R2	1495	7.4	0.996	79.0	LOS F	50.1	372.9	1.00	1.23	25.9
Approach		2361	6.2	0.996	62.5	LOS E	50.1	372.9	0.95	1.10	29.0
West: M5 Motorway on&off ramp (W)											
10	L2	631	15.2	0.376	5.8	LOS A	0.0	0.0	0.00	0.52	54.3
12	R2	255	3.7	0.414	44.2	LOS D	5.4	38.8	0.94	0.78	33.1
Approach		885	11.9	0.414	16.9	LOS B	5.4	38.8	0.27	0.60	46.4
All Vehicles		4566	6.9	0.996	42.6	LOS D	50.1	372.9	0.75	0.90	34.4

PHASING SUMMARY



Site: I-13 2030 BASE PM

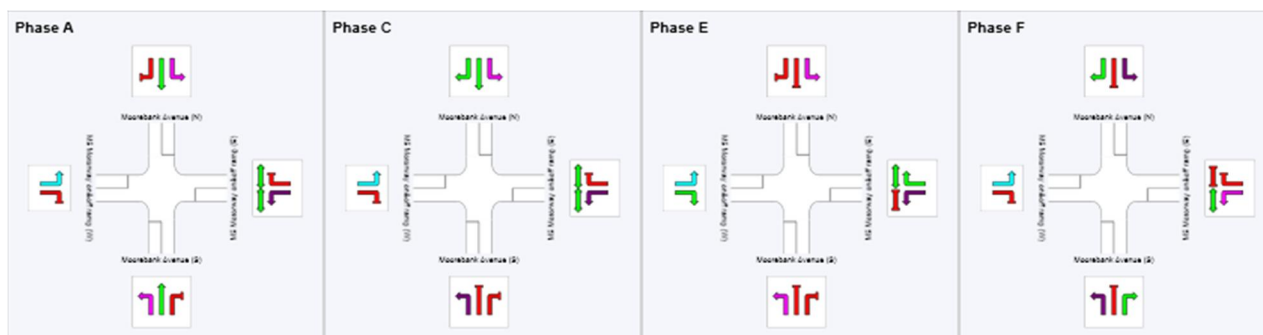
Moorebank Avenue / the M5 Motorway

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	17	30	53
Green Time (sec)	10	6	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	17	13	23	41
Phase Split	18 %	14 %	24 %	44 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-13 2030 MIMT AM

Moorebank Avenue / the M5 Motorway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	427	40.6	0.505	11.1	LOS A	5.5	65.0	0.52	0.73	47.9
2	T1	729	12.0	0.918	47.0	LOS D	17.1	142.0	1.00	1.17	32.4
3	R2	322	7.3	0.476	33.7	LOS C	5.8	45.0	0.91	0.79	36.5
Approach		1478	19.2	0.918	33.7	LOS C	17.1	142.0	0.84	0.96	36.8
East: M5 Motorway on&off ramp (E)											
4	L2	281	19.7	0.388	11.3	LOS A	3.8	34.9	0.59	0.73	48.5
6	R2	237	6.2	0.246	28.8	LOS C	3.4	25.1	0.82	0.76	40.4
Approach		517	13.5	0.388	19.3	LOS B	3.8	34.9	0.70	0.74	44.2
North: Moorebank Avenue (N)											
7	L2	51	47.9	0.050	7.9	LOS A	0.4	3.5	0.29	0.60	51.1
8	T1	231	24.7	0.322	26.4	LOS B	3.6	34.2	0.87	0.70	40.6
9	R2	454	25.5	0.772	37.8	LOS C	10.0	85.2	0.97	0.88	36.3
Approach		735	26.8	0.772	32.2	LOS C	10.0	85.2	0.90	0.80	38.3
West: M5 Motorway on&off ramp (W)											
10	L2	1722	7.5	0.977	8.2	LOS A	0.0	0.0	0.00	0.50	51.2
12	R2	567	29.0	0.774	37.9	LOS C	10.7	113.7	0.98	0.93	34.8
Approach		2289	12.8	0.977	15.5	LOS B	10.7	113.7	0.24	0.60	46.2
All Vehicles		5019	16.8	0.977	23.7	LOS B	17.1	142.0	0.56	0.75	41.7

PHASING SUMMARY



Site: I-13 2030 MIMT AM

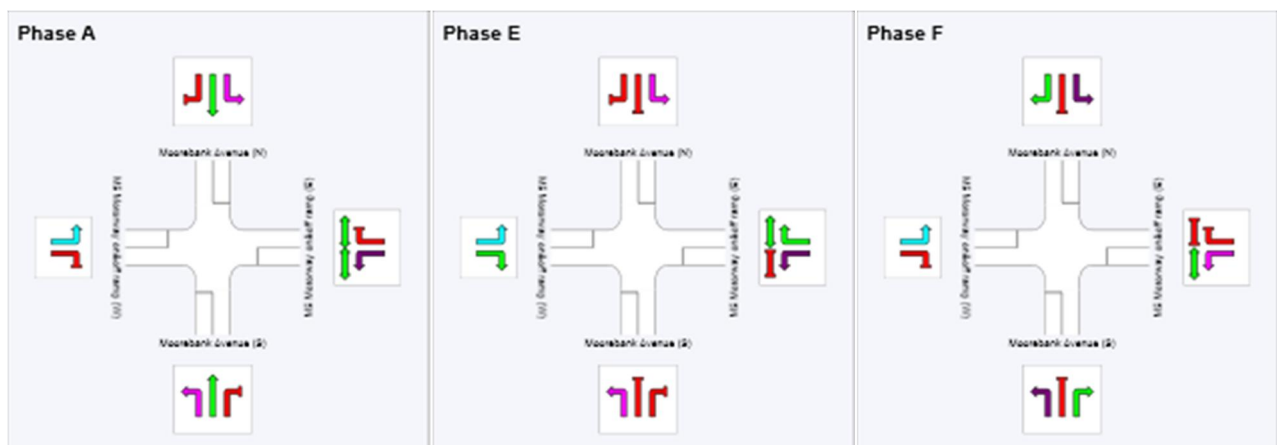
Moorebank Avenue / the M5 Motorway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 74 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	E	F
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	24	51
Green Time (sec)	17	20	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	24	27	23
Phase Split	32 %	36 %	31 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-13 2030 MIMT PM

Moorebank Avenue / the M5 Motorway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
1	L2	515	35.9	0.886	41.6	LOS C	24.6	284.2	0.97	1.00	33.4
2	T1	224	22.9	0.675	47.5	LOS D	5.4	51.4	1.00	0.85	32.2
3	R2	367	17.4	0.366	29.5	LOS C	6.9	62.7	0.77	0.77	38.0
Approach		1107	27.1	0.886	38.8	LOS C	24.6	284.2	0.91	0.90	34.5
East: M5 Motorway on&off ramp (E)											
4	L2	473	9.9	1.030	101.0	LOS F	35.2	285.5	1.00	1.29	21.1
6	R2	97	21.7	0.177	42.7	LOS D	2.0	16.2	0.89	0.73	34.9
Approach		570	11.9	1.030	91.1	LOS F	35.2	285.5	0.98	1.20	22.7
North: Moorebank Avenue (N)											
7	L2	139	6.1	0.116	7.7	LOS A	1.3	9.3	0.29	0.63	52.4
8	T1	777	10.0	0.900	51.5	LOS D	21.3	172.2	1.00	1.10	31.0
9	R2	1488	7.0	0.989	75.1	LOS F	48.5	359.6	1.00	1.21	26.7
Approach		2405	7.9	0.989	63.5	LOS E	48.5	359.6	0.96	1.14	28.7
West: M5 Motorway on&off ramp (W)											
10	L2	620	13.8	0.367	5.8	LOS A	0.0	0.0	0.00	0.52	54.4
12	R2	438	44.0	1.090	159.8	LOS F	21.1	266.4	1.00	1.52	15.3
Approach		1058	26.3	1.090	69.5	LOS E	21.1	266.4	0.41	0.93	27.3
All Vehicles		5139	16.3	1.090	62.5	LOS E	48.5	359.6	0.84	1.05	28.6

PHASING SUMMARY



Site: I-13 2030 MIMT PM

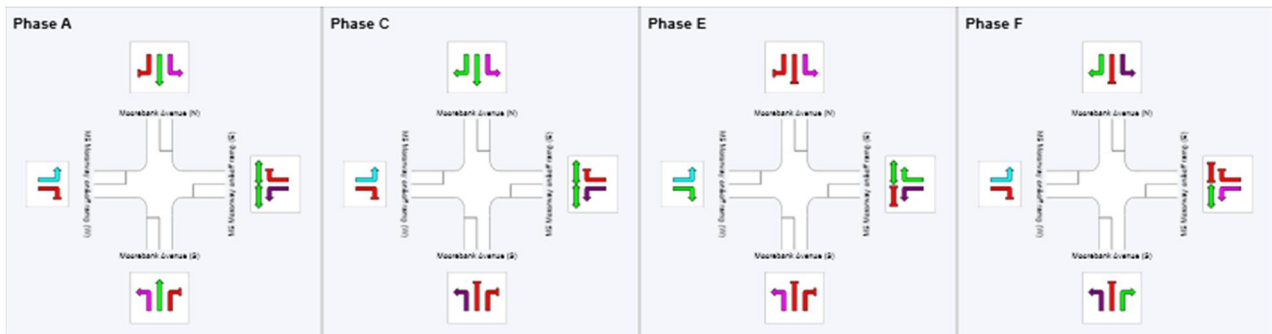
Moorebank Avenue / the M5 Motorway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	17	30	53
Green Time (sec)	10	6	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	17	13	23	41
Phase Split	18 %	14 %	24 %	44 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-13 2030 MIMT PM upgrade

Moorebank Avenue / the M5 Motorway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%				v/c	sec			
South: Moorebank Avenue (S)											
1	L2	515	35.9	0.936	56.1	LOS D	29.6	341.9	1.00	1.10	29.1
2	T1	224	22.9	0.965	73.0	LOS F	6.9	66.0	1.00	1.16	25.8
3	R2	367	17.4	0.366	29.5	LOS C	6.9	62.7	0.77	0.77	38.0
Approach		1107	27.1	0.965	50.7	LOS D	29.6	341.9	0.92	1.00	30.7
East: M5 Motorway on&off ramp (E)											
4	L2	473	9.9	1.030	101.0	LOS F	35.2	285.5	1.00	1.29	21.1
6	R2	97	21.7	0.177	42.7	LOS D	2.0	16.2	0.89	0.73	34.9
Approach		570	11.9	1.030	91.1	LOS F	35.2	285.5	0.98	1.20	22.7
North: Moorebank Avenue (N)											
7	L2	139	6.1	0.116	7.7	LOS A	1.3	9.3	0.29	0.63	52.4
8	T1	777	10.0	0.900	51.5	LOS D	21.3	172.2	1.00	1.10	31.0
9	R2	1488	7.0	0.920	43.0	LOS D	34.3	254.6	1.00	1.06	34.8
Approach		2405	7.9	0.920	43.7	LOS D	34.3	254.6	0.96	1.05	34.2
West: M5 Motorway on&off ramp (W)											
10	L2	620	13.8	0.367	5.8	LOS A	0.0	0.0	0.00	0.52	54.4
12	R2	438	44.0	1.090	159.8	LOS F	21.1	266.4	1.00	1.52	15.3
Approach		1058	26.3	1.090	69.5	LOS E	21.1	266.4	0.41	0.93	27.3
All Vehicles		5139	16.3	1.090	55.8	LOS D	35.2	341.9	0.84	1.03	30.2

PHASING SUMMARY



Site: I-13 2030 MIMT PM upgrade

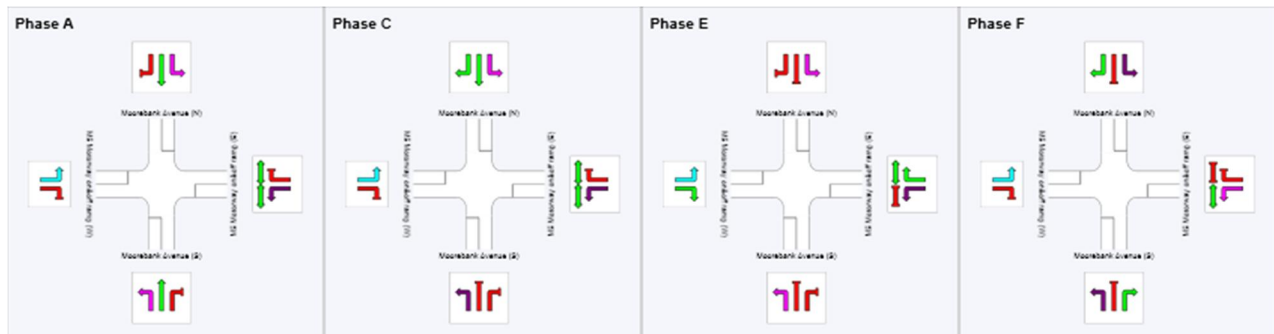
Moorebank Avenue / the M5 Motorway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 94 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	C	E	F
Reference Phase	Yes	No	No	No
Phase Change Time (sec)	0	14	30	53
Green Time (sec)	7	9	16	34
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	14	16	23	41
Phase Split	15 %	17 %	24 %	44 %



I-14 Intersection of M5 Motorway and Hume Highway

AM BASE

MOVEMENT SUMMARY



Site: I-14 2030 BASE AM

M5 Motorway / Hume Highway

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles										
Mov ID	ODMo v	Demand Flows Total	Deg. Satn HV	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec	veh	m		per veh	km/h
South: Hume Highway (S)										
2	T1	4252	4.5	1.025	58.2	151.4	1100.9	1.00	1.20	33.5
3	R2	640	4.1	0.881	42.9	17.4	125.8	1.00	0.90	37.8
Approach		4892	4.5	1.025	56.2	151.4	1100.9	1.00	1.16	34.1
East: M5 Motorway on&off-ramp (E)										
4	L2	340	6.5	0.135	30.6	4.8	35.8	0.60	0.71	41.9
6	R2	1180	3.9	1.214	292.5	64.9	469.4	1.00	1.43	8.6
Approach		1520	4.5	1.214	233.9	64.9	469.4	0.91	1.27	11.3
North: Hume Highway (N)										
7	L2	699	5.9	0.530	12.1	18.8	138.4	0.45	0.71	47.3
8	T1	1213	7.0	0.492	28.5	17.9	132.8	0.62	0.55	43.3
Approach		1912	6.6	0.530	22.5	18.8	138.4	0.56	0.61	44.3
All Vehicles		8323	5.0	1.214	80.9	151.4	1100.9	0.88	1.06	27.4

PHASING SUMMARY



Site: I-14 2030 BASE AM

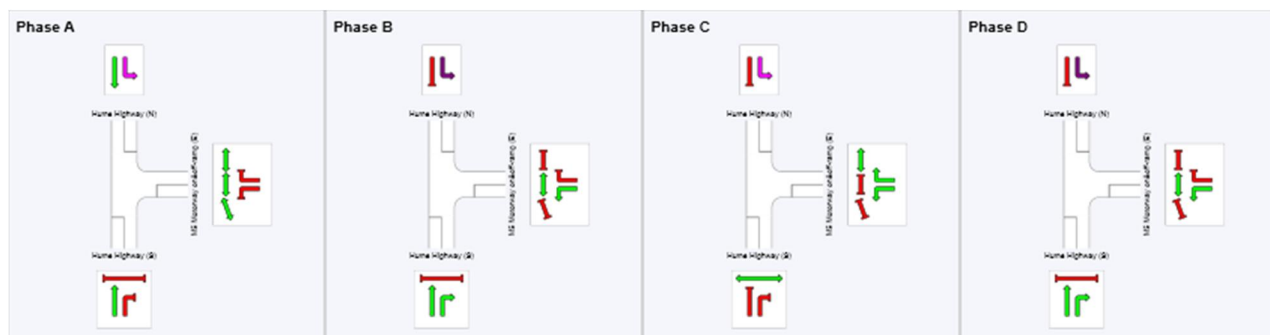
M5 Motorway / Hume Highway

2030 BASE AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM BASE

MOVEMENT SUMMARY



Site: I-14 2030 BASE PM

M5 Motorway / Hume Highway

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	2552	3.8	0.623	2.2	LOS A	7.0	50.8	0.12	0.11	58.3
3	R2	401	1.8	1.023	122.1	LOS F	20.4	145.1	1.00	1.07	22.6
Approach		2953	3.5	1.023	18.5	LOS B	20.4	145.1	0.24	0.24	48.0
East: M5 Motorway on&off-ramp (E)											
4	L2	1465	3.6	1.104	217.9	LOS F	88.9	641.3	1.00	1.28	15.1
6	R2	1175	3.6	1.152	240.1	LOS F	59.4	428.7	1.00	1.33	10.2
Approach		2640	3.6	1.152	227.8	LOS F	88.9	641.3	1.00	1.30	12.9
North: Hume Highway (N)											
7	L2	852	2.1	0.643	13.1	LOS A	26.5	189.0	0.56	0.78	46.8
8	T1	2844	2.7	0.889	23.0	LOS B	56.7	405.9	0.79	0.75	45.7
Approach		3696	2.6	0.889	20.8	LOS B	56.7	405.9	0.74	0.76	45.9
All Vehicles		9288	3.2	1.152	78.9	LOS F	88.9	641.3	0.65	0.75	27.8

PHASING SUMMARY



Site: I-14 2030 BASE PM

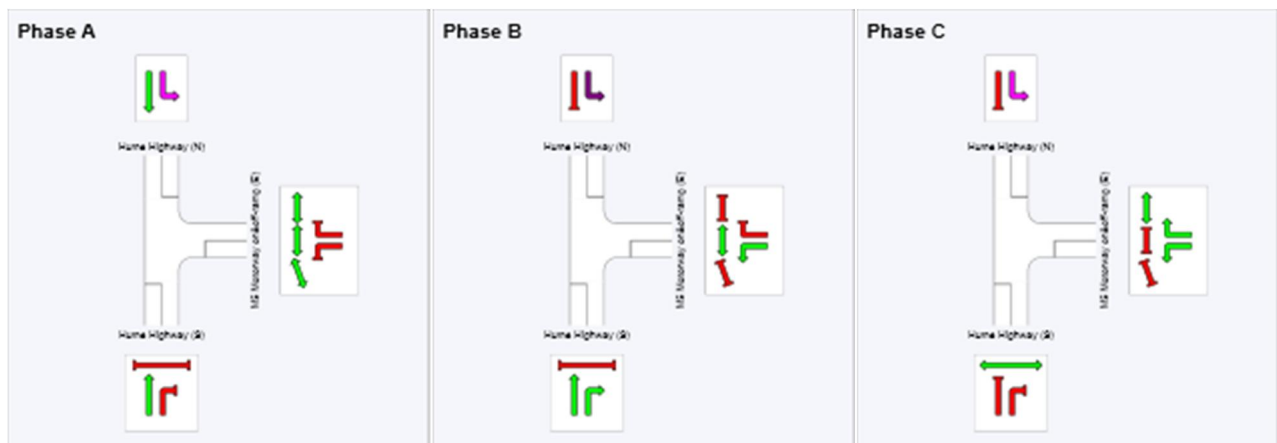
M5 Motorway / Hume Highway

2030 BASE PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	97	121
Green Time (sec)	90	17	31
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	97	24	38
Phase Split	61 %	15 %	24 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-14 2030 MIMT AM

M5 Motorway / Hume Highway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV				Vehicles	Distance			
		veh/h	%				v/c	sec			
South: Hume Highway (S)											
2	T1	4256	4.6	1.027	59.4	LOS E	152.3	1108.5	1.00	1.21	33.2
3	R2	648	4.2	0.893	44.1	LOS D	17.9	129.9	1.00	0.91	37.4
Approach		4904	4.6	1.027	57.4	LOS E	152.3	1108.5	1.00	1.17	33.7
East: M5 Motorway on&off-ramp (E)											
4	L2	338	5.9	0.134	30.5	LOS C	4.8	35.4	0.60	0.71	41.9
6	R2	1220	7.0	1.316	383.2	LOS F	77.6	595.6	1.00	1.58	6.8
Approach		1557	6.8	1.316	306.7	LOS F	77.6	595.6	0.91	1.39	9.0
North: Hume Highway (N)											
7	L2	751	11.2	0.609	13.2	LOS A	22.8	184.5	0.51	0.73	46.3
8	T1	1208	6.7	0.490	28.5	LOS B	17.8	131.7	0.62	0.55	43.3
Approach		1959	8.4	0.609	22.6	LOS B	22.8	184.5	0.58	0.62	44.1
All Vehicles		8421	5.9	1.316	95.4	LOS F	152.3	1108.5	0.89	1.08	24.9

PHASING SUMMARY



Site: I-14 2030 MIMT AM

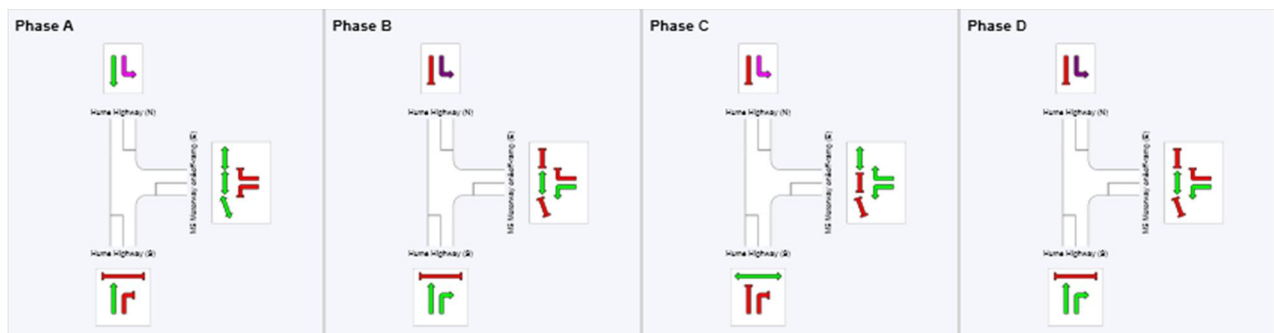
M5 Motorway / Hume Highway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-14 2030 MIMT PM

M5 Motorway / Hume Highway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	2555	3.9	0.624	2.2	LOS A	7.1	51.1	0.12	0.11	58.3
3	R2	401	1.8	1.023	122.1	LOS F	20.4	145.1	1.00	1.07	22.6
Approach		2956	3.6	1.023	18.4	LOS B	20.4	145.1	0.24	0.24	48.0
East: M5 Motorway on&off-ramp (E)											
4	L2	1470	3.4	1.107	220.0	LOS F	89.7	646.2	1.00	1.28	15.0
6	R2	1236	7.6	1.285	357.5	LOS F	77.5	601.9	1.00	1.54	7.2
Approach		2706	5.3	1.285	282.8	LOS F	89.7	646.2	1.00	1.40	10.8
North: Hume Highway (N)											
7	L2	907	8.1	0.742	15.8	LOS B	28.4	225.4	0.65	0.84	44.6
8	T1	2837	2.4	0.870	20.5	LOS B	51.6	368.7	0.78	0.73	47.0
Approach		3744	3.8	0.870	19.4	LOS B	51.6	368.7	0.75	0.76	46.5
All Vehicles		9406	4.2	1.285	94.9	LOS F	89.7	646.2	0.66	0.78	25.0

PHASING SUMMARY



Site: I-14 2030 MIMT PM

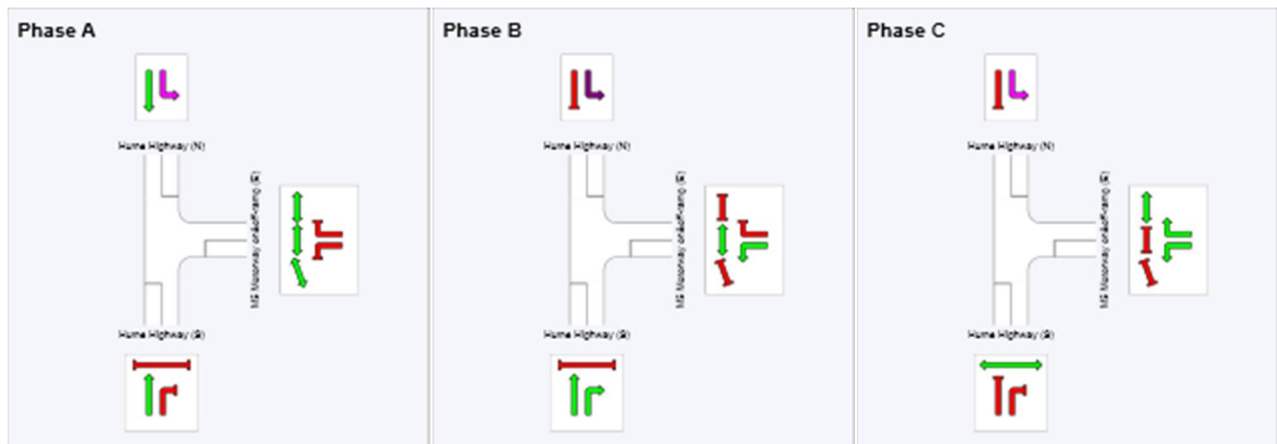
M5 Motorway / Hume Highway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	97	121
Green Time (sec)	90	17	31
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	97	24	38
Phase Split	61 %	15 %	24 %



AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-14 2030 MIMT AM - Upgrade

M5 Motorway / Hume Highway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed
	v	Total	HV			Vehicles	Distance		
		veh/h	%	v/c	sec	veh	m	per veh	km/h
South: Hume Highway (S)									
2	T1	4256	4.6	1.027	59.4	LOS E	152.3	1108.5	1.00
3	R2	648	4.2	0.893	44.1	LOS D	17.9	129.9	1.00
Approach		4904	4.6	1.027	57.4	LOS E	152.3	1108.5	1.00
East: M5 Motorway on&off-ramp (E)									
4	L2	338	5.9	0.134	30.5	LOS C	4.8	35.4	0.60
6	R2	1220	7.0	1.287	355.8	LOS F	73.2	562.0	1.00
Approach		1557	6.8	1.287	285.2	LOS F	73.2	562.0	0.91
North: Hume Highway (N)									
7	L2	751	11.2	0.609	13.2	LOS A	22.8	184.5	0.51
8	T1	1208	6.7	0.490	28.5	LOS B	17.8	131.7	0.62
Approach		1959	8.4	0.609	22.6	LOS B	22.8	184.5	0.58
All Vehicles		8421	5.9	1.287	91.4	LOS F	152.3	1108.5	0.89

PHASING SUMMARY



Site: I-14 2030 MIMT AM - Upgrade

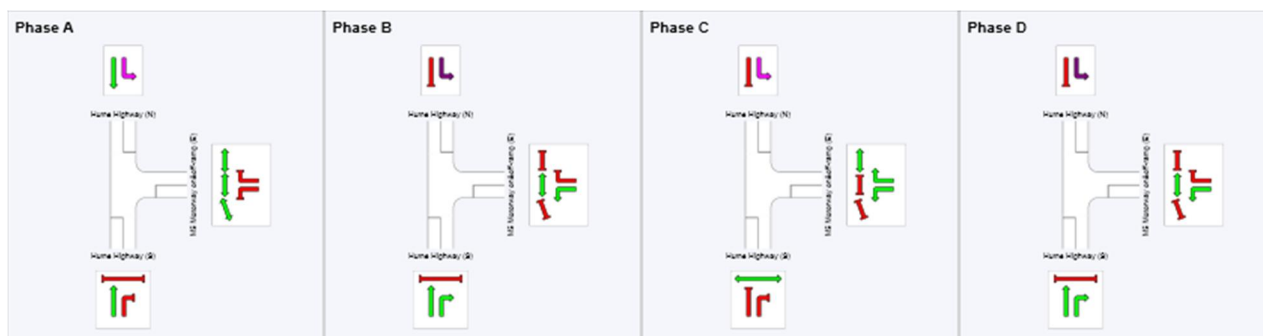
M5 Motorway / Hume Highway

2030 MIMT AM PEAK 7:45 am - 8:45 am

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C	D
Reference Phase	No	No	No	Yes
Phase Change Time (sec)	20	97	123	0
Green Time (sec)	70	19	29	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	3	3	3	3
Phase Time (sec)	77	26	36	20
Phase Split	48 %	16 %	23 %	13 %



PM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-14 2030 MIMT PM - Upgrade

M5 Motorway / Hume Highway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Hume Highway (S)											
2	T1	2555	3.9	0.636	3.1	LOS A	9.7	70.4	0.16	0.15	57.6
3	R2	401	1.8	1.087	170.8	LOS F	24.1	171.2	1.00	1.18	18.1
Approach		2956	3.6	1.087	25.9	LOS B	24.1	171.2	0.28	0.29	44.4
East: M5 Motorway on&off-ramp (E)											
4	L2	1470	3.4	1.092	207.8	LOS F	86.8	625.7	1.00	1.26	15.6
6	R2	1236	7.6	1.156	240.5	LOS F	60.9	472.9	1.00	1.34	10.2
Approach		2706	5.3	1.156	222.7	LOS F	86.8	625.7	1.00	1.30	13.1
North: Hume Highway (N)											
7	L2	907	8.1	0.741	15.4	LOS B	28.8	228.6	0.65	0.84	44.9
8	T1	2837	2.4	0.951	40.7	LOS C	80.8	577.3	0.86	0.90	38.7
Approach		3744	3.8	0.951	34.6	LOS C	80.8	577.3	0.81	0.89	39.6
All Vehicles		9406	4.2	1.156	86.0	LOS F	86.8	625.7	0.70	0.82	26.4

PHASING SUMMARY



Site: I-14 2030 MIMT PM - Upgrade

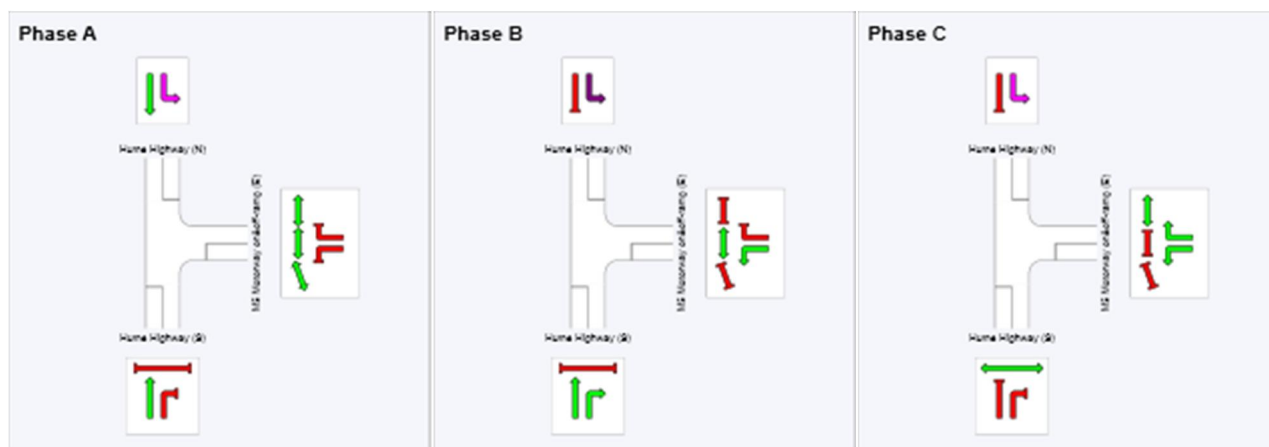
M5 Motorway / Hume Highway

2030 MIMT PM PEAK 4:30 pm - 5:30 pm

Signals - Fixed Time Cycle Time = 159 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	96	119
Green Time (sec)	89	16	33
Yellow Time (sec)	4	4	4
All-Red Time (sec)	3	3	3
Phase Time (sec)	96	23	40
Phase Split	60 %	14 %	25 %



I-15 Intersection of Cambridge Avenue and Canterbury Road

AM BASE

MOVEMENT SUMMARY



Site: I-15 2030 BASE AM

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 BASE AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	449	3.5	0.498	6.1	LOS A	3.1	22.6	0.61	0.70	52.9
2	T1	8	0.0	0.827	8.7	LOS A	12.0	85.2	0.86	0.89	50.3
3	R2	999	2.1	0.827	14.1	LOS A	12.0	85.2	0.86	0.89	50.4
Approach		1457	2.5	0.827	11.6	LOS A	12.0	85.2	0.78	0.83	51.0
East: Cambridge Avenue (E)											
4	L2	307	3.1	0.163	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	81	7.8	0.088	5.5	LOS A	0.5	3.9	0.56	0.59	53.2
6	R2	54	9.8	0.088	10.7	LOS A	0.5	3.9	0.57	0.61	53.5
Approach		442	4.8	0.163	4.7	LOS A	0.5	3.9	0.17	0.48	55.5
North: Railway Parade (N)											
7	L2	319	3.0	0.747	34.1	LOS C	8.6	61.6	1.00	1.32	38.3
8	T1	4	25.0	0.613	29.0	LOS C	4.7	35.7	0.97	1.16	39.6
9	R2	181	8.7	0.613	34.3	LOS C	4.7	35.7	0.97	1.16	37.8
Approach		504	5.2	0.747	34.1	LOS C	8.6	61.6	0.99	1.26	38.1
West: Glenfield Road (W)											
10	L2	395	5.3	1.135	171.6	LOS F	60.0	440.6	1.00	3.16	14.1
11	T1	200	6.8	1.135	172.5	LOS F	60.0	440.6	1.00	3.07	14.3
12	R2	363	5.8	1.135	180.0	LOS F	49.5	364.5	1.00	2.90	14.3
Approach		958	5.8	1.135	175.0	LOS F	60.0	440.6	1.00	3.04	14.2
All Vehicles		3361	4.2	1.135	60.6	LOS E	60.0	440.6	0.80	1.48	29.6

PM BASE

MOVEMENT SUMMARY



Site: I-15 2030 BASE PM

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 BASE PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	338	2.2	0.467	8.7	LOS A	3.0	21.3	0.78	0.92	51.1
2	T1	6	0.0	0.399	7.1	LOS A	2.4	17.2	0.75	0.90	51.3
3	R2	334	1.3	0.399	12.5	LOS A	2.4	17.2	0.75	0.90	51.4
Approach		678	1.7	0.467	10.6	LOS A	3.0	21.3	0.77	0.91	51.3
East: Cambridge Avenue (E)											
4	L2	1111	2.3	0.586	3.6	LOS A	0.0	0.0	0.00	0.43	56.3
5	T1	291	8.0	0.444	7.2	LOS A	3.5	24.8	0.75	0.75	52.0
6	R2	323	1.0	0.444	12.3	LOS A	3.5	24.8	0.80	0.78	52.3
Approach		1724	3.0	0.586	5.8	LOS A	3.5	24.8	0.28	0.55	54.8
North: Railway Parade (N)											
7	L2	125	1.7	0.191	7.9	LOS A	1.0	6.8	0.69	0.80	52.8
8	T1	0	0.0	0.000	0.0	NA	0.0	0.0	0.00	0.00	0.0
9	R2	240	8.3	0.294	12.7	LOS A	1.7	12.6	0.72	0.86	50.0
Approach		365	6.1	0.294	11.0	LOS A	1.7	12.6	0.71	0.84	51.0
West: Glenfield Road (W)											
10	L2	271	4.7	0.425	8.4	LOS A	2.8	19.9	0.75	0.84	51.3
11	T1	54	0.0	0.425	8.3	LOS A	2.8	19.9	0.75	0.84	53.2
12	R2	451	3.7	0.495	13.6	LOS A	3.8	27.5	0.78	0.90	49.5
Approach		775	3.8	0.495	11.4	LOS A	3.8	27.5	0.77	0.87	50.3
All Vehicles		3542	3.2	0.586	8.5	LOS A	3.8	27.5	0.52	0.72	52.7

AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-15 2030 MIMT AM

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 MIMT AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	449	3.5	0.491	5.9	LOS A	3.0	21.7	0.59	0.68	53.0
2	T1	8	0.0	0.828	8.4	LOS A	12.0	85.1	0.85	0.87	50.4
3	R2	1017	2.1	0.828	13.8	LOS A	12.0	85.1	0.85	0.87	50.6
Approach		1475	2.5	0.828	11.4	LOS A	12.0	85.1	0.77	0.81	51.2
East: Cambridge Avenue (E)											
4	L2	307	3.1	0.163	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	81	7.8	0.087	5.4	LOS A	0.5	3.8	0.55	0.58	53.2
6	R2	54	9.8	0.087	10.6	LOS A	0.5	3.8	0.55	0.60	53.5
Approach		442	4.8	0.163	4.7	LOS A	0.5	3.8	0.17	0.48	55.5
North: Railway Parade (N)											
7	L2	316	0.7	0.737	33.6	LOS C	8.4	59.3	1.00	1.31	38.5
8	T1	3	0.0	0.548	25.3	LOS B	4.1	28.8	0.97	1.12	41.3
9	R2	168	1.9	0.548	30.7	LOS C	4.1	28.8	0.97	1.12	39.6
Approach		488	1.1	0.737	32.5	LOS C	8.4	59.3	0.99	1.24	38.9
West: Glenfield Road (W)											
10	L2	399	6.3	1.188	214.8	LOS F	72.6	537.9	1.00	3.57	11.9
11	T1	207	8.1	1.188	215.7	LOS F	72.6	537.9	1.00	3.46	12.0
12	R2	367	6.9	1.188	223.1	LOS F	59.6	442.6	1.00	3.25	12.0
Approach		973	6.9	1.188	218.1	LOS F	72.6	537.9	1.00	3.43	12.0
All Vehicles		3378	3.9	1.188	73.1	LOS F	72.6	537.9	0.79	1.58	26.8

PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-15 2030 MIMT PM

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 MIMT PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	338	2.2	0.471	8.8	LOS A	3.0	21.5	0.78	0.93	51.0
2	T1	6	0.0	0.402	7.2	LOS A	2.5	17.4	0.76	0.91	51.2
3	R2	334	1.3	0.402	12.6	LOS A	2.5	17.4	0.76	0.91	51.4
Approach		678	1.7	0.471	10.6	LOS A	3.0	21.5	0.77	0.92	51.2
East: Cambridge Avenue (E)											
4	L2	1129	2.2	0.596	3.6	LOS A	0.0	0.0	0.00	0.43	56.3
5	T1	294	7.9	0.450	7.2	LOS A	3.5	25.3	0.76	0.75	52.0
6	R2	328	1.0	0.450	12.4	LOS A	3.5	25.3	0.81	0.78	52.3
Approach		1751	2.9	0.596	5.8	LOS A	3.5	25.3	0.28	0.55	54.8
North: Railway Parade (N)											
7	L2	125	1.7	0.191	7.9	LOS A	1.0	6.8	0.69	0.80	52.8
8	T1	1	0.0	0.295	7.2	LOS A	1.7	12.7	0.72	0.86	51.2
9	R2	240	8.3	0.295	12.7	LOS A	1.7	12.7	0.72	0.86	50.0
Approach		366	6.0	0.295	11.0	LOS A	1.7	12.7	0.71	0.84	51.0
West: Glenfield Road (W)											
10	L2	271	4.7	0.428	8.5	LOS A	2.8	20.2	0.75	0.84	51.2
11	T1	54	0.0	0.428	8.3	LOS A	2.8	20.2	0.75	0.84	53.1
12	R2	451	3.7	0.498	13.7	LOS A	3.9	27.8	0.79	0.90	49.4
Approach		775	3.8	0.498	11.5	LOS A	3.9	27.8	0.77	0.88	50.2
All Vehicles		3570	3.2	0.596	8.5	LOS A	3.9	27.8	0.52	0.72	52.7

AM With Moorebank IMT – with upgrade

MOVEMENT SUMMARY



Site: I-15 2030 MIMT AM - Upgrade

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 MIMT AM PEAK 7:45 am - 8:45 am
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	449	3.5	0.633	5.9	LOS A	5.3	37.7	0.63	0.72	51.2
2	T1	8	0.0	0.633	5.8	LOS A	5.3	37.7	0.63	0.72	53.9
3	R2	1017	2.1	0.633	11.5	LOS A	5.3	37.5	0.65	0.76	52.4
Approach		1475	2.5	0.633	9.8	LOS A	5.3	37.7	0.64	0.75	52.1
East: Cambridge Avenue (E)											
4	L2	307	3.1	0.163	3.5	LOS A	0.0	0.0	0.00	0.43	56.5
5	T1	81	7.8	0.090	5.7	LOS A	0.5	4.0	0.58	0.60	53.1
6	R2	54	9.8	0.090	10.9	LOS A	0.5	4.0	0.59	0.62	53.4
Approach		442	4.8	0.163	4.8	LOS A	0.5	4.0	0.18	0.49	55.5
North: Railway Parade (N)											
7	L2	316	0.7	0.516	13.4	LOS A	3.7	26.3	0.90	1.04	48.9
8	T1	3	0.0	0.391	13.6	LOS A	2.2	15.4	0.84	0.99	47.2
9	R2	168	1.9	0.391	19.0	LOS B	2.2	15.4	0.84	0.99	45.9
Approach		488	1.1	0.516	15.3	LOS B	3.7	26.3	0.88	1.03	47.9
West: Glenfield Road (W)											
10	L2	399	6.3	0.722	12.1	LOS A	6.5	47.9	0.91	1.10	48.4
11	T1	207	8.1	0.722	12.6	LOS A	6.5	47.9	0.90	1.11	48.6
12	R2	367	6.9	0.722	19.3	LOS B	5.9	43.7	0.89	1.12	46.0
Approach		973	6.9	0.722	14.9	LOS B	6.5	47.9	0.90	1.11	47.5
All Vehicles		3378	3.9	0.722	11.4	LOS A	6.5	47.9	0.69	0.86	50.5

PM With Moorebank IMT – upgrade

MOVEMENT SUMMARY



Site: I-15 2030 MIMT PM - Upgrade

Canterbury Road / Cambridge Avenue / Glenfield Road
2030 MIMT PM PEAK 4:30 pm - 5:30 pm
Roundabout

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Canterbury Road (S)											
1	L2	338	2.2	0.437	7.7	LOS A	2.8	20.0	0.77	0.89	51.7
2	T1	6	0.0	0.437	7.6	LOS A	2.8	20.0	0.77	0.89	54.3
3	R2	334	1.3	0.437	13.7	LOS A	2.8	20.0	0.77	0.95	50.8
Approach		678	1.7	0.437	10.6	LOS A	2.8	20.0	0.77	0.92	51.2
East: Cambridge Avenue (E)											
4	L2	1129	2.2	0.596	3.6	LOS A	0.0	0.0	0.00	0.43	56.3
5	T1	294	7.9	0.445	7.2	LOS A	3.4	24.7	0.75	0.75	52.0
6	R2	328	1.0	0.445	12.3	LOS A	3.4	24.7	0.80	0.78	52.3
Approach		1751	2.9	0.596	5.8	LOS A	3.4	24.7	0.27	0.55	54.8
North: Railway Parade (N)											
7	L2	125	1.7	0.184	7.7	LOS A	0.9	6.2	0.66	0.78	52.9
8	T1	1	0.0	0.283	7.0	LOS A	1.5	11.5	0.69	0.85	51.3
9	R2	240	8.3	0.283	12.5	LOS A	1.5	11.5	0.69	0.85	50.2
Approach		366	6.0	0.283	10.8	LOS A	1.5	11.5	0.68	0.83	51.1
West: Glenfield Road (W)											
10	L2	271	4.7	0.405	7.5	LOS A	2.3	16.9	0.69	0.80	51.9
11	T1	54	0.0	0.405	7.4	LOS A	2.3	16.9	0.69	0.80	53.9
12	R2	451	3.7	0.471	12.6	LOS A	3.1	22.7	0.72	0.88	50.2
Approach		775	3.8	0.471	10.5	LOS A	3.1	22.7	0.71	0.85	51.0
All Vehicles		3570	3.2	0.596	8.3	LOS A	3.4	24.7	0.50	0.71	52.9

I-0A Intersection of Moorebank Avenue and Anzac Road

AM BASE

MOVEMENT SUMMARY



Site: I-0A 2030 BASE AM

Intersection of Moorebank Avenue and Anzac Road

2030 BASE AM PEAK

Signals - Fixed Time Cycle Time = 103 seconds (User-Given Phase Times)

Movement Performance - Vehicles											
Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	1101	3.4	1.044	107.2	LOS F	104.4	752.0	1.00	1.53	15.4
3	R2	473	3.1	0.773	36.9	LOS C	19.6	140.6	0.96	1.00	36.7
Approach		1574	3.3	1.044	86.1	LOS F	104.4	752.0	0.99	1.37	20.3
East: Anzac Road (E)											
4	L2	258	3.3	0.311	24.5	LOS B	8.1	58.6	0.67	0.76	41.9
6	R2	227	13.4	0.864	61.5	LOS E	12.9	100.8	1.00	0.97	19.6
Approach		485	8.0	0.864	41.9	LOS C	12.9	100.8	0.83	0.86	30.0
North: Moorebank Avenue (N)											
7	L2	383	9.9	0.250	6.1	LOS A	1.4	10.9	0.16	0.59	49.8
8	T1	644	3.3	0.595	23.1	LOS B	18.7	134.4	0.78	0.68	36.9
Approach		1027	5.7	0.595	16.8	LOS B	18.7	134.4	0.55	0.65	40.9
All Vehicles		3086	4.9	1.044	56.1	LOS D	104.4	752.0	0.82	1.05	25.5

PHASING SUMMARY



Site: I-0A 2030 BASE AM

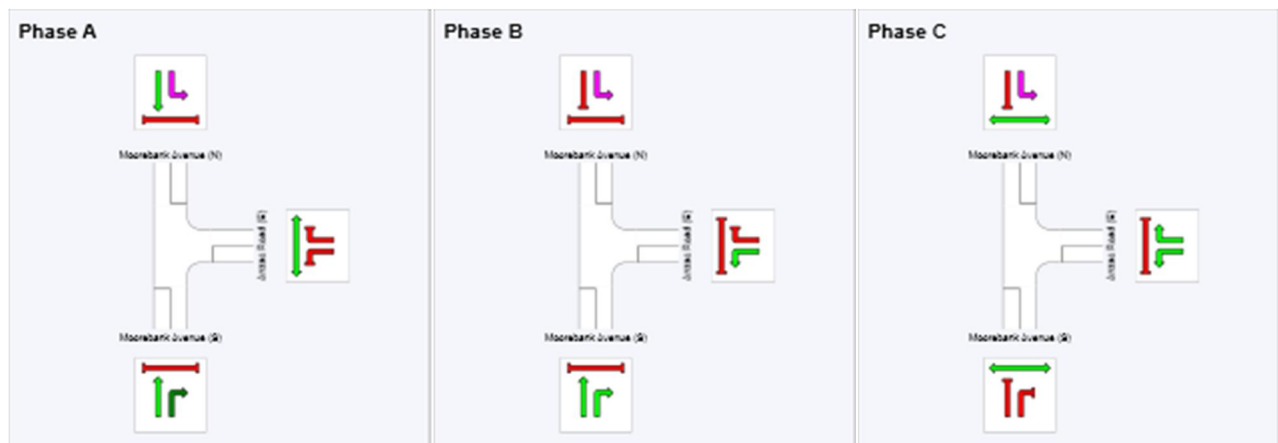
Intersection of Moorebank Avenue and Anzac Road

2030 BASE AM PEAK

Signals - Fixed Time Cycle Time = 103 seconds (User-Given Phase Times)

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	50	78
Green Time (sec)	44	22	19
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	50	28	25
Phase Split	49 %	27 %	24 %



PM BASE

MOVEMENT SUMMARY



Site: I-OA 2030 BASE PM

Intersection of Moorebank Avenue and Anzac Road

2030 BASE PM PEAK

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

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles	Distance			
		veh/h	%				veh	m			
South: Moorebank Avenue (S)											
2	T1	323	3.9	0.271	9.7	LOS A	7.6	55.3	0.48	0.42	47.5
3	R2	208	1.0	1.210	231.3	LOS F	26.9	189.8	1.00	1.38	12.4
Approach		532	2.8	1.210	96.6	LOS F	26.9	189.8	0.68	0.79	19.4
East: Anzac Road (E)											
4	L2	578	2.2	0.848	46.1	LOS D	31.5	224.9	0.99	0.94	33.6
6	R2	391	5.4	0.924	69.1	LOS E	25.7	188.0	1.00	1.02	18.4
Approach		968	3.5	0.924	55.3	LOS D	31.5	224.9	0.99	0.97	27.1
North: Moorebank Avenue (N)											
7	L2	359	3.8	0.223	6.1	LOS A	1.3	9.5	0.15	0.59	50.2
8	T1	1307	2.4	0.997	61.7	LOS E	80.8	577.3	0.91	1.11	22.5
Approach		1666	2.7	0.997	49.8	LOS D	80.8	577.3	0.74	1.00	25.5
All Vehicles		3166	3.0	1.210	59.3	LOS E	80.8	577.3	0.81	0.96	24.6

PHASING SUMMARY



Site: I-OA 2030 BASE PM

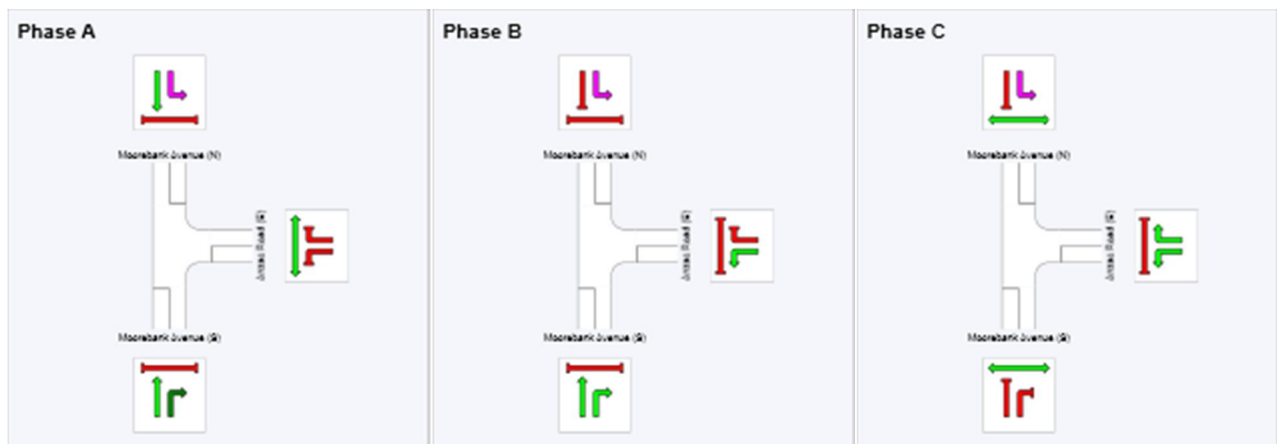
Intersection of Moorebank Avenue and Anzac Road

2030 BASE PM PEAK

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

Phase Timing Results

Phase	A	B	C
Reference Phase	Yes	No	No
Phase Change Time (sec)	0	63	75
Green Time (sec)	57	6	29
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	63	12	35
Phase Split	57 %	11 %	32 %



AM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-OA 2030 MINT AM

Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2030 MINT AM PEAK - Upgrade 1

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

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows	Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average	
		Total	HV	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Speed	
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Moorebank Avenue (S)											
1	L2	44	0.0	0.735	33.0	LOS C	22.8	163.8	0.82	0.77	29.5
2	T1	1083	3.5	0.735	27.2	LOS B	23.0	166.0	0.82	0.75	37.2
3	R2	473	3.1	0.867	54.2	LOS D	27.5	197.6	1.00	0.96	28.3
Approach		1600	3.3	0.867	35.3	LOS C	27.5	197.6	0.88	0.82	33.7
East: Anzac Road (E)											
4	L2	215	3.9	0.231	11.4	LOS A	3.8	27.8	0.42	0.68	47.9
5	T1	13	0.0	0.071	51.8	LOS D	0.6	4.5	0.94	0.66	25.9
6	R2	224	13.6	0.728	63.1	LOS E	6.4	49.8	1.00	0.87	28.0
Approach		452	8.6	0.728	38.2	LOS C	6.4	49.8	0.72	0.77	34.3
North: Moorebank Avenue (N)											
7	L2	383	9.9	0.687	35.2	LOS C	20.7	155.7	0.88	0.83	37.4
8	T1	507	3.1	0.687	33.5	LOS C	20.7	155.7	0.87	0.77	34.0
9	R2	368	60.6	0.884	69.3	LOS E	11.9	176.9	1.00	1.05	19.3
Approach		1259	22.0	0.884	44.5	LOS D	20.7	176.9	0.91	0.87	29.8
West: MIMT Access Road (W)											
10	L2	225	99.1	0.484	27.4	LOS B	3.8	75.7	0.87	0.77	30.7
11	T1	1	0.0	0.007	52.0	LOS D	0.1	0.4	0.94	0.56	26.0
12	R2	1	0.0	0.008	56.3	LOS D	0.1	0.4	0.94	0.59	19.2
Approach		227	98.1	0.484	27.7	LOS B	3.8	75.7	0.87	0.77	30.6
All Vehicles		3538	16.7	0.884	38.5	LOS C	27.5	197.6	0.87	0.83	32.1

PHASING SUMMARY



Site: I-OA 2030 MINT AM

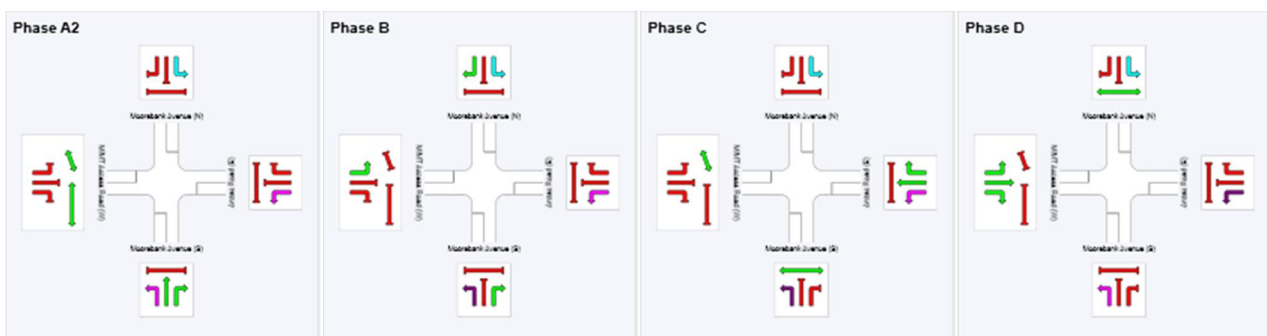
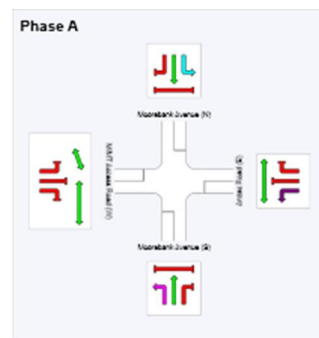
Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2030 MINT AM PEAK - Upgrade 1

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

Phase Timing Results

Phase	A	A2	B	C	D
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	41	50	80	96
Green Time (sec)	35	3	24	10	8
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Split (sec)	41	9	30	16	14
Phase Split	37 %	8 %	27 %	15 %	13 %



PM With Moorebank IMT

MOVEMENT SUMMARY



Site: I-0A 2030 MINT PM

Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2030 MINT PM PEAK - Upgrade 1

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

Movement Performance - Vehicles

Mov ID	ODMo v	Demand Flows		Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
		Total	HV				Vehicles veh	Distance m			
		veh/h	%								
South: Moorebank Avenue (S)											
1	L2	1	0.0	0.229	30.6	LOS C	4.8	34.9	0.60	0.50	31.1
2	T1	323	3.9	0.229	24.1	LOS B	4.9	35.4	0.60	0.50	39.0
3	R2	208	1.0	0.956	82.8	LOS F	14.4	101.7	1.00	1.10	22.2
Approach		533	2.8	0.956	47.1	LOS D	14.4	101.7	0.76	0.73	29.7
East: Anzac Road (E)											
4	L2	568	2.2	0.878	42.5	LOS C	32.8	233.9	1.00	1.02	32.0
5	T1	1	0.0	0.005	48.2	LOS D	0.1	0.4	0.91	0.56	26.9
6	R2	391	5.4	1.000	101.9	LOS F	15.2	111.2	1.00	1.20	21.3
Approach		960	3.5	1.000	66.6	LOS E	32.8	233.9	1.00	1.09	26.2
North: Moorebank Avenue (N)											
7	L2	353	3.9	0.927	42.6	LOS D	53.6	385.3	0.95	1.01	35.5
8	T1	1264	2.6	0.927	37.2	LOS C	53.6	385.3	0.84	0.92	32.4
9	R2	289	93.5	0.825	62.8	LOS E	8.8	168.3	0.99	1.00	19.9
Approach		1906	16.6	0.927	42.1	LOS C	53.6	385.3	0.88	0.95	30.7
West: MIMT Access Road (W)											
10	L2	423	63.9	0.704	29.3	LOS C	7.7	117.4	0.94	0.86	30.6
11	T1	16	0.0	0.111	53.7	LOS D	0.8	5.8	0.96	0.67	25.5
12	R2	35	0.0	0.257	59.1	LOS E	1.9	13.0	0.98	0.72	18.6
Approach		474	57.1	0.704	32.3	LOS C	7.7	117.4	0.94	0.84	29.3
All Vehicles		3873	16.4	1.000	47.7	LOS D	53.6	385.3	0.90	0.94	29.0

PHASING SUMMARY



Site: I-0A 2030 MINT PM

Intersection of Moorebank Avenue, Anzac Road and MIMT Access Road

2030 MINT PM PEAK - Upgrade 1

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

Phase Timing Results

Phase	A	A3	B	C	D
Reference Phase	Yes	No	No	No	No
Phase Change Time (sec)	0	47	59	78	96
Green Time (sec)	41	6	13	12	8
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	47	12	19	18	14
Phase Split	43 %	11 %	17 %	16 %	13 %

