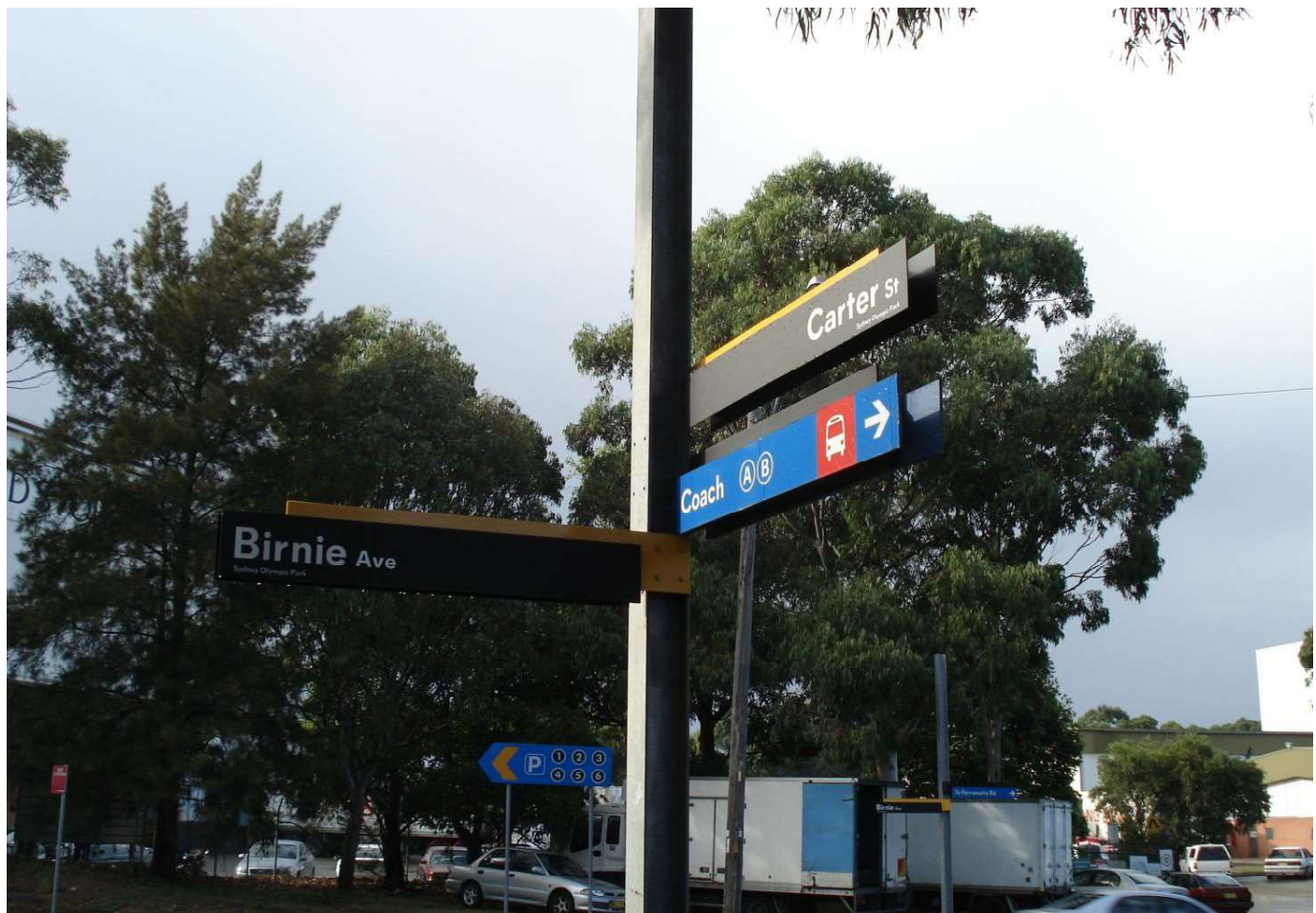


Appendix B

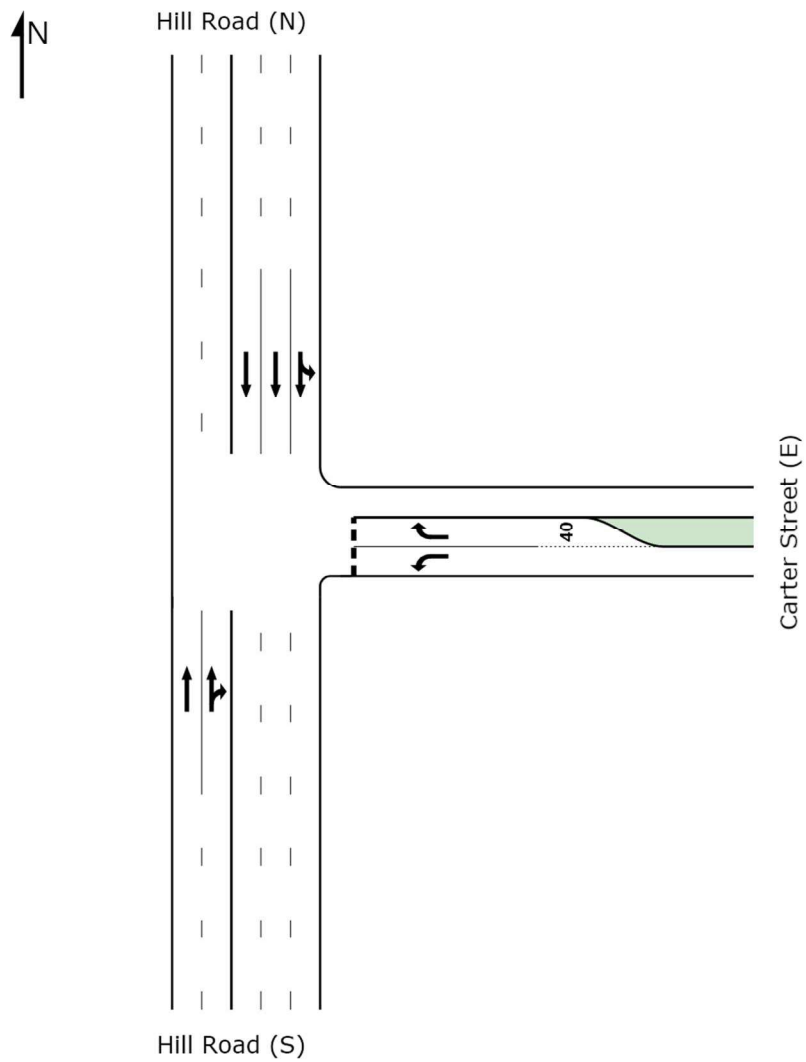
2013 SIDRA intersection model results



Year 2013 – Existing condition

I-01 Hill Road / Carter Street Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct
I-01 Hill Road / Carter Street
2013 Existing AM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Hill Road (S)											
2	T	784	8.2	0.424	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R	513	6.0	0.796	21.0	LOS B	7.7	56.5	0.86	1.32	38.1
Approach		1297	7.3	0.796	8.3	NA	7.7	56.5	0.34	0.52	48.9
East: Carter Street (E)											
4	L	218	28.5	0.572	23.0	LOS B	3.4	30.0	0.78	1.11	37.4
6	R	11	40.0	0.845	552.8	LOS F	2.6	24.0	1.00	1.09	3.7
Approach		228	29.0	0.845	47.4	LOS D	3.4	30.0	0.79	1.10	26.3
North: Hill Road (N)											
7	L	92	4.6	0.160	8.4	LOS A	0.0	0.0	0.00	0.91	49.0
8	T	800	6.7	0.160	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		892	6.5	0.160	0.9	NA	0.0	0.0	0.00	0.09	58.6
All Vehicles		2417	9.1	0.845	9.3	NA	7.7	56.5	0.26	0.42	48.0

MOVEMENT SUMMARY

Site: EX PM

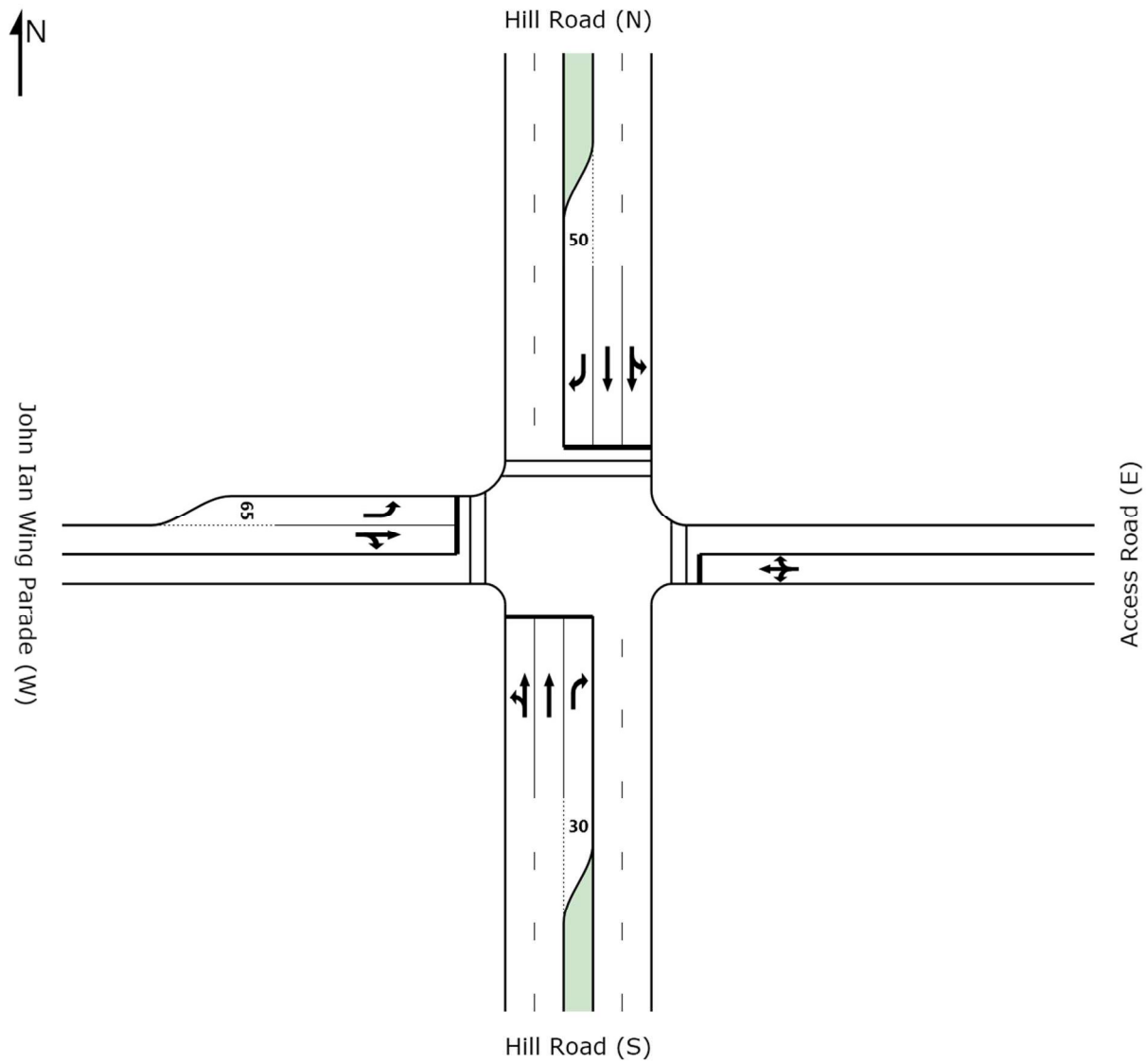
Carter Street Precinct
I-01 Hill Road / Carter Street
2013 Existing PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Hill Road (S)											
2	T	809	8.3	0.438	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R	242	10.0	0.508	18.8	LOS B	2.4	18.4	0.79	1.04	39.8
Approach		1052	8.7	0.508	4.3	NA	2.4	18.4	0.18	0.24	53.7
East: Carter Street (E)											
4	L	438	5.5	1.077	116.4	LOS F	34.4	252.2	1.00	3.13	14.3
6	R	12	9.1	0.289	110.3	LOS F	0.8	6.2	0.97	1.01	14.9
Approach		449	5.6	1.077	116.3	LOS F	34.4	252.2	1.00	3.07	14.3
North: Hill Road (N)											
7	L	29	10.7	0.197	8.6	LOS A	0.0	0.0	0.00	1.06	49.0
8	T	1092	3.9	0.197	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1121	4.0	0.197	0.2	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		2622	6.2	1.077	21.8	NA	34.4	252.2	0.24	0.63	37.6

I-02 Hill Road / John Ian Wing Parade Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2013 Existing AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	140	1.5	0.611	27.3	LOS B	10.3	76.2	0.89	0.86	34.6
2	T	617	10.4	0.611	19.8	LOS B	10.3	78.1	0.89	0.76	36.4
3	R	6	16.7	0.032	43.7	LOS D	0.1	1.1	0.69	0.77	33.6
Approach		763	8.8	0.611	21.3	LOS B	10.3	78.1	0.89	0.78	36.1
East: Access Road (E)											
4	L	1	0.0	0.007	6.4	LOS A	0.0	0.2	0.51	0.48	16.2
5	T	1	0.0	0.007	5.0	LOS A	0.0	0.2	0.51	0.34	13.3
6	R	1	0.0	0.007	6.4	LOS A	0.0	0.2	0.51	0.48	16.2
Approach		3	0.0	0.007	6.0	LOS A	0.0	0.2	0.51	0.43	15.2
North: Hill Road (N)											
7	L	1	0.0	0.318	33.0	LOS C	3.7	27.5	0.40	0.98	39.7
8	T	611	9.1	0.318	7.0	LOS A	3.8	28.6	0.41	0.35	48.7
9	R	38	11.1	0.113	19.2	LOS B	0.6	4.3	0.70	0.71	38.3
Approach		649	9.2	0.318	7.7	LOS A	3.8	28.6	0.42	0.37	48.0
West: John Ian Wing Parade (W)											
10	L	101	7.3	0.175	17.6	LOS B	1.8	13.2	0.58	0.73	36.4
11	T	1	0.0	0.612	40.0	LOS C	8.0	56.0	0.91	0.86	27.2
12	R	281	0.0	0.612	29.3	LOS C	8.0	56.0	0.91	0.83	30.3
Approach		383	1.9	0.612	26.2	LOS B	8.0	56.0	0.83	0.80	31.7
All Vehicles		1799	7.5	0.612	17.4	LOS B	10.3	78.1	0.71	0.64	38.4

Site: EX AM

PHASING SUMMARY

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2013 Existing AM

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

Phase times determined by the program

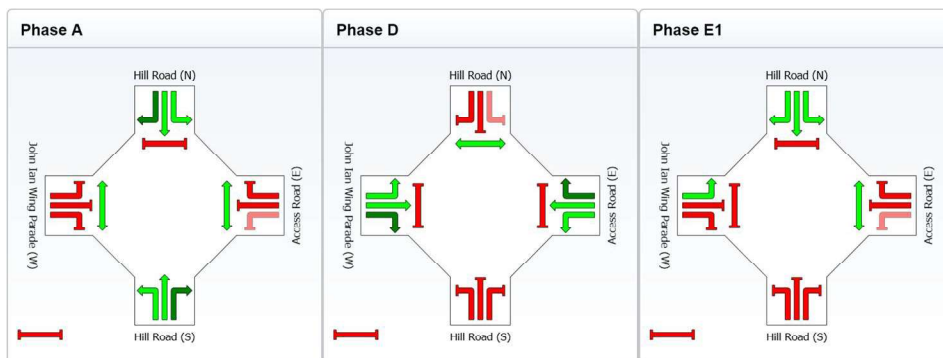
Sequence: TCS3413 AM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

Phase Timing Results

Phase	A	D	E1
Green Time (sec)	22	19	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	28	25	12
Phase Split	43 %	38 %	18 %



MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2013 Existing PM

Signals - Fixed Time Cycle Time = 80 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Hill Road (S)											
1	L	241	0.0	0.493	23.6	LOS B	11.5	83.4	0.75	0.85	36.1
2	T	596	10.6	0.493	16.2	LOS B	11.5	86.7	0.75	0.65	39.1
3	R	1	0.0	0.005	38.8	LOS C	0.0	0.2	0.55	0.77	35.8
Approach		838	7.5	0.493	18.3	LOS B	11.5	86.7	0.74	0.71	38.2
East: Access Road (E)											
4	L	8	0.0	0.042	3.4	LOS A	0.1	0.6	0.31	0.46	17.8
5	T	1	0.0	0.042	2.0	LOS A	0.1	0.6	0.31	0.23	15.1
6	R	3	0.0	0.042	3.5	LOS A	0.1	0.6	0.31	0.46	17.8
Approach		13	0.0	0.042	3.3	LOS A	0.1	0.6	0.31	0.44	17.6
North: Hill Road (N)											
7	L	1	0.0	0.398	30.6	LOS C	4.6	33.4	0.28	1.01	41.9
8	T	922	4.8	0.398	4.5	LOS A	4.9	35.5	0.28	0.25	52.1
9	R	159	4.0	0.424	17.3	LOS B	2.4	17.7	0.63	0.75	39.6
Approach		1082	4.7	0.424	6.4	LOS A	4.9	35.5	0.33	0.33	49.8
West: John Ian Wing Parade (W)											
10	L	48	10.9	0.111	24.1	LOS B	1.2	9.1	0.66	0.72	32.9
11	T	1	0.0	0.491	47.2	LOS D	6.3	44.1	0.91	0.84	24.6
12	R	179	0.6	0.491	36.5	LOS C	6.3	44.1	0.91	0.81	27.6
Approach		228	2.8	0.491	33.9	LOS C	6.3	44.1	0.86	0.79	28.5
All Vehicles		2161	5.6	0.493	13.9	LOS A	11.5	86.7	0.55	0.52	41.5

Site: EX PM

PHASING SUMMARY

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2013 Existing PM

Signals - Fixed Time Cycle Time = 80 seconds (User-Given Cycle Time)

Phase times determined by the program

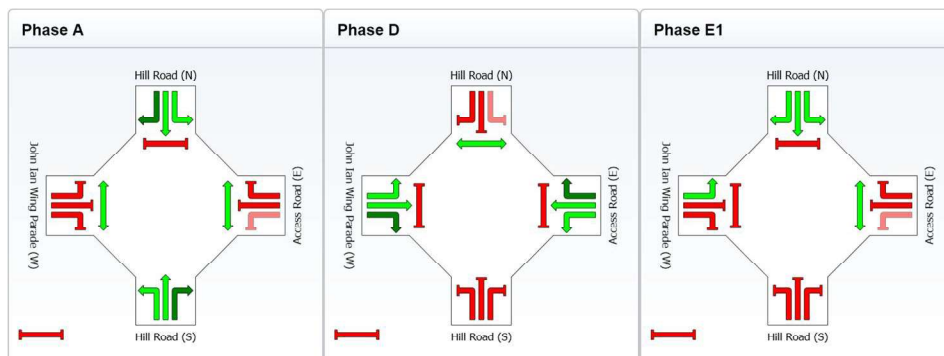
Sequence: TCS3413 PM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

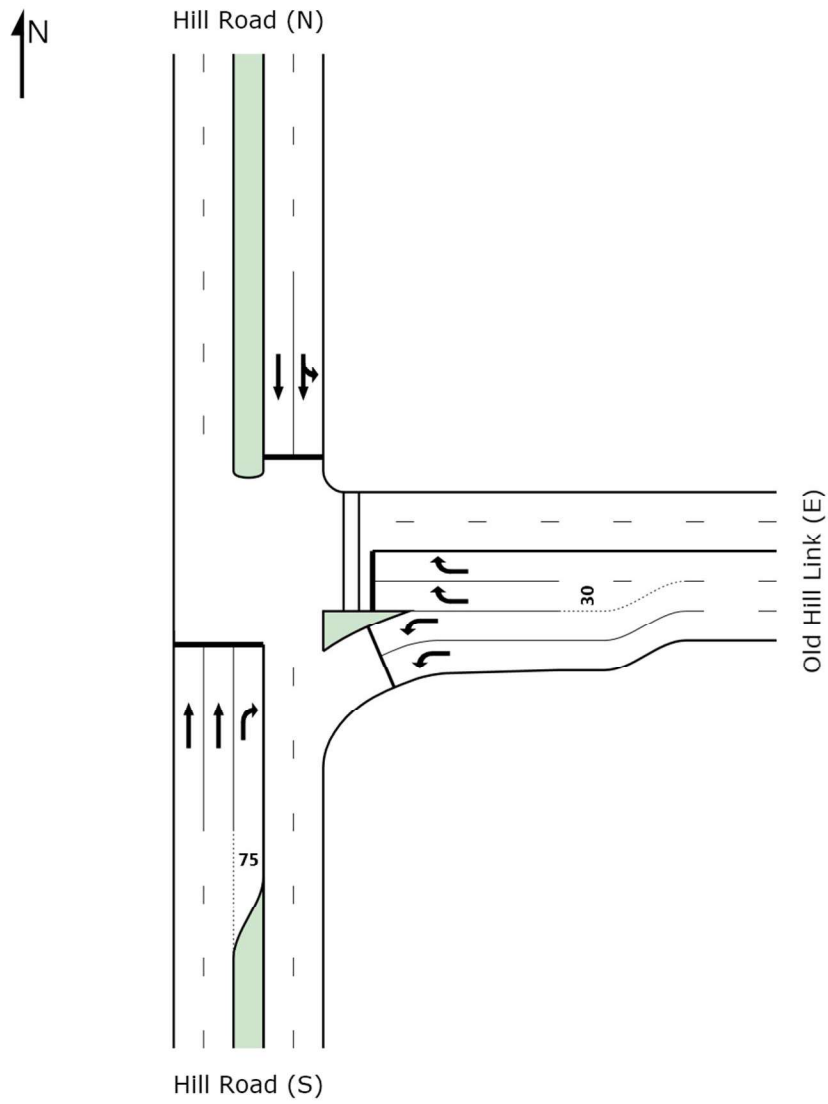
Phase Timing Results

Phase	A	D	E1
Green Time (sec)	37	19	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	43	25	12
Phase Split	54 %	31 %	15 %



I-03 Hill Road / Old Hill Link Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link

2013 Existing AM

Signals - Fixed Time Cycle Time = 50 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Hill Road (S)											
2	T	482	10.7	0.207	1.9	LOS A	1.1	8.0	0.19	0.16	56.0
3	R	248	6.8	0.458	15.9	LOS B	3.4	24.9	0.66	0.77	41.9
Approach		731	9.4	0.458	6.7	LOS A	3.4	24.9	0.35	0.37	50.3
East: Old Hill Link (E)											
4	L	76	16.7	0.057	17.0	LOS B	0.5	3.6	0.50	0.67	25.8
6	R	42	15.0	0.105	31.2	LOS C	0.5	3.7	0.88	0.70	16.6
Approach		118	16.1	0.105	22.1	LOS B	0.5	3.7	0.64	0.68	21.7
North: Hill Road (N)											
7	L	42	7.5	0.451	21.1	LOS B	5.0	37.2	0.70	0.89	39.9
8	T	562	6.7	0.451	12.7	LOS A	5.1	37.5	0.70	0.59	42.2
Approach		604	6.8	0.451	13.3	LOS A	5.1	37.5	0.70	0.62	42.0
All Vehicles		1453	8.8	0.458	10.7	LOS A	5.1	37.5	0.52	0.50	44.7

PHASING SUMMARY

Site: EX AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link

2013 Existing AM

Signals - Fixed Time Cycle Time = 50 seconds (User-Given Cycle Time)

Phase times determined by the program

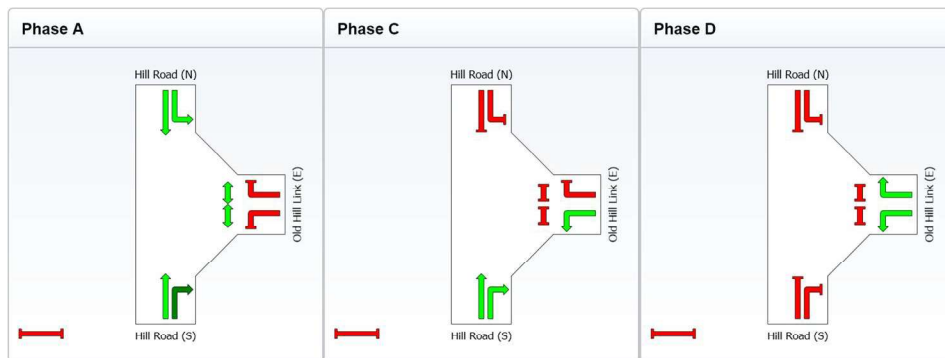
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

Phase	A	C	D
Green Time (sec)	18	8	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	24	14	12
Phase Split	48 %	28 %	24 %



MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link

2013 Existing PM

Signals - Fixed Time Cycle Time = 55 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	500	10.5	0.204	1.3	LOS A	0.8	6.5	0.13	0.11	57.2
3	R	117	5.4	0.239	13.7	LOS A	1.2	8.8	0.47	0.72	43.7
Approach		617	9.6	0.239	3.7	LOS A	1.2	8.8	0.20	0.23	54.0
East: Old Hill Link (E)											
4	L	399	2.9	0.335	22.6	LOS B	3.6	26.1	0.70	0.76	21.4
6	R	132	2.4	0.330	34.5	LOS C	1.7	12.2	0.93	0.75	15.3
Approach		531	2.8	0.335	25.5	LOS B	3.6	26.1	0.76	0.75	19.6
North: Hill Road (N)											
7	L	38	5.6	0.393	17.4	LOS B	4.7	34.6	0.55	0.93	42.3
8	T	625	7.2	0.393	9.1	LOS A	4.7	34.8	0.55	0.47	45.9
Approach		663	7.1	0.393	9.5	LOS A	4.7	34.8	0.55	0.50	45.7
All Vehicles		1811	6.7	0.393	12.2	LOS A	4.7	34.8	0.49	0.48	41.6

PHASING SUMMARY

Site: EX PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link

2013 Existing PM

Signals - Fixed Time Cycle Time = 55 seconds (User-Given Cycle Time)

Phase times determined by the program

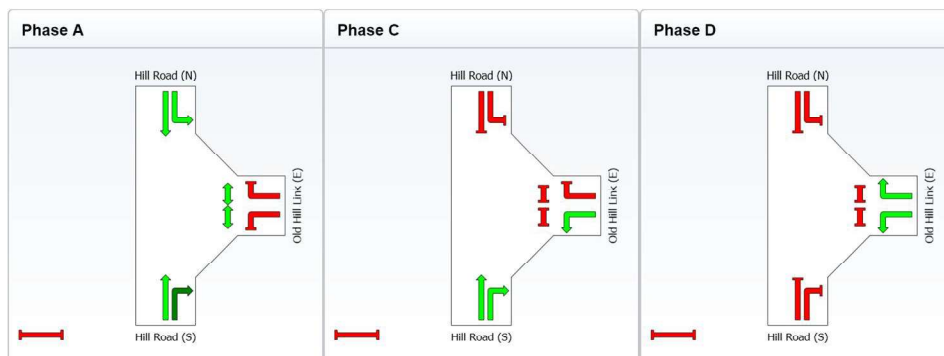
Sequence: TCS3402 PM

Input Sequence: A, C, D

Output Sequence: A, C, D

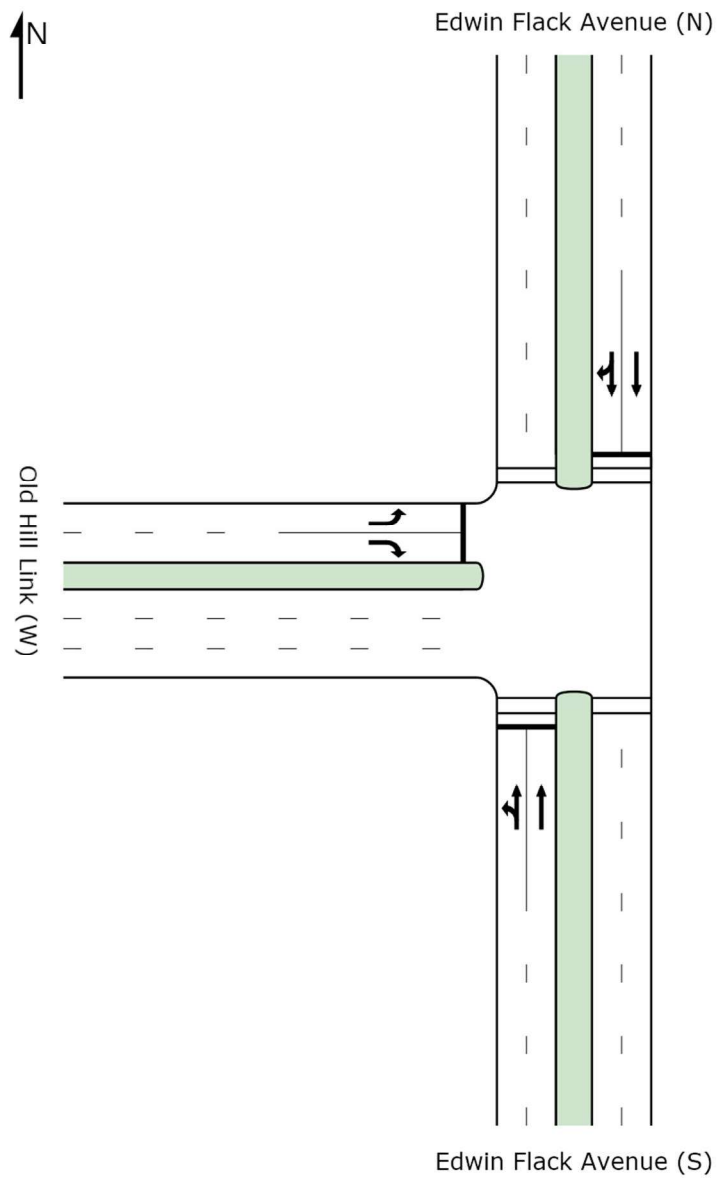
Phase Timing Results

Phase	A	C	D
Green Time (sec)	25	6	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	31	12	12
Phase Split	56 %	22 %	22 %



I-04 Edwin Flack Avenue / Old Hill Link Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2013 Existing AM

Signals - Fixed Time Cycle Time = 50 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Edwin Flack Avenue (S)											
1	L	104	12.1	0.203	23.2	LOS B	2.0	15.1	0.78	0.76	36.9
2	T	143	10.3	0.103	0.9	LOS A	0.5	3.6	0.27	0.15	55.0
Approach		247	11.1	0.203	10.3	LOS A	2.0	15.1	0.49	0.41	45.6
North: Edwin Flack Avenue (N)											
8	T	324	1.6	0.297	14.8	LOS B	3.0	20.9	0.72	0.58	40.6
9	R	9	22.2	0.297	23.5	LOS B	2.8	19.9	0.72	0.86	38.7
Approach		334	2.2	0.297	15.0	LOS B	3.0	20.9	0.72	0.59	40.5
West: Old Hill Link (W)											
10	L	40	7.9	0.049	15.1	LOS B	0.4	2.9	0.42	0.70	42.6
12	R	244	4.7	0.296	15.6	LOS B	2.9	20.9	0.50	0.73	42.2
Approach		284	5.2	0.296	15.6	LOS B	2.9	20.9	0.49	0.73	42.2
All Vehicles		865	5.7	0.297	13.8	LOS A	3.0	20.9	0.58	0.58	42.4

PHASING SUMMARY

Site: EX AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2013 Existing AM

Signals - Fixed Time Cycle Time = 50 seconds (User-Given Cycle Time)

Phase times determined by the program

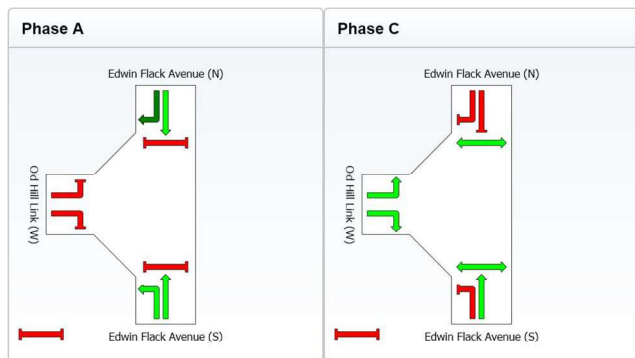
Sequence: TCS3403 AM

Input Sequence: A, C

Output Sequence: A, C

Phase Timing Results

Phase	A	C
Green Time (sec)	15	23
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	21	29
Phase Split	42 %	58 %



MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2013 Existing PM

Signals - Fixed Time Cycle Time = 55 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	507	3.1	0.569	19.1	LOS B	9.8	70.3	0.76	0.83	39.4
2	T	355	0.9	0.234	0.9	LOS A	1.3	9.3	0.28	0.16	54.8
Approach		862	2.2	0.569	11.6	LOS A	9.8	70.3	0.56	0.55	44.5
North: Edwin Flack Avenue (N)											
8	T	199	1.1	0.144	7.7	LOS A	1.4	9.9	0.44	0.36	47.6
9	R	20	0.0	0.144	18.3	LOS B	1.1	8.0	0.53	0.83	41.1
Approach		219	1.0	0.144	8.7	LOS A	1.4	9.9	0.45	0.40	47.0
West: Old Hill Link (W)											
10	L	25	4.2	0.048	23.5	LOS B	0.4	3.1	0.65	0.71	36.5
12	R	133	6.3	0.257	24.5	LOS B	2.5	18.4	0.71	0.75	36.0
Approach		158	6.0	0.257	24.4	LOS B	2.5	18.4	0.70	0.75	36.1
All Vehicles		1239	2.5	0.569	12.7	LOS A	9.8	70.3	0.56	0.55	43.6

PHASING SUMMARY

Site: EX PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2013 Existing PM

Signals - Fixed Time Cycle Time = 55 seconds (User-Given Cycle Time)

Phase times determined by the program

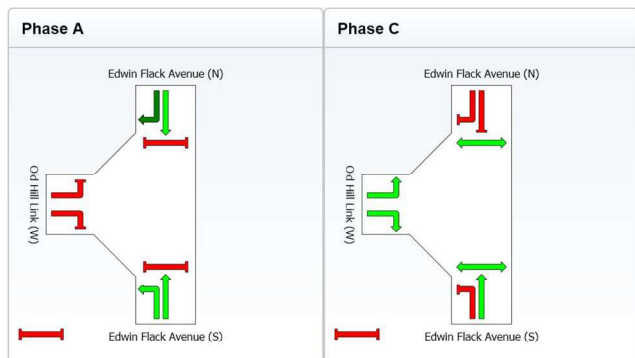
Sequence: TCS3403 PM

Input Sequence: A, C

Output Sequence: A, C

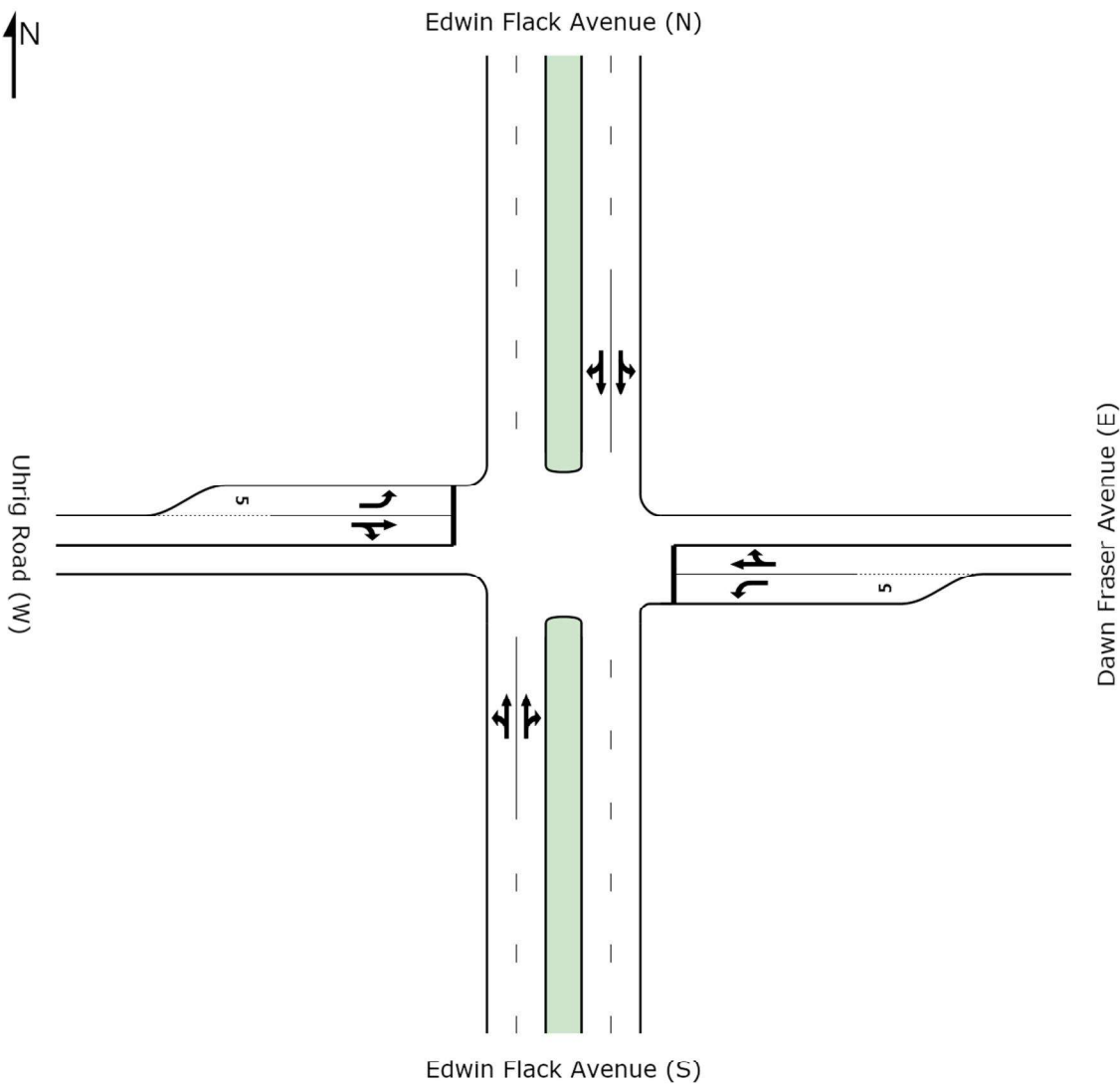
Phase Timing Results

Phase	A	C
Green Time (sec)	27	16
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	33	22
Phase Split	60 %	40 %



I-05 Edwin Flack Avenue / Uhrig Road Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road
2013 Existing AM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	17	0.0	0.108	8.2	LOS A	0.0	0.0	0.00	1.03	49.0
2	T	185	5.7	0.108	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R	102	1.0	0.124	9.8	LOS A	0.4	3.0	0.46	0.74	45.8
Approach		304	3.8	0.124	3.7	NA	0.4	3.0	0.15	0.30	54.0
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.154	11.3	LOS A	0.2	1.5	0.40	0.89	35.1
5	T	79	9.3	0.408	20.5	LOS B	2.0	15.9	0.73	1.13	30.8
6	R	76	18.1	0.408	20.9	LOS B	2.0	15.9	0.73	1.11	30.8
Approach		199	12.7	0.408	18.6	LOS B	2.0	15.9	0.65	1.07	31.6
North: Edwin Flack Avenue (N)											
7	L	285	3.0	0.157	7.3	LOS A	0.0	0.0	0.00	0.64	48.7
8	T	273	2.3	0.150	1.1	LOS A	1.2	8.2	0.37	0.00	53.3
9	R	8	12.5	0.150	9.6	LOS A	1.2	8.2	0.37	0.88	49.2
Approach		566	2.8	0.157	4.3	NA	1.2	8.2	0.19	0.33	50.9
West: Uhrig Road (W)											
10	L	8	25.0	0.035	13.3	LOS A	0.0	0.3	0.31	0.85	45.8
11	T	148	4.3	0.400	20.0	LOS B	2.0	14.7	0.75	1.08	38.3
12	R	21	10.0	0.400	21.3	LOS B	2.0	14.7	0.75	1.08	39.2
Approach		178	5.9	0.400	19.8	LOS B	2.0	14.7	0.72	1.07	38.8
All Vehicles		1247	5.1	0.408	8.7	NA	2.0	15.9	0.33	0.55	45.1

MOVEMENT SUMMARY

Site: EX PM

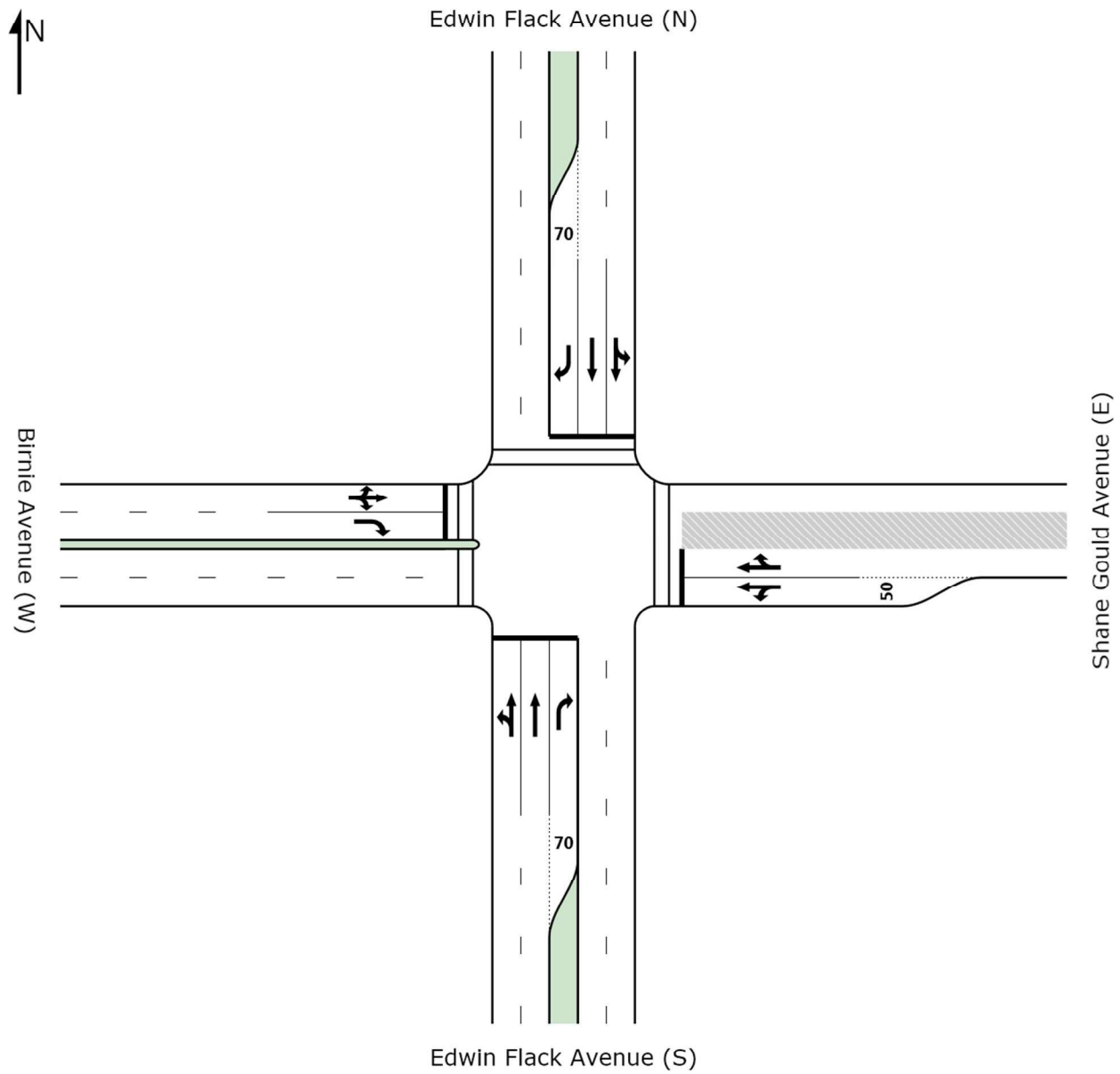
Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road
2013 Existing PM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	41	0.0	0.175	8.2	LOS A	0.0	0.0	0.00	1.01	49.0
2	T	561	1.5	0.175	0.8	LOS A	1.2	8.2	0.19	0.00	56.2
3	R	39	0.0	0.175	8.7	LOS A	1.2	8.2	0.41	0.91	48.8
Approach		641	1.3	0.175	1.8	NA	1.2	8.2	0.19	0.12	55.2
East: Dawn Fraser Avenue (E)											
4	L	89	1.2	0.268	10.5	LOS A	0.4	2.6	0.36	0.89	35.3
5	T	105	3.0	1.100	145.9	LOS F	31.2	224.0	1.00	3.86	11.1
6	R	227	2.8	1.100	145.8	LOS F	31.2	224.0	1.00	3.62	11.1
Approach		422	2.5	1.100	117.1	LOS F	31.2	224.0	0.86	3.10	13.0
North: Edwin Flack Avenue (N)											
7	L	89	8.2	0.100	7.4	LOS A	0.0	0.0	0.00	0.86	48.7
8	T	252	0.8	0.100	1.8	LOS A	0.8	5.9	0.34	0.00	53.7
9	R	16	0.0	0.100	11.0	LOS A	0.8	5.9	0.55	0.91	48.2
Approach		357	2.7	0.100	3.6	NA	0.8	5.9	0.27	0.25	52.1
West: Uhrig Road (W)											
10	L	67	6.3	0.266	14.6	LOS B	0.4	2.8	0.51	0.95	44.1
11	T	72	7.4	0.294	22.0	LOS B	1.2	9.0	0.78	1.04	37.0
12	R	24	4.3	0.294	22.8	LOS B	1.2	9.0	0.78	1.04	37.9
Approach		163	6.5	0.294	19.1	LOS B	1.2	9.0	0.67	1.00	39.9
All Vehicles		1583	2.5	1.100	34.7	NA	31.2	224.0	0.44	1.04	28.7

I-06 Edwin Flack Avenue / Birnie Avenue Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2013 Existing AM

Signals - Fixed Time Cycle Time = 72 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	257	2.9	0.253	16.1	LOS B	4.6	33.0	0.52	0.77	41.7
2	T	127	1.7	0.253	23.0	LOS B	4.6	33.0	0.82	0.66	34.9
3	R	7	0.0	0.023	31.3	LOS C	0.2	1.4	0.79	0.68	32.2
Approach		392	2.4	0.253	18.7	LOS B	4.6	33.0	0.62	0.73	39.0
East: Shane Gould Avenue (E)											
4	L	6	0.0	0.131	43.1	LOS D	0.7	5.1	0.96	0.71	28.4
5	T	21	0.0	0.131	35.0	LOS C	0.7	5.1	0.96	0.67	28.5
6	R	13	16.7	0.131	43.9	LOS D	0.7	5.1	0.96	0.70	27.8
Approach		40	5.3	0.131	39.1	LOS C	0.7	5.1	0.96	0.69	28.3
North: Edwin Flack Avenue (N)											
7	L	23	0.0	0.174	23.9	LOS B	2.5	17.9	0.75	0.83	37.7
8	T	215	3.4	0.174	15.2	LOS B	3.0	21.7	0.70	0.55	40.0
9	R	92	4.6	0.244	25.2	LOS B	2.2	16.0	0.83	0.75	35.5
Approach		329	3.5	0.244	18.6	LOS B	3.0	21.7	0.74	0.63	38.5
West: Birnie Avenue (W)											
10	L	155	3.4	0.552	20.1	LOS B	6.7	48.7	0.86	0.82	39.0
11	T	36	5.9	0.552	11.8	LOS A	6.7	48.7	0.86	0.73	40.0
12	R	426	5.2	0.552	28.2	LOS B	8.1	59.3	0.89	0.82	33.9
Approach		617	4.8	0.552	25.2	LOS B	8.1	59.3	0.88	0.82	35.4
All Vehicles		1378	3.8	0.552	22.2	LOS B	8.1	59.3	0.78	0.74	36.8

Site: EX AM

PHASING SUMMARY

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2013 Existing AM

Signals - Fixed Time Cycle Time = 72 seconds (User-Given Cycle Time)

Phase times determined by the program

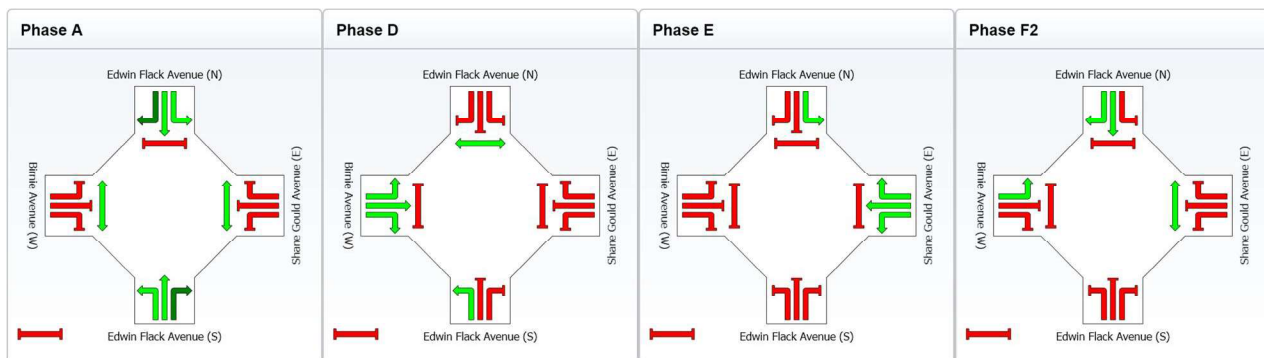
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	17	19	6	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	23	25	12	12
Phase Split	32 %	35 %	17 %	17 %



MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2013 Existing PM

Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	654	1.0	0.593	19.2	LOS B	18.6	131.3	0.64	0.83	39.3
2	T	468	1.6	0.593	24.4	LOS B	18.6	131.3	0.84	0.74	34.1
3	R	3	0.0	0.008	27.7	LOS B	0.1	0.6	0.64	0.66	34.0
Approach		1125	1.2	0.593	21.4	LOS B	18.6	131.3	0.72	0.79	37.0
East: Shane Gould Avenue (E)											
4	L	15	0.0	0.441	57.8	LOS E	2.6	18.0	1.00	0.74	23.9
5	T	61	0.0	0.441	49.6	LOS D	2.6	18.0	1.00	0.74	23.9
6	R	31	0.0	0.441	57.8	LOS E	2.5	17.7	1.00	0.74	23.6
Approach		106	0.0	0.441	53.1	LOS D	2.6	18.0	1.00	0.74	23.8
North: Edwin Flack Avenue (N)											
7	L	46	0.0	0.120	21.2	LOS B	2.3	16.3	0.64	0.79	38.8
8	T	172	1.8	0.120	11.9	LOS A	2.8	19.8	0.56	0.45	43.0
9	R	147	0.7	0.485	26.1	LOS B	3.7	25.7	0.89	0.80	34.9
Approach		365	1.2	0.485	18.8	LOS B	3.7	25.7	0.70	0.63	38.8
West: Birnie Avenue (W)											
10	L	137	0.8	0.563	29.2	LOS C	9.4	65.9	0.92	0.83	33.7
11	T	64	0.0	0.563	21.0	LOS B	9.4	65.9	0.92	0.77	34.2
12	R	321	0.3	0.563	40.0	LOS C	9.4	65.9	0.94	0.82	28.7
Approach		522	0.4	0.563	34.8	LOS C	9.4	65.9	0.93	0.82	30.5
All Vehicles		2119	0.9	0.593	25.8	LOS B	18.6	131.3	0.78	0.77	34.5

PHASING SUMMARY

Site: EX PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2013 Existing PM

Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Phase times determined by the program

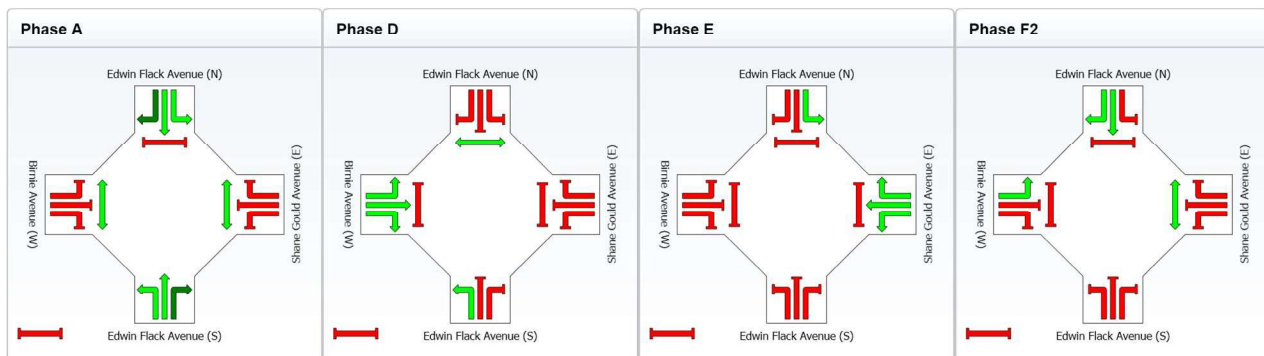
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

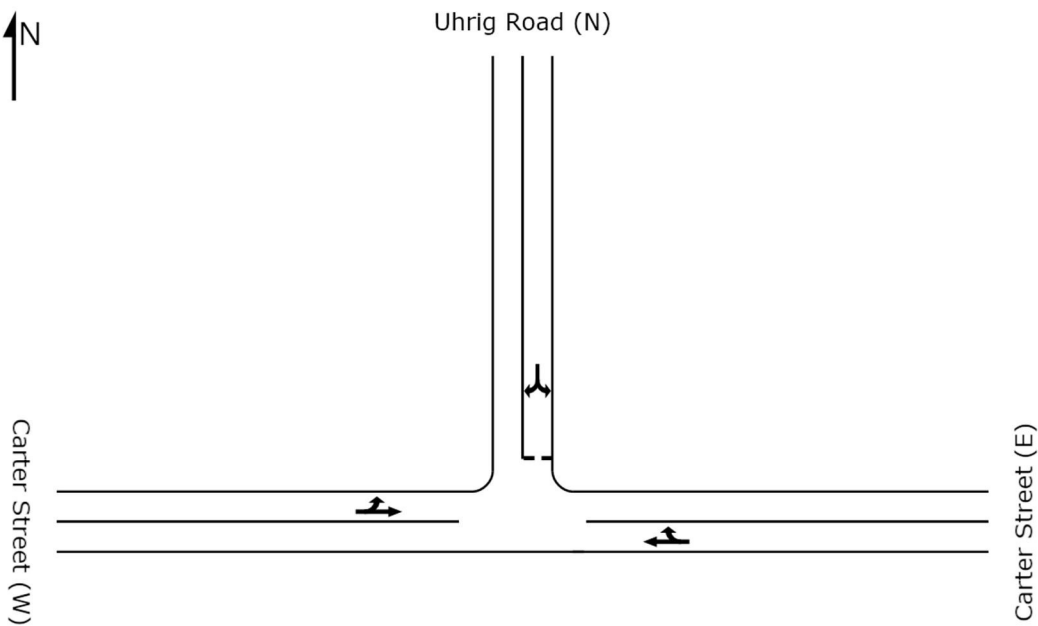
Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	36	20	6	9
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	42	26	12	15
Phase Split	44 %	27 %	13 %	16 %



I-07 Carter Street / Uhrig Road Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2013 Existing AM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
East: Carter Street (E)											
5	T	265	14.7	0.173	3.5	LOS A	1.5	12.0	0.62	0.00	49.5
6	R	19	5.6	0.173	12.2	LOS A	1.5	12.0	0.62	1.03	47.8
Approach		284	14.1	0.173	4.1	NA	1.5	12.0	0.62	0.07	49.4
North: Uhrig Road (N)											
7	L	26	16.0	0.276	17.5	LOS B	1.1	8.4	0.66	0.87	40.8
9	R	79	16.0	0.276	17.8	LOS B	1.1	8.4	0.66	0.93	40.7
Approach		105	16.0	0.276	17.7	LOS B	1.1	8.4	0.66	0.92	40.7
West: Carter Street (W)											
10	L	226	5.6	0.282	8.4	LOS A	0.0	0.0	0.00	0.85	49.0
11	T	285	10.0	0.282	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		512	8.0	0.282	3.7	NA	0.0	0.0	0.00	0.38	54.6
All Vehicles		901	10.9	0.282	5.5	NA	1.5	12.0	0.27	0.34	50.9

MOVEMENT SUMMARY

Site: EX PM

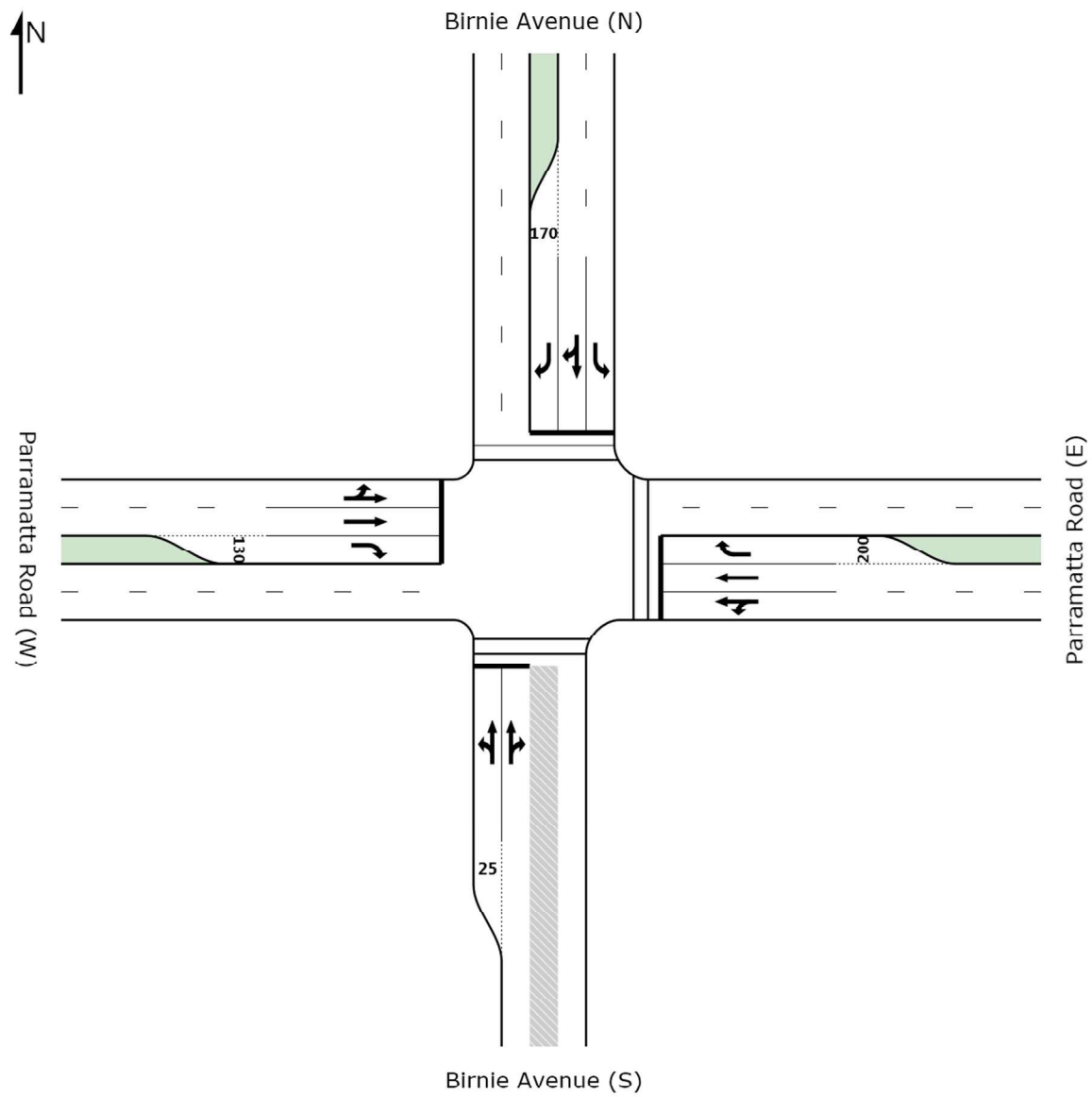
Carter Street Precinct
I-07 Carter Street / Uhrig Road
2013 Existing PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
East: Carter Street (E)											
5	T	247	8.1	0.158	1.9	LOS A	1.2	8.8	0.50	0.00	51.1
6	R	24	4.3	0.158	10.6	LOS A	1.2	8.8	0.50	0.97	48.9
Approach		272	7.8	0.158	2.7	NA	1.2	8.8	0.50	0.09	50.9
North: Uhrig Road (N)											
7	L	9	0.0	0.299	14.0	LOS A	1.2	8.8	0.59	0.77	43.1
9	R	144	2.9	0.299	14.4	LOS A	1.2	8.8	0.59	0.91	43.0
Approach		154	2.7	0.299	14.4	LOS A	1.2	8.8	0.59	0.90	43.0
West: Carter Street (W)											
10	L	94	14.6	0.191	8.7	LOS A	0.0	0.0	0.00	0.94	49.0
11	T	256	4.9	0.191	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		349	7.5	0.191	2.3	NA	0.0	0.0	0.00	0.25	56.6
All Vehicles		775	6.7	0.299	4.9	NA	1.2	8.8	0.29	0.32	51.4

I-08 Parramatta Road / Birnie Avenue Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM - Original

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue
2013 Existing AM
Signals - Fixed Time Cycle Time = 120 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Birnie Avenue (S)											
1	L	20	52.6	0.875	75.0	LOS F	5.0	40.8	0.94	0.97	20.5
2	T	182	9.2	0.875	65.3	LOS E	14.4	110.8	0.98	0.98	20.4
3	R	97	14.1	0.875	74.1	LOS F	14.4	110.8	1.00	1.01	20.2
Approach		299	13.7	0.875	68.8	LOS E	14.4	110.8	0.98	0.99	20.4
East: Parramatta Road (E)											
4	L	160	8.6	0.637	16.7	LOS B	15.5	114.7	0.40	0.94	42.4
5	T	1285	6.3	0.637	8.6	LOS A	16.3	120.5	0.42	0.38	46.8
6	R	237	8.9	0.853	51.5	LOS D	10.0	75.6	1.00	0.98	24.9
Approach		1682	6.9	0.853	15.4	LOS B	16.3	120.5	0.50	0.52	41.3
North: Birnie Avenue (N)											
7	L	133	9.5	0.295	47.1	LOS D	6.3	47.4	0.85	0.79	26.2
8	T	115	7.3	0.639	58.7	LOS E	7.0	52.2	1.00	0.81	22.1
9	R	122	0.9	0.639	66.8	LOS E	7.0	52.2	1.00	0.81	21.2
Approach		369	6.0	0.639	57.2	LOS E	7.0	52.2	0.95	0.81	23.1
West: Parramatta Road (W)											
10	L	257	4.1	0.860	39.2	LOS C	36.8	268.7	0.88	0.99	29.9
11	T	1205	5.3	0.860	31.0	LOS C	37.9	277.6	0.89	0.87	30.7
12	R	52	16.3	0.635	39.0	LOS C	2.4	19.1	0.69	0.85	29.1
Approach		1514	5.5	0.860	32.6	LOS C	37.9	277.6	0.88	0.89	30.5
All Vehicles		3864	6.8	0.875	30.3	LOS C	37.9	277.6	0.73	0.73	31.9

PHASING SUMMARY

Site: EX AM - Original

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue
2013 Existing AM
Signals - Fixed Time Cycle Time = 120 seconds (User-Given Cycle Time)

Phase times determined by the program

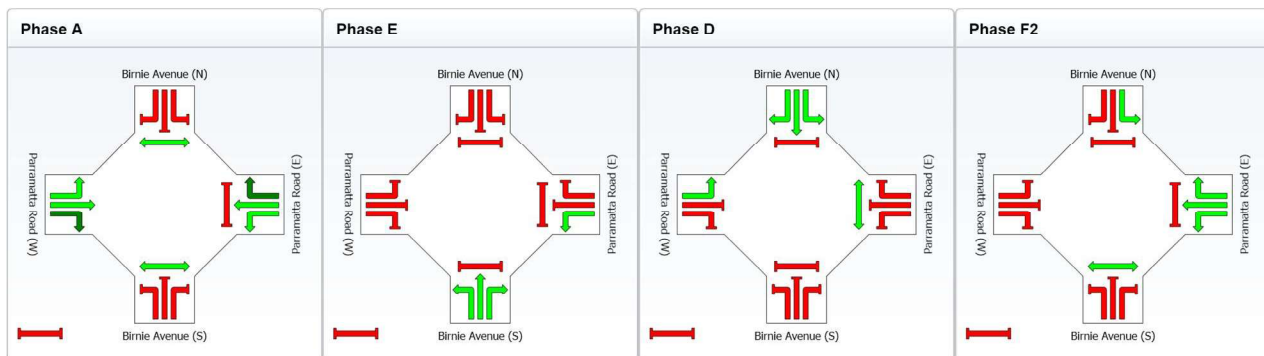
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	54	17	12	13
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	60	23	18	19
Phase Split	50 %	19 %	15 %	16 %



MOVEMENT SUMMARY

Site: EX PM - Original

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue
2013 Existing PM
Signals - Fixed Time Cycle Time = 130 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	34	3.1	0.922	73.0	LOS F	5.7	40.8	0.95	0.87	20.4
2	T	152	3.5	0.922	72.8	LOS F	17.8	127.3	0.98	0.97	19.0
3	R	141	2.2	0.922	85.6	LOS F	17.8	127.3	1.00	1.06	18.1
Approach		326	2.9	0.922	78.3	LOS F	17.8	127.3	0.99	1.00	18.7
East: Parramatta Road (E)											
4	L	278	2.7	0.860	30.2	LOS C	42.2	303.2	0.80	0.94	33.9
5	T	1464	3.2	0.860	22.4	LOS B	42.8	307.7	0.81	0.77	35.1
6	R	235	5.8	1.119	168.7	LOS F	21.3	156.6	1.00	1.27	10.7
Approach		1977	3.4	1.119	40.9	LOS C	42.8	307.7	0.83	0.85	27.5
North: Birnie Avenue (N)											
7	L	286	1.5	0.494	46.9	LOS D	14.7	104.0	0.86	0.83	26.2
8	T	334	1.6	0.899	68.8	LOS E	24.0	170.3	1.00	1.04	20.1
9	R	317	2.0	0.899	77.5	LOS F	24.0	170.3	1.00	0.98	19.2
Approach		937	1.7	0.899	65.1	LOS E	24.0	170.3	0.96	0.96	21.2
West: Parramatta Road (W)											
10	L	124	0.0	0.906	54.5	LOS D	45.6	323.6	0.97	1.02	24.9
11	T	1300	1.9	0.906	45.3	LOS D	46.0	326.9	0.97	0.98	25.5
12	R	16	0.0	0.246	61.3	LOS E	0.9	6.2	0.83	0.75	22.3
Approach		1440	1.7	0.906	46.3	LOS D	46.0	326.9	0.97	0.99	25.4
All Vehicles		4680	2.5	1.119	50.0	LOS D	46.0	326.9	0.91	0.92	24.6

PHASING SUMMARY

Site: EX PM - Original

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue
2013 Existing PM
Signals - Fixed Time Cycle Time = 130 seconds (User-Given Cycle Time)

Phase times determined by the program

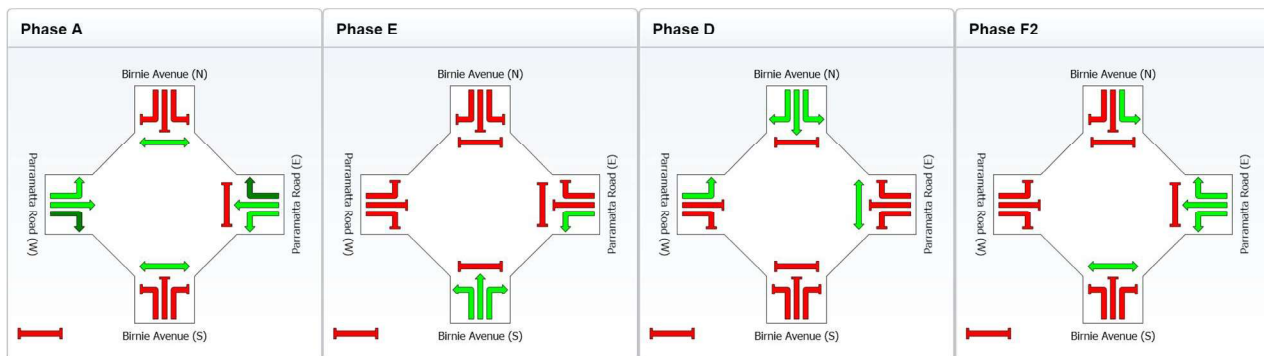
Sequence: TCS376 PM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

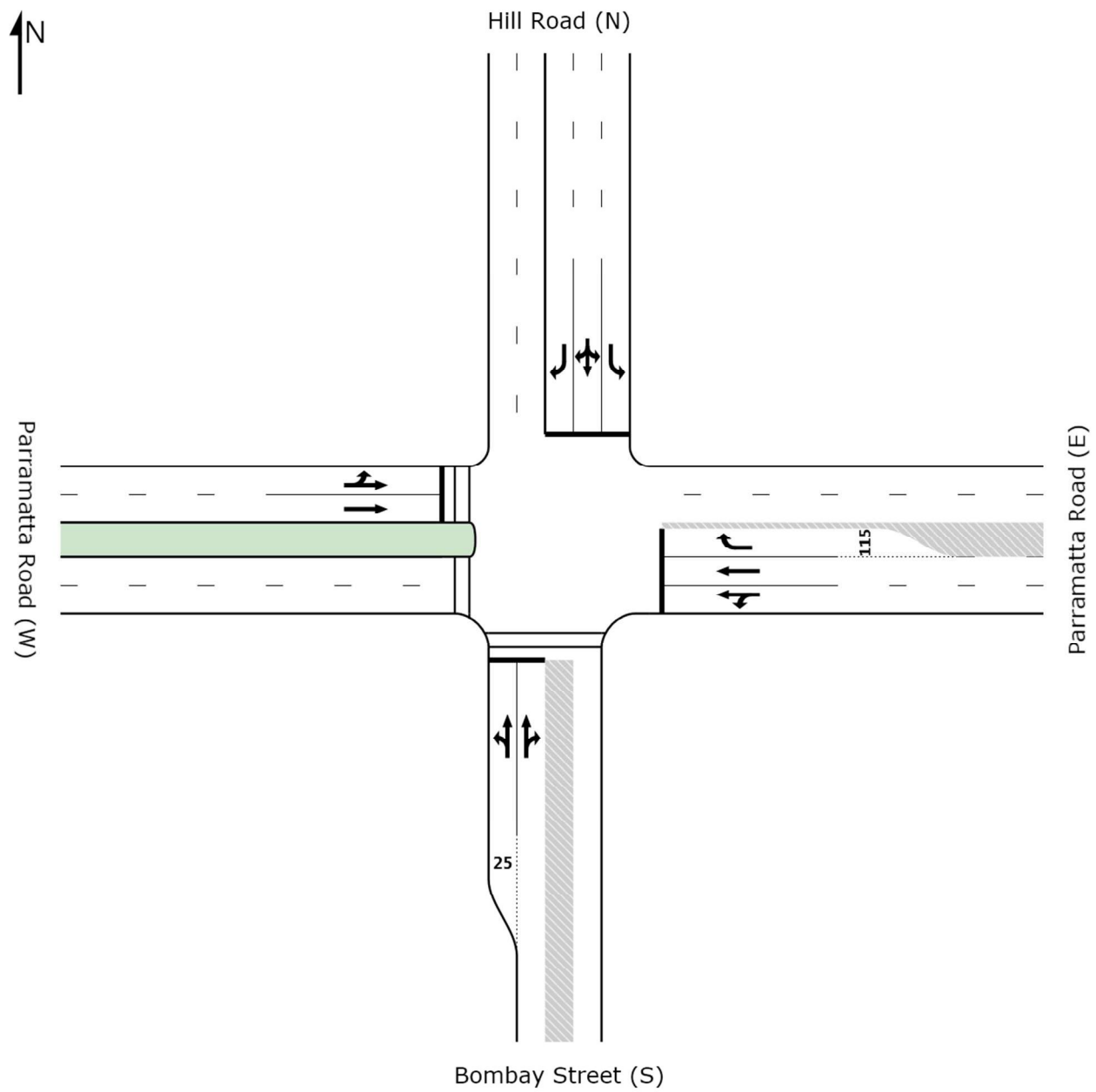
Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	53	18	25	10
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	59	24	31	16
Phase Split	45 %	18 %	24 %	12 %



I-09 Parramatta Road / Hill Road Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2013 Existing AM

Signals - Fixed Time Cycle Time = 130 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Bombay Street (S)											
1	L	17	6.3	0.841	74.1	LOS F	5.4	38.4	0.94	0.97	19.0
2	T	221	1.0	0.841	66.5	LOS E	15.1	106.7	0.98	0.96	19.0
3	R	66	1.6	0.841	73.6	LOS F	15.1	106.7	1.00	0.98	19.1
Approach		304	1.4	0.841	68.5	LOS E	15.1	106.7	0.98	0.96	19.1
East: Parramatta Road (E)											
4	L	14	23.1	0.505	16.9	LOS B	10.6	78.9	0.32	1.13	41.5
5	T	1146	6.6	0.505	8.3	LOS A	11.1	82.0	0.33	0.30	47.6
6	R	275	6.9	0.821	69.8	LOS E	16.6	123.3	0.99	1.09	20.6
Approach		1435	6.8	0.821	20.2	LOS B	16.6	123.3	0.45	0.46	38.0
North: Hill Road (N)											
7	L	321	5.2	0.614	51.1	LOS D	17.6	128.6	0.92	0.85	25.0
8	T	116	4.5	0.728	64.5	LOS E	10.4	76.5	1.00	0.86	20.2
9	R	181	9.9	0.728	72.7	LOS F	10.4	76.5	1.00	0.85	20.2
Approach		618	6.5	0.728	59.9	LOS E	17.6	128.6	0.96	0.85	22.4
West: Parramatta Road (W)											
10	L	315	6.4	0.843	40.2	LOS C	35.5	261.8	0.88	0.97	29.3
11	T	1048	6.3	0.843	32.8	LOS C	37.1	273.6	0.89	0.85	29.9
Approach		1363	6.3	0.843	34.5	LOS C	37.1	273.6	0.88	0.88	29.8
All Vehicles		3720	6.1	0.843	36.0	LOS C	37.1	273.6	0.74	0.72	29.3

PHASING SUMMARY

Site: EX AM

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2013 Existing AM

Signals - Fixed Time Cycle Time = 130 seconds (User-Given Cycle Time)

Phase times determined by the program

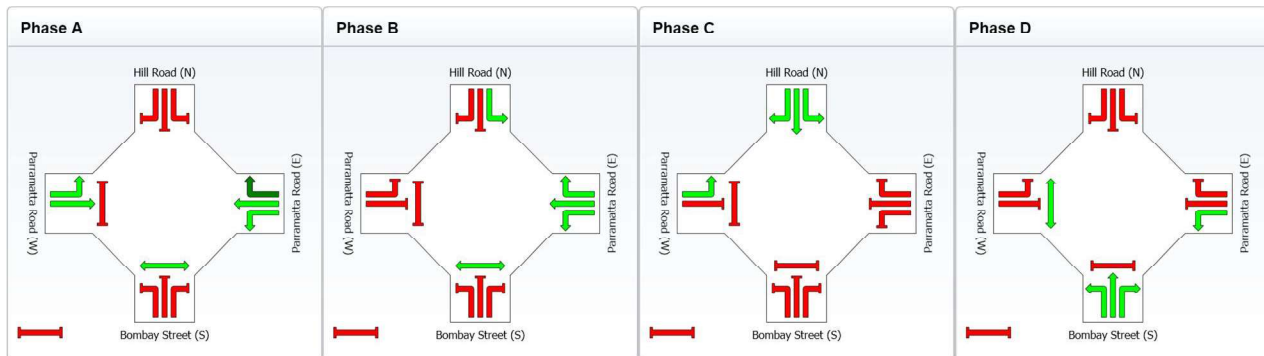
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	56	18	14	18
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	62	24	20	24
Phase Split	48 %	18 %	15 %	18 %



MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2013 Existing AM

Signals - Fixed Time Cycle Time = 135 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	25	0.0	0.807	74.9	LOS F	4.9	35.3	0.96	0.92	18.8
2	T	186	4.0	0.807	68.3	LOS E	12.5	90.1	0.99	0.92	18.8
3	R	43	0.0	0.807	75.6	LOS F	12.5	90.1	1.00	0.94	18.8
Approach		255	2.9	0.807	70.2	LOS E	12.5	90.1	0.99	0.93	18.8
East: Parramatta Road (E)											
4	L	38	0.0	0.662	24.2	LOS B	22.3	160.5	0.53	1.03	36.4
5	T	1385	3.3	0.662	15.5	LOS B	22.8	164.3	0.53	0.49	40.6
6	R	273	4.2	0.852	76.5	LOS F	17.8	129.1	1.00	1.11	19.3
Approach		1696	3.4	0.852	25.5	LOS B	22.8	164.3	0.61	0.61	34.4
North: Hill Road (N)											
7	L	355	3.6	0.540	44.7	LOS D	18.4	132.6	0.85	0.84	26.9
8	T	241	1.7	0.761	59.3	LOS E	18.3	130.4	1.00	0.89	21.4
9	R	292	6.1	0.761	67.5	LOS E	18.3	130.4	1.00	0.88	21.2
Approach		887	3.9	0.761	56.2	LOS D	18.4	132.6	0.94	0.87	23.2
West: Parramatta Road (W)											
10	L	198	10.1	0.856	49.7	LOS D	36.9	267.6	0.93	0.97	26.2
11	T	1062	1.7	0.856	41.1	LOS C	38.3	272.1	0.93	0.90	26.8
Approach		1260	3.0	0.856	42.5	LOS C	38.3	272.1	0.93	0.91	26.7
All Vehicles		4098	3.3	0.856	40.1	LOS C	38.3	272.1	0.80	0.78	27.7

PHASING SUMMARY

Site: EX PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2013 Existing AM

Signals - Fixed Time Cycle Time = 135 seconds (User-Given Cycle Time)

Phase times determined by the program

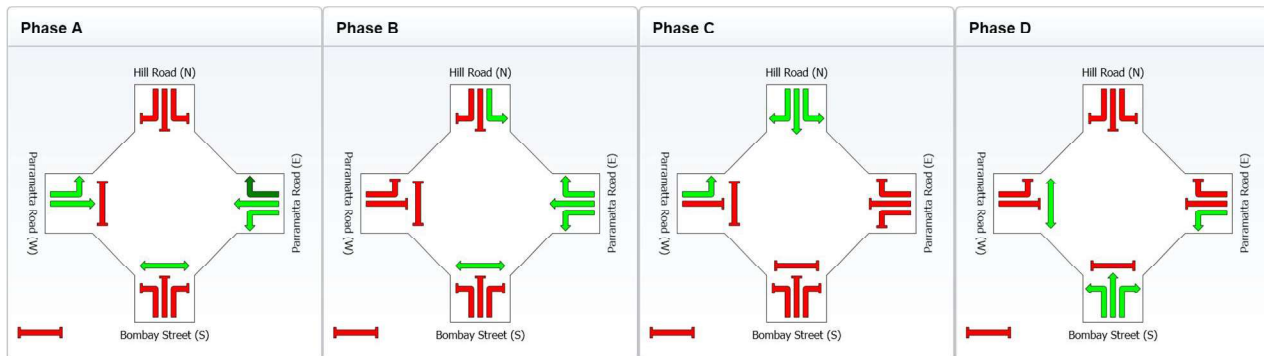
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

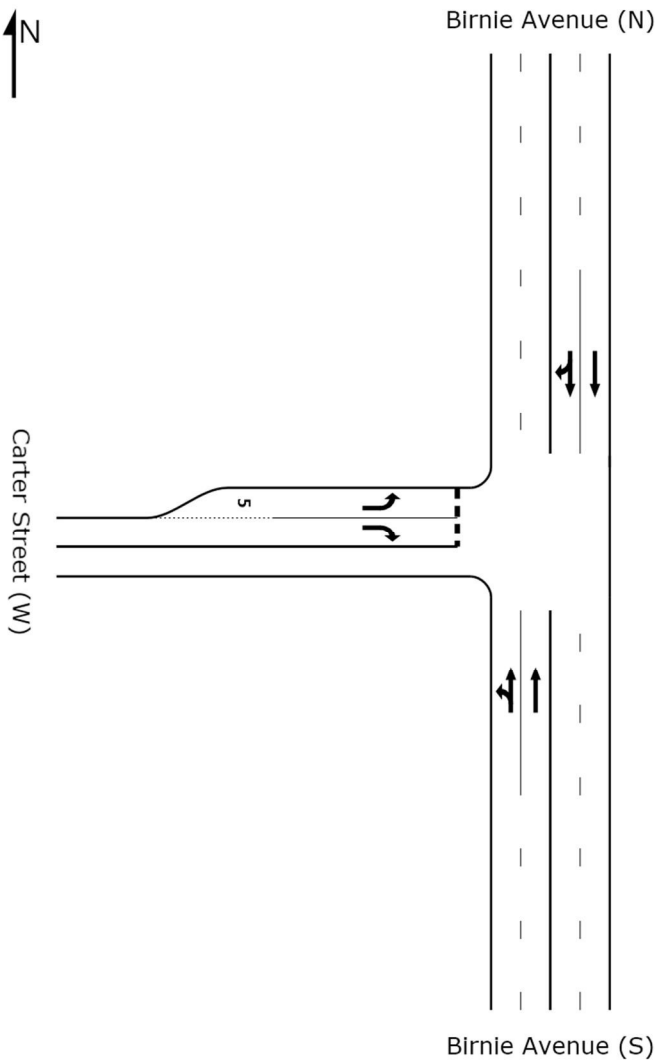
Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	52	18	25	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	58	24	31	22
Phase Split	43 %	18 %	23 %	16 %



I-10 Carter Street / Birnie Avenue Intersection

INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: EX AM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue
2013 Existing AM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Birnie Avenue (S)											
1	L	198	18.1	0.185	8.9	LOS A	0.0	0.0	0.00	0.79	49.0
2	T	478	2.6	0.185	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		676	7.2	0.185	2.6	NA	0.0	0.0	0.00	0.23	56.3
North: Birnie Avenue (N)											
8	T	253	3.3	0.132	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
9	R	117	2.7	0.161	12.0	LOS A	0.6	4.0	0.54	0.82	45.2
Approach		369	3.1	0.161	3.8	NA	0.6	4.0	0.17	0.26	54.4
West: Carter Street (W)											
10	L	140	12.0	0.595	16.1	LOS B	1.3	9.8	0.54	0.94	41.9
12	R	145	10.9	0.529	25.6	LOS B	2.4	18.6	0.82	1.07	35.4
Approach		285	11.4	0.595	20.9	LOS B	2.4	18.6	0.68	1.00	38.3
All Vehicles		1331	7.0	0.595	6.9	NA	2.4	18.6	0.19	0.40	50.7

MOVEMENT SUMMARY

Site: EX PM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue
2013 Existing PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Birnie Avenue (S)											
1	L	118	15.2	0.136	8.7	LOS A	0.0	0.0	0.00	0.84	49.0
2	T	393	0.3	0.136	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		511	3.7	0.136	2.0	NA	0.0	0.0	0.00	0.19	57.0
North: Birnie Avenue (N)											
8	T	708	0.7	0.267	0.8	LOS A	1.6	11.6	0.13	0.00	57.0
9	R	154	1.4	0.267	11.2	LOS A	1.6	11.6	0.50	0.86	47.0
Approach		862	0.9	0.267	2.6	NA	1.6	11.6	0.20	0.15	55.0
West: Carter Street (W)											
10	L	114	0.9	0.377	11.1	LOS A	0.6	4.5	0.45	0.75	45.9
12	R	203	5.2	0.993	91.2	LOS F	11.8	86.5	1.00	1.90	17.1
Approach		317	3.7	0.993	62.5	LOS E	11.8	86.5	0.80	1.49	22.0
All Vehicles		1689	2.2	0.993	13.7	NA	11.8	86.5	0.25	0.42	43.3

Year 2031 – Future condition

I-01 Hill Road / Carter Street Intersection

MOVEMENT SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct
I-01 Hill Road / Carter Street
2031 with Development AM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c			sec	Vehicles veh			
South: Hill Road (S)											
2	T	2077	10.0	1.134	120.8	LOS F	154.1	1170.9	1.00	0.00	13.6
3	R	925	10.0	6.056	4590.9	LOS F	498.5	3788.6	1.00	7.89	0.5
Approach		3002	10.0	6.056	1498.5	NA	498.5	3788.6	1.00	2.43	1.4
East: Carter Street (E)											
4	L	477	9.9	4.106	2847.9	LOS F	238.3	1809.8	1.00	5.97	0.8
6	R	11	10.0	1.000 ³	575.6	LOS F	2.5	19.3	1.00	1.10	3.6
Approach		487	9.9	4.106	2798.9	LOS F	238.3	1809.8	1.00	5.87	0.8
North: Hill Road (N)											
7	L	92	10.3	0.352	8.6	LOS A	0.0	0.0	0.00	1.01	49.0
8	T	1836	10.0	0.352	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1927	10.0	0.352	0.4	NA	0.0	0.0	0.00	0.05	59.4
All Vehicles		5417	10.0	6.056	1082.4	NA	498.5	3788.6	0.64	1.89	1.9

³ x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

MOVEMENT SUMMARY

Site: 2031 FU DV PM

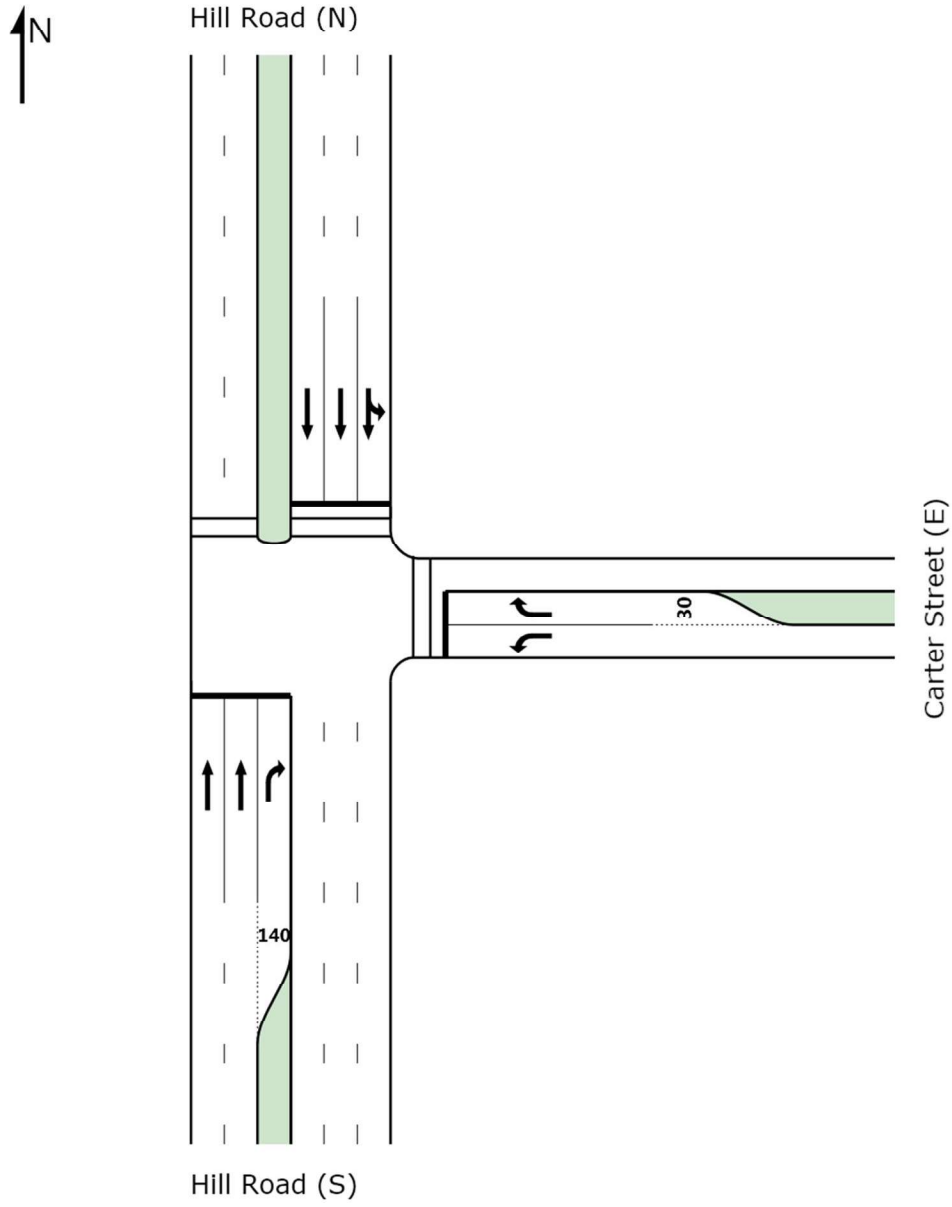
Carter Street Precinct
I-01 Hill Road / Carter Street
2031 with Development PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles vehDistance m		Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hill Road (S)											
2	T	1872	5.0	0.991	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R	515	4.9	7.725	6128.6	LOS F	298.0	2173.5	1.00	4.39	0.4
Approach		2386	5.0	7.725	1322.0	NA	298.0	2173.5	0.22	0.95	1.6
East: Carter Street (E)											
4	L	883	5.0	14.719	12422.7	LOS F	552.0	4029.7	1.00	4.41	0.2
6	R	25	4.2	1.000 ³	287.8	LOS F	3.1	22.2	1.00	1.18	6.7
Approach		908	5.0	14.719	12085.2	LOS F	552.0	4029.7	1.00	4.32	0.2
North: Hill Road (N)											
7	L	29	3.6	0.471	8.3	LOS A	0.0	0.0	0.00	1.08	49.0
8	T	2639	5.0	0.471	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2668	5.0	0.471	0.1	NA	0.0	0.0	0.00	0.01	59.9
All Vehicles		5963	5.0	14.719	2370.1	NA	552.0	4029.7	0.24	1.04	0.9

³ x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: 2031 FU DV AM -
Conversion

Carter Street Precinct

I-01 Hill Road / Carter Street - Upgraded to Signalised Intersection

2031 with Development AM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	2077	10.0	0.715	2.2	LOS A	11.5	87.7	0.17	0.16	55.8
3	R	925	10.0	1.172	212.2	LOS F	115.4	877.4	1.00	1.32	8.8
Approach		3002	10.0	1.172	66.9	LOS E	115.4	877.4	0.43	0.52	21.1
East: Carter Street (E)											
4	L	477	9.9	0.463	26.6	LOS B	19.2	145.6	0.61	0.81	34.8
6	R	11	10.0	0.111	70.6	LOS F	0.7	5.2	0.91	0.68	20.4
Approach		487	9.9	0.463	27.5	LOS B	19.2	145.6	0.61	0.80	34.3
North: Hill Road (N)											
7	L	92	10.3	1.077	159.9	LOS F	76.6	582.2	1.00	1.41	11.3
8	T	1836	10.0	1.077	150.3	LOS F	76.8	583.5	1.00	1.43	11.5
Approach		1927	10.0	1.077	150.7	LOS F	76.8	583.5	1.00	1.43	11.5
All Vehicles		5417	10.0	1.172	93.2	LOS F	115.4	877.4	0.65	0.87	16.7

PHASING SUMMARY

Site: 2031 FU DV AM -
Conversion

Carter Street Precinct

I-01 Hill Road / Carter Street - Upgraded to Signalised Intersection

2031 with Development AM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

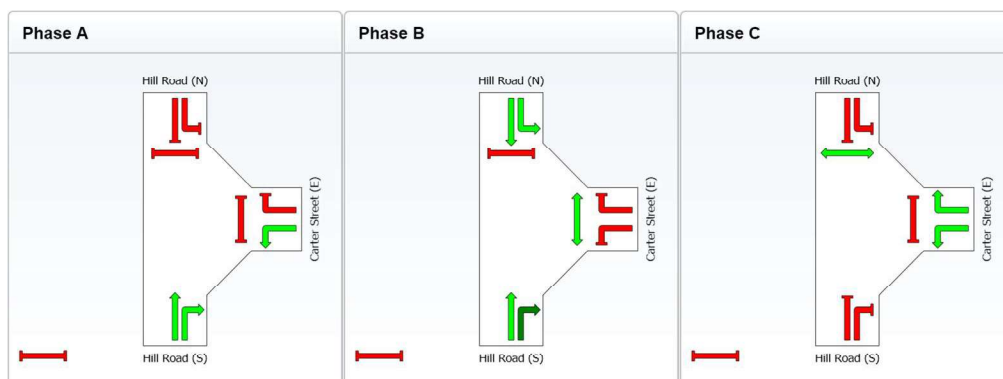
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	64	49	19
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	70	55	25
Phase Split	47 %	37 %	17 %



MOVEMENT SUMMARY

Site: 2031 FU DV PM -
Conversion

Carter Street Precinct

I-01 Hill Road / Carter Street - Upgraded to Signalised Intersection

2031 with Development PM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	1872	5.0	0.625	1.8	LOS A	8.2	59.8	0.13	0.13	56.4
3	R	515	4.9	0.854	63.6	LOS E	33.8	246.6	1.00	1.04	21.9
Approach		2386	5.0	0.854	15.2	LOS B	33.8	246.6	0.32	0.32	42.1
East: Carter Street (E)											
4	L	883	5.0	1.041	129.4	LOS F	100.8	736.1	1.00	1.14	13.1
6	R	25	4.2	0.255	71.2	LOS F	1.7	12.0	0.92	0.71	20.3
Approach		908	5.0	1.041	127.8	LOS F	100.8	736.1	1.00	1.13	13.3
North: Hill Road (N)											
7	L	29	3.6	1.055	127.0	LOS F	100.8	735.4	1.00	1.34	13.7
8	T	2639	5.0	1.055	118.4	LOS F	100.8	735.7	1.00	1.35	13.8
Approach		2668	5.0	1.055	118.5	LOS F	100.8	735.7	1.00	1.35	13.8
All Vehicles		5963	5.0	1.055	78.6	LOS F	100.8	736.1	0.73	0.90	18.7

PHASING SUMMARY

Site: 2031 FU DV PM -
Conversion

Carter Street Precinct

I-01 Hill Road / Carter Street - Upgraded to Signalised Intersection

2031 with Development PM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

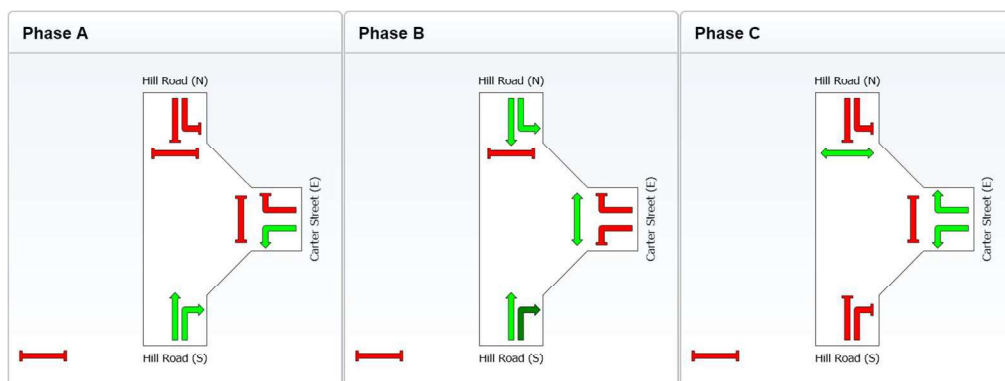
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	46	67	19
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	52	73	25
Phase Split	35 %	49 %	17 %



I-02 Hill Road / John Ian Wing Parade Intersection

MOVEMENT SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 with Development AM

Signals - Fixed Time Cycle Time = 150 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	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: Hill Road (S)											
1	L	214	9.9	2.019	1007.2	LOS F	370.6	2816.5	1.00	3.23	2.0
2	T	2331	10.0	2.019	999.5	LOS F	370.6	2816.5	1.00	3.14	2.1
3	R	120	9.9	1.000 ³	82.4	LOS F	6.4	49.0	1.00	0.82	19.6
Approach		2664	10.0	2.019	959.0	LOS F	370.6	2816.5	1.00	3.04	2.2
East: Access Road (E)											
4	L	219	10.1	0.740	97.9	LOS F	47.2	359.4	1.00	1.04	4.4
5	T	75	9.9	0.740	96.5	LOS F	47.2	359.4	1.00	1.04	3.5
6	R	217	10.2	0.740	97.9	LOS F	47.2	359.4	1.00	1.04	4.4
Approach		511	10.1	0.740	97.7	LOS F	47.2	359.4	1.00	1.04	4.3
North: Hill Road (N)											
7	L	304	10.0	1.660	691.1	LOS F	257.2	1954.5	1.00	2.53	2.6
8	T	1803	10.0	1.660	664.4	LOS F	257.2	1954.5	1.00	2.74	3.1
9	R	38	11.1	0.320	49.2	LOS D	1.7	13.2	0.98	0.72	24.7
Approach		2145	10.0	1.660	657.3	LOS F	257.2	1954.5	1.00	2.67	3.1
West: John Ian Wing Parade (W)											
10	L	101	10.4	0.321	29.0	LOS C	3.9	29.6	0.57	0.73	30.6
11	T	93	10.2	2.052	1018.7	LOS F	122.2	929.5	1.00	2.14	1.8
12	R	378	10.0	2.052	1007.7	LOS F	122.2	929.5	1.00	2.14	2.1
Approach		572	10.1	2.052	836.5	LOS F	122.2	929.5	0.92	1.89	2.4
All Vehicles		5892	10.0	2.052	762.6	LOS F	370.6	2816.5	0.99	2.62	2.5

3 x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

MOVEMENT SUMMARY

Site: 2031 FU DV PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 with Development PM

Signals - Fixed Time Cycle Time = 65 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	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: Hill Road (S)											
1	L	348	5.1	1.966	918.1	LOS F	267.9	1956.4	1.00	5.27	2.2
2	T	1911	5.0	1.966	910.4	LOS F	271.0	1978.4	1.00	5.28	2.3
3	R	124	5.0	1.024	103.0	LOS F	6.6	48.4	1.00	1.09	16.0
Approach		2384	5.0	1.966	869.5	LOS F	271.0	1978.4	1.00	5.06	2.4
East: Access Road (E)											
4	L	446	5.0	1.777	742.6	LOS F	193.4	1411.4	1.00	7.15	0.7
5	T	111	4.8	1.777	741.2	LOS F	193.4	1411.4	1.00	7.15	0.6
6	R	333	5.1	1.777	742.6	LOS F	193.4	1411.4	1.00	7.15	0.7
Approach		889	5.0	1.777	742.5	LOS F	193.4	1411.4	1.00	7.15	0.7
North: Hill Road (N)											
7	L	251	5.0	1.561	560.6	LOS F	266.6	1946.1	1.00	4.54	3.2
8	T	2639	5.0	1.561	534.0	LOS F	269.0	1963.8	1.00	4.71	3.8
9	R	159	5.3	0.555	23.7	LOS B	3.0	22.0	0.95	0.78	35.3
Approach		3048	5.0	1.561	509.6	LOS F	269.0	1963.8	1.00	4.49	3.9
West: John Ian Wing Parade (W)											
10	L	48	4.3	0.078	16.0	LOS B	0.8	5.6	0.53	0.70	37.3
11	T	79	5.3	1.854	830.5	LOS F	79.8	583.0	1.00	3.70	2.2
12	R	275	5.0	1.854	819.6	LOS F	79.8	583.0	1.00	3.70	2.5
Approach		402	5.0	1.854	724.9	LOS F	79.8	583.0	0.94	3.34	2.8
All Vehicles		6724	5.0	1.966	680.9	LOS F	271.0	1978.4	1.00	4.97	2.7

PROPOSED INTERSECTION LAYOUT

I-03 Hill Road / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT

I-04 Edwin Flack Avenue / Old Hill Link Intersection

MOVEMENT SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Future with Development AM

Signals - Fixed Time Cycle Time = 50 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Edwin Flack Avenue (S)											
1	L	69	10.6	0.126	15.3	LOS B	1.1	8.4	0.64	0.77	43.0
2	T	197	10.2	0.126	1.5	LOS A	1.1	8.4	0.32	0.19	53.6
Approach		266	10.3	0.126	5.1	LOS A	1.1	8.4	0.40	0.34	50.4
North: Edwin Flack Avenue (N)											
8	T	478	9.9	0.338	10.3	LOS A	3.5	26.8	0.60	0.50	44.7
9	R	9	11.1	0.338	18.6	LOS B	3.4	26.0	0.60	0.90	41.8
Approach		487	9.9	0.338	10.4	LOS A	3.5	26.8	0.60	0.51	44.6
West: Old Hill Link (W)											
10	L	203	9.8	0.325	20.6	LOS B	3.1	23.9	0.65	0.77	38.5
12	R	81	10.4	0.130	19.2	LOS B	1.1	8.5	0.58	0.72	39.6
Approach		284	10.0	0.325	20.2	LOS B	3.1	23.9	0.63	0.76	38.8
All Vehicles		1038	10.0	0.338	11.7	LOS A	3.5	26.8	0.56	0.54	44.1

MOVEMENT SUMMARY

Site: 2031 FU DV PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Future with Development PM

Signals - Fixed Time Cycle Time = 55 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Edwin Flack Avenue (S)											
1	L	344	4.9	0.391	18.0	LOS B	5.9	43.1	0.67	0.80	40.2
2	T	483	5.0	0.327	1.0	LOS A	2.0	14.4	0.31	0.17	54.3
Approach		827	5.0	0.391	8.1	LOS A	5.9	43.1	0.46	0.43	47.4
North: Edwin Flack Avenue (N)											
8	T	286	5.1	0.187	6.9	LOS A	1.8	13.5	0.43	0.35	48.6
9	R	20	5.3	0.187	15.5	LOS B	1.5	11.1	0.44	0.88	43.5
Approach		306	5.2	0.187	7.5	LOS A	1.8	13.5	0.43	0.38	48.2
West: Old Hill Link (W)											
10	L	60	5.3	0.115	24.0	LOS B	1.1	7.7	0.67	0.73	36.2
12	R	98	5.4	0.188	24.1	LOS B	1.8	13.1	0.69	0.74	36.3
Approach		158	5.3	0.188	24.1	LOS B	1.8	13.1	0.68	0.74	36.3
All Vehicles		1292	5.1	0.391	9.9	LOS A	5.9	43.1	0.48	0.46	45.9

I-05 Edwin Flack Avenue / Uhrig Road Intersection

MOVEMENT SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road
2031 Future with Development AM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Edwin Flack Avenue (S)											
1	L	36	8.8	0.155	8.5	LOS A	0.0	0.0	0.00	1.02	49.0
2	T	471	10.1	0.155	2.3	LOS A	1.4	10.7	0.30	0.00	54.4
3	R	21	10.0	0.155	12.1	LOS A	1.4	10.7	0.63	1.00	46.2
Approach		527	10.0	0.155	3.2	NA	1.4	10.7	0.29	0.11	53.6
East: Dawn Fraser Avenue (E)											
4	L	17	12.5	0.085	14.5	LOS B	0.1	0.9	0.56	0.93	33.6
5	T	212	10.0	2.699	1590.5	LOS F	132.8	1010.1	1.00	7.17	1.3
6	R	102	10.3	2.699	1590.5	LOS F	132.8	1010.1	1.00	6.37	1.3
Approach		331	10.2	2.699	1510.2	LOS F	132.8	1010.1	0.98	6.60	1.4
North: Edwin Flack Avenue (N)											
7	L	44	9.5	0.207	7.4	LOS A	0.0	0.0	0.00	1.10	48.7
8	T	621	10.0	0.207	1.5	LOS A	1.8	13.8	0.27	0.00	54.8
9	R	41	10.3	0.207	11.7	LOS A	1.8	13.8	0.58	0.92	47.9
Approach		706	10.0	0.207	2.5	NA	1.8	13.8	0.27	0.12	54.0
West: Uhrig Road (W)											
10	L	122	10.3	0.492	16.7	LOS B	0.9	7.0	0.51	1.02	42.5
11	T	347	10.0	2.486	1382.9	LOS F	172.3	1308.7	1.00	6.61	1.4
12	R	87	9.6	2.486	1383.9	LOS F	172.3	1308.7	1.00	6.15	1.5
Approach		557	10.0	2.486	1083.4	LOS F	172.3	1308.7	0.89	5.31	1.8
All Vehicles		2121	10.0	2.699	521.4	NA	172.3	1308.7	0.55	2.49	3.8

MOVEMENT SUMMARY

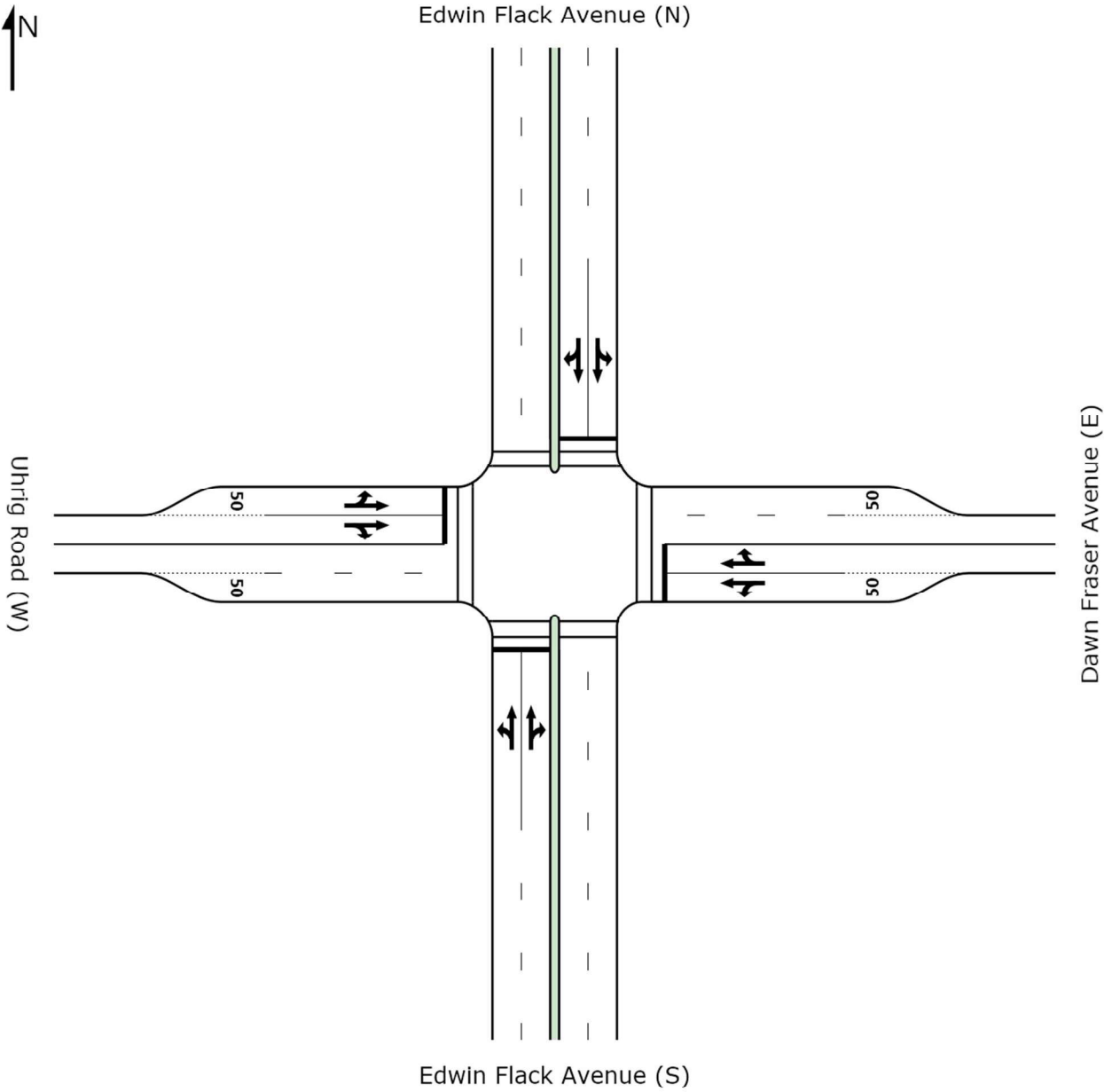
Site: 2031 FU DV PM

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road
2031 Future with Development PM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Edwin Flack Avenue (S)											
1	L	157	4.7	0.238	8.4	LOS A	0.0	0.0	0.00	0.89	49.0
2	T	677	5.0	0.238	2.2	LOS A	2.1	15.4	0.34	0.00	53.8
3	R	24	4.3	0.238	10.8	LOS A	2.1	15.4	0.58	0.98	47.3
Approach		858	4.9	0.238	3.5	NA	2.1	15.4	0.28	0.19	52.7
East: Dawn Fraser Avenue (E)											
4	L	41	5.1	0.153	12.2	LOS A	0.2	1.5	0.49	0.92	34.6
5	T	599	4.9	3.575	2358.5	LOS F	300.2	2190.5	1.00	10.18	0.9
6	R	39	5.4	3.575	2358.5	LOS F	300.2	2190.5	1.00	9.45	0.9
Approach		679	5.0	3.575	2216.6	LOS F	300.2	2190.5	0.97	9.58	1.0
North: Edwin Flack Avenue (N)											
7	L	89	4.7	0.204	7.3	LOS A	0.0	0.0	0.00	1.05	48.7
8	T	484	5.0	0.204	2.2	LOS A	1.8	12.8	0.28	0.00	54.5
9	R	64	4.9	0.204	13.9	LOS A	1.8	12.8	0.70	0.97	45.5
Approach		638	5.0	0.204	4.1	NA	1.8	12.8	0.28	0.25	52.6
West: Uhrig Road (W)											
10	L	55	5.8	0.242	15.7	LOS B	0.4	2.6	0.56	0.98	43.1
11	T	276	5.0	2.653	1542.2	LOS F	147.0	1073.7	1.00	5.85	1.3
12	R	78	5.4	2.653	1543.2	LOS F	147.0	1073.7	1.00	5.19	1.4
Approach		408	5.2	2.653	1337.8	LOS F	147.0	1073.7	0.94	5.07	1.5
All Vehicles		2583	5.0	3.575	796.3	NA	300.2	2190.5	0.57	3.44	2.6

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: 2031 FU DV AM -
Conversion

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade
2031 Future with Development AM
Signals - Fixed Time Cycle Time = 50 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Edwin Flack Avenue (S)											
1	L	17	12.5	0.392	22.9	LOS B	4.0	30.2	0.73	0.89	39.0
2	T	212	10.0	0.392	14.3	LOS A	4.0	30.2	0.73	0.60	40.8
3	R	102	10.3	0.439	28.0	LOS B	2.3	17.2	0.87	0.77	32.4
Approach		331	10.2	0.439	19.0	LOS B	4.0	30.2	0.77	0.67	37.9
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.265	15.3	LOS B	2.2	16.4	0.64	0.76	32.8
5	T	621	10.0	0.802	17.1	LOS B	14.4	109.4	0.89	0.91	29.4
6	R	41	10.3	0.802	24.5	LOS B	14.4	109.4	0.94	1.03	29.0
Approach		706	10.0	0.802	17.4	LOS B	14.4	109.4	0.88	0.90	29.5
North: Edwin Flack Avenue (N)											
7	L	122	10.3	0.555	22.7	LOS B	6.1	46.1	0.80	0.86	37.1
8	T	347	10.0	0.555	15.8	LOS B	6.1	46.1	0.81	0.68	38.7
9	R	87	9.6	0.555	25.0	LOS B	4.7	36.0	0.82	0.85	37.0
Approach		557	10.0	0.555	18.7	LOS B	6.1	46.1	0.81	0.74	38.1
West: Uhrig Road (W)											
10	L	36	8.8	0.198	17.6	LOS B	1.6	12.0	0.63	0.81	41.7
11	T	471	10.1	0.599	15.6	LOS B	8.3	63.4	0.81	0.75	40.2
12	R	21	10.0	0.599	21.7	LOS B	8.3	63.4	0.84	0.88	39.6
Approach		527	10.0	0.599	16.0	LOS B	8.3	63.4	0.80	0.76	40.2
All Vehicles		2121	10.0	0.802	17.6	LOS B	14.4	109.4	0.82	0.79	35.0

PHASING SUMMARY

Site: 2031 FU DV AM -
Conversion

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade
2031 Future with Development AM
Signals - Fixed Time Cycle Time = 50 seconds (Practical Cycle Time)

Phase times determined by the program

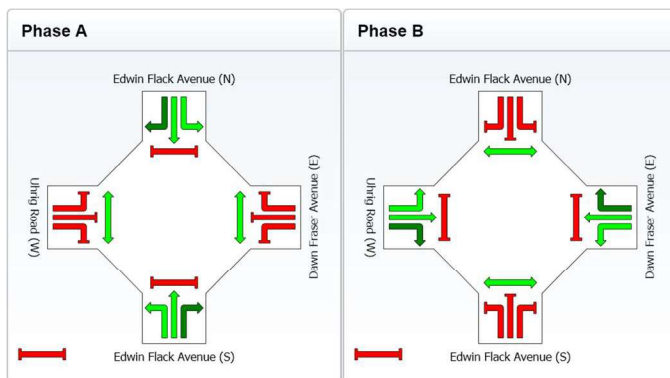
Sequence: Two Phases

Input Sequence: A, B

Output Sequence: A, B

Phase Timing Results

Phase	A	B
Green Time (sec)	16	22
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	22	28
Phase Split	44 %	56 %



MOVEMENT SUMMARY

Site: 2031 FU DV PM -
Conversion

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade
2031 Future with Development PM
Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	41	5.1	0.750	32.5	LOS C	10.5	77.0	0.93	0.92	33.5
2	T	599	4.9	0.750	24.9	LOS B	10.5	77.0	0.94	0.86	33.5
3	R	39	5.4	0.750	33.2	LOS C	8.8	64.2	0.95	0.92	31.7
Approach		679	5.0	0.750	25.9	LOS B	10.5	77.0	0.94	0.87	33.4
East: Dawn Fraser Avenue (E)											
4	L	89	4.7	0.246	13.5	LOS A	2.1	15.0	0.53	0.72	33.4
5	T	484	5.0	0.744	17.3	LOS B	13.6	99.2	0.87	0.82	29.3
6	R	64	4.9	0.744	24.3	LOS B	13.6	99.2	0.90	0.93	29.0
Approach		638	5.0	0.744	17.5	LOS B	13.6	99.2	0.82	0.82	29.8
North: Edwin Flack Avenue (N)											
7	L	55	5.8	0.611	28.8	LOS C	7.6	55.6	0.87	0.87	33.9
8	T	276	5.0	0.611	22.3	LOS B	7.6	55.6	0.88	0.74	34.7
9	R	78	5.4	0.611	38.6	LOS C	3.2	23.1	0.98	0.81	29.5
Approach		408	5.2	0.611	26.3	LOS B	7.6	55.6	0.90	0.77	33.5
West: Uhrig Road (W)											
10	L	157	4.7	0.279	16.1	LOS B	2.4	17.1	0.54	0.75	41.7
11	T	677	5.0	0.750	17.0	LOS B	17.4	126.8	0.85	0.84	39.1
12	R	24	4.3	0.750	22.3	LOS B	17.4	126.8	0.85	0.94	39.1
Approach		858	4.9	0.750	17.0	LOS B	17.4	126.8	0.79	0.83	39.6
All Vehicles		2583	5.0	0.750	20.9	LOS B	17.4	126.8	0.86	0.83	34.0

PHASING SUMMARY

Site: 2031 FU DV PM -
Conversion

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade
2031 Future with Development PM
Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Phase times determined by the program

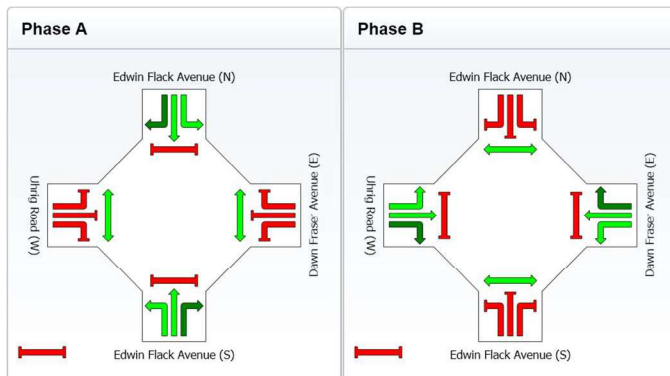
Sequence: Two Phases

Input Sequence: A, B

Output Sequence: A, B

Phase Timing Results

Phase	A	B
Green Time (sec)	16	32
Yellow Time (sec)	4	4
All-Red Time (sec)	2	2
Phase Time (sec)	22	38
Phase Split	37 %	63 %



I-06 Edwin Flack Avenue / Birnie Avenue Intersection

MOVEMENT SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2031 Future with Development AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	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: Edwin Flack Avenue (S)											
1	L	444	10.0	0.427	17.8	LOS B	9.3	70.6	0.58	0.79	40.5
2	T	127	9.9	0.327	29.4	LOS C	4.3	32.8	0.89	0.71	31.6
3	R	7	14.3	0.029	36.2	LOS C	0.2	1.8	0.82	0.68	30.2
Approach		579	10.0	0.427	20.6	LOS B	9.3	70.6	0.65	0.77	38.0
East: Shane Gould Avenue (E)											
4	L	6	16.7	0.150	48.6	LOS D	0.8	6.0	0.97	0.71	26.7
5	T	21	10.0	0.150	39.8	LOS C	0.8	6.0	0.97	0.68	26.8
6	R	13	8.3	0.150	48.2	LOS D	0.8	5.9	0.97	0.71	26.3
Approach		40	10.5	0.150	43.8	LOS D	0.8	6.0	0.97	0.69	26.6
North: Edwin Flack Avenue (N)											
7	L	23	9.1	0.192	27.0	LOS B	2.8	20.9	0.78	0.82	36.1
8	T	215	9.8	0.192	17.8	LOS B	3.5	26.8	0.73	0.58	38.1
9	R	167	10.1	0.572	30.2	LOS C	4.8	36.3	0.96	0.80	32.9
Approach		405	9.9	0.572	23.5	LOS B	4.8	36.3	0.83	0.68	35.7
West: Birnie Avenue (W)											
10	L	181	9.9	0.632	20.0	LOS B	9.3	70.5	0.85	0.84	39.2
11	T	36	8.8	0.632	11.4	LOS A	9.3	70.5	0.85	0.73	40.3
12	R	583	9.9	0.632	28.3	LOS B	11.7	88.7	0.89	0.84	34.0
Approach		800	9.9	0.632	25.7	LOS B	11.7	88.7	0.88	0.83	35.3
All Vehicles		1824	9.9	0.632	24.0	LOS B	11.7	88.7	0.80	0.78	35.9

PHASING SUMMARY

Site: 2031 FU DV AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2031 Future with Development AM

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

Phase times determined by the program

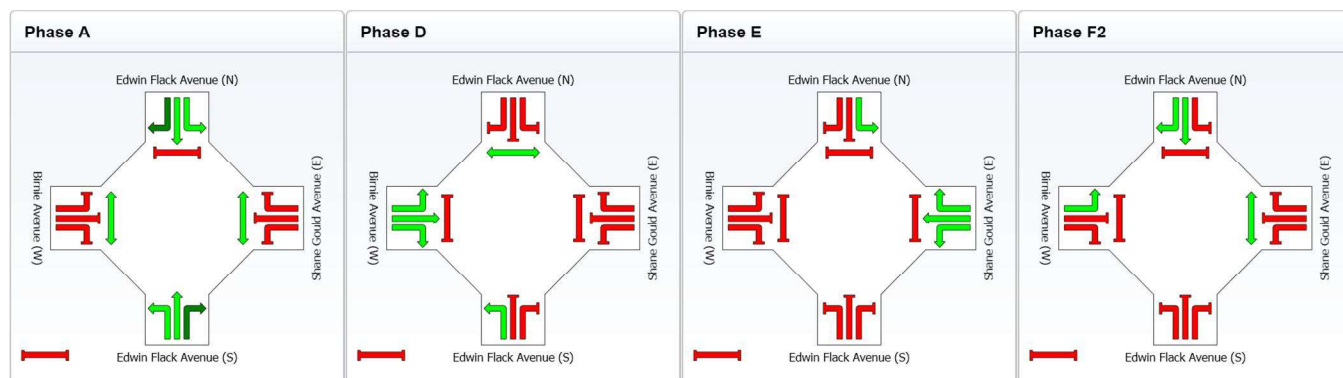
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	17	25	6	8
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	23	31	12	14
Phase Split	29 %	39 %	15 %	18 %



MOVEMENT SUMMARY

Site: 2031 FU DV PM

Carter Street Precinct
I-06 Edwin Flack Avenue / Birnie Avenue
2031 Future with Development PM
Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	821	5.0	0.722	19.9	LOS B	25.5	186.0	0.71	0.85	38.9
2	T	468	4.9	0.722	30.1	LOS C	25.5	186.0	0.93	0.83	31.2
3	R	3	0.0	0.009	31.3	LOS C	0.1	0.7	0.69	0.66	32.2
Approach		1293	5.0	0.722	23.7	LOS B	25.5	186.0	0.79	0.84	35.7
East: Shane Gould Avenue (E)											
4	L	15	7.1	0.456	58.2	LOS E	2.6	18.8	1.00	0.74	23.9
5	T	61	5.2	0.456	49.8	LOS D	2.6	18.8	1.00	0.74	23.8
6	R	31	3.4	0.456	58.1	LOS E	2.6	18.5	1.00	0.74	23.5
Approach		106	5.0	0.456	53.3	LOS D	2.6	18.8	1.00	0.74	23.8
North: Edwin Flack Avenue (N)											
7	L	46	4.5	0.137	24.4	LOS B	2.5	18.5	0.70	0.79	36.9
8	T	172	4.9	0.137	14.8	LOS B	3.2	23.2	0.61	0.49	40.5
9	R	172	4.9	0.678	33.0	LOS C	5.0	36.2	1.00	0.82	31.5
Approach		389	4.9	0.678	24.0	LOS B	5.0	36.2	0.79	0.67	35.6
West: Birnie Avenue (W)											
10	L	175	4.8	0.704	27.0	LOS B	13.4	97.4	0.93	0.85	34.8
11	T	64	4.9	0.704	18.7	LOS B	13.4	97.4	0.93	0.80	35.3
12	R	534	4.9	0.704	37.3	LOS C	14.4	105.0	0.95	0.86	29.8
Approach		773	4.9	0.704	33.4	LOS C	14.4	105.0	0.94	0.85	31.2
All Vehicles		2561	4.9	0.722	27.9	LOS B	25.5	186.0	0.85	0.81	33.5

PHASING SUMMARY

Site: 2031 FU DV PM

Carter Street Precinct
I-06 Edwin Flack Avenue / Birnie Avenue
2031 Future with Development PM
Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Phase times determined by the program

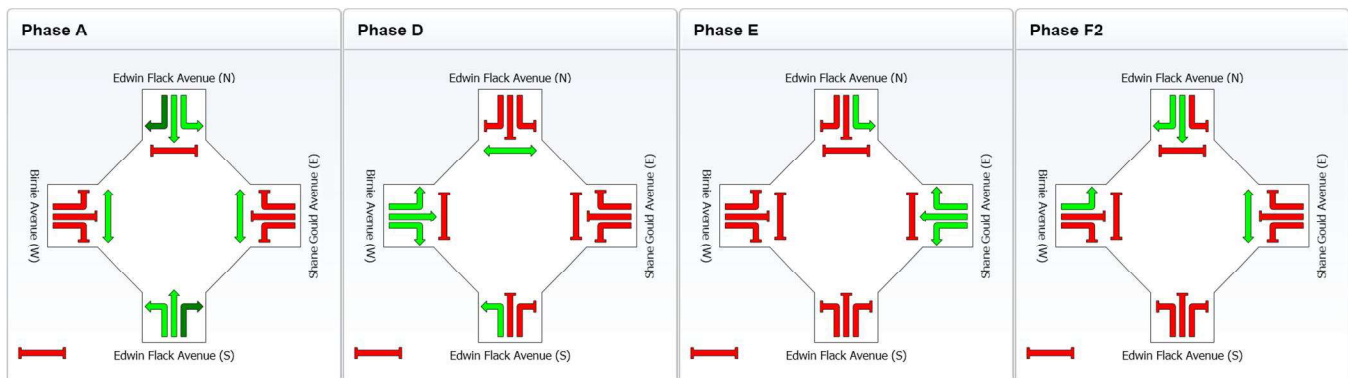
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	31	25	6	9
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	37	31	12	15
Phase Split	39 %	33 %	13 %	16 %



I-07 Carter Street / Uhrig Road Intersection

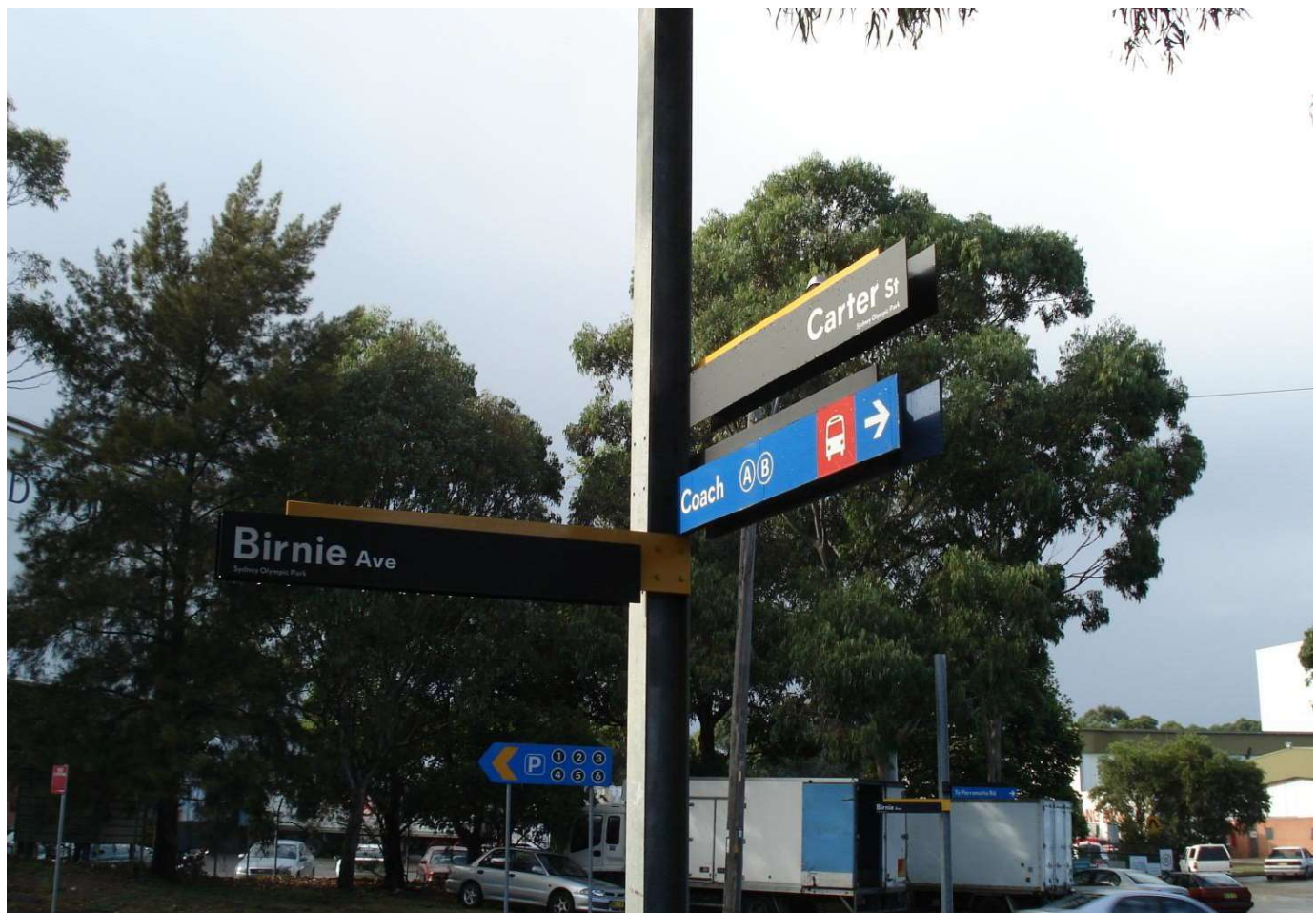
I-08 Parramatta Road / Birnie Avenue Intersection

I-09 Parramatta Road / Hill Road Intersection

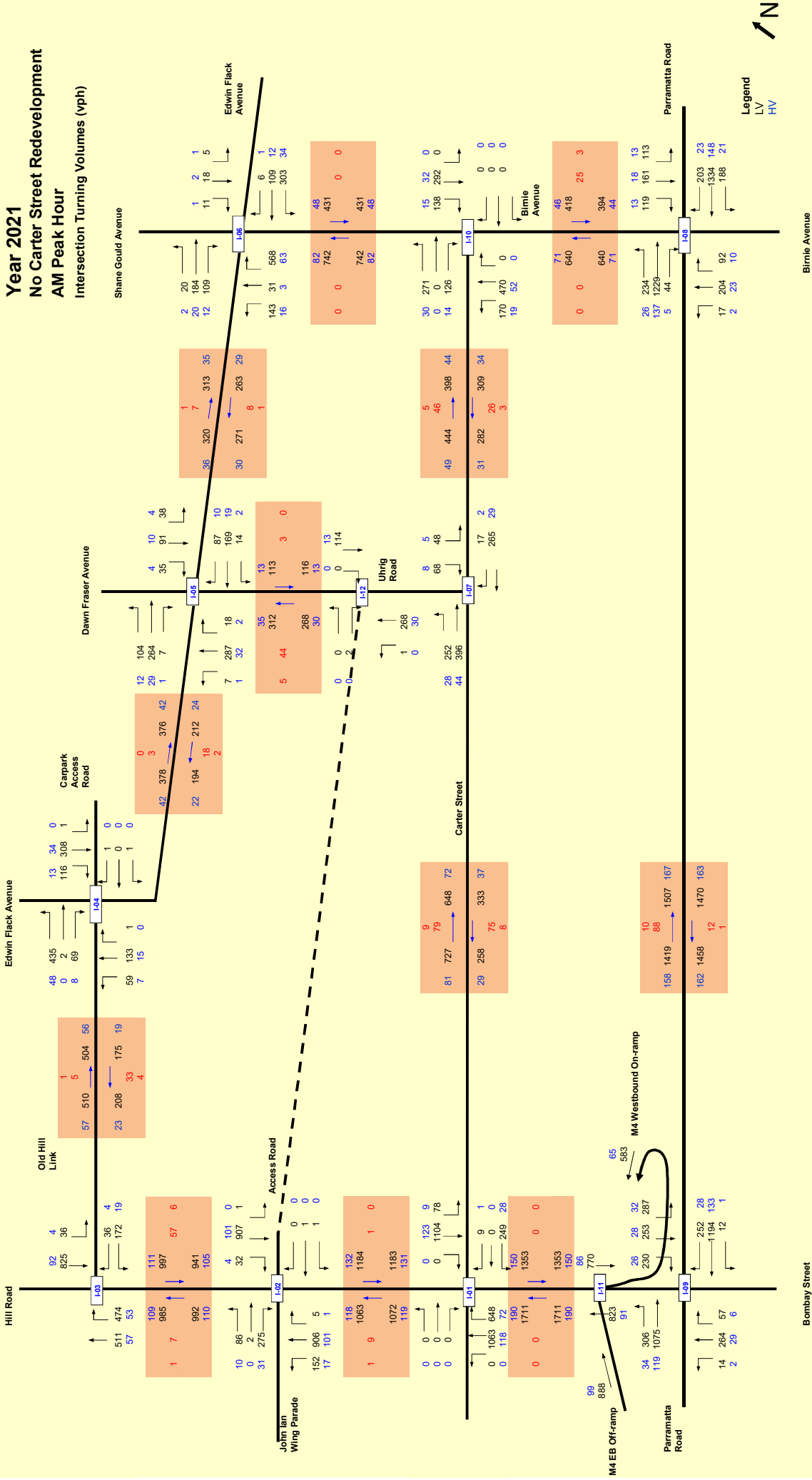
I-10 Carter Street / Birnie Avenue Intersection

Appendix C

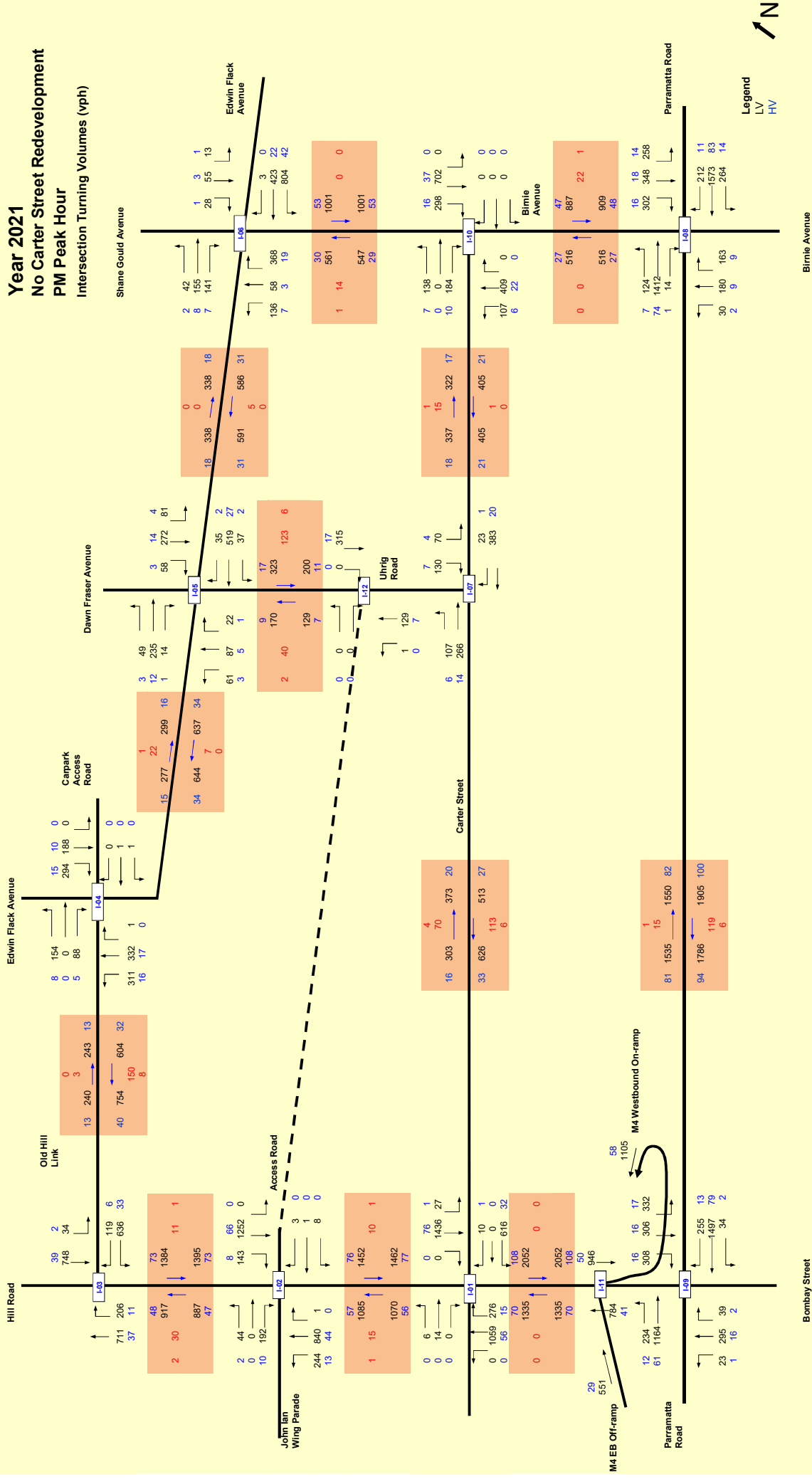
2021 and 2031 Base traffic volumes



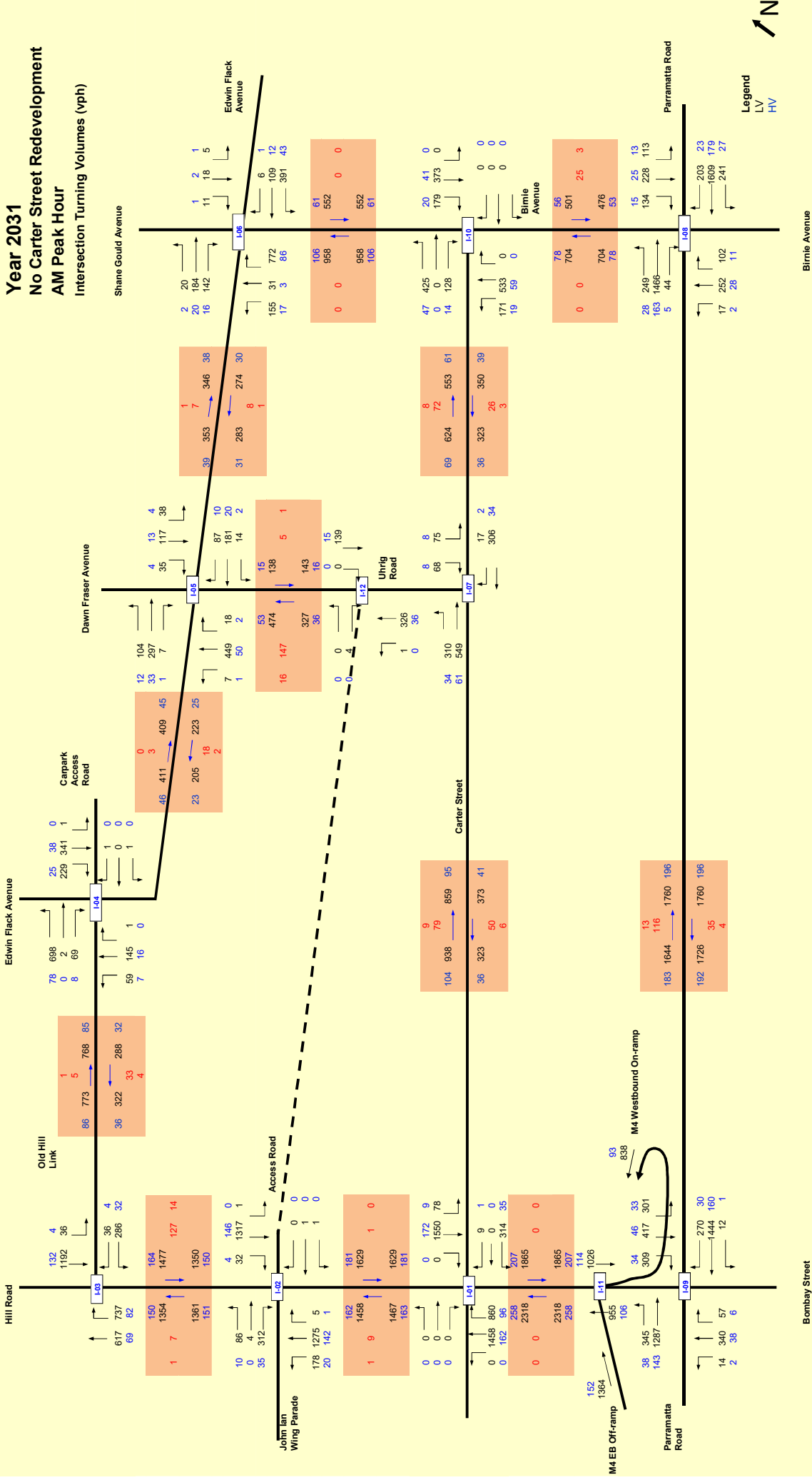
Year 2021
No Carter Street Redevelopment
AM Peak Hour
Intersection Turning Volumes (vph)



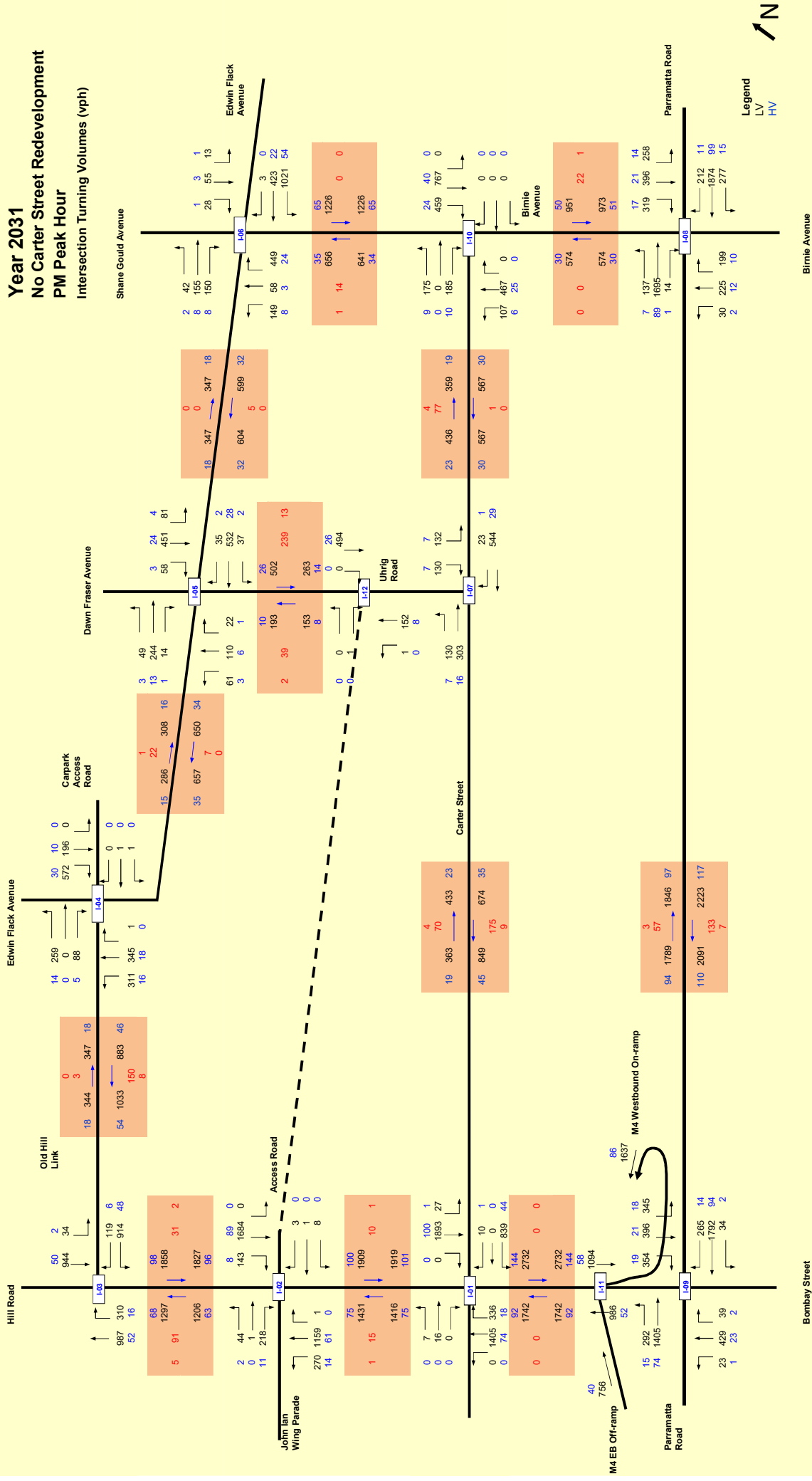
Year 2021
No Carter Street Redevelopment
PM Peak Hour
Intersection Turning Volumes (vph)



Year 2031
No Carter Street Redevelopment
AM Peak Hour
Intersection Turning Volumes (vph)

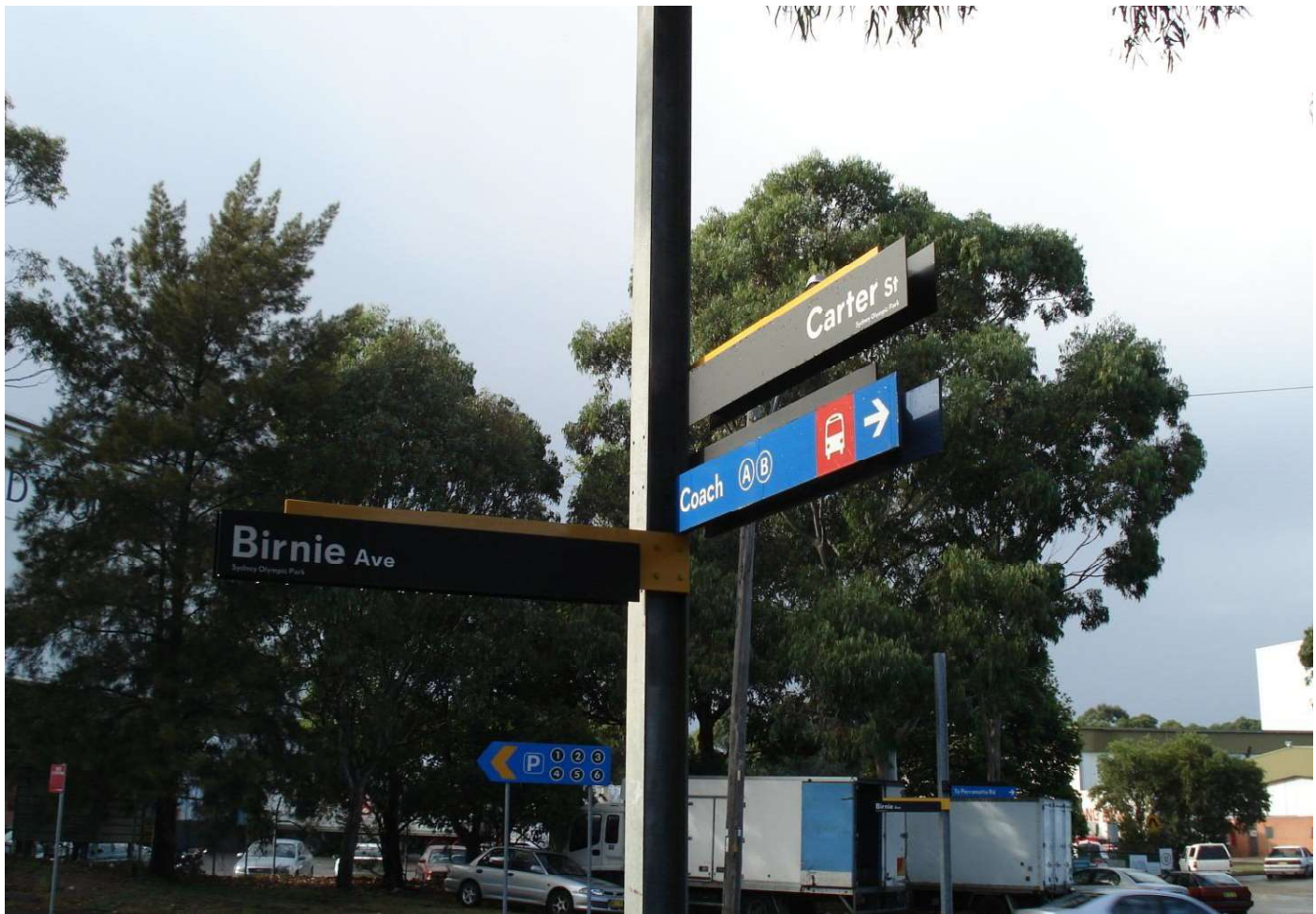


Year 2031
No Carter Street Redevelopment
PM Peak Hour
Intersection Turning Volumes (vph)



Appendix D

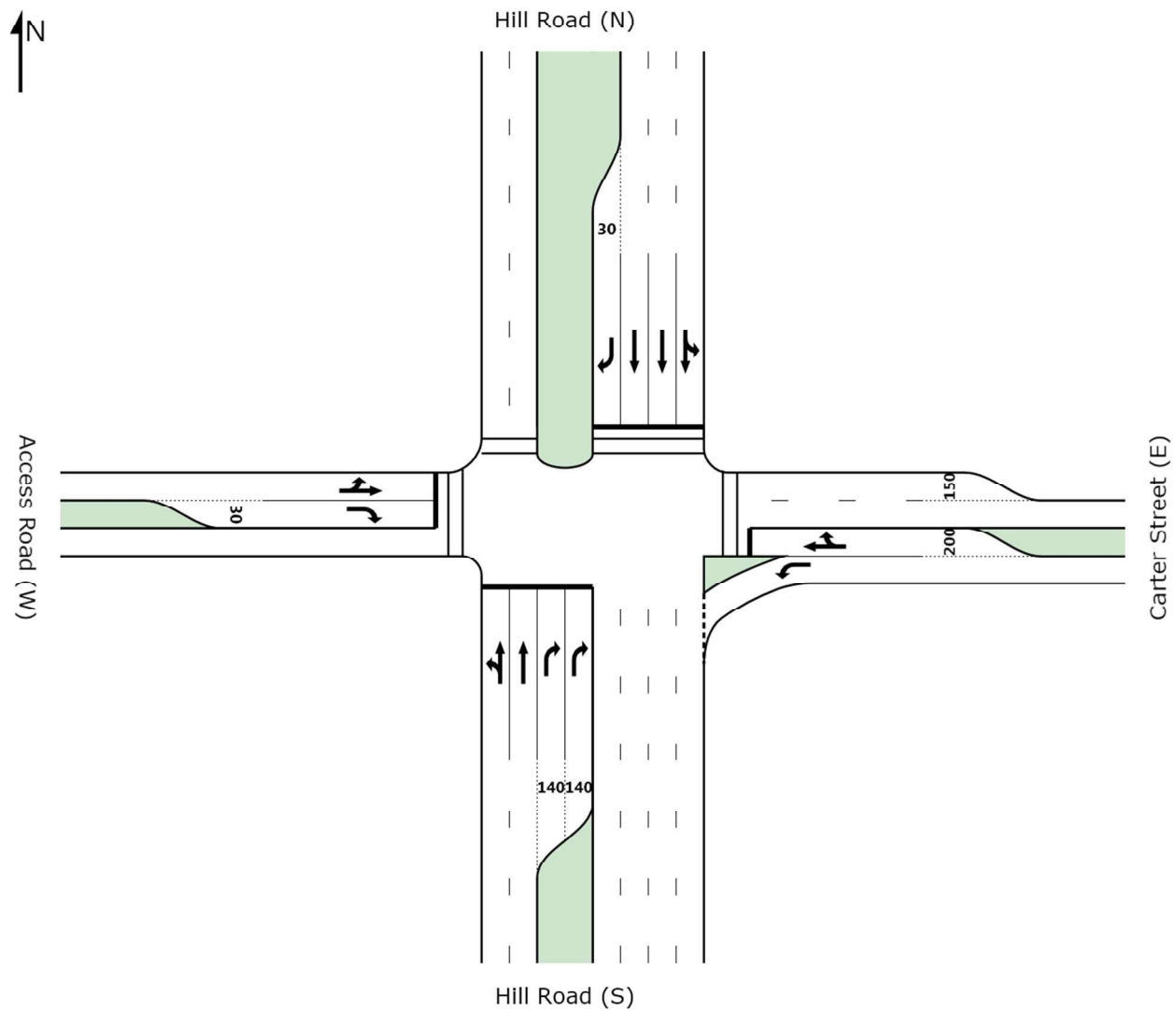
2021 and 2031 Base SIDRA intersection model results



Year 2021 No Carter Street Redevelopment

I-01 Hill Road / Carter Street Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-01 2021 No
Redevelopment AM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	11	0.0	0.435	9.6	LOS A	3.8	28.9	0.09	1.06	47.8
2	T	1243	10.0	0.435	1.5	LOS A	3.8	28.9	0.09	0.08	55.2
3	R	758	10.0	0.738	40.2	LOS C	19.8	150.1	0.70	0.80	20.6
Approach		2012	9.9	0.738	16.1	LOS B	19.8	150.1	0.32	0.36	33.8
East: Carter Street (E)											
4	L	292	10.1	0.272	17.9	LOS B	9.0	68.2	0.47	0.76	40.6
5	T	11	0.0	0.100	62.1	LOS E	1.4	10.0	0.91	0.66	21.1
6	R	11	10.0	0.100	70.4	LOS E	1.4	10.0	0.91	0.73	20.9
Approach		313	9.8	0.272	21.1	LOS B	9.0	68.2	0.50	0.76	38.2
North: Hill Road (N)											
7	L	92	10.3	0.744	53.1	LOS D	27.4	208.5	0.89	0.89	19.0
8	T	1292	10.0	0.744	44.5	LOS D	27.7	210.8	0.89	0.78	19.6
9	R	11	0.0	0.104	45.0	LOS D	0.5	3.3	0.60	0.72	26.8
Approach		1394	10.0	0.744	45.1	LOS D	27.7	210.8	0.88	0.79	19.6
West: Access Road (W)											
10	L	11	0.0	0.083	69.6	LOS E	1.4	9.5	0.91	0.73	20.9
11	T	11	0.0	0.083	61.4	LOS E	1.4	9.5	0.91	0.65	21.2
12	R	11	0.0	0.103	69.5	LOS E	0.7	4.7	0.90	0.68	20.6
Approach		32	0.0	0.103	66.8	LOS E	1.4	9.5	0.91	0.69	20.9
All Vehicles		3749	9.9	0.744	27.7	LOS B	27.7	210.8	0.55	0.56	26.8

PHASING SUMMARY

Site: I-01 2021 No
Redevelopment AM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Phase times determined by the program

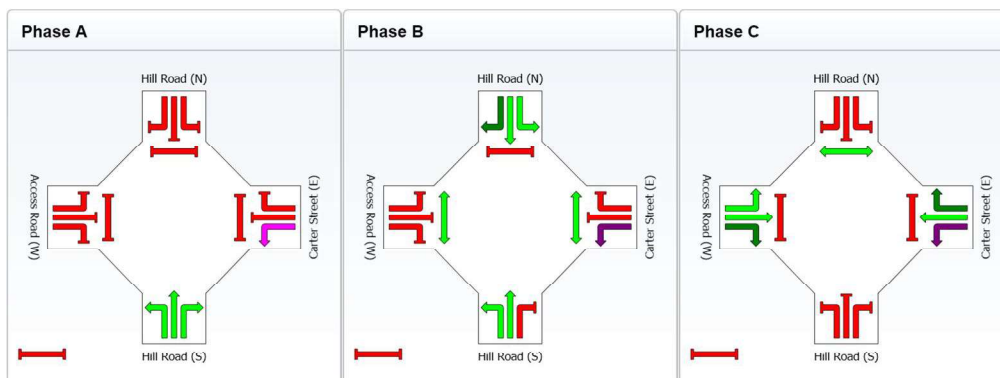
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	61	51	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	67	57	26
Phase Split	45 %	38 %	17 %



MOVEMENT SUMMARY

Site: I-01 2021 No
Redevelopment PM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2021 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	11	0.0	0.495	15.7	LOS B	11.3	82.6	0.29	1.03	42.9
2	T	1174	5.0	0.495	7.5	LOS A	11.3	82.7	0.29	0.26	42.5
3	R	306	5.2	0.557	70.2	LOS E	10.9	80.0	0.93	0.80	13.8
Approach		1491	5.0	0.557	20.5	LOS B	11.3	82.7	0.42	0.38	29.8
East: Carter Street (E)											
4	L	682	4.9	0.671	24.1	LOS B	24.6	179.3	0.71	0.92	36.4
5	T	11	0.0	0.049	41.0	LOS C	1.2	8.4	0.75	0.56	26.7
6	R	12	9.1	0.049	49.3	LOS D	1.2	8.4	0.75	0.75	26.0
Approach		704	4.9	0.671	24.8	LOS B	24.6	179.3	0.71	0.91	35.9
North: Hill Road (N)											
7	L	29	3.6	0.671	40.0	LOS C	27.2	198.1	0.75	0.94	23.1
8	T	1592	5.0	0.671	31.7	LOS C	27.2	198.7	0.75	0.67	24.1
9	R	11	0.0	0.083	32.8	LOS C	0.4	2.5	0.47	0.71	31.5
Approach		1632	5.0	0.671	31.9	LOS C	27.2	198.7	0.75	0.68	24.2
West: Access Road (W)											
10	L	6	0.0	0.038	48.8	LOS D	1.1	7.6	0.75	0.78	26.3
11	T	15	0.0	0.038	40.6	LOS C	1.1	7.6	0.75	0.55	27.0
12	R	11	0.0	0.085	48.7	LOS D	0.5	3.8	0.74	0.68	25.7
Approach		32	0.0	0.085	45.0	LOS D	1.1	7.6	0.75	0.64	26.4
All Vehicles		3858	4.9	0.671	26.3	LOS B	27.2	198.7	0.62	0.60	28.4

PHASING SUMMARY

Site: I-01 2021 No
Redevelopment PM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2021 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Phase times determined by the program

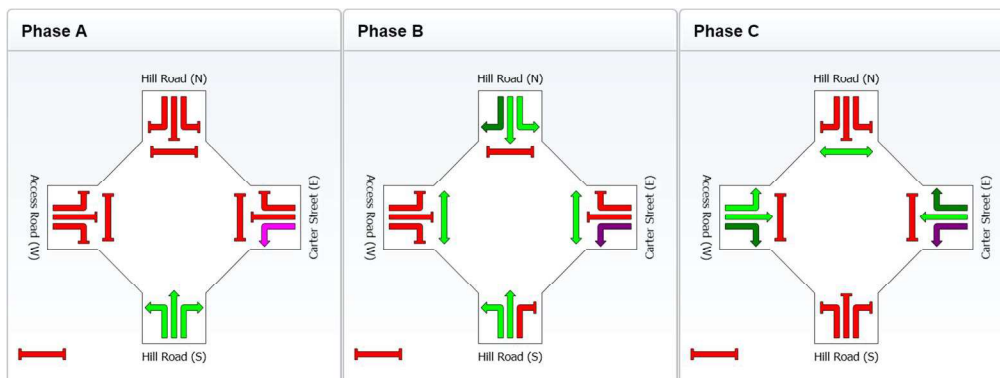
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

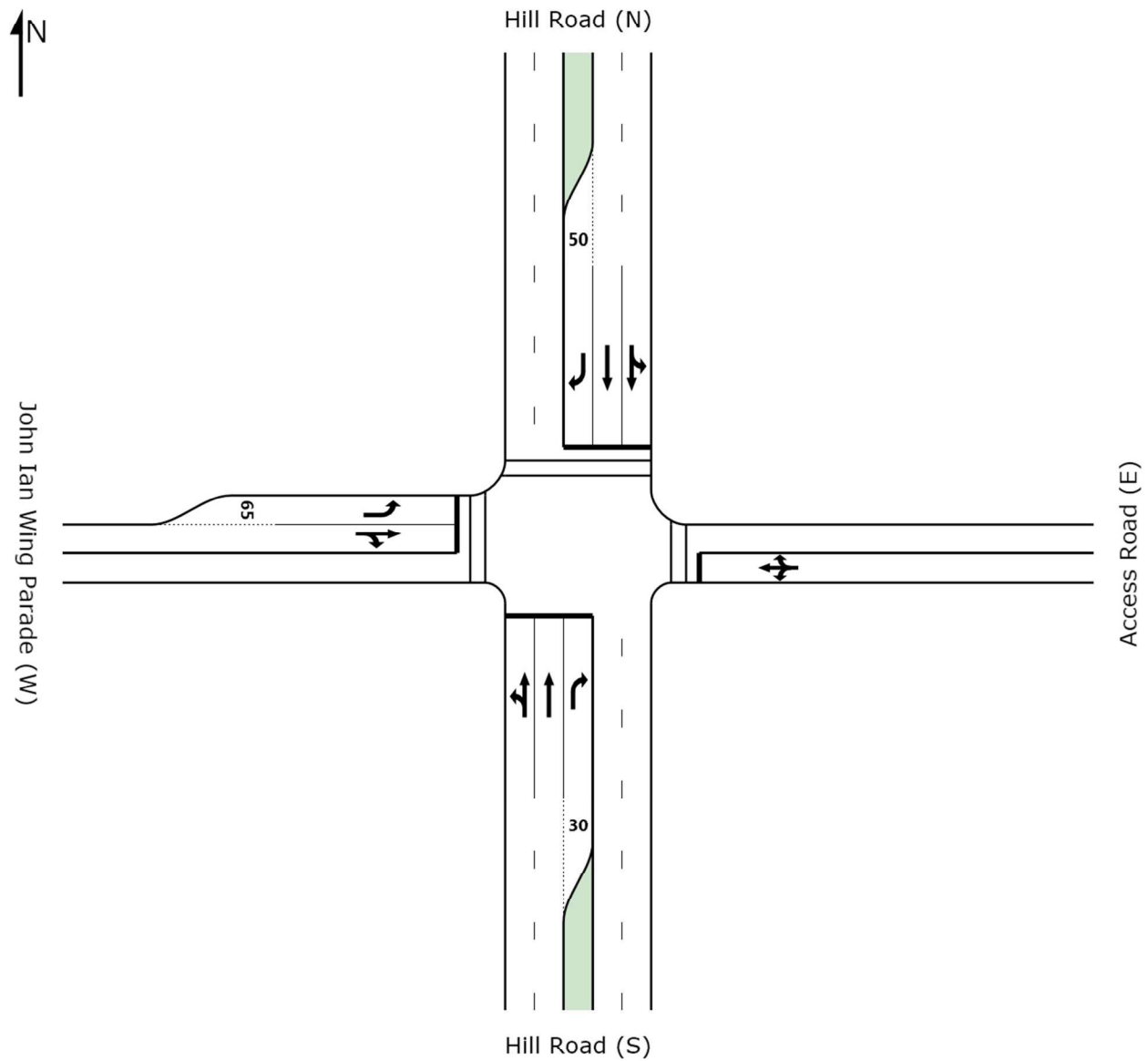
Phase Timing Results

Phase	A	B	C
Green Time (sec)	25	64	43
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	31	70	49
Phase Split	21 %	47 %	33 %



I-02 Hill Road / John Ian Wing Parade Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-02 2021 No
Redevelopment AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2021 No Carter Street Redevelopment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	178	10.1	0.783	32.3	LOS C	23.2	176.5	0.92	0.94	32.3
2	T	1060	10.0	0.783	24.5	LOS B	23.5	179.0	0.92	0.87	33.7
3	R	6	16.7	0.047	43.6	LOS D	0.2	1.3	0.60	0.81	33.7
Approach		1244	10.1	0.783	25.7	LOS B	23.5	179.0	0.92	0.88	33.5
East: Access Road (E)											
4	L	1	0.0	0.014	6.2	LOS A	0.0	0.3	0.45	0.47	16.2
5	T	1	0.0	0.014	4.8	LOS A	0.0	0.3	0.45	0.31	13.5
6	R	1	0.0	0.014	6.3	LOS A	0.0	0.3	0.45	0.47	16.3
Approach		3	0.0	0.014	5.8	LOS A	0.0	0.3	0.45	0.42	15.4
North: Hill Road (N)											
7	L	1	0.0	0.503	33.2	LOS C	8.0	60.5	0.39	0.99	39.6
8	T	1061	10.0	0.503	7.2	LOS A	8.3	62.9	0.40	0.36	48.6
9	R	38	11.1	0.163	23.4	LOS B	0.7	5.2	0.77	0.72	35.5
Approach		1100	10.0	0.503	7.7	LOS A	8.3	62.9	0.41	0.37	48.0
West: John Ian Wing Parade (W)											
10	L	101	10.4	0.231	23.6	LOS B	2.6	19.5	0.64	0.74	33.1
11	T	2	0.0	0.787	53.4	LOS D	13.9	105.8	0.98	0.94	22.7
12	R	322	10.1	0.787	43.0	LOS D	13.9	105.8	0.98	0.93	25.6
Approach		425	10.1	0.787	38.4	LOS C	13.9	105.8	0.90	0.89	27.0
All Vehicles		2773	10.1	0.787	20.5	LOS B	23.5	179.0	0.71	0.68	36.5

PHASING SUMMARY

Site: I-02 2021 No
Redevelopment AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2021 No Carter Street Redevelopment AM

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

Phase times determined by the program

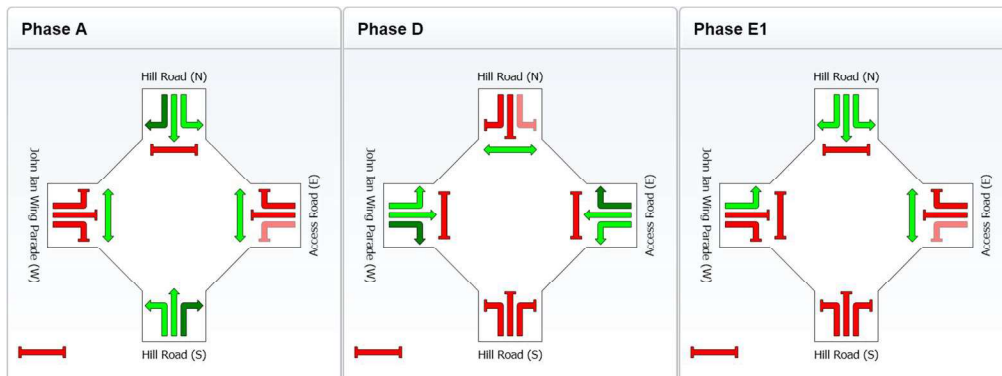
Sequence: TCS3413 AM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

Phase Timing Results

Phase	A	D	E1
Green Time (sec)	37	24	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	43	30	12
Phase Split	51 %	35 %	14 %



MOVEMENT SUMMARY

Site: I-02 2021 No
Redevelopment PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2021 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	271	5.1	0.651	24.9	LOS B	18.4	134.1	0.80	0.89	35.8
2	T	931	5.0	0.651	17.3	LOS B	18.8	137.2	0.80	0.72	38.2
3	R	1	0.0	0.008	38.4	LOS C	0.0	0.2	0.52	0.79	36.0
Approach		1202	5.0	0.651	19.0	LOS B	18.8	137.2	0.80	0.76	37.7
East: Access Road (E)											
4	L	8	0.0	0.061	3.8	LOS A	0.1	0.7	0.32	0.47	17.6
5	T	1	0.0	0.061	2.4	LOS A	0.1	0.7	0.32	0.25	14.9
6	R	3	0.0	0.061	3.9	LOS A	0.1	0.7	0.32	0.47	17.6
Approach		13	0.0	0.061	3.7	LOS A	0.1	0.7	0.32	0.45	17.3
North: Hill Road (N)											
7	L	1	0.0	0.579	30.5	LOS C	8.0	58.5	0.30	1.01	42.0
8	T	1387	5.0	0.579	4.5	LOS A	8.6	62.6	0.31	0.28	52.0
9	R	159	5.3	0.556	20.7	LOS B	2.7	19.7	0.77	0.78	37.2
Approach		1547	5.0	0.579	6.2	LOS A	8.6	62.6	0.36	0.34	50.0
West: John Ian Wing Parade (W)											
10	L	48	4.3	0.114	26.2	LOS B	1.3	9.5	0.68	0.72	31.7
11	T	1	0.0	0.630	51.4	LOS D	8.4	61.0	0.96	0.85	23.3
12	R	213	5.0	0.630	40.9	LOS C	8.4	61.0	0.96	0.83	26.2
Approach		262	4.8	0.630	38.2	LOS C	8.4	61.0	0.91	0.81	27.0
All Vehicles		3024	5.0	0.651	14.0	LOS A	18.8	137.2	0.58	0.54	41.5

PHASING SUMMARY

Site: I-02 2021 No
Redevelopment PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2021 No Carter Street Redevelopment PM

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

Phase times determined by the program

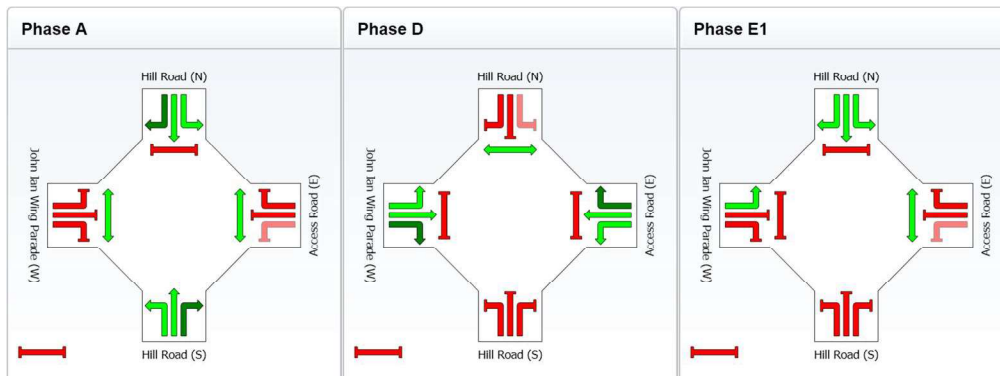
Sequence: TCS3413 PM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

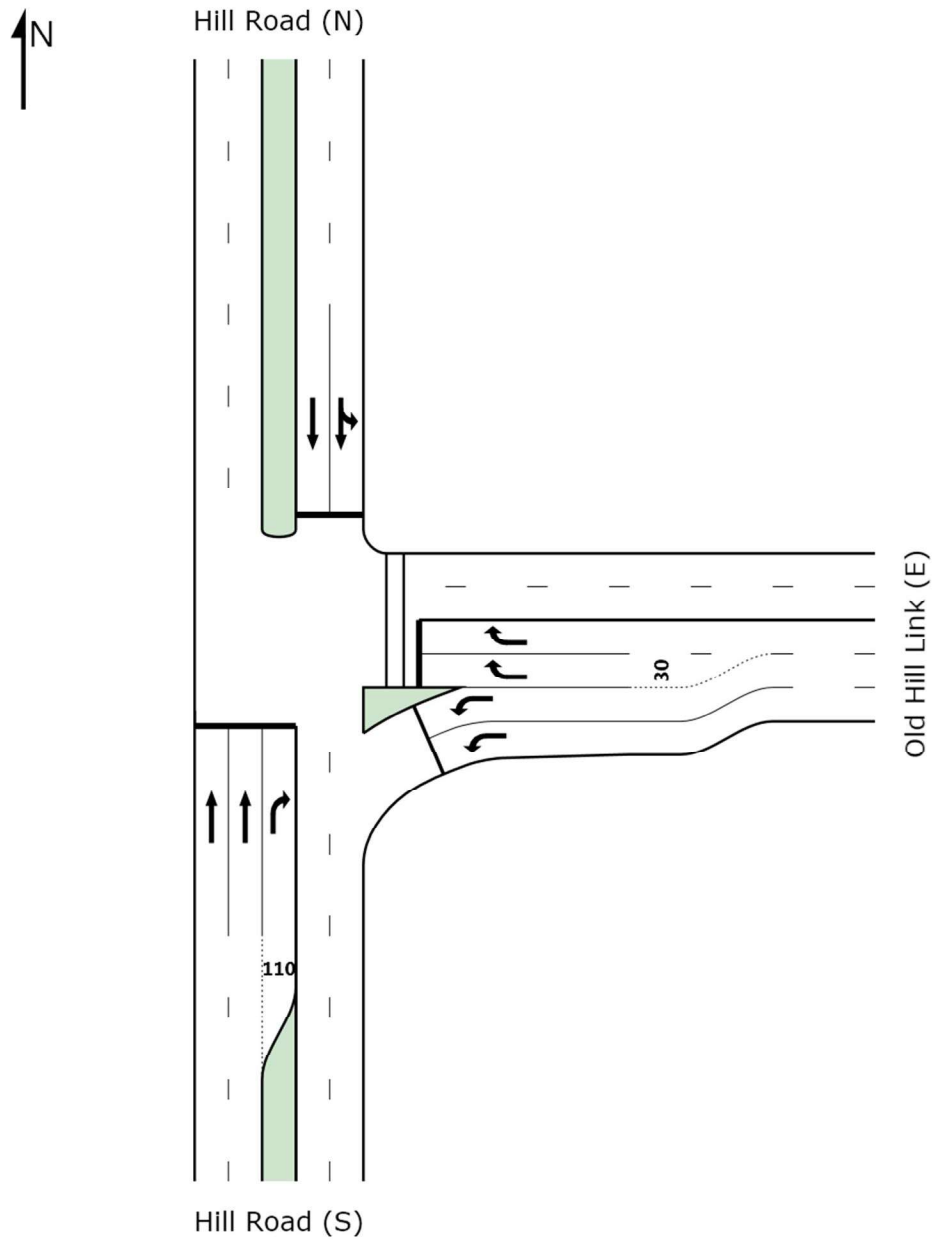
Phase Timing Results

Phase	A	D	E1
Green Time (sec)	42	19	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	48	25	12
Phase Split	56 %	29 %	14 %



I-03 Hill Road / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-03 2021 No
Redevelopment AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 No Carter Street Redevelopment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	598	10.0	0.207	0.7	LOS A	0.8	5.8	0.07	0.06	58.6
3	R	555	10.1	0.741	24.6	LOS B	12.8	97.1	0.74	0.96	36.1
Approach		1153	10.0	0.741	12.2	LOS A	12.8	97.1	0.39	0.49	45.0
East: Old Hill Link (E)											
4	L	201	9.9	0.120	18.1	LOS B	1.6	12.2	0.41	0.68	24.7
6	R	42	10.0	0.172	51.2	LOS D	0.9	6.5	0.95	0.70	11.3
Approach		243	10.0	0.172	23.8	LOS B	1.6	12.2	0.50	0.69	20.7
North: Hill Road (N)											
7	L	42	10.0	0.731	39.0	LOS C	16.8	127.5	0.84	0.96	30.4
8	T	965	10.0	0.731	26.7	LOS B	16.9	128.1	0.84	0.77	32.9
Approach		1007	10.0	0.731	27.2	LOS B	16.9	128.1	0.84	0.78	32.8
All Vehicles		2403	10.0	0.741	19.7	LOS B	16.9	128.1	0.59	0.63	37.2

PHASING SUMMARY

Site: I-03 2021 No
Redevelopment AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 No Carter Street Redevelopment AM

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

Phase times determined by the program

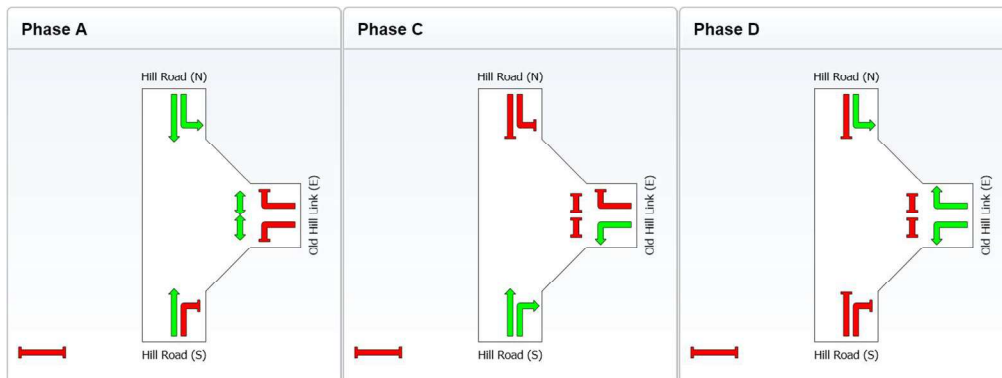
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

Phase	A	C	D
Green Time (sec)	32	29	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	38	35	12
Phase Split	45 %	41 %	14 %



MOVEMENT SUMMARY

Site: I-03 2021 No
Redevelopment PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	787	4.9	0.300	1.8	LOS A	2.0	14.6	0.11	0.10	56.6
3	R	228	5.1	0.482	22.4	LOS B	6.9	50.0	0.63	0.79	37.2
Approach		1016	5.0	0.482	6.4	LOS A	6.9	50.0	0.23	0.25	50.7
East: Old Hill Link (E)											
4	L	704	4.9	0.479	29.3	LOS C	11.1	80.7	0.66	0.78	18.0
6	R	132	4.8	0.263	47.5	LOS D	3.8	27.3	0.83	0.75	12.0
Approach		836	4.9	0.479	32.2	LOS C	11.1	80.7	0.68	0.77	16.7
North: Hill Road (N)											
7	L	38	5.6	0.482	26.7	LOS B	11.3	82.2	0.55	0.97	36.0
8	T	828	5.0	0.482	17.1	LOS B	11.6	84.6	0.56	0.50	39.3
Approach		866	5.0	0.482	17.5	LOS B	11.6	84.6	0.56	0.52	39.1
All Vehicles		2718	5.0	0.482	17.9	LOS B	11.6	84.6	0.47	0.50	36.6

PHASING SUMMARY

Site: I-03 2021 No
Redevelopment PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 No Carter Street Redevelopment PM

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

Phase times determined by the program

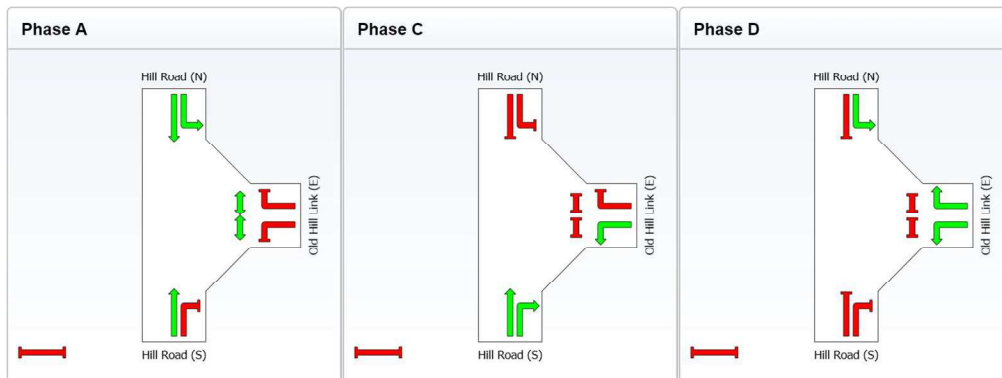
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

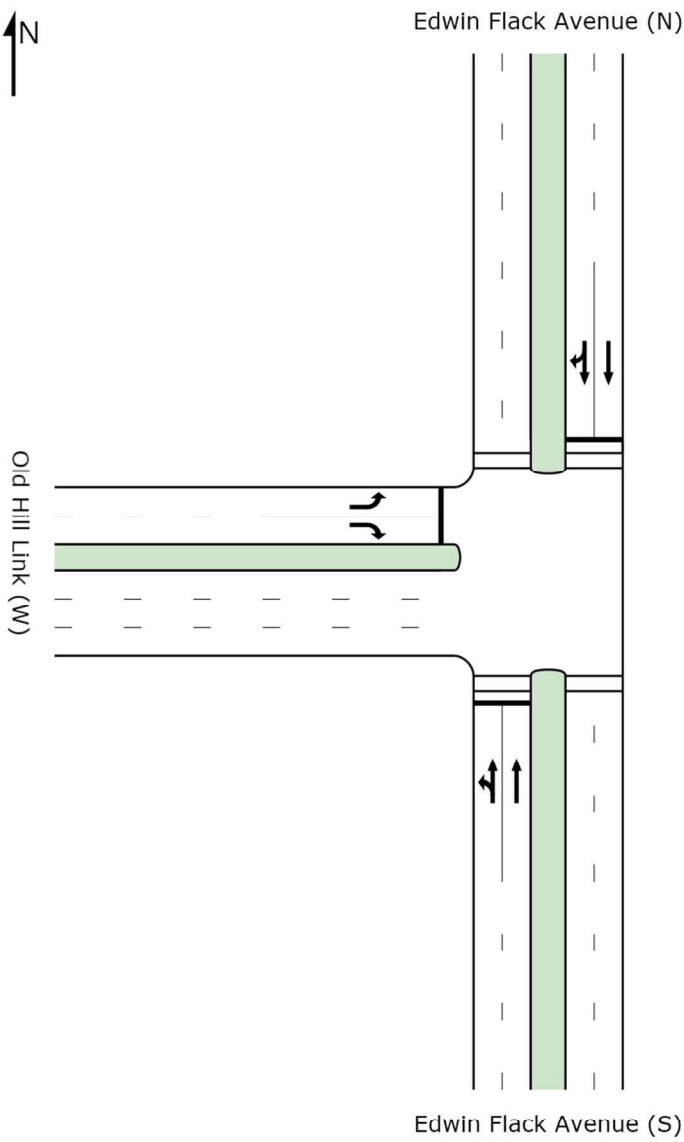
Phase Timing Results

Phase	A	C	D
Green Time (sec)	50	17	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	56	23	26
Phase Split	53 %	22 %	25 %



I-04 Edwin Flack Avenue / Old Hill Link Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-04 2021 No
Redevelopment AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	69	10.6	0.420	21.4	LOS B	2.1	16.2	0.93	0.79	39.2
2	T	156	10.1	0.420	20.9	LOS B	2.6	19.8	0.95	0.74	35.5
Approach		225	10.3	0.420	21.0	LOS B	2.6	19.8	0.94	0.75	36.6
North: Edwin Flack Avenue (N)											
8	T	360	9.9	0.319	7.7	LOS A	3.4	25.9	0.49	0.41	47.2
9	R	136	10.1	0.319	18.0	LOS B	3.1	23.8	0.60	0.79	40.9
Approach		496	10.0	0.319	10.5	LOS A	3.4	25.9	0.52	0.51	45.3
West: Old Hill Link (W)											
10	L	508	9.9	0.448	10.7	LOS A	2.9	21.9	0.22	0.72	46.7
12	R	81	10.4	0.161	24.1	LOS B	1.5	11.1	0.68	0.73	36.4
Approach		589	10.0	0.448	12.5	LOS A	2.9	21.9	0.29	0.72	44.9
All Vehicles		1311	10.0	0.448	13.2	LOS A	3.4	25.9	0.49	0.65	43.4

PHASING SUMMARY

Site: I-04 2021 No
Redevelopment AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

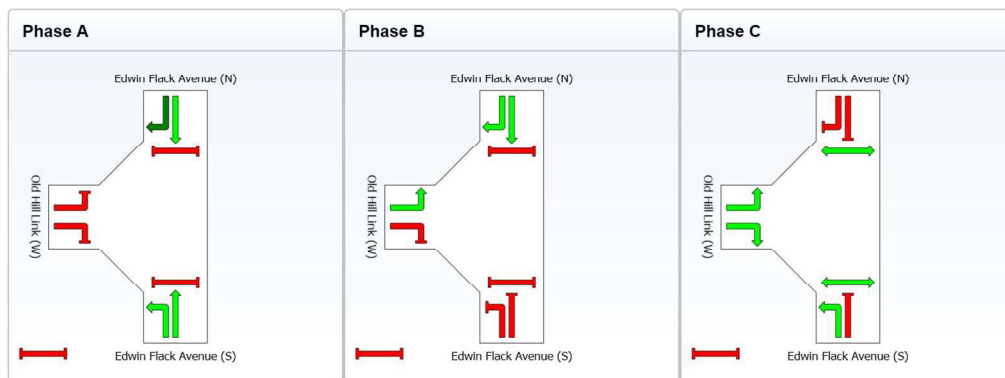
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	7	14	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	13	20	22
Phase Split	24 %	36 %	40 %



MOVEMENT SUMMARY

Site: I-04 2021 No
Redevelopment PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	344	4.9	0.612	17.6	LOS B	6.8	49.5	0.86	0.83	41.0
2	T	367	4.9	0.612	19.6	LOS B	7.8	57.0	0.92	0.78	36.4
Approach		712	4.9	0.612	18.6	LOS B	7.8	57.0	0.89	0.80	38.5
North: Edwin Flack Avenue (N)											
8	T	208	5.1	0.207	5.6	LOS A	2.1	15.1	0.36	0.30	50.4
9	R	325	4.9	0.648	26.7	LOS B	7.2	52.5	0.87	0.89	34.7
Approach		534	4.9	0.648	18.5	LOS B	7.2	52.5	0.67	0.66	39.5
West: Old Hill Link (W)											
10	L	171	4.9	0.173	13.3	LOS A	1.5	11.1	0.32	0.72	44.1
12	R	98	5.4	0.205	26.9	LOS B	2.0	15.0	0.73	0.75	34.7
Approach		268	5.1	0.205	18.3	LOS B	2.0	15.0	0.47	0.73	40.1
All Vehicles		1514	4.9	0.648	18.5	LOS B	7.8	57.0	0.74	0.74	39.1

PHASING SUMMARY

Site: I-04 2021 No
Redevelopment PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 No Carter Street Redevelopment PM

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

Phase times determined by the program

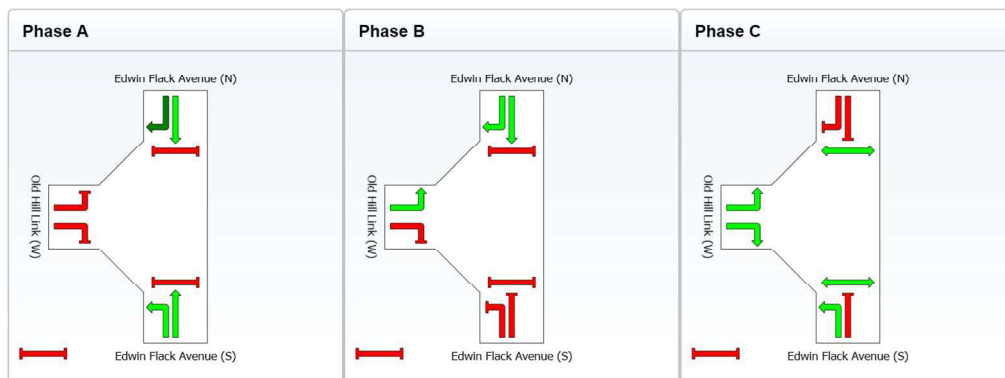
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

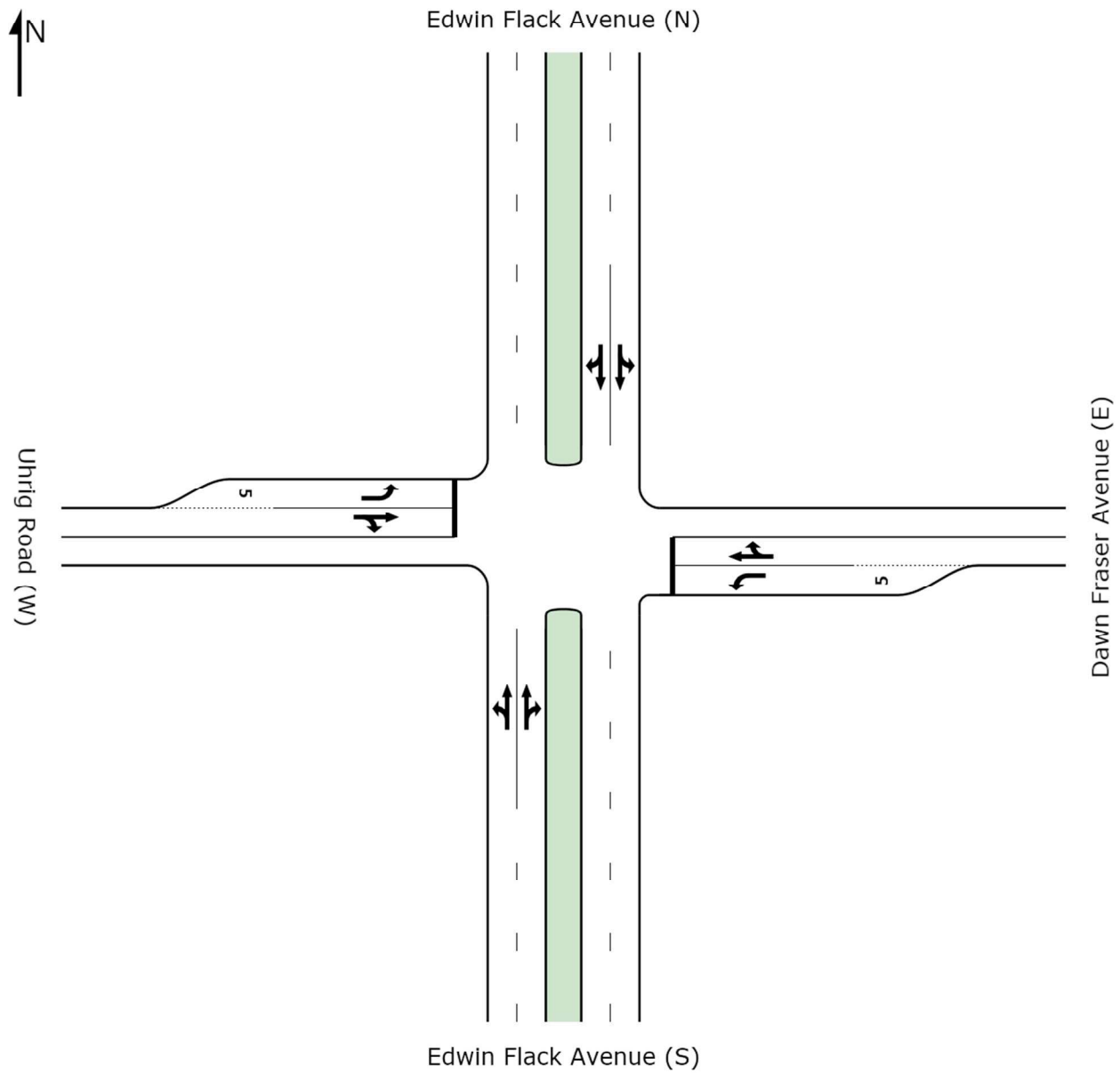
Phase Timing Results

Phase	A	B	C
Green Time (sec)	15	11	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	21	17	22
Phase Split	35 %	28 %	37 %



I-05 Edwin Flack Avenue / Uhrig Road Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-05 2021 AM

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Priority control
2021 Draft Structure Plan Version 2 AM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	17	12.5	0.118	8.6	LOS A	0.0	0.0	0.00	1.06	49.0
2	T	198	10.1	0.118	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R	102	10.3	0.119	9.6	LOS A	0.4	3.2	0.41	0.70	46.2
Approach		317	10.3	0.119	3.5	NA	0.4	3.2	0.13	0.28	54.4
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.157	11.4	LOS A	0.2	1.5	0.41	0.89	35.0
5	T	106	9.9	0.401	21.1	LOS B	1.9	14.8	0.74	1.12	30.5
6	R	41	10.3	0.401	21.1	LOS B	1.9	14.8	0.74	1.10	30.5
Approach		192	9.9	0.401	18.9	LOS B	1.9	14.8	0.66	1.06	31.4
North: Edwin Flack Avenue (N)											
7	L	122	10.3	0.123	7.4	LOS A	0.0	0.0	0.00	0.82	48.7
8	T	308	9.9	0.123	0.8	LOS A	0.9	6.8	0.26	0.00	55.1
9	R	8	12.5	0.123	9.7	LOS A	0.9	6.8	0.38	0.88	49.2
Approach		439	10.1	0.123	2.8	NA	0.9	6.8	0.19	0.24	53.2
West: Uhrig Road (W)											
10	L	8	12.5	0.029	12.5	LOS A	0.0	0.3	0.31	0.84	45.9
11	T	336	10.0	0.836	34.5	LOS C	9.4	71.5	0.91	1.56	30.2
12	R	21	10.0	0.836	35.5	LOS C	9.4	71.5	0.91	1.53	31.3
Approach		365	10.1	0.836	34.0	LOS C	9.4	71.5	0.90	1.54	30.5
All Vehicles		1313	10.1	0.836	14.0	NA	9.4	71.5	0.44	0.73	41.1

MOVEMENT SUMMARY

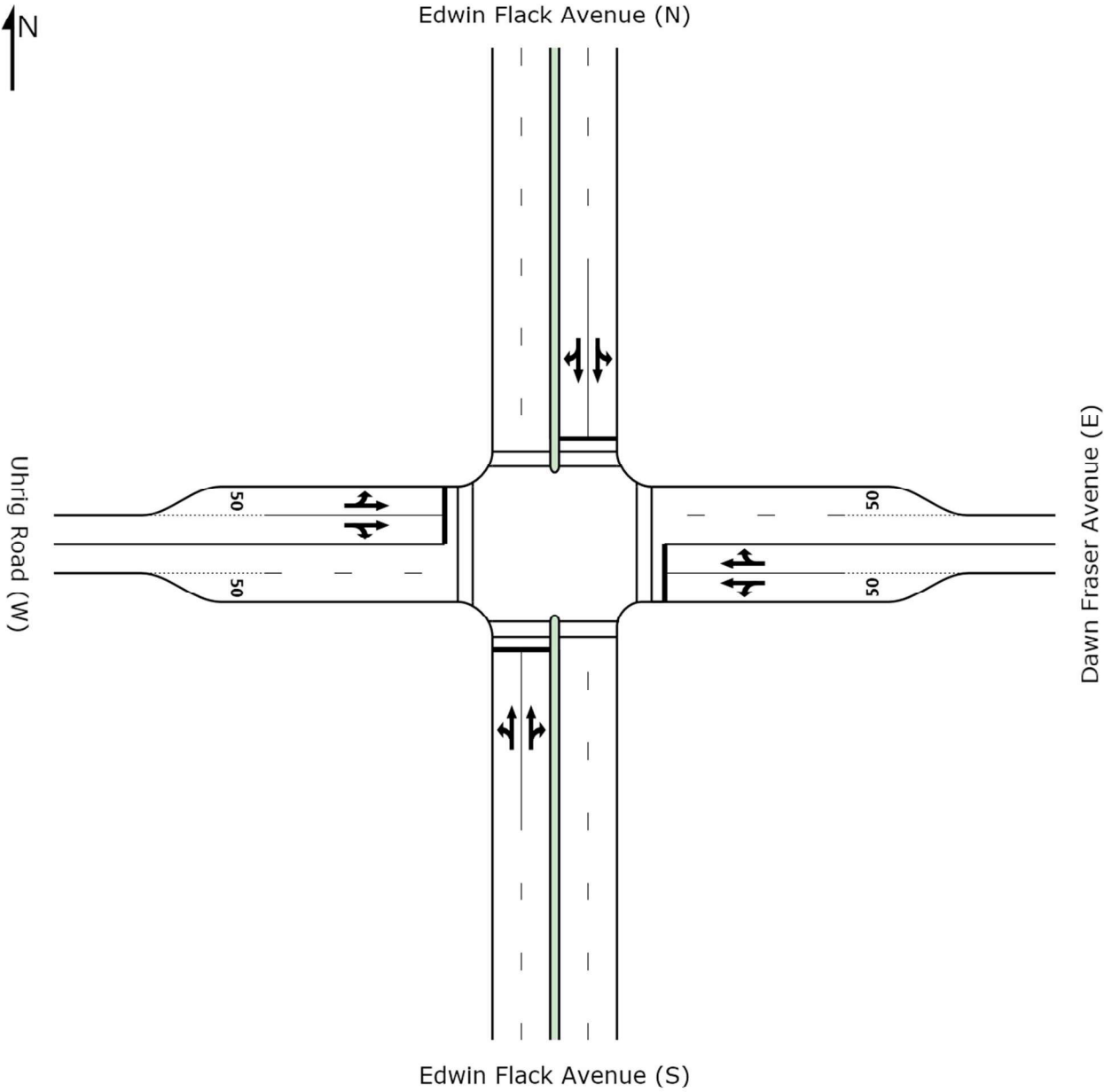
Site: I-05 2021 PM

Carter Street Precinct
I-05 Edwin Flack Avenue / Uhrig Road - Priority control
2021 Draft Structure Plan Version 2 PM
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	41	5.1	0.182	8.4	LOS A	0.0	0.0	0.00	1.02	49.0
2	T	575	4.9	0.182	0.8	LOS A	1.2	8.6	0.19	0.00	56.3
3	R	39	5.4	0.182	8.7	LOS A	1.2	8.6	0.39	0.91	48.9
Approach		655	5.0	0.182	1.7	NA	1.2	8.6	0.19	0.12	55.3
East: Dawn Fraser Avenue (E)											
4	L	89	4.7	0.862	36.1	LOS C	11.2	81.4	0.83	1.99	25.2
5	T	301	4.9	0.862	35.7	LOS C	11.2	81.4	0.83	1.81	25.3
6	R	64	4.9	0.257	24.2	LOS B	0.9	6.9	0.81	1.04	29.2
Approach		455	4.9	0.862	34.2	LOS C	11.2	81.4	0.83	1.74	25.8
North: Edwin Flack Avenue (N)											
7	L	55	5.8	0.094	7.3	LOS A	0.0	0.0	0.00	0.98	48.7
8	T	260	4.9	0.094	1.7	LOS A	0.8	5.7	0.30	0.00	54.4
9	R	16	6.7	0.094	11.4	LOS A	0.8	5.7	0.55	0.91	47.9
Approach		331	5.1	0.094	3.1	NA	0.8	5.7	0.26	0.21	53.1
West: Uhrig Road (W)											
10	L	67	4.7	0.262	14.5	LOS A	0.4	2.8	0.52	0.95	44.0
11	T	97	5.4	0.396	24.7	LOS B	1.8	13.0	0.81	1.08	35.2
12	R	24	4.3	0.396	25.5	LOS B	1.8	13.0	0.81	1.07	36.3
Approach		188	5.0	0.396	21.1	LOS B	1.8	13.0	0.70	1.03	38.3
All Vehicles		1628	5.0	0.862	13.3	NA	11.2	81.4	0.44	0.69	40.1

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-05 2021 No
Redevelopment AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 57 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	17	12.5	0.363	26.9	LOS B	3.9	29.3	0.76	0.87	36.5
2	T	198	10.1	0.363	17.3	LOS B	3.9	29.3	0.76	0.62	38.3
3	R	102	10.3	0.363	18.9	LOS B	2.1	16.0	0.75	0.77	38.6
Approach		317	10.3	0.363	18.3	LOS B	3.9	29.3	0.76	0.68	38.2
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.120	17.4	LOS B	1.0	7.4	0.64	0.71	31.6
5	T	106	9.9	0.363	19.1	LOS B	3.3	24.8	0.85	0.68	28.6
6	R	41	10.3	0.363	26.1	LOS B	3.3	24.8	0.87	0.79	28.3
Approach		192	9.9	0.363	20.2	LOS B	3.3	24.8	0.80	0.71	29.1
North: Edwin Flack Avenue (N)											
7	L	122	10.3	0.441	26.2	LOS B	4.7	36.1	0.79	0.83	34.3
8	T	308	9.9	0.441	22.6	LOS B	5.1	38.8	0.79	0.67	34.9
9	R	8	12.5	0.441	33.0	LOS C	5.1	38.8	0.78	0.91	33.2
Approach		439	10.1	0.441	23.8	LOS B	5.1	38.8	0.79	0.72	34.7
West: Uhrig Road (W)											
10	L	8	12.5	0.184	24.0	LOS B	1.6	11.9	0.75	0.81	37.8
11	T	336	10.0	0.557	21.1	LOS B	7.0	53.2	0.86	0.76	36.1
12	R	21	10.0	0.557	27.3	LOS B	7.0	53.2	0.89	0.85	36.0
Approach		365	10.1	0.557	21.6	LOS B	7.0	53.2	0.86	0.76	36.1
All Vehicles		1313	10.1	0.557	21.3	LOS B	7.0	53.2	0.80	0.72	34.8

PHASING SUMMARY

Site: I-05 2021 No
Redevelopment AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 57 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

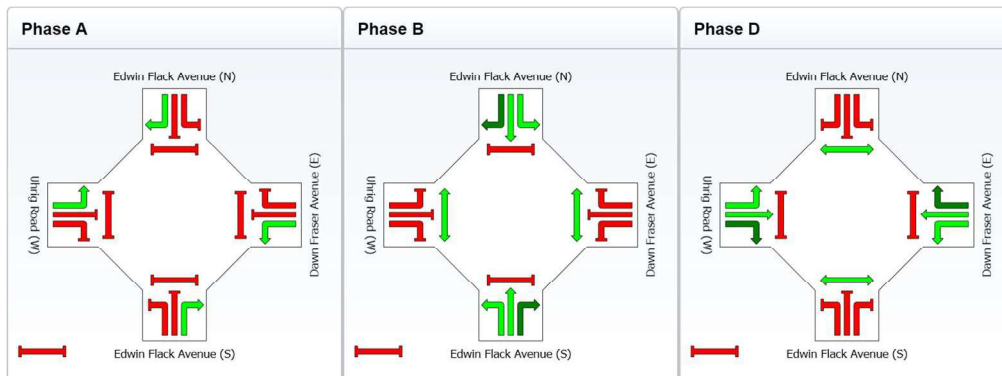
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	16	17
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	22	23
Phase Split	21 %	39 %	40 %



MOVEMENT SUMMARY

Site: I-05 2021 No
Redevelopment PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 57 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	41	5.1	0.652	28.8	LOS C	8.3	60.6	0.88	0.88	35.3
2	T	575	4.9	0.652	22.9	LOS B	8.3	60.6	0.87	0.78	34.7
3	R	39	5.4	0.652	32.8	LOS C	7.4	54.2	0.87	0.94	31.8
Approach		655	5.0	0.652	23.8	LOS B	8.3	60.6	0.87	0.80	34.6
East: Dawn Fraser Avenue (E)											
4	L	89	4.7	0.228	17.7	LOS B	2.0	14.5	0.67	0.73	31.4
5	T	301	4.9	0.691	20.3	LOS B	9.1	66.6	0.92	0.84	28.0
6	R	64	4.9	0.691	26.8	LOS B	9.1	66.6	0.94	0.90	28.1
Approach		455	4.9	0.691	20.7	LOS B	9.1	66.6	0.87	0.82	28.6
North: Edwin Flack Avenue (N)											
7	L	55	5.8	0.343	25.4	LOS B	3.7	26.9	0.76	0.86	35.4
8	T	260	4.9	0.343	21.0	LOS B	3.7	26.9	0.76	0.64	35.9
9	R	16	6.7	0.343	32.0	LOS C	3.4	24.6	0.77	0.90	33.4
Approach		331	5.1	0.343	22.2	LOS B	3.7	26.9	0.76	0.69	35.7
West: Uhrig Road (W)											
10	L	67	4.7	0.120	16.0	LOS B	1.0	7.0	0.53	0.72	41.7
11	T	97	5.4	0.283	21.7	LOS B	2.8	20.4	0.84	0.71	35.3
12	R	24	4.3	0.283	27.0	LOS B	2.8	20.4	0.84	0.81	35.7
Approach		188	5.0	0.283	20.4	LOS B	2.8	20.4	0.73	0.73	37.6
All Vehicles		1628	5.0	0.691	22.2	LOS B	9.1	66.6	0.83	0.77	33.1

PHASING SUMMARY

Site: I-05 2021 No
Redevelopment PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 57 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

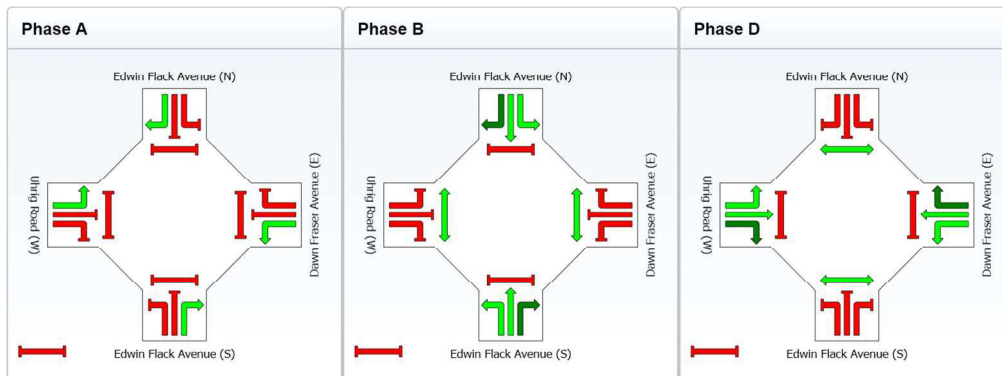
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

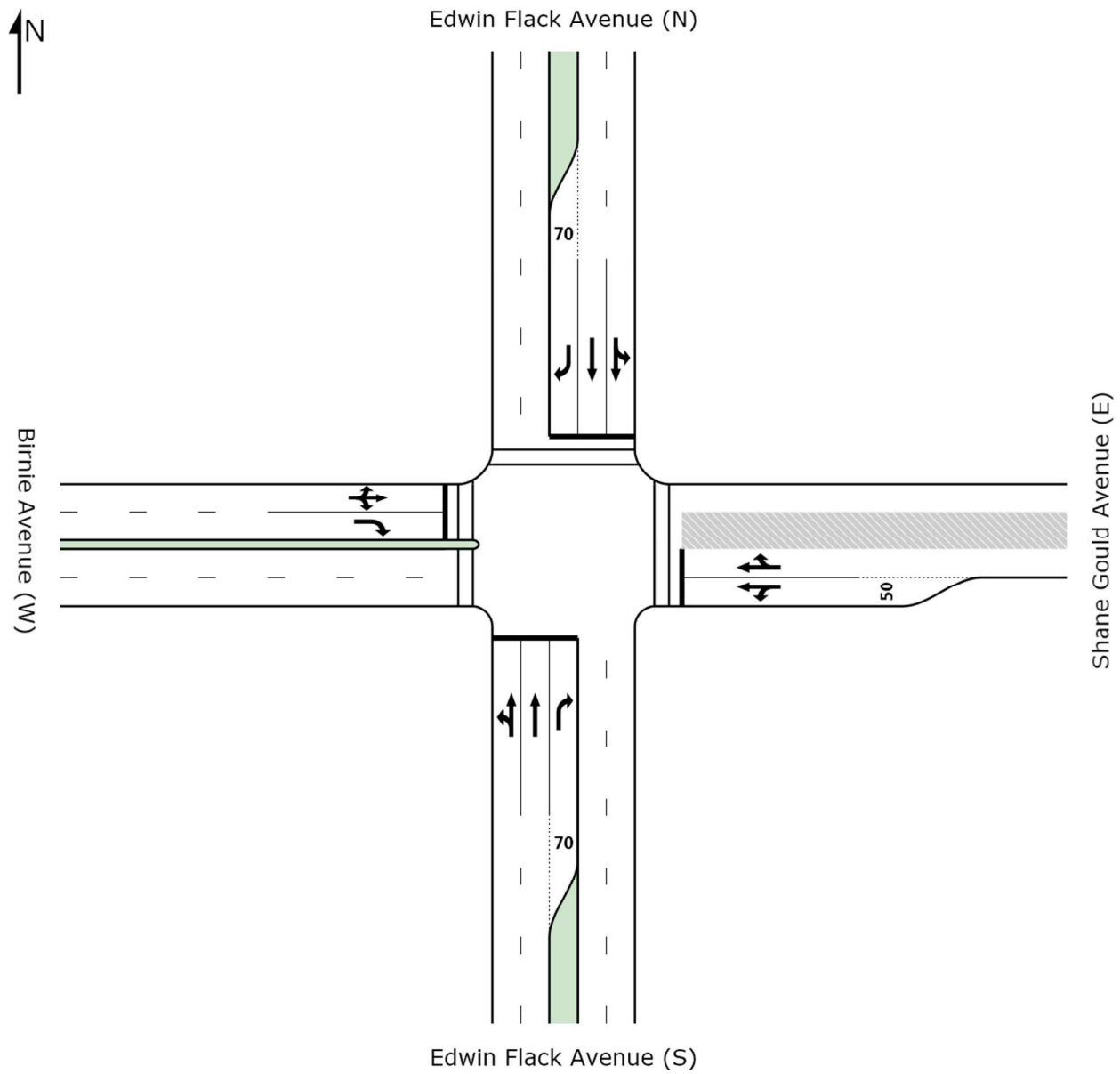
Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	16	17
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	22	23
Phase Split	21 %	39 %	40 %



I-06 Edwin Flack Avenue / Birnie Avenue Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-06 2021 No
Redevelopment AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 No Carter Street Redevelopment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	355	10.1	0.287	9.7	LOS A	3.0	22.7	0.29	0.71	47.7
2	T	127	9.9	0.287	26.5	LOS B	3.8	28.8	0.79	0.62	33.0
3	R	7	14.3	0.031	38.8	LOS C	0.3	2.0	0.83	0.68	29.2
Approach		489	10.1	0.287	14.5	LOS B	3.8	28.8	0.43	0.69	42.4
East: Shane Gould Avenue (E)											
4	L	6	16.7	0.159	51.4	LOS D	0.8	6.4	0.97	0.71	25.8
5	T	21	10.0	0.159	42.6	LOS D	0.8	6.4	0.97	0.68	25.9
6	R	13	8.3	0.159	51.1	LOS D	0.8	6.3	0.97	0.70	25.4
Approach		40	10.5	0.159	46.7	LOS D	0.8	6.4	0.97	0.69	25.7
North: Edwin Flack Avenue (N)											
7	L	23	9.1	0.201	28.9	LOS C	2.9	22.2	0.80	0.82	35.0
8	T	215	9.8	0.201	19.6	LOS B	3.9	29.4	0.74	0.59	36.9
9	R	127	9.9	0.322	29.7	LOS C	3.8	28.8	0.84	0.77	33.2
Approach		365	9.8	0.322	23.7	LOS B	3.9	29.4	0.78	0.67	35.4
West: Birnie Avenue (W)											
10	L	167	10.1	0.636	19.6	LOS B	10.2	77.4	0.83	0.84	39.4
11	T	36	8.8	0.636	11.1	LOS A	10.2	77.4	0.83	0.72	40.6
12	R	664	10.0	0.636	27.8	LOS B	13.3	101.1	0.87	0.84	34.3
Approach		867	10.0	0.636	25.5	LOS B	13.3	101.1	0.86	0.84	35.4
All Vehicles		1762	10.0	0.636	22.6	LOS B	13.3	101.1	0.73	0.76	36.8

PHASING SUMMARY

Site: I-06 2021 No
Redevelopment AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 No Carter Street Redevelopment AM

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

Phase times determined by the program

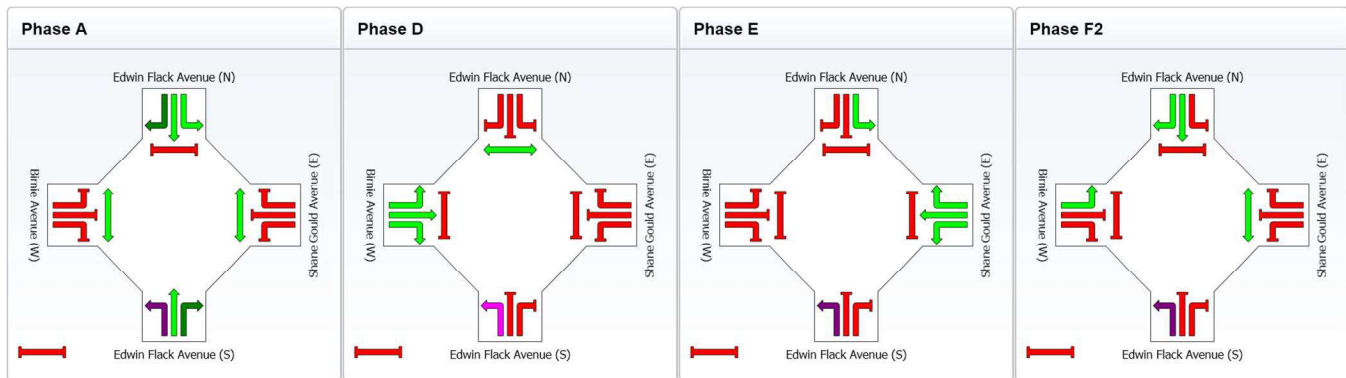
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	17	29	6	9
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	23	35	12	15
Phase Split	27 %	41 %	14 %	18 %



MOVEMENT SUMMARY

Site: I-06 2021 No
Redevelopment PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	891	5.0	0.767	19.6	LOS B	25.8	188.1	0.76	0.86	39.1
2	T	468	4.9	0.727	27.5	LOS B	17.6	128.2	0.94	0.84	32.5
3	R	3	0.0	0.008	28.0	LOS B	0.1	0.6	0.68	0.66	33.9
Approach		1362	4.9	0.767	22.4	LOS B	25.8	188.1	0.82	0.85	36.5
East: Shane Gould Avenue (E)											
4	L	15	7.1	0.408	52.3	LOS D	2.3	16.7	0.99	0.75	25.5
5	T	61	5.2	0.408	43.8	LOS D	2.3	16.7	0.99	0.74	25.5
6	R	31	3.4	0.408	52.1	LOS D	2.3	16.4	0.99	0.74	25.1
Approach		106	5.0	0.408	47.4	LOS D	2.3	16.7	0.99	0.74	25.4
North: Edwin Flack Avenue (N)											
7	L	46	4.5	0.134	22.4	LOS B	2.3	17.1	0.68	0.79	38.1
8	T	172	4.9	0.134	13.3	LOS A	2.8	20.3	0.61	0.49	41.7
9	R	156	4.7	0.709	32.0	LOS C	4.2	30.4	1.00	0.83	32.0
Approach		374	4.8	0.709	22.2	LOS B	4.2	30.4	0.78	0.67	36.6
West: Birnie Avenue (W)											
10	L	151	4.9	0.634	25.3	LOS B	9.3	67.8	0.92	0.84	35.9
11	T	64	4.9	0.634	17.0	LOS B	9.3	67.8	0.92	0.78	36.4
12	R	407	4.9	0.634	35.2	LOS C	10.2	74.7	0.94	0.83	30.6
Approach		622	4.9	0.634	31.0	LOS C	10.2	74.7	0.93	0.83	32.3
All Vehicles		2464	4.9	0.767	25.6	LOS B	25.8	188.1	0.85	0.81	34.7

PHASING SUMMARY

Site: I-06 2021 No
Redevelopment PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 No Carter Street Redevelopment PM

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

Phase times determined by the program

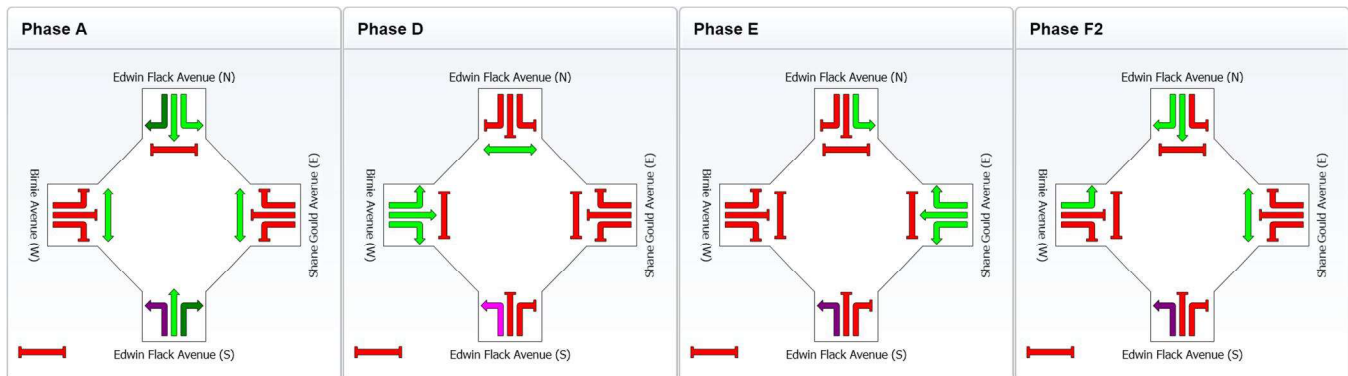
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

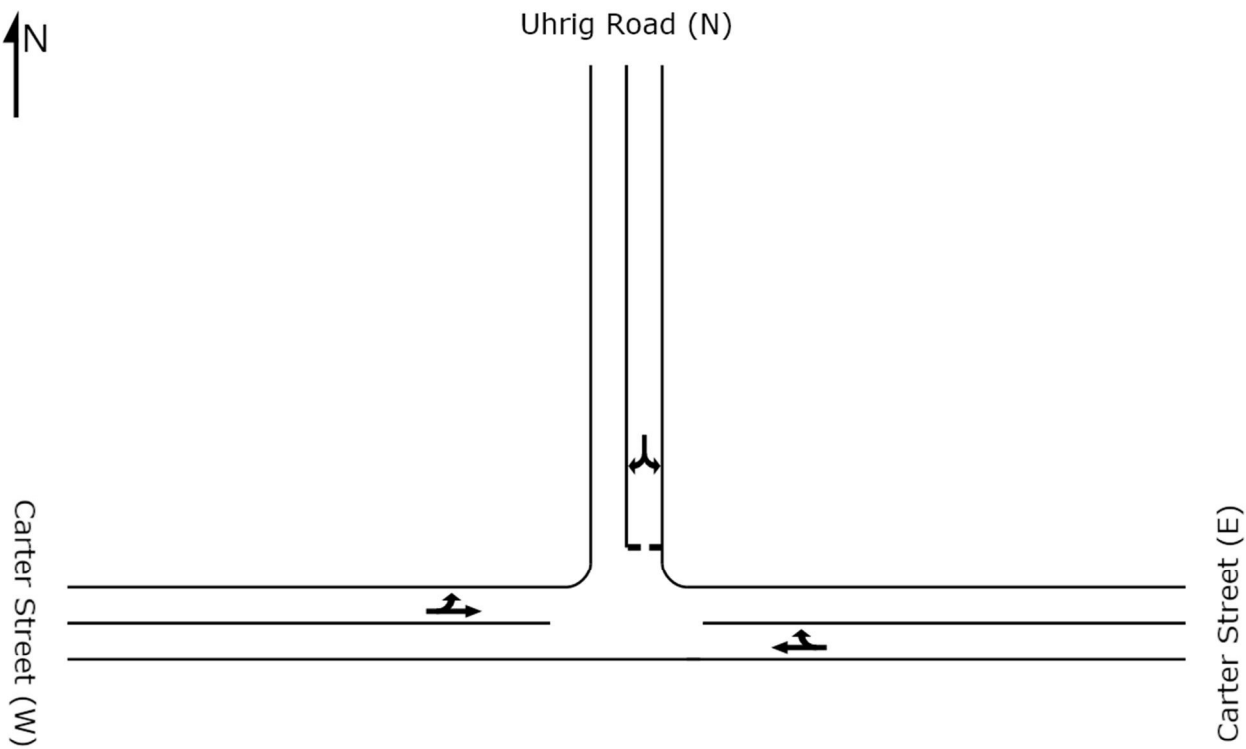
Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	29	20	6	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	35	26	12	12
Phase Split	41 %	31 %	14 %	14 %



I-07 Carter Street / Uhrig Road Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-07 2021 No
Redevelopment AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2021 No Carter Street Redevelopment AM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	309	9.9	0.213	9.0	LOS A	3.1	23.5	0.85	0.00	44.8
6	R	20	10.5	0.213	17.9	LOS B	3.1	23.5	0.85	1.04	43.6
Approach		329	9.9	0.213	9.5	NA	3.1	23.5	0.85	0.06	44.8
North: Uhrig Road (N)											
7	L	56	9.4	0.448	23.3	LOS B	1.9	14.5	0.81	1.04	36.6
9	R	80	10.5	0.448	23.6	LOS B	1.9	14.5	0.81	1.03	36.6
Approach		136	10.1	0.448	23.5	LOS B	1.9	14.5	0.81	1.04	36.6
West: Carter Street (W)											
10	L	295	10.0	0.423	8.6	LOS A	0.0	0.0	0.00	0.88	49.0
11	T	463	10.0	0.423	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		758	10.0	0.423	3.3	NA	0.0	0.0	0.00	0.34	55.2
All Vehicles		1223	10.0	0.448	7.2	NA	3.1	23.5	0.32	0.34	49.3

MOVEMENT SUMMARY

Site: I-07 2021 No
Redevelopment PM

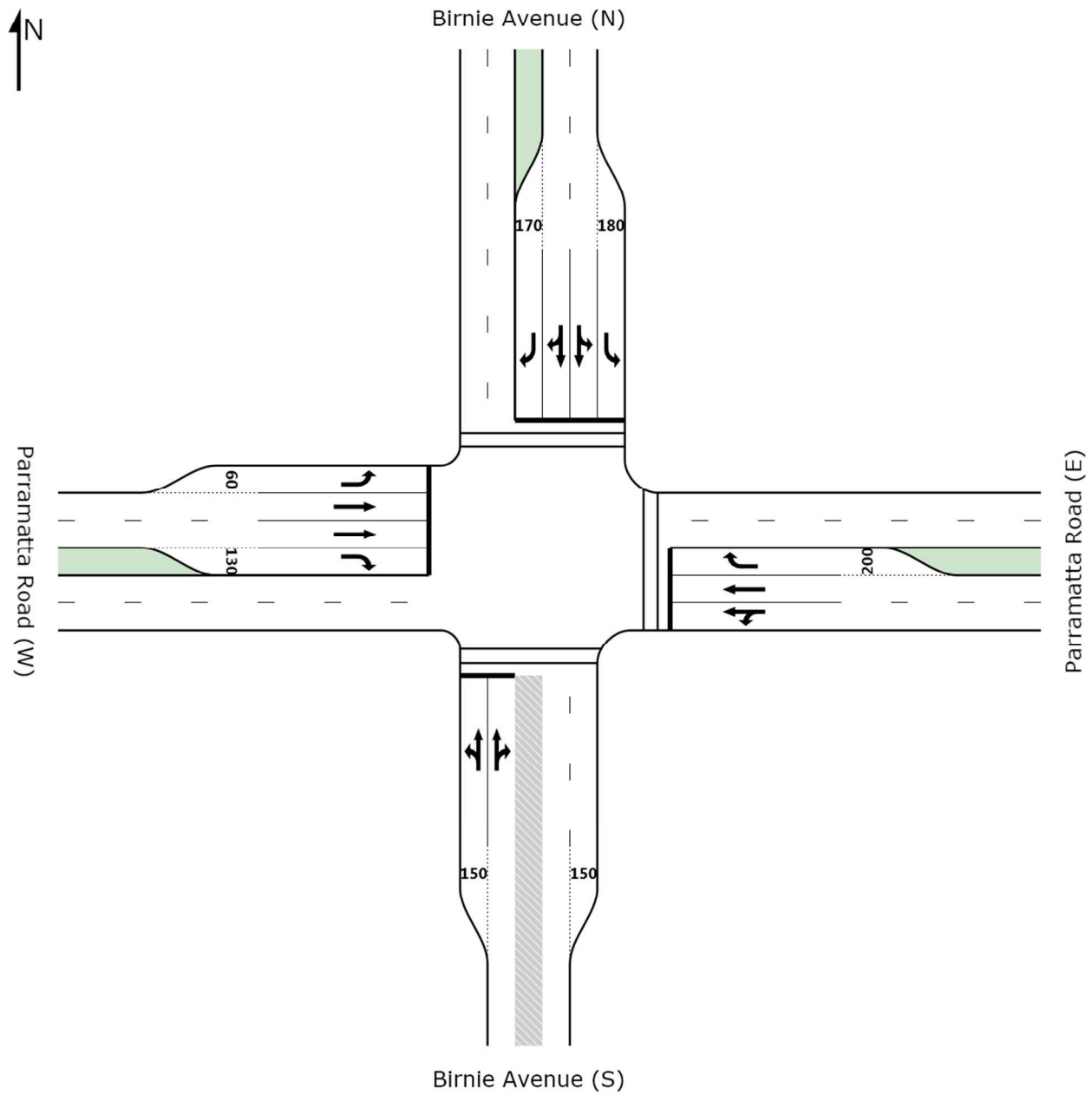
Carter Street Precinct
I-07 Carter Street / Uhrig Road
2021 No Carter Street Redevelopment PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	424	5.0	0.252	2.7	LOS A	2.3	16.7	0.61	0.00	49.7
6	R	25	4.2	0.252	11.3	LOS A	2.3	16.7	0.61	1.00	48.7
Approach		449	4.9	0.252	3.2	NA	2.3	16.7	0.61	0.06	49.6
North: Uhrig Road (N)											
7	L	78	5.4	0.492	18.2	LOS B	2.5	18.6	0.68	0.95	39.9
9	R	144	5.1	0.492	18.5	LOS B	2.5	18.6	0.68	1.01	39.9
Approach		222	5.2	0.492	18.4	LOS B	2.5	18.6	0.68	0.99	39.9
West: Carter Street (W)											
10	L	119	5.3	0.223	8.4	LOS A	0.0	0.0	0.00	0.92	49.0
11	T	295	5.0	0.223	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		414	5.1	0.223	2.4	NA	0.0	0.0	0.00	0.26	56.4
All Vehicles		1085	5.0	0.492	6.0	NA	2.5	18.6	0.39	0.33	49.4

I-08 Parramatta Road / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-08 2021 No
Redevelopment AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 110 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	20	10.5	0.863	69.6	LOS E	11.2	84.9	1.00	0.99	21.4
2	T	239	10.1	0.863	61.1	LOS E	11.2	84.9	1.00	0.99	21.4
3	R	107	9.8	0.863	69.6	LOS E	10.9	82.8	1.00	0.99	21.0
Approach		366	10.1	0.863	64.0	LOS E	11.2	84.9	1.00	0.99	21.3
East: Parramatta Road (E)											
4	L	220	10.0	0.800	17.5	LOS B	24.3	184.8	0.56	0.94	42.2
5	T	1560	10.0	0.800	9.3	LOS A	25.4	192.8	0.57	0.53	45.4
6	R	238	10.2	0.858	49.1	LOS D	9.4	71.6	1.00	0.98	25.7
Approach		2018	10.0	0.858	14.9	LOS B	25.4	192.8	0.62	0.63	41.3
North: Birnie Avenue (N)											
7	L	133	10.3	0.281	42.6	LOS D	5.1	38.6	0.75	0.78	27.7
8	T	188	10.1	0.589	52.1	LOS D	6.1	46.2	0.97	0.77	23.6
9	R	139	9.8	0.589	60.9	LOS E	6.1	46.2	0.98	0.79	22.7
Approach		460	10.1	0.589	52.0	LOS D	6.1	46.2	0.91	0.78	24.4
West: Parramatta Road (W)											
10	L	274	10.0	0.369	13.4	LOS A	2.6	19.9	0.35	0.73	44.2
11	T	1438	10.0	0.882	32.8	LOS C	37.2	282.6	0.92	0.92	30.1
12	R	52	10.2	0.607	44.2	LOS D	2.4	18.4	0.78	0.84	27.1
Approach		1763	10.0	0.882	30.1	LOS C	37.2	282.6	0.83	0.89	31.6
All Vehicles		4607	10.0	0.882	28.3	LOS B	37.2	282.6	0.76	0.77	32.7

PHASING SUMMARY

Site: I-08 2021 No
Redevelopment AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 110 seconds (Practical Cycle Time)

Phase times determined by the program

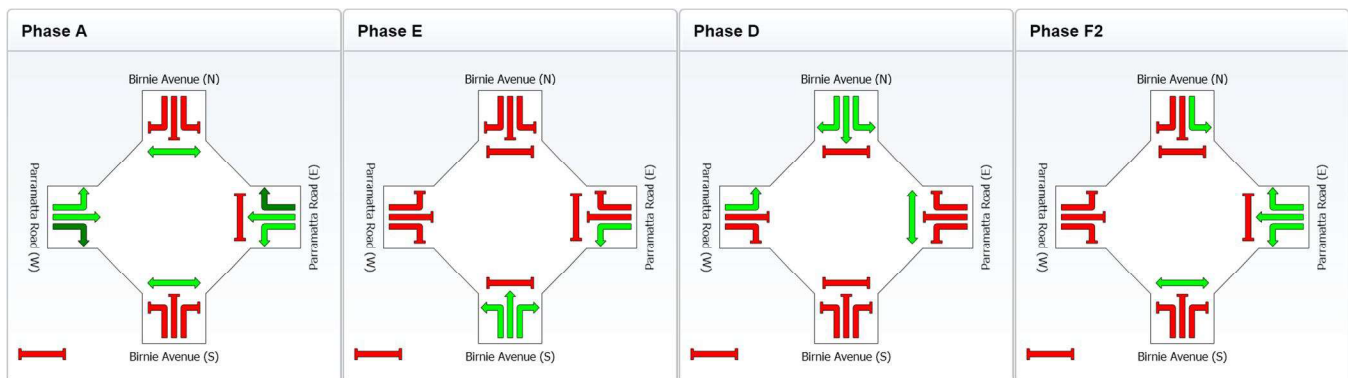
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	49	13	12	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	55	19	18	18
Phase Split	50 %	17 %	16 %	16 %



MOVEMENT SUMMARY

Site: I-08 2021 No
Redevelopment PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	34	6.3	0.889	90.4	LOS F	17.2	125.3	1.00	1.01	17.7
2	T	199	4.8	0.889	82.0	LOS F	17.2	125.3	1.00	1.00	17.7
3	R	181	5.2	0.889	90.7	LOS F	16.6	121.1	1.00	0.97	17.3
Approach		414	5.1	0.889	86.5	LOS F	17.2	125.3	1.00	0.99	17.5
East: Parramatta Road (E)											
4	L	293	5.0	0.901	28.2	LOS B	55.5	405.0	0.77	0.96	35.1
5	T	1743	5.0	0.901	20.1	LOS B	56.5	412.6	0.78	0.75	36.6
6	R	235	4.9	0.903	73.4	LOS F	14.5	105.6	1.00	1.02	20.0
Approach		2271	5.0	0.903	26.7	LOS B	56.5	412.6	0.80	0.81	33.5
North: Birnie Avenue (N)											
7	L	286	5.1	0.533	54.5	LOS D	15.9	116.1	0.81	0.82	24.0
8	T	385	4.9	0.894	72.2	LOS F	20.1	146.7	1.00	0.92	19.4
9	R	335	5.0	0.894	85.9	LOS F	20.1	146.7	1.00	0.95	18.0
Approach		1006	5.0	0.894	71.7	LOS F	20.1	146.7	0.95	0.90	20.0
West: Parramatta Road (W)											
10	L	138	5.3	0.164	12.2	LOS A	1.1	8.4	0.23	0.70	45.1
11	T	1564	5.0	0.913	44.0	LOS D	56.2	410.2	0.96	0.95	26.0
12	R	16	6.7	0.288	67.8	LOS E	1.0	7.4	0.81	0.75	21.0
Approach		1718	5.0	0.913	41.7	LOS C	56.2	410.2	0.90	0.93	26.9
All Vehicles		5408	5.0	0.913	44.4	LOS D	56.5	412.6	0.87	0.88	26.3

PHASING SUMMARY

Site: I-08 2021 No
Redevelopment PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

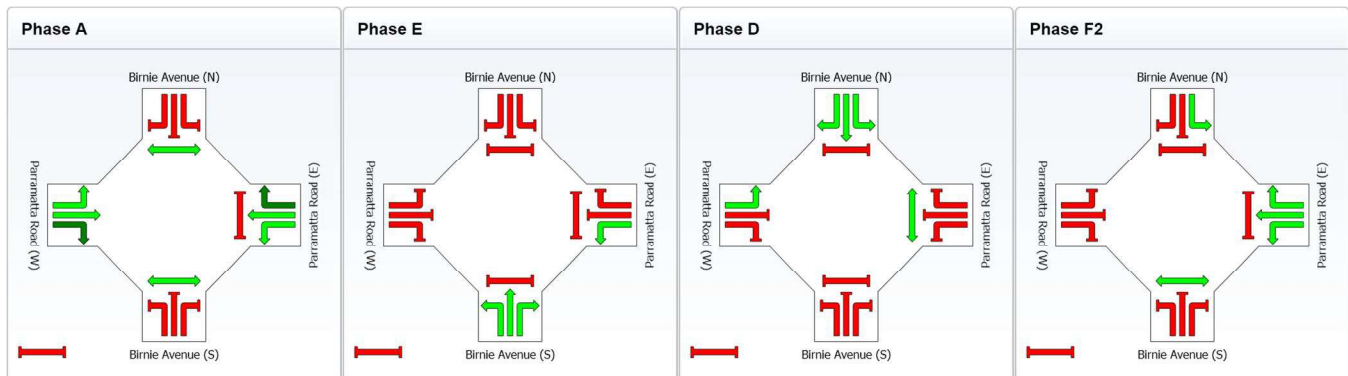
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

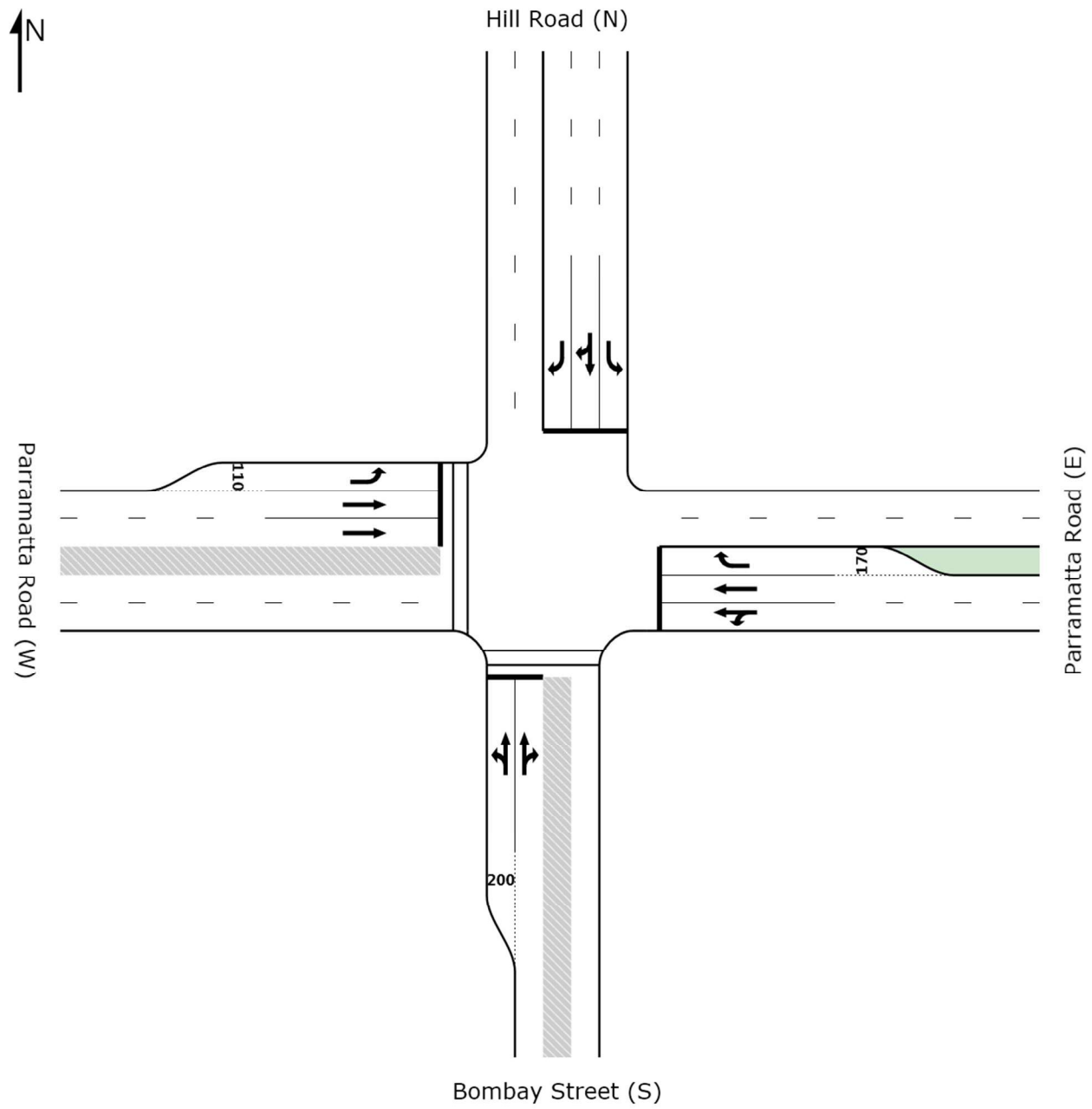
Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	68	19	23	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	74	25	29	22
Phase Split	49 %	17 %	19 %	15 %



I-09 Parramatta Road / Hill Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-09 2021 No
Redevelopment AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	17	12.5	0.901	92.4	LOS F	16.3	124.0	1.00	1.06	16.5
2	T	308	9.9	0.901	84.8	LOS F	16.3	124.0	1.00	1.05	16.4
3	R	66	9.5	0.901	92.4	LOS F	16.1	122.4	1.00	1.05	16.4
Approach		392	9.9	0.901	86.4	LOS F	16.3	124.0	1.00	1.05	16.4
East: Parramatta Road (E)											
4	L	14	7.7	0.664	24.1	LOS B	23.1	175.6	0.50	1.06	36.5
5	T	1397	10.0	0.664	15.3	LOS B	23.6	179.3	0.50	0.46	40.8
6	R	295	10.0	0.883	87.1	LOS F	21.7	164.6	1.00	1.14	17.7
Approach		1705	10.0	0.883	27.8	LOS B	23.6	179.3	0.59	0.59	33.3
North: Hill Road (N)											
7	L	336	10.0	0.519	44.4	LOS D	16.5	125.2	0.72	0.82	27.1
8	T	296	10.0	0.897	76.9	LOS F	23.4	177.6	1.00	1.00	18.2
9	R	269	10.2	0.865	80.6	LOS F	20.6	156.8	1.00	0.92	18.7
Approach		901	10.0	0.897	65.9	LOS E	23.4	177.6	0.90	0.90	21.0
West: Parramatta Road (W)											
10	L	358	10.0	0.426	14.8	LOS B	4.8	36.8	0.36	0.74	42.9
11	T	1257	10.0	0.887	49.2	LOS D	44.6	338.6	0.96	0.94	24.5
Approach		1615	10.0	0.887	41.6	LOS C	44.6	338.6	0.83	0.89	27.1
All Vehicles		4613	10.0	0.901	45.0	LOS D	44.6	338.6	0.77	0.80	26.0

PHASING SUMMARY

Site: I-09 2021 No
Redevelopment AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

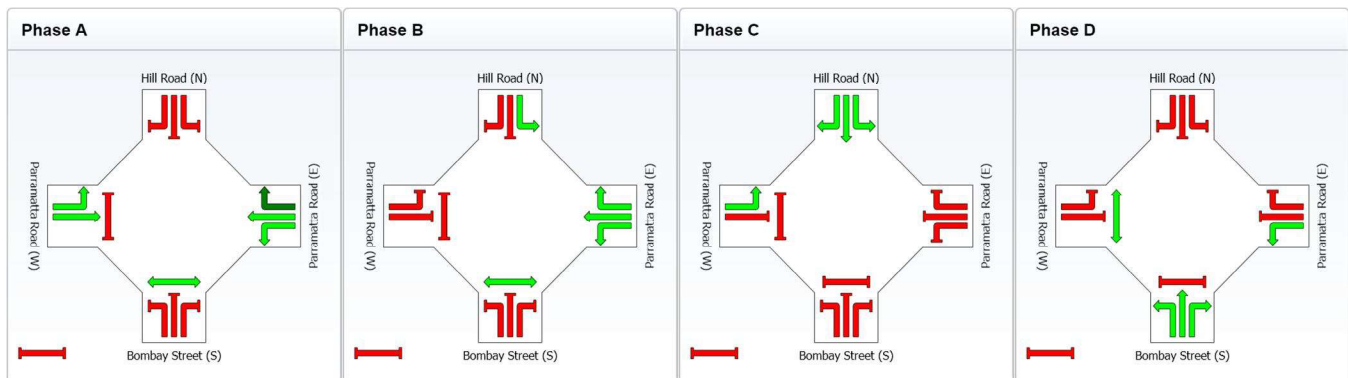
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	58	23	27	18
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	64	29	33	24
Phase Split	43 %	19 %	22 %	16 %



MOVEMENT SUMMARY

Site: I-09 2021 No
Redevelopment PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road - Proposed Upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 130 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	25	4.2	0.917	85.0	LOS F	14.7	107.4	1.00	1.09	17.4
2	T	327	5.1	0.917	77.7	LOS F	14.7	107.4	1.00	1.09	17.4
3	R	43	4.9	0.917	85.0	LOS F	14.6	107.0	1.00	1.09	17.4
Approach		396	5.1	0.917	79.0	LOS F	14.7	107.4	1.00	1.09	17.4
East: Parramatta Road (E)											
4	L	38	5.6	0.823	28.2	LOS B	35.5	259.0	0.73	1.00	34.6
5	T	1659	5.0	0.823	19.2	LOS B	36.0	262.9	0.73	0.68	37.5
6	R	282	4.9	0.930	86.5	LOS F	19.6	142.6	1.00	1.17	17.8
Approach		1979	5.0	0.930	28.9	LOS C	36.0	262.9	0.77	0.76	32.3
North: Hill Road (N)											
7	L	367	4.9	0.543	39.5	LOS C	15.8	115.5	0.73	0.82	28.8
8	T	339	5.0	0.924	70.9	LOS F	25.1	183.5	1.00	1.05	19.2
9	R	341	4.9	0.924	78.6	LOS F	25.1	183.5	1.00	0.98	19.0
Approach		1047	4.9	0.924	62.4	LOS E	25.1	183.5	0.91	0.94	21.7
West: Parramatta Road (W)											
10	L	259	4.9	0.262	13.3	LOS A	2.6	18.8	0.32	0.72	44.1
11	T	1289	5.0	0.924	53.4	LOS D	44.8	326.7	1.00	1.04	23.4
Approach		1548	5.0	0.924	46.7	LOS D	44.8	326.7	0.89	0.99	25.4
All Vehicles		4971	5.0	0.930	45.5	LOS D	44.8	326.7	0.85	0.90	25.7

PHASING SUMMARY

Site: I-09 2021 No
Redevelopment PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road - Proposed Upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 130 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

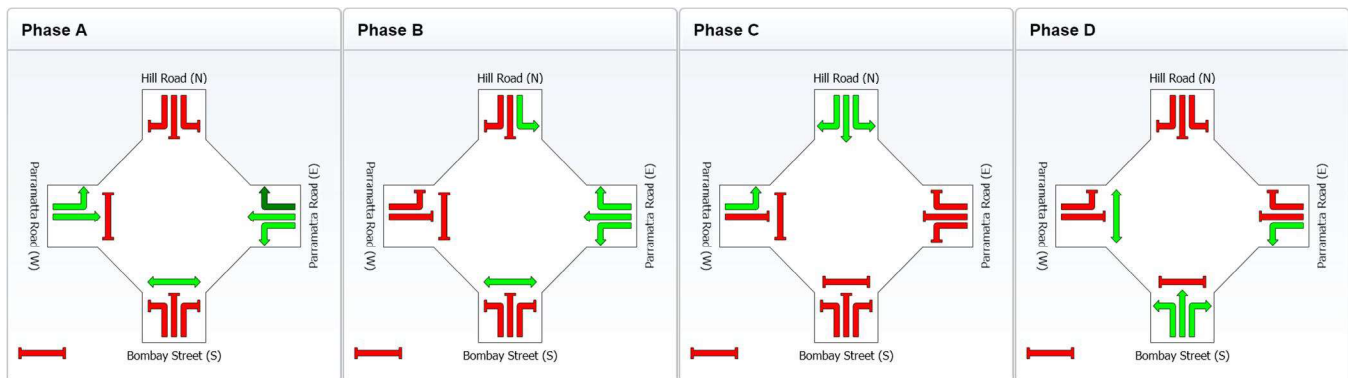
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

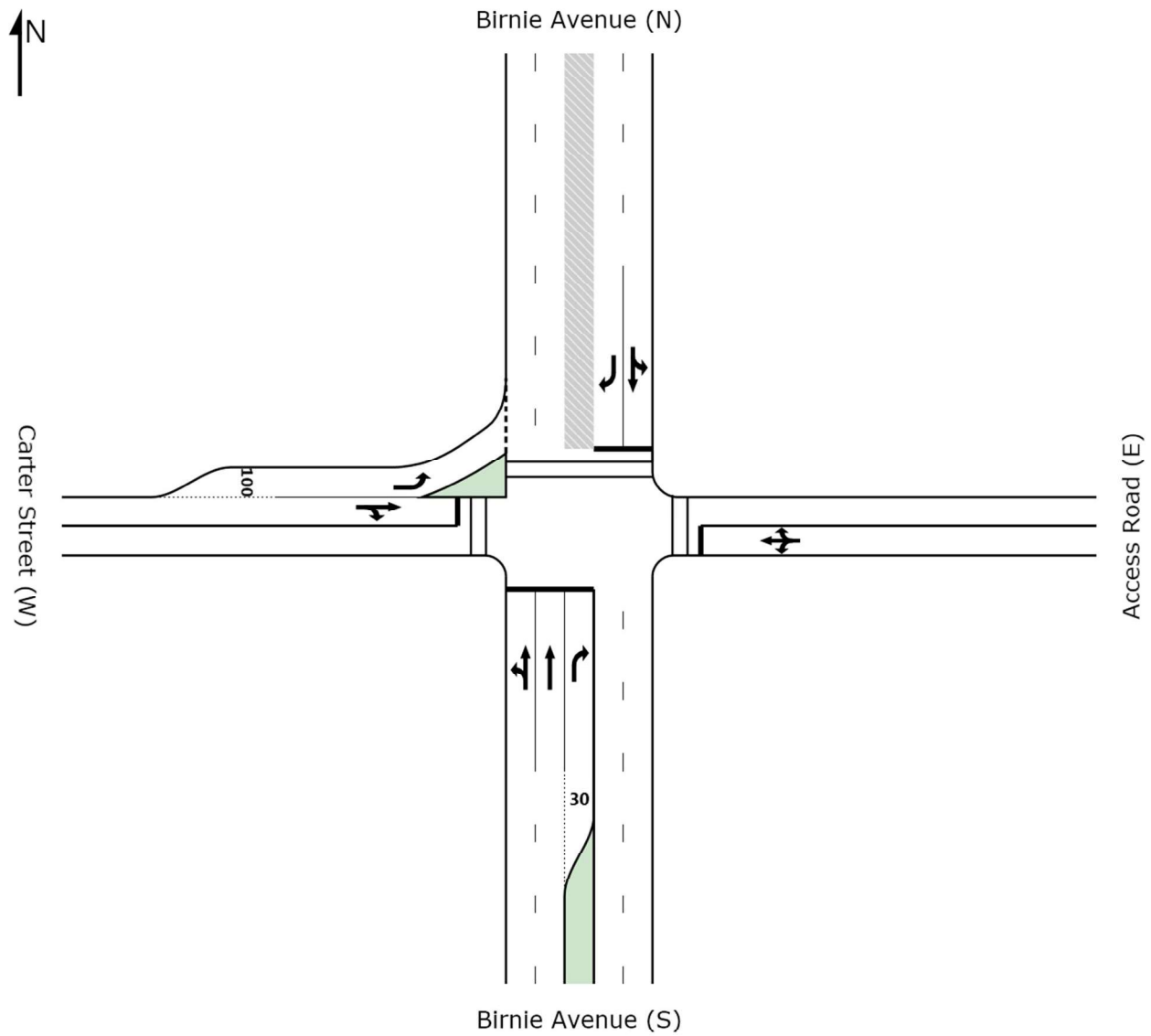
Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	48	17	26	15
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	54	23	32	21
Phase Split	42 %	18 %	25 %	16 %



I-10 Carter Street / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-10 2021 No
Redevelopment AM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue - Proposed upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	199	10.1	0.762	34.9	LOS C	12.5	94.9	0.92	0.92	31.6
2	T	549	10.0	0.762	27.8	LOS B	12.5	94.9	0.94	0.86	32.0
3	R	11	0.0	0.044	29.8	LOS C	0.2	1.7	0.69	0.69	32.9
Approach		759	9.8	0.762	29.7	LOS C	12.5	94.9	0.93	0.87	31.9
East: Access Road (E)											
4	L	11	0.0	0.195	42.4	LOS C	1.1	7.5	0.96	0.72	28.1
5	T	11	0.0	0.195	34.2	LOS C	1.1	7.5	0.96	0.69	28.3
6	R	11	0.0	0.195	42.5	LOS D	1.1	7.5	0.96	0.72	28.1
Approach		32	0.0	0.195	39.7	LOS C	1.1	7.5	0.96	0.71	28.2
North: Birnie Avenue (N)											
7	L	11	0.0	0.447	25.2	LOS B	7.0	53.1	0.60	0.96	37.0
8	T	341	9.9	0.447	17.0	LOS B	7.0	53.1	0.60	0.54	39.3
9	R	161	9.8	0.611	27.2	LOS B	3.8	28.5	0.95	0.80	34.5
Approach		513	9.7	0.611	20.4	LOS B	7.0	53.1	0.71	0.63	37.6
West: Carter Street (W)											
10	L	317	10.0	0.322	11.3	LOS A	3.5	26.5	0.45	0.71	46.0
11	T	11	0.0	0.396	25.5	LOS B	4.7	35.8	0.89	0.73	31.8
12	R	147	10.0	0.396	34.0	LOS C	4.7	35.8	0.89	0.80	31.2
Approach		475	9.8	0.396	18.7	LOS B	4.7	35.8	0.60	0.74	39.8
All Vehicles		1778	9.6	0.762	24.2	LOS B	12.5	94.9	0.78	0.76	35.2

PHASING SUMMARY

Site: I-10 2021 No
Redevelopment AM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue - Proposed upgrade
2021 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Phase times determined by the program

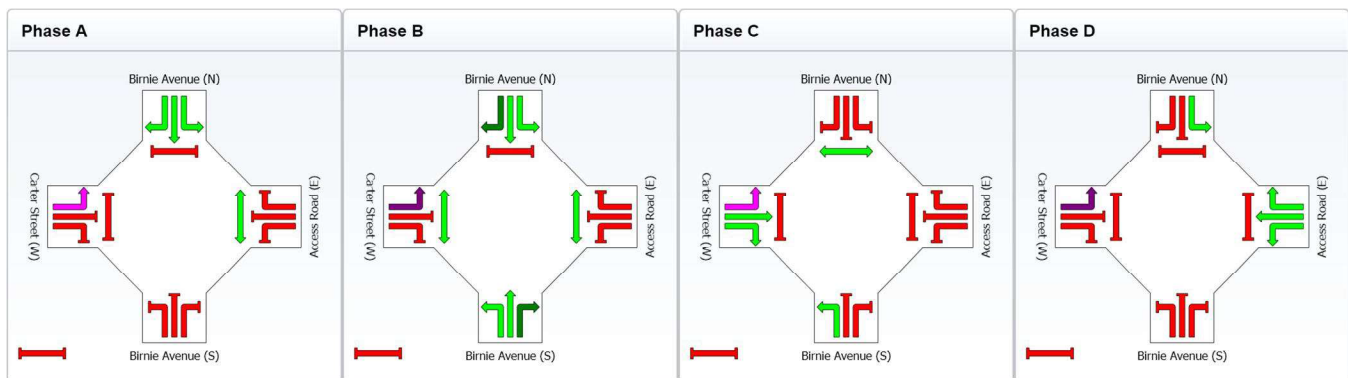
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	6	18	16	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	12	24	22	12
Phase Split	17 %	34 %	31 %	17 %



MOVEMENT SUMMARY

Site: I-10 2021 No
Redevelopment PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	119	5.3	0.643	43.1	LOS D	11.7	85.2	0.90	0.85	28.3
2	T	454	5.1	0.643	35.6	LOS C	11.7	85.2	0.91	0.77	28.8
3	R	11	0.0	0.071	40.6	LOS C	0.4	2.5	0.73	0.71	28.3
Approach		583	5.1	0.643	37.2	LOS C	11.7	85.2	0.90	0.78	28.7
East: Access Road (E)											
4	L	11	0.0	0.265	56.9	LOS E	1.5	10.4	0.99	0.72	23.7
5	T	11	0.0	0.265	48.8	LOS D	1.5	10.4	0.99	0.71	23.8
6	R	11	0.0	0.265	57.1	LOS E	1.5	10.4	0.99	0.72	23.6
Approach		32	0.0	0.265	54.2	LOS D	1.5	10.4	0.99	0.72	23.7
North: Birnie Avenue (N)											
7	L	11	0.0	0.721	19.6	LOS B	18.1	132.2	0.54	1.00	40.6
8	T	778	5.0	0.721	11.4	LOS A	18.1	132.2	0.54	0.50	43.9
9	R	331	5.1	0.523	21.5	LOS B	7.0	50.9	0.72	0.80	37.8
Approach		1119	5.0	0.721	14.5	LOS A	18.1	132.2	0.60	0.60	41.8
West: Carter Street (W)											
10	L	153	4.8	0.149	9.9	LOS A	1.5	10.6	0.29	0.67	47.3
11	T	11	0.0	0.709	42.9	LOS D	10.0	72.8	1.00	0.86	25.1
12	R	204	5.2	0.709	51.2	LOS D	10.0	72.8	1.00	0.86	25.0
Approach		367	4.9	0.709	33.8	LOS C	10.0	72.8	0.70	0.78	31.2
All Vehicles		2101	4.9	0.721	24.8	LOS B	18.1	132.2	0.71	0.68	34.9

PHASING SUMMARY

Site: I-10 2021 No
Redevelopment PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

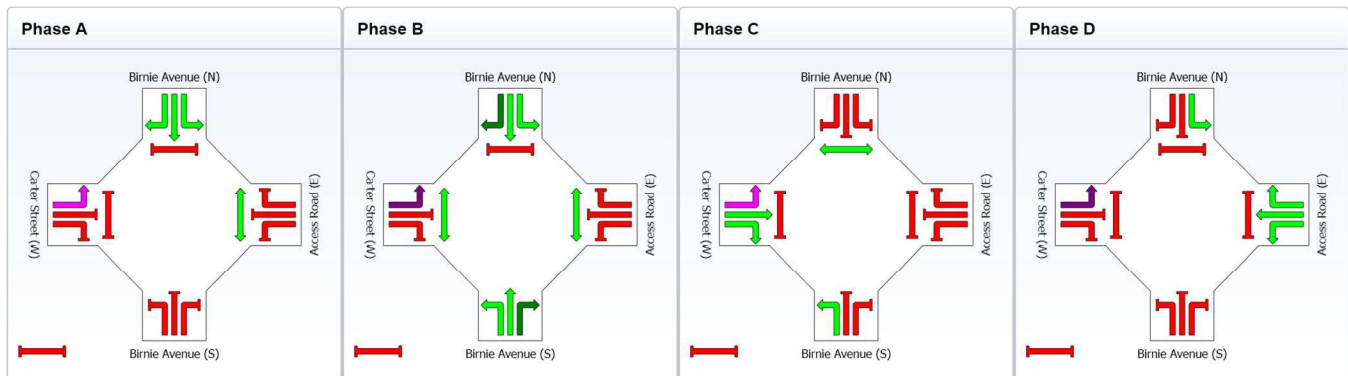
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

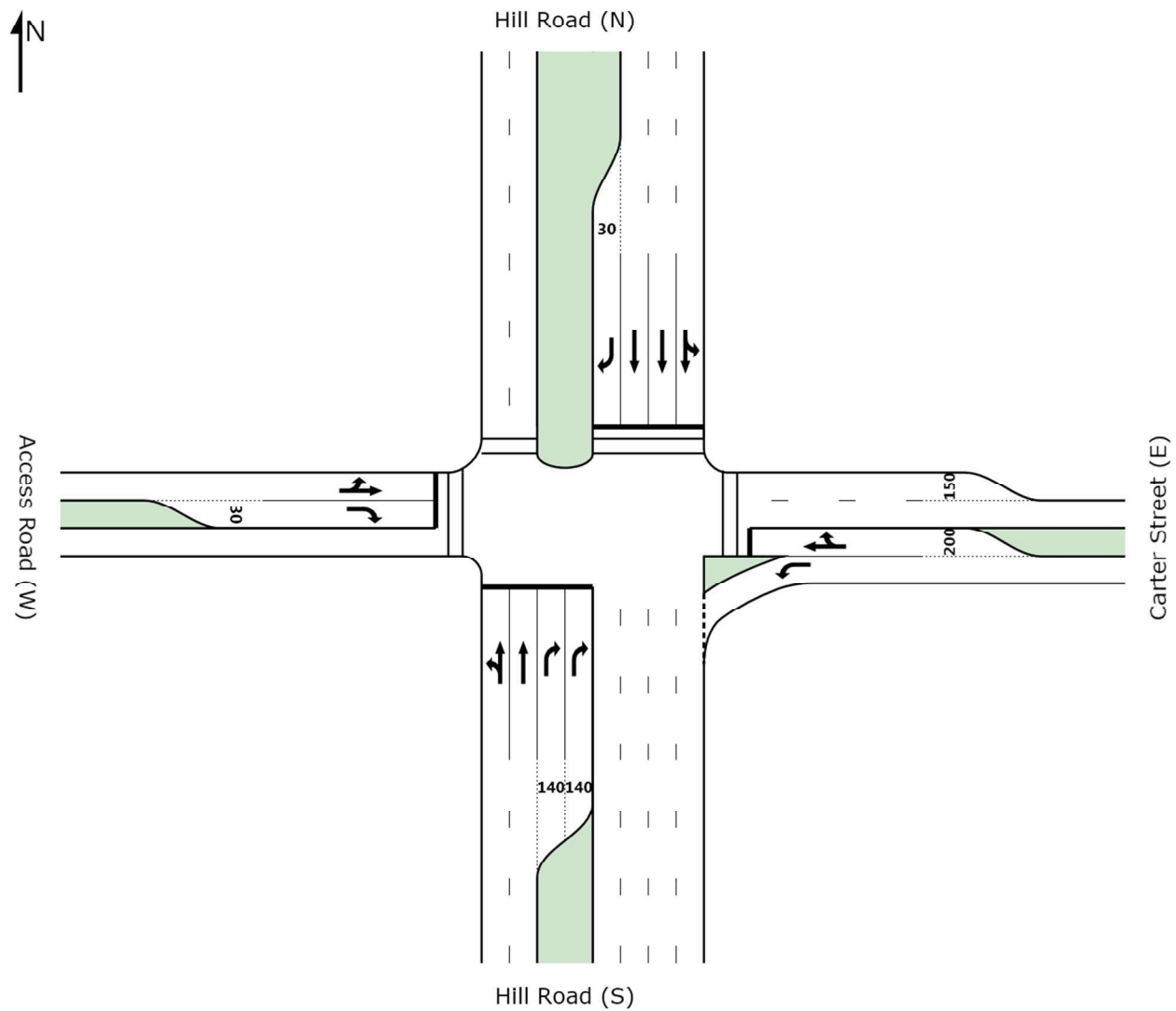
Phase	A	B	C	D
Green Time (sec)	27	22	16	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	33	28	22	12
Phase Split	35 %	29 %	23 %	13 %



Year 2031 No Carter Street Redevelopment

I-01 Hill Road / Carter Street Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-01 2031 No
Redevelopment AM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	11	0.0	0.609	10.0	LOS A	7.4	56.3	0.13	1.06	47.6
2	T	1741	10.0	0.609	1.9	LOS A	7.4	56.3	0.13	0.12	54.0
3	R	970	10.0	1.000 ³	51.8	LOS D	30.1	228.5	0.90	0.88	17.3
Approach		2722	10.0	1.000	19.7	LOS B	30.1	228.5	0.41	0.39	30.8
East: Carter Street (E)											
4	L	367	10.0	0.362	25.0	LOS B	11.9	90.5	0.54	0.82	36.0
5	T	11	0.0	0.100	62.1	LOS E	1.4	10.0	0.91	0.66	21.1
6	R	11	10.0	0.100	70.4	LOS E	1.4	10.0	0.91	0.73	20.9
Approach		388	9.8	0.362	27.2	LOS B	11.9	90.5	0.56	0.82	34.6
North: Hill Road (N)											
7	L	92	10.3	0.984	92.8	LOS F	59.1	449.2	1.00	1.13	12.4
8	T	1813	10.0	0.984	84.1	LOS F	59.5	452.4	1.00	1.14	12.5
9	R	11	0.0	0.166	45.3	LOS D	0.5	3.4	0.60	0.73	26.7
Approach		1915	10.0	0.984	84.3	LOS F	59.5	452.4	1.00	1.14	12.6
West: Access Road (W)											
10	L	11	0.0	0.083	69.6	LOS E	1.4	9.5	0.91	0.73	20.9
11	T	11	0.0	0.083	61.4	LOS E	1.4	9.5	0.91	0.65	21.2
12	R	11	0.0	0.103	69.5	LOS E	0.7	4.7	0.90	0.68	20.6
Approach		32	0.0	0.103	66.8	LOS E	1.4	9.5	0.91	0.69	20.9
All Vehicles		5057	9.9	1.000	45.0	LOS D	59.5	452.4	0.65	0.71	20.0

³ x = 1.00 due to short lane. Refer to the Lane Summary report for information about excess flow and related conditions.

PHASING SUMMARY

Site: I-01 2031 No
Redevelopment AM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Phase times determined by the program

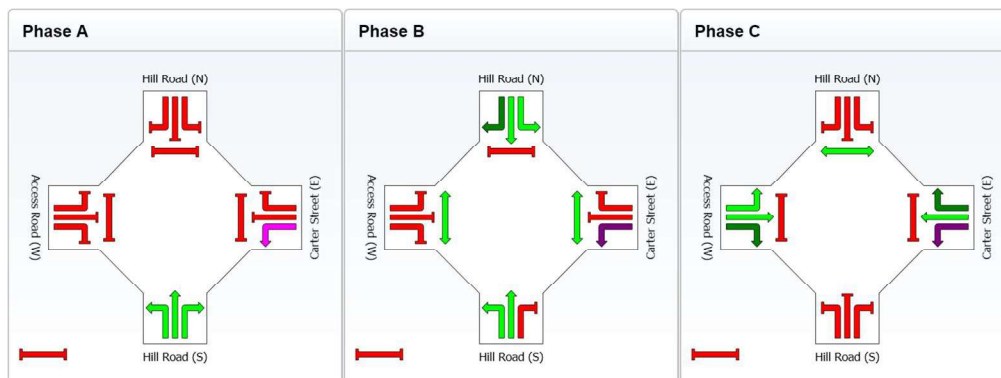
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	59	53	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	65	59	26
Phase Split	43 %	39 %	17 %



MOVEMENT SUMMARY

Site: I-01 2031 No
Redevelopment PM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	11	0.0	0.537	9.9	LOS A	5.7	41.5	0.11	1.06	47.6
2	T	1557	5.0	0.537	1.7	LOS A	5.7	41.5	0.11	0.10	54.4
3	R	373	5.1	0.388	47.1	LOS D	9.7	70.9	0.70	0.78	18.5
Approach		1940	5.0	0.537	10.5	LOS A	9.7	70.9	0.22	0.24	39.6
East: Carter Street (E)											
4	L	929	5.0	0.935	59.4	LOS E	67.9	495.9	1.00	1.14	23.0
5	T	11	0.0	0.097	60.1	LOS E	1.4	10.3	0.90	0.65	21.5
6	R	12	9.1	0.097	68.3	LOS E	1.4	10.3	0.90	0.73	21.3
Approach		952	5.0	0.935	59.5	LOS E	67.9	495.9	1.00	1.13	23.0
North: Hill Road (N)											
7	L	29	3.6	0.924	61.6	LOS E	54.2	395.5	0.99	1.01	17.2
8	T	2098	5.0	0.924	53.3	LOS D	54.3	396.2	0.99	1.00	17.4
9	R	11	0.0	0.131	37.0	LOS C	0.4	2.9	0.51	0.72	29.7
Approach		2138	5.0	0.924	53.3	LOS D	54.3	396.2	0.99	1.00	17.4
West: Access Road (W)											
10	L	7	0.0	0.086	67.7	LOS E	1.5	10.7	0.90	0.75	21.5
11	T	17	0.0	0.086	59.5	LOS E	1.5	10.7	0.90	0.65	21.8
12	R	11	0.0	0.101	67.4	LOS E	0.7	4.7	0.89	0.68	21.0
Approach		35	0.0	0.101	63.6	LOS E	1.5	10.7	0.89	0.68	21.5
All Vehicles		5064	4.9	0.935	38.2	LOS C	67.9	495.9	0.70	0.73	23.2

PHASING SUMMARY

Site: I-01 2031 No
Redevelopment PM

Carter Street Precinct
I-01 Hill Road / Carter Street - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (User-Given Cycle Time)

Phase times determined by the program

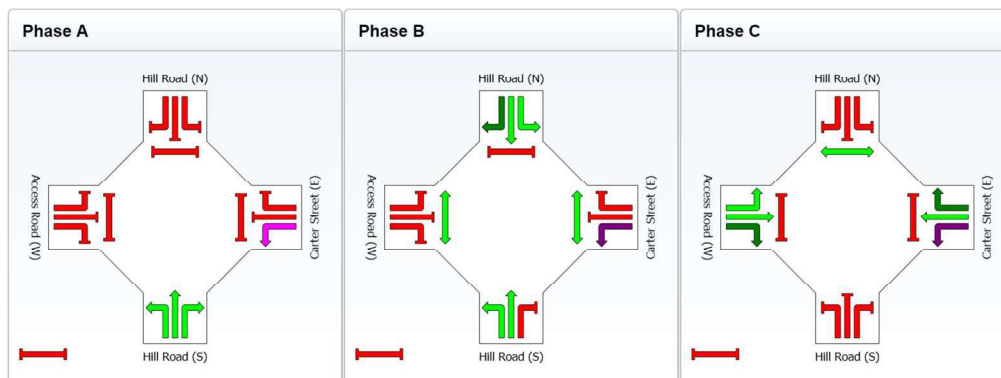
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

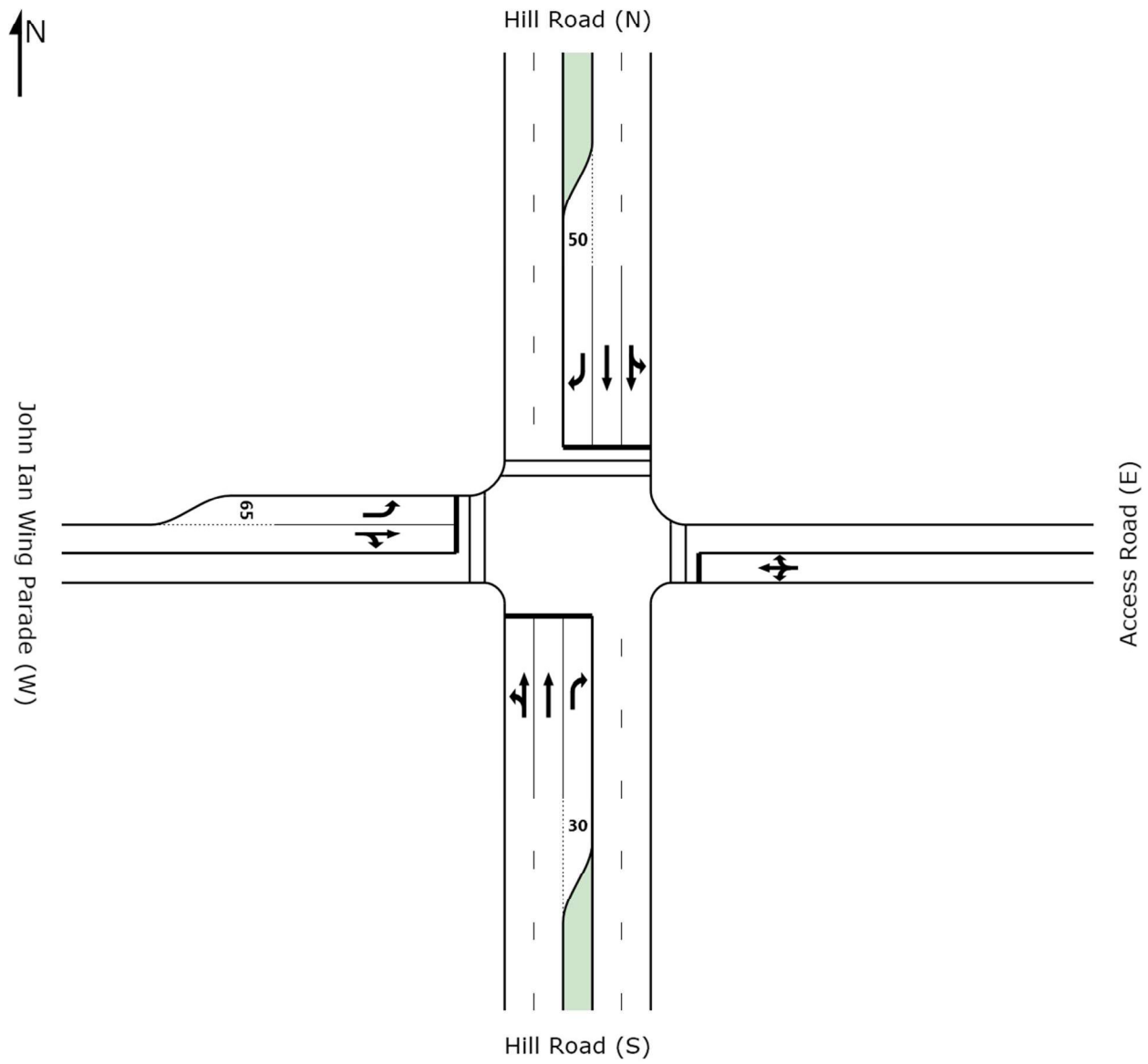
Phase Timing Results

Phase	A	B	C
Green Time (sec)	49	61	22
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	55	67	28
Phase Split	37 %	45 %	19 %



I-02 Hill Road / John Ian Wing Parade Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-02 2031 No
Redevelopment AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 145 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	208	10.1	0.880	45.4	LOS D	56.1	426.3	0.96	0.96	27.0
2	T	1492	10.0	0.880	37.5	LOS C	56.6	430.6	0.96	0.92	28.1
3	R	6	16.7	0.111	56.1	LOS D	0.3	2.3	0.61	0.82	27.4
Approach		1706	10.1	0.880	38.5	LOS C	56.6	430.6	0.96	0.93	27.9
East: Access Road (E)											
4	L	1	0.0	0.027	8.6	LOS A	0.1	0.4	0.43	0.47	15.2
5	T	1	0.0	0.027	7.2	LOS A	0.1	0.4	0.43	0.31	12.6
6	R	1	0.0	0.027	8.6	LOS A	0.1	0.4	0.43	0.47	15.2
Approach		3	0.0	0.027	8.1	LOS A	0.1	0.4	0.43	0.42	14.4
North: Hill Road (N)											
7	L	1	0.0	0.686	36.5	LOS C	21.5	163.4	0.44	1.00	37.0
8	T	1540	10.0	0.686	10.5	LOS A	22.1	168.0	0.44	0.41	45.0
9	R	38	11.1	0.291	39.7	LOS C	1.4	10.6	0.87	0.75	27.8
Approach		1579	10.0	0.686	11.2	LOS A	22.1	168.0	0.45	0.42	44.4
West: John Ian Wing Parade (W)											
10	L	101	10.4	0.369	38.2	LOS C	4.6	34.9	0.69	0.75	27.1
11	T	4	0.0	0.877	82.9	LOS F	28.6	217.6	1.00	0.97	16.7
12	R	365	10.1	0.877	72.5	LOS F	28.6	217.6	1.00	0.97	19.0
Approach		471	10.1	0.877	65.2	LOS E	28.6	217.6	0.93	0.92	20.3
All Vehicles		3759	10.0	0.880	30.4	LOS C	56.6	430.6	0.74	0.71	31.3

PHASING SUMMARY

Site: I-02 2031 No
Redevelopment AM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 145 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

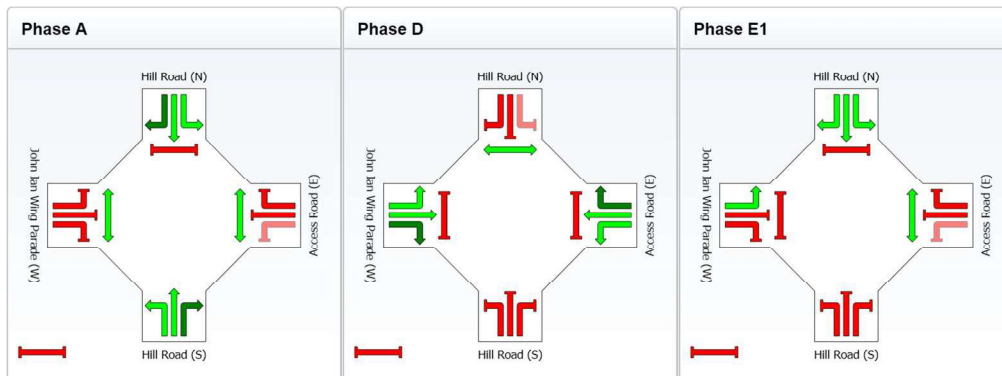
Sequence: TCS3413 AM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

Phase Timing Results

Phase	A	D	E1
Green Time (sec)	77	44	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	83	50	12
Phase Split	57 %	34 %	8 %



MOVEMENT SUMMARY

Site: I-02 2031 No
Redevelopment PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	299	4.9	0.770	26.4	LOS B	29.6	216.3	0.84	0.91	35.1
2	T	1284	5.0	0.770	18.8	LOS B	30.2	220.5	0.84	0.77	37.2
3	R	1	0.0	0.013	39.5	LOS C	0.0	0.2	0.50	0.80	35.3
Approach		1584	5.0	0.770	20.2	LOS B	30.2	220.5	0.84	0.80	36.8
East: Access Road (E)											
4	L	8	0.0	0.075	4.8	LOS A	0.1	1.0	0.35	0.48	17.0
5	T	1	0.0	0.075	3.4	LOS A	0.1	1.0	0.35	0.27	14.4
6	R	3	0.0	0.075	4.8	LOS A	0.1	1.0	0.35	0.48	17.1
Approach		13	0.0	0.075	4.7	LOS A	0.1	1.0	0.35	0.47	16.8
North: Hill Road (N)											
7	L	1	0.0	0.738	30.0	LOS C	12.9	94.3	0.31	1.01	42.4
8	T	1866	5.0	0.738	4.1	LOS A	14.1	103.0	0.33	0.30	52.4
9	R	159	5.3	0.735	31.4	LOS C	5.2	37.8	0.94	0.87	31.2
Approach		2026	5.0	0.738	6.2	LOS A	14.1	103.0	0.37	0.35	49.9
West: John Ian Wing Parade (W)											
10	L	48	4.3	0.134	32.0	LOS C	1.6	11.7	0.72	0.72	29.3
11	T	1	0.0	0.775	62.9	LOS E	12.2	89.1	1.00	0.91	20.4
12	R	241	4.8	0.775	52.4	LOS D	12.2	89.1	1.00	0.91	23.0
Approach		291	4.7	0.775	49.0	LOS D	12.2	89.1	0.95	0.88	23.8
All Vehicles		3914	5.0	0.775	15.1	LOS B	30.2	220.5	0.61	0.57	40.6

PHASING SUMMARY

Site: I-02 2031 No
Redevelopment PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

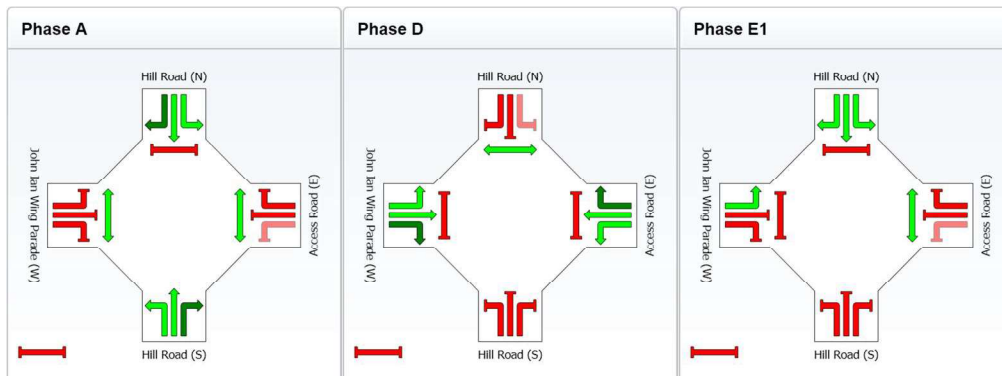
Sequence: TCS3413 PM

Input Sequence: A, D, E1

Output Sequence: A, D, E1

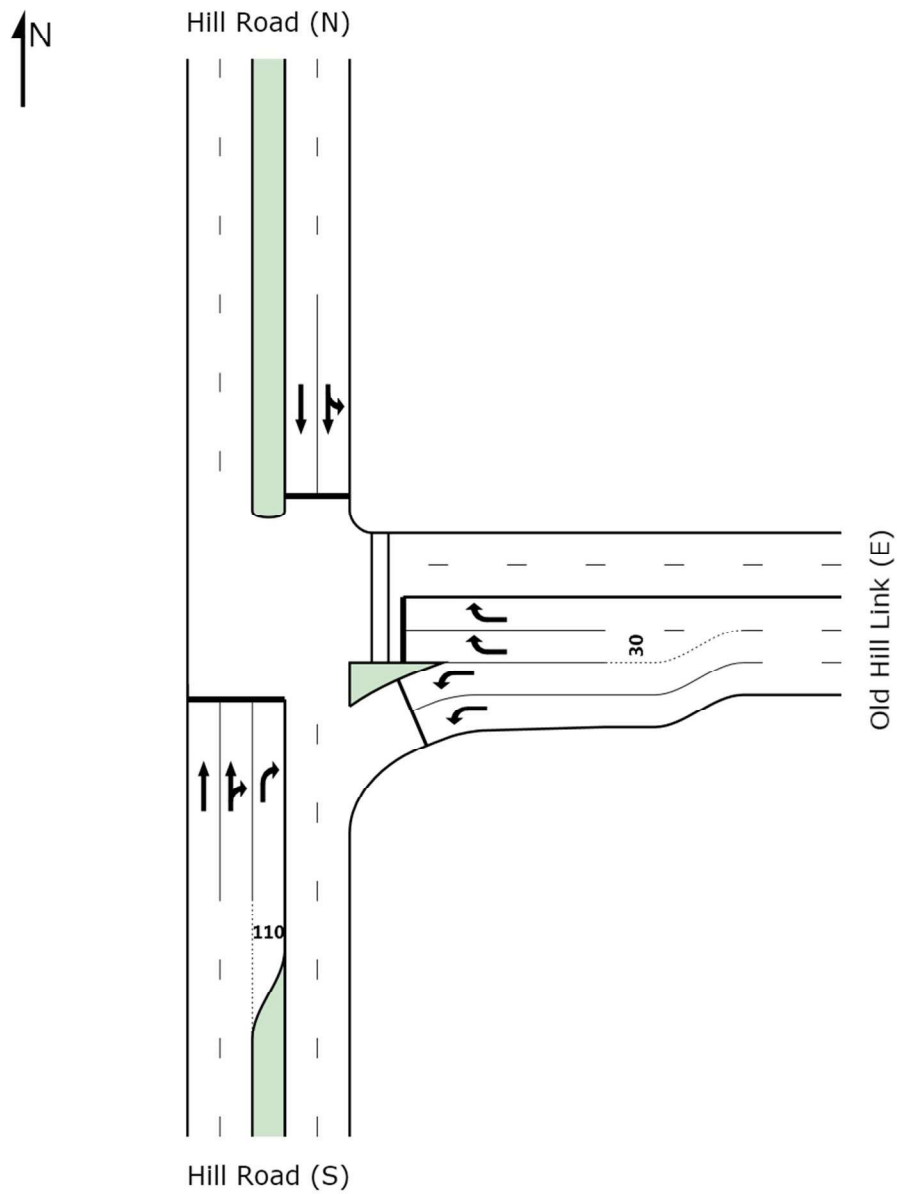
Phase Timing Results

Phase	A	D	E1
Green Time (sec)	55	21	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	61	27	12
Phase Split	61 %	27 %	12 %



I-03 Hill Road / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-03 2031 No
Redevelopment AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	722	10.1	0.481	0.9	LOS A	3.2	24.2	0.10	0.09	58.0
3	R	862	10.0	0.829	47.8	LOS D	20.7	157.1	0.96	0.92	26.1
Approach		1584	10.0	0.829	26.4	LOS B	20.7	157.1	0.57	0.54	34.8
East: Old Hill Link (E)											
4	L	335	10.1	0.230	25.2	LOS B	4.1	31.2	0.54	0.72	20.0
6	R	42	10.0	0.202	59.9	LOS E	1.0	7.8	0.97	0.70	9.9
Approach		377	10.1	0.230	29.1	LOS C	4.1	31.2	0.58	0.72	18.1
North: Hill Road (N)											
7	L	42	10.0	0.852	40.5	LOS C	31.0	235.8	0.87	1.02	29.9
8	T	1394	10.0	0.852	28.9	LOS C	31.3	237.7	0.87	0.87	31.9
Approach		1436	10.0	0.852	29.3	LOS C	31.3	237.7	0.87	0.87	31.8
All Vehicles		3397	10.0	0.852	27.9	LOS B	31.3	237.7	0.70	0.70	32.2

PHASING SUMMARY

Site: I-03 2031 No
Redevelopment AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 100 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

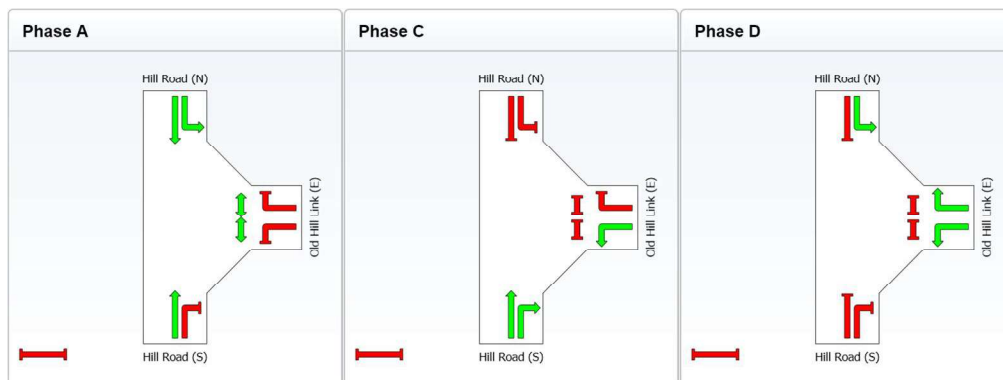
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

Phase	A	C	D
Green Time (sec)	46	30	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	52	36	12
Phase Split	52 %	36 %	12 %



MOVEMENT SUMMARY

Site: I-03 2031 No
Redevelopment PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	1094	5.0	0.606	8.8	LOS A	13.5	98.6	0.29	0.25	47.1
3	R	343	4.9	0.606	45.9	LOS D	13.5	98.6	0.88	0.83	26.8
Approach		1437	5.0	0.606	17.6	LOS B	13.5	98.6	0.43	0.39	39.9
East: Old Hill Link (E)											
4	L	1013	5.0	0.644	28.8	LOS C	17.3	126.0	0.72	0.81	18.2
6	R	132	4.8	0.328	52.7	LOS D	3.8	27.9	0.89	0.76	11.0
Approach		1144	5.0	0.644	31.6	LOS C	17.3	126.0	0.74	0.80	17.0
North: Hill Road (N)											
7	L	38	5.6	0.642	32.8	LOS C	17.7	129.6	0.69	0.97	32.9
8	T	1046	5.0	0.642	22.2	LOS B	18.1	132.0	0.70	0.63	35.7
Approach		1084	5.0	0.642	22.6	LOS B	18.1	132.0	0.70	0.65	35.6
All Vehicles		3665	5.0	0.644	23.5	LOS B	18.1	132.0	0.61	0.59	32.5

PHASING SUMMARY

Site: I-03 2031 No
Redevelopment PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 No Carter Street Redevelopment PM

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

Phase times determined by the program

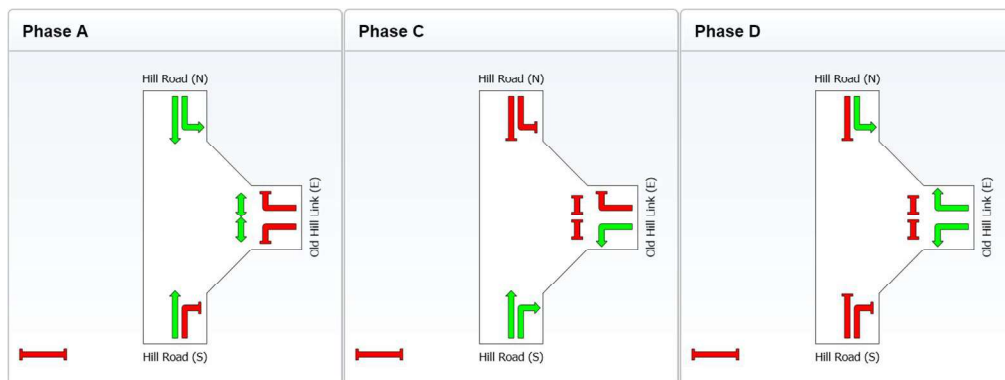
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

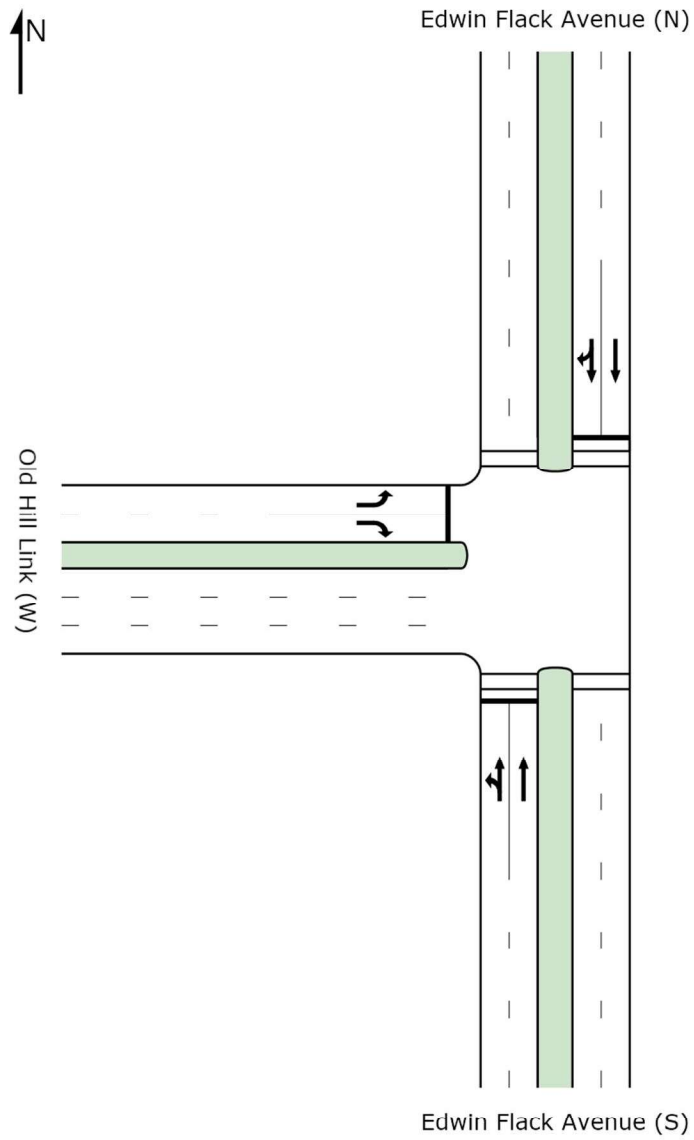
Phase Timing Results

Phase	A	C	D
Green Time (sec)	47	25	15
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	53	31	21
Phase Split	50 %	30 %	20 %



I-04 Edwin Flack Avenue / Old Hill Link Intersection

EXISTING INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-04 2031 No
Redevelopment AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	69	10.6	0.517	22.1	LOS B	2.3	17.2	0.96	0.79	38.8
2	T	169	9.9	0.517	21.8	LOS B	2.9	21.7	0.98	0.77	34.9
Approach		239	10.1	0.517	21.9	LOS B	2.9	21.7	0.97	0.77	35.9
North: Edwin Flack Avenue (N)											
8	T	399	10.0	0.479	9.5	LOS A	6.1	46.0	0.59	0.51	45.5
9	R	267	9.8	0.487	22.8	LOS B	4.8	36.7	0.77	0.82	37.1
Approach		666	10.0	0.487	14.8	LOS B	6.1	46.0	0.66	0.64	41.7
West: Old Hill Link (W)											
10	L	817	10.1	0.701	10.8	LOS A	6.2	46.8	0.30	0.74	46.6
12	R	81	10.4	0.143	22.0	LOS B	1.3	10.2	0.63	0.73	37.7
Approach		898	10.1	0.701	11.8	LOS A	6.2	46.8	0.33	0.74	45.7
All Vehicles		1803	10.0	0.701	14.3	LOS A	6.2	46.8	0.54	0.71	42.6

PHASING SUMMARY

Site: I-04 2031 No
Redevelopment AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

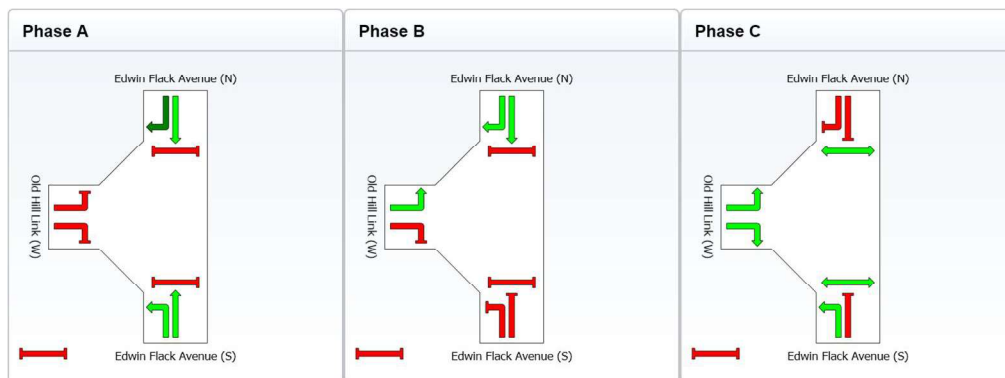
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	13	18
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	19	24
Phase Split	22 %	35 %	44 %



MOVEMENT SUMMARY

Site: I-04 2031 No
Redevelopment PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	344	4.9	0.713	35.6	LOS C	13.4	97.4	0.94	0.96	30.6
2	T	382	5.0	0.713	35.9	LOS C	13.9	101.2	0.97	0.87	28.6
Approach		726	4.9	0.713	35.8	LOS C	13.9	101.2	0.95	0.91	29.5
North: Edwin Flack Avenue (N)											
8	T	217	4.9	0.163	1.1	LOS A	0.7	5.1	0.08	0.06	57.8
9	R	634	5.0	0.746	25.4	LOS B	15.7	114.5	0.73	0.96	35.5
Approach		851	5.0	0.746	19.2	LOS B	15.7	114.5	0.56	0.73	39.3
West: Old Hill Link (W)											
10	L	287	5.1	0.250	11.9	LOS A	2.4	17.6	0.20	0.71	45.3
12	R	98	5.4	0.325	46.5	LOS D	3.9	28.6	0.88	0.77	26.5
Approach		385	5.2	0.325	20.7	LOS B	3.9	28.6	0.37	0.72	38.3
All Vehicles		1962	5.0	0.746	25.6	LOS B	15.7	114.5	0.67	0.80	34.9

PHASING SUMMARY

Site: I-04 2031 No
Redevelopment PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

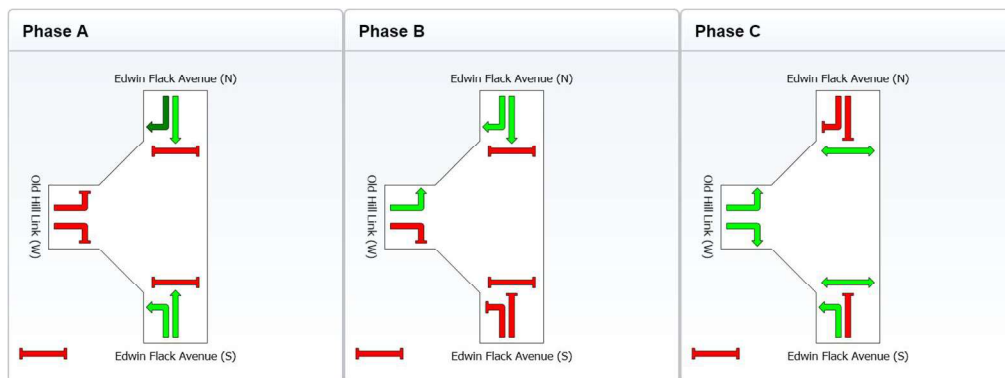
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

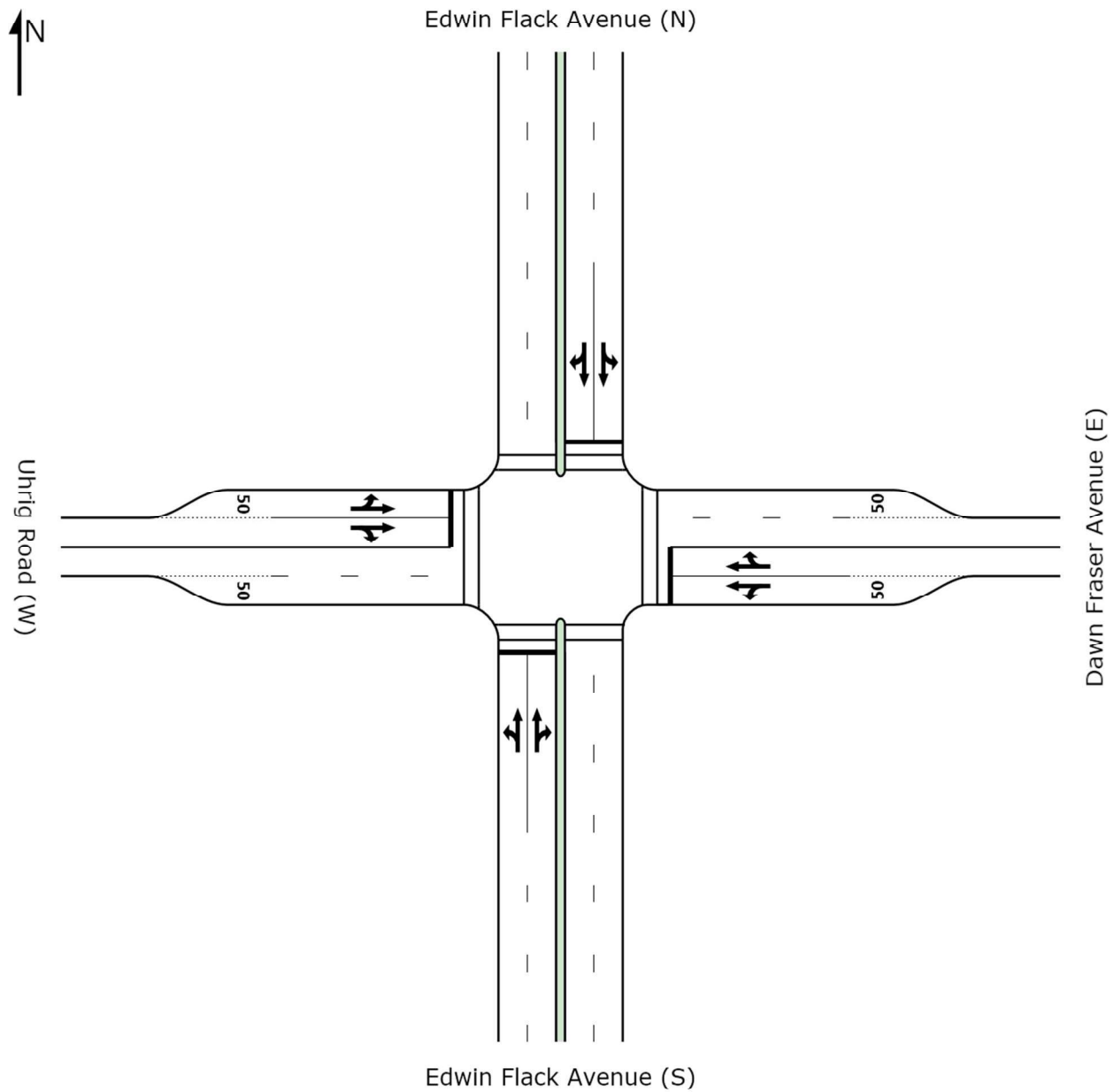
Phase Timing Results

Phase	A	B	C
Green Time (sec)	22	39	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	28	45	22
Phase Split	29 %	47 %	23 %



I-05 Edwin Flack Avenue / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-05 2031 No
Redevelopment AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 No Carter Street Redevelopment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	17	12.5	0.408	28.8	LOS C	4.5	34.4	0.80	0.87	35.4
2	T	212	10.0	0.408	19.2	LOS B	4.5	34.4	0.80	0.65	36.9
3	R	102	10.3	0.408	20.7	LOS B	2.4	18.2	0.80	0.78	37.3
Approach		331	10.2	0.408	20.1	LOS B	4.5	34.4	0.80	0.70	37.0
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.151	18.2	LOS B	1.3	9.5	0.65	0.72	31.2
5	T	137	10.0	0.457	21.3	LOS B	4.1	31.4	0.87	0.70	27.7
6	R	41	10.3	0.457	29.2	LOS C	4.1	31.4	0.91	0.80	27.2
Approach		222	10.0	0.457	22.1	LOS B	4.1	31.4	0.84	0.72	28.3
North: Edwin Flack Avenue (N)											
7	L	122	10.3	0.505	28.3	LOS B	5.7	43.5	0.83	0.83	33.3
8	T	347	10.0	0.505	25.3	LOS B	6.2	47.2	0.83	0.71	33.4
9	R	8	12.5	0.505	36.3	LOS C	6.2	47.2	0.82	0.90	31.7
Approach		478	10.1	0.505	26.3	LOS B	6.2	47.2	0.83	0.74	33.3
West: Uhrig Road (W)											
10	L	8	12.5	0.252	23.4	LOS B	2.2	16.6	0.73	0.83	38.2
11	T	525	10.0	0.764	24.1	LOS B	13.1	99.6	0.91	0.87	34.3
12	R	21	10.0	0.764	31.0	LOS C	13.1	99.6	0.95	0.95	34.1
Approach		555	10.1	0.764	24.4	LOS B	13.1	99.6	0.91	0.88	34.3
All Vehicles		1585	10.1	0.764	23.7	LOS B	13.1	99.6	0.85	0.78	33.5

PHASING SUMMARY

Site: I-05 2031 No
Redevelopment AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 No Carter Street Redevelopment AM

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

Phase times determined by the program

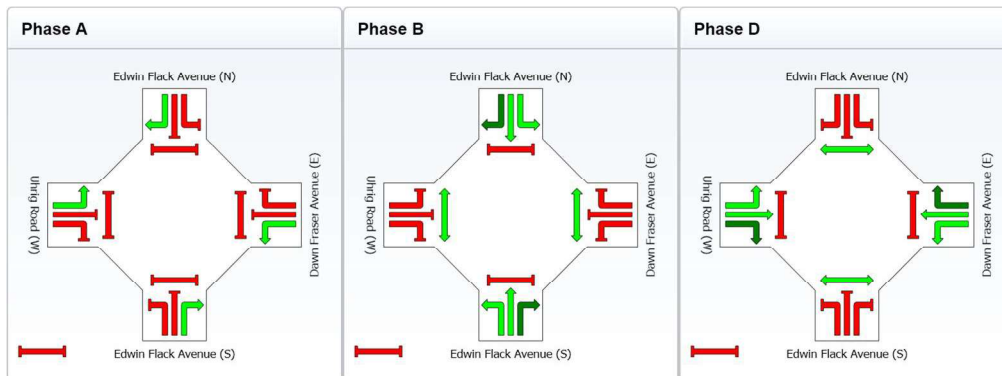
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	16	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	22	26
Phase Split	20 %	37 %	43 %



MOVEMENT SUMMARY

Site: I-05 2031 No
Redevelopment PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 65 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	41	5.1	0.775	36.0	LOS C	11.2	82.1	0.96	0.93	31.8
2	T	589	5.0	0.775	31.7	LOS C	11.2	82.1	0.96	0.91	30.3
3	R	39	5.4	0.775	43.6	LOS D	10.2	74.5	0.96	0.99	27.2
Approach		669	5.0	0.775	32.6	LOS C	11.2	82.1	0.96	0.92	30.2
East: Dawn Fraser Avenue (E)											
4	L	89	4.7	0.262	16.8	LOS B	2.3	16.8	0.61	0.73	31.8
5	T	500	5.1	0.794	22.4	LOS B	16.9	123.1	0.92	0.91	27.3
6	R	64	4.9	0.794	29.2	LOS C	16.9	123.1	0.95	0.98	27.3
Approach		654	5.0	0.794	22.3	LOS B	16.9	123.1	0.88	0.89	27.8
North: Edwin Flack Avenue (N)											
7	L	55	5.8	0.416	30.2	LOS C	4.8	35.4	0.82	0.85	32.8
8	T	271	5.1	0.416	27.5	LOS B	4.8	35.4	0.84	0.71	32.3
9	R	16	6.7	0.416	40.6	LOS C	4.4	32.3	0.86	0.88	29.7
Approach		341	5.2	0.416	28.6	LOS C	4.8	35.4	0.84	0.74	32.2
West: Uhrig Road (W)											
10	L	67	4.7	0.119	15.0	LOS B	0.9	6.9	0.47	0.72	42.6
11	T	122	5.2	0.306	22.8	LOS B	3.7	27.1	0.82	0.72	34.8
12	R	24	4.3	0.306	28.1	LOS B	3.7	27.1	0.82	0.83	35.1
Approach		214	4.9	0.306	21.0	LOS B	3.7	27.1	0.71	0.73	37.1
All Vehicles		1878	5.0	0.794	27.0	LOS B	16.9	123.1	0.88	0.85	30.2

PHASING SUMMARY

Site: I-05 2031 No
Redevelopment PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 No Carter Street Redevelopment PM

Signals - Fixed Time Cycle Time = 65 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

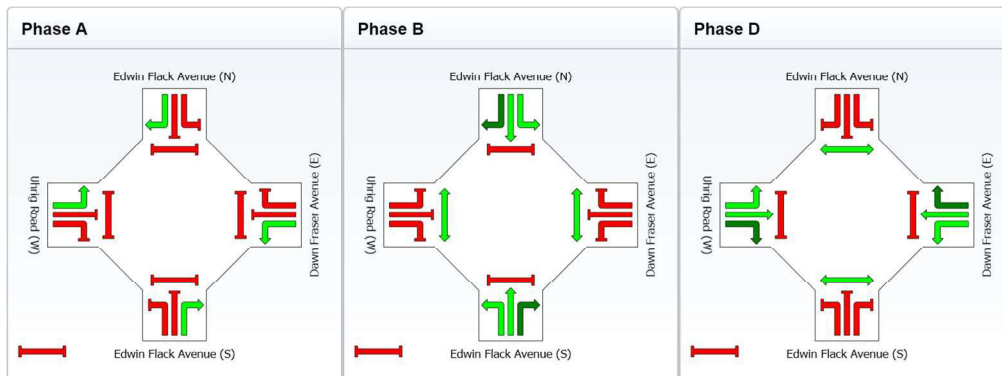
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

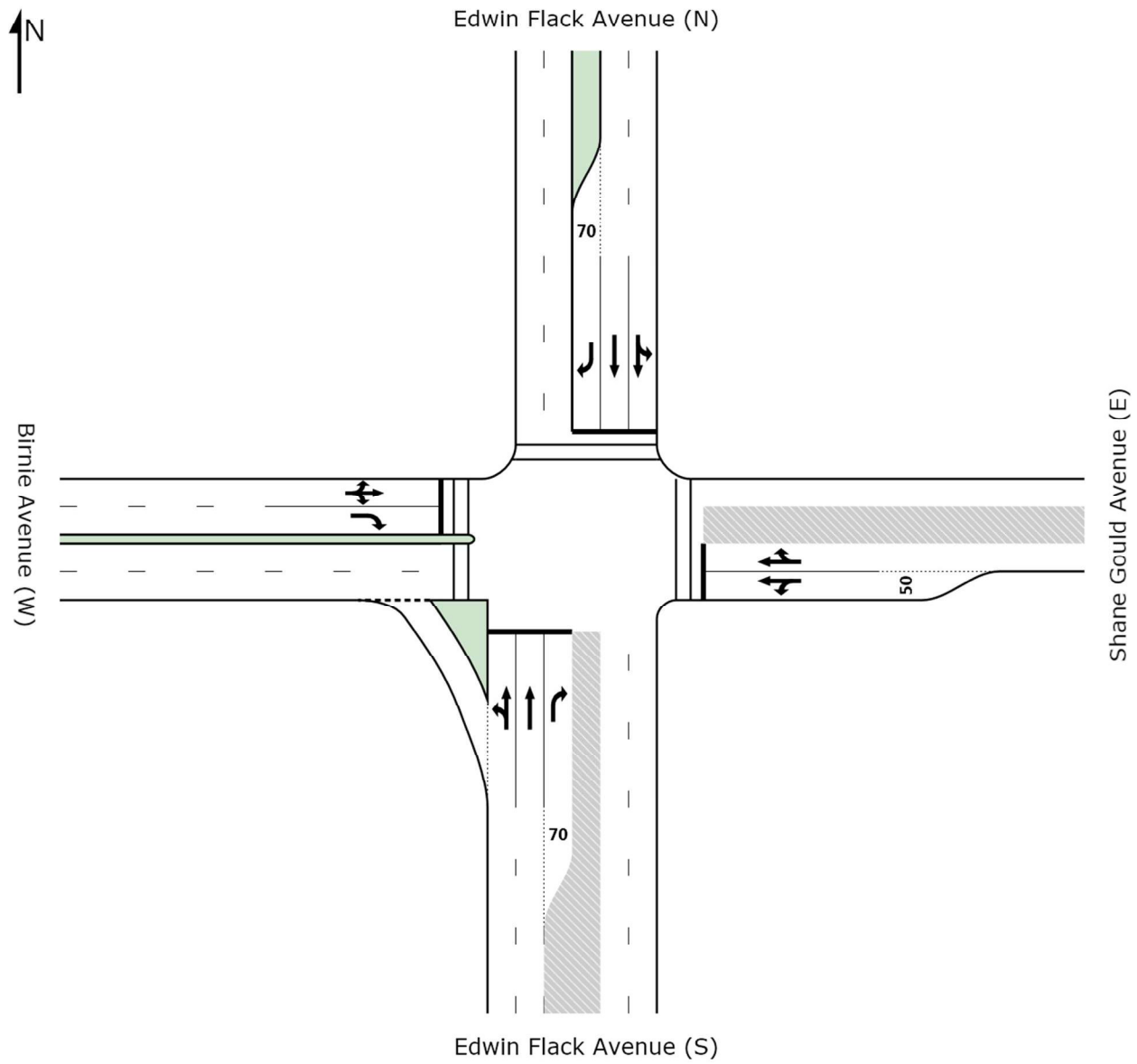
Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	16	25
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	22	31
Phase Split	18 %	34 %	48 %



I-06 Edwin Flack Avenue / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-06 2031 No
Redevelopment AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	457	9.9	0.337	9.3	LOS A	3.3	25.3	0.25	0.70	48.1
2	T	127	9.9	0.337	32.7	LOS C	4.6	34.8	0.83	0.66	30.2
3	R	7	14.3	0.034	44.2	LOS D	0.3	2.3	0.85	0.68	27.2
Approach		592	10.0	0.337	14.8	LOS B	4.6	34.8	0.38	0.69	42.3
East: Shane Gould Avenue (E)											
4	L	6	16.7	0.178	57.2	LOS E	0.9	7.2	0.98	0.71	24.2
5	T	21	10.0	0.178	48.4	LOS D	0.9	7.2	0.98	0.69	24.2
6	R	13	8.3	0.178	56.9	LOS E	0.9	7.1	0.98	0.70	23.8
Approach		40	10.5	0.178	52.5	LOS D	0.9	7.2	0.98	0.70	24.1
North: Edwin Flack Avenue (N)											
7	L	23	9.1	0.233	35.9	LOS C	3.7	28.4	0.83	0.81	31.5
8	T	215	9.8	0.233	26.4	LOS B	4.6	35.1	0.80	0.64	33.0
9	R	166	10.1	0.526	38.2	LOS C	6.4	48.4	0.93	0.79	29.4
Approach		404	9.9	0.526	31.8	LOS C	6.4	48.4	0.86	0.71	31.3
West: Birnie Avenue (W)											
10	L	181	9.9	0.687	21.1	LOS B	15.2	115.2	0.81	0.87	38.4
11	T	36	8.8	0.687	12.6	LOS A	15.2	115.2	0.81	0.74	39.6
12	R	903	10.0	0.687	27.2	LOS B	19.3	146.6	0.84	0.86	34.6
Approach		1120	10.0	0.687	25.7	LOS B	19.3	146.6	0.84	0.86	35.3
All Vehicles		2156	10.0	0.687	24.4	LOS B	19.3	146.6	0.72	0.78	35.8

PHASING SUMMARY

Site: I-06 2031 No
Redevelopment AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment AM

Signals - Fixed Time Cycle Time = 95 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

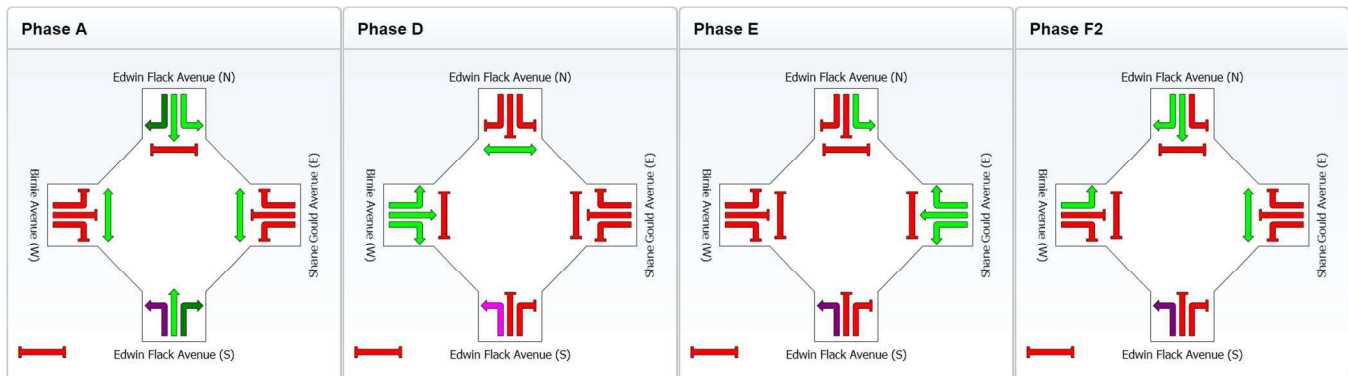
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	17	41	6	7
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	23	47	12	13
Phase Split	24 %	49 %	13 %	14 %



MOVEMENT SUMMARY

Site: I-06 2031 No
Redevelopment PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	1132	5.0	0.812	12.6	LOS A	15.8	115.5	0.63	0.84	44.8
2	T	468	4.9	0.812	32.3	LOS C	18.6	135.4	0.98	0.95	30.2
3	R	3	0.0	0.008	29.3	LOS C	0.1	0.6	0.72	0.66	33.2
Approach		1603	5.0	0.812	18.4	LOS B	18.6	135.4	0.73	0.87	39.3
East: Shane Gould Avenue (E)											
4	L	15	7.1	0.384	49.3	LOS D	2.1	15.7	0.99	0.75	26.4
5	T	61	5.2	0.384	40.9	LOS C	2.1	15.7	0.99	0.74	26.4
6	R	31	3.4	0.384	49.2	LOS D	2.1	15.4	0.99	0.74	26.0
Approach		106	5.0	0.384	44.4	LOS D	2.1	15.7	0.99	0.74	26.3
North: Edwin Flack Avenue (N)											
7	L	46	4.5	0.146	23.3	LOS B	2.3	16.7	0.72	0.79	37.6
8	T	172	4.9	0.146	14.2	LOS A	2.8	20.8	0.65	0.52	40.9
9	R	166	5.1	0.628	29.2	LOS C	4.4	32.0	0.98	0.81	33.3
Approach		384	4.9	0.628	21.8	LOS B	4.4	32.0	0.80	0.68	36.9
West: Birnie Avenue (W)											
10	L	165	5.1	0.699	24.1	LOS B	10.2	74.4	0.93	0.85	36.5
11	T	64	4.9	0.699	15.8	LOS B	10.2	74.4	0.93	0.80	37.1
12	R	498	5.1	0.699	33.7	LOS C	11.7	85.5	0.95	0.86	31.3
Approach		727	5.1	0.699	29.9	LOS C	11.7	85.5	0.95	0.85	32.8
All Vehicles		2821	5.0	0.812	22.8	LOS B	18.6	135.4	0.81	0.84	36.4

PHASING SUMMARY

Site: I-06 2031 No
Redevelopment PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment PM

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

Phase times determined by the program

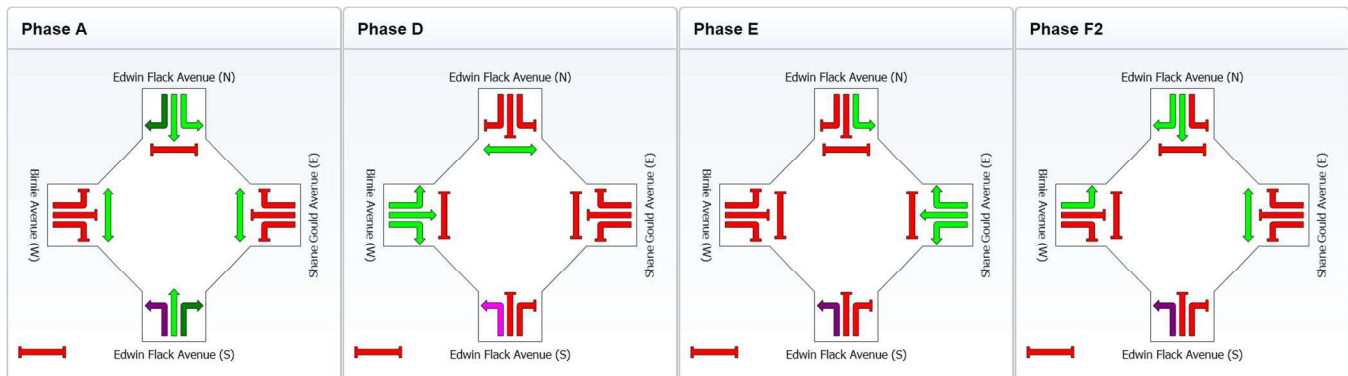
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

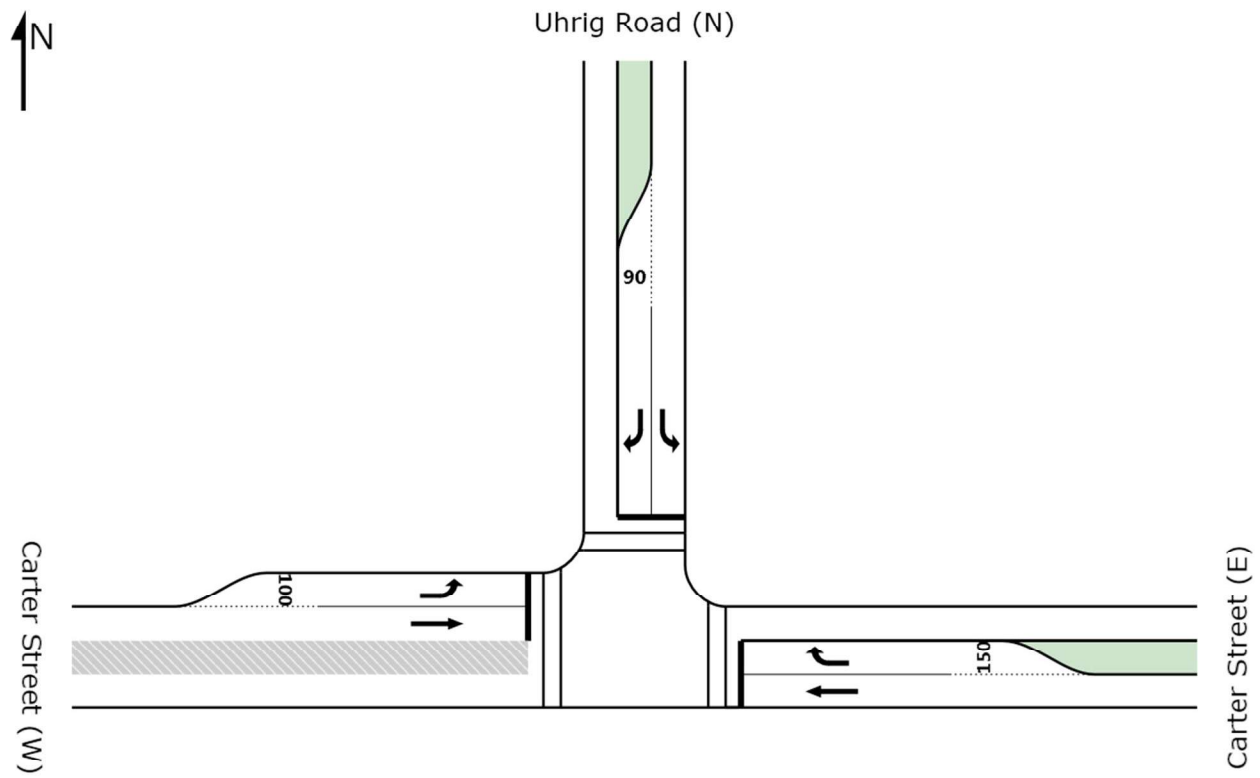
Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	24	20	6	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	30	26	12	12
Phase Split	38 %	33 %	15 %	15 %



I-07 Carter Street / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-07 2031 No
Redevelopment AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road - Proposed upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	358	10.0	0.304	2.7	LOS A	2.4	17.9	0.21	0.18	54.8
6	R	20	10.5	0.066	19.2	LOS B	0.2	1.8	0.66	0.71	39.5
Approach		378	10.0	0.304	3.6	LOS A	2.4	17.9	0.23	0.21	53.7
North: Uhrig Road (N)											
7	L	87	9.6	0.141	24.0	LOS B	1.7	12.8	0.59	0.74	36.3
9	R	80	10.5	0.249	35.9	LOS C	2.3	17.4	0.84	0.76	30.3
Approach		167	10.1	0.249	29.7	LOS C	2.3	17.4	0.71	0.75	33.1
West: Carter Street (W)											
10	L	362	9.9	0.516	22.0	LOS B	8.3	63.3	0.71	0.81	37.6
11	T	642	10.0	0.744	17.4	LOS B	18.7	141.9	0.88	0.81	38.3
Approach		1004	10.0	0.744	19.1	LOS B	18.7	141.9	0.82	0.81	38.1
All Vehicles		1549	10.0	0.744	16.4	LOS B	18.7	141.9	0.66	0.66	40.3

PHASING SUMMARY

Site: I-07 2031 No
Redevelopment AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road - Proposed upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 70 seconds (Practical Cycle Time)

Phase times determined by the program

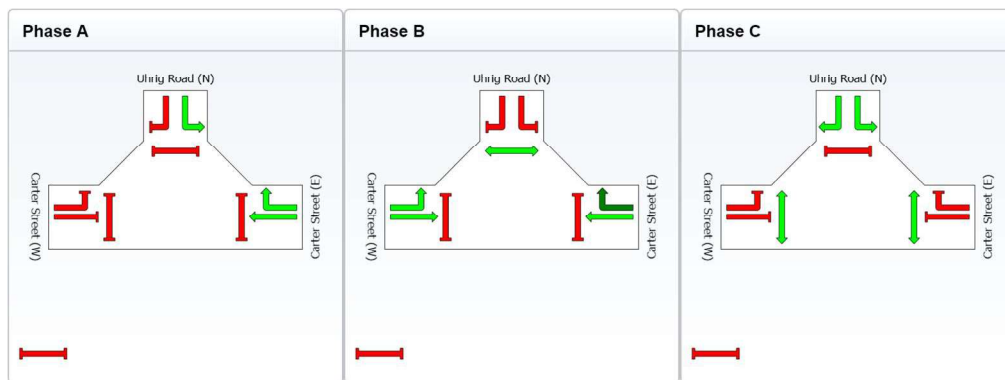
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	33	13
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	39	19
Phase Split	17 %	56 %	27 %



MOVEMENT SUMMARY

Site: I-07 2031 No
Redevelopment PM

Carter Street Precinct
I-07 Carter Street / Uhrig Road - Proposed upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	603	5.1	0.548	5.1	LOS A	6.9	50.3	0.42	0.37	50.8
6	R	25	4.2	0.052	16.0	LOS B	0.3	2.0	0.56	0.70	41.8
Approach		628	5.0	0.548	5.5	LOS A	6.9	50.3	0.42	0.38	50.4
North: Uhrig Road (N)											
7	L	146	5.0	0.196	19.0	LOS B	2.2	15.8	0.53	0.74	39.5
9	R	144	5.1	0.371	31.0	LOS C	3.5	25.6	0.84	0.78	32.4
Approach		291	5.1	0.371	24.9	LOS B	3.5	25.6	0.68	0.76	35.6
West: Carter Street (W)											
10	L	144	5.1	0.210	21.9	LOS B	2.9	21.0	0.71	0.77	37.5
11	T	336	5.0	0.464	15.2	LOS B	7.5	54.9	0.80	0.68	40.1
Approach		480	5.0	0.464	17.2	LOS B	7.5	54.9	0.77	0.71	39.3
All Vehicles		1399	5.0	0.548	13.6	LOS A	7.5	54.9	0.60	0.57	42.6

PHASING SUMMARY

Site: I-07 2031 No
Redevelopment PM

Carter Street Precinct
I-07 Carter Street / Uhrig Road - Proposed upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Phase times determined by the program

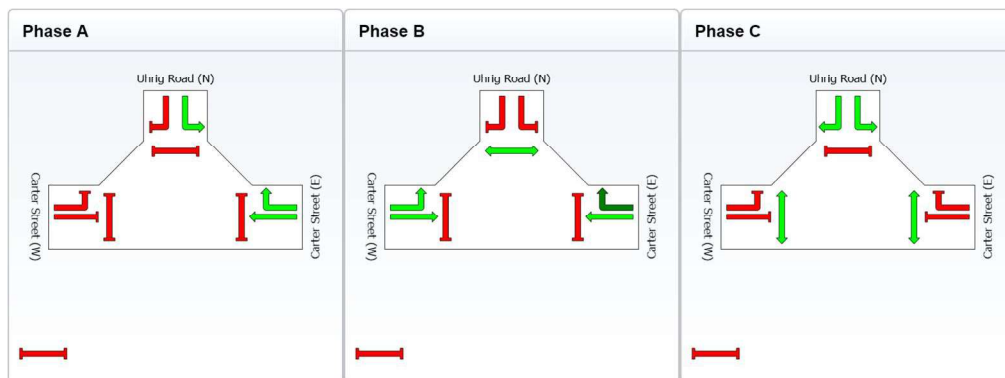
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

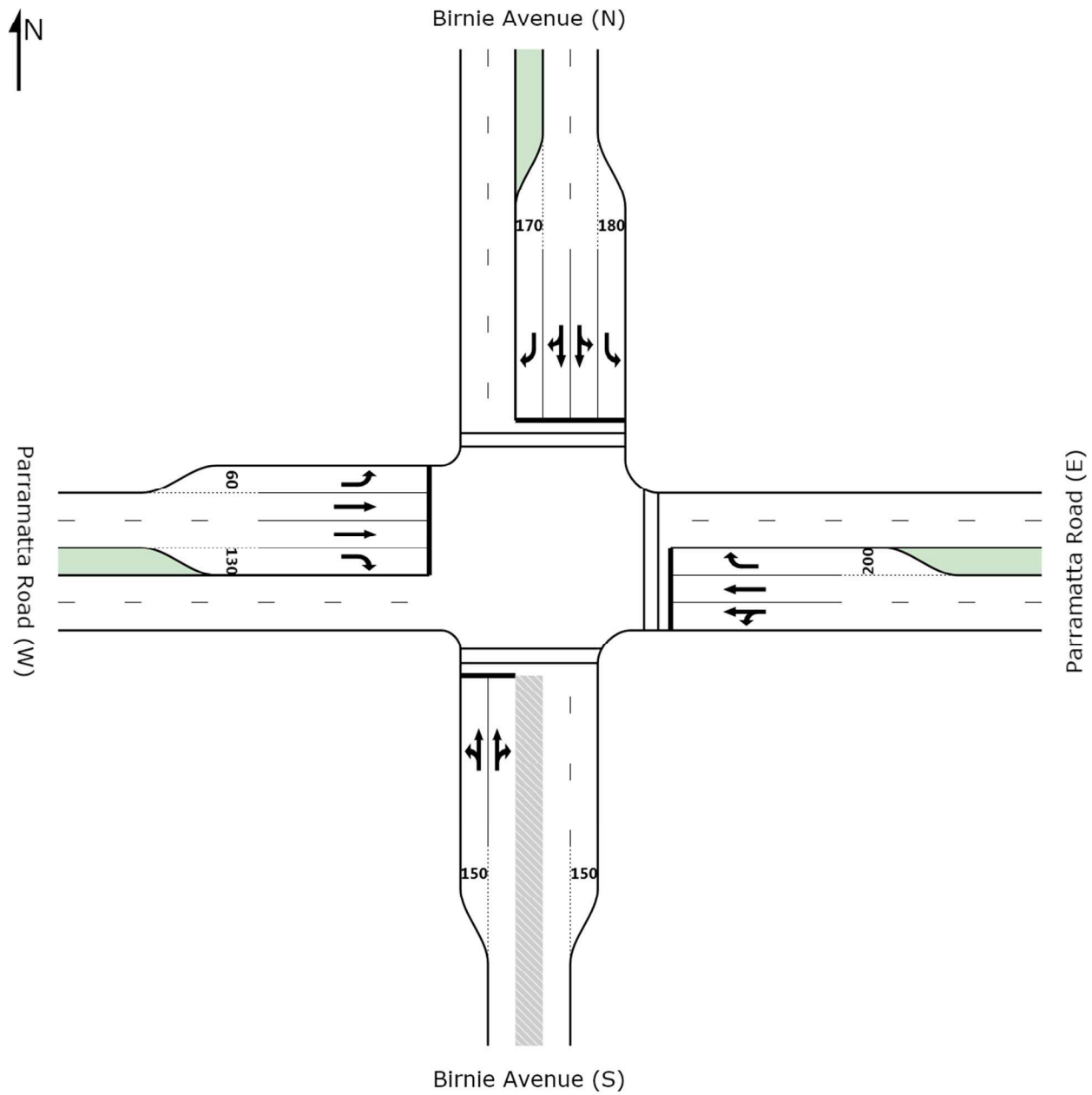
Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	23	13
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	29	19
Phase Split	20 %	48 %	32 %



I-08 Parramatta Road / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-08 2031 No
Redevelopment AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	20	10.5	0.904	92.6	LOS F	18.2	138.4	1.00	1.03	17.5
2	T	295	10.0	0.904	84.1	LOS F	18.2	138.4	1.00	1.03	17.4
3	R	119	9.7	0.904	92.8	LOS F	17.8	135.2	1.00	1.02	17.2
Approach		434	10.0	0.904	86.9	LOS F	18.2	138.4	1.00	1.03	17.4
East: Parramatta Road (E)											
4	L	282	10.1	0.908	22.9	LOS B	50.9	386.8	0.65	0.97	38.4
5	T	1882	10.0	0.908	14.6	LOS B	52.6	399.5	0.67	0.65	40.6
6	R	238	10.2	0.935	84.6	LOS F	15.9	120.8	1.00	1.08	18.1
Approach		2402	10.0	0.935	22.5	LOS B	52.6	399.5	0.70	0.73	36.0
North: Birnie Avenue (N)											
7	L	133	10.3	0.320	59.0	LOS E	7.3	55.9	0.80	0.79	22.9
8	T	266	9.9	0.887	79.3	LOS F	12.0	91.5	1.00	0.90	18.3
9	R	157	10.1	0.887	91.4	LOS F	12.0	91.5	1.00	0.93	17.2
Approach		556	10.0	0.887	77.8	LOS F	12.0	91.5	0.95	0.88	18.9
West: Parramatta Road (W)											
10	L	292	10.1	0.472	13.1	LOS A	3.1	23.4	0.27	0.72	44.4
11	T	1715	10.0	0.924	39.7	LOS C	61.5	467.3	0.94	0.95	27.5
12	R	52	10.2	0.807	84.8	LOS F	4.4	33.1	0.94	0.97	18.0
Approach		2058	10.0	0.924	37.1	LOS C	61.5	467.3	0.84	0.92	28.7
All Vehicles		5449	10.0	0.935	38.8	LOS C	61.5	467.3	0.80	0.84	28.2

PHASING SUMMARY

Site: I-08 2031 No
Redevelopment AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

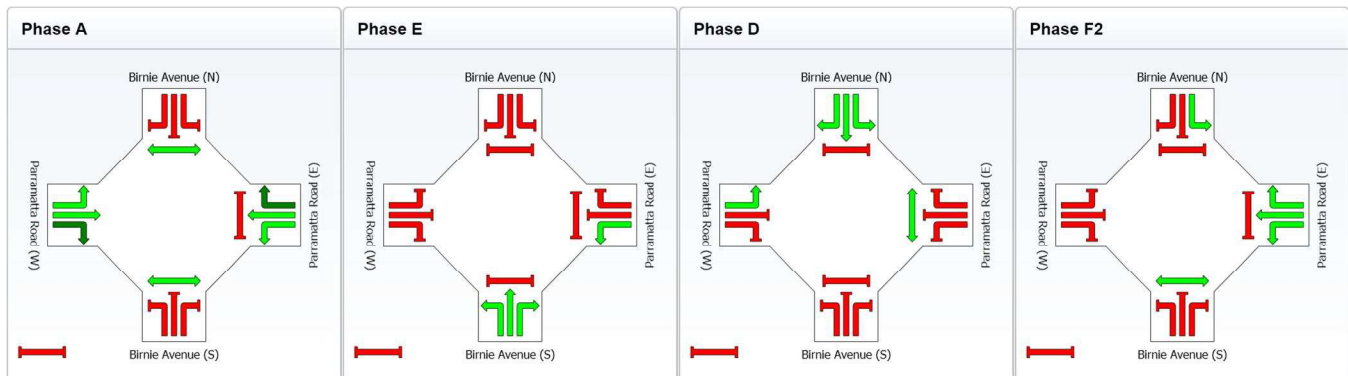
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	76	20	14	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	82	26	20	22
Phase Split	55 %	17 %	13 %	15 %



MOVEMENT SUMMARY

Site: I-08 2031 No
Redevelopment PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	34	6.3	1.080	178.8	LOS F	30.6	224.0	1.00	1.37	10.3
2	T	249	5.1	1.080	170.5	LOS F	30.6	224.0	1.00	1.36	10.3
3	R	220	4.8	1.080	179.2	LOS F	29.6	215.7	1.00	1.25	10.2
Approach		503	5.0	1.080	174.8	LOS F	30.6	224.0	1.00	1.31	10.2
East: Parramatta Road (E)											
4	L	307	5.1	1.033	88.4	LOS F	126.8	925.9	1.00	1.22	17.9
5	T	2077	5.0	1.033	80.2	LOS F	127.3	929.5	1.00	1.24	18.1
6	R	235	4.9	0.962	89.5	LOS F	16.8	122.5	1.00	1.08	17.4
Approach		2619	5.0	1.033	82.0	LOS F	127.3	929.5	1.00	1.23	18.0
North: Birnie Avenue (N)											
7	L	286	5.1	0.558	56.9	LOS E	16.4	119.8	0.84	0.83	23.4
8	T	439	5.0	1.077	117.9	LOS F	32.6	237.8	1.00	1.16	13.8
9	R	354	5.1	1.077	170.6	LOS F	32.6	237.8	1.00	1.23	10.6
Approach		1079	5.1	1.077	119.0	LOS F	32.6	237.8	0.96	1.09	13.9
West: Parramatta Road (W)											
10	L	152	4.9	0.183	12.2	LOS A	1.3	9.3	0.23	0.70	45.1
11	T	1878	5.0	1.065	123.9	LOS F	109.3	797.5	1.00	1.38	13.3
12	R	16	6.7	0.304	92.7	LOS F	1.2	9.1	1.00	0.67	16.9
Approach		2045	5.0	1.065	115.4	LOS F	109.3	797.5	0.94	1.33	14.1
All Vehicles		6246	5.0	1.080	106.8	LOS F	127.3	929.5	0.97	1.24	15.0

PHASING SUMMARY

Site: I-08 2031 No
Redevelopment PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

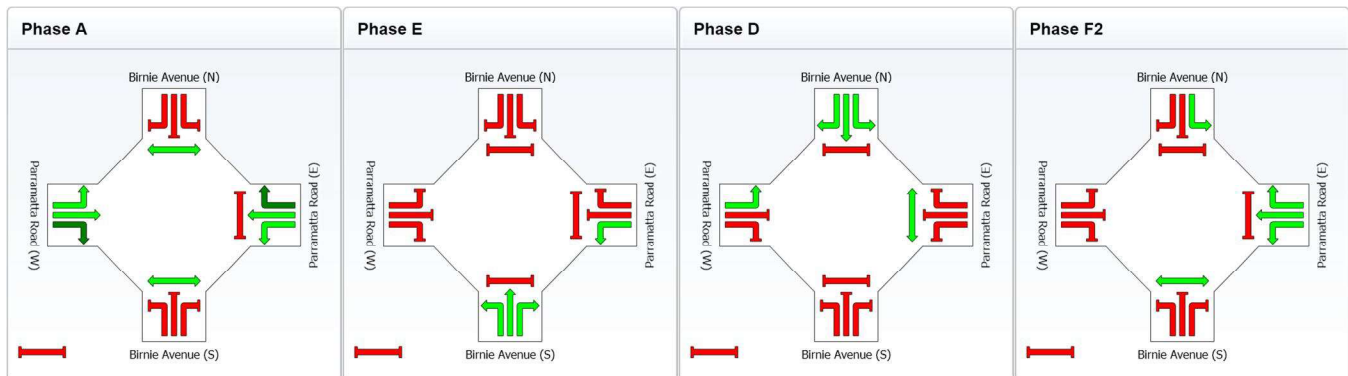
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

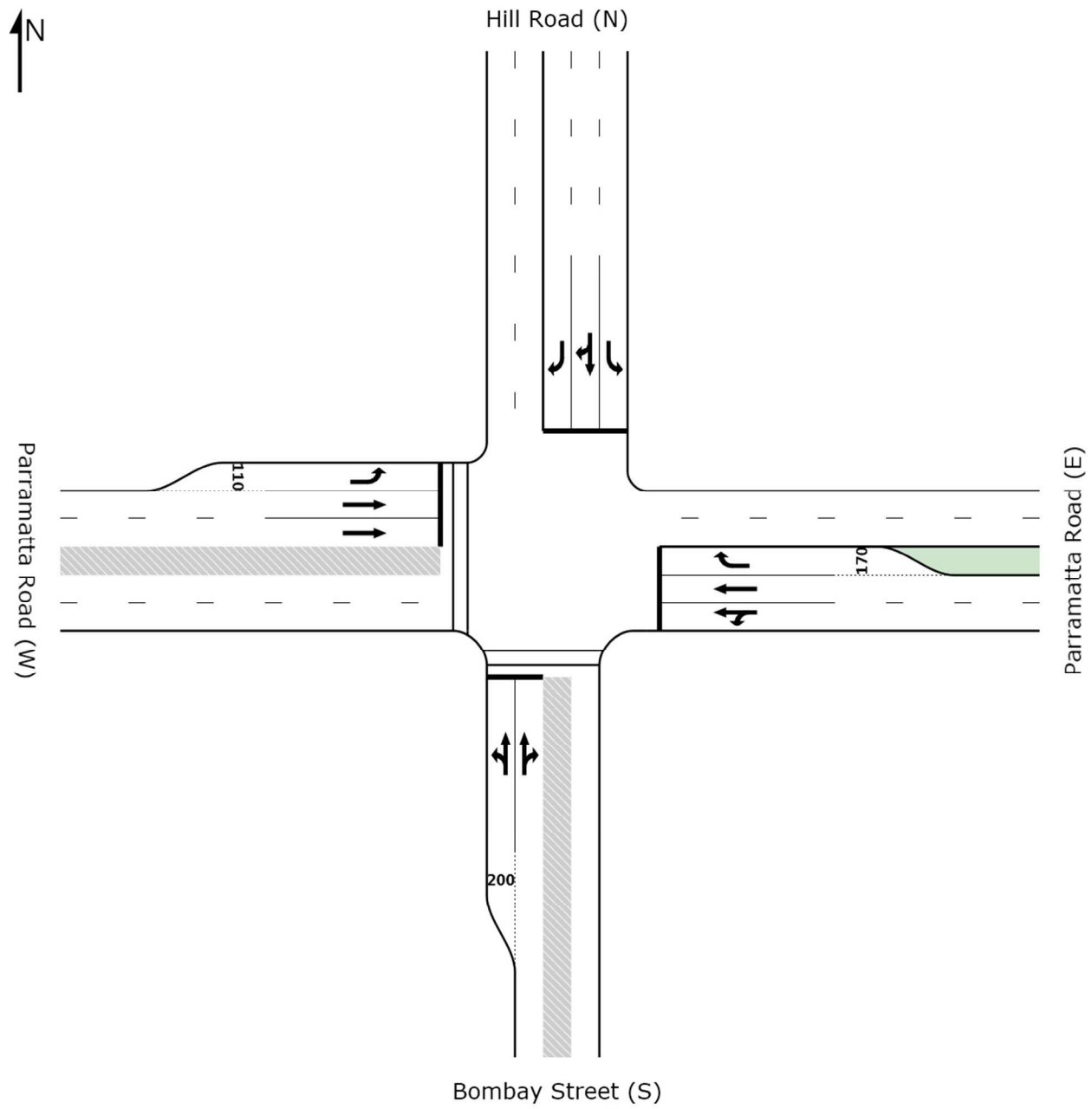
Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	70	19	21	16
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	76	25	27	22
Phase Split	51 %	17 %	18 %	15 %



I-09 Parramatta Road / Hill Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-09 2031 No
Redevelopment AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	17	12.5	1.106	199.1	LOS F	30.6	233.3	1.00	1.52	9.1
2	T	398	10.1	1.106	191.5	LOS F	30.6	233.3	1.00	1.52	9.1
3	R	66	9.5	1.106	199.1	LOS F	30.4	230.7	1.00	1.51	9.1
Approach		481	10.1	1.106	192.8	LOS F	30.6	233.3	1.00	1.52	9.1
East: Parramatta Road (E)											
4	L	14	7.7	0.895	42.3	LOS C	54.0	410.3	0.87	1.01	28.4
5	T	1712	10.0	0.895	32.5	LOS C	54.2	412.0	0.87	0.85	30.3
6	R	292	10.0	1.132	161.5	LOS F	36.5	277.4	1.00	1.14	11.0
Approach		2018	10.0	1.132	51.3	LOS D	54.2	412.0	0.89	0.89	24.2
North: Hill Road (N)											
7	L	352	9.9	0.515	41.8	LOS C	16.6	125.9	0.70	0.81	28.0
8	T	487	9.9	1.140	210.7	LOS F	66.2	503.0	1.00	1.64	8.4
9	R	361	9.9	0.892	78.8	LOS F	28.1	213.1	1.00	0.94	19.0
Approach		1200	9.9	1.140	121.5	LOS F	66.2	503.0	0.91	1.19	13.5
West: Parramatta Road (W)											
10	L	403	9.9	0.396	13.4	LOS A	4.3	32.7	0.31	0.73	44.1
11	T	1505	10.0	1.121	181.4	LOS F	99.5	755.8	1.00	1.58	9.9
Approach		1908	10.0	1.121	145.9	LOS F	99.5	755.8	0.85	1.40	11.8
All Vehicles		5607	10.0	1.140	110.7	LOS F	99.5	755.8	0.89	1.18	14.5

PHASING SUMMARY

Site: I-09 2031 No
Redevelopment AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

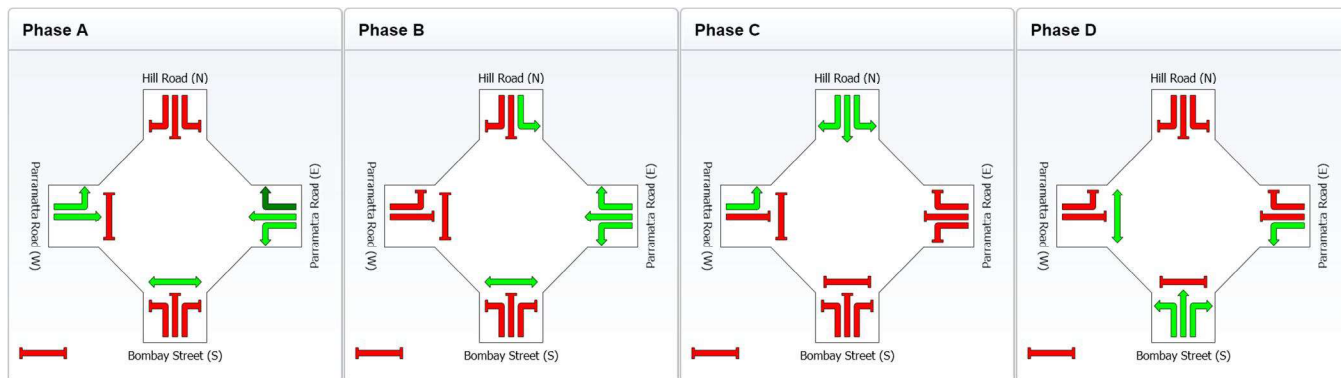
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	55	18	35	18
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	61	24	41	24
Phase Split	41 %	16 %	27 %	16 %



MOVEMENT SUMMARY

Site: I-09 2031 No
Redevelopment PM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	25	4.2	1.088	183.7	LOS F	33.2	242.7	1.00	1.49	9.7
2	T	476	5.1	1.088	176.4	LOS F	33.2	242.7	1.00	1.49	9.7
3	R	43	4.9	1.088	183.7	LOS F	33.1	241.9	1.00	1.49	9.7
Approach		544	5.0	1.088	177.3	LOS F	33.2	242.7	1.00	1.49	9.7
East: Parramatta Road (E)											
4	L	38	5.6	0.992	74.4	LOS F	95.1	694.2	1.00	1.15	19.8
5	T	1985	5.0	0.992	65.0	LOS E	95.1	694.5	1.00	1.15	20.8
6	R	294	5.0	1.097	132.0	LOS F	33.6	245.6	1.00	1.10	13.0
Approach		2317	5.0	1.097	73.7	LOS F	95.1	694.5	1.00	1.14	19.3
North: Hill Road (N)											
7	L	382	5.0	0.581	46.2	LOS D	19.8	144.2	0.77	0.83	26.4
8	T	439	5.0	1.125	198.8	LOS F	57.5	419.6	1.00	1.56	8.8
9	R	393	5.1	1.060	154.8	LOS F	44.4	324.3	1.00	1.15	11.4
Approach		1214	5.0	1.125	136.5	LOS F	57.5	419.6	0.93	1.20	12.4
West: Parramatta Road (W)											
10	L	323	4.9	0.317	13.5	LOS A	3.5	25.2	0.31	0.73	43.9
11	T	1557	5.0	1.085	149.5	LOS F	94.6	690.8	1.00	1.46	11.5
Approach		1880	5.0	1.085	126.1	LOS F	94.6	690.8	0.88	1.33	13.2
All Vehicles		5955	5.0	1.125	112.5	LOS F	95.1	694.5	0.95	1.24	14.3

PHASING SUMMARY

Site: I-09 2031 No
Redevelopment PM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2031 No Carter Street Redevelopment PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

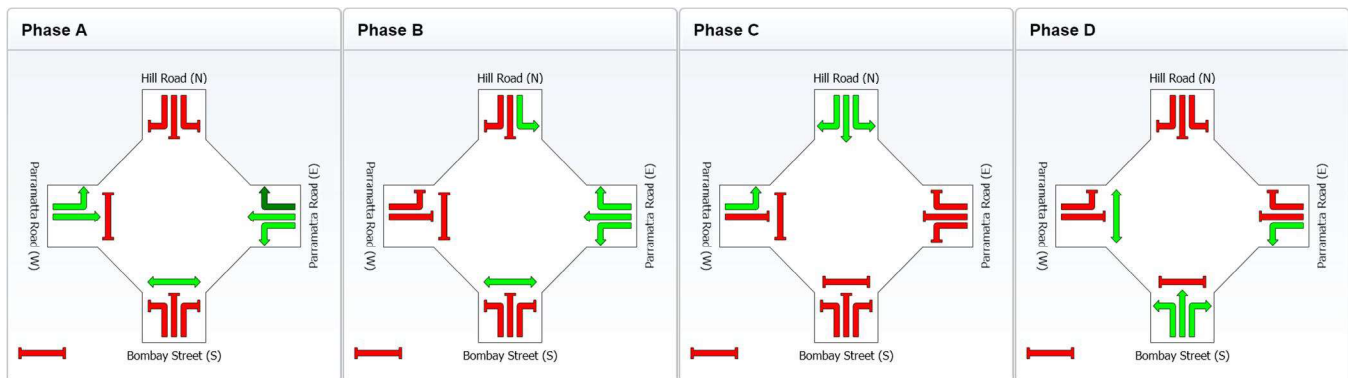
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

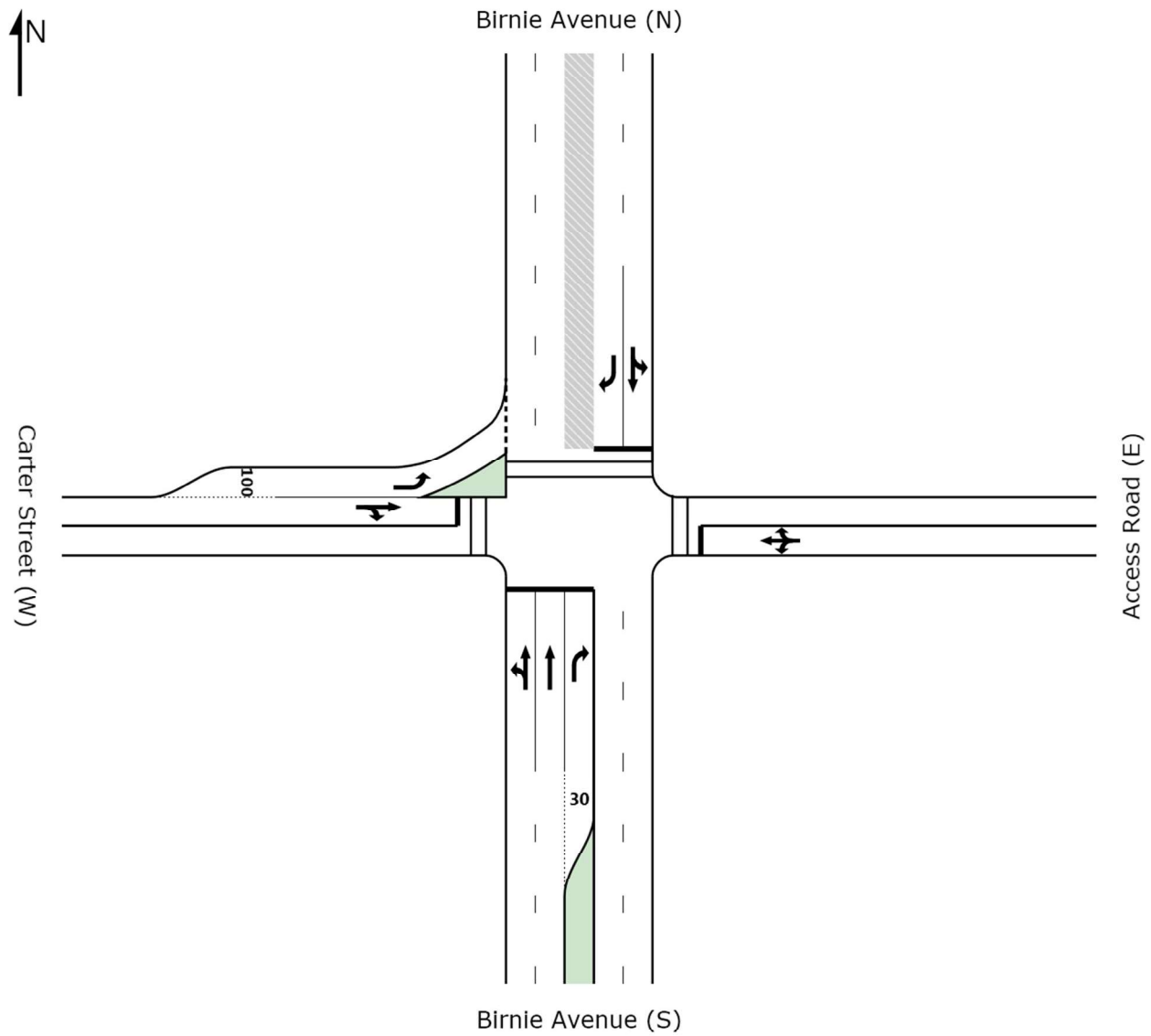
Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	57	18	31	20
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	63	24	37	26
Phase Split	42 %	16 %	25 %	17 %



I-10 Carter Street / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-10 2031 No
Redevelopment AM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue - Proposed upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 80 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	200	10.0	0.677	31.4	LOS C	13.0	98.8	0.83	0.87	33.2
2	T	623	10.0	0.677	24.1	LOS B	13.0	98.8	0.85	0.74	34.0
3	R	11	0.0	0.045	27.9	LOS B	0.2	1.7	0.60	0.70	33.9
Approach		834	9.8	0.677	25.9	LOS B	13.0	98.8	0.84	0.77	33.8
East: Access Road (E)											
4	L	11	0.0	0.223	48.2	LOS D	1.2	8.7	0.97	0.72	26.1
5	T	11	0.0	0.223	40.0	LOS C	1.2	8.7	0.97	0.70	26.3
6	R	11	0.0	0.223	48.3	LOS D	1.2	8.7	0.97	0.72	26.1
Approach		32	0.0	0.223	45.5	LOS D	1.2	8.7	0.97	0.71	26.2
North: Birnie Avenue (N)											
7	L	11	0.0	0.486	22.0	LOS B	8.4	63.5	0.52	0.99	38.8
8	T	436	9.9	0.486	13.8	LOS A	8.4	63.5	0.52	0.47	41.9
9	R	209	10.1	0.692	27.0	LOS B	5.0	38.3	0.91	0.84	34.6
Approach		656	9.8	0.692	18.2	LOS B	8.4	63.5	0.64	0.60	39.2
West: Carter Street (W)											
10	L	497	10.0	0.562	12.3	LOS A	7.4	55.9	0.51	0.74	45.1
11	T	11	0.0	0.458	31.4	LOS C	5.7	43.0	0.93	0.75	29.2
12	R	149	9.9	0.458	39.9	LOS C	5.7	43.0	0.93	0.80	28.8
Approach		657	9.8	0.562	18.9	LOS B	7.4	55.9	0.62	0.76	39.7
All Vehicles		2178	9.7	0.692	21.7	LOS B	13.0	98.8	0.71	0.71	36.8

PHASING SUMMARY

Site: I-10 2031 No
Redevelopment AM

Carter Street Precinct
I-10 Carter Street / Birnie Avenue - Proposed upgrade
2031 No Carter Street Redevelopment AM
Signals - Fixed Time Cycle Time = 80 seconds (Practical Cycle Time)

Phase times determined by the program

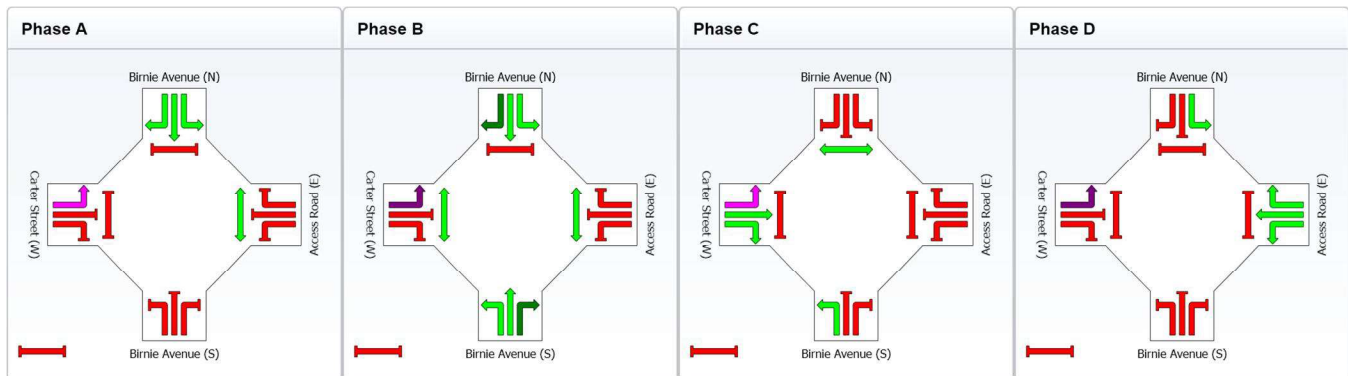
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	8	26	16	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	14	32	22	12
Phase Split	18 %	40 %	28 %	15 %



MOVEMENT SUMMARY

Site: I-10 2031 No
Redevelopment PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	119	5.3	0.686	50.0	LOS D	15.6	114.1	0.91	0.86	26.0
2	T	518	5.1	0.686	42.4	LOS C	15.6	114.1	0.92	0.79	26.4
3	R	11	0.0	0.084	46.4	LOS D	0.4	3.0	0.72	0.72	26.3
Approach		647	5.0	0.686	43.9	LOS D	15.6	114.1	0.92	0.80	26.3
East: Access Road (E)											
4	L	11	0.0	0.321	68.6	LOS E	1.8	12.8	1.00	0.72	21.0
5	T	11	0.0	0.321	60.4	LOS E	1.8	12.8	1.00	0.72	21.1
6	R	11	0.0	0.321	68.7	LOS E	1.8	12.8	1.00	0.72	21.0
Approach		32	0.0	0.321	65.9	LOS E	1.8	12.8	1.00	0.72	21.0
North: Birnie Avenue (N)											
7	L	11	0.0	0.727	17.5	LOS B	19.2	140.1	0.44	1.02	41.9
8	T	849	5.0	0.727	9.4	LOS A	19.2	140.1	0.44	0.41	46.1
9	R	508	5.0	0.728	28.0	LOS B	16.4	119.4	0.81	0.88	33.9
Approach		1368	4.9	0.728	16.4	LOS B	19.2	140.1	0.58	0.59	40.7
West: Carter Street (W)											
10	L	194	4.9	0.207	10.4	LOS A	2.3	16.9	0.29	0.67	46.8
11	T	11	0.0	0.726	51.9	LOS D	12.1	88.1	1.00	0.86	22.7
12	R	205	5.1	0.726	60.2	LOS E	12.1	88.1	1.00	0.86	22.7
Approach		409	4.9	0.726	36.4	LOS C	12.1	88.1	0.67	0.77	30.1
All Vehicles		2457	4.9	0.728	27.6	LOS B	19.2	140.1	0.69	0.68	33.5

PHASING SUMMARY

Site: I-10 2031 No
Redevelopment PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 No Carter Street Redevelopment PM

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

Phase times determined by the program

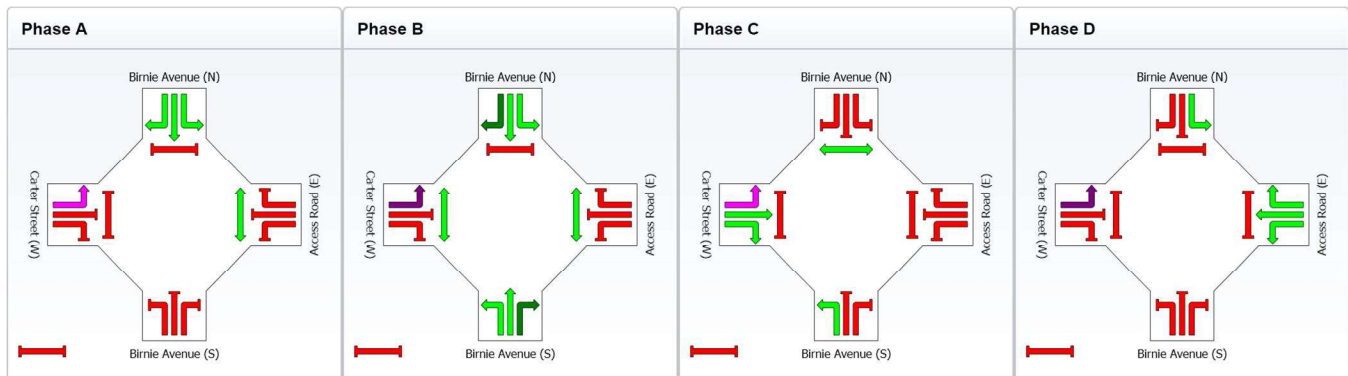
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

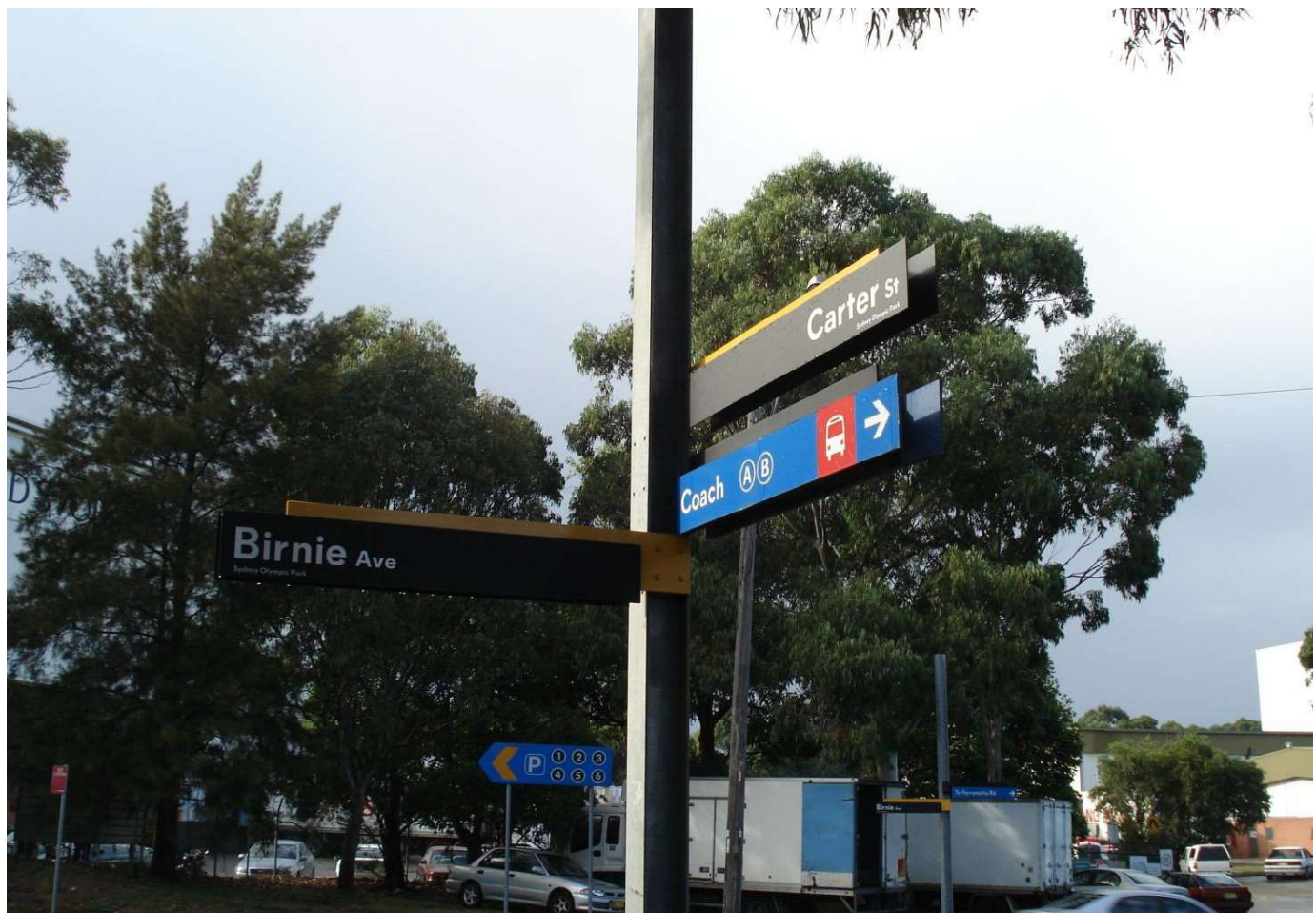
Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	38	28	19	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	44	34	25	12
Phase Split	38 %	30 %	22 %	10 %



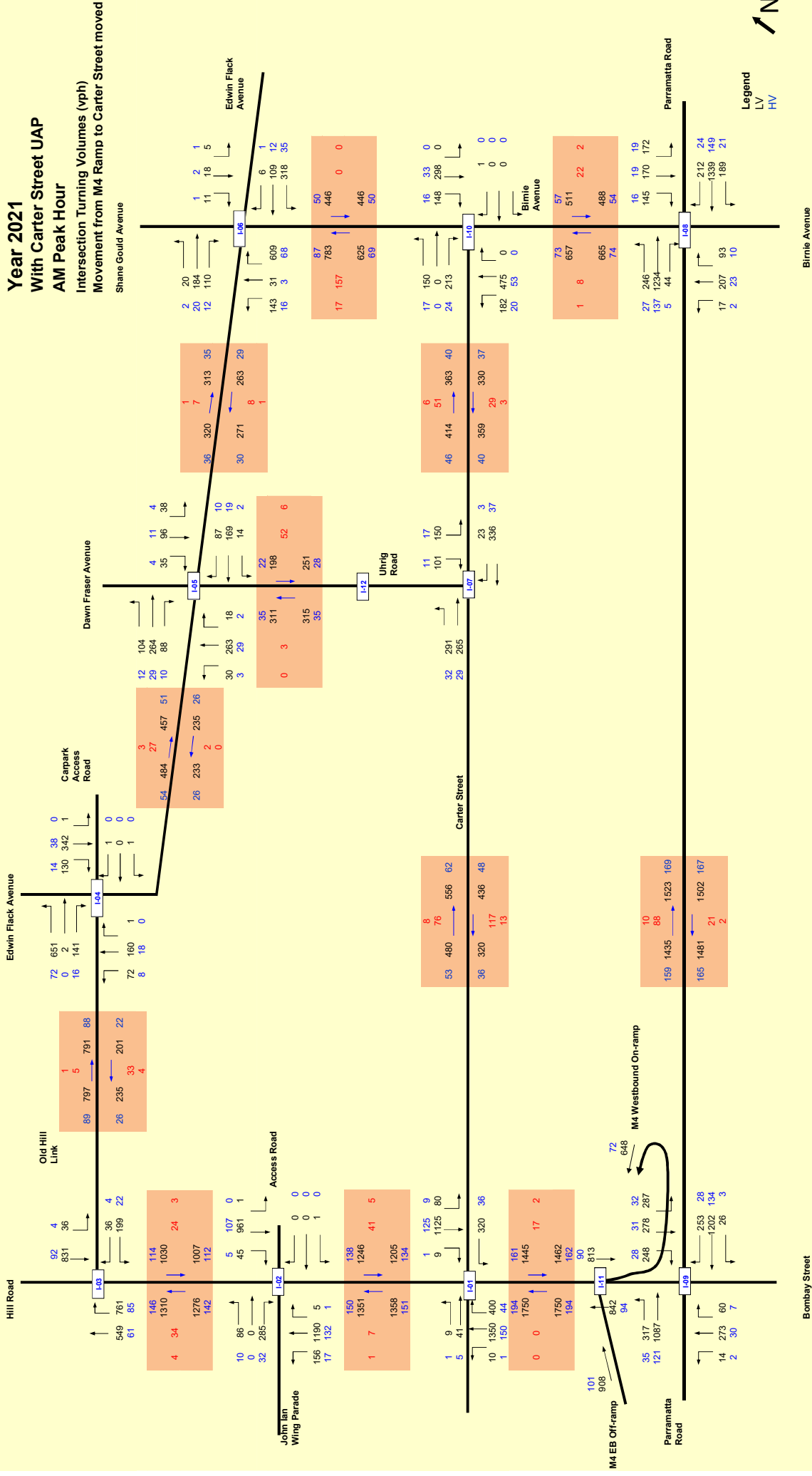
Appendix E

2021 and 2031 with Carter Street UAP traffic volumes

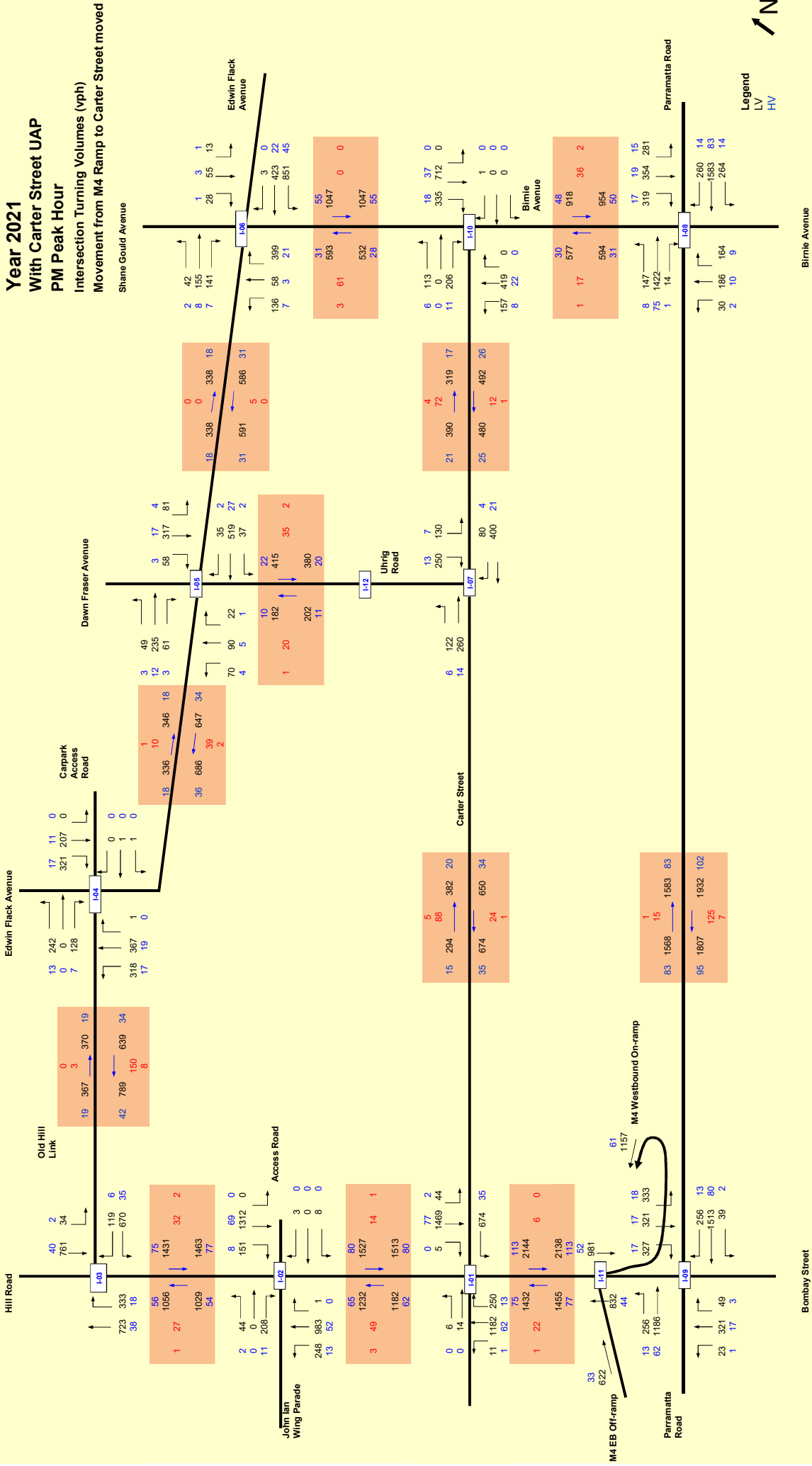


**Year 2021
With Carter Street UAP
AM Peak Hour**

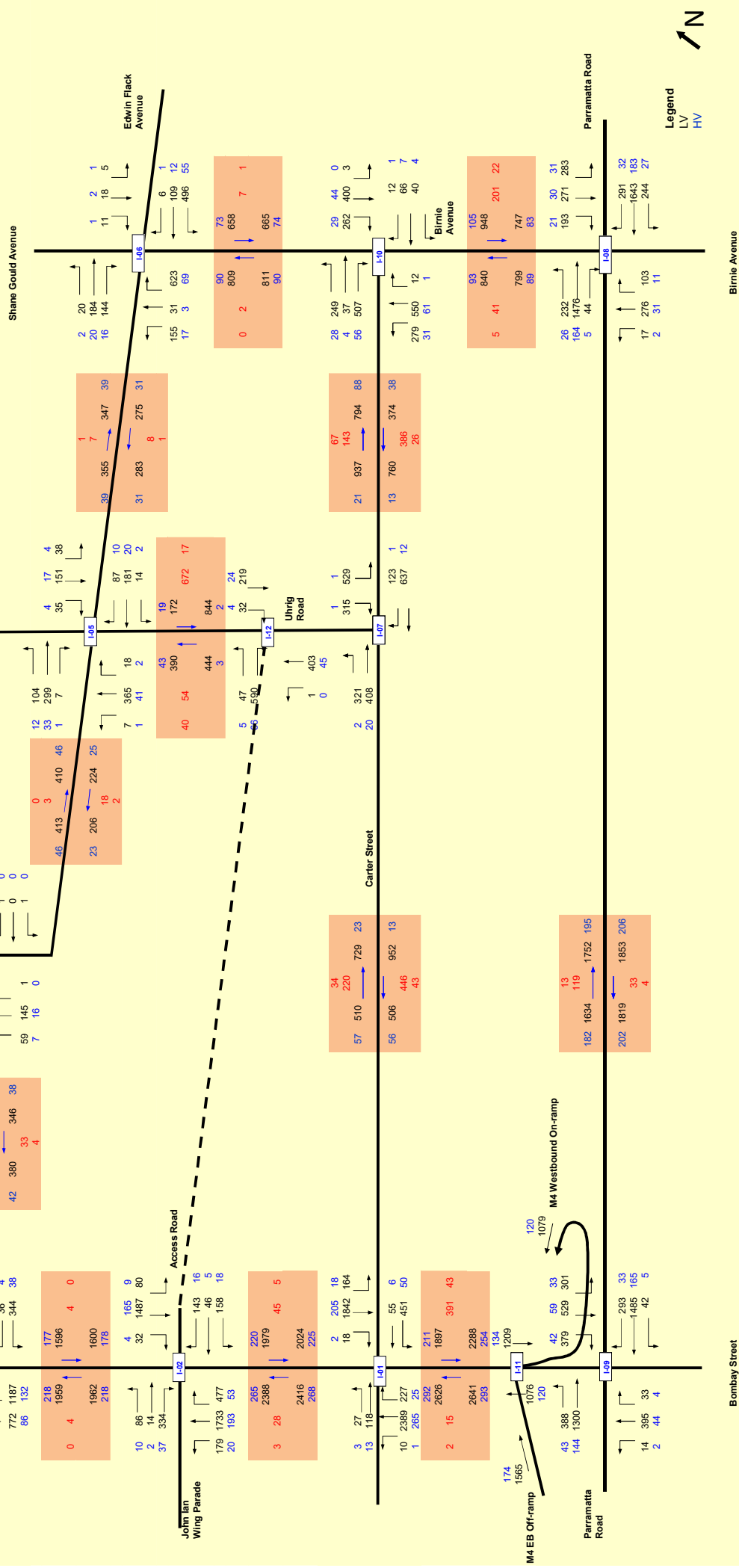
Intersection Turning Volumes (vph)
Movement from M4 Ramp to Carter Street moved



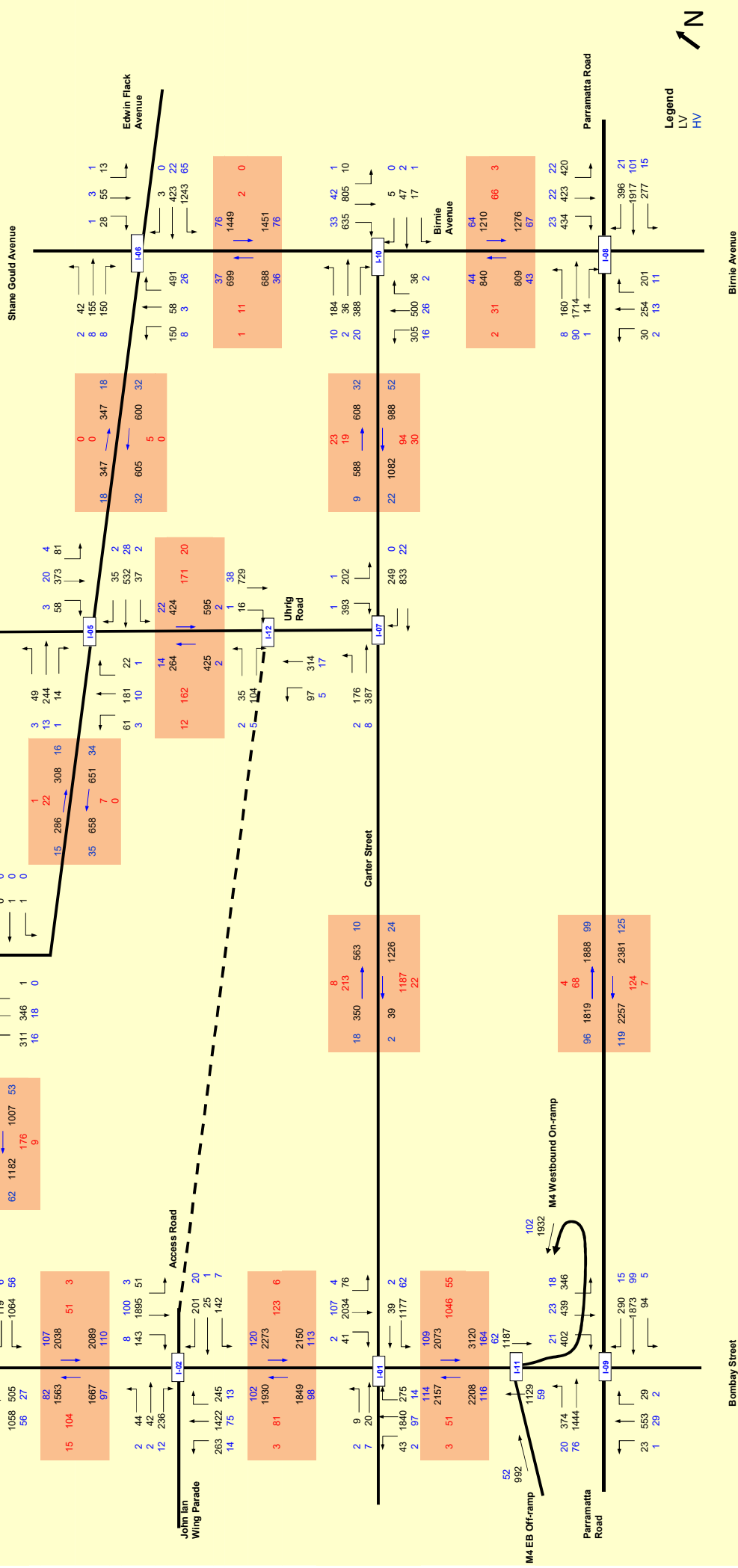
Year 2021
With Carter Street UAP
PM Peak Hour
Intersection Turning Volumes (vph)
Movement from M4 Ramp to Carter Street moved



Year 2031
With Uhrig Rd Ext. & 3rd Parramatta Rd
AM Peak Hour - 111,000m² Commercial
Intersection Turning Volumes (vph)
Movement from M4 Ramp to Carter Street moved

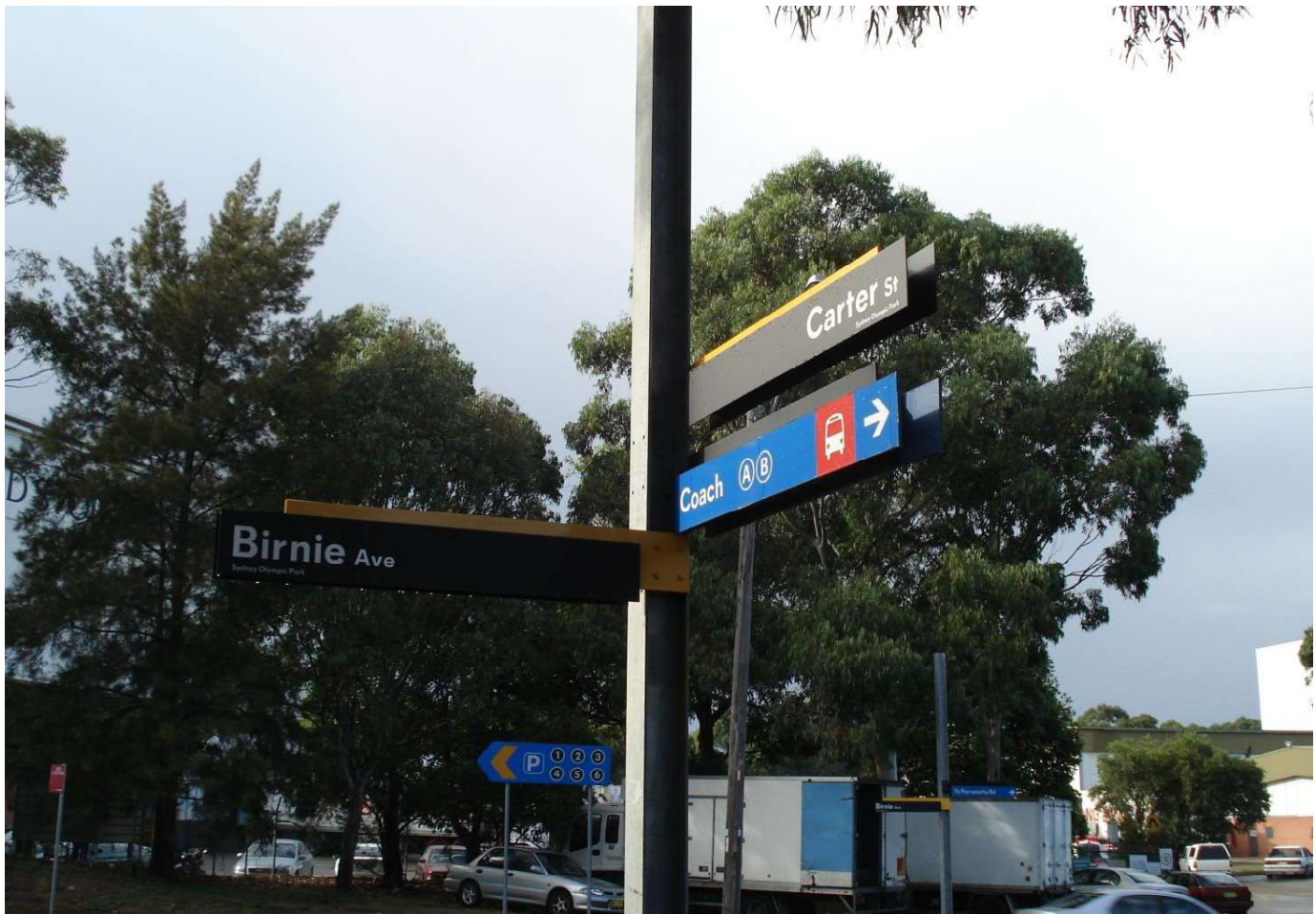


Year 2031 With Uhrig Rd Ext. & 3rd Parramatta Rd PM Peak Hour - 111,000m² Commercial Intersection Turning Volumes (vph) Movement from M4 Ramp to Carter Street moved



Appendix F

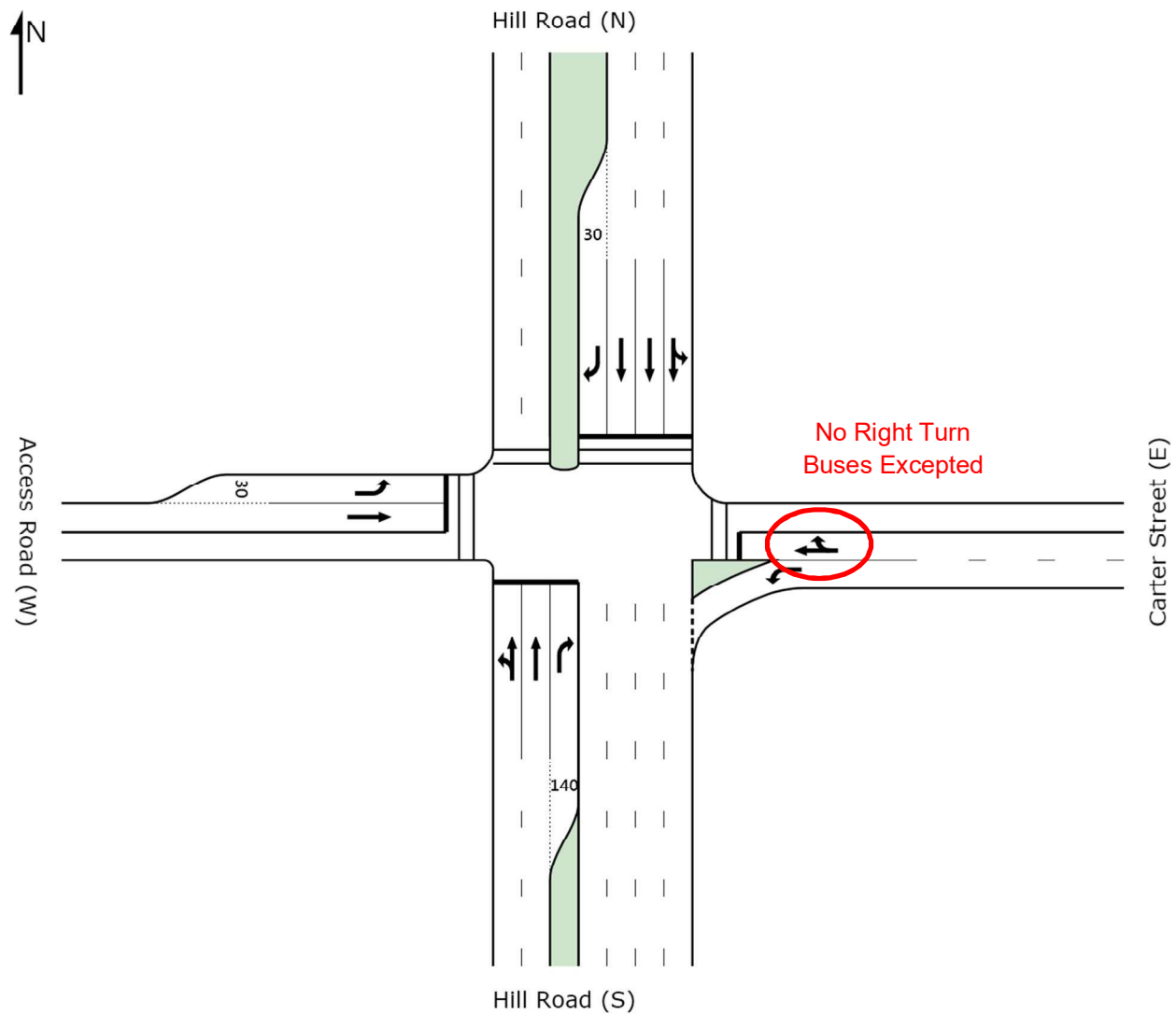
2021 and 2031 with Carter Street UAP intersection model results



Year 2021 – All Residential and Retail

I-01 Hill Road / Carter Street Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-01 2021 DSP2 AM

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2021 Phase 2 AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	11	0.0	0.552	9.9	LOS A	5.9	45.1	0.11	1.06	47.7
2	T	1579	10.0	0.552	1.7	LOS A	5.9	45.2	0.11	0.11	54.5
3	R	468	10.0	0.813	43.1	LOS D	23.6	179.3	0.75	0.84	19.7
Approach		2058	9.9	0.813	11.2	LOS A	23.6	179.3	0.26	0.28	38.8
East: Carter Street (E)											
4	L	374	10.0	0.330	19.0	LOS B	10.8	81.7	0.47	0.79	39.8
5	T	11	0.0	0.184	65.6	LOS E	1.6	16.2	0.93	0.69	20.3
6	R	13	100.0	0.184	77.0	LOS F	1.6	16.2	0.93	0.75	21.5
Approach		397	12.6	0.330	22.1	LOS B	10.8	81.7	0.50	0.78	37.7
North: Hill Road (N)											
7	L	94	10.0	0.822	61.1	LOS E	31.3	237.7	0.95	0.92	17.2
8	T	1316	10.0	0.822	52.5	LOS D	31.6	240.1	0.95	0.87	17.5
9	R	11	11.1	0.172	51.9	LOS D	0.5	4.1	0.65	0.73	24.8
Approach		1420	10.0	0.822	53.1	LOS D	31.6	240.1	0.95	0.88	17.6
West: Access Road (W)											
10	L	11	9.1	0.109	69.6	LOS E	0.7	5.1	0.90	0.68	20.6
11	T	48	11.8	0.200	63.0	LOS E	3.2	24.6	0.93	0.70	21.3
Approach		59	11.3	0.200	64.1	LOS E	3.2	24.6	0.92	0.70	21.2
All Vehicles		3934	10.3	0.822	28.2	LOS B	31.6	240.1	0.54	0.55	26.7

PHASING SUMMARY

Site: I-01 2021 DSP2 AM

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2021 Phase 2 AM

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

Phase times determined by the program

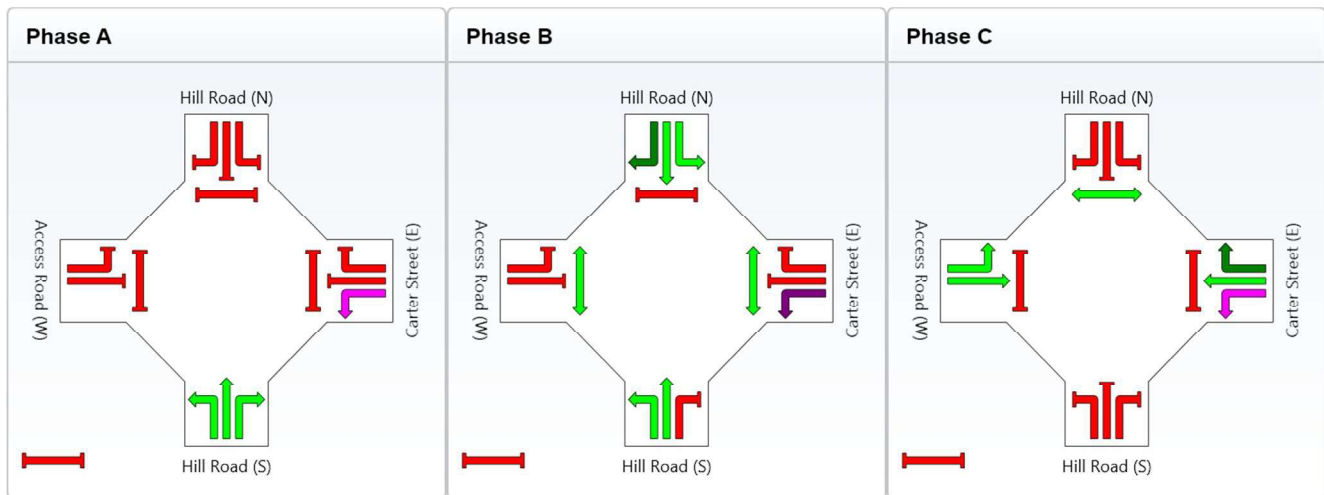
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	65	47	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	71	53	26
Phase Split	47 %	35 %	17 %



MOVEMENT SUMMARY

Site: I-01 2021 DSP2 PM

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2021 Phase 2 PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	13	7.1	0.449	10.0	LOS A	4.1	30.0	0.09	1.08	47.7
2	T	1311	5.0	0.449	1.5	LOS A	4.1	30.0	0.09	0.09	55.1
3	R	277	5.0	0.559	52.8	LOS D	15.0	109.4	0.79	0.81	17.0
Approach		1600	5.0	0.559	10.5	LOS A	15.0	109.4	0.22	0.22	39.7
East: Carter Street (E)											
4	L	747	5.0	0.688	25.5	LOS B	27.2	198.5	0.73	0.93	35.6
5	T	24	7.7	0.224	63.5	LOS E	2.5	23.1	0.93	0.70	20.9
6	R	13	100.0	0.224	74.9	LOS F	2.5	23.1	0.93	0.77	22.2
Approach		784	6.6	0.688	27.4	LOS B	27.2	198.5	0.74	0.92	34.5
North: Hill Road (N)											
7	L	48	4.7	0.684	39.5	LOS C	28.1	204.9	0.75	0.93	23.3
8	T	1628	5.0	0.684	31.1	LOS C	28.2	205.8	0.75	0.68	24.4
9	R	31	0.0	0.270	35.0	LOS C	1.2	8.4	0.53	0.75	30.5
Approach		1707	4.9	0.684	31.4	LOS C	28.2	205.8	0.75	0.68	24.5
West: Access Road (W)											
10	L	6	0.0	0.060	67.7	LOS E	0.4	2.8	0.89	0.66	20.9
11	T	15	0.0	0.054	60.0	LOS E	0.9	6.5	0.90	0.63	21.9
Approach		21	0.0	0.060	62.3	LOS E	0.9	6.5	0.89	0.64	21.6
All Vehicles		4113	5.2	0.688	22.7	LOS B	28.2	205.8	0.54	0.55	30.8

PHASING SUMMARY

Site: I-01 2021 DSP2 PM

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2021 Phase 2 PM

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

Phase times determined by the program

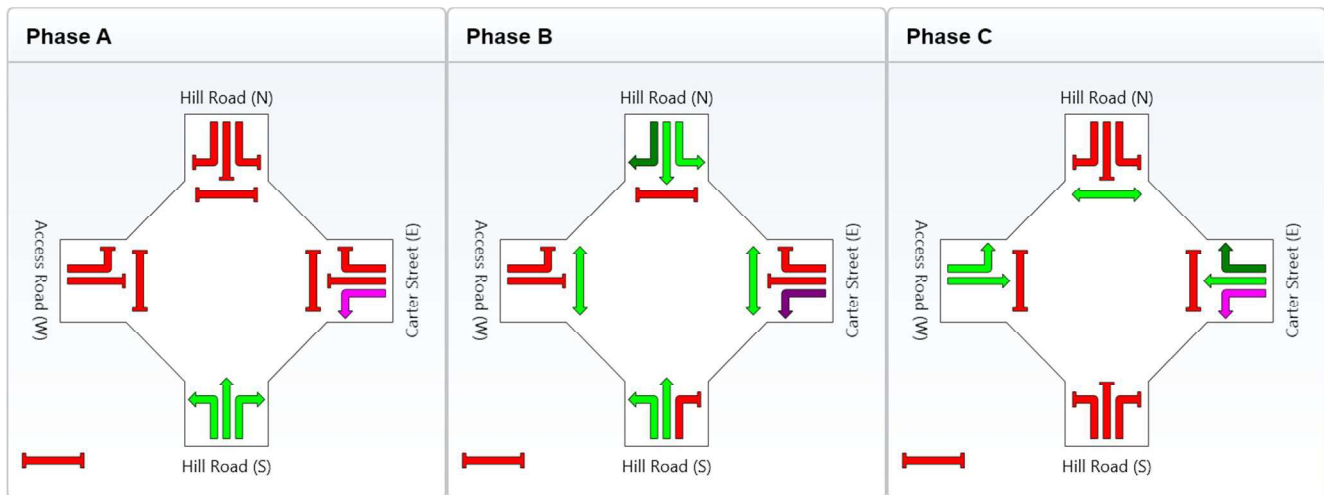
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

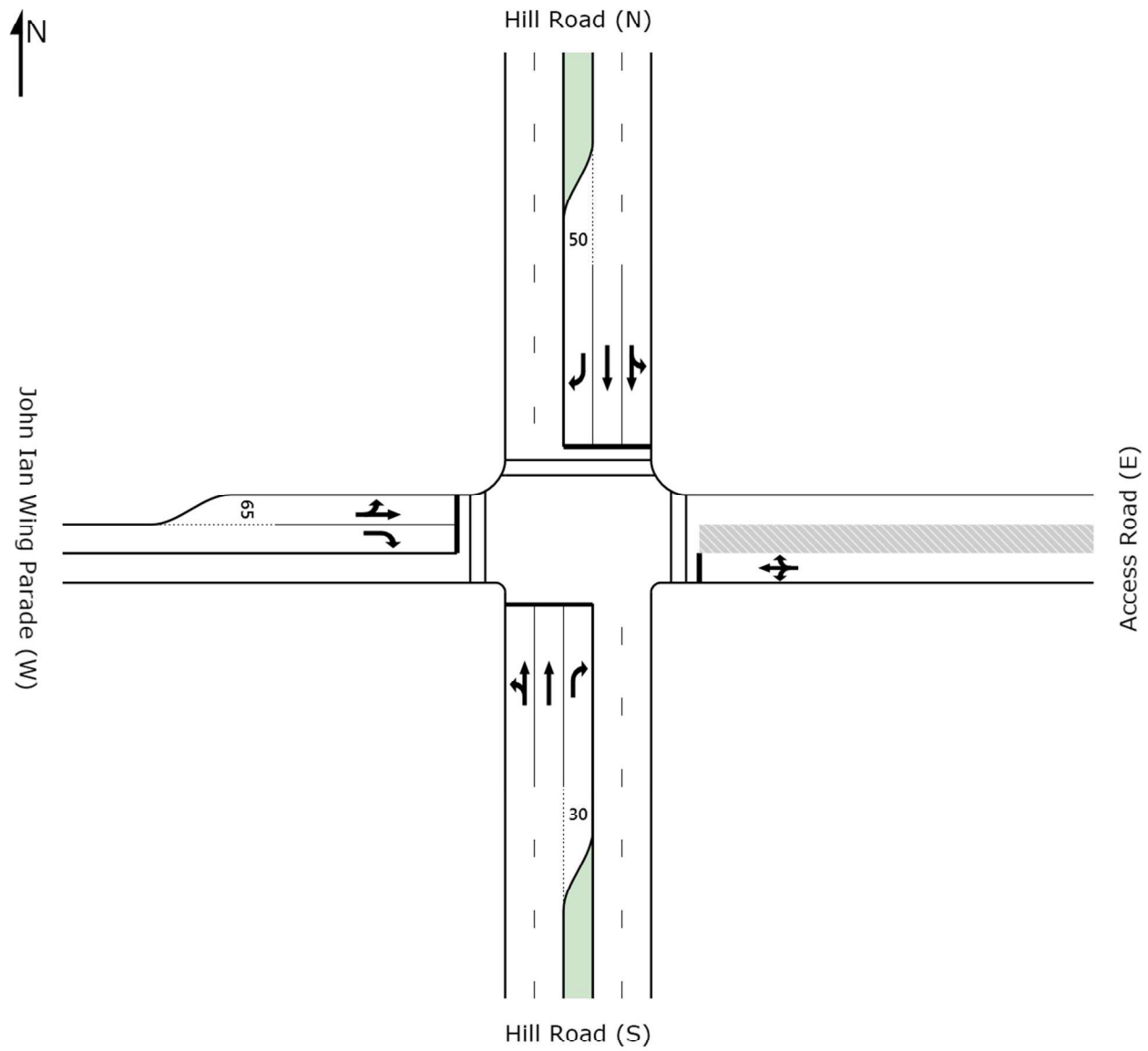
Phase Timing Results

Phase	A	B	C
Green Time (sec)	46	65	21
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	52	71	27
Phase Split	35 %	47 %	18 %



I-02 Hill Road / John Ian Wing Parade Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-02 2021 DSP2 AM -
Copy

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Proposed Upgrade

2021 Phase 2 AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	182	10.2	0.837	29.5	LOS C	34.9	265.7	0.80	0.95	33.7
2	T	1392	10.0	0.837	21.7	LOS B	35.3	268.4	0.80	0.75	35.6
3	R	11	0.0	0.059	38.0	LOS C	0.2	1.5	0.34	0.87	36.3
Approach		1584	10.0	0.837	22.7	LOS B	35.3	268.4	0.79	0.78	35.4
East: Access Road (E)											
4	L	5	9.9	0.039	34.7	LOS C	0.7	5.1	0.75	0.61	8.9
5	T	5	12.5	0.039	33.3	LOS C	0.7	5.1	0.75	0.54	7.1
6	R	5	10.8	0.039	34.7	LOS C	0.7	5.1	0.75	0.61	8.9
Approach		16	11.1	0.039	34.2	LOS C	0.7	5.1	0.75	0.59	8.3
North: Hill Road (N)											
7	L	5	9.8	0.500	34.2	LOS C	9.8	74.6	0.33	1.00	39.5
8	T	1123	10.0	0.500	7.2	LOS A	9.8	74.6	0.33	0.29	48.8
9	R	53	11.1	0.335	29.9	LOS C	1.4	10.5	0.79	0.75	32.0
Approach		1181	10.1	0.500	8.3	LOS A	9.8	74.6	0.35	0.32	47.7
West: John Ian Wing Parade (W)											
10	L	101	10.4	0.339	34.2	LOS C	4.1	31.3	0.70	0.75	28.5
11	T	5	8.3	0.339	45.0	LOS D	4.1	31.3	0.70	0.87	25.5
12	R	333	10.0	0.847	61.0	LOS E	21.0	159.7	1.00	0.96	21.1
Approach		439	10.1	0.847	54.6	LOS D	21.0	159.7	0.93	0.91	22.5
All Vehicles		3220	10.0	0.847	21.9	LOS B	35.3	268.4	0.65	0.63	35.8

PHASING SUMMARY

Site: I-02 2021 DSP2 AM -
Copy

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Proposed Upgrade

2021 Phase 2 AM

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

Phase times determined by the program

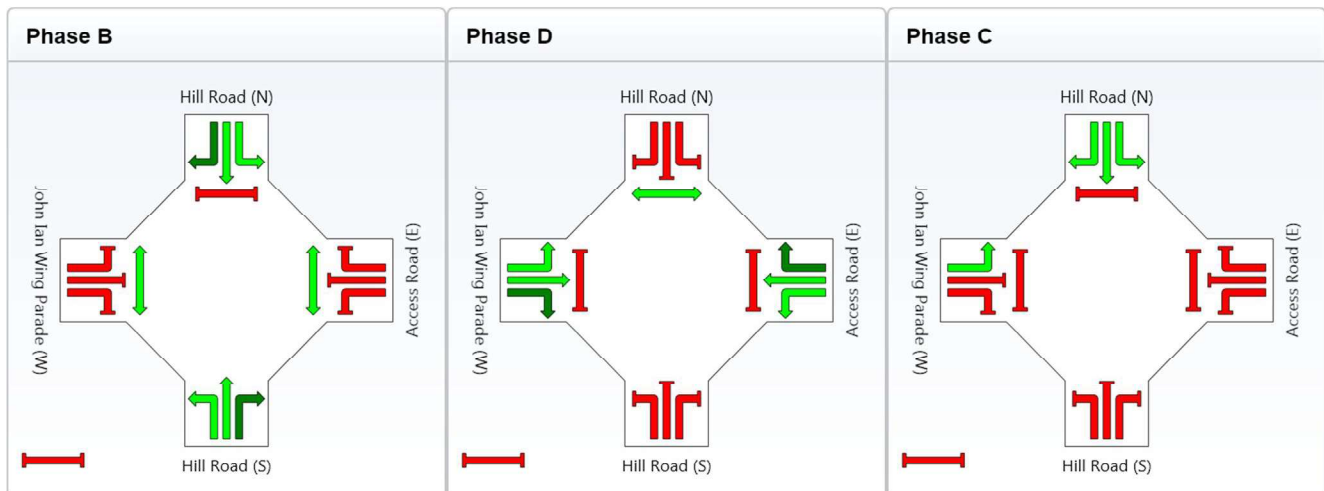
Sequence: TCS3413 AM

Input Sequence: B, D, C

Output Sequence: B, D, C

Phase Timing Results

Phase	B	D	C
Green Time (sec)	62	34	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	68	40	12
Phase Split	57 %	33 %	10 %



MOVEMENT SUMMARY

Site: I-02 2021 DSP2 PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Proposed Upgrade

2021 Phase 2 AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	275	5.0	0.735	20.7	LOS B	17.4	127.1	0.70	0.89	38.5
2	T	1098	5.0	0.735	13.1	LOS A	17.7	129.5	0.70	0.63	41.6
3	R	5	4.4	0.035	35.4	LOS C	0.1	0.5	0.35	0.85	38.6
Approach		1378	5.0	0.735	14.7	LOS B	17.7	129.5	0.70	0.69	40.9
East: Access Road (E)											
4	L	5	0.0	0.049	29.7	LOS C	0.5	3.7	0.84	0.64	9.6
5	T	5	7.7	0.049	28.3	LOS B	0.5	3.7	0.84	0.59	7.7
6	R	5	4.8	0.049	29.7	LOS C	0.5	3.7	0.84	0.64	9.7
Approach		16	4.2	0.049	29.2	LOS C	0.5	3.7	0.84	0.62	9.0
North: Hill Road (N)											
7	L	5	4.8	0.594	30.3	LOS C	7.8	56.9	0.30	1.01	42.6
8	T	1454	5.0	0.594	3.7	LOS A	7.8	56.9	0.30	0.27	53.0
9	R	167	5.3	0.620	20.9	LOS B	3.2	23.2	0.82	0.81	37.0
Approach		1626	5.1	0.620	5.6	LOS A	7.8	56.9	0.35	0.33	50.8
West: John Ian Wing Parade (W)											
10	L	46	4.3	0.125	28.4	LOS B	1.4	10.4	0.74	0.73	30.7
11	T	5	8.3	0.125	39.4	LOS C	1.4	10.4	0.74	0.83	27.6
12	R	231	4.8	0.735	43.2	LOS D	9.2	67.3	0.99	0.90	25.4
Approach		282	4.8	0.735	40.7	LOS C	9.2	67.3	0.95	0.87	26.2
All Vehicles		3302	5.0	0.735	12.5	LOS A	17.7	129.5	0.55	0.53	42.8

PHASING SUMMARY

Site: I-02 2021 DSP2 PM

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Proposed Upgrade

2021 Phase 2 AM

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

Phase times determined by the program

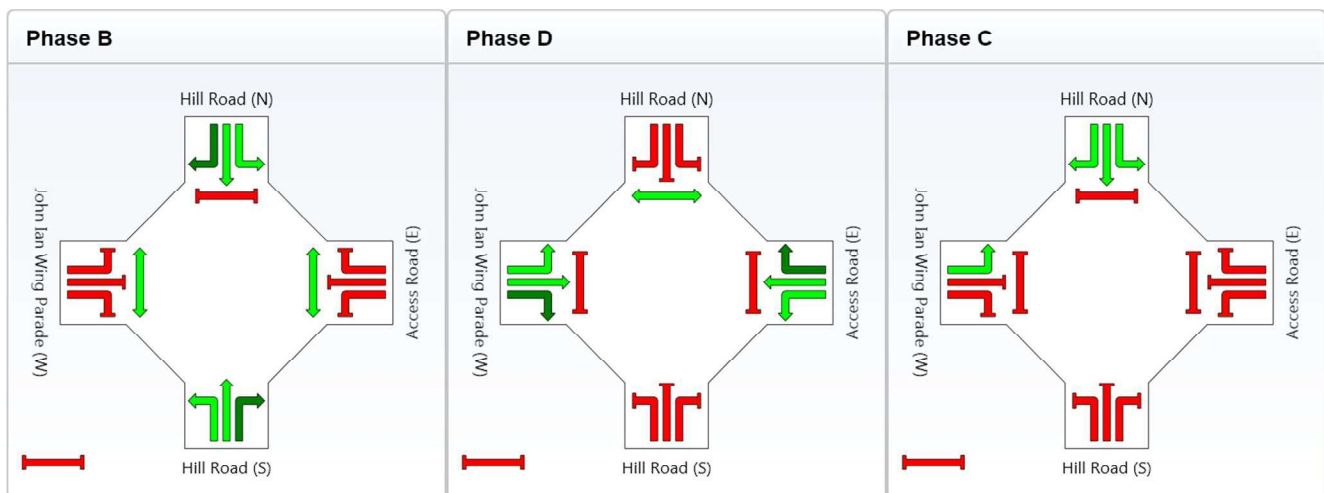
Sequence: TCS3413 PM

Input Sequence: B, D, C

Output Sequence: B, D, C

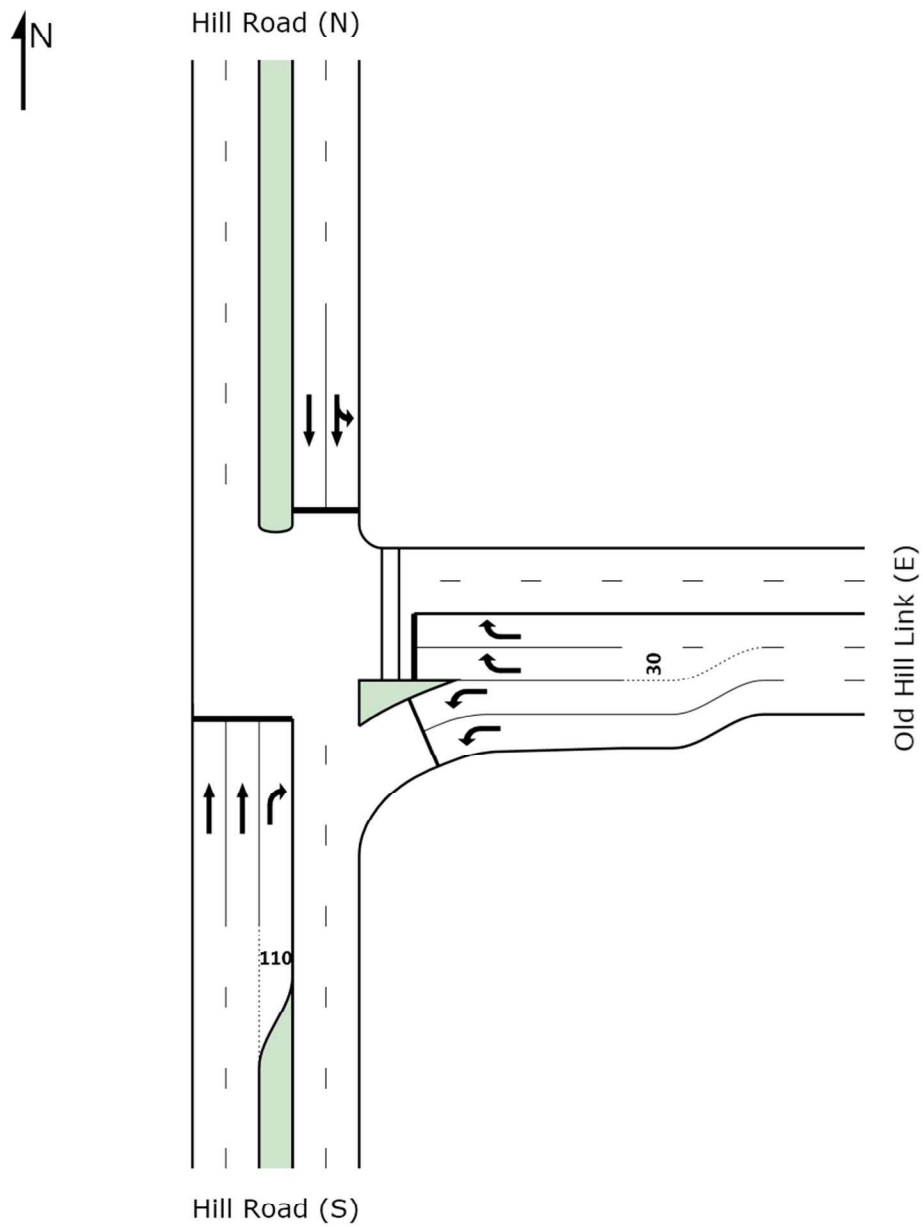
Phase Timing Results

Phase	B	D	C
Green Time (sec)	40	16	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	46	22	12
Phase Split	58 %	28 %	15 %



I-03 Hill Road / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-03 2021 DSP2 AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 Phase 2 AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	642	10.0	0.445	0.8	LOS A	2.3	17.3	0.09	0.08	58.1
3	R	889	10.1	0.672	23.3	LOS B	10.3	78.3	0.68	0.92	36.8
Approach		1532	10.0	0.672	13.9	LOS A	10.3	78.3	0.44	0.57	43.5
East: Old Hill Link (E)											
4	L	233	9.8	0.154	21.2	LOS B	2.2	16.8	0.49	0.70	22.5
6	R	42	10.0	0.172	51.2	LOS D	0.9	6.5	0.95	0.70	11.3
Approach		275	9.9	0.172	25.8	LOS B	2.2	16.8	0.56	0.70	19.6
North: Hill Road (N)											
7	L	42	10.0	0.654	35.9	LOS C	17.9	136.1	0.73	0.96	31.6
8	T	973	10.0	0.654	22.7	LOS B	17.9	136.1	0.74	0.67	35.3
Approach		1015	10.0	0.654	23.2	LOS B	17.9	136.1	0.74	0.68	35.1
All Vehicles		2821	10.0	0.672	18.4	LOS B	17.9	136.1	0.56	0.62	38.3

PHASING SUMMARY

Site: I-03 2021 DSP2 AM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 Phase 2 AM

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

Phase times determined by the program

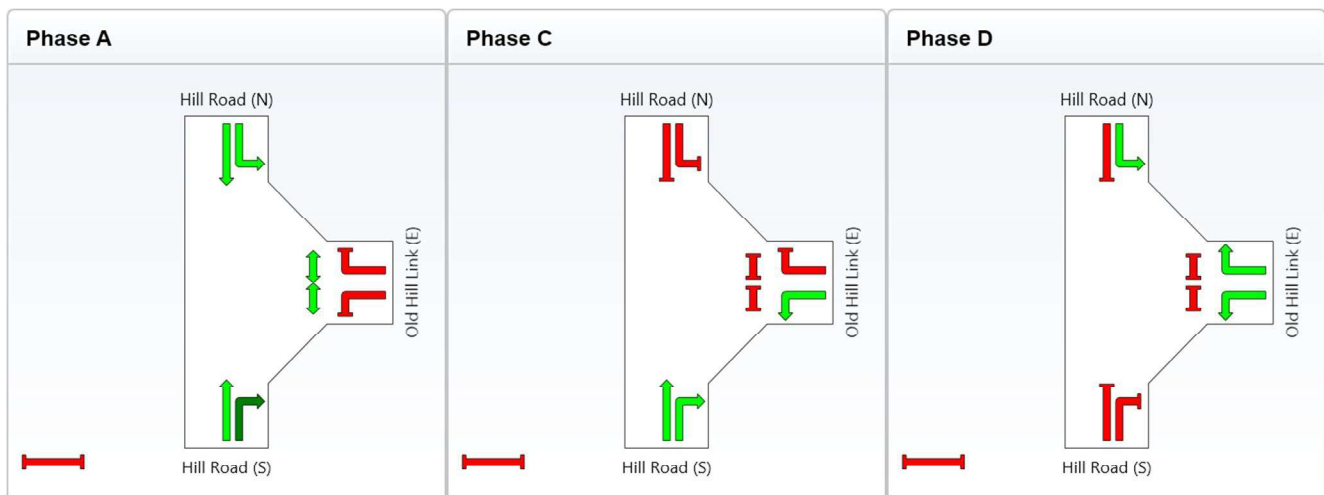
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

Phase	A	C	D
Green Time (sec)	36	25	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	42	31	12
Phase Split	49 %	36 %	14 %



MOVEMENT SUMMARY

Site: I-03 2021 DSP2 PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 Phase 2 PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Hill Road (S)											
2	T	801	5.0	0.426	2.4	LOS A	5.0	36.4	0.15	0.13	55.3
3	R	368	5.0	0.426	17.5	LOS B	6.2	45.3	0.47	0.80	40.8
Approach		1169	5.0	0.426	7.2	LOS A	6.2	45.3	0.25	0.34	49.7
East: Old Hill Link (E)											
4	L	742	4.9	0.494	28.7	LOS C	11.5	84.3	0.65	0.78	18.3
6	R	132	4.8	0.328	52.7	LOS D	3.8	27.9	0.89	0.76	11.0
Approach		874	4.9	0.494	32.3	LOS C	11.5	84.3	0.69	0.77	16.7
North: Hill Road (N)											
7	L	38	5.6	0.500	31.1	LOS C	13.1	95.5	0.58	0.97	33.5
8	T	843	5.0	0.500	19.7	LOS B	13.1	95.5	0.58	0.53	37.4
Approach		881	5.0	0.500	20.2	LOS B	13.1	95.5	0.58	0.55	37.3
All Vehicles		2924	5.0	0.500	18.6	LOS B	13.1	95.5	0.48	0.53	36.1

PHASING SUMMARY

Site: I-03 2021 DSP2 PM

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2021 Phase 2 PM

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

Phase times determined by the program

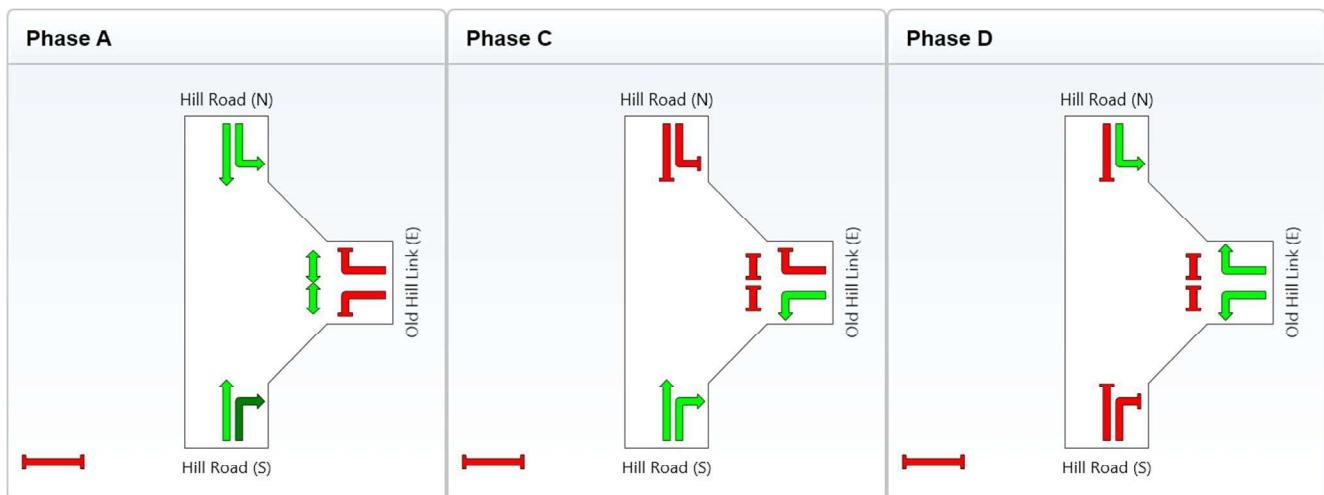
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

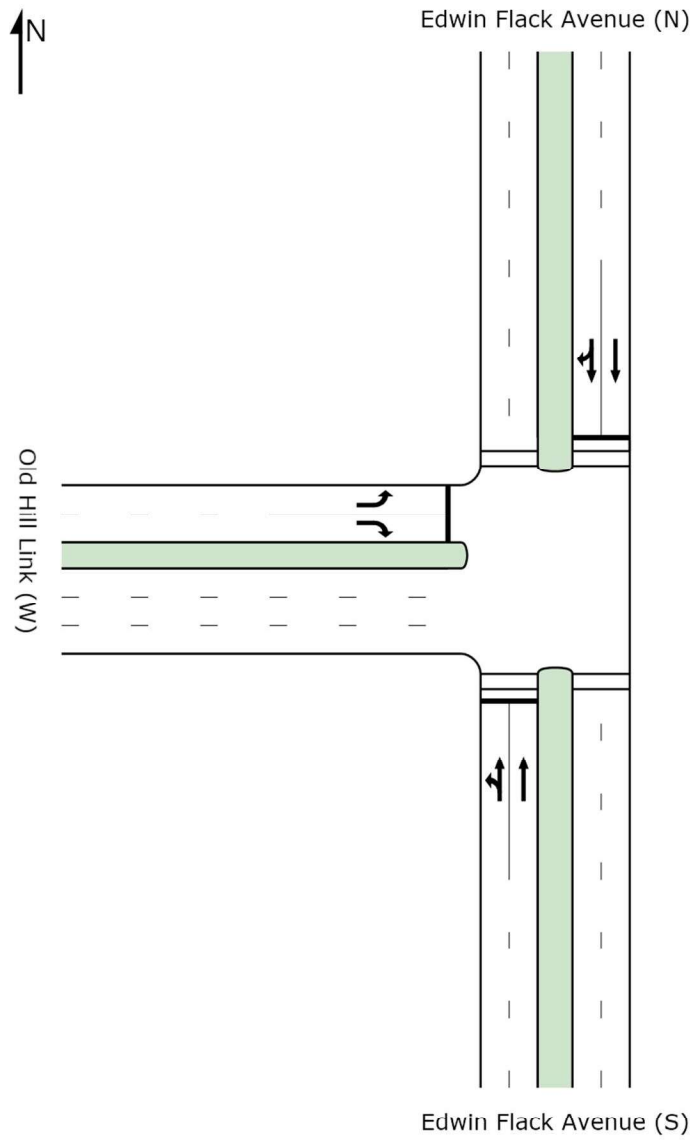
Phase Timing Results

Phase	A	C	D
Green Time (sec)	49	23	15
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	55	29	21
Phase Split	52 %	28 %	20 %



I-04 Edwin Flack Avenue / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-04 2021 DSP2 AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 50 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	84	10.6	0.526	20.3	LOS B	2.3	17.3	0.95	0.79	40.0
2	T	187	10.1	0.526	19.5	LOS B	2.9	22.0	0.97	0.77	36.2
Approach		272	10.2	0.526	19.8	LOS B	2.9	22.0	0.97	0.78	37.3
North: Edwin Flack Avenue (N)											
8	T	400	9.9	0.408	9.4	LOS A	4.5	33.9	0.61	0.51	45.1
9	R	152	10.0	0.408	20.0	LOS B	3.6	27.5	0.74	0.79	39.5
Approach		552	9.9	0.408	12.3	LOS A	4.5	33.9	0.64	0.59	43.4
West: Old Hill Link (W)											
10	L	761	9.9	0.686	11.5	LOS A	6.7	50.7	0.38	0.76	45.9
12	R	165	10.4	0.299	22.0	LOS B	2.7	20.9	0.69	0.76	37.7
Approach		926	10.0	0.686	13.4	LOS A	6.7	50.7	0.44	0.76	44.2
All Vehicles		1749	10.0	0.686	14.0	LOS A	6.7	50.7	0.58	0.71	42.7

PHASING SUMMARY

Site: I-04 2021 DSP2 AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 50 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

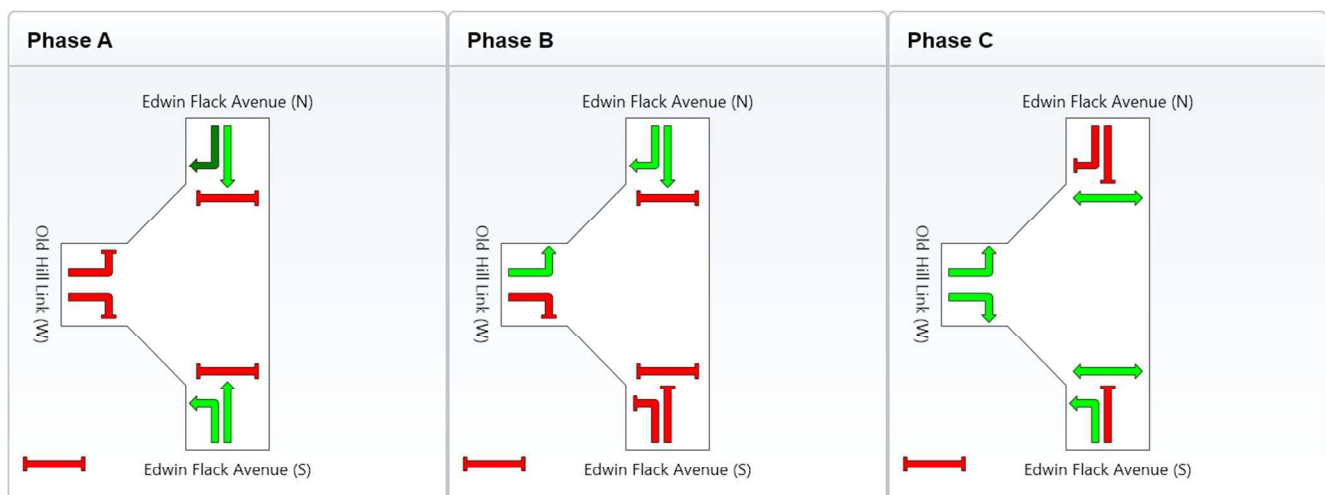
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	10	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	16	22
Phase Split	24 %	32 %	44 %



MOVEMENT SUMMARY

Site: I-04 2021 DSP2 PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 65 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	353	4.9	0.647	20.1	LOS B	8.0	58.4	0.88	0.86	39.2
2	T	406	5.1	0.647	21.4	LOS B	9.4	68.7	0.93	0.80	35.4
Approach		759	5.0	0.647	20.8	LOS B	9.4	68.7	0.91	0.83	37.0
North: Edwin Flack Avenue (N)											
8	T	229	5.1	0.214	4.7	LOS A	2.1	15.3	0.31	0.26	51.7
9	R	355	4.9	0.648	26.9	LOS B	8.0	58.6	0.84	0.91	34.6
Approach		584	4.9	0.648	18.2	LOS B	8.0	58.6	0.63	0.65	39.8
West: Old Hill Link (W)											
10	L	268	4.9	0.270	13.9	LOS A	2.8	20.3	0.35	0.73	43.5
12	R	142	5.4	0.323	30.3	LOS C	3.5	25.6	0.79	0.77	32.9
Approach		411	5.1	0.323	19.6	LOS B	3.5	25.6	0.50	0.74	39.1
All Vehicles		1754	5.0	0.648	19.6	LOS B	9.4	68.7	0.72	0.75	38.4

PHASING SUMMARY

Site: I-04 2021 DSP2 PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 65 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

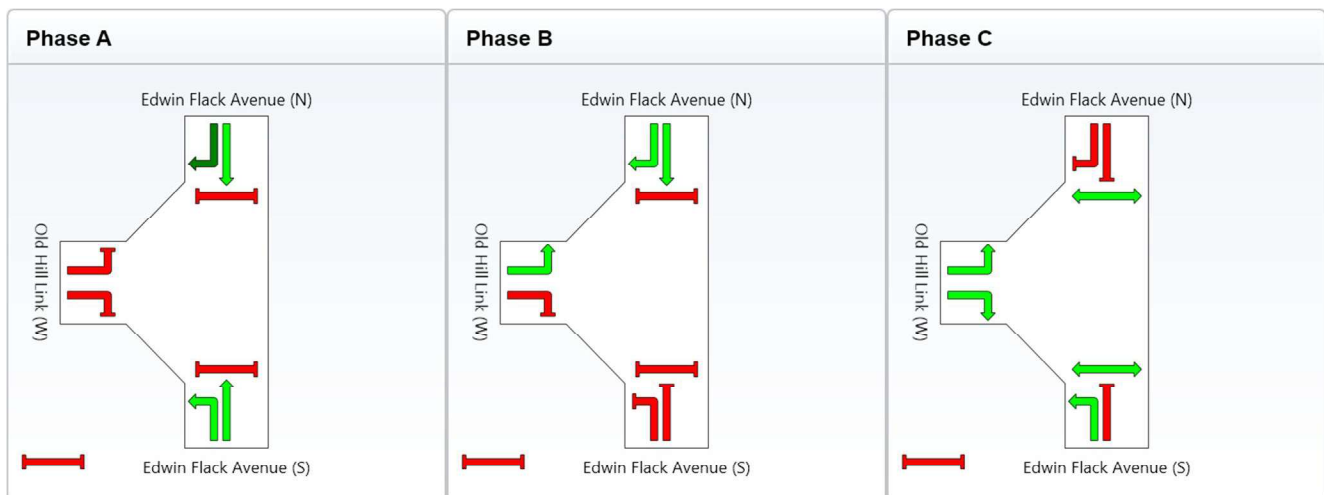
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

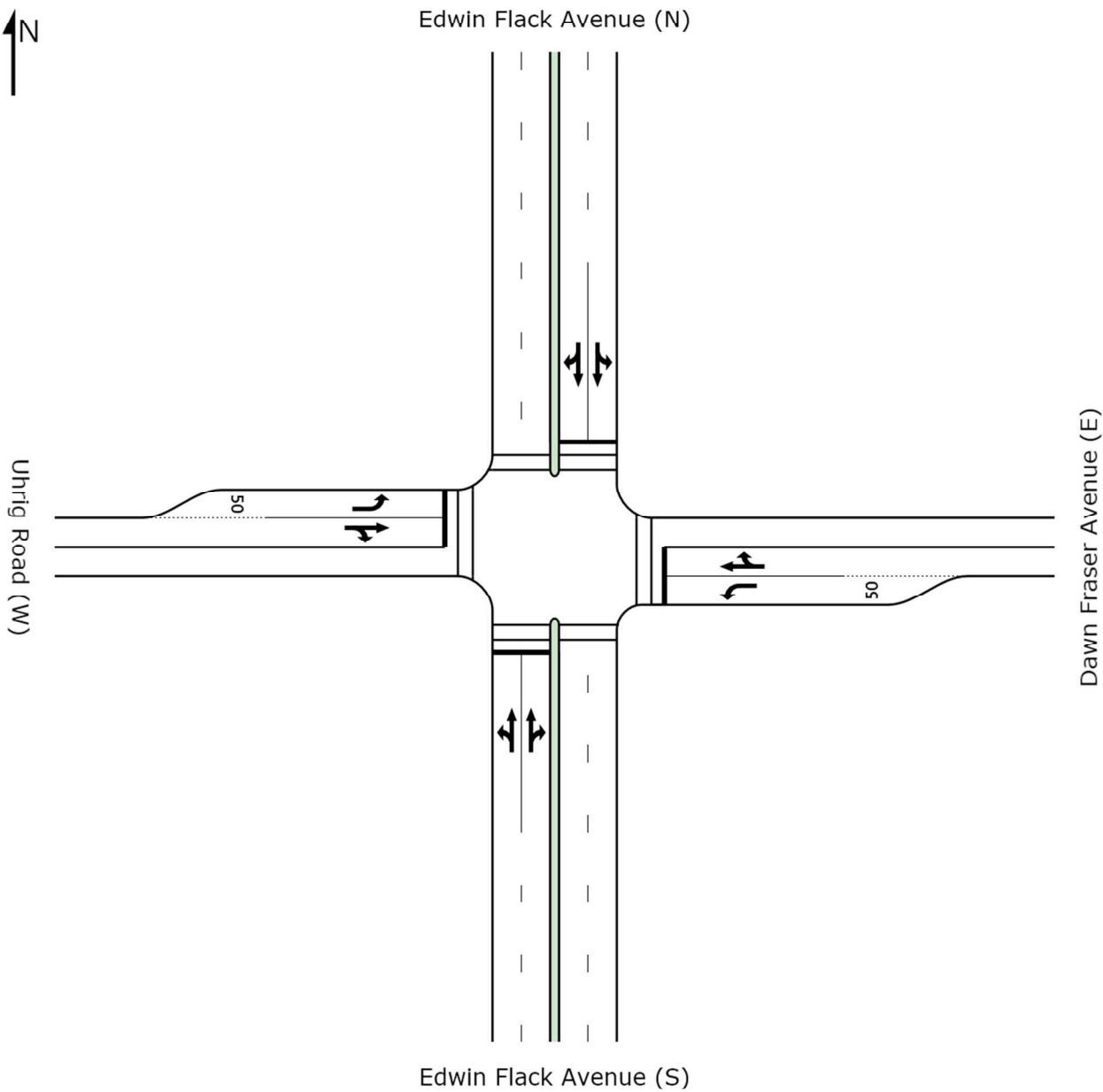
Phase Timing Results

Phase	A	B	C
Green Time (sec)	17	14	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	23	20	22
Phase Split	35 %	31 %	34 %



I-05 Edwin Flack Avenue / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-05 2021 DSP2 AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	17	12.5	0.409	27.7	LOS B	4.1	30.9	0.81	0.86	36.1
2	T	199	10.1	0.409	18.2	LOS B	4.1	30.9	0.81	0.66	37.5
3	R	102	10.3	0.409	19.9	LOS B	2.1	16.0	0.84	0.77	37.9
Approach		318	10.3	0.409	19.3	LOS B	4.1	30.9	0.82	0.71	37.5
East: Dawn Fraser Avenue (E)											
4	L	44	9.5	0.077	12.8	LOS A	0.6	4.3	0.51	0.67	33.7
5	T	113	10.0	0.391	19.2	LOS B	3.6	27.2	0.87	0.71	28.5
6	R	41	10.3	0.391	25.3	LOS B	3.6	27.2	0.87	0.80	28.6
Approach		198	9.9	0.391	19.0	LOS B	3.6	27.2	0.79	0.72	29.5
North: Edwin Flack Avenue (N)											
7	L	122	10.3	0.650	28.5	LOS B	7.2	54.4	0.90	0.87	33.6
8	T	309	9.9	0.650	21.2	LOS B	7.2	54.4	0.90	0.80	34.9
9	R	103	12.5	0.650	30.1	LOS C	4.7	36.2	0.90	0.93	34.1
Approach		535	10.5	0.650	24.6	LOS B	7.2	54.4	0.90	0.84	34.5
West: Uhrig Road (W)											
10	L	36	12.5	0.064	15.4	LOS B	0.5	3.6	0.50	0.71	42.5
11	T	307	10.0	0.609	21.1	LOS B	7.8	59.2	0.90	0.80	36.1
12	R	21	10.0	0.609	26.7	LOS B	7.8	59.2	0.90	0.86	36.5
Approach		364	10.2	0.609	20.9	LOS B	7.8	59.2	0.86	0.79	36.7
All Vehicles		1415	10.3	0.650	21.7	LOS B	7.8	59.2	0.86	0.78	34.8

PHASING SUMMARY

Site: I-05 2021 DSP2 AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

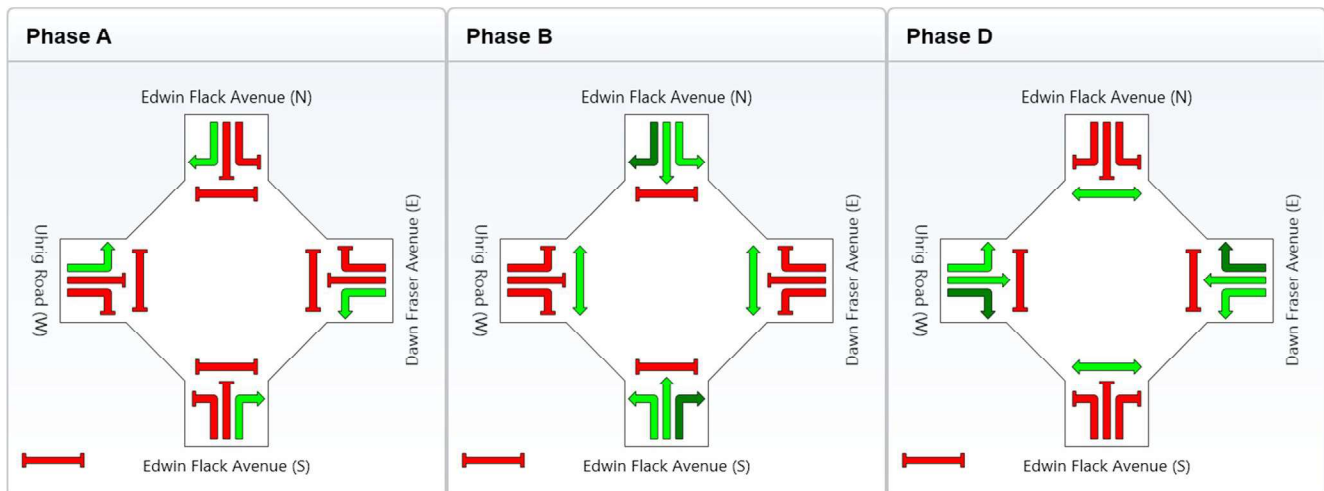
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	14	17
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	20	23
Phase Split	22 %	36 %	42 %



MOVEMENT SUMMARY

Site: I-05 2021 DSP2 PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	41	5.1	0.735	30.9	LOS C	9.1	66.2	0.93	0.91	34.3
2	T	575	4.9	0.735	25.9	LOS B	9.1	66.2	0.94	0.87	33.0
3	R	39	5.4	0.735	37.2	LOS C	8.3	60.3	0.94	0.97	29.8
Approach		655	5.0	0.735	26.9	LOS B	9.1	66.2	0.94	0.88	32.9
East: Dawn Fraser Avenue (E)											
4	L	89	4.7	0.151	12.9	LOS A	1.2	8.7	0.52	0.69	33.6
5	T	351	4.9	0.791	23.3	LOS B	11.8	86.3	0.97	1.00	26.9
6	R	64	4.9	0.791	29.3	LOS C	11.8	86.3	0.97	1.02	27.3
Approach		504	4.9	0.791	22.2	LOS B	11.8	86.3	0.89	0.94	27.9
North: Edwin Flack Avenue (N)											
7	L	55	5.8	0.515	27.0	LOS B	5.5	40.0	0.85	0.87	34.9
8	T	260	4.9	0.515	19.3	LOS B	5.5	40.0	0.87	0.72	36.4
9	R	67	6.7	0.515	26.5	LOS B	2.5	18.3	0.92	0.82	35.9
Approach		382	5.3	0.515	21.7	LOS B	5.5	40.0	0.87	0.76	36.1
West: Uhrig Road (W)											
10	L	78	4.7	0.132	15.3	LOS B	1.0	7.5	0.52	0.73	42.4
11	T	99	4.8	0.299	21.6	LOS B	2.8	20.3	0.85	0.72	35.4
12	R	24	4.3	0.299	27.0	LOS B	2.8	20.3	0.85	0.82	35.8
Approach		201	4.7	0.299	19.8	LOS B	2.8	20.3	0.72	0.73	38.0
All Vehicles		1742	5.0	0.791	23.6	LOS B	11.8	86.3	0.88	0.85	32.3

PHASING SUMMARY

Site: I-05 2021 DSP2 PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

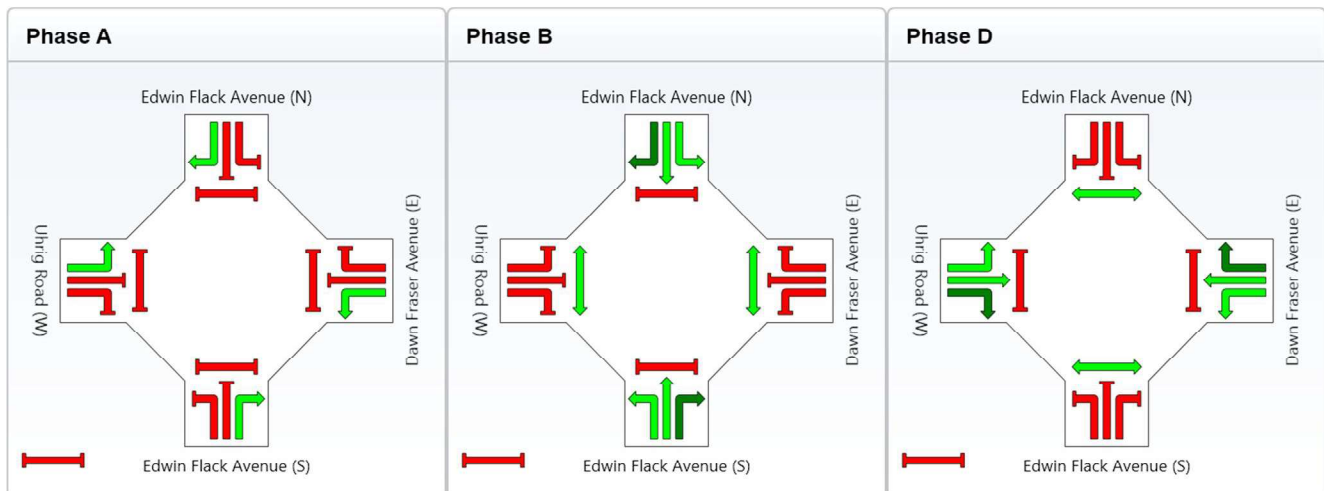
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

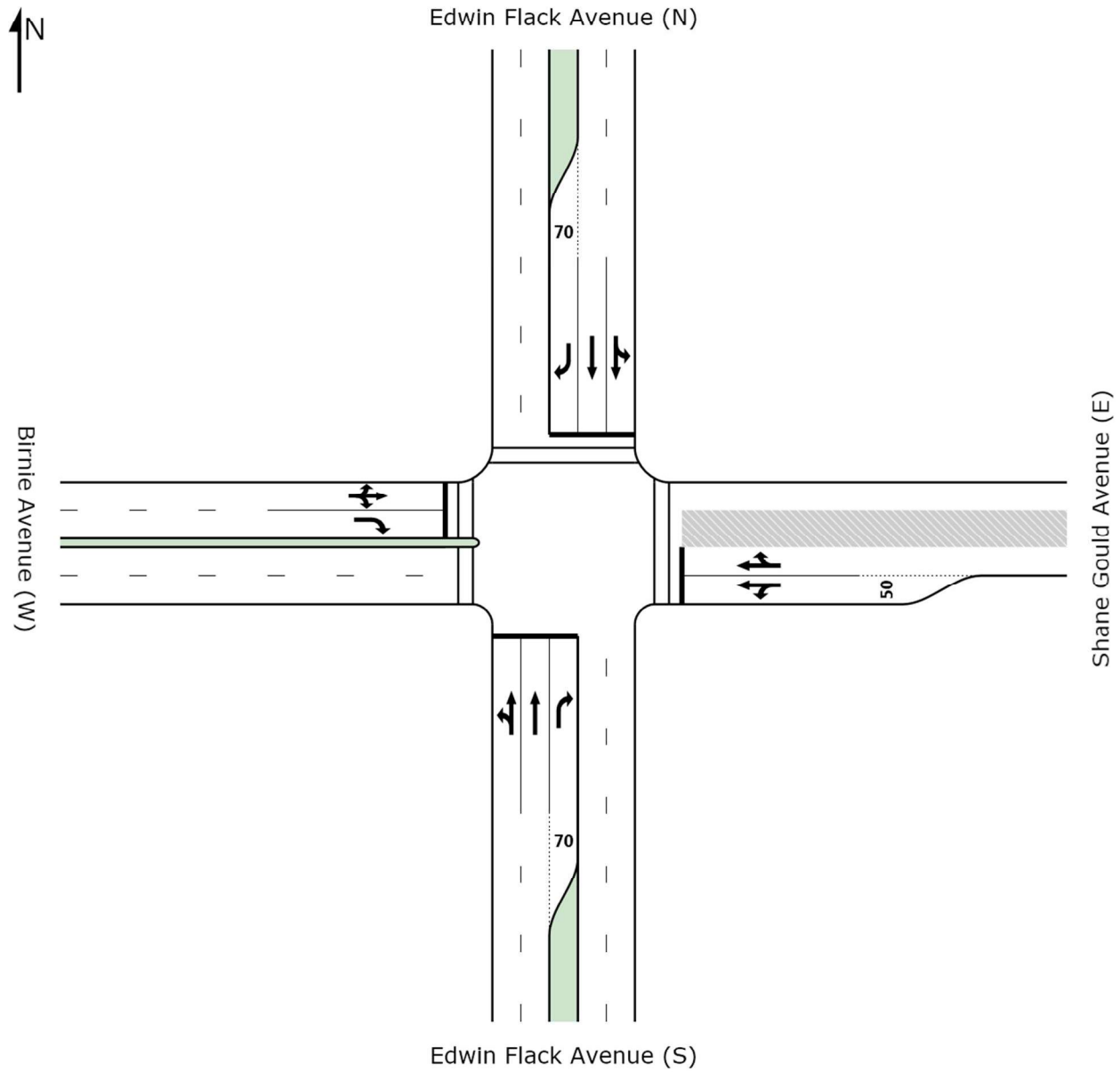
Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	14	17
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	20	23
Phase Split	22 %	36 %	42 %



I-06 Edwin Flack Avenue / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-06 2021 DSP2 AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 Phase 2 AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	372	9.9	0.350	17.3	LOS B	7.6	57.4	0.53	0.78	40.9
2	T	127	9.9	0.348	32.3	LOS C	4.7	35.4	0.90	0.72	30.4
3	R	7	14.3	0.031	38.8	LOS C	0.3	2.0	0.83	0.68	29.2
Approach		506	10.0	0.350	21.4	LOS B	7.6	57.4	0.63	0.76	37.4
East: Shane Gould Avenue (E)											
4	L	6	16.7	0.159	51.4	LOS D	0.8	6.4	0.97	0.71	25.8
5	T	21	10.0	0.159	42.6	LOS D	0.8	6.4	0.97	0.68	25.9
6	R	13	8.3	0.159	51.1	LOS D	0.8	6.3	0.97	0.70	25.4
Approach		40	10.5	0.159	46.7	LOS D	0.8	6.4	0.97	0.69	25.7
North: Edwin Flack Avenue (N)											
7	L	23	9.1	0.201	28.9	LOS C	2.9	22.2	0.80	0.82	35.0
8	T	215	9.8	0.201	19.6	LOS B	3.9	29.4	0.74	0.59	36.9
9	R	128	9.8	0.405	30.5	LOS C	3.8	29.0	0.90	0.78	32.8
Approach		366	9.8	0.405	24.0	LOS B	3.9	29.4	0.80	0.67	35.2
West: Birnie Avenue (W)											
10	L	167	10.1	0.671	19.9	LOS B	11.0	83.4	0.85	0.85	39.3
11	T	36	8.8	0.671	11.3	LOS A	11.0	83.4	0.85	0.74	40.4
12	R	712	10.0	0.671	28.0	LOS B	14.3	108.4	0.88	0.85	34.1
Approach		915	10.0	0.671	25.8	LOS B	14.3	108.4	0.88	0.84	35.2
All Vehicles		1827	9.9	0.671	24.7	LOS B	14.3	108.4	0.79	0.78	35.5

PHASING SUMMARY

Site: I-06 2021 DSP2 AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 Phase 2 AM

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

Phase times determined by the program

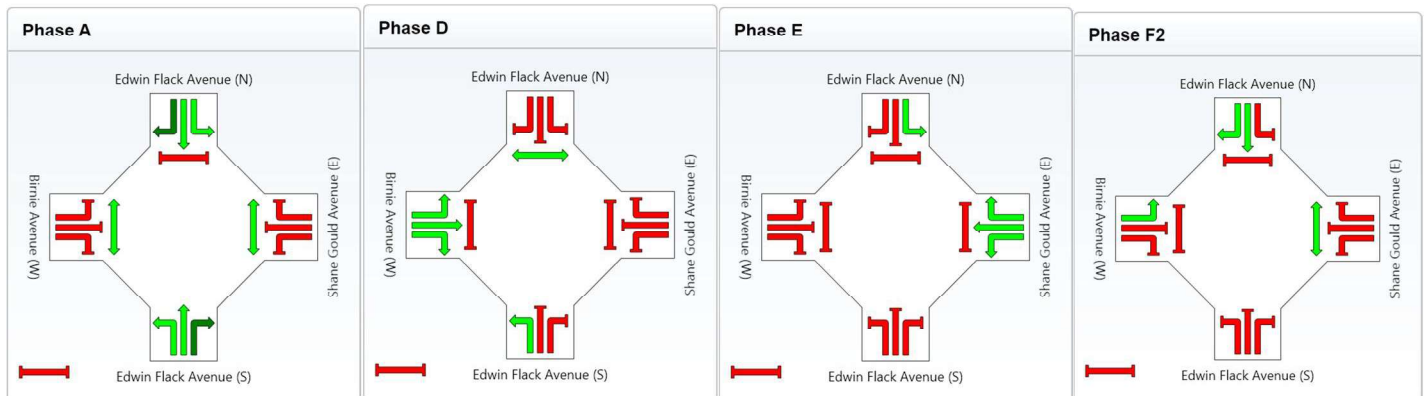
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	17	29	6	9
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	23	35	12	15
Phase Split	27 %	41 %	14 %	18 %



MOVEMENT SUMMARY

Site: I-06 2021 DSP2 PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	943	5.0	0.793	20.5	LOS B	30.8	224.7	0.77	0.87	38.5
2	T	468	4.9	0.673	27.2	LOS B	18.3	133.6	0.90	0.79	32.7
3	R	3	0.0	0.008	28.4	LOS B	0.1	0.6	0.65	0.66	33.6
Approach		1415	5.0	0.793	22.7	LOS B	30.8	224.7	0.81	0.84	36.3
East: Shane Gould Avenue (E)											
4	L	15	7.1	0.456	58.2	LOS E	2.6	18.8	1.00	0.74	23.9
5	T	61	5.2	0.456	49.8	LOS D	2.6	18.8	1.00	0.74	23.8
6	R	31	3.4	0.456	58.1	LOS E	2.6	18.5	1.00	0.74	23.5
Approach		106	5.0	0.456	53.3	LOS D	2.6	18.8	1.00	0.74	23.8
North: Edwin Flack Avenue (N)											
7	L	46	4.5	0.126	22.4	LOS B	2.4	17.8	0.65	0.79	38.1
8	T	172	4.9	0.126	13.0	LOS A	2.9	21.2	0.58	0.46	42.0
9	R	156	4.7	0.664	32.8	LOS C	4.2	30.7	1.00	0.81	31.6
Approach		374	4.8	0.664	22.4	LOS B	4.2	30.7	0.76	0.65	36.5
West: Birnie Avenue (W)											
10	L	151	4.9	0.675	28.4	LOS B	11.6	84.8	0.93	0.84	34.1
11	T	64	4.9	0.675	20.0	LOS B	11.6	84.8	0.93	0.80	34.6
12	R	441	5.0	0.675	39.0	LOS C	12.2	89.0	0.96	0.85	29.1
Approach		656	5.0	0.675	34.7	LOS C	12.2	89.0	0.95	0.84	30.6
All Vehicles		2551	4.9	0.793	27.0	LOS B	30.8	224.7	0.85	0.81	34.0

PHASING SUMMARY

Site: I-06 2021 DSP2 PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 95 seconds (User-Given Cycle Time)

Phase times determined by the program

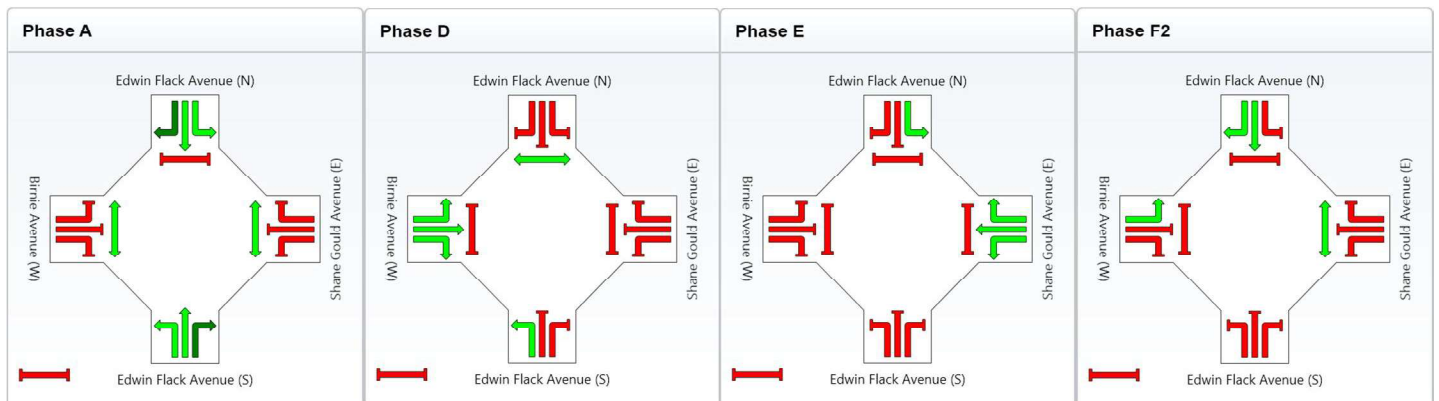
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

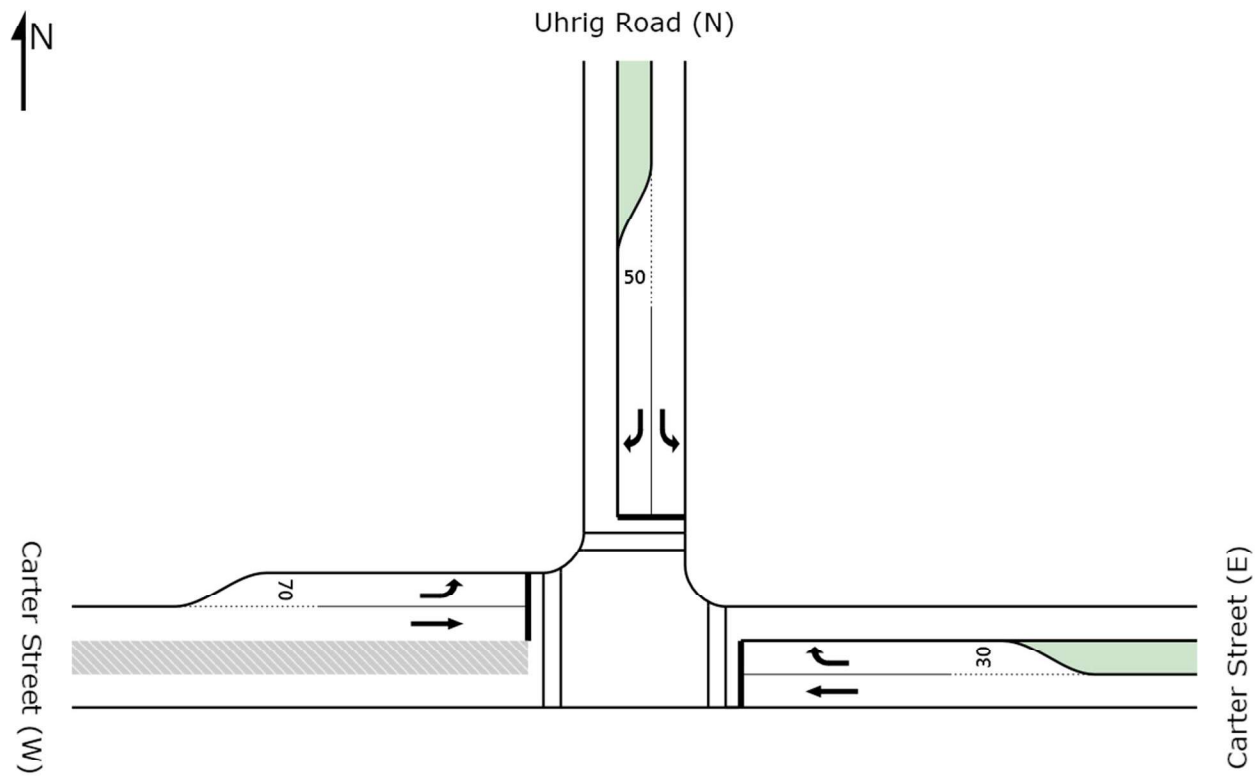
Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	35	22	6	8
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	41	28	12	14
Phase Split	43 %	29 %	13 %	15 %



I-07 Carter Street / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-07 2021 DSP2 AM

Carter Street Precinct

I-07 Carter Street / Uhrig Road - Proposed upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Carter Street (E)											
5	T	393	10.1	0.368	4.4	LOS A	3.6	27.4	0.33	0.29	52.0
6	R	27	9.5	0.066	16.6	LOS B	0.3	2.3	0.59	0.71	41.4
Approach		420	10.0	0.368	5.2	LOS A	3.6	27.4	0.35	0.32	51.2
North: Uhrig Road (N)											
7	L	175	10.1	0.242	19.4	LOS B	2.7	20.3	0.54	0.75	39.3
9	R	118	9.6	0.313	30.8	LOS C	2.8	21.3	0.82	0.77	32.6
Approach		293	9.9	0.313	24.0	LOS B	2.8	21.3	0.65	0.76	36.3
West: Carter Street (W)											
10	L	341	10.1	0.617	24.2	LOS B	7.9	59.7	0.82	0.82	36.2
11	T	309	10.0	0.441	15.1	LOS B	6.9	52.1	0.79	0.67	40.2
Approach		651	10.1	0.617	19.9	LOS B	7.9	59.7	0.80	0.75	38.0
All Vehicles		1363	10.0	0.617	16.2	LOS B	7.9	59.7	0.63	0.62	40.8

PHASING SUMMARY

Site: I-07 2021 DSP2 AM

Carter Street Precinct

I-07 Carter Street / Uhrig Road - Proposed upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Phase times determined by the program

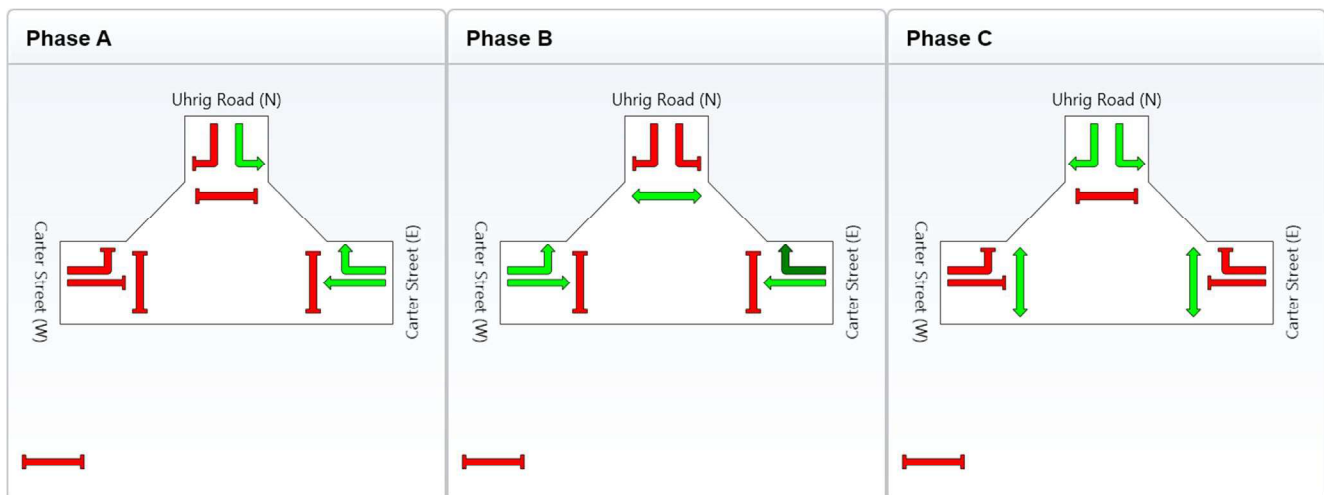
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	23	13
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	29	19
Phase Split	20 %	48 %	32 %



MOVEMENT SUMMARY

Site: I-07 2021 DSP2 PM

Carter Street Precinct

I-07 Carter Street / Uhrig Road - Proposed upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
East: Carter Street (E)											
5	T	443	5.0	0.503	9.9	LOS A	7.2	52.7	0.59	0.51	45.1
6	R	88	4.9	0.228	20.8	LOS B	1.4	10.5	0.75	0.75	38.2
Approach		532	5.0	0.503	11.7	LOS A	7.2	52.7	0.61	0.55	43.8
North: Uhrig Road (N)											
7	L	144	5.3	0.151	13.8	LOS A	1.4	10.0	0.34	0.72	43.6
9	R	277	5.1	0.595	25.2	LOS B	5.8	42.6	0.74	0.80	35.5
Approach		421	5.2	0.595	21.3	LOS B	5.8	42.6	0.61	0.77	37.9
West: Carter Street (W)											
10	L	135	5.3	0.282	27.7	LOS B	3.2	23.6	0.83	0.78	34.1
11	T	288	5.0	0.573	21.2	LOS B	7.6	55.2	0.92	0.77	35.9
Approach		423	5.1	0.573	23.3	LOS B	7.6	55.2	0.89	0.77	35.3
All Vehicles		1376	5.1	0.595	18.2	LOS B	7.6	55.2	0.70	0.69	39.1

PHASING SUMMARY

Site: I-07 2021 DSP2 PM

Carter Street Precinct

I-07 Carter Street / Uhrig Road - Proposed upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Phase times determined by the program

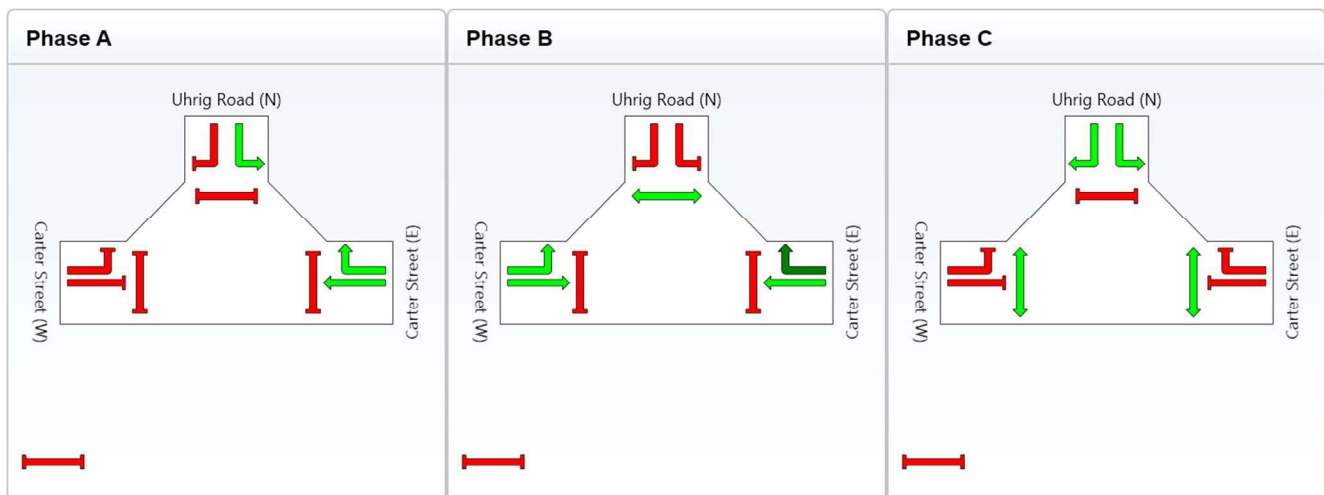
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

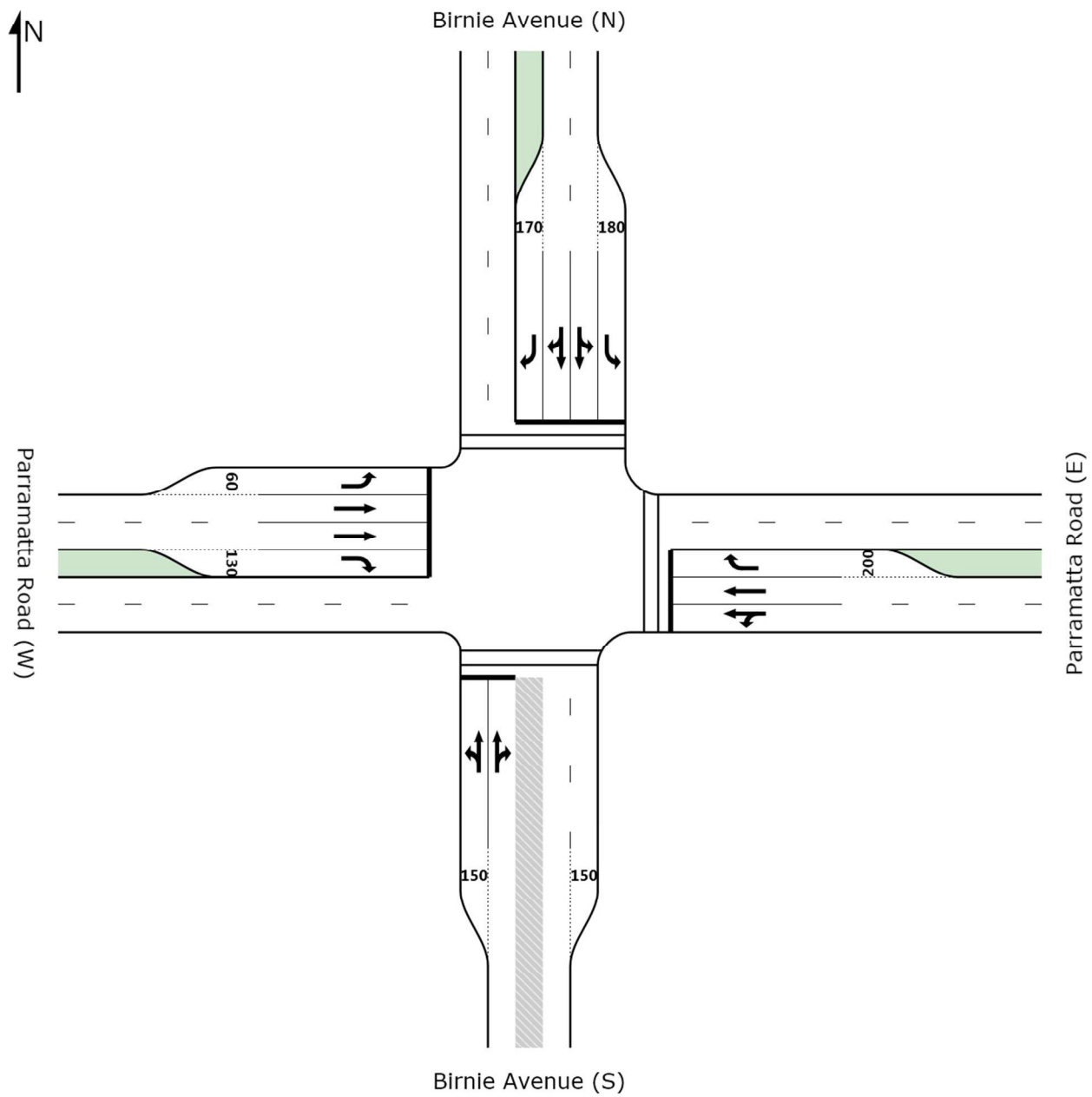
Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	16	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	22	26
Phase Split	20 %	37 %	43 %



I-08 Parramatta Road / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-08 2021 DSP2 AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 Phase 2 AM
Signals - Fixed Time Cycle Time = 110 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	20	10.5	0.873	70.4	LOS E	11.4	86.6	1.00	1.01	21.2
2	T	242	10.0	0.873	61.9	LOS E	11.4	86.6	1.00	1.01	21.2
3	R	108	9.7	0.873	70.5	LOS E	11.1	84.5	1.00	1.01	20.8
Approach		371	9.9	0.873	64.9	LOS E	11.4	86.6	1.00	1.01	21.1
East: Parramatta Road (E)											
4	L	221	10.0	0.803	17.5	LOS B	24.6	187.0	0.57	0.94	42.2
5	T	1566	10.0	0.803	9.4	LOS A	25.7	195.0	0.58	0.53	45.4
6	R	248	10.1	0.895	54.3	LOS D	10.7	81.6	1.00	1.02	24.2
Approach		2036	10.0	0.895	15.7	LOS B	25.7	195.0	0.63	0.64	40.7
North: Birnie Avenue (N)											
7	L	202	10.1	0.428	44.3	LOS D	8.2	62.7	0.80	0.80	27.1
8	T	199	9.9	0.666	52.8	LOS D	7.0	53.2	0.98	0.79	23.4
9	R	171	10.1	0.666	62.0	LOS E	7.0	53.2	0.99	0.82	22.5
Approach		572	10.0	0.666	52.5	LOS D	8.2	62.7	0.92	0.80	24.3
West: Parramatta Road (W)											
10	L	287	10.1	0.389	13.4	LOS A	2.8	21.2	0.36	0.73	44.1
11	T	1443	10.0	0.885	33.2	LOS C	37.7	286.2	0.92	0.93	29.9
12	R	52	10.2	0.608	45.2	LOS D	2.4	18.6	0.79	0.84	26.8
Approach		1782	10.0	0.885	30.4	LOS C	37.7	286.2	0.83	0.89	31.5
All Vehicles		4760	10.0	0.895	29.5	LOS C	37.7	286.2	0.77	0.78	32.2

PHASING SUMMARY

Site: I-08 2021 DSP2 AM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 Phase 2 AM
Signals - Fixed Time Cycle Time = 110 seconds (Practical Cycle Time)

Phase times determined by the program

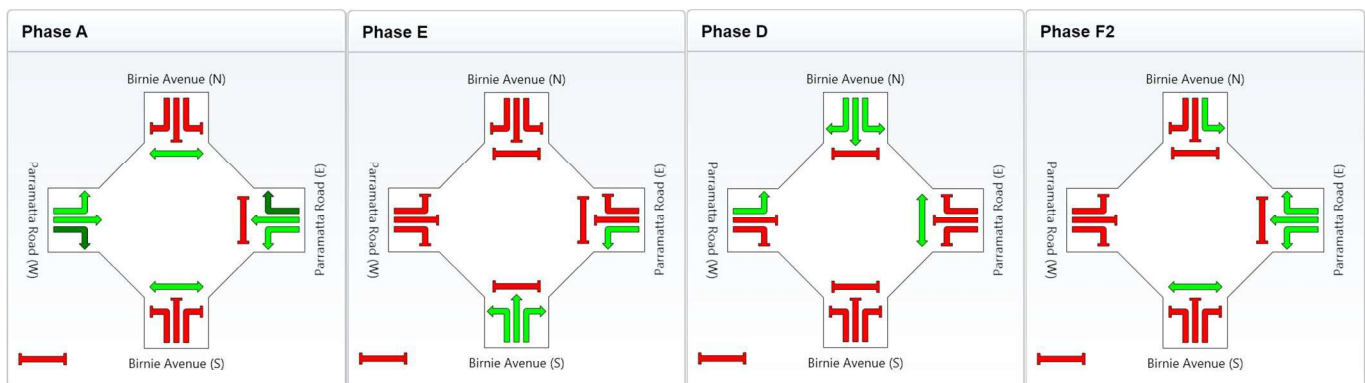
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	49	13	12	12
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	55	19	18	18
Phase Split	50 %	17 %	16 %	16 %



MOVEMENT SUMMARY

Site: I-08 2021 DSP2 PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 Phase 2 PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	34	6.3	0.956	105.8	LOS F	19.2	140.7	1.00	1.11	15.7
2	T	206	5.2	0.956	97.5	LOS F	19.2	140.7	1.00	1.10	15.8
3	R	181	5.2	0.956	106.2	LOS F	18.6	136.0	1.00	1.05	15.4
Approach		421	5.3	0.956	101.9	LOS F	19.2	140.7	1.00	1.08	15.6
East: Parramatta Road (E)											
4	L	293	5.0	0.886	23.8	LOS B	49.4	360.5	0.71	0.94	37.7
5	T	1754	5.0	0.886	15.8	LOS B	50.6	369.2	0.72	0.68	39.6
6	R	288	4.8	0.958	89.2	LOS F	21.2	154.6	1.00	1.09	17.4
Approach		2335	5.0	0.958	25.8	LOS B	50.6	369.2	0.75	0.77	34.0
North: Birnie Avenue (N)											
7	L	312	5.1	0.543	51.9	LOS D	16.9	123.5	0.80	0.82	24.7
8	T	392	4.9	0.968	81.5	LOS F	23.4	170.9	1.00	0.99	17.9
9	R	354	5.1	0.968	103.5	LOS F	23.4	170.9	1.00	1.04	15.7
Approach		1057	5.0	0.968	80.1	LOS F	23.4	170.9	0.94	0.96	18.5
West: Parramatta Road (W)											
10	L	163	4.8	0.200	13.0	LOS A	1.5	10.9	0.26	0.71	44.4
11	T	1576	5.0	0.948	55.9	LOS D	63.9	466.7	1.00	1.05	22.8
12	R	16	6.7	0.284	62.6	LOS E	0.9	7.0	0.77	0.76	22.1
Approach		1755	5.0	0.948	52.0	LOS D	63.9	466.7	0.93	1.01	23.8
All Vehicles		5567	5.0	0.968	50.1	LOS D	63.9	466.7	0.86	0.90	24.6

PHASING SUMMARY

Site: I-08 2021 DSP2 PM

Carter Street Precinct
I-08 Parramatta Road / Birnie Avenue - Proposed Upgrade
2021 Phase 2 PM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

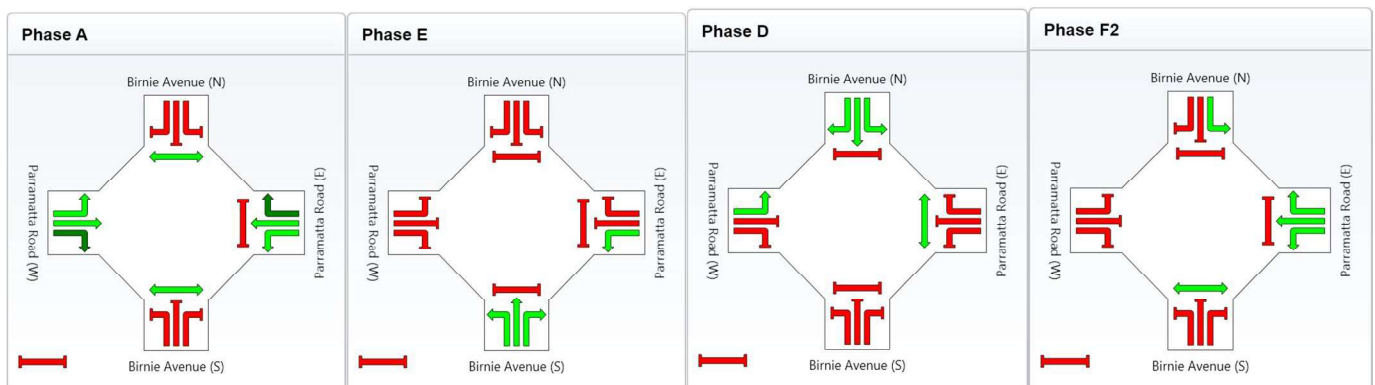
Sequence: TCS376 AM

Input Sequence: A, E, D, F2

Output Sequence: A, E, D, F2

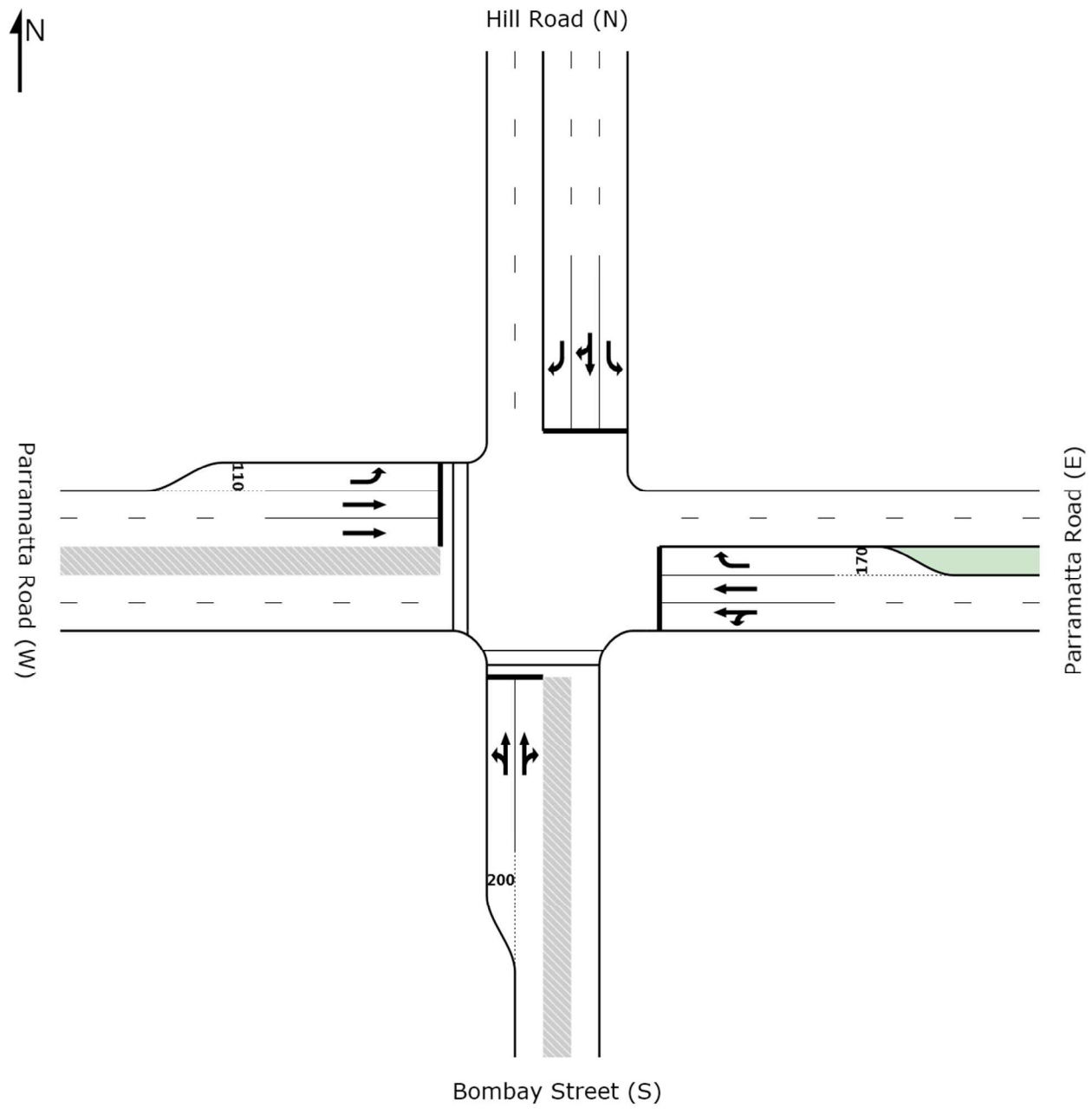
Phase Timing Results

Phase	A	E	D	F2
Green Time (sec)	66	18	22	20
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	72	24	28	26
Phase Split	48 %	16 %	19 %	17 %



I-09 Parramatta Road / Hill Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-09 2021 DSP2 AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2021 Phase 2 AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	17	12.5	0.936	99.5	LOS F	17.8	135.2	1.00	1.12	15.7
2	T	319	10.0	0.936	92.0	LOS F	17.8	135.2	1.00	1.12	15.6
3	R	71	9.6	0.936	99.6	LOS F	17.6	133.3	1.00	1.11	15.6
Approach		406	10.0	0.936	93.6	LOS F	17.8	135.2	1.00	1.11	15.6
East: Parramatta Road (E)											
4	L	31	8.3	0.693	31.2	LOS C	31.0	235.7	0.55	1.04	32.6
5	T	1406	10.0	0.693	19.6	LOS B	31.0	235.7	0.55	0.51	37.6
6	R	296	10.0	0.934	98.3	LOS F	23.6	179.3	1.00	1.19	16.2
Approach		1733	10.0	0.934	33.3	LOS C	31.0	235.7	0.63	0.64	30.7
North: Hill Road (N)											
7	L	336	10.0	0.510	43.4	LOS D	16.2	122.9	0.71	0.81	27.4
8	T	325	10.0	0.919	79.3	LOS F	26.5	201.1	1.00	1.03	17.8
9	R	289	10.0	0.864	79.1	LOS F	22.0	167.1	1.00	0.92	18.9
Approach		951	10.0	0.919	66.6	LOS E	26.5	201.1	0.90	0.92	20.8
West: Parramatta Road (W)											
10	L	371	10.0	0.448	14.5	LOS B	4.8	36.6	0.35	0.74	43.1
11	T	1272	10.0	0.914	55.2	LOS D	48.2	366.6	0.99	1.00	23.0
Approach		1642	10.0	0.914	46.0	LOS D	48.2	366.6	0.85	0.94	25.7
All Vehicles		4732	10.0	0.936	49.6	LOS D	48.2	366.6	0.79	0.84	24.6

PHASING SUMMARY

Site: I-09 2021 DSP2 AM

Carter Street Precinct
I-09 Parramatta Road / Hill Road - Proposed Upgrade
2021 Phase 2 AM
Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

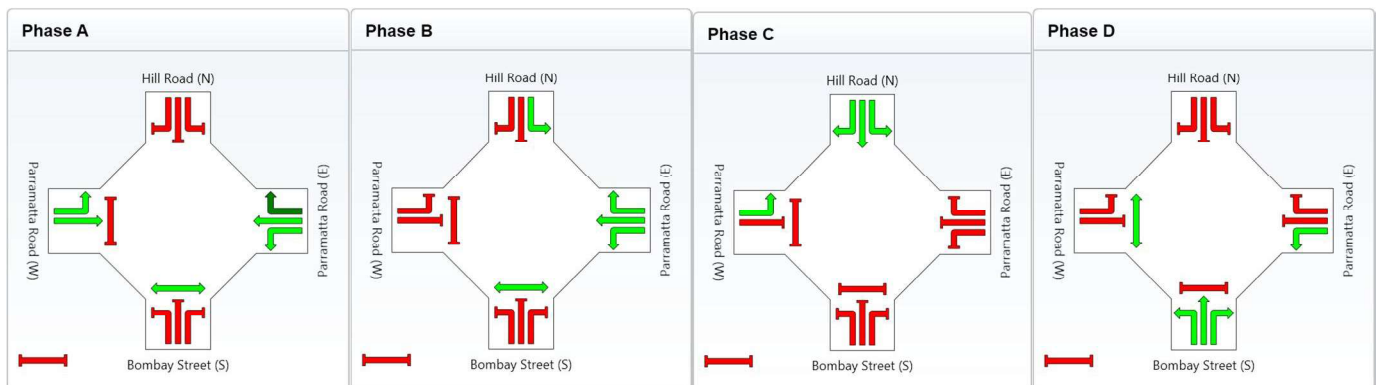
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	57	22	29	18
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	63	28	35	24
Phase Split	42 %	19 %	23 %	16 %



MOVEMENT SUMMARY

Site: I-09 2021 DSP2 PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road - Proposed Upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	25	4.2	0.874	86.6	LOS F	17.5	127.6	1.00	1.01	17.2
2	T	356	4.9	0.874	79.3	LOS F	17.5	127.6	1.00	1.01	17.2
3	R	55	5.9	0.874	86.7	LOS F	17.3	126.8	1.00	1.01	17.2
Approach		436	5.0	0.874	80.7	LOS F	17.5	127.6	1.00	1.01	17.2
East: Parramatta Road (E)											
4	L	43	4.3	0.843	37.4	LOS C	43.5	317.7	0.77	0.99	30.1
5	T	1676	5.0	0.843	25.6	LOS B	44.1	321.7	0.77	0.72	33.7
6	R	283	4.8	0.930	96.0	LOS F	22.1	160.8	1.00	1.16	16.5
Approach		2002	5.0	0.930	35.8	LOS C	44.1	321.7	0.80	0.79	29.3
North: Hill Road (N)											
7	L	368	5.1	0.532	42.7	LOS D	17.8	130.0	0.72	0.82	27.6
8	T	356	5.0	0.944	84.0	LOS F	31.3	228.1	1.00	1.07	17.1
9	R	362	5.1	0.944	91.8	LOS F	31.3	228.1	1.00	0.99	17.1
Approach		1086	5.1	0.944	72.6	LOS F	31.3	228.1	0.90	0.96	19.7
West: Parramatta Road (W)											
10	L	283	4.9	0.292	14.2	LOS A	3.3	24.0	0.33	0.73	43.3
11	T	1315	5.0	0.967	74.5	LOS F	58.1	424.1	1.00	1.10	19.1
Approach		1598	5.0	0.967	63.8	LOS E	58.1	424.1	0.88	1.04	21.2
All Vehicles		5122	5.0	0.967	56.2	LOS D	58.1	424.1	0.87	0.92	22.8

PHASING SUMMARY

Site: I-09 2021 DSP2 PM

Carter Street Precinct

I-09 Parramatta Road / Hill Road - Proposed Upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 150 seconds (Practical Cycle Time)

Phase times determined by the program

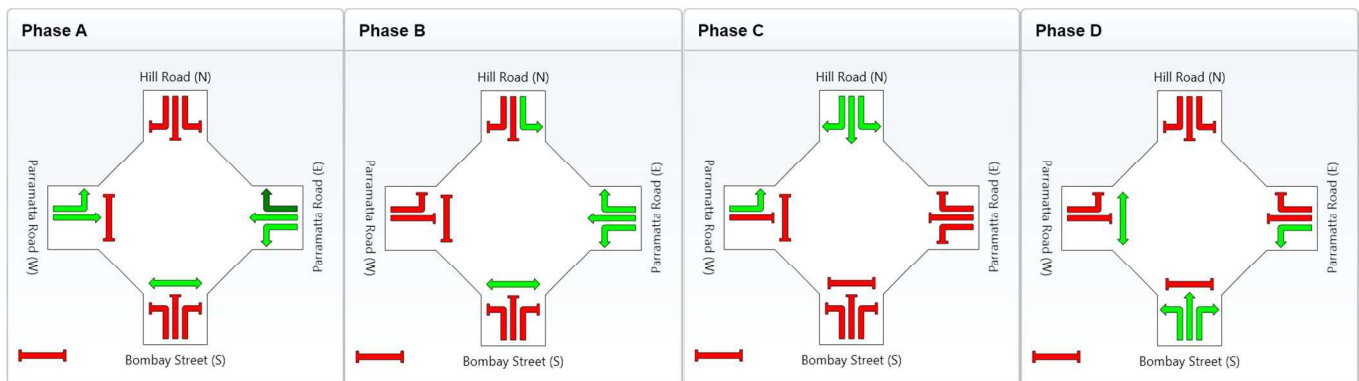
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

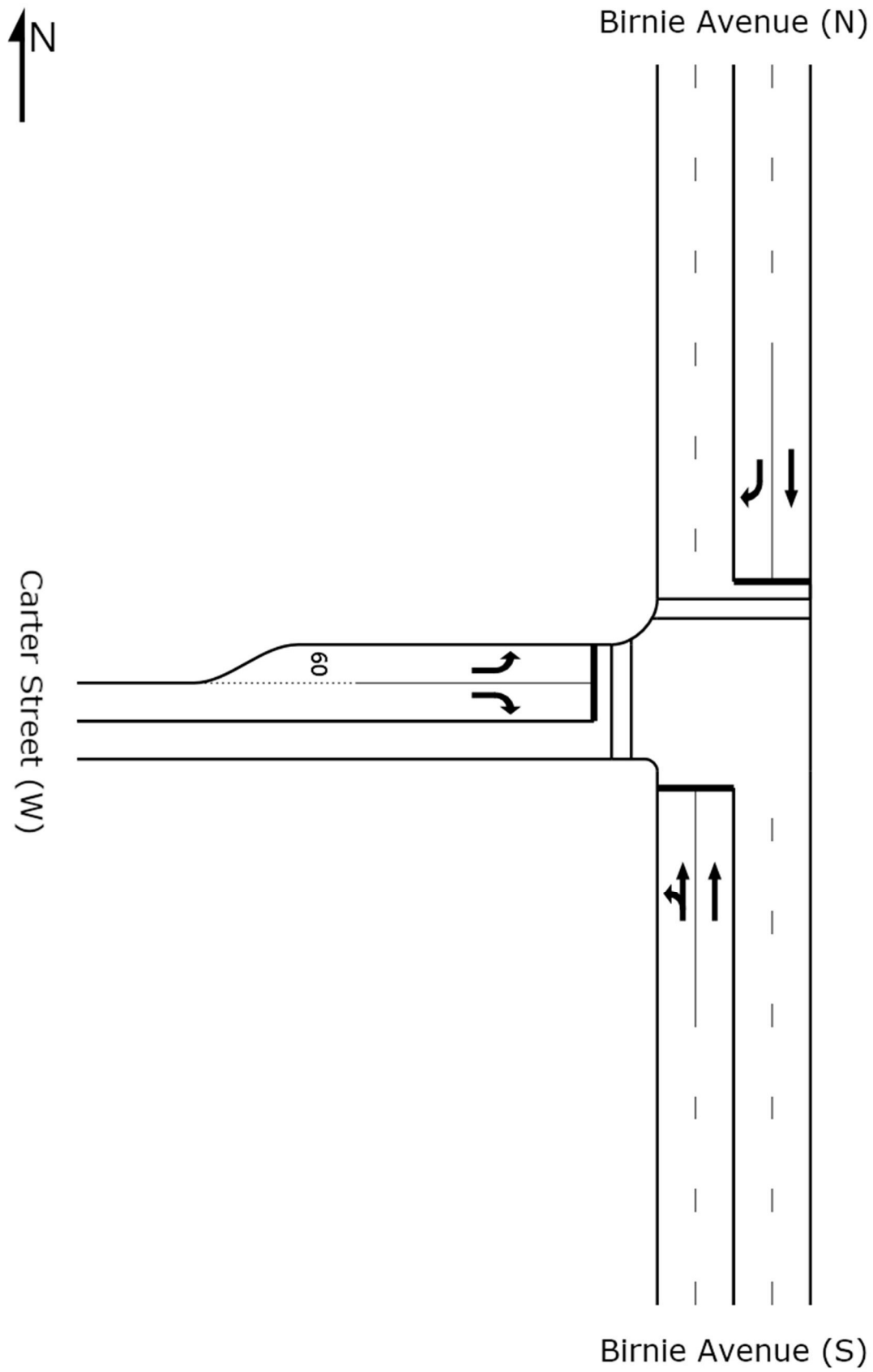
Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	54	21	31	20
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	60	27	37	26
Phase Split	40 %	18 %	25 %	17 %



I-10 Carter Street / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-10 2021 DSP2 AM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	213	10.2	0.605	23.5	LOS B	8.5	64.6	0.75	0.85	37.5
2	T	556	10.0	0.605	16.8	LOS B	8.5	64.6	0.79	0.68	38.6
Approach		768	10.1	0.605	18.6	LOS B	8.5	64.6	0.78	0.73	38.3
North: Birnie Avenue (N)											
8	T	348	10.1	0.357	6.2	LOS A	4.0	30.3	0.41	0.36	49.5
9	R	174	10.2	0.505	19.9	LOS B	2.7	20.4	0.80	0.78	39.0
Approach		522	10.1	0.505	10.8	LOS A	4.0	30.3	0.54	0.50	45.4
West: Carter Street (W)											
10	L	176	10.0	0.316	18.9	LOS B	3.1	23.4	0.63	0.76	39.7
12	R	249	10.2	0.540	29.8	LOS C	6.5	49.5	0.91	0.82	33.1
Approach		425	10.1	0.540	25.3	LOS B	6.5	49.5	0.79	0.80	35.6
All Vehicles		1716	10.1	0.605	17.9	LOS B	8.5	64.6	0.71	0.67	39.4

PHASING SUMMARY

Site: I-10 2021 DSP2 AM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 Phase 2 AM

Signals - Fixed Time Cycle Time = 60 seconds (Practical Cycle Time)

Phase times determined by the program

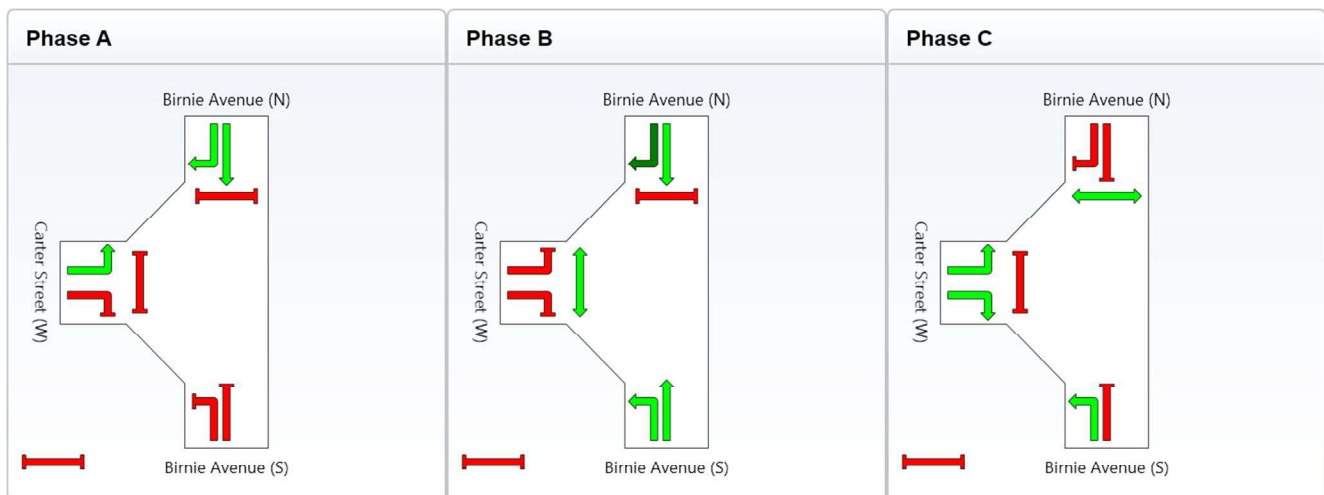
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	20	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	26	22
Phase Split	20 %	43 %	37 %



MOVEMENT SUMMARY

Site: I-10 2021 DSP2 PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Birnie Avenue (S)											
1	L	175	5.0	0.599	30.2	LOS C	9.0	66.0	0.83	0.85	33.7
2	T	465	5.1	0.599	23.6	LOS B	9.0	66.0	0.85	0.72	34.3
Approach		640	5.0	0.599	25.4	LOS B	9.0	66.0	0.84	0.76	34.1
North: Birnie Avenue (N)											
8	T	789	5.0	0.697	6.0	LOS A	12.2	89.1	0.49	0.44	49.5
9	R	372	4.9	0.624	18.6	LOS B	5.9	43.3	0.79	0.82	39.8
Approach		1161	5.0	0.697	10.0	LOS A	12.2	89.1	0.58	0.56	45.9
West: Carter Street (W)											
10	L	125	5.2	0.211	16.3	LOS B	2.0	14.8	0.50	0.74	41.6
12	R	228	5.1	0.558	35.1	LOS C	7.1	52.2	0.93	0.82	30.5
Approach		354	5.2	0.558	28.4	LOS B	7.1	52.2	0.78	0.79	33.7
All Vehicles		2155	5.0	0.697	17.6	LOS B	12.2	89.1	0.69	0.66	39.5

PHASING SUMMARY

Site: I-10 2021 DSP2 PM

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2021 Phase 2 PM

Signals - Fixed Time Cycle Time = 70 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

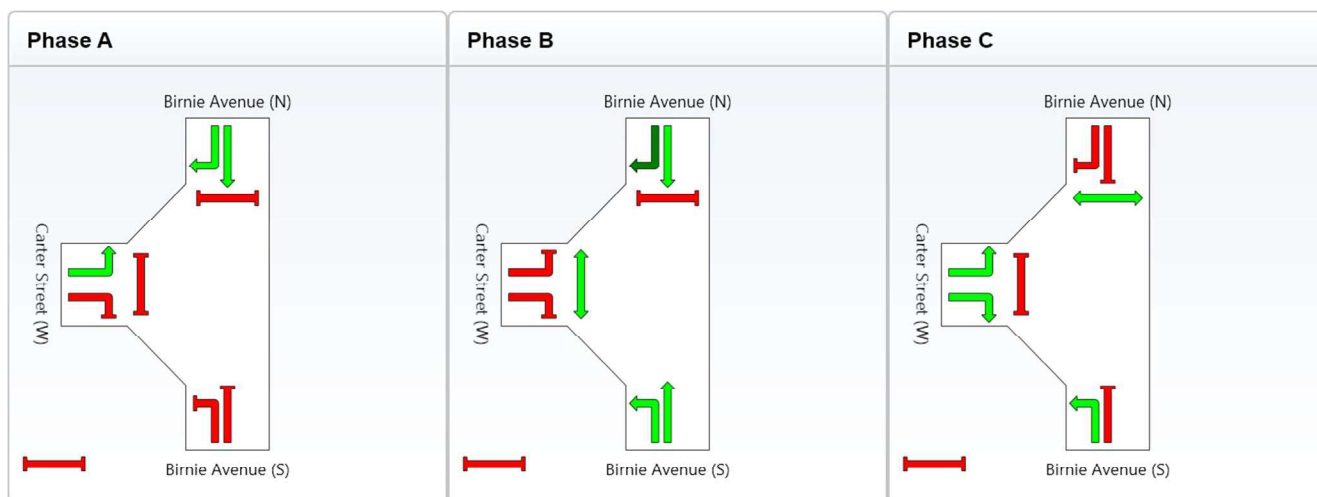
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

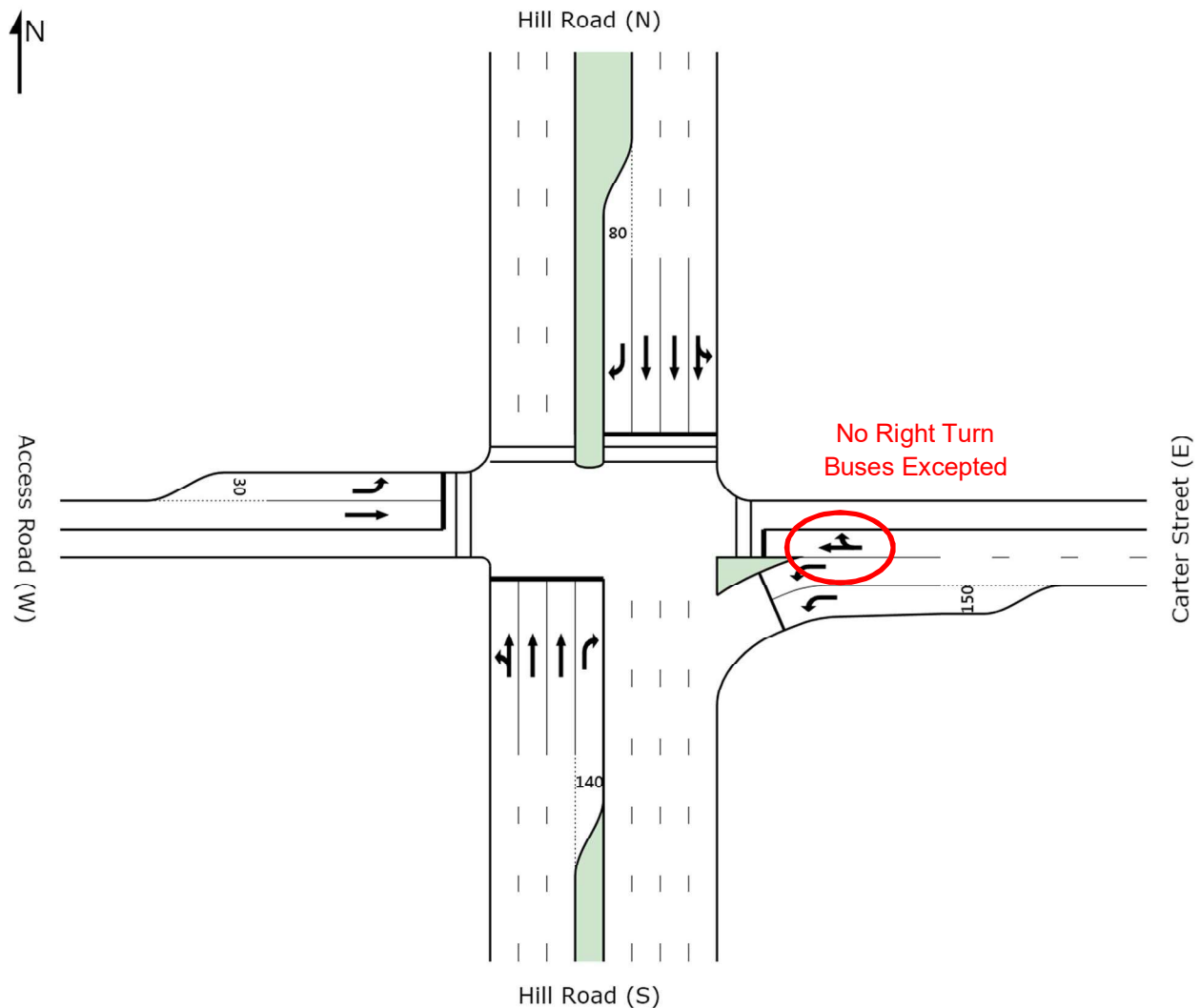
Phase	A	B	C
Green Time (sec)	17	19	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	23	25	22
Phase Split	33 %	36 %	31 %



Year 2031 – All Residential and Retail, 111,000m² GFA Commercial

I-01 Hill Road / Carter Street Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-01 FU DSP2 AM - C

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

Signalised dual left turn on Carter Street

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	12	5.0	0.681	11.0	LOS A	9.6	70.1	0.16	1.07	46.9
2	T	2794	5.0	0.681	2.5	LOS A	9.6	70.1	0.16	0.15	52.3
3	R	265	5.0	0.853	79.6	LOS F	20.1	146.4	1.00	0.91	12.5
Approach		3071	5.0	0.853	9.2	LOS A	20.1	146.4	0.23	0.22	41.0
East: Carter Street (E)											
4	L	528	5.0	0.414	40.7	LOS C	15.6	113.5	0.75	0.79	28.6
5	T	64	5.0	0.306	59.1	LOS E	5.0	41.0	0.92	0.72	22.0
6	R	13	100.0	0.306	70.5	LOS F	5.0	41.0	0.92	0.81	23.4
Approach		605	7.0	0.414	43.3	LOS D	15.6	113.5	0.77	0.79	27.6
North: Hill Road (N)											
7	L	193	5.0	0.811	32.4	LOS C	39.6	288.8	0.77	0.92	26.2
8	T	2155	5.0	0.811	24.0	LOS B	40.1	292.5	0.77	0.71	27.7
9	R	85	5.0	0.901	86.7	LOS F	8.1	59.2	0.88	1.07	17.8
Approach		2433	5.0	0.901	26.9	LOS B	40.1	292.5	0.77	0.74	26.8
West: Access Road (W)											
10	L	32	5.0	0.294	61.5	LOS E	1.9	13.8	0.85	0.72	22.3
11	T	138	5.0	0.378	56.8	LOS E	8.8	64.3	0.92	0.75	22.6
Approach		169	5.0	0.378	57.7	LOS E	8.8	64.3	0.91	0.74	22.6
All Vehicles		6278	5.2	0.901	20.6	LOS B	40.1	292.5	0.51	0.49	31.3

PHASING SUMMARY

Site: I-01 FU DSP2 AM - C

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

Signalised dual left turn on Carter Street

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

Phase times specified by the user

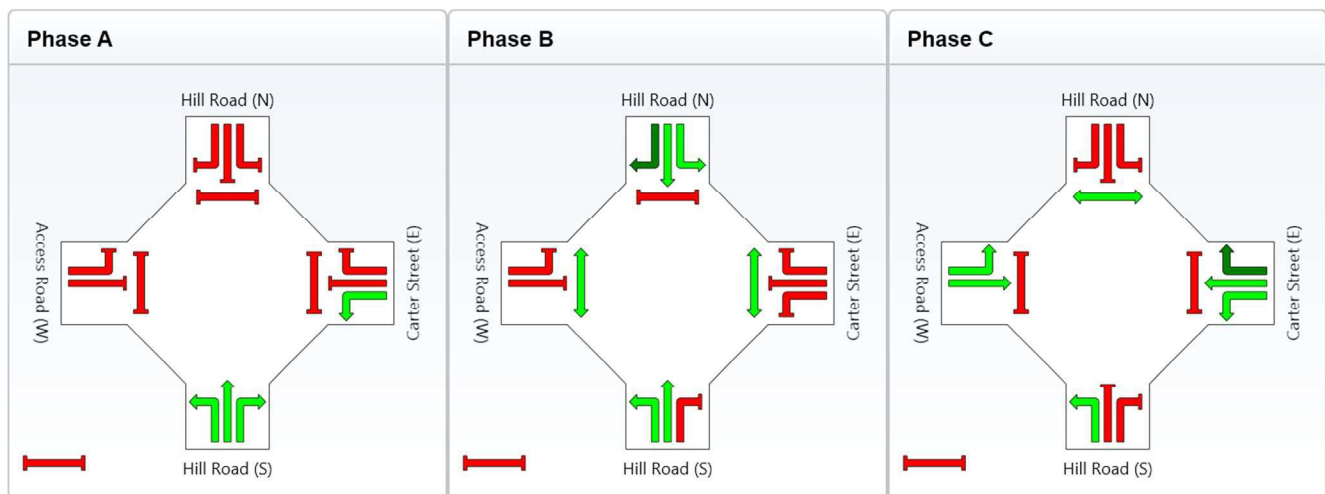
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	26	77	29
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	32	83	35
Phase Split	21 %	55 %	23 %



MOVEMENT SUMMARY

Site: I-01 FU DSP2 PM - C

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement form M4 ramp to Carter Street Moved

Signalised dual left turn on Carter Street

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
1	L	47	4.0	0.523	10.9	LOS A	5.7	41.3	0.13	1.04	46.8
2	T	2038	4.0	0.523	2.8	LOS A	6.5	46.9	0.14	0.13	51.9
3	R	304	4.0	0.936	91.3	LOS F	25.6	185.1	1.00	0.99	11.2
Approach		2389	4.0	0.936	14.2	LOS A	25.6	185.1	0.25	0.25	35.5
East: Carter Street (E)											
4	L	1304	4.0	0.955	68.2	LOS E	67.5	489.0	0.98	0.98	21.1
5	T	43	4.0	0.188	51.5	LOS D	3.3	28.6	0.85	0.67	23.8
6	R	13	100.0	0.188	62.9	LOS E	3.3	28.6	0.85	0.81	24.9
Approach		1360	4.9	0.955	67.6	LOS E	67.5	489.0	0.97	0.97	21.2
North: Hill Road (N)											
7	L	83	4.0	0.855	39.3	LOS C	45.9	332.1	0.86	0.95	23.5
8	T	2254	4.0	0.855	31.0	LOS C	46.1	333.6	0.86	0.81	24.3
9	R	88	4.0	0.946	109.6	LOS F	9.7	70.3	0.98	1.14	15.0
Approach		2425	4.0	0.946	34.1	LOS C	46.1	333.6	0.87	0.82	23.4
West: Access Road (W)											
10	L	12	4.0	0.103	57.0	LOS E	0.7	4.7	0.81	0.68	23.4
11	T	28	4.0	0.068	49.2	LOS D	1.6	11.8	0.82	0.61	24.7
Approach		40	4.0	0.103	51.5	LOS D	1.6	11.8	0.82	0.63	24.3
All Vehicles		6215	4.2	0.955	33.9	LOS C	67.5	489.0	0.65	0.64	25.3

PHASING SUMMARY

Site: I-01 FU DSP2 PM - C

Carter Street Precinct

I-01 Hill Road / Carter Street - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement form M4 ramp to Carter Street Moved

Signalised dual left turn on Carter Street

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

Phase times determined by the program

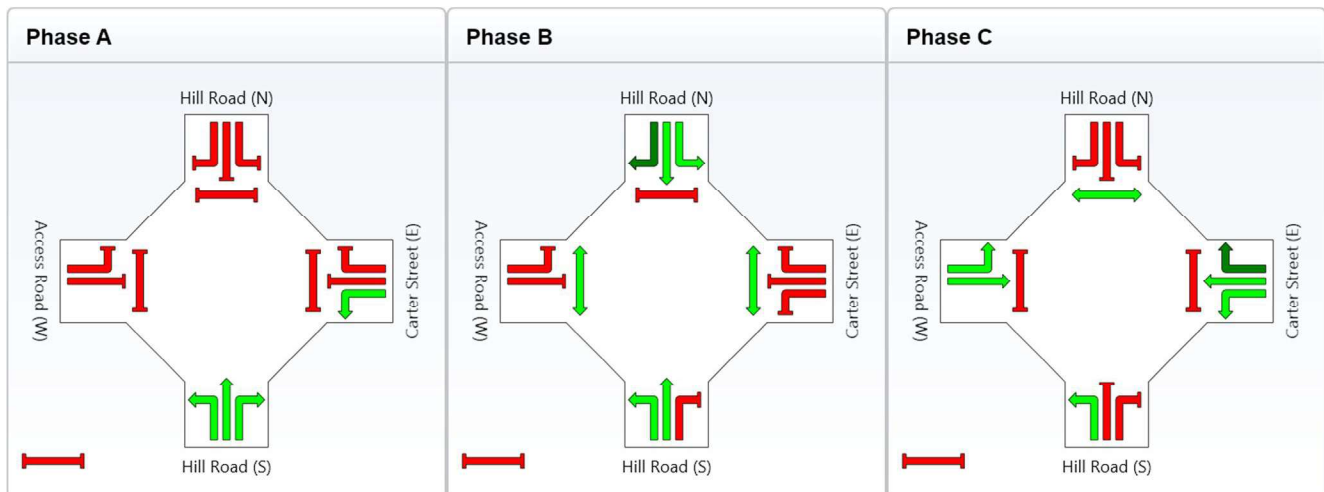
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

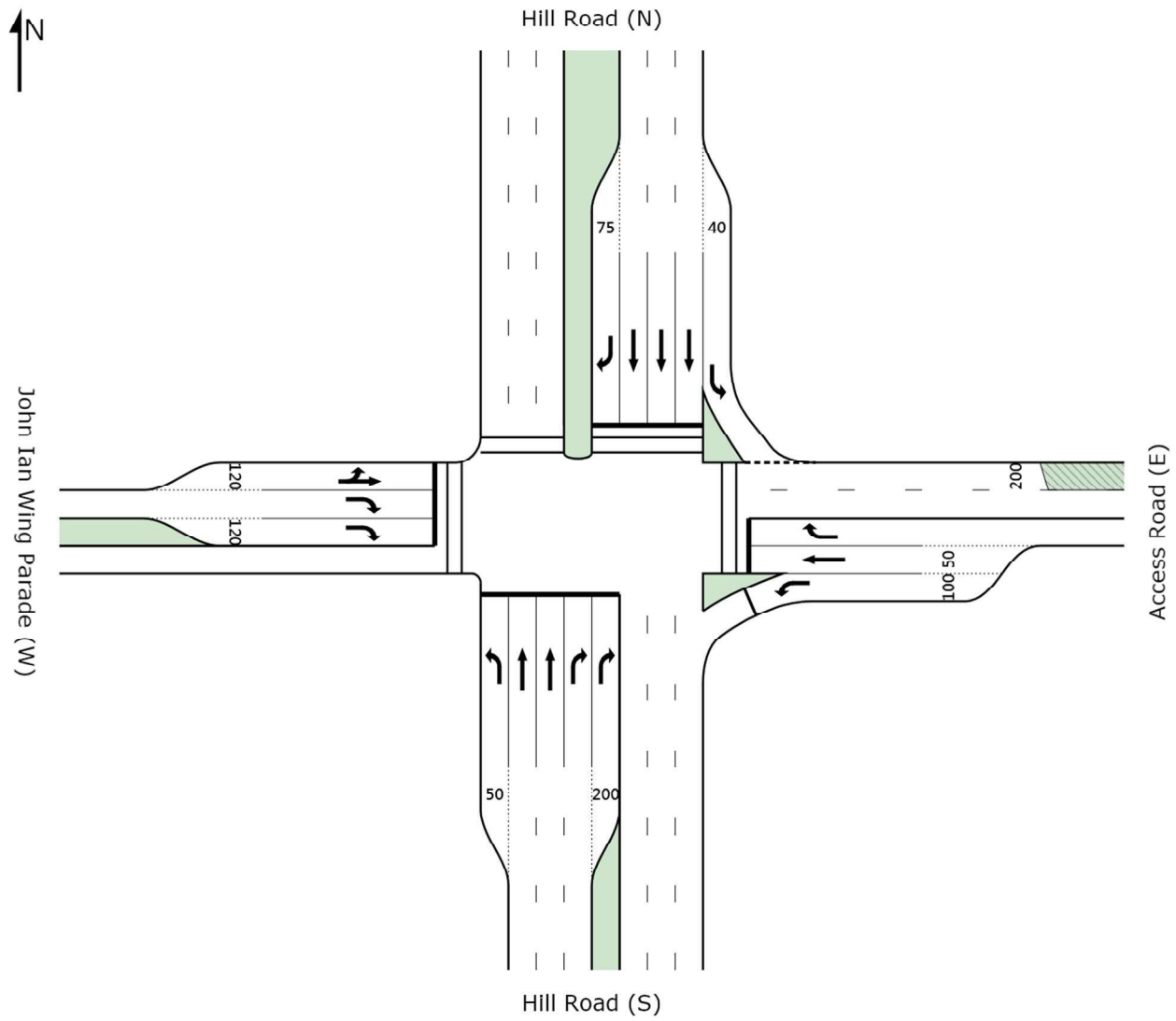
Phase Timing Results

Phase	A	B	C
Green Time (sec)	27	72	33
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	33	78	39
Phase Split	22 %	52 %	26 %



I-02 Hill Road / John Ian Wing Parade Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-02 FU DSP2 AM - SB Slip

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Southbound Slip

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	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: Hill Road (S)											
1	L	209	5.0	0.185	8.8	LOS A	0.9	6.3	0.08	0.66	47.2
2	T	2026	5.0	0.847	11.2	LOS A	39.7	289.6	0.60	0.56	43.9
3	R	557	5.0	0.708	56.1	LOS D	10.2	74.8	0.89	0.89	26.3
Approach		2793	5.0	0.847	20.0	LOS B	39.7	289.6	0.62	0.63	39.5
East: Access Road (E)											
4	L	249	5.0	0.696	45.9	LOS D	14.5	105.9	0.85	0.78	9.1
5	T	54	5.0	0.345	66.4	LOS E	3.6	26.6	0.95	0.72	7.2
6	R	167	5.0	0.824	78.9	LOS F	13.0	94.8	1.00	1.01	7.5
Approach		471	5.0	0.824	60.0	LOS E	14.5	105.9	0.91	0.86	8.3
North: Hill Road (N)											
7	L	94	5.0	0.088	27.0	LOS B	0.3	2.0	0.06	0.91	41.6
8	T	1739	5.0	0.708	31.6	LOS C	29.9	218.2	0.77	0.69	30.9
9	R	38	5.0	0.585	55.5	LOS D	2.4	17.3	0.78	0.82	23.0
Approach		1871	5.0	0.708	31.9	LOS C	29.9	218.2	0.74	0.71	31.0
West: John Ian Wing Parade (W)											
10	L	101	5.0	0.506	73.6	LOS F	8.5	61.8	0.98	0.80	18.7
11	T	21	5.0	0.506	84.4	LOS F	8.5	61.8	0.98	0.81	16.3
12	R	391	5.0	0.817	81.5	LOS F	15.0	109.3	1.00	0.91	17.7
Approach		513	5.0	0.817	80.1	LOS F	15.0	109.3	0.99	0.89	17.8
All Vehicles		5646	5.0	0.847	32.7	LOS C	39.7	289.6	0.72	0.70	27.6

PHASING SUMMARY

Site: I-02 FU DSP2 AM - SB Slip

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Southbound Slip

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

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

Phase times determined by the program

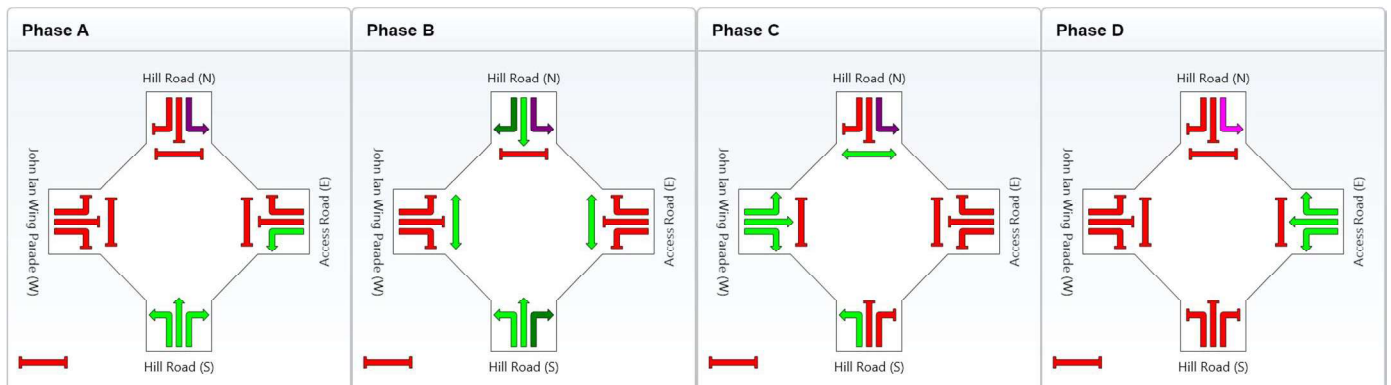
Sequence: TCS3413 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	24	65	20	17
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	30	71	26	23
Phase Split	20 %	47 %	17 %	15 %



Normal Movement	Permitted/Opposed
Slip-Lane Movement	Opposed Slip-Lane
Stopped Movement	Continuous Movement

MOVEMENT SUMMARY

Site: I-02 FU DSP2 PM - SB Slip

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Southbound Slip

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement from M4 ramp to Carter Street Moved

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	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: Hill Road (S)											
1	L	292	4.0	0.257	9.4	LOS A	1.3	9.3	0.12	0.67	46.5
2	T	1576	4.0	0.635	6.9	LOS A	16.2	117.6	0.31	0.29	49.1
3	R	272	4.0	1.026	153.9	LOS F	13.7	98.9	1.00	0.95	11.1
Approach		2139	4.0	1.026	25.9	LOS B	16.2	117.6	0.37	0.43	35.3
East: Access Road (E)											
4	L	157	4.0	0.477	53.7	LOS D	9.6	69.7	0.89	0.77	8.7
5	T	28	4.0	0.179	64.0	LOS E	1.9	13.6	0.93	0.67	7.3
6	R	233	4.0	1.074	167.9	LOS F	27.4	198.5	1.00	1.69	5.2
Approach		418	4.0	1.074	117.9	LOS F	27.4	198.5	0.95	1.28	6.3
North: Hill Road (N)											
7	L	56	4.0	0.048	26.9	LOS B	0.2	1.1	0.05	0.91	41.7
8	T	2139	4.0	0.696	18.8	LOS B	28.7	208.1	0.61	0.56	38.0
9	R	119	4.0	1.052	165.5	LOS F	16.9	122.1	1.00	1.31	10.4
Approach		2315	4.0	1.052	26.6	LOS B	28.7	208.1	0.61	0.60	33.7
West: John Ian Wing Parade (W)											
10	L	48	4.0	0.480	76.9	LOS F	6.7	48.5	0.99	0.78	18.1
11	T	46	4.0	0.480	87.7	LOS F	6.7	48.5	0.99	0.79	15.9
12	R	262	4.0	0.680	79.3	LOS F	9.6	69.6	1.00	0.83	18.0
Approach		357	4.0	0.680	80.1	LOS F	9.6	69.6	1.00	0.82	17.7
All Vehicles		5228	4.0	1.074	37.3	LOS C	28.7	208.1	0.57	0.60	26.1

PHASING SUMMARY

Site: I-02 FU DSP2 PM - SB Slip

Carter Street Precinct

I-02 Hill Road / John Ian Wing Parade - Southbound Slip

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement from M4 ramp to Carter Street Moved

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

Phase times determined by the program

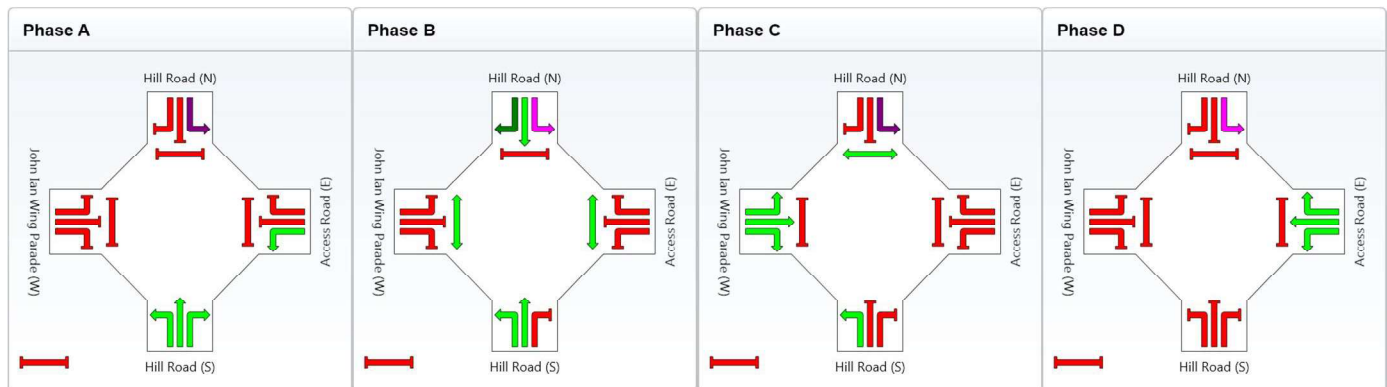
Sequence: TCS3413 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

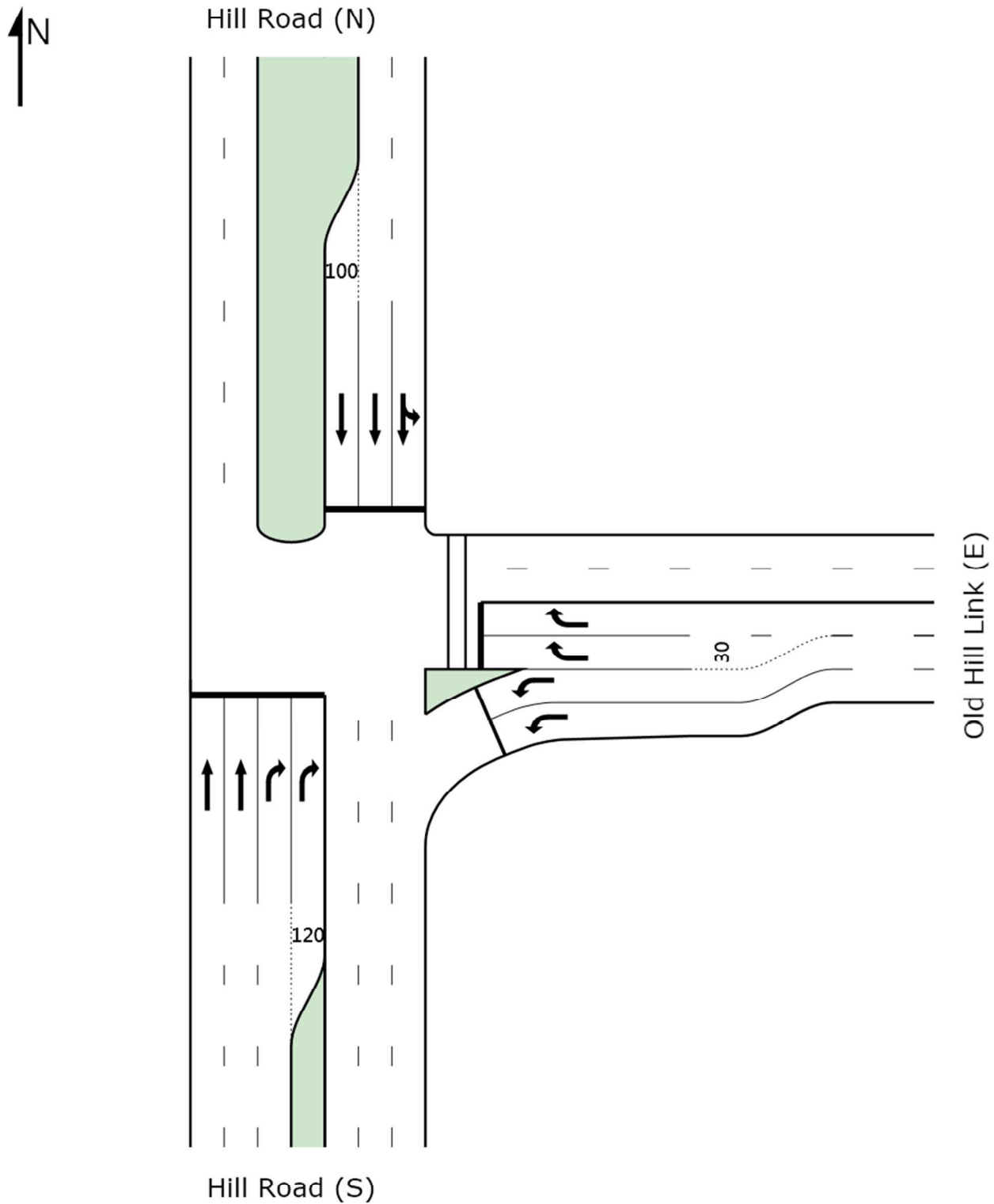
Phase	A	B	C	D
Green Time (sec)	11	81	16	18
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	17	87	22	24
Phase Split	11 %	58 %	15 %	16 %



Normal Movement	Permitted/Opposed
Slip-Lane Movement	Opposed Slip-Lane
Stopped Movement	Continuous Movement

I-03 Hill Road / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



Note: Due to long queues and delays, some northbound right-turn traffic switched to through movement to take advantage of alternative route via Pondage Link.

MOVEMENT SUMMARY

Site: I-03 FU DSP2 AM - C

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	1494	5.0	0.449	0.9	LOS A	4.6	33.8	0.09	0.09	58.0
3	R	797	5.0	0.674	44.5	LOS D	25.0	182.2	0.76	0.82	27.1
Approach		2291	5.0	0.674	16.0	LOS B	25.0	182.2	0.33	0.34	41.5
East: Old Hill Link (E)											
4	L	402	5.0	0.244	29.1	LOS C	6.6	47.9	0.48	0.72	18.1
6	R	42	5.0	0.294	88.5	LOS F	1.6	11.5	0.99	0.70	7.1
Approach		444	5.0	0.294	34.8	LOS C	6.6	47.9	0.53	0.72	15.9
North: Hill Road (N)											
7	L	42	5.0	0.664	55.0	LOS D	38.5	280.9	0.70	0.98	24.7
8	T	1464	5.0	0.664	33.9	LOS C	38.5	280.9	0.68	0.62	30.0
Approach		1506	5.0	0.664	34.5	LOS C	38.5	280.9	0.68	0.63	29.8
All Vehicles		4241	5.0	0.674	24.6	LOS B	38.5	280.9	0.47	0.48	34.3

PHASING SUMMARY

Site: I-03 FU DSP2 AM - C

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Movement from M4 ramp to Carter Street Moved

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

Phase times determined by the program

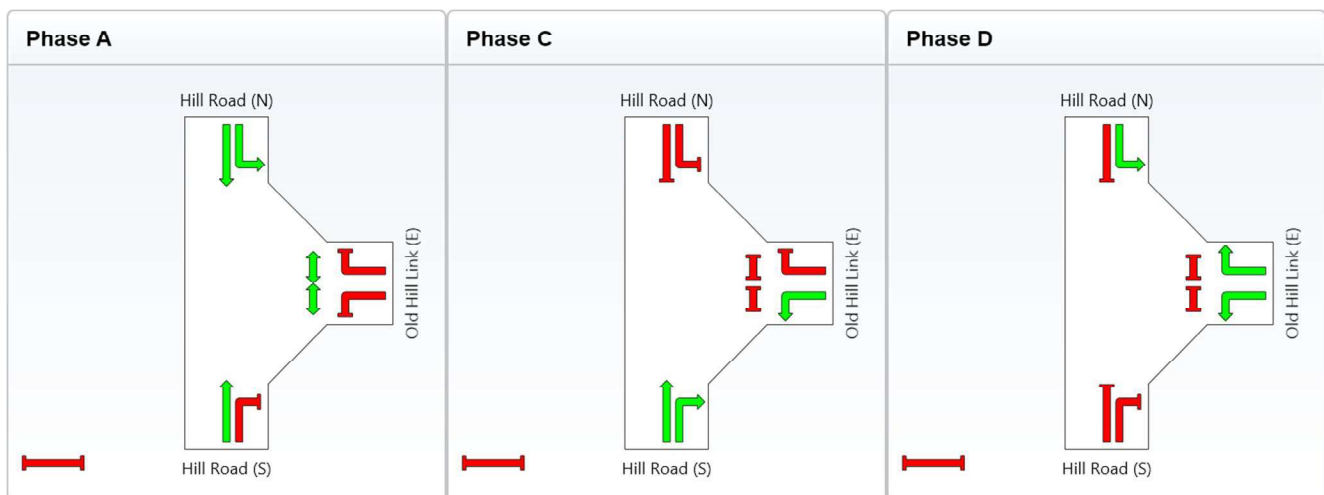
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

Phase	A	C	D
Green Time (sec)	69	57	6
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	75	63	12
Phase Split	50 %	42 %	8 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

MOVEMENT SUMMARY

Site: I-03 FU DSP2 PM - C

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement from M4 ramp to Carter Street Moved

Signals - Fixed Time Cycle Time = 75 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Hill Road (S)											
2	T	1173	4.0	0.472	3.0	LOS A	4.7	33.9	0.24	0.21	54.3
3	R	559	4.0	0.580	34.5	LOS C	8.5	61.7	0.86	0.81	30.9
Approach		1732	4.0	0.580	13.1	LOS A	8.5	61.7	0.44	0.41	43.6
East: Old Hill Link (E)											
4	L	1179	4.0	0.633	17.0	LOS B	11.7	85.1	0.55	0.76	25.5
6	R	132	4.0	0.390	38.1	LOS C	4.2	30.1	0.87	0.78	14.3
Approach		1311	4.0	0.633	19.1	LOS B	11.7	85.1	0.58	0.76	23.7
North: Hill Road (N)											
7	L	38	4.0	0.638	39.4	LOS C	11.2	81.4	0.84	0.92	30.1
8	T	1080	4.0	0.638	26.3	LOS B	11.2	81.4	0.85	0.74	33.2
Approach		1118	4.0	0.638	26.7	LOS B	11.2	81.4	0.85	0.75	33.1
All Vehicles		4160	4.0	0.638	18.7	LOS B	11.7	85.1	0.59	0.61	35.7

PHASING SUMMARY

Site: I-03 FU DSP2 PM - C

Carter Street Precinct

I-03 Hill Road / Old Hill Link - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Movement from M4 ramp to Carter Street Moved

Signals - Fixed Time Cycle Time = 75 seconds (User-Given Cycle Time)

Phase times determined by the program

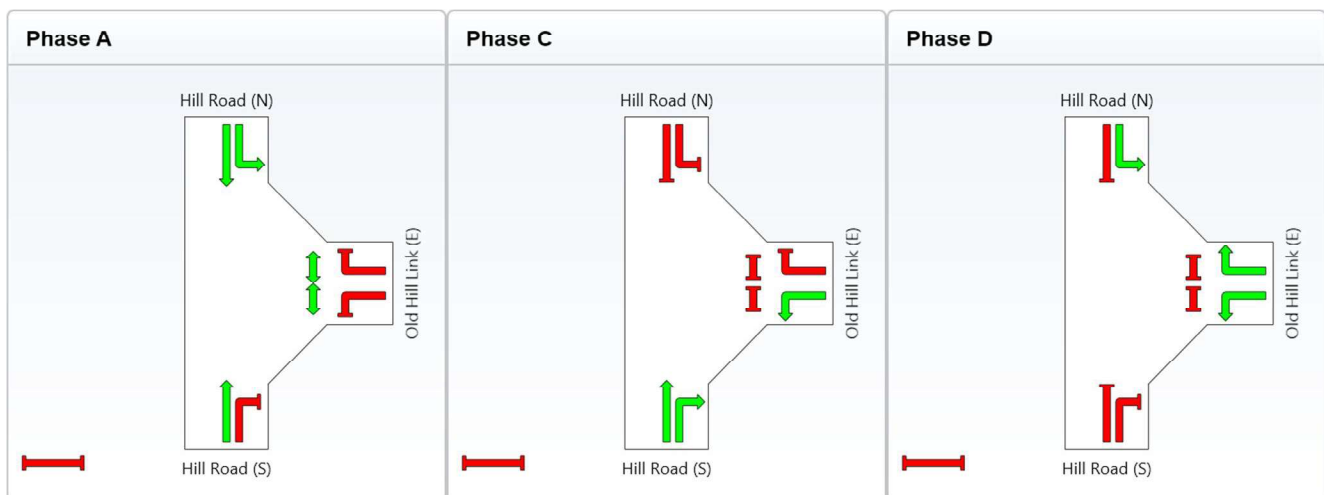
Sequence: TCS3402 AM

Input Sequence: A, C, D

Output Sequence: A, C, D

Phase Timing Results

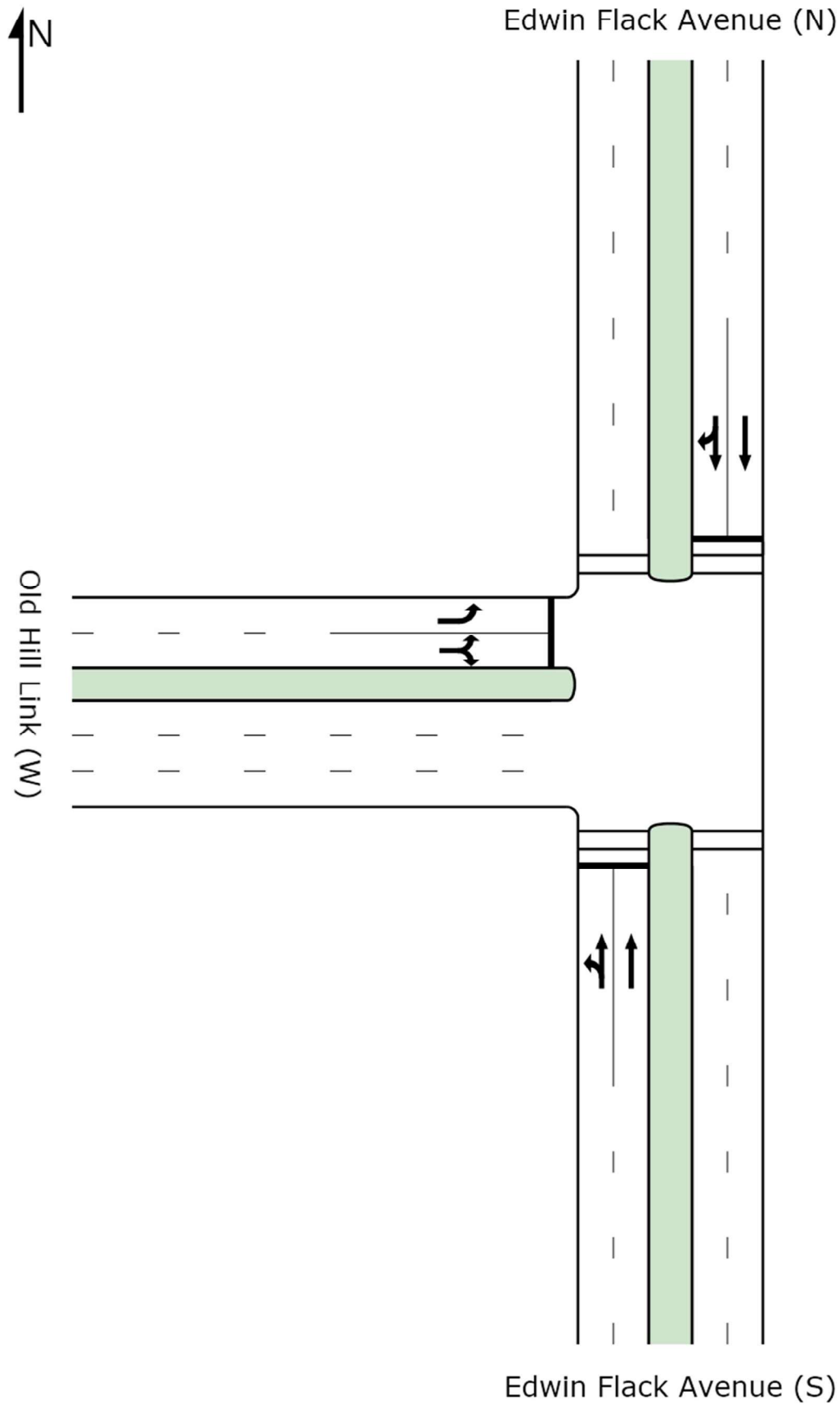
Phase	A	C	D
Green Time (sec)	23	20	14
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	29	26	20
Phase Split	39 %	35 %	27 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

I-04 Edwin Flack Avenue / Old Hill Link Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-04 FU DSP2 AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 50 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	69	5.0	0.459	19.9	LOS B	1.9	13.9	0.94	0.79	40.2
2	T	171	5.0	0.459	19.1	LOS B	2.6	18.7	0.96	0.75	36.5
Approach		240	5.0	0.459	19.4	LOS B	2.6	18.7	0.96	0.76	37.5
North: Edwin Flack Avenue (N)											
8	T	401	5.0	0.506	10.3	LOS A	6.2	44.9	0.65	0.56	44.6
9	R	336	5.0	0.685	25.1	LOS B	6.4	46.6	0.90	0.90	35.7
Approach		737	5.0	0.685	17.0	LOS B	6.4	46.6	0.77	0.72	40.0
West: Old Hill Link (W)											
10	L	1343	5.0	0.687	13.2	LOS A	9.5	69.0	0.48	0.78	44.2
12	R	81	5.0	0.687	15.5	LOS B	9.5	69.0	0.63	0.79	42.0
Approach		1424	5.0	0.687	13.3	LOS A	9.5	69.0	0.49	0.78	44.0
All Vehicles		2401	5.0	0.687	15.1	LOS B	9.5	69.0	0.62	0.76	42.0

PHASING SUMMARY

Site: I-04 FU DSP2 AM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 50 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

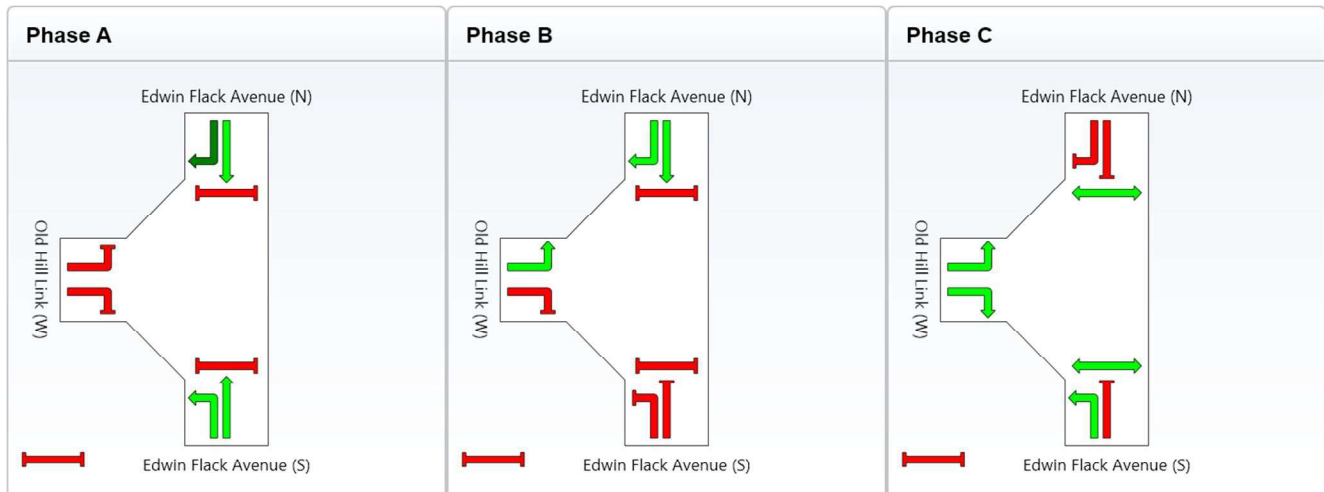
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	6	9	17
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	15	23
Phase Split	24 %	30 %	46 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

MOVEMENT SUMMARY

Site: I-04 FU DSP2 PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Edwin Flack Avenue (S)											
1	L	344	5.0	0.772	47.8	LOS D	17.4	127.3	0.97	1.03	26.1
2	T	383	5.0	0.772	47.1	LOS D	17.6	128.8	1.00	0.93	24.9
Approach		727	5.0	0.772	47.5	LOS D	17.6	128.8	0.98	0.97	25.5
North: Edwin Flack Avenue (N)											
8	T	218	5.0	0.153	1.0	LOS A	0.7	5.1	0.06	0.05	58.1
9	R	771	5.0	0.796	24.5	LOS B	23.7	173.0	0.70	0.96	36.0
Approach		988	5.0	0.796	19.3	LOS B	23.7	173.0	0.56	0.76	39.3
West: Old Hill Link (W)											
10	L	502	5.0	0.409	11.8	LOS A	5.2	37.8	0.17	0.71	45.5
12	R	98	5.0	0.409	57.2	LOS E	5.2	37.8	0.92	0.78	23.4
Approach		600	5.0	0.409	19.2	LOS B	5.2	37.8	0.29	0.72	39.4
All Vehicles		2316	5.0	0.796	28.1	LOS B	23.7	173.0	0.62	0.81	33.6

PHASING SUMMARY

Site: I-04 FU DSP2 PM

Carter Street Precinct

I-04 Edwin Flack Avenue / Old Hill Link

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Phase times determined by the program

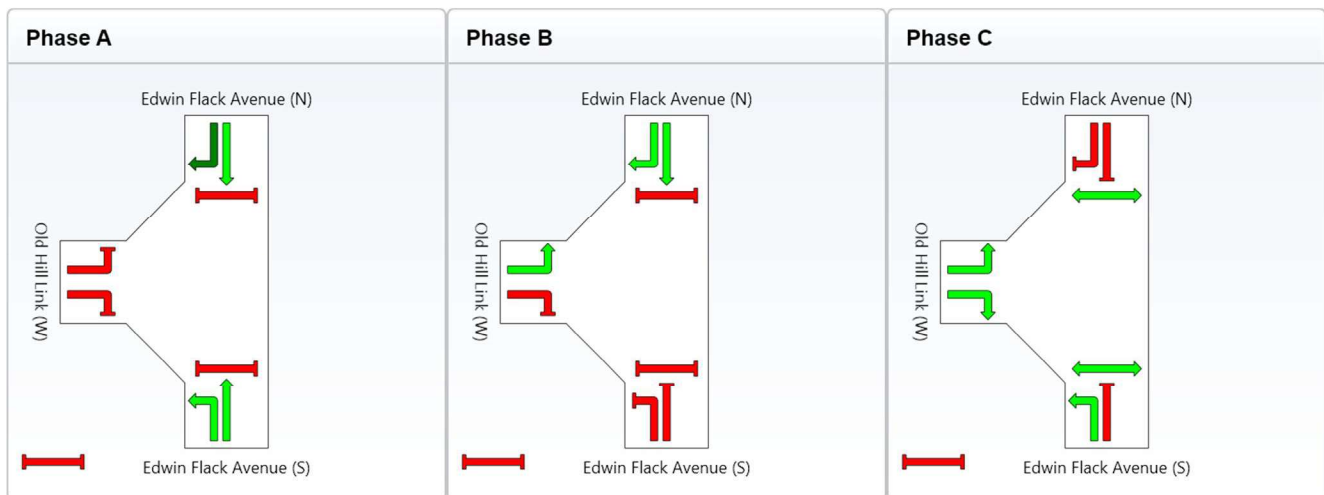
Sequence: TCS3403 AM

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

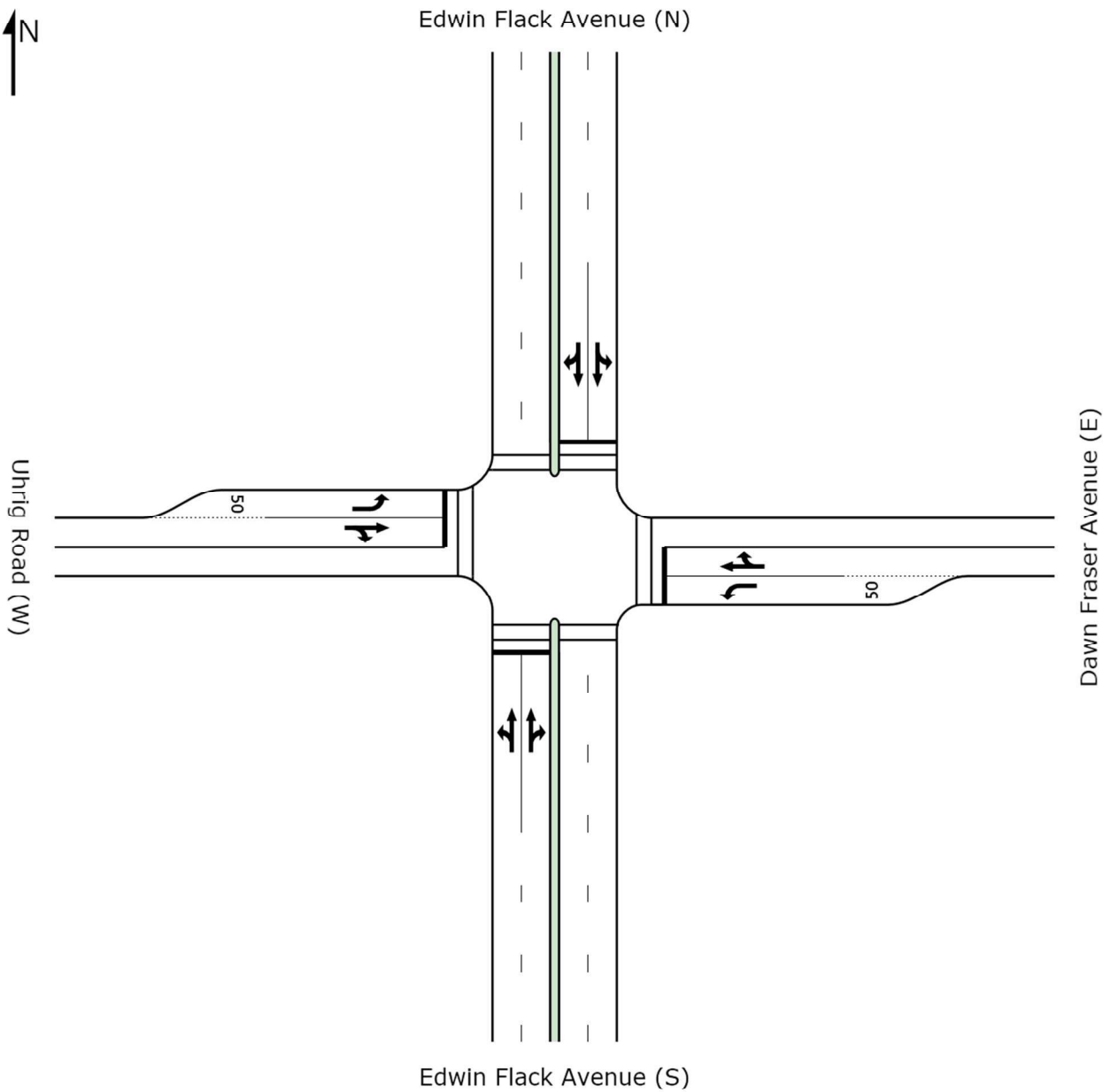
Phase	A	B	C
Green Time (sec)	25	56	16
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	31	62	22
Phase Split	27 %	54 %	19 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

I-05 Edwin Flack Avenue / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-05 FU DSP2 AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	17	5.0	0.430	28.4	LOS B	4.2	30.9	0.83	0.85	35.6
2	T	213	5.0	0.430	18.8	LOS B	4.2	30.9	0.83	0.68	37.0
3	R	102	5.0	0.430	20.3	LOS B	2.5	18.0	0.83	0.78	37.7
Approach		332	5.0	0.430	19.7	LOS B	4.2	30.9	0.83	0.72	37.1
East: Dawn Fraser Avenue (E)											
4	L	44	5.0	0.073	12.1	LOS A	0.6	4.0	0.49	0.67	34.0
5	T	176	5.0	0.529	20.7	LOS B	5.3	38.9	0.92	0.76	27.9
6	R	41	5.0	0.529	26.7	LOS B	5.3	38.9	0.92	0.82	28.1
Approach		261	5.0	0.529	20.2	LOS B	5.3	38.9	0.85	0.75	28.8
North: Edwin Flack Avenue (N)											
7	L	122	5.0	0.553	28.1	LOS B	5.6	40.9	0.88	0.83	33.4
8	T	349	5.0	0.553	32.8	LOS C	10.2	74.4	0.87	0.74	29.9
9	R	8	5.0	0.553	47.3	LOS D	10.2	74.4	0.87	0.89	27.3
Approach		480	5.0	0.553	31.9	LOS C	10.2	74.4	0.87	0.77	30.6
West: Uhrig Road (W)											
10	L	8	5.0	0.014	14.4	LOS A	0.1	0.7	0.47	0.67	43.1
11	T	426	5.0	0.754	23.7	LOS B	12.0	87.3	0.95	0.92	34.5
12	R	21	5.0	0.754	29.2	LOS C	12.0	87.3	0.95	0.95	35.0
Approach		456	5.0	0.754	23.8	LOS B	12.0	87.3	0.94	0.91	34.6
All Vehicles		1528	5.0	0.754	24.8	LOS B	12.0	87.3	0.88	0.80	32.6

PHASING SUMMARY

Site: I-05 FU DSP2 AM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 55 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

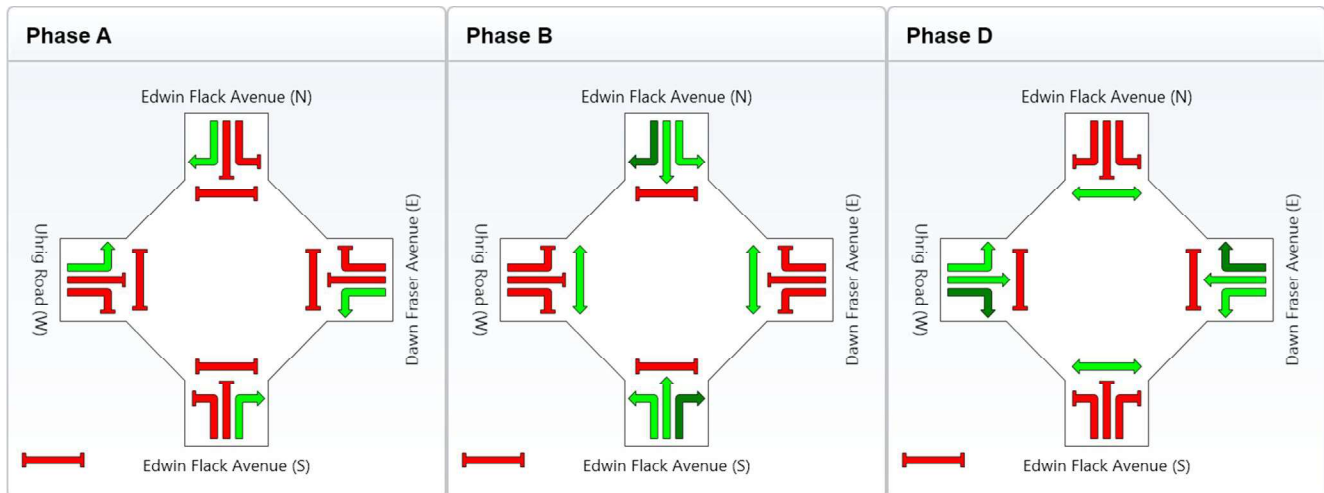
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

Phase Timing Results

Phase	A	B	D
Green Time (sec)	6	13	18
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	19	24
Phase Split	22 %	35 %	44 %



→ Normal Movement	→ Permitted/Opposed
→ Slip-Lane Movement	→ Opposed Slip-Lane
→ Stopped Movement	→ Continuous Movement

MOVEMENT SUMMARY

Site: I-05 FU DSP2 PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	41	5.0	0.809	36.0	LOS C	10.8	79.0	0.98	0.96	31.9
2	T	589	5.0	0.809	32.1	LOS C	10.8	79.0	0.98	0.96	30.1
3	R	39	5.0	0.809	44.4	LOS D	10.6	77.5	0.98	1.01	26.9
Approach		669	5.0	0.809	33.0	LOS C	10.8	79.0	0.98	0.96	30.0
East: Dawn Fraser Avenue (E)											
4	L	89	5.0	0.151	12.2	LOS A	1.2	8.7	0.48	0.68	33.9
5	T	413	5.0	0.788	23.1	LOS B	14.3	104.6	0.96	0.96	27.0
6	R	64	5.0	0.788	29.1	LOS C	14.3	104.6	0.96	0.99	27.3
Approach		566	5.0	0.788	22.1	LOS B	14.3	104.6	0.88	0.92	27.9
North: Edwin Flack Avenue (N)											
7	L	55	5.0	0.435	29.3	LOS C	4.6	33.4	0.84	0.85	33.3
8	T	271	5.0	0.435	27.2	LOS B	4.7	34.3	0.85	0.71	32.4
9	R	16	5.0	0.435	40.8	LOS C	4.7	34.3	0.86	0.88	29.6
Approach		341	5.0	0.435	28.2	LOS B	4.7	34.3	0.85	0.74	32.4
West: Uhrig Road (W)											
10	L	67	5.0	0.114	14.6	LOS B	0.9	6.4	0.47	0.72	42.9
11	T	201	5.0	0.419	20.9	LOS B	5.4	39.1	0.83	0.74	36.1
12	R	24	5.0	0.419	26.4	LOS B	5.4	39.1	0.83	0.85	36.3
Approach		293	5.0	0.419	19.9	LOS B	5.4	39.1	0.75	0.75	37.6
All Vehicles		1869	5.0	0.809	26.8	LOS B	14.3	104.6	0.89	0.87	30.6

PHASING SUMMARY

Site: I-05 FU DSP2 PM

Carter Street Precinct

I-05 Edwin Flack Avenue / Uhrig Road - Proposed Upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Phase times determined by the program

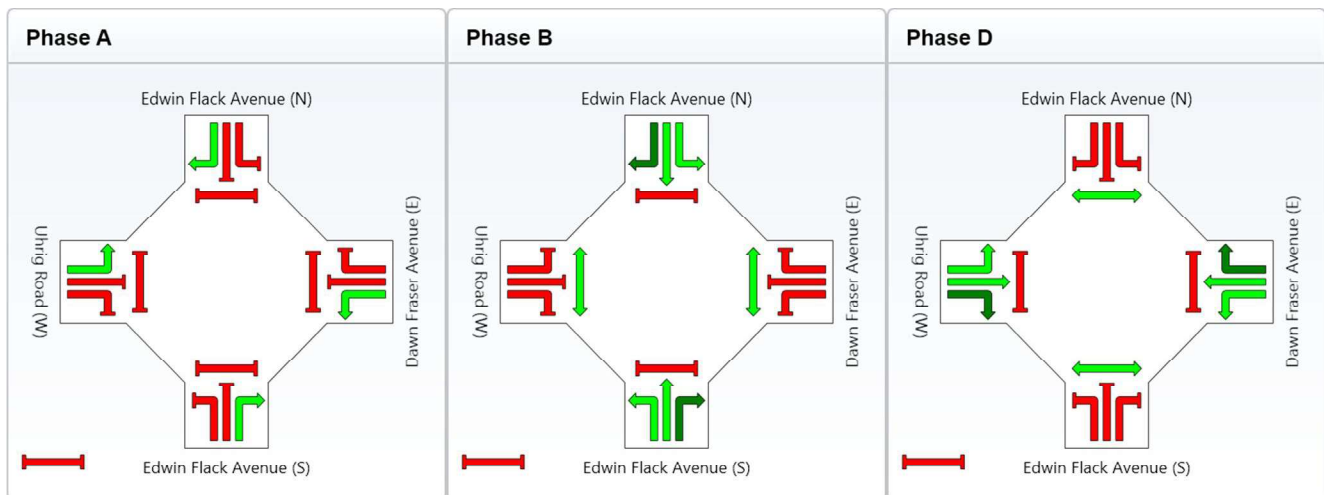
Sequence: Two Phases

Input Sequence: A, B, D

Output Sequence: A, B, D

Phase Timing Results

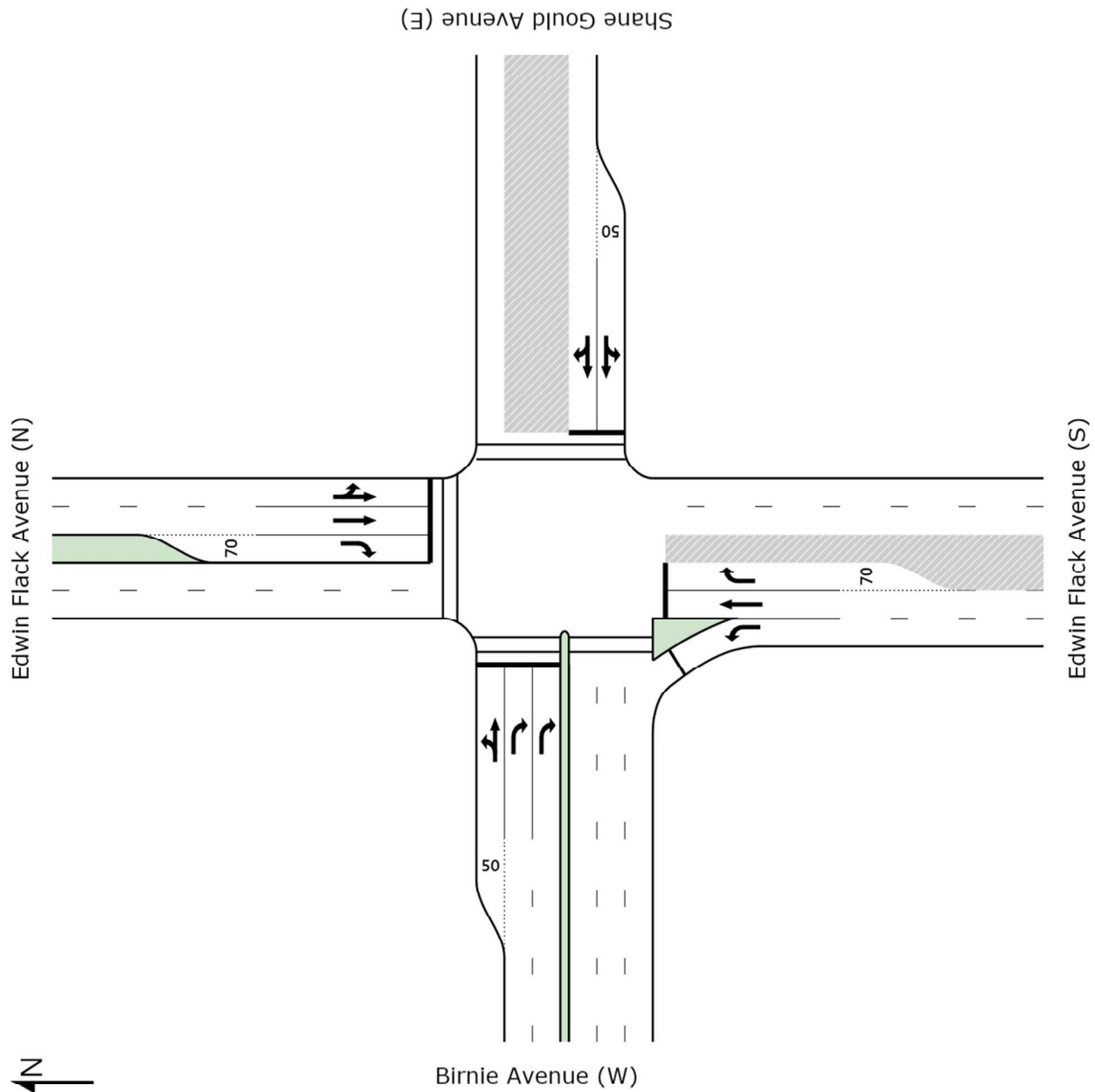
Phase	A	B	D
Green Time (sec)	6	14	22
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	12	20	28
Phase Split	20 %	33 %	47 %



Normal Movement	Permitted/Opposed
Slip-Lane Movement	Opposed Slip-Lane
Stopped Movement	Continuous Movement

I-06 Edwin Flack Avenue / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-06 FU DSP2 AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 77 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	580	5.0	0.530	17.0	LOS B	12.5	91.4	0.62	0.78	41.2
2	T	127	5.0	0.236	23.0	LOS B	3.7	27.1	0.81	0.65	35.1
3	R	7	5.0	0.021	29.9	LOS C	0.2	1.5	0.74	0.68	33.0
Approach		715	5.0	0.530	18.2	LOS B	12.5	91.4	0.65	0.76	39.9
East: Shane Gould Avenue (E)											
4	L	6	5.0	0.139	46.2	LOS D	0.8	5.5	0.96	0.71	27.4
5	T	21	5.0	0.139	37.9	LOS C	0.8	5.5	0.96	0.67	27.4
6	R	13	5.0	0.139	46.3	LOS D	0.7	5.4	0.96	0.70	26.9
Approach		40	5.0	0.139	41.9	LOS C	0.8	5.5	0.96	0.69	27.2
North: Edwin Flack Avenue (N)											
7	L	23	5.0	0.157	21.8	LOS B	2.1	15.2	0.57	0.86	38.8
8	T	215	5.0	0.157	12.4	LOS A	2.2	16.2	0.51	0.41	42.8
9	R	168	5.0	0.599	27.5	LOS B	4.2	30.4	0.92	0.80	34.3
Approach		406	5.0	0.599	19.2	LOS B	4.2	30.4	0.69	0.59	38.6
West: Birnie Avenue (W)											
10	L	182	5.0	0.440	17.4	LOS B	3.3	24.4	0.64	0.78	41.0
11	T	36	5.0	0.440	9.1	LOS A	3.3	24.4	0.64	0.53	43.5
12	R	728	5.0	0.823	34.6	LOS C	13.3	97.2	0.95	0.90	30.9
Approach		946	5.0	0.823	30.3	LOS C	13.3	97.2	0.88	0.86	32.8
All Vehicles		2107	5.0	0.823	24.3	LOS B	13.3	97.2	0.77	0.77	35.9

PHASING SUMMARY

Site: I-06 FU DSP2 AM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 77 seconds (User-Given Cycle Time)

Phase times determined by the program

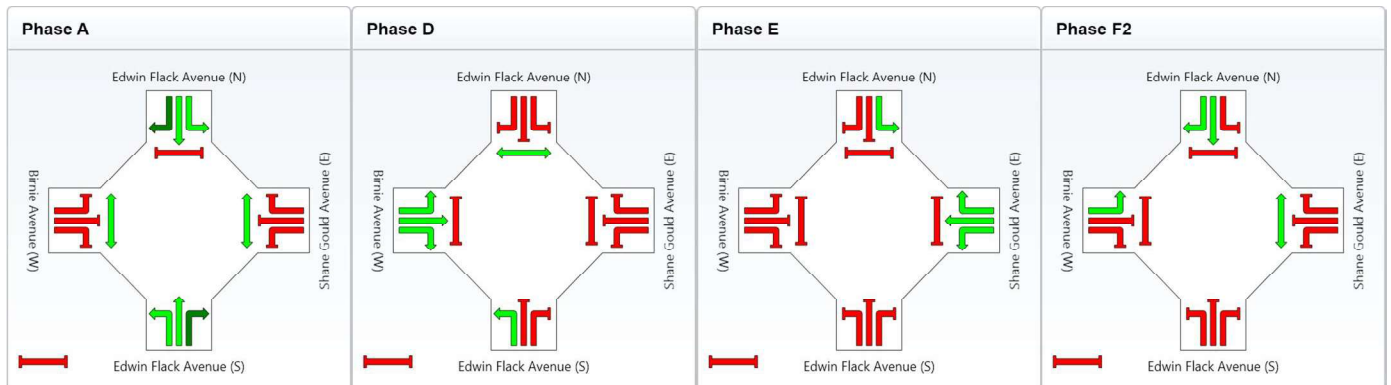
Sequence: TCS4402 AM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

Phase	A	D	E	F2
Green Time (sec)	22	19	6	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	28	25	12	12
Phase Split	36 %	32 %	16 %	16 %



MOVEMENT SUMMARY

Site: I-06 FU DSP2 PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Signals - Fixed Time Cycle Time = 77 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Edwin Flack Avenue (S)											
1	L	1378	5.0	0.962	48.8	LOS D	61.3	447.7	0.96	1.16	26.7
2	T	468	5.0	0.868	37.5	LOS C	20.1	146.8	1.00	1.05	28.2
3	R	3	5.0	0.009	29.6	LOS C	0.1	0.6	0.73	0.66	33.1
Approach		1849	5.0	0.962	45.9	LOS D	61.3	447.7	0.97	1.13	27.1
East: Shane Gould Avenue (E)											
4	L	15	5.0	0.369	47.4	LOS D	2.1	15.0	0.99	0.75	27.0
5	T	61	5.0	0.369	39.1	LOS C	2.1	15.0	0.99	0.73	27.0
6	R	31	5.0	0.369	47.5	LOS D	2.0	14.8	0.99	0.74	26.6
Approach		106	5.0	0.369	42.6	LOS D	2.1	15.0	0.99	0.74	26.9
North: Edwin Flack Avenue (N)											
7	L	46	5.0	0.151	22.5	LOS B	1.9	13.7	0.62	0.79	37.9
8	T	172	5.0	0.151	12.3	LOS A	2.1	15.5	0.51	0.41	42.8
9	R	166	5.0	0.661	29.3	LOS C	4.2	30.8	0.98	0.81	33.4
Approach		384	5.0	0.661	20.9	LOS B	4.2	30.8	0.73	0.63	37.6
West: Birnie Avenue (W)											
10	L	165	5.0	0.497	18.2	LOS B	3.8	27.5	0.68	0.80	40.6
11	T	64	5.0	0.497	9.9	LOS A	3.8	27.5	0.68	0.56	42.9
12	R	544	5.0	0.615	30.4	LOS C	8.3	60.5	0.84	0.81	32.8
Approach		774	5.0	0.615	26.1	LOS B	8.3	60.5	0.79	0.79	34.9
All Vehicles		3114	5.0	0.962	37.8	LOS C	61.3	447.7	0.89	0.97	29.7

PHASING SUMMARY

Site: I-06 FU DSP2 PM

Carter Street Precinct

I-06 Edwin Flack Avenue / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Signals - Fixed Time Cycle Time = 77 seconds (Optimum Cycle Time - Minimum Delay)

Phase times determined by the program

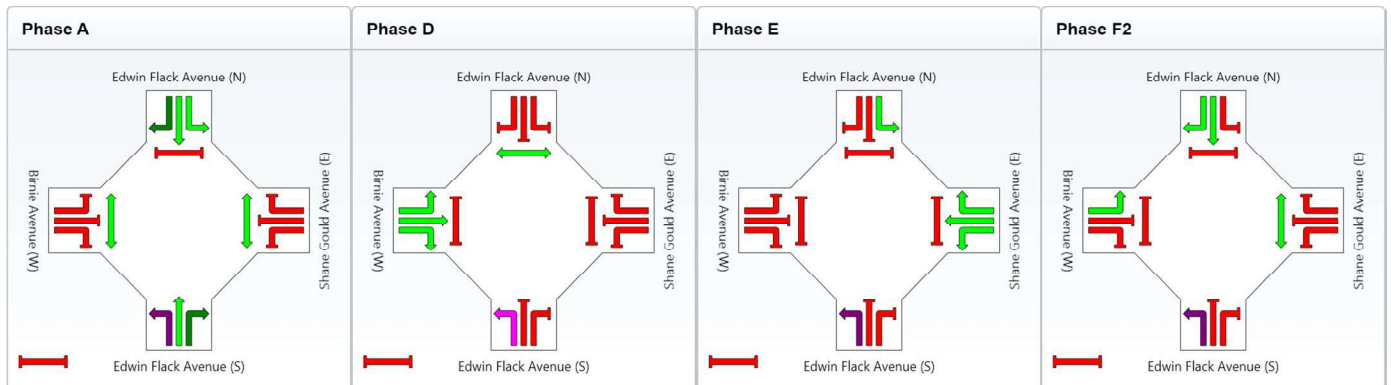
Sequence: TCS4402 PM

Input Sequence: A, D, E, F2

Output Sequence: A, D, E, F2

Phase Timing Results

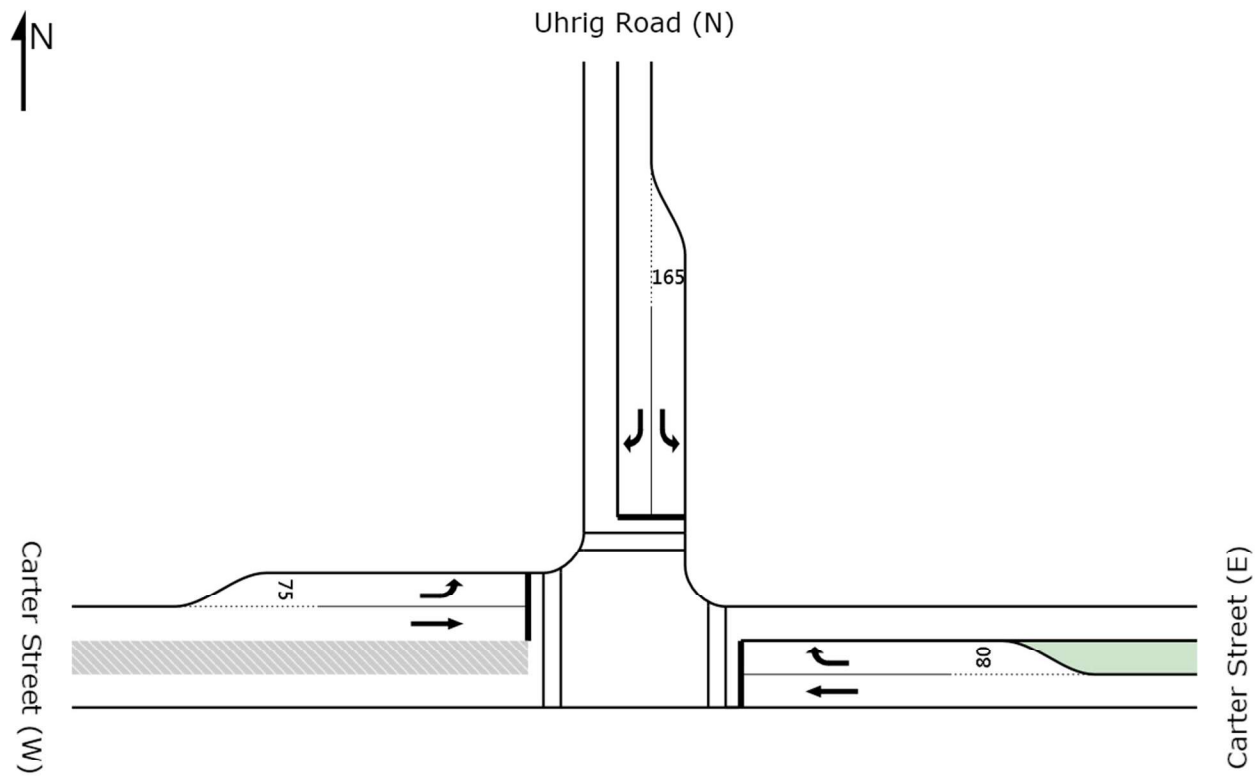
Phase	A	D	E	F2
Green Time (sec)	22	19	6	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	28	25	12	12
Phase Split	36 %	32 %	16 %	16 %



█	Normal Movement	█	Permitted/Opposed
█	Slip-Lane Movement	█	Opposed Slip-Lane
█	Stopped Movement	█	Continuous Movement
█	Turn On Red	█	Undetected Movement
●		●	Phase Transition Applied

I-07 Carter Street / Uhrig Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-07 FU DSP2 AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM
Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	683	5.0	0.666	8.6	LOS A	12.5	91.3	0.57	0.52	46.4
6	R	131	5.0	0.366	21.5	LOS B	2.2	15.9	0.78	0.77	37.8
Approach		814	5.0	0.666	10.7	LOS A	12.5	91.3	0.61	0.56	44.8
North: Uhrig Road (N)											
7	L	557	5.0	0.659	20.8	LOS B	12.2	89.0	0.68	0.82	38.2
9	R	334	5.0	0.651	32.9	LOS C	9.7	70.8	0.88	0.83	31.5
Approach		891	5.0	0.659	25.3	LOS B	12.2	89.0	0.75	0.82	35.4
West: Carter Street (W)											
10	L	340	5.0	0.376	11.8	LOS A	3.9	28.2	0.36	0.74	45.5
11	T	452	5.0	0.669	20.8	LOS B	13.3	96.8	0.90	0.78	36.1
Approach		792	5.0	0.669	16.9	LOS B	13.3	96.8	0.67	0.76	39.6
All Vehicles		2496	5.0	0.669	17.9	LOS B	13.3	96.8	0.68	0.72	39.4

PHASING SUMMARY

Site: I-07 FU DSP2 AM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM
Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Phase times determined by the program

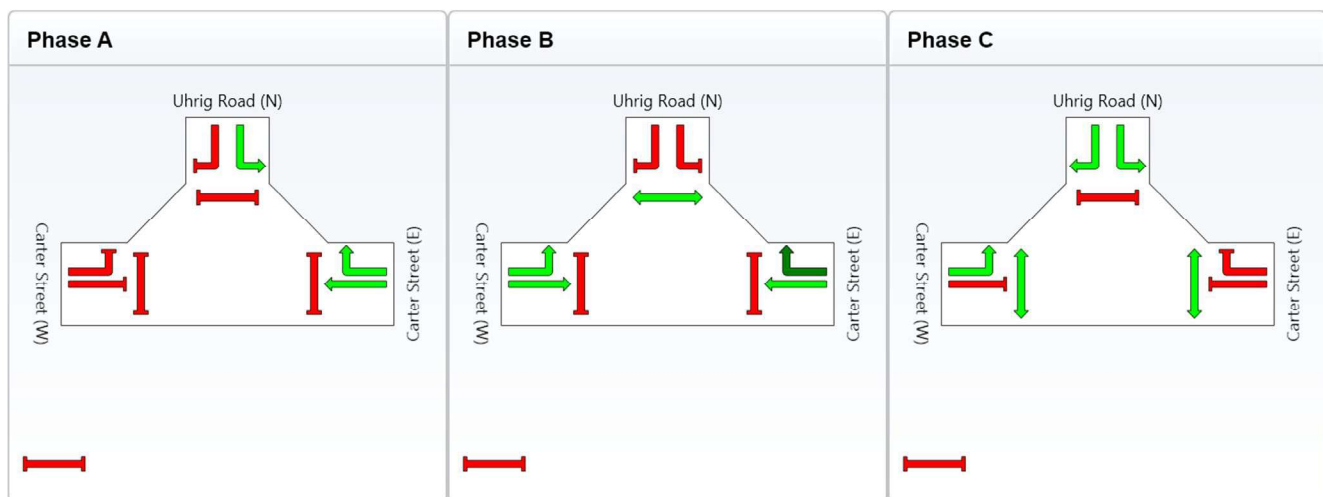
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

Phase	A	B	C
Green Time (sec)	7	25	20
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	13	31	26
Phase Split	19 %	44 %	37 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

MOVEMENT SUMMARY

Site: I-07 FU DSP2 PM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM
Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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
East: Carter Street (E)											
5	T	900	5.0	0.855	14.8	LOS B	25.7	187.7	0.76	0.79	40.5
6	R	262	5.0	0.632	21.4	LOS B	4.7	34.5	0.84	0.81	37.8
Approach		1162	5.0	0.855	16.3	LOS B	25.7	187.7	0.78	0.79	39.9
North: Uhrig Road (N)											
7	L	214	5.0	0.253	18.1	LOS B	3.2	23.6	0.47	0.75	40.2
9	R	415	5.0	0.852	40.9	LOS C	15.2	111.0	0.98	0.94	28.2
Approach		628	5.0	0.852	33.2	LOS C	15.2	111.0	0.81	0.88	31.4
West: Carter Street (W)											
10	L	188	5.0	0.213	11.8	LOS A	2.0	14.8	0.34	0.72	45.5
11	T	416	5.0	0.616	20.3	LOS B	11.9	86.9	0.88	0.76	36.5
Approach		604	5.0	0.616	17.6	LOS B	11.9	86.9	0.71	0.75	38.9
All Vehicles		2395	5.0	0.855	21.1	LOS B	25.7	187.7	0.77	0.80	37.0

PHASING SUMMARY

Site: I-07 FU DSP2 PM

Carter Street Precinct
I-07 Carter Street / Uhrig Road
2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM
Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Phase times determined by the program

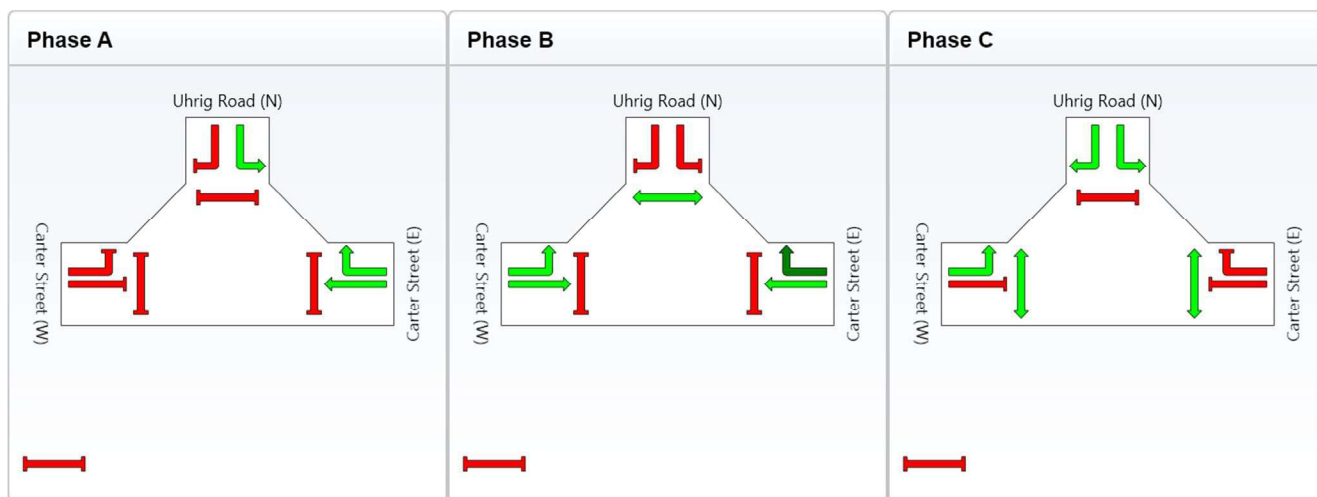
Sequence: Opposed Turns

Input Sequence: A, B, C

Output Sequence: A, B, C

Phase Timing Results

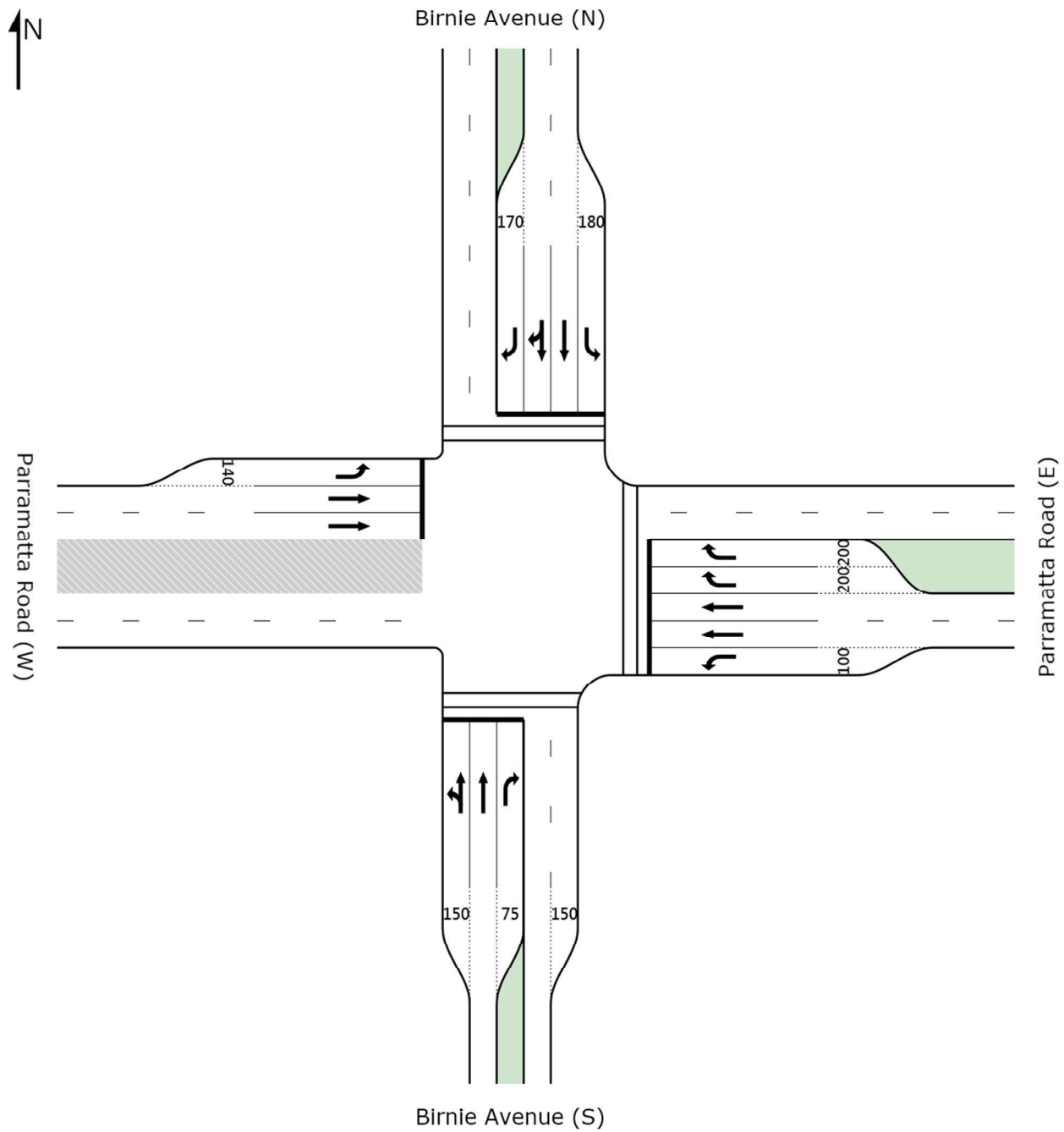
Phase	A	B	C
Green Time (sec)	8	25	19
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	14	31	25
Phase Split	20 %	44 %	36 %



█	Normal Movement	█	Permitted/Opposed
█	Slip-Lane Movement	█	Opposed Slip-Lane
█	Stopped Movement	█	Continuous Movement
█	Turn On Red	█	Undetected Movement
		●	Phase Transition Applied

I-08 Parramatta Road / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-08 FU DSP2 AM RT Ban

Carter Street Precinct

I-08 Parramatta Road / Birnie Avenue

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	20	5.0	0.909	95.6	LOS F	14.2	103.7	1.00	1.02	17.0
2	T	322	5.0	0.909	87.2	LOS F	14.3	104.3	1.00	1.02	17.1
3	R	120	5.0	0.697	61.2	LOS E	7.4	54.0	1.00	0.82	22.5
Approach		462	5.0	0.909	80.8	LOS F	14.3	104.3	1.00	0.97	18.3
East: Parramatta Road (E)											
4	L	285	5.0	0.209	9.7	LOS A	1.3	9.2	0.07	0.68	47.6
5	T	1921	6.0	0.783	8.3	LOS A	27.9	205.5	0.44	0.41	47.2
6	R	340	5.0	0.889	89.9	LOS F	13.6	99.1	1.00	0.93	17.4
Approach		2546	5.8	0.889	19.4	LOS B	27.9	205.5	0.48	0.51	38.4
North: Birnie Avenue (N)											
7	L	332	5.0	0.603	54.8	LOS D	18.9	138.3	0.84	0.83	23.9
8	T	317	5.0	0.889	72.5	LOS F	16.7	121.8	1.00	0.89	19.4
9	R	226	5.0	0.889	88.7	LOS F	16.0	117.1	1.00	0.93	17.5
Approach		875	5.0	0.889	70.0	LOS E	18.9	138.3	0.94	0.88	20.3
West: Parramatta Road (W)											
10	L	272	5.0	0.225	11.9	LOS A	2.5	18.1	0.14	0.70	45.3
11	T	1726	5.0	0.902	34.0	LOS C	56.7	413.7	0.90	0.88	29.7
Approach		1998	5.0	0.902	31.0	LOS C	56.7	413.7	0.80	0.86	31.1
All Vehicles		5881	5.3	0.909	35.7	LOS C	56.7	413.7	0.70	0.72	29.6

PHASING SUMMARY

Site: I-08 FU DSP2 AM RT Ban

Carter Street Precinct

I-08 Parramatta Road / Birnie Avenue

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

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

Phase times determined by the program

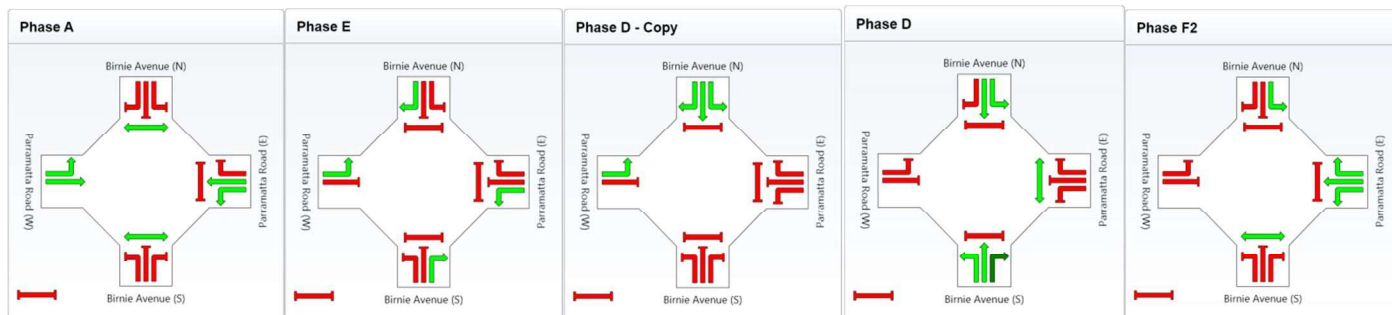
Sequence: TCS376 AM

Input Sequence: A, E, D - Copy, D, F2

Output Sequence: A, E, D - Copy, D, F2

Phase Timing Results

Phase	A	E	D - Copy	D	F2
Green Time (sec)	76	10	3	15	16
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	82	16	9	21	22
Phase Split	55 %	11 %	6 %	14 %	15 %



█	Normal Movement	█	Permitted/Opposed
█	Slip-Lane Movement	█	Opposed Slip-Lane
█	Stopped Movement	█	Continuous Movement
█	Turn On Red	█	Undetected Movement
●		●	Phase Transition Applied

MOVEMENT SUMMARY

Site: I-08 FU DSP2 PM RT Ban

Carter Street Precinct

I-08 Parramatta Road / Birnie Avenue

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	34	5.0	1.044	152.7	LOS F	18.3	133.5	1.00	1.23	11.7
2	T	305	5.0	1.044	144.3	LOS F	18.3	133.9	1.00	1.23	11.8
3	R	199	5.0	1.017	106.0	LOS F	16.8	122.3	1.00	1.10	15.4
Approach		538	5.0	1.044	130.6	LOS F	18.3	133.9	1.00	1.18	12.9
East: Parramatta Road (E)											
4	L	307	5.0	0.238	9.9	LOS A	1.4	10.3	0.07	0.68	47.3
5	T	2124	2.0	0.920	23.8	LOS B	64.3	457.5	0.83	0.82	34.6
6	R	438	5.0	1.077	172.1	LOS F	25.4	185.4	1.00	1.19	10.5
Approach		2869	2.8	1.077	44.9	LOS D	64.3	457.5	0.77	0.86	26.2
North: Birnie Avenue (N)											
7	L	465	5.0	0.762	50.9	LOS D	27.3	199.5	0.87	0.86	25.0
8	T	468	5.0	1.153	130.3	LOS F	36.8	268.3	1.00	1.24	12.8
9	R	481	5.0	1.153	162.3	LOS F	38.0	277.4	1.00	1.19	11.0
Approach		1415	5.0	1.153	115.1	LOS F	38.0	277.4	0.96	1.10	14.3
West: Parramatta Road (W)											
10	L	177	5.0	0.145	11.4	LOS A	1.4	9.9	0.11	0.69	45.9
11	T	1899	3.0	1.111	163.6	LOS F	123.0	883.4	1.00	1.54	10.7
Approach		2076	3.2	1.111	150.6	LOS F	123.0	883.4	0.92	1.47	11.5
All Vehicles		6898	3.5	1.153	97.8	LOS F	123.0	883.4	0.87	1.12	16.0

PHASING SUMMARY

Site: I-08 FU DSP2 PM RT Ban

Carter Street Precinct

I-08 Parramatta Road / Birnie Avenue

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Phase times determined by the program

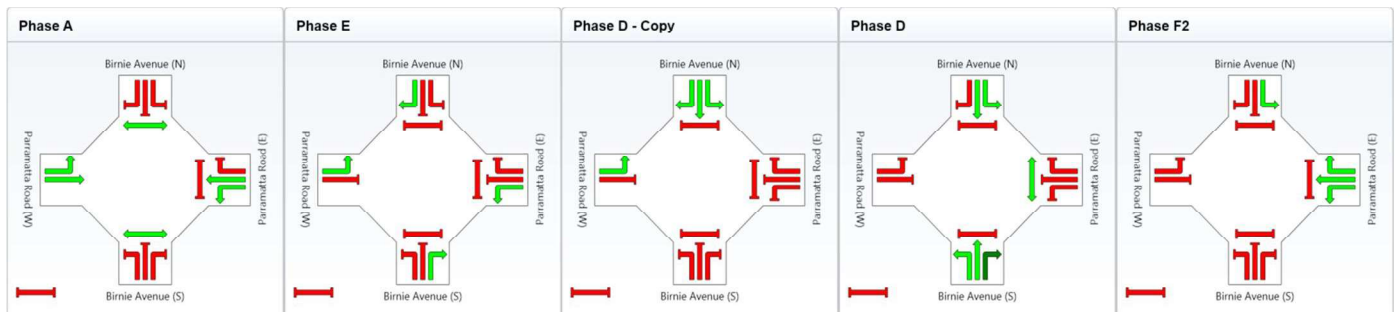
Sequence: TCS376 AM

Input Sequence: A, E, D - Copy, D, F2

Output Sequence: A, E, D - Copy, D, F2

Phase Timing Results

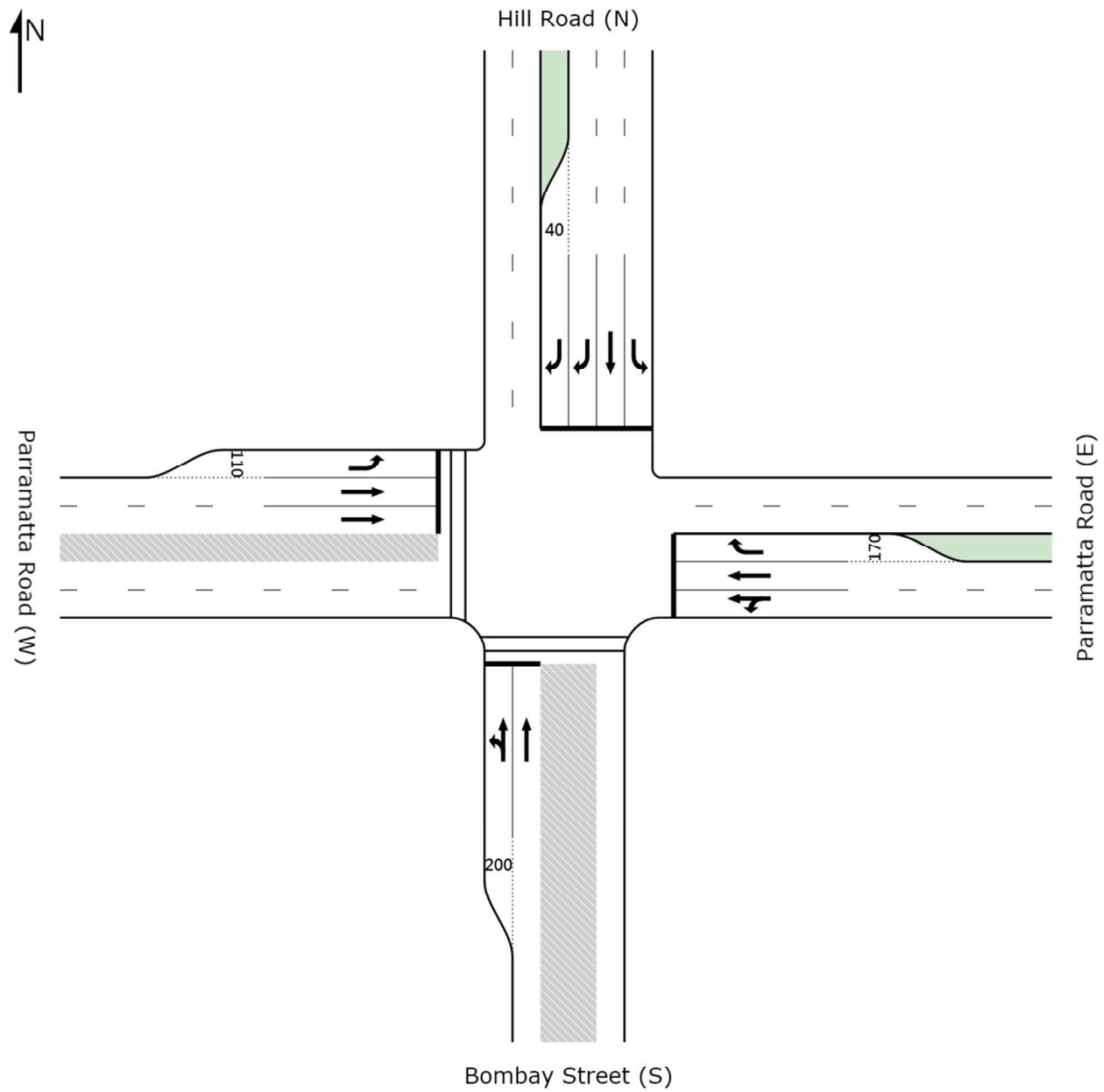
Phase	A	E	D - Copy	D	F2
Green Time (sec)	67	12	11	13	17
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	73	18	17	19	23
Phase Split	49 %	12 %	11 %	13 %	15 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

I-09 Parramatta Road / Hill Road Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-09 FU DSP2 AM RT Ban

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	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
							Vehicles veh	Distance m			
South: Bombay Street (S)											
1	L	17	5.0	1.003	125.3	LOS F	23.8	173.5	1.00	1.26	13.2
2	T	462	5.0	1.003	117.9	LOS F	23.8	174.1	1.00	1.26	13.2
Approach		479	5.0	1.003	118.2	LOS F	23.8	174.1	1.00	1.26	13.2
East: Parramatta Road (E)											
4	L	48	5.0	0.821	23.4	LOS B	39.2	290.6	0.66	1.00	37.4
5	T	1747	7.0	0.821	15.8	LOS B	39.3	291.3	0.66	0.62	39.9
6	R	333	5.0	1.098	131.9	LOS F	38.0	277.4	1.00	1.11	13.0
Approach		2128	6.6	1.098	34.2	LOS C	39.3	291.3	0.72	0.70	30.1
North: Hill Road (N)											
7	L	353	5.0	0.383	25.8	LOS B	10.8	79.0	0.46	0.76	35.2
8	T	619	5.0	0.983	86.7	LOS F	57.6	420.3	1.00	1.15	16.8
9	R	443	5.0	1.017	110.1	LOS F	30.6	223.5	0.99	0.99	14.9
Approach		1415	5.0	1.017	78.9	LOS F	57.6	420.3	0.86	1.00	18.5
West: Parramatta Road (W)											
10	L	454	5.0	0.485	14.7	LOS B	6.2	45.4	0.38	0.75	42.9
11	T	1520	6.0	0.996	83.3	LOS F	73.5	540.9	1.00	1.17	17.7
Approach		1974	5.8	0.996	67.5	LOS E	73.5	540.9	0.86	1.07	20.5
All Vehicles		5996	5.8	1.098	62.4	LOS E	73.5	540.9	0.82	0.94	21.4

PHASING SUMMARY

Site: I-09 FU DSP2 AM RT Ban

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

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

Phase times determined by the program

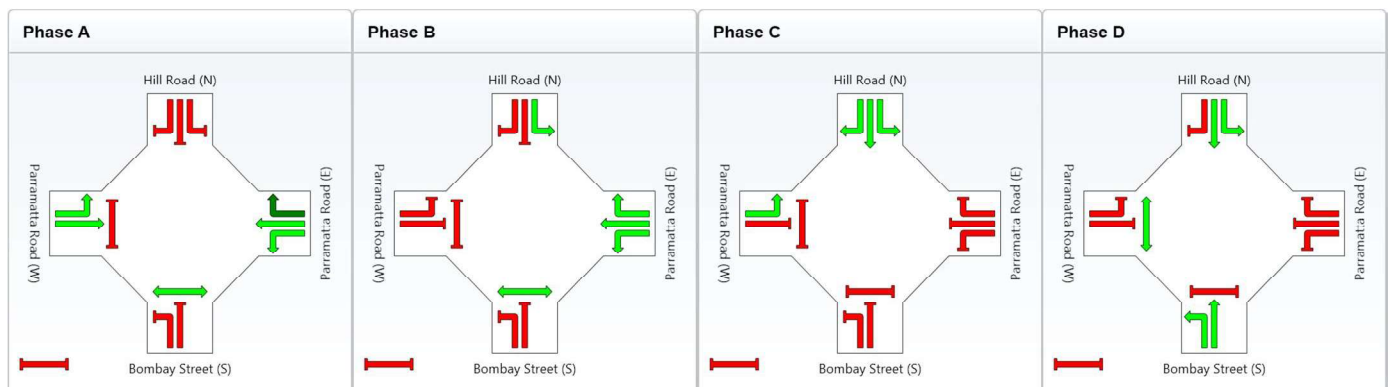
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	61	21	25	19
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	67	27	31	25
Phase Split	45 %	18 %	21 %	17 %



█ Normal Movement	█ Permitted/Opposed
█ Slip-Lane Movement	█ Opposed Slip-Lane
█ Stopped Movement	█ Continuous Movement
█ Turn On Red	█ Undetected Movement
	● Phase Transition Applied

MOVEMENT SUMMARY

Site: I-09 FU DSP2 PM RT Ban

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Bombay Street (S)											
1	L	25	5.0	1.104	195.6	LOS F	40.4	294.9	1.00	1.57	9.2
2	T	613	5.0	1.104	188.2	LOS F	40.6	296.0	1.00	1.57	9.3
Approach		638	5.0	1.104	188.5	LOS F	40.6	296.0	1.00	1.57	9.3
East: Parramatta Road (E)											
4	L	104	5.0	1.021	85.2	LOS F	112.4	833.0	1.00	1.21	17.9
5	T	2075	7.0	1.021	77.6	LOS F	112.8	837.0	1.00	1.22	18.5
6	R	321	5.0	1.057	100.2	LOS F	32.9	240.2	1.00	1.05	16.0
Approach		2500	6.7	1.057	80.8	LOS F	112.8	837.0	1.00	1.20	18.1
North: Hill Road (N)											
7	L	383	5.0	0.406	24.7	LOS B	11.4	83.6	0.45	0.76	35.8
8	T	486	5.0	0.743	44.8	LOS D	28.9	210.9	0.88	0.79	25.5
9	R	446	5.0	1.128	169.9	LOS F	40.7	297.2	0.99	1.12	10.6
Approach		1316	5.0	1.128	81.3	LOS F	40.7	297.2	0.79	0.90	18.2
West: Parramatta Road (W)											
10	L	414	5.0	0.469	15.8	LOS B	6.0	44.0	0.42	0.75	41.9
11	T	1600	6.0	1.084	147.3	LOS F	97.2	715.0	1.00	1.45	11.7
Approach		2014	5.8	1.084	120.3	LOS F	97.2	715.0	0.88	1.31	13.7
All Vehicles		6467	5.9	1.128	103.8	LOS F	112.8	837.0	0.92	1.21	15.2

PHASING SUMMARY

Site: I-09 FU DSP2 PM RT Ban

Carter Street Precinct

I-09 Parramatta Road / Hill Road

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Phase times determined by the program

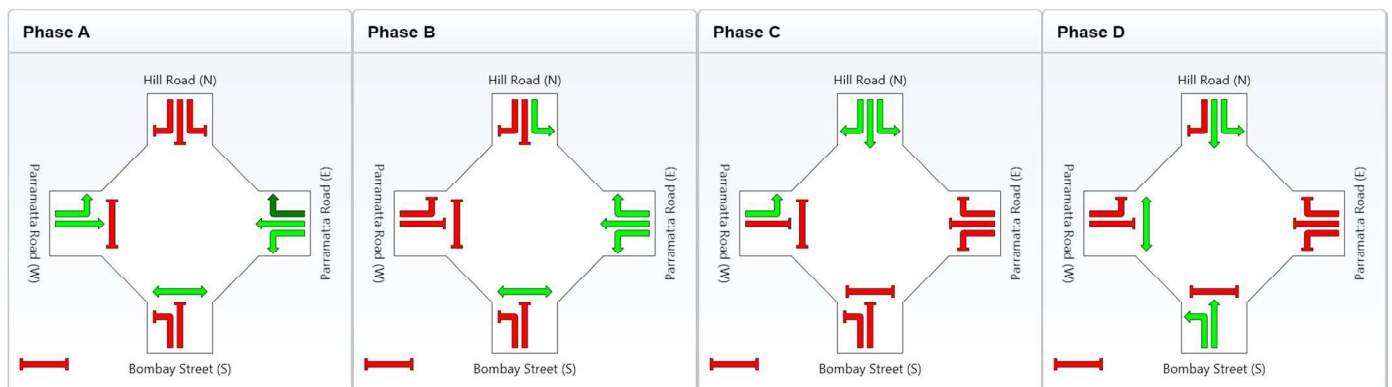
Sequence: TCS880 AM

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

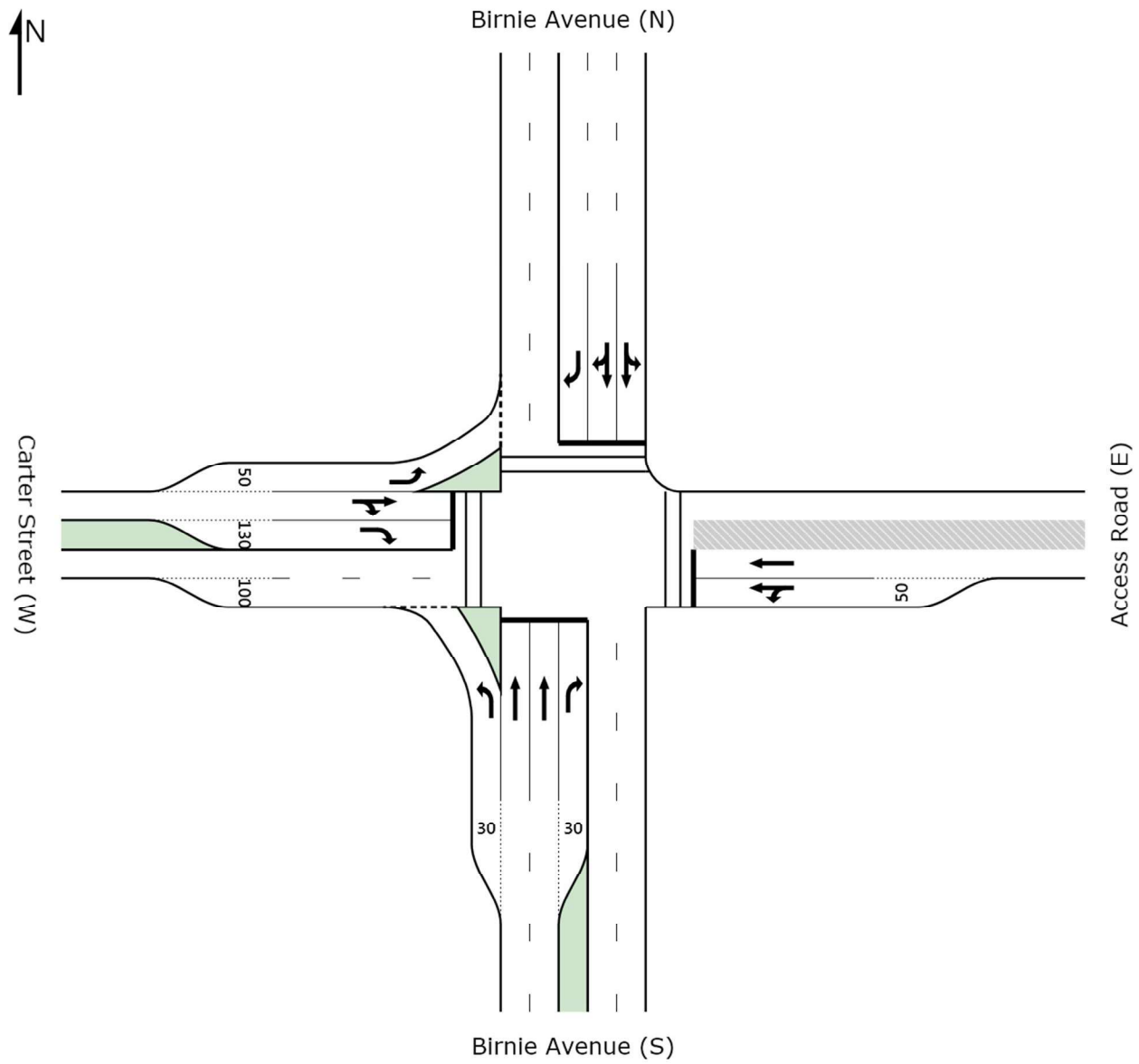
Phase	A	B	C	D
Green Time (sec)	59	21	23	23
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	65	27	29	29
Phase Split	43 %	18 %	19 %	19 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

I-10 Carter Street / Birnie Avenue Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-10 FU DSP2 AM RT Ban

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 75 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	326	5.0	0.332	8.3	LOS A	0.7	5.3	0.08	0.62	49.0
2	T	643	5.0	0.751	31.7	LOS C	11.4	83.3	0.96	0.86	30.6
3	R	14	5.0	0.068	33.8	LOS C	0.4	2.7	0.73	0.70	31.1
Approach		983	5.0	0.751	24.0	LOS B	11.4	83.3	0.66	0.78	35.0
East: Access Road (E)											
4	L	47	5.0	0.347	46.3	LOS D	1.9	13.6	0.98	0.74	26.5
5	T	92	5.0	0.589	39.1	LOS C	3.4	25.1	1.00	0.79	27.6
Approach		139	5.0	0.589	41.6	LOS C	3.4	25.1	0.99	0.77	27.2
North: Birnie Avenue (N)											
7	L	4	5.0	0.552	21.8	LOS B	10.3	75.4	0.64	0.96	39.5
8	T	468	5.0	0.552	13.5	LOS A	10.3	75.4	0.64	0.56	41.9
9	R	306	5.0	0.744	43.4	LOS D	7.4	53.8	0.97	0.84	27.4
Approach		779	5.0	0.744	25.3	LOS B	10.3	75.4	0.77	0.67	34.7
West: Carter Street (W)											
10	L	292	5.0	0.362	10.8	LOS A	3.2	23.4	0.39	0.69	46.4
11	T	44	5.0	0.775	32.8	LOS C	12.2	89.3	0.99	0.92	28.7
12	R	594	5.0	0.775	41.2	LOS C	12.2	89.3	0.99	0.92	28.3
Approach		929	5.0	0.775	31.2	LOS C	12.2	89.3	0.80	0.85	32.3
All Vehicles		2831	5.0	0.775	27.6	LOS B	12.2	89.3	0.75	0.77	33.5

PHASING SUMMARY

Site: I-10 FU DSP2 AM RT Ban

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 75 seconds (User-Given Cycle Time)

Phase times determined by the program

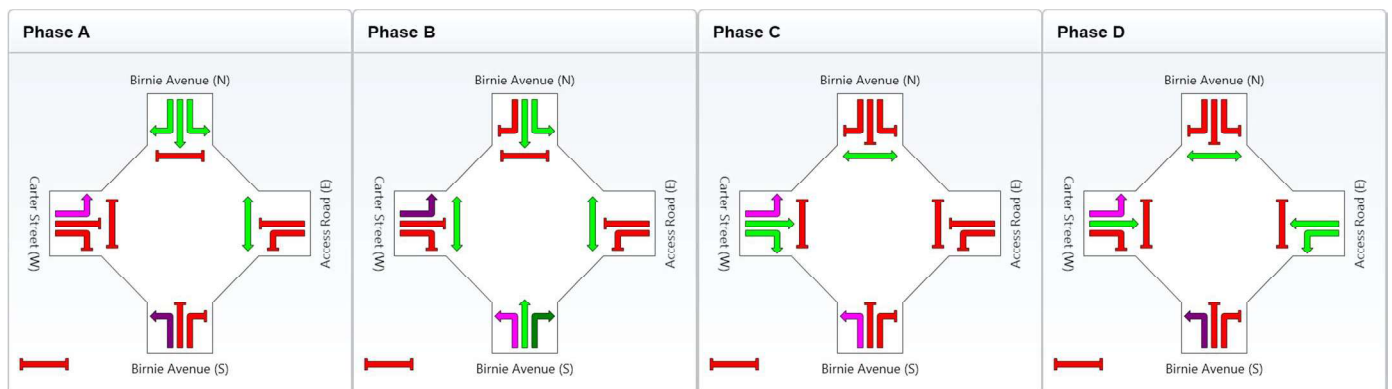
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

Phase	A	B	C	D
Green Time (sec)	11	17	17	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	17	23	23	12
Phase Split	23 %	31 %	31 %	16 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

MOVEMENT SUMMARY

Site: I-10 FU DSP2 PM RT Ban

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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: Birnie Avenue (S)											
1	L	338	5.0	0.639	11.6	LOS A	2.5	18.2	0.20	0.66	45.8
2	T	554	5.0	0.687	58.8	LOS E	18.1	132.1	0.95	0.80	22.2
3	R	40	5.0	0.424	66.3	LOS E	2.5	18.3	0.84	0.78	21.2
Approach		932	5.0	0.687	42.0	LOS C	18.1	132.1	0.67	0.75	27.3
East: Access Road (E)											
4	L	19	5.0	0.382	89.2	LOS F	2.1	15.5	1.00	0.72	17.6
5	T	58	5.0	0.649	82.4	LOS F	3.8	27.9	1.00	0.77	17.8
Approach		77	5.0	0.649	84.1	LOS F	3.8	27.9	1.00	0.76	17.7
North: Birnie Avenue (N)											
7	L	12	5.0	0.690	16.4	LOS B	20.5	149.5	0.37	1.03	42.8
8	T	893	5.0	0.690	9.6	LOS A	20.5	149.5	0.39	0.36	46.0
9	R	704	5.0	0.690	42.8	LOS D	26.2	191.5	0.75	0.83	27.7
Approach		1608	5.0	0.690	24.1	LOS B	26.2	191.5	0.55	0.57	35.7
West: Carter Street (W)											
10	L	203	5.0	0.244	10.7	LOS A	3.2	23.2	0.26	0.66	46.5
11	T	36	5.0	0.666	60.1	LOS E	16.0	117.1	0.98	0.82	21.1
12	R	431	5.0	0.666	68.6	LOS E	16.0	117.1	0.98	0.84	20.9
Approach		669	5.0	0.666	50.6	LOS D	16.0	117.1	0.76	0.78	25.2
All Vehicles		3286	5.0	0.690	36.0	LOS C	26.2	191.5	0.64	0.67	29.8

PHASING SUMMARY

Site: I-10 FU DSP2 PM RT Ban

Carter Street Precinct

I-10 Carter Street / Birnie Avenue - Proposed upgrade

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

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

Phase times determined by the program

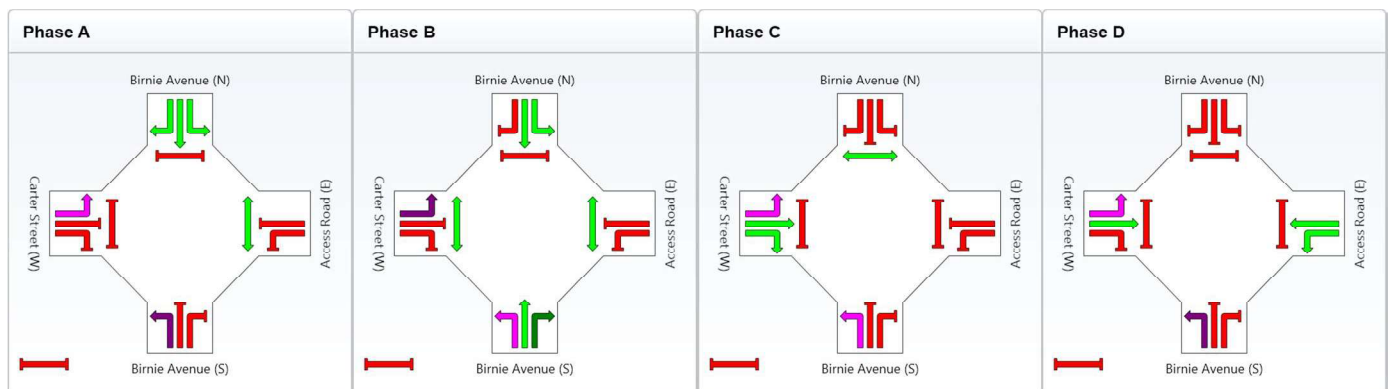
Sequence: Opposed Turns

Input Sequence: A, B, C, D

Output Sequence: A, B, C, D

Phase Timing Results

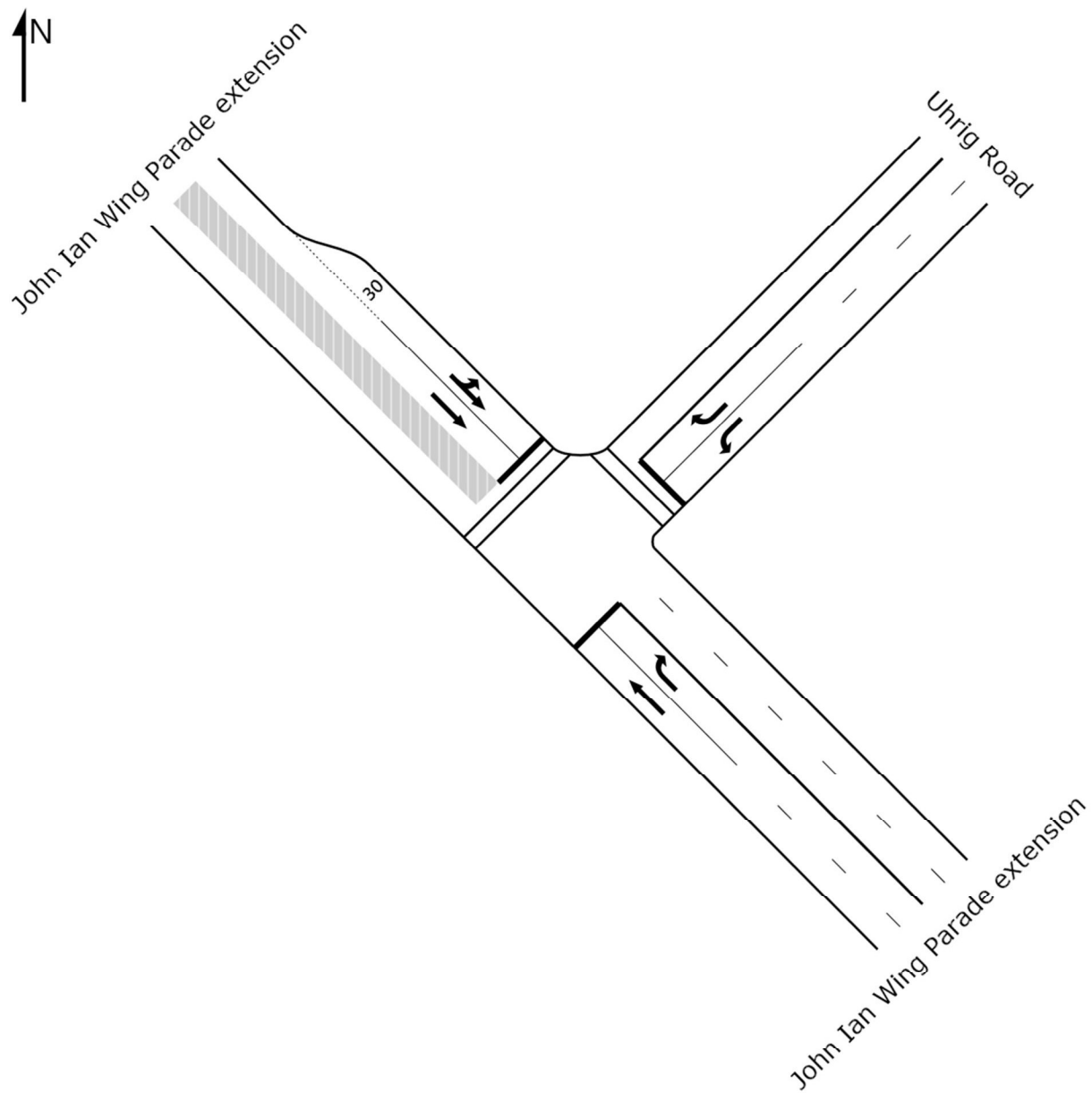
Phase	A	B	C	D
Green Time (sec)	59	32	29	6
Yellow Time (sec)	4	4	4	4
All-Red Time (sec)	2	2	2	2
Phase Time (sec)	65	38	35	12
Phase Split	43 %	25 %	23 %	8 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

I-12 Uhrig Road and John Ian Wing Parade extension Intersection

PROPOSED INTERSECTION LAYOUT



MOVEMENT SUMMARY

Site: I-12 FU DSP2 AM

Carter Street Precinct

I-10 Uhrig Road / Access Road - New Intersection

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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 East: John Ian Wing Parade extension											
22	T	32	5.0	0.026	4.8	LOS A	0.4	2.8	0.38	0.28	51.3
23	R	471	5.0	0.967	66.0	LOS E	24.6	179.4	1.00	1.17	21.3
Approach		502	5.0	0.967	62.2	LOS E	24.6	179.4	0.96	1.11	22.1
North East: Uhrig Road											
24	L	256	5.0	0.263	17.5	LOS B	4.7	34.0	0.57	0.77	40.6
26	R	38	5.0	0.114	34.7	LOS C	1.1	8.1	0.86	0.73	30.7
Approach		294	5.0	0.263	19.8	LOS B	4.7	34.0	0.61	0.77	39.0
North West: John Ian Wing Parade extension											
27	L	55	5.0	0.962	34.6	LOS C	6.7	49.0	0.92	0.85	32.1
28	T	691	5.0	0.962	47.8	LOS D	26.6	194.0	0.98	1.17	24.8
Approach		745	5.0	0.962	46.9	LOS D	26.6	194.0	0.98	1.15	25.2
All Vehicles		1541	5.0	0.967	46.7	LOS D	26.6	194.0	0.90	1.06	25.8

PHASING SUMMARY

Site: I-12 FU DSP2 AM

Carter Street Precinct

I-10 Uhrig Road / Access Road - New Intersection

2031 Draft Structure Plan V4 111,000 sq.m GFA employment AM

Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Phase times determined by the program

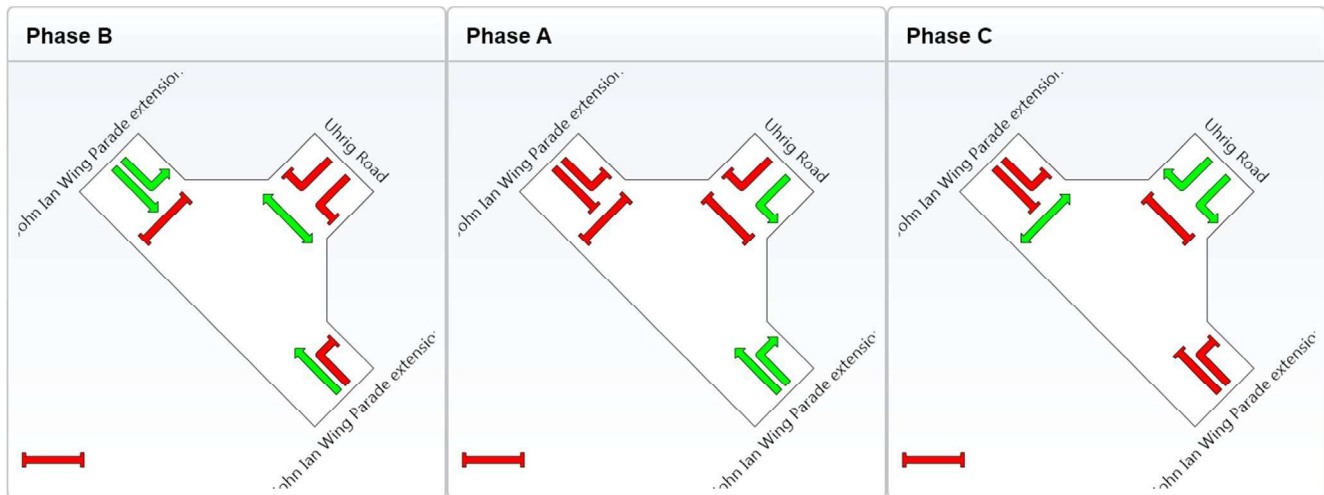
Sequence: Two-Phase

Input Sequence: B, A, C

Output Sequence: B, A, C

Phase Timing Results

Phase	B	A	C
Green Time (sec)	20	19	13
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	26	25	19
Phase Split	37 %	36 %	27 %



█ Normal Movement	█ Permitted/Opposed
█ Slip-Lane Movement	█ Opposed Slip-Lane
█ Stopped Movement	█ Continuous Movement
█ Turn On Red	█ Undetected Movement
	● Phase Transition Applied

MOVEMENT SUMMARY

Site: I-12 FU DSP2 PM

Carter Street Precinct

I-10 Uhrig Road / Access Road - New Intersection

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow 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 East: John Ian Wing Parade extension											
22	T	107	5.0	0.088	5.0	LOS A	1.4	10.0	0.40	0.32	51.0
23	R	347	5.0	0.522	27.1	LOS B	9.4	68.6	0.83	0.83	34.4
Approach		455	5.0	0.522	21.9	LOS B	9.4	68.6	0.73	0.71	37.3
North East: Uhrig Road											
24	L	807	5.0	0.700	17.1	LOS B	17.9	131.0	0.70	0.84	40.9
26	R	18	5.0	0.054	34.3	LOS C	0.5	3.7	0.85	0.70	30.9
Approach		825	5.0	0.700	17.5	LOS B	17.9	131.0	0.71	0.84	40.6
North West: John Ian Wing Parade extension											
27	L	39	5.0	0.275	35.0	LOS C	1.7	12.3	0.88	0.75	31.1
28	T	115	5.0	0.275	27.1	LOS B	2.9	21.4	0.89	0.70	32.5
Approach		154	5.0	0.275	29.1	LOS C	2.9	21.4	0.89	0.71	32.2
All Vehicles		1434	5.0	0.700	20.1	LOS B	17.9	131.0	0.73	0.78	38.4

PHASING SUMMARY

Site: I-12 FU DSP2 PM

Carter Street Precinct

I-10 Uhrig Road / Access Road - New Intersection

2031 Draft Structure Plan V4 111,000 sq.m GFA employment PM

Signals - Fixed Time Cycle Time = 70 seconds (User-Given Cycle Time)

Phase times determined by the program

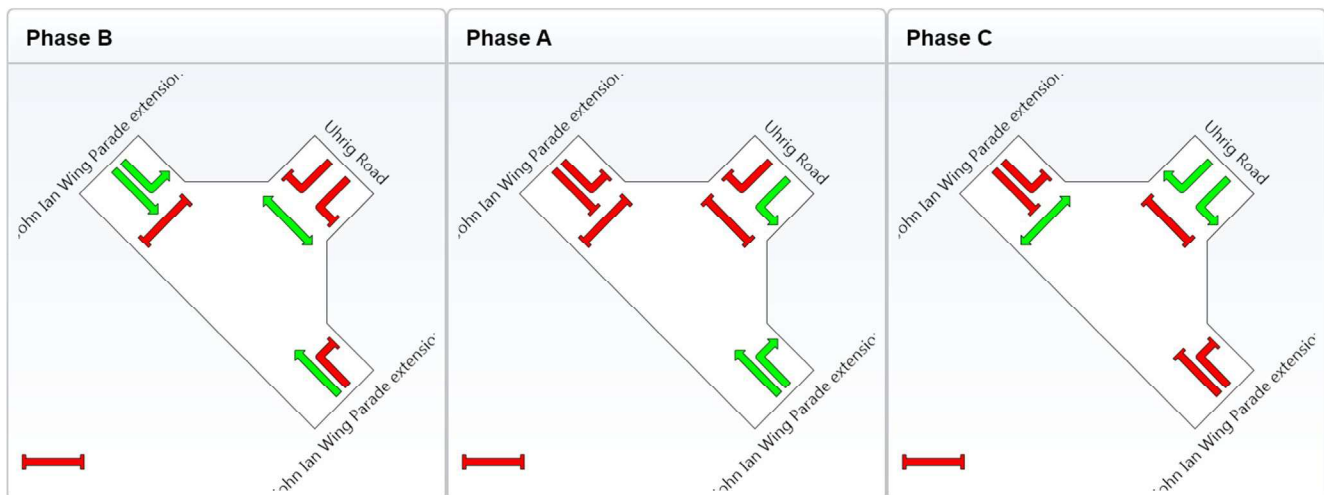
Sequence: Two-Phase

Input Sequence: B, A, C

Output Sequence: B, A, C

Phase Timing Results

Phase	B	A	C
Green Time (sec)	13	26	13
Yellow Time (sec)	4	4	4
All-Red Time (sec)	2	2	2
Phase Time (sec)	19	32	19
Phase Split	27 %	46 %	27 %



	Normal Movement		Permitted/Opposed
	Slip-Lane Movement		Opposed Slip-Lane
	Stopped Movement		Continuous Movement
	Turn On Red		Undetected Movement
			Phase Transition Applied

