Craigieburn Employment Precinct North and English Street

METROPOLITAN PLANNING AUTHORITY

Intersection Analyses

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SKM

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Document history and status

Revision	Date	Description	By	Review	Approved
A	14 Nov 13	Initial turning volumes and SIDRA analyses (12 sites)	TE	CM	CM
B	4 Dec 13	Updated intersection layouts and SIDRA analyses (13 sites)	TE	CM	CM
C	31 Jan 14	Report of analyses with updated 2026 turning volumes (13 sites)	TE	CM	CM
D	7 Feb 14	Change in intersection identifiers and removal of intersection 9	TE	CM	CM

Contents

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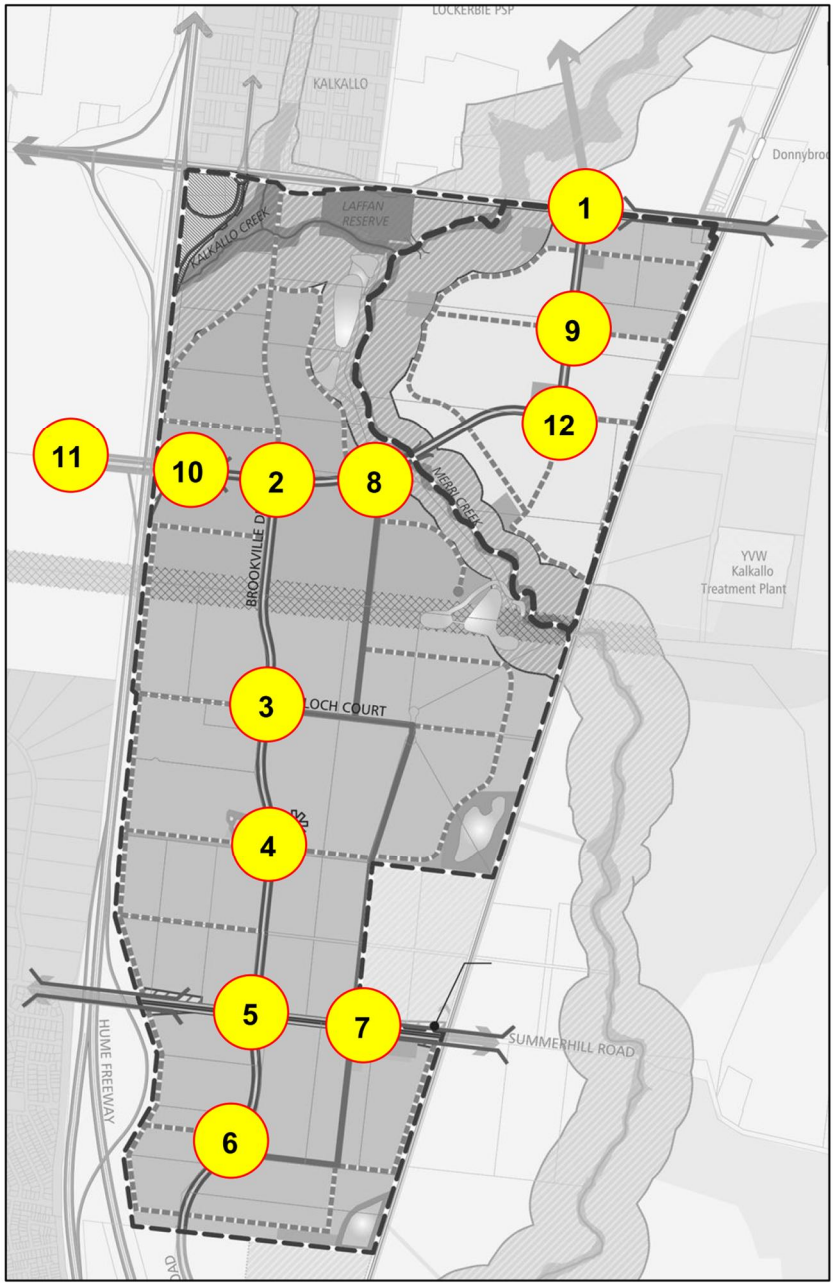
1. Introduction

This report accompanies the main strategic modelling report[1] for Precinct Structure Plan (PSP) 25, which incorporates the Craigieburn Employment Area North and English Street areas.

The purpose of the report is to advise on potential intersection capacity requirements at key intersections within PSP 25.

The intersections assessed in this report are shown in Figure 1.1 below. Each intersection is identified by a number (1 to 12) which is referred to in the tables and diagrams throughout the report.

Figure 1.1 : Modelled intersections in Craigieburn North Employment Precinct and English Street (PSP 25)



[1] Sinclair Knight Merz (2014), *Strategic Traffic Modelling – Craigieburn PSP25*, Final report for the Metropolitan Planning Authority.

Two forecast years were assessed: an interim year of 2026 and an ultimate year of 2046. The road networks assumed in each of these scenarios are described in the main strategic modelling report (Scenario 1B)[1]. Note that intersections 7, 8, 10 and 11 are assumed to be operational only in the 2046 scenario.

The report is structured as follows:

- Chapter 2 summarises the assumed turning volumes at each intersection for 2026 and 2046.
- Chapter 3 summarises the intersection layouts and level of service under assumed 2026 traffic conditions.
- Chapter 4 summarises the updated intersection layouts and level of service under assumed 2046 traffic conditions.

2. Turning volumes

This chapter summarises the future turning volumes assumed in the analysis of future intersection requirements.

2.1 Assumptions

As part of the road network planning study for PSP25, the Northern Growth Corridor transport model[2] was used to forecast traffic volumes in the area for 2026 and 2046. The raw volumes obtained from the model were generally reasonable on arterial roads, such as Brookville Drive and Donnybrook Road, but were less reliable on local streets.

At several intersections, this resulted in the following issues:

- some turning movements occasionally had zero flows on the minor approaches of intersections serving local developments;
- unbalanced turning flows occurred at adjacent intersections (e.g. heavy right turns at intersection 5 and very low right turning volumes at nearby intersection 7).

These issues were dealt with using the following process:

- **Intersections 5 and 7**: Turning flows from the north were unbalanced, with high volumes turning right from intersection 5 and left from intersection 7. Turning volumes were proportionally redistributed at the two intersections according to the total approach volume on the northern leg of the intersection. The east-west flows were also adjusted to account for the redistribution of traffic.
- **Intersections 9 and 12**: In the English Street area, the model routed traffic flow from the area onto a small number of collector roads, leaving other local streets without any traffic at all. In these cases, traffic was redistributed evenly between the available road connections, resolving the zero-flow issues on minor-leg approaches at these intersections.
- **Other zero-flow movements:** At some other minor intersections, local-street approaches were occasionally modelled with zero-flow turning volumes. In these cases, the turning flows were set to an appropriate minimum flow, which we have judged to be 10 vehicles per hour per movement, resulting in a minimum approach volume of 30 vehicles per hour.

All flows were adjusted systematically; no ad-hoc adjustments were made. Where possible, total traffic flows were maintained in the road network, so that a reduction of flow at one intersection was balanced by an increase at an adjacent intersection.

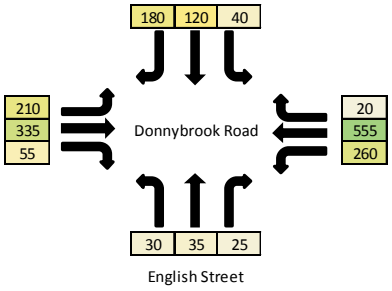
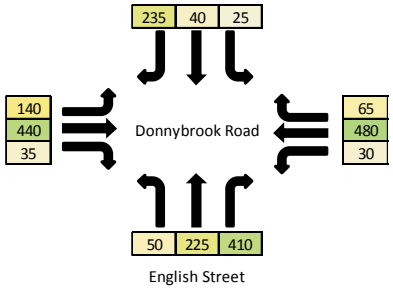
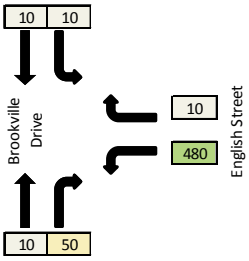
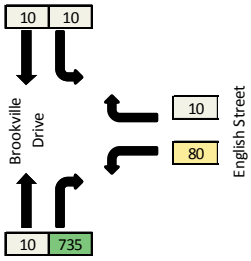
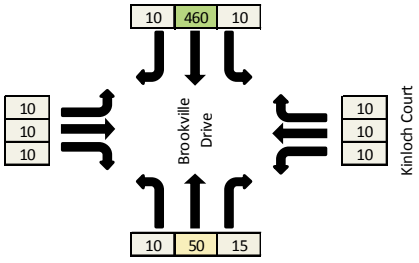
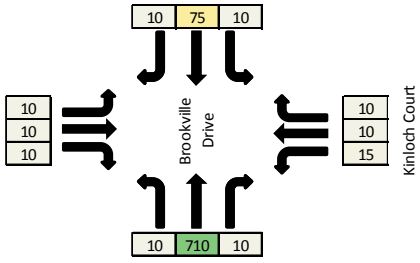
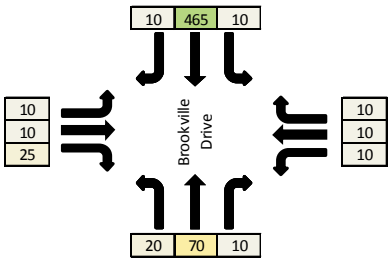
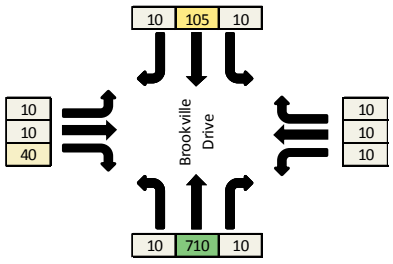
2.2 Turning volume summaries

The following diagrams summarise the adjusted turning movements for the AM and PM peak periods for the years 2026 and 2046. The results are expressed as hourly volumes to provide for ease of comparison, and have been rounded to the nearest multiple of five vehicles.

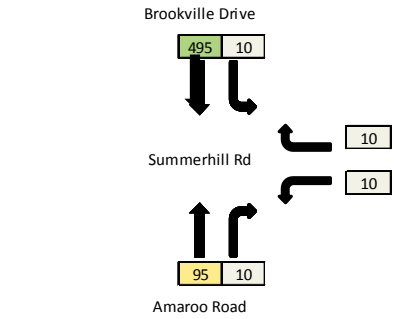
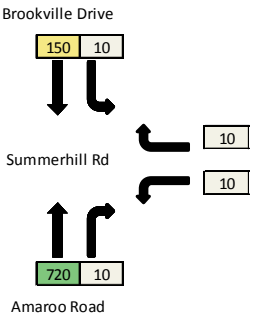
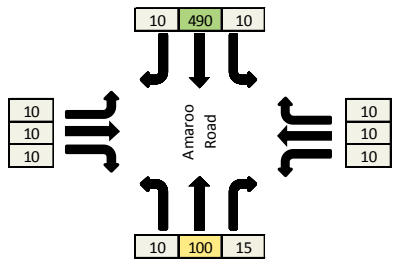
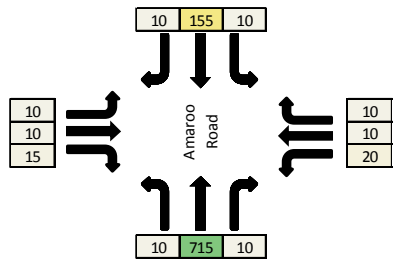
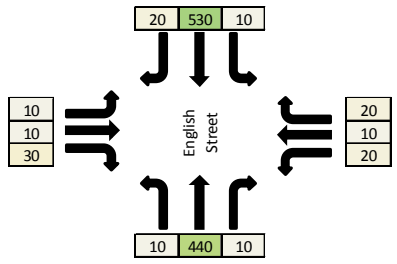
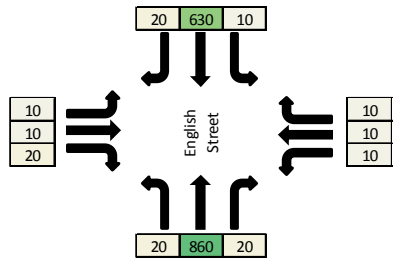
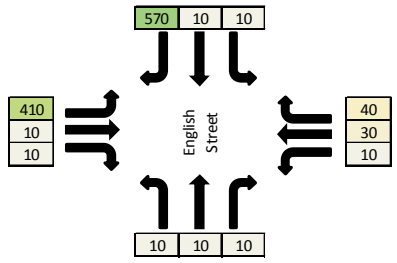
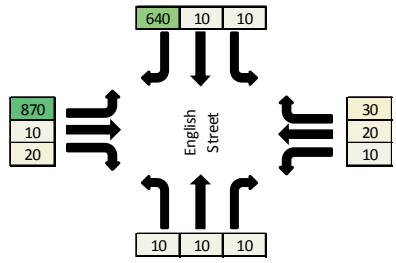
Volumes in 2046 are generally lower along Brookville Drive than in 2026 due to the access provided to the Hume Freeway by the extension of English Street and the provision of new on and off ramps. This is observed for all traffic travelling inbound in the morning peak and outbound in the afternoon peak, with decreases observed along Brookville Drive for southbound traffic in the AM peak and northbound traffic in the PM peak.

[2] The Northern Growth Corridor model is a variant of the Victorian Government's Victorian Integrated Transport Model (VITM). Its use for this study is described further in Sinclair Knight Merz (2014), *Strategic Traffic Modelling – Craigieburn PSP25*, Final report for the Metropolitan Planning Authority.

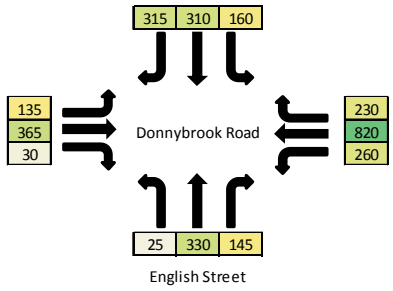
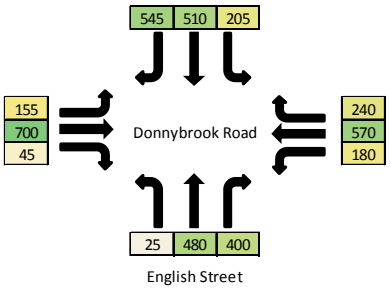
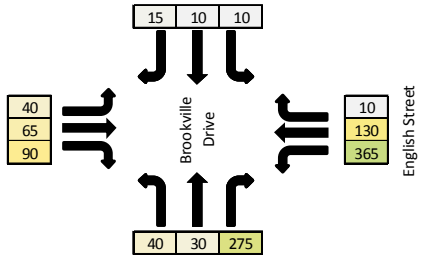
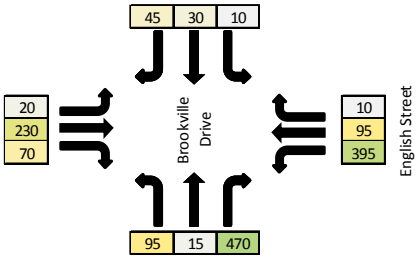
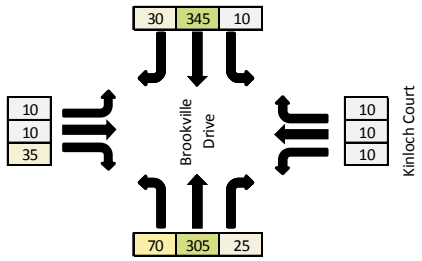
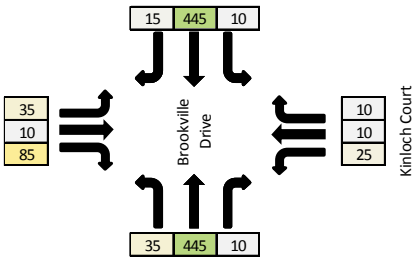
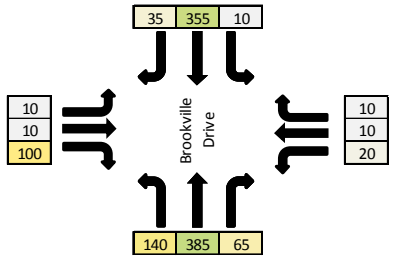
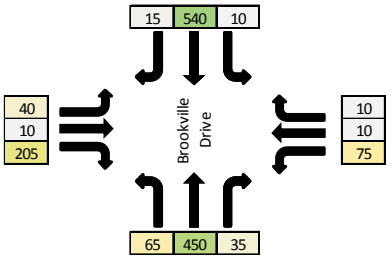
2.2.1 2026 turning volumes

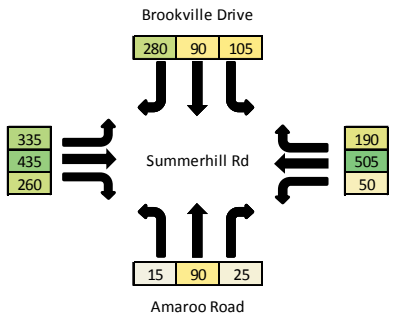
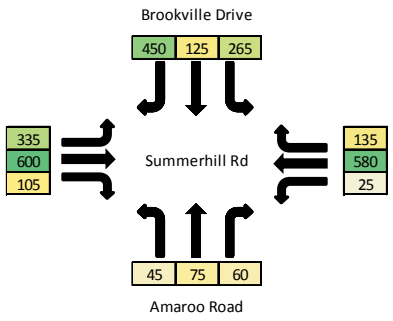
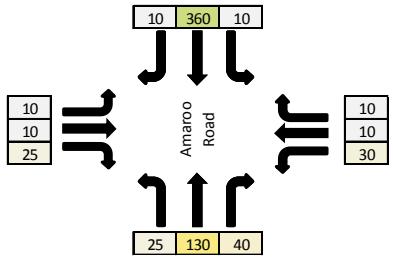
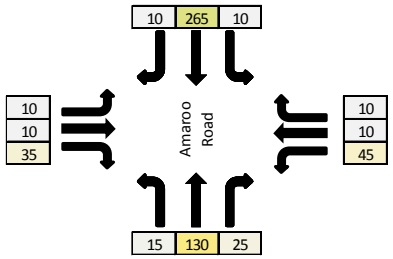
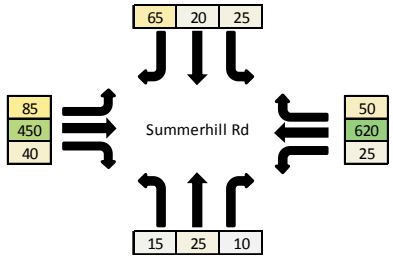
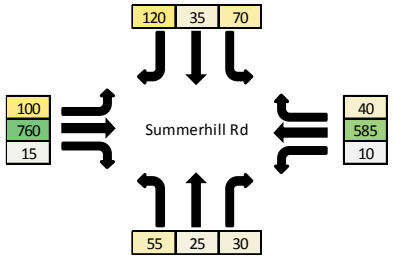
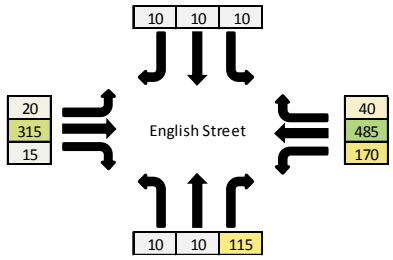
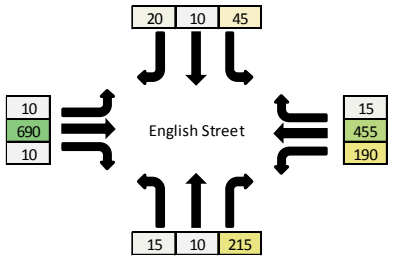
2026 HOURLY TURNING MOVEMENT VOLUMES		
Intersection	AM PEAK (7-9am) HOURLY TURNING MOVEMENT VOLUMES	PM PEAK (3-6pm) HOURLY TURNING MOVEMENT VOLUMES
Intersection 1		
Intersection 2		
Intersection 3		
Intersection 4		

2026 HOURLY TURNING MOVEMENT VOLUMES

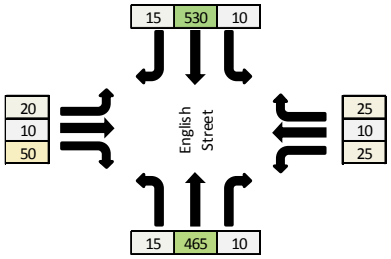
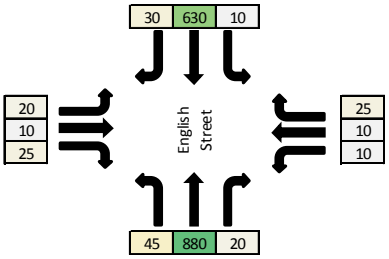
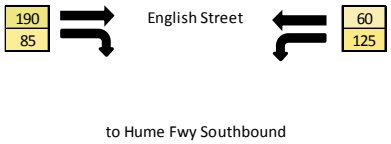
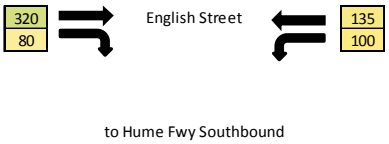
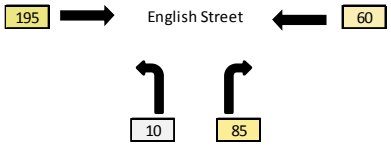
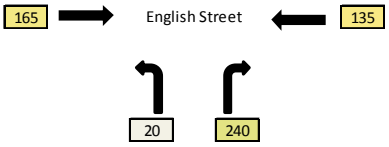
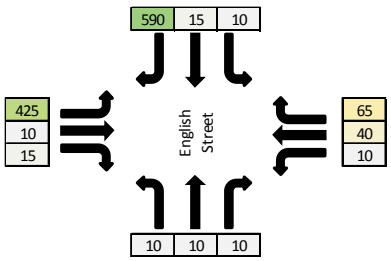
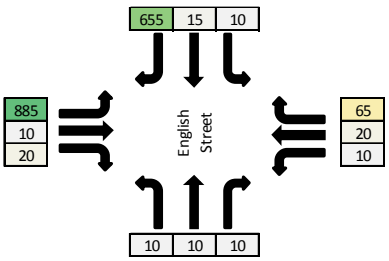
Intersection	AM PEAK (7-9am) HOURLY TURNING MOVEMENT VOLUMES	PM PEAK (3-6pm) HOURLY TURNING MOVEMENT VOLUMES
Intersection 5		
Intersection 6		
Intersection 9		
Intersection 12		

2.2.2 2046 turning volumes

2046 HOURLY TURNING MOVEMENT VOLUMES		
Intersection	AM PEAK (7-9am)	PM PEAK (3-6pm)
	HOURLY TURNING MOVEMENT VOLUMES	HOURLY TURNING MOVEMENT VOLUMES
Intersection 1		
Intersection 2		
Intersection 3		
Intersection 4		

2046 HOURLY TURNING MOVEMENT VOLUMES		
Intersection	AM PEAK (7-9am)	PM PEAK (3-6pm)
	HOURLY TURNING MOVEMENT VOLUMES	HOURLY TURNING MOVEMENT VOLUMES
Intersection 5		
Intersection 6		
Intersection 7		
Intersection 8		

2046 HOURLY TURNING MOVEMENT VOLUMES

Intersection	AM PEAK (7-9am) HOURLY TURNING MOVEMENT VOLUMES	PM PEAK (3-6pm) HOURLY TURNING MOVEMENT VOLUMES
Intersection 9		
Intersection 10		
Intersection 11		
Intersection 12		

3. SIDRA intersection analysis

This chapter proposes layouts and lane configurations for each of the intersections to accommodate the turning volumes listed in Chapter 2.

3.1 Intersection performance criteria

SIDRA Intersection analysis software was used to calculate the levels of service at each intersection and to help optimise the intersection layouts.

The criteria used to determine the configuration of lanes on each approach were as follows:

- degree of saturation generally less than 0.9 (i.e. volumes should be less than 90% of each movement's capacity);
- 95th percentile queue lengths generally less than 150 metres;
- effective stop rates less than 1.0 (i.e. each vehicle can proceed through the signals within a single signal cycle);
- intersection layout should generally conform with VicRoads design practice (for example, ensuring that the number of departure lanes match the number of approach lanes; using indented turning lanes on divided arterial roads).

In some cases, intersections having performance values slightly above the thresholds were deemed to be suitable, particularly where the addition of further lanes would result in significant excess capacity being provided.

Full SIDRA output summaries and intersection layouts are provided in Appendix A.

3.2 Summary of results

The following tables provide a summary of the performance parameters for each intersection with the layouts as shown in Appendix A.

Table 3.1 : Intersection performance parameters (2026 AM peak)

Intersection	LOS	Average Delay (sec/veh)	DOS	Highest DOS	95th %ile Queue (m)	Longest queue	Effective Stop Rate
1 - Donnybrook Road and English Street	B	18	0.41	East	78	East	0.67
2- Brookville Drive and English Street (West)	C	25	0.60	East	135	East	0.80
3 - Brookville Drive and Kinloch Court	A	9	0.38	North	21	North	0.52
4 - Brookville Drive and East-West Access Road	A	9	0.37	North	21	North	0.52
5 - Brookville Drive (Amaroo Road) and Summerhill Road	A	8	0.39	North	41	North	0.41
6 - Amaroo Road and East-West Connector Road	A	7	0.38	North	22	North	0.47
9 - English Street and East-West Access Road	A	10	0.42	North	73	North	0.43
12 - English Street and Norman Road	B	18	0.58	North	40	East	0.43

LOS = level of service DOS = degree of saturation

Table 3.2 : Intersection performance parameters (2026 PM peak)

Intersection	LOS	Average Delay (sec/veh)	DOS	Highest DOS	95th %ile Queue (m)	Longest queue	Effective Stop Rate
1 - Donnybrook Road and English Street	C	24	0.59	West	106	West	0.75
2- Brookville Drive and English Street (West)	B	18	0.81	South	76	South	0.80
3 - Brookville Drive and Kinloch Court	A	9	0.55	South	41	South	0.51
4 - Brookville Drive and East-West Access Road	A	9	0.56	South	42	South	0.52
5 - Brookville Drive (Amaroo Road) and Summerhill Road	A	7	0.56	South	66	South	0.38
6 - Amaroo Road and East-West Connector Road	A	7	0.56	South	43	South	0.47
9 - English Street and East-West Access Road	A	8	0.63	South	156	South	0.44
12 - English Street and Norman Road	B	19	0.78	West	80	West	0.77

LOS = level of service DOS = degree of saturation

Table 3.3 : Intersection performance parameters (2046 AM peak)

Intersection	LOS	Average Delay (sec/veh)	DOS	Highest DOS	95th %ile Queue (m)	Longest queue	Effective Stop Rate
1 - Donnybrook Road and English Street	D	37	0.90	East	110	East	0.81
2- Brookville Drive and English Street (West)	C	20	0.36	South	39	South	0.71
3 - Brookville Drive and Kinloch Court	A	8	0.16	South	6	North	0.51
4 - Brookville Drive and East-West Access Road	A	8	0.23	South	9	South	0.55
5 - Brookville Drive (Amaroo Road) and Summerhill Road	C	31	0.65	West	90	East	0.77
6 - Amaroo Road and East-West Connector Road	A	8	0.15	North	6	North	0.51
7 - Summerhill Road and North-South Connector Road	A	8	0.29	East	13	East	0.54
8 - English Street and North-South Connector Road	A	8	0.26	East	11	East	0.54
9 - English Street and East-West Access Road	A	12	0.24	West	40	North	0.46
10 - Hume Freeway Southbound On Ramp	A	10	0.13	West	12	West	0.57
11 - Hume Freeway Northbound Off Ramp	B	16	0.10	West	15	West	0.49
12 - English Street and Norman Road	C	30	0.56	North	63	North	0.79

LOS = level of service DOS = degree of saturation

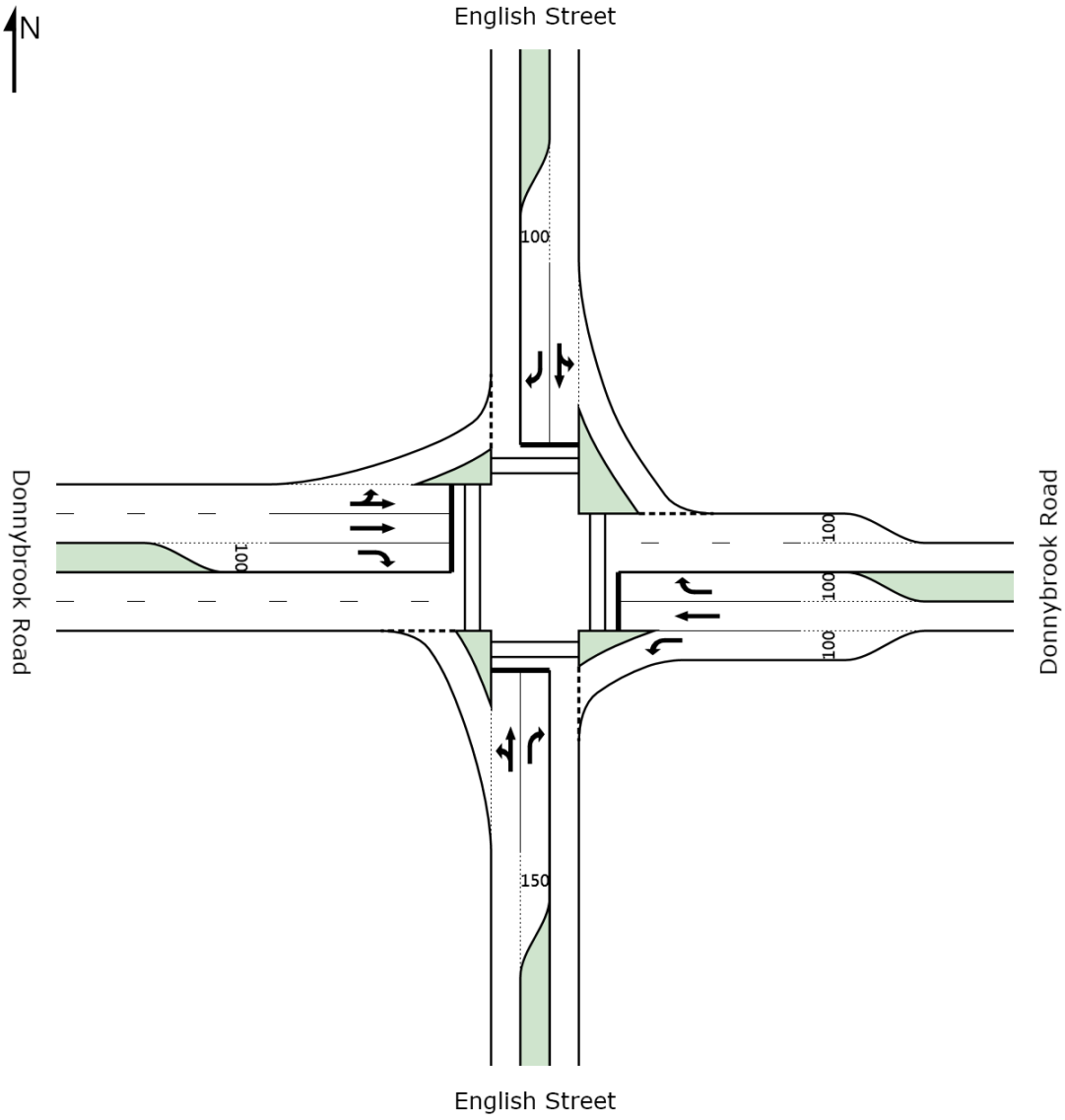
Table 3.4 : Intersection performance parameters (2046 PM peak)

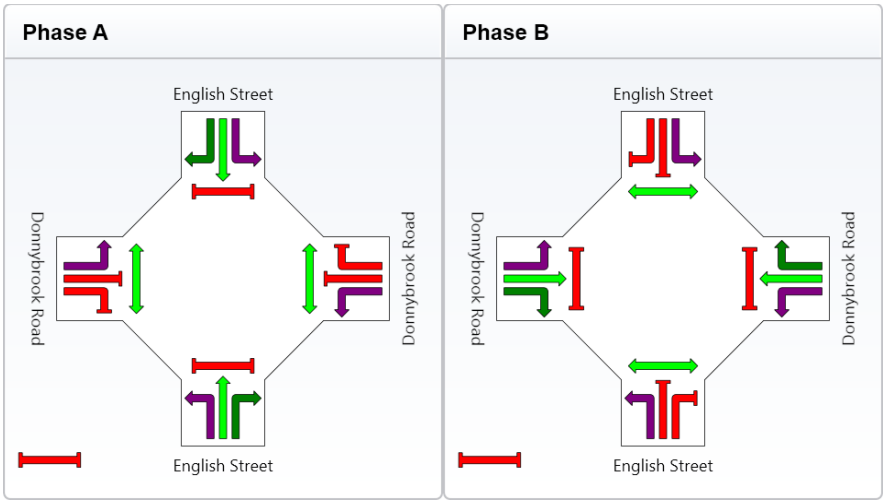
Intersection	LOS	Average Delay (sec/veh)	DOS	Highest DOS	95th %ile Queue (m)	Longest queue	Effective Stop Rate
1 - Donnybrook Road and English Street	D	44	0.91	East	119	North	0.84
2- Brookville Drive and English Street (West)	C	21	0.62	South	78	South	0.73
3 - Brookville Drive and Kinloch Court	A	8	0.20	North	8	North	0.53
4 - Brookville Drive and East-West Access Road	A	9	0.32	West	12	North	0.61
5 - Brookville Drive (Amaroo Road) and Summerhill Road	C	30	0.68	North	95	East	0.77
6 - Amaroo Road and East-West Connector Road	A	8	0.12	North	4	North	0.52
7 - Summerhill Road and North-South Connector Road	A	8	0.36	West	16	West	0.58
8 - English Street and North-South Connector Road	A	9	0.35	West	16	West	0.59
9 - English Street and East-West Access Road	A	9	0.37	South	73	South	0.41
10 - Hume Freeway Southbound On Ramp	A	8	0.14	West	20	West	0.48
11 - Hume Freeway Northbound Off Ramp	C	23	0.14	South	22	South	0.68
12 - English Street and Norman Road	C	30	0.66	North	92	West	0.82

LOS = level of service DOS = degree of saturation

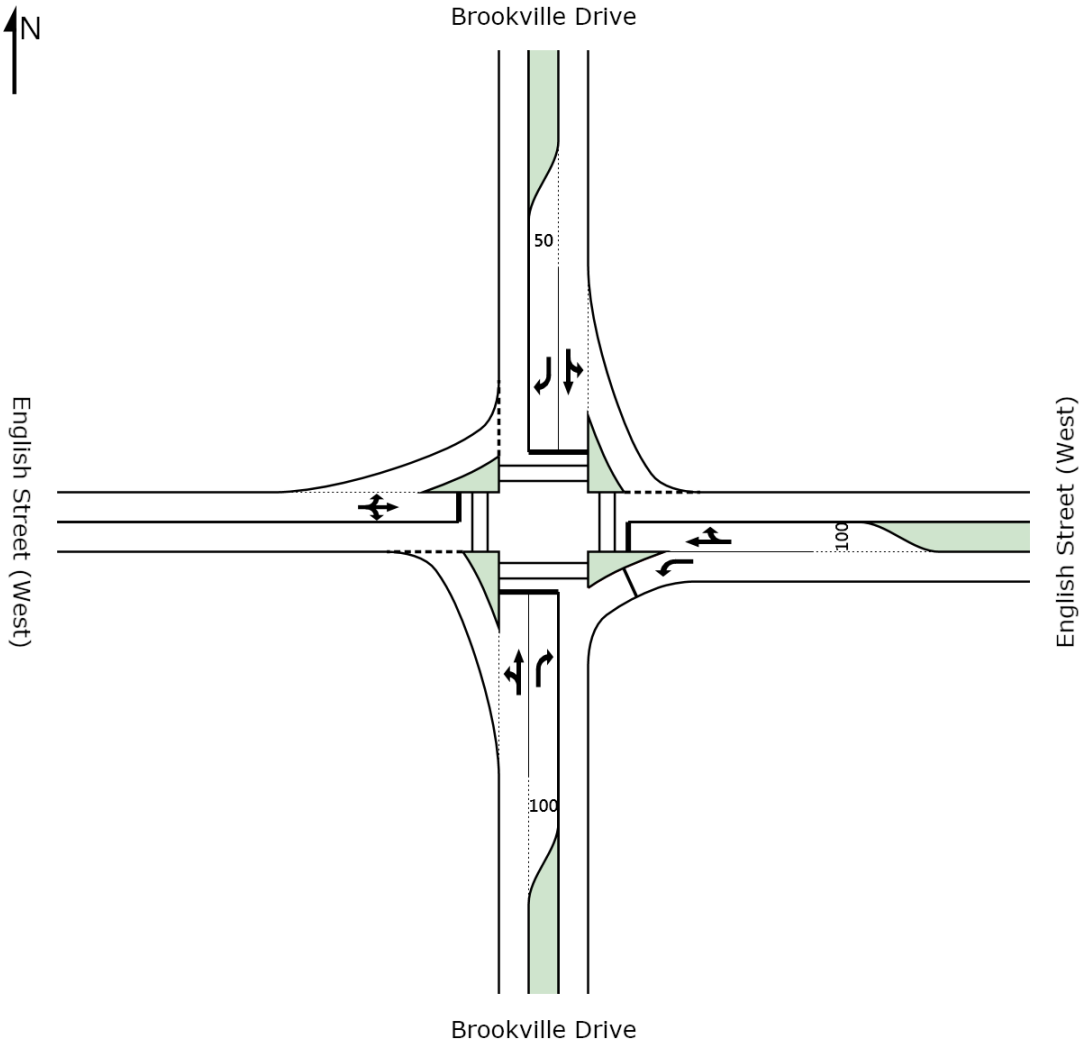
Appendix A. Intersection configurations and phasing – 2026

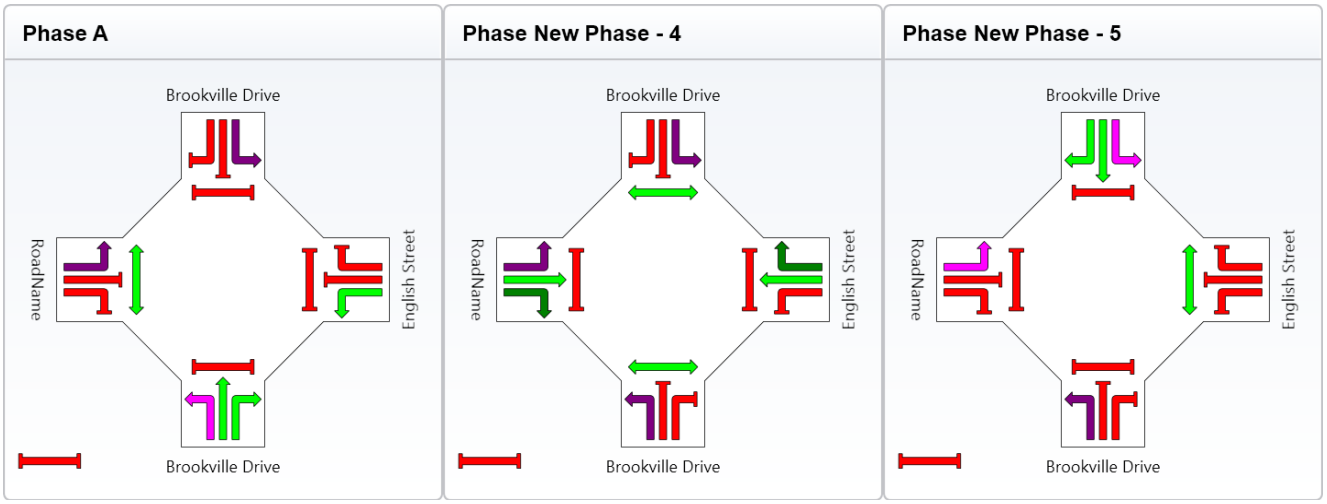
1) Donnybrook and English



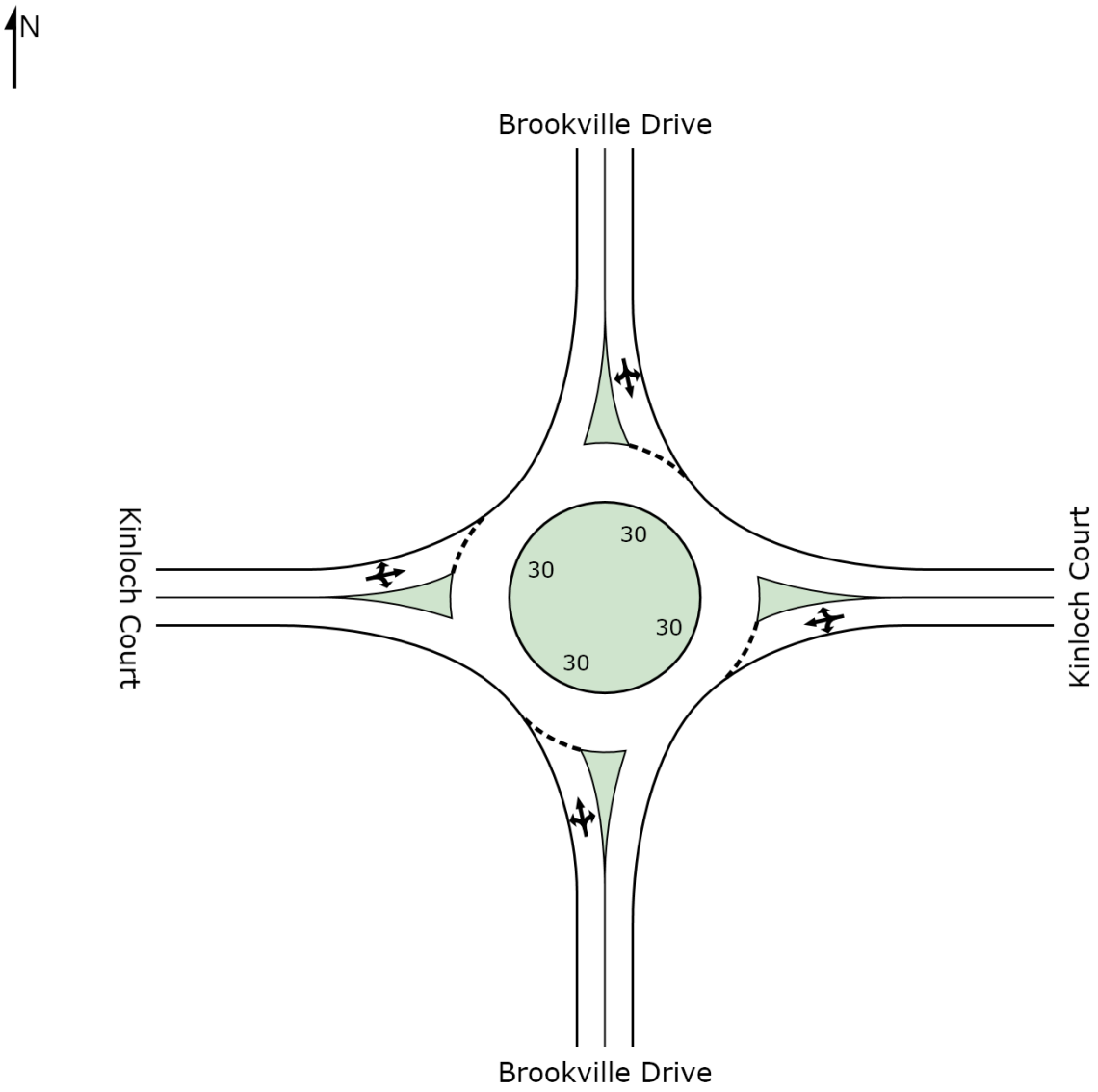


2) Brookville and English (West)

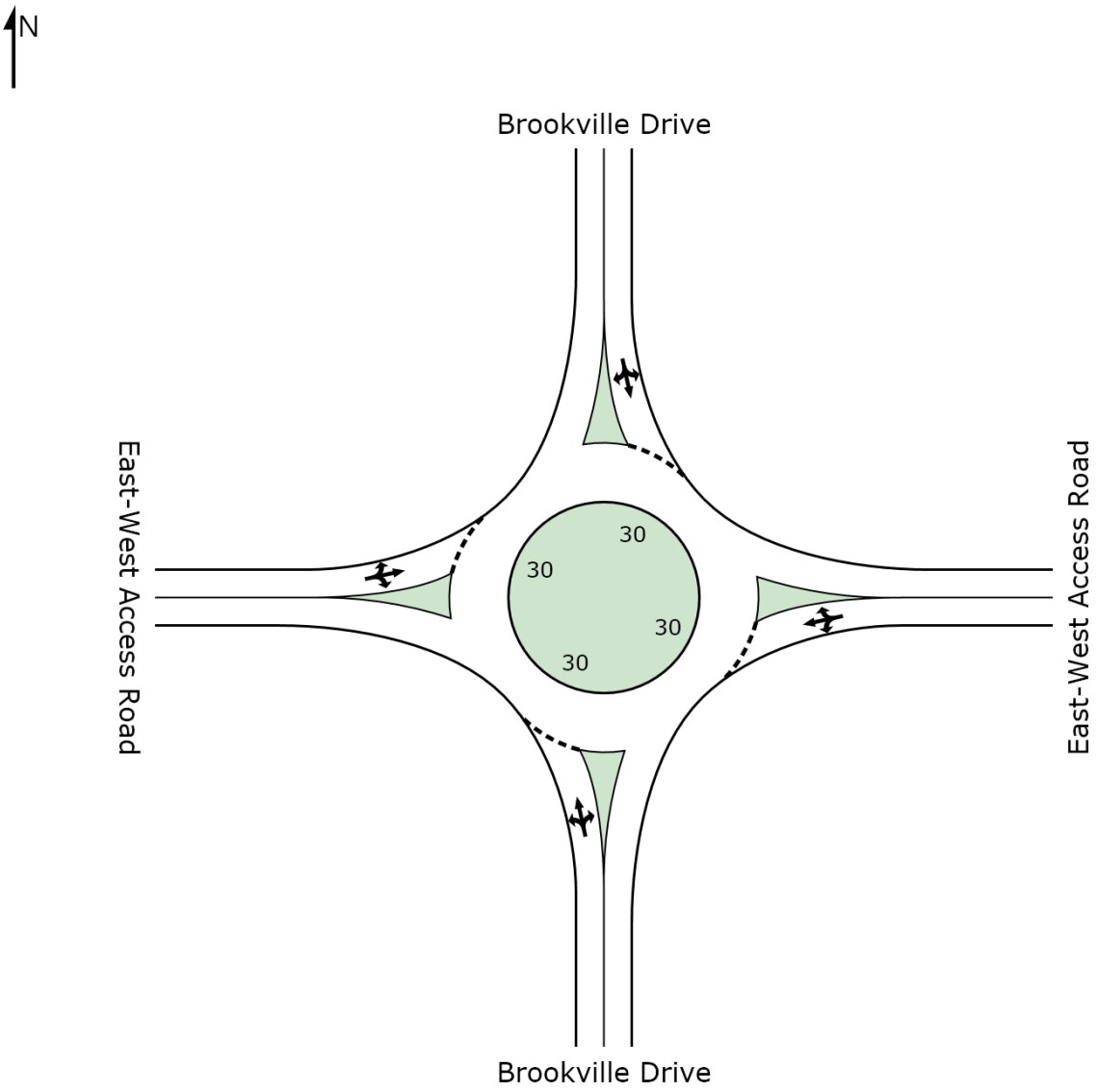




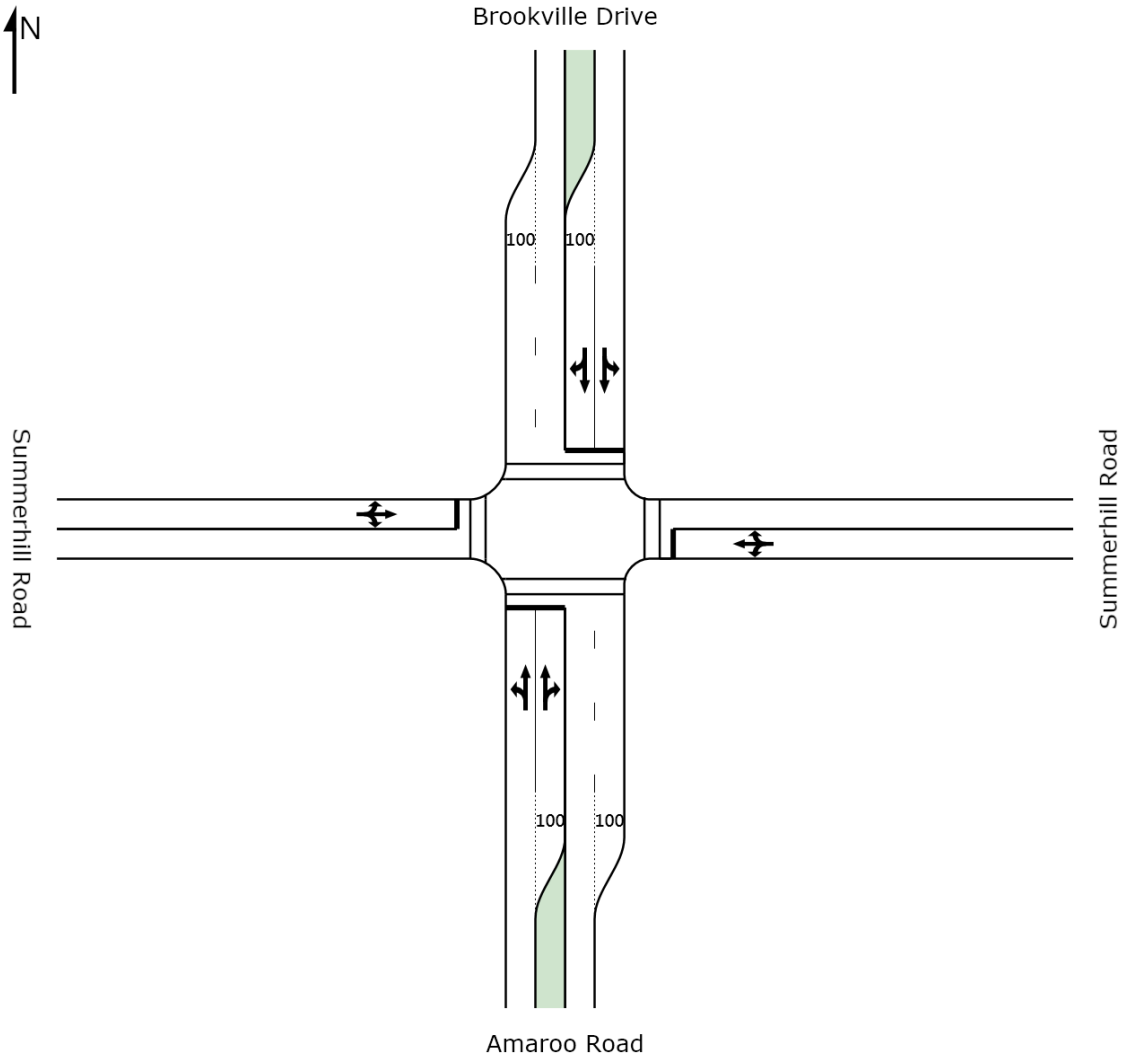
3) Brookville and Kinloch

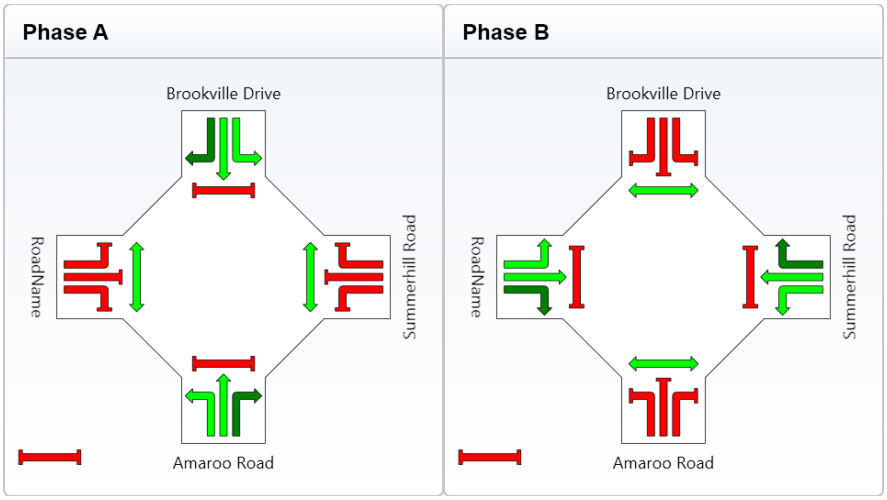


4) Brookville and East-West Access Road

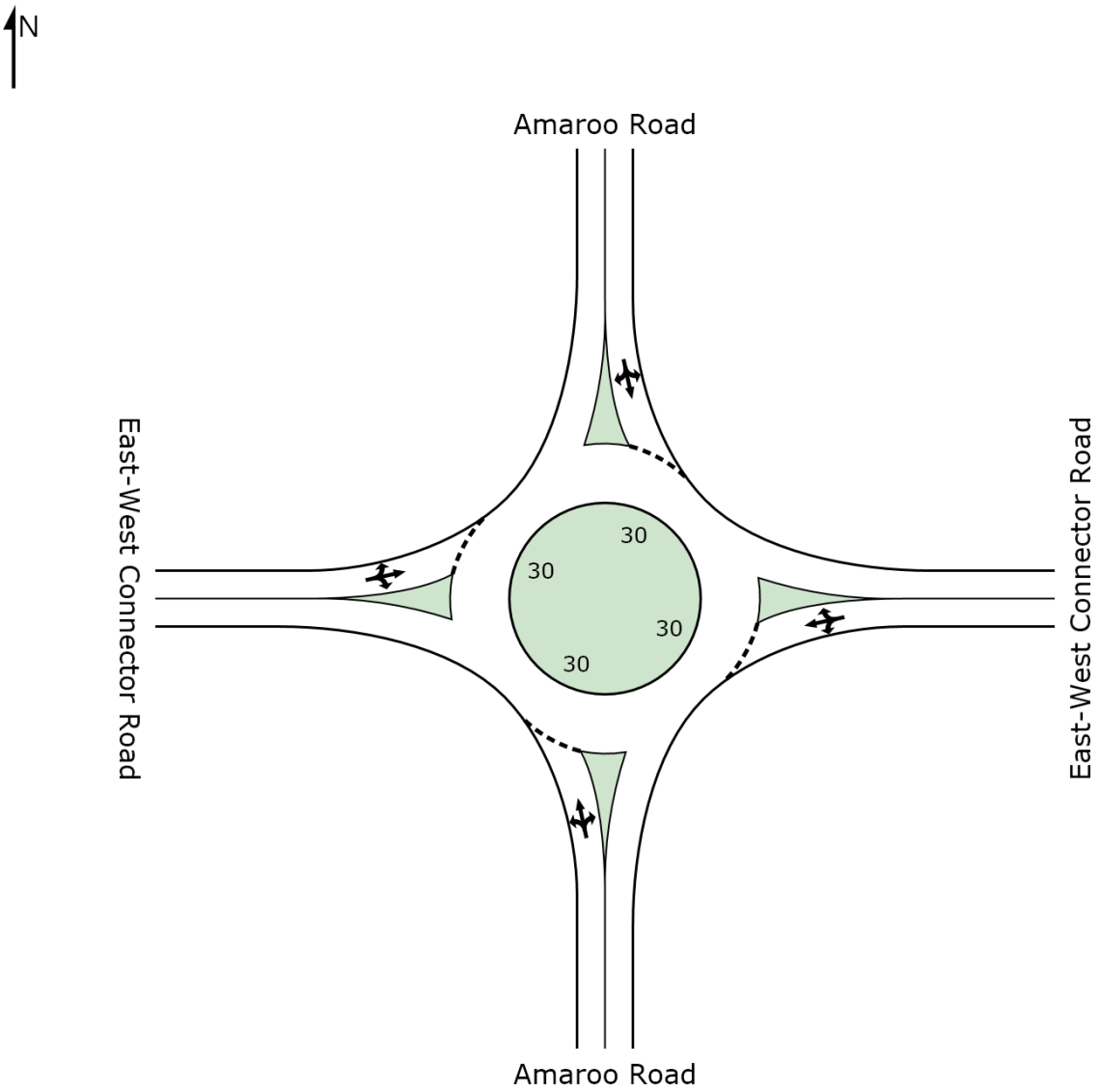


5) Brookville and Summerhill

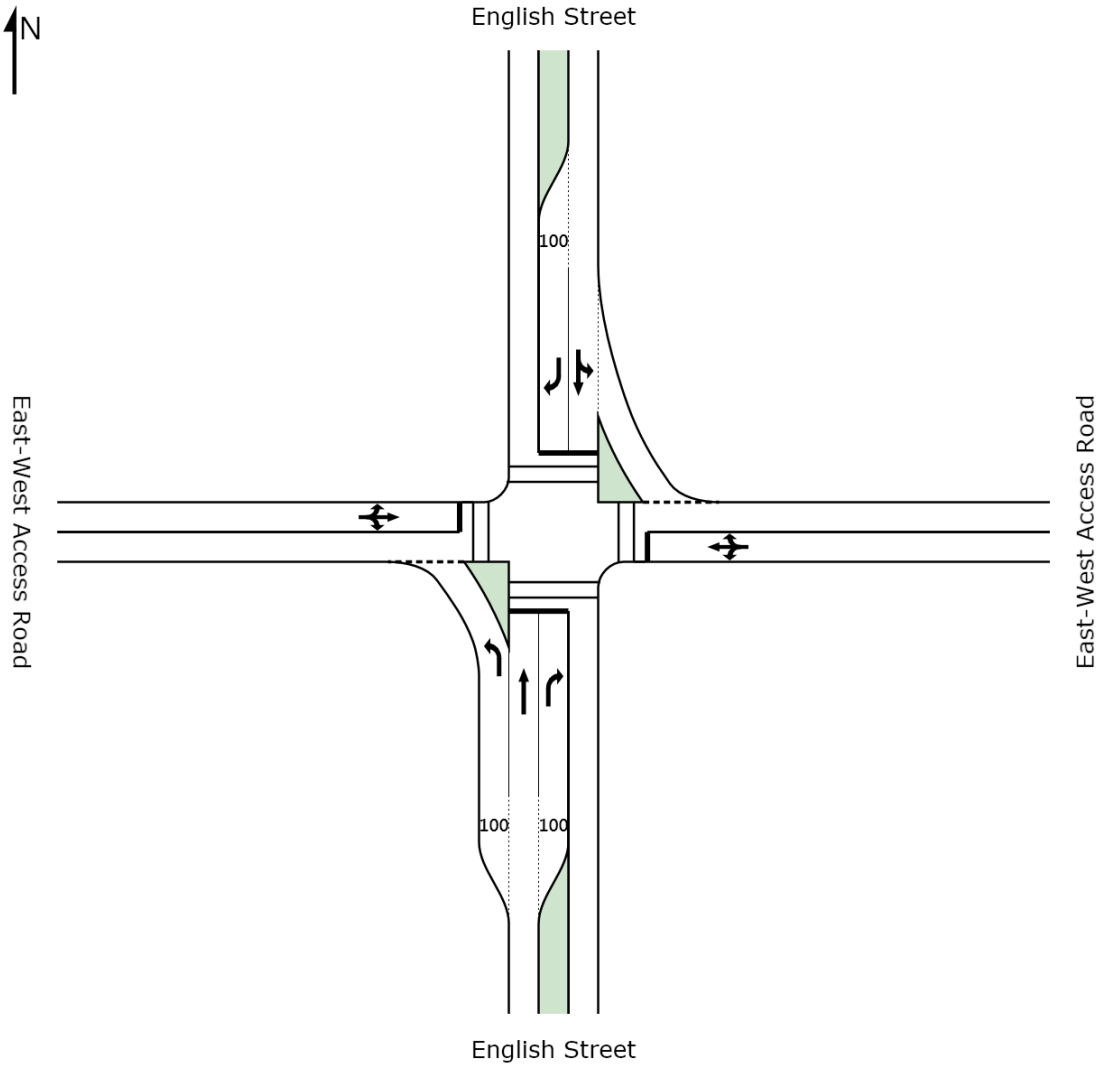


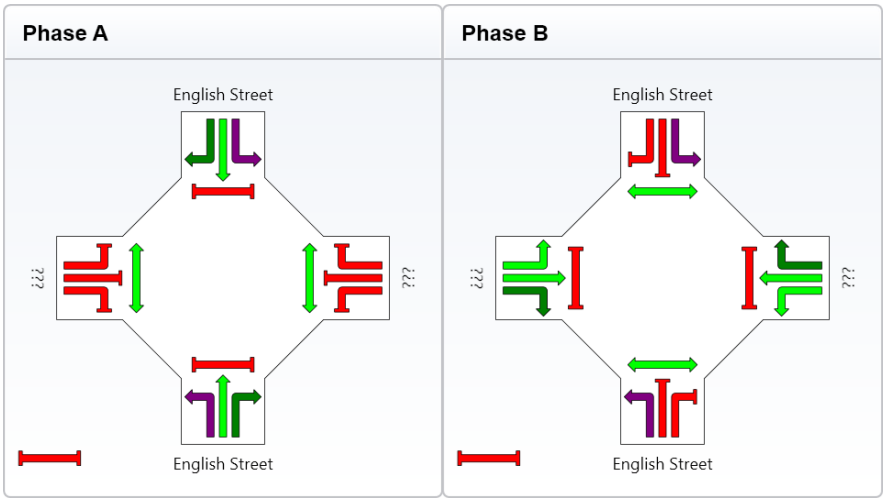


6) Amaroo and East-West Connector Road

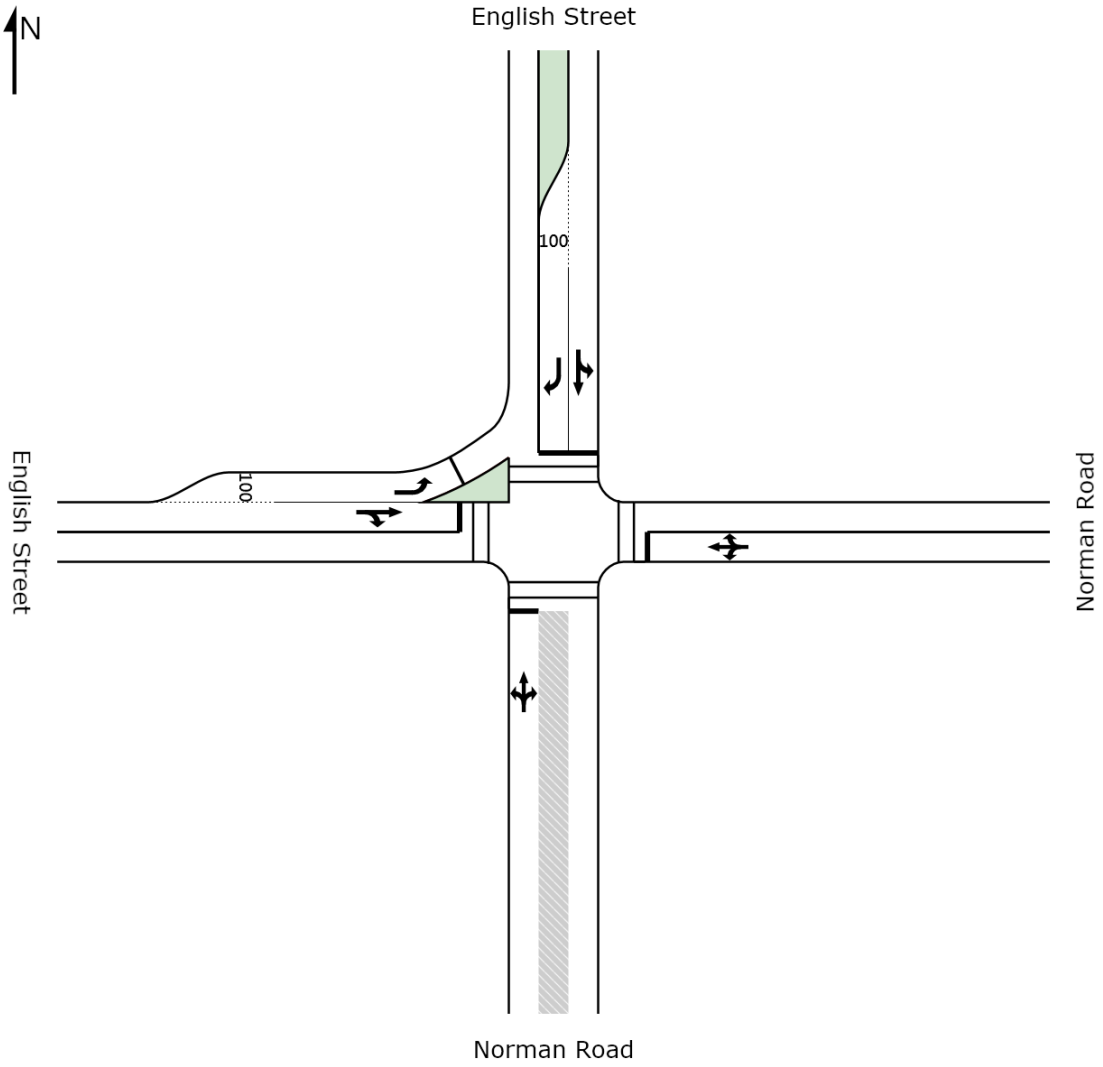


9) English Street and East-West Access Road



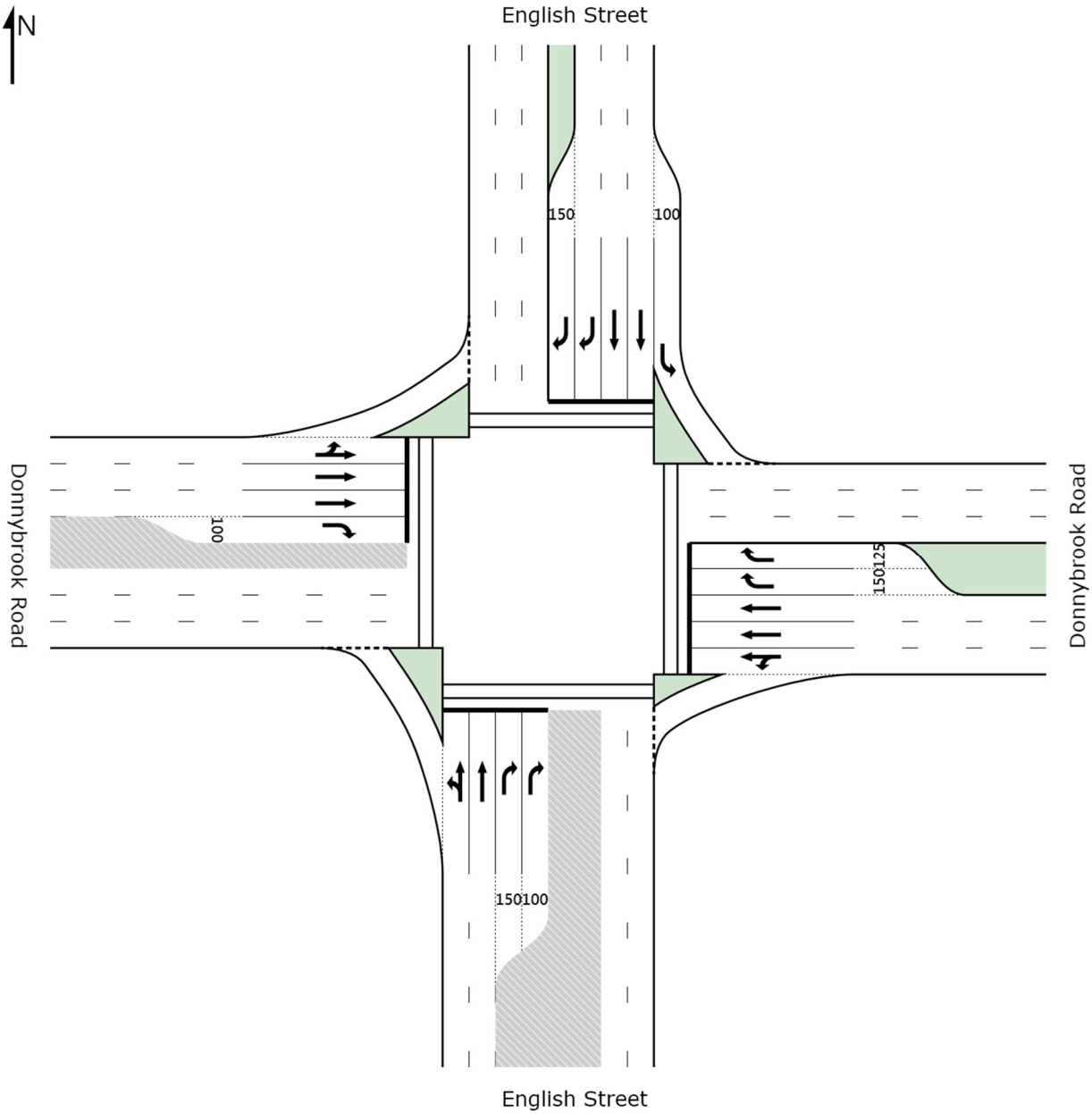


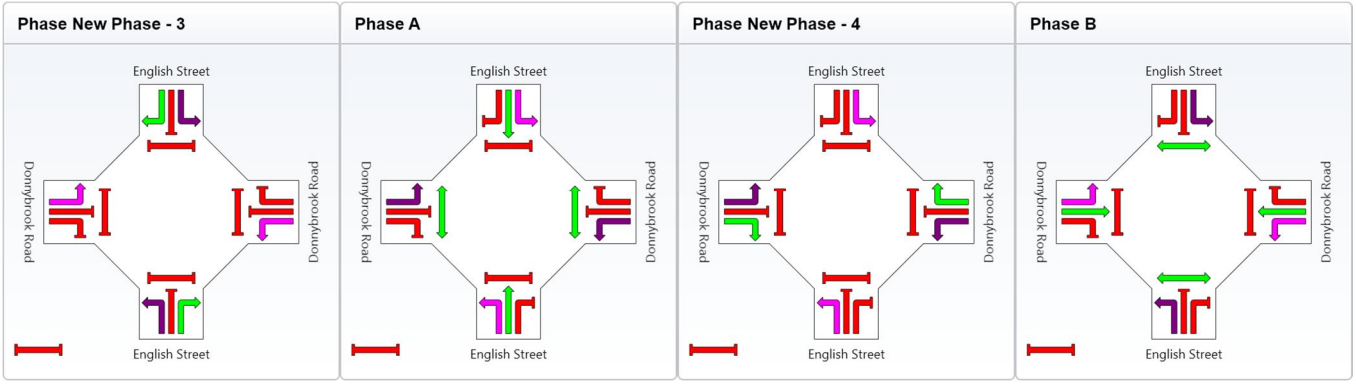
12) English Street and Norman Road



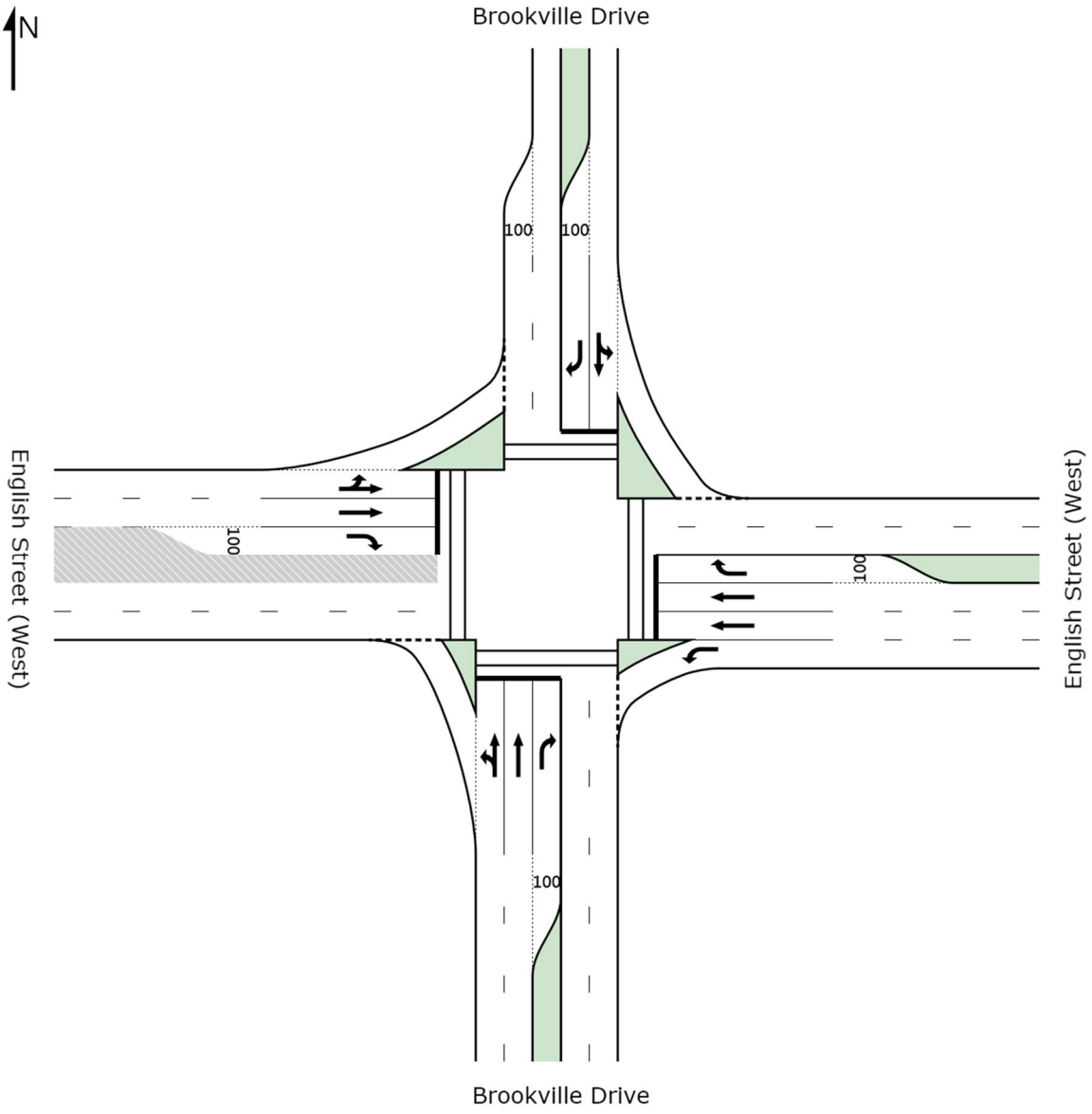
Appendix B. Intersection configurations and phasing – 2046

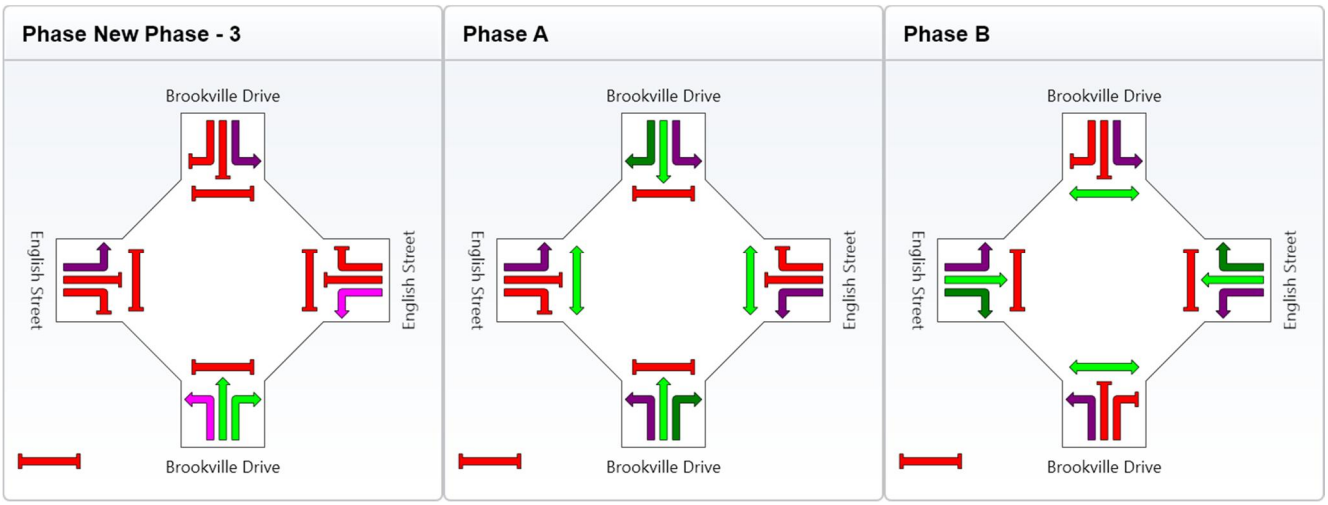
1) Donnybrook and English



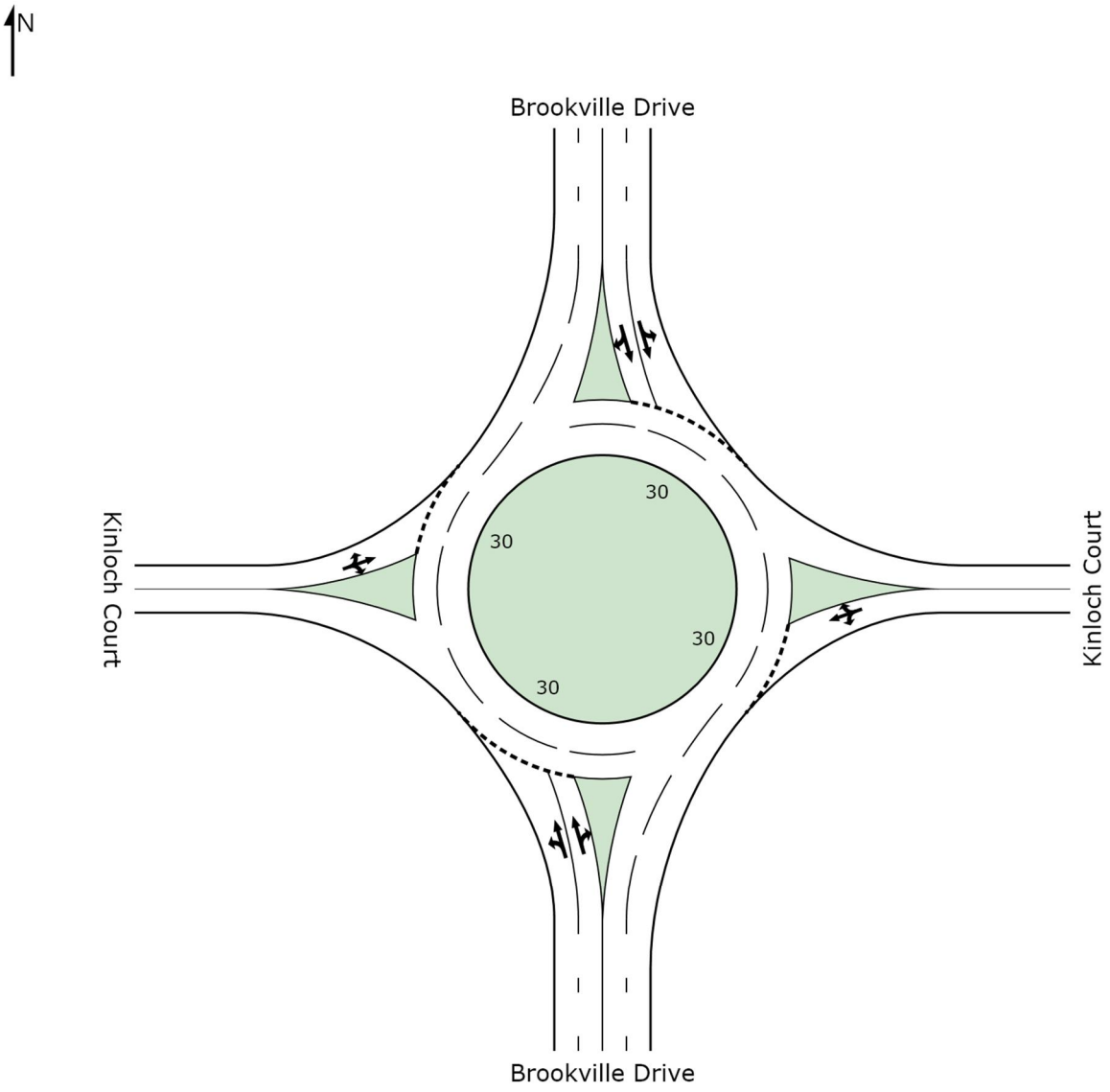


2) Brookville and English (West)

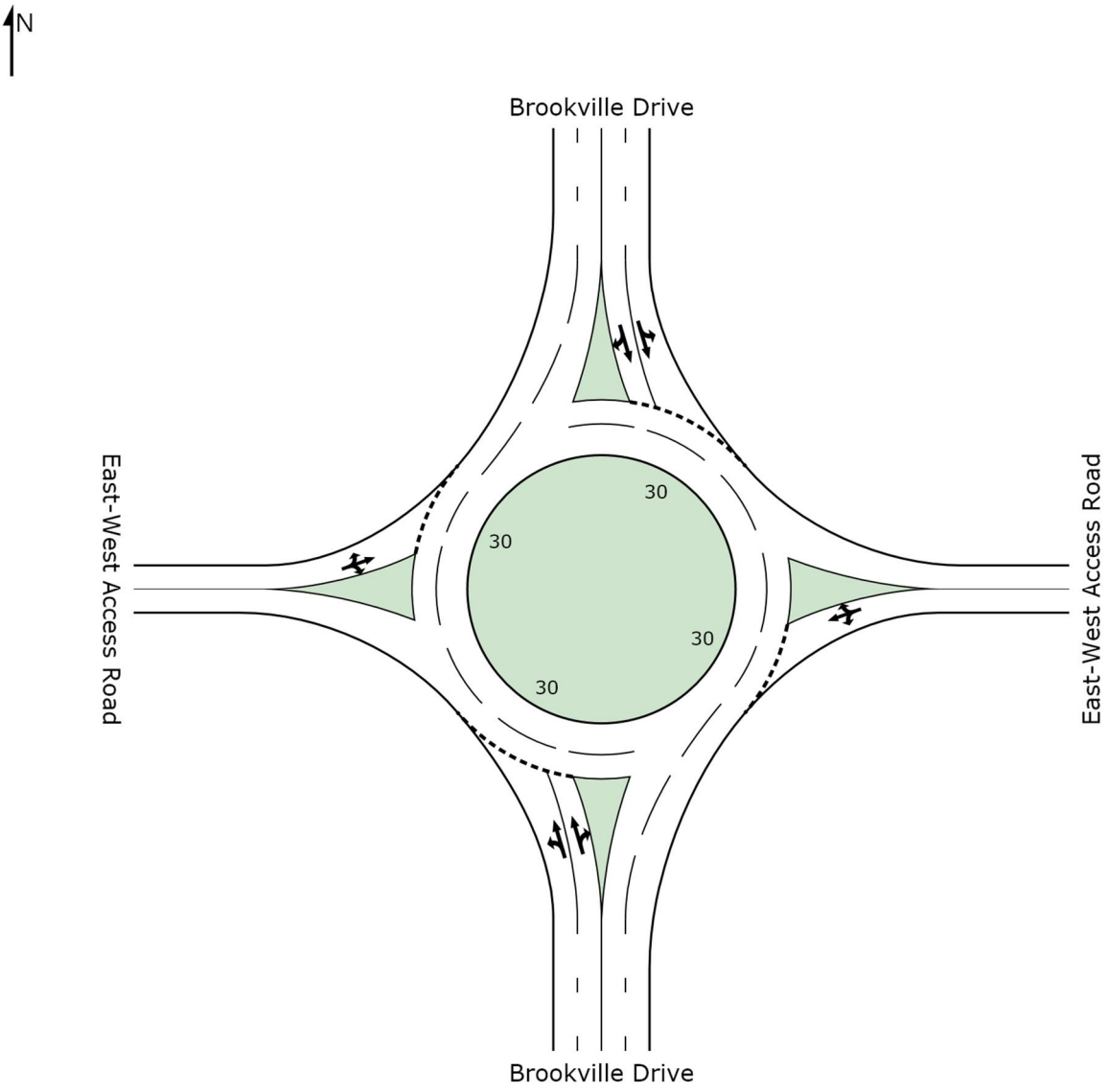




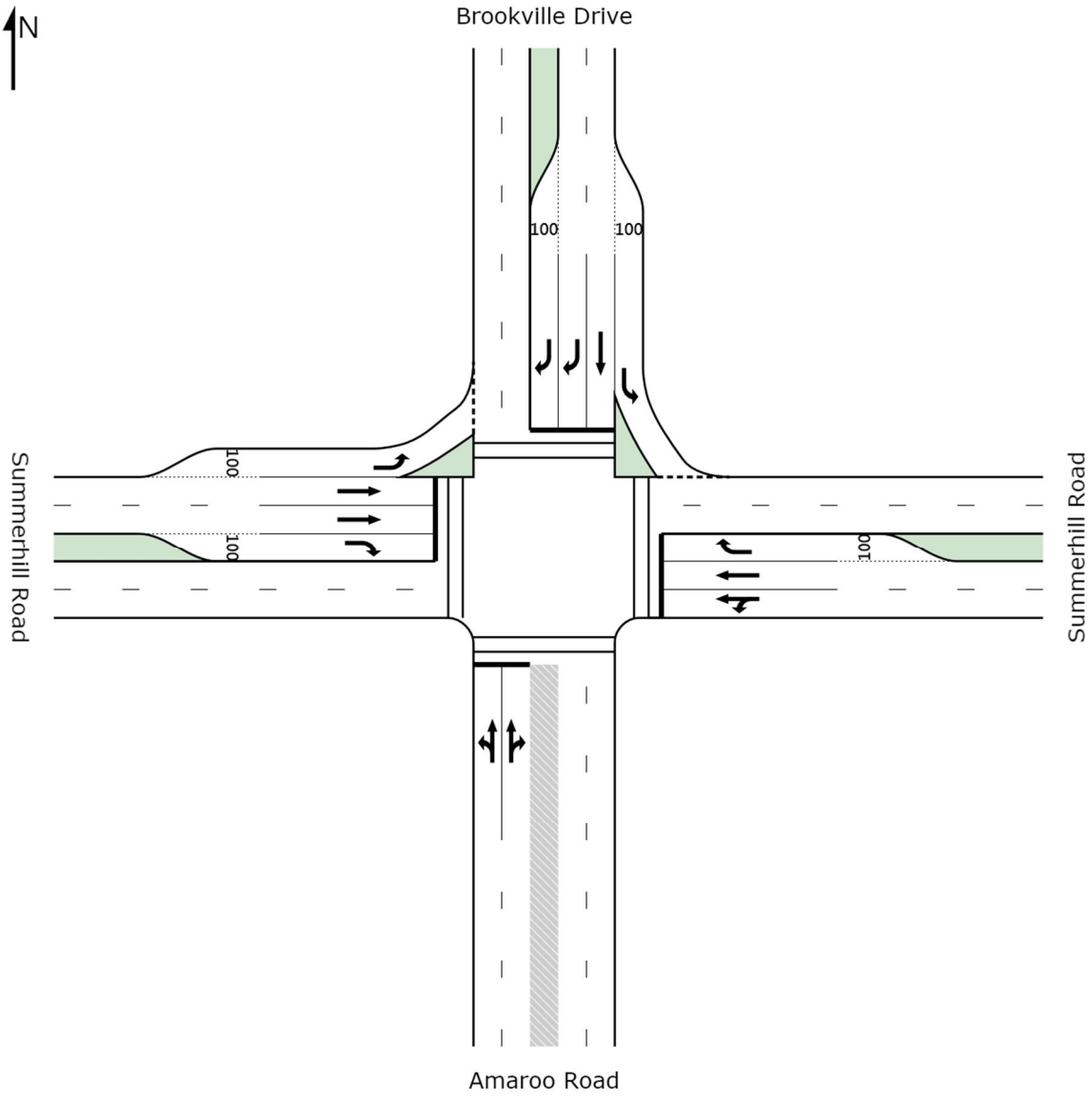
3) Brookville and Kinloch

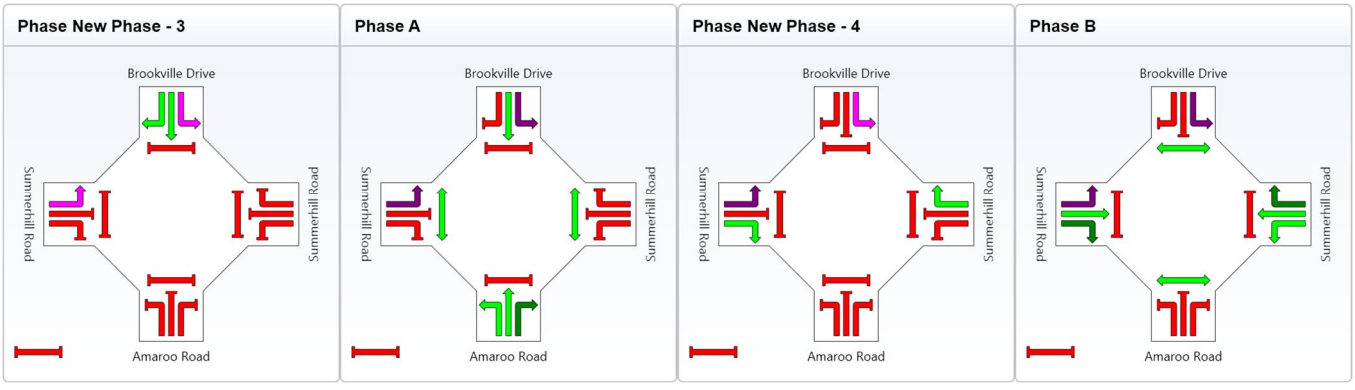


4) Brookville and East-West Access Road

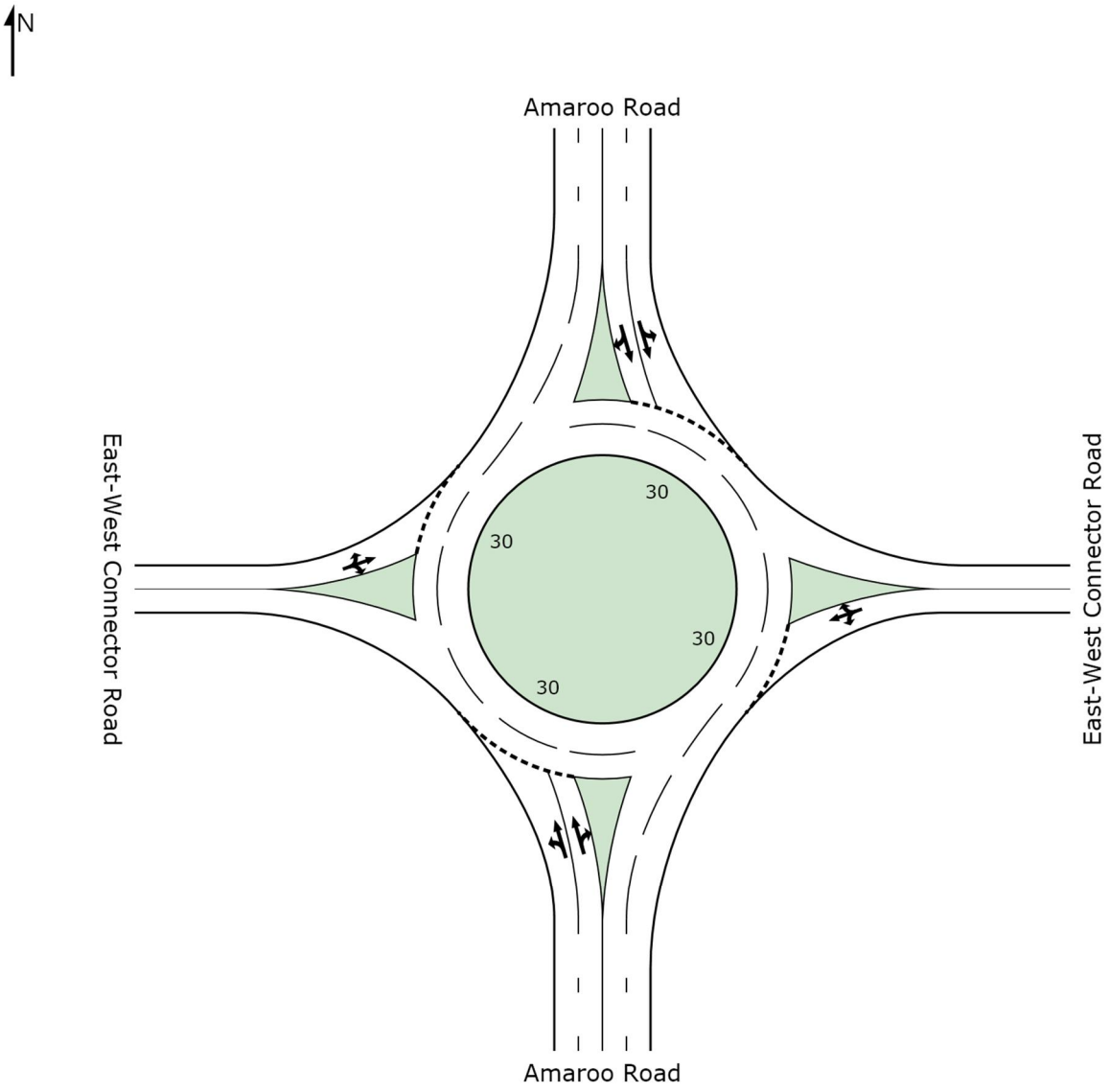


5) Brookville and Summerhill

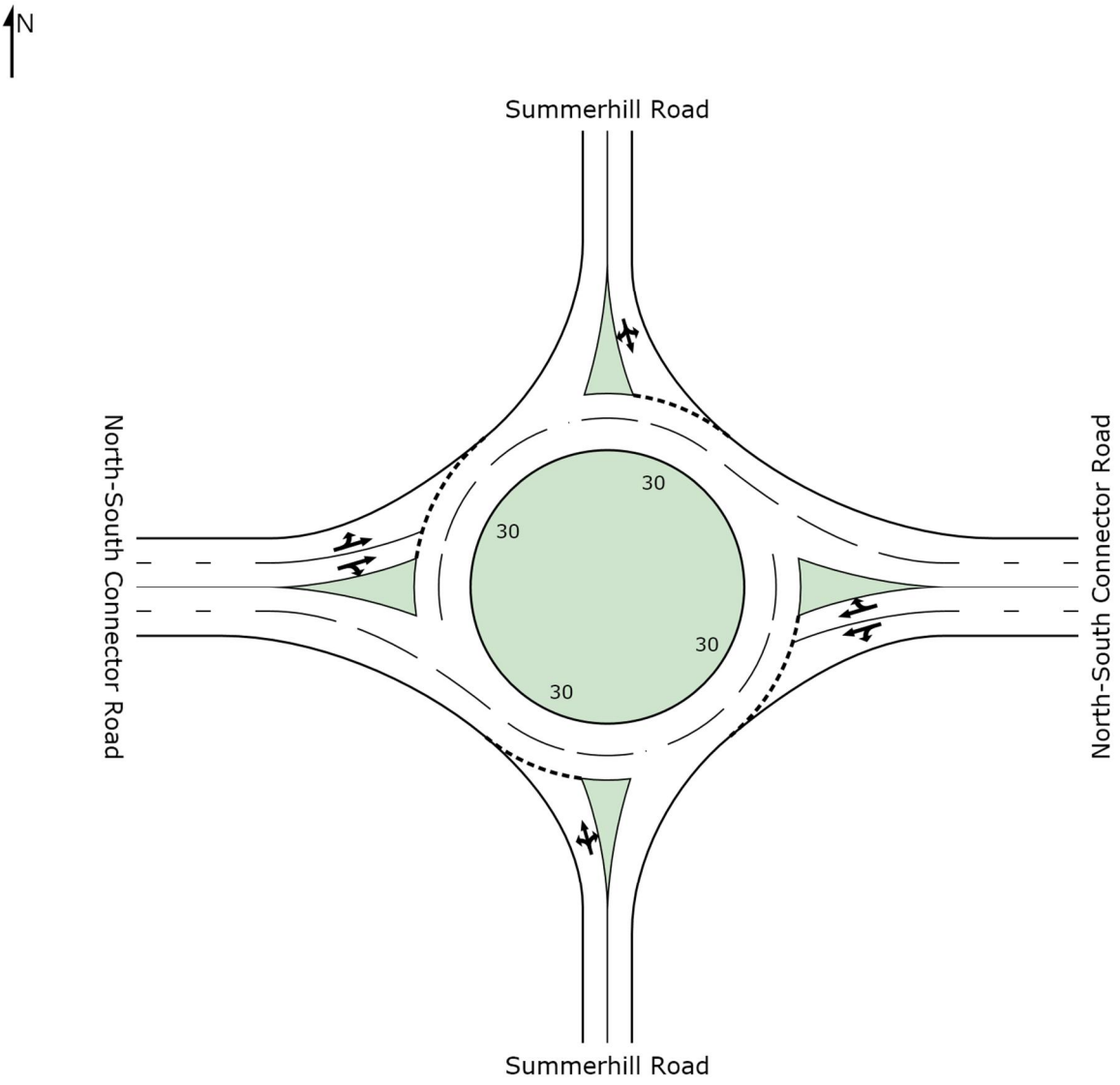




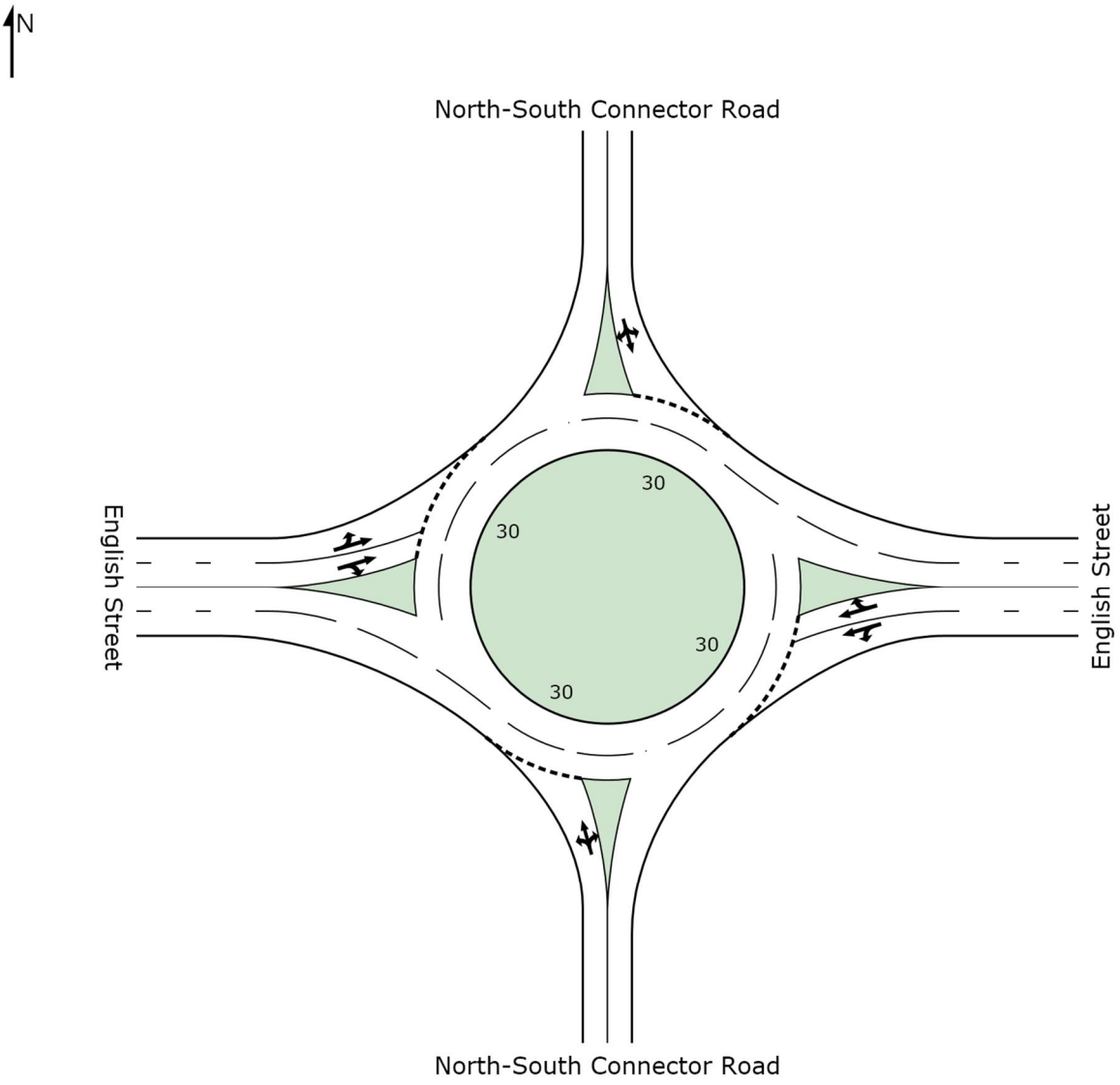
6) Amaroo and East-West Connector Road



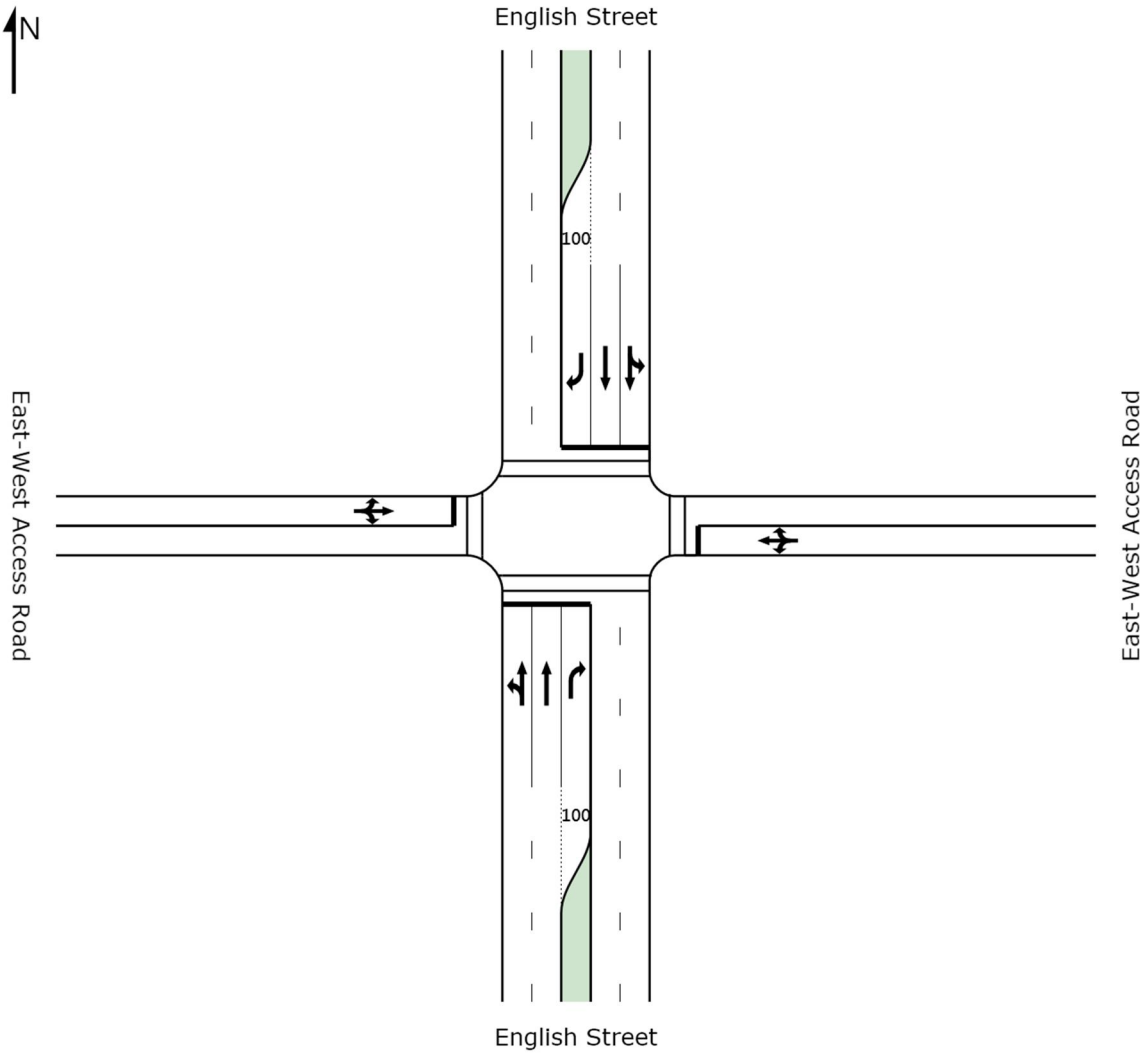
7) Summerhill and North-South Connector

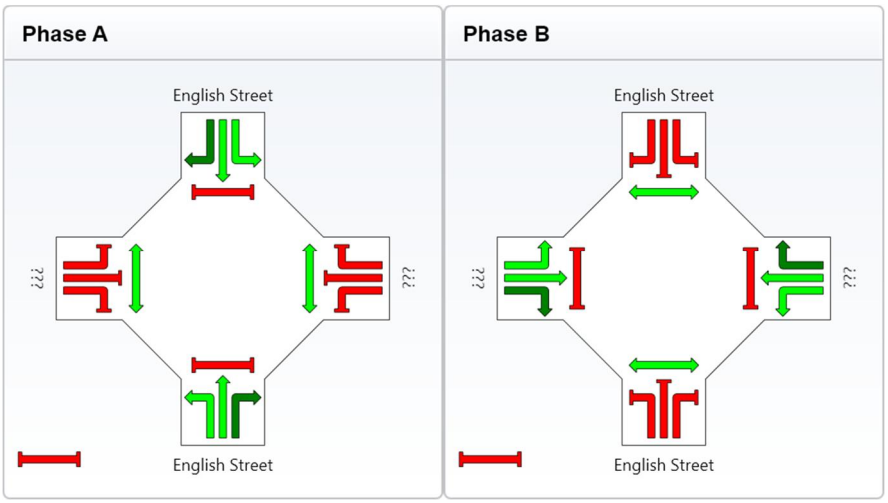


8) English and North-South Connector Road

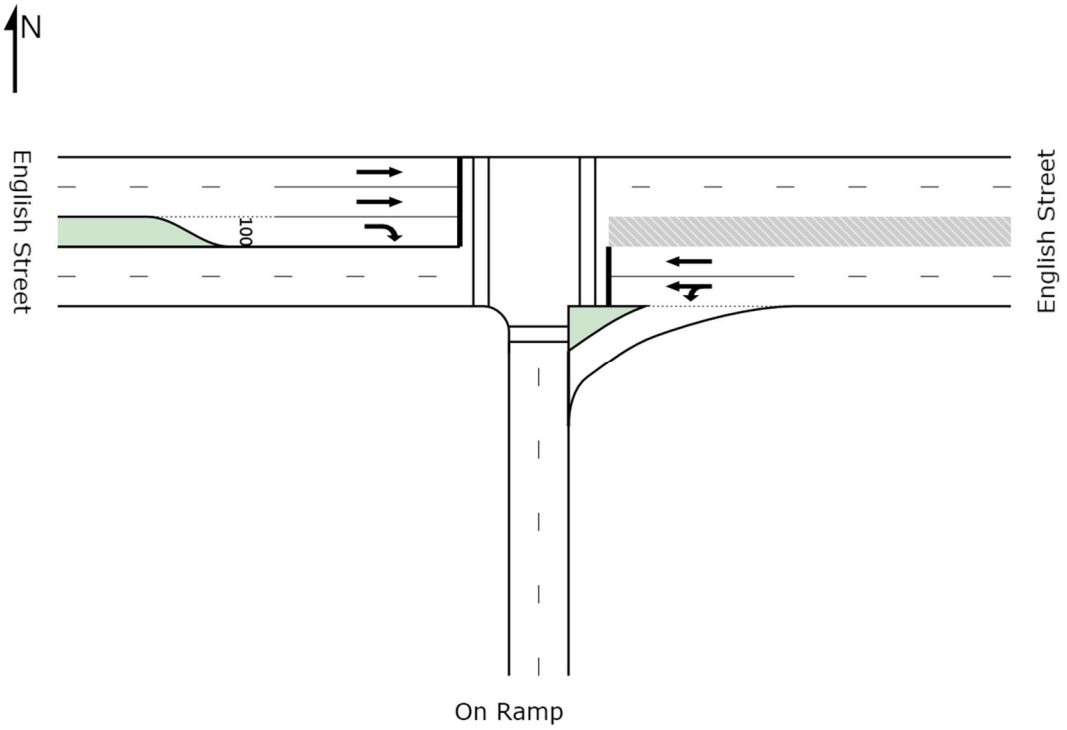


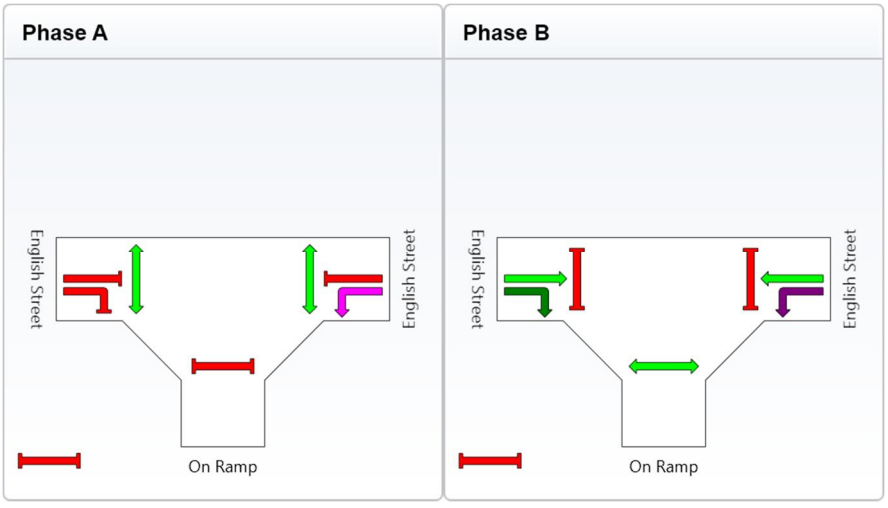
9) English and East-West Access Road



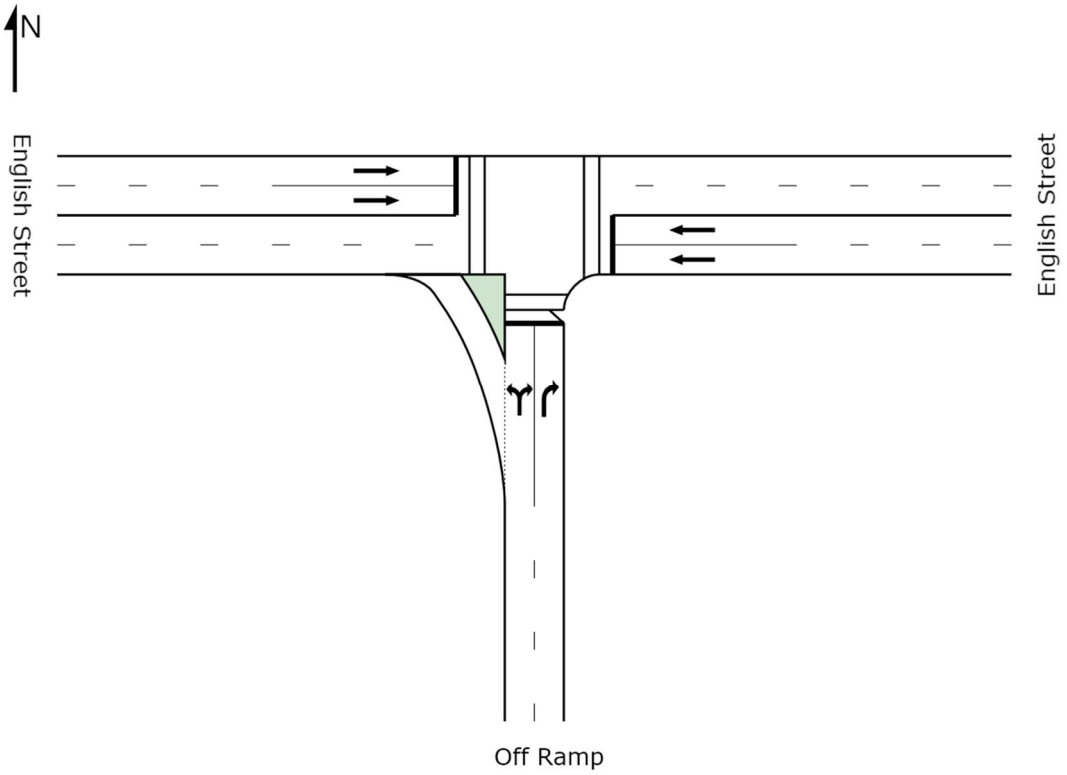


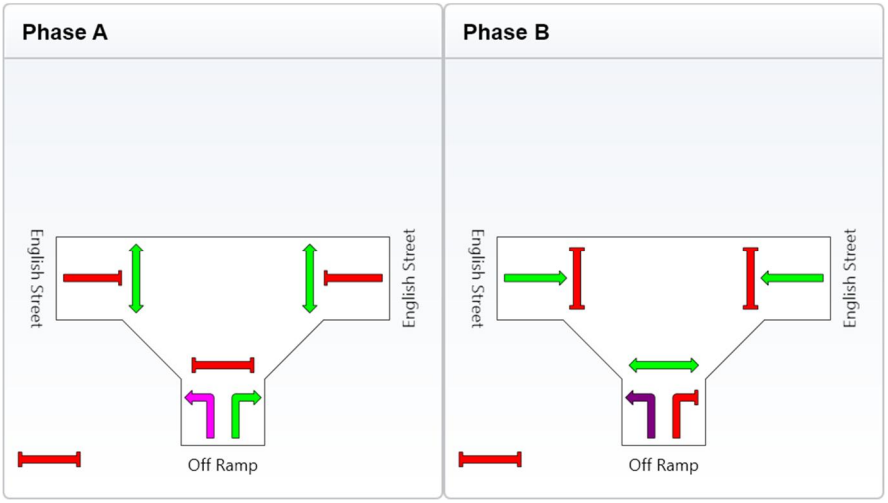
10) Hume Freeway Southbound On Ramp



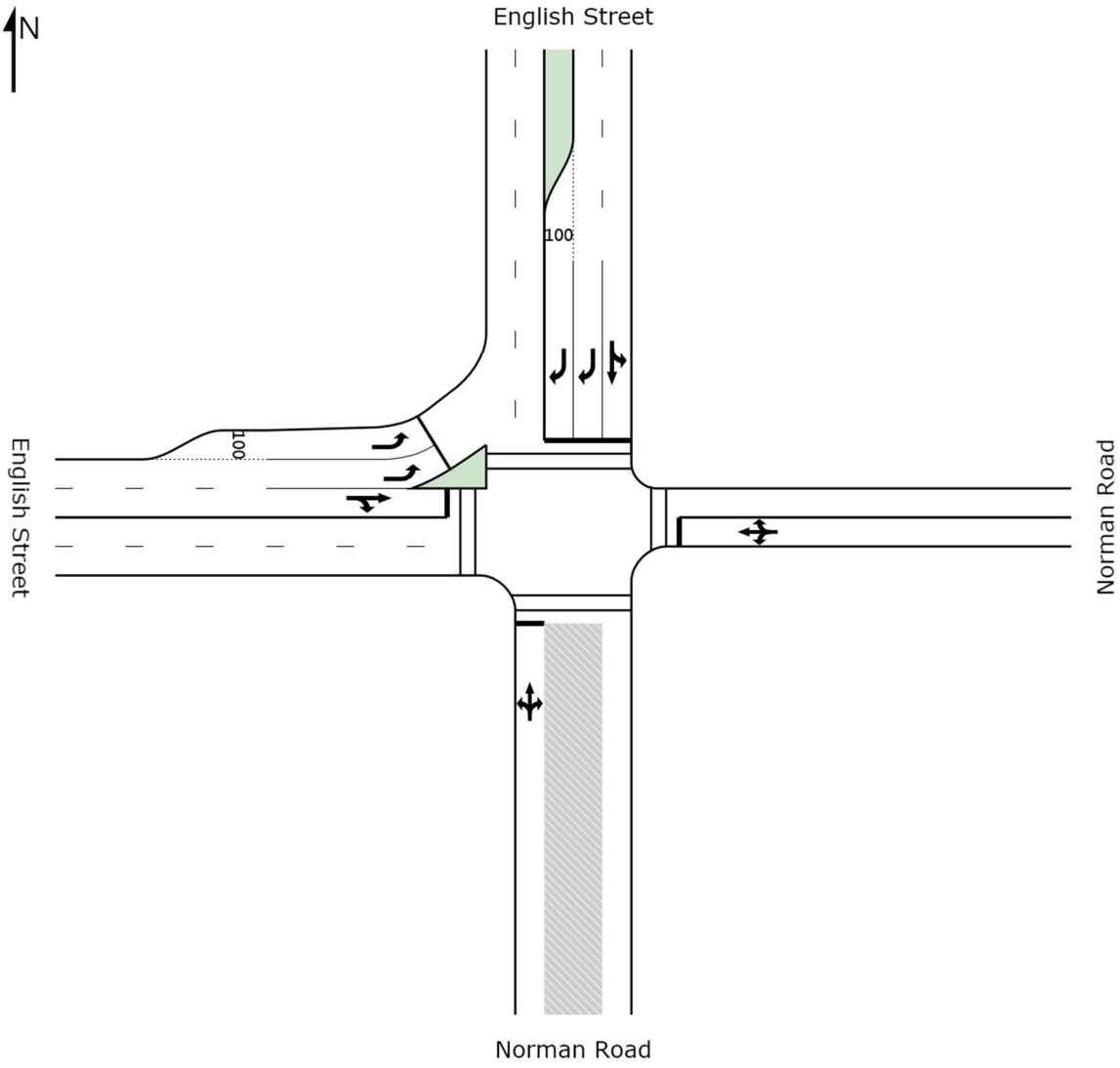


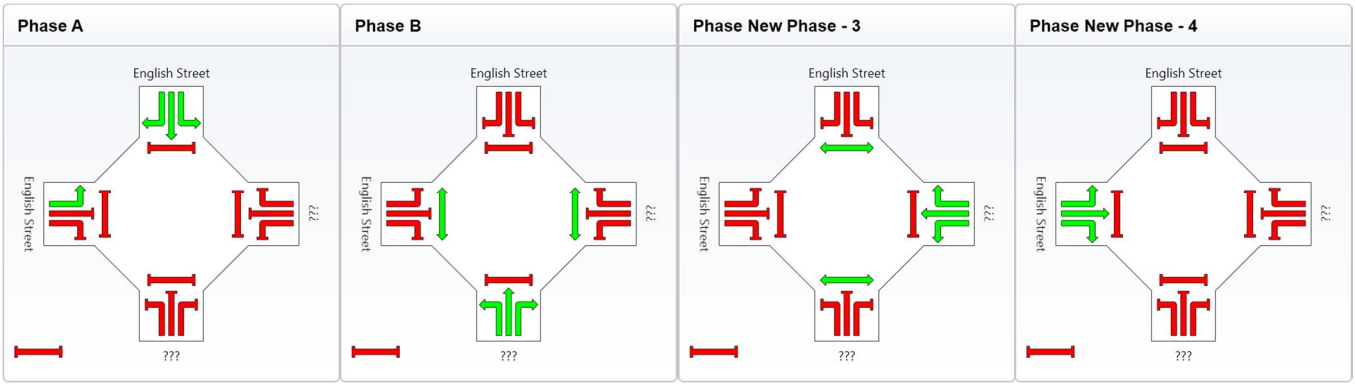
11) Hume Freeway Northbound Off Ramp





12) English and Norman Road





Appendix C. Movement performance – 2026 AM peak

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 1 - Donnybrook and English

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	37	7.0	0.144	22.5	0.23	LOS C	1.6	11.8	0.69	0.81	44.8	0.6	1.2
Through	42	7.0	0.144	13.1	0.15	LOS B	1.6	11.8	0.69	0.57	45.2	0.6	1.2
Right	26	7.0	0.077	37.6	0.27	LOS D	0.9	6.5	0.78	0.74	34.3	0.5	1.2
Approach	105	7.0	0.144	22.5	0.66	LOS C	1.6	11.8	0.72	0.69	41.6	1.6	3.6
East													
Left	284	7.0	0.407	14.8	1.17	LOS B	4.1	30.5	0.49	0.81	52.9	3.5	6.8
Through	458	7.0	0.407	12.6	1.61	LOS B	10.5	77.8	0.63	0.55	52.8	6.0	13.8
Right	32	7.0	0.069	27.1	0.24	LOS C	0.8	6.2	0.62	0.74	39.6	0.5	1.1
Approach	774	7.0	0.407	14.0	3.01	LOS B	10.5	77.8	0.58	0.65	52.2	9.9	21.8
North													
Left	47	7.0	0.405	32.6	0.43	LOS C	8.1	59.8	0.80	0.86	35.5	0.9	2.1
Through	205	7.0	0.405	23.2	1.33	LOS C	8.1	59.8	0.80	0.70	35.3	3.8	8.3
Right	189	7.0	0.392	33.9	1.78	LOS C	6.4	47.6	0.80	0.81	33.8	3.8	8.7
Approach	442	7.0	0.405	28.8	3.54	LOS C	8.1	59.8	0.80	0.76	34.6	8.5	19.2
West													
Left	221	7.0	0.183	10.6	0.65	LOS B	0.8	5.7	0.16	0.71	56.2	2.4	3.7
Through	326	7.0	0.335	13.3	1.21	LOS B	8.2	61.1	0.62	0.53	52.6	4.3	10.0
Right	63	7.0	0.163	29.8	0.52	LOS C	1.8	13.5	0.67	0.77	39.0	1.0	2.4
Approach	611	7.0	0.335	14.0	2.38	LOS B	8.2	61.1	0.46	0.62	51.9	7.7	16.1
All Vehicles	1932	7.0	0.407	17.9	9.59	LOS B	10.5	77.8	0.60	0.67	46.1	27.8	60.6

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 2- Brookville and English (West)

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.022	14.5	0.05	LOS B	0.4	2.8	0.43	0.82	44.4	0.2	0.3
Through	11	9.7	0.022	7.4	0.02	LOS A	0.4	2.8	0.43	0.35	57.7	0.1	0.2
Right	53	7.0	0.053	12.2	0.18	LOS B	0.2	1.2	0.07	0.73	55.6	0.6	0.9
Approach	75	9.1	0.053	11.9	0.25	LOS B	0.4	2.8	0.18	0.69	53.8	0.9	1.5
East													
Left	595	7.0	0.598	25.2	4.16	LOS C	18.2	135.4	0.71	0.83	41.6	9.8	23.9
Through	12	17.7	0.108	40.4	0.13	LOS D	1.0	7.6	0.91	0.66	26.6	0.3	0.6
Right	11	9.7	0.108	50.6	0.15	LOS D	1.0	7.6	0.91	0.74	28.2	0.2	0.6
Approach	617	7.3	0.598	25.9	4.45	LOS C	18.2	135.4	0.72	0.83	40.9	10.3	25.1
North													
Left	11	9.7	0.087	43.9	0.13	LOS D	0.8	6.4	0.89	0.73	31.0	0.2	0.5
Through	11	9.7	0.087	34.0	0.10	LOS C	0.8	6.4	0.89	0.64	32.6	0.2	0.5
Right	12	17.7	0.063	51.1	0.17	LOS D	0.5	4.1	0.92	0.69	25.0	0.3	0.6
Approach	34	12.5	0.087	43.3	0.40	LOS D	0.8	6.4	0.90	0.69	29.2	0.7	1.7
West													
Left	12	17.7	0.078	27.1	0.09	LOS C	1.0	7.8	0.79	0.73	35.1	0.2	0.5
Through	12	17.7	0.078	18.9	0.06	LOS B	1.0	7.8	0.79	0.59	36.1	0.2	0.4
Right	12	17.7	0.078	27.7	0.09	LOS C	1.0	7.8	0.79	0.75	35.0	0.2	0.5
Approach	36	17.7	0.078	24.6	0.24	LOS C	1.0	7.8	0.79	0.69	35.4	0.6	1.3
All Vehicles	762	8.2	0.598	25.3	5.35	LOS C	18.2	135.4	0.68	0.80	40.9	12.5	29.6

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 3 - Brookville and Kinloch

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.051	8.0	0.02	LOS A	0.3	2.2	0.15	0.52	59.5	0.1	0.2
Through	47	7.0	0.051	8.5	0.11	LOS A	0.3	2.2	0.15	0.49	61.6	0.5	0.7
Right	16	7.0	0.051	13.7	0.06	LOS B	0.3	2.2	0.15	0.82	52.9	0.2	0.3
Approach	74	7.4	0.051	9.5	0.20	LOS A	0.3	2.2	0.15	0.56	59.3	0.8	1.2
East													
Left	11	9.7	0.038	10.4	0.03	LOS B	0.2	1.7	0.65	0.63	49.6	0.1	0.2
Through	11	9.7	0.038	8.0	0.02	LOS A	0.2	1.7	0.65	0.58	47.8	0.1	0.2
Right	11	9.7	0.038	17.0	0.05	LOS B	0.2	1.7	0.65	0.75	46.1	0.2	0.3
Approach	33	9.7	0.038	11.8	0.11	LOS B	0.2	1.7	0.65	0.66	47.7	0.5	0.7
North													
Left	11	9.7	0.376	8.1	0.02	LOS A	2.9	21.3	0.20	0.54	59.3	0.1	0.2
Through	568	7.0	0.376	8.6	1.35	LOS A	2.9	21.3	0.20	0.50	61.3	6.4	8.9
Right	11	9.7	0.376	13.9	0.04	LOS B	2.9	21.3	0.20	0.86	53.1	0.1	0.2
Approach	590	7.1	0.376	8.7	1.42	LOS A	2.9	21.3	0.20	0.51	61.1	6.6	9.3
West													
Left	11	9.7	0.025	7.3	0.02	LOS A	0.1	1.0	0.23	0.48	52.4	0.1	0.2
Through	11	9.7	0.025	4.9	0.01	LOS A	0.1	1.0	0.23	0.35	51.4	0.1	0.2
Right	11	9.7	0.025	13.9	0.04	LOS B	0.1	1.0	0.23	0.74	48.0	0.2	0.2
Approach	33	9.7	0.025	8.7	0.08	LOS A	0.1	1.0	0.23	0.52	50.5	0.4	0.6
All Vehicles	729	7.4	0.376	8.9	1.80	LOS A	2.9	21.3	0.22	0.52	59.6	8.3	11.7

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 4 - Brookville and East-West Access Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	21	7.0	0.068	8.0	0.05	LOS A	0.4	3.0	0.16	0.53	59.6	0.2	0.3
Through	68	7.0	0.068	8.5	0.16	LOS A	0.4	3.0	0.16	0.49	61.7	0.8	1.0
Right	11	9.7	0.068	13.8	0.04	LOS B	0.4	3.0	0.16	0.84	52.9	0.1	0.2
Approach	100	7.3	0.068	8.9	0.25	LOS A	0.4	3.0	0.16	0.54	60.2	1.1	1.5
East													
Left	11	9.7	0.038	10.4	0.03	LOS B	0.2	1.7	0.65	0.63	49.6	0.1	0.2
Through	11	9.7	0.038	8.0	0.02	LOS A	0.2	1.7	0.65	0.58	47.8	0.1	0.2
Right	11	9.7	0.038	17.0	0.05	LOS B	0.2	1.7	0.65	0.75	46.0	0.2	0.3
Approach	33	9.7	0.038	11.8	0.11	LOS B	0.2	1.7	0.65	0.66	47.7	0.5	0.7
North													
Left	11	9.7	0.372	8.1	0.02	LOS A	2.9	21.3	0.19	0.54	59.4	0.1	0.2
Through	568	7.0	0.372	8.5	1.35	LOS A	2.9	21.3	0.19	0.50	61.4	6.4	8.9
Right	11	9.7	0.372	13.8	0.04	LOS B	2.9	21.3	0.19	0.87	53.1	0.1	0.2
Approach	590	7.1	0.372	8.6	1.41	LOS A	2.9	21.3	0.19	0.51	61.2	6.6	9.3
West													
Left	11	9.7	0.025	7.4	0.02	LOS A	0.1	1.0	0.25	0.48	52.2	0.1	0.2
Through	11	9.7	0.025	5.0	0.01	LOS A	0.1	1.0	0.25	0.36	51.2	0.1	0.2
Right	11	9.7	0.025	14.0	0.04	LOS B	0.1	1.0	0.25	0.73	47.9	0.2	0.2
Approach	33	9.7	0.025	8.8	0.08	LOS A	0.1	1.0	0.25	0.52	50.3	0.4	0.6
All Vehicles	755	7.3	0.372	8.8	1.85	LOS A	2.9	21.3	0.21	0.52	59.8	8.6	12.1

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 5 - Brookville and Summerhill

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	1	0.0	0.039	12.9	0.00	LOS B	0.7	5.1	0.34	1.17	46.1	0.0	0.0
Through	95	7.0	0.075	5.1	0.13	LOS A	0.8	6.2	0.35	0.27	59.5	1.1	2.0
Right	11	9.7	0.075	15.0	0.05	LOS B	0.8	6.2	0.36	1.04	48.7	0.1	0.3
Approach	107	7.2	0.075	6.2	0.18	LOS A	0.8	6.2	0.35	0.36	58.2	1.3	2.4
East													
Left	11	9.7	0.081	43.2	0.13	LOS D	0.9	6.4	0.86	0.72	28.6	0.2	0.5
Through	1	0.0	0.081	33.9	0.01	LOS C	0.9	6.4	0.86	0.63	28.3	0.0	0.0
Right	11	9.7	0.081	43.5	0.13	LOS D	0.9	6.4	0.86	0.73	29.9	0.2	0.5
Approach	23	9.3	0.081	42.9	0.27	LOS D	0.9	6.4	0.86	0.72	29.2	0.5	1.1
North													
Left	11	9.7	0.204	15.8	0.05	LOS B	4.1	30.4	0.39	1.37	53.6	0.1	0.3
Through	589	7.0	0.390	6.6	1.09	LOS A	5.6	41.5	0.40	0.39	62.0	6.1	12.9
Right	1	0.0	0.390	13.9	0.00	LOS B	5.6	41.5	0.41	1.68	46.4	0.0	0.0
Approach	601	7.0	0.390	6.8	1.14	LOS A	5.6	41.5	0.40	0.41	61.8	6.3	13.3
West													
Left	1	0.0	0.011	41.0	0.01	LOS D	0.1	0.8	0.84	0.66	28.5	0.0	0.0
Through	1	0.0	0.011	32.9	0.01	LOS C	0.1	0.8	0.84	0.54	29.2	0.0	0.0
Right	1	0.0	0.011	41.2	0.01	LOS D	0.1	0.8	0.84	0.67	28.5	0.0	0.0
Approach	3	0.0	0.011	38.3	0.03	LOS D	0.1	0.8	0.84	0.62	28.7	0.1	0.1
All Vehicles	734	7.1	0.390	8.0	1.63	LOS A	5.6	41.5	0.41	0.41	58.9	8.1	16.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 6 - Amaroo and East-West Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.083	6.7	0.02	LOS A	0.5	3.7	0.16	0.50	55.9	0.1	0.2
Through	100	7.0	0.083	6.6	0.18	LOS A	0.5	3.7	0.16	0.44	57.3	1.1	1.5
Right	11	9.7	0.083	12.5	0.04	LOS B	0.5	3.7	0.16	0.85	50.1	0.1	0.2
Approach	122	7.5	0.083	7.2	0.24	LOS A	0.5	3.7	0.16	0.48	56.5	1.4	1.9
East													
Left	11	9.7	0.039	9.9	0.03	LOS A	0.2	1.7	0.66	0.63	48.5	0.1	0.2
Through	11	9.7	0.039	8.1	0.02	LOS A	0.2	1.7	0.66	0.58	47.7	0.1	0.2
Right	11	9.7	0.039	16.3	0.05	LOS B	0.2	1.7	0.66	0.75	45.0	0.2	0.2
Approach	33	9.7	0.039	11.4	0.10	LOS B	0.2	1.7	0.66	0.66	47.0	0.4	0.7
North													
Left	11	9.7	0.382	6.8	0.02	LOS A	3.0	22.3	0.19	0.51	55.7	0.1	0.2
Through	584	7.0	0.382	6.7	1.08	LOS A	3.0	22.3	0.19	0.45	57.0	6.6	9.1
Right	11	9.7	0.382	12.6	0.04	LOS B	3.0	22.3	0.19	0.86	50.2	0.1	0.2
Approach	606	7.1	0.382	6.8	1.14	LOS A	3.0	22.3	0.19	0.46	56.9	6.9	9.5
West													
Left	11	9.7	0.026	6.9	0.02	LOS A	0.1	1.0	0.30	0.47	50.9	0.1	0.2
Through	11	9.7	0.026	5.1	0.02	LOS A	0.1	1.0	0.30	0.37	50.8	0.1	0.2
Right	11	9.7	0.026	13.3	0.04	LOS B	0.1	1.0	0.30	0.72	46.9	0.2	0.2
Approach	33	9.7	0.026	8.4	0.08	LOS A	0.1	1.0	0.30	0.52	49.4	0.4	0.6
All Vehicles	793	7.4	0.382	7.1	1.56	LOS A	3.0	22.3	0.21	0.47	56.0	9.2	12.6

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 9 - English Street and East-West Access Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.009	9.2	0.03	LOS A	0.0	0.2	0.14	0.64	53.1	0.1	0.2
Through	463	7.0	0.344	4.9	0.63	LOS A	7.4	54.9	0.40	0.35	58.5	5.1	10.3
Right	11	9.7	0.023	17.0	0.05	LOS B	0.2	1.4	0.41	0.72	44.9	0.1	0.3
Approach	485	7.1	0.344	5.3	0.71	LOS A	7.4	54.9	0.39	0.37	58.0	5.4	10.8
East													
Left	21	7.0	0.231	47.3	0.28	LOS D	2.1	15.9	0.92	0.76	27.4	0.5	1.1
Through	11	9.7	0.231	38.1	0.11	LOS D	2.1	15.9	0.92	0.70	26.9	0.2	0.5
Right	21	7.0	0.231	47.4	0.28	LOS D	2.1	15.9	0.92	0.76	27.4	0.5	1.1
Approach	53	7.6	0.231	45.4	0.67	LOS D	2.1	15.9	0.92	0.75	27.3	1.2	2.8
North													
Left	11	9.7	0.424	15.3	0.05	LOS B	9.8	72.9	0.43	1.08	49.0	0.1	0.3
Through	558	7.0	0.424	6.2	0.96	LOS A	9.8	72.9	0.43	0.39	56.3	6.4	13.2
Right	21	7.0	0.039	16.1	0.09	LOS B	0.3	2.6	0.39	0.73	45.6	0.3	0.6
Approach	590	7.0	0.424	6.7	1.10	LOS A	9.8	72.9	0.43	0.42	55.8	6.8	14.1
West													
Left	11	9.7	0.243	47.6	0.14	LOS D	2.2	16.2	0.92	0.76	27.4	0.3	0.6
Through	11	9.7	0.243	38.3	0.12	LOS D	2.2	16.2	0.92	0.70	26.9	0.2	0.5
Right	32	7.0	0.243	47.4	0.42	LOS D	2.2	16.2	0.92	0.76	27.4	0.7	1.7
Approach	53	8.1	0.243	45.6	0.67	LOS D	2.2	16.2	0.92	0.75	27.3	1.2	2.8
All Vehicles	1181	7.1	0.424	9.6	3.16	LOS A	9.8	72.9	0.46	0.43	51.8	14.6	30.5

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - AM Peak

Title: 12 - English Street and Norman Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.209	65.4	0.20	LOS E	1.9	14.5	0.96	0.73	19.4	0.4	0.8
Through	11	9.7	0.209	59.1	0.18	LOS E	1.9	14.5	0.96	0.71	19.3	0.4	0.8
Right	11	9.7	0.209	64.2	0.19	LOS E	1.9	14.5	0.96	0.73	17.6	0.3	0.8
Approach	33	9.7	0.209	62.9	0.57	LOS E	1.9	14.5	0.96	0.72	18.8	1.1	2.4
East													
Left	11	9.7	0.480	63.6	0.19	LOS E	5.4	39.9	0.99	0.78	17.6	0.3	0.8
Through	32	7.0	0.480	59.0	0.52	LOS E	5.4	39.9	0.99	0.77	19.3	1.1	2.3
Right	47	7.0	0.480	65.3	0.86	LOS E	5.4	39.9	0.99	0.78	19.4	1.6	3.5
Approach	90	7.3	0.480	62.9	1.57	LOS E	5.4	39.9	0.99	0.78	19.2	2.9	6.6
North													
Left	11	9.7	0.026	21.6	0.07	LOS C	0.7	5.2	0.46	0.91	41.7	0.1	0.4
Through	16	7.0	0.026	12.4	0.05	LOS B	0.7	5.2	0.46	0.34	47.9	0.2	0.5
Right	579	7.0	0.576	12.7	2.05	LOS B	4.1	30.2	0.19	0.74	49.1	7.1	11.9
Approach	606	7.0	0.576	12.9	2.17	LOS B	4.1	30.2	0.20	0.73	48.9	7.5	12.8
West													
Left	447	7.0	0.381	11.3	1.40	LOS B	2.1	15.5	0.10	0.67	52.5	5.5	8.5
Through	11	9.7	0.253	71.0	0.21	LOS E	1.4	10.3	0.99	0.70	19.4	0.3	0.8
Right	11	9.7	0.253	75.4	0.23	LOS E	1.4	10.3	0.99	0.71	19.6	0.3	0.8
Approach	469	7.1	0.381	14.1	1.84	LOS B	2.1	15.5	0.14	0.67	49.2	6.1	10.0
All Vehicles	1197	7.2	0.576	18.5	6.15	LOS B	5.4	39.9	0.26	0.71	42.2	17.6	31.8

Appendix D. Movement performance – 2026 PM peak

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 1 - Donnybrook and English

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	47	7.0	0.477	26.8	0.35	LOS C	11.8	87.6	0.69	0.93	42.3	0.8	1.9
Through	379	7.0	0.477	17.4	1.83	LOS B	11.8	87.6	0.69	0.65	42.7	5.4	12.9
Right	426	7.0	0.591	27.3	3.23	LOS C	13.2	97.9	0.75	0.84	40.1	7.2	17.4
Approach	853	7.0	0.591	22.9	5.42	LOS C	13.2	97.9	0.72	0.76	41.3	13.3	32.2
East													
Left	32	7.0	0.413	32.1	0.28	LOS C	7.0	52.2	0.78	0.92	40.4	0.5	1.3
Through	468	7.0	0.413	22.8	2.96	LOS C	9.1	67.7	0.79	0.67	43.0	7.5	18.1
Right	68	7.0	0.322	46.0	0.87	LOS D	2.7	20.2	0.90	0.78	29.5	1.4	3.4
Approach	568	7.0	0.413	26.1	4.12	LOS C	9.1	67.7	0.81	0.70	40.8	9.5	22.7
North													
Left	26	7.0	0.099	16.6	0.12	LOS B	1.0	7.2	0.56	0.79	45.3	0.4	0.8
Through	42	7.0	0.099	7.3	0.09	LOS A	1.0	7.2	0.56	0.44	47.7	0.6	1.0
Right	232	7.0	0.580	33.5	2.15	LOS C	8.3	61.3	0.84	0.83	34.0	4.6	10.9
Approach	300	7.0	0.580	28.3	2.36	LOS C	8.3	61.3	0.78	0.77	36.2	5.6	12.7
West													
Left	163	7.0	0.321	19.2	0.87	LOS B	3.9	29.2	0.67	0.82	47.4	2.1	4.6
Through	453	7.0	0.595	23.6	2.96	LOS C	14.3	105.8	0.85	0.73	42.2	7.4	18.1
Right	37	7.0	0.141	39.5	0.40	LOS D	1.3	9.6	0.81	0.76	33.4	0.7	1.6
Approach	653	7.0	0.595	23.4	4.24	LOS C	14.3	105.8	0.80	0.76	42.6	10.2	24.4
All Vehicles	2374	7.0	0.595	24.5	16.13	LOS C	14.3	105.8	0.77	0.75	40.8	38.6	92.0

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 2- Brookville and English (West)

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.022	13.7	0.05	LOS B	0.4	3.0	0.37	0.85	45.1	0.2	0.3
Through	12	17.7	0.022	6.5	0.02	LOS A	0.4	3.0	0.37	0.31	59.7	0.1	0.3
Right	889	7.0	0.809	15.3	3.79	LOS B	10.3	76.3	0.48	0.82	51.6	10.9	21.2
Approach	913	7.3	0.809	15.2	3.85	LOS B	10.3	76.3	0.47	0.82	51.6	11.2	21.8
East													
Left	84	7.0	0.077	19.2	0.45	LOS B	1.8	13.1	0.42	0.73	46.4	1.2	2.7
Through	12	17.7	0.137	49.0	0.16	LOS D	1.2	9.6	0.93	0.68	24.0	0.3	0.7
Right	12	17.7	0.137	59.5	0.20	LOS E	1.2	9.6	0.93	0.74	25.5	0.3	0.7
Approach	108	9.4	0.137	26.9	0.81	LOS C	1.8	13.1	0.53	0.72	39.4	1.8	4.1
North													
Left	12	17.7	0.115	38.5	0.13	LOS D	0.9	7.1	0.86	0.74	33.5	0.2	0.6
Through	12	17.7	0.115	28.4	0.09	LOS C	0.9	7.1	0.86	0.63	35.5	0.2	0.5
Right	12	17.7	0.073	59.3	0.20	LOS E	0.6	4.9	0.94	0.69	22.8	0.3	0.7
Approach	36	17.7	0.115	42.1	0.42	LOS D	0.9	7.1	0.88	0.69	29.8	0.8	1.8
West													
Left	12	17.7	0.090	33.8	0.11	LOS C	1.2	10.0	0.83	0.73	31.7	0.2	0.5
Through	12	17.7	0.090	25.6	0.08	LOS C	1.2	10.0	0.83	0.61	32.4	0.2	0.5
Right	12	17.7	0.090	34.4	0.11	LOS C	1.2	10.0	0.83	0.75	31.6	0.2	0.5
Approach	36	17.7	0.090	31.3	0.31	LOS C	1.2	10.0	0.83	0.70	31.9	0.7	1.6
All Vehicles	1093	8.2	0.809	17.8	5.39	LOS B	10.3	76.3	0.51	0.80	48.0	14.5	29.3

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 3 - Brookville and Kinloch

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.552	8.4	0.03	LOS A	5.5	40.9	0.27	0.53	58.8	0.1	0.2
Through	853	7.0	0.552	8.7	2.05	LOS A	5.5	40.9	0.27	0.50	60.6	9.7	13.9
Right	12	17.7	0.552	14.1	0.05	LOS B	5.5	40.9	0.27	0.83	53.1	0.1	0.2
Approach	876	7.3	0.552	8.7	2.13	LOS A	5.5	40.9	0.27	0.50	60.5	9.9	14.3
East													
Left	16	7.0	0.032	7.4	0.03	LOS A	0.2	1.3	0.28	0.48	52.0	0.2	0.3
Through	12	17.7	0.032	5.2	0.02	LOS A	0.2	1.3	0.28	0.37	50.9	0.1	0.2
Right	12	17.7	0.032	14.3	0.05	LOS B	0.2	1.3	0.28	0.73	47.9	0.2	0.3
Approach	40	13.4	0.032	8.8	0.10	LOS A	0.2	1.3	0.28	0.52	50.3	0.5	0.7
North													
Left	12	17.7	0.073	8.3	0.03	LOS A	0.4	3.3	0.18	0.53	59.4	0.1	0.2
Through	79	7.0	0.073	8.5	0.19	LOS A	0.4	3.3	0.18	0.49	61.4	0.9	1.2
Right	12	17.7	0.073	14.0	0.05	LOS B	0.4	3.3	0.18	0.83	52.9	0.1	0.2
Approach	103	9.5	0.073	9.1	0.26	LOS A	0.4	3.3	0.18	0.54	60.1	1.2	1.6
West													
Left	12	17.7	0.063	14.4	0.05	LOS B	0.4	3.2	0.81	0.75	46.4	0.2	0.3
Through	12	17.7	0.063	12.0	0.04	LOS B	0.4	3.2	0.81	0.72	44.7	0.2	0.3
Right	12	17.7	0.063	21.0	0.07	LOS C	0.4	3.2	0.81	0.82	43.3	0.2	0.3
Approach	36	17.7	0.063	15.8	0.16	LOS B	0.4	3.2	0.81	0.77	44.7	0.5	0.9
All Vehicles	1054	8.1	0.552	9.0	2.64	LOS A	5.5	40.9	0.28	0.51	59.3	12.1	17.5

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 4 - Brookville and East-West Access Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.555	8.4	0.03	LOS A	5.6	41.9	0.27	0.53	58.7	0.1	0.2
Through	858	7.0	0.555	8.7	2.06	LOS A	5.6	41.9	0.27	0.49	60.6	9.7	14.0
Right	12	17.7	0.555	14.1	0.05	LOS B	5.6	41.9	0.27	0.82	53.1	0.1	0.2
Approach	882	7.3	0.555	8.7	2.14	LOS A	5.6	41.9	0.27	0.50	60.5	10.0	14.4
East													
Left	12	17.7	0.032	8.0	0.03	LOS A	0.2	1.4	0.35	0.50	51.6	0.2	0.2
Through	12	17.7	0.032	5.5	0.02	LOS A	0.2	1.4	0.35	0.39	50.4	0.1	0.2
Right	12	17.7	0.032	14.6	0.05	LOS B	0.2	1.4	0.35	0.72	47.8	0.2	0.3
Approach	36	17.7	0.032	9.4	0.09	LOS A	0.2	1.4	0.35	0.54	49.8	0.5	0.7
North													
Left	12	17.7	0.093	8.4	0.03	LOS A	0.6	4.4	0.23	0.53	59.0	0.1	0.2
Through	105	7.0	0.093	8.6	0.25	LOS A	0.6	4.4	0.23	0.50	60.9	1.2	1.6
Right	12	17.7	0.093	14.1	0.05	LOS B	0.6	4.4	0.23	0.82	52.9	0.1	0.2
Approach	129	9.0	0.093	9.1	0.33	LOS A	0.6	4.4	0.23	0.53	60.0	1.5	2.0
West													
Left	12	17.7	0.090	14.1	0.05	LOS B	0.6	4.5	0.82	0.78	46.4	0.2	0.3
Through	12	17.7	0.090	11.7	0.04	LOS B	0.6	4.5	0.82	0.75	44.6	0.2	0.3
Right	32	7.0	0.090	20.4	0.18	LOS C	0.6	4.5	0.82	0.81	43.3	0.5	0.8
Approach	55	11.6	0.090	17.2	0.26	LOS B	0.6	4.5	0.82	0.79	44.2	0.9	1.4
All Vehicles	1102	8.0	0.555	9.2	2.82	LOS A	5.6	41.9	0.30	0.52	58.9	12.8	18.5

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 5 - Brookville and Summerhill

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	1	0.0	0.295	13.5	0.00	LOS B	6.7	49.8	0.39	1.20	45.9	0.0	0.0
Through	868	7.0	0.564	5.5	1.33	LOS A	8.9	66.2	0.40	0.35	58.7	10.3	21.1
Right	12	17.7	0.564	15.4	0.05	LOS B	8.9	66.2	0.41	1.23	49.3	0.1	0.4
Approach	881	7.1	0.564	5.7	1.39	LOS A	8.9	66.2	0.40	0.37	58.5	10.4	21.5
East													
Left	12	17.7	0.104	48.6	0.16	LOS D	1.0	8.4	0.88	0.73	26.9	0.3	0.6
Through	1	0.0	0.104	39.1	0.01	LOS D	1.0	8.4	0.88	0.65	26.5	0.0	0.1
Right	12	17.7	0.104	49.0	0.16	LOS D	1.0	8.4	0.88	0.73	28.1	0.3	0.7
Approach	25	16.9	0.104	48.4	0.33	LOS D	1.0	8.4	0.88	0.72	27.5	0.6	1.3
North													
Left	12	17.7	0.052	15.0	0.05	LOS B	0.9	7.1	0.31	1.22	53.7	0.1	0.3
Through	142	7.0	0.100	5.5	0.22	LOS A	1.2	9.0	0.31	0.30	64.1	1.4	2.8
Right	1	0.0	0.100	12.7	0.00	LOS B	1.2	9.0	0.31	1.74	46.8	0.0	0.0
Approach	155	7.8	0.100	6.2	0.27	LOS A	1.2	9.0	0.31	0.38	63.1	1.6	3.2
West													
Left	1	0.0	0.012	45.8	0.01	LOS D	0.1	0.9	0.86	0.66	26.9	0.0	0.1
Through	1	0.0	0.012	37.6	0.01	LOS D	0.1	0.9	0.86	0.55	27.4	0.0	0.1
Right	1	0.0	0.012	45.9	0.01	LOS D	0.1	0.9	0.86	0.66	26.9	0.0	0.1
Approach	3	0.0	0.012	43.1	0.04	LOS D	0.1	0.9	0.86	0.63	27.0	0.1	0.2
All Vehicles	1064	7.4	0.564	6.9	2.03	LOS A	8.9	66.2	0.40	0.38	57.5	12.7	26.1

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 6 - Amaroo and East-West Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.559	7.1	0.02	LOS A	5.7	42.5	0.27	0.50	55.1	0.1	0.2
Through	863	7.0	0.559	6.8	1.63	LOS A	5.7	42.5	0.27	0.45	56.3	9.9	14.0
Right	12	17.7	0.559	12.9	0.04	LOS B	5.7	42.5	0.27	0.82	50.2	0.2	0.2
Approach	887	7.3	0.559	6.9	1.70	LOS A	5.7	42.5	0.27	0.45	56.2	10.2	14.4
East													
Left	16	7.0	0.034	7.2	0.03	LOS A	0.2	1.4	0.37	0.49	50.4	0.2	0.3
Through	12	17.7	0.034	5.6	0.02	LOS A	0.2	1.4	0.37	0.41	50.1	0.1	0.2
Right	12	17.7	0.034	13.8	0.05	LOS B	0.2	1.4	0.37	0.72	46.8	0.2	0.3
Approach	40	13.4	0.034	8.7	0.10	LOS A	0.2	1.4	0.37	0.54	49.1	0.5	0.7
North													
Left	12	17.7	0.121	6.9	0.02	LOS A	0.8	5.8	0.18	0.50	55.7	0.1	0.2
Through	153	7.0	0.121	6.7	0.28	LOS A	0.8	5.8	0.18	0.45	57.1	1.7	2.3
Right	12	17.7	0.121	12.7	0.04	LOS B	0.8	5.8	0.18	0.85	50.2	0.2	0.2
Approach	176	8.4	0.121	7.1	0.35	LOS A	0.8	5.8	0.18	0.48	56.5	2.0	2.8
West													
Left	12	17.7	0.063	14.0	0.05	LOS B	0.4	3.2	0.81	0.75	45.2	0.2	0.3
Through	12	17.7	0.063	12.1	0.04	LOS B	0.4	3.2	0.81	0.73	44.6	0.2	0.3
Right	12	17.7	0.063	20.3	0.07	LOS C	0.4	3.2	0.81	0.82	42.2	0.2	0.3
Approach	36	17.7	0.063	15.5	0.15	LOS B	0.4	3.2	0.81	0.77	43.9	0.5	0.9
All Vehicles	1139	8.0	0.559	7.2	2.29	LOS A	5.7	42.5	0.28	0.47	55.5	13.3	18.8

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 9 - English Street and East-West Access Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	21	7.0	0.017	9.1	0.05	LOS A	0.1	0.5	0.11	0.64	53.3	0.2	0.4
Through	905	7.0	0.626	5.8	1.45	LOS A	21.0	156.2	0.48	0.44	56.8	10.3	24.9
Right	21	7.0	0.048	16.7	0.10	LOS B	0.4	3.0	0.37	0.74	45.1	0.3	0.6
Approach	947	7.0	0.626	6.1	1.60	LOS A	21.0	156.2	0.47	0.45	56.4	10.8	25.9
East													
Left	12	17.7	0.206	59.1	0.20	LOS E	1.8	14.7	0.94	0.75	24.2	0.3	0.7
Through	12	17.7	0.206	49.6	0.16	LOS D	1.8	14.7	0.94	0.70	23.7	0.3	0.7
Right	12	17.7	0.206	59.3	0.20	LOS E	1.8	14.7	0.94	0.75	24.2	0.3	0.7
Approach	36	17.7	0.206	56.0	0.56	LOS E	1.8	14.7	0.94	0.73	24.0	0.9	2.2
North													
Left	12	17.7	0.470	14.7	0.05	LOS B	12.6	93.9	0.38	1.11	49.5	0.1	0.4
Through	663	7.0	0.470	5.5	1.01	LOS A	12.6	93.9	0.38	0.35	57.7	7.4	16.0
Right	21	7.0	0.080	21.5	0.13	LOS C	0.5	3.9	0.47	0.75	41.0	0.3	0.7
Approach	696	7.2	0.470	6.1	1.18	LOS A	12.6	93.9	0.39	0.38	56.9	7.9	17.1
West													
Left	12	17.7	0.255	59.5	0.20	LOS E	2.3	17.9	0.95	0.75	24.1	0.3	0.7
Through	12	17.7	0.255	50.0	0.17	LOS D	2.3	17.9	0.95	0.71	23.5	0.3	0.7
Right	21	7.0	0.255	59.1	0.35	LOS E	2.3	17.9	0.95	0.75	24.1	0.6	1.3
Approach	45	12.7	0.255	56.8	0.71	LOS E	2.3	17.9	0.95	0.74	23.9	1.2	2.8
All Vehicles	1724	7.4	0.626	8.4	4.05	LOS A	21.0	156.2	0.46	0.44	53.3	20.8	48.0

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2026 - Scenario 1B - PM Peak

Title: 12 - English Street and Norman Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.241	66.0	0.22	LOS E	2.1	17.0	0.97	0.73	19.3	0.4	0.9
Through	12	17.7	0.241	59.5	0.20	LOS E	2.1	17.0	0.97	0.71	19.2	0.4	0.9
Right	12	17.7	0.241	64.7	0.21	LOS E	2.1	17.0	0.97	0.74	17.5	0.4	0.9
Approach	36	17.7	0.241	63.4	0.63	LOS E	2.1	17.0	0.97	0.73	18.7	1.2	2.6
East													
Left	12	17.7	0.378	62.9	0.21	LOS E	4.1	30.9	0.97	0.76	17.7	0.4	0.9
Through	21	7.0	0.378	58.2	0.34	LOS E	4.1	30.9	0.97	0.75	19.4	0.7	1.5
Right	37	7.0	0.378	64.5	0.66	LOS E	4.1	30.9	0.97	0.77	19.5	1.2	2.7
Approach	70	8.8	0.378	62.4	1.21	LOS E	4.1	30.9	0.97	0.76	19.2	2.3	5.1
North													
Left	12	17.7	0.028	21.8	0.07	LOS C	0.7	5.5	0.46	0.91	41.6	0.2	0.4
Through	16	7.0	0.028	12.4	0.05	LOS B	0.7	5.5	0.46	0.34	47.8	0.2	0.5
Right	674	7.0	0.671	13.6	2.55	LOS B	5.9	43.8	0.27	0.76	48.1	8.4	14.8
Approach	701	7.2	0.671	13.7	2.68	LOS B	5.9	43.8	0.28	0.75	48.0	8.8	15.7
West													
Left	921	7.0	0.784	15.1	3.86	LOS B	10.8	80.4	0.51	0.79	48.4	12.3	23.1
Through	12	17.7	0.390	72.0	0.24	LOS E	2.1	16.0	1.00	0.72	19.1	0.3	0.8
Right	21	7.0	0.390	76.2	0.45	LOS E	2.1	16.0	1.00	0.72	19.3	0.6	1.5
Approach	954	7.1	0.784	17.1	4.54	LOS B	10.8	80.4	0.52	0.79	46.3	13.3	25.4
All Vehicles	1761	7.4	0.784	18.5	9.06	LOS B	10.8	80.4	0.45	0.77	43.2	25.5	48.9

Appendix E. Movement performance – 2046 AM peak

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 1 - Donnybrook and English

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	26	7.0	0.359	43.4	0.32	LOS D	6.1	45.1	0.82	0.90	33.0	0.5	1.3
Through	347	7.0	0.359	30.0	2.90	LOS C	7.0	52.1	0.83	0.70	35.7	6.7	15.2
Right	153	7.0	0.397	53.8	2.28	LOS D	3.4	24.9	0.97	0.77	27.9	3.7	8.5
Approach	526	7.0	0.397	37.6	5.50	LOS D	7.0	52.1	0.87	0.73	33.0	11.0	24.9
East													
Left	274	7.0	0.716	33.3	2.53	LOS C	13.9	103.5	0.93	0.91	38.1	4.6	11.4
Through	863	7.0	0.716	32.5	7.79	LOS C	14.8	109.7	0.96	0.85	36.2	16.5	40.7
Right	242	7.0	0.900	68.7	4.62	LOS E	6.4	47.7	1.00	0.94	24.7	6.7	15.8
Approach	1379	7.0	0.900	39.0	14.94	LOS D	14.8	109.7	0.96	0.88	33.8	27.8	67.9
North													
Left	168	7.0	0.160	13.1	0.61	LOS B	1.4	10.7	0.27	0.73	56.3	2.0	3.6
Through	326	7.0	0.298	28.4	2.57	LOS C	5.7	42.4	0.82	0.69	38.6	5.5	13.4
Right	332	7.0	0.862	64.0	5.89	LOS E	8.5	62.9	1.00	0.94	25.9	8.7	20.8
Approach	826	7.0	0.862	39.5	9.07	LOS D	8.5	62.9	0.78	0.79	34.0	16.2	37.9
West													
Left	142	7.0	0.325	22.8	0.90	LOS C	3.8	28.5	0.75	0.83	47.2	2.0	4.3
Through	384	7.0	0.325	26.6	2.84	LOS C	5.8	43.0	0.83	0.68	40.0	6.6	15.5
Right	32	7.0	0.235	56.3	0.49	LOS E	1.4	10.5	0.97	0.72	27.0	0.8	1.7
Approach	558	7.0	0.325	27.3	4.23	LOS C	5.8	43.0	0.82	0.72	40.5	9.4	21.6
All Vehicles	3289	7.0	0.900	36.9	33.74	LOS D	14.8	109.7	0.88	0.81	34.7	64.4	152.3

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 2- Brookville and English (West)

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	42	7.0	0.030	9.6	0.11	LOS A	0.2	1.3	0.17	0.67	52.7	0.5	0.7
Through	32	7.0	0.026	5.7	0.05	LOS A	0.5	3.5	0.37	0.28	57.5	0.4	0.7
Right	289	7.0	0.364	17.1	1.37	LOS B	5.3	39.0	0.53	0.77	46.2	4.0	8.5
Approach	363	7.0	0.364	15.2	1.53	LOS B	5.3	39.0	0.47	0.72	47.7	4.9	9.9
East													
Left	384	7.0	0.267	10.3	1.10	LOS B	1.9	14.2	0.22	0.70	53.3	4.7	7.3
Through	137	7.0	0.174	32.9	1.25	LOS C	2.5	18.5	0.86	0.68	32.9	2.5	6.0
Right	11	9.7	0.039	41.9	0.13	LOS D	0.4	3.0	0.83	0.70	30.8	0.2	0.5
Approach	532	7.1	0.267	16.8	2.48	LOS B	2.5	18.5	0.39	0.69	45.7	7.4	13.8
North													
Left	11	9.7	0.061	29.7	0.09	LOS C	0.6	4.6	0.79	0.75	38.1	0.2	0.4
Through	11	9.7	0.061	19.9	0.06	LOS B	0.6	4.6	0.79	0.57	39.6	0.2	0.4
Right	16	7.0	0.049	40.0	0.18	LOS D	0.6	4.2	0.82	0.71	30.4	0.3	0.7
Approach	37	8.6	0.061	31.2	0.32	LOS C	0.6	4.6	0.81	0.68	34.9	0.7	1.5
West													
Left	42	7.0	0.128	31.1	0.36	LOS C	1.8	13.6	0.78	0.76	34.2	0.8	1.8
Through	68	7.0	0.128	28.9	0.55	LOS C	1.8	13.6	0.83	0.63	32.4	1.4	3.0
Right	95	7.0	0.362	44.6	1.17	LOS D	3.8	28.0	0.91	0.78	28.1	2.1	4.9
Approach	205	7.0	0.362	36.6	2.09	LOS D	3.8	28.0	0.86	0.73	30.6	4.3	9.7
All Vehicles	1138	7.1	0.364	20.3	6.43	LOS C	5.3	39.0	0.52	0.71	42.1	17.3	34.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 3 - Brookville and Kinloch

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	74	7.0	0.157	6.9	0.14	LOS A	0.8	5.7	0.17	0.52	55.5	0.8	1.1
Through	321	7.0	0.157	6.7	0.60	LOS A	0.8	5.7	0.18	0.45	57.1	3.6	4.8
Right	26	7.0	0.157	12.6	0.09	LOS B	0.8	5.6	0.18	0.85	50.1	0.3	0.5
Approach	421	7.0	0.157	7.1	0.83	LOS A	0.8	5.7	0.18	0.49	56.3	4.8	6.4
East													
Left	11	9.7	0.037	8.2	0.02	LOS A	0.2	1.2	0.48	0.60	49.7	0.1	0.2
Through	11	9.7	0.037	6.4	0.02	LOS A	0.2	1.2	0.48	0.52	49.2	0.1	0.2
Right	11	9.7	0.037	14.6	0.04	LOS B	0.2	1.2	0.48	0.78	46.2	0.2	0.2
Approach	33	9.7	0.037	9.7	0.09	LOS A	0.2	1.2	0.48	0.63	48.3	0.4	0.6
North													
Left	11	9.7	0.155	7.1	0.02	LOS A	0.8	5.8	0.22	0.54	55.3	0.1	0.2
Through	363	7.0	0.155	6.8	0.68	LOS A	0.8	5.8	0.22	0.46	56.8	4.1	5.5
Right	32	7.0	0.155	12.7	0.11	LOS B	0.8	5.7	0.22	0.83	50.1	0.4	0.6
Approach	406	7.1	0.155	7.2	0.82	LOS A	0.8	5.8	0.22	0.49	56.1	4.7	6.3
West													
Left	11	9.7	0.063	8.0	0.02	LOS A	0.3	2.0	0.45	0.58	49.6	0.1	0.2
Through	11	9.7	0.063	6.1	0.02	LOS A	0.3	2.0	0.45	0.50	49.2	0.1	0.2
Right	37	7.0	0.063	14.2	0.15	LOS B	0.3	2.0	0.45	0.75	46.2	0.6	0.8
Approach	59	8.0	0.063	11.6	0.19	LOS B	0.3	2.0	0.45	0.67	47.3	0.8	1.2
All Vehicles	918	7.2	0.157	7.5	1.92	LOS A	0.8	5.8	0.22	0.51	55.2	10.7	14.5

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 4 - Brookville and East-West Access Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	147	7.0	0.230	6.9	0.28	LOS A	1.2	9.0	0.20	0.52	55.3	1.6	2.2
Through	405	7.0	0.230	6.7	0.76	LOS A	1.2	9.0	0.20	0.45	56.8	4.6	6.2
Right	68	7.0	0.230	12.6	0.24	LOS B	1.2	9.0	0.21	0.82	50.0	0.9	1.3
Approach	621	7.0	0.230	7.4	1.28	LOS A	1.2	9.0	0.20	0.51	55.6	7.1	9.7
East													
Left	21	7.0	0.052	8.5	0.05	LOS A	0.2	1.7	0.52	0.63	49.4	0.3	0.4
Through	11	9.7	0.052	6.8	0.02	LOS A	0.2	1.7	0.52	0.57	48.8	0.1	0.2
Right	11	9.7	0.052	14.9	0.04	LOS B	0.2	1.7	0.52	0.81	46.0	0.2	0.2
Approach	43	8.4	0.052	9.7	0.12	LOS A	0.2	1.7	0.52	0.66	48.3	0.6	0.8
North													
Left	11	9.7	0.181	7.6	0.02	LOS A	0.9	7.0	0.37	0.58	54.4	0.1	0.2
Through	374	7.0	0.181	7.3	0.76	LOS A	0.9	7.0	0.37	0.52	55.4	4.4	6.0
Right	37	7.0	0.181	13.3	0.14	LOS B	0.9	6.9	0.38	0.81	49.9	0.5	0.7
Approach	421	7.1	0.181	7.9	0.92	LOS A	0.9	7.0	0.37	0.55	54.8	5.0	6.8
West													
Left	11	9.7	0.146	8.6	0.03	LOS A	0.7	4.9	0.53	0.66	48.9	0.1	0.2
Through	11	9.7	0.146	6.8	0.02	LOS A	0.7	4.9	0.53	0.59	48.2	0.1	0.2
Right	105	7.0	0.146	14.9	0.44	LOS B	0.7	4.9	0.53	0.79	45.6	1.6	2.3
Approach	127	7.5	0.146	13.7	0.48	LOS B	0.7	4.9	0.53	0.76	46.0	1.9	2.7
All Vehicles	1212	7.1	0.230	8.3	2.80	LOS A	1.2	9.0	0.31	0.55	53.8	14.6	20.1

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 5 - Brookville and Summerhill

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	16	7.0	0.195	43.6	0.19	LOS D	2.8	20.8	0.87	0.81	31.6	0.3	0.8
Through	95	7.0	0.195	33.6	0.88	LOS C	2.8	20.8	0.87	0.67	32.3	1.9	4.3
Right	26	7.0	0.195	43.7	0.32	LOS D	2.4	18.1	0.87	0.79	31.1	0.5	1.3
Approach	137	7.0	0.195	36.7	1.39	LOS D	2.8	20.8	0.87	0.71	32.0	2.7	6.4
East													
Left	53	7.0	0.636	44.3	0.65	LOS D	12.0	89.1	0.95	0.86	31.5	1.1	2.7
Through	532	7.0	0.636	34.3	5.06	LOS C	12.1	89.9	0.95	0.80	32.3	10.6	25.8
Right	200	7.0	0.434	27.9	1.55	LOS C	5.6	41.6	0.83	0.80	38.1	3.4	7.7
Approach	784	7.0	0.636	33.3	7.26	LOS C	12.1	89.9	0.92	0.81	33.6	15.0	36.2
North													
Left	111	7.0	0.106	11.3	0.35	LOS B	0.9	6.9	0.26	0.69	52.3	1.4	2.4
Through	95	7.0	0.128	19.0	0.50	LOS B	2.7	20.1	0.67	0.53	42.3	1.4	3.3
Right	295	7.0	0.646	53.9	4.41	LOS D	6.7	50.0	1.00	0.83	26.6	7.1	16.7
Approach	500	7.0	0.646	37.9	5.26	LOS D	6.7	50.0	0.77	0.74	32.5	9.9	22.4
West													
Left	353	7.0	0.341	11.3	1.11	LOS B	3.2	23.6	0.30	0.71	52.3	4.4	7.7
Through	458	7.0	0.496	32.9	4.18	LOS C	9.1	67.2	0.91	0.76	33.3	8.9	21.4
Right	274	7.0	0.648	30.2	2.29	LOS C	8.1	60.0	0.94	0.83	36.6	4.8	11.0
Approach	1084	7.0	0.648	25.2	7.58	LOS C	9.1	67.2	0.72	0.76	38.8	18.0	40.2
All Vehicles	2505	7.0	0.648	30.9	21.49	LOS C	12.1	89.9	0.80	0.77	35.3	45.7	105.2

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 6 - Amaroo and East-West Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	26	7.0	0.076	6.8	0.05	LOS A	0.4	2.6	0.13	0.53	55.9	0.3	0.4
Through	137	7.0	0.076	6.6	0.25	LOS A	0.4	2.6	0.13	0.44	57.5	1.5	2.0
Right	42	7.0	0.076	12.5	0.15	LOS B	0.4	2.6	0.13	0.79	50.0	0.6	0.8
Approach	205	7.0	0.076	7.8	0.45	LOS A	0.4	2.6	0.13	0.52	55.6	2.4	3.2
East													
Left	32	7.0	0.059	8.1	0.07	LOS A	0.3	1.9	0.47	0.61	49.7	0.4	0.6
Through	11	9.7	0.059	6.4	0.02	LOS A	0.3	1.9	0.47	0.54	49.3	0.1	0.2
Right	11	9.7	0.059	14.5	0.04	LOS B	0.3	1.9	0.47	0.80	46.3	0.2	0.2
Approach	53	8.1	0.059	9.0	0.13	LOS A	0.3	1.9	0.47	0.63	48.9	0.7	1.0
North													
Left	11	9.7	0.154	7.1	0.02	LOS A	0.7	5.5	0.22	0.54	55.3	0.1	0.2
Through	379	7.0	0.154	6.8	0.72	LOS A	0.7	5.5	0.22	0.47	56.8	4.3	5.8
Right	11	9.7	0.154	12.8	0.04	LOS B	0.7	5.5	0.23	0.86	50.2	0.1	0.2
Approach	401	7.1	0.154	7.0	0.78	LOS A	0.7	5.5	0.22	0.48	56.5	4.6	6.1
West													
Left	11	9.7	0.045	7.2	0.02	LOS A	0.2	1.5	0.33	0.50	50.5	0.1	0.2
Through	11	9.7	0.045	5.4	0.02	LOS A	0.2	1.5	0.33	0.41	50.3	0.1	0.2
Right	26	7.0	0.045	13.5	0.10	LOS B	0.2	1.5	0.33	0.72	46.6	0.4	0.6
Approach	48	8.2	0.045	10.2	0.14	LOS B	0.2	1.5	0.33	0.60	48.1	0.7	0.9
All Vehicles	707	7.2	0.154	7.6	1.49	LOS A	0.7	5.5	0.22	0.51	54.9	8.3	11.3

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 7 - Summerhill and North-South Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	16	7.0	0.073	9.4	0.04	LOS A	0.3	2.3	0.60	0.73	49.1	0.2	0.3
Through	26	7.0	0.073	7.6	0.06	LOS A	0.3	2.3	0.60	0.67	48.4	0.3	0.5
Right	11	9.7	0.073	15.8	0.05	LOS B	0.3	2.3	0.60	0.88	45.5	0.2	0.3
Approach	53	7.6	0.073	9.8	0.14	LOS A	0.3	2.3	0.60	0.73	47.9	0.7	1.0
East													
Left	26	7.0	0.295	7.3	0.05	LOS A	1.7	12.7	0.34	0.56	54.5	0.3	0.4
Through	653	7.0	0.295	7.1	1.29	LOS A	1.7	12.7	0.34	0.50	55.6	7.6	10.4
Right	53	7.0	0.295	13.1	0.19	LOS B	1.7	12.5	0.35	0.81	50.0	0.7	1.0
Approach	732	7.0	0.295	7.6	1.54	LOS A	1.7	12.7	0.34	0.53	55.1	8.6	11.8
North													
Left	26	7.0	0.137	8.6	0.06	LOS A	0.6	4.5	0.54	0.68	49.0	0.3	0.5
Through	21	7.0	0.137	6.9	0.04	LOS A	0.6	4.5	0.54	0.60	48.3	0.3	0.4
Right	68	7.0	0.137	15.0	0.28	LOS B	0.6	4.5	0.54	0.82	45.7	1.0	1.5
Approach	116	7.0	0.137	12.1	0.39	LOS B	0.6	4.5	0.54	0.75	46.8	1.6	2.4
West													
Left	89	7.0	0.233	7.1	0.18	LOS A	1.2	9.2	0.25	0.53	55.0	1.0	1.4
Through	474	7.0	0.233	6.9	0.91	LOS A	1.2	9.2	0.26	0.47	56.3	5.4	7.3
Right	42	7.0	0.233	12.8	0.15	LOS B	1.2	9.1	0.26	0.83	50.1	0.6	0.8
Approach	605	7.0	0.233	7.3	1.23	LOS A	1.2	9.2	0.26	0.51	55.7	7.0	9.5
All Vehicles	1506	7.0	0.295	7.9	3.30	LOS A	1.7	12.7	0.33	0.54	54.3	17.9	24.7

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 8 - English Street and North-South Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.172	9.0	0.03	LOS A	0.8	5.7	0.56	0.70	48.6	0.1	0.2
Through	11	9.7	0.172	7.2	0.02	LOS A	0.8	5.7	0.56	0.62	47.9	0.1	0.2
Right	121	7.0	0.172	15.3	0.51	LOS B	0.8	5.7	0.56	0.82	45.3	1.8	2.7
Approach	143	7.4	0.172	14.2	0.56	LOS B	0.8	5.7	0.56	0.79	45.7	2.1	3.1
East													
Left	179	7.0	0.261	6.8	0.34	LOS A	1.5	10.8	0.16	0.52	55.6	2.0	2.7
Through	511	7.0	0.261	6.6	0.94	LOS A	1.5	10.8	0.16	0.45	57.2	5.8	7.8
Right	42	7.0	0.261	12.5	0.15	LOS B	1.4	10.7	0.17	0.86	50.1	0.6	0.8
Approach	732	7.0	0.261	7.0	1.43	LOS A	1.5	10.8	0.16	0.49	56.4	8.3	11.2
North													
Left	11	9.7	0.039	8.4	0.03	LOS A	0.2	1.3	0.50	0.61	49.5	0.1	0.2
Through	11	9.7	0.039	6.6	0.02	LOS A	0.2	1.3	0.50	0.54	49.0	0.1	0.2
Right	11	9.7	0.039	14.8	0.04	LOS B	0.2	1.3	0.50	0.79	46.1	0.2	0.2
Approach	33	9.7	0.039	9.9	0.09	LOS A	0.2	1.3	0.50	0.64	48.1	0.4	0.6
West													
Left	21	7.0	0.158	7.4	0.04	LOS A	0.8	6.1	0.36	0.57	54.4	0.2	0.3
Through	332	7.0	0.158	7.3	0.67	LOS A	0.8	6.1	0.36	0.51	55.5	3.9	5.3
Right	16	7.0	0.158	13.2	0.06	LOS B	0.8	6.0	0.37	0.83	50.1	0.2	0.3
Approach	368	7.0	0.158	7.5	0.77	LOS A	0.8	6.1	0.36	0.53	55.2	4.3	5.9
All Vehicles	1275	7.1	0.261	8.0	2.85	LOS A	1.5	10.8	0.27	0.54	54.3	15.2	20.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 9 - English Street and East-West Access Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	16	7.0	0.214	16.7	0.07	LOS B	4.6	34.3	0.45	1.09	47.6	0.2	0.5
Through	489	7.0	0.214	7.4	1.01	LOS A	4.6	34.5	0.45	0.39	54.6	5.8	12.1
Right	11	9.7	0.024	18.2	0.05	LOS B	0.2	1.5	0.44	0.71	43.8	0.1	0.3
Approach	516	7.1	0.214	7.9	1.14	LOS A	4.6	34.5	0.45	0.41	54.1	6.1	12.9
East													
Left	26	7.0	0.175	39.4	0.29	LOS C	2.3	16.9	0.84	0.77	30.2	0.6	1.3
Through	11	9.7	0.175	30.2	0.09	LOS C	2.3	16.9	0.84	0.65	30.0	0.2	0.5
Right	26	7.0	0.175	39.4	0.29	LOS C	2.3	16.9	0.84	0.77	30.2	0.6	1.3
Approach	63	7.5	0.175	37.8	0.67	LOS C	2.3	16.9	0.84	0.75	30.2	1.3	3.0
North													
Left	11	9.7	0.241	17.0	0.05	LOS B	5.3	39.5	0.46	1.12	47.5	0.1	0.3
Through	558	7.0	0.241	7.6	1.17	LOS A	5.3	39.6	0.46	0.40	54.4	6.6	14.0
Right	16	7.0	0.031	18.1	0.08	LOS B	0.3	2.2	0.45	0.72	43.8	0.2	0.5
Approach	585	7.1	0.241	8.0	1.30	LOS A	5.3	39.6	0.46	0.42	53.9	7.0	14.8
West													
Left	21	7.0	0.244	40.1	0.23	LOS C	3.1	23.0	0.85	0.78	29.9	0.4	1.0
Through	11	9.7	0.244	30.9	0.09	LOS C	3.1	23.0	0.85	0.67	29.7	0.2	0.5
Right	53	7.0	0.244	40.0	0.59	LOS C	3.1	23.0	0.85	0.78	29.9	1.1	2.6
Approach	85	7.3	0.244	38.9	0.91	LOS C	3.1	23.0	0.85	0.77	29.9	1.8	4.1
All Vehicles	1249	7.1	0.244	11.6	4.02	LOS A	5.3	39.6	0.50	0.46	49.4	16.2	34.7

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 10 - Hume Highway SB On Ramp

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Approach	0	0.0	0.000	0.0	0.00	LOS X	0.0	0.0	0.00	0.00	0.0	0.0	0.0
East													
Left	132	7.0	0.101	13.0	0.47	LOS B	0.4	3.2	0.15	0.97	52.1	2.0	3.2
Through	63	7.0	0.052	5.8	0.10	LOS A	1.0	7.2	0.37	0.29	50.2	0.8	1.4
Approach	195	7.0	0.101	10.7	0.58	LOS B	1.0	7.2	0.23	0.75	51.5	2.7	4.6
West													
Through	200	7.0	0.082	5.9	0.33	LOS A	1.6	11.6	0.38	0.31	50.0	2.4	4.6
Right	89	7.0	0.129	15.8	0.39	LOS B	1.5	11.0	0.40	0.75	49.2	1.4	2.8
Approach	289	7.0	0.129	9.0	0.72	LOS A	1.6	11.6	0.39	0.45	49.7	3.8	7.5
All Vehicles	484	7.0	0.129	9.7	1.30	LOS A	1.6	11.6	0.32	0.57	50.4	6.6	12.0

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 11 - Hume Highway NB Off Ramp

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.094	34.8	0.10	LOS C	1.4	10.6	0.74	0.81	39.9	0.2	0.4
Right	89	7.0	0.094	35.3	0.88	LOS D	1.6	11.7	0.75	0.77	38.3	1.4	3.4
Approach	100	7.3	0.094	35.2	0.98	LOS D	1.6	11.7	0.75	0.77	38.5	1.6	3.9
East													
Through	63	7.0	0.030	9.0	0.16	LOS A	0.6	4.4	0.46	0.35	46.4	0.8	1.7
Approach	63	7.0	0.030	9.0	0.16	LOS A	0.6	4.4	0.46	0.35	46.4	0.8	1.7
West													
Through	205	7.0	0.097	9.5	0.54	LOS A	2.0	15.1	0.48	0.39	45.9	2.7	5.5
Approach	205	7.0	0.097	9.5	0.54	LOS A	2.0	15.1	0.48	0.39	45.9	2.7	5.5
All Vehicles	369	7.1	0.097	16.4	1.68	LOS B	2.0	15.1	0.55	0.49	43.7	5.1	11.1

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - AM Peak

Title: 12 - English Street and Norman Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	11	9.7	0.159	38.3	0.12	LOS D	1.0	7.9	0.91	0.72	25.1	0.3	0.5
Through	11	9.7	0.159	32.0	0.10	LOS C	1.0	7.9	0.91	0.66	25.0	0.3	0.5
Right	11	9.7	0.159	37.1	0.11	LOS D	1.0	7.9	0.91	0.72	23.1	0.3	0.5
Approach	33	9.7	0.159	35.8	0.32	LOS D	1.0	7.9	0.91	0.70	24.4	0.8	1.6
East													
Left	11	9.7	0.313	34.5	0.10	LOS C	2.8	20.8	0.90	0.76	23.8	0.3	0.5
Through	32	7.0	0.313	29.8	0.26	LOS C	2.8	20.8	0.90	0.70	25.6	0.8	1.5
Right	47	7.0	0.313	36.0	0.47	LOS D	2.8	20.8	0.90	0.76	25.8	1.2	2.3
Approach	90	7.3	0.313	33.7	0.84	LOS C	2.8	20.8	0.90	0.74	25.5	2.2	4.3
North													
Left	11	9.7	0.051	29.0	0.09	LOS C	0.7	4.9	0.73	0.77	36.0	0.2	0.4
Through	16	7.0	0.051	24.8	0.11	LOS C	0.7	4.9	0.73	0.63	36.5	0.2	0.5
Right	579	7.0	0.565	33.9	5.45	LOS C	8.5	63.1	0.88	0.83	34.6	10.7	23.8
Approach	606	7.0	0.565	33.6	5.65	LOS C	8.5	63.1	0.87	0.82	34.6	11.1	24.7
West													
Left	447	7.0	0.291	22.3	2.78	LOS C	5.0	37.1	0.63	0.77	42.0	6.9	14.5
Through	11	9.7	0.140	39.3	0.12	LOS D	0.7	5.5	0.93	0.68	28.4	0.2	0.5
Right	11	9.7	0.140	43.6	0.13	LOS D	0.7	5.5	0.93	0.72	28.5	0.2	0.5
Approach	469	7.1	0.291	23.2	3.03	LOS C	5.0	37.1	0.65	0.77	41.3	7.3	15.5
All Vehicles	1197	7.2	0.565	29.6	9.84	LOS C	8.5	63.1	0.79	0.79	35.6	21.4	46.1

Appendix F. Movement performance – 2046 PM peak

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 1 - Donnybrook and English

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	26	7.0	0.555	55.8	0.41	LOS E	11.7	86.8	0.91	0.90	28.5	0.6	1.5
Through	505	7.0	0.555	39.8	5.58	LOS D	11.9	88.2	0.91	0.79	31.2	11.2	26.5
Right	421	7.0	0.639	53.1	6.21	LOS D	10.0	74.0	0.98	0.83	28.2	10.2	24.5
Approach	953	7.0	0.639	46.1	12.20	LOS D	11.9	88.2	0.94	0.81	29.7	22.0	52.5
East													
Left	189	7.0	0.552	36.4	1.91	LOS D	9.2	67.9	0.88	0.90	36.2	3.4	7.9
Through	600	7.0	0.552	35.2	5.86	LOS D	10.7	79.7	0.92	0.78	34.9	11.9	29.0
Right	253	7.0	0.911	75.0	5.27	LOS E	7.4	55.1	1.00	0.95	23.2	7.4	17.8
Approach	1042	7.0	0.911	45.1	13.04	LOS D	10.7	79.7	0.93	0.84	31.3	22.7	54.7
North													
Left	216	7.0	0.253	17.9	1.08	LOS B	4.1	30.8	0.47	0.76	50.6	2.9	6.4
Through	537	7.0	0.544	36.2	5.39	LOS D	11.6	86.1	0.91	0.78	34.1	10.2	26.3
Right	574	7.0	0.871	64.7	10.30	LOS E	16.0	118.8	1.00	0.94	25.7	15.1	37.8
Approach	1326	7.0	0.871	45.5	16.77	LOS D	16.0	118.8	0.88	0.85	31.3	28.2	70.4
West													
Left	163	7.0	0.651	44.9	2.03	LOS D	12.4	91.9	0.93	0.93	33.7	3.3	8.0
Through	737	7.0	0.651	37.4	7.66	LOS D	13.0	96.8	0.95	0.82	33.8	15.1	37.2
Right	47	7.0	0.341	61.4	0.81	LOS E	2.4	17.6	0.98	0.74	25.5	1.2	2.8
Approach	947	7.0	0.651	39.9	10.50	LOS D	13.0	96.8	0.95	0.84	33.3	19.6	48.1
All Vehicles	4268	7.0	0.911	44.3	52.51	LOS D	16.0	118.8	0.92	0.84	31.3	92.5	225.7

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 2- Brookville and English (West)

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	100	7.0	0.070	9.6	0.27	LOS A	0.4	2.8	0.17	0.68	52.6	1.2	1.7
Through	16	7.0	0.013	5.6	0.02	LOS A	0.2	1.7	0.36	0.26	57.6	0.2	0.3
Right	495	7.0	0.623	18.3	2.51	LOS B	10.5	77.8	0.62	0.80	45.1	7.0	15.7
Approach	611	7.0	0.623	16.5	2.80	LOS B	10.5	77.8	0.54	0.77	46.4	8.4	17.8
East													
Left	416	7.0	0.290	10.3	1.18	LOS B	1.9	13.8	0.21	0.70	53.3	5.1	7.8
Through	100	7.0	0.127	32.5	0.90	LOS C	1.8	13.4	0.85	0.66	33.1	1.8	4.3
Right	12	17.7	0.063	46.6	0.15	LOS D	0.5	3.7	0.88	0.70	29.1	0.3	0.6
Approach	528	7.2	0.290	15.3	2.24	LOS B	1.9	13.8	0.34	0.69	47.3	7.1	12.7
North													
Left	12	17.7	0.129	28.1	0.09	LOS C	1.0	7.8	0.83	0.79	40.0	0.2	0.4
Through	32	7.0	0.129	18.0	0.16	LOS B	1.0	7.8	0.83	0.63	41.6	0.5	1.0
Right	47	7.0	0.146	41.0	0.54	LOS D	1.7	12.8	0.85	0.75	30.0	1.0	2.2
Approach	91	8.4	0.146	31.3	0.79	LOS C	1.7	12.8	0.84	0.71	34.7	1.6	3.6
West													
Left	21	7.0	0.338	37.7	0.22	LOS D	4.6	34.1	0.89	0.81	31.9	0.4	1.0
Through	242	7.0	0.338	31.2	2.10	LOS C	5.1	37.5	0.89	0.72	31.4	5.0	11.1
Right	74	7.0	0.264	42.9	0.88	LOS D	2.8	21.0	0.88	0.77	28.7	1.6	3.7
Approach	337	7.0	0.338	34.1	3.20	LOS C	5.1	37.5	0.89	0.74	30.8	7.0	15.8
All Vehicles	1566	7.2	0.623	20.8	9.03	LOS C	10.5	77.8	0.57	0.73	41.3	24.2	50.0

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 3 - Brookville and Kinloch

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	Percentile Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	37	7.0	0.189	6.9	0.07	LOS A	1.0	7.3	0.16	0.53	55.7	0.4	0.6
Through	468	7.0	0.189	6.6	0.86	LOS A	1.0	7.3	0.17	0.46	57.3	5.3	7.1
Right	12	17.7	0.189	12.8	0.04	LOS B	1.0	7.3	0.17	0.87	50.2	0.2	0.2
Approach	517	7.2	0.189	6.8	0.98	LOS A	1.0	7.3	0.17	0.47	57.0	5.9	7.9
East													
Left	26	7.0	0.066	8.9	0.07	LOS A	0.3	2.2	0.55	0.66	49.3	0.3	0.5
Through	12	17.7	0.066	7.3	0.02	LOS A	0.3	2.2	0.55	0.61	48.6	0.1	0.2
Right	12	17.7	0.066	15.5	0.05	LOS B	0.3	2.2	0.55	0.84	45.7	0.2	0.3
Approach	50	12.1	0.066	10.1	0.14	LOS B	0.3	2.2	0.55	0.69	48.2	0.7	1.0
North													
Left	12	17.7	0.200	7.5	0.02	LOS A	1.1	8.1	0.30	0.56	54.8	0.1	0.2
Through	468	7.0	0.200	7.0	0.91	LOS A	1.1	8.1	0.30	0.49	56.0	5.4	7.3
Right	16	7.0	0.200	12.9	0.06	LOS B	1.1	7.9	0.31	0.84	50.2	0.2	0.3
Approach	496	7.3	0.200	7.2	0.99	LOS A	1.1	8.1	0.30	0.50	55.8	5.8	7.8
West													
Left	37	7.0	0.161	8.6	0.09	LOS A	0.7	5.3	0.53	0.67	49.0	0.5	0.7
Through	12	17.7	0.161	7.0	0.02	LOS A	0.7	5.3	0.53	0.59	48.4	0.2	0.2
Right	89	7.0	0.161	14.9	0.37	LOS B	0.7	5.3	0.53	0.81	45.7	1.4	2.0
Approach	138	7.9	0.161	12.6	0.48	LOS B	0.7	5.3	0.53	0.76	46.7	2.0	2.9
All Vehicles	1202	7.5	0.200	7.8	2.59	LOS A	1.1	8.1	0.28	0.53	54.6	14.3	19.6

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 4 - Brookville and East-West Access Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	68	7.0	0.210	6.9	0.13	LOS A	1.1	8.5	0.17	0.53	55.6	0.7	1.0
Through	474	7.0	0.210	6.6	0.87	LOS A	1.1	8.5	0.17	0.45	57.2	5.4	7.2
Right	37	7.0	0.210	12.5	0.13	LOS B	1.1	8.4	0.18	0.85	50.1	0.5	0.7
Approach	579	7.0	0.210	7.0	1.13	LOS A	1.1	8.5	0.17	0.49	56.5	6.6	8.9
East													
Left	79	7.0	0.153	10.1	0.22	LOS B	0.7	5.4	0.66	0.78	48.6	1.0	1.6
Through	12	17.7	0.153	8.5	0.03	LOS A	0.7	5.4	0.66	0.73	47.8	0.2	0.2
Right	12	17.7	0.153	16.6	0.06	LOS B	0.7	5.4	0.66	0.93	44.9	0.2	0.3
Approach	103	9.5	0.153	10.7	0.30	LOS B	0.7	5.4	0.66	0.79	48.0	1.4	2.1
North													
Left	12	17.7	0.277	8.3	0.03	LOS A	1.6	12.1	0.49	0.64	53.6	0.1	0.2
Through	568	7.0	0.277	7.9	1.24	LOS A	1.6	12.1	0.49	0.59	54.4	6.8	9.6
Right	16	7.0	0.277	13.8	0.06	LOS B	1.6	11.8	0.50	0.84	49.8	0.2	0.3
Approach	596	7.2	0.277	8.0	1.33	LOS A	1.6	12.1	0.49	0.59	54.2	7.1	10.1
West													
Left	42	7.0	0.317	9.1	0.11	LOS A	1.5	11.5	0.59	0.72	48.4	0.6	0.8
Through	12	17.7	0.317	7.5	0.02	LOS A	1.5	11.5	0.59	0.63	47.6	0.2	0.2
Right	216	7.0	0.317	15.4	0.92	LOS B	1.5	11.5	0.59	0.85	45.2	3.3	4.9
Approach	270	7.5	0.317	14.0	1.05	LOS B	1.5	11.5	0.59	0.82	45.7	4.0	6.0
All Vehicles	1548	7.3	0.317	8.9	3.82	LOS A	1.6	12.1	0.40	0.61	52.8	19.1	27.1

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 5 - Brookville and Summerhill

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	47	7.0	0.291	44.2	0.58	LOS D	4.0	30.0	0.89	0.81	30.9	1.0	2.3
Through	79	7.0	0.291	34.3	0.75	LOS C	4.0	30.0	0.89	0.71	31.5	1.6	3.7
Right	63	7.0	0.291	44.5	0.78	LOS D	3.3	24.5	0.89	0.79	30.2	1.3	3.1
Approach	189	7.0	0.291	40.2	2.11	LOS D	4.0	30.0	0.89	0.76	30.9	3.9	9.1
East													
Left	26	7.0	0.649	42.6	0.31	LOS D	12.8	94.6	0.94	0.87	32.5	0.5	1.3
Through	611	7.0	0.649	32.6	5.53	LOS C	12.8	95.0	0.94	0.80	33.2	11.9	28.9
Right	142	7.0	0.515	32.9	1.30	LOS C	4.4	32.8	0.93	0.79	35.2	2.6	5.9
Approach	779	7.0	0.649	33.0	7.14	LOS C	12.8	95.0	0.94	0.80	33.5	15.0	36.2
North													
Left	279	7.0	0.295	12.8	1.00	LOS B	3.5	26.3	0.38	0.72	50.6	3.6	6.9
Through	132	7.0	0.153	15.1	0.55	LOS B	3.4	24.9	0.61	0.50	45.7	1.9	4.2
Right	474	7.0	0.677	48.1	6.33	LOS D	10.2	75.7	0.98	0.85	28.5	10.6	25.4
Approach	884	7.0	0.677	32.1	7.88	LOS C	10.2	75.7	0.74	0.76	35.4	16.1	36.5
West													
Left	353	7.0	0.284	10.9	1.07	LOS B	2.7	20.0	0.27	0.71	52.7	4.3	7.4
Through	632	7.0	0.642	32.5	5.70	LOS C	12.6	93.8	0.94	0.80	33.4	12.2	29.8
Right	111	7.0	0.403	32.5	1.00	LOS C	3.4	24.9	0.90	0.78	35.3	2.0	4.5
Approach	1095	7.0	0.642	25.6	7.77	LOS C	12.6	93.8	0.72	0.77	38.1	18.5	41.7
All Vehicles	2947	7.0	0.677	30.4	24.90	LOS C	12.8	95.0	0.79	0.77	35.5	53.5	123.5

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 6 - Amaroo and East-West Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	16	7.0	0.067	6.8	0.03	LOS A	0.3	2.3	0.14	0.53	55.8	0.2	0.2
Through	137	7.0	0.067	6.6	0.25	LOS A	0.3	2.3	0.14	0.44	57.4	1.5	2.0
Right	26	7.0	0.067	12.5	0.09	LOS B	0.3	2.3	0.15	0.81	50.0	0.3	0.5
Approach	179	7.0	0.067	7.5	0.37	LOS A	0.3	2.3	0.14	0.51	56.1	2.1	2.8
East													
Left	47	7.0	0.077	7.9	0.10	LOS A	0.3	2.6	0.44	0.59	50.0	0.6	0.9
Through	12	17.7	0.077	6.3	0.02	LOS A	0.3	2.6	0.44	0.52	49.6	0.1	0.2
Right	12	17.7	0.077	14.4	0.05	LOS B	0.3	2.6	0.44	0.80	46.5	0.2	0.3
Approach	71	10.6	0.077	8.7	0.17	LOS A	0.3	2.6	0.44	0.61	49.2	0.9	1.3
North													
Left	12	17.7	0.118	7.3	0.02	LOS A	0.6	4.2	0.21	0.54	55.4	0.1	0.2
Through	279	7.0	0.118	6.8	0.53	LOS A	0.6	4.2	0.21	0.46	56.8	3.2	4.2
Right	12	17.7	0.118	12.9	0.04	LOS B	0.6	4.2	0.22	0.85	50.2	0.2	0.2
Approach	303	7.8	0.118	7.0	0.59	LOS A	0.6	4.2	0.21	0.48	56.5	3.5	4.6
West													
Left	12	17.7	0.059	7.4	0.02	LOS A	0.3	2.0	0.33	0.50	50.5	0.2	0.2
Through	12	17.7	0.059	5.6	0.02	LOS A	0.3	2.0	0.33	0.41	50.3	0.1	0.2
Right	37	7.0	0.059	13.5	0.14	LOS B	0.3	2.0	0.33	0.71	46.5	0.5	0.8
Approach	61	11.2	0.059	10.7	0.18	LOS B	0.3	2.0	0.33	0.61	47.9	0.8	1.2
All Vehicles	613	8.2	0.118	7.7	1.32	LOS A	0.6	4.2	0.23	0.52	54.4	7.3	9.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 7 - Summerhill and North-South Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	58	7.0	0.162	9.7	0.16	LOS A	0.7	5.5	0.64	0.78	48.6	0.8	1.2
Through	26	7.0	0.162	7.9	0.06	LOS A	0.7	5.5	0.64	0.70	47.8	0.3	0.5
Right	32	7.0	0.162	16.0	0.14	LOS B	0.7	5.5	0.64	0.91	45.1	0.5	0.7
Approach	116	7.0	0.162	11.0	0.36	LOS B	0.7	5.5	0.64	0.80	47.4	1.6	2.4
East													
Left	12	17.7	0.287	7.8	0.03	LOS A	1.7	13.0	0.42	0.59	54.0	0.1	0.2
Through	616	7.0	0.287	7.4	1.26	LOS A	1.7	13.0	0.42	0.53	54.9	7.3	10.1
Right	42	7.0	0.287	13.3	0.16	LOS B	1.7	12.7	0.43	0.81	50.0	0.6	0.8
Approach	670	7.2	0.287	7.8	1.44	LOS A	1.7	13.0	0.42	0.55	54.6	7.9	11.1
North													
Left	74	7.0	0.336	10.3	0.21	LOS B	1.6	12.1	0.69	0.84	48.0	1.0	1.5
Through	37	7.0	0.336	8.6	0.09	LOS A	1.6	12.1	0.69	0.76	47.1	0.5	0.7
Right	126	7.0	0.336	16.7	0.59	LOS B	1.6	12.1	0.69	0.94	44.4	2.0	3.1
Approach	237	7.0	0.336	13.4	0.88	LOS B	1.6	12.1	0.69	0.88	45.8	3.4	5.3
West													
Left	105	7.0	0.356	7.2	0.21	LOS A	2.2	16.4	0.31	0.54	54.7	1.2	1.6
Through	800	7.0	0.356	7.0	1.56	LOS A	2.2	16.4	0.32	0.49	55.9	9.3	12.7
Right	16	7.0	0.356	12.9	0.06	LOS B	2.2	16.1	0.32	0.84	50.2	0.2	0.3
Approach	921	7.0	0.356	7.1	1.82	LOS A	2.2	16.4	0.31	0.50	55.6	10.6	14.6
All Vehicles	1943	7.1	0.356	8.3	4.51	LOS A	2.2	16.4	0.42	0.58	53.3	23.6	33.4

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 8 - English Street and North-South Connector Road

Type: Roundabout

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	16	7.0	0.299	9.1	0.04	LOS A	1.5	11.1	0.60	0.72	48.3	0.2	0.3
Through	12	17.7	0.299	7.5	0.02	LOS A	1.5	11.1	0.60	0.64	47.5	0.2	0.2
Right	226	7.0	0.299	15.4	0.97	LOS B	1.5	11.1	0.60	0.83	45.1	3.5	5.2
Approach	254	7.5	0.299	14.6	1.03	LOS B	1.5	11.1	0.60	0.82	45.4	3.8	5.7
East													
Left	200	7.0	0.253	6.9	0.38	LOS A	1.5	11.0	0.19	0.51	55.4	2.2	3.0
Through	479	7.0	0.253	6.7	0.89	LOS A	1.5	11.0	0.20	0.45	56.9	5.4	7.4
Right	16	7.0	0.253	12.6	0.06	LOS B	1.5	10.8	0.20	0.86	50.2	0.2	0.3
Approach	695	7.0	0.253	6.9	1.33	LOS A	1.5	11.0	0.20	0.48	56.3	7.8	10.7
North													
Left	47	7.0	0.130	10.6	0.14	LOS B	0.6	4.6	0.69	0.81	48.0	0.6	1.0
Through	12	17.7	0.130	9.0	0.03	LOS A	0.6	4.6	0.69	0.78	47.4	0.2	0.2
Right	21	7.0	0.130	17.0	0.10	LOS B	0.6	4.6	0.69	0.92	44.4	0.3	0.5
Approach	80	8.6	0.130	12.1	0.27	LOS B	0.6	4.6	0.69	0.84	46.9	1.1	1.8
West													
Left	12	17.7	0.345	8.3	0.03	LOS A	2.2	16.1	0.51	0.64	53.5	0.1	0.2
Through	726	7.0	0.345	7.9	1.59	LOS A	2.2	16.1	0.51	0.59	54.2	8.7	12.4
Right	12	17.7	0.345	14.1	0.05	LOS B	2.1	15.7	0.52	0.86	49.8	0.2	0.2
Approach	750	7.3	0.345	8.0	1.67	LOS A	2.2	16.1	0.51	0.60	54.1	9.0	12.8
All Vehicles	1779	7.3	0.345	8.7	4.30	LOS A	2.2	16.1	0.41	0.59	53.0	21.8	30.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 9 - English Street and East-West Access Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	47	7.0	0.366	15.6	0.21	LOS B	9.8	72.4	0.42	1.10	48.4	0.6	1.5
Through	926	7.0	0.366	6.3	1.62	LOS A	9.8	72.7	0.42	0.37	56.2	10.6	23.5
Right	21	7.0	0.047	16.3	0.10	LOS B	0.4	2.9	0.37	0.73	45.4	0.3	0.6
Approach	995	7.0	0.366	7.0	1.92	LOS A	9.8	72.7	0.41	0.41	55.6	11.5	25.6
East													
Left	12	17.7	0.195	51.9	0.17	LOS D	2.3	18.0	0.89	0.76	26.1	0.3	0.7
Through	12	17.7	0.195	42.4	0.14	LOS C	2.3	18.0	0.89	0.68	25.7	0.3	0.6
Right	26	7.0	0.195	51.5	0.38	LOS D	2.3	18.0	0.89	0.76	26.1	0.6	1.5
Approach	50	12.1	0.195	49.5	0.69	LOS D	2.3	18.0	0.89	0.74	26.0	1.2	2.9
North													
Left	12	17.7	0.253	15.3	0.05	LOS B	6.1	45.3	0.37	1.19	49.0	0.1	0.4
Through	663	7.0	0.253	5.7	1.04	LOS A	6.1	45.4	0.37	0.33	57.5	7.5	15.7
Right	32	7.0	0.100	18.4	0.16	LOS B	0.7	5.1	0.42	0.74	43.5	0.4	1.0
Approach	707	7.2	0.253	6.4	1.26	LOS A	6.1	45.4	0.37	0.36	56.5	8.0	17.1
West													
Left	21	7.0	0.221	51.7	0.30	LOS D	2.8	20.9	0.90	0.77	26.0	0.5	1.2
Through	12	17.7	0.221	42.6	0.14	LOS D	2.8	20.9	0.90	0.69	25.6	0.3	0.6
Right	26	7.0	0.221	51.7	0.38	LOS D	2.8	20.9	0.90	0.77	26.0	0.6	1.5
Approach	59	9.1	0.221	49.9	0.82	LOS D	2.8	20.9	0.90	0.75	25.9	1.4	3.4
All Vehicles	1811	7.3	0.366	9.3	4.69	LOS A	9.8	72.7	0.43	0.41	52.4	22.2	48.9

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 10 - Hume Highway SB On Ramp

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Approach	0	0.0	0.000	0.0	0.00	LOS X	0.0	0.0	0.00	0.00	0.0	0.0	0.0
East													
Left	105	7.0	0.103	14.0	0.41	LOS B	0.9	6.6	0.25	0.98	51.4	1.6	2.8
Through	142	7.0	0.103	5.5	0.22	LOS A	2.0	15.0	0.37	0.30	50.3	1.7	3.2
Approach	247	7.0	0.103	9.1	0.63	LOS A	2.0	15.0	0.32	0.59	50.9	3.3	6.0
West													
Through	337	7.0	0.137	6.1	0.57	LOS A	2.7	20.4	0.40	0.33	49.7	4.1	8.0
Right	84	7.0	0.129	16.1	0.38	LOS B	1.4	10.7	0.41	0.75	48.9	1.3	2.7
Approach	421	7.0	0.137	8.1	0.95	LOS A	2.7	20.4	0.40	0.42	49.5	5.5	10.7
All Vehicles	668	7.0	0.137	8.5	1.58	LOS A	2.7	20.4	0.37	0.48	50.0	8.8	16.7

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 11 - Hume Highway NB Off Ramp

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	'ercentile Back of Queu Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	21	7.0	0.145	24.5	0.14	LOS C	2.7	19.9	0.53	0.88	48.5	0.3	0.6
Right	253	7.0	0.145	23.4	1.65	LOS C	3.0	22.2	0.53	0.80	48.5	3.1	7.5
Approach	274	7.0	0.145	23.5	1.79	LOS C	3.0	22.2	0.53	0.81	48.5	3.4	8.1
East													
Through	142	7.0	0.114	22.3	0.88	LOS C	2.2	16.0	0.73	0.57	35.6	2.4	5.4
Approach	142	7.0	0.114	22.3	0.88	LOS C	2.2	16.0	0.73	0.57	35.6	2.4	5.4
West													
Through	174	7.0	0.140	22.5	1.09	LOS C	2.7	19.8	0.73	0.58	35.5	3.0	6.7
Approach	174	7.0	0.140	22.5	1.09	LOS C	2.7	19.8	0.73	0.58	35.5	3.0	6.7
ll Vehicles	589	7.0	0.145	22.9	3.76	LOS C	3.0	22.2	0.64	0.68	40.5	8.8	20.2

MOVEMENT OUTPUT

*Use the **Control** sheet to create output data in this sheet. For detailed information, refer to the **Intro** sheet.*

2046 - Scenario 1B - PM Peak

Title: 12 - English Street and Norman Road

Type: Signals

Movement Performance - Vehicles

Turn	Demand Flow veh/h	HV %	Deg. Satn. v/c	Average Delay sec	Total Delay veh-h/h	Level of Service	95th Percentile Back of Queue Vehicles veh	95th Percentile Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h	Tot. Travel Time veh-h/h	Perf. Index
South													
Left	12	17.7	0.183	38.8	0.13	LOS D	1.2	9.3	0.91	0.72	25.1	0.3	0.6
Through	12	17.7	0.183	32.3	0.11	LOS C	1.2	9.3	0.91	0.67	24.9	0.3	0.6
Right	12	17.7	0.183	37.5	0.12	LOS D	1.2	9.3	0.91	0.73	23.1	0.3	0.6
Approach	36	17.7	0.183	36.2	0.36	LOS D	1.2	9.3	0.91	0.71	24.4	0.9	1.7
East													
Left	12	17.7	0.247	34.1	0.11	LOS C	2.1	16.2	0.89	0.74	23.9	0.3	0.6
Through	21	7.0	0.247	29.4	0.17	LOS C	2.1	16.2	0.89	0.68	25.8	0.5	1.0
Right	37	7.0	0.247	35.6	0.36	LOS D	2.1	16.2	0.89	0.75	25.9	0.9	1.8
Approach	70	8.8	0.247	33.5	0.65	LOS C	2.1	16.2	0.89	0.73	25.5	1.7	3.3
North													
Left	12	17.7	0.054	29.2	0.10	LOS C	0.7	5.2	0.73	0.77	35.9	0.2	0.4
Through	16	7.0	0.054	24.8	0.11	LOS C	0.7	5.2	0.73	0.63	36.4	0.2	0.5
Right	674	7.0	0.657	34.7	6.50	LOS C	10.2	76.0	0.91	0.84	34.1	12.6	28.3
Approach	701	7.2	0.657	34.4	6.71	LOS C	10.2	76.0	0.90	0.83	34.2	13.0	29.3
West													
Left	921	7.0	0.599	24.8	6.35	LOS C	12.4	92.2	0.76	0.82	40.3	14.8	33.0
Through	12	17.7	0.215	39.9	0.13	LOS D	1.1	8.5	0.94	0.70	28.0	0.2	0.5
Right	21	7.0	0.215	44.0	0.26	LOS D	1.1	8.5	0.94	0.73	28.1	0.4	0.9
Approach	954	7.1	0.599	25.4	6.73	LOS C	12.4	92.2	0.77	0.82	39.7	15.5	34.5
All Vehicles	1761	7.4	0.657	29.5	14.45	LOS C	12.4	92.2	0.83	0.82	36.2	31.1	68.9