Appendix A

Intersection Traffic Surveys

R.O.A.R. DATA

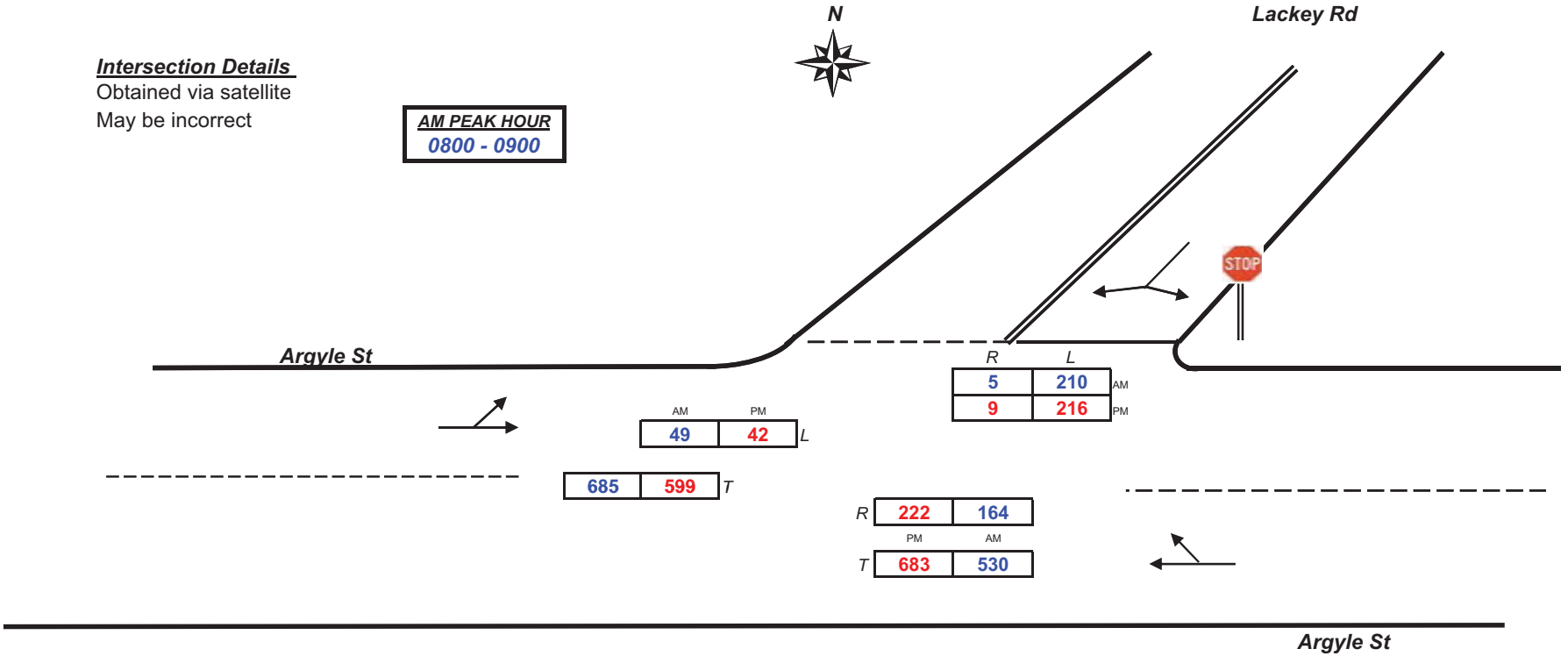
Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMM
Job No/Name : 5939 BERRIMA Additional Surveys
Day/Date : Wednesday 17th February 2016

Intersection Details
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900



Combined figures only

PM PEAK HOUR
1530 - 1630

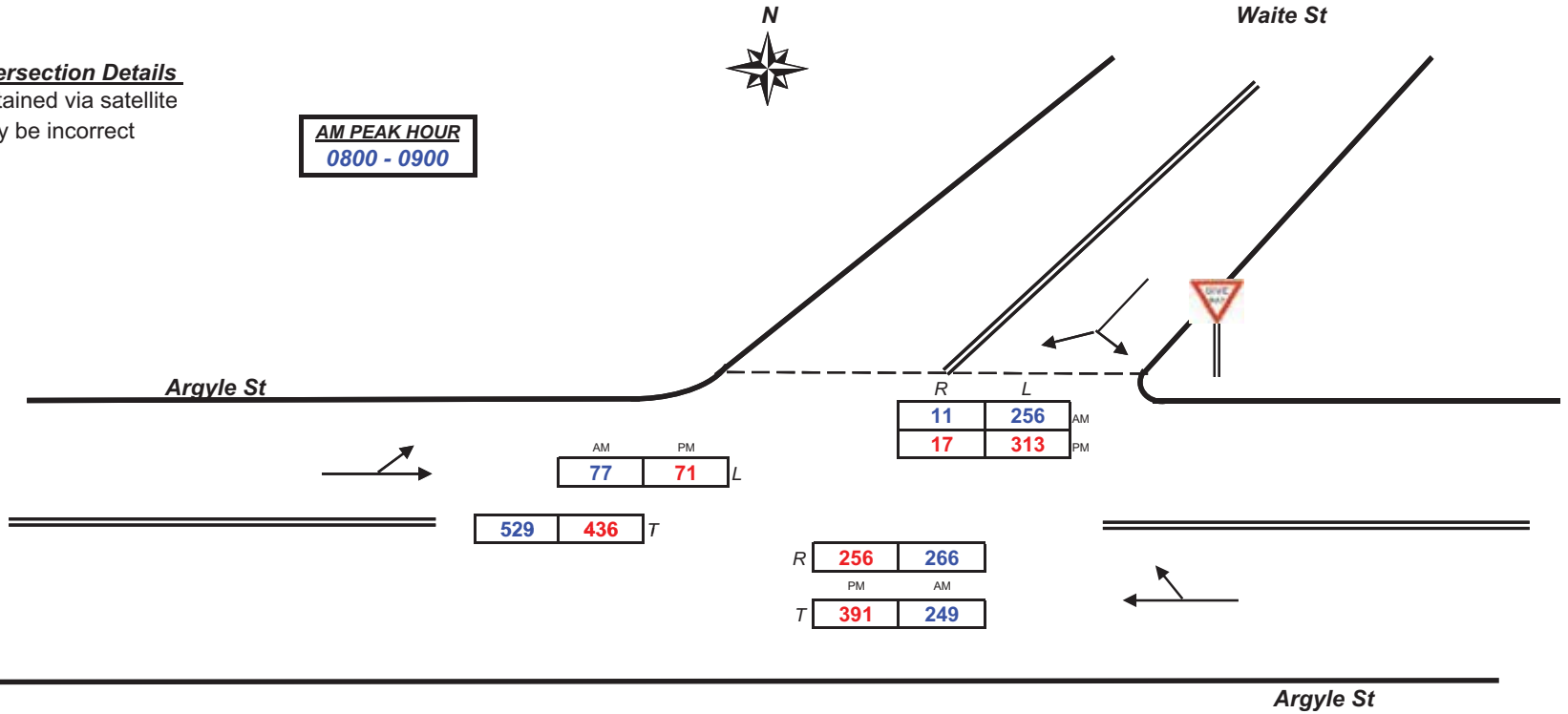
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMM
Job No/Name : 5939 BERRIMA Additional Surveys
Day/Date : Wednesday 17th February 2016

Intersection Details
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900



Combined figures only

PM PEAK HOUR
1500 - 1600

Weather >>>

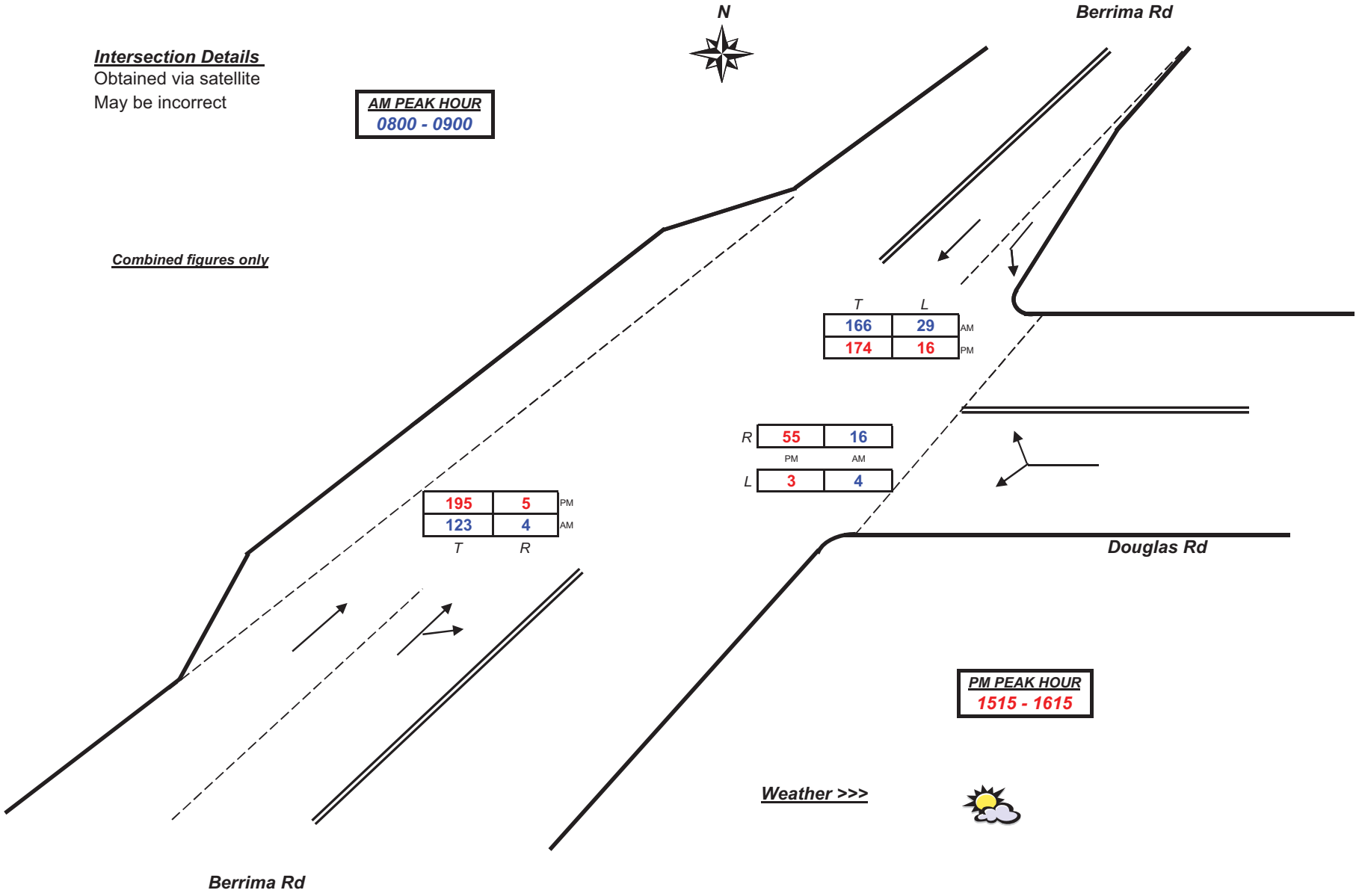
R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMM
Job No/Name : 5939 BERRIMA Additional Surveys
Day/Date : Thursday 18th February 2016

Intersection Details
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900

Combined figures only



PM PEAK HOUR
1515 - 1615

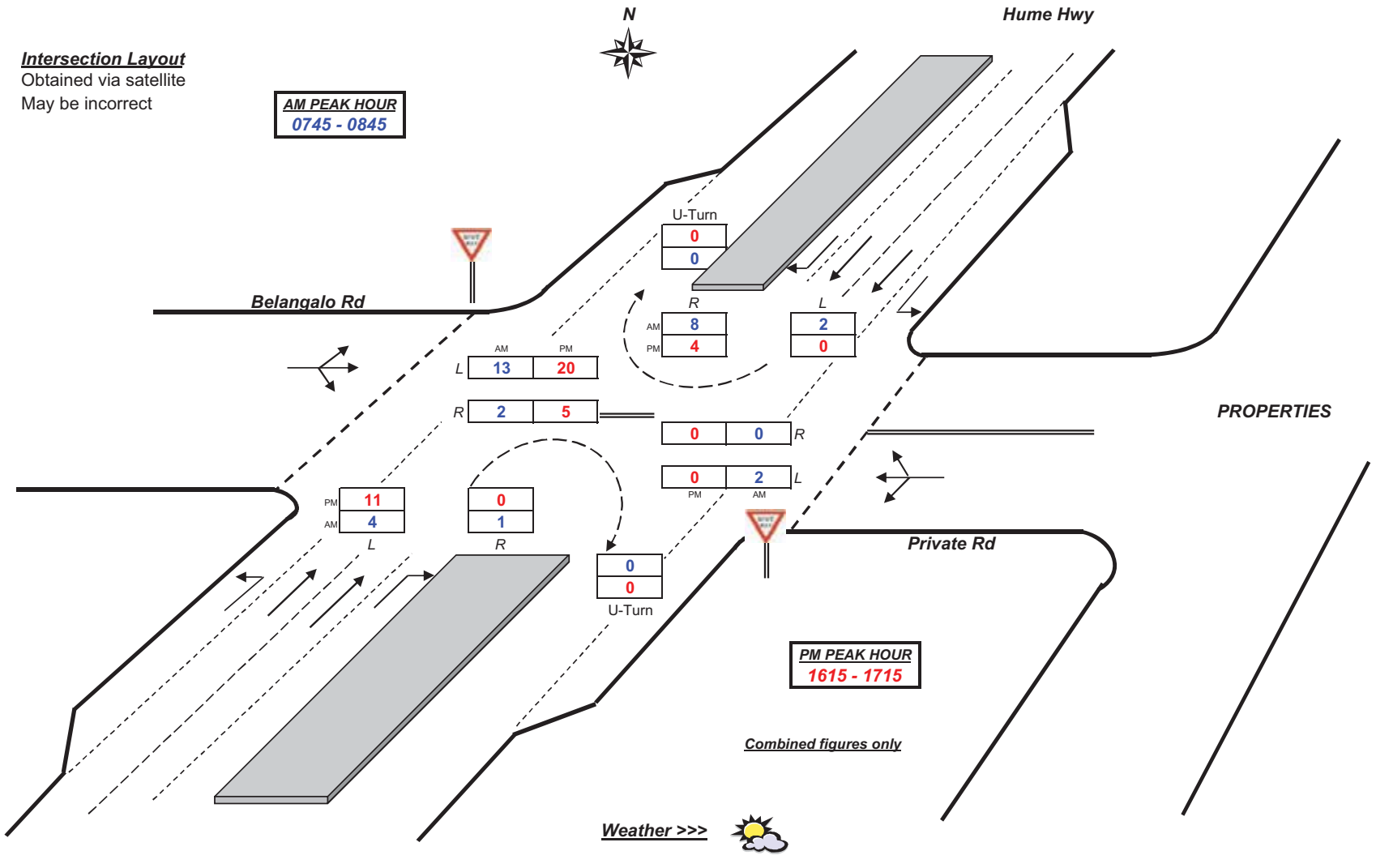
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMM
Job No/Name : 5939 BERRIMA Additional Surveys
Day/Date : Thursday 18th February 2016

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0745 - 0845



PM PEAK HOUR
1615 - 1715

Combined figures only

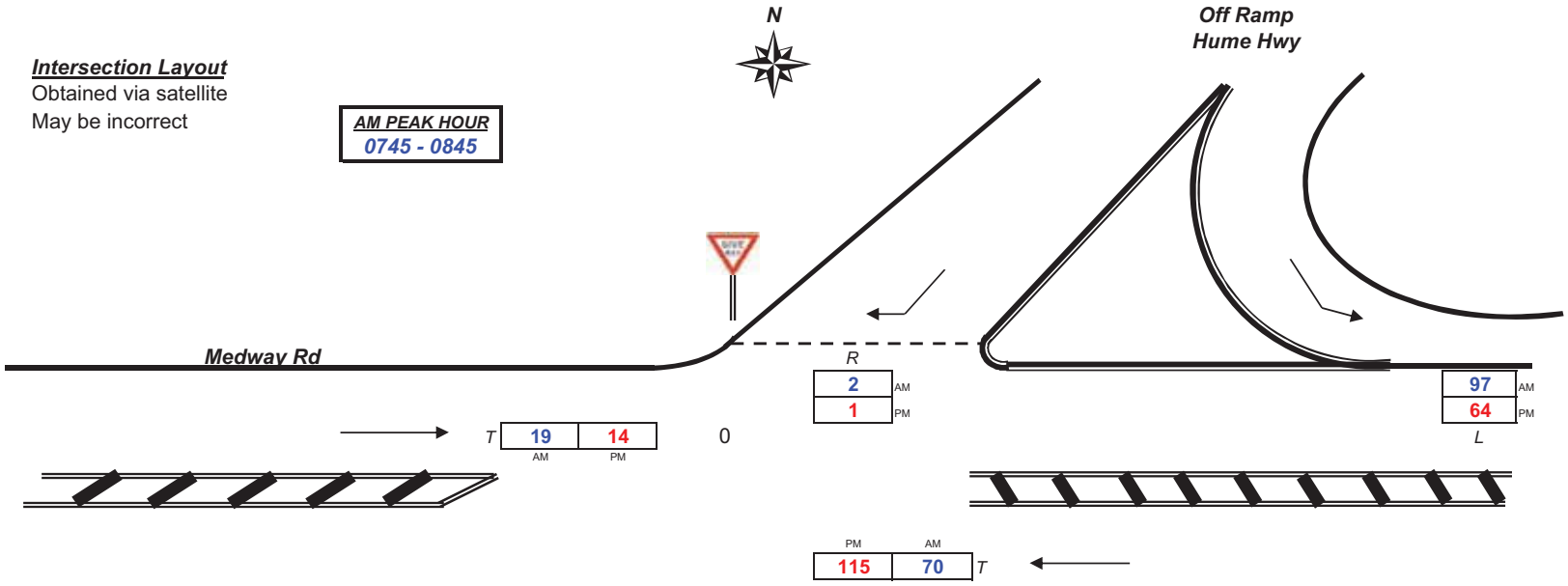
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Thursday / 25th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0745 - 0845



PM PEAK HOUR
1515 - 1615

Combined figures only

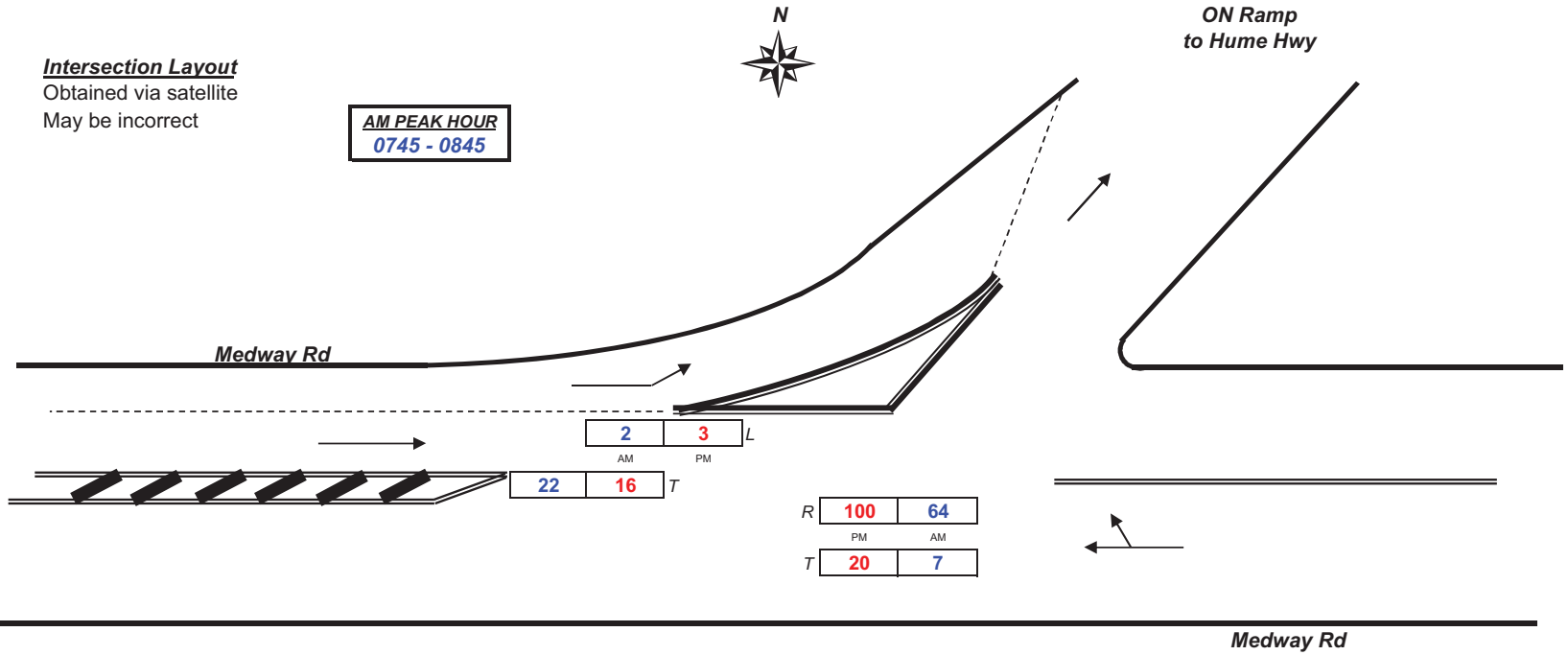
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Thursday / 25th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0745 - 0845



PM PEAK HOUR
1530 - 1630

Combined figures only

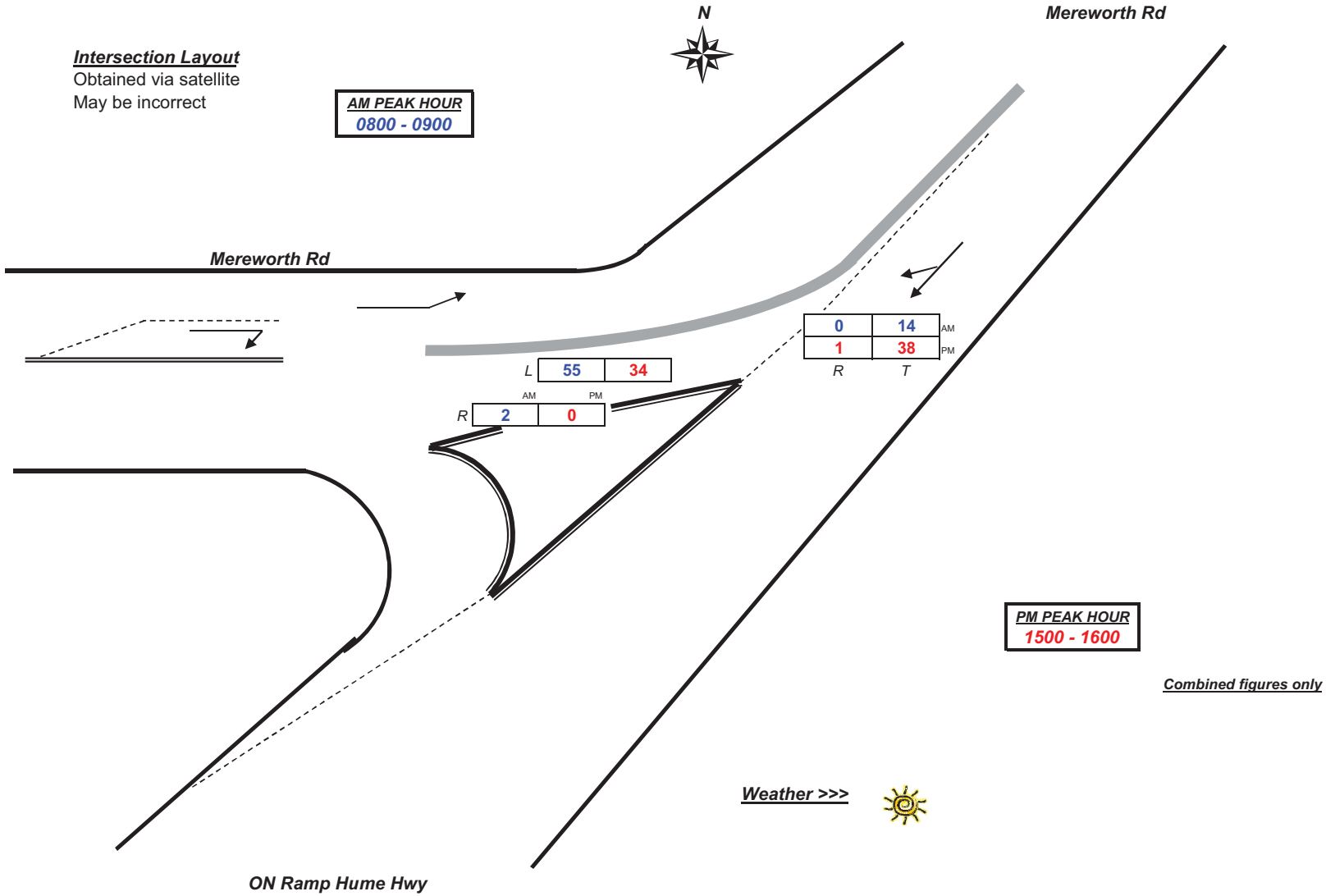
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Wednesday / 24th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900



PM PEAK HOUR
1500 - 1600

Combined figures only

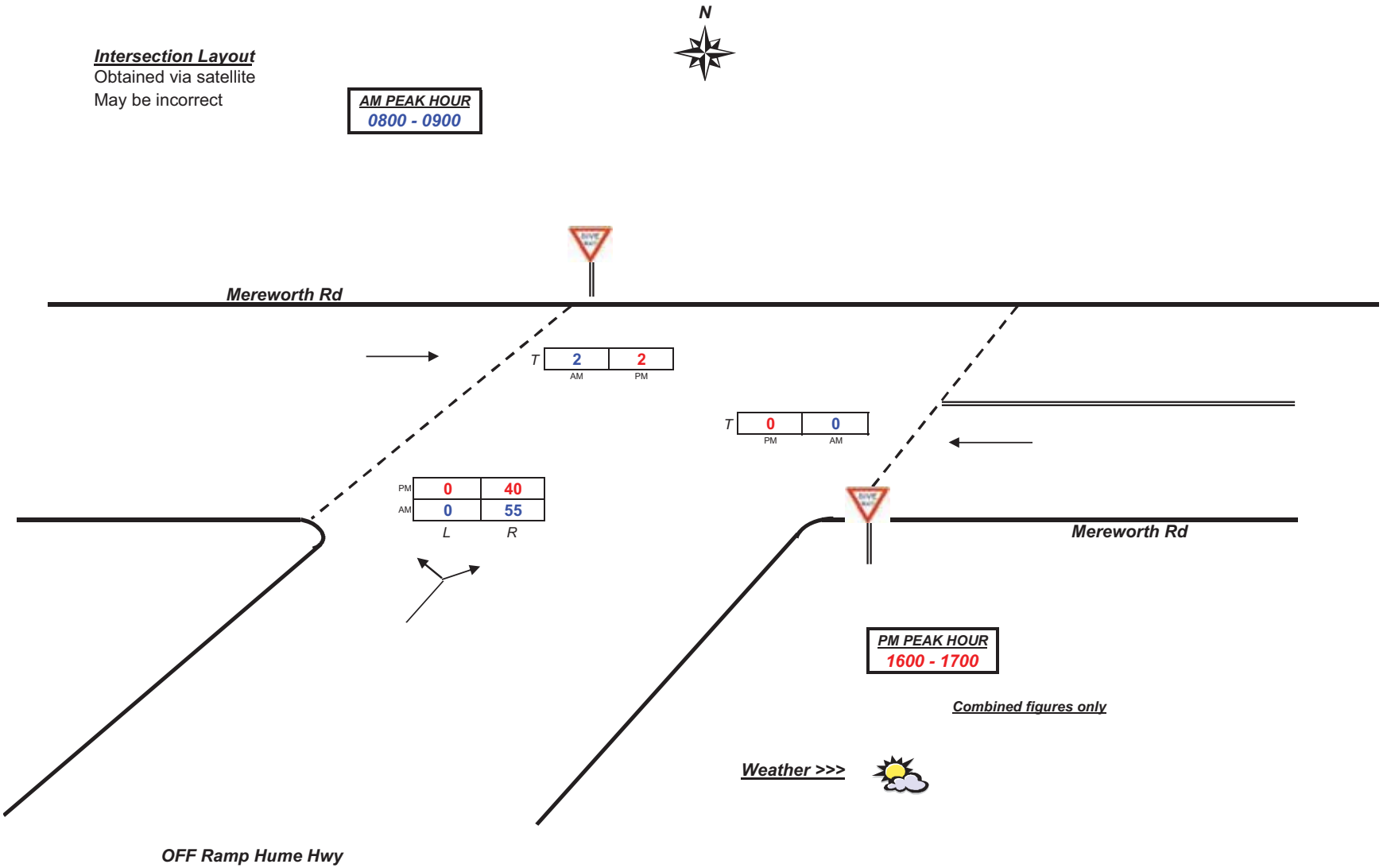
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Wednesday / 24th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900



PM PEAK HOUR
1600 - 1700

Combined figures only

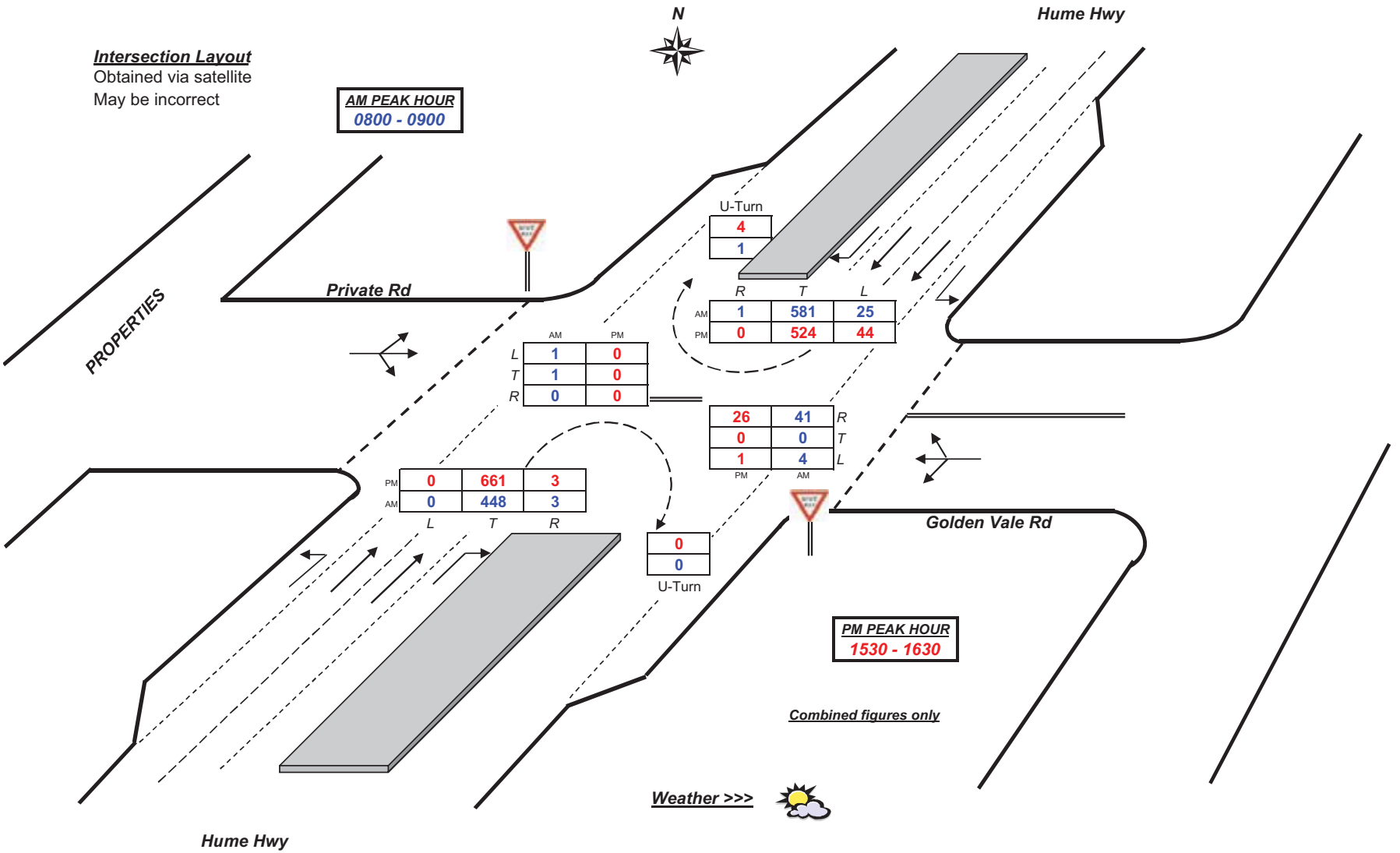
Weather >>>

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Wednesday / 24th June 2015

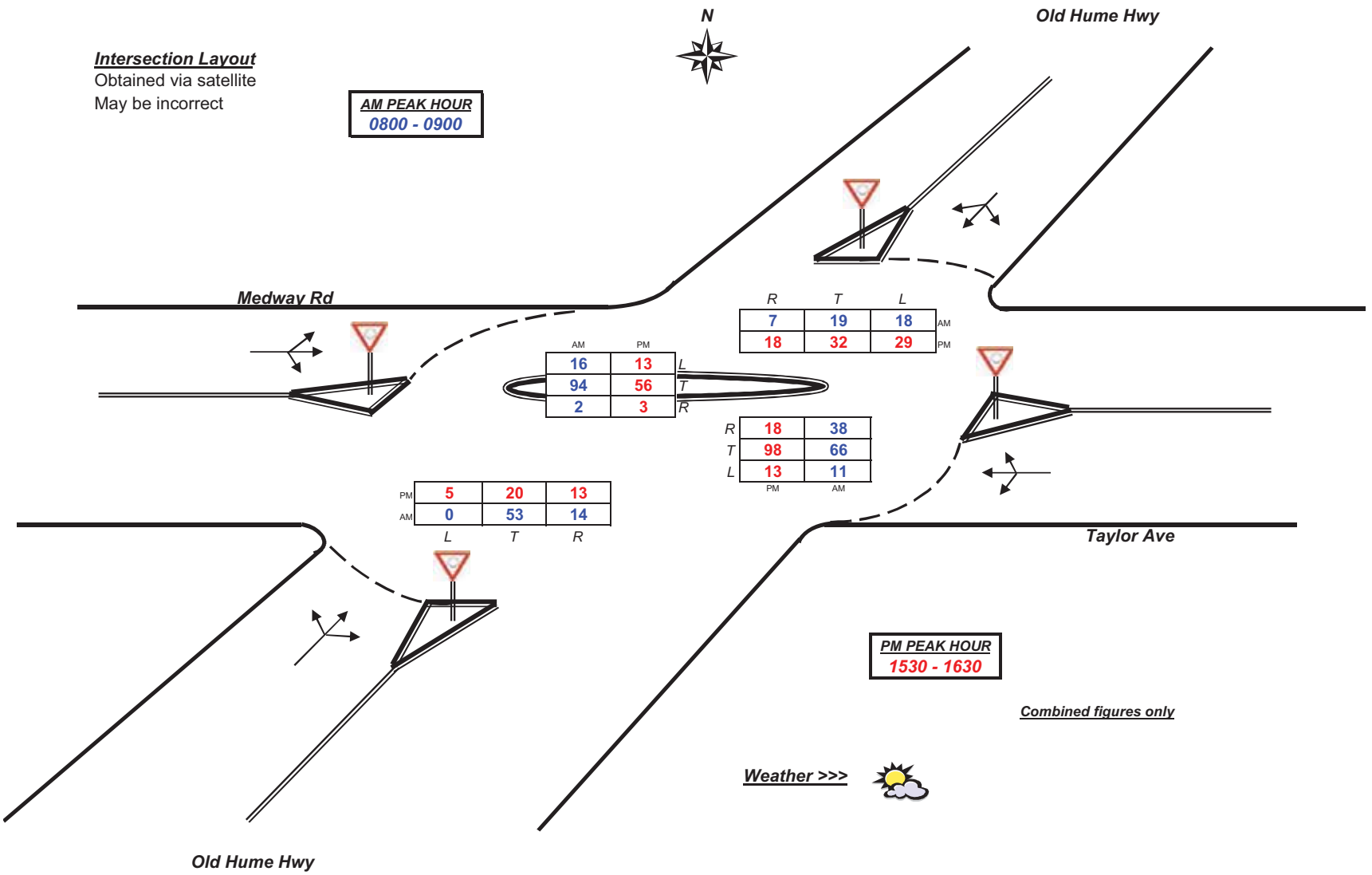


R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Thursday / 25th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

AM PEAK HOUR
0800 - 0900



PM PEAK HOUR
1530 - 1630

Combined figures only

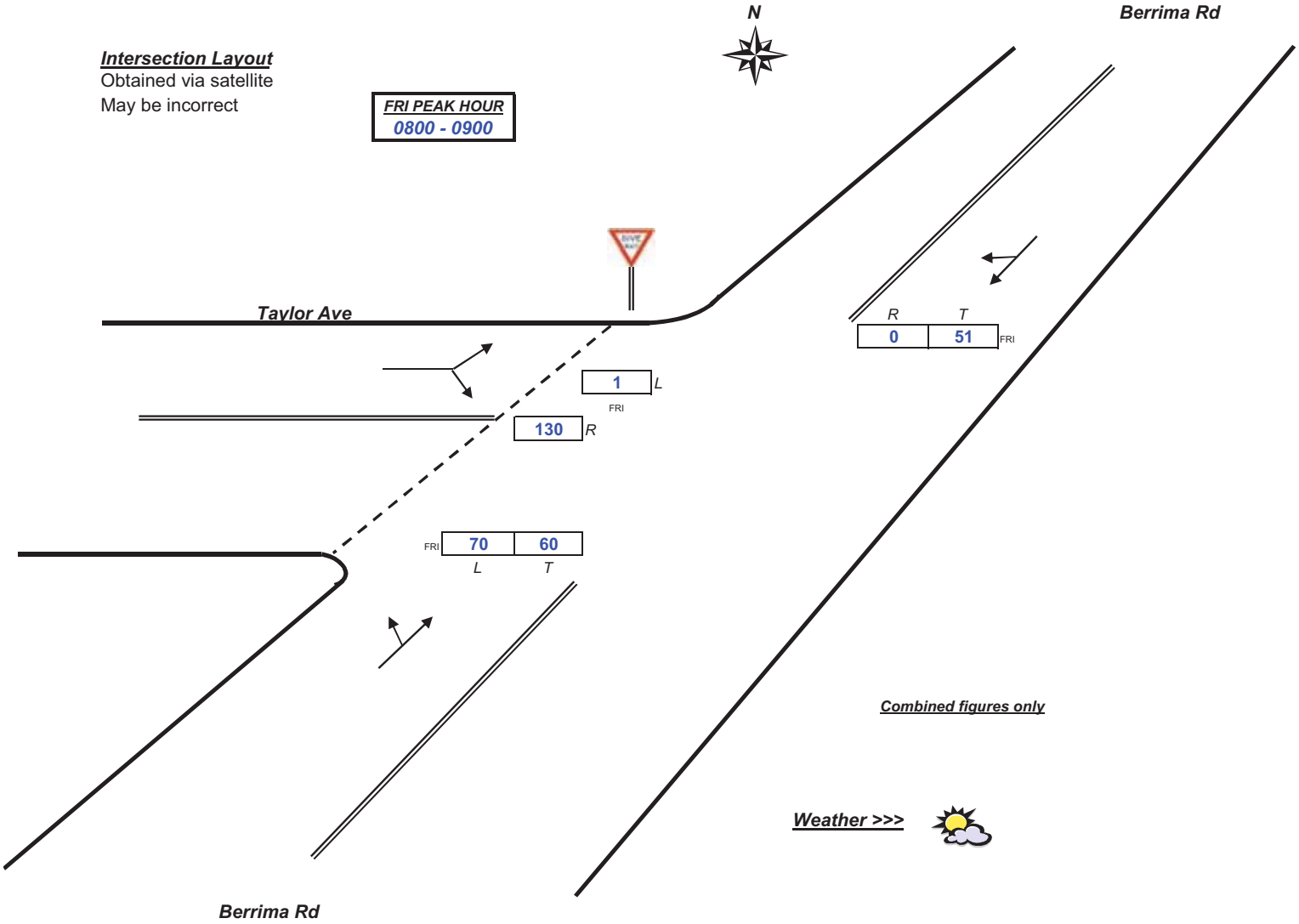
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Friday / 26th June 2015

Intersection Layout
Obtained via satellite
May be incorrect

FRI PEAK HOUR
0800 - 0900



Combined figures only

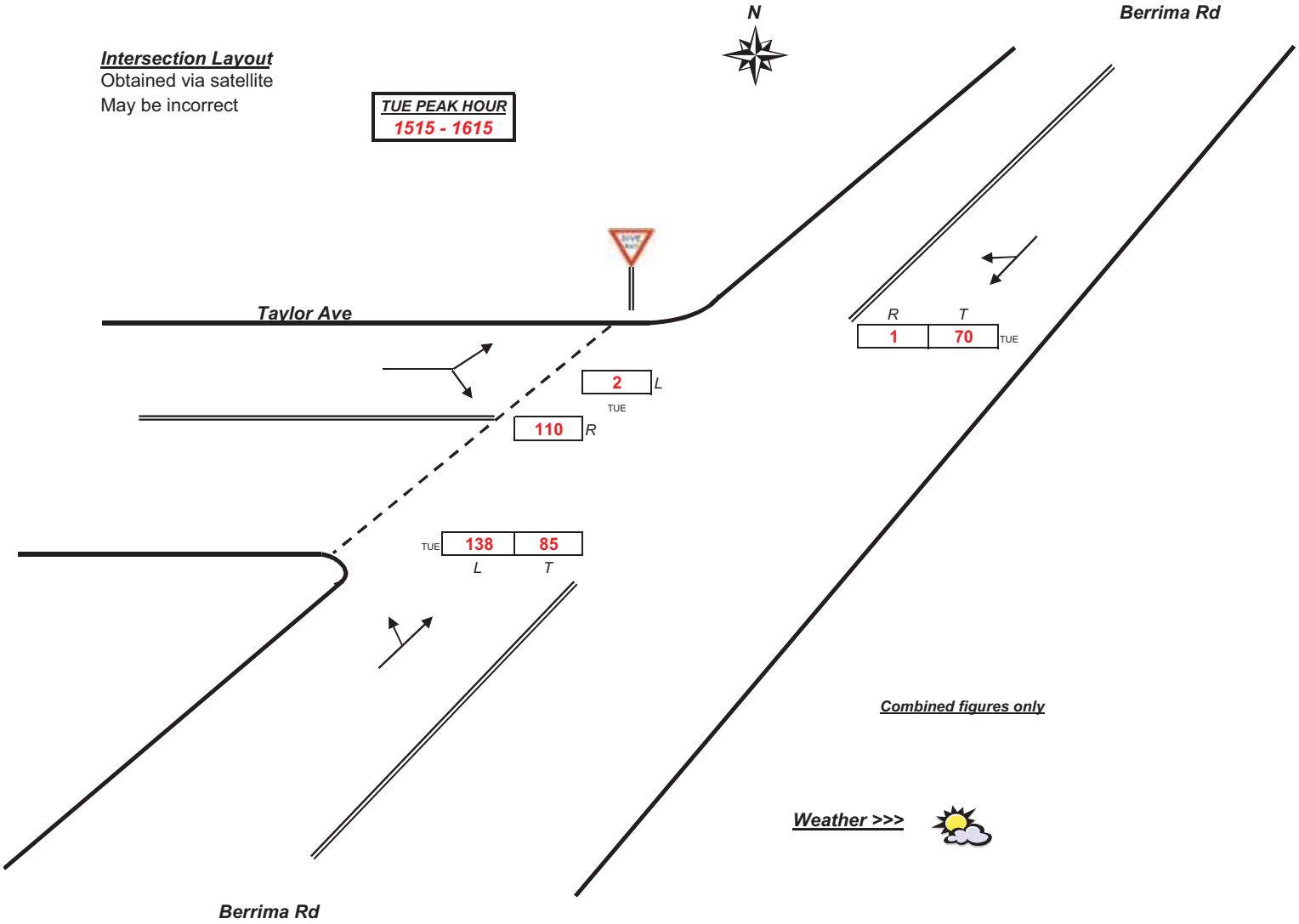
Weather >>>

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : EMGA
Job No/Name : 5659 BERRIMA Traffic Surveys
Day/Date : Tuesday / 23rd June 2015

Intersection Layout
Obtained via satellite
May be incorrect

TUE PEAK HOUR
1515 - 1615

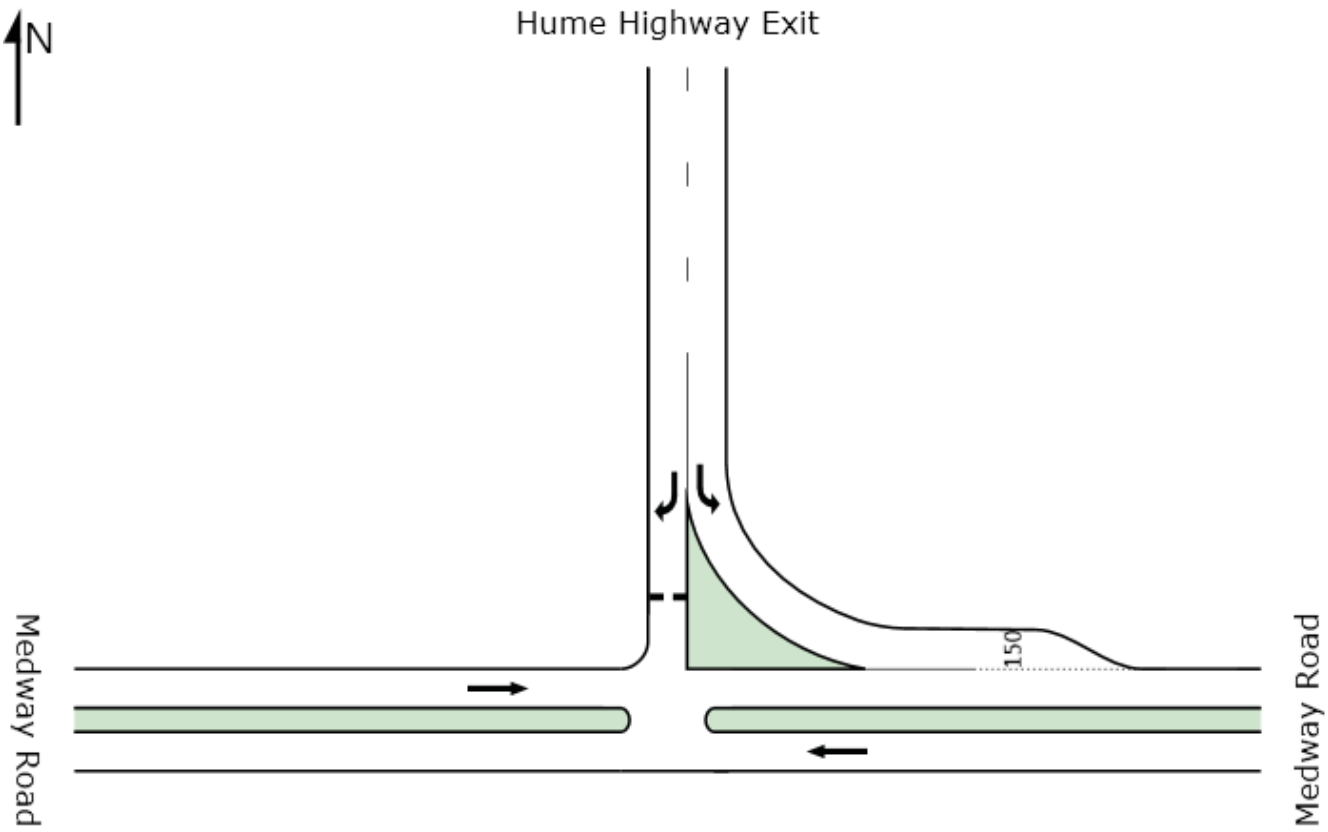


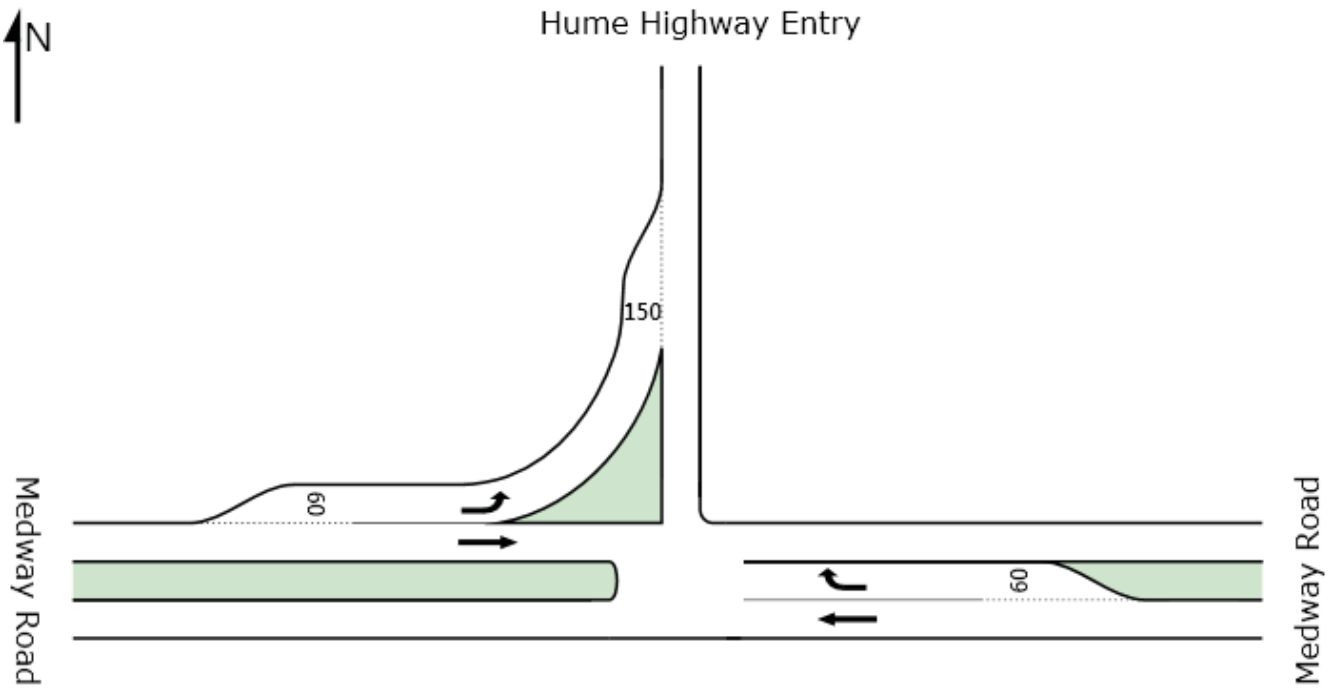
Combined figures only

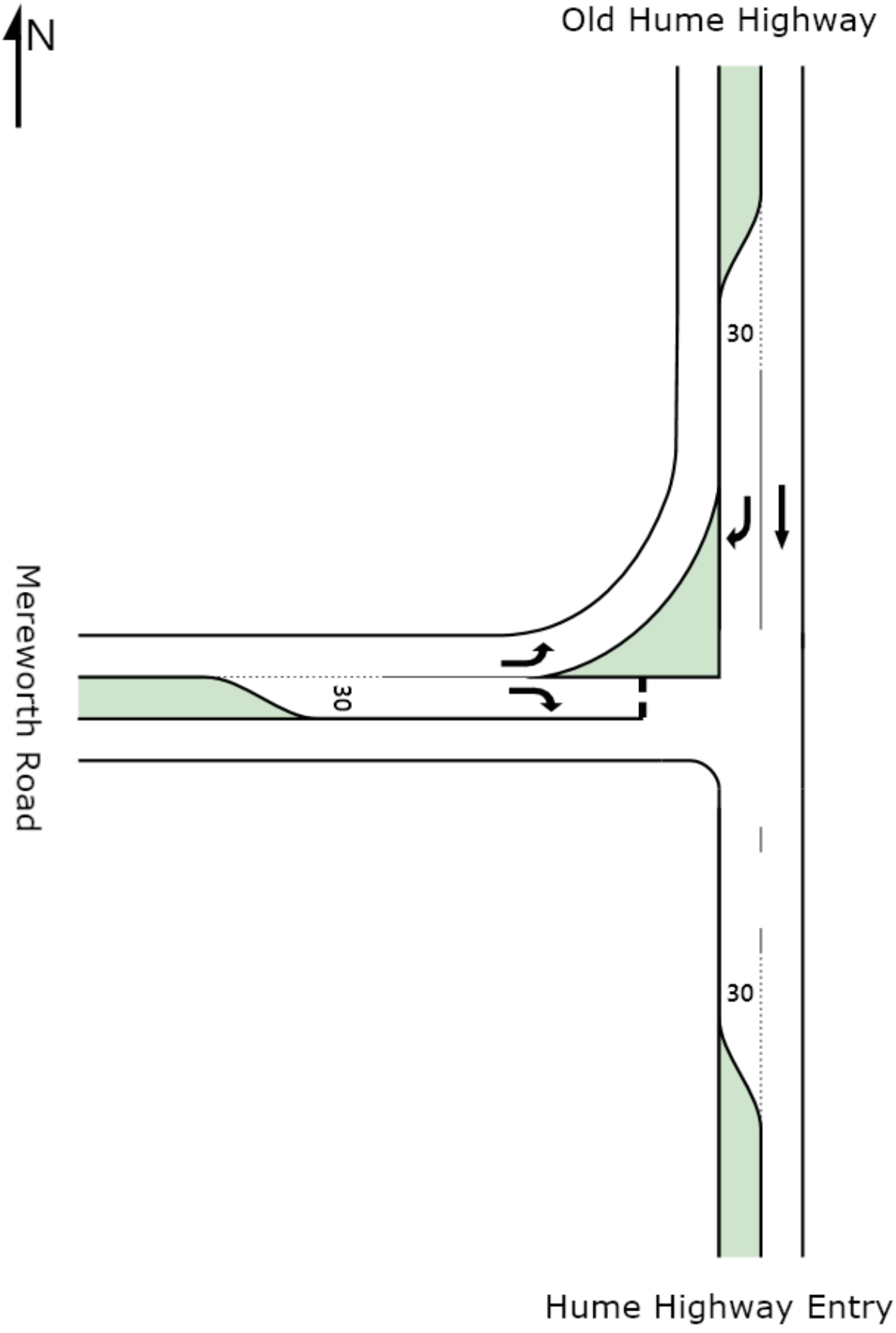
Weather >>>

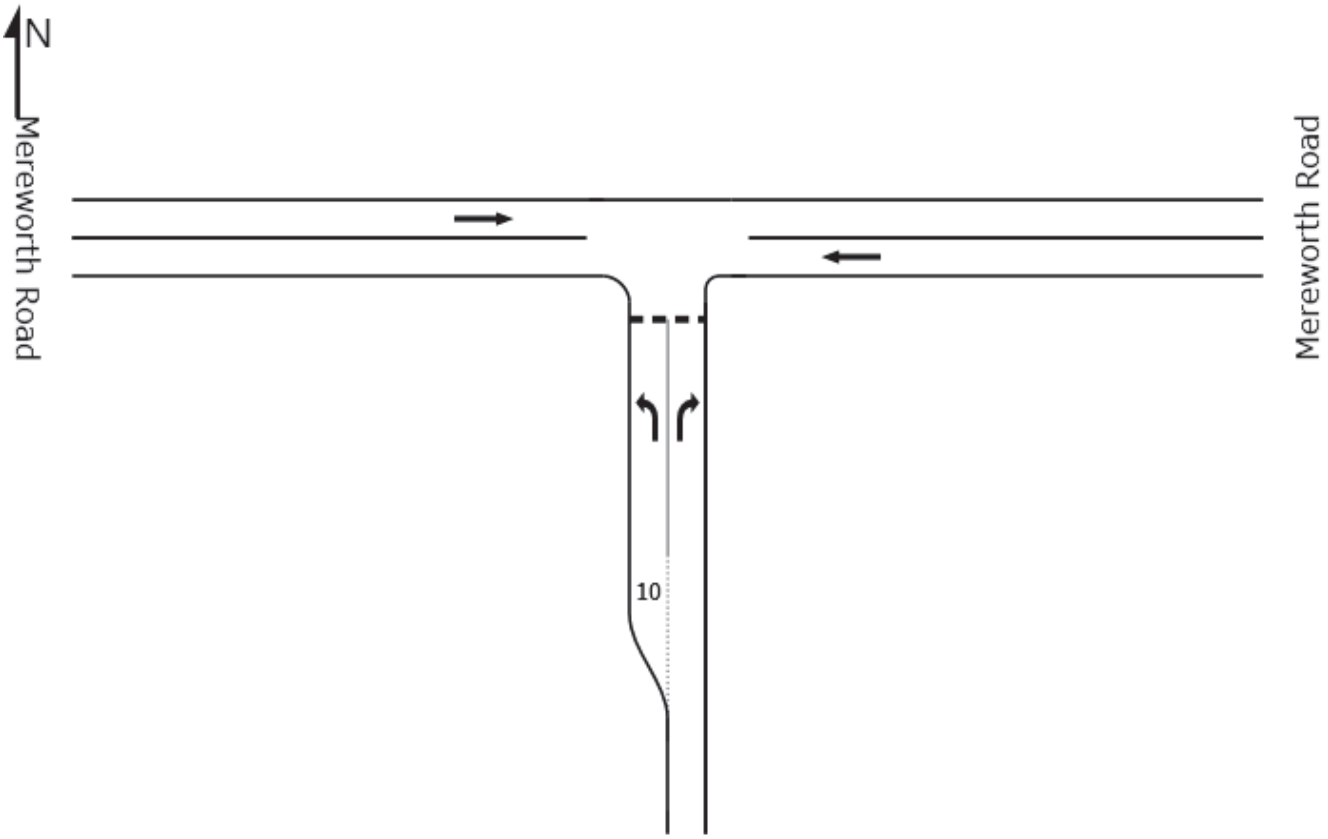
Appendix B

SIDRA Intersection Delay Results for existing traffic

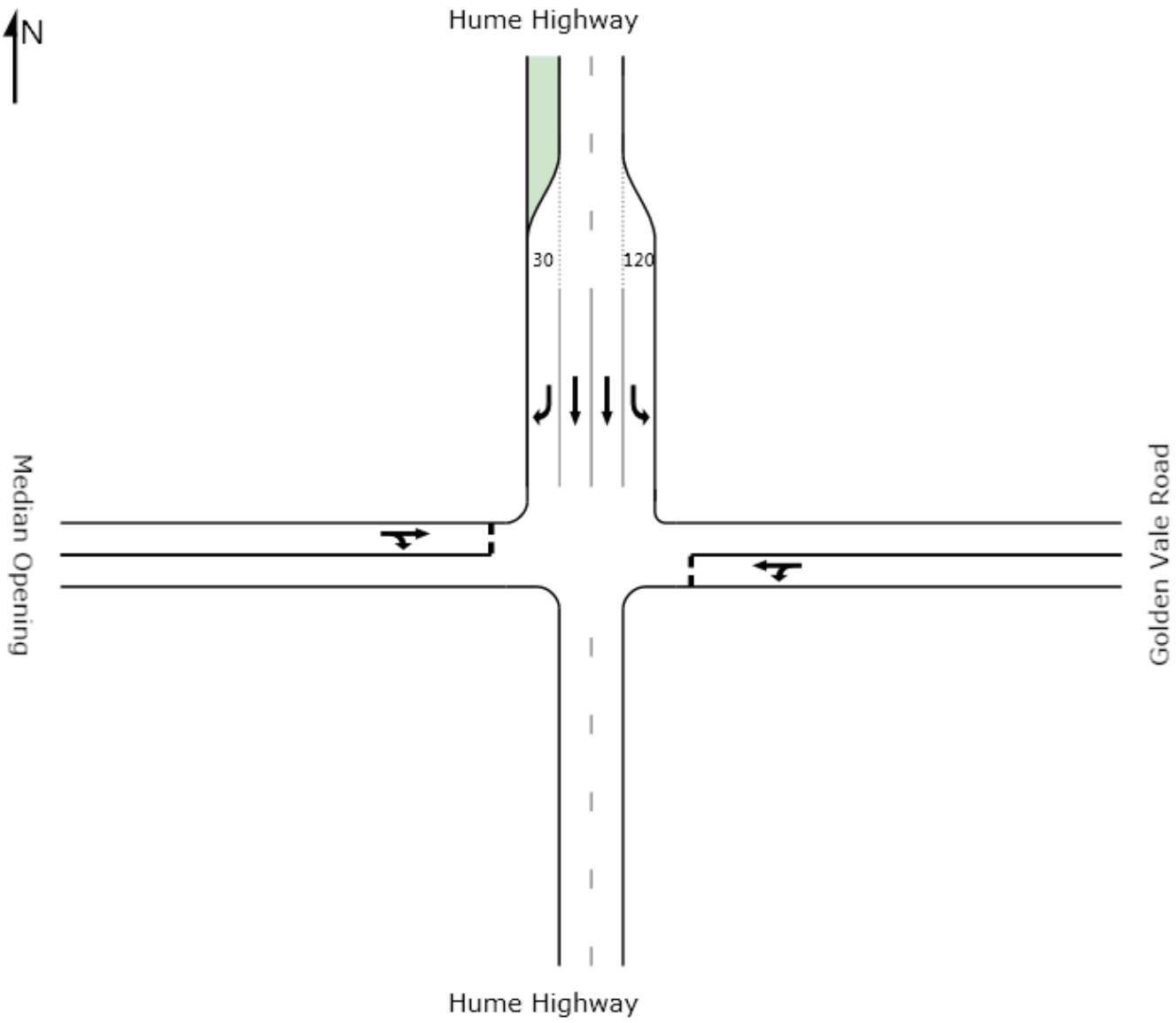

N
Hume Highway Exit
Medway Road
Medway Road
150

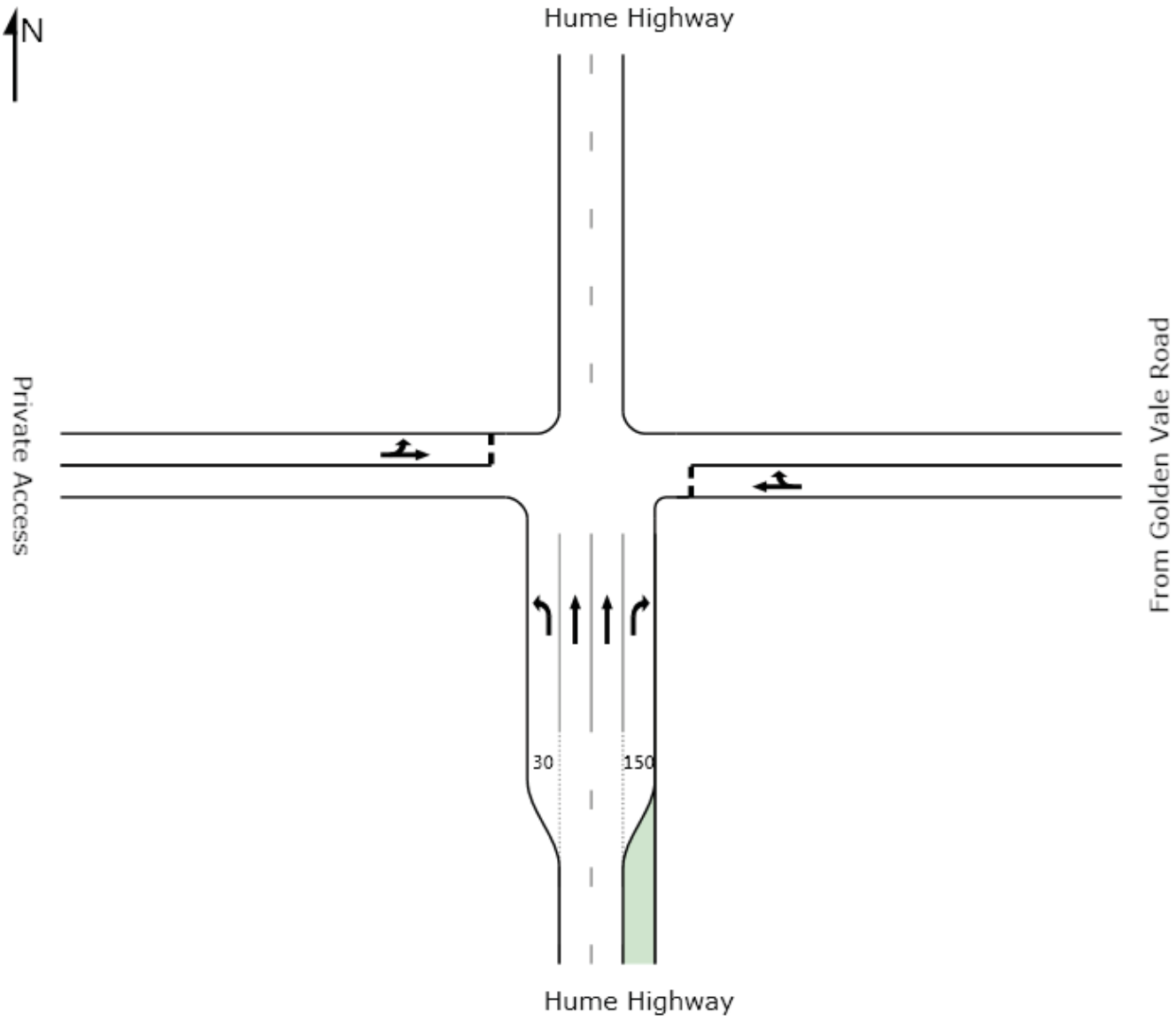

N
Hume Highway Entry
150
60
60
Medway Road
Medway Road

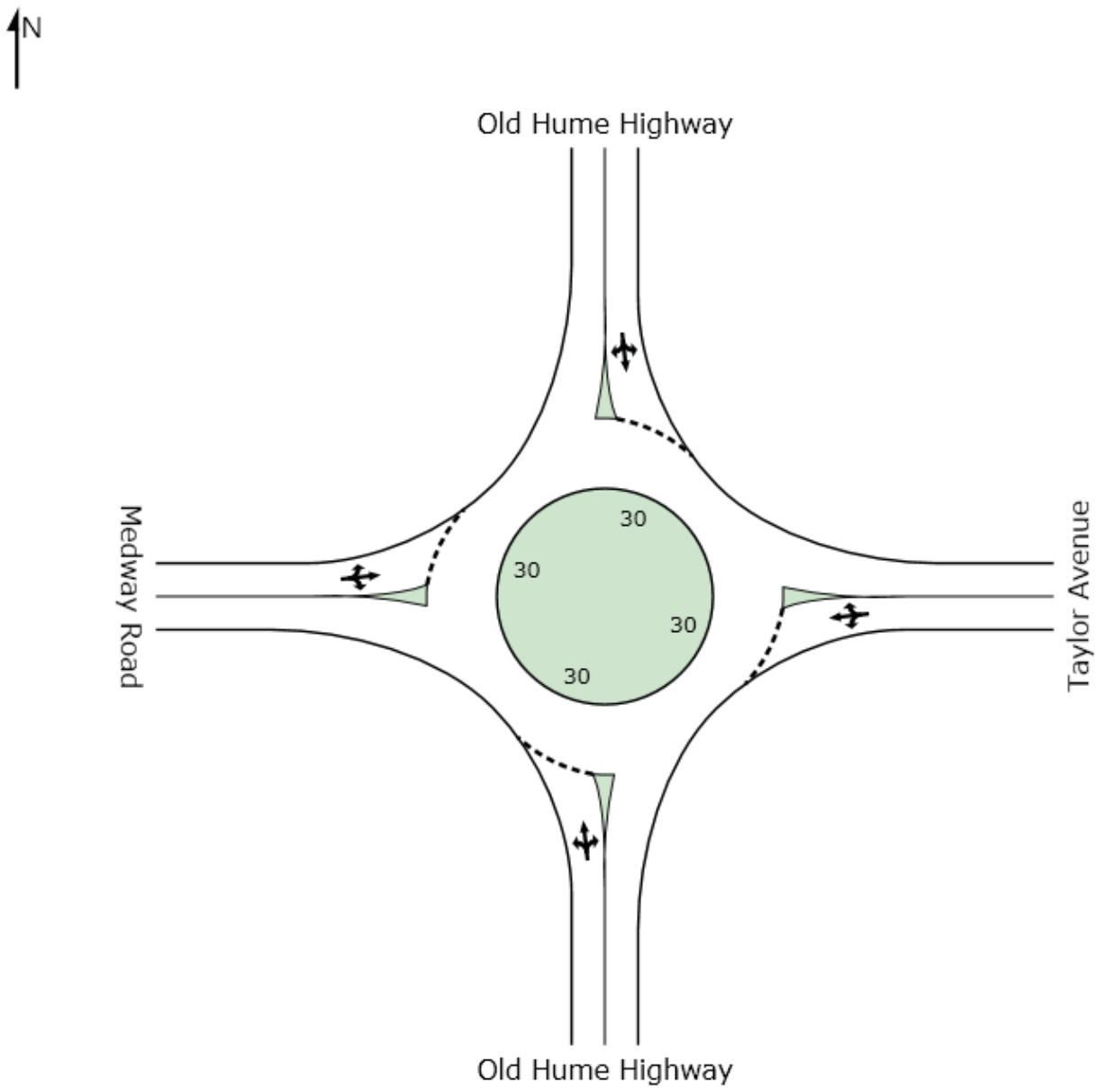

N
Old Hume Highway
30
30
30
Mereworth Road
Hume Highway Entry



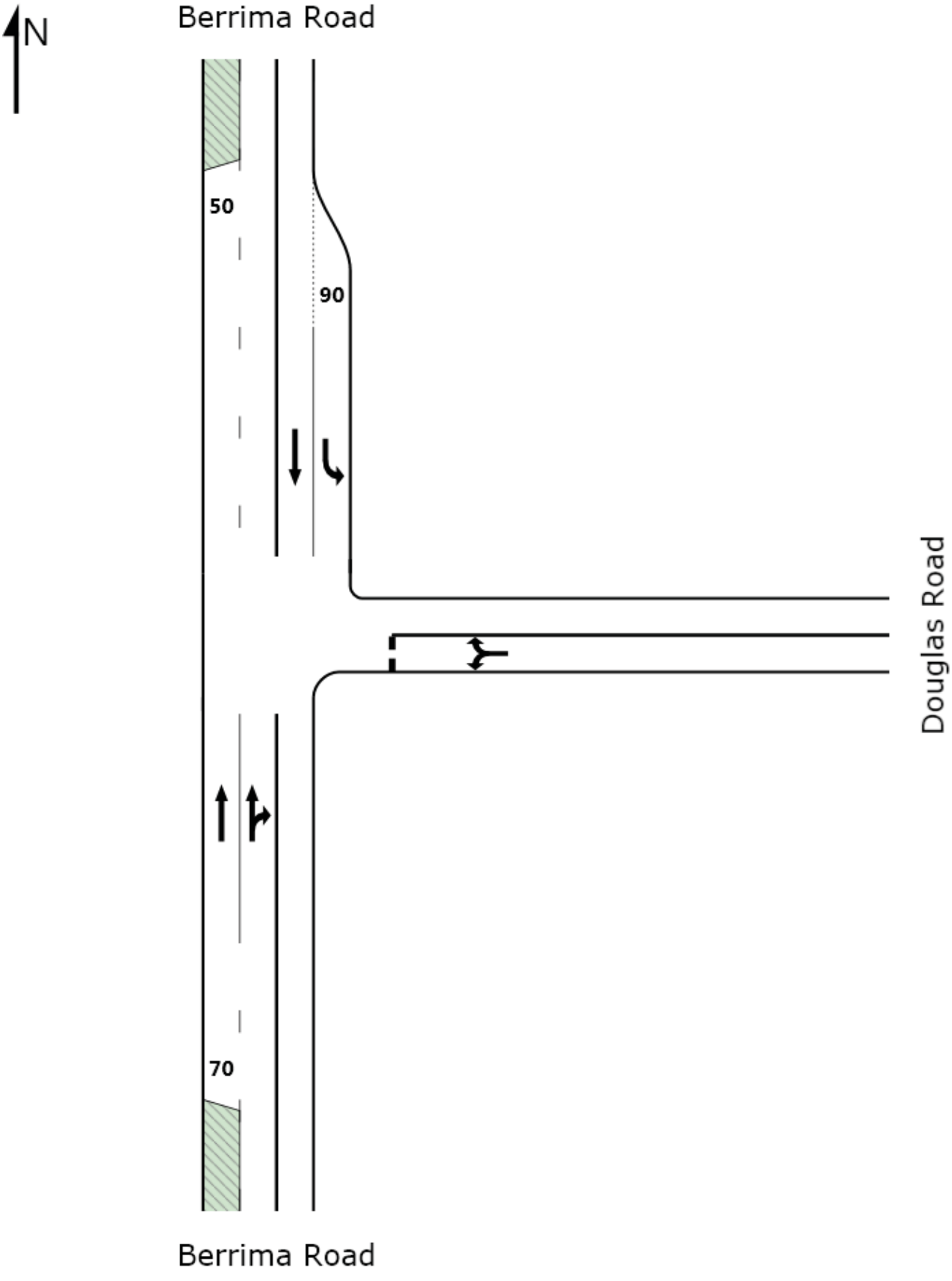
Hume Highway Exiit

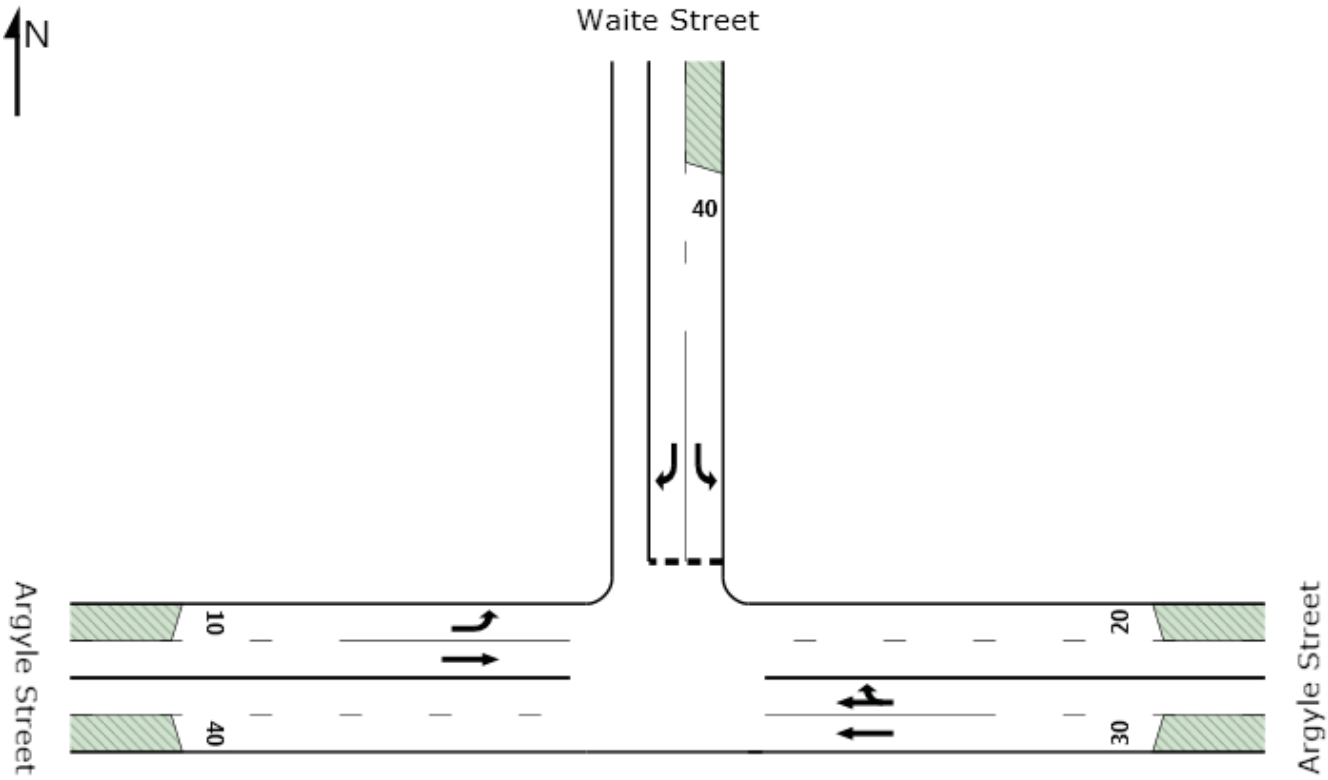

N
Hume Highway
30
120
Median Opening
Golden Vale Road
Hume Highway

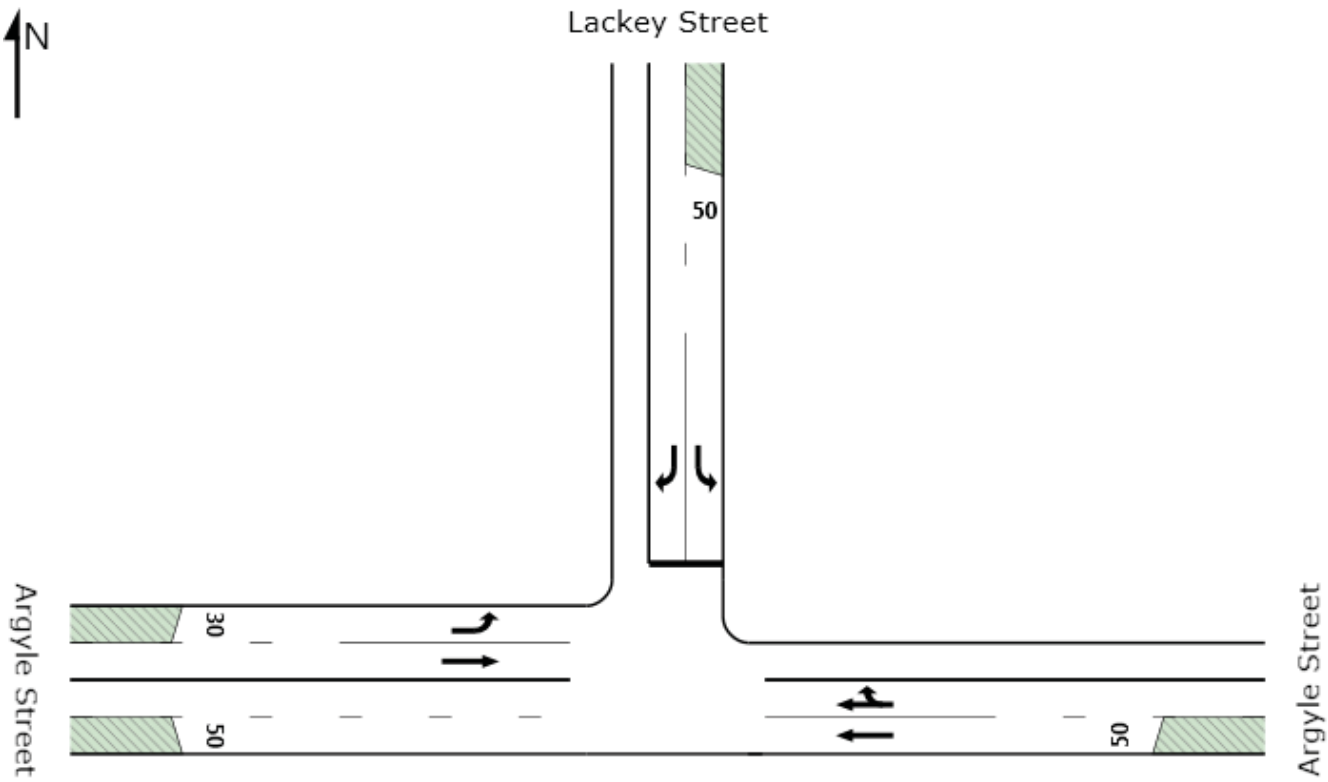

N
Hume Highway
Private Access
From Golden Vale Road
30
150
Hume Highway


N
Old Hume Highway
Medway Road
Taylor Avenue
Old Hume Highway
30
30
30
30

N
Berrima Road
Taylor Avenue
Berrima Road


N
Berrima Road
50
90
Douglas Road
70
Berrima Road


N
Waite Street
40
Argyle Street
10
40
20
30
Argyle Street


N
Lackey Street
50
Argyle Street
30
50
50
Argyle Street

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side AM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	74	18.6	0.042	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		74	18.6	0.042	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	102	13.4	0.060	11.7	X	X	X	X	0.69	58.9
9	R	2	0.0	0.003	11.6	LOS A	0.0	0.1	0.25	0.66	57.9
Approach		104	13.1	0.060	11.7	LOS A	0.0	0.1	0.01	0.69	58.8
West: Medway Road											
11	T	20	5.3	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		20	5.3	0.011	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		198	14.4	0.060	6.2	NA	0.0	0.1	0.00	0.36	67.3

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side PM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	121	7.0	0.065	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		121	7.0	0.065	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	67	14.1	0.040	11.7	X	X	X	X	0.69	58.9
9	R	1	0.0	0.001	11.9	LOS A	0.0	0.0	0.30	0.65	57.5
Approach		68	13.8	0.040	11.7	LOS A	0.0	0.0	0.00	0.69	58.8
West: Medway Road											
11	T	15	14.3	0.008	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		15	14.3	0.008	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		204	9.8	0.065	3.9	NA	0.0	0.0	0.00	0.23	71.5

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side AM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	7	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	67	20.3	0.066	12.5	LOS A	0.2	1.8	0.09	0.73	58.4
Approach		75	18.3	0.066	11.2	NA	0.2	1.8	0.08	0.65	60.0
West: Medway Road											
10	L	2	0.0	0.001	11.1	X	X	X	X	0.69	58.9
11	T	23	4.5	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		25	4.2	0.012	0.9	NA	0.0	0.0	0.00	0.06	77.7
All Vehicles		100	14.7	0.066	8.6	NA	0.2	1.8	0.06	0.50	63.7

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side PM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	21	5.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	105	7.0	0.089	11.5	LOS A	0.3	2.3	0.07	0.73	58.5
Approach		126	6.7	0.089	9.6	NA	0.3	2.3	0.06	0.61	61.3
West: Medway Road											
10	L	3	0.0	0.002	11.1	X	X	X	X	0.69	58.9
11	T	17	6.3	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		20	5.3	0.009	1.7	NA	0.0	0.0	0.00	0.11	75.8
All Vehicles		146	6.5	0.089	8.5	NA	0.3	2.3	0.05	0.54	62.9

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side AM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	15	21.4	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	1	0.0	0.001	10.8	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		16	20.0	0.009	0.7	NA	0.0	0.0	0.00	0.05	78.2
West: Mereworth Road											
10	L	58	9.1	0.033	11.5	X	X	X	X	0.69	58.9
12	R	2	50.0	0.005	14.6	LOS B	0.0	0.1	0.11	0.72	58.3
Approach		60	10.5	0.033	11.6	LOS A	0.0	0.1	0.00	0.69	58.8
All Vehicles		76	12.5	0.033	9.3	NA	0.0	0.1	0.00	0.56	62.1

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side PM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	40	7.9	0.022	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	1	0.0	0.001	10.8	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		41	7.7	0.022	0.3	NA	0.0	0.0	0.00	0.02	79.3
West: Mereworth Road											
10	L	36	8.8	0.020	11.5	X	X	X	X	0.69	58.9
12	R	1	0.0	0.002	11.3	LOS A	0.0	0.0	0.15	0.69	58.1
Approach		37	8.6	0.020	11.5	LOS A	0.0	0.0	0.00	0.69	58.8
All Vehicles		78	8.1	0.022	5.6	NA	0.0	0.0	0.00	0.34	68.2

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side AM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.00	0.73	58.9
3	R	58	10.9	0.068	11.8	LOS A	0.3	2.1	0.03	0.75	58.6
Approach		59	10.7	0.068	11.8	LOS A	0.3	2.1	0.03	0.75	58.6
East: Mereworth Road											
5	T	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	2	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		62	10.2	0.068	11.2	NA	0.3	2.1	0.03	0.71	59.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side PM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.00	0.73	58.9
3	R	42	20.0	0.054	12.4	LOS A	0.2	1.7	0.04	0.76	58.6
Approach		43	19.5	0.054	12.4	LOS A	0.2	1.7	0.04	0.75	58.6
East: Mereworth Road											
5	T	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	2	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		46	18.2	0.054	11.6	NA	0.2	1.7	0.03	0.70	59.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection East Side AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	4	25.0	0.127	18.8	LOS B	0.5	3.4	0.67	0.91	47.7
5	T	43	0.0	0.127	15.4	LOS B	0.5	3.4	0.67	0.86	42.0
Approach		47	2.2	0.127	15.7	LOS B	0.5	3.4	0.67	0.87	42.6
North: Hume Highway											
7	L	26	12.0	0.015	13.2	LOS A	0.0	0.0	0.00	0.76	63.3
8	T	612	13.4	0.170	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	2	0.0	0.001	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		640	13.3	0.170	0.6	NA	0.0	0.0	0.00	0.03	98.1
West: Median Opening											
11	T	4	0.0	0.015	15.5	LOS B	0.1	0.4	0.66	0.75	41.8
12	R	1	0.0	0.015	17.7	LOS B	0.1	0.4	0.66	0.86	47.8
Approach		5	0.0	0.015	15.9	LOS B	0.1	0.4	0.66	0.78	43.2
All Vehicles		693	12.5	0.170	1.7	NA	0.5	3.4	0.05	0.10	90.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection East Side PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	1	0.0	0.075	17.0	LOS B	0.3	2.0	0.65	0.86	48.1
5	T	27	0.0	0.075	15.0	LOS B	0.3	2.0	0.65	0.85	42.4
Approach		28	0.0	0.075	15.1	LOS B	0.3	2.0	0.65	0.85	42.6
North: Hume Highway											
7	L	46	0.0	0.025	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
8	T	552	22.3	0.162	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	4	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		602	20.5	0.162	1.1	NA	0.0	0.0	0.00	0.06	96.4
West: Median Opening											
11	T	3	0.0	0.012	15.4	LOS B	0.0	0.3	0.66	0.74	41.9
12	R	1	0.0	0.012	17.6	LOS B	0.0	0.3	0.66	0.84	47.9
Approach		4	0.0	0.012	15.9	LOS B	0.0	0.3	0.66	0.76	43.5
All Vehicles		635	19.4	0.162	1.8	NA	0.3	2.0	0.03	0.10	91.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection West Side AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	472	32.4	0.146	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		476	32.1	0.146	0.1	NA	0.0	0.0	0.00	0.01	99.6
East: From Golden Vale Road											
5	T	1	0.0	0.130	15.6	LOS B	0.5	3.3	0.65	0.83	41.2
6	R	44	0.0	0.130	17.7	LOS B	0.5	3.3	0.65	0.91	47.3
Approach		45	0.0	0.130	17.7	LOS B	0.5	3.3	0.65	0.90	47.2
West: Private Access											
10	L	1	0.0	0.004	13.8	LOS A	0.0	0.1	0.56	0.69	50.7
11	T	1	0.0	0.004	11.8	LOS A	0.0	0.1	0.56	0.65	45.1
Approach		2	0.0	0.004	12.8	LOS A	0.0	0.1	0.56	0.67	48.1
All Vehicles		523	29.2	0.146	1.7	NA	0.5	3.3	0.06	0.09	90.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection West Side PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	696	10.6	0.191	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		700	10.5	0.191	0.1	NA	0.0	0.0	0.00	0.00	99.7
East: From Golden Vale Road											
5	T	1	0.0	0.120	18.8	LOS B	0.4	2.9	0.72	0.87	38.8
6	R	32	0.0	0.120	21.0	LOS B	0.4	2.9	0.72	0.93	44.9
Approach		33	0.0	0.120	20.9	LOS B	0.4	2.9	0.72	0.92	44.7
West: Private Access											
10	L	1	0.0	0.005	15.6	LOS B	0.0	0.1	0.63	0.73	49.1
11	T	1	0.0	0.005	13.6	LOS A	0.0	0.1	0.63	0.70	43.4
Approach		2	0.0	0.005	14.6	LOS B	0.0	0.1	0.63	0.71	46.4
All Vehicles		735	10.0	0.191	1.0	NA	0.4	2.9	0.03	0.05	94.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout AM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	1	0.0	0.056	9.6	LOS A	0.3	2.0	0.28	0.58	59.6
2	T	56	0.0	0.056	8.5	LOS A	0.3	2.0	0.28	0.51	60.5
3	R	15	28.6	0.056	17.1	LOS B	0.3	2.0	0.28	0.82	54.3
Approach		72	5.9	0.056	10.3	LOS A	0.3	2.0	0.28	0.57	59.1
East: Taylor Avenue											
4	L	12	27.3	0.090	10.6	LOS A	0.5	3.7	0.13	0.57	60.6
5	T	69	21.2	0.090	9.1	LOS A	0.5	3.7	0.13	0.48	62.0
6	R	40	13.2	0.090	15.9	LOS B	0.5	3.7	0.13	0.82	54.3
Approach		121	19.1	0.090	11.5	LOS A	0.5	3.7	0.13	0.60	59.0
North: Old Hume Highway											
7	L	19	5.6	0.036	9.8	LOS A	0.2	1.3	0.27	0.57	59.4
8	T	20	5.3	0.036	8.7	LOS A	0.2	1.3	0.27	0.49	60.4
9	R	8	12.5	0.036	16.3	LOS B	0.2	1.3	0.27	0.78	54.1
Approach		47	6.7	0.036	10.5	LOS A	0.2	1.3	0.27	0.57	58.8
West: Medway Road											
10	L	17	6.3	0.097	9.9	LOS A	0.5	3.8	0.28	0.59	59.7
11	T	99	17.0	0.097	9.3	LOS A	0.5	3.8	0.28	0.52	60.7
12	R	2	0.0	0.097	15.7	LOS B	0.5	3.8	0.28	0.84	54.5
Approach		118	15.2	0.097	9.5	LOS A	0.5	3.8	0.28	0.54	60.4
All Vehicles		358	13.5	0.097	10.5	LOS A	0.5	3.8	0.23	0.57	59.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout PM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	5	0.0	0.033	9.6	LOS A	0.2	1.2	0.29	0.56	59.3
2	T	21	0.0	0.033	8.6	LOS A	0.2	1.2	0.29	0.49	60.2
3	R	14	30.8	0.033	17.2	LOS B	0.2	1.2	0.29	0.77	54.0
Approach		40	10.5	0.033	11.7	LOS A	0.2	1.2	0.29	0.60	57.8
East: Taylor Avenue											
4	L	14	23.1	0.095	10.5	LOS A	0.5	3.6	0.18	0.59	60.4
5	T	103	7.1	0.095	8.5	LOS A	0.5	3.6	0.18	0.50	61.6
6	R	19	0.0	0.095	15.4	LOS B	0.5	3.6	0.18	0.85	54.4
Approach		136	7.8	0.095	9.7	LOS A	0.5	3.6	0.18	0.56	60.3
North: Old Hume Highway											
7	L	31	3.4	0.060	9.5	LOS A	0.3	2.1	0.21	0.57	59.9
8	T	34	0.0	0.060	8.3	LOS A	0.3	2.1	0.21	0.49	61.1
9	R	19	5.6	0.060	15.8	LOS B	0.3	2.1	0.21	0.79	54.2
Approach		83	2.5	0.060	10.4	LOS A	0.3	2.1	0.21	0.59	58.9
West: Medway Road											
10	L	14	7.7	0.058	9.7	LOS A	0.3	2.2	0.18	0.59	60.4
11	T	59	16.1	0.058	8.9	LOS A	0.3	2.2	0.18	0.50	61.6
12	R	3	0.0	0.058	15.4	LOS B	0.3	2.2	0.18	0.86	54.5
Approach		76	13.9	0.058	9.3	LOS A	0.3	2.2	0.18	0.53	61.1
All Vehicles		335	8.2	0.095	10.0	LOS A	0.5	3.6	0.20	0.56	59.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
AM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	74	17.1	0.077	8.8	LOS A	0.0	0.0	0.00	0.82	49.0
2	T	63	0.0	0.077	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		137	9.2	0.077	4.7	NA	0.0	0.0	0.00	0.44	53.5
North: Berrima Road											
8	T	54	2.0	0.029	0.5	LOS A	0.2	1.2	0.27	0.00	54.9
9	R	1	0.0	0.029	9.0	LOS A	0.2	1.2	0.27	0.99	49.0
Approach		55	1.9	0.029	0.7	NA	0.2	1.2	0.27	0.02	54.8
West: Taylor Avenue											
10	L	1	0.0	0.203	10.1	LOS A	0.9	6.7	0.38	0.59	46.8
12	R	137	10.0	0.203	10.8	LOS A	0.9	6.7	0.38	0.70	46.6
Approach		138	9.9	0.203	10.8	LOS A	0.9	6.7	0.38	0.70	46.6
All Vehicles		329	8.3	0.203	6.6	NA	0.9	6.7	0.20	0.48	50.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
PM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	145	4.3	0.127	8.3	LOS A	0.0	0.0	0.00	0.78	49.0
2	T	89	0.0	0.127	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		235	2.7	0.127	5.2	NA	0.0	0.0	0.00	0.48	52.7
North: Berrima Road											
8	T	74	1.4	0.039	0.9	LOS A	0.3	1.8	0.37	0.00	53.4
9	R	1	0.0	0.039	9.4	LOS A	0.3	1.8	0.37	0.97	49.2
Approach		75	1.4	0.039	1.1	NA	0.3	1.8	0.37	0.01	53.3
West: Taylor Avenue											
10	L	2	0.0	0.198	11.2	LOS A	0.8	6.3	0.46	0.63	45.6
12	R	116	10.0	0.198	11.9	LOS A	0.8	6.3	0.46	0.75	45.5
Approach		118	9.8	0.198	11.9	LOS A	0.8	6.3	0.46	0.75	45.5
All Vehicles		427	4.4	0.198	6.3	NA	0.8	6.3	0.19	0.47	50.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
AM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	129	12.2	0.058	0.7	LOS A	0.4	2.7	0.27	0.00	71.0
3	R	4	0.0	0.058	11.1	LOS A	0.4	2.7	0.35	1.38	59.4
Approach		134	11.8	0.058	1.0	NA	0.4	2.7	0.27	0.04	70.6
East: Douglas Road											
4	L	4	0.0	0.054	15.1	LOS B	0.2	1.7	0.51	0.64	45.4
6	R	17	37.5	0.054	17.0	LOS B	0.2	1.7	0.51	0.80	45.5
Approach		21	30.0	0.054	16.6	LOS B	0.2	1.7	0.51	0.76	45.4
North: Berrima Road											
7	L	31	41.4	0.021	11.9	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	175	10.2	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		205	14.9	0.096	1.8	NA	0.0	0.0	0.00	0.11	76.0
All Vehicles		360	14.6	0.096	2.4	NA	0.4	2.7	0.13	0.12	71.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
PM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	205	4.6	0.087	0.6	LOS A	0.6	4.1	0.26	0.00	71.1
3	R	5	0.0	0.087	11.0	LOS A	0.6	4.1	0.35	1.40	59.4
Approach		211	4.5	0.087	0.9	NA	0.6	4.1	0.27	0.04	70.8
East: Douglas Road											
4	L	3	0.0	0.134	14.5	LOS A	0.5	3.9	0.54	0.66	45.9
6	R	58	10.9	0.134	15.1	LOS B	0.5	3.9	0.54	0.83	45.9
Approach		61	10.3	0.134	15.0	LOS B	0.5	3.9	0.54	0.82	45.9
North: Berrima Road											
7	L	17	37.5	0.011	11.7	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	183	4.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		200	6.8	0.096	1.0	NA	0.0	0.0	0.00	0.06	77.7
All Vehicles		472	6.3	0.134	2.8	NA	0.6	4.1	0.19	0.15	68.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection AM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	262	2.8	0.409	1.0	LOS A	2.6	18.9	0.12	0.00	48.0
6	R	280	4.1	0.409	11.9	LOS A	2.6	18.9	0.66	0.97	39.1
Approach		542	3.5	0.409	6.6	NA	2.6	18.9	0.40	0.50	43.0
North: Waite Street											
7	L	269	5.5	0.451	13.1	LOS A	2.5	18.0	0.65	0.97	38.1
9	R	12	18.2	0.143	51.1	LOS D	0.4	3.5	0.91	0.97	22.5
Approach		281	6.0	0.451	14.6	LOS B	2.5	18.0	0.66	0.97	37.1
West: Argyle Street											
10	L	81	6.5	0.046	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	557	2.3	0.290	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		638	2.8	0.290	0.8	NA	0.0	0.0	0.00	0.08	49.0
All Vehicles		1461	3.7	0.451	5.6	NA	2.6	18.9	0.28	0.41	44.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection PM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	412	2.3	0.424	2.2	LOS A	3.8	27.1	0.32	0.00	45.6
6	R	269	2.7	0.424	11.3	LOS A	3.8	27.1	0.69	1.00	40.0
Approach		681	2.5	0.424	5.8	NA	3.8	27.1	0.46	0.39	43.2
North: Waite Street											
7	L	329	3.8	0.478	11.9	LOS A	2.9	21.0	0.63	0.97	38.9
9	R	18	0.0	0.159	38.8	LOS C	0.5	3.5	0.89	0.96	25.8
Approach		347	3.6	0.478	13.3	LOS A	2.9	21.0	0.64	0.97	37.9
West: Argyle Street											
10	L	75	5.6	0.042	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	459	2.8	0.240	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		534	3.2	0.240	0.9	NA	0.0	0.0	0.00	0.09	48.9
All Vehicles		1562	3.0	0.478	5.8	NA	3.8	27.1	0.34	0.42	43.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
AM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	558	3.4	0.442	4.7	LOS A	5.3	38.7	0.51	0.00	42.8
6	R	173	6.1	0.442	15.7	LOS B	5.3	38.7	0.96	1.13	37.7
Approach		731	4.0	0.442	7.3	NA	5.3	38.7	0.62	0.27	41.5
North: Lackey Street											
7	L	221	3.3	0.451	18.1	LOS B	2.3	16.2	0.73	1.11	35.8
9	R	5	0.0	0.093	70.6	LOS F	0.3	1.8	0.94	1.00	18.8
Approach		226	3.3	0.451	19.3	LOS B	2.3	16.2	0.73	1.11	35.1
West: Argyle Street											
10	L	52	2.0	0.028	6.5	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	721	3.6	0.379	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		773	3.5	0.379	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1729	3.7	0.451	5.8	NA	5.3	38.7	0.36	0.28	43.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
PM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	719	2.6	0.541	4.9	LOS A	7.7	55.2	0.55	0.00	42.5
6	R	234	1.8	0.541	15.6	LOS B	7.7	55.2	1.00	1.20	37.7
Approach		953	2.4	0.541	7.5	NA	7.7	55.2	0.66	0.29	41.2
North: Lackey Street											
7	L	227	0.9	0.406	16.0	LOS B	2.0	14.2	0.66	1.09	37.0
9	R	9	0.0	0.230	102.5	LOS F	0.6	4.5	0.96	1.01	14.6
Approach		237	0.9	0.406	19.5	LOS B	2.0	14.2	0.67	1.08	34.8
West: Argyle Street											
10	L	44	9.5	0.025	6.7	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	631	2.8	0.329	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		675	3.3	0.329	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1864	2.5	0.541	6.5	NA	7.7	55.2	0.42	0.30	42.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

Appendix C

SIDRA Intersection Delay Results for 2020 Baseline Traffic

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side 2020 AM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	78	18.9	0.045	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		78	18.9	0.045	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	107	13.7	0.063	11.7	X	X	X	X	0.69	58.9
9	R	2	0.0	0.003	11.7	LOS A	0.0	0.1	0.26	0.66	57.8
Approach		109	13.5	0.063	11.7	LOS A	0.0	0.1	0.00	0.69	58.8
West: Medway Road											
11	T	21	5.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.011	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		208	14.6	0.063	6.1	NA	0.0	0.1	0.00	0.36	67.4

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side 2020 PM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	126	6.7	0.068	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		126	6.7	0.068	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	71	13.4	0.042	11.7	X	X	X	X	0.69	58.9
9	R	1	0.0	0.001	12.0	LOS A	0.0	0.0	0.30	0.65	57.4
Approach		72	13.2	0.042	11.7	LOS A	0.0	0.0	0.00	0.69	58.8
West: Medway Road											
11	T	16	13.3	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		16	13.3	0.009	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		214	9.4	0.068	3.9	NA	0.0	0.0	0.00	0.23	71.5

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side 2020 AM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	7	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	72	20.6	0.070	12.5	LOS A	0.2	2.0	0.10	0.73	58.3
Approach		79	18.7	0.070	11.3	NA	0.2	2.0	0.09	0.66	59.9
West: Medway Road											
10	L	2	0.0	0.001	11.1	X	X	X	X	0.69	58.9
11	T	24	4.3	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		26	4.0	0.013	0.9	NA	0.0	0.0	0.00	0.06	77.8
All Vehicles		105	15.0	0.070	8.7	NA	0.2	2.0	0.07	0.51	63.6

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side 2020 PM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	22	4.8	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	111	6.7	0.093	11.5	LOS A	0.3	2.4	0.08	0.73	58.4
Approach		133	6.3	0.093	9.6	NA	0.3	2.4	0.06	0.61	61.2
West: Medway Road											
10	L	3	0.0	0.002	11.1	X	X	X	X	0.69	58.9
11	T	18	5.9	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.010	1.7	NA	0.0	0.0	0.00	0.10	76.0
All Vehicles		154	6.2	0.093	8.5	NA	0.3	2.4	0.05	0.54	62.9

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side 2020 AM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	16	20.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	1	0.0	0.001	10.8	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		17	18.8	0.009	0.7	NA	0.0	0.0	0.00	0.05	78.3
West: Mereworth Road											
10	L	61	8.6	0.035	11.5	X	X	X	X	0.69	58.9
12	R	2	50.0	0.005	14.7	LOS B	0.0	0.1	0.12	0.72	58.3
Approach		63	10.0	0.035	11.6	LOS A	0.0	0.1	0.00	0.69	58.8
All Vehicles		80	11.8	0.035	9.3	NA	0.0	0.1	0.00	0.55	62.1

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side 2020 PM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	42	7.5	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	1	0.0	0.001	10.8	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		43	7.3	0.023	0.3	NA	0.0	0.0	0.00	0.02	79.3
West: Mereworth Road											
10	L	38	8.3	0.022	11.4	X	X	X	X	0.69	58.9
12	R	1	0.0	0.002	11.3	LOS A	0.0	0.0	0.15	0.69	58.1
Approach		39	8.1	0.022	11.4	LOS A	0.0	0.0	0.00	0.69	58.8
All Vehicles		82	7.7	0.023	5.6	NA	0.0	0.0	0.00	0.34	68.1

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side 2020 AM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.00	0.73	58.9
3	R	60	10.5	0.071	11.8	LOS A	0.3	2.2	0.03	0.75	58.6
Approach		61	10.3	0.071	11.8	LOS A	0.3	2.2	0.03	0.75	58.6
East: Mereworth Road											
5	T	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	2	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		64	9.8	0.071	11.2	NA	0.3	2.2	0.03	0.72	59.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side 2020 PM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.00	0.73	58.9
3	R	44	19.0	0.056	12.4	LOS A	0.2	1.8	0.04	0.75	58.6
Approach		45	18.6	0.056	12.3	LOS A	0.2	1.8	0.04	0.75	58.6
East: Mereworth Road											
5	T	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		1	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	2	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	0.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		48	17.4	0.056	11.5	NA	0.2	1.8	0.03	0.71	59.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side 2020 AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	4	25.0	0.149	20.3	LOS B	0.6	3.9	0.71	0.92	46.6
5	T	45	0.0	0.149	16.9	LOS B	0.6	3.9	0.71	0.88	40.8
Approach		49	2.1	0.149	17.2	LOS B	0.6	3.9	0.71	0.88	41.4
North: Hume Highway											
7	L	27	11.5	0.016	13.2	LOS A	0.0	0.0	0.00	0.76	63.3
8	T	673	13.5	0.188	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	2	0.0	0.001	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		702	13.3	0.188	0.6	NA	0.0	0.0	0.00	0.03	98.2
West: Median Opening											
11	T	4	0.0	0.017	17.0	LOS B	0.1	0.4	0.70	0.79	40.6
12	R	1	0.0	0.017	19.2	LOS B	0.1	0.4	0.70	0.89	46.6
Approach		5	0.0	0.017	17.5	LOS B	0.1	0.4	0.70	0.81	42.0
All Vehicles		757	12.5	0.188	1.8	NA	0.6	3.9	0.05	0.09	91.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side 2020 PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	1	0.0	0.087	18.4	LOS B	0.3	2.2	0.69	0.90	46.9
5	T	28	0.0	0.087	16.4	LOS B	0.3	2.2	0.69	0.87	41.2
Approach		29	0.0	0.087	16.5	LOS B	0.3	2.2	0.69	0.87	41.5
North: Hume Highway											
7	L	48	0.0	0.026	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
8	T	607	22.4	0.178	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	4	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		660	20.6	0.178	1.0	NA	0.0	0.0	0.00	0.06	96.6
West: Median Opening											
11	T	3	0.0	0.014	16.9	LOS B	0.0	0.3	0.70	0.77	40.7
12	R	1	0.0	0.014	19.1	LOS B	0.0	0.3	0.70	0.86	46.7
Approach		4	0.0	0.014	17.4	LOS B	0.0	0.3	0.70	0.80	42.4
All Vehicles		694	19.6	0.178	1.8	NA	0.3	2.2	0.03	0.10	91.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection West Side 2020 AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	519	32.5	0.161	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		523	32.2	0.161	0.1	NA	0.0	0.0	0.00	0.01	99.6
East: From Golden Vale Road											
5	T	1	0.0	0.152	17.1	LOS B	0.5	3.8	0.69	0.85	40.0
6	R	46	0.0	0.152	19.3	LOS B	0.5	3.8	0.69	0.92	46.1
Approach		47	0.0	0.152	19.2	LOS B	0.5	3.8	0.69	0.92	46.0
West: Private Access											
10	L	1	0.0	0.005	14.6	LOS B	0.0	0.1	0.58	0.71	50.0
11	T	1	0.0	0.005	12.6	LOS A	0.0	0.1	0.58	0.67	44.3
Approach		2	0.0	0.005	13.6	LOS A	0.0	0.1	0.58	0.69	47.3
All Vehicles		573	29.4	0.161	1.7	NA	0.5	3.8	0.06	0.08	90.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection West Side 2020 PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	765	10.6	0.210	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		769	10.5	0.210	0.1	NA	0.0	0.0	0.00	0.00	99.8
East: From Golden Vale Road											
5	T	1	0.0	0.146	21.2	LOS B	0.5	3.5	0.77	0.89	37.2
6	R	34	0.0	0.146	23.4	LOS B	0.5	3.5	0.77	0.94	43.2
Approach		35	0.0	0.146	23.3	LOS B	0.5	3.5	0.77	0.94	43.1
West: Private Access											
10	L	1	0.0	0.006	16.8	LOS B	0.0	0.1	0.67	0.75	48.1
11	T	1	0.0	0.006	14.8	LOS B	0.0	0.1	0.67	0.73	42.3
Approach		2	0.0	0.006	15.8	LOS B	0.0	0.1	0.67	0.74	45.4
All Vehicles		806	10.1	0.210	1.1	NA	0.5	3.5	0.03	0.05	94.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout 2020 AM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	1	0.0	0.059	9.6	LOS A	0.3	2.1	0.28	0.58	59.5
2	T	59	0.0	0.059	8.5	LOS A	0.3	2.1	0.28	0.51	60.5
3	R	16	26.7	0.059	17.0	LOS B	0.3	2.1	0.28	0.82	54.3
Approach		76	5.6	0.059	10.3	LOS A	0.3	2.1	0.28	0.58	59.0
East: Taylor Avenue											
4	L	12	27.3	0.094	10.6	LOS A	0.5	3.9	0.14	0.57	60.6
5	T	72	22.1	0.094	9.1	LOS A	0.5	3.9	0.14	0.48	62.0
6	R	42	12.5	0.094	15.9	LOS B	0.5	3.9	0.14	0.82	54.3
Approach		125	19.3	0.094	11.5	LOS A	0.5	3.9	0.14	0.60	59.0
North: Old Hume Highway											
7	L	20	5.3	0.038	9.8	LOS A	0.2	1.4	0.28	0.57	59.4
8	T	21	5.0	0.038	8.7	LOS A	0.2	1.4	0.28	0.50	60.4
9	R	8	12.5	0.038	16.3	LOS B	0.2	1.4	0.28	0.78	54.1
Approach		49	6.4	0.038	10.4	LOS A	0.2	1.4	0.28	0.57	58.8
West: Medway Road											
10	L	18	5.9	0.102	9.9	LOS A	0.5	4.1	0.29	0.60	59.6
11	T	104	17.2	0.102	9.3	LOS A	0.5	4.1	0.29	0.53	60.6
12	R	2	0.0	0.102	15.8	LOS B	0.5	4.1	0.29	0.84	54.5
Approach		124	15.3	0.102	9.5	LOS A	0.5	4.1	0.29	0.54	60.3
All Vehicles		375	13.5	0.102	10.5	LOS A	0.5	4.1	0.23	0.57	59.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout 2020 PM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	5	0.0	0.034	9.7	LOS A	0.2	1.2	0.30	0.57	59.2
2	T	22	0.0	0.034	8.6	LOS A	0.2	1.2	0.30	0.50	60.2
3	R	14	30.8	0.034	17.3	LOS B	0.2	1.2	0.30	0.78	54.0
Approach		41	10.3	0.034	11.6	LOS A	0.2	1.2	0.30	0.60	57.8
East: Taylor Avenue											
4	L	15	21.4	0.101	10.4	LOS A	0.5	3.8	0.18	0.59	60.3
5	T	108	6.8	0.101	8.5	LOS A	0.5	3.8	0.18	0.50	61.6
6	R	20	0.0	0.101	15.4	LOS B	0.5	3.8	0.18	0.85	54.4
Approach		143	7.4	0.101	9.6	LOS A	0.5	3.8	0.18	0.56	60.3
North: Old Hume Highway											
7	L	32	3.3	0.063	9.5	LOS A	0.3	2.2	0.22	0.57	59.9
8	T	36	0.0	0.063	8.3	LOS A	0.3	2.2	0.22	0.49	61.0
9	R	20	5.3	0.063	15.8	LOS B	0.3	2.2	0.22	0.79	54.2
Approach		87	2.4	0.063	10.4	LOS A	0.3	2.2	0.22	0.59	58.8
West: Medway Road											
10	L	15	7.1	0.060	9.7	LOS A	0.3	2.3	0.18	0.59	60.3
11	T	61	15.5	0.060	8.9	LOS A	0.3	2.3	0.18	0.50	61.6
12	R	3	0.0	0.060	15.4	LOS B	0.3	2.3	0.18	0.86	54.5
Approach		79	13.3	0.060	9.3	LOS A	0.3	2.3	0.18	0.53	61.0
All Vehicles		351	7.8	0.101	10.0	LOS A	0.5	3.8	0.21	0.56	59.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
2020 AM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	78	17.6	0.081	8.8	LOS A	0.0	0.0	0.00	0.82	49.0
2	T	66	0.0	0.081	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		144	9.5	0.081	4.8	NA	0.0	0.0	0.00	0.44	53.5
North: Berrima Road											
8	T	57	1.9	0.030	0.6	LOS A	0.2	1.3	0.28	0.00	54.8
9	R	1	0.0	0.030	9.0	LOS A	0.2	1.3	0.28	0.99	49.0
Approach		58	1.8	0.030	0.7	NA	0.2	1.3	0.28	0.02	54.7
West: Taylor Avenue											
10	L	1	0.0	0.218	10.3	LOS A	1.0	7.3	0.39	0.60	46.6
12	R	144	10.2	0.218	10.9	LOS A	1.0	7.3	0.39	0.71	46.4
Approach		145	10.1	0.218	10.9	LOS A	1.0	7.3	0.39	0.71	46.4
All Vehicles		347	8.5	0.218	6.7	NA	1.0	7.3	0.21	0.48	50.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
2020 PM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	153	4.1	0.133	8.3	LOS A	0.0	0.0	0.00	0.78	49.0
2	T	94	0.0	0.133	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		246	2.6	0.133	5.2	NA	0.0	0.0	0.00	0.48	52.6
North: Berrima Road											
8	T	77	1.4	0.041	1.0	LOS A	0.3	1.9	0.38	0.00	53.2
9	R	1	0.0	0.041	9.5	LOS A	0.3	1.9	0.38	0.97	49.2
Approach		78	1.4	0.041	1.1	NA	0.3	1.9	0.38	0.01	53.1
West: Taylor Avenue											
10	L	2	0.0	0.214	11.5	LOS A	0.9	6.8	0.47	0.64	45.4
12	R	122	10.3	0.214	12.2	LOS A	0.9	6.8	0.47	0.76	45.3
Approach		124	10.2	0.214	12.1	LOS A	0.9	6.8	0.47	0.76	45.3
All Vehicles		448	4.5	0.214	6.4	NA	0.9	6.8	0.20	0.48	50.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
2020 AM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	136	12.4	0.061	0.7	LOS A	0.4	2.9	0.28	0.00	70.7
3	R	4	0.0	0.061	11.1	LOS A	0.4	2.9	0.36	1.37	59.5
Approach		140	12.0	0.061	1.0	NA	0.4	2.9	0.28	0.04	70.4
East: Douglas Road											
4	L	4	0.0	0.058	15.3	LOS B	0.2	1.8	0.52	0.65	45.1
6	R	18	35.3	0.058	17.1	LOS B	0.2	1.8	0.52	0.81	45.2
Approach		22	28.6	0.058	16.8	LOS B	0.2	1.8	0.52	0.78	45.2
North: Berrima Road											
7	L	33	41.9	0.023	11.9	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	184	10.3	0.101	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		217	15.0	0.101	1.8	NA	0.0	0.0	0.00	0.11	75.9
All Vehicles		379	14.7	0.101	2.4	NA	0.4	2.9	0.13	0.12	71.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
2020 PM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	215	4.4	0.091	0.7	LOS A	0.6	4.3	0.27	0.00	70.9
3	R	5	0.0	0.091	11.1	LOS A	0.6	4.3	0.36	1.40	59.5
Approach		220	4.3	0.091	0.9	NA	0.6	4.3	0.27	0.03	70.6
East: Douglas Road											
4	L	3	0.0	0.142	14.8	LOS B	0.5	4.1	0.55	0.67	45.6
6	R	60	10.5	0.142	15.4	LOS B	0.5	4.1	0.55	0.84	45.7
Approach		63	10.0	0.142	15.3	LOS B	0.5	4.1	0.55	0.83	45.7
North: Berrima Road											
7	L	18	35.3	0.012	11.6	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	192	3.8	0.101	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		209	6.5	0.101	1.0	NA	0.0	0.0	0.00	0.06	77.7
All Vehicles		493	6.0	0.142	2.8	NA	0.6	4.3	0.19	0.15	68.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
2020 AM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	275	2.7	0.444	0.9	LOS A	2.9	20.9	0.11	0.00	48.2
6	R	295	4.3	0.444	12.6	LOS A	2.9	20.9	0.69	1.00	38.6
Approach		569	3.5	0.444	7.0	NA	2.9	20.9	0.41	0.52	42.7
North: Waite Street											
7	L	283	5.6	0.495	14.0	LOS A	2.8	20.7	0.68	1.01	37.5
9	R	12	18.2	0.165	59.0	LOS E	0.5	4.0	0.93	0.98	20.7
Approach		295	6.1	0.495	15.8	LOS B	2.8	20.7	0.69	1.01	36.3
West: Argyle Street											
10	L	85	6.2	0.048	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	585	2.3	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		671	2.8	0.305	0.8	NA	0.0	0.0	0.00	0.08	49.0
All Vehicles		1535	3.7	0.495	6.0	NA	2.9	20.9	0.29	0.42	43.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
2020 PM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	432	2.2	0.452	2.4	LOS A	4.2	30.2	0.32	0.00	45.5
6	R	282	2.6	0.452	11.9	LOS A	4.2	30.2	0.72	1.03	39.6
Approach		714	2.4	0.452	6.2	NA	4.2	30.2	0.48	0.41	42.9
North: Waite Street											
7	L	346	4.0	0.519	12.7	LOS A	3.3	24.1	0.65	1.00	38.4
9	R	19	0.0	0.191	44.6	LOS D	0.6	4.2	0.91	0.98	24.1
Approach		365	3.7	0.519	14.3	LOS A	3.3	24.1	0.67	1.00	37.2
West: Argyle Street											
10	L	78	5.4	0.044	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	482	2.8	0.252	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		560	3.2	0.252	0.9	NA	0.0	0.0	0.00	0.08	48.9
All Vehicles		1639	3.0	0.519	6.2	NA	4.2	30.2	0.36	0.43	43.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
2020 AM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	586	3.4	0.479	5.3	LOS A	5.9	42.6	0.51	0.00	42.3
6	R	182	6.4	0.479	17.1	LOS B	5.9	42.6	1.00	1.16	36.8
Approach		768	4.1	0.479	8.1	NA	5.9	42.6	0.63	0.28	40.8
North: Lackey Street											
7	L	232	3.2	0.499	19.3	LOS B	2.6	18.6	0.76	1.14	35.1
9	R	5	0.0	0.112	82.5	LOS F	0.3	2.2	0.95	1.00	17.0
Approach		237	3.1	0.499	20.7	LOS B	2.6	18.6	0.76	1.13	34.3
West: Argyle Street											
10	L	54	2.0	0.029	6.5	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	757	3.6	0.397	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		811	3.5	0.397	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1816	3.7	0.499	6.3	NA	5.9	42.6	0.37	0.28	43.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
2020 PM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	755	2.6	0.580	5.6	LOS A	8.3	59.0	0.54	0.00	41.9
6	R	245	1.7	0.580	17.0	LOS B	8.3	59.0	1.00	1.24	36.8
Approach		1000	2.4	0.580	8.4	NA	8.3	59.0	0.65	0.30	40.5
North: Lackey Street											
7	L	239	0.9	0.446	16.9	LOS B	2.3	16.2	0.69	1.11	36.4
9	R	9	0.0	0.282	129.3	LOS F	0.8	5.5	0.97	1.02	12.3
Approach		248	0.8	0.446	21.2	LOS B	2.3	16.2	0.70	1.10	33.9
West: Argyle Street											
10	L	46	9.1	0.027	6.7	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	662	2.9	0.346	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		708	3.3	0.346	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1957	2.5	0.580	7.1	NA	8.3	59.0	0.42	0.31	42.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

Appendix D

SIDRA Intersection Delay results for early construction

MOVEMENT SUMMARY

Site: Medway Road Interchange East Side Early Construction AM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	81	20.8	0.047	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		81	20.8	0.047	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	114	14.8	0.068	11.8	X	X	X	X	0.69	58.9
9	R	2	0.0	0.003	11.7	LOS A	0.0	0.1	0.26	0.66	57.8
Approach		116	14.5	0.068	11.8	LOS A	0.0	0.1	0.00	0.69	58.8
West: Medway Road											
11	T	21	5.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.011	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		218	15.9	0.068	6.2	NA	0.0	0.1	0.00	0.36	67.2

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange East Side Early Construction PM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	139	6.8	0.074	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		139	6.8	0.074	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	72	14.7	0.043	11.8	X	X	X	X	0.69	58.9
9	R	1	0.0	0.001	12.1	LOS A	0.0	0.0	0.32	0.65	57.3
Approach		73	14.5	0.043	11.8	LOS A	0.0	0.0	0.00	0.69	58.8
West: Medway Road											
11	T	16	13.3	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		16	13.3	0.009	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		227	9.7	0.074	3.8	NA	0.0	0.0	0.00	0.22	71.8

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange West Side Early Construction AM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	7	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	75	22.5	0.074	12.6	LOS A	0.3	2.1	0.10	0.73	58.3
Approach		82	20.5	0.074	11.5	NA	0.3	2.1	0.09	0.66	59.8
West: Medway Road											
10	L	2	0.0	0.001	11.1	X	X	X	X	0.69	58.9
11	T	24	4.3	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		26	4.0	0.013	0.9	NA	0.0	0.0	0.00	0.06	77.8
All Vehicles		108	16.5	0.074	8.9	NA	0.3	2.1	0.07	0.51	63.4

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange West Side Early Construction PM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	23	4.5	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	122	6.9	0.103	11.5	LOS A	0.4	2.7	0.08	0.73	58.4
Approach		145	6.5	0.103	9.7	NA	0.4	2.7	0.06	0.61	61.1
West: Medway Road											
10	L	3	0.0	0.002	11.1	X	X	X	X	0.69	58.9
11	T	18	5.9	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.010	1.7	NA	0.0	0.0	0.00	0.10	76.0
All Vehicles		166	6.3	0.103	8.7	NA	0.4	2.7	0.06	0.55	62.7

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange East Side Early Construction AM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	16	20.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	16	26.7	0.010	12.5	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		32	23.3	0.010	6.3	NA	0.0	0.0	0.00	0.37	68.0
West: Mereworth Road											
10	L	66	14.3	0.039	11.7	X	X	X	X	0.69	58.9
12	R	3	66.7	0.009	16.2	LOS B	0.0	0.3	0.18	0.71	57.7
Approach		69	16.7	0.039	11.9	LOS A	0.0	0.3	0.01	0.69	58.8
All Vehicles		101	18.8	0.039	10.2	NA	0.0	0.3	0.01	0.59	61.4

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange East Side Early Construction PM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	42	7.5	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	2	50.0	0.002	14.0	LOS A	0.0	0.0	0.00	0.75	59.0
Approach		44	9.5	0.023	0.7	NA	0.0	0.0	0.00	0.04	78.7
West: Mereworth Road											
10	L	65	6.5	0.037	11.4	X	X	X	X	0.69	58.9
12	R	11	0.0	0.016	11.4	LOS A	0.0	0.3	0.16	0.70	58.1
Approach		76	5.6	0.037	11.4	LOS A	0.0	0.3	0.02	0.69	58.8
All Vehicles		120	7.0	0.037	7.4	NA	0.0	0.3	0.01	0.45	64.9

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange West Side Early Construction AM Peak

With Intersection Reconfigured to New E-W Priority Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	5	20.0	0.011	12.2	LOS A	0.0	0.1	0.08	0.69	58.4
3	R	60	10.5	0.074	12.1	LOS A	0.3	2.2	0.14	0.71	58.1
Approach		65	11.3	0.074	12.1	LOS A	0.3	2.2	0.13	0.71	58.1
East: Mereworth Road											
5	T	16	26.7	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		16	26.7	0.010	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	8	62.5	0.006	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		8	62.5	0.006	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		89	18.8	0.074	8.8	NA	0.3	2.2	0.10	0.52	62.8

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement

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

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

SIDRA Standard Delay Model used.

SIDRA INTERSECTION

MOVEMENT SUMMARY

Site: Mereworth Road Interchange West Side Early Construction PM Peak

With Intersection Reconfigured to New E-W Priority Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.02	0.71	58.8
3	R	44	19.0	0.060	12.8	LOS A	0.2	1.9	0.17	0.71	58.0
Approach		45	18.6	0.060	12.8	LOS A	0.2	1.9	0.16	0.71	58.0
East: Mereworth Road											
5	T	2	50.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	50.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	39	2.7	0.020	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		39	2.7	0.020	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		86	12.2	0.060	6.7	NA	0.2	1.9	0.09	0.37	66.8

Level of Service (LOS) Method: Delay (RTA NSW).

Vehicle movement LOS values are based on average delay per movement

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

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

SIDRA Standard Delay Model used.

SIDRA INTERSECTION

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side Early Construction AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	4	25.0	0.149	20.4	LOS B	0.6	3.9	0.71	0.92	46.5
5	T	45	0.0	0.149	17.0	LOS B	0.6	3.9	0.71	0.88	40.8
Approach		49	2.1	0.149	17.3	LOS B	0.6	3.9	0.71	0.88	41.3
North: Hume Highway											
7	L	27	11.5	0.016	13.2	LOS A	0.0	0.0	0.00	0.76	63.3
8	T	674	13.6	0.188	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	2	0.0	0.001	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		703	13.5	0.188	0.6	NA	0.0	0.0	0.00	0.03	98.2
West: Median Opening											
11	T	4	0.0	0.017	17.1	LOS B	0.1	0.4	0.70	0.79	40.6
12	R	1	0.0	0.017	19.3	LOS B	0.1	0.4	0.70	0.89	46.6
Approach		5	0.0	0.017	17.5	LOS B	0.1	0.4	0.70	0.81	41.9
All Vehicles		758	12.6	0.188	1.8	NA	0.6	3.9	0.05	0.09	91.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side Early Construction PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	1	0.0	0.089	18.6	LOS B	0.3	2.3	0.70	0.91	46.8
5	T	28	0.0	0.089	16.6	LOS B	0.3	2.3	0.70	0.88	41.1
Approach		29	0.0	0.089	16.7	LOS B	0.3	2.3	0.70	0.88	41.3
North: Hume Highway											
7	L	49	0.0	0.027	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
8	T	616	22.1	0.181	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	4	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		669	20.3	0.181	1.0	NA	0.0	0.0	0.00	0.06	96.5
West: Median Opening											
11	T	3	0.0	0.014	17.1	LOS B	0.0	0.3	0.70	0.78	40.5
12	R	1	0.0	0.014	19.3	LOS B	0.0	0.3	0.70	0.87	46.5
Approach		4	0.0	0.014	17.6	LOS B	0.0	0.3	0.70	0.80	42.2
All Vehicles		703	19.3	0.181	1.8	NA	0.3	2.3	0.03	0.10	91.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection West Side Early Construction AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	523	32.4	0.162	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		527	32.1	0.162	0.1	NA	0.0	0.0	0.00	0.01	99.6
East: From Golden Vale Road											
5	T	1	0.0	0.153	17.2	LOS B	0.6	3.9	0.69	0.86	39.9
6	R	46	0.0	0.153	19.4	LOS B	0.6	3.9	0.69	0.92	46.0
Approach		47	0.0	0.153	19.4	LOS B	0.6	3.9	0.69	0.92	45.9
West: Private Access											
10	L	1	0.0	0.005	14.6	LOS B	0.0	0.1	0.59	0.71	49.9
11	T	1	0.0	0.005	12.6	LOS A	0.0	0.1	0.59	0.67	44.3
Approach		2	0.0	0.005	13.6	LOS A	0.0	0.1	0.59	0.69	47.3
All Vehicles		577	29.4	0.162	1.7	NA	0.6	3.9	0.06	0.08	90.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection West Side Early Construction PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	765	10.6	0.210	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		769	10.5	0.210	0.1	NA	0.0	0.0	0.00	0.00	99.8
East: From Golden Vale Road											
5	T	1	0.0	0.146	21.2	LOS B	0.5	3.5	0.77	0.89	37.2
6	R	34	0.0	0.146	23.4	LOS B	0.5	3.5	0.77	0.94	43.2
Approach		35	0.0	0.146	23.3	LOS B	0.5	3.5	0.77	0.94	43.1
West: Private Access											
10	L	1	0.0	0.006	16.8	LOS B	0.0	0.1	0.67	0.75	48.1
11	T	1	0.0	0.006	14.8	LOS B	0.0	0.1	0.67	0.73	42.3
Approach		2	0.0	0.006	15.8	LOS B	0.0	0.1	0.67	0.74	45.4
All Vehicles		806	10.1	0.210	1.1	NA	0.5	3.5	0.03	0.05	94.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout Early Construction AM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	4	50.0	0.067	12.3	LOS A	0.3	2.5	0.29	0.61	59.4
2	T	59	0.0	0.067	8.6	LOS A	0.3	2.5	0.29	0.51	60.4
3	R	18	35.3	0.067	17.5	LOS B	0.3	2.5	0.29	0.81	54.2
Approach		81	10.4	0.067	10.7	LOS A	0.3	2.5	0.29	0.58	58.8
East: Taylor Avenue											
4	L	17	31.3	0.100	10.9	LOS A	0.5	4.2	0.16	0.57	60.4
5	T	72	22.1	0.100	9.2	LOS A	0.5	4.2	0.16	0.48	61.7
6	R	42	12.5	0.100	16.0	LOS B	0.5	4.2	0.16	0.81	54.3
Approach		131	20.2	0.100	11.6	LOS A	0.5	4.2	0.16	0.60	58.8
North: Old Hume Highway											
7	L	20	5.3	0.040	9.9	LOS A	0.2	1.5	0.30	0.57	59.3
8	T	24	4.3	0.040	8.7	LOS A	0.2	1.5	0.30	0.50	60.2
9	R	8	12.5	0.040	16.3	LOS B	0.2	1.5	0.30	0.79	54.1
Approach		53	6.0	0.040	10.4	LOS A	0.2	1.5	0.30	0.57	58.8
West: Medway Road											
10	L	18	5.9	0.109	10.0	LOS A	0.5	4.4	0.29	0.59	59.5
11	T	104	17.2	0.109	9.4	LOS A	0.5	4.4	0.29	0.52	60.4
12	R	8	25.0	0.109	17.0	LOS B	0.5	4.4	0.29	0.83	54.4
Approach		131	16.1	0.109	9.9	LOS A	0.5	4.4	0.29	0.55	59.9
All Vehicles		395	14.9	0.109	10.7	LOS A	0.5	4.4	0.25	0.58	59.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway Roundabout Early Construction PM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	18	5.9	0.054	10.0	LOS A	0.3	2.0	0.30	0.57	59.2
2	T	29	0.0	0.054	8.6	LOS A	0.3	2.0	0.30	0.50	60.1
3	R	21	20.0	0.054	16.7	LOS B	0.3	2.0	0.30	0.78	54.0
Approach		68	7.7	0.054	11.4	LOS A	0.3	2.0	0.30	0.60	57.8
East: Taylor Avenue											
4	L	15	21.4	0.101	10.4	LOS A	0.5	3.8	0.19	0.59	60.3
5	T	108	6.8	0.101	8.5	LOS A	0.5	3.8	0.19	0.50	61.5
6	R	20	0.0	0.101	15.4	LOS B	0.5	3.8	0.19	0.85	54.4
Approach		143	7.4	0.101	9.7	LOS A	0.5	3.8	0.19	0.56	60.2
North: Old Hume Highway											
7	L	32	3.3	0.063	9.6	LOS A	0.3	2.2	0.23	0.57	59.8
8	T	36	0.0	0.063	8.3	LOS A	0.3	2.2	0.23	0.49	60.9
9	R	20	5.3	0.063	15.8	LOS B	0.3	2.2	0.23	0.79	54.1
Approach		87	2.4	0.063	10.5	LOS A	0.3	2.2	0.23	0.59	58.7
West: Medway Road											
10	L	15	7.1	0.063	9.7	LOS A	0.3	2.4	0.21	0.58	60.1
11	T	61	15.5	0.063	9.0	LOS A	0.3	2.4	0.21	0.50	61.3
12	R	4	25.0	0.063	16.7	LOS B	0.3	2.4	0.21	0.84	54.4
Approach		80	14.5	0.063	9.5	LOS A	0.3	2.4	0.21	0.54	60.7
All Vehicles		379	7.8	0.101	10.1	LOS A	0.5	3.8	0.22	0.57	59.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
Early Construction AM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	83	19.0	0.085	8.9	LOS A	0.0	0.0	0.00	0.81	49.0
2	T	66	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		149	10.6	0.085	4.9	NA	0.0	0.0	0.00	0.45	53.3
North: Berrima Road											
8	T	57	1.9	0.030	0.6	LOS A	0.2	1.3	0.29	0.00	54.6
9	R	1	0.0	0.030	9.0	LOS A	0.2	1.3	0.29	0.99	49.0
Approach		58	1.8	0.030	0.7	NA	0.2	1.3	0.29	0.02	54.5
West: Taylor Avenue											
10	L	1	0.0	0.226	10.4	LOS A	1.0	7.6	0.40	0.60	46.5
12	R	146	11.5	0.226	11.1	LOS A	1.0	7.6	0.40	0.71	46.3
Approach		147	11.4	0.226	11.1	LOS A	1.0	7.6	0.40	0.71	46.3
All Vehicles		355	9.5	0.226	6.8	NA	1.0	7.6	0.21	0.49	50.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
Early Construction PM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	153	4.1	0.133	8.3	LOS A	0.0	0.0	0.00	0.78	49.0
2	T	94	0.0	0.133	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		246	2.6	0.133	5.2	NA	0.0	0.0	0.00	0.48	52.6
North: Berrima Road											
8	T	77	1.4	0.041	1.0	LOS A	0.3	1.9	0.38	0.00	53.2
9	R	1	0.0	0.041	9.5	LOS A	0.3	1.9	0.38	0.97	49.2
Approach		78	1.4	0.041	1.1	NA	0.3	1.9	0.38	0.01	53.1
West: Taylor Avenue											
10	L	2	0.0	0.223	11.5	LOS A	0.9	7.2	0.48	0.64	45.4
12	R	128	9.8	0.223	12.1	LOS A	0.9	7.2	0.48	0.77	45.3
Approach		131	9.7	0.223	12.1	LOS A	0.9	7.2	0.48	0.76	45.3
All Vehicles		455	4.4	0.223	6.5	NA	0.9	7.2	0.20	0.48	50.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Early Construction AM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	140	12.8	0.063	0.8	LOS A	0.4	3.0	0.28	0.00	70.6
3	R	4	0.0	0.063	11.2	LOS A	0.4	3.0	0.37	1.37	59.5
Approach		144	12.4	0.063	1.1	NA	0.4	3.0	0.28	0.04	70.3
East: Douglas Road											
4	L	4	0.0	0.065	16.1	LOS B	0.2	2.1	0.54	0.65	44.6
6	R	19	38.9	0.065	18.0	LOS B	0.2	2.1	0.54	0.82	44.6
Approach		23	31.8	0.065	17.7	LOS B	0.2	2.1	0.54	0.79	44.6
North: Berrima Road											
7	L	34	43.8	0.024	12.0	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	185	10.8	0.102	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		219	15.9	0.102	1.8	NA	0.0	0.0	0.00	0.11	75.8
All Vehicles		386	15.5	0.102	2.5	NA	0.4	3.0	0.14	0.12	70.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Early Construction PM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	215	4.4	0.091	0.7	LOS A	0.6	4.3	0.28	0.00	70.7
3	R	5	0.0	0.091	11.1	LOS A	0.6	4.3	0.36	1.40	59.6
Approach		220	4.3	0.091	0.9	NA	0.6	4.3	0.28	0.03	70.5
East: Douglas Road											
4	L	3	0.0	0.143	14.9	LOS B	0.5	4.2	0.55	0.67	45.5
6	R	60	10.5	0.143	15.5	LOS B	0.5	4.2	0.55	0.85	45.6
Approach		63	10.0	0.143	15.5	LOS B	0.5	4.2	0.55	0.84	45.5
North: Berrima Road											
7	L	18	35.3	0.012	11.6	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	198	3.7	0.104	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		216	6.3	0.104	1.0	NA	0.0	0.0	0.00	0.06	77.7
All Vehicles		499	5.9	0.143	2.8	NA	0.6	4.3	0.19	0.15	68.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Early Construction AM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	275	2.7	0.447	0.9	LOS A	2.9	21.0	0.10	0.00	48.2
6	R	297	4.6	0.447	12.6	LOS A	2.9	21.0	0.70	1.00	38.6
Approach		572	3.7	0.447	7.0	NA	2.9	21.0	0.41	0.52	42.7
North: Waite Street											
7	L	284	5.9	0.500	14.1	LOS A	2.9	21.1	0.68	1.01	37.4
9	R	12	18.2	0.166	59.4	LOS E	0.5	4.0	0.93	0.98	20.6
Approach		296	6.4	0.500	15.9	LOS B	2.9	21.1	0.69	1.01	36.3
West: Argyle Street											
10	L	86	6.1	0.049	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	585	2.3	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		672	2.8	0.305	0.8	NA	0.0	0.0	0.00	0.08	49.0
All Vehicles		1539	3.8	0.500	6.0	NA	2.9	21.1	0.29	0.42	43.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Early Construction PM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	432	2.2	0.452	2.4	LOS A	4.2	30.2	0.32	0.00	45.5
6	R	282	2.6	0.452	11.9	LOS A	4.2	30.2	0.72	1.03	39.6
Approach		714	2.4	0.452	6.2	NA	4.2	30.2	0.48	0.41	42.9
North: Waite Street											
7	L	348	3.9	0.522	12.7	LOS A	3.4	24.3	0.66	1.01	38.3
9	R	21	0.0	0.213	45.5	LOS D	0.7	4.7	0.91	0.98	23.8
Approach		369	3.7	0.522	14.6	LOS B	3.4	24.3	0.67	1.01	37.1
West: Argyle Street											
10	L	78	5.4	0.044	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	482	2.8	0.252	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		560	3.2	0.252	0.9	NA	0.0	0.0	0.00	0.08	48.9
All Vehicles		1643	2.9	0.522	6.3	NA	4.2	30.2	0.36	0.43	43.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Early Construction AM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	588	3.6	0.481	5.3	LOS A	5.9	42.8	0.51	0.00	42.2
6	R	182	6.4	0.481	17.2	LOS B	5.9	42.8	1.00	1.16	36.7
Approach		771	4.2	0.481	8.1	NA	5.9	42.8	0.63	0.27	40.8
North: Lackey Street											
7	L	232	3.2	0.500	19.3	LOS B	2.6	18.7	0.76	1.14	35.1
9	R	5	0.0	0.113	83.1	LOS F	0.3	2.2	0.95	1.00	16.9
Approach		237	3.1	0.500	20.8	LOS B	2.6	18.7	0.77	1.13	34.3
West: Argyle Street											
10	L	54	2.0	0.029	6.5	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	758	3.8	0.398	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		812	3.6	0.398	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1819	3.8	0.500	6.3	NA	5.9	42.8	0.37	0.28	43.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Early Construction PM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	755	2.6	0.581	5.6	LOS A	8.3	59.0	0.54	0.00	41.9
6	R	245	1.7	0.581	17.0	LOS B	8.3	59.0	1.00	1.24	36.8
Approach		1000	2.4	0.581	8.4	NA	8.3	59.0	0.65	0.30	40.5
North: Lackey Street											
7	L	239	0.9	0.448	17.0	LOS B	2.3	16.3	0.69	1.11	36.4
9	R	9	0.0	0.283	130.1	LOS F	0.8	5.5	0.97	1.02	12.2
Approach		248	0.8	0.448	21.3	LOS B	2.3	16.3	0.70	1.10	33.9
West: Argyle Street											
10	L	46	9.1	0.027	6.7	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	664	2.9	0.347	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		711	3.3	0.347	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1959	2.5	0.581	7.1	NA	8.3	59.0	0.42	0.31	42.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

Appendix E

SIDRA Intersection Delay Results for peak construction

MOVEMENT SUMMARY

Site: Medway Road Interchange East Side Peak Construction AM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	83	22.8	0.049	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		83	22.8	0.049	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	116	15.5	0.069	11.8	X	X	X	X	0.69	58.9
9	R	2	0.0	0.003	11.7	LOS A	0.0	0.1	0.27	0.66	57.7
Approach		118	15.2	0.069	11.8	LOS A	0.0	0.1	0.00	0.69	58.8
West: Medway Road											
11	T	21	5.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.011	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		222	17.1	0.069	6.3	NA	0.0	0.1	0.00	0.36	67.2

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange East Side Peak Construction PM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	129	7.3	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		129	7.3	0.070	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	72	14.7	0.043	11.8	X	X	X	X	0.69	58.9
9	R	1	0.0	0.001	12.0	LOS A	0.0	0.0	0.31	0.65	57.4
Approach		73	14.5	0.043	11.8	LOS A	0.0	0.0	0.00	0.69	58.8
West: Medway Road											
11	T	16	13.3	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		16	13.3	0.009	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		218	10.1	0.070	3.9	NA	0.0	0.0	0.00	0.23	71.5

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange West Side Peak Construction AM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	7	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	77	24.7	0.078	12.8	LOS A	0.3	2.3	0.10	0.73	58.3
Approach		84	22.5	0.078	11.7	NA	0.3	2.3	0.09	0.66	59.8
West: Medway Road											
10	L	2	0.0	0.001	11.1	X	X	X	X	0.69	58.9
11	T	24	4.3	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		26	4.0	0.013	0.9	NA	0.0	0.0	0.00	0.06	77.8
All Vehicles		111	18.1	0.078	9.1	NA	0.3	2.3	0.07	0.52	63.3

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange West Side Peak Construction PM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	22	4.8	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	114	7.4	0.097	11.6	LOS A	0.3	2.6	0.08	0.73	58.4
Approach		136	7.0	0.097	9.7	NA	0.3	2.6	0.06	0.61	61.2
West: Medway Road											
10	L	3	0.0	0.002	11.1	X	X	X	X	0.69	58.9
11	T	18	5.9	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.010	1.7	NA	0.0	0.0	0.00	0.10	76.0
All Vehicles		157	6.7	0.097	8.6	NA	0.3	2.6	0.06	0.54	62.8

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange East Side Peak Construction AM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	16	20.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	33	19.4	0.020	12.1	LOS A	0.0	0.0	0.00	0.74	59.0
Approach		48	19.6	0.020	8.1	NA	0.0	0.0	0.00	0.50	64.6
West: Mereworth Road											
10	L	75	18.3	0.046	11.9	X	X	X	X	0.69	58.9
12	R	5	60.0	0.014	16.1	LOS B	0.0	0.4	0.23	0.70	57.3
Approach		80	21.1	0.046	12.2	LOS A	0.0	0.4	0.01	0.69	58.8
All Vehicles		128	20.5	0.046	10.7	NA	0.0	0.4	0.01	0.62	60.8

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange East Side Peak Construction PM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	42	7.5	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	2	50.0	0.002	14.0	LOS A	0.0	0.0	0.00	0.75	59.0
Approach		44	9.5	0.023	0.7	NA	0.0	0.0	0.00	0.04	78.7
West: Mereworth Road											
10	L	48	10.9	0.028	11.6	X	X	X	X	0.69	58.9
12	R	2	0.0	0.003	11.4	LOS A	0.0	0.1	0.16	0.69	58.1
Approach		51	10.4	0.028	11.6	LOS A	0.0	0.1	0.01	0.69	58.8
All Vehicles		95	10.0	0.028	6.5	NA	0.0	0.1	0.00	0.38	66.7

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side Peak Construction AM Peak

With Intersection Reconfigured to New E-W Priority Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	6	33.3	0.016	13.2	LOS A	0.0	0.2	0.13	0.68	58.2
3	R	60	10.5	0.078	12.4	LOS A	0.3	2.4	0.21	0.71	57.8
Approach		66	12.7	0.078	12.5	LOS A	0.3	2.4	0.20	0.70	57.8
East: Mereworth Road											
5	T	33	19.4	0.019	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		33	19.4	0.019	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	19	55.6	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		19	55.6	0.013	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		118	21.4	0.078	7.0	NA	0.3	2.4	0.11	0.40	65.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side Peak Construction PM Peak

With Intersection Reconfigured to New E-W Priority Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.02	0.71	58.8
3	R	44	19.0	0.058	12.5	LOS A	0.2	1.8	0.10	0.73	58.3
Approach		45	18.6	0.058	12.5	LOS A	0.2	1.8	0.10	0.73	58.3
East: Mereworth Road											
5	T	2	50.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		2	50.0	0.001	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	14	15.4	0.008	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		14	15.4	0.008	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		61	19.0	0.058	9.3	NA	0.2	1.8	0.07	0.54	62.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side Peak Construction AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	4	25.0	0.150	20.5	LOS B	0.6	4.0	0.71	0.92	46.5
5	T	45	0.0	0.150	17.1	LOS B	0.6	4.0	0.71	0.88	40.7
Approach		49	2.1	0.150	17.3	LOS B	0.6	4.0	0.71	0.89	41.3
North: Hume Highway											
7	L	27	11.5	0.016	13.2	LOS A	0.0	0.0	0.00	0.76	63.3
8	T	676	13.7	0.189	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	2	0.0	0.001	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		705	13.6	0.189	0.6	NA	0.0	0.0	0.00	0.03	98.2
West: Median Opening											
11	T	4	0.0	0.017	17.1	LOS B	0.1	0.4	0.70	0.79	40.6
12	R	1	0.0	0.017	19.3	LOS B	0.1	0.4	0.70	0.89	46.5
Approach		5	0.0	0.017	17.6	LOS B	0.1	0.4	0.70	0.81	41.9
All Vehicles		760	12.7	0.189	1.8	NA	0.6	4.0	0.05	0.09	91.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection East Side Peak Construction PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	1	0.0	0.087	18.4	LOS B	0.3	2.2	0.69	0.90	46.9
5	T	28	0.0	0.087	16.5	LOS B	0.3	2.2	0.69	0.87	41.2
Approach		29	0.0	0.087	16.5	LOS B	0.3	2.2	0.69	0.88	41.5
North: Hume Highway											
7	L	48	0.0	0.026	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
8	T	608	22.3	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	4	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		661	20.5	0.179	1.0	NA	0.0	0.0	0.00	0.06	96.6
West: Median Opening											
11	T	3	0.0	0.014	16.9	LOS B	0.0	0.3	0.70	0.78	40.7
12	R	1	0.0	0.014	19.1	LOS B	0.0	0.3	0.70	0.86	46.7
Approach		4	0.0	0.014	17.5	LOS B	0.0	0.3	0.70	0.80	42.3
All Vehicles		695	19.5	0.179	1.8	NA	0.3	2.2	0.03	0.10	91.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road Intersection West Side Peak Construction AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	524	32.5	0.163	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		528	32.3	0.163	0.1	NA	0.0	0.0	0.00	0.01	99.6
East: From Golden Vale Road											
5	T	1	0.0	0.154	17.3	LOS B	0.6	3.9	0.70	0.86	39.9
6	R	46	0.0	0.154	19.5	LOS B	0.6	3.9	0.70	0.92	46.0
Approach		47	0.0	0.154	19.4	LOS B	0.6	3.9	0.70	0.92	45.9
West: Private Access											
10	L	1	0.0	0.005	14.7	LOS B	0.0	0.1	0.59	0.71	49.9
11	T	1	0.0	0.005	12.7	LOS A	0.0	0.1	0.59	0.67	44.2
Approach		2	0.0	0.005	13.7	LOS A	0.0	0.1	0.59	0.69	47.3
All Vehicles		578	29.5	0.163	1.7	NA	0.6	3.9	0.06	0.08	90.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection West Side Peak
Construction PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	765	10.6	0.210	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		769	10.5	0.210	0.1	NA	0.0	0.0	0.00	0.00	99.8
East: From Golden Vale Road											
5	T	1	0.0	0.146	21.2	LOS B	0.5	3.5	0.77	0.89	37.2
6	R	34	0.0	0.146	23.4	LOS B	0.5	3.5	0.77	0.94	43.2
Approach		35	0.0	0.146	23.3	LOS B	0.5	3.5	0.77	0.94	43.1
West: Private Access											
10	L	1	0.0	0.006	16.8	LOS B	0.0	0.1	0.67	0.75	48.1
11	T	1	0.0	0.006	14.8	LOS B	0.0	0.1	0.67	0.73	42.3
Approach		2	0.0	0.006	15.8	LOS B	0.0	0.1	0.67	0.74	45.4
All Vehicles		806	10.1	0.210	1.1	NA	0.5	3.5	0.03	0.05	94.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway
Roundabout Peak Construction
AM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	6	66.7	0.077	13.3	LOS A	0.4	2.9	0.30	0.61	59.3
2	T	61	0.0	0.077	8.6	LOS A	0.4	2.9	0.30	0.51	60.2
3	R	22	38.1	0.077	17.7	LOS B	0.4	2.9	0.30	0.80	54.2
Approach		89	14.1	0.077	11.2	LOS A	0.4	2.9	0.30	0.59	58.5
East: Taylor Avenue											
4	L	24	26.1	0.108	10.7	LOS A	0.5	4.5	0.19	0.57	60.2
5	T	72	22.1	0.108	9.2	LOS A	0.5	4.5	0.19	0.48	61.4
6	R	42	12.5	0.108	16.0	LOS B	0.5	4.5	0.19	0.80	54.2
Approach		138	19.8	0.108	11.6	LOS A	0.5	4.5	0.19	0.60	58.7
North: Old Hume Highway											
7	L	20	5.3	0.046	9.9	LOS A	0.2	1.7	0.31	0.58	59.2
8	T	32	3.3	0.046	8.7	LOS A	0.2	1.7	0.31	0.51	60.2
9	R	8	12.5	0.046	16.4	LOS B	0.2	1.7	0.31	0.79	54.2
Approach		60	5.3	0.046	10.2	LOS A	0.2	1.7	0.31	0.57	58.9
West: Medway Road											
10	L	18	5.9	0.112	10.0	LOS A	0.6	4.5	0.31	0.59	59.4
11	T	104	17.2	0.112	9.4	LOS A	0.6	4.5	0.31	0.53	60.3
12	R	11	30.0	0.112	17.3	LOS B	0.6	4.5	0.31	0.83	54.4
Approach		133	16.7	0.112	10.1	LOS A	0.6	4.5	0.31	0.56	59.6
All Vehicles		420	15.5	0.112	10.8	LOS A	0.6	4.5	0.27	0.58	59.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway
Roundabout Peak Construction
PM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	8	12.5	0.043	10.4	LOS A	0.2	1.6	0.30	0.57	59.2
2	T	25	0.0	0.043	8.6	LOS A	0.2	1.6	0.30	0.50	60.1
3	R	18	29.4	0.043	17.2	LOS B	0.2	1.6	0.30	0.77	54.0
Approach		52	12.2	0.043	11.9	LOS A	0.2	1.6	0.30	0.61	57.6
East: Taylor Avenue											
4	L	15	21.4	0.101	10.4	LOS A	0.5	3.8	0.19	0.59	60.3
5	T	108	6.8	0.101	8.5	LOS A	0.5	3.8	0.19	0.50	61.5
6	R	20	0.0	0.101	15.4	LOS B	0.5	3.8	0.19	0.85	54.4
Approach		143	7.4	0.101	9.7	LOS A	0.5	3.8	0.19	0.56	60.2
North: Old Hume Highway											
7	L	32	3.3	0.063	9.6	LOS A	0.3	2.2	0.23	0.57	59.8
8	T	36	0.0	0.063	8.3	LOS A	0.3	2.2	0.23	0.49	60.9
9	R	20	5.3	0.063	15.8	LOS B	0.3	2.2	0.23	0.79	54.1
Approach		87	2.4	0.063	10.5	LOS A	0.3	2.2	0.23	0.59	58.8
West: Medway Road											
10	L	15	7.1	0.062	9.7	LOS A	0.3	2.4	0.20	0.58	60.2
11	T	61	15.5	0.062	9.0	LOS A	0.3	2.4	0.20	0.50	61.4
12	R	4	25.0	0.062	16.6	LOS B	0.3	2.4	0.20	0.85	54.4
Approach		80	14.5	0.062	9.5	LOS A	0.3	2.4	0.20	0.53	60.8
All Vehicles		362	8.4	0.101	10.1	LOS A	0.5	3.8	0.22	0.57	59.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
Peak Construction AM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	89	18.8	0.089	8.9	LOS A	0.0	0.0	0.00	0.80	49.0
2	T	66	0.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		156	10.8	0.089	5.1	NA	0.0	0.0	0.00	0.46	53.1
North: Berrima Road											
8	T	57	1.9	0.030	0.6	LOS A	0.2	1.3	0.30	0.00	54.5
9	R	1	0.0	0.030	9.1	LOS A	0.2	1.3	0.30	0.98	49.1
Approach		58	1.8	0.030	0.8	NA	0.2	1.3	0.30	0.02	54.4
West: Taylor Avenue											
10	L	1	0.0	0.236	10.5	LOS A	1.0	8.1	0.41	0.60	46.3
12	R	151	12.6	0.236	11.3	LOS A	1.0	8.1	0.41	0.72	46.2
Approach		152	12.5	0.236	11.3	LOS A	1.0	8.1	0.41	0.72	46.2
All Vehicles		365	10.1	0.236	7.0	NA	1.0	8.1	0.22	0.50	50.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
Peak Construction PM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	153	4.1	0.133	8.3	LOS A	0.0	0.0	0.00	0.78	49.0
2	T	94	0.0	0.133	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		246	2.6	0.133	5.2	NA	0.0	0.0	0.00	0.48	52.6
North: Berrima Road											
8	T	77	1.4	0.041	1.0	LOS A	0.3	1.9	0.38	0.00	53.2
9	R	1	0.0	0.041	9.5	LOS A	0.3	1.9	0.38	0.97	49.2
Approach		78	1.4	0.041	1.1	NA	0.3	1.9	0.38	0.01	53.1
West: Taylor Avenue											
10	L	2	0.0	0.222	11.5	LOS A	0.9	7.2	0.48	0.64	45.3
12	R	126	10.8	0.222	12.2	LOS A	0.9	7.2	0.48	0.77	45.2
Approach		128	10.7	0.222	12.2	LOS A	0.9	7.2	0.48	0.76	45.2
All Vehicles		453	4.7	0.222	6.5	NA	0.9	7.2	0.20	0.48	50.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Peak Construction AM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	145	12.3	0.065	0.8	LOS A	0.4	3.1	0.28	0.00	70.5
3	R	4	0.0	0.065	11.2	LOS A	0.4	3.1	0.37	1.37	59.6
Approach		149	12.0	0.065	1.1	NA	0.4	3.1	0.29	0.04	70.2
East: Douglas Road											
4	L	4	0.0	0.073	16.8	LOS B	0.3	2.4	0.55	0.66	43.9
6	R	20	42.1	0.073	19.0	LOS B	0.3	2.4	0.55	0.84	44.0
Approach		24	34.8	0.073	18.6	LOS B	0.3	2.4	0.55	0.81	44.0
North: Berrima Road											
7	L	35	45.5	0.025	12.1	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	188	11.2	0.104	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		223	16.5	0.104	1.9	NA	0.0	0.0	0.00	0.11	75.8
All Vehicles		397	15.9	0.104	2.6	NA	0.4	3.1	0.14	0.13	70.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Peak Construction PM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	215	4.4	0.091	0.7	LOS A	0.6	4.3	0.27	0.00	70.8
3	R	5	0.0	0.091	11.1	LOS A	0.6	4.3	0.36	1.40	59.6
Approach		220	4.3	0.091	0.9	NA	0.6	4.3	0.28	0.03	70.5
East: Douglas Road											
4	L	3	0.0	0.143	14.9	LOS B	0.5	4.1	0.55	0.67	45.5
6	R	60	10.5	0.143	15.4	LOS B	0.5	4.1	0.55	0.85	45.6
Approach		63	10.0	0.143	15.4	LOS B	0.5	4.1	0.55	0.84	45.6
North: Berrima Road											
7	L	18	35.3	0.012	11.6	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	196	4.3	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		214	6.9	0.103	1.0	NA	0.0	0.0	0.00	0.06	77.7
All Vehicles		497	6.1	0.143	2.8	NA	0.6	4.3	0.19	0.15	68.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Peak Construction AM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	275	2.7	0.450	0.9	LOS A	2.9	21.2	0.10	0.00	48.3
6	R	299	4.6	0.450	12.7	LOS A	2.9	21.2	0.70	1.01	38.6
Approach		574	3.7	0.450	7.0	NA	2.9	21.2	0.41	0.52	42.7
North: Waite Street											
7	L	285	5.9	0.502	14.2	LOS A	2.9	21.3	0.69	1.02	37.4
9	R	13	16.7	0.174	57.8	LOS E	0.5	4.2	0.92	0.98	21.0
Approach		298	6.4	0.502	16.0	LOS B	2.9	21.3	0.70	1.01	36.2
West: Argyle Street											
10	L	88	6.0	0.050	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	585	2.3	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		674	2.8	0.305	0.9	NA	0.0	0.0	0.00	0.08	49.0
All Vehicles		1545	3.8	0.502	6.1	NA	2.9	21.3	0.29	0.42	43.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Peak Construction PM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	432	2.2	0.452	2.4	LOS A	4.2	30.2	0.32	0.00	45.5
6	R	282	2.6	0.452	11.9	LOS A	4.2	30.2	0.72	1.03	39.6
Approach		714	2.4	0.452	6.2	NA	4.2	30.2	0.48	0.41	42.9
North: Waite Street											
7	L	348	4.2	0.522	12.7	LOS A	3.4	24.4	0.66	1.01	38.3
9	R	20	0.0	0.202	45.1	LOS D	0.6	4.4	0.91	0.98	23.9
Approach		368	4.0	0.522	14.5	LOS A	3.4	24.4	0.67	1.01	37.1
West: Argyle Street											
10	L	78	5.4	0.044	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	482	2.8	0.252	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		560	3.2	0.252	0.9	NA	0.0	0.0	0.00	0.08	48.9
All Vehicles		1642	3.0	0.522	6.2	NA	4.2	30.2	0.36	0.43	43.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Peak Construction AM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	591	3.6	0.482	5.4	LOS A	5.9	43.0	0.51	0.00	42.2
6	R	182	6.4	0.482	17.2	LOS B	5.9	43.0	1.00	1.16	36.7
Approach		773	4.2	0.482	8.2	NA	5.9	43.0	0.63	0.27	40.8
North: Lackey Street											
7	L	232	3.2	0.502	19.4	LOS B	2.6	18.7	0.76	1.14	35.1
9	R	5	0.0	0.114	83.8	LOS F	0.3	2.2	0.95	1.00	16.8
Approach		237	3.1	0.502	20.8	LOS B	2.6	18.7	0.77	1.13	34.2
West: Argyle Street											
10	L	54	2.0	0.029	6.5	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	760	3.9	0.400	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		814	3.8	0.400	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1823	3.9	0.502	6.4	NA	5.9	43.0	0.37	0.28	43.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Peak Construction PM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	755	2.6	0.581	5.6	LOS A	8.3	59.0	0.54	0.00	41.9
6	R	245	1.7	0.581	17.0	LOS B	8.3	59.0	1.00	1.24	36.8
Approach		1000	2.4	0.581	8.4	NA	8.3	59.0	0.65	0.30	40.5
North: Lackey Street											
7	L	239	0.9	0.448	17.0	LOS B	2.3	16.3	0.69	1.11	36.4
9	R	9	0.0	0.283	130.1	LOS F	0.8	5.5	0.97	1.02	12.2
Approach		248	0.8	0.448	21.3	LOS B	2.3	16.3	0.70	1.10	33.9
West: Argyle Street											
10	L	46	9.1	0.027	6.7	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	664	3.0	0.347	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		711	3.4	0.347	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1959	2.6	0.581	7.1	NA	8.3	59.0	0.42	0.31	42.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

Appendix F

SIDRA Intersection Delay Results for project operations

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side Operations AM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	86	17.1	0.049	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		86	17.1	0.049	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	108	14.6	0.064	11.7	X	X	X	X	0.69	58.9
9	R	2	0.0	0.003	11.7	LOS A	0.0	0.1	0.27	0.66	57.8
Approach		111	14.3	0.064	11.7	LOS A	0.0	0.1	0.01	0.69	58.8
West: Medway Road											
11	T	21	5.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.011	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		218	14.5	0.064	6.0	NA	0.0	0.1	0.00	0.35	67.7

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
East Side Operations PM Peak

Interchange East Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	138	6.9	0.074	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		138	6.9	0.074	0.0	NA	0.0	0.0	0.00	0.00	80.0
North: Hume Highway Exit											
7	L	72	14.7	0.043	11.8	X	X	X	X	0.69	58.9
9	R	1	0.0	0.001	12.1	LOS A	0.0	0.0	0.32	0.65	57.3
Approach		73	14.5	0.043	11.8	LOS A	0.0	0.0	0.00	0.69	58.8
West: Medway Road											
11	T	16	13.3	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		16	13.3	0.009	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		226	9.8	0.074	3.8	NA	0.0	0.0	0.00	0.22	71.8

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side Operations AM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	7	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	80	18.4	0.077	12.4	LOS A	0.3	2.1	0.10	0.73	58.4
Approach		87	16.9	0.077	11.3	NA	0.3	2.1	0.09	0.66	59.7
West: Medway Road											
10	L	2	0.0	0.001	11.1	X	X	X	X	0.69	58.9
11	T	24	4.3	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		26	4.0	0.013	0.9	NA	0.0	0.0	0.00	0.06	77.8
All Vehicles		114	13.9	0.077	8.9	NA	0.3	2.1	0.07	0.52	63.2

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Medway Road Interchange
West Side Operations PM Peak

Interchange West Side Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Medway Road											
5	T	22	4.8	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
6	R	122	6.9	0.103	11.5	LOS A	0.4	2.7	0.08	0.73	58.4
Approach		144	6.6	0.103	9.8	NA	0.4	2.7	0.07	0.62	61.0
West: Medway Road											
10	L	3	0.0	0.002	11.1	X	X	X	X	0.69	58.9
11	T	18	5.9	0.010	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		21	5.0	0.010	1.7	NA	0.0	0.0	0.00	0.10	76.0
All Vehicles		165	6.4	0.103	8.7	NA	0.4	2.7	0.06	0.55	62.6

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side Operations AM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	16	20.0	0.009	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	5	40.0	0.004	13.4	LOS A	0.0	0.0	0.00	0.75	59.0
Approach		21	25.0	0.009	3.3	NA	0.0	0.0	0.00	0.19	73.6
West: Mereworth Road											
10	L	100	5.3	0.056	11.3	X	X	X	X	0.69	58.9
12	R	7	14.3	0.013	12.2	LOS A	0.0	0.3	0.12	0.71	58.3
Approach		107	5.9	0.056	11.4	LOS A	0.0	0.3	0.01	0.69	58.8
All Vehicles		128	9.0	0.056	10.1	NA	0.0	0.3	0.01	0.61	60.8

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
East Side Operations PM Peak

Interchange Ramp Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
North: Old Hume Highway											
8	T	42	7.5	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
9	R	3	33.3	0.002	13.0	LOS A	0.0	0.0	0.00	0.75	59.0
Approach		45	9.3	0.023	0.9	NA	0.0	0.0	0.00	0.05	78.1
West: Mereworth Road											
10	L	88	4.8	0.049	11.3	X	X	X	X	0.69	58.9
12	R	7	0.0	0.011	11.4	LOS A	0.0	0.2	0.16	0.70	58.1
Approach		96	4.4	0.049	11.3	LOS A	0.0	0.2	0.01	0.69	58.8
All Vehicles		141	6.0	0.049	8.0	NA	0.0	0.2	0.01	0.48	63.9

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side Operations AM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.04	0.70	58.7
3	R	60	10.5	0.076	12.3	LOS A	0.3	2.3	0.18	0.71	57.9
Approach		61	10.3	0.076	12.3	LOS A	0.3	2.3	0.18	0.71	57.9
East: Mereworth Road											
5	T	5	40.0	0.003	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		5	40.0	0.003	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	46	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		46	0.0	0.024	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		113	7.5	0.076	6.6	NA	0.3	2.3	0.10	0.38	66.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Mereworth Road Interchange
West Side Operations PM Peak

With Intersection Reconfigured to New E-W Priority
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway Exiit											
1	L	1	0.0	0.002	10.9	LOS A	0.0	0.0	0.02	0.71	58.8
3	R	44	19.0	0.062	13.1	LOS A	0.2	2.0	0.21	0.71	57.7
Approach		45	18.6	0.062	13.0	LOS A	0.2	2.0	0.21	0.71	57.7
East: Mereworth Road											
5	T	3	33.3	0.002	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		3	33.3	0.002	0.0	NA	0.0	0.0	0.00	0.00	80.0
West: Mereworth Road											
11	T	59	1.8	0.031	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		59	1.8	0.031	0.0	NA	0.0	0.0	0.00	0.00	80.0
All Vehicles		107	9.8	0.062	5.5	NA	0.2	2.0	0.09	0.30	68.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection East Side Operations
AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	4	25.0	0.150	20.4	LOS B	0.6	4.0	0.71	0.92	46.5
5	T	45	0.0	0.150	17.0	LOS B	0.6	4.0	0.71	0.88	40.8
Approach		49	2.1	0.150	17.3	LOS B	0.6	4.0	0.71	0.89	41.3
North: Hume Highway											
7	L	29	10.7	0.017	13.1	LOS A	0.0	0.0	0.00	0.76	63.3
8	T	676	13.4	0.188	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	2	0.0	0.001	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		707	13.2	0.188	0.6	NA	0.0	0.0	0.00	0.03	98.1
West: Median Opening											
11	T	4	0.0	0.017	17.1	LOS B	0.1	0.4	0.70	0.79	40.6
12	R	1	0.0	0.017	19.3	LOS B	0.1	0.4	0.70	0.89	46.6
Approach		5	0.0	0.017	17.6	LOS B	0.1	0.4	0.70	0.81	41.9
All Vehicles		762	12.4	0.188	1.8	NA	0.6	4.0	0.05	0.09	90.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection East Side Operations
PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Golden Vale Road											
4	L	1	0.0	0.088	18.5	LOS B	0.3	2.3	0.70	0.91	46.9
5	T	28	0.0	0.088	16.5	LOS B	0.3	2.3	0.70	0.87	41.2
Approach		29	0.0	0.088	16.6	LOS B	0.3	2.3	0.70	0.88	41.4
North: Hume Highway											
7	L	51	0.0	0.027	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
8	T	612	22.2	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
9	R	4	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		666	20.4	0.179	1.0	NA	0.0	0.0	0.00	0.06	96.5
West: Median Opening											
11	T	3	0.0	0.014	17.0	LOS B	0.0	0.3	0.70	0.78	40.6
12	R	1	0.0	0.014	19.2	LOS B	0.0	0.3	0.70	0.86	46.6
Approach		4	0.0	0.014	17.6	LOS B	0.0	0.3	0.70	0.80	42.3
All Vehicles		700	19.4	0.179	1.8	NA	0.3	2.3	0.03	0.10	91.8

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection West Side Operations
AM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	519	32.5	0.161	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		523	32.2	0.161	0.1	NA	0.0	0.0	0.00	0.01	99.6
East: From Golden Vale Road											
5	T	1	0.0	0.152	17.1	LOS B	0.5	3.8	0.69	0.85	40.0
6	R	46	0.0	0.152	19.3	LOS B	0.5	3.8	0.69	0.92	46.1
Approach		47	0.0	0.152	19.2	LOS B	0.5	3.8	0.69	0.92	46.0
West: Private Access											
10	L	1	0.0	0.005	14.6	LOS B	0.0	0.1	0.58	0.71	50.0
11	T	1	0.0	0.005	12.6	LOS A	0.0	0.1	0.58	0.67	44.3
Approach		2	0.0	0.005	13.6	LOS A	0.0	0.1	0.58	0.69	47.3
All Vehicles		573	29.4	0.161	1.7	NA	0.5	3.8	0.06	0.08	90.7

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Golden Vale Road
Intersection West Side Operations
PM Peak

Highway At Grade Access With Median Opening
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Hume Highway											
1	L	1	0.0	0.001	12.5	LOS A	0.0	0.0	0.00	0.75	63.3
2	T	765	10.6	0.210	0.0	LOS A	0.0	0.0	0.00	0.00	100.0
3	R	3	0.0	0.002	13.0	LOS A	0.0	0.0	0.00	0.80	62.5
Approach		769	10.5	0.210	0.1	NA	0.0	0.0	0.00	0.00	99.8
East: From Golden Vale Road											
5	T	1	0.0	0.146	21.2	LOS B	0.5	3.5	0.77	0.89	37.2
6	R	34	0.0	0.146	23.4	LOS B	0.5	3.5	0.77	0.94	43.2
Approach		35	0.0	0.146	23.3	LOS B	0.5	3.5	0.77	0.94	43.1
West: Private Access											
10	L	1	0.0	0.006	16.8	LOS B	0.0	0.1	0.67	0.75	48.1
11	T	1	0.0	0.006	14.8	LOS B	0.0	0.1	0.67	0.73	42.3
Approach		2	0.0	0.006	15.8	LOS B	0.0	0.1	0.67	0.74	45.4
All Vehicles		806	10.1	0.210	1.1	NA	0.5	3.5	0.03	0.05	94.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway
Roundabout Operations AM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	9	0.0	0.088	9.6	LOS A	0.4	3.1	0.29	0.58	59.4
2	T	75	0.0	0.088	8.5	LOS A	0.4	3.1	0.29	0.51	60.4
3	R	31	13.8	0.088	16.4	LOS B	0.4	3.1	0.29	0.80	54.2
Approach		115	3.7	0.088	10.7	LOS A	0.4	3.1	0.29	0.59	58.4
East: Taylor Avenue											
4	L	14	30.8	0.096	10.8	LOS A	0.5	4.0	0.14	0.57	60.5
5	T	72	22.1	0.096	9.1	LOS A	0.5	4.0	0.14	0.48	61.9
6	R	42	12.5	0.096	15.9	LOS B	0.5	4.0	0.14	0.82	54.3
Approach		127	19.8	0.096	11.6	LOS A	0.5	4.0	0.14	0.60	58.9
North: Old Hume Highway											
7	L	20	5.3	0.039	9.9	LOS A	0.2	1.4	0.30	0.57	59.2
8	T	22	4.8	0.039	8.7	LOS A	0.2	1.4	0.30	0.50	60.2
9	R	8	12.5	0.039	16.3	LOS B	0.2	1.4	0.30	0.78	54.1
Approach		51	6.3	0.039	10.5	LOS A	0.2	1.4	0.30	0.58	58.7
West: Medway Road											
10	L	18	5.9	0.107	10.1	LOS A	0.5	4.3	0.32	0.60	59.3
11	T	104	17.2	0.107	9.5	LOS A	0.5	4.3	0.32	0.54	60.2
12	R	3	33.3	0.107	17.5	LOS B	0.5	4.3	0.32	0.84	54.4
Approach		125	16.0	0.107	9.8	LOS A	0.5	4.3	0.32	0.55	59.9
All Vehicles		418	12.6	0.107	10.7	LOS A	0.5	4.3	0.26	0.58	59.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Old Hume Highway
Roundabout Operations PM Peak

Four Way Roundabout
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Hume Highway											
1	L	17	6.3	0.071	10.0	LOS A	0.4	2.6	0.30	0.57	59.2
2	T	42	0.0	0.071	8.6	LOS A	0.4	2.6	0.30	0.50	60.1
3	R	33	12.9	0.071	16.4	LOS B	0.4	2.6	0.30	0.77	53.9
Approach		92	5.7	0.071	11.6	LOS A	0.4	2.6	0.30	0.61	57.5
East: Taylor Avenue											
4	L	15	21.4	0.101	10.4	LOS A	0.5	3.8	0.19	0.59	60.3
5	T	108	6.8	0.101	8.5	LOS A	0.5	3.8	0.19	0.50	61.5
6	R	20	0.0	0.101	15.4	LOS B	0.5	3.8	0.19	0.84	54.4
Approach		143	7.4	0.101	9.7	LOS A	0.5	3.8	0.19	0.56	60.2
North: Old Hume Highway											
7	L	32	3.3	0.065	9.6	LOS A	0.3	2.3	0.25	0.57	59.7
8	T	37	0.0	0.065	8.3	LOS A	0.3	2.3	0.25	0.49	60.7
9	R	20	5.3	0.065	15.8	LOS B	0.3	2.3	0.25	0.79	54.1
Approach		88	2.4	0.065	10.5	LOS A	0.3	2.3	0.25	0.59	58.7
West: Medway Road											
10	L	15	7.1	0.064	9.8	LOS A	0.3	2.5	0.25	0.58	59.9
11	T	61	15.5	0.064	9.1	LOS A	0.3	2.5	0.25	0.51	60.9
12	R	4	25.0	0.064	16.8	LOS B	0.3	2.5	0.25	0.83	54.4
Approach		80	14.5	0.064	9.6	LOS A	0.3	2.5	0.25	0.54	60.3
All Vehicles		403	7.3	0.101	10.3	LOS A	0.5	3.8	0.24	0.57	59.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue Operations AM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	80	18.4	0.083	8.9	LOS A	0.0	0.0	0.00	0.81	49.0
2	T	66	0.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		146	10.1	0.083	4.8	NA	0.0	0.0	0.00	0.45	53.4
North: Berrima Road											
8	T	57	1.9	0.030	0.6	LOS A	0.2	1.3	0.29	0.00	54.7
9	R	1	0.0	0.030	9.0	LOS A	0.2	1.3	0.29	0.99	49.0
Approach		58	1.8	0.030	0.7	NA	0.2	1.3	0.29	0.02	54.6
West: Taylor Avenue											
10	L	1	0.0	0.235	10.3	LOS A	1.0	7.9	0.40	0.60	46.6
12	R	157	9.4	0.235	10.9	LOS A	1.0	7.9	0.40	0.71	46.4
Approach		158	9.3	0.235	10.9	LOS A	1.0	7.9	0.40	0.71	46.4
All Vehicles		362	8.4	0.235	6.8	NA	1.0	7.9	0.22	0.49	50.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Taylor Avenue
Operations PM Peak

T Intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
1	L	153	4.1	0.133	8.3	LOS A	0.0	0.0	0.00	0.78	49.0
2	T	94	0.0	0.133	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		246	2.6	0.133	5.2	NA	0.0	0.0	0.00	0.48	52.6
North: Berrima Road											
8	T	77	1.4	0.041	1.0	LOS A	0.3	1.9	0.38	0.00	53.2
9	R	1	0.0	0.041	9.5	LOS A	0.3	1.9	0.38	0.97	49.2
Approach		78	1.4	0.041	1.1	NA	0.3	1.9	0.38	0.01	53.1
West: Taylor Avenue											
10	L	2	0.0	0.239	11.5	LOS A	1.0	7.7	0.48	0.65	45.4
12	R	139	9.1	0.239	12.1	LOS A	1.0	7.7	0.48	0.77	45.3
Approach		141	9.0	0.239	12.1	LOS A	1.0	7.7	0.48	0.77	45.3
All Vehicles		465	4.3	0.239	6.6	NA	1.0	7.7	0.21	0.49	50.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Operations AM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	138	13.0	0.062	0.8	LOS A	0.4	3.0	0.28	0.00	70.5
3	R	4	0.0	0.062	11.2	LOS A	0.4	3.0	0.37	1.37	59.6
Approach		142	12.6	0.062	1.1	NA	0.4	3.0	0.29	0.04	70.1
East: Douglas Road											
4	L	4	0.0	0.060	15.7	LOS B	0.2	1.9	0.53	0.65	44.8
6	R	18	35.3	0.060	17.5	LOS B	0.2	1.9	0.53	0.81	44.9
Approach		22	28.6	0.060	17.2	LOS B	0.2	1.9	0.53	0.78	44.9
North: Berrima Road											
7	L	33	41.9	0.023	11.9	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	197	9.6	0.107	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		229	14.2	0.107	1.7	NA	0.0	0.0	0.00	0.10	76.1
All Vehicles		394	14.4	0.107	2.3	NA	0.4	3.0	0.13	0.12	71.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Berrima Road Douglas Road
Operations PM Peak

T intersection
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Berrima Road											
2	T	215	4.4	0.091	0.7	LOS A	0.6	4.4	0.28	0.00	70.5
3	R	5	0.0	0.091	11.1	LOS A	0.6	4.4	0.37	1.39	59.6
Approach		220	4.3	0.091	1.0	NA	0.6	4.4	0.28	0.03	70.3
East: Douglas Road											
4	L	3	0.0	0.146	15.1	LOS B	0.6	4.2	0.56	0.68	45.3
6	R	60	10.5	0.146	15.7	LOS B	0.6	4.2	0.56	0.85	45.4
Approach		63	10.0	0.146	15.7	LOS B	0.6	4.2	0.56	0.84	45.4
North: Berrima Road											
7	L	18	35.3	0.012	11.6	LOS A	0.0	0.0	0.00	0.71	57.1
8	T	208	3.5	0.109	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
Approach		226	6.0	0.109	0.9	NA	0.0	0.0	0.00	0.06	77.8
All Vehicles		509	5.8	0.146	2.8	NA	0.6	4.4	0.19	0.14	68.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Operations AM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	275	2.7	0.446	0.9	LOS A	2.9	21.0	0.10	0.00	48.2
6	R	297	4.6	0.446	12.6	LOS A	2.9	21.0	0.70	1.00	38.6
Approach		572	3.7	0.446	7.0	NA	2.9	21.0	0.41	0.52	42.7
North: Waite Street											
7	L	288	5.5	0.503	14.1	LOS A	2.9	21.3	0.68	1.02	37.4
9	R	16	13.3	0.194	53.3	LOS D	0.6	4.6	0.92	0.98	21.9
Approach		304	5.9	0.503	16.1	LOS B	2.9	21.3	0.70	1.01	36.1
West: Argyle Street											
10	L	85	6.2	0.048	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	585	2.3	0.305	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		671	2.8	0.305	0.8	NA	0.0	0.0	0.00	0.08	49.0
All Vehicles		1546	3.7	0.503	6.1	NA	2.9	21.3	0.29	0.43	43.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Waite Street intersection
Operations PM Peak

T Intersection with Argyle Street
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	432	2.2	0.452	2.4	LOS A	4.2	30.2	0.32	0.00	45.5
6	R	282	2.6	0.452	11.9	LOS A	4.2	30.2	0.72	1.03	39.6
Approach		714	2.4	0.452	6.2	NA	4.2	30.2	0.48	0.41	42.9
North: Waite Street											
7	L	353	3.9	0.528	12.8	LOS A	3.4	24.9	0.66	1.01	38.3
9	R	24	0.0	0.245	46.9	LOS D	0.8	5.5	0.91	0.99	23.4
Approach		377	3.6	0.528	15.0	LOS B	3.4	24.9	0.67	1.01	36.8
West: Argyle Street											
10	L	78	5.4	0.044	6.6	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	482	2.8	0.252	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		560	3.2	0.252	0.9	NA	0.0	0.0	0.00	0.08	48.9
All Vehicles		1651	2.9	0.528	6.4	NA	4.2	30.2	0.36	0.44	43.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Operations AM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	588	3.6	0.482	5.4	LOS A	5.9	42.8	0.51	0.00	42.2
6	R	182	6.4	0.482	17.3	LOS B	5.9	42.8	1.00	1.16	36.7
Approach		771	4.2	0.482	8.2	NA	5.9	42.8	0.63	0.28	40.8
North: Lackey Street											
7	L	232	3.2	0.503	19.5	LOS B	2.6	18.8	0.76	1.14	35.0
9	R	5	0.0	0.114	83.8	LOS F	0.3	2.2	0.95	1.00	16.8
Approach		237	3.1	0.503	20.9	LOS B	2.6	18.8	0.77	1.14	34.2
West: Argyle Street											
10	L	54	2.0	0.029	6.5	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	762	3.6	0.400	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		816	3.5	0.400	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1823	3.8	0.503	6.4	NA	5.9	42.8	0.36	0.28	43.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Lackey Street intersection
Operations PM Peak

T-intersection with Argyle Street
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Argyle Street											
5	T	755	2.6	0.582	5.7	LOS A	8.3	59.0	0.54	0.00	41.9
6	R	245	1.7	0.582	17.1	LOS B	8.3	59.0	1.00	1.24	36.7
Approach		1000	2.4	0.582	8.5	NA	8.3	59.0	0.65	0.30	40.5
North: Lackey Street											
7	L	239	0.9	0.450	17.1	LOS B	2.3	16.4	0.70	1.11	36.4
9	R	9	0.0	0.287	131.8	LOS F	0.8	5.6	0.97	1.02	12.1
Approach		248	0.8	0.450	21.4	LOS B	2.3	16.4	0.71	1.11	33.8
West: Argyle Street											
10	L	46	9.1	0.027	6.7	LOS A	0.0	0.0	0.00	0.61	43.3
11	T	668	2.8	0.349	0.0	LOS A	0.0	0.0	0.00	0.00	50.0
Approach		715	3.2	0.349	0.4	NA	0.0	0.0	0.00	0.04	49.5
All Vehicles		1963	2.5	0.582	7.2	NA	8.3	59.0	0.42	0.31	42.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
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SIDRA Standard Delay Model used.

SYDNEY
Ground floor, Suite 01, 20 Chandos Street
St Leonards, New South Wales, 2065
T 02 9493 9500 F 02 9493 9599

NEWCASTLE
Level 1, Suite 6, 146 Hunter Street
Newcastle, New South Wales, 2300
T 02 4907 4800 F 02 4907 4899

BRISBANE
Level 4, Suite 01, 87 Wickham Terrace
Spring Hill, Queensland, 4000
T 07 3839 1800 F 07 3839 1866