



appendix 1

photographic record



View looking north along Old Canterbury Road towards Toothill Street on approach to the site.



View looking north along Old Canterbury Road at Railway Terrace. Old Canterbury Road is one lane northbound under the overpass.





View looking east along Longport Street across Old Canterbury Road.

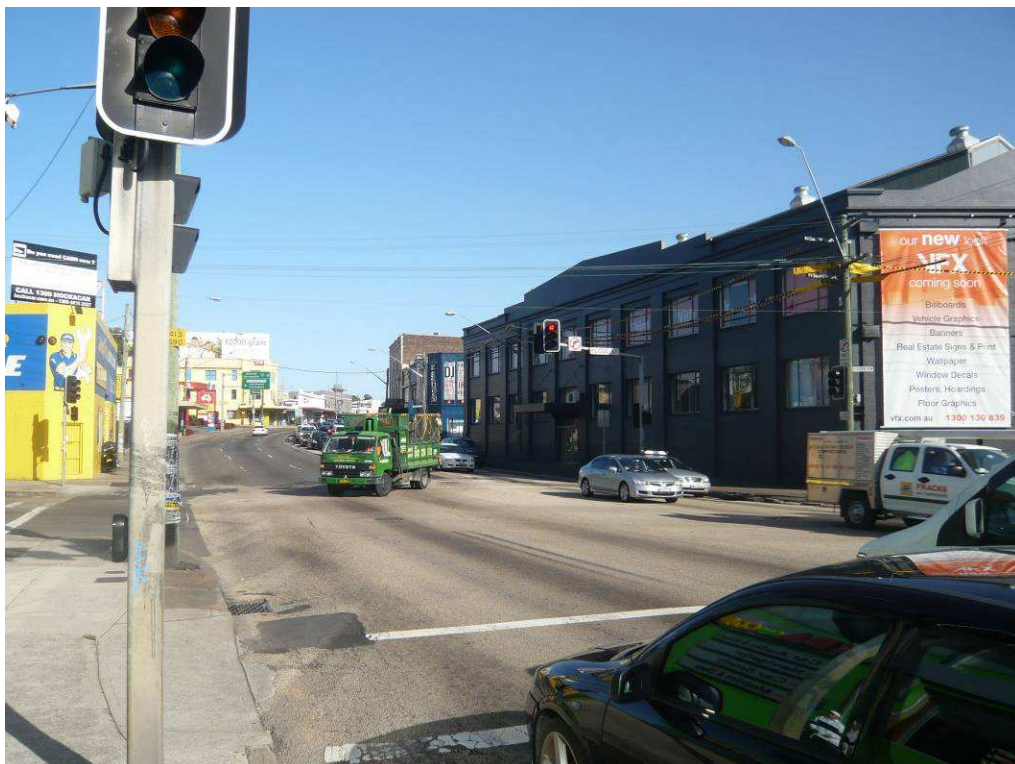


View looking east along Longport Street at Smith Street





View looking east along Railway Terrace at West Street.

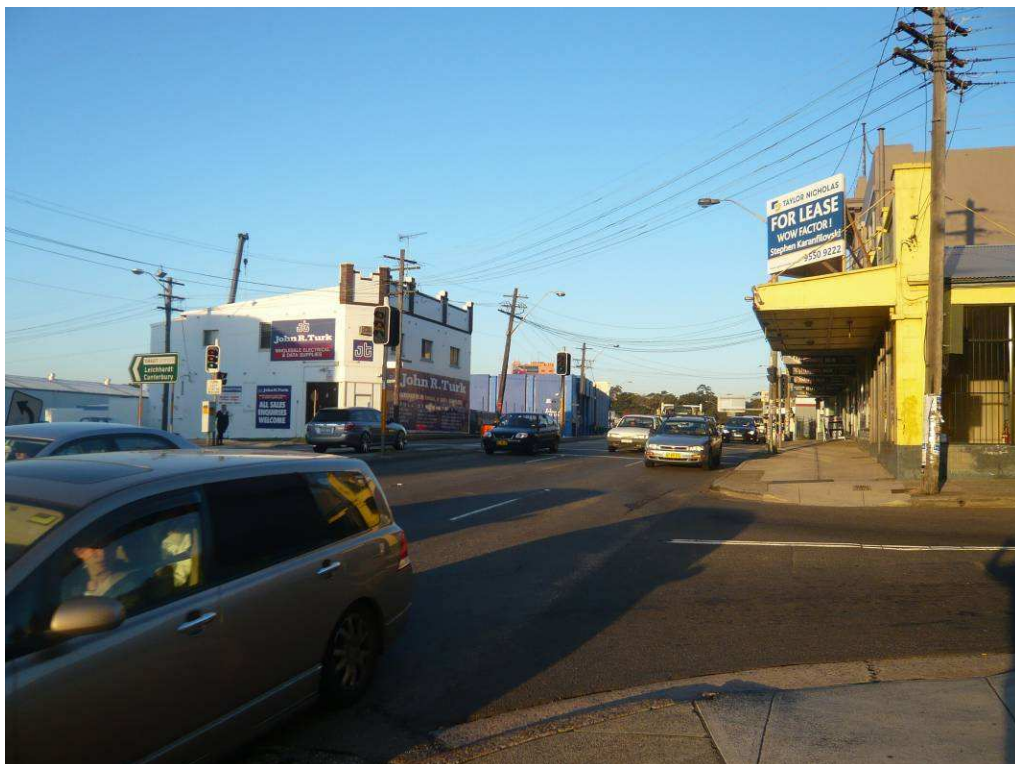


View looking west along Parramatta Road at Flood Street/West Street intersection.





View looking south along Old Canterbury Road adjacent to the site.



View looking east along Parramatta Road at Old Canterbury Road.





appendix 2

concept plan (extracts)





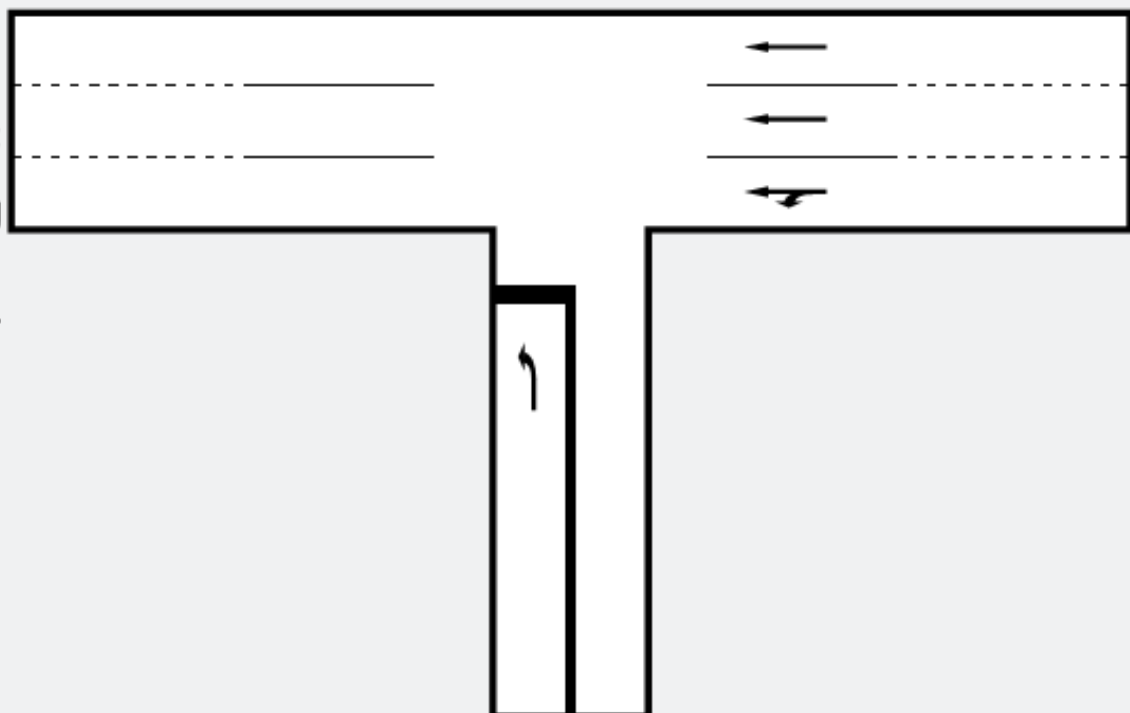
appendix 3a

sidra outputs (existing)

Parramatta Road

Parramatta Road

Old Canterbury Road



MOVEMENT SUMMARY

Site: Parramatta Rd - EX - AM

Old Canterbury/Parramatta
Existing AM
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Road											
1	L	120	2.0	0.329	20.5	LOS B	1.4	10.0	0.77	1.05	39.6
Approach		120	2.0	0.329	20.5	LOS B	1.4	10.0	0.77	1.05	39.6
East: Parramatta Road											
4	L	27	3.0	0.526	10.5	LOS A	4.8	34.7	0.35	1.20	49.3
5	T	1588	3.0	0.657	3.2	LOS A	8.9	63.6	0.40	0.32	54.7
Approach		1616	3.0	0.657	3.4	LOS A	8.9	63.6	0.40	0.33	54.6
All Vehicles		1736	2.9	0.657	4.5	NA	8.9	63.6	0.42	0.38	53.2

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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SIDRA
INTERSECTION

MOVEMENT SUMMARY

Site: Parramatta Rd - EX - PM

Old Canterbury/Parramatta
Existing PM
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Road											
1	L	78	2.0	0.433	34.0	LOS C	1.7	12.2	0.91	1.06	31.9
Approach		78	2.0	0.433	34.0	LOS C	1.7	12.2	0.91	1.06	31.9
East: Parramatta Road											
4	L	37	3.0	0.709	11.1	LOS A	11.4	81.5	0.41	1.11	49.1
5	T	2262	3.0	0.881	6.7	LOS A	30.1	215.9	0.58	0.47	50.3
Approach		2299	3.0	0.881	6.8	LOS A	30.1	215.9	0.58	0.48	50.3
All Vehicles		2377	3.0	0.881	7.7	NA	30.1	215.9	0.59	0.50	49.4

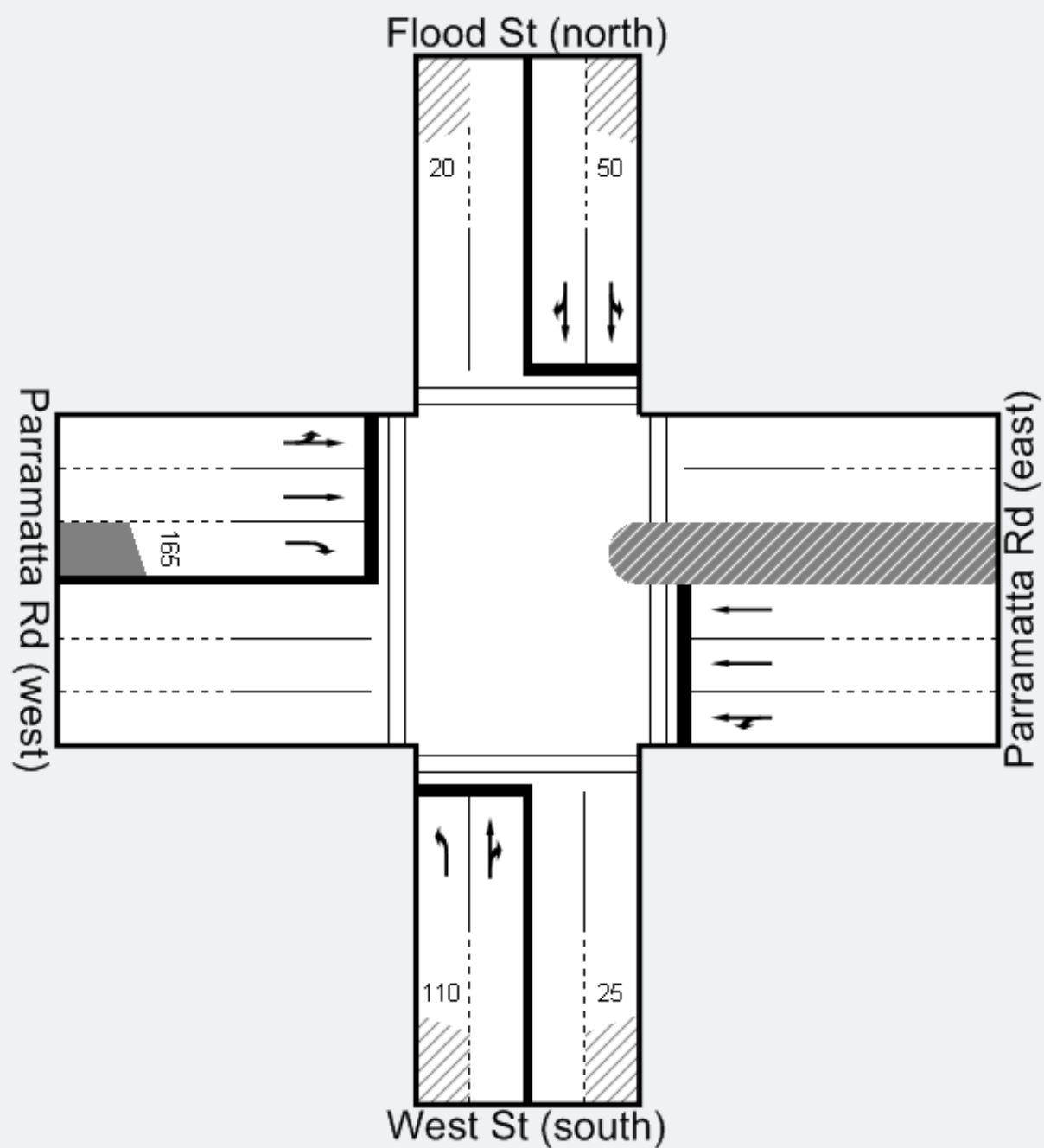
LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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SIDRA
INTERSECTION



MOVEMENT SUMMARY

Site: Parramatta/West - EX - AM

Parramatta Rd / West St

Existing - AM

Signals - Fixed Time Cycle Time = 145 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: West St (south)											
1	L	196	1.5	0.433	39.9	LOS C	10.9	77.5	0.72	0.79	28.6
2	T	209	1.5	0.605	59.2	LOS E	15.3	110.3	0.97	0.81	21.6
3	R	4	100.0	0.609	69.6	LOS E	15.3	110.3	0.97	0.85	24.0
Approach		409	2.5	0.605	50.1	LOS D	15.3	110.3	0.85	0.80	24.6
East: Parramatta Rd (east)											
4	L	26	1.5	0.507	31.8	LOS C	23.6	167.7	0.70	0.94	33.4
5	T	1509	1.5	0.506	23.6	LOS B	23.7	168.1	0.70	0.62	34.9
Approach		1536	1.5	0.506	23.7	LOS B	23.7	168.1	0.70	0.63	34.9
North: Flood St (north)											
7	L	37	1.5	0.224	59.0	LOS E	3.4	24.3	0.86	0.73	21.5
8	T	129	1.5	0.881	79.3	LOS F	15.6	110.6	1.00	1.02	17.1
9	R	54	1.5	0.881	87.2	LOS F	15.6	110.6	1.00	1.03	17.1
Approach		220	1.5	0.881	77.8	LOS F	15.6	110.6	0.97	0.97	17.7
West: Parramatta Rd (west)											
10	L	59	1.5	0.879	28.6	LOS C	62.4	442.5	0.88	0.97	34.7
11	T	2281	1.5	0.879	18.3	LOS B	64.5	457.4	0.86	0.81	37.7
12	R	434	1.5	0.886	73.5	LOS F	32.7	232.1	1.00	1.13	19.9
Approach		2774	1.5	0.885	27.2	LOS B	64.5	457.4	0.88	0.86	33.0
All Vehicles		4939	1.6	0.886	30.3	LOS C	64.5	457.4	0.82	0.79	31.5

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	53	15.9	LOS B	0.1	0.1	0.47	0.47
P3	Across E approach	53	46.4	LOS E	0.2	0.2	0.80	0.80
P5	Across N approach	53	15.9	LOS B	0.1	0.1	0.47	0.47
P7	Across W approach	53	46.4	LOS E	0.2	0.2	0.80	0.80
All Pedestrians		212	31.2				0.63	0.63

Level of Service (Aver. Int. Delay): LOS D. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS E. LOS Method for individual pedestrian movements: Delay (HCM).

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Project: T:\Traffic\2009\091411\Job Tasks\Modelling\091210 Dec 09_v2 Modelling (TL)\09 141_091210 Combined

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INTERSECTION

MOVEMENT SUMMARY

Site: Parramatta/West - EX - PM

Parramatta Rd / West St

Existing - PM

Signals - Fixed Time Cycle Time = 145 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: West St (south)											
1	L	316	1.5	0.595	30.4	LOS C	14.4	102.0	0.63	0.79	32.7
2	T	251	1.5	0.501	49.2	LOS D	16.3	116.6	0.90	0.77	24.2
3	R	2	100.0	0.492	59.6	LOS E	16.3	116.6	0.90	0.88	26.4
Approach		568	1.9	0.595	38.8	LOS C	16.3	116.6	0.75	0.78	28.4
East: Parramatta Rd (east)											
4	L	35	1.5	0.928	69.6	LOS E	58.0	411.4	1.00	1.05	21.4
5	T	2149	1.5	0.927	61.3	LOS E	58.1	412.2	1.00	1.05	21.5
Approach		2184	1.5	0.927	61.5	LOS E	58.1	412.2	1.00	1.05	21.5
North: Flood St (north)											
7	L	31	1.5	0.232	49.4	LOS D	3.5	25.0	0.78	0.74	23.9
8	T	216	1.5	0.913	77.9	LOS F	23.4	166.0	0.98	1.05	17.3
9	R	74	1.5	0.912	87.9	LOS F	23.4	166.0	1.00	1.09	17.0
Approach		320	1.5	0.913	77.5	LOS F	23.4	166.0	0.97	1.03	17.7
West: Parramatta Rd (west)											
10	L	57	1.5	0.709	34.5	LOS C	37.4	265.5	0.81	0.95	31.4
11	T	1543	1.5	0.708	21.5	LOS B	39.9	283.2	0.75	0.69	36.0
12	R	405	1.5	0.936	94.4	LOS F	31.2	221.3	1.00	1.20	16.7
Approach		2005	1.5	0.936	36.6	LOS C	39.9	283.2	0.80	0.80	29.1
All Vehicles		5078	1.5	0.936	50.1	LOS D	58.1	412.2	0.89	0.92	24.3

Level of Service (Aver. Int. Delay): LOS D. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

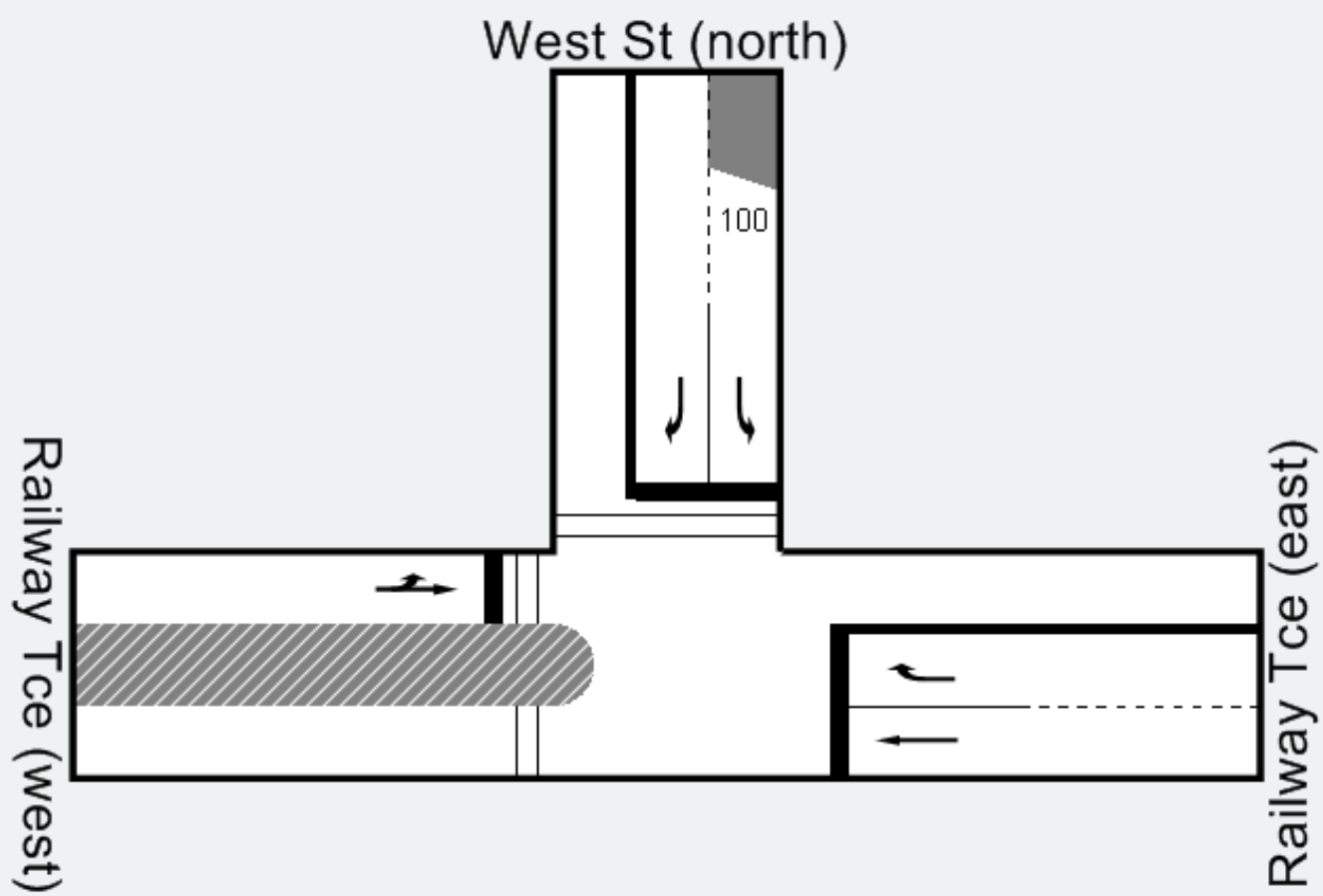
Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	53	24.9	LOS C	0.1	0.1	0.59	0.59
P3	Across E approach	53	38.0	LOS D	0.2	0.2	0.72	0.72
P5	Across N approach	53	24.9	LOS C	0.1	0.1	0.59	0.59
P7	Across W approach	53	38.0	LOS D	0.2	0.2	0.72	0.72
All Pedestrians		212	31.5				0.66	0.66

Level of Service (Aver. Int. Delay): LOS D. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).



MOVEMENT SUMMARY

Site: Railway/West - EX - AM

Railway Tce / West St

Existing - AM

Signals - Fixed Time Cycle Time = 100 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Railway Tce (east)											
5	T	678	1.5	0.446	4.6	LOS A	13.3	94.3	0.39	0.36	43.2
6	R	358	1.5	1.466	461.6	LOS F	61.2	433.6	1.00	1.91	1.9
Approach		1036	1.5	1.466	162.5	LOS F	61.2	433.6	0.60	0.89	5.1
North: West St (north)											
7	L	429	1.5	0.866	54.7	LOS D	23.7	168.1	1.00	0.96	11.0
9	R	84	1.5	0.665	61.7	LOS E	5.9	41.6	1.00	0.82	22.2
Approach		514	1.5	0.866	55.9	LOS D	23.7	168.1	1.00	0.93	13.5
West: Railway Tce (west)											
10	L	226	1.5	0.976	63.3	LOS E	82.8	587.1	1.00	1.19	22.7
11	T	979	1.5	0.975	55.1	LOS D	82.8	587.1	1.00	1.19	22.8
Approach		1205	1.5	0.975	56.6	LOS E	82.8	587.1	1.00	1.19	22.7
All Vehicles		2755	1.5	1.466	96.3	LOS F	82.8	587.1	0.85	1.03	12.1

Level of Service (Aver. Int. Delay): LOS F. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
PN	Across N approach	53	7.2	LOS A	0.1	0.1	0.38	0.38
PW	Across W approach	53	37.8	LOS D	0.1	0.1	0.87	0.87
All Pedestrians		106	22.5				0.63	0.63

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).

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INTERSECTION

MOVEMENT SUMMARY

Site: Railway/West - EX - PM

Railway Tce / West St

Existing - PM

Signals - Fixed Time Cycle Time = 100 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Railway Tce (east)											
5	T	831	1.5	1.264	151.4	LOS F	117.0	829.7	0.69	1.17	5.4
6	R	464	1.5	1.263	283.6	LOS F	117.0	829.7	1.00	1.91	3.1
Approach		1295	1.5	1.264	198.8	LOS F	117.0	829.7	0.80	1.43	4.3
North: West St (north)											
7	L	499	1.5	0.765	26.7	LOS B	17.8	126.0	0.69	0.83	18.9
9	R	171	1.5	1.178	234.3	LOS F	21.3	151.0	1.00	1.52	8.0
Approach		669	1.5	1.178	79.6	LOS F	21.3	151.0	0.77	1.01	11.2
West: Railway Tce (west)											
10	L	103	1.5	1.113	171.7	LOS F	83.1	589.4	1.00	1.83	10.7
11	T	682	1.5	1.112	163.5	LOS F	83.1	589.4	1.00	1.83	10.7
Approach		785	1.5	1.112	164.6	LOS F	83.1	589.4	1.00	1.83	10.7
All Vehicles		2749	1.5	1.264	160.0	LOS F	117.0	829.7	0.85	1.44	7.2

Level of Service (Aver. Int. Delay): LOS F. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
PN	Across N approach	53	20.5	LOS C	0.1	0.1	0.64	0.64
PW	Across W approach	53	37.0	LOS D	0.1	0.1	0.86	0.86
All Pedestrians		106	28.7				0.75	0.75

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).

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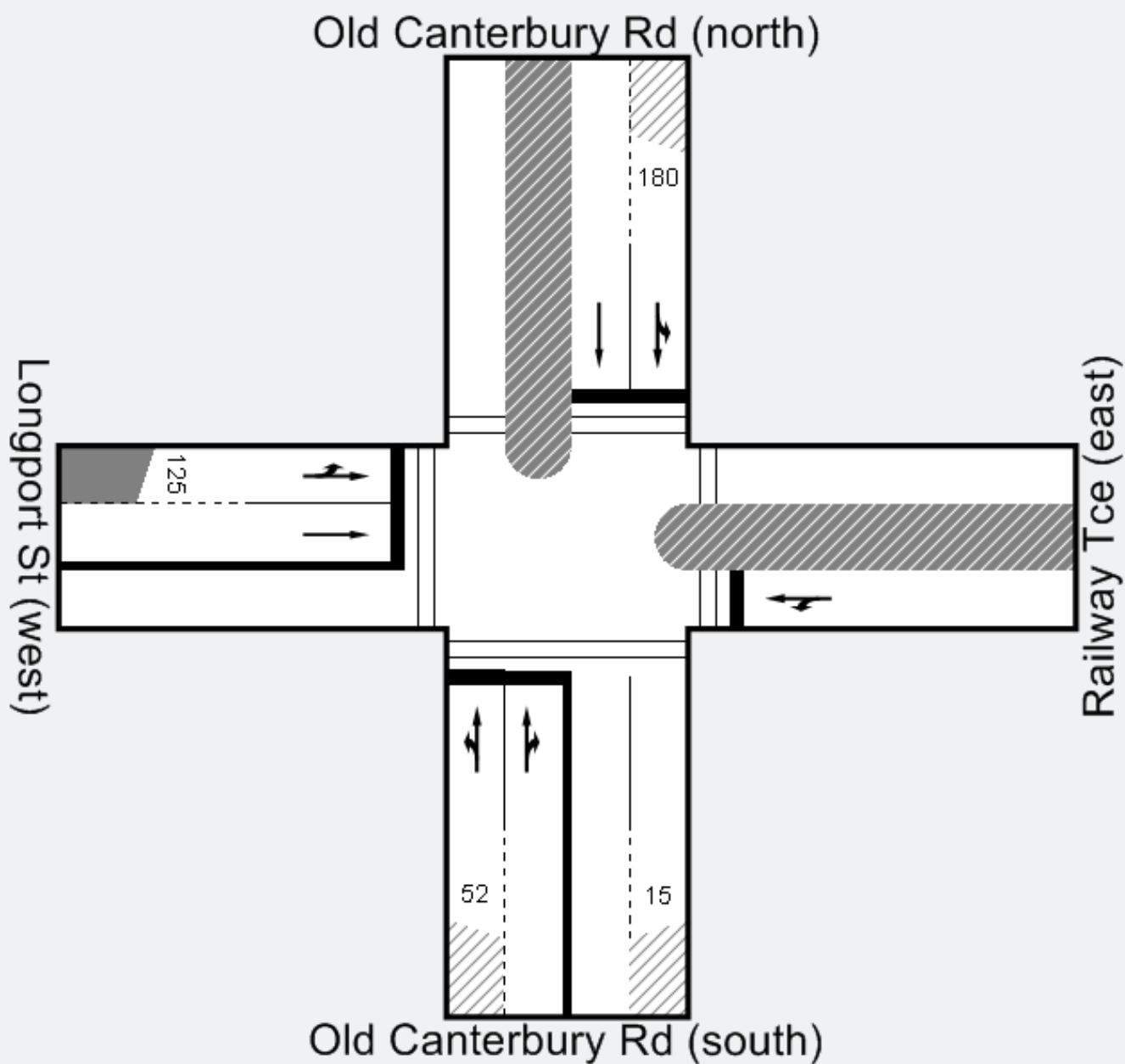
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INTERSECTION



MOVEMENT SUMMARY

Site: Longport - Ex- AM

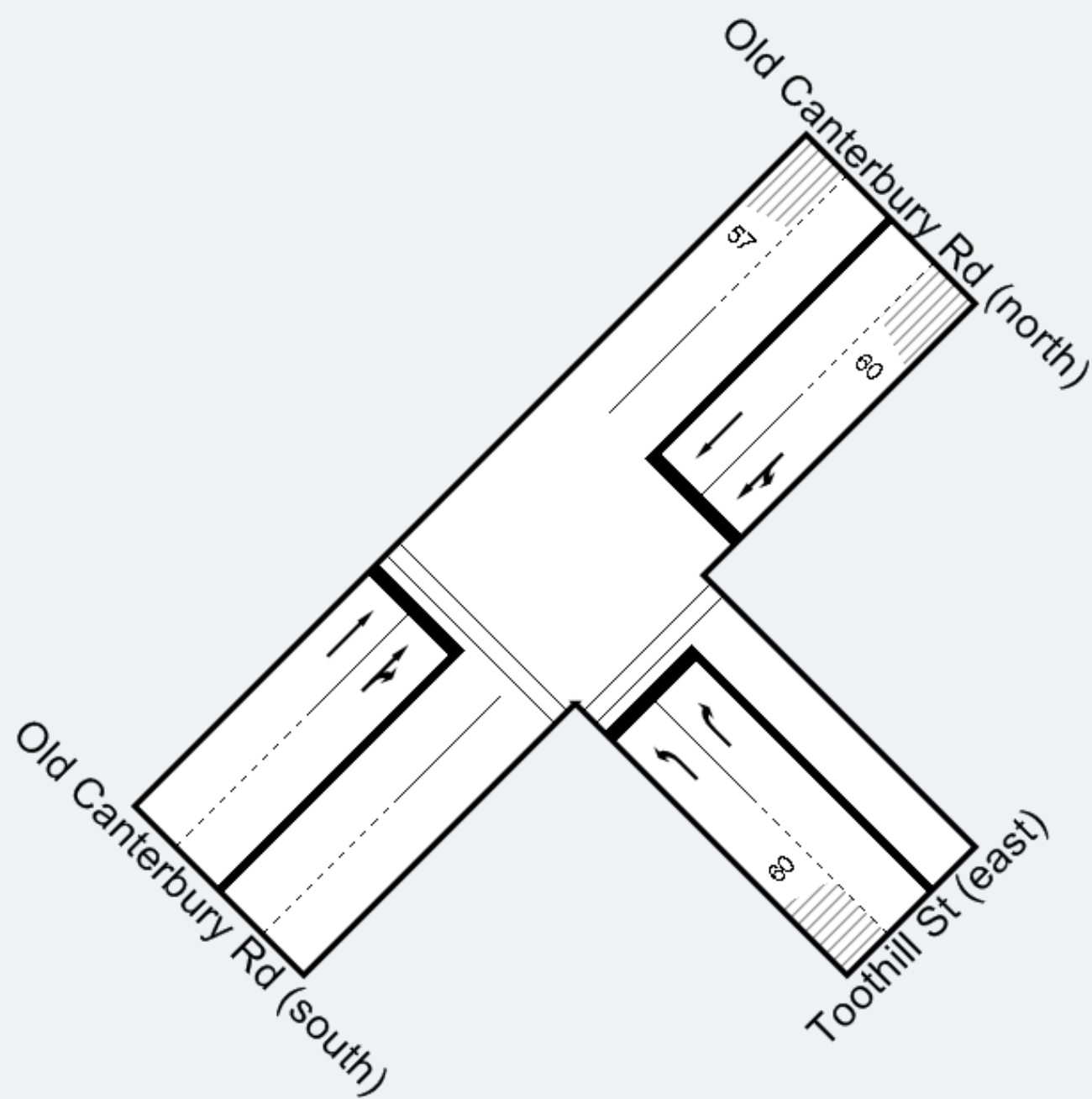
Old Canterbury Rd / Longport St / Railway Terrace
Existing - AM
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	65	0.0	0.229	24.5	LOS B	3.4	23.9	0.56	0.74	35.0
2	T	1022	0.9	1.143	191.6	LOS F	130.0	922.0	0.99	1.84	9.4
3	R	7	85.7	1.134	203.6	LOS F	130.0	922.0	1.00	1.86	9.0
Approach		1095	1.4	1.144	181.7	LOS F	130.0	922.0	0.97	1.78	9.8
East: Railway Tce (east)											
4	L	41	7.7	1.016	105.0	LOS F	79.8	561.3	1.00	1.34	15.1
5	T	836	0.3	1.019	97.6	LOS F	79.8	561.3	1.00	1.34	14.5
Approach		877	0.6	1.019	97.9	LOS F	79.8	561.3	1.00	1.34	14.6
North: Old Canterbury Rd (north)											
7	L	165	2.5	0.210	25.6	LOS B	6.9	49.6	0.59	0.76	34.1
8	T	662	1.0	0.717	25.5	LOS B	30.5	215.1	0.85	0.77	33.6
Approach		827	1.3	0.717	25.5	LOS B	30.5	215.1	0.80	0.77	33.7
West: Longport St (west)											
10	L	180	0.0	0.309	31.9	LOS C	8.5	59.6	0.70	0.77	29.2
11	T	895	0.9	1.137	190.2	LOS F	111.6	787.6	1.00	1.83	8.8
Approach		1075	0.8	1.136	163.7	LOS F	111.6	787.6	0.95	1.66	10.0
All Vehicles		3874	1.0	1.143	124.4	LOS F	130.0	922.0	0.93	1.43	12.8

Level of Service (Aver. Int. Delay): LOS F. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	105	20.4	LOS C	0.2	0.2	0.58	0.58
P3	Across E approach	105	15.0	LOS B	0.2	0.2	0.50	0.50
P5	Across N approach	105	20.4	LOS C	0.2	0.2	0.58	0.58
P7	Across W approach	105	15.0	LOS B	0.2	0.2	0.50	0.50
All Pedestrians		420	17.7				0.54	0.54

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS C. LOS Method for individual pedestrian movements: Delay (HCM).



MOVEMENT SUMMARY

Site: Toothill - EX-AM

Old Canterbury Rd / Toothill St

AM - Existing

Signals - Fixed Time Cycle Time 61 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	126	1.5	0.175	11.2	LOS A	2.4	16.7	0.45	0.68	34.4
23	R	261	1.5	0.619	29.9	LOS C	9.0	64.1	0.95	0.83	26.5
Approach		387	1.5	0.619	23.8	LOS B	9.0	64.1	0.79	0.78	28.7
North East: Old Canterbury Rd (north)											
24	L	216	1.5	0.853	38.9	LOS C	14.6	103.7	1.00	1.04	28.2
25	T	489	1.5	0.854	32.6	LOS C	14.6	103.7	1.00	1.04	29.7
Approach		705	1.5	0.854	34.5	LOS C	14.6	103.7	1.00	1.04	29.3
South West: Old Canterbury Rd (south)											
31	T	766	1.5	1.023	36.7	LOS C	39.1	277.4	0.78	0.94	28.3
32	R	371	1.5	1.023	73.8	LOS F	39.1	277.4	1.00	1.40	18.9
Approach		1137	1.5	1.023	48.8	LOS D	39.1	277.4	0.85	1.09	24.6
All Vehicles		2229	1.5	1.023	40.0	LOS C	39.1	277.4	0.89	1.02	26.6

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	18.9	LOS B	0.1	0.1	0.79	0.79
P15	Across SW approach	53	17.3	LOS B	0.1	0.1	0.75	0.75
All Pedestrians		106	18.1				0.77	0.77

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

Processed: Thursday, 10 December 2009 9:24:40 AM

SIDRA INTERSECTION 4.0.18.1102

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Stage 1 (Dec 09 Vols_v2).sip

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INTERSECTION

MOVEMENT SUMMARY

Site: Toothill - EX-PM

Old Canterbury Rd / Toothill St

PM - Existing

Signals - Fixed Time Cycle Time 59 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	226	1.5	0.390	18.7	LOS B	5.7	40.2	0.68	0.77	35.6
23	R	282	1.5	0.647	30.6	LOS C	9.5	67.2	0.95	0.85	29.7
Approach		508	1.5	0.647	25.3	LOS B	9.5	67.2	0.83	0.81	32.1
North East: Old Canterbury Rd (north)											
24	L	252	1.5	0.931	46.0	LOS D	27.6	195.8	1.00	1.24	26.5
25	T	1051	1.5	0.931	38.6	LOS C	27.6	195.8	1.00	1.23	27.6
Approach		1302	1.5	0.931	40.0	LOS C	27.6	195.8	1.00	1.23	27.3
South West: Old Canterbury Rd (south)											
31	T	515	1.5	0.477	8.5	LOS A	10.6	75.5	0.64	0.57	46.3
32	R	168	1.5	0.525	29.0	LOS C	5.8	41.2	0.95	0.77	32.3
Approach		683	1.5	0.525	13.5	LOS A	10.6	75.5	0.72	0.62	42.0
All Vehicles		2494	1.5	0.931	29.8	LOS C	27.6	195.8	0.89	0.98	31.3

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS D. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	11.6	LOS B	0.1	0.1	0.63	0.63
P15	Across SW approach	53	16.4	LOS B	0.1	0.1	0.75	0.75
All Pedestrians		106	14.0				0.69	0.69

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

MOVEMENT SUMMARY

Site: Longport - Ex- PM

Old Canterbury Rd / Longport St / Railway Terrace
Existing - PM
Signals - Fixed Time Cycle Time 116 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	114	0.0	0.135	25.0	LOS B	5.1	35.8	0.58	0.75	34.5
2	T	641	0.2	0.677	24.5	LOS B	27.7	194.5	0.83	0.74	34.2
Approach		755	0.1	0.677	24.6	LOS B	27.7	194.5	0.79	0.75	34.3
East: Railway Tce (east)											
4	L	82	7.7	1.167	217.9	LOS F	130.3	924.5	1.00	1.93	8.5
5	T	924	1.0	1.164	210.5	LOS F	130.3	924.5	1.00	1.93	8.1
Approach		1006	1.6	1.164	211.1	LOS F	130.3	924.5	1.00	1.93	8.1
North: Old Canterbury Rd (north)											
7	L	75	2.8	0.239	25.9	LOS B	7.9	56.1	0.61	0.86	35.0
8	T	1194	0.0	1.177	200.0	LOS F	144.6	1012.3	0.96	1.88	9.1
Approach		1268	0.2	1.177	189.8	LOS F	144.6	1012.3	0.94	1.82	9.5
West: Longport St (west)											
10	L	115	0.0	0.191	29.7	LOS C	5.4	38.1	0.66	0.75	30.1
11	T	732	0.6	0.915	49.9	LOS D	47.4	333.5	1.00	1.07	21.9
Approach		846	0.5	0.915	47.2	LOS D	47.4	333.5	0.95	1.02	22.8
All Vehicles		3876	0.6	1.177	132.0	LOS F	144.6	1012.3	0.93	1.47	12.3

Level of Service (Aver. Int. Delay): LOS F. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	105	19.3	LOS B	0.2	0.2	0.58	0.58
P3	Across E approach	105	15.0	LOS B	0.2	0.2	0.51	0.51
P5	Across N approach	105	19.3	LOS B	0.2	0.2	0.58	0.58
P7	Across W approach	105	15.0	LOS B	0.2	0.2	0.51	0.51
All Pedestrians		420	17.2				0.54	0.54

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

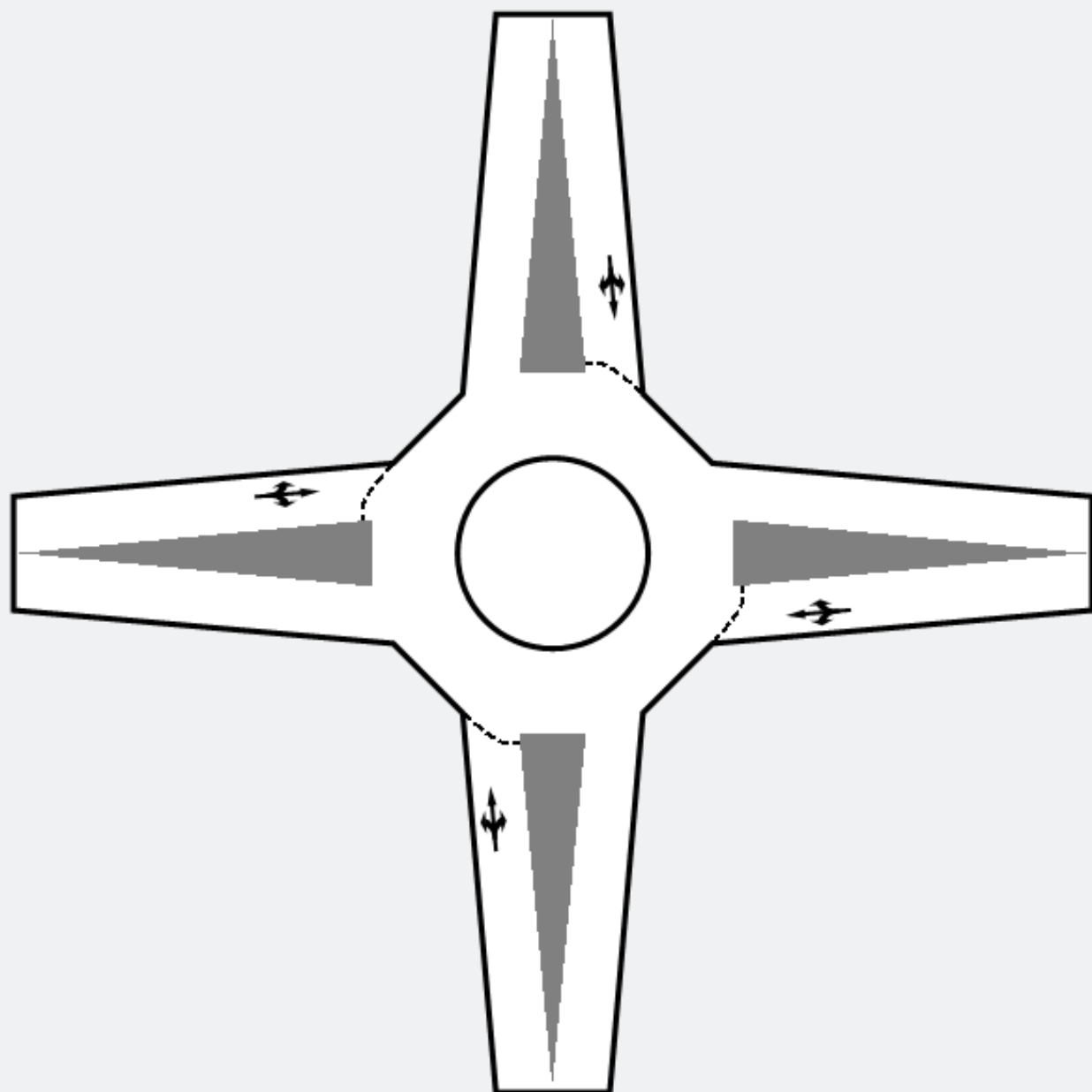
Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

Grosvenor Crescent

Longport Street West

Longport Street East

Smith Street



MOVEMENT SUMMARY

Site: Smith - EX - AM

Longport-Smith
Existing AM
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Smith Street											
1	L	4	2.0	0.702	22.0	LOS B	8.2	58.7	0.96	1.17	37.0
2	T	72	2.0	0.657	21.2	LOS B	8.2	58.7	0.96	1.17	37.1
3	R	317	2.0	0.655	25.8	LOS B	8.2	58.7	0.96	1.10	35.7
Approach		393	2.0	0.654	24.9	LOS B	8.2	58.7	0.96	1.11	36.0
East: Longport Street East											
4	L	38	2.0	0.602	7.6	LOS A	8.0	57.2	0.32	0.53	48.4
5	T	334	2.0	0.600	6.8	LOS A	8.0	57.2	0.32	0.47	48.8
6	R	524	2.0	0.600	11.3	LOS A	8.0	57.2	0.32	0.67	45.7
Approach		896	2.0	0.600	9.5	LOS A	8.0	57.2	0.32	0.59	46.9
North: Grosvenor Crescent											
7	L	381	2.0	0.605	16.2	LOS B	7.0	49.7	0.91	1.05	41.5
8	T	32	2.0	0.607	15.4	LOS B	7.0	49.7	0.91	1.04	41.7
9	R	4	2.0	0.602	19.8	LOS B	7.0	49.7	0.91	0.98	39.7
Approach		417	2.0	0.604	16.2	LOS B	7.0	49.7	0.91	1.05	41.5
West: Longport Street West											
10	L	22	2.0	0.691	25.4	LOS B	9.2	65.8	1.00	1.22	35.7
11	T	351	2.0	0.691	24.6	LOS B	9.2	65.8	1.00	1.22	35.8
12	R	6	2.0	0.702	29.1	LOS C	9.2	65.8	1.00	1.15	34.5
Approach		379	2.0	0.692	24.7	LOS C	9.2	65.8	1.00	1.22	35.7
All Vehicles		2084	2.0	0.702	16.5	LOS B	9.2	65.8	0.68	0.89	41.1

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout Capacity Model: SIDRA Standard.

MOVEMENT SUMMARY

Site: Smith - EX - PM

Longport-Smith
Existing PM Peak
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	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Smith Street											
1	L	4	2.0	0.602	23.6	LOS B	6.7	47.4	1.00	1.13	36.2
2	T	79	2.0	0.642	22.8	LOS B	6.7	47.4	1.00	1.13	36.3
3	R	145	2.0	0.640	27.3	LOS B	6.7	47.4	1.00	1.06	35.0
Approach		228	2.0	0.639	25.7	LOS B	6.7	47.4	1.00	1.08	35.4
East: Longport Street East											
4	L	113	2.0	0.901	12.2	LOS A	21.5	153.0	1.00	0.70	45.0
5	T	492	2.0	0.902	11.3	LOS A	21.5	153.0	1.00	0.70	44.8
6	R	447	2.0	0.902	15.9	LOS B	21.5	153.0	1.00	0.67	42.8
Approach		1052	2.0	0.902	13.3	LOS B	21.5	153.0	1.00	0.69	43.9
North: Grosvenor Crescent											
7	L	254	2.0	0.571	13.6	LOS A	5.5	39.4	0.82	0.98	43.8
8	T	100	2.0	0.571	12.7	LOS A	5.5	39.4	0.82	0.97	44.0
9	R	29	2.0	0.567	17.2	LOS B	5.5	39.4	0.82	0.94	41.7
Approach		383	2.0	0.571	13.6	LOS B	5.5	39.4	0.82	0.98	43.7
West: Longport Street West											
10	L	59	2.0	0.728	20.0	LOS B	10.4	74.2	0.99	1.19	39.1
11	T	416	2.0	0.728	19.1	LOS B	10.4	74.2	0.99	1.18	39.2
12	R	13	2.0	0.743	23.7	LOS B	10.4	74.2	0.99	1.09	37.6
Approach		487	2.0	0.729	19.3	LOS B	10.4	74.2	0.99	1.18	39.2
All Vehicles		2151	2.0	0.902	16.1	LOS B	21.5	153.0	0.97	0.89	41.7

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout Capacity Model: SIDRA Standard.



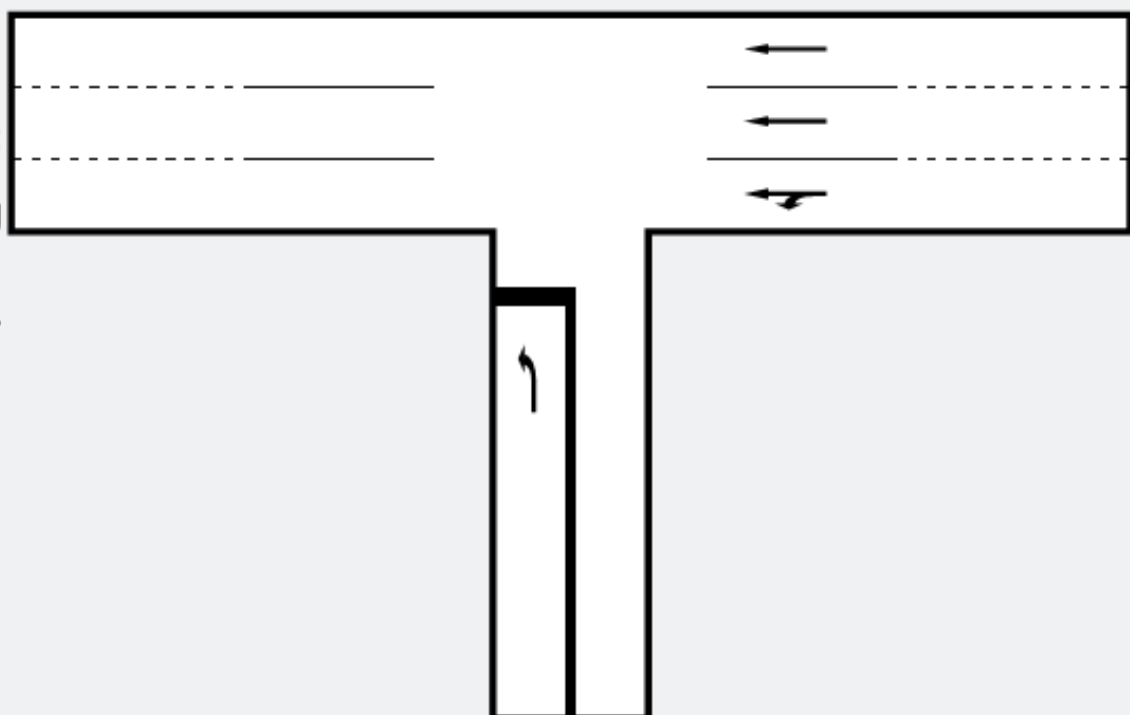
appendix 3b

sidra outputs (under CA)

Parramatta Road

Parramatta Road

Old Canterbury Road



MOVEMENT SUMMARY

Site: Parramatta Rd - Stage 1 (Dec 09_v2) - AM

Old Canterbury/Parramatta Rd
AM - All Northern Stage 1 Vols
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Road											
1	L	205	2.0	0.569	23.6	LOS B	3.0	21.3	0.84	1.13	37.5
Approach		205	2.0	0.569	23.6	LOS B	3.0	21.3	0.84	1.13	37.5
East: Parramatta Road											
4	L	51	3.0	0.602	13.4	LOS A	7.2	51.8	0.50	0.83	47.2
5	T	1588	3.0	0.752	7.0	LOS A	12.0	86.3	0.56	0.64	50.2
Approach		1639	3.0	0.753	7.2	LOS A	12.0	86.3	0.56	0.65	50.1
All Vehicles		1844	2.9	0.752	9.0	NA	12.0	86.3	0.59	0.70	48.3

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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INTERSECTION

MOVEMENT SUMMARY

Site: Parramatta Rd - Stage 1 (Dec 09_v2) - PM

Old Canterbury/Parramatta Rd
PM - All Northern Stage 1 Vols
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Road											
1	L	99	2.0	0.582	39.4	LOS C	2.5	17.6	0.94	1.10	29.6
Approach		99	2.0	0.581	39.4	LOS C	2.5	17.6	0.94	1.10	29.6
East: Parramatta Road											
4	L	131	3.0	0.742	13.1	LOS A	16.7	119.9	0.56	0.64	47.5
5	T	2262	3.0	0.926	11.6	LOS A	38.7	277.8	0.73	0.75	45.2
Approach		2393	3.0	0.926	11.7	LOS A	38.7	277.8	0.72	0.75	45.4
All Vehicles		2492	3.0	0.926	12.8	NA	38.7	277.8	0.73	0.76	44.4

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

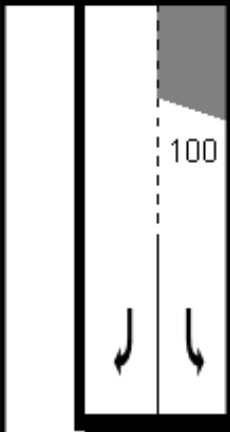
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INTERSECTION

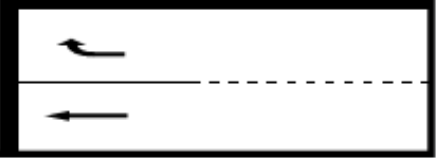
Railway Tce (west)



West St (north)



Railway Tce (east)



MOVEMENT SUMMARY

Site: Railway/West - Stage 1 (New Layout) - AM

Railway Tce / West St
AM - Stage 1 Vols (New Layout)
No Stage 1 Vols
Signals - Fixed Time Cycle Time 400 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Railway Tce (east)											
5	T	701	1.5	0.487	6.4	LOS A	15.8	112.1	0.47	0.42	39.4
6	R	358	1.5	0.940	68.2	LOS E	19.5	138.0	1.00	1.14	10.9
Approach		1059	1.5	0.940	27.3	LOS B	19.5	138.0	0.65	0.67	21.1
North: West St (north)											
7	L	429	1.5	0.799	39.9	LOS C	19.7	139.4	0.87	0.89	14.1
9	R	84	1.5	0.423	54.9	LOS D	5.4	38.6	0.98	0.77	23.9
Approach		514	1.5	0.799	42.4	LOS C	19.7	139.4	0.88	0.87	16.6
West: Railway Tce (west)											
10	L	226	1.5	0.635	26.5	LOS B	8.5	60.1	0.66	0.77	34.7
11	T	979	1.5	0.932	43.4	LOS D	57.5	407.4	1.00	1.10	26.2
Approach		1205	1.5	0.932	40.2	LOS C	57.5	407.4	0.94	1.04	27.5
All Vehicles		2778	1.5	0.940	35.7	LOS C	57.5	407.4	0.82	0.87	23.8

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS E. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
PN	Across N approach	53	12.0	LOS B	0.1	0.1	0.49	0.49
PW	Across W approach	53	34.4	LOS D	0.1	0.1	0.83	0.83
All Pedestrians		106	23.2				0.66	0.66

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).

MOVEMENT SUMMARY

Site: Railway/West - Stage 1 (New Layout) - PM

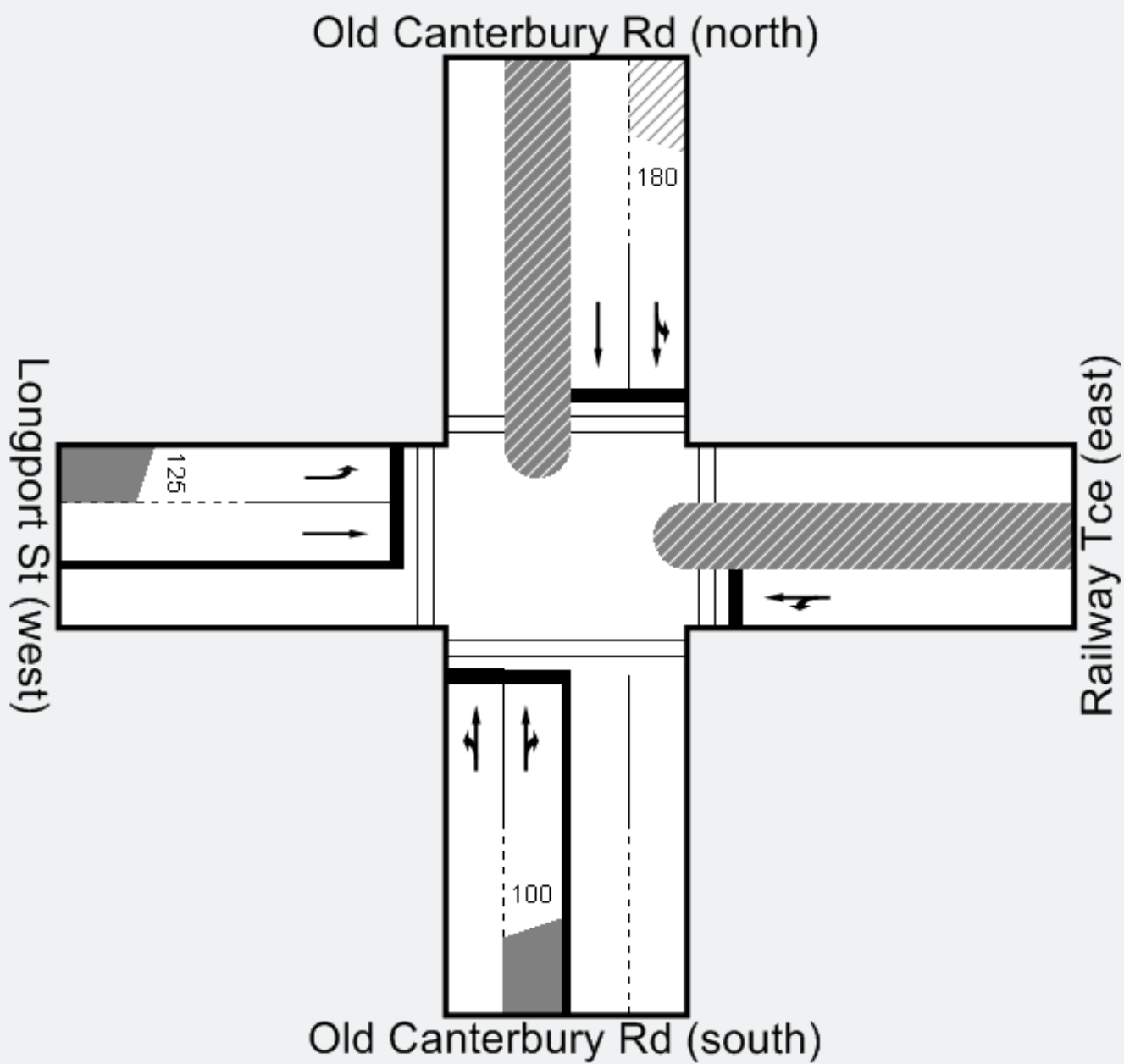
Railway Tce / West St
PM - Stage 1 (New Layout)
No Stage 1 Traffic Associated
Signals - Fixed Time Cycle Time 400 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Railway Tce (east)											
5	T	831	1.5	0.585	7.6	LOS A	20.7	146.5	0.54	0.49	37.1
6	R	464	1.5	0.802	38.1	LOS C	17.6	125.0	0.98	0.98	17.1
Approach		1295	1.5	0.802	18.5	LOS B	20.7	146.5	0.70	0.67	26.2
North: West St (north)											
7	L	499	1.5	0.818	34.6	LOS C	20.9	147.9	0.77	0.88	15.7
9	R	171	1.5	0.786	59.6	LOS E	10.6	75.0	1.00	0.90	22.8
Approach		669	1.5	0.819	41.0	LOS C	20.9	147.9	0.83	0.88	18.6
West: Railway Tce (west)											
10	L	103	1.5	0.333	32.0	LOS C	4.7	33.7	0.72	0.75	31.9
11	T	682	1.5	0.812	31.2	LOS C	31.4	222.7	0.96	0.90	30.7
Approach		785	1.5	0.812	31.3	LOS C	31.4	222.7	0.93	0.88	30.9
All Vehicles		2749	1.5	0.818	27.6	LOS B	31.4	222.7	0.79	0.78	25.9

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS E. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
PN	Across N approach	53	17.4	LOS B	0.1	0.1	0.59	0.59
PW	Across W approach	53	33.6	LOS D	0.1	0.1	0.82	0.82
All Pedestrians		106	25.5				0.71	0.71

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).



MOVEMENT SUMMARY

Site: Longport - Stage 1 (Dec 09_v2) - AM

Old Canterbury Rd / Longport St / Railway Terrace
AM - Stage 1 Vols
Signals - Fixed Time Cycle Time =120 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	65	0.0	0.828	42.5	LOS C	37.4	263.3	0.95	0.95	28.2
2	T	1107	0.9	1.000 ³	34.8	LOS C	37.4	263.3	0.97	0.89	29.1
3	R	7	85.7	0.987	44.3	LOS D	23.6	168.2	1.00	0.88	28.7
Approach		1180	1.4	1.000	35.3	LOS C	37.4	263.3	0.97	0.89	29.1
East: Railway Tce (east)											
4	L	41	7.7	0.889	47.1	LOS D	52.5	369.7	0.99	0.99	25.1
5	T	836	0.3	0.892	39.7	LOS C	52.5	369.7	0.99	0.99	24.6
Approach		877	0.6	0.892	40.0	LOS C	52.5	369.7	0.99	0.99	24.6
North: Old Canterbury Rd (north)											
7	L	165	2.5	0.543	33.8	LOS C	18.3	129.8	0.78	0.88	31.0
8	T	685	1.0	0.543	26.7	LOS B	20.0	141.0	0.79	0.69	32.9
Approach		851	1.3	0.543	28.1	LOS B	20.0	141.0	0.79	0.73	32.5
West: Longport St (west)											
10	L	180	0.0	0.287	27.2	LOS B	7.8	54.6	0.63	0.76	31.2
11	T	895	0.9	0.994	80.6	LOS F	76.5	540.1	1.00	1.26	16.5
Approach		1075	0.8	0.994	71.7	LOS F	76.5	540.1	0.94	1.18	18.0
All Vehicles		3982	1.0	1.000	44.6	LOS D	76.5	540.1	0.93	0.96	24.7

Level of Service (Aver. Int. Delay): LOS D. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

³ x =1.00 due to short lane

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	105	16.5	LOS B	0.2	0.2	0.53	0.53
P3	Across E approach	105	18.7	LOS B	0.2	0.2	0.56	0.56
P5	Across N approach	105	16.5	LOS B	0.2	0.2	0.53	0.53
P7	Across W approach	105	18.7	LOS B	0.2	0.2	0.56	0.56
All Pedestrians		420	17.6				0.54	0.54

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

MOVEMENT SUMMARY

Site: Longport - Stage 1 (Dec 09_v2) - PM

Old Canterbury Rd / Longport St / Railway Terrace
PM - Stage 1 Vols
Signals - Fixed Time Cycle Time 116 seconds

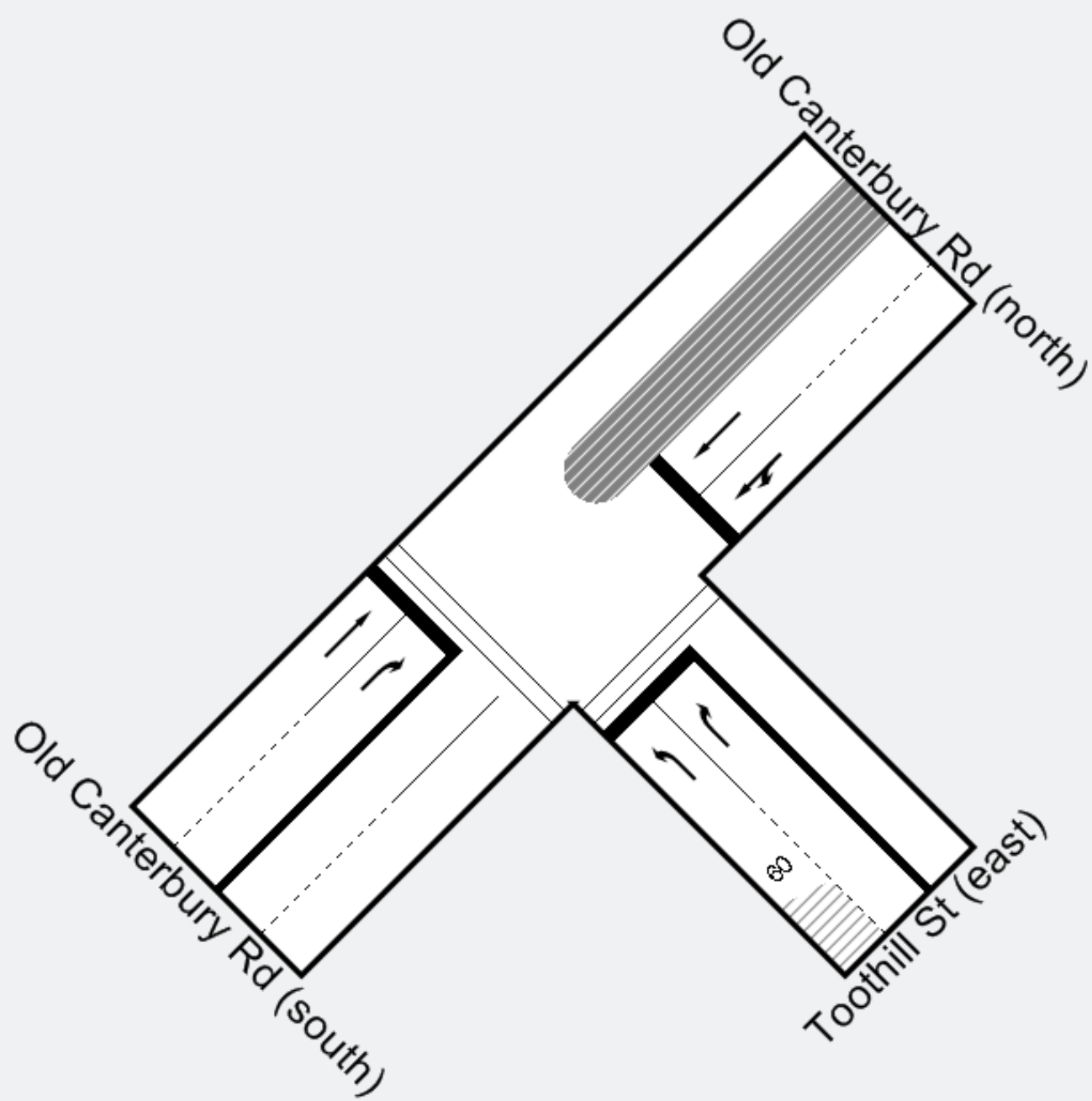
Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	114	0.0	0.343	32.9	LOS C	11.8	83.0	0.74	0.85	31.3
2	T	662	0.2	1.000 ³	32.4	LOS C	24.0	167.9	0.94	0.82	30.1
Approach		776	0.1	1.000	32.5	LOS C	24.0	167.9	0.91	0.83	30.3
East: Railway Tce (east)											
4	L	82	7.7	0.983	75.0	LOS F	78.6	557.4	1.00	1.19	19.0
5	T	924	1.0	0.980	67.6	LOS E	78.6	557.4	1.00	1.19	18.4
Approach		1006	1.6	0.980	68.2	LOS E	78.6	557.4	1.00	1.19	18.5
North: Old Canterbury Rd (north)											
7	L	75	2.8	0.887	52.1	LOS D	41.4	290.7	1.00	1.01	25.0
8	T	1287	0.0	0.886	44.6	LOS D	41.4	290.7	1.00	1.02	25.7
Approach		1362	0.2	0.886	45.0	LOS D	41.4	290.7	1.00	1.02	25.7
West: Longport St (west)											
10	L	115	0.0	0.173	24.1	LOS B	4.8	33.5	0.57	0.74	32.7
11	T	732	0.6	0.770	25.7	LOS B	33.8	237.8	0.88	0.80	29.6
Approach		846	0.5	0.770	25.5	LOS B	33.8	237.8	0.84	0.80	30.0
All Vehicles		3991	0.6	1.000	44.3	LOS D	78.6	557.4	0.95	0.98	24.8

Level of Service (Aver. Int. Delay): LOS D. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

³ x 1.00 due to short lane

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	Across S approach	105	14.5	LOS B	0.2	0.2	0.50	0.50
P3	Across E approach	105	19.9	LOS B	0.2	0.2	0.59	0.59
P5	Across N approach	105	14.5	LOS B	0.2	0.2	0.50	0.50
P7	Across W approach	105	19.9	LOS B	0.2	0.2	0.59	0.59
All Pedestrians		420	17.2				0.54	0.54

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).



MOVEMENT SUMMARY

Site: Toothill - Stage 1 (Dec 09_v2)
- AM [altered lanes]

Old Canterbury Rd / Toothill St
AM - Stage 1 Vols
Signals - Fixed Time Cycle Time 61 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	126	1.5	0.198	13.8	LOS A	2.8	20.0	0.54	0.70	33.1
23	R	319	1.5	0.706	30.7	LOS C	11.0	78.3	0.97	0.89	26.3
Approach		445	1.5	0.706	25.9	LOS B	11.0	78.3	0.85	0.83	27.9
North East: Old Canterbury Rd (north)											
24	L	262	1.5	0.701	27.3	LOS B	13.3	94.2	0.92	0.89	33.6
25	T	545	1.5	0.701	22.1	LOS B	13.3	94.2	0.94	0.84	34.9
Approach		807	1.5	0.701	23.8	LOS B	13.3	94.2	0.94	0.86	34.5
South West: Old Canterbury Rd (south)											
31	T	766	1.5	0.712	10.8	LOS A	18.0	127.7	0.79	0.71	43.7
32	R	371	1.5	0.753	30.7	LOS C	11.4	80.6	0.97	1.00	30.9
Approach		1137	1.5	0.753	17.3	LOS B	18.0	127.7	0.85	0.81	38.8
All Vehicles		2389	1.5	0.753	21.1	LOS B	18.0	127.7	0.88	0.83	34.8

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	15.2	LOS B	0.1	0.1	0.70	0.70
P15	Across SW approach	53	16.6	LOS B	0.1	0.1	0.74	0.74
All Pedestrians		106	15.9				0.72	0.72

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

MOVEMENT SUMMARY

Site: Toothill - Stage 1 (Dec 09_v2)-PM- New Phase Time [altered lanes]

Old Canterbury Rd / Toothill St
PM - Stage 1 Vols
Signals - Fixed Time Cycle Time 90 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	226	1.5	0.563	27.9	LOS B	8.6	61.2	0.74	0.78	31.0
23	R	414	1.5	0.881	53.2	LOS D	21.8	154.4	1.00	1.00	22.7
Approach		640	1.5	0.881	44.3	LOS D	21.8	154.4	0.91	0.92	25.1
North East: Old Canterbury Rd (north)											
24	L	382	1.5	0.864	36.4	LOS C	36.4	258.4	0.95	0.99	29.9
25	T	1224	1.5	0.864	29.5	LOS C	36.4	258.4	0.96	0.97	31.2
Approach		1606	1.5	0.864	31.2	LOS C	36.4	258.4	0.96	0.97	30.9
South West: Old Canterbury Rd (south)											
31	T	515	1.5	0.436	9.9	LOS A	13.4	94.9	0.57	0.51	45.2
32	R	168	1.5	0.754	50.8	LOS D	9.4	66.3	1.00	0.98	24.1
Approach		683	1.5	0.753	20.0	LOS B	13.4	94.9	0.68	0.62	37.4
All Vehicles		2929	1.5	0.881	31.4	LOS C	36.4	258.4	0.88	0.88	30.6

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).
Level of Service (Worst Movement): LOS D. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on average delay for all vehicle movements.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	11.8	LOS B	0.1	0.1	0.51	0.51
P15	Across SW approach	53	24.2	LOS C	0.1	0.1	0.73	0.73
All Pedestrians		106	18.0				0.62	0.62

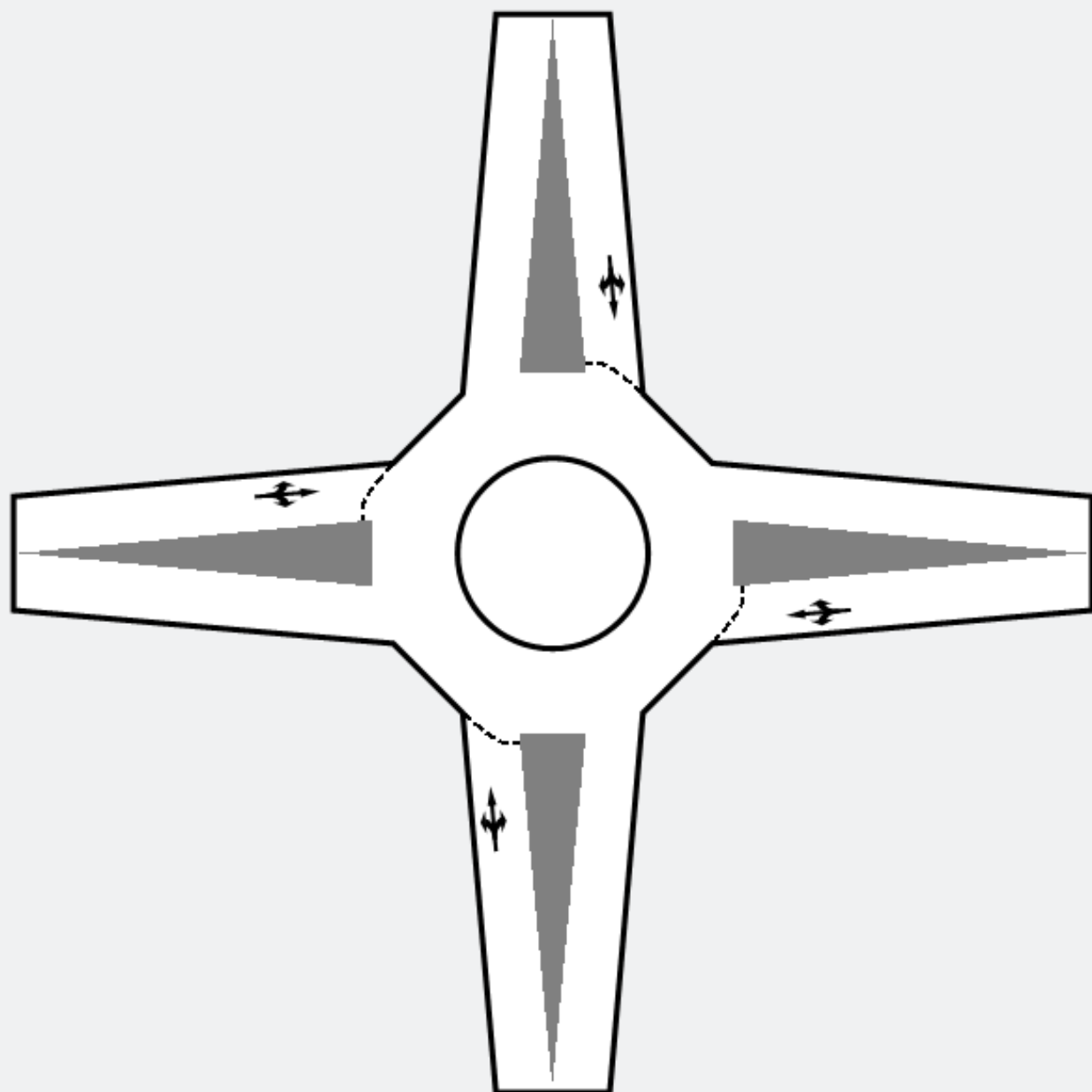
Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS C. LOS Method for individual pedestrian movements: Delay (HCM).

Grosvenor Crescent

Longport Street West

Longport Street East

Smith Street



MOVEMENT SUMMARY

Site: Smith - Stage 1 (Dec 09_v2) - AM

Longport-Smith
AM - Stage 1 Vols
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	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Smith Street											
1	L	4	2.0	0.702	22.5	LOS B	8.4	60.0	0.97	1.18	36.7
2	T	72	2.0	0.663	21.7	LOS B	8.4	60.0	0.97	1.18	36.8
3	R	317	2.0	0.661	26.3	LOS B	8.4	60.0	0.97	1.11	35.4
Approach		393	2.0	0.661	25.4	LOS B	8.4	60.0	0.97	1.12	35.7
East: Longport Street East											
4	L	38	2.0	0.602	7.6	LOS A	8.2	58.2	0.32	0.53	48.3
5	T	342	2.0	0.605	6.8	LOS A	8.2	58.2	0.32	0.47	48.8
6	R	524	2.0	0.605	11.3	LOS A	8.2	58.2	0.32	0.67	45.7
Approach		904	2.0	0.605	9.5	LOS A	8.2	58.2	0.32	0.58	46.9
North: Grosvenor Crescent											
7	L	381	2.0	0.605	16.2	LOS B	7.0	49.7	0.91	1.05	41.5
8	T	32	2.0	0.607	15.4	LOS B	7.0	49.7	0.91	1.04	41.7
9	R	4	2.0	0.602	19.8	LOS B	7.0	49.7	0.91	0.98	39.7
Approach		417	2.0	0.604	16.2	LOS B	7.0	49.7	0.91	1.05	41.5
West: Longport Street West											
10	L	22	2.0	0.691	25.5	LOS B	9.3	66.0	1.00	1.23	35.7
11	T	351	2.0	0.693	24.6	LOS B	9.3	66.0	1.00	1.23	35.8
12	R	6	2.0	0.702	29.1	LOS C	9.3	66.0	1.00	1.15	34.5
Approach		379	2.0	0.693	24.7	LOS C	9.3	66.0	1.00	1.22	35.7
All Vehicles		2093	2.0	0.702	16.6	LOS B	9.3	66.0	0.68	0.89	41.1

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout Capacity Model: SIDRA Standard.

MOVEMENT SUMMARY

Site: Smith - Stage 1 (Dec 09_v2) - PM

Longport-Smith
PM - Stage 1 Vols
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Smith Street											
1	L	4	2.0	0.602	23.8	LOS B	6.7	47.6	1.00	1.13	36.1
2	T	79	2.0	0.642	23.0	LOS B	6.7	47.6	1.00	1.13	36.2
3	R	145	2.0	0.643	27.5	LOS B	6.7	47.6	1.00	1.06	34.9
Approach		228	2.0	0.642	25.9	LOS B	6.7	47.6	1.00	1.08	35.3
East: Longport Street East											
4	L	113	2.0	0.901	12.3	LOS A	21.7	154.6	1.00	0.70	44.9
5	T	494	2.0	0.903	11.4	LOS A	21.7	154.6	1.00	0.70	44.8
6	R	447	2.0	0.904	15.9	LOS B	21.7	154.6	1.00	0.67	42.7
Approach		1054	2.0	0.903	13.4	LOS B	21.7	154.6	1.00	0.69	43.9
North: Grosvenor Crescent											
7	L	254	2.0	0.571	13.6	LOS A	5.5	39.4	0.82	0.99	43.8
8	T	100	2.0	0.571	12.7	LOS A	5.5	39.4	0.82	0.97	44.0
9	R	29	2.0	0.567	17.2	LOS B	5.5	39.4	0.82	0.94	41.6
Approach		383	2.0	0.571	13.6	LOS B	5.5	39.4	0.82	0.98	43.7
West: Longport Street West											
10	L	59	2.0	0.728	20.0	LOS B	10.4	74.2	0.99	1.19	39.1
11	T	416	2.0	0.728	19.1	LOS B	10.4	74.2	0.99	1.18	39.2
12	R	13	2.0	0.743	23.7	LOS B	10.4	74.2	0.99	1.09	37.6
Approach		487	2.0	0.729	19.3	LOS B	10.4	74.2	0.99	1.18	39.2
All Vehicles		2153	2.0	0.904	16.1	LOS B	21.7	154.6	0.97	0.89	41.6

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

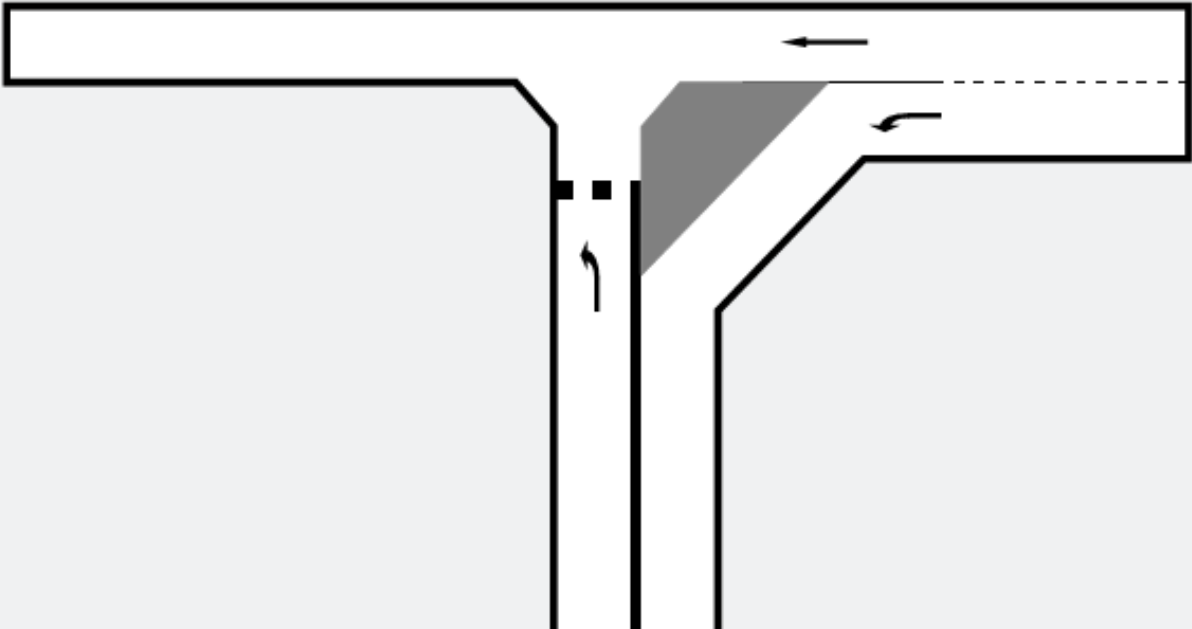
Approach LOS values are based on the worst delay for any vehicle movement.

Roundabout Capacity Model: SIDRA Standard.

Longport St (west)

Longport St (east)

Brown St (south)



MOVEMENT SUMMARY

Site: Brown - Stage 1 - AM

Longport St / Brown Street
AM - Stage 1 Vols
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Brown St (south)											
1	L	4	1.5	0.008	11.0	LOS A	0.0	0.3	0.59	0.70	34.5
Approach		4	1.5	0.008	11.0	LOS A	0.0	0.3	0.59	0.70	34.5
East: Longport St (east)											
4	L	1	1.5	0.001	7.6	NA ⁹	NA ⁹	NA ⁹	0.00	0.60	49.8
5	T	899	1.5	0.466	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		900	1.5	0.465	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		904	1.5	0.466	0.1	NA	0.0	0.3	0.00	0.00	59.8

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS A. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

⁹ Continuous movement

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Stage 1 (Dec 09 Vols_v2)- Part 2.sip
8000844, TRAFFIX, SINGLE

SIDRA
INTERSECTION

MOVEMENT SUMMARY

Site: Brown - Stage 1 - PM

Longport St / Brown Street
PM - Stage 1 Vols
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Brown St (south)											
1	L	2	1.5	0.005	12.4	LOS A	0.0	0.2	0.65	0.71	33.8
Approach		2	1.5	0.005	12.4	LOS A	0.0	0.2	0.65	0.71	33.8
East: Longport St (east)											
4	L	1	1.5	0.001	7.6	NA ⁹	NA ⁹	NA ⁹	0.00	0.60	49.8
5	T	1028	1.5	0.533	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1029	1.5	0.533	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
All Vehicles		1032	1.5	0.533	0.0	NA	0.0	0.2	0.00	0.00	59.9

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS A. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

⁹ Continuous movement

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SIDRA INTERSECTION 4.0.18.1102 www.sidrasolutions.com
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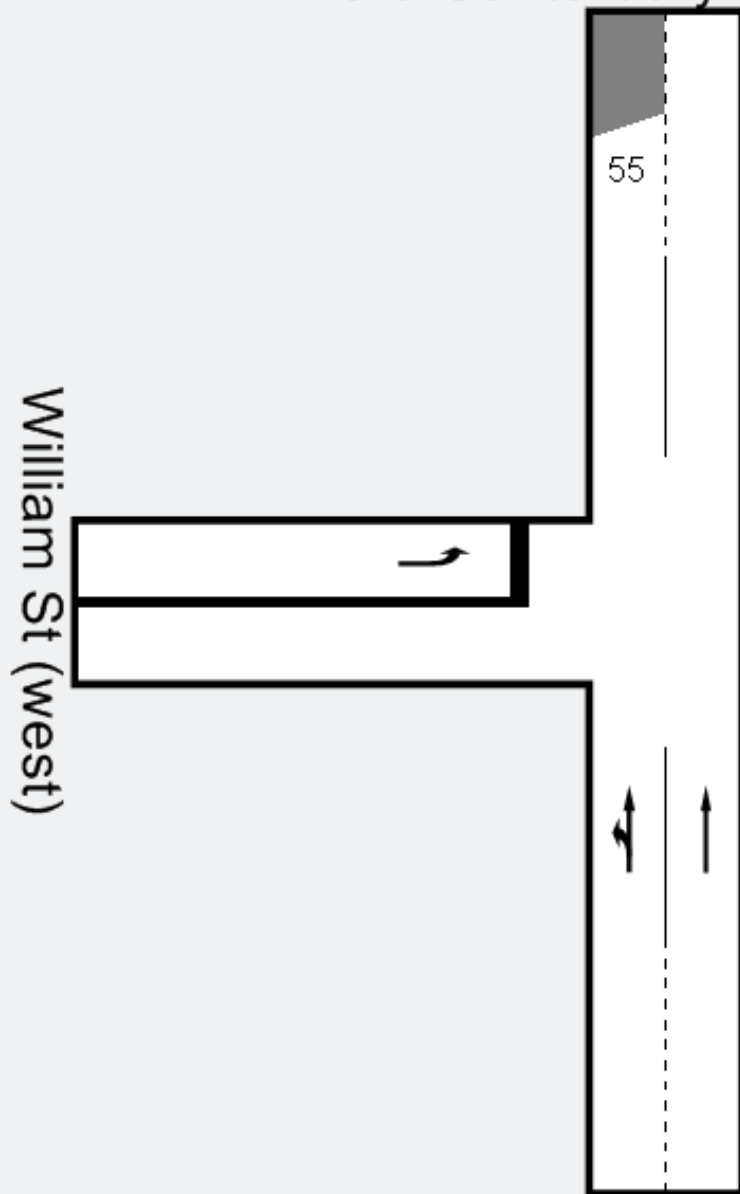
SIDRA
INTERSECTION

Old Canterbury Rd (north)

55

William St (west)

Old Canterbury Rd (south)



MOVEMENT SUMMARY

Site: William - Stage 1 - AM

Old Canterbury Rd - William St
AM - Stage 1 Vols
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	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	46	1.5	0.140	7.2	LOS A	0.0	0.0	0.00	1.09	48.7
2	T	1071	1.5	0.439	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1117	1.5	0.439	0.3	LOS A	0.0	0.0	0.00	0.05	59.5
West: William St (west)											
10	L	43	1.5	0.154	21.0	LOS B	0.6	4.4	0.80	1.00	30.5
Approach		43	1.5	0.154	21.0	LOS B	0.6	4.4	0.80	1.00	30.5
All Vehicles		1160	1.5	0.439	1.1	NA	0.6	4.4	0.03	0.08	57.4

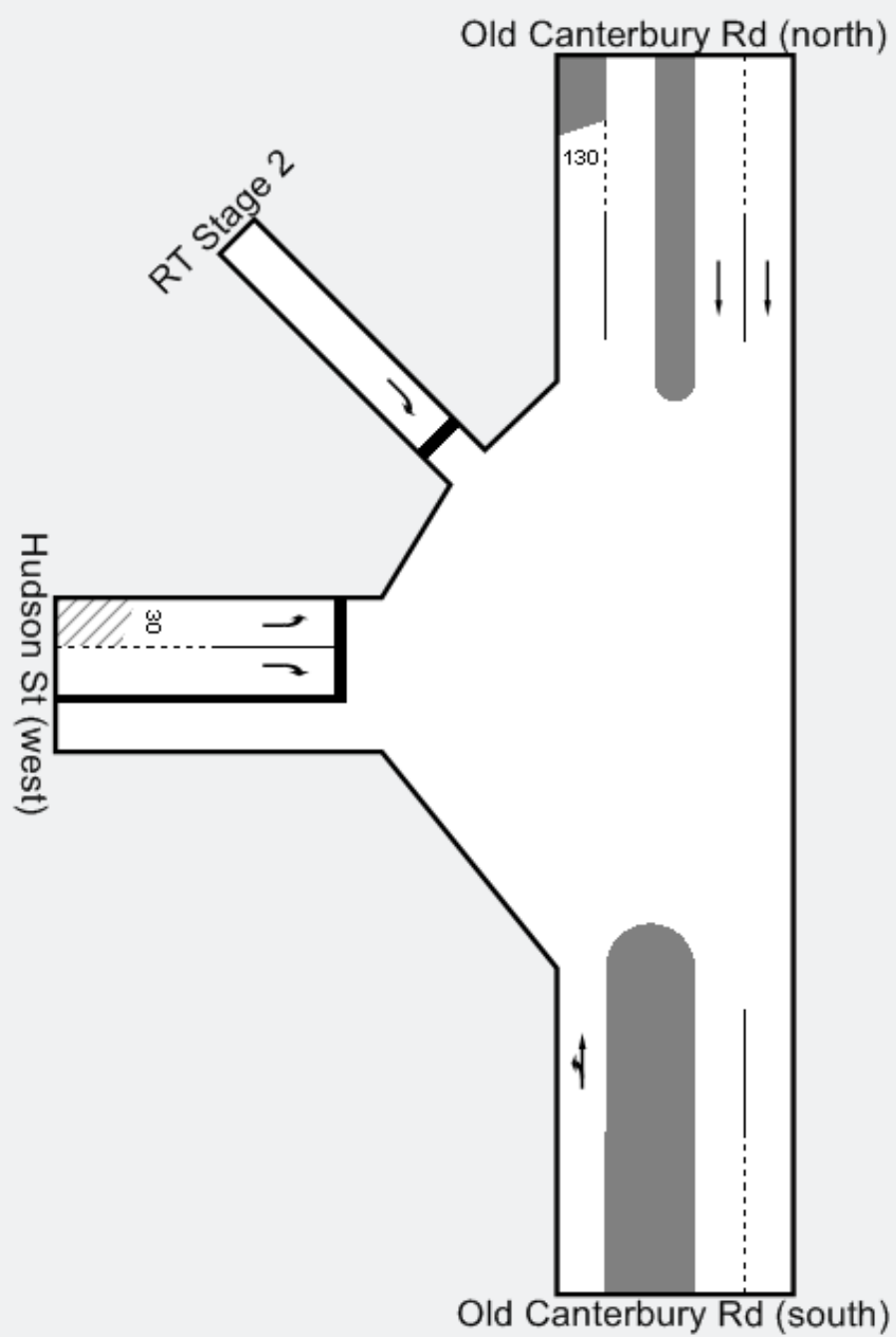
LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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INTERSECTION



MOVEMENT SUMMARY

Site: Hudson - Stage 1 (Dec 09_v2) - AM (Staged)

Old Canterbury Rd - Hudson St
AM - Stage 1 Vols (Staged Crossing)
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	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	12	1.5	0.551	7.2	LOS A	0.0	0.0	0.00	1.09	48.7
2	T	1074	1.5	0.562	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1085	1.5	0.562	0.1	LOS A	0.0	0.0	0.00	0.01	59.9
North: Old Canterbury Rd (north)											
8	T	728	1.5	0.189	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		728	1.5	0.189	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North West: RT Stage 2											
29	R	79	1.5	0.135	10.0	LOS A	0.6	4.5	0.57	0.98	20.6
Approach		79	1.5	0.135	10.0	LOS A	0.6	4.5	0.57	0.98	20.6
West: Hudson St (west)											
10	L	43	1.5	0.162	22.6	LOS B	0.7	4.9	0.81	1.00	29.9
12	R	79	1.5	0.446	38.0	LOS C	2.4	16.9	0.91	1.11	22.7
Approach		122	1.5	0.446	32.5	LOS C	2.4	16.9	0.87	1.07	25.1
All Vehicles		2015	1.5	0.562	2.4	NA	2.4	16.9	0.08	0.11	54.8

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

MOVEMENT SUMMARY

Site: Hudson - Stage 1 (Dec 09_v2) - PM (Staged)

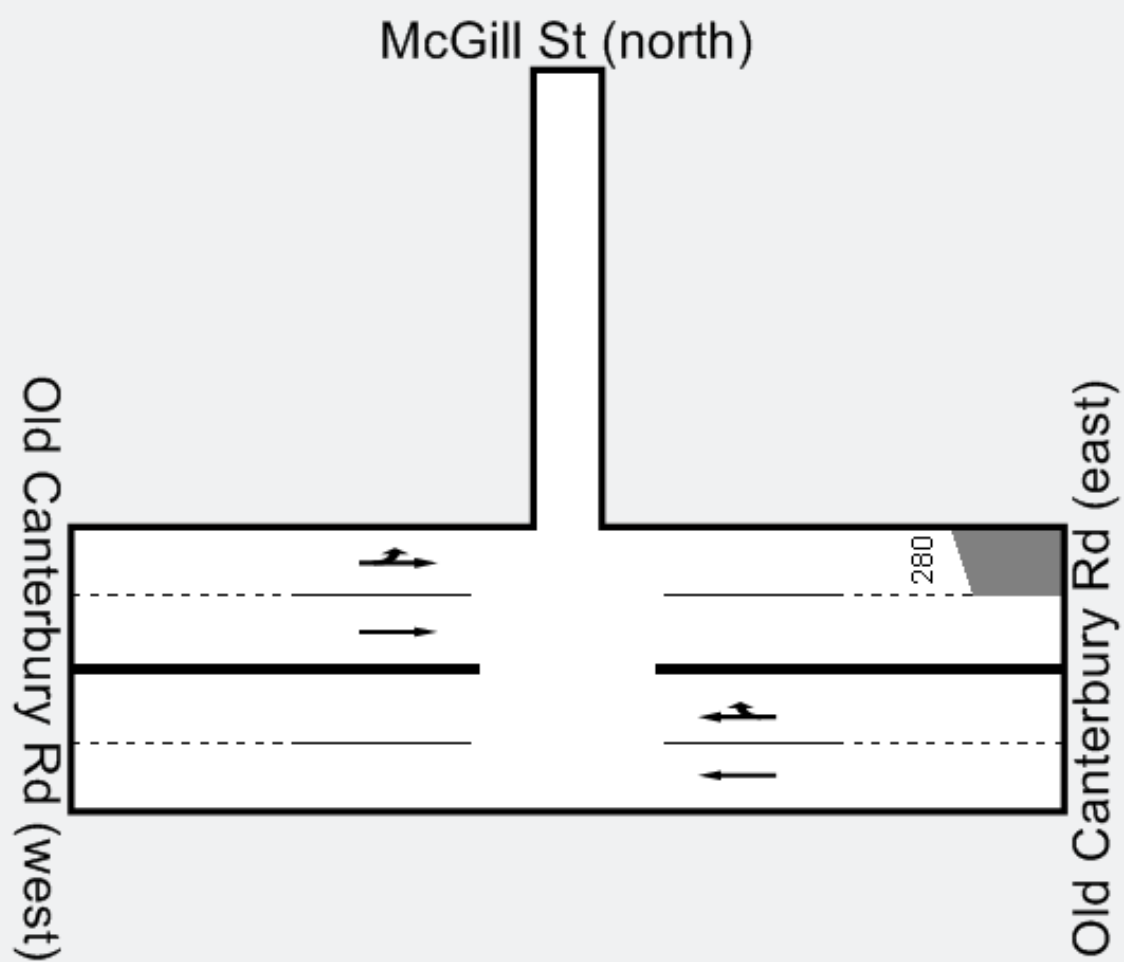
Old Canterbury Rd - Hudson St
PM - Stage 1 Vols (Staged Crossing)
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	40	1.5	0.336	7.2	LOS A	0.0	0.0	0.00	1.09	48.7
2	T	606	1.5	0.336	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		646	1.5	0.336	0.4	LOS A	0.0	0.0	0.00	0.07	59.2
North: Old Canterbury Rd (north)											
8	T	1396	1.5	0.361	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1396	1.5	0.361	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
North West: RT Stage 2											
29	R	211	1.5	0.923	63.4	LOS E	9.7	68.4	0.98	2.54	5.6
Approach		211	1.5	0.922	63.4	LOS E	9.7	68.4	0.98	2.54	5.6
West: Hudson St (west)											
10	L	16	1.5	0.026	13.2	LOS A	0.1	0.9	0.54	0.89	34.0
12	R	211	1.5	0.927	50.8	LOS D	8.6	61.0	0.72	2.08	19.5
Approach		226	1.5	0.928	48.2	LOS D	8.6	61.0	0.71	2.00	20.2
All Vehicles		2479	1.5	0.927	9.9	NA	9.7	68.4	0.15	0.42	44.8

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS E. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.



MOVEMENT SUMMARY

Site: McGill - Stage 1 (Dec 09_v2) - AM

Old Canterbury Rd - McGill St
AM - Stage 1 Vols
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	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	648	1.5	0.200	5.0	LOS A	3.5	24.8	0.38	0.00	50.9
6	R	23	1.5	0.200	19.8	LOS B	3.5	24.8	0.94	1.03	40.6
Approach		672	1.5	0.200	5.5	LOS B	3.5	24.8	0.40	0.04	50.5
West: Old Canterbury Rd (west)											
10	L	36	1.5	0.421	7.2	LOS A	0.0	0.0	0.00	1.10	48.7
11	T	1137	1.5	0.419	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1173	1.5	0.419	0.2	LOS A	0.0	0.0	0.00	0.03	59.6
All Vehicles		1844	1.5	0.421	2.1	NA	3.5	24.8	0.15	0.03	55.9

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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INTERSECTION

MOVEMENT SUMMARY

Site: McGill - Stage 1 (Dec 09_v2) - PM

Old Canterbury Rd - McGill St
PM - Stage 1 Vols
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	1357	1.5	0.425	3.3	LOS A	7.5	53.1	0.38	0.00	52.8
6	R	94	1.5	0.424	15.9	LOS B	7.5	53.1	0.97	1.10	44.2
Approach		1451	1.5	0.425	4.1	LOS B	7.5	53.1	0.42	0.07	52.2
West: Old Canterbury Rd (west)											
10	L	84	1.5	0.285	7.2	LOS A	0.0	0.0	0.00	1.09	48.7
11	T	683	1.5	0.285	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		767	1.5	0.285	0.8	LOS A	0.0	0.0	0.00	0.12	58.6
All Vehicles		2218	1.5	0.425	3.0	NA	7.5	53.1	0.28	0.09	54.2

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

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INTERSECTION

MOVEMENT SUMMARY

Site: William - Stage 1 - PM

Old Canterbury Rd - William St
PM- Stage 1 Vols
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Canterbury Rd (south)											
1	L	92	1.5	0.079	7.2	LOS A	0.0	0.0	0.00	0.78	48.7
2	T	531	1.5	0.246	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		622	1.5	0.246	1.1	LOS A	0.0	0.0	0.00	0.11	58.2
West: William St (west)											
10	L	5	1.5	0.008	12.4	LOS A	0.0	0.3	0.51	0.86	34.3
Approach		5	1.5	0.008	12.4	LOS A	0.0	0.3	0.51	0.86	34.3
All Vehicles		627	1.5	0.246	1.2	NA	0.0	0.3	0.00	0.12	57.8

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS A. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

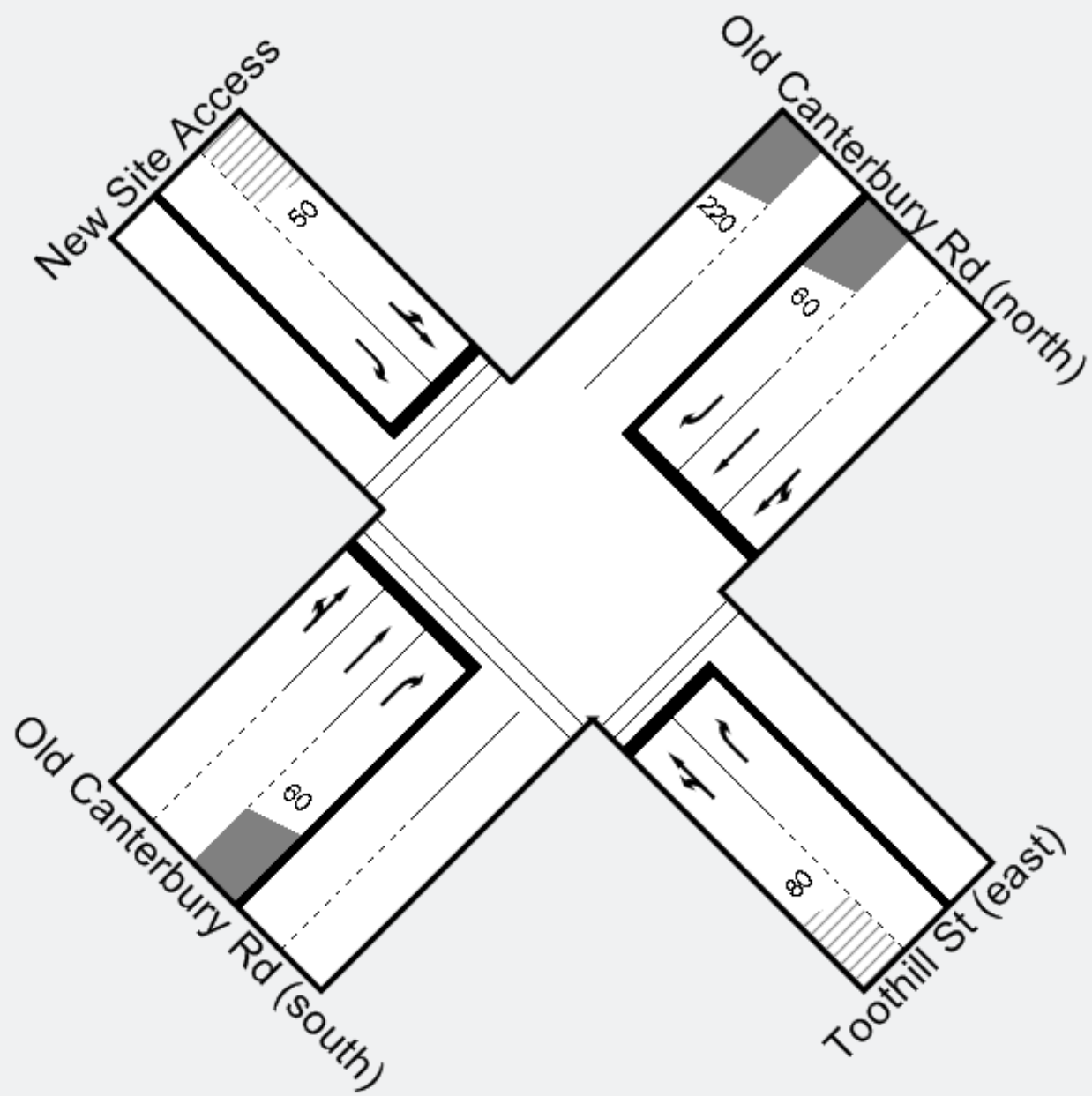
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SIDRA
INTERSECTION



appendix 3c

sidra outputs (long term future - post CA)



MOVEMENT SUMMARY

Site: Toothill - Mastepan - AM

Old Canterbury Rd / Toothill St

AM - Masterplan Vols

(Stage 1 + 315 units)

Signals - Fixed Time Cycle Time = 60 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	126	1.5	0.174	13.9	LOS A	3.0	21.0	0.55	0.71	33.0
22	T	6	0.0	0.174	8.1	LOS A	3.0	21.0	0.55	0.44	33.0
23	R	314	1.5	0.812	34.5	LOS C	11.9	84.6	0.99	1.02	25.2
Approach		446	1.5	0.812	28.3	LOS B	11.9	84.6	0.86	0.92	27.1
North East: Old Canterbury Rd (north)											
24	L	216	1.5	0.795	35.1	LOS C	12.5	88.9	1.00	0.97	29.7
25	T	489	1.5	0.795	27.8	LOS B	12.8	90.9	1.00	0.96	31.9
26	R	42	0.0	0.174	28.2	LOS B	1.6	11.2	0.83	0.74	32.1
Approach		747	1.4	0.795	30.0	LOS C	12.8	90.9	0.99	0.95	31.3
North West: New Site Access											
27	L	68	0.0	0.269	23.0	LOS B	3.7	25.9	0.78	0.76	29.2
28	T	47	0.0	0.269	17.2	LOS B	3.7	25.9	0.78	0.62	28.4
29	R	37	0.0	0.094	24.1	LOS B	1.3	9.0	0.78	0.71	28.6
Approach		153	0.0	0.269	21.4	LOS B	3.7	25.9	0.78	0.70	28.8
South West: Old Canterbury Rd (south)											
30	L	1	0.0	0.421	17.3	LOS B	8.8	62.1	0.67	0.94	41.3
31	T	766	1.5	0.397	10.2	LOS A	8.8	62.2	0.67	0.57	44.6
32	R	371	1.5	0.835	26.6	LOS B	10.4	73.8	1.00	0.95	33.0
Approach		1138	1.5	0.835	15.5	LOS B	10.4	73.8	0.77	0.70	40.3
All Vehicles		2484	1.4	0.835	22.5	LOS B	12.8	90.9	0.86	0.82	33.6

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS C. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	16.9	LOS B	0.1	0.1	0.75	0.75
P13	Across NW approach	53	16.9	LOS B	0.1	0.1	0.75	0.75
P15	Across SW approach	53	14.0	LOS B	0.1	0.1	0.68	0.68
All Pedestrians		159	15.9				0.73	0.73

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS B. LOS Method for individual pedestrian movements: Delay (HCM).

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MOVEMENT SUMMARY

Site: Toothill - Mastepan - PM

Old Canterbury Rd / Toothill St

PM - Masterplan Vols

(Stage 1 + 315 units)

Signals - Fixed Time Cycle Time = 110 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Toothill St (east)											
21	L	226	1.5	0.483	23.2	LOS B	9.2	64.9	0.62	0.75	28.9
22	T	14	0.0	0.486	17.4	LOS B	9.2	64.9	0.62	0.53	28.4
23	R	401	1.5	0.892	59.6	LOS E	26.0	184.4	1.00	1.05	19.5
Approach		641	1.5	0.892	45.9	LOS D	26.0	184.4	0.86	0.93	22.2
North East: Old Canterbury Rd (north)											
24	L	252	1.5	0.892	53.2	LOS D	38.4	271.9	1.00	1.02	23.8
25	T	1051	1.5	0.892	45.8	LOS D	39.0	276.3	1.00	1.03	25.3
26	R	168	0.0	0.586	35.3	LOS C	8.6	60.5	0.80	0.81	28.8
Approach		1471	1.3	0.892	45.9	LOS D	39.0	276.3	0.98	1.00	25.3
North West: New Site Access											
27	L	17	0.0	0.484	29.3	LOS C	6.7	47.2	0.70	0.77	27.1
28	T	131	0.0	0.485	23.5	LOS B	6.7	47.2	0.70	0.56	26.4
29	R	81	0.0	0.210	35.6	LOS C	4.5	31.5	0.77	0.75	24.9
Approach		228	0.0	0.485	28.2	LOS B	6.7	47.2	0.72	0.65	25.9
South West: Old Canterbury Rd (south)											
30	L	1	0.0	0.263	24.0	LOS B	9.6	67.9	0.61	0.95	36.1
31	T	515	1.5	0.267	16.8	LOS B	9.6	67.9	0.61	0.52	39.4
32	R	168	1.5	0.850	42.8	LOS D	7.9	56.1	1.00	0.93	26.0
Approach		684	1.5	0.850	23.2	LOS B	9.6	67.9	0.71	0.62	35.2
All Vehicles		3024	1.3	0.892	39.4	LOS C	39.0	276.3	0.87	0.87	26.2

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all vehicle movements. LOS Method: Delay (RTA NSW).

Level of Service (Worst Movement): LOS E. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P9	Across SE approach	53	20.4	LOS C	0.1	0.1	0.61	0.61
P13	Across NW approach	53	20.4	LOS C	0.1	0.1	0.61	0.61
P15	Across SW approach	53	19.8	LOS B	0.1	0.1	0.60	0.60
All Pedestrians		159	20.2				0.61	0.61

Level of Service (Aver. Int. Delay): LOS C. Based on average delay for all pedestrian movements. LOS Method: Delay (HCM).

Level of Service (Worst Movement): LOS C. LOS Method for individual pedestrian movements: Delay (HCM).

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