

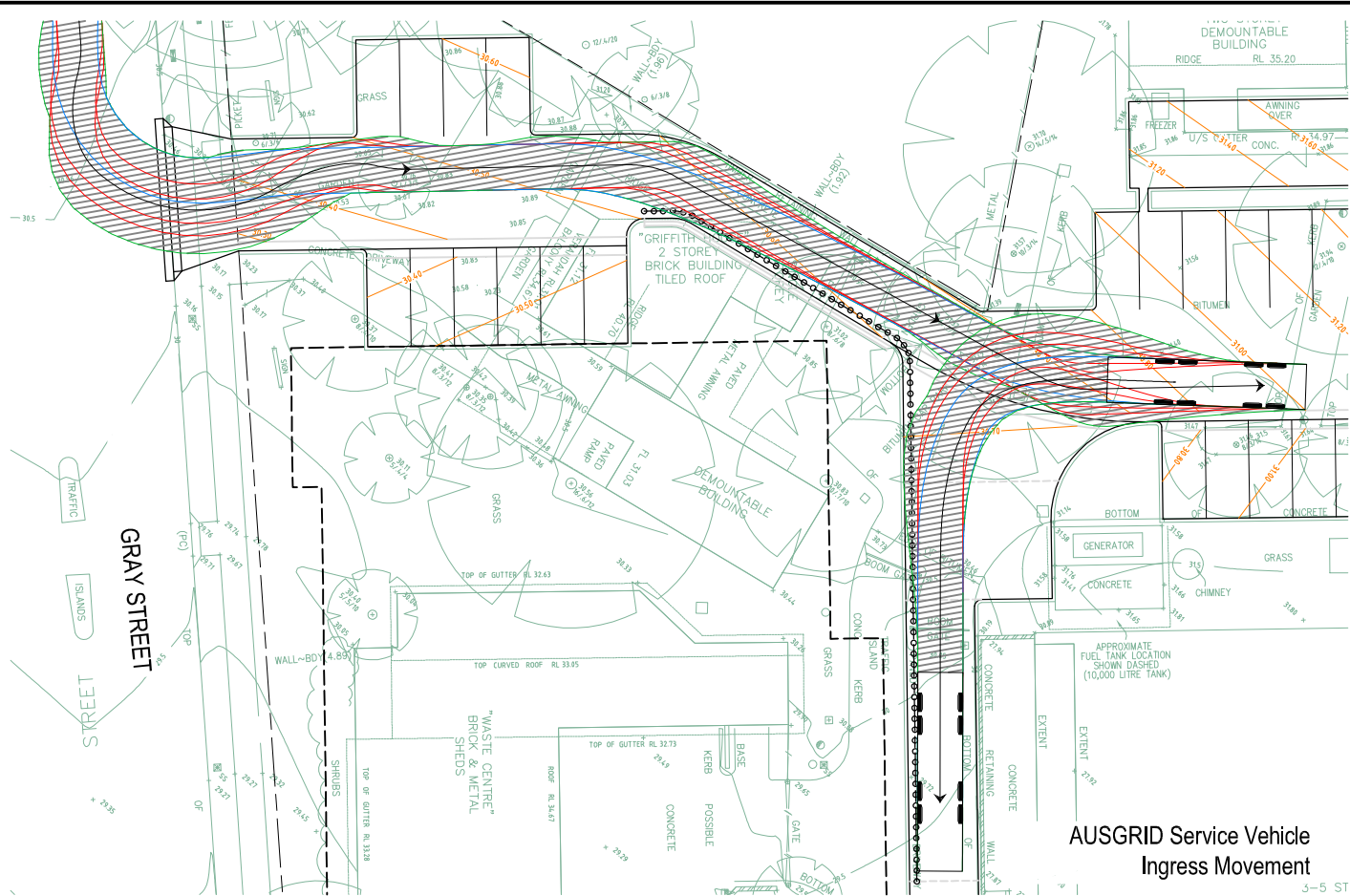


APPENDICES

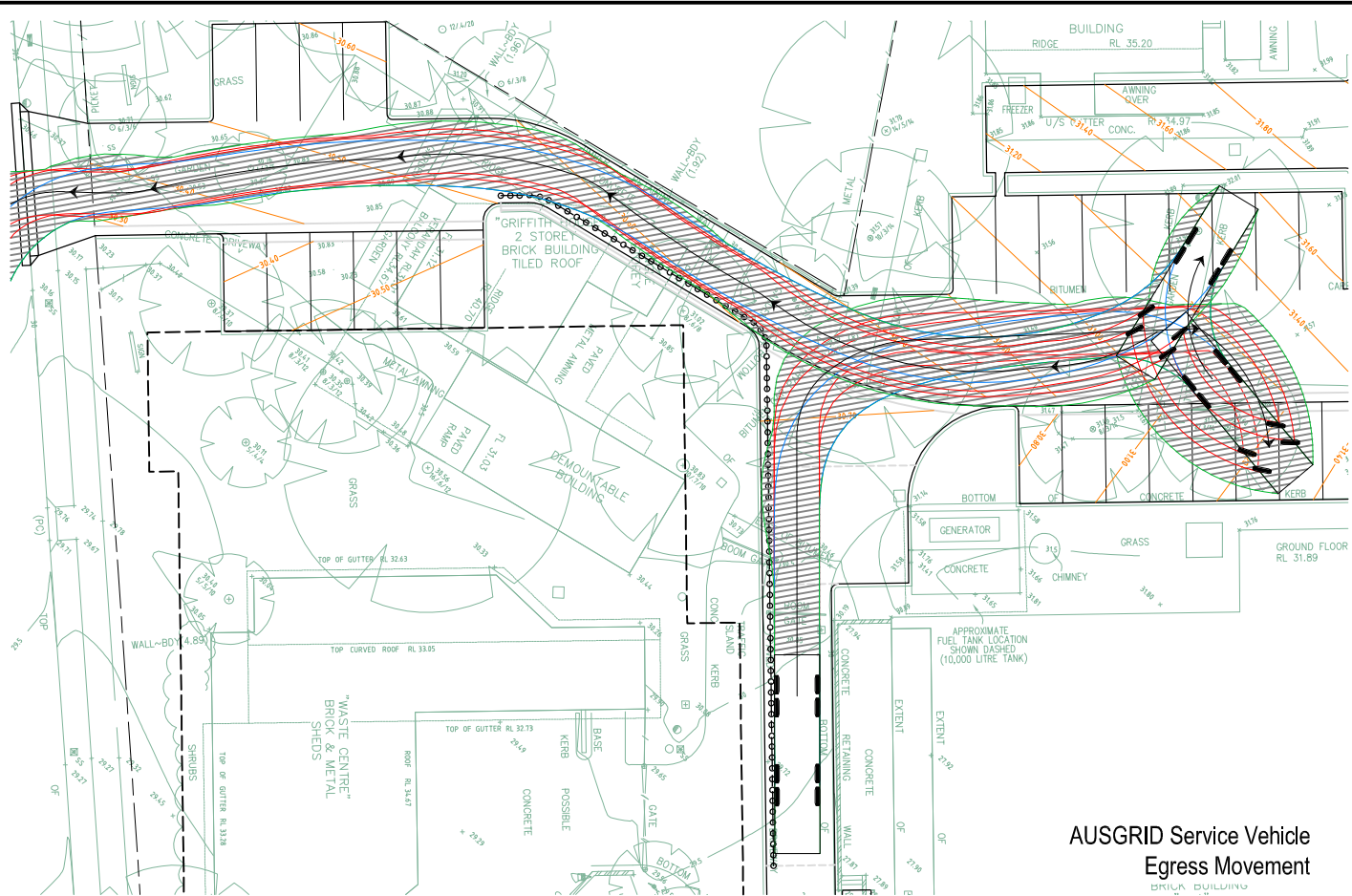


Appendix A

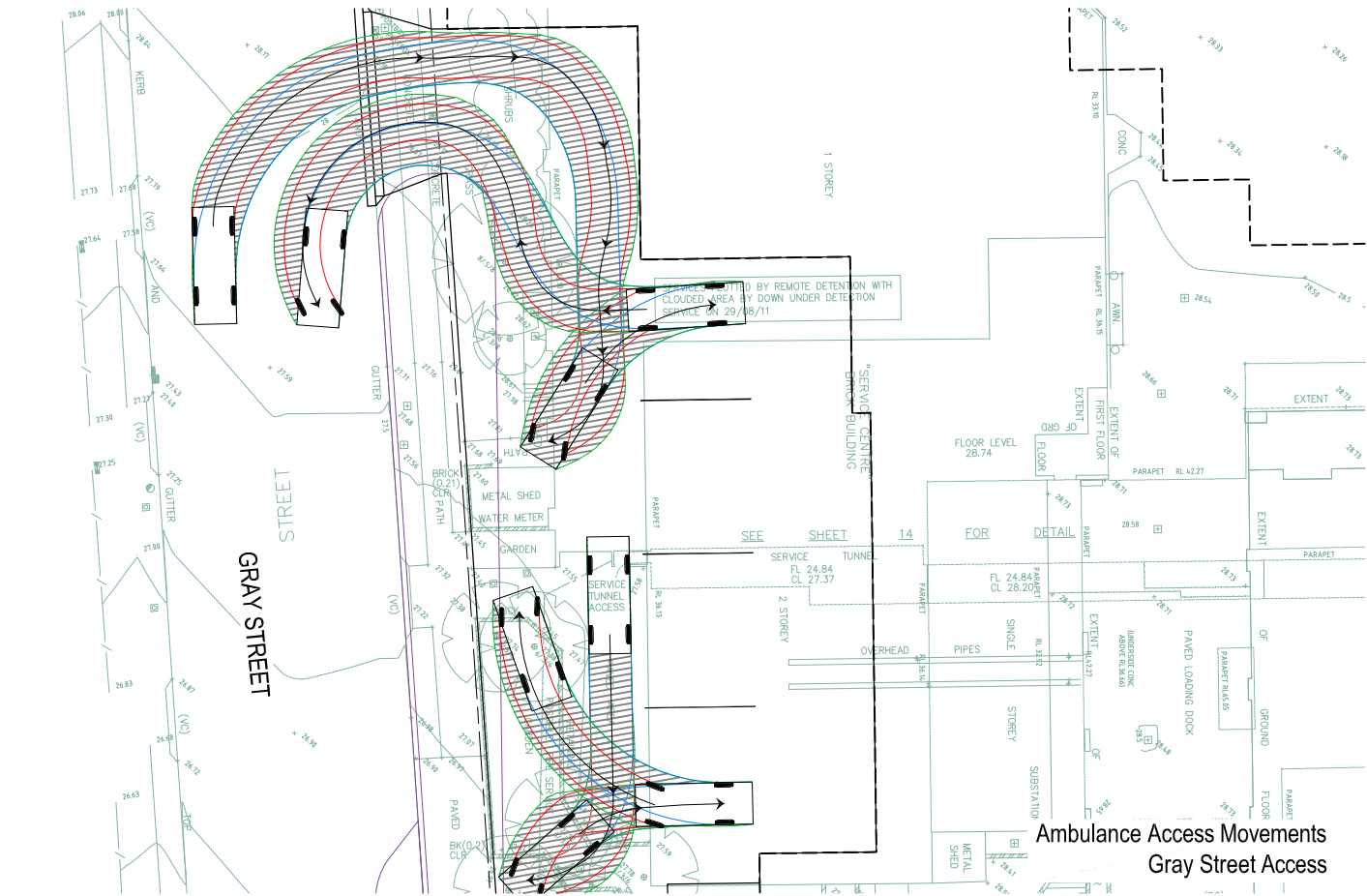
Swept Path Assessment



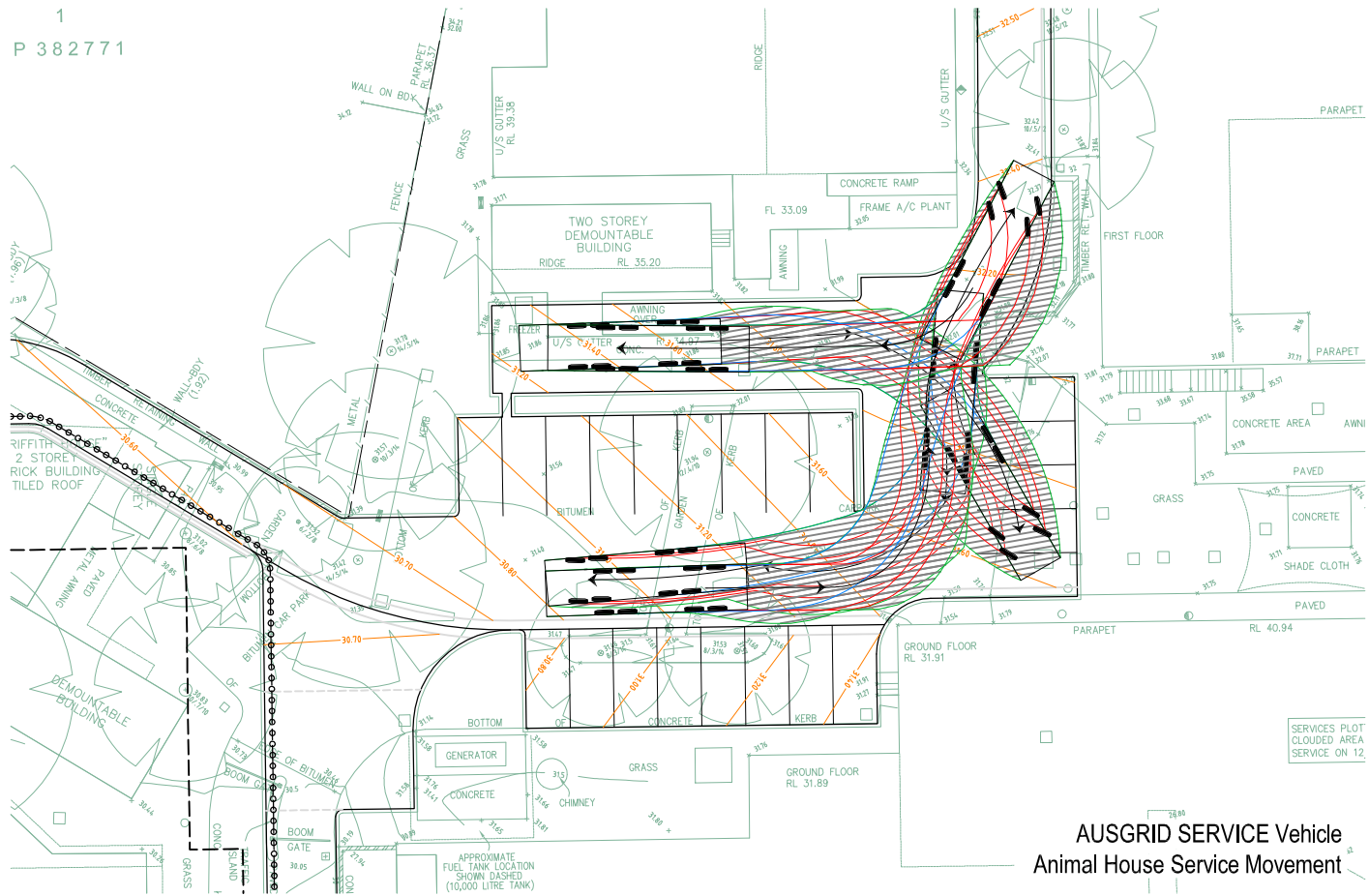
AUSGRID Service Vehicle
Ingress Movement



AUSGRID Service Vehicle
Egress Movement



Ambulance Access Movements
Gray Street Access



AUSGRID SERVICE Vehicle
Animal House Service Movement

Rev	Date	ISSUE FOR COMMENT	Description	Des.	Verif.	Appr.
1	16/03/2012	ISSUE FOR COMMENT		KH	KH	KH

Drawn	KH	Date	16/03/2012
Checked	KH	Date	16/03/2012
Designed	KH	Date	16/03/2012
Verified		Date	
Approved		Date	

Client	NSW Health Infrastructure
	St George Hospital Emergency Building Service Facilities
	Service Vehicle Swept Paths

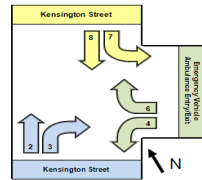
Status	PRELIMINARY NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	A.H.D.	Register	Scale	Size
			1:200	A1
Drawing Number	CES01222-006			Revision
				1



Appendix B

Traffic Survey

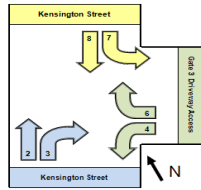
Client : Cardno
 Location : Kensington St & Emergency Ambulance Entry Exit
 Survey Type : Classified Intersection Counts
 Survey date : Thursday, 01 September 2011



Approach			Kensington Street												Emergency Vehicles Ambulance Entry/Exit												Kensington Street																		
			Direction 2						Direction 3						Direction 4						Direction 6						Direction 7						Direction 8												
Time Period			Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals								
			8:00	to	8:15	169	0	0	0	0	0	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	0	28	
8:15	to	8:30	185	0	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	32			
8:30	to	8:45	193	0	0	0	0	0	193	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	29			
8:45	to	9:00	220	2	0	1	1	0	224	0	1	0	0	0	0	224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0	0	42				
9:00	to	9:15	141	0	0	0	1	0	142	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	70					
9:15	to	9:30	100	0	0	0	1	0	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	1	0	0	1	1	45						
9:30	to	9:45	121	2	0	0	0	0	123	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	39	0	0	0	0	0	39						
9:45	to	10:00	115	0	0	0	3	0	118	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0	1	0	53						
AM TOTALS			1244	4	0	1	6	0	1255	0	3	0	0	0	0	3	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	334	1	0	0	2	1	338		
12:00	to	12:15	84	0	0	0	0	0	84	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	0	0	33					
12:15	to	12:30	92	0	0	0	0	0	92	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	38						
12:30	to	12:45	73	0	2	0	3	0	78	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	40	0	0	0	0	0	40					
12:45	to	13:00	90	0	1	1	1	0	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	38						
13:00	to	13:15	108	0	0	0	1	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0	1	2	0	0	56						
13:15	to	13:30	101	0	1	3	3	1	109	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	0	2	2	0	0	86							
13:30	to	13:45	97	0	0	2	0	0	99	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	56	0	0	0	0	0	56							
13:45	to	14:00	93	0	0	0	1	0	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0	0	0	0	59							
NOON TOTALS			738	0	4	6	9	1	758	1	3	1	0	0	0	5	1	2	1	0	0	0	4	0	1	0	0	0	0	1	0	0	0	399	0	3	4	0	0	406					
16:30	to	16:45	64	0	0	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	1	0	0	1	0	72							
16:45	to	17:00	76	0	0	0	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	0	1	0	0	67							
17:00	to	17:15	125	0	0	1	0	0	126	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	73	2	1	0	0	0	76							
17:15	to	17:30	110	0	1	0	0	0	111	0	1	0	0	0	0	1	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	86	0	0	0	0	0	86							
17:30	to	17:45	68	0	0	0	0	0	68	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	71	2	0	0	1	0	74							
17:45	to	18:00	58	0	0	0	0	0	58	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	1	0	0	0	0	1	0	78	1	0	0	0	0	79							
18:00	to	18:15	72	0	0	0	0	0	72	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	72	0	0	0	0	0	72								
18:15	to	18:30	89	2	0	0	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0	0	0	0	0	79								
PM TOTALS			662	2	1	1	0	0	666	0	7	0	0	0	0	7	0	7	0	0	0	0	7	0	2	0	0	0	0	2	0	1	0	0	0	0	0	1	595	6	1	1	2	0	605

Approach		Kensington Street												Emergency Vehicles Ambulance Entry/Exit												Kensington Street											
Time Period		Direction 2						Direction 3						Direction 4						Direction 6						Direction 7						Direction 8					
		Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks						
8:00	to 9:00	767	2	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:15	to 9:15	739	2	0	1	2	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:30	to 9:30	654	2	0	1	3	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0					
8:45	to 9:45	582	4	0	1	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0					
9:00	to 10:00	477	2	0	0	5	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0					
12:00	to 13:00	339	0	3	1	4	0	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
12:15	to 13:15	363	0	3	1	5	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0					
12:30	to 13:30	372	0	4	4	8	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0					
12:45	to 13:45	396	0	2	6	5	1	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0					
13:00	to 14:00	399	0	1	5	5	1	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0					
16:30	to 17:30	375	0	1	1	0	0	0	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0					
16:45	to 17:45	379	0	1	1	0	0	0	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0					
17:00	to 18:00	361	0	1	1	0	0	0	6	0	0	0	0	0	0	7	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0					
17:15	to 18:15	308	0	1	0	0	0	0	4	0	0	0	0	0	0	7	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0					
17:30	to 18:30	287	2	0	0	0	0	0	3	0	0	0	0	0	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0					

Client : Cardno
Location : Kensington St & Gate 3 Driveway Access
Survey Type : Classified Intersection Counts
Survey date : Thursday, 01 September 2011



Approach		Kensington Street														Gate 3 Drive Way Access														Kensington Street													
		Direction 2						Direction 3						Direction 4						Direction 6						Direction 7						Direction 8											
		Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals							
Time Period																																											
8:00	to 8:15	198	0	0	0	0	0	198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	0	0	1	0	0	40								
8:15	to 8:30	205	0	0	0	0	0	205	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	43								
8:30	to 8:45	254	0	1	0	0	0	255	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	38	1	0	2	0	1	42								
8:45	to 9:00	246	2	0	1	1	0	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	0	0	1	0	55								
9:00	to 9:15	237	0	0	0	1	0	238	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	90	0	1	0	0	0	91								
9:15	to 9:30	226	0	0	2	1	0	229	2	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	56	1	0	1	1	1	60								
9:30	to 9:45	198	2	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0	0	0	0	0	48								
9:45	to 10:00	177	0	0	0	3	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	0	0	0	1	0	70								
AM TOTALS		1741	4	1	3	6	0	1755	5	0	0	0	0	0	5	2	0	0	0	0	0	2	0	0	0	0	0	0	437	2	1	4	3	2	449								
12:00	to 12:15	111	0	0	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0	0	0	52								
12:15	to 12:30	123	0	0	2	0	0	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	0	0	1	0	0	50								
12:30	to 12:45	89	1	2	0	3	0	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	0	0	0	0	0	61								
12:45	to 13:00	105	0	1	1	1	0	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	0	0	0	0	0	51								
13:00	to 13:15	128	0	0	0	1	0	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	0	1	2	0	0	71								
13:15	to 13:30	119	0	1	4	3	1	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	0	2	2	0	0	99								
13:30	to 13:45	115	0	0	2	0	0	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	0	64								
13:45	to 14:00	119	0	0	0	1	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	0	0	0	0	0	73								
NOON TOTALS		909	1	4	9	9	1	933	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	513	0	3	5	0	0	521								
16:30	to 16:45	89	0	0	0	0	0	89	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	86	1	0	0	1	0	88								
16:45	to 17:00	103	0	0	0	0	0	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	1	0	0	81								
17:00	to 17:15	146	0	0	1	0	0	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	2	1	0	1	0	95								
17:15	to 17:30	129	1	1	0	0	0	131	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	99	0	0	2	0	0	101								
17:30	to 17:45	96	0	0	1	0	0	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	2	0	0	1	0	90								
17:45	to 18:00	88	0	0	0	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	1	0	1	0	0	94								
18:00	to 18:15	99	0	0	1	0	0	100	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	86	0	0	0	0	0	86								
18:15	to 18:30	104	2	0	0	0	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	0	0	1	0	0	96								
PM TOTALS		854	3	1	3	0	0	861	2	0	0	0	0	0	2	1	0	0	0	0	0	1	1	0	0	0	0	0	0	716	6	1	5	3	0	731							

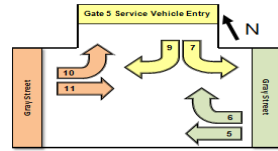
Approach		Kensington Street												Gate 3 Drive Way Access												Kensington Street																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Direction 2						Direction 3						Direction 4						Direction 6						Direction 7						Direction 8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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The diagram illustrates the intersection of Gray Street and Queens Avenue. Gray Street is a one-way street running north-south, with traffic flowing north. Queens Avenue is a two-way street running east-west. The intersection is controlled by traffic lights. The diagram shows the layout of the streets, the direction of traffic flow, and the location of the traffic lights. A north arrow is shown in the bottom right corner.



Approach		Gray Street										Queens Avenue										Gray Street															
		Direction 1					Direction 3					Direction 4					Direction 5					Direction 11					Direction 12										
Time Period		Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Totals	
8:00	to 8:15	64	0	0	0	0	0	64	8	0	0	0	0	0	8	12	49	0	1	0	0	0	50	60	0	0	0	0	60	6	0	0	0	0	6	9	
8:15	to 8:30	81	0	0	0	1	1	83	12	0	0	0	0	1	13	16	65	0	0	0	0	0	65	57	0	0	2	1	61	9	0	0	0	0	0	9	
8:30	to 8:45	90	1	0	1	1	1	93	12	0	1	2	0	0	15	13	0	0	0	0	0	13	58	0	0	1	0	59	104	0	0	0	0	0	10		
8:45	to 9:00	84	0	0	0	0	0	84	16	0	0	0	0	0	16	12	1	0	0	0	0	13	150	2	1	0	0	153	71	0	1	1	0	0	20		
9:00	to 9:15	50	0	1	0	0	0	51	8	0	0	0	0	0	8	11	0	1	0	0	0	12	101	0	1	0	0	102	60	0	0	2	0	0	21		
9:15	to 9:30	43	0	0	0	0	0	43	5	0	0	1	0	0	6	14	0	0	0	0	0	14	51	0	0	1	2	54	95	0	0	2	0	0	9		
9:30	to 9:45	56	1	0	2	0	0	59	3	0	0	0	0	0	3	13	0	0	0	0	0	13	97	1	1	2	0	101	69	2	1	2	1	1	25		
9:45	to 10:00	34	0	0	0	0	0	34	4	0	0	0	0	0	4	10	0	1	0	0	0	11	77	0	0	0	1	79	59	0	1	1	0	0	30		
AM TOTALS		502	2	1	4	2	0	511	68	0	1	3	0	1	73	101	1	2	0	0	0	0	104	648	3	4	4	3	1	663	575	2	3	10	2	3	130
12:00	to 12:15	20	0	0	0	0	0	20	7	0	0	0	0	0	7	6	1	0	0	0	0	7	58	0	0	1	2	62	64	0	0	3	1	0	25		
12:15	to 12:30	19	0	0	0	0	0	19	10	0	0	0	0	0	10	3	0	0	0	0	0	3	66	1	0	0	0	67	71	0	1	2	0	0	17		
12:30	to 12:45	14	0	0	1	0	0	15	11	0	0	0	0	0	11	7	0	0	0	0	0	7	69	0	2	1	1	73	60	0	0	1	0	0	17		
12:45	to 13:00	24	0	0	1	0	0	25	3	0	1	0	0	0	4	8	0	0	0	0	0	8	73	0	3	0	1	77	48	0	0	0	1	1	14		
13:00	to 13:15	34	1	0	0	0	0	35	10	0	0	0	0	0	10	8	0	0	1	1	0	10	58	0	0	1	1	60	79	0	1	3	2	0	16		
13:15	to 13:30	33	0	0	0	0	0	33	6	0	0	0	0	0	6	7	0	0	0	0	0	7	72	0	0	3	2	77	66	1	2	0	1	0	25		
13:30	to 13:45	39	0	0	2	0	0	41	11	0	0	0	0	0	11	7	0	1	0	0	0	8	86	0	0	1	0	87	49	0	1	0	1	0	22		
13:45	to 14:00	23	0	0	0	0	0	23	4	0	0	0	0	0	4	3	0	0	0	0	0	3	45	0	0	0	0	45	90	0	0	1	0	0	29		
NOON TOTALS		206	1	0	4	0	0	211	62	0	1	0	0	0	63	49	1	1	1	1	0	53	527	1	5	7	7	1	548	527	1	5	10	6	1	165	
16:30	to 16:45	27	0	0	0	0	0	27	8	0	0	0	0	0	8	16	0	0	0	0	0	16	85	0	0	0	0	85	101	0	0	0	0	0	55		
16:45	to 17:00	31	0	0	1	0	0	32	11	0	0	0	0	0	11	11	0	0	0	0	0	11	99	2	0	0	0	101	85	0	0	0	0	0	52		
17:00	to 17:15	18	0	0	0	0	0	18	13	0	0	0	0	0	13	15	0	0	0	0	0	15	71	0	1	0	0	72	91	1	0	0	0	0	5		
17:15	to 17:30	20	1	0	0	0	0	21	10	0	0	0	0	0	10	21	0	0	0	0	0	21	93	0	0	0	1	94	82	1	0	0	0	0	44		
17:30	to 17:45	25	0	0	0	0	0	25	8	0	0	0	0	0	8	8	0	0	0	0	0	8	89	0	0	0	0	89	84	1	0	0	1	0	37		
17:45	to 18:00	27	0	0	0	0	0	27	8	0	0	0	0	0	8	7	0	0	0	0	0	7	72	0	0	0	0	72	84	0	0	0	0	0	40		
18:00	to 18:15	30	0	0	0	0	0	30	7	0	0	0	0	0	7	8	0	0	0	0	0	8	96	0	0	0	1	97	75	0	0	0	0	0	24		
18:15	to 18:30	15	0	0	0	0	0	15	4	0	0	0	0	0	4	14	0	0	0	0	0	14	62	1	0	0	0	63	66	1	0	0	0	0	19		
PM TOTALS		193	1	0	1	0	0	195	69	0	0	0	0	0	69	100	0	0	0	0	0	0	100	667	3	1	0	2	0	673	668	4	0	0	1	0	325

Approach		Gray Street										Queens Avenue										Gray Street																
		Direction 1					Direction 3					Direction 4					Direction 5					Direction 11					Direction 12											
Time Period		Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Amulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	
8:00	to 9:00	319	1	0	2	2	0	48	0	1	2	0	1	53	1	0	0	0	0	0	322	2	2	1	0	0	292	0	1	3	1	1	1	45	0	0	0	0
8:15	to 9:15	305	1	1	2	2	0	48	0	1	2	0	1	52	1	1	0	0	0	374	2	2	1	0	0	292	0	1	5	1	1	1	60	0	0	0	0	
8:30	to 9:30	267	1	1	1	1	0	41	0	1	3	0	0	50	1	1	0	0	0	360	2	2	2	2	0	330	0	1	5	0	0	0	60	0	0	0	0	
8:45	to 9:45	233	1	1	2	0	0	32	0	0	1	0	0	50	1	1	0	0	0	399	3	3	3	2	0	295	2	2	7	1	2	1	74	0	0	1	0	
9:00	to 10:00	183	1	1	2	0	0	20	0	0	1	0	0	24	0	0	2	0	0	326	1	2	3	3	1	283	2	2	7	1	2	1	84	0	0	1	0	
12:00	to 13:00	77	0	0	2	0	0	31	0	1	0	0	0	48	1	0	0	0	0	266	1	5	2	4	1	243	0	1	6	2	1	7	73	0	0	0	0	
12:15	to 13:15	91	1	0	2	0	0	34	0	1	0	0	0	26	0	0	0	1	1	0	266	1	5	2	3	0	258	0	2	6	3	1	63	0	0	1	0	
12:30	to 13:30	105	1	0	2	0	0	30	0	1	0	0	0	30	0	0	1	1	0	272	0	5	5	5	0	253	1	3	4	4	1	71	0	0	1	0		
12:45	to 13:45	130	1	0	3	0	0	30	0	1	0	0	0	30	0	1	1	1	0	289	0	3	5	4	0	242	1	4	3	5	1	76	0	0	1	0		
13:00	to 14:00	129	1	0	2	0	0	31	0	0	0	0	0	25	0	1	1	1	0	261	0	0	5	3	0	284	1	4	4	4	0	91	0	0	1	0		
16:30	to 17:30	96	1	0	1	0	0	42	0	0	0	0	0	63	0	0	0	0	0	348	2	1	0	1	0	359	2	0	0	0	0	205	0	0	0	0		
16:45	to 17:45	94	1	0	1	0	0	42	0	0	0	0	0	55	0	0	0	0	0	352	2	1	0	1	0	342	3	0	0	0	1	0	187	0	0	0	0	
17:00	to 18:00	90	1	0	0	0	0	39	0	0	0	0	0	51	0	0	0	0	0	325	0	1	0	1	0	341	3	0	0	0	1	0	175	0	0	0	0	
17:15	to 18:15	102	1	0	0	0	0	33	0	0	0	0	0	44	0	0	0	0	0	350	0	0	0	2	0	325	2	0	0	0	1	0	145	0	0	0	0	
17:30	to 18:30	97	0	0	0	0	0	27	0	0	0	0	0	37	0	0	0	0	0	319	1	0	0	1	0	309	2	0	0	0	1	0	120	0	0	0	0	


SKYHIGH
 THE TRAFFIC SURVEY COMPANY

Approach		Gray Street										Gate 5 Service Vehicle Entry										Gray Street																
		Direction 5					Direction 6					Direction 7					Direction 9					Direction 10					Direction 11											
Time Period		Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks	Cars	Ambulance	Patient Transport Vans	Small Rigid Trucks	Medium Rigid Trucks	Heavy Rigid Trucks							
8:00	to 9:00	369	3	0	1	0	0	8	0	2	0	0	0	2	0	0	0	2	0	0	6	0	2	0	0	0	3	0	0	0	1	0	337	0	2	5	0	2
8:15	to 9:15	421	3	1	1	0	0	7	0	2	0	1	0	3	0	0	0	2	0	0	5	0	2	0	0	0	1	0	0	0	1	0	339	0	2	7	0	2
8:30	to 9:30	403	3	1	2	1	0	7	0	1	0	1	0	5	0	1	0	3	0	0	7	0	2	0	1	0	4	0	0	0	0	0	367	0	2	8	0	1
8:45	to 9:45	440	4	2	3	1	0	8	1	2	0	1	0	5	0	1	0	1	0	0	9	0	2	0	1	0	3	0	1	0	0	0	324	2	1	8	1	2
9:00	to 10:00	363	1	2	3	2	1	11	1	1	0	1	0	7	0	2	0	1	0	0	11	0	2	0	1	0	3	0	2	0	0	0	300	2	0	8	1	2
12:00	to 13:00	280	1	3	1	2	1	8	1	1	2	1	0	4	1	0	1	4	0	0	10	1	2	1	2	0	6	0	0	4	1	1	268	0	2	2	1	1
12:15	to 13:15	286	0	3	2	3	0	2	1	0	1	2	0	2	1	0	1	3	0	0	6	1	2	1	1	0	5	0	1	1	3	0	287	0	2	5	0	0
12:30	to 13:30	298	0	3	5	3	0	5	0	1	2	0	0	1	0	0	1	1	2	0	4	0	2	1	3	0	4	0	2	0	4	0	279	1	2	4	0	0
12:45	to 13:45	314	0	1	6	2	0	5	0	1	0	0	0	1	0	0	1	1	2	0	5	0	3	0	3	0	4	0	3	0	4	0	268	1	2	3	1	1
13:00	to 14:00	282	0	0	6	2	0	6	0	1	0	0	0	6	0	2	2	1	0	0	4	0	1	0	2	0	6	0	3	0	3	0	309	1	1	4	1	0
16:30	to 17:30	406	2	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0	0	0	5	0	1	0	0	0	0	1	0	0	0	0	401	1	0	0	0	0
16:45	to 17:45	404	2	0	0	1	0	1	1	0	0	0	0	1	1	2	0	0	0	0	3	0	1	1	0	0	1	1	0	0	0	0	383	2	0	0	1	0
17:00	to 18:00	373	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	3	0	1	0	0	0	3	1	0	0	0	0	377	2	0	0	1	0
17:15	to 18:15	393	0	0	0	2	0	1	2	0	0	0	0	2	2	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	354	2	0	0	1	0
17:30	to 18:30	354	0	0	0	1	0	1	2	1	0	0	0	3	2	0	0	0	0	0	2	1	0	0	0	0	4	0	0	0	0	0	332	2	0	0	1	0

AM Peak 7:30 8:30

1425

PM Peak 16:15 17:15

1284



SKYHIGH
THE TRAFFIC SURVEY COMPANY

Belgrave Street

304

119

38

9

72

Hour Starting

7:30

Vehicle Type

All vehicles

Kensington Street

191

45

120

26

N

PROHIBITED TURNS

Belgrave Street

32

14

10

56

91

Kensington Street

Client:	Cardno
Site:	Belgrave Street Kensington Street
Day:	20.02.2012 (Monday)
Description:	Pedestrians & Traffic Counts (15mins & 1hour Data)

245

758

56

202

1059

AM Peak 7:30 8:30

1425

PM Peak 16:15 17:15

1284



SKYHIGH
THE TRAFFIC SURVEY COMPANY

Belgrave Street

253

159

41

5

113

Hour Starting

16:15

Vehicle Type

All vehicles

Kensington Street

177

60

71

694

46

Kensington Street

168

610

79

207

857

N

PROHIBITED TURNS

Belgrave Street

43

25

23

91

130

Client:	Cardno
Site:	Belgrave Street Kensington Street
Day:	20.02.2012 (Monday)
Description:	Pedestrians & Traffic Counts (15mins & 1hour Data)

AM Peak 7:15 to 8:15

4925

PM Peak 16:45 to 17:45

5457

South Street

283

114

116

169

Princes Hwy

3596

1044

0

1044

Hour Starting

7:15

Vehicle Type

All vehicles

PROHIBITED TURNS

Prices Hwy



SKYHIGH
THE TRAFFIC SURVEY COMPANY

U-turns not included



Client:	Cardno
Site:	Princes Hwy
	South Street
Day:	20.02.2012 (Monday)
Description:	Pedestrians & Traffic Counts (15mins & 1 hour Data)

AM Peak 7:15 to 8:15

4925

PM Peak 16:45 to 17:45

5457

South Street

456

159

66

297

Princes Hwy

1888

3206

0

3206

Hour Starting

16:45

Vehicle Type

All vehicles

PROHIBITED TURNS

Prices Hwy

66

1729

1795

3503

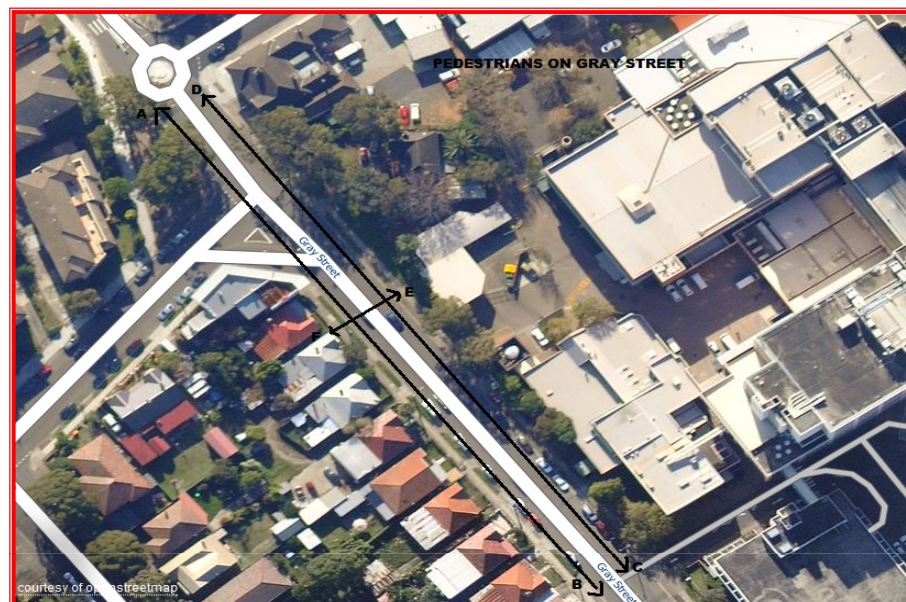


SKYHIGH
THE TRAFFIC SURVEY COMPANY

U-turns not included



Client:	Cardno
Site:	Princes Hwy South Street
Day:	20.02.2012 (Monday)
Description:	Pedestrians & Traffic Counts (15mins & 1hour Data)



Client : Cardno
 Location : Kensington Street Between Derby St & Belgrave St
 Survey Type : Pedestrians Counts
 Survey date : Thursday, 01 September 2011



Approach		Kensington Street Between Derby Street and Belgrave Street									
Time Period		On Foot Path				Mid Block		Totals	Emergency Access		Totals
		A	B	C	D	E	F		IN	OUT	
8:00	to 8:15	6	10	5	6	5	2	34	1	3	4
8:15	to 8:30	9	8	2	4	7	1	31	2	2	4
8:30	to 8:45	8	9	5	5	4	1	32	2	2	4
8:45	to 9:00	11	9	7	2	3	3	35	2	2	4
9:00	to 9:15	12	15	13	9	5	4	58	14	9	23
9:15	to 9:30	15	7	10	12	8	3	55	6	3	9
9:30	to 9:45	13	4	7	7	6	4	41	5	3	8
9:45	to 10:00	14	17	12	7	0	2	52	9	5	14
AM TOTALS		88	79	61	52	38	20	338	41	29	70
12:00	to 12:15	18	12	6	5	6	6	53	10	6	16
12:15	to 12:30	23	14	8	8	4	9	66	6	9	15
12:30	to 12:45	18	13	4	6	7	12	60	14	11	25
12:45	to 13:00	20	15	6	7	4	5	57	11	12	23
13:00	to 13:15	25	20	14	9	14	16	98	11	22	33
13:15	to 13:30	13	16	7	11	10	8	65	15	13	28
13:30	to 13:45	21	20	19	10	9	3	82	12	10	22
13:45	to 14:00	19	23	10	9	9	9	79	9	14	23
NOON TOTALS		157	133	74	65	63	68	560	88	97	185
16:30	to 16:45	9	15	3	6	3	5	41	3	10	13
16:45	to 17:00	8	14	4	10	5	3	44	5	8	13
17:00	to 17:15	5	13	4	2	2	3	29	7	12	19
17:15	to 17:30	7	6	5	6	5	6	35	2	6	8
17:30	to 17:45	12	21	3	2	2	4	44	1	5	6
17:45	to 18:00	6	17	4	3	6	3	39	2	5	7
18:00	to 18:15	6	4	4	5	7	6	32	2	8	10
18:15	to 18:30	3	7	5	8	7	4	34	2	5	7
PM TOTALS		56	97	32	42	37	34	298	24	59	83

Approach		Kensington Street Between Derby Street and Belgrave Street									
Time Period		On Foot Path				Mid Block			Emergency Access		
		A	B	C	D	E	F		IN	OUT	
8:00	to 9:00	34	36	19	17	19	7		7	9	
8:15	to 9:15	40	41	27	20	19	9		20	15	
8:30	to 9:30	46	40	35	28	20	11		24	16	
8:45	to 9:45	51	35	37	30	22	14		27	17	
9:00	to 10:00	54	43	42	35	19	13		34	20	
12:00	to 13:00	79	54	24	26	21	32		41	38	
12:15	to 13:15	86	62	32	30	29	42		42	54	
12:30	to 13:30	76	64	31	33	35	41		51	58	
12:45	to 13:45	79	71	46	37	37	32		49	57	
13:00	to 14:00	78	79	50	39	42	36		47	59	
16:30	to 17:30	29	48	16	24	15	17		17	36	
16:45	to 17:45	32	54	16	20	14	16		15	31	
17:00	to 18:00	30	57	16	13	15	16		12	28	
17:15	to 18:15	31	48	16	16	20	19		7	24	
17:30	to 18:30	27	49	16	18	22	17		7	23	

Client : Cardno
 Location : Kensington Street Between Derby St & Belgrave St
 Survey Type : Pedestrians Counts
 Survey date : Thursday, 01 September 2011



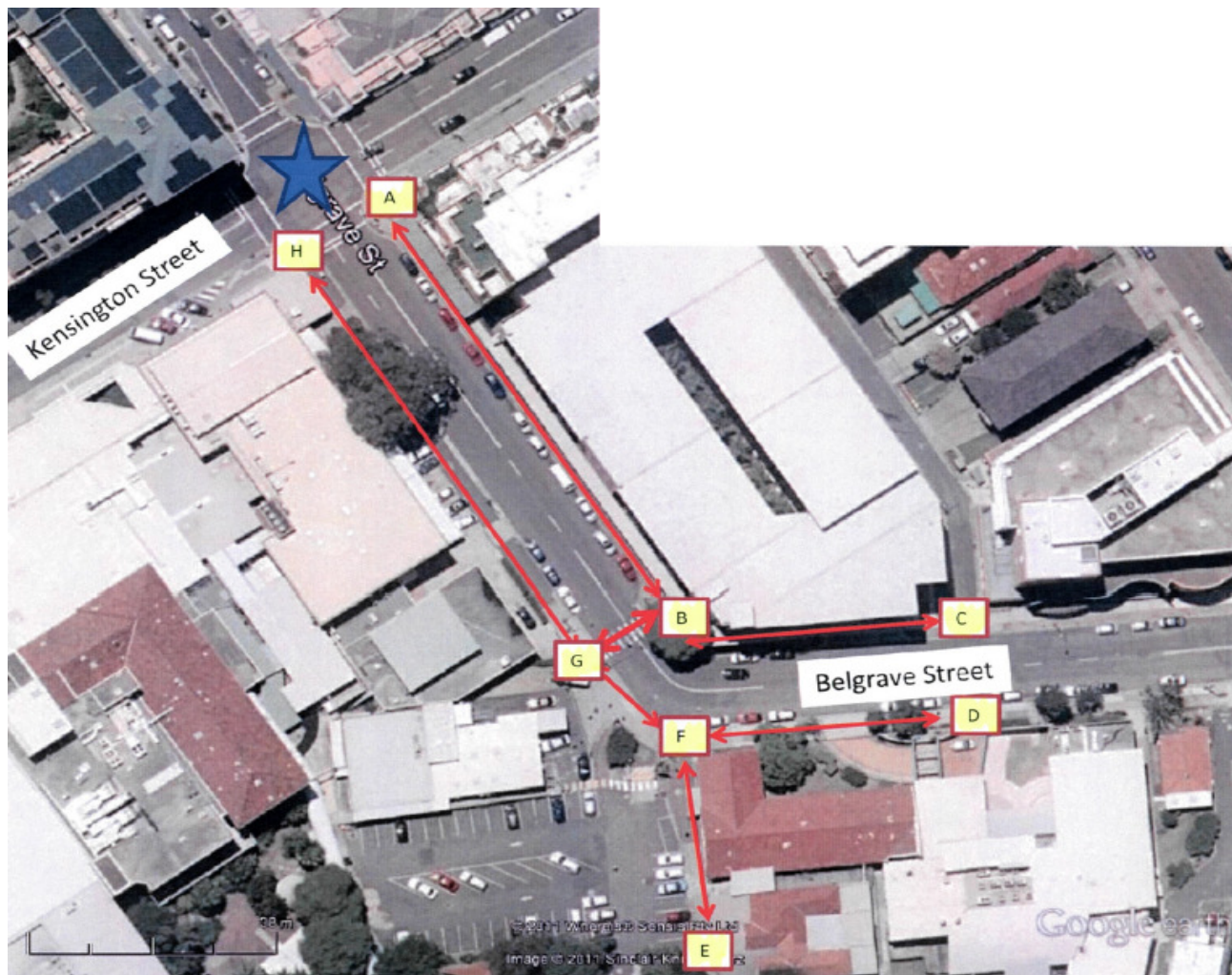
Approach		Gray Street Between Kensington Street and Short Street									
Time Period		On Foot Path				Mid Block		Total Is	Gate 5 Service Access		Total Is
		A	B	C	D	E	F		IN	OUT	
8:00 to 8:15		3	2	9	3	3	6	26	4	2	6
8:15 to 8:30		5	4	14	3	4	2	32	7	0	7
8:30 to 8:45		3	1	20	3	2	3	32	7	3	10
8:45 to 9:00		6	2	12	7	4	5	36	17	0	17
9:00 to 9:15		2	1	6	9	7	4	29	5	2	7
9:15 to 9:30		1	0	11	7	2	6	27	4	8	12
9:30 to 9:45		8	4	14	14	11	1	52	4	0	4
9:45 to 10:00		6	4	26	9	6	5	56	8	3	11
AM TOTALS		34	18	112	55	39	32	290	56	18	74
12:00 to 12:15		6	1	9	13	7	4	40	2	8	10
12:15 to 12:30		3	6	14	7	9	7	46	3	7	10
12:30 to 12:45		9	2	8	20	3	3	45	4	2	6
12:45 to 13:00		3	3	20	19	8	8	61	8	6	14
13:00 to 13:15		7	1	16	13	5	2	44	11	6	17
13:15 to 13:30		3	2	11	6	4	6	32	17	3	20
13:30 to 13:45		5	0	7	9	5	9	35	6	5	11
13:45 to 14:00		6	2	8	3	3	3	25	1	2	3
NOON TOTALS		42	17	93	90	44	42	328	52	39	91
16:30 to 16:45		2	0	5	8	2	5	22	2	4	6
16:45 to 17:00		3	0	6	7	1	8	25	0	4	4
17:00 to 17:15		5	3	8	13	3	11	43	1	11	12
17:15 to 17:30		4	2	6	3	0	3	18	0	7	7
17:30 to 17:45		6	4	9	6	5	6	36	0	6	6
17:45 to 18:00		3	1	7	6	2	4	23	5	6	11
18:00 to 18:15		3	3	8	8	1	3	26	0	3	3
18:15 to 18:30		5	2	8	5	4	5	29	1	6	7
PM TOTALS		31	15	57	56	18	45	222	9	47	56

Approach		Gray Street Between Kensington Street and Short Street									
Time Period		On Foot Path				Mid Block			Emergency Access		
		A	B	C	D	E	F		IN	OUT	
8:00 to 9:00		17	9	55	16	13	16		35	5	
8:15 to 9:15		16	8	52	22	17	14		36	5	
8:30 to 9:30		12	4	49	26	15	18		33	13	
8:45 to 9:45		17	7	43	37	24	16		30	10	
9:00 to 10:00		17	9	57	39	26	16		21	13	
12:00 to 13:00		21	12	51	59	27	22		17	23	
12:15 to 13:15		22	12	58	59	25	20		26	21	
12:30 to 13:30		22	8	55	58	20	19		40	17	
12:45 to 13:45		18	6	54	47	22	25		42	20	
13:00 to 14:00		21	5	42	31	17	20		35	16	
16:30 to 17:30		14	5	25	31	6	27		3	26	
16:45 to 17:45		18	9	29	29	9	28		1	28	
17:00 to 18:00		18	10	30	28	10	24		6	30	
17:15 to 18:15		16	10	30	23	8	16		5	22	
17:30 to 18:30		17	10	32	25	12	18		6	21	

Client	Cardno
Location	Belgrave St Midblock
Survey Date	Mon, 20th Feb 2012 (7am to 6pm)
Description	Pedestrian movement count



Ref Map



15mins Raw data

Time Period	PEDESTRIANS MOVEMENTS BY DIRECTION															Total
	A to B	B to A	B to C	C to B	D to F	F to D	F to E	E to F	F to G	G to F	G to H	H to G	G to B	B to G		
7:00 to 7:15	10	9	5	7	12	22	27	24	22	47	8	17	3	3	216	
7:15 to 7:30	15	10	8	5	15	25	35	30	25	55	12	25	2	2	264	
7:30 to 7:45	10	7	8	6	14	27	33	38	23	51	11	25	4	1	258	
7:45 to 8:00	20	12	10	6	17	27	93	25	17	84	8	38	13	4	374	
8:00 to 8:15	33	17	18	7	23	31	89	42	34	91	18	35	10	5	453	
8:15 to 8:30	41	19	31	11	22	36	90	44	45	99	23	65	18	2	546	
8:30 to 8:45	43	20	27	6	18	30	68	47	44	55	18	24	13	2	415	
8:45 to 9:00	23	10	14	4	23	40	74	4	34	93	25	57	5	3	409	
9:00 to 9:15	38	13	31	8	40	25	62	31	43	70	32	32	6	2	433	
9:15 to 9:30	27	17	14	9	21	31	51	56	49	56	32	24	10	5	402	
9:30 to 9:45	31	15	20	12	26	43	58	52	55	69	45	40	5	8	479	
9:45 to 10:00	57	30	30	16	25	25	46	56	60	64	38	46	4	13	510	
10:00 to 10:15	30	21	24	17	37	30	69	50	51	67	37	42	7	2	484	
10:15 to 10:30	41	32	19	14	33	25	60	47	40	52	31	40	12	4	450	
10:30 to 10:45	42	37	20	18	35	30	55	55	41	44	25	34	9	3	448	
10:45 to 11:00	62	52	22	14	36	27	62	63	77	68	36	47	18	2	586	
11:00 to 11:15	36	22	14	20	13	33	43	42	63	67	27	35	8	20	443	
11:15 to 11:30	33	24	19	26	34	13	52	41	63	68	38	38	13	16	478	
11:30 to 11:45	30	38	14	25	37	29	50	70	79	39	31	24	8	3	477	
11:45 to 12:00	26	26	7	22	35	25	25	46	44	41	39	23	6	15	380	
12:00 to 12:15	40	46	15	25	34	27	47	73	90	44	37	20	5	4	507	
12:15 to 12:30	33	34	25	30	35	19	59	58	71	61	41	34	8	4	512	
12:30 to 12:45	31	26	10	11	12	27	58	86	92	43	74	34	7	6	517	
12:45 to 13:00	40	43	18	59	30	29	96	91	88	87	53	46	12	38	730	
13:00 to 13:15	35	31	17	27	18	30	74	75	86	82	59	53	19	14	620	
13:15 to 13:30	32	23	31	28	28	49	94	76	68	94	34	85	5	6	653	
13:30 to 13:45	19	28	13	22	27	21	79	50	42	78	23	58	2	3	465	
13:45 to 14:00	20	17	11	10	20	23	53	45	47	71	26	59	5	2	409	
14:00 to 14:15	33	14	12	17	20	31	59	63	50	64	25	33	13	24	458	
14:15 to 14:30	32	18	24	22	24	22	54	58	68	62	42	40	19	12	497	
14:30 to 14:45	30	24	15	30	28	27	60	66	55	65	45	47	24	21	537	
14:45 to 15:00	33	29	18	25	22	25	53	61	68	60	50	42	12	11	509	
15:00 to 15:15	35	35	11	24	23	26	66	72	77	67	41	48	15	13	553	
15:15 to 15:30	16	11	10	27	50	16	67	36	50	43	31	16	10	22	405	
15:30 to 15:45	25	21	6	10	28	34	40	77	70	36	52	30	16	8	453	
15:45 to 16:00	12	15	10	15	17	31	28	62	41	24	21	22	8	10	316	
16:00 to 16:15	15	16	4	9	16	10	18	45	34	25	16	20	5	5	238	
16:15 to 16:30	19	25	7	15	19	14	16	53	64	21	8	20	4	8	293	
16:30 to 16:45	15	22	4	12	16	11	11	51	46	15	26	13	9	6	257	
16:45 to 17:00	22	14	7	14	18	17	19	59	38	17	7	14	10	15	271	
17:00 to 17:15	21	20	5	22	13	7	12	42	48	16	18	17	15	18	274	
17:15 to 17:30	15	4	8	12	14	11	17	36	32	15	13	13	12	15	217	
17:30 to 17:45	11	6	5	1	11	5	15	30	24	12	20	10	6	1	157	
17:45 to 18:00	17	11	5	5	5	11	22	40	34	27	25	26	5	6	239	
Total	1,249	964	646	725	1,044	1,097	2,259	2,268	2,292	2,409	1,321	1,511	420	387	18,592	
Peak Hour	138	123	76	125	88	135	322	328	334	306	220	218	43	64	2,520	

Hourly Summary

Time Period	PEDESTRIANS MOVEMENTS BY DIRECTION															Total
	A to B	B to A	B to C	C to B	D to F	F to D	F to E	E to F	F to G	G to F	G to H	H to G	G to B	B to G		
7:00 to 8:00	55	38	31	24	58	101	188	117	87	237	39	105	22	10	1,112	
8:00 to 9:00	140	66	90	28	86	137	321	137	157	338	84	181	46	12	1,823	
9:00 to 10:00	153	75	95	45	112	124	217	195	207	259	147	142	25	28	1,824	
10:00 to 11:00	175	142	85	63	141	112	246	215	209	231	129	163	46	11	1,968	
11:00 to 12:00	125	110	54	93	119	100	170	199	249	215	135	120	35	54	1,778	
12:00 to 13:00	144	149	68	125	111	102	260	308	341	235	205	134	32	52	2,266	
13:00 to 14:00	106	99	72	87	93	123	300	246	243	325	142	255	31	25	2,147	
14:00 to 15:00	128	85	69	94	94	105	226	248	241	251	162	162	68	68	2,001	
15:00 to 16:00	88	82	37	76	118	107	201	247	238	170	145	116	49	53	1,727	
16:00 to 17:00	71	77	22	50	69	52	64	208	182	78	57	67	28	34	1,059	
17:00 to 18:00	64	41	23	40	43	34	66	148	138	70	76	66	38	40	887	
Total	1,249	964	646	725	1,044	1,097	2,259	2,268	2,292	2,409	1,321	1,511	420	387	18,592	

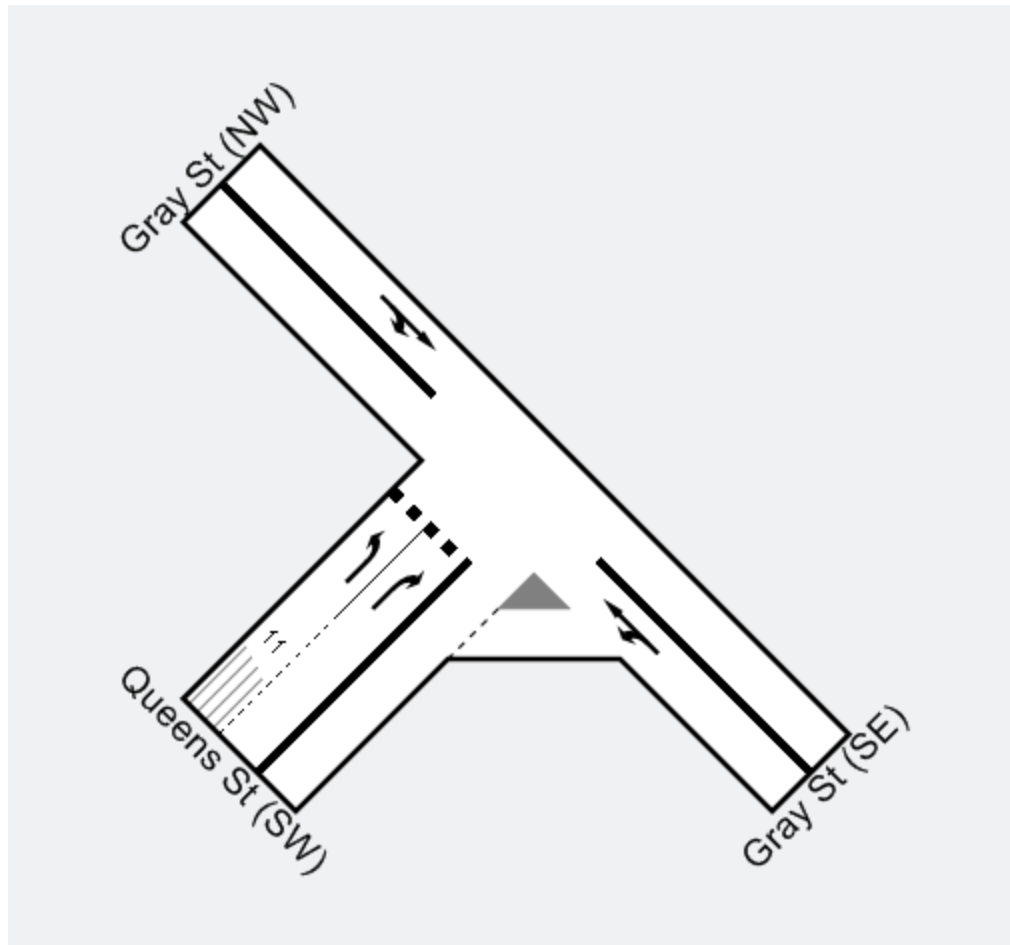


Appendix C

SIDRA Assessment

2011/2012 Existing Situation Assessment

Gray Street / Queens Avenue



MOVEMENT SUMMARY

Site: Gray St/Queens Ave AM

Gray Steet / Queens Ave
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV Deg. Satn		Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
veh/h			%	v/c	sec		veh	m		per veh	km/h
South East: Gray St (SE)											
4	L	54	3.7	0.236	6.4	LOS A	1.6	11.0	0.20	0.99	43.9
5	T	379	1.3	0.236	0.3	LOS A	1.6	11.0	0.20	0.00	47.5
Approach		433	1.6	0.236	1.0	LOS A	1.6	11.0	0.20	0.12	47.0
North West: Gray St (NW)											
11	T	300	2.7	0.219	2.3	LOS A	1.7	12.2	0.54	0.00	43.6
12	R	60	0.0	0.219	8.5	LOS A	1.7	12.2	0.54	0.82	42.6
Approach		360	2.3	0.219	3.3	LOS A	1.7	12.2	0.54	0.14	43.4
South West: Queens St (SW)											
1	L	311	1.9	0.612	12.2	LOS A	2.9	20.5	0.57	0.98	38.7
3	R	52	7.7	0.115	12.8	LOS A	0.4	2.9	0.64	0.86	38.3
Approach		363	2.7	0.612	12.3	LOS A	2.9	20.5	0.58	0.96	38.6
All Vehicles		1156	2.2	0.612	5.3	NA	2.9	20.5	0.42	0.39	43.0

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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INTERSECTIONS

MOVEMENT SUMMARY

Site: Gray St/Queens Ave
NOON

Gray Steet / Queens Ave
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South East: Gray St (SE)											
4	L	28	10.7	0.163	6.7	LOS A	1.1	7.7	0.25	1.02	43.9
5	T	269	3.0	0.163	0.5	LOS A	1.1	7.7	0.25	0.00	46.9
Approach		297	3.7	0.163	1.0	LOS A	1.1	7.7	0.25	0.10	46.6
North West: Gray St (NW)											
11	T	297	4.4	0.240	1.5	LOS A	1.7	12.2	0.45	0.00	44.4
12	R	92	1.1	0.240	7.8	LOS A	1.7	12.2	0.45	0.76	42.8
Approach		389	3.6	0.240	3.0	LOS A	1.7	12.2	0.45	0.18	44.0
South West: Queens St (SW)											
1	L	132	2.3	0.242	8.1	LOS A	0.6	4.1	0.40	0.67	41.8
3	R	31	0.0	0.057	10.9	LOS A	0.2	1.4	0.56	0.79	39.6
Approach		163	1.9	0.242	8.7	LOS A	0.6	4.1	0.43	0.69	41.4
All Vehicles		849	3.3	0.242	3.4	NA	1.7	12.2	0.38	0.25	44.3

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 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
INTERSE

MOVEMENT SUMMARY

Site: Gray St/Queens Ave PM

Gray Steet / Queens Ave
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
veh/h			%	v/c	sec		veh	m		per veh	km/h
South East: Gray St (SE)											
4	L	63	0.0	0.235	7.1	LOS A	1.7	11.9	0.40	0.92	43.9
5	T	352	1.1	0.235	1.1	LOS A	1.7	11.9	0.40	0.00	45.2
Approach		415	0.9	0.235	2.0	LOS A	1.7	11.9	0.40	0.14	45.0
North West: Gray St (NW)											
11	T	361	0.6	0.392	3.0	LOS A	3.8	26.9	0.61	0.00	42.5
12	R	205	0.0	0.392	9.3	LOS A	3.8	26.9	0.61	0.86	41.8
Approach		566	0.4	0.392	5.3	LOS A	3.8	26.9	0.61	0.31	42.3
South West: Queens St (SW)											
1	L	98	2.0	0.192	8.9	LOS A	0.5	3.3	0.46	0.72	41.2
3	R	42	0.0	0.117	15.0	LOS B	0.4	2.7	0.73	0.89	36.7
Approach		140	1.4	0.192	10.7	LOS B	0.5	3.3	0.54	0.77	39.8
All Vehicles		1121	0.7	0.392	4.7	NA	3.8	26.9	0.52	0.31	42.9

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.

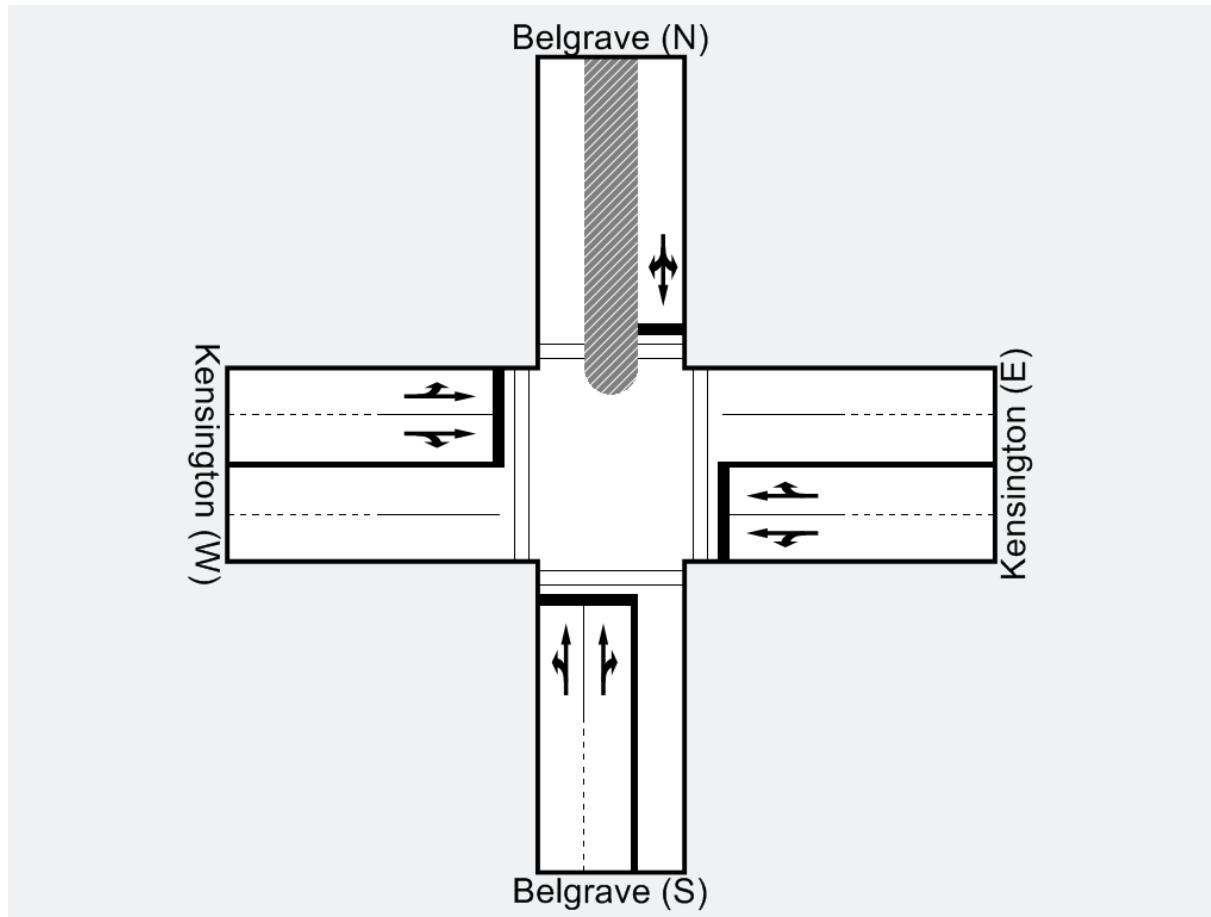
Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

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INTERSECTIONS

Belgrave St / Kensington St



MOVEMENT SUMMARY

Site: Belgrave-Kensington AM

Belgrave-Kensington AM Existing
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV Deg.	Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Belgrave (S)											
1	L	32	5.0	0.104	53.5	LOS D	2.4	17.3	0.87	0.73	24.3
2	T	14	5.0	0.098	47.2	LOS D	2.4	17.3	0.89	0.65	24.6
3	R	10	5.0	0.098	55.8	LOS D	1.8	13.5	0.89	0.75	24.3
Approach		56	5.0	0.104	52.3	LOS D	2.4	17.3	0.88	0.71	24.4
East: Kensington (E)											
4	L	56	5.0	0.446	15.5	LOS B	15.3	111.8	0.44	0.99	43.7
5	T	758	5.0	0.446	7.2	LOS A	15.3	111.8	0.44	0.40	47.8
6	R	245	5.0	0.446	16.1	LOS B	12.6	92.3	0.45	0.87	42.4
Approach		1059	5.0	0.446	9.7	LOS A	15.3	111.8	0.44	0.54	46.2
North: Belgrave (N)											
7	L	72	5.0	0.435	57.1	LOS E	8.1	58.8	0.94	0.80	23.4
8	T	9	5.0	0.436	48.7	LOS D	8.1	58.8	0.94	0.76	23.6
9	R	38	5.0	0.435	57.3	LOS E	8.1	58.8	0.94	0.80	23.4
Approach		119	5.0	0.435	56.6	LOS E	8.1	58.8	0.94	0.80	23.4
West: Kensington (W)											
10	L	45	5.0	0.097	13.5	LOS A	3.2	23.1	0.31	0.87	44.7
11	T	120	5.0	0.097	6.4	LOS A	3.2	23.1	0.35	0.28	48.9
12	R	26	5.0	0.097	18.1	LOS B	2.2	15.7	0.42	0.85	41.0
Approach		191	5.0	0.097	9.7	LOS A	3.2	23.1	0.35	0.50	46.6
All Vehicles		1425	5.0	0.446	15.3	LOS B	15.3	111.8	0.49	0.56	41.5

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	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P1	Across S approach	53	4.3	LOS A	0.0	0.0	0.27	0.27
P3	Across E approach	53	40.0	LOS E	0.1	0.1	0.82	0.82
P5	Across N approach	53	4.3	LOS A	0.0	0.0	0.27	0.27
P7	Across W approach	53	40.0	LOS E	0.1	0.1	0.82	0.82
All Pedestrians		212	22.1				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

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INTER

MOVEMENT SUMMARY

Site: Belgrave-Kensington PM

Belgrave-Kensington PM Existing
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV Deg.	Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Belgrave (S)											
1	L	43	5.0	0.094	44.6	LOS D	2.8	20.5	0.79	0.74	27.0
2	T	25	5.0	0.142	41.2	LOS C	3.3	24.2	0.84	0.65	26.4
3	R	23	5.0	0.142	49.8	LOS D	3.3	24.2	0.84	0.78	25.9
Approach		91	5.0	0.142	45.0	LOS D	3.3	24.2	0.82	0.73	26.5
East: Kensington (E)											
4	L	79	5.0	0.400	19.3	LOS B	14.5	105.9	0.52	0.94	40.7
5	T	610	5.0	0.399	11.1	LOS A	14.5	105.9	0.52	0.47	43.6
6	R	168	5.0	0.399	20.1	LOS B	12.5	91.2	0.53	0.89	39.7
Approach		857	5.0	0.399	13.6	LOS A	14.5	105.9	0.52	0.59	42.5
North: Belgrave (N)											
7	L	113	5.0	0.389	48.3	LOS D	9.5	69.0	0.87	0.81	25.8
8	T	5	5.0	0.387	39.9	LOS C	9.5	69.0	0.87	0.72	26.3
9	R	41	5.0	0.389	48.5	LOS D	9.5	69.0	0.87	0.81	25.8
Approach		159	5.0	0.389	48.0	LOS D	9.5	69.0	0.87	0.80	25.8
West: Kensington (W)											
10	L	60	5.0	0.113	17.1	LOS B	4.1	29.8	0.41	0.84	41.6
11	T	71	5.0	0.112	8.7	LOS A	4.1	29.8	0.41	0.34	46.0
12	R	46	5.0	0.118	24.1	LOS B	2.1	15.1	0.53	0.74	36.1
Approach		177	5.0	0.118	15.6	LOS B	4.1	29.8	0.44	0.61	41.6
All Vehicles		1284	5.0	0.400	20.4	LOS B	14.5	105.9	0.58	0.63	37.8

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 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	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P1	Across S approach	53	7.4	LOS A	0.1	0.1	0.35	0.35
P3	Across E approach	53	32.3	LOS D	0.1	0.1	0.73	0.73
P5	Across N approach	53	7.4	LOS A	0.1	0.1	0.35	0.35
P7	Across W approach	53	32.3	LOS D	0.1	0.1	0.73	0.73
All Pedestrians		212	19.8				0.54	0.54

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

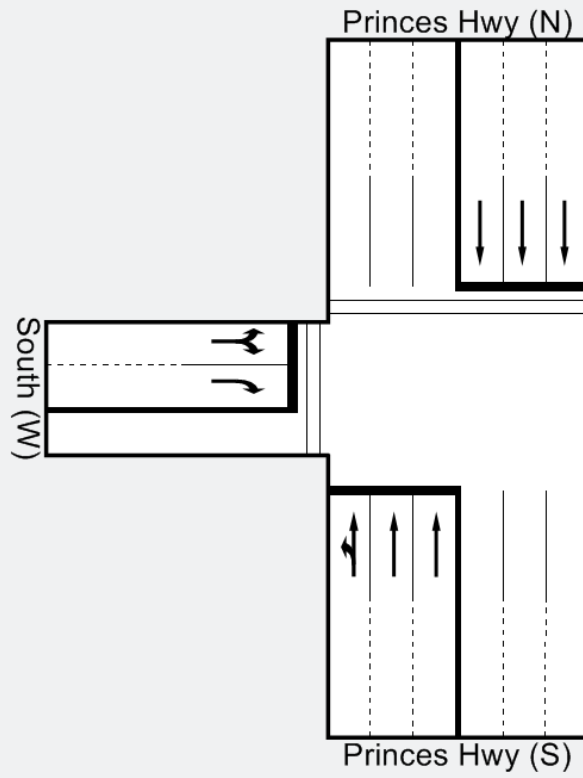
Level of Service (Worst Movement): LOS D. LOS Method for individual pedestrian movements: Delay (HCM).

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INTER

South St / Princes Highway



MOVEMENT SUMMARY

Site: South - Princes AM

South - Princes AM Existing
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV Deg.	Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Princes Hwy (S)											
1	L	116	5.0	0.859	19.6	LOS B	48.6	354.9	0.77	0.97	41.3
2	T	3482	5.0	0.862	11.2	LOS A	48.8	356.3	0.77	0.73	43.3
Approach		3598	5.0	0.861	11.5	LOS A	48.8	356.3	0.77	0.74	43.2
North: Princes Hwy (N)											
8	T	1044	5.0	0.250	4.8	LOS A	7.8	56.8	0.33	0.29	51.5
Approach		1044	5.0	0.250	4.8	LOS A	7.8	56.8	0.33	0.29	51.5
West: South (W)											
10	L	114	5.0	0.534	60.5	LOS E	9.6	69.8	0.97	0.80	22.5
12	R	169	5.0	0.534	60.5	LOS E	9.6	69.8	0.97	0.80	22.5
Approach		283	5.0	0.534	60.5	LOS E	9.6	69.8	0.97	0.80	22.5
All Vehicles		4925	5.0	0.862	12.9	LOS A	48.8	356.3	0.69	0.65	42.4

Level of Service (Aver. Int. Delay): LOS A. 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	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P5	Across N approach	50	42.5	LOS E	0.1	0.1	0.84	0.84
P7	Across W approach	50	3.5	LOS A	0.0	0.0	0.24	0.24
All Pedestrians		100	23.0				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

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INTER

MOVEMENT SUMMARY

Site: South - Princes PM

South - Princes PM Existing
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV Deg.	Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
South: Princes Hwy (S)											
1	L	66	5.0	0.439	15.0	LOS B	14.8	108.4	0.43	0.98	44.0
2	T	1729	5.0	0.440	6.6	LOS A	14.9	108.9	0.43	0.39	48.9
Approach		1795	5.0	0.440	6.9	LOS A	14.9	108.9	0.43	0.41	48.7
North: Princes Hwy (N)											
8	T	3206	5.0	0.784	10.6	LOS A	38.7	282.2	0.68	0.64	44.2
Approach		3206	5.0	0.784	10.6	LOS A	38.7	282.2	0.68	0.64	44.2
West: South (W)											
10	L	159	5.0	0.775	64.3	LOS E	15.1	110.0	1.00	0.88	21.7
12	R	297	5.0	0.775	64.3	LOS E	15.1	110.0	1.00	0.88	21.7
Approach		456	5.0	0.775	64.3	LOS E	15.1	110.0	1.00	0.88	21.7
All Vehicles		5457	5.0	0.784	13.9	LOS A	38.7	282.2	0.63	0.59	41.9

Level of Service (Aver. Int. Delay): LOS A. 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	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		per ped
					ped	m		
P5	Across N approach	50	40.8	LOS E	0.1	0.1	0.83	0.83
P7	Across W approach	50	4.0	LOS A	0.0	0.0	0.26	0.26
All Pedestrians		100	22.4				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

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Sensitivity Assessment

Gray Street / Queens Avenue

MOVEMENT SUMMARY

Site: Gray St/Queens Ave AM
- flow scale

Gray Steet / Queens Ave
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV Deg. Satn %	Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South East: Gray St (SE)											
4	L	86	3.7	0.379	6.7	LOS A	3.8	26.7	0.31	0.95	43.9
5	T	606	1.3	0.379	0.6	LOS A	3.8	26.7	0.31	0.00	46.2
Approach		693	1.6	0.379	1.4	LOS A	3.8	26.7	0.31	0.12	45.9
North West: Gray St (NW)											
11	T	480	2.7	0.387	6.6	LOS A	6.5	46.4	0.84	0.00	40.6
12	R	96	0.0	0.387	12.8	LOS A	6.5	46.4	0.84	1.07	39.7
Approach		576	2.3	0.387	7.6	LOS A	6.5	46.4	0.84	0.18	40.5
South West: Queens St (SW)											
1	L	414	1.9	1.000 ³	14.7	LOS B	4.7	33.3	0.88	0.95	37.0
3	R	167	7.7	0.823	50.9	LOS D	5.9	43.3	0.96	1.40	22.5
Approach		581	2.7	1.000	25.1	LOS D	5.9	43.3	0.91	1.08	31.2
All Vehicles		1850	2.2	1.000	10.8	NA	6.5	46.4	0.66	0.44	38.6

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 D. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Flow Scale Analysis Objective: Worst Movement Level of Service Target. (Results for Flow Scale = 160.0 % largest for any movement)

³ x = 1.00 due to short lane

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INTERSECTIONS

MOVEMENT SUMMARY

Site: Gray St/Queens Ave
NOON - Flow Scale

Gray Steet / Queens Ave
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South East: Gray St (SE)											
4	L	66	10.7	0.390	7.9	LOS A	4.5	32.6	0.52	0.95	44.2
5	T	629	3.0	0.389	1.7	LOS A	4.5	32.6	0.52	0.00	43.9
Approach		695	3.7	0.389	2.3	LOS A	4.5	32.6	0.52	0.09	43.9
North West: Gray St (NW)											
11	T	695	4.4	0.684	14.4	LOS A	14.6	105.2	1.00	0.00	34.7
12	R	215	1.1	0.683	20.7	LOS B	14.6	105.2	1.00	1.38	34.7
Approach		910	3.6	0.684	15.9	LOS B	14.6	105.2	1.00	0.33	34.7
South West: Queens St (SW)											
1	L	309	2.3	0.765	18.0	LOS B	4.7	33.3	0.79	1.14	34.9
3	R	73	0.0	0.698	69.1	LOS E	3.2	22.5	0.97	1.14	18.8
Approach		381	1.9	0.765	27.7	LOS E	4.7	33.3	0.83	1.14	30.0
All Vehicles		1987	3.3	0.765	13.4	NA	14.6	105.2	0.80	0.40	36.3

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 E. LOS Method for individual vehicle movements: Delay (RTA NSW).

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

Flow Scale Analysis Objective: Worst Movement Level of Service Target. (Results for Flow Scale = 234.0 % largest for any movement)

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INTERSECTIONS

MOVEMENT SUMMARY

Site: Gray St/Queens Ave PM
- flow scale

Gray Steet / Queens Ave
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South East: Gray St (SE)											
4	L	105	0.0	0.405	9.0	LOS A	5.7	40.4	0.65	0.98	43.7
5	T	584	1.1	0.405	3.0	LOS A	5.7	40.4	0.65	0.00	42.6
Approach		689	0.9	0.405	3.9	LOS A	5.7	40.4	0.65	0.15	42.7
North West: Gray St (NW)											
11	T	599	0.6	0.776	16.4	LOS B	17.0	119.4	1.00	0.00	33.4
12	R	340	0.0	0.777	22.6	LOS B	17.0	119.4	1.00	1.52	33.3
Approach		940	0.4	0.776	18.7	LOS B	17.0	119.4	1.00	0.55	33.4
South West: Queens St (SW)											
1	L	163	2.0	0.395	13.5	LOS A	1.7	12.2	0.66	0.94	37.8
3	R	70	0.0	0.670	67.0	LOS E	3.0	21.3	0.97	1.13	19.1
Approach		232	1.4	0.673	29.6	LOS E	3.0	21.3	0.75	1.00	29.2
All Vehicles		1861	0.7	0.777	14.6	NA	17.0	119.4	0.84	0.46	35.6

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.

Flow Scale Analysis Objective: Worst Movement Level of Service Target. (Results for Flow Scale = 166.0 % largest for any movement)

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INTERSECTIONS

Belgrave St / Kensington St

MOVEMENT SUMMARY

Site: SENS_Belgrave-Kensington AM

Belgrave-Kensington AM Sensitivity Assessment
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV Deg. Satn %	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: Belgrave (S)										
1	L	65	5.0	0.211	LOS D	4.6	33.7	0.90	0.76	24.0
2	T	29	5.0	0.332	LOS E	4.6	33.7	0.98	0.73	21.9
3	R	20	5.0	0.332	LOS E	4.0	29.1	0.98	0.76	21.8
Approach		114	5.0	0.332	LOS E	4.6	33.7	0.93	0.75	23.0
East: Kensington (E)										
4	L	114	5.0	0.991	LOS F	121.2	885.1	1.00	1.27	19.2
5	T	1546	5.0	0.988	LOS F	121.2	885.1	1.00	1.27	18.4
6	R	500	5.0	0.988	LOS F	85.4	623.5	1.00	1.27	15.7
Approach		2160	5.0	0.988	LOS F	121.2	885.1	1.00	1.27	17.7
North: Belgrave (N)										
7	L	147	5.0	0.954	LOS F	20.5	149.5	1.00	1.14	16.4
8	T	18	5.0	0.954	LOS F	20.5	149.5	1.00	1.14	16.5
9	R	78	5.0	0.953	LOS F	20.5	149.5	1.00	1.14	16.4
Approach		243	5.0	0.954	LOS F	20.5	149.5	1.00	1.14	16.4
West: Kensington (W)										
10	L	92	5.0	0.253	LOS A	8.2	59.6	0.36	0.91	44.2
11	T	245	5.0	0.253	LOS A	8.2	59.6	0.36	0.32	49.6
12	R	53	5.0	0.798	LOS F	4.8	35.2	1.00	0.86	18.9
Approach		390	5.0	0.798	LOS B	8.2	59.6	0.45	0.53	39.7
All Vehicles		2907	5.0	0.991	LOS F	121.2	885.1	0.92	1.14	19.2

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.

Flow Scale Analysis Objective: Capacity (v/c ratio = 1). (Results for Flow Scale = 204.0 % largest for any movement)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian Distance		Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		per ped
P1	Across S approach	107	4.3	LOS A	0.1	0.1	0.27	0.27
P3	Across E approach	107	40.0	LOS E	0.3	0.3	0.82	0.82
P5	Across N approach	107	4.3	LOS A	0.1	0.1	0.27	0.27
P7	Across W approach	107	40.0	LOS E	0.3	0.3	0.82	0.82
All Pedestrians		428	22.1				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

MOVEMENT SUMMARY

Site: SENS_Belgrave-Kensington PM

Belgrave-Kensington PM Sensitivity Assessment
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	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belgrave (S)											
1	L	91	5.0	0.214	47.7	LOS D	5.8	42.1	0.84	0.77	26.0
2	T	53	5.0	0.694	60.9	LOS E	7.9	57.6	1.00	0.85	21.1
3	R	49	5.0	0.695	69.5	LOS E	7.9	57.6	1.00	0.85	21.0
Approach		193	5.0	0.695	56.8	LOS E	7.9	57.6	0.92	0.81	23.1
East: Kensington (E)											
4	L	167	5.0	0.877	30.5	LOS C	53.9	393.3	0.88	0.98	34.3
5	T	1293	5.0	0.877	25.1	LOS B	53.9	393.3	0.89	0.87	33.2
6	R	356	5.0	0.877	40.3	LOS C	43.7	318.7	0.91	0.99	29.2
Approach		1817	5.0	0.877	28.6	LOS C	53.9	393.3	0.89	0.91	32.4
North: Belgrave (N)											
7	L	240	5.0	0.974	108.6	LOS F	30.4	222.1	1.00	1.18	15.0
8	T	11	5.0	0.975	100.2	LOS F	30.4	222.1	1.00	1.18	15.1
9	R	87	5.0	0.974	108.8	LOS F	30.4	222.1	1.00	1.18	15.0
Approach		337	5.0	0.974	108.4	LOS F	30.4	222.1	1.00	1.18	15.0
West: Kensington (W)											
10	L	127	5.0	0.233	17.1	LOS B	8.1	59.1	0.43	0.85	41.7
11	T	151	5.0	0.232	8.7	LOS A	12.4	90.2	0.43	0.37	45.9
12	R	98	5.0	0.999	157.5	LOS F	12.4	90.2	1.00	1.38	11.2
Approach		375	5.0	0.999	50.2	LOS D	12.4	90.2	0.58	0.80	25.0
All Vehicles		2722	5.0	0.999	43.4	LOS D	53.9	393.3	0.86	0.92	26.8

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.

Flow Scale Analysis Objective: Capacity (v/c ratio = 1). (Results for Flow Scale = 212.0 % largest for any movement)

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P1	Across S approach	112	6.7	LOS A	0.1	0.1	0.33	0.33
P3	Across E approach	112	33.8	LOS D	0.3	0.3	0.75	0.75
P5	Across N approach	112	6.7	LOS A	0.1	0.1	0.33	0.33
P7	Across W approach	112	33.8	LOS D	0.3	0.3	0.75	0.75
All Pedestrians		448	20.2				0.54	0.54

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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INTER

South St / Princes Highway

MOVEMENT SUMMARY

Site: SENS_South - Princes
AM

South - Princes AM Sensitivity Assessment
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	veh	m		per veh	km/h	
South: Princes Hwy (S)											
1	L	135	5.0	0.997	92.3	LOS F	136.8	998.4	1.00	1.33	17.5
2	T	4039	5.0	0.999	83.7	LOS F	137.3	1002.0	1.00	1.34	17.6
Approach		4174	5.0	0.999	84.0	LOS F	137.3	1002.0	1.00	1.34	17.6
North: Princes Hwy (N)											
8	T	1211	5.0	0.289	5.0	LOS A	9.1	66.2	0.34	0.30	51.2
Approach		1211	5.0	0.289	5.0	LOS A	9.1	66.2	0.34	0.30	51.2
West: South (W)											
10	L	132	5.0	0.620	61.3	LOS E	10.9	79.8	0.99	0.81	22.4
12	R	196	5.0	0.620	61.3	LOS E	10.9	79.8	0.99	0.81	22.3
Approach		328	5.0	0.620	61.3	LOS E	10.9	79.8	0.99	0.81	22.3
All Vehicles		5713	5.0	0.999	65.9	LOS E	137.3	1002.0	0.86	1.09	20.8

Level of Service (Aver. Int. Delay): LOS E. 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.

Flow Scale Analysis Objective: Capacity (v/c ratio = 1). (Results for Flow Scale = 116.0 % largest for any movement)

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P5	Across N approach	58	42.5	LOS E	0.2	0.2	0.84	0.84
P7	Across W approach	58	3.5	LOS A	0.0	0.0	0.24	0.24
All Pedestrians		116	23.0				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

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MOVEMENT SUMMARY

Site: SENS_South - Princes
PM

South - Princes PM Sensitivity Assessment
Signals - Fixed Time Cycle Time = 120 seconds

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
							veh	m			
South: Princes Hwy (S)											
1	L	83	5.0	0.553	16.0	LOS B	20.3	148.1	0.49	0.98	43.4
2	T	2179	5.0	0.554	7.6	LOS A	20.4	148.8	0.49	0.45	47.7
Approach		2262	5.0	0.554	7.9	LOS A	20.4	148.8	0.49	0.47	47.5
North: Princes Hwy (N)											
8	T	4040	5.0	0.988	71.5	LOS F	122.2	892.3	1.00	1.28	19.6
Approach		4040	5.0	0.987	71.5	LOS F	122.2	892.3	1.00	1.28	19.6
West: South (W)											
10	L	200	5.0	0.976	107.2	LOS F	25.1	183.3	1.00	1.16	15.2
12	R	374	5.0	0.976	107.2	LOS F	25.1	183.3	1.00	1.16	15.2
Approach		575	5.0	0.976	107.2	LOS F	25.1	183.3	1.00	1.16	15.2
All Vehicles		6876	5.0	0.988	53.6	LOS D	122.2	892.3	0.83	1.00	23.6

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.

Flow Scale Analysis Objective: Capacity (v/c ratio = 1). (Results for Flow Scale = 126.0 % largest for any movement)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue		Prop. Queued	Effective Stop Rate
		ped/h	sec		Pedestrian	Distance		
					ped	m		per ped
P5	Across N approach	63	40.8	LOS E	0.2	0.2	0.83	0.83
P7	Across W approach	63	4.0	LOS A	0.1	0.1	0.26	0.26
All Pedestrians		126	22.4				0.54	0.54

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 E. LOS Method for individual pedestrian movements: Delay (HCM).

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With Development Assessment

Gray Street / Queens Avenue

MOVEMENT SUMMARY

Site: Gray St/Queens Ave
AM_WD

Gray Street / Queens Ave
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV Deg. Satn %	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: Gray St (SE)											
4	L	54	3.7	0.287	6.4	LOS A	2.5	17.8	0.21	1.02	43.9
5	T	479	1.3	0.287	0.3	LOS A	2.5	17.8	0.21	0.00	47.4
Approach		533	1.5	0.287	0.9	LOS A	2.5	17.8	0.21	0.10	47.0
North West: Gray St (NW)											
11	T	400	2.7	0.280	3.5	LOS A	3.3	23.5	0.66	0.00	42.5
12	R	60	0.0	0.279	9.8	LOS A	3.3	23.5	0.66	0.91	41.9
Approach		460	2.3	0.280	4.3	LOS A	3.3	23.5	0.66	0.12	42.4
South West: Queens St (SW)											
1	L	311	1.9	0.662	14.6	LOS B	4.1	29.5	0.64	1.08	37.0
3	R	52	7.7	0.159	16.4	LOS B	0.7	4.9	0.75	0.90	36.0
Approach		363	2.7	0.662	14.8	LOS B	4.1	29.5	0.66	1.06	36.9
All Vehicles		1356	2.1	0.662	5.8	NA	4.1	29.5	0.48	0.36	42.3

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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MOVEMENT SUMMARY

Site: Gray St/Queens Ave
NOON_WD

Gray Steet / Queens Ave
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV Deg. Satn %	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 East: Gray St (SE)											
4	L	28	10.7	0.215	6.7	LOS A	1.9	13.5	0.26	1.05	44.0
5	T	369	3.0	0.215	0.5	LOS A	1.9	13.5	0.26	0.00	46.8
Approach		397	3.5	0.215	0.9	LOS A	1.9	13.5	0.26	0.07	46.6
North West: Gray St (NW)											
11	T	397	4.4	0.304	2.5	LOS A	3.1	22.6	0.58	0.00	43.1
12	R	92	1.1	0.304	8.8	LOS A	3.1	22.6	0.58	0.83	42.5
Approach		489	3.8	0.304	3.7	LOS A	3.1	22.6	0.58	0.16	43.0
South West: Queens St (SW)											
1	L	132	2.3	0.258	9.0	LOS A	0.8	5.7	0.47	0.73	41.2
3	R	31	0.0	0.076	13.6	LOS A	0.3	2.2	0.68	0.87	37.7
Approach		163	1.9	0.259	9.8	LOS A	0.8	5.7	0.51	0.76	40.5
All Vehicles		1049	3.4	0.304	3.6	NA	3.1	22.6	0.45	0.22	43.8

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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MOVEMENT SUMMARY

Site: Gray St/Queens Ave
PM_WD

Gray Steet / Queens Ave
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 East: Gray St (SE)											
4	L	63	0.0	0.286	7.2	LOS A	2.7	19.4	0.42	0.94	44.0
5	T	452	1.1	0.287	1.2	LOS A	2.7	19.4	0.42	0.00	44.9
Approach		515	1.0	0.287	1.9	LOS A	2.7	19.4	0.42	0.11	44.8
North West: Gray St (NW)											
11	T	461	0.6	0.471	5.1	LOS A	7.5	52.5	0.78	0.00	40.9
12	R	205	0.0	0.471	11.4	LOS A	7.5	52.5	0.78	1.05	40.5
Approach		666	0.4	0.471	7.0	LOS A	7.5	52.5	0.78	0.32	40.8
South West: Queens St (SW)											
1	L	98	2.0	0.207	9.8	LOS A	0.7	4.7	0.52	0.78	40.5
3	R	42	0.0	0.166	19.7	LOS B	0.7	4.6	0.82	0.93	33.9
Approach		140	1.4	0.207	12.8	LOS B	0.7	4.7	0.61	0.83	38.2
All Vehicles		1321	0.7	0.471	5.7	NA	7.5	52.5	0.63	0.30	41.9

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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