MEADOWBANK TRAFFIC ASSESSMENT
MODEL CALIBRATION/VALIDATION

FOR

CITY OF RYDE

Gold Coast
Suite 26, 58 Riverwalk Avenue
Robina QLD 4226
P: (07) 5562 5377
W: www.bitziosconsulting.com.au

Brisbane
Level 2, 428 Upper Edward Street
Spring Hill QLD 4000
P: (07) 3831 4442
E: admin@bitziosconsulting.com.au

Sydney
Studio 203, 3 Gladstone Street
Newtown NSW 2042
P: (02) 9557 6202

Project No: P0989 Version No: 003 Issue date: 26 July 2012

DOCUMENT CONTROL SHEET

Issue History

Report File Name	Prepared by	Reviewed by	Issued by	Date	Issued to
P0989.001R Meadowbank Traffic Assessment_Model Calibration/Validation	D. Bitzios	A.Finlay	D. Bitzios	25/05/2012	City of Ryde
P0989.002R Meadowbank Traffic Assessment_Model Calibration/Validation	P. Bollavaram	D. Bitzios	D. Bitzios	10/07/2012	City of Ryde
P0989.003R Meadowbank Traffic Assessment_Model Calibration/Validation	P. Bollavaram	D. Bitzios	D. Bitzios	26/07/2012	City of Ryde

Certified System
Quality
ISO 9001
SAI GLOBAL

CONTENTS

Tables

Figures

Appendices

EXECUTIVE SUMMARY

A number of development applications have been received under the Local Environment Plan (LEP2011), and some approved, for the Meadowbank Enterprise Area (MEA) which is planned to be redeveloped with mixed use commercial, retail and dwelling developments. Recently a major "Part 3A" application was submitted to the Department of Planning for consideration. This Part 3A application was for higher levels of development than originally envisaged under LEP2011 and the City of Ryde (CoR) has commissioned Bitzios Consulting to create a traffic model for the area to identify what the impacts associated with this development might be and what measures/upgrades might be put in place to mitigate these impacts.

This report outlines the development, calibration and validation of a SATURN mesoscopic traffic model for the MEA.

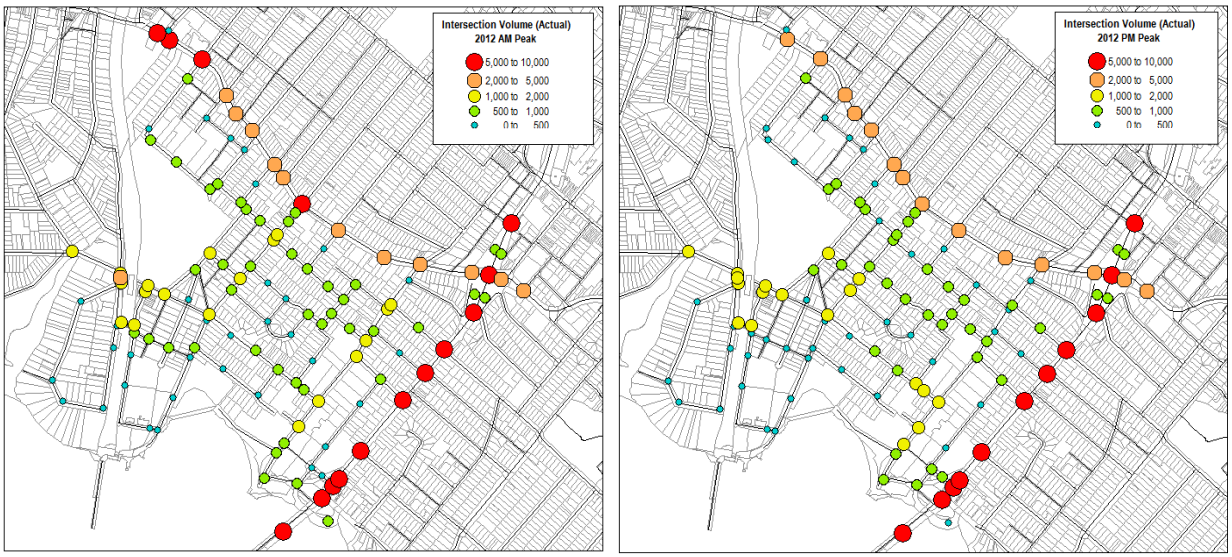
The network coding has been based on aerial photography and verified through site investigations. Traffic demands were generated through firstly establishing a comprehensive property by property development database and applying traffic generation rates to these developments. Traffic surveys have also been undertaken to establish key through movement patterns in the area and to estimate the AM and PM peak traffic matrices through calibration of these models. The models were then validated to travel times on four key routes in the study area and a reasonableness check was also undertaken on back of queue lengths at critical intersections.

The models have achieved the calibration criteria (in accordance with the RMS Paramics Microsimulation Modelling Manual) as follows:

- AM Peak:
  - 85% of turn counts achieved a GEH of 5.0 or better; and
  - 100% of turn counts achieved a GEH of 10.0 or better.
- PM Peak:
  - 85% of turn counts achieved a GEH of 5.0 or better; and
  - 100% of turn counts achieved a GEH of 10.0 or better.

The models have been validated to travel time surveys and all model-output travel times are within 15% of average surveyed travel times whilst sitting within minimum and maximum travel time records. Back of queue model outputs also lie between the maximum and minimum surveyed values tending towards the average of these values.

On this basis the Meadowbank base year (2012) SATURN models are deemed to be fit for purpose to enable them to be used as a basis for creating the 2031 Meadowbank SATURN models.



1. INTRODUCTION

1.1 BACKGROUND

The Meadowbank Enterprise Area (MEA) site within the broader Meadowbank suburb is located at the southern end of the City of Ryde (CoR). The MEA is planned to be redeveloped over time into a range of mixed use commercial, retail and dwelling developments. Some of this development has already occurred.

Various applications for development in the area have been received under the Local Environment Plan (LEP2011) and more recently a major "Part 3A" application was submitted to the Department of Planning for consideration, as shown in Figure 1.1. This Part 3A application was for higher levels of development than originally envisaged under LEP2011.

Figure 1.1: Shepherds Bay Development Proposal

Key routes through Meadowbank suffer from congestion and long delays in peak periods; partly as a consequence of the ability to "rat run" through this area to avoid congestion along Victoria Road and the M3 and partly due to reasonably large traffic generators within the area.

The CoR has identified potential issues with development in Meadowbank exacerbating existing traffic and transport concerns and has initiated the creation of a traffic model for the area to assess development impacts holistically as well as to identify and test potential traffic management measures.

1.2 PURPOSE AND SCOPE

The CoR has initiated the creation of a Meso-scopic traffic model for Meadowbank. The model has been created in SATURN, which is a specialised mesoscopic traffic modelling software package.

The scope of the project involves:

1. conducting traffic surveys in the area (intersection counts, origin-destination surveys, back of queue counts and travel time surveys);
2. coding in a base year (2012) network;
3. calculating traffic generation for the zones in the study area;
4. matrix estimation in SATURN to generate "calibrated" AM peak and PM peak traffic matrices;
5. validation of the models to back of queue data and route travel times;
6. creating a future year 2031 model representing development under LEP2011 and under the Shepherd's Bay Part 3A proposal;
7. identifying traffic capacity issues and modelling network options to mitigate these issues; and
8. providing conclusions and recommendations regarding the appropriate traffic capacity works required in the area to cater for traffic demands under each land use scenario.

This report is for Items 1 to 5 above.

1.3 SATURN OVERVIEW

SATURN (*Simulation and Assignment of Traffic in Urban Road Networks*) has been used internationally for over 30 years primarily for modelling urban traffic networks where intersections (rather than links) are the primary source of congestion and delay.

The software simulates operations of traffic at individual intersections and how these operations affect other intersections. This is done through a time-slice approach to loading traffic to the network to more sensitively model the build-up of queues and congestion over time. The software models traffic in an aggregate way rather than considering individual vehicles like microscopic simulation models do, or "packets" of vehicles like some macroscopic simulation models do.

1.4 CALIBRATION AND VALIDATION CRITERIA

The use of mesoscopic models is relatively limited in New South Wales (NSW) and there are currently no calibration/validation guidelines for these types of models. Discussions between RMS and CoR have determined that the criteria contained in the RTA (now RMS) Paramics Modelling Manual are generally appropriate for use here, as adapted to suit the different outputs and capabilities of the SATURN package. It is important to highlight that the level of validation for a mesoscopic model is generally not as "tight" as for a simulation model and greater reliance is placed on link flows than on turn flows. Notwithstanding this, the RMS Paramics Manual GEH statistic criteria have been used as a basis for acceptable GEH comparison of turn counts. These criteria are:

- 85% of assigned turn volumes from the model within a GEH of 5.0 when compared to survey data; and
- 100% of assigned turn volumes from the model within a GEH of 10.0 when compared to survey data.

The criteria for model validation is set as follows:

- The average route travel times from the model are within 15% of the surveyed average travel times and fall within the maximum and minimum surveyed travel times.

In addition, whilst not a set validation criterion due to its inherent variability, queue lengths at key locations have also been checked as a "reasonableness" test of the model.

2. TRAFFIC SURVEYS

2.1 TRAFFIC COUNTS

Intersection turning counts were conducted at 20 intersections across the study area for 7.00 AM to 9.00 AM and 4.00 PM to 6.00 PM. The data was collected between the 3rd April 2012 and the 4th April, 2012. The surveyed intersections are listed in Table 2.1.

Table 2.1: Surveyed Intersections

ID	Location	ID	Location
1	Parsonage Street and The Loop Road	11	Victoria Road and Forsyth Street
2	Church Street and Riverside Avenue	12	Victoria Road and Mellor Street
3	Church Street and Junction Street	13	Victoria Road and Hermitage Road
4	Church Street and Suttor Avenue	14	Belmore Street and Constitution Road
5	Church Street and Morrison Road	15	Belmore Street and Junction Street
6	Victoria Road and Devlin Street	16	Belmore Street and Morrison Road/Yerong Street
7	Church Street and Blaxland Road	17	Bowden Street and Constitution Road
8	Victoria Road & Belmore Street	18	Bowden Street and Squire Street/McPherson Street
9	Victoria Road and Shepherd Street	19	Railway Road and Bank Street
10	Victoria Road and Bowden Street	20	Constitution Road & Station Street

The count data was collected in 15 minute intervals and was classified by:

- car (including motorcycles and utes);
- rigid trucks (including buses); and
- semi-trailers.

The weather conditions during the counts were generally fine with no incidents apparent that would bias the results.

2.2 ORIGIN-DESTINATION SURVEY

The origin-destination (O-D) survey targeted key known "rat runs" through the study area to estimate the proportion of through traffic compared to local traffic for key origin-destination movements and routes. The O-D survey was conducted on the Wednesday 4th April, 2012 from 7.00AM-9.00AM and 4.00PM-6.00 PM.

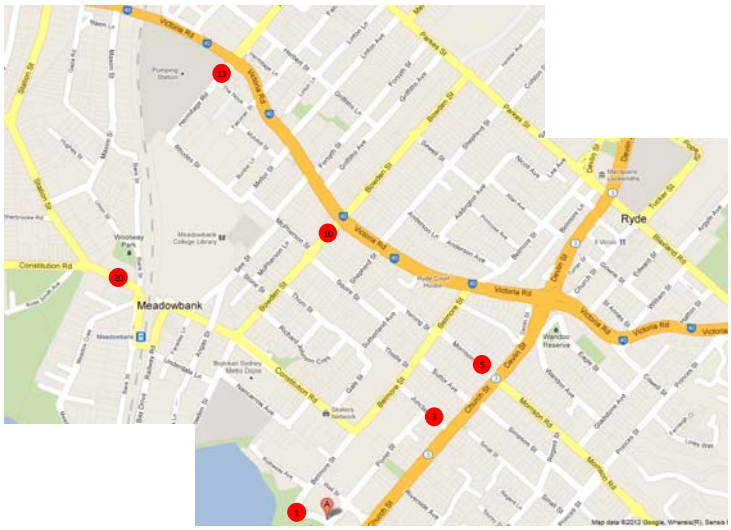


Figure 2.1: Origin-Destination Survey Stations

It should be highlighted that there is inherent under-reporting of "matched" trips using O-D surveys and the results generally need to be treated with caution and supplemented with local knowledge.

2.3 Back of Queue Surveys

Key signalised intersections contained in the study area were also surveyed to identify the back of queue lengths on each approach. The surveyed locations were:

- Junction Street & Church Street;
- Morrison Road & Church Street;
- Bowden Street & Victoria Road; and
- Hermitage Street & Victoria Road.

Where queues extended back into an adjoining signalised intersection, or where they extended beyond the extent of sight from the intersection indicative queue lengths were noted.

The back of queue data was sampled at each intersection approach with the measurement taken just as the green phase for that approach commenced.

2.4 Travel Time Surveys

Travel time surveys were conducted on four key routes through the study area, shown in Figure 2.2. Multiple runs in each direction in each peak were conducted to understand travel time variability on these routes.

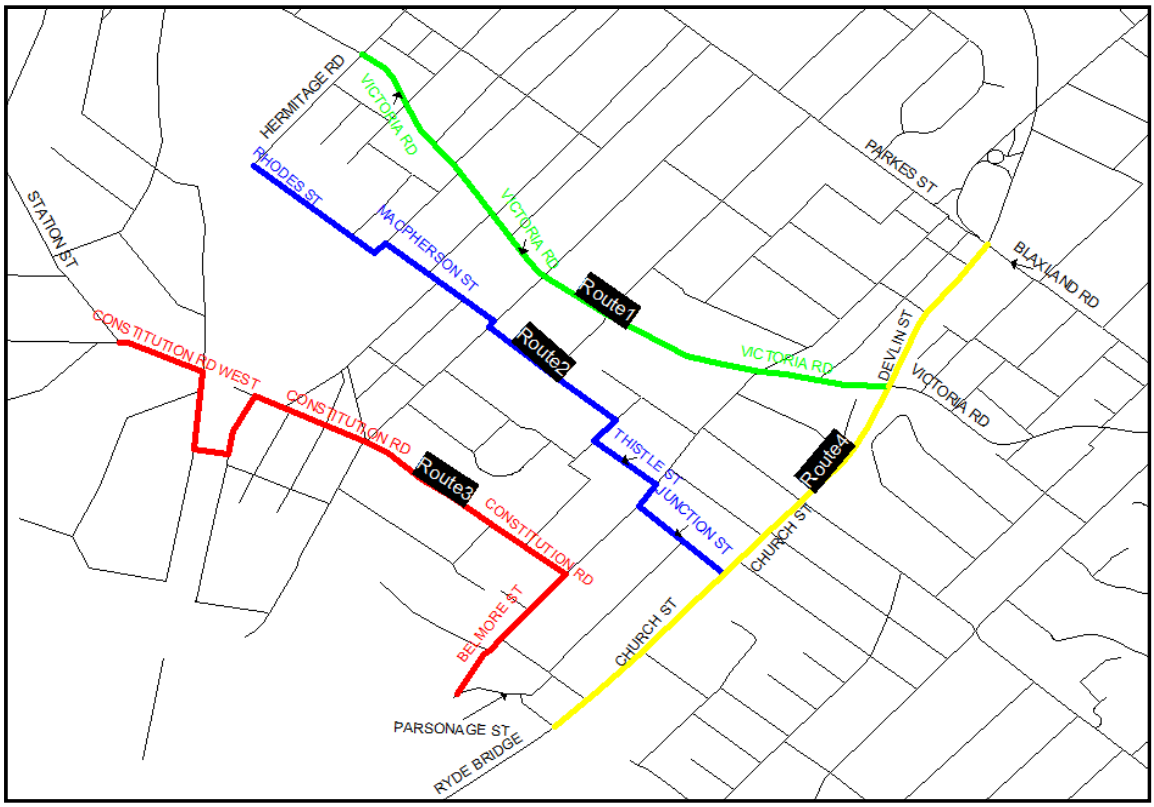


Figure 2.2: Travel Time Survey Routes

All of the detailed survey outputs are provided in Appendix A.

3. NETWORK CODING

3.1 MODEL BOUNDARY

The model is generally boarded by the Parramatta River to the south, the M3 in the east, Victoria Road in the north and the rail line in the west, as shown in Figure 3.1.

Figure 3.1: Model Boundary

The boundary extends to the Blaxland Road/Devlin Street intersection in the north as this intersection controls queuing back into the modelled area in the south. Similarly, the model boundary is extended to the Constitution Road/Station Street intersection in the west to capture the capacity constraint-influences in this area and their effects back into Meadowbank.

3.2 LINKS AND NODES

Simulation nodes were provided at every intersection in the modelled area and "dummy" nodes were used where zone connectors were fed into the network. In line with good coding practice, zone connectors were not fed directly into simulation nodes.

In general, standard turn capacity values were used for priority controlled intersections, roundabouts and signalised intersections. Modifications to this approach were used in the following circumstances:

- reduced capacity of very small roundabouts to 600 vph (circulating capacity) based on a manual survey of the "at capacity" roundabout immediately east of the rail line;
- reduced capacity of movements at intersections either side of the Meadowbank rail station to reflect observed congested conditions;
- reduced capacity and link speed of residential street links within the central Meadowbank area to reflect the geometrical impediments to rat running through this area; and
- increased lane capacity on Victoria Road and Church Street – Devlin Street reflecting the higher lane capacity likely as traffic "pushes through" this area.

"Left turn on red" is available at three intersections in the modelled area and this was modelled by allowing the side street left turn to run in the major road phase but as a give-way movement.

Pedestrians were considered in the signal coding with dummy phases added where the IDM data suggested pedestrian calls for more than half the phases for that approach. Figure 3.2 shows the model links and nodes.

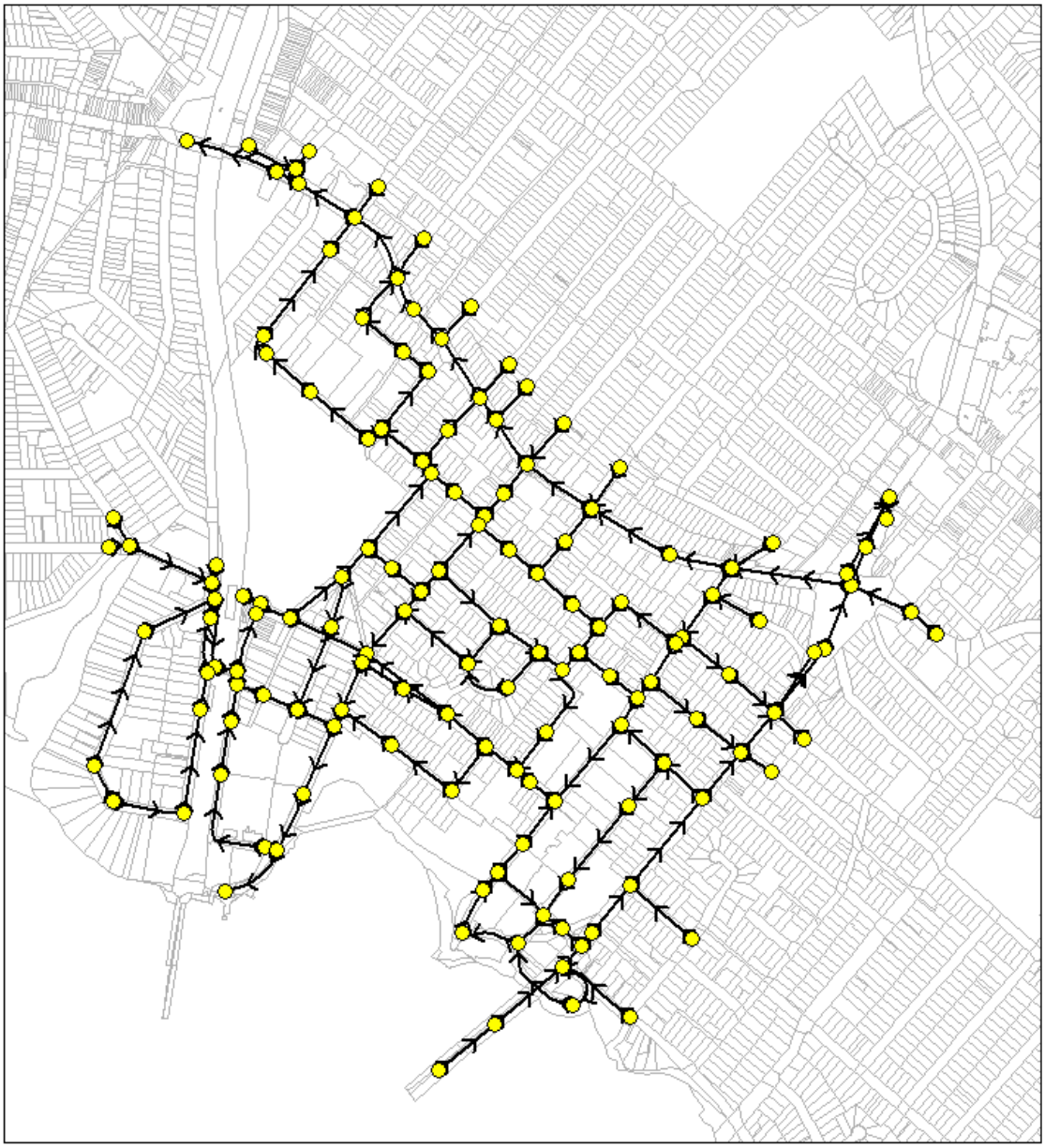


Figure 3.2: Links and Nodes

3.3 ZONE SYSTEM AND CONNECTORS

The zoning systems used is shown in Figure 3.3, along with the locations of connectors from these zones into the network.

The zoning systems has been based on aggregation of land parcels generally at the "block" level, although in more dense future development areas smaller zone sizes have been used to allow for the potential for multiple assess.

Overall the model includes 21 "external" zones and 50 "internal" zones.

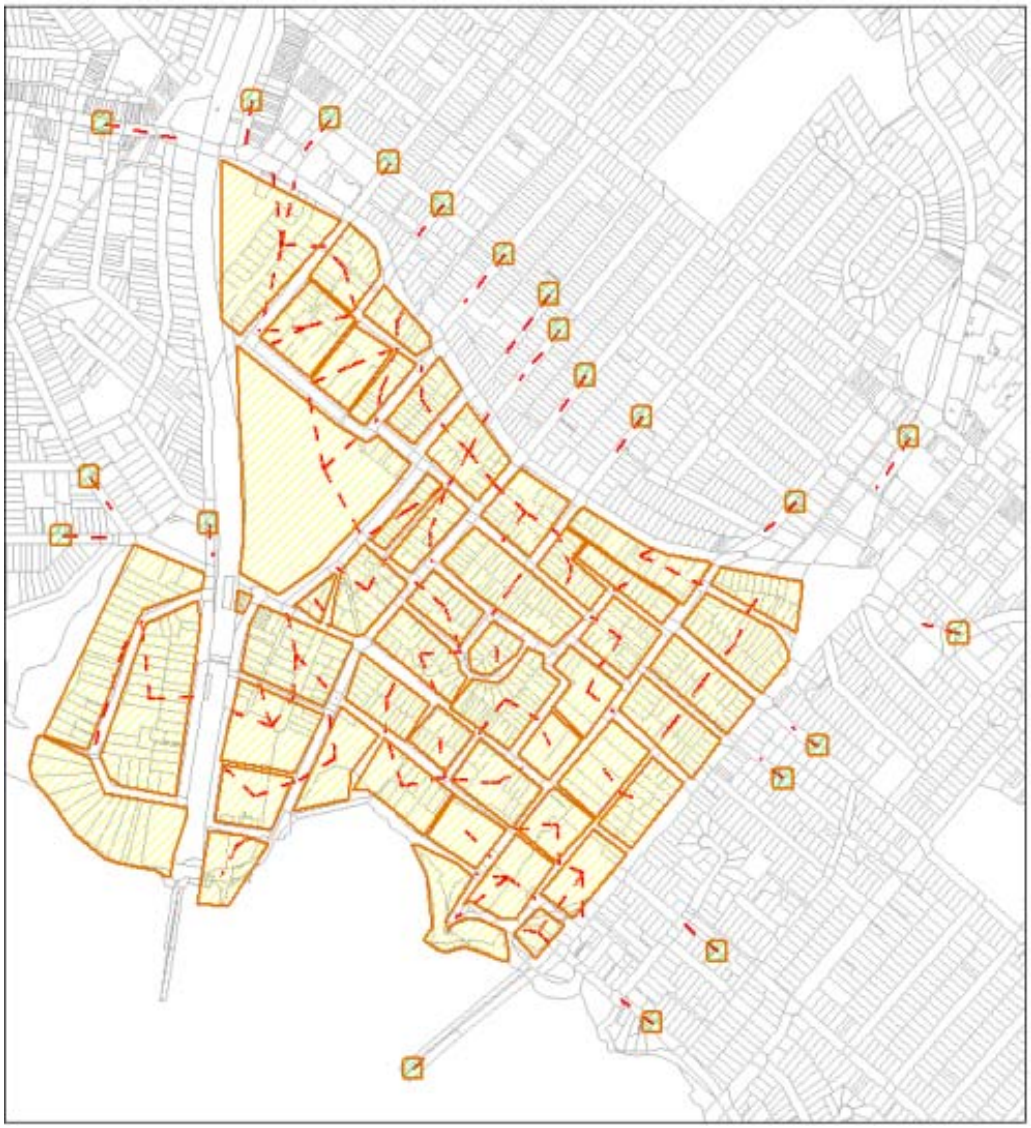


Figure 3.3: Zoning and Connectors

4. TRAFFIC MATRICES DEVELOPMENT

4.1 PEAK HOUR DETERMINATION

The approach volumes across all of the intersections counts were summated to determine the "aggregate" peak hours across the modelled area. Figure 4.1 shows this calculation.

AM Peak																						
SITE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL ALL SITES	PEAK HOUR	
7:00	176	1711	1650	1506	1722	1477	1826	1111	1098	1180	1054	1057	1257	268	156	122	320	175	270	249	18385		
7:15	174	1806	1750	1638	1862	1492	1909	1239	1249	1342	1161	1175	1295	270	160	129	380	240	280	253	19804		
7:30	209	1775	1660	1646	1766	1494	1802	1286	1280	1385	1238	1149	1386	300	150	126	382	239	340	304	19917		
7:45	235	1644	1572	1548	1703	1513	1900	1215	1218	1339	1150	1140	1378	332	167	159	403	258	326	322	19522	77628	
8:00	207	1529	1464	1509	1619	1467	1713	1191	1184	1321	1134	1152	1327	309	152	153	424	258	364	338	18815	78058	0715:0815
8:15	197	1621	1536	1669	1672	1415	1773	1156	1090	1243	1072	1066	1278	285	167	155	398	265	318	335	18711	76965	
8:30	259	1583	1479	1435	1614	1487	1700	1221	1174	1313	1134	1134	1258	332	171	163	438	270	320	337	18822	75870	
8:45	228	1394	1372	1284	1512	1310	1662	1116	1082	1244	1059	1073	1266	319	176	147	394	277	359	309	17583	73931	
PM Peak																					TOTAL ALL SITES	PEAK HOUR	
16:00	221	1625	1617	1586	1716	1324	1672	1074	1048	1133	947	958	1106	293	142	150	417	226	313	288	17856		
16:15	222	1777	1679	1520	1793	1351	1822	1099	1010	1125	975	1010	1136	313	140	140	394	242	370	337	18455		
16:30	244	1761	1742	1379	1928	1420	1918	1045	999	1090	923	882	1152	315	144	150	412	254	405	382	18545		
16:45	214	1774	1702	1398	1829	1441	1903	1106	1039	1139	956	976	1171	291	131	174	448	274	391	345	18702	73558	
17:00	254	1790	1731	1459	1856	1391	1826	1019	970	1086	895	889	1114	332	156	179	468	302	398	341	18456	74158	
17:15	239	1753	1639	1527	1792	1523	1765	1109	947	1067	947	951	1187	339	188	194	482	342	397	388	18776	74479	
17:30	257	1792	1749	1674	1906	1452	1808	1118	1020	1147	960	984	1179	350	188	178	442	328	420	411	19363	75297	1645:1745
17:45	221	1729	1680	1494	1815	1334	1837	1091	989	1134	979	1027	1231	316	141	143	436	304	402	390	18693	75288	

Figure 4.1: Peak Hour Determination

The peak hours were determined to be:

- AM peak: 0715-08:15; and
- PM peak: 1645-1745.

The relatively early AM peak appeared to be a consequence of the industrial nature of much of the employment in and around the study area, as well as the distance from the CBD for traffic travelling on Victoria Road to arrive at the CBD in conventional business hours.

4.2 INTERNAL ZONE TRAFFIC GENERATION

A database was developed containing the existing development details for each land parcel within the model boundary. This data was initially provided by City of Ryde. Spot checks were undertaken and sites that were not included in Council's database were verified through site visits. Traffic generation rates were then applied to the floor area, unit numbers etc. for each land parcel to generate initial traffic generation by parcel. Discounts to these rates were then applied based on public and active mode share splits generated from the Sydney Household Travel Survey (HTS) and the Australian Bureau of Statistics Journey to Work (JTW) data. The HTS mode splits were used for trips to employment-generating activities in Meadowbank whilst the JTW mode splits was used for residences in Meadowbank.

Following this, assumptions were made regarding the split of in/out splits in the peaks for trips for each land parcel. These assumptions were based on the development type within the parcel. An example of part of this spreadsheet is provided in Table 3.1.

Table 4.1: Year 2012 Traffic Generation Database Example

Zone	Property ID	Business Name/Type	Land Use	GFA/Dwellings (residential)(m2) or (number of dwellings)	Rate (per m^2) AM	Mode Split Discount (AM)	Rate (per m^2) PM	Mode Split Discount (PM)	AM % IN	AM % OUT	PM % IN	PM % OUT	AM Peak Traffic IN	AM Peak Traffic OUT
2062	1	Tyre Shop	Auto	525.5	0.01	5%	0.01	5%	70%	30%	30%	70%	3.5	1.5
2062	2	Smash Repairs	Auto	585.5	0.032	5%	0.041	5%	70%	30%	30%	70%	12.5	5.3
2062	3	Tyre and Wheel Supplies	Auto	622	0.01	5%	0.01	5%	70%	30%	30%	70%	4.1	1.8
2062	4	Dunlop Tyres	Auto	384	0.01	5%	0.01	5%	70%	30%	30%	70%	2.6	1.1
2062	5	West Ryde Smash Repairs	Auto	1123.5	0.032	5%	0.041	5%	70%	30%	30%	70%	23.9	10.2
2059	6	Col's Body Shop-Auto Repairs	Auto	2262.5	0.032	5%	0.041	5%	70%	30%	30%	70%	48.1	20.6
2059	7	Reece Plumbing Centre	Retail	932	0.02	5%	0.02	5%	70%	30%	30%	70%	12.4	5.3
2059	8	Repco - Auto Repairs	Auto	607	0.032	5%	0.041	5%	70%	30%	30%	70%	12.9	5.5
2059	9	Art Basic - Art Supplies	Retail	1734.5	0.052	5%	0.069	5%	60%	40%	40%	60%	51.4	34.3
2059	10	VACANT		308.5	0	0	0	0	0	0	0	0	0.0	0.0
2059	11	VACANT		416.5	0	0	0	0	0	0	0	0	0.0	0.0

Each land parcel was associated with a Traffic Zone in GIS. This relationship was used to compress the parcel-based traffic generation to zonal-based traffic generation for the AM and PM peak 1 hour periods.

4.3 EXTERNAL ZONE TRAFFIC GENERATION

The traffic generated by the external zones on the edges of the model boundary was determined from traffic count data for the area's peak hours. SATURN assigns traffic on the basis of passenger car units (PCUs) and hence the classified traffic counts at the externals of the model needed to be converted to PCUs. This was achieved by the following formula:

PCUs = Cars x 1.0 + Rigid Trucks x 2.0 + Semi-Trailers x 4.0

4.4 TRIP BALANCING

An important step in creating the prior matrix for input into matrix estimation is balancing of the zonal trip productions and attractions.

Table 4.2 shows that the unbalanced trip productions were well balanced to the trip attractions with only a 4% difference. This provides a level of confidence in the assumptions made regarding internal traffic generation rates.

The AM peak trips were then balanced to the trip production total ("OUT" trips) given the predominantly residential nature of the modelled area and the greater confidence therefore placed on trip productions in this period. Similarly, PM peak trips were balanced to the trip attraction total ("IN" trips).

This calculation resulted in a total trip generation of 16,478 PCUs in the AM peak and 16,106 PCUs in the PM peak.

Table 4.2: Zonal Trip Balancing

	UNBALANCED TRIPS				Balance to Trips OUT AM and Trips IN PM				
	PCUs	PCUs	PCUs	PCUs		PCUs	PCUs	PCUs	PCUs
ZONE	0715:0815_IN	0715:0815_OUT	1645:1745_IN	1645:1745_OUT	ZONE	0715:0815_IN	0715:0815_OUT	1645:1745_IN	1645:1745_OUT
2000	13	42	16	47	2000	13	42	16	45
2001	3317	3230	2889	3390	2001	3190	3230	2889	3244
2002	2336	2042	2229	2026	2002	2247	2042	2229	1939
2003	460	378	488	416	2003	442	378	488	398
2004	100	87	130	100	2004	96	87	130	96
2005	97	400	109	209	2005	93	400	109	200
2007	4014	3255	3613	3995	2007	3861	3255	3613	3823
2008	333	681	897	326	2008	320	681	897	312
2009	124	119	189	118	2009	119	119	189	113
2010	26	24	31	19	2010	25	24	31	18
2067	2150	3249	2133	2308	2067	2068	3249	2133	2209
2011	417	253	376	239	2011	401	253	376	229
2014	50	50	50	50	2014	48	50	50	48
2015	50	50	50	50	2015	48	50	50	48
2016	4	8	8	1	2016	4	8	8	1
2017	10	10	10	10	2017	10	10	10	10
2018	301	204	254	252	2018	290	204	254	241
2019	1	46	22	30	2019	1	46	22	29
2021	5	12	23	15	2021	4	12	23	14
2022	4	18	18	4	2022	4	18	18	4
2023	2	9	9	2	2023	2	9	9	2
2024	2	8	8	2	2024	2	8	8	2
2025	3	13	13	3	2025	3	13	13	3
2026	4	17	17	4	2026	4	17	17	4
2027	12	18	19	14	2027	11	18	19	13
2028	72	73	5	4	2028	70	73	5	4
2029	176	176	101	101	2029	170	176	101	96
2030	25	18	18	25	2030	24	18	18	24
2031	37	19	16	27	2031	35	19	16	26
2032	46	75	66	22	2032	45	75	66	21
2033	3	10	10	3	2033	2	10	10	2
2034	11	5	5	11	2034	11	5	5	11
2035	45	19	13	51	2035	43	19	13	49
2036	33	14	14	33	2036	32	14	14	32
2037	53	24	28	63	2037	51	24	28	60
2038	90	38	38	90	2038	86	38	38	86
2039	43	15	15	43	2039	41	15	15	41
2040	81	74	228	260	2040	78	74	228	249
2041	22	9	9	22	2041	21	9	9	21
2042	24	55	55	24	2042	23	55	55	23
2043	7	30	30	7	2043	7	30	30	7
2044	21	15	15	21	2044	20	15	15	20
2045	139	61	63	142	2045	134	61	63	136
2046	5	20	20	5	2046	5	20	20	5
2047	3	13	13	3	2047	3	13	13	3
2048	2	8	8	2	2048	2	8	8	2
2049	2	10	10	2	2049	2	10	10	2
2050	6	24	24	6	2050	6	24	24	6
2051	6	23	23	6	2051	6	23	23	5
2052	25	30	23	16	2052	24	30	23	15
2053	0	2	2	0	2053	0	2	2	0
2054	2	7	7	2	2054	2	7	7	2
2055	2	7	7	2	2055	2	7	7	2
2056	9	19	17	11	2056	9	19	17	11
2057	1389	595	794	1191	2057	1336	595	794	1140
2058	32	42	42	32	2058	30	42	42	30
2059	159	91	118	204	2059	153	91	118	195
2060	105	40	54	137	2060	101	40	54	131
2061	150	64	68	160	2061	144	64	68	153
2062	121	55	62	137	2062	117	55	62	131
2063	214	80	72	178	2063	206	80	72	171
2064	0	1	1	0	2064	0	1	1	0
2065	51	203	203	51	2065	49	203	203	49
2066	64	162	175	77	2066	62	162	175	73
2020	12	17	24	19	2020	11	17	24	19
2068	1	1	1	1	2068	1	1	1	1
2069	4	4	4	4	2069	4	4	4	4
2070	3	3	4	4	2070	3	3	4	4
TOTAL	17131	16478	16106	16830	TOTAL	16478	16478	16106	16106
	16478			16106					
	4%		-4%						

4.5 PRIOR MATRIX DEVELOPMENT

In SATURN, as in most matrix estimation processes, the more considered the development of the prior matrix the better the estimated matrix that results. The development of the prior matrix requires use of all available data sources as well as local knowledge to ensure that the scale relativity between major O-D movements is appropriate. If this relativity is incorrect, it is likely that the estimation process while maintain this issue as the available count data is usually insufficient to force the scale of change required.

For the Meadowbank SATURN model, the O-D data was used to fix specific cells in the matrix. After a site visit and a review of this data, some issues were identified regarding the underreporting of trips between the south and the western end of Constitution Road and between Bowden Street and the western end of Constitution Road. Accordingly, these cells in the matrices were manually adjusted and "locked" prior to the two dimensional balancing process to create the prior matrix.

The prior matrix development for each peak included the following matrix balancing process:

- a spread sheet was established with the "target" row and column trip ends based on the final-balanced trip production and attractions;
- specific O-D movements from the O-D survey and from site observations were locked in through the following iterative process;
- cell values in the matrix were factored to meet target row totals;
- cell values in the matrix were factored to meet target column totals; and
- this process was repeated until the R superscript of the differences between the matrix totals and row totals were less than 0.1% of the matrix total.

Following this process there were a number of cells with trip values between 0 and 1 and these were converted to an integer (along with all other cells in the matrix) by multiplying all cells by a factor and then truncating these, such that the matrix total was the same before and after the factoring.

4.6 MATRIX ESTIMATION AND MODEL ADJUSTMENTS

The matrix estimation process in SATURN uses its inbuilt "ME2" and "SATPIJA" processes. This requires the input "prior" matrix and a set of counts to constrain the matrix to, through multiple iterations of traffic assignment and matrix factoring. This process was repeated until the GEH criteria listed in Section 1.4 were achieved.

Network adjustments and prior matrix adjustments were made between iterations to achieve the GEH thresholds. For example, in the AM model, pinch point issues resulted eastbound on Victoria Road through the Bowden Street intersection where Victoria Road reduced to two through lanes before opening up to three lanes beyond the intersection. Under these conditions it is reasonable to increase the lane-based "push" capacity which was done to ensure that the modelled throughput matched the observed volumes in this location.

Similarly, in the PM peak, not enough traffic was moving between Church Street from the south through to Constitution Road and then westwards in the model. Given that the green arrow is almost always on for left turns from Belmore Street into Constitution Road, it is reasonable to increase the left turn capacity for this movement to 1800 PCUs per hour to encourage greater use of this route in the model and better reflect observed movement patterns.

In addition, capacity adjustments were made for the local roundabouts within Meadowbank as the geometry of these facilities makes them difficult to negotiate. The smaller roundabouts (e.g. Railway Road/bank Street) were allocated a circulating capacity of 600 PCUs whilst slightly larger roundabouts (e.g. Constitution Road/Bowden Street and Parsonage Street/Belmore Street) were allocated circulating capacities of 900 PCUs per hour. These capacities when applied in the model appear to provide a good match with observed queue lengths at these locations.

In addition to the above, a "free flow" speed of 40 kph was used for most residential streets within Meadowbank reflecting the reduced ability to accelerate to posted speeds of 50 kph with short block lengths.

These adjustments were iteratively made in the model and reviewed to ensure that the GEH comparison statistics for modelled versus actual turn volumes were achieved.

Tables 4.3 and 4.4 summaries the GEH results whilst further details are provided in Appendix B.

Table 4.3: GEH Summary Statistics – Matrix Estimation AM

Criteria	Target	Achieved
% Turn Counts < GEH 5.0	85%	87%
% Turn Counts < GEH 10.0	100%	100%

Table 4.4: GEH Summary Statistics – Matrix Estimation PM

Criteria	Target	Achieved
% Turn Counts < GEH 5.0	85%	87%
% Turn Counts < GEH 10.0	100%	100%

Figure 4.2 and Figure 4.3 provides an indication of the relative traffic generation of each zone in the study area for each peak hour.

Figure 4.2: AM Peak Hour Traffic Generation

The resulting traffic distribution in the 2012 AM peak traffic matrices is summarised as follows:

- 73% of the traffic volumes in the model are "through" movements;
- 21% of the traffic volumes in the model either enter or leave the model area; and
- 5% of the traffic volumes in the model are trips within the model area.

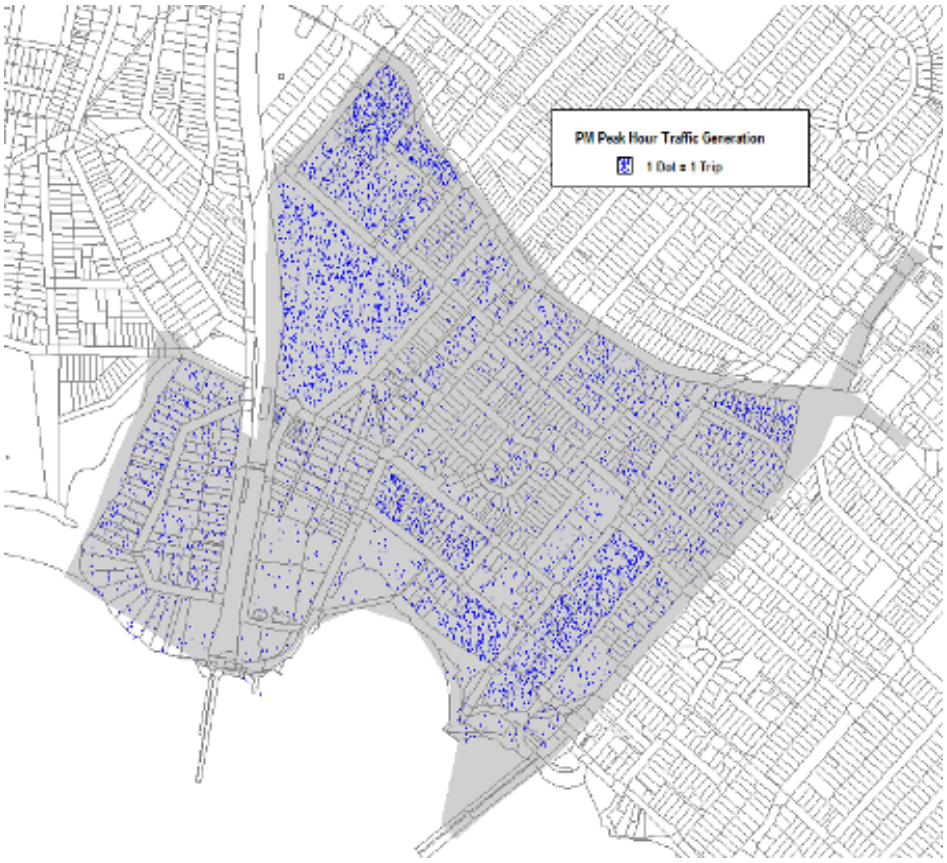


Figure 4.3: PM Peak Hour Traffic Generation

The resulting traffic distribution in the 2012 AM peak traffic matrices is summarised as follows:

- 74% of the traffic volumes in the model are “through” movements;
- 22% of the traffic volumes in the model either enter or leave the model area; and
- 4% of the traffic volumes in the model are trips within the model area.

5. MODEL VALIDATION

5.1 OBSERVED TRAFFIC CONDITIONS

Part of the model validation process included ensuring that the critical pinch points identified in the model reflected what was observed in the field such that future improvements can adequately be assessed in terms of their upstream and downstream effects.

5.1.1 Morning Peak

Key traffic issues in the morning peak are shown in Figure 5.1.

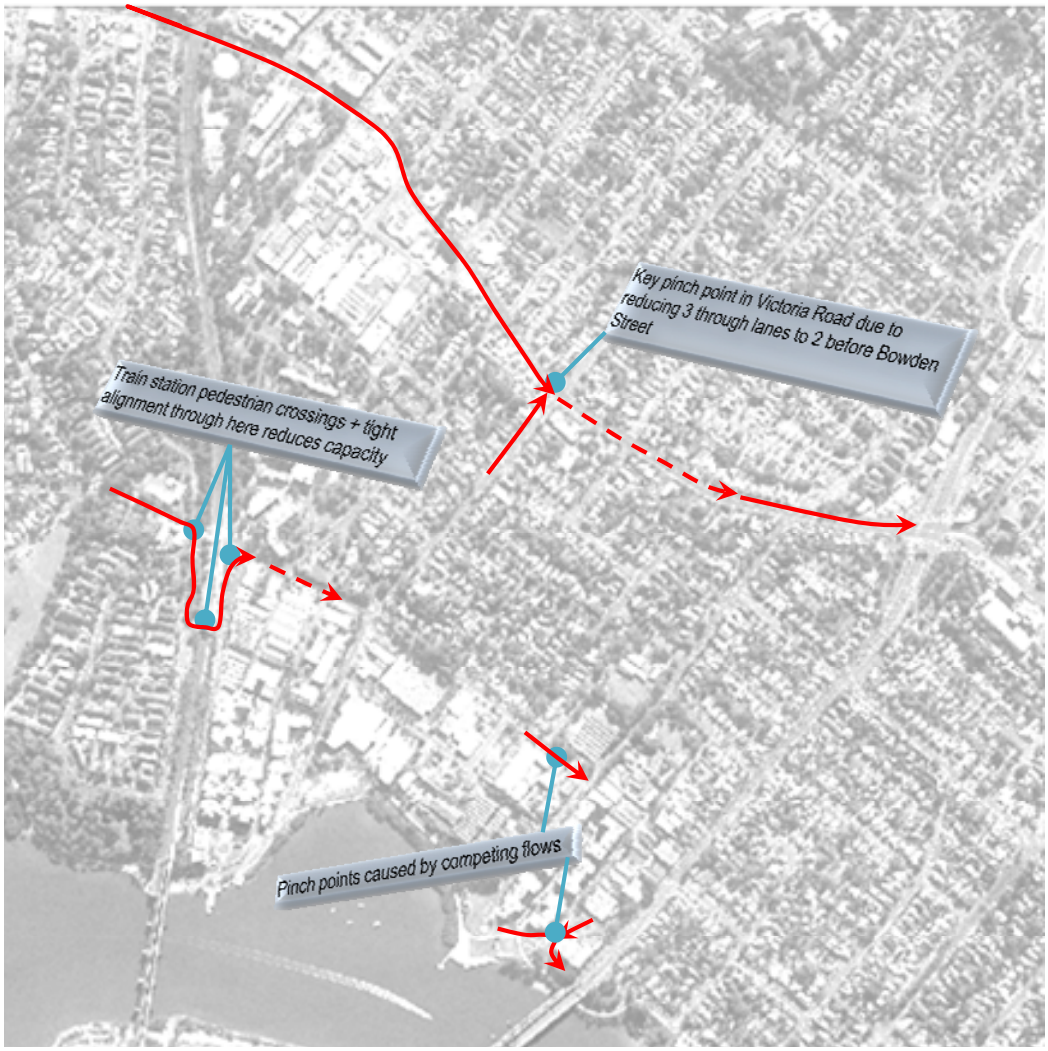


Figure 5.1: Morning Peak Traffic Issues

In general, the dominant flow in Victoria Road is west to east (i.e. inbound). On this route the Bowden street intersection is a key pinch point as the through lanes reduce from three to two to accommodate the right turn pocket. This has a major effect on queue propagation back to the east along Victoria Road. Immediately west of this intersection the third through lane is re-introduced with some respite in congested conditions until the back of the queue is reached at the Church Street interchange signals.

Bank Street-Railway Road-Constitution Road is a key "rat run" eastbound in this area, primarily used to avoid Victoria Road. The pedestrian crossing on the western side of the railway line has a significant volume of pedestrians and this pedestrian flow constantly interrupts traffic flow on Bank Street limiting capacity to an observed approximate rate of 600 PCUs per hour. Similarly, the pedestrian crossing on the eastern side of the rail line carries a lower volume of pedestrians than the eastern side however still results in a significant disruption to traffic capacity. When no pedestrians are present, the capacity in this area is limited by the tight geometry of in the area and the associated roundabout at Station Road.

Further east, there is a heavy flow effectively turning right from Parsonage Street into the loop road to access Concord Road southbound, which interrupts movements from the Concorde Road westbound off ramp to Well Street.

5.1.2 Afternoon Peak

Key traffic issues in the afternoon peak are shown in Figure 5.2.

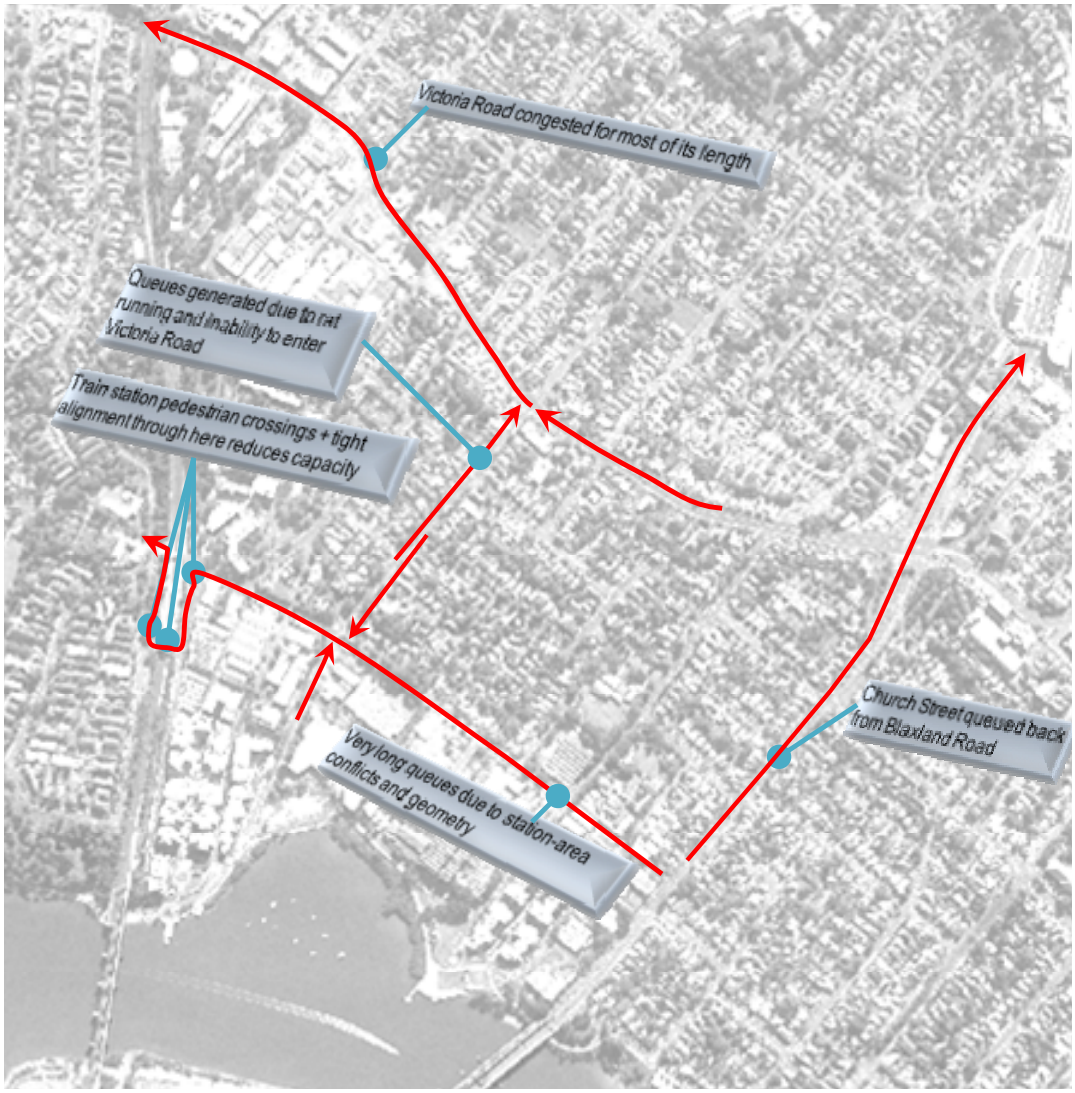


Figure 5.2: Afternoon Peak Traffic Issues

The afternoon peak queuing in Meadowbank is visibly more significant that the morning peak queuing and this reduced ability to pass through the area may be contributing to the generally lower observed traffic matrix in the PM peak compared to the AM peak (approximately 6% lower).

In the PM peak, queuing westbound in Victoria Road is extensive, generated from beyond the Meadowbank area but spilling back into this area. Similarly, congestion on Church Street due to the Blaxland Road signals extends back down towards the Parramatta River and encourages through movements along the alternative Constitution Road route.

The key pinch point for Constitution Road westbound movements involves a variety of factors around the station area. These include the two pedestrian crossings either side of the station as well as the bridge geometry and roundabout at the Railway Road intersection. This area generates queues back down Constitution Road as far back as Belmore Street. Some traffic also attempt to divert from this rat run back towards Victoria Road via Bowden Street and Hermitage Road and these intersections with Victoria Road also show long queues. In addition, the level of queuing in Constitution Road is also encouraging some of these through movements to use other residential access streets such as Squire Street, Thorn Street and Macpherson Street.

5.2 TRAVEL TIME VALIDATION

Travel time surveys were conducted on four key routes in the area and compared to the model results for validation purposes. Five travel time runs were conducted for each route in each direction of travel and some of the routes showed significant variations in travel times between runs. In SATURN the determination of travel times required the manual extraction on "nodal" delays and "link" travel times and the addition of these to create "route" travel times.

Figure 5.2 shows the travel time routes used whilst Tables 5.1 and 5.2 document the comparison of surveyed to modelled travel times for each route.

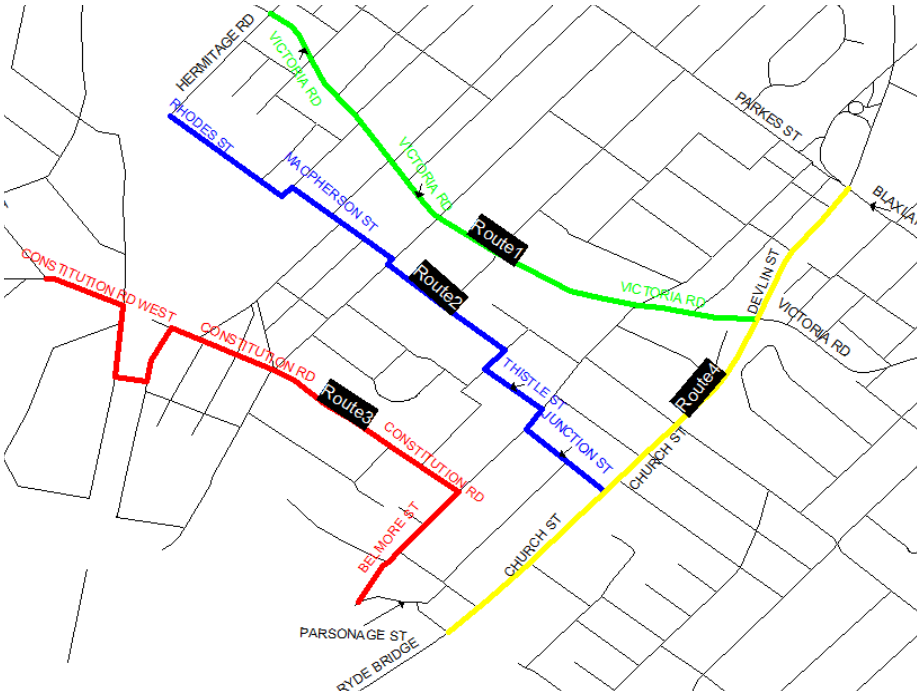


Figure 5.3: Travel Time Routes

Table 5.1: Travel Time Comparison - AM Peak

			Maximum Travel Time	Minimum Travel Time	Average Travel Time	Model Travel Time	% Difference
Route 1	Eastbound	AM Peak	4:45	3:46	4:05	3:25	-16%
	Westbound	AM Peak	2:02	1:20	1:42	1:45	3%
Route 2	Eastbound	AM Peak	4:06	2:40	3:16	2:56	-10%
	Westbound	AM Peak	3:46	2:43	3:17	3:11	-3%
Route 3	Eastbound	AM Peak	4:39	2:57	3:56	4:11	6%
	Westbound	AM Peak	3:56	2:30	2:54	2:33	-12%
Route 4	Northbound	AM Peak	3:10	2:25	2:47	2:32	-9%
	Southbound	AM Peak	3:33	1:21	2:12	2:28	12%

Table 5.2: Travel Time Comparison - PM Peak

Route 1	Eastbound	PM Peak	3:07	1:14	2:18	2:05	-9%
	Westbound	PM Peak	9:38	4:38	8:13	7:39	-7%
Route 2	Eastbound	PM Peak	4:08	3:13	3:39	3:06	-15%
	Westbound	PM Peak	4:30	2:31	3:30	3:23	-3%
Route 3	Eastbound	PM Peak	3:24	2:54	3:06	3:32	14%
	Westbound	PM Peak	11:35	2:52	6:25	6:20	-1%
Route 4	Northbound	PM Peak	3:26	1:18	2:19	2:17	-1%
	Southbound	PM Peak	5:21	0:53	2:47	2:34	-8%

Tables 5.1 and 5.2 show that the modelled travel times compare well to the surveyed travel times and are within the model validation criteria documented in Section 1.4. The one exception is Route 1 eastbound in the AM peak that is 16% of the surveyed average. This travel time was observed on site as being highly variable and based on conditions at the M3 interchange. Also, this route is not critical to the route choice or performance results of other routes in Meadowbank as there is no route choice in the model west of Meadowbank that would shift vehicles away from Constitution Road and back onto Victoria Road because of this travel time difference. Accordingly, the 16% travel time difference in deemed as acceptable.

5.3 QUEUE LENGTH REASONABLENESS CHECK

Back of queue surveys were conducted on the side street approaches three key signalised intersections in the study area to provide a "spot check" of the performance of the model regarding matching observed queuing behaviour.

Table 5.3 provides this comparison.

Table 5.3: Back of Queue Comparison

AM Peak			
Road Name		Observed Queues	Modelled Queues
Hermitage Road(Northbound)	Left & Through	2	2
	Right & Through	2	2
Bowden Street(Northbound)	Left & Through	11	4
	Right	11	8
Morrison Road(Eastbound)	Left & Through	18	13
Junction Street(Eastbound)	Left & Right	5	8
	Right	5	3
PM Peak			
Road Name		Observed Queues	Modelled Queues
Hermitage Road(Northbound)	Left & Through	12	15
	Right & Through	4	7
Bowden Street(Northbound)	Left & Through	12	5
	Right	11	9
Morrison Road(Eastbound)	Left & Through	11	18
Junction Street(Eastbound)	Left & Right	5	9
	Right	4	3

The modelled queues fall within the wide range of maximum and minimum queue lengths observed with a general tendency towards the average value.

6. YEAR 2012 BASE MODEL RESULTS

Key parameters from the 2012 base model are summarised as follows:

- there are approximately 16,970 traffic movements in the model area in the AM peak with approximately 17,017 movements in the PM peak
- in the morning peak, 28 of the 110 intersections in the area are at capacity with most of these along Victoria Road and Church Street-Devlin Street;
- the highest volume intersections are along Church Street, followed by Victoria Road. Victoria Road volumes at some location are capacity-constrained by critical pinch points as discussed in Section 5.1;
- in the AM peak:
  - total travel time in the network is 2,965 PCU-hours;
  - total travel distance is 22,318 PCU-km;
  - average travel speed of 7.5 kph;
  - over capacity queues introduce 830 PCU-hours of delay; and
  - number of stops = 37,425
- in the PM peak:
  - total travel time in the network is 3,296 PCU-hours;
  - total travel distance is 21,894 PCU-km;
  - average travel speed of 6.6 kph;
  - over capacity queues introduce 1,280 PCU-hours of delay; and
  - number of stops = 47,573.

The PM peak congestion conditions are worse, which matches field observations. The PM peak effects are also a consequence of downstream effects in Victoria Road west of the study area in the PM peak.

Figures 6.1 and 6.2 provide maps of key intersection volumes for the 2012 base year.

The “supply” volumes are denoted as “actual” volumes in SATURN and correspond to the traffic volumes that get through the intersection in the modelled period (as opposed to the demand flow which may not necessarily get through the intersection and would leave residual queues).

Further results in the form of SATURN network plots are provided in Appendix C.

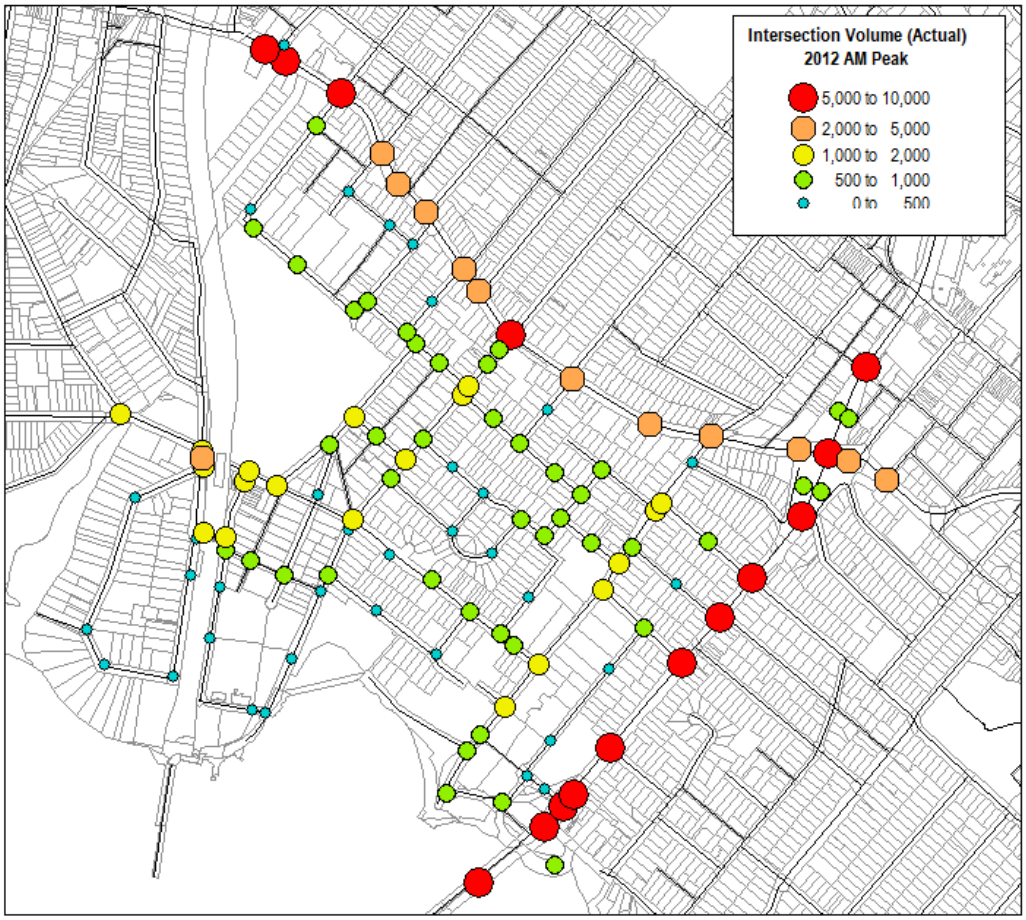


Figure 6.1: 2012 AM Peak Intersection Supply Volumes

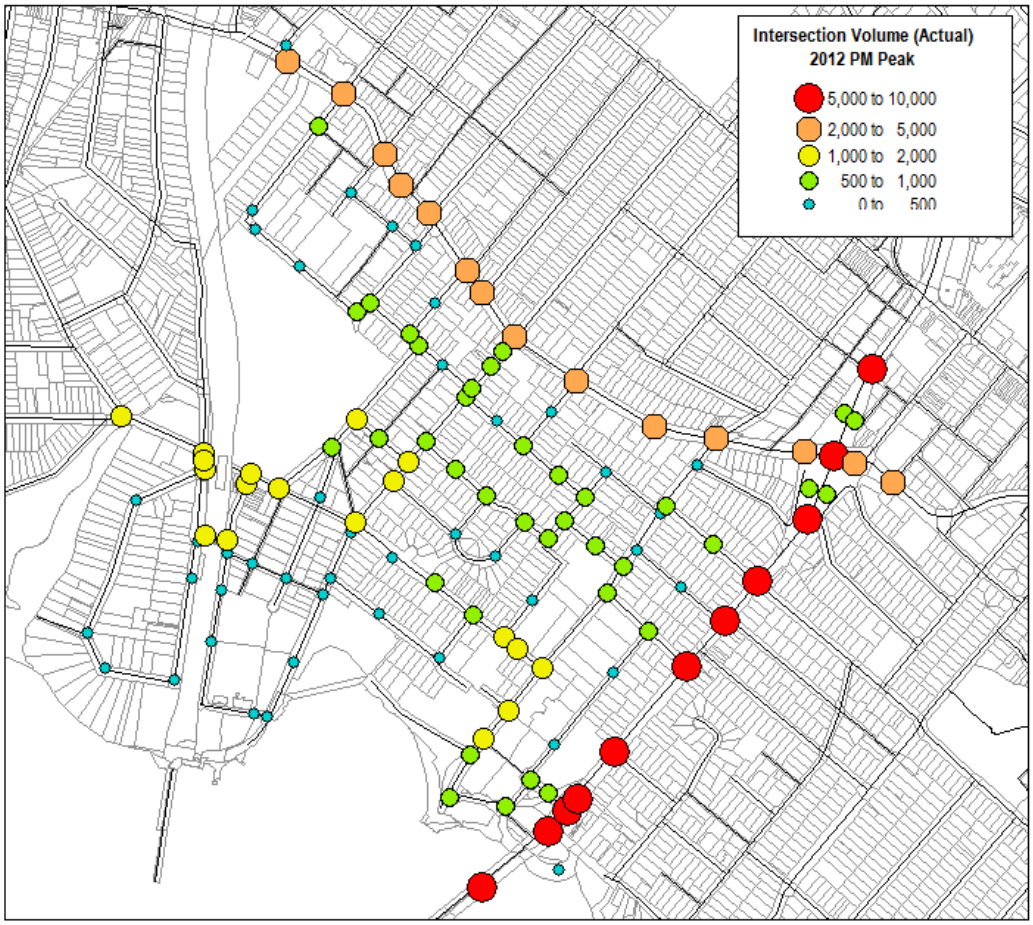


Figure 6.2: 2012 PM Peak Intersection Supply Volumes

7. CALIBRATION/VALIDATION STATEMENT

The Meadowbank base year (2012) SATURN model has been calibrated to existing count data and sufficiently validated to queue length and travel time data to enable it to be used as a basis for creating 2031 Meadowbank SATURN models.

On this basis, it is deemed that the 2012 models are fit for purpose.

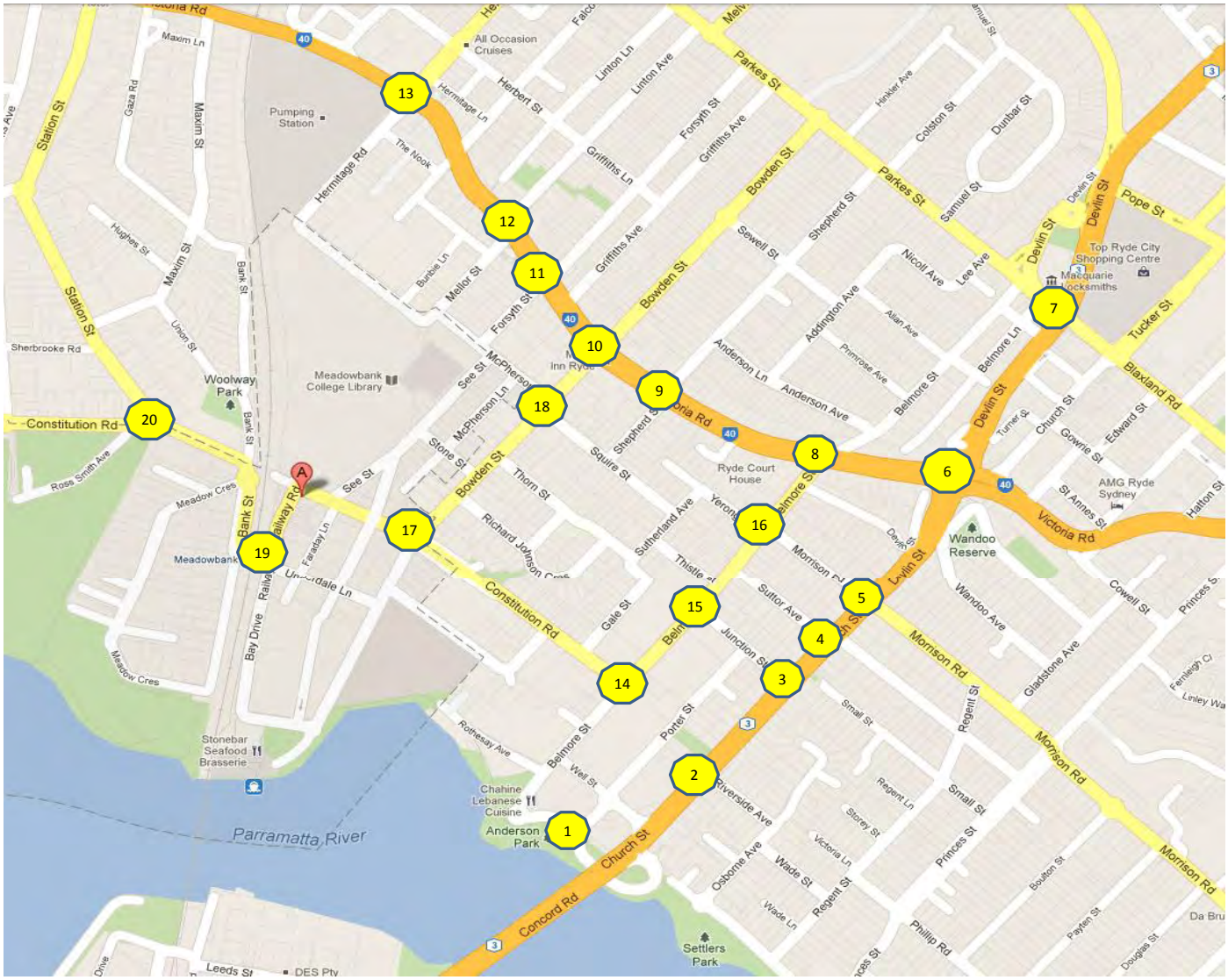
APPENDIX A

TRAFFIC SURVEYS

Meadowbank Intersection Report

Intersection Counts

Site No.	Locations	Type	Date	Time
1	Parsonage St & The Loop Rd	R'bout	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
2	Church St & Riverside Ave	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
3	Church St & Junction St	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
4	Church St & Suttor Ave	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
5	Church St & Morrison Rd	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
6	Victoria Rd & Devlin St	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
7	Church St & Blaxland Rd	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
8	Victoria Rd & Belmore St	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
9	Victoria Rd & Shepherd St	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
10	Victoria Rd & Bowden St	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
11	Victoria Rd & Forsyth St	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
12	Victoria Rd & Mellor St	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
13	Victoria Rd & Hermitage Rd	Int	Wednesday 4th April	7:00-9:00 / 16:00-18:00
14	Belmore St & Constitution Rd	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
15	Belmore St & Junction St	Int	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
16	Belmore St & Morrison Rd / Yerong St	R'bout	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
17	Bowden St & Constitution Rd	R'bout	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
18	Bowden St & Squire St / McPherson St	R'bout	Tuesday 3rd April	7:00-9:00 / 16:00-18:00
19	Railway Rd & Bank St	R'bout	Wednesday 4th April	7:00-9:00 / 16:00-18:00
20	Constitution Rd & Station St	R'bout	Wednesday 4th April	7:00-9:00 / 16:00-18:00



TDC
Traffic Data & Control

Survey Location:	Parsonage St & The Loop Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		The Loop Rd Southbound Through				The Loop Rd Southbound Right Turn				The Loop Rd Southbound U Turn				The Loop Rd Northbound Left Turn				The Loop Rd Northbound Through				The Loop Rd Northbound U Turn				Parsonage St Eastbound Left Turn				Parsonage St Eastbound Right Turn				Parsonage St Eastbound U Turn				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	5	1	0	1	61	1	0	0	0	0	0	0	10	0	0	0	3	0	0	0	0	0	0	0	5	0	0	0	87	0	0	1	1	0	0	0	
7:15	7:30	7	0	0	0	56	0	1	1	0	0	0	0	12	1	0	0	3	0	0	1	0	0	0	0	6	0	0	0	84	2	0	0	0	0	0	0	
7:30	7:45	4	0	0	2	76	0	0	3	0	0	0	0	14	0	0	0	2	0	0	0	0	0	0	0	4	1	0	0	102	1	0	0	0	0	0	0	
7:45	8:00	5	0	0	0	121	1	0	1	0	0	0	0	18	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	79	2	0	1	0	0	0	0	794
8:00	8:15	6	0	0	0	77	0	0	3	0	0	0	0	12	0	0	0	4	0	0	0	0	0	0	0	5	0	1	0	98	0	0	0	1	0	0	0	825
8:15	8:30	11	0	0	0	65	3	0	1	0	0	0	0	13	0	0	0	3	0	0	0	0	0	0	0	3	2	0	0	95	1	0	0	0	0	0	0	848
8:30	8:45	12	0	0	0	111	4	0	0	1	0	0	0	15	0	0	0	7	0	0	0	0	0	0	0	9	0	0	0	99	0	0	0	1	0	0	0	898
8:45	9:00	6	0	0	0	100	1	0	0	0	0	0	0	12	0	0	0	6	1	0	0	0	0	0	0	8	1	0	0	90	3	0	0	0	0	0	0	891
Period Total		56	1	0	3	667	10	1	9	1	0	0	0	106	1	0	0	30	1	0	1	0	0	0	0	45	4	1	0	734	9	0	2	3	0	0	0	
Peak Period : 7:45am - 8:45am		34	0	0	0	374	8	0	5	1	0	0	0	58	0	0	0	16	0	0	0	0	0	0	0	22	2	1	0	371	3	0	1	2	0	0	0	

15 Minutes Starting	The Loop Rd SB Pedestrians	The Loop Rd NB Pedestrians	Parsonage St EB Pedestrians	15 Minute Total
7:00	0	0	0	**0**
7:15	0	1	0	**1**
7:30	0	0	0	**0**
7:45	0	0	0	**0**
8:00	0	0	0	**0**
8:15	0	0	0	**0**
8:30	0	0	0	**0**
8:45	0	0	0	**0**
2 Hr Total	**0**	**1**	**0**	
Peak Period	**0**	**0**	**0**	

Time Interval : 4:00pm - 6:00pm		The Loop Rd Southbound Through				The Loop Rd Southbound Right Turn				The Loop Rd Southbound U Turn				The Loop Rd Northbound Left Turn				The Loop Rd Northbound Through				The Loop Rd Northbound U Turn				Parsonage St Eastbound Left Turn				Parsonage St Eastbound Right Turn				Parsonage St Eastbound U Turn				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	1	0	0	1	113	2	0	1	0	0	0	0	30	1	0	0	10	0	0	0	0	0	0	0	5	0	1	0	56	0	0	0	0	0	0	0	
16:15	16:30	1	0	0	0	117	2	0	0	0	0	0	0	34	1	0	0	6	1	0	0	0	0	0	0	8	1	0	0	51	0	0	0	0	0	0	0	
16:30	16:45	5	0	0	0	119	1	0	1	1	0	0	0	31	1	0	1	6	1	0	0	0	0	0	0	7	0	0	0	68	1	0	0	1	0	0	0	
16:45	17:00	1	0	0	0	137	1	0	0	0	0	0	0	23	0	0	1	7	0	1	0	0	0	0	0	0	0	0	0	40	1	0	1	1	0	0	0	901
17:00	17:15	1	0	0	0	148	0	0	0	1	0	0	0	26	0	0	2	7	0	0	0	0	0	0	0	8	0	0	0	59	0	0	1	1	0	0	0	934
17:15	17:30	4	0	0	0	141	2	0	0	0	0	0	0	24	0	0	0	5	0	0	0	0	0	0	0	5	0	0	0	56	0	0	1	1	0	0	0	951
17:30	17:45	4	0	0	0	162	0	0	1	0	0	0	0	20	0	0	0	6	0	0	0	0	0	0	0	9	0	0	1	54	0	0	0	0	0	0	0	964
17:45	18:00	3	0	0	0	145	1	0	0	0	0	0	0	18	0	0	1	4	0	0	0	0	0	0	0	6	0	0	0	41	1	0	1	0	0	0	0	971
Period Total		20	0	0	1	1082	9	0	3	2	0	0	0	206	3	0	5	51	2	1	0	0	0	0	0	48	1	1	1	425	3	0	4	4	0	0	0	
Peak Period : 5:00pm - 6:00pm		12	0	0	0	596	3	0	1	1	0	0	0	88	0	0	3	22	0	0	0	0	0	0	0	28	0	0	1	210	1	0	3	2	0	0	0	

15 Minutes Starting	The Loop Rd SB Pedestrians	The Loop Rd NB Pedestrians	Parsonage St EB Pedestrians	15 Minute Total
16:00	0	0	0	**0**
16:15	0	0	0	**0**
16:30	0	0	0	**0**
16:45	0	0	0	**0**
17:00	0	0	0	**0**
17:15	0	0	0	**0**
17:30	0	0	0	**0**
17:45	0	1	0	**1**
2 Hr Total	**0**	**1**	**0**	
Peak Period	**0**	**1**	**0**	

TDC
Traffic Data & Control

Survey Location:	Church Rd & Riverside Ave, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Church St Southbound Left Turn Cars	Church St Southbound Left Turn Medium Truck	Church St Southbound Left Turn Heavy Truck	Church St Southbound Left Turn Bicycles	Church St Southbound Through Cars	Church St Southbound Through Medium Truck	Church St Southbound Through Heavy Truck	Church St Southbound Through Bicycles	Riverside Ave Westbound Left Turn Cars	Riverside Ave Westbound Left Turn Medium Truck	Riverside Ave Westbound Left Turn Heavy Truck	Riverside Ave Westbound Left Turn Bicycles	Church St Northbound Through Cars	Church St Northbound Through Medium Truck	Church St Northbound Through Heavy Truck	Church St Northbound Through Bicycles	Hourly Total
7:00	7:15	27	1	0	0	808	22	5	5	64	2	0	0	721	42	7	7	
7:15	7:30	22	2	0	1	911	20	7	2	79	1	0	1	720	27	7	6	
7:30	7:45	21	1	0	0	878	23	7	8	105	0	0	1	688	30	9	4	
7:45	8:00	21	1	0	0	825	21	14	4	104	0	0	1	610	33	4	6	6936
8:00	8:15	19	1	1	0	747	12	9	9	110	0	0	1	595	17	5	3	6754
8:15	8:30	26	0	0	0	749	29	12	7	83	1	0	1	664	34	7	8	6569
8:30	8:45	22	2	0	0	739	22	9	2	84	1	0	0	656	33	9	4	6377
8:45	9:00	27	0	0	0	692	25	10	5	69	1	0	0	516	33	8	8	6127
Period Total		185	8	1	1	6349	174	73	42	698	6	0	5	5170	249	56	46	
Peak Period : 7:00am - 8:00am		91	5	0	1	3422	86	33	19	352	3	0	3	2739	132	27	23	

15 Minutes Starting	Church St SB Pedestrians	Riverside Ave WB Pedestrians	Church St NB Pedestrians	15 Minute Total
7:00	0	0	0	0
7:15	0	0	0	0
7:30	0	1	0	1
7:45	0	0	0	0
8:00	0	0	0	0
8:15	0	1	0	1
8:30	0	0	0	0
8:45	0	0	0	0
2 Hr Total	0	2	0	
Peak Period	0	1	0	

Time Interval : 4:00pm - 6:00pm		Church St Southbound Left Turn Cars	Church St Southbound Left Turn Medium Truck	Church St Southbound Left Turn Heavy Truck	Church St Southbound Left Turn Bicycles	Church St Southbound Through Cars	Church St Southbound Through Medium Truck	Church St Southbound Through Heavy Truck	Church St Southbound Through Bicycles	Riverside Ave Westbound Left Turn Cars	Riverside Ave Westbound Left Turn Medium Truck	Riverside Ave Westbound Left Turn Heavy Truck	Riverside Ave Westbound Left Turn Bicycles	Church St Northbound Through Cars	Church St Northbound Through Medium Truck	Church St Northbound Through Heavy Truck	Church St Northbound Through Bicycles	Hourly Total
16:00	16:15	31	0	0	0	739	36	8	6	52	0	0	0	714	23	8	8	
16:15	16:30	18	2	0	0	801	38	5	3	60	1	0	0	817	15	10	7	
16:30	16:45	23	2	0	0	816	36	4	11	67	1	0	2	780	11	4	4	
16:45	17:00	24	0	0	0	826	37	2	6	64	1	1	0	793	5	7	8	6937
17:00	17:15	24	0	0	0	832	26	3	4	43	0	0	3	834	9	7	5	7102
17:15	17:30	33	0	0	0	772	19	3	11	60	0	0	0	835	10	6	4	7078
17:30	17:45	28	0	0	0	805	27	6	9	36	0	0	0	856	11	9	5	7109
17:45	18:00	30	1	0	0	803	22	3	8	41	1	0	0	793	13	7	7	7064
Period Total		211	5	0	0	6394	241	34	58	423	4	1	5	6422	97	58	48	
Peak Period : 4:45pm - 5:45pm		109	0	0	0	3235	109	14	30	203	1	1	3	3318	35	29	22	

15 Minutes Starting	Church St SB Pedestrians	Riverside Ave WB Pedestrians	Church St NB Pedestrians	15 Minute Total
16:00	0	4	0	4
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	1	0	1
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0
2 Hr Total	0	5	0	
Peak Period	0	1	0	

TDC
Traffic Data & Control

Survey Location:	Church St & Junction St, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Church St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Church St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Junction St Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
7:00	7:15	792	22	5	4	0	0	0	0	0	0	0	0	5	2	0	0	713	39	7	7	0	0	0	0	11	2	0	0	39	2	0	0	0	0	0	0	
7:15	7:30	909	18	7	1	0	0	0	0	0	0	0	0	2	0	0	0	713	24	8	8	0	0	0	0	17	0	0	0	41	1	0	1	0	0	0	0	
7:30	7:45	839	22	8	6	0	0	0	0	0	0	0	0	2	0	0	0	662	39	5	5	0	0	0	0	17	1	1	0	50	3	0	0	0	0	0	0	
7:45	8:00	821	19	12	1	0	0	0	0	0	0	0	0	0	0	0	0	615	34	4	7	0	0	0	0	19	0	0	0	38	1	0	1	0	0	0	0	**6632**
8:00	8:15	730	14	8	9	0	0	0	0	0	0	0	0	3	0	0	0	621	19	4	5	0	0	0	0	22	0	0	0	27	2	0	0	0	0	0	0	**6446**
8:15	8:30	716	30	10	6	0	0	0	0	0	0	0	0	5	1	0	0	660	30	8	8	0	0	0	0	11	1	0	0	49	1	0	0	0	0	0	0	**6232**
8:30	8:45	704	24	9	2	0	0	0	0	0	0	0	0	5	0	0	1	631	32	6	5	0	0	0	0	17	0	0	0	42	1	0	0	0	0	0	0	**6051**
8:45	9:00	686	26	10	3	0	0	0	0	0	0	0	0	4	1	0	0	543	30	8	5	0	0	0	0	19	1	0	0	36	0	0	0	0	0	0	0	**5851**
Period Total		**6197**	**175**	**69**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**4**	**0**	**1**	**5158**	**247**	**50**	**50**	**0**	**0**	**0**	**0**	**133**	**5**	**1**	**0**	**322**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	
Peak Period : 7:00am - 8:00am		**3361**	**81**	**32**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**2**	**0**	**0**	**2703**	**136**	**24**	**27**	**0**	**0**	**0**	**0**	**64**	**3**	**1**	**0**	**168**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Church St SB Pedestrians	Church St NB Pedestrians	Junction St EB Pedestrians	15 Minute Total
7:00	1	0	0	**1**
7:15	1	0	0	**1**
7:30	1	0	0	**1**
7:45	1	0	0	**1**
8:00	0	0	2	**2**
8:15	0	0	0	**0**
8:30	1	0	0	**1**
8:45	4	0	0	**4**
2 Hr Total	**9**	**0**	**2**	
Peak Period	**4**	**0**	**0**	

Time Interval : 4:00pm - 6:00pm		Church St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Church St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Junction St Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
16:00	16:15	747	32	8	3	0	0	0	0	0	0	0	0	17	0	0	0	719	25	6	6	0	0	0	0	13	0	0	0	40	1	0	0	0	0	0	0	
16:15	16:30	766	39	5	3	0	0	0	0	0	0	0	0	15	2	0	0	772	18	10	6	0	0	0	0	6	1	0	0	35	1	0	0	0	0	0	0	
16:30	16:45	810	40	4	6	0	0	0	0	0	0	0	0	13	0	0	0	798	12	4	4	0	0	0	0	7	0	0	0	44	0	0	0	0	0	0	0	
16:45	17:00	803	35	3	5	0	0	0	0	0	0	0	0	20	0	1	0	776	7	5	8	0	0	0	0	12	0	1	0	26	0	0	0	0	0	0	0	**6740**
17:00	17:15	820	28	3	2	0	0	0	0	0	0	0	0	13	1	0	0	800	10	6	6	0	0	0	0	11	0	0	0	31	0	0	0	0	0	0	0	**6854**
17:15	17:30	711	15	2	10	0	0	0	0	0	0	0	0	19	0	0	0	803	6	5	5	0	0	0	0	10	0	0	0	52	1	0	0	0	0	0	0	**6814**
17:30	17:45	784	27	6	5	0	0	0	0	0	0	0	0	15	0	0	0	830	7	9	5	0	0	0	0	15	0	0	0	46	0	0	0	0	0	0	0	**6821**
17:45	18:00	789	21	4	8	0	0	0	0	0	0	0	0	10	0	0	0	773	10	6	5	0	0	0	0	13	1	0	0	39	1	0	0	0	0	0	0	**6799**
Period Total		**6230**	**237**	**35**	**42**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**122**	**3**	**1**	**0**	**6271**	**95**	**51**	**45**	**0**	**0**	**0**	**0**	**87**	**2**	**1**	**0**	**313**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	
Peak Period : 4:15pm - 5:15pm		**3199**	**142**	**15**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**61**	**3**	**1**	**0**	**3146**	**47**	**25**	**24**	**0**	**0**	**0**	**0**	**36**	**1**	**1**	**0**	**136**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Church St SB Pedestrians	Church St NB Pedestrians	Junction St EB Pedestrians	15 Minute Total
16:00	2	0	1	**3**
16:15	3	0	1	**4**
16:30	6	0	0	**6**
16:45	2	0	1	**3**
17:00	3	0	0	**3**
17:15	2	0	3	**5**
17:30	0	0	1	**1**
17:45	0	0	1	**1**
2 Hr Total	**18**	**0**	**8**	
Peak Period	**14**	**0**	**2**	

TDC
Traffic Data & Control

Survey Location:	Church St & Suttor Ave, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Church St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Church St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Suttor Ave Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Hourly Total
7:00	7:15	749	15	8	4	3	0	0	0	671	37	6	10	2	1	0	0	
7:15	7:30	831	18	6	1	3	0	0	0	731	34	7	3	4	0	0	0	
7:30	7:45	843	10	9	2	1	0	0	0	728	32	2	4	15	0	0	0	
7:45	8:00	779	19	10	2	1	0	0	0	689	19	9	11	9	0	0	0	6338
8:00	8:15	747	33	9	10	2	1	0	0	635	35	4	14	19	0	0	0	6341
8:15	8:30	841	25	9	7	1	0	0	0	718	43	5	6	13	1	0	0	6372
8:30	8:45	693	31	7	2	0	0	0	0	632	49	3	2	16	0	0	0	6161
8:45	9:00	584	24	14	3	1	0	0	0	587	43	10	4	14	0	0	0	5897
Period Total		6067	175	72	31	12	1	0	0	5391	292	46	54	92	2	0	0	
Peak Period : 7:30am - 8:30am		3210	87	37	21	5	1	0	0	2770	129	20	35	56	1	0	0	

15 Minutes Starting	Church St SB Pedestrians	Simpson St WB Pedestrians	Church St NB Pedestrians	Suttor Ave EB Pedestrians	15 Minute Total
7:00	0	0	0	0	0
7:15	0	0	0	3	3
7:30	0	1	0	1	2
7:45	0	0	0	1	1
8:00	0	0	0	0	0
8:15	0	1	0	1	2
8:30	0	0	0	0	0
8:45	0	0	0	1	1
2 Hr Total	0	2	0	7	
Peak Period	0	2	0	3	

Time Interval : 4:00pm - 6:00pm		Church St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Church St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Suttor Ave Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Hourly Total
16:00	16:15	745	31	11	2	3	0	0	0	769	12	4	7	2	0	0	0	
16:15	16:30	733	16	7	0	5	0	0	0	723	16	9	10	1	0	0	0	
16:30	16:45	571	18	8	0	3	0	0	0	741	16	9	8	5	0	0	0	
16:45	17:00	592	21	2	7	6	0	0	0	759	6	4	0	1	0	0	0	5883
17:00	17:15	572	26	3	2	2	0	0	0	824	9	4	6	10	0	0	1	5756
17:15	17:30	678	26	3	3	2	0	0	0	792	7	8	3	5	0	0	0	5763
17:30	17:45	755	31	8	6	1	0	0	0	846	12	5	5	5	0	0	0	6058
17:45	18:00	664	20	6	5	3	0	0	0	767	14	4	8	3	0	0	0	6154
Period Total		5310	189	48	25	25	0	0	0	6221	92	47	47	32	0	0	1	
Peak Period : 5:00pm - 6:00pm		2669	103	20	16	8	0	0	0	3229	42	21	22	23	0	0	1	

15 Minutes Starting	Church St SB Pedestrians	Simpson St WB Pedestrians	Church St NB Pedestrians	Suttor Ave EB Pedestrians	15 Minute Total
16:00	0	1	0	0	1
16:15	0	0	0	1	1
16:30	0	3	0	1	4
16:45	0	1	0	2	3
17:00	0	0	0	1	1
17:15	0	0	0	0	0
17:30	0	0	0	1	1
17:45	0	0	0	1	1
2 Hr Total	0	5	0	7	
Peak Period	0	0	0	3	

TDC
Traffic Data & Control

Survey Location:	Church St & Morrison Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am	Devlin St Southbound Left Turn				Devlin St Southbound Through				Morrison Rd Westbound Left Turn				Morrison Rd Westbound Through				Church St Northbound Left Turn				Church St Northbound Through				Morrison Rd Eastbound Left Turn				Morrison Rd Eastbound Through				Hourly Total
	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00 7:15	36	1	0	1	742	21	5	5	37	0	0	0	32	0	1	1	0	0	0	0	707	58	7	7	3	1	0	0	55	1	1	0	
7:15 7:30	50	0	2	0	881	16	7	1	40	0	0	0	33	1	0	0	1	0	0	0	731	27	8	8	1	1	0	1	52	1	0	0	
7:30 7:45	58	1	0	0	790	21	9	10	44	0	0	0	43	0	1	1	1	0	0	0	680	39	5	5	4	1	0	0	52	0	1	0	
7:45 8:00	52	2	1	0	763	19	13	2	53	1	0	0	49	1	0	0	3	0	0	0	630	34	5	7	5	0	0	0	62	0	0	1	7053
8:00 8:15	39	1	1	0	692	14	7	9	49	0	0	0	57	0	0	0	1	0	0	0	655	15	6	3	10	1	0	1	55	1	2	0	6950
8:15 8:30	52	2	0	0	669	26	11	7	49	0	0	0	59	0	2	0	1	0	0	0	694	28	10	6	5	1	0	0	48	2	0	0	6760
8:30 8:45	58	1	0	0	651	22	10	2	56	3	0	0	45	0	0	1	4	0	0	0	650	30	6	4	10	0	0	1	59	0	1	0	6608
8:45 9:00	67	0	0	0	643	22	9	3	44	2	0	1	45	2	0	0	5	0	0	0	570	30	9	5	4	1	0	1	46	2	0	1	6417
Period Total	**412**	**8**	**4**	**1**	**5831**	**161**	**71**	**39**	**372**	**6**	**0**	**1**	**363**	**4**	**4**	**3**	**16**	**0**	**0**	**0**	**5317**	**261**	**56**	**45**	**42**	**6**	**0**	**4**	**429**	**7**	**5**	**2**	
Peak Period : 7:00am - 8:00am	**196**	**4**	**3**	**1**	**3176**	**77**	**34**	**18**	**174**	**1**	**0**	**0**	**157**	**2**	**2**	**2**	**5**	**0**	**0**	**0**	**2748**	**158**	**25**	**27**	**13**	**3**	**0**	**1**	**221**	**2**	**2**	**1**	

15 Minutes Starting	Devlin St SB Pedestrians	Morrison Rd WB Pedestrians	Church St NB Pedestrians	Morrison Rd EB Pedestrians	15 Minute Total
7:00	0	1	0	1	**2**
7:15	0	0	1	0	**1**
7:30	0	3	3	0	**6**
7:45	0	2	3	2	**7**
8:00	0	1	0	0	**1**
8:15	0	2	1	0	**3**
8:30	0	2	1	1	**4**
8:45	0	2	1	0	**3**
2 Hr Total	**0**	**13**	**10**	**4**	
Peak Period	**0**	**6**	**7**	**3**	

Time Interval : 4:00pm - 6:00pm	Devlin St Southbound Left Turn				Devlin St Southbound Through				Morrison Rd Westbound Left Turn				Morrison Rd Westbound Through				Church St Northbound Left Turn				Church St Northbound Through				Morrison Rd Eastbound Left Turn				Morrison Rd Eastbound Through				Hourly Total
	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00 16:15	49	0	1	0	708	38	9	6	46	0	0	0	63	1	1	0	4	0	0	0	704	22	7	8	8	0	0	0	40	0	0	1	
16:15 16:30	47	1	0	0	752	39	5	4	33	3	0	0	56	1	1	0	6	0	0	0	765	14	11	8	5	1	0	0	39	1	1	0	
16:30 16:45	61	0	0	1	800	36	3	10	39	0	0	0	62	0	0	0	4	0	0	0	845	10	4	4	3	0	0	0	45	0	0	1	
16:45 17:00	55	1	0	1	780	36	4	6	30	0	0	0	52	0	0	1	3	0	0	0	791	8	6	9	10	0	0	0	34	0	1	1	7266
17:00 17:15	48	0	0	0	773	29	3	2	45	0	0	0	70	0	1	1	6	2	0	0	794	6	6	3	7	0	0	0	60	0	0	0	7406
17:15 17:30	94	2	0	0	684	15	2	14	36	0	0	0	62	0	1	1	1	0	0	0	805	8	5	5	3	0	0	0	53	0	1	0	7405
17:30 17:45	74	1	0	1	749	24	7	7	43	1	0	0	64	0	1	0	3	0	0	0	848	7	9	7	6	0	0	0	54	0	0	0	7383
17:45 18:00	73	0	0	1	764	22	3	8	40	0	0	1	51	0	1	1	3	0	0	0	780	12	6	5	5	0	0	0	39	0	0	0	7369
Period Total	**501**	**5**	**1**	**4**	**6010**	**239**	**36**	**57**	**312**	**4**	**0**	**1**	**480**	**2**	**6**	**4**	**30**	**2**	**0**	**0**	**6332**	**87**	**54**	**49**	**47**	**1**	**0**	**0**	**364**	**1**	**3**	**3**	
Peak Period : 4:15pm - 5:15pm	**211**	**2**	**0**	**2**	**3105**	**140**	**15**	**22**	**147**	**3**	**0**	**0**	**240**	**1**	**2**	**2**	**19**	**2**	**0**	**0**	**3195**	**38**	**27**	**24**	**25**	**1**	**0**	**0**	**178**	**1**	**2**	**2**	

15 Minutes Starting	Devlin St SB Pedestrians	Morrison Rd WB Pedestrians	Church St NB Pedestrians	Morrison Rd EB Pedestrians	15 Minute Total
16:00	0	2	4	2	**8**
16:15	0	1	1	1	**3**
16:30	0	1	2	2	**5**
16:45	0	1	0	0	**1**
17:00	0	2	6	0	**8**
17:15	0	0	2	3	**5**
17:30	0	2	1	2	**5**
17:45	0	0	1	1	**2**
2 Hr Total	**0**	**9**	**17**	**11**	
Peak Period	**0**	**5**	**9**	**3**	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Devlin St, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Devlin St Southbound												Victoria Rd Westbound																Devlin St Northbound												Victoria Rd Eastbound												Hourly Total
		Left Turn				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	7	1	0	0	145	3	0	1	0	0	0	0	117	5	2	0	237	5	6	2	21	1	0	0	0	0	0	0	11	3	2	0	132	15	4	2	7	0	0	0	146	10	0	4	476	23	3	13	72	0	0	1	0	0	0	0	
7:15	7:30	5	0	0	0	144	3	2	3	0	0	0	0	139	4	3	0	247	8	6	3	32	0	0	0	0	0	0	0	15	1	0	0	127	5	5	0	9	0	0	0	152	11	5	2	424	14	2	8	112	1	0	0	0	0	0	0	
7:30	7:45	5	1	1	1	107	6	4	1	0	0	0	0	153	2	2	1	288	6	8	6	39	1	0	0	0	0	0	0	8	0	0	0	107	12	2	6	15	0	0	0	175	13	2	0	389	12	2	8	109	2	0	0	0	0	0	0	
7:45	8:00	5	0	0	0	131	9	3	4	0	0	0	0	121	3	5	0	305	11	5	2	25	0	0	0	0	0	0	0	6	1	1	0	122	10	1	0	11	1	0	0	184	7	4	2	407	13	4	9	98	3	0	0	0	0	0	0	5976
8:00	8:15	7	0	1	0	137	6	4	1	0	0	0	0	126	0	2	0	322	6	1	4	31	2	0	0	0	0	0	0	14	1	0	0	101	6	1	0	6	0	0	0	162	9	2	0	397	5	2	11	97	3	0	0	0	0	0	0	5966
8:15	8:30	4	0	0	0	141	5	3	1	0	0	0	0	103	4	2	1	253	2	1	3	42	0	0	0	0	0	0	0	9	0	2	0	144	5	2	1	7	0	0	0	143	8	3	1	377	7	8	7	117	7	1	1	0	0	0	0	5889
8:30	8:45	6	0	0	0	120	6	5	0	0	0	0	0	114	2	1	1	276	7	1	1	40	1	0	0	0	0	0	0	16	1	0	0	160	5	4	2	8	0	0	0	151	7	1	0	423	14	4	4	103	2	0	1	0	0	0	0	5882
8:45	9:00	8	1	0	0	132	8	5	0	0	0	0	0	111	3	1	1	219	7	3	1	41	0	0	0	0	0	0	0	24	0	0	0	119	6	6	0	7	0	0	0	107	11	3	0	330	9	10	5	131	0	1	0	0	0	0	4	5679
Period Total		47	3	2	1	1057	46	26	11	0	0	0	0	984	23	18	4	2147	52	31	22	271	5	0	0	0	0	0	0	103	7	5	0	1012	64	25	11	70	1	0	0	1220	76	20	9	3223	97	35	65	839	18	2	3	0	0	0	0	
Peak Period : 7:00am - 8:00am		22	2	1	1	527	21	9	9	0	0	0	0	530	14	12	1	1077	30	25	13	117	2	0	0	0	0	0	0	40	5	3	0	488	42	12	8	42	1	0	0	657	41	11	8	1696	62	11	38	391	6	0	1	0	0	0	0	

15 Minutes Starting	Devlin St SB Pedestrians	Victoria Rd WB Pedestrians	Devlin St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	1	0	2	1	4
7:15	2	0	3	2	7
7:30	4	0	3	2	9
7:45	2	0	1	2	5
8:00	3	0	1	1	5
8:15	2	1	0	3	6
8:30	1	0	0	1	2
8:45	12	0	0	4	16
2 Hr Total	27	1	10	16	
Peak Period	9	0	9	7	

Time Interval : 4:00pm - 6:00pm		Devlin St Southbound												Victoria Rd Westbound																Devlin St Northbound												Victoria Rd Eastbound												Hourly Total
		Left Turn				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	7	1	0	0	129	6	6	1	0	0	1	0	93	6	2	0	393	17	1	0	43	0	0	0	0	0	0	0	46	0	0	0	121	5	2	1	20	0	0	0	101	5	0	0	222	4	9	3	77	1	1	0	0	0	0	0	
16:15	16:30	9	0	1	0	139	7	4	2	0	0	0	0	98	10	0	0	327	5	1	0	42	0	0	1	0	0	0	0	48	2	0	0	141	2	6	0	23	0	0	0	107	3	1	1	291	4	2	1	71	2	0	0	0	0	0	0	
16:30	16:45	16	0	0	0	149	10	3	0	0	0	0	0	104	2	1	1	350	8	1	0	40	1	0	3	0	0	0	0	44	0	1	0	188	2	5	3	27	0	0	0	106	4	3	0	269	7	6	0	66	0	0	0	0	0	0	0	
16:45	17:00	12	0	0	0	136	4	4	0	0	0	0	0	99	1	0	0	367	4	1	1	54	0	0	0	0	0	0	0	45	0	0	1	157	2	3	1	26	1	0	1	100	0	0	1	334	0	4	1	80	0	0	1	0	0	0	0	5536
17:00	17:15	10	0	0	0	168	4	6	0	1	0	0	0	96	4	2	0	329	16	0	3	54	1	0	0	2	0	0	0	44	1	0	0	159	1	4	0	22	0	0	0	89	0	0	1	299	2	1	3	69	0	0	0	0	0	0	0	5603
17:15	17:30	15	0	0	0	148	3	4	0	3	0	0	0	77	5	0	0	330	8	1	8	48	1	0	2	1	0	0	0	57	1	1	1	178	0	4	0	48	0	0	0	94	2	0	1	371	3	4	5	98	0	0	1	0	0	0	0	5775
17:30	17:45	16	0	0	1	142	6	3	0	1	0	0	0	82	4	2	0	300	10	0	5	54	0	0	1	1	0	0	0	32	0	0	1	201	1	4	1	47	0	0	1	92	1	0	0	347	2	3	7	81	1	0	2	0	0	0	0	5807
17:45	18:00	13	0	0	0	132	5	3	1	1	0	0	0	90	2	1	0	287	6	0	8	52	0	0	1	0	0	0	0	44	0	0	0	185	0	4	2	35	0	0	0	96	0	0	0	287	1	4	5	69	0	0	0	0	0	0	0	5700
Period Total		98	1	1	1	1143	45	33	4	6	0	1	0	739	34	8	1	2683	74	5	25	387	3	0	8	4	0	0	0	360	4	2	3	1330	13	32	8	248	1	0	2	785	15	4	4	2420	23	33	25	611	4	1	4	0	0	0	0	
Peak Period : 4:45pm - 5:45pm		53	0	0	1	594	17	17	0	5	0	0	0	354	14	4	0	1326	38	2	17	210	2	0	3	4	0	0	0	178	2	1	3	695	4	15	2	143	1	0	2	375	3	0	3	1351	7	12	16	328	1	0	4	0	0	0	0	

15 Minutes Starting	Devlin St SB Pedestrians	Victoria Rd WB Pedestrians	Devlin St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	0	0	2	0	2
16:15	0	0	2	0	2
16:30	4	0	1	0	5
16:45	3	0	2	0	5
17:00	4	0	0	0	4
17:15	5	0	0	0	5
17:30	1	0	1	4	6
17:45	0	0	1	3	4
2 Hr Total	17	0	9	7	
Peak Period	13	0	3	4	

TDC Traffic Data & Control

Survey Location:	Devlin St & Blaxland Rd, West Ryde
Day & Date:	Tuesday April 3rd, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Devlin St Southbound																Blaxland Rd Westbound															
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
7:00	7:15	99	5	5	3	756	16	5	4	11	1	0	0	0	0	0	0	9	1	0	0	9	1	2	0	40	0	8	0	0	0	0	0
7:15	7:30	103	2	4	6	791	13	8	4	18	1	0	0	0	0	0	0	12	3	2	0	9	0	3	0	48	2	4	0	0	0	0	0
7:30	7:45	92	2	3	1	692	19	9	7	14	0	0	0	1	0	0	0	12	1	3	0	20	0	3	0	43	3	5	1	0	0	0	0
7:45	8:00	108	4	5	1	734	20	12	7	34	0	0	0	1	0	0	0	14	3	2	0	21	0	3	0	46	2	8	1	0	0	0	0
8:00	8:15	104	2	1	2	596	11	13	9	35	0	0	0	0	0	0	0	15	1	2	0	20	0	1	0	62	1	7	0	0	0	0	0
8:15	8:30	119	6	2	2	617	19	10	5	29	2	0	0	0	0	0	0	14	2	1	0	21	1	2	1	41	3	3	0	0	0	0	0
8:30	8:45	119	3	4	0	603	21	13	0	40	1	0	0	0	0	0	0	21	1	1	0	16	1	0	1	71	1	6	1	0	0	0	0
8:45	9:00	128	3	2	1	589	25	12	4	30	1	0	0	0	0	0	0	18	1	3	0	24	0	2	0	52	3	4	0	0	0	0	0
Period Total		**872**	**27**	**26**	**16**	**5378**	**144**	**82**	**40**	**211**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**115**	**13**	**14**	**0**	**140**	**3**	**16**	**2**	**403**	**15**	**45**	**3**	**0**	**0**	**0**	**0**
Peak Period : 7:00am - 8:00am		**402**	**13**	**17**	**11**	**####**	**68**	**34**	**22**	**77**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**47**	**8**	**7**	**0**	**59**	**1**	**11**	**0**	**177**	**7**	**25**	**2**	**0**	**0**	**0**	**0**

Time Interval : 7:00am - 9:00am		Devlin St Northbound												Parkes St Eastbound																Hourly Total
		Left Turn				Through				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	17	1	0	0	710	39	5	7	0	0	0	0	36	1	0	1	24	0	4	0	5	1	0	0	0	0	0	0	
7:15	7:30	11	1	0	1	754	38	5	6	0	0	0	0	36	1	0	0	17	0	2	0	3	1	0	0	0	0	0	0	
7:30	7:45	11	0	0	0	739	40	4	2	0	0	0	0	48	1	0	0	17	0	3	1	5	0	0	0	0	0	0	0	
7:45	8:00	17	0	0	0	734	26	8	5	0	0	0	0	44	0	0	1	34	0	2	0	3	0	0	0	0	0	0	0	**7437**
8:00	8:15	13	0	0	0	690	25	5	7	0	0	0	0	60	0	0	1	20	0	5	0	5	0	0	0	0	0	0	0	**7324**
8:15	8:30	15	1	0	0	716	22	7	6	0	0	0	0	58	0	0	0	37	0	3	3	4	1	0	0	0	0	0	0	**7188**
8:30	8:45	12	0	0	0	627	38	2	7	0	0	0	0	52	2	0	0	25	0	5	2	3	0	1	0	0	0	0	0	**7086**
8:45	9:00	21	0	0	0	587	34	4	7	0	0	0	0	64	2	0	0	36	0	3	0	2	0	0	0	0	0	0	0	**6848**
Period Total		**117**	**3**	**0**	**1**	**5557**	**262**	**40**	**47**	**0**	**0**	**0**	**0**	**398**	**7**	**0**	**3**	**210**	**0**	**27**	**6**	**30**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	
Peak Period : 7:00am - 8:00am		**56**	**2**	**0**	**1**	**####**	**143**	**22**	**20**	**0**	**0**	**0**	**0**	**164**	**3**	**0**	**2**	**92**	**0**	**11**	**1**	**16**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Devlin St SB Pedestrians	Blaxland Rd WB Pedestrians	Devlin St NB Pedestrians	Parkes St EB Pedestrians	15 Minute Total
7:00	0	0	0	3	**3**
7:15	0	2	0	4	**6**
7:30	0	1	0	5	**6**
7:45	0	6	1	9	**16**
8:00	0	6	2	7	**15**
8:15	0	2	0	8	**10**
8:30	0	2	0	2	**4**
8:45	0	2	0	6	**8**
2 Hr Total	**0**	**21**	**3**	**44**	
Peak Period	**0**	**9**	**1**	**21**	

Time Interval : 4:00pm - 6:00pm		Devlin St Southbound																Blaxland Rd Westbound															
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
16:00	16:15	86	2	3	0	671	35	9	7	36	0	0	0	0	0	0	0	33	0	3	0	35	0	0	0	53	1	5	0	0	0	0	0
16:15	16:30	87	3	1	1	730	30	8	6	47	2	0	0	0	0	0	0	26	1	2	0	29	0	0	1	64	1	5	0	0	0	0	0
16:30	16:45	79	3	3	1	795	42	5	5	25	0	0	0	0	0	0	0	27	0	1	0	17	1	1	1	82	0	4	0	0	0	0	0
16:45	17:00	90	0	1	0	759	30	4	5	44	1	0	0	0	0	0	0	26	0	1	0	40	2	1	0	77	0	4	0	0	0	0	0
17:00	17:15	92	2	3	2	738	26	3	4	33	1	0	0	0	0	0	0	24	0	3	0	36	1	2	0	61	2	7	0	0	0	0	0
17:15	17:30	89	0	1	0	734	17	6	9	52	1	1	0	0	0	0	0	24	0	1	0	31	0	2	0	73	0	5	0	0	0	0	0
17:30	17:45	76	1	2	0	732	18	7	5	28	1	0	2	0	0	0	0	28	2	4	0	34	1	4	0	56	0	8	2	0	0	0	0
17:45	18:00	104	1	1	0	750	24	5	11	46	0	0	0	1	0	0	0	33	0	0	0	37	0	0	1	85	0	4	2	0	0	0	0
Period Total		**703**	**12**	**15**	**4**	**5909**	**222**	**47**	**52**	**311**	**6**	**1**	**2**	**1**	**0**	**0**	**0**	**221**	**3**	**15**	**0**	**259**	**5**	**10**	**3**	**551**	**4**	**42**	**4**	**0**	**0**	**0**	**0**
Peak Period : 4:15pm - 5:15pm		**348**	**8**	**8**	**4**	**####**	**128**	**20**	**20**	**149**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**103**	**1**	**7**	**0**	**122**	**4**	**4**	**2**	**284**	**3**	**20**	**0**	**0**	**0**	**0**	**0**

Time Interval : 4:00pm - 6:00pm		Devlin St Northbound												Parkes St Eastbound																Hourly Total
		Left Turn				Through				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	28	0	0	0	591	18	1	4	0	0	0	0	28	0	0	0	13	2	1	0	7	0	0	0	0	0	0	0	
16:15	16:30	37	0	0	0	655	10	5	3	0	0	0	0	35	0	0	0	23	0	3	0	7	0	0	0	0	0	0	0	
16:30	16:45	30	0	0	0	719	10	8	2	0	0	0	0	35	0	0	0	13	0	2	0	7	0	0	0	0	0	0	0	
16:45	17:00	37	0	0	0	705	3	3	7	0	0	0	0	42	0	0	0	13	0	2	0	6	0	0	0	0	0	0	0	**7315**
17:00	17:15	29	0	0	0	680	2	2	3	0	0	0	0	44	1	0	0	18	1	2	0	4	0	0	0	0	0	0	0	**7469**
17:15	17:30	34	0	0	0	603	7	1	4	0	0	0	0	38	2	1	0	15	0	2	0	11	0	0	1	0	0	0	0	**7412**
17:30	17:45	48	1	0	0	681	5	3	5	0	0	0	0	30	0	0	0	18	0	2	2	2	0	0	0	0	0	0	0	**7302**
17:45	18:00	29	0	0	0	617	9	4	3	0	0	0	0	41	0	0	0	22	0	2	0	5	0	0	0	0	0	0	0	**7236**
Period Total		**272**	**1**	**0**	**0**	**5251**	**64**	**27**	**31**	**0**	**0**	**0**	**0**	**293**	**3**	**1**	**0**	**135**	**3**	**16**	**2**	**49**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	
Peak Period : 4:15pm - 5:15pm		**133**	**0**	**0**	**0**	**####**	**25**	**18**	**15**	**0**	**0**	**0**	**0**	**156**	**1**	**0**	**0**	**67**	**1**	**9**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Devlin St SB Pedestrians	Blaxland Rd WB Pedestrians	Devlin St NB Pedestrians	Parkes St EB Pedestrians	15 Minute Total
16:00	1	3	0	3	**7**
16:15	0	1	0	13	**14**
16:30	0	6	0	10	**16**
16:45	0	2	1	10	**13**
17:00	0	7	0	9	**16**
17:15	0	8	1	5	**14**
17:30	0	2	3	4	**9**
17:45	0	3	0	6	**9**
2 Hr Total	**1**	**32**	**5**	**60**	
Peak Period	**0**	**16**	**1**	**42**	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Belmore St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Belmore St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Belmore St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	11	0	0	0	11	1	0	0	347	20	6	1	29	0	0	0	1	1	0	0	623	42	3	15	
7:15	7:30	5	0	0	0	10	1	0	0	448	15	10	3	27	0	1	1	2	0	0	0	684	24	3	5	
7:30	7:45	18	0	0	0	6	0	0	0	463	22	11	7	30	2	1	1	4	0	0	0	685	30	1	5	
7:45	8:00	8	0	0	0	7	1	0	0	443	18	8	4	29	0	0	0	7	0	0	0	639	32	8	11	4851
8:00	8:15	11	0	0	0	9	0	0	0	439	14	1	0	24	1	0	0	0	0	0	0	654	28	3	7	4931
8:15	8:30	23	0	0	0	7	0	0	0	413	15	3	5	30	0	0	0	2	0	0	0	613	27	9	9	4848
8:30	8:45	30	1	0	0	13	1	0	0	426	14	4	2	33	1	0	2	5	0	0	0	636	38	5	10	4783
8:45	9:00	10	0	0	0	8	0	0	0	391	16	6	1	37	1	0	1	7	0	0	0	608	14	9	7	4684
Period Total		**116**	**1**	**0**	**0**	**71**	**4**	**0**	**0**	**3370**	**134**	**49**	**23**	**239**	**5**	**2**	**5**	**28**	**1**	**0**	**0**	**5142**	**235**	**41**	**69**	
Peak Period : 7:15am - 8:15am		**42**	**0**	**0**	**0**	**32**	**2**	**0**	**0**	**1793**	**69**	**30**	**14**	**110**	**3**	**2**	**2**	**13**	**0**	**0**	**0**	**2662**	**114**	**15**	**28**	

15 Minutes Starting	Belmore St SB Pedestrians	Victoria Rd WB Pedestrians	Belmore St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	2	0	1	0	**3**
7:15	0	0	1	0	**1**
7:30	3	0	4	0	**7**
7:45	2	0	2	0	**4**
8:00	3	0	4	0	**7**
8:15	3	1	3	1	**8**
8:30	0	0	6	0	**6**
8:45	3	0	4	0	**7**
2 Hr Total	**16**	**1**	**25**	**1**	
Peak Period	**8**	**0**	**11**	**0**	

Time Interval : 4:00pm - 6:00pm		Belmore St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Belmore St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	13	0	0	0	34	0	0	0	505	24	5	11	21	1	0	0	7	0	0	0	429	8	11	5	
16:15	16:30	11	0	0	0	34	0	0	0	506	28	4	15	14	0	0	0	1	0	0	0	454	14	11	7	
16:30	16:45	13	0	0	0	54	1	0	0	414	23	8	6	14	0	0	0	2	0	0	0	496	6	4	4	
16:45	17:00	13	0	0	0	57	1	0	0	476	24	7	4	11	2	0	0	4	0	0	0	485	14	4	4	4324
17:00	17:15	10	0	0	0	44	2	0	1	414	23	2	6	8	1	0	0	3	0	0	0	496	6	3	0	4269
17:15	17:30	15	0	0	0	114	0	0	0	410	11	3	2	13	1	0	0	3	0	0	0	525	4	3	5	4279
17:30	17:45	9	0	0	0	93	1	0	2	413	15	5	6	17	2	0	0	6	0	0	0	537	6	4	2	4352
17:45	18:00	5	0	0	0	88	0	0	3	417	24	1	9	16	0	0	0	0	0	0	0	516	5	3	4	4337
Period Total		**89**	**0**	**0**	**0**	**518**	**5**	**0**	**6**	**3555**	**172**	**35**	**59**	**114**	**7**	**0**	**0**	**26**	**0**	**0**	**0**	**3938**	**63**	**43**	**31**	
Peak Period : 4:45pm - 5:45pm		**47**	**0**	**0**	**0**	**308**	**4**	**0**	**3**	**1713**	**73**	**17**	**18**	**49**	**6**	**0**	**0**	**16**	**0**	**0**	**0**	**2043**	**30**	**14**	**11**	

15 Minutes Starting	Belmore St SB Pedestrians	Victoria Rd WB Pedestrians	Belmore St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	1	1	7	2	**11**
16:15	1	1	2	0	**4**
16:30	0	0	5	3	**8**
16:45	1	0	4	3	**8**
17:00	0	0	6	0	**6**
17:15	0	0	6	0	**6**
17:30	6	0	0	1	**7**
17:45	0	0	1	0	**1**
2 Hr Total	**9**	**2**	**31**	**9**	
Peak Period	**7**	**0**	**16**	**4**	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Shepherd St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Shepherd St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Shepherd St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	8	0	0	1	0	0	0	0	372	18	8	1	0	0	0	0	1	0	0	0	634	38	1	16	
7:15	7:30	8	0	0	0	5	0	0	0	471	17	12	3	3	0	0	0	1	0	0	0	692	28	2	7	
7:30	7:45	17	0	0	0	7	0	0	0	500	20	14	9	1	0	0	0	0	0	0	0	672	31	1	8	
7:45	8:00	11	0	0	0	5	0	0	0	474	18	9	4	0	0	0	0	0	0	0	0	652	27	8	10	4845
8:00	8:15	10	0	0	0	7	0	0	0	463	11	2	0	0	0	0	0	0	0	0	0	657	21	5	8	4931
8:15	8:30	13	0	0	0	5	0	0	0	432	13	3	2	2	0	0	0	3	0	0	0	575	23	10	9	4772
8:30	8:45	14	0	0	0	8	0	0	0	443	11	4	0	2	0	0	0	2	0	0	0	642	33	3	12	4666
8:45	9:00	4	0	0	0	9	0	0	0	403	14	7	2	0	0	0	0	1	0	0	0	611	14	9	8	4530
Period Total		85	0	0	1	46	0	0	0	3558	122	59	21	8	0	0	0	8	0	0	0	5135	215	39	78	
Peak Period : 7:15am - 8:15am		46	0	0	0	24	0	0	0	1908	66	37	16	4	0	0	0	1	0	0	0	2673	107	16	33	

15 Minutes Starting	Shepherd St SB Pedestrians	Victoria Rd WB Pedestrians	Shepherd St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	1	0	1	0	2
7:15	2	0	6	0	8
7:30	2	0	0	0	2
7:45	3	0	1	0	4
8:00	2	0	2	0	4
8:15	0	0	0	0	0
8:30	4	0	1	0	5
8:45	3	0	2	0	5
2 Hr Total	17	0	13	0	
Peak Period	9	0	9	0	

Time Interval : 4:00pm - 6:00pm		Shepherd St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Shepherd St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	9	0	0	0	14	0	0	0	524	26	6	12	0	0	0	0	4	1	0	0	427	8	12	5	
16:15	16:30	4	0	0	0	29	0	0	1	453	25	3	12	0	0	0	0	5	1	0	0	443	16	11	7	
16:30	16:45	8	0	0	0	27	0	0	0	397	23	8	7	0	0	0	0	4	0	0	1	507	9	3	5	
16:45	17:00	6	0	0	1	32	1	0	0	455	26	7	3	1	0	0	0	3	0	0	0	484	10	6	4	4096
17:00	17:15	7	0	0	0	16	1	0	0	399	21	3	1	1	0	0	0	8	1	0	0	497	9	2	4	4018
17:15	17:30	6	0	0	0	22	0	0	0	368	13	3	5	1	0	0	0	4	0	0	0	511	4	3	7	3955
17:30	17:45	11	0	0	0	17	0	0	0	399	15	4	4	0	0	0	0	5	0	0	0	549	7	4	5	3976
17:45	18:00	5	0	0	0	10	0	0	0	439	22	2	6	0	0	0	0	3	0	0	0	487	4	3	8	3926
Period Total		56	0	0	1	167	2	0	1	3434	171	36	50	3	0	0	0	36	3	0	1	3905	67	44	45	
Peak Period : 4:00pm - 5:00pm		27	0	0	1	102	1	0	1	1829	100	24	34	1	0	0	0	16	2	0	1	1861	43	32	21	

15 Minutes Starting	Shepherd St SB Pedestrians	Victoria Rd WB Pedestrians	Shepherd St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	5	0	0	0	5
16:15	1	0	0	0	1
16:30	1	0	0	0	1
16:45	1	0	0	0	1
17:00	2	0	2	0	4
17:15	4	0	3	0	7
17:30	4	0	1	0	5
17:45	2	0	0	0	2
2 Hr Total	20	0	6	0	
Peak Period	8	0	0	0	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Bowden St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Bowden St Southbound																Victoria Rd Westbound																Bowden St Northbound																Victoria Rd Eastbound																Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	5	0	0	0	22	0	0	1	3	0	0	0	0	0	0	0	20	2	0	0	359	17	5	1	0	0	0	0	0	0	0	0	11	2	0	0	32	2	0	1	38	1	1	0	0	0	0	0	2	0	2	0	585	38	1	11	15	2	1	0	0	0	0	0	
7:15	7:30	7	0	0	0	22	1	0	1	9	0	0	0	0	0	0	0	29	0	2	0	433	16	9	0	0	0	0	0	0	0	0	0	4	1	2	0	57	0	0	0	48	4	0	0	0	0	0	0	0	0	1	0	637	27	1	8	21	2	0	0	0	0	0	0	
7:30	7:45	5	0	0	0	27	0	0	1	9	1	0	0	0	0	0	0	37	1	2	0	461	19	13	2	0	0	0	0	0	0	0	0	8	0	0	0	60	1	0	2	40	0	0	0	0	0	0	0	1	0	2	0	623	35	2	9	21	2	1	0	0	0	0	0	
7:45	8:00	9	0	0	0	50	1	0	5	7	0	0	0	0	0	0	0	24	0	0	0	425	20	6	3	0	0	1	0	0	0	0	0	3	0	1	0	71	1	1	0	30	1	1	0	0	0	0	0	3	0	1	0	606	29	7	9	22	0	1	1	0	0	0	0	5246
8:00	8:15	8	1	0	0	35	2	0	1	4	0	0	0	0	0	0	0	31	1	1	0	427	14	1	2	1	0	0	0	0	0	0	0	8	3	0	0	66	2	1	4	41	1	1	0	0	0	0	0	2	0	1	0	597	28	1	2	33	1	0	0	0	0	0	0	5387
8:15	8:30	6	0	1	0	38	1	0	1	9	0	0	0	0	0	0	0	28	0	0	0	415	14	2	4	0	0	0	0	0	0	0	0	10	2	0	0	65	1	1	1	47	1	1	0	0	0	0	0	1	0	2	0	537	32	9	0	14	0	0	0	0	0	0	0	5288
8:30	8:45	11	0	0	0	47	0	0	0	7	0	0	0	0	0	0	0	33	1	1	0	411	9	3	5	0	0	0	0	0	0	0	0	13	0	0	0	53	1	0	2	18	1	0	0	0	0	0	0	0	0	1	0	622	35	5	8	25	1	0	0	0	0	0	0	5216
8:45	9:00	6	0	0	0	39	1	0	0	6	1	0	0	0	0	0	0	48	1	0	1	365	15	6	2	0	0	0	0	0	0	0	0	8	0	0	0	57	0	0	0	29	1	0	0	0	0	0	0	4	0	0	0	576	18	7	0	51	1	1	0	0	0	0	0	5121
Period Total		57	1	1	0	280	6	0	10	54	2	0	0	0	0	0	0	250	6	6	1	3296	124	45	19	1	0	1	0	0	0	0	0	65	8	3	0	461	8	3	10	291	10	4	0	0	0	0	0	13	0	10	0	4783	242	33	47	202	9	4	1	0	0	0	0	
Peak Period : 7:15am - 8:15am		29	1	0	0	134	4	0	8	29	1	0	0	0	0	0	0	121	2	5	0	####	69	29	7	1	0	1	0	0	0	0	0	23	4	3	0	254	4	2	6	159	6	2	0	0	0	0	0	6	0	5	0	####	119	11	28	97	5	2	1	0	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Victoria Rd WB Pedestrians	Bowden St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	2	9	0	0	11
7:15	0	5	0	0	5
7:30	2	8	0	0	10
7:45	6	6	0	0	12
8:00	0	4	5	0	9
8:15	2	3	2	0	7
8:30	6	5	3	0	14
8:45	2	6	1	0	9
2 Hr Total	20	46	11	0	
Peak Period	8	23	5	0	

Time Interval : 4:00pm - 6:00pm		Bowden St Southbound																Victoria Rd Westbound																Bowden St Northbound																Victoria Rd Eastbound																Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	9	1	1	0	42	0	0	1	7	0	0	0	0	0	0	0	30	0	0	0	473	23	4	11	0	0	0	0	0	0	0	0	7	1	1	0	45	0	0	0	42	1	1	0	0	0	0	0	4	0	2	0	380	7	9	5	26	0	0	0	0	0	0	0	
16:15	16:30	7	0	0	0	42	1	0	2	9	0	0	0	0	0	0	0	33	0	1	0	421	22	3	11	0	0	0	0	0	0	0	0	9	1	0	0	57	0	1	0	42	0	1	1	0	0	0	0	3	0	2	0	411	15	9	3	18	0	0	0	0	0	0	0	
16:30	16:45	3	0	0	0	44	1	0	1	4	0	0	0	0	0	0	0	25	1	0	0	367	23	8	6	0	0	0	0	0	0	0	0	12	0	0	0	40	1	0	3	40	0	0	1	0	0	0	0	5	0	1	0	463	6	3	1	30	0	1	0	0	0	0	0	
16:45	17:00	8	0	0	0	48	0	0	0	4	0	0	0	0	0	0	0	37	0	2	1	415	25	6	1	0	0	0	0	0	0	0	0	21	0	1	0	52	0	0	0	41	0	1	1	0	0	0	0	3	0	1	0	433	10	5	2	21	0	0	0	0	0	0	0	4487
17:00	17:15	4	0	0	0	49	0	0	3	5	0	0	0	0	0	0	0	46	3	0	0	354	14	3	4	0	0	0	0	0	0	0	0	15	0	0	0	53	0	0	0	36	1	0	0	0	0	0	0	1	0	2	0	460	8	1	2	20	1	1	0	0	0	0	0	4440
17:15	17:30	9	0	0	0	61	1	0	0	3	0	0	0	0	0	0	0	21	0	1	2	340	15	2	3	0	0	0	0	1	0	0	0	16	0	0	0	51	0	0	1	26	0	0	0	0	0	0	0	3	0	1	0	464	4	2	5	34	0	0	1	0	0	0	0	4382
17:30	17:45	7	0	0	0	45	0	0	0	7	0	0	1	0	0	0	0	30	0	1	0	393	13	3	4	0	0	0	0	0	0	0	0	14	0	0	0	63	0	0	3	35	2	1	0	0	0	0	0	4	0	2	0	495	4	3	2	14	0	1	0	0	0	0	0	4439
17:45	18:00	3	0	0	0	51	0	0	2	5	1	0	0	0	0	0	0	26	0	0	0	402	20	2	4	0	0	0	0	0	0	0	0	9	1	1	0	46	1	0	2	29	0	1	0	0	0	0	0	6	0	2	0	489	5	3	5	17	0	1	0	0	0	0	0	4434
Period Total		50	1	1	0	382	3	0	9	44	1	0	1	0	0	0	0	248	4	5	3	3165	155	31	44	0	0	0	0	1	0	0	0	103	3	3	0	407	2	1	9	291	4	5	3	0	0	0	0	29	0	13	0	3595	59	35	25	180	1	4	1	0	0	0	0	
Peak Period : 4:00pm - 5:00pm		27	1	1	0	176	2	0	4	24	0	0	0	0	0	0	0	125	1	3	1	####	93	21	29	0	0	0	0	0	0	0	0	49	2	2	0	194	1	1	3	165	1	3	3	0	0	0	0	15	0	6	0	####	38	26	11	95	0	1	0	0	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Victoria Rd WB Pedestrians	Bowden St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	2	5	1	0	8
16:15	3	7	1	0	11
16:30	2	11	0	0	13
16:45	2	2	0	0	4
17:00	2	4	2	0	8
17:15	1	6	0	0	7
17:30	2	10	1	0	13
17:45	0	4	0	0	4
2 Hr Total	14	49	5	0	
Peak Period	9	25	2	0	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Forsyth St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Forsyth St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Forsyth St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	0	0	0	0	2	0	0	0	368	15	8	1	5	0	0	0	1	0	0	0	607	42	4	1	
7:15	7:30	2	0	0	0	1	0	0	0	460	15	11	3	4	0	0	0	0	0	0	0	631	27	4	3	
7:30	7:45	2	0	0	0	2	0	0	0	483	18	12	8	7	0	0	0	2	0	0	0	659	33	3	9	
7:45	8:00	4	0	0	0	1	0	0	0	436	17	8	4	11	0	0	0	1	0	0	0	624	27	9	8	4603
8:00	8:15	0	0	0	0	0	0	0	0	438	16	1	2	6	0	0	0	1	0	0	0	631	30	2	7	4683
8:15	8:30	5	0	0	0	2	0	0	0	436	14	2	5	8	0	0	0	2	2	0	0	549	26	11	10	4594
8:30	8:45	0	0	0	0	1	0	0	0	432	9	3	4	4	0	0	0	2	0	0	0	628	38	5	8	4490
8:45	9:00	3	0	0	0	1	0	0	0	381	16	6	2	7	0	0	0	0	0	0	0	615	12	11	5	4399
Period Total		**16**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**3434**	**120**	**51**	**29**	**52**	**0**	**0**	**0**	**9**	**2**	**0**	**0**	**4944**	**235**	**49**	**51**	
Peak Period : 7:15am - 8:15am		**8**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1817**	**66**	**32**	**17**	**28**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2545**	**117**	**18**	**27**	

15 Minutes Starting	Forsyth St SB Pedestrians	Victoria Rd WB Pedestrians	Forsyth St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	0	0	1	0	**1**
7:15	1	0	1	0	**2**
7:30	8	0	4	0	**12**
7:45	11	1	1	0	**13**
8:00	2	0	2	0	**4**
8:15	1	0	1	0	**2**
8:30	3	0	1	0	**4**
8:45	4	0	0	0	**4**
2 Hr Total	**30**	**1**	**11**	**0**	
Peak Period	**22**	**1**	**8**	**0**	

Time Interval : 4:00pm - 6:00pm		Forsyth St Southbound Left Turn				Victoria Rd Westbound Left Turn				Victoria Rd Westbound Through				Forsyth St Northbound Left Turn				Victoria Rd Eastbound Left Turn				Victoria Rd Eastbound Through				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	1	0	0	0	1	0	0	0	478	26	4	11	4	0	0	0	1	0	0	0	397	7	11	6	
16:15	16:30	0	0	0	0	3	0	0	0	448	26	3	14	7	0	0	0	4	0	0	0	440	15	11	4	
16:30	16:45	0	0	0	0	4	0	0	0	355	22	8	6	3	0	0	0	1	0	0	0	508	8	6	2	
16:45	17:00	0	0	0	0	4	0	0	0	439	26	6	0	3	0	0	0	3	0	0	0	457	11	6	1	3801
17:00	17:15	0	0	0	0	4	0	0	0	364	15	3	6	2	0	0	0	2	0	0	0	485	7	3	4	3749
17:15	17:30	0	0	0	0	5	0	0	0	372	16	2	2	4	0	0	0	1	0	0	0	528	4	5	8	3721
17:30	17:45	0	0	0	0	2	0	0	0	398	13	1	5	5	0	0	0	2	0	0	0	517	4	6	7	3758
17:45	18:00	0	0	0	0	2	0	0	0	403	23	4	9	5	0	0	0	3	0	0	0	511	7	5	7	3781
Period Total		**1**	**0**	**0**	**0**	**25**	**0**	**0**	**0**	**3257**	**167**	**31**	**53**	**33**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**3843**	**63**	**53**	**39**	
Peak Period : 4:00pm - 5:00pm		**1**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**1720**	**100**	**21**	**31**	**17**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**1802**	**41**	**34**	**13**	

15 Minutes Starting	Forsyth St SB Pedestrians	Victoria Rd WB Pedestrians	Forsyth St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	2	1	2	0	**5**
16:15	3	0	1	0	**4**
16:30	2	1	0	0	**3**
16:45	3	0	1	0	**4**
17:00	1	0	0	0	**1**
17:15	2	0	1	0	**3**
17:30	3	0	3	0	**6**
17:45	0	0	0	0	**0**
2 Hr Total	**16**	**2**	**8**	**0**	
Peak Period	**10**	**2**	**4**	**0**	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Mellor St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Give-Way
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Victoria Rd Westbound Left Turn Cars	Victoria Rd Westbound Left Turn Medium Truck	Victoria Rd Westbound Left Turn Heavy Truck	Victoria Rd Westbound Left Turn Bicycles	Victoria Rd Westbound Through Cars	Victoria Rd Westbound Through Medium Truck	Victoria Rd Westbound Through Heavy Truck	Victoria Rd Westbound Through Bicycles	Mellor St Northbound Left Turn Cars	Mellor St Northbound Left Turn Medium Truck	Mellor St Northbound Left Turn Heavy Truck	Mellor St Northbound Left Turn Bicycles	Victoria Rd Eastbound Through Cars	Victoria Rd Eastbound Through Medium Truck	Victoria Rd Eastbound Through Heavy Truck	Victoria Rd Eastbound Through Bicycles	Hourly Total
7:00	7:15	4	0	0	0	370	11	10	0	10	0	0	0	589	42	4	17	
7:15	7:30	4	0	0	0	428	12	12	2	6	1	0	0	671	27	3	9	
7:30	7:45	9	0	0	0	430	23	11	6	7	0	1	0	621	30	3	8	
7:45	8:00	11	0	0	1	451	22	5	1	9	1	0	0	588	30	9	12	4521
8:00	8:15	5	0	0	0	442	16	4	2	14	0	0	0	631	28	2	8	4616
8:15	8:30	3	2	0	0	427	11	2	6	10	0	0	0	555	30	10	10	4507
8:30	8:45	4	0	0	0	436	11	3	4	5	2	0	0	619	33	5	12	4492
8:45	9:00	6	0	0	0	388	12	5	2	7	2	0	0	616	15	12	8	4425
Period Total		**46**	**2**	**0**	**1**	**3372**	**118**	**52**	**23**	**68**	**6**	**1**	**0**	**4890**	**235**	**48**	**84**	
Peak Period : 7:15am - 8:15am		**29**	**0**	**0**	**1**	**1751**	**73**	**32**	**11**	**36**	**2**	**1**	**0**	**2511**	**115**	**17**	**37**	

15 Minutes Starting	Linton Ave SB Pedestrians	Victoria Rd WB Pedestrians	Mellor St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	0	0	2	0	**2**
7:15	1	0	3	0	**4**
7:30	1	0	1	0	**2**
7:45	2	0	2	0	**4**
8:00	4	0	3	0	**7**
8:15	1	0	0	0	**1**
8:30	2	1	2	1	**6**
8:45	1	0	0	0	**1**
2 Hr Total	**12**	**1**	**13**	**1**	
Peak Period	**8**	**0**	**9**	**0**	

Time Interval : 4:00pm - 6:00pm		Victoria Rd Westbound Left Turn Cars	Victoria Rd Westbound Left Turn Medium Truck	Victoria Rd Westbound Left Turn Heavy Truck	Victoria Rd Westbound Left Turn Bicycles	Victoria Rd Westbound Through Cars	Victoria Rd Westbound Through Medium Truck	Victoria Rd Westbound Through Heavy Truck	Victoria Rd Westbound Through Bicycles	Mellor St Northbound Left Turn Cars	Mellor St Northbound Left Turn Medium Truck	Mellor St Northbound Left Turn Heavy Truck	Mellor St Northbound Left Turn Bicycles	Victoria Rd Eastbound Through Cars	Victoria Rd Eastbound Through Medium Truck	Victoria Rd Eastbound Through Heavy Truck	Victoria Rd Eastbound Through Bicycles	Hourly Total
16:00	16:15	3	1	0	1	458	27	5	6	18	0	0	0	415	7	12	5	
16:15	16:30	5	0	0	0	467	25	3	14	14	0	0	0	445	19	12	6	
16:30	16:45	3	0	0	0	342	18	8	3	9	1	0	0	481	8	5	4	
16:45	17:00	1	0	0	0	435	30	6	2	8	1	0	0	470	14	6	3	3826
17:00	17:15	1	0	0	0	366	13	3	4	3	0	0	0	484	7	4	4	3757
17:15	17:30	0	0	0	0	364	17	5	2	16	1	0	1	530	4	4	7	3698
17:30	17:45	1	0	0	0	396	16	1	7	24	0	0	0	522	4	7	6	3800
17:45	18:00	2	0	0	0	424	21	4	9	9	0	0	3	536	7	4	8	3851
Period Total		**16**	**1**	**0**	**1**	**3252**	**167**	**35**	**47**	**101**	**3**	**0**	**4**	**3883**	**70**	**54**	**43**	
Peak Period : 5:00pm - 6:00pm		**4**	**0**	**0**	**0**	**1550**	**67**	**13**	**22**	**52**	**1**	**0**	**4**	**2072**	**22**	**19**	**25**	

15 Minutes Starting	Linton Ave SB Pedestrians	Victoria Rd WB Pedestrians	Mellor St NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	1	0	0	0	**1**
16:15	0	0	1	0	**1**
16:30	1	0	0	0	**1**
16:45	2	0	0	0	**2**
17:00	2	0	10	7	**19**
17:15	7	0	0	0	**7**
17:30	3	0	0	0	**3**
17:45	0	0	0	0	**0**
2 Hr Total	**16**	**0**	**11**	**7**	
Peak Period	**12**	**0**	**10**	**7**	

TDC
Traffic Data & Control

Survey Location:	Victoria Rd & Hermitage Rd, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Hermitage Rd – Southbound												Victoria Rd – Westbound												Hermitage Rd – Northbound												Victoria Rd – Eastbound												Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	3	0	0	0	17	0	0	1	42	1	0	1	0	0	0	0	3	1	0	0	345	15	8	1	14	1	1	0	1	0	0	0	2	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	64	1	0	1	648	32	4	15	26	2	0	0	0	0	0	0	
7:15	7:30	6	0	0	0	21	0	0	2	44	0	0	0	0	0	0	0	5	0	0	0	401	14	9	3	13	1	3	0	0	0	0	0	7	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	59	1	0	0	644	19	3	4	23	4	0	1	0	0	0	0	
7:30	7:45	2	0	0	0	21	1	0	2	23	1	0	0	0	0	0	0	3	0	0	0	436	25	11	5	17	1	1	0	0	0	0	1	7	2	0	0	16	0	0	2	3	0	0	0	0	0	0	0	64	1	0	0	665	32	5	4	33	2	0	0	0	0	0	0	
7:45	8:00	7	0	0	0	38	0	0	2	28	0	0	1	0	0	0	0	1	0	0	0	448	21	6	0	17	1	1	0	0	0	0	0	10	1	0	0	14	1	0	0	3	0	0	0	0	0	0	0	70	1	0	0	635	26	7	8	30	1	0	0	0	0	0	0	5316
8:00	8:15	6	0	0	0	20	0	0	0	33	0	0	0	0	0	0	0	6	1	0	0	438	15	1	3	15	0	1	0	0	0	0	0	7	0	0	0	9	0	0	1	1	1	0	0	0	0	0	0	78	0	0	0	624	16	6	10	34	0	0	1	0	0	0	0	5386
8:15	8:30	9	0	0	0	36	1	0	2	22	1	1	2	0	0	0	0	5	1	0	0	404	11	2	4	17	0	0	0	0	0	0	0	13	0	0	0	19	0	0	1	5	0	0	0	0	0	0	0	66	3	0	0	578	24	12	8	30	1	0	0	0	0	0	0	5369
8:30	8:45	14	0	0	0	35	0	0	1	29	1	0	0	0	0	0	0	4	0	0	0	410	9	2	4	20	1	1	1	0	0	0	0	12	2	0	0	16	0	0	0	5	0	0	0	0	0	0	0	73	0	0	0	546	31	8	9	23	1	0	0	0	0	0	0	5241
8:45	9:00	6	0	0	0	26	1	0	2	45	2	0	0	0	0	0	0	2	0	0	0	367	16	4	1	16	0	2	0	0	0	0	0	11	0	0	0	13	1	0	1	3	0	0	0	0	0	0	0	56	0	0	0	600	14	12	4	60	1	0	0	0	0	0	0	5129
Period Total		**53**	**0**	**0**	**0**	**214**	**3**	**0**	**12**	**266**	**6**	**1**	**4**	**0**	**0**	**0**	**0**	**29**	**3**	**0**	**0**	**3249**	**126**	**43**	**21**	**129**	**5**	**10**	**1**	**1**	**0**	**0**	**1**	**69**	**6**	**0**	**0**	**97**	**2**	**0**	**5**	**24**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**530**	**7**	**0**	**1**	**4940**	**194**	**57**	**62**	**259**	**12**	**0**	**2**	**0**	**0**	**0**	**0**	
Peak Period : 7:15am - 8:15am		**21**	**0**	**0**	**0**	**100**	**1**	**0**	**6**	**128**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**0**	**####**	**75**	**27**	**11**	**62**	**3**	**6**	**0**	**0**	**0**	**0**	**1**	**31**	**4**	**0**	**0**	**46**	**1**	**0**	**3**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**271**	**3**	**0**	**0**	**####**	**93**	**21**	**26**	**120**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Hermitage Rd SB Pedestrians	Victoria Rd WB Pedestrians	Hermitage Rd NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
7:00	1	0	4	5	**10**
7:15	4	0	5	9	**18**
7:30	3	0	3	4	**10**
7:45	5	1	3	16	**25**
8:00	8	0	3	13	**24**
8:15	10	2	7	7	**26**
8:30	6	1	6	15	**28**
8:45	6	1	4	9	**20**
2 Hr Total	**43**	**5**	**35**	**78**	
Peak Period	**20**	**1**	**14**	**42**	

Time Interval : 4:00pm - 6:00pm		Hermitage Rd – Southbound												Victoria Rd – Westbound												Hermitage Rd – Northbound												Victoria Rd – Eastbound												Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	6	0	0	0	17	1	0	0	22	0	0	0	0	0	0	0	4	0	0	0	449	28	3	10	21	1	2	1	0	0	0	0	47	0	0	0	23	0	0	0	8	1	0	1	0	0	0	0	32	2	0	1	385	8	11	3	18	1	0	0	0	0	0	0	
16:15	16:30	8	0	0	0	18	0	0	1	23	0	0	0	0	0	0	0	2	1	0	0	449	24	2	12	24	0	2	0	0	0	0	0	43	1	0	2	20	1	0	1	12	0	0	0	0	0	0	0	30	0	0	0	419	14	11	5	11	0	0	0	0	0	0	0	
16:30	16:45	15	0	0	0	17	0	0	0	24	1	0	1	0	0	0	0	1	0	0	0	371	18	3	6	10	0	2	0	0	0	0	0	73	0	0	1	24	0	0	2	11	0	0	0	0	0	0	0	54	0	0	0	484	9	6	3	16	0	0	0	0	0	0	0	
16:45	17:00	11	0	0	0	24	0	0	1	18	3	0	2	0	0	0	0	0	1	0	0	447	29	5	2	14	0	3	0	0	0	0	0	50	1	0	2	30	0	0	0	9	0	0	0	0	0	0	0	50	0	0	0	437	10	7	2	13	0	0	0	0	0	0	0	4565
17:00	17:15	9	0	0	0	36	0	0	1	21	0	0	0	0	0	0	0	1	0	0	0	369	16	2	7	11	0	0	0	0	0	0	0	57	0	0	0	23	0	0	0	7	0	0	0	0	0	0	0	45	0	1	0	478	7	3	4	15	1	0	0	0	0	0	0	4573
17:15	17:30	12	0	0	0	26	0	0	3	21	0	0	0	0	0	0	0	0	0	0	0	389	19	3	3	19	0	0	0	0	0	0	0	68	0	0	0	32	0	0	0	5	0	0	0	0	0	0	0	46	0	0	0	513	4	5	5	14	0	0	0	0	0	0	0	4624
17:30	17:45	12	0	0	0	29	0	0	3	14	0	0	1	0	0	0	0	2	0	0	0	411	13	1	3	16	0	0	1	0	0	0	0	62	0	0	1	30	0	0	2	5	0	0	0	0	0	0	0	44	0	0	0	495	4	6	6	18	0	0	0	0	0	0	0	4651
17:45	18:00	11	0	0	0	23	0	0	0	15	1	0	0	0	0	0	0	1	0	0	0	431	15	3	10	15	0	1	0	0	0	0	0	60	0	0	0	26	0	0	0	2	0	0	0	0	0	0	0	53	0	0	0	516	9	5	10	24	0	0	0	0	0	0	0	4711
Period Total		**84**	**0**	**0**	**0**	**190**	**1**	**0**	**9**	**158**	**5**	**0**	**4**	**0**	**0**	**0**	**0**	**11**	**2**	**0**	**0**	**3316**	**162**	**22**	**53**	**130**	**1**	**10**	**2**	**0**	**0**	**0**	**0**	**460**	**2**	**0**	**6**	**208**	**1**	**0**	**5**	**59**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**354**	**2**	**1**	**1**	**3727**	**65**	**54**	**38**	**129**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	
Peak Period : 5:00pm - 6:00pm		**44**	**0**	**0**	**0**	**114**	**0**	**0**	**7**	**71**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**####**	**63**	**9**	**23**	**61**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**247**	**0**	**0**	**1**	**111**	**0**	**0**	**2**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**188**	**0**	**1**	**0**	**####**	**24**	**19**	**25**	**71**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Hermitage Rd SB Pedestrians	Victoria Rd WB Pedestrians	Hermitage Rd NB Pedestrians	Victoria Rd EB Pedestrians	15 Minute Total
16:00	3	1	5	21	**30**
16:15	3	0	5	11	**19**
16:30	2	0	5	12	**19**
16:45	6	0	1	9	**16**
17:00	3	0	2	11	**16**
17:15	5	0	3	5	**13**
17:30	3	0	2	7	**12**
17:45	3	1	3	5	**12**
2 Hr Total	**28**	**2**	**26**	**81**	
Peak Period	**14**	**1**	**10**	**28**	

TDC
Traffic Data & Control

Survey Location:	Belmore St & Constitution Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Belmore St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Belmore St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Constitution Rd Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
7:00	7:15	5	1	0	1	25	6	1	0	0	0	0	0	71	2	0	1	7	0	0	0	0	0	0	0	61	1	0	1	84	0	0	1	0	0	0	0	
7:15	7:30	2	0	0	1	20	1	0	0	0	0	0	0	67	1	1	0	8	1	0	1	0	0	0	0	74	0	0	1	91	1	0	0	0	0	0	0	
7:30	7:45	2	1	0	0	26	2	1	0	0	0	0	0	96	0	0	3	9	0	0	0	0	0	0	0	57	4	1	0	97	1	0	0	0	0	0	0	
7:45	8:00	5	1	0	0	29	0	0	0	0	0	0	0	129	1	0	1	9	0	0	0	0	0	0	0	66	1	1	1	86	1	0	1	0	0	0	0	1170
8:00	8:15	0	0	0	0	33	1	0	0	0	0	0	0	88	1	0	3	10	0	0	1	0	0	0	0	63	2	1	0	105	1	0	0	0	0	0	0	1211
8:15	8:30	3	0	0	0	25	1	2	0	0	0	0	0	81	2	0	1	9	1	0	0	0	0	0	0	63	2	0	0	92	3	0	0	0	0	0	0	1226
8:30	8:45	3	0	0	0	25	0	0	1	0	0	0	0	116	4	0	0	14	0	0	0	0	0	0	0	60	1	1	0	107	0	0	0	0	0	0	0	1258
8:45	9:00	5	0	0	0	33	1	0	0	0	0	0	0	113	1	0	0	11	0	0	0	0	0	0	0	65	3	0	0	83	4	0	0	0	0	0	0	1245
Period Total		**25**	**3**	**0**	**2**	**216**	**12**	**4**	**1**	**0**	**0**	**0**	**0**	**761**	**12**	**1**	**9**	**77**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**509**	**14**	**4**	**3**	**745**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	
Peak Period : 7:45am - 8:45am		**11**	**1**	**0**	**0**	**112**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**414**	**8**	**0**	**5**	**42**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**252**	**6**	**3**	**1**	**390**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Belmore St SB Pedestrians	Belmore St NB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
7:00	3	0	0	**3**
7:15	3	0	0	**3**
7:30	18	0	0	**18**
7:45	20	0	0	**20**
8:00	7	0	0	**7**
8:15	18	0	0	**18**
8:30	14	0	0	**14**
8:45	23	1	0	**24**
2 Hr Total	**106**	**1**	**0**	
Peak Period	**59**	**0**	**0**	

Time Interval : 4:00pm - 6:00pm		Belmore St Southbound Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Belmore St Northbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Constitution Rd Eastbound Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
16:00	16:15	5	0	1	0	41	2	2	0	0	0	0	0	129	3	0	0	2	0	0	0	0	0	0	0	49	0	0	0	59	0	0	0	0	0	0	0	
16:15	16:30	7	0	0	0	34	0	1	0	0	0	0	0	161	2	0	0	1	0	0	0	0	0	0	0	42	1	1	0	63	0	0	0	0	0	0	0	
16:30	16:45	8	0	0	0	38	0	0	0	0	0	0	0	148	2	0	1	3	1	0	1	0	0	0	0	42	0	0	0	71	0	0	0	0	0	0	0	
16:45	17:00	3	0	0	1	32	1	0	1	0	0	0	0	160	2	0	0	5	0	0	0	0	0	0	0	38	0	1	0	45	1	0	1	0	0	0	0	1212
17:00	17:15	4	0	0	0	39	0	2	0	0	0	0	0	154	2	0	1	12	0	0	0	0	0	0	0	48	0	0	1	68	0	0	1	0	0	0	0	1251
17:15	17:30	13	0	0	0	43	0	1	0	0	0	0	0	155	1	0	0	4	0	0	0	0	0	0	0	61	0	1	0	59	0	0	1	0	0	0	0	1277
17:30	17:45	8	0	0	1	35	0	1	0	0	0	0	0	163	1	0	0	21	1	0	1	0	0	0	0	49	0	0	1	68	0	0	0	0	0	0	0	1312
17:45	18:00	5	0	0	0	22	0	1	0	0	0	0	0	159	1	0	1	13	0	0	0	0	0	0	0	61	0	1	0	50	1	0	1	0	0	0	0	1337
Period Total		**53**	**0**	**1**	**2**	**284**	**3**	**8**	**1**	**0**	**0**	**0**	**0**	**1229**	**14**	**0**	**3**	**61**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**390**	**1**	**4**	**2**	**483**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	
Peak Period : 5:00pm - 6:00pm		**30**	**0**	**0**	**1**	**139**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**631**	**5**	**0**	**2**	**50**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**219**	**0**	**2**	**2**	**245**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Belmore St SB Pedestrians	Belmore St NB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
16:00	3	0	0	**3**
16:15	6	0	0	**6**
16:30	3	0	1	**4**
16:45	3	0	1	**4**
17:00	8	0	1	**9**
17:15	12	0	1	**13**
17:30	6	0	4	**10**
17:45	9	0	2	**11**
2 Hr Total	**50**	**0**	**10**	
Peak Period	**35**	**0**	**8**	

TDC
Traffic Data & Control

Survey Location:	Belmore St & Junction Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Signals
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Belmore St Southbound												Junction St Westbound												Belmore St Northbound												Hourly Total
		Left Turn				Through				U Turn				Left Turn				Right Turn				U Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	17	0	0	0	22	1	1	1	0	0	0	0	4	1	0	0	30	1	0	0	0	0	0	0	43	0	1	0	29	4	0	1	0	0	0	0	
7:15	7:30	15	0	0	0	13	0	0	1	0	0	0	0	5	0	0	0	34	2	0	1	0	0	0	0	46	1	0	1	39	1	0	1	0	0	0	0	
7:30	7:45	18	2	0	0	26	2	1	0	0	0	0	0	2	0	0	0	28	0	0	0	0	0	0	0	32	2	1	0	33	3	0	0	0	0	0	0	
7:45	8:00	12	0	0	0	28	1	0	0	0	0	0	0	5	0	0	0	37	0	0	0	0	0	0	0	51	0	1	0	30	1	0	1	0	0	0	0	633
8:00	8:15	10	0	0	0	28	0	0	0	0	0	0	0	3	0	0	0	29	1	0	1	0	0	0	0	46	3	1	1	27	2	0	0	0	0	0	0	629
8:15	8:30	15	0	0	0	27	0	1	0	0	0	0	0	1	1	0	0	44	1	0	0	0	0	0	0	38	2	0	0	35	2	0	0	0	0	0	0	636
8:30	8:45	15	0	0	0	27	0	0	0	0	0	0	0	3	0	0	0	49	0	0	2	0	0	0	0	42	0	1	0	32	0	0	0	0	0	0	0	657
8:45	9:00	12	0	0	0	35	1	0	0	0	0	0	0	5	0	0	0	35	3	0	3	0	0	0	0	49	3	0	0	30	0	0	0	0	0	0	0	666
Period Total		114	2	0	0	206	5	3	2	0	0	0	0	28	2	0	0	286	8	0	7	0	0	0	0	347	11	5	2	255	13	0	3	0	0	0	0	
Peak Period : 8:00am - 9:00am		52	0	0	0	117	1	1	0	0	0	0	0	12	1	0	0	157	5	0	6	0	0	0	0	175	8	2	1	124	4	0	0	0	0	0	0	

15 Minutes Starting	Belmore St SB Pedestrians	Junction St WB Pedestrians	Belmore St NB Pedestrians	15 Minute Total
7:00	0	0	0	0
7:15	0	0	0	0
7:30	0	0	0	0
7:45	0	4	0	4
8:00	0	2	0	2
8:15	0	1	0	1
8:30	0	1	2	3
8:45	0	1	0	1
2 Hr Total	0	9	2	
Peak Period	0	5	2	

Time Interval : 4:00pm - 6:00pm		Belmore St Southbound												Junction St Westbound												Belmore St Northbound												Hourly Total
		Left Turn				Through				U Turn				Left Turn				Right Turn				U Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	13	0	0	0	37	4	1	0	0	0	0	0	5	0	0	0	24	0	0	0	0	0	0	0	26	0	0	1	31	0	0	0	0	0	0	0	
16:15	16:30	13	0	0	0	38	1	1	0	0	0	0	0	3	0	0	0	35	1	0	0	0	0	0	0	26	0	1	0	20	1	0	0	0	0	0	0	
16:30	16:45	16	0	0	0	37	1	0	0	0	0	0	0	5	0	0	0	33	0	0	0	0	0	0	0	29	1	0	1	21	0	0	0	0	0	0	0	
16:45	17:00	14	0	0	0	27	2	0	2	0	0	0	0	8	0	1	0	28	1	0	0	0	0	0	0	31	0	1	1	15	0	0	0	0	0	0	0	557
17:00	17:15	11	0	0	0	33	0	1	0	0	0	0	0	11	0	0	0	34	2	0	0	0	0	0	0	42	0	0	0	21	0	0	1	0	0	0	0	571
17:15	17:30	9	1	0	0	41	0	1	0	0	0	0	0	6	0	0	0	56	0	0	1	0	0	0	0	36	0	1	0	36	0	0	0	0	0	0	0	619
17:30	17:45	15	0	0	0	37	0	1	0	0	0	0	0	6	0	0	0	52	0	0	0	0	0	0	0	51	1	0	2	23	0	0	0	0	0	0	0	663
17:45	18:00	7	0	0	0	19	0	1	0	0	0	0	0	6	0	0	0	31	0	0	0	0	0	0	0	47	0	1	0	29	0	0	0	0	0	0	0	673
Period Total		98	1	0	0	269	8	6	2	0	0	0	0	50	0	1	0	293	4	0	1	0	0	0	0	288	2	4	5	196	1	0	1	0	0	0	0	
Peak Period : 5:00pm - 6:00pm		42	1	0	0	130	0	4	0	0	0	0	0	29	0	0	0	173	2	0	1	0	0	0	0	176	1	2	2	109	0	0	1	0	0	0	0	

15 Minutes Starting	Belmore St SB Pedestrians	Junction St WB Pedestrians	Belmore St NB Pedestrians	15 Minute Total
16:00	0	2	0	2
16:15	0	2	0	2
16:30	0	1	0	1
16:45	1	1	3	5
17:00	0	1	0	1
17:15	0	2	0	2
17:30	0	1	0	1
17:45	0	2	1	3
2 Hr Total	1	12	4	
Peak Period	0	6	1	

TDC
Traffic Data & Control

Survey Location:	Belmore St & Morrison Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Belmore St – Southbound (Time Interval: 7:00am - 9:00am)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
7:00	7:15	2	1	0	0	9	1	0	0	0	0	1	0	0	0	0	0
7:15	7:30	2	0	0	0	7	0	0	1	1	0	0	0	0	0	0	0
7:30	7:45	1	0	0	0	10	2	0	0	0	0	0	0	0	0	0	0
7:45	8:00	2	0	0	0	12	1	0	0	0	0	0	0	1	0	0	0
8:00	8:15	1	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0
8:15	8:30	0	1	0	0	10	0	0	0	2	0	0	0	0	0	0	0
8:30	8:45	4	0	0	0	11	0	0	0	1	0	0	0	1	0	0	0
8:45	9:00	1	0	0	0	12	1	0	0	2	0	0	0	1	0	0	0
Period Total		**13**	**2**	**0**	**0**	**84**	**5**	**0**	**1**	**6**	**0**	**1**	**0**	**3**	**0**	**0**	**0**
Peak Period : 7:45am - 8:45am		**7**	**1**	**0**	**0**	**46**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**

Morrison Rd – Westbound (Time Interval: 7:00am - 9:00am)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
7:00	7:15	14	0	1	0	2	0	0	0	17	0	0	1	0	0	0	0
7:15	7:30	13	0	0	0	8	0	0	0	12	0	1	0	1	0	0	0
7:30	7:45	22	0	1	1	9	0	0	0	15	0	0	0	1	0	0	0
7:45	8:00	22	0	0	0	14	0	0	0	7	0	0	0	3	0	0	0
8:00	8:15	28	0	0	0	13	1	0	0	19	0	0	0	0	0	0	0
8:15	8:30	26	0	2	0	15	0	0	0	15	0	0	0	0	0	0	0
8:30	8:45	20	0	0	0	14	0	0	1	12	0	0	0	4	0	0	0
8:45	9:00	27	0	0	0	13	0	0	0	7	1	0	0	0	0	0	0
Period Total		**172**	**0**	**4**	**1**	**88**	**1**	**0**	**1**	**104**	**1**	**1**	**1**	**9**	**0**	**0**	**0**
Peak Period : 7:45am - 8:45am		**96**	**0**	**2**	**0**	**56**	**1**	**0**	**1**	**53**	**0**	**0**	**0**	**7**	**0**	**0**	**0**

Belmore St – Northbound (Time Interval: 7:00am - 9:00am)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
7:00	7:15	2	0	0	0	14	0	0	0	52	0	1	0	1	0	0	0
7:15	7:30	3	0	0	0	19	1	0	0	48	0	0	2	0	0	0	0
7:30	7:45	2	0	0	0	10	0	0	0	41	0	1	0	0	0	0	0
7:45	8:00	4	0	0	0	18	0	0	0	56	0	1	1	1	0	0	0
8:00	8:15	1	0	0	0	15	1	0	0	47	2	1	1	1	0	0	0
8:15	8:30	3	0	0	0	16	2	0	0	41	1	0	0	1	0	0	0
8:30	8:45	5	0	0	0	28	0	0	1	41	0	1	1	0	0	0	0
8:45	9:00	2	0	0	0	13	2	0	0	41	4	0	2	0	0	0	0
Period Total		**22**	**0**	**0**	**0**	**133**	**6**	**0**	**1**	**367**	**7**	**5**	**7**	**4**	**0**	**0**	**0**
Peak Period : 7:45am - 8:45am		**13**	**0**	**0**	**0**	**77**	**3**	**0**	**1**	**185**	**3**	**3**	**3**	**3**	**0**	**0**	**0**

Yerong St – Eastbound (Time Interval: 7:00am - 9:00am)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
7:00	7:15	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
7:15	7:30	2	0	0	0	6	0	0	0	2	0	0	0	0	0	0	0	
7:30	7:45	2	0	0	0	5	1	0	0	2	0	0	0	0	0	0	0	
7:45	8:00	2	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	**536**
8:00	8:15	0	0	0	0	8	0	0	0	1	0	0	0	0	0	0	0	**567**
8:15	8:30	3	0	0	0	13	1	0	0	3	0	0	0	0	0	0	0	**593**
8:30	8:45	1	0	0	0	15	0	0	0	2	0	0	0	0	0	0	0	**630**
8:45	9:00	1	0	0	0	14	0	0	0	3	0	0	0	0	0	0	0	**618**
Period Total		**12**	**0**	**0**	**0**	**77**	**2**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Peak Period : 7:45am - 8:45am		**6**	**0**	**0**	**0**	**50**	**1**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Belmore St SB Pedestrians	Morrison Rd WB Pedestrians	Belmore St NB Pedestrians	Yerong St EB Pedestrians	15 Minute Total
7:00	0	3	1	0	**4**
7:15	0	0	0	0	**0**
7:30	0	1	0	0	**1**
7:45	0	4	0	0	**4**
8:00	0	3	0	0	**3**
8:15	0	1	0	0	**1**
8:30	0	0	0	0	**0**
8:45	0	0	0	0	**0**
2 Hr Total	**0**	**12**	**1**	**0**	
Peak Period	**0**	**8**	**0**	**0**	

Belmore St – Southbound (Time Interval: 4:00pm - 6:00pm)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
16:00	16:15	7	0	0	0	13	2	1	0	2	0	0	0	0	0	0	0
16:15	16:30	4	0	0	0	16	0	0	0	1	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	20	1	0	0	4	0	0	0	0	0	0	0
16:45	17:00	5	0	0	0	14	1	0	0	16	0	0	0	0	0	0	0
17:00	17:15	4	0	0	0	25	0	0	0	15	0	0	0	0	0	0	0
17:15	17:30	2	0	0	0	38	0	0	0	33	0	0	0	0	0	0	0
17:30	17:45	2	0	0	0	25	0	0	0	10	0	0	0	0	0	0	0
17:45	18:00	2	0	0	0	14	0	0	0	11	0	0	0	0	0	0	0
Period Total		**26**	**0**	**0**	**0**	**165**	**4**	**1**	**0**	**92**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Peak Period : 4:45pm - 5:45pm		**13**	**0**	**0**	**0**	**102**	**1**	**0**	**0**	**74**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Morrison Rd – Westbound (Time Interval: 4:00pm - 6:00pm)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
16:00	16:15	35	1	1	0	18	0	0	0	13	0	0	0	2	0	0	0
16:15	16:30	33	0	1	0	18	0	0	1	11	0	0	0	3	1	0	0
16:30	16:45	33	0	0	0	16	0	0	0	10	0	0	0	3	0	0	0
16:45	17:00	27	0	0	2	28	0	0	0	10	0	0	0	3	0	0	0
17:00	17:15	35	0	1	0	30	0	0	1	5	1	0	0	3	0	0	0
17:15	17:30	23	1	1	0	22	0	0	0	8	0	0	0	1	0	0	0
17:30	17:45	29	0	1	0	28	0	0	0	8	0	0	0	1	0	0	0
17:45	18:00	18	0	1	1	21	0	0	0	11	0	0	0	2	0	0	0
Period Total		**233**	**2**	**6**	**3**	**181**	**0**	**0**	**2**	**76**	**1**	**0**	**0**	**18**	**1**	**0**	**0**
Peak Period : 4:45pm - 5:45pm		**114**	**1**	**3**	**2**	**108**	**0**	**0**	**1**	**31**	**1**	**0**	**0**	**8**	**0**	**0**	**0**

Belmore St – Northbound (Time Interval: 4:00pm - 6:00pm)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles
16:00	16:15	2	0	0	0	8	1	0	0	33	0	0	1	0	0	0	0
16:15	16:30	3	1	0	0	9	1	0	0	29	1	1	0	0	0	0	0
16:30	16:45	1	0	0	0	10	1	0	1	38	1	0	0	1	0	0	0
16:45	17:00	1	0	0	0	6	0	0	0	40	0	1	0	1	0	0	0
17:00	17:15	3	0	0	0	6	0	1	0	33	0	0	0	2	0	0	0
17:15	17:30	5	0	0	0	7	0	0	0	42	0	1	0	0	0	0	0
17:30	17:45	6	0	0	1	11	0	0	0	48	0	0	0	0	0	0	0
17:45	18:00	3	0	0	0	8	0	0	0	42	0	0	0	0	0	0	0
Period Total		**24**	**1**	**0**	**1**	**65**	**3**	**1**	**1**	**305**	**2**	**3**	**1**	**4**	**0**	**0**	**0**
Peak Period : 4:45pm - 5:45pm		**15**	**0**	**0**	**1**	**30**	**0**	**1**	**0**	**163**	**0**	**2**	**0**	**3**	**0**	**0**	**0**

Yerong St – Eastbound (Time Interval: 4:00pm - 6:00pm)

Time Interval		Left Turn Cars	Left Turn Medium Truck	Left Turn Heavy Truck	Left Turn Bicycles	Through Cars	Through Medium Truck	Through Heavy Truck	Through Bicycles	Right Turn Cars	Right Turn Medium Truck	Right Turn Heavy Truck	Right Turn Bicycles	U Turn Cars	U Turn Medium Truck	U Turn Heavy Truck	U Turn Bicycles	Hourly Total
16:00	16:15	0	0	0	0	8	0	0	0	2	0	0	0	0	0	0	0	
16:15	16:30	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	
16:30	16:45	1	0	0	0	7	0	0	1	0	0	0	0	0	1	0	0	
16:45	17:00	3	0	0	0	13	0	0	1	2	0	0	0	0	0	0	0	**614**
17:00	17:15	2	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0	**643**
17:15	17:30	2	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	**697**
17:30	17:45	1	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	**725**
17:45	18:00	2	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	**694**
Period Total		**13**	**1**	**0**	**0**	**64**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	
Peak Period : 4:45pm - 5:45pm		**8**	**1**	**0**	**0**	**38**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	

15 Minutes Starting	Belmore St SB Pedestrians	Morrison Rd WB Pedestrians	Belmore St NB Pedestrians	Yerong St EB Pedestrians	15 Minute Total
16:00	1	1	0	0	**2**
16:15	0	4	0	0	**4**
16:30	0	2	1	0	**3**
16:45	0	1	0	0	**1**
17:00	1	2	0	0	**3**
17:15	0	2	0	0	**2**
17:30	1	1	0	0	**2**
17:45	0	2	2	0	**4**
2 Hr Total	**3**	**15**	**3**	**0**	
Peak Period	**2**	**6**	**0**	**0**	

TDC
Traffic Data & Control

Survey Location:	Bowden St & Constitution Rd, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Bowden St – Southbound												Constitution Rd – Westbound												Bowden St – Northbound												Constitution Rd – Eastbound												Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	17	1	0	1	7	2	0	0	9	0	0	0	0	0	0	0	10	2	0	0	50	2	1	0	26	1	0	0	0	0	0	0	0	1	0	0	20	1	0	0	14	1	0	0	0	0	0	0	29	0	1	1	117	0	0	2	3	0	0	0	1	0	0	0	
7:15	7:30	22	0	0	0	12	2	0	0	12	0	0	0	1	0	0	0	8	0	0	0	50	3	0	0	26	2	1	0	0	0	0	0	2	0	0	0	35	0	0	0	17	1	0	1	0	0	0	0	46	1	0	0	133	2	0	0	1	0	0	0	2	0	0	0	
7:30	7:45	20	2	0	0	15	1	0	0	16	0	1	0	0	0	0	0	6	1	0	0	64	1	1	1	38	2	0	2	0	0	0	0	1	0	0	0	26	1	0	0	20	1	0	0	0	0	0	0	45	2	1	0	107	2	1	1	2	0	0	0	1	0	0	0	
7:45	8:00	25	0	0	0	21	1	0	0	20	1	1	0	0	0	0	0	8	0	0	0	90	1	0	1	50	0	0	0	0	0	0	0	0	0	0	0	19	0	0	1	26	1	0	1	0	0	0	0	27	1	0	0	101	1	1	1	3	0	0	0	1	0	0	0	1485
8:00	8:15	16	0	0	0	16	1	2	0	29	0	1	0	0	0	0	0	7	0	0	0	74	0	0	1	34	1	0	1	0	0	0	0	2	0	0	0	33	0	1	0	36	0	0	0	0	0	0	0	42	1	0	0	116	4	1	0	4	0	0	0	1	0	0	0	1589
8:15	8:30	27	2	0	0	14	1	0	0	28	0	0	0	1	0	0	0	11	1	0	0	59	1	2	0	33	0	0	1	0	0	0	0	0	0	0	0	28	1	1	0	19	2	0	0	0	0	0	0	37	0	2	0	123	1	0	0	1	0	0	0	2	0	0	0	1607
8:30	8:45	20	0	0	0	22	1	0	0	29	0	1	1	0	0	0	0	16	1	0	0	75	2	0	1	40	1	0	0	0	0	0	0	3	0	0	0	30	0	0	0	24	0	0	0	0	0	0	0	32	0	0	0	130	2	1	0	5	0	0	0	1	0	0	0	1663
8:45	9:00	20	3	0	0	23	2	0	0	29	1	0	0	0	0	0	0	11	0	0	0	69	1	0	0	38	0	0	0	1	0	0	0	0	0	0	0	21	1	0	0	24	2	0	0	1	0	0	0	33	0	0	1	109	3	0	0	1	0	0	0	0	0	0	0	1654
Period Total		167	8	0	1	130	11	2	0	172	2	4	1	2	0	0	0	77	5	0	0	531	11	4	4	285	7	1	4	1	0	0	0	8	1	0	0	212	4	2	1	180	8	0	2	1	0	0	0	291	5	4	2	936	15	4	4	20	0	0	0	9	0	0	0	
Peak Period : 7:45am - 8:45am		88	2	0	0	73	4	2	0	106	1	3	1	1	0	0	0	42	2	0	0	298	4	2	3	157	2	0	2	0	0	0	0	5	0	0	0	110	1	2	1	105	3	0	1	0	0	0	0	138	2	2	0	470	8	3	1	13	0	0	0	5	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Constitution Rd WB Pedestrians	Bowden St NB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
7:00	12	1	4	11	28
7:15	16	1	3	2	22
7:30	17	0	1	0	18
7:45	23	0	4	5	32
8:00	22	0	1	3	26
8:15	26	0	1	7	34
8:30	21	0	1	2	24
8:45	16	0	1	4	21
2 Hr Total	153	2	16	34	
Peak Period	92	0	7	17	

Time Interval : 4:00pm - 6:00pm		Bowden St – Southbound												Constitution Rd – Westbound												Bowden St – Northbound												Constitution Rd – Eastbound												Hourly Total
		Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				Left Turn				Through				Right Turn				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	20	0	0	0	24	0	0	0	53	1	1	0	1	0	0	0	12	2	0	0	147	2	2	0	16	0	0	0	0	0	0	0	9	0	0	0	19	0	1	0	24	0	0	0	1	0	0	0	14	0	1	0	64	0	0	0	1	0	0	0	2	0	0	0	
16:15	16:30	18	0	0	0	18	0	0	1	63	2	0	0	0	0	0	0	12	0	0	0	142	2	1	0	17	1	0	0	1	0	0	0	4	0	0	0	20	0	0	0	14	0	0	0	0	0	0	0	13	0	1	0	61	0	1	0	2	0	0	0	0	0	0	0	
16:30	16:45	20	0	0	0	16	0	1	0	66	0	0	0	1	0	0	0	22	1	0	0	151	1	0	1	15	0	0	0	0	0	0	0	4	0	0	0	24	0	0	0	17	0	0	0	0	0	0	0	11	0	0	1	56	1	0	0	3	0	0	0	0	0	0	0	
16:45	17:00	14	1	0	0	22	0	0	0	96	2	1	2	1	0	0	0	25	1	0	0	159	2	0	0	14	0	0	0	0	0	0	0	3	1	0	0	27	1	1	0	10	0	0	0	0	0	0	0	14	0	0	0	49	0	1	1	0	0	0	0	0	0	0	0	1671
17:00	17:15	22	0	0	0	26	1	0	0	89	1	0	0	0	0	0	0	25	0	1	0	142	2	1	1	17	0	0	0	0	0	0	0	14	0	0	0	25	0	0	0	20	0	0	1	0	0	0	0	16	0	1	0	61	0	0	0	2	0	0	0	0	0	0	0	1722
17:15	17:30	26	0	0	0	28	1	0	1	119	0	0	0	0	0	0	0	28	1	0	0	114	0	1	0	13	0	0	0	0	0	0	0	7	0	0	0	21	1	0	0	11	0	0	0	0	0	0	0	24	0	1	0	82	0	1	0	1	0	0	0	1	0	0	0	1810
17:30	17:45	20	0	0	0	22	0	1	1	105	1	0	0	0	0	0	0	39	0	0	0	97	0	1	0	8	0	0	0	0	0	0	0	8	0	0	0	23	0	0	1	16	0	0	0	0	0	0	0	27	0	1	0	70	0	0	0	1	0	0	0	0	0	0	0	1840
17:45	18:00	20	1	0	1	27	0	0	2	94	0	1	0	0	0	0	0	35	0	0	0	98	0	0	0	22	0	0	0	0	0	0	0	5	0	0	0	23	0	2	0	11	0	0	0	0	0	0	0	20	0	0	0	72	0	1	0	0	0	0	0	1	0	0	0	1828
Period Total		160	2	0	1	183	2	2	5	685	7	3	2	3	0	0	0	198	5	1	0	1050	9	6	2	122	1	0	0	1	0	0	0	54	1	0	0	182	2	4	1	123	0	0	1	1	0	0	0	139	0	5	1	515	1	4	1	10	0	0	0	4	0	0	0	
Peak Period : 4:45pm - 5:45pm		82	1	0	0	98	2	1	2	409	4	1	2	1	0	0	0	117	2	1	0	512	4	3	1	52	0	0	0	0	0	0	0	32	1	0	0	96	2	1	1	57	0	0	1	0	0	0	0	81	0	3	0	262	0	2	1	4	0	0	0	1	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Constitution Rd WB Pedestrians	Bowden St NB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
16:00	10	1	0	8	19
16:15	12	0	0	7	19
16:30	13	0	0	5	18
16:45	11	0	0	4	15
17:00	15	0	2	8	25
17:15	7	0	1	5	13
17:30	14	0	0	3	17
17:45	8	0	2	4	14
2 Hr Total	90	1	5	44	
Peak Period	47	0	3	20	

TDC
Traffic Data & Control

Survey Location:	Bowden St & McPherson St, West Ryde
Day & Date:	Tuesday 3rd April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Bowden St – Southbound (AM)

Time Interval: 7:00am - 9:00am		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
7:00	7:15	11	0	0	0	31	1	0	0	9	0	0	1	2	0	0	0
7:15	7:30	16	1	0	0	38	3	0	0	27	0	0	2	0	0	0	0
7:30	7:45	17	1	0	0	44	1	1	0	11	1	0	3	1	0	0	0
7:45	8:00	20	0	0	0	55	1	1	0	20	0	0	0	3	0	0	0
8:00	8:15	13	0	0	0	54	1	3	1	17	2	0	0	0	0	0	0
8:15	8:30	17	0	0	0	53	0	0	0	27	0	0	0	1	0	0	0
8:30	8:45	15	0	0	0	61	2	1	0	21	1	0	0	0	0	0	0
8:45	9:00	19	1	0	0	64	4	0	0	25	0	0	1	1	0	0	0
Period Total		128	3	0	0	400	13	6	1	157	4	0	7	8	0	0	0
Peak Period : 8:00am - 9:00am		64	1	0	0	232	7	4	1	90	3	0	1	2	0	0	0

Squire St – Westbound (AM)

Time Interval: 7:00am - 9:00am		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
7:00	7:15	2	0	0	0	1	0	0	0	5	1	0	0	0	0	0	0
7:15	7:30	5	0	0	0	12	0	0	0	9	0	0	0	0	0	0	0
7:30	7:45	6	0	0	0	8	0	0	0	7	0	0	0	0	0	0	0
7:45	8:00	8	0	0	1	11	0	0	0	13	0	0	0	0	0	0	0
8:00	8:15	11	0	0	0	8	1	0	0	14	0	0	1	0	0	0	0
8:15	8:30	6	0	0	0	15	0	0	0	19	1	1	0	0	0	0	0
8:30	8:45	10	0	0	1	8	0	0	0	24	0	0	0	0	0	0	0
8:45	9:00	7	0	0	0	14	0	0	1	17	0	0	0	0	0	0	0
Period Total		55	0	0	2	77	1	0	1	108	2	1	1	0	0	0	0
Peak Period : 8:00am - 9:00am		34	0	0	1	45	1	0	1	74	1	1	1	0	0	0	0

Bowden St – Northbound (AM)

Time Interval: 7:00am - 9:00am		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
7:00	7:15	8	0	1	1	76	0	2	1	1	0	0	0	0	0	0	0
7:15	7:30	8	0	0	0	89	0	3	0	2	0	0	0	1	0	0	0
7:30	7:45	7	0	0	0	97	5	2	2	4	0	0	0	0	0	0	0
7:45	8:00	12	0	0	0	81	1	0	2	5	0	0	0	0	0	0	0
8:00	8:15	14	0	0	0	86	3	1	1	3	0	0	0	0	0	0	0
8:15	8:30	13	0	0	0	79	1	3	2	7	0	0	0	1	0	0	0
8:30	8:45	11	0	0	0	83	1	0	1	5	0	0	0	1	0	0	0
8:45	9:00	15	0	0	0	72	1	0	0	2	0	0	0	0	0	0	0
Period Total		88	0	1	1	663	12	11	9	29	0	0	0	3	0	0	0
Peak Period : 8:00am - 9:00am		53	0	0	0	320	6	4	4	17	0	0	0	2	0	0	0

McPherson St – Eastbound (AM)

Time Interval: 7:00am - 9:00am		Left Turn				Through				Right Turn				U Turn				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	9	1	0	1	5	0	0	0	4	0	0	1	0	0	0	0	
7:15	7:30	12	1	0	2	2	0	0	0	7	0	0	0	0	0	0	0	
7:30	7:45	13	1	0	1	3	1	0	0	2	0	0	0	0	0	0	0	
7:45	8:00	11	1	0	0	8	0	0	0	4	0	0	0	0	0	0	0	912
8:00	8:15	11	1	0	1	5	0	0	0	6	0	0	0	0	0	0	0	995
8:15	8:30	6	2	0	0	4	1	0	0	5	1	0	0	0	0	0	0	1020
8:30	8:45	15	0	0	1	6	0	0	0	2	0	0	0	0	0	0	0	1051
8:45	9:00	15	1	0	0	10	0	0	0	6	1	0	0	0	0	0	0	1070
Period Total		92	8	0	6	43	2	0	0	36	2	0	1	0	0	0	0	
Peak Period : 8:00am - 9:00am		47	4	0	2	25	1	0	0	19	2	0	0	0	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Squire St WB Pedestrians	Bowden St NB Pedestrians	McPherson St EB Pedestrians	15 Minute Total
7:00	0	3	0	1	4
7:15	2	8	3	3	16
7:30	0	2	2	2	6
7:45	1	4	0	2	7
8:00	2	4	5	3	14
8:15	0	1	0	1	2
8:30	1	1	3	7	12
8:45	0	1	3	4	8
2 Hr Total	6	24	16	23	
Peak Period	3	7	11	15	

Bowden St – Southbound (PM)

Time Interval: 4:00pm - 6:00pm		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
16:00	16:15	7	0	0	0	70	1	2	1	12	0	0	0	3	0	0	0
16:15	16:30	12	0	0	0	56	2	0	0	18	0	0	1	2	0	0	0
16:30	16:45	12	0	0	0	65	2	1	0	17	0	0	0	1	0	0	0
16:45	17:00	12	0	0	0	74	0	1	0	7	0	0	0	1	0	0	0
17:00	17:15	9	0	0	0	77	2	0	0	9	0	0	0	2	0	0	0
17:15	17:30	8	0	0	1	96	2	1	2	24	0	0	2	0	0	0	0
17:30	17:45	16	0	0	0	82	0	1	0	20	1	0	0	1	0	0	0
17:45	18:00	11	0	0	0	79	1	0	1	27	0	0	0	0	0	0	0
Period Total		87	0	0	1	599	10	6	4	134	1	0	3	10	0	0	0
Peak Period : 5:00pm - 6:00pm		44	0	0	1	334	5	2	3	80	1	0	2	3	0	0	0

Squire St – Westbound (PM)

Time Interval: 4:00pm - 6:00pm		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
16:00	16:15	16	0	0	0	13	0	0	0	9	0	0	0	0	0	0	0
16:15	16:30	19	0	0	0	17	0	0	1	17	0	0	0	0	0	0	0
16:30	16:45	26	0	0	1	14	0	0	0	13	1	0	0	0	0	0	0
16:45	17:00	44	0	0	0	16	0	0	0	23	0	0	0	1	0	0	0
17:00	17:15	41	0	0	0	27	0	0	1	22	0	0	0	0	0	0	0
17:15	17:30	41	0	0	0	49	0	0	1	19	0	0	0	0	0	0	0
17:30	17:45	39	1	0	1	34	0	0	1	28	1	0	0	0	0	0	0
17:45	18:00	33	0	0	0	33	1	0	0	17	0	0	0	0	0	0	0
Period Total		259	1	0	2	203	1	0	4	148	2	0	0	1	0	0	0
Peak Period : 5:00pm - 6:00pm		154	1	0	1	143	1	0	3	86	1	0	0	0	0	0	0

Bowden St – Northbound (PM)

Time Interval: 4:00pm - 6:00pm		Left Turn				Through				Right Turn				U Turn			
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles
16:00	16:15	6	0	0	0	42	0	2	0	2	0	0	0	0	0	0	0
16:15	16:30	6	1	0	0	47	0	1	0	1	0	0	0	0	0	0	0
16:30	16:45	11	0	0	0	41	0	0	0	4	0	0	0	0	0	0	0
16:45	17:00	8	0	0	0	52	2	1	0	4	0	0	0	0	0	0	0
17:00	17:15	9	0	0	0	57	0	1	0	2	0	0	0	0	0	0	0
17:15	17:30	10	0	0	0	52	1	1	0	3	0	0	0	0	0	0	0
17:30	17:45	12	0	0	0	51	0	1	0	2	0	0	0	0	0	0	0
17:45	18:00	13	1	0	0	46	0	1	0	2	0	0	0	0	0	0	0
Period Total		75	2	0	0	388	3	8	0	20	0	0	0	0	0	0	0
Peak Period : 5:00pm - 6:00pm		44	1	0	0	206	1	4	0	9	0	0	0	0	0	0	0

McPherson St – Eastbound (PM)

Time Interval: 4:00pm - 6:00pm		Left Turn				Through				Right Turn				U Turn				Hourly Total
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	29	0	0	0	3	0	0	0	8	0	0	0	0	0	0	0	
16:15	16:30	24	0	0	0	9	0	0	0	8	0	0	0	0	0	0	0	
16:30	16:45	23	1	0	0	9	0	0	0	11	1	0	0	0	0	0	0	
16:45	17:00	14	0	0	1	4	0	0	0	9	0	0	0	0	0	0	0	996
17:00	17:15	25	0	0	0	9	0	0	0	9	0	0	0	0	0	0	0	1072
17:15	17:30	16	0	0	1	4	0	0	0	8	0	0	0	0	0	0	0	1172
17:30	17:45	26	0	0	2	4	0	0	0	4	0	0	0	0	0	0	0	1246
17:45	18:00	22	0	0	1	4	0	0	0	9	0	0	1	1	0	0	0	1276
Period Total		179	1	0	5	46	0	0	0	66	1	0	1	1	0	0	0	
Peak Period : 5:00pm - 6:00pm		89	0	0	4	21	0	0	0	30	0	0	1	1	0	0	0	

15 Minutes Starting	Bowden St SB Pedestrians	Squire St WB Pedestrians	Bowden St NB Pedestrians	McPherson St EB Pedestrians	15 Minute Total
16:00	0	3	1	2	6
16:15	0	4	0	0	4
16:30	1	4	0	0	5
16:45	0	0	0	2	2
17:00	1	6	2	3	12
17:15	2	6	1	2	11
17:30	1	9	0	2	12
17:45	2	4	2	2	10
2 Hr Total	7	36	6	13	
Peak Period	6	25	5	9	

TDC
Traffic Data & Control

Survey Location:	Railway Rd & Bank St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video manually counted

Count Period
AM Period - 7:00AM to 9:00AM
PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Railway Rd Southbound Through Cars	Railway Rd Southbound Through Medium Truck	Railway Rd Southbound Through Heavy Truck	Railway Rd Southbound Through Bicycles	Railway Rd Southbound Right Turn Cars	Railway Rd Southbound Right Turn Medium Truck	Railway Rd Southbound Right Turn Heavy Truck	Railway Rd Southbound Right Turn Bicycles	Railway Rd Southbound U Turn Cars	Railway Rd Southbound U Turn Medium Truck	Railway Rd Southbound U Turn Heavy Truck	Railway Rd Southbound U Turn Bicycles	Railway Rd Northbound Left Turn Cars	Railway Rd Northbound Left Turn Medium Truck	Railway Rd Northbound Left Turn Heavy Truck	Railway Rd Northbound Left Turn Bicycles	Railway Rd Northbound Through Cars	Railway Rd Northbound Through Medium Truck	Railway Rd Northbound Through Heavy Truck	Railway Rd Northbound Through Bicycles	Railway Rd Northbound U Turn Cars	Railway Rd Northbound U Turn Medium Truck	Railway Rd Northbound U Turn Heavy Truck	Railway Rd Northbound U Turn Bicycles	Bank St Eastbound Left Turn Cars	Bank St Eastbound Left Turn Medium Truck	Bank St Eastbound Left Turn Heavy Truck	Bank St Eastbound Left Turn Bicycles	Bank St Eastbound Right Turn Cars	Bank St Eastbound Right Turn Medium Truck	Bank St Eastbound Right Turn Heavy Truck	Bank St Eastbound Right Turn Bicycles	Bank St Eastbound U Turn Cars	Bank St Eastbound U Turn Medium Truck	Bank St Eastbound U Turn Heavy Truck	Bank St Eastbound U Turn Bicycles	Hourly Total
7:00	7:15	10	0	0	0	41	0	0	0	2	0	0	0	14	0	0	0	5	0	0	1	0	0	0	0	167	3	0	0	25	1	0	1	0	0	0	0	
7:15	7:30	9	0	0	1	35	2	0	1	0	0	0	0	12	1	0	0	4	0	0	1	0	0	0	0	176	3	0	0	30	0	0	5	0	0	0	0	
7:30	7:45	9	0	0	0	70	1	0	0	6	0	0	0	16	1	0	2	2	0	0	4	0	0	0	0	193	1	0	0	33	0	0	2	0	0	0	0	
7:45	8:00	13	1	0	1	77	0	0	0	1	0	0	0	15	0	0	0	5	0	0	0	0	0	0	0	176	0	0	1	34	0	0	0	2	0	0	0	1216
8:00	8:15	13	0	0	1	84	3	0	1	1	0	0	0	22	1	0	0	4	0	0	2	0	0	0	0	191	2	0	0	37	0	0	2	0	0	0	0	1310
8:15	8:30	19	0	0	2	23	2	0	0	2	0	0	0	14	0	0	0	4	1	0	1	0	0	0	0	188	3	0	0	58	0	0	1	0	0	0	0	1348
8:30	8:45	15	0	0	2	58	1	0	0	0	0	0	0	24	0	0	0	8	0	0	2	0	0	0	0	164	3	0	0	36	4	0	3	0	0	0	0	1328
8:45	9:00	20	2	0	1	93	1	0	0	1	0	0	0	18	0	0	0	8	0	0	2	0	0	0	0	159	2	0	1	46	0	0	5	0	0	0	0	1361
Period Total		**108**	**3**	**0**	**8**	**481**	**10**	**0**	**2**	**13**	**0**	**0**	**0**	**135**	**3**	**0**	**2**	**40**	**1**	**0**	**13**	**0**	**0**	**0**	**0**	**1414**	**17**	**0**	**2**	**299**	**5**	**0**	**19**	**2**	**0**	**0**	**0**	
Peak Period : 8:00am - 9:00am		**67**	**2**	**0**	**6**	**258**	**7**	**0**	**1**	**4**	**0**	**0**	**0**	**78**	**1**	**0**	**0**	**24**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**702**	**10**	**0**	**1**	**177**	**4**	**0**	**11**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Railway Rd SB Pedestrians	Railway Rd NB Pedestrians	Bank St EB Pedestrians	15 Minute Total
7:00	2	19	1	**22**
7:15	0	11	0	**11**
7:30	4	21	0	**25**
7:45	1	22	0	**23**
8:00	2	16	0	**18**
8:15	4	32	2	**38**
8:30	4	14	1	**19**
8:45	2	11	0	**13**
2 Hr Total	**19**	**146**	**4**	
Peak Period	**12**	**73**	**3**	

Time Interval : 4:00pm - 6:00pm		Railway Rd Southbound Through Cars	Railway Rd Southbound Through Medium Truck	Railway Rd Southbound Through Heavy Truck	Railway Rd Southbound Through Bicycles	Railway Rd Southbound Right Turn Cars	Railway Rd Southbound Right Turn Medium Truck	Railway Rd Southbound Right Turn Heavy Truck	Railway Rd Southbound Right Turn Bicycles	Railway Rd Southbound U Turn Cars	Railway Rd Southbound U Turn Medium Truck	Railway Rd Southbound U Turn Heavy Truck	Railway Rd Southbound U Turn Bicycles	Railway Rd Northbound Left Turn Cars	Railway Rd Northbound Left Turn Medium Truck	Railway Rd Northbound Left Turn Heavy Truck	Railway Rd Northbound Left Turn Bicycles	Railway Rd Northbound Through Cars	Railway Rd Northbound Through Medium Truck	Railway Rd Northbound Through Heavy Truck	Railway Rd Northbound Through Bicycles	Railway Rd Northbound U Turn Cars	Railway Rd Northbound U Turn Medium Truck	Railway Rd Northbound U Turn Heavy Truck	Railway Rd Northbound U Turn Bicycles	Bank St Eastbound Left Turn Cars	Bank St Eastbound Left Turn Medium Truck	Bank St Eastbound Left Turn Heavy Truck	Bank St Eastbound Left Turn Bicycles	Bank St Eastbound Right Turn Cars	Bank St Eastbound Right Turn Medium Truck	Bank St Eastbound Right Turn Heavy Truck	Bank St Eastbound Right Turn Bicycles	Bank St Eastbound U Turn Cars	Bank St Eastbound U Turn Medium Truck	Bank St Eastbound U Turn Heavy Truck	Bank St Eastbound U Turn Bicycles	Hourly Total
16:00	16:15	5	0	0	0	187	3	0	1	2	0	0	0	33	1	0	0	11	0	1	0	0	0	0	0	53	1	0	0	15	0	0	0	0	0	0	0	
16:15	16:30	13	0	0	1	218	3	0	1	0	0	0	0	35	0	0	0	10	0	0	0	0	0	0	0	66	0	0	0	21	0	0	2	0	0	0	0	
16:30	16:45	10	0	0	0	249	1	0	3	1	0	0	0	42	0	0	2	10	0	0	1	0	0	0	0	62	3	0	2	19	0	0	0	0	0	0	0	
16:45	17:00	12	0	0	0	232	1	0	2	2	0	0	0	47	0	0	1	11	0	0	1	0	0	0	0	72	1	0	0	8	0	0	1	0	0	0	0	1479
17:00	17:15	17	0	0	1	217	3	1	1	1	0	0	0	59	0	0	2	7	0	0	0	0	0	0	0	68	0	0	0	21	0	0	0	0	0	0	0	1564
17:15	17:30	5	0	0	1	229	0	0	2	1	0	0	0	65	2	0	0	6	0	0	3	0	0	0	0	58	1	0	2	20	0	0	0	2	0	0	0	1591
17:30	17:45	5	0	0	0	215	0	0	0	1	0	0	0	74	0	0	3	7	0	0	1	0	0	0	0	89	0	0	0	25	0	0	0	0	0	0	0	1606
17:45	18:00	10	0	0	1	230	0	0	2	1	0	0	0	55	0	0	2	10	0	0	0	0	0	0	0	76	0	0	0	15	0	0	0	0	0	0	0	1617
Period Total		**77**	**0**	**0**	**4**	**1777**	**11**	**1**	**12**	**9**	**0**	**0**	**0**	**410**	**3**	**0**	**10**	**72**	**0**	**1**	**6**	**0**	**0**	**0**	**0**	**544**	**6**	**0**	**4**	**144**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	
Peak Period : 5:00pm - 6:00pm		**37**	**0**	**0**	**3**	**891**	**3**	**1**	**5**	**4**	**0**	**0**	**0**	**253**	**2**	**0**	**7**	**30**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**291**	**1**	**0**	**2**	**81**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	

15 Minutes Starting	Railway Rd SB Pedestrians	Railway Rd NB Pedestrians	Bank St EB Pedestrians	15 Minute Total
16:00	1	5	0	**6**
16:15	0	7	0	**7**
16:30	1	11	0	**12**
16:45	0	1	0	**1**
17:00	0	9	0	**9**
17:15	0	7	0	**7**
17:30	0	7	0	**7**
17:45	0	7	0	**7**
2 Hr Total	**2**	**54**	**0**	
Peak Period	**0**	**30**	**0**	

TDC
Traffic Data & Control

Survey Location:	Constitution Rd & Station St, West Ryde
Day & Date:	Wednesday 4th April, 2012
Weather:	Fine
Traffic Control:	Roundabout
Survey Method:	Video

Count Period

AM Period - 7:00AM to 9:00AM

PM Period - 4:00PM to 6:00PM

Time Interval : 7:00am - 9:00am		Station St Southbound												Constitution Rd Westbound												Constitution Rd Eastbound												Hourly Total
		Left Turn				Right Turn				U Turn				Through				Right Turn				U Turn				Left Turn				Through				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
7:00	7:15	32	0	0	0	1	0	0	0	0	0	0	0	42	1	0	1	16	0	0	0	0	0	0	0	5	0	0	0	149	2	0	0	0	0	0	0	
7:15	7:30	20	0	0	0	2	0	0	0	0	0	0	0	51	7	0	2	8	2	0	0	1	0	0	0	7	0	0	0	150	0	0	2	1	0	0	0	
7:30	7:45	31	0	0	0	3	0	0	0	0	0	0	0	75	2	0	3	18	1	0	0	2	0	0	0	8	0	0	0	158	1	0	0	2	0	0	0	
7:45	8:00	28	1	0	0	3	0	0	0	0	0	0	0	85	0	0	1	25	0	0	0	1	0	0	0	8	0	0	0	168	0	0	2	0	0	0	0	1128
8:00	8:15	25	1	0	0	3	0	0	0	0	0	0	0	91	1	0	0	31	2	0	0	2	0	0	0	9	0	0	0	167	2	0	3	1	0	0	0	1217
8:15	8:30	25	0	0	0	5	0	0	0	0	0	0	0	91	0	0	0	27	1	0	0	3	1	0	0	14	0	0	0	165	2	0	0	1	0	0	0	1299
8:30	8:45	40	0	0	0	7	0	0	0	0	0	0	0	85	0	0	0	30	0	0	1	0	0	0	0	15	0	0	1	154	2	0	2	0	0	0	0	1332
8:45	9:00	37	1	0	0	7	0	0	0	0	0	0	0	83	2	0	1	24	1	1	0	1	1	0	0	14	0	0	0	135	0	0	1	0	0	0	0	1319
Period Total		**238**	**3**	**0**	**0**	**31**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**603**	**13**	**0**	**8**	**179**	**7**	**1**	**1**	**10**	**2**	**0**	**0**	**80**	**0**	**0**	**1**	**1246**	**9**	**0**	**10**	**5**	**0**	**0**	**0**	
Peak Period : 7:45am - 8:45am		**118**	**2**	**0**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**352**	**1**	**0**	**1**	**113**	**3**	**0**	**1**	**6**	**1**	**0**	**0**	**46**	**0**	**0**	**1**	**654**	**6**	**0**	**7**	**2**	**0**	**0**	**0**	

15 Minutes Starting	Station St SB Pedestrians	Constitution Rd WB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
7:00	3	0	1	**4**
7:15	0	0	3	**3**
7:30	0	1	0	**1**
7:45	0	0	0	**0**
8:00	3	0	1	**4**
8:15	1	0	4	**5**
8:30	5	0	3	**8**
8:45	6	0	1	**7**
2 Hr Total	**18**	**1**	**13**	
Peak Period	**9**	**0**	**8**	

Time Interval : 4:00pm - 6:00pm		Station St Southbound												Constitution Rd Westbound												Constitution Rd Eastbound												Hourly Total
		Left Turn				Right Turn				U Turn				Through				Right Turn				U Turn				Left Turn				Through				U Turn				
		Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	Cars	Medium Truck	Heavy Truck	Bicycles	
16:00	16:15	12	0	0	0	5	0	0	0	1	0	0	0	168	5	0	0	33	0	0	0	0	0	0	0	4	0	0	0	59	1	0	0	0	0	0	0	
16:15	16:30	17	0	0	0	12	1	0	0	0	0	0	0	189	2	0	1	44	0	0	0	0	0	0	0	6	0	0	0	64	0	0	1	0	0	0	0	
16:30	16:45	14	0	0	1	4	0	0	0	0	0	0	0	244	6	0	1	40	1	0	1	1	0	0	0	3	0	0	0	62	1	0	3	0	0	0	0	
16:45	17:00	19	0	0	0	7	0	0	0	1	0	0	0	216	1	0	2	37	0	0	0	1	0	0	0	8	0	0	0	52	0	0	1	0	0	0	0	1352
17:00	17:15	22	1	0	0	6	0	0	0	0	0	0	0	198	3	0	2	39	1	0	0	0	0	0	0	6	0	0	0	62	0	0	1	0	0	0	0	1405
17:15	17:30	20	0	0	1	5	0	0	1	0	0	0	0	218	1	0	2	45	1	0	2	0	0	0	0	7	0	0	0	84	0	0	1	0	0	0	0	1456
17:30	17:45	27	0	0	0	10	0	0	0	1	0	0	0	227	0	0	0	37	0	0	0	2	0	0	0	6	0	0	0	101	0	0	0	0	0	0	0	1485
17:45	18:00	18	0	0	0	7	0	0	0	1	0	0	0	221	0	0	6	41	0	0	0	2	0	0	0	3	0	0	1	89	0	0	1	0	0	0	0	1530
Period Total		**149**	**1**	**0**	**2**	**56**	**1**	**0**	**1**	**4**	**0**	**0**	**0**	**1681**	**18**	**0**	**14**	**316**	**3**	**0**	**3**	**6**	**0**	**0**	**0**	**43**	**0**	**0**	**1**	**573**	**2**	**0**	**8**	**0**	**0**	**0**	**0**	
Peak Period : 5:00pm - 6:00pm		**87**	**1**	**0**	**1**	**28**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**864**	**4**	**0**	**10**	**162**	**2**	**0**	**2**	**4**	**0**	**0**	**0**	**22**	**0**	**0**	**1**	**336**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	

15 Minutes Starting	Station St SB Pedestrians	Constitution Rd WB Pedestrians	Constitution Rd EB Pedestrians	15 Minute Total
16:00	2	0	2	**4**
16:15	2	0	2	**4**
16:30	0	0	0	**0**
16:45	1	0	0	**1**
17:00	3	1	4	**8**
17:15	2	0	2	**4**
17:30	4	0	0	**4**
17:45	0	0	4	**4**
2 Hr Total	**14**	**1**	**14**	
Peak Period	**9**	**1**	**10**	

APPENDIX B

TURN COUNT GEH STATISTICS

AM Peak Turn Count Comparison

Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Church Street/Riverside Ave Intersection	Through-Southbound	1007	1006	1005	3497	3430	1.1
	Left - Into Riverside Ave- Southbound	1007	1006	1019	90	128	3.7
	Left - Out Riverside Ave - Westbound	1019	1006	1005	403	403	0.0
	Through- Northbound	1005	1006	1007	2764	2620	2.8
Church Street/Junction Street Intersection	Right-Eastbound	1029	1007	1006	165	75	8.2
	Left-Eastbound	1029	1007	1008	77	85	0.9
	Through-Southbound	1008	1007	1006	3424	3487	1.1
	Through-Northbound	1006	1007	1008	2773	2599	3.4
	Left-Northbound	1006	1007	1029	47	21	4.5
Church Street/Suttor Ave Intersection	Left-Eastbound	1030	1008	1009	47	32	2.3
	Through-Southbound	1009	1008	1007	3329	3487	2.7
	Through-Northbound	1007	1008	1009	2957	2645	5.9
	Left-Northbound	1007	1008	1030	8	26	4.3
Church Street/Morrison Road Intersection	Through-Eastbound	1031	1009	1021	227	210	1.2
	Left-Eastbound	1031	1009	1011	35	123	10
	Through-Southbound	1011	1009	1008	3254	3441	3.2
	Left-Southbound	1011	1009	1021	207	270	4.1
	Through-Westbound	1021	1009	1031	186	140	3.6
	Left-Westbound	1021	1009	1008	187	186	0.1
	Through-Northbound	1008	1009	1011	2858	2672	3.5
	Left-Northbound	1008	1009	1031	6	3	1.4
Church Street/Victoria Street Intersection	U-turn- Southbound	1154	1012	1014	0	0	0.0
	Right-Southbound	1154	1012	1158	565	564	0.0
	Left-Southbound	1154	1012	1157	26	26	0.0
	Right-Westbound	1157	1012	1014	130	130	0.0
	Through-Westbound	1157	1012	1158	1228	1219	0.3
	Left-Westbound	1157	1012	1156	561	455	4.7
	U-turn- Northbound	1155	1012	1156	42	6	7.2
	Right-Northbound	1155	1012	1157	505	508	0.1
	Left-Northbound	1155	1012	1158	47	31	2.5
	Right-Eastbound	1158	1012	1156	375	386	0.5
	Through-Eastbound	1158	1012	1157	1707	1839	3.1
	Left-Eastbound	1158	1012	1014	730	821	3.3
Victoria Street/Belmore Street Intersection	Left-Southbound	1045	1044	1158	42	75	4.3
	Through-Westbound	1158	1044	1056	1800	1667	3.2
	Left-Westbound	1158	1044	1043	34	116	9.4
	Left-Northbound	1043	1044	1056	117	69	5.0
	Through-Eastbound	1056	1044	1158	2819	3012	3.6
	Left-Eastbound	1056	1044	1045	13	13	0.1
Victoria Street/ Shepherd Street Intersection	Left-Southbound	1066	1065	1056	46	40	0.9
	Through-Westbound	1056	1065	1084	1893	1706	4.4
	Left-Westbound	1056	1065	1064	24	38	2.6
	Through-Eastbound	1084	1065	1056	2829	2994	3.1
	Left-Eastbound	1084	1065	1066	1	1	0.2
Victoria Street/Bowden Street Intersection	Right-Southbound	1085	1084	1100	30	20	2.0
	Through-Southbound	1085	1084	1159	146	202	4.2
	Left-Southbound	1085	1084	1065	30	30	0.1
	Through-Westbound	1065	1084	1100	1765	1659	2.6
	Left-Westbound	1065	1084	1159	128	90	3.6
	Right-Northbound	1159	1084	1065	167	215	3.5
	Through-Northbound	1159	1084	1085	266	251	0.9
	Left-Northbound	1159	1084	1100	30	29	0.2
	Right-Eastbound	1100	1084	1159	105	135	2.7
	Through-Eastbound	1100	1084	1065	2621	2760	2.7
	Left-Eastbound	1100	1084	1085	11	32	4.6
Victoria Road/Forsyth Road Intersection	Left-Southbound	1110	1109	1100	8	8	0.0
	Through-Westbound	1100	1109	1121	1790	1707	2.0
	Left-Westbound	1100	1109	1108	4	2	1.2

AM Peak Turn Count Comparison

Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Victoria Road/Forsyth Road Intersection	Left-Northbound	1108	1109	1121	28	85	7.6
	Through-Eastbound	1121	1109	1100	2707	2899	3.6
	Left-Eastbound	1121	1109	1110	4	7	1.2
Victoria Road/Mellor Street Intersection	Through-Westbound	1109	1121	1125	1788	1769	0.5
	Left-Westbound	1109	1121	1120	30	23	1.3
	Left-Northbound	1120	1121	1125	39	61	3.1
	Through-Eastbound	1125	1121	1109	2680	2876	3.7
Victoria Road/Hermitage Road Intersection	Right-Southbound	1133	1132	1134	130	120	0.9
	Through-Southbound	1133	1132	1131	137	87	4.7
	Left-Southbound	1133	1132	1129	200	302	6.4
	Right-Westbound	1129	1132	1133	21	20	0.2
	Through-Westbound	1129	1132	1134	1790	1818	0.7
	Left-Westbound	1129	1132	1131	16	12	1.1
	Right-Northbound	1131	1132	1129	8	70	9.9
	Through-Northbound	1131	1132	1133	50	59	1.2
	Left-Northbound	1131	1132	1134	35	20	2.9
	Right-Eastbound	1134	1132	1131	129	90	3.7
	Through-Eastbound	1134	1132	1129	2708	2858	2.9
	Left-Eastbound	1134	1132	1133	274	271	0.2
Constitution Road/Belmore Street Intersection	Right-Southbound	1038	1037	1048	113	120	0.7
	Through-Southbound	1038	1037	1036	12	26	3.3
	Through-Northbound	1036	1037	1038	39	54	2.2
	Left-Northbound	1036	1037	1048	391	392	0.1
	Right-Eastbound	1048	1037	1036	384	338	2.4
	Left-Eastbound	1048	1037	1038	272	146	8.7
Junction Street/Belmore Street Intersection	Through-Southbound	1039	1038	1037	100	108	0.8
	Left-Southbound	1039	1038	1029	57	143	8.6
	Right-Westbound	1029	1038	1039	133	110	2.1
	Left-Westbound	1029	1038	1037	15	39	4.7
	Right-Northbound	1037	1038	1029	138	138	0.0
	Through-Northbound	1037	1038	1039	186	73	9.9
Belmore Road/Morrison Road/Yerong Street Intersection	Through-Southbound	1043	1042	1041	46	136	9.4
	Left-Southbound	1043	1042	1031	6	26	5.0
	Right-Westbound	1031	1042	1043	54	67	1.6
	Left-Westbound	1031	1042	1041	137	102	3.2
	Right-Northbound	1041	1042	1031	235	230	0.3
	Through-Northbound	1041	1042	1043	64	84	2.4
	Left-Northbound	1040	1041	1055	10	2	3.3
Constitution Road/Bowden Street	Right-Southbound	1078	1077	1103	81	66	1.8
	Through-Southbound	1078	1077	1076	71	73	0.2
	Left-Southbound	1078	1077	1057	85	25	8.0
	Right-Westbound	1057	1077	1078	157	258	7.0
	Through-Westbound	1057	1077	1103	287	187	6.5
	Left-Westbound	1068	1076	1075	30	17	2.6
	Right-Northbound	1076	1077	1057	104	60	4.9
	Through-Northbound	1076	1077	1078	116	165	4.1
	Left-Northbound	1076	1077	1103	5	0	3.2
	Right-Eastbound	1103	1077	1076	10	0	4.5
	Through-Eastbound	1103	1077	1057	471	398	3.5
	Left-Eastbound	1103	1077	1078	166	69	8.9
Bowden Street/Squire Street/McPherson Street Intersection	Right-Southbound	1083	1082	1099	75	43	4.2
	Through-Southbound	1082	1081	1080	106	128	2.1
	Right-Westbound	1069	1081	1082	84	164	7.2
	Left-Westbound	1069	1081	1080	31	57	4.0
	Right-Northbound	1080	1081	1069	15	33	3.7
	Through-Northbound	1080	1081	1082	414	432	0.9
	Left-Westbound	1099	1082	1083	55	29	4.1
	Right-Southbound	1115	1114	1143	284	361	4.3

AM Peak Turn Count Comparison

Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Railway Road/Bank Street Intersection	Through-Southbound	1115	1114	1113	48	57	1.2
	Through-Northbound	1113	1114	1115	22	22	0.0
	Left-Northbound	1113	1114	1143	70	37	4.6
	Right-Eastbound	1143	1114	1113	145	108	3.3
	Left-Eastbound	1143	1114	1115	743	807	2.3
Constitution Road/Station Street Intersection	Right-Southbound	1153	1151	1152	11	5	2.1
	Through-Southbound	1153	1151	1146	106	135	2.6
	Right-Westbound	1146	1151	1153	93	127	3.3
	Through-Westbound	1146	1151	1152	318	245	4.4
	Through-Eastbound	1152	1151	1146	657	692	1.3
	Left-Eastbound	1152	1151	1153	32	32	0.0
Parsonage Street/Porter Street Intersection	Right-Southbound	1025	1024	1033	330	249	4.8
	Left-Southbound	1025	1024	1017	24	76	7.3
	Right-Westbound	1017	1024	1025	12	27	3.4
	Through-Westbound	1017	1024	1033	57	37	2.9
	Through-Eastbound	1033	1024	1017	353	305	2.7
	Left-Eastbound	1033	1024	1025	22	12	2.6

PM Turn Count Comparison							
Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Church Street/Riverside Ave Intersection	Through-Southbound	1007	1006	1005	3446	3327	2.1
	Left - Into Riverside Ave- Southbound	1007	1006	1019	109	129	1.9
	Left - Out Riverside Ave - Westbound	1019	1006	1005	208	209	0.1
	Through- Northbound	1005	1006	1007	3404	3328	1.3
Church Street/Junction Street Intersection	Right-Eastbound	1029	1007	1006	156	75	7.6
	Left-Eastbound	1029	1007	1008	49	87	4.6
	Through-Southbound	1008	1007	1006	3290	3384	1.6
	Through-Northbound	1006	1007	1008	3288	3271	0.3
	Left-Northbound	1006	1007	1029	69	57	1.5
Church Street/Suttor Ave Intersection	Left-Eastbound	1030	1008	1009	32	33	0.1
	Through-Southbound	1009	1008	1007	3290	3384	1.6
	Through-Northbound	1007	1008	1009	3290	3343	0.9
	Left-Northbound	1007	1008	1030	11	0	4.7
Church Street/Morrison Road Intersection	Through-Eastbound	1031	1009	1021	204	225	1.4
	Left-Eastbound	1031	1009	1011	26	25	0
	Through-Southbound	1011	1009	1008	3135	3204	1.2
	Left-Southbound	1011	1009	1021	277	247	1.8
	Through-Westbound	1021	1009	1031	254	224	1.9
	Left-Westbound	1021	1009	1008	155	180	1.9
	Through-Northbound	1008	1009	1011	3317	3302	0.3
	Left-Northbound	1008	1009	1031	15	71	8.5
Church Street/Victoria Street Intersection	U-turn- Southbound	1154	1012	1014	5	0	3.2
	Right-Southbound	1154	1012	1158	628	523	4.4
	Left-Southbound	1154	1012	1157	54	54	0.0
	Right-Westbound	1157	1012	1014	219	219	0.0
	Through-Westbound	1157	1012	1158	1383	1322	1.7
	Left-Westbound	1157	1012	1156	372	322	2.7
	U-turn- Northbound	1155	1012	1156	146	69	7.5
	Right-Northbound	1155	1012	1157	716	689	1.0
	Left-Northbound	1155	1012	1158	125	105	1.8
	Right-Eastbound	1158	1012	1156	333	363	1.6
	Through-Eastbound	1158	1012	1157	1386	1462	2.0
	Left-Eastbound	1158	1012	1014	381	378	0.1
Victoria Street/Belmore Street Intersection	Left-Southbound	1045	1044	1158	47	60	1.8
	Through-Westbound	1158	1044	1056	1821	1689	3.1
	Left-Westbound	1158	1044	1043	315	261	3.2
	Left-Northbound	1043	1044	1056	55	66	1.4
	Through-Eastbound	1056	1044	1158	2098	2144	1.0
	Left-Eastbound	1056	1044	1045	16	11	1.4
Victoria Street/ Shepherd Street Intersection	Left-Southbound	1066	1065	1056	31	55	3.7
	Through-Westbound	1056	1065	1084	1726	1702	0.6
	Left-Westbound	1056	1065	1064	89	61	3.2
	Through-Eastbound	1084	1065	1056	2106	2069	0.8
	Left-Eastbound	1084	1065	1066	21	15	1.4
Victoria Street/Bowden Street Intersection	Right-Southbound	1085	1084	1100	20	20	0.0
	Through-Southbound	1085	1084	1159	207	222	1.0
	Left-Southbound	1085	1084	1065	28	60	4.8
	Through-Westbound	1065	1084	1100	1595	1620	0.6
	Left-Westbound	1065	1084	1159	144	112	2.8
	Right-Northbound	1159	1084	1065	144	132	1.0
	Through-Northbound	1159	1084	1085	223	220	0.2
	Left-Northbound	1159	1084	1100	67	24	6.3
	Right-Eastbound	1100	1084	1159	93	168	6.6
	Through-Eastbound	1100	1084	1065	1900	1892	0.2
	Left-Eastbound	1100	1084	1085	17	30	2.7
Victoria Road/Forsyth Road Intersection	Left-Southbound	1110	1109	1100	0	0	0.0
	Through-Westbound	1100	1109	1121	1668	1659	0.2
	Left-Westbound	1100	1109	1108	15	6	2.8

PM Turn Count Comparison							
Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Victoria Road/Forsyth Road Intersection	Left-Northbound	1108	1109	1121	14	63	7.9
	Through-Eastbound	1121	1109	1100	2053	2094	0.9
	Left-Eastbound	1121	1109	1110	8	13	1.5
Victoria Road/Mellor Street Intersection	Through-Westbound	1109	1121	1125	1667	1719	1.3
	Left-Westbound	1109	1121	1120	8	3	2.0
	Left-Northbound	1120	1121	1125	59	58	0.2
	Through-Eastbound	1125	1121	1109	2076	2084	0.2
Victoria Road/Hermitage Road Intersection	Right-Southbound	1133	1132	1134	44	39	0.7
	Through-Southbound	1133	1132	1131	123	112	1.0
	Left-Southbound	1133	1132	1129	80	70	1.2
	Right-Westbound	1129	1132	1133	64	78	1.7
	Through-Westbound	1129	1132	1134	1719	1625	2.3
	Left-Westbound	1129	1132	1131	4	0	2.8
	Right-Northbound	1131	1132	1129	26	97	9.1
	Through-Northbound	1131	1132	1133	117	101	1.5
	Left-Northbound	1131	1132	1134	241	225	1.0
	Right-Eastbound	1134	1132	1131	61	105	4.9
	Through-Eastbound	1134	1132	1129	1986	1855	3.0
	Left-Eastbound	1134	1132	1133	186	146	3.1
Constitution Road/Belmore Street Intersection	Right-Southbound	1038	1037	1048	155	81	6.8
	Through-Southbound	1038	1037	1036	30	15	3.1
	Through-Northbound	1036	1037	1038	44	107	7.3
	Left-Northbound	1036	1037	1048	639	747	4.1
	Right-Eastbound	1048	1037	1036	244	209	2.3
	Left-Eastbound	1048	1037	1038	200	101	8.1
Junction Street/Belmore Street Intersection	Through-Southbound	1039	1038	1037	145	75	6.7
	Left-Southbound	1039	1038	1029	50	143	9.5
	Right-Westbound	1029	1038	1039	174	169	0.4
	Left-Westbound	1029	1038	1037	32	27	1.0
	Right-Northbound	1037	1038	1029	96	87	0.9
	Through-Northbound	1037	1038	1039	166	121	3.8
Belmore Road/Morrison Road/Yerong Street Intersection	Through-Southbound	1043	1042	1041	103	140	3.4
	Left-Southbound	1043	1042	1031	74	32	5.8
	Right-Westbound	1031	1042	1043	32	62	4.4
	Left-Westbound	1031	1042	1041	229	222	0.5
	Right-Northbound	1041	1042	1031	207	171	2.6
	Through-Northbound	1041	1042	1043	31	61	4.4
	Left-Northbound	1040	1041	1055	16	9	2.1
Constitution Road/Bowden Street	Right-Southbound	1078	1077	1103	416	329	4.5
	Through-Southbound	1078	1077	1076	103	112	0.9
	Left-Southbound	1078	1077	1057	83	86	0.3
	Right-Westbound	1057	1077	1078	52	1	9.8
	Through-Westbound	1057	1077	1103	520	632	4.7
	Left-Westbound	1068	1076	1075	120	74	4.7
	Right-Northbound	1076	1077	1057	58	58	0.1
	Through-Northbound	1076	1077	1078	100	153	4.7
	Left-Northbound	1076	1077	1103	33	47	2.2
	Right-Eastbound	1103	1077	1076	4	11	2.6
	Through-Eastbound	1103	1077	1057	84	131	4.5
	Left-Eastbound	1103	1077	1078	265	130	9.6
Bowden Street/Squire Street/McPherson Street Intersection	Right-Southbound	1083	1082	1099	67	111	4.7
	Through-Southbound	1082	1081	1080	238	315	4.6
	Right-Westbound	1069	1081	1082	233	214	1.3
	Left-Westbound	1069	1081	1080	167	89	6.9
	Right-Northbound	1080	1081	1069	11	25	3.4
	Through-Northbound	1080	1081	1082	258	321	3.7
	Left-Westbound	1099	1082	1083	85	49	4.4
	Right-Southbound	1115	1114	1143	903	1148	7.6

PM Turn Count Comparison							
Intersection	Approach	A node	B node	C node	Count	Modelled	GEH
Railway Road/Bank Street Intersection	Through-Southbound	1115	1114	1113	41	27	2.3
	Through-Northbound	1113	1114	1115	36	14	4.4
	Left-Northbound	1113	1114	1143	253	181	4.9
	Right-Eastbound	1143	1114	1113	77	46	4.0
	Left-Eastbound	1143	1114	1115	291	324	1.9
Constitution Road/Station Street Intersection	Right-Southbound	1153	1151	1152	90	90	0.0
	Through-Southbound	1153	1151	1146	31	52	3.3
	Right-Westbound	1146	1151	1153	165	219	3.9
	Through-Westbound	1146	1151	1152	870	805	2.2
	Through-Eastbound	1152	1151	1146	302	274	1.6
	Left-Eastbound	1152	1151	1153	27	27	0.0
Parsonage Street/Porter Street Intersection	Right-Southbound	1025	1024	1033	592	651	2.4
	Left-Southbound	1025	1024	1017	10	29	4.3
	Right-Westbound	1017	1024	1025	26	7	4.6
	Through-Westbound	1017	1024	1033	96	56	4.6
	Through-Eastbound	1033	1024	1017	213	201	0.9
	Left-Eastbound	1033	1024	1025	23	9	3.4

APPENDIX C

SATURN MODEL OUTPUTS

SATURN

Atkins Ltd /
DVV / ITS

DOWBANK_2012
_AM_BASE.UFS

Scale 9477

Link Annot:

Actual flow

2- 7-12
BITZIOS CONS

SATURN

Atkins Ltd /
DVV / ITS

DOWBANK_2012
_PM_BASE.UFS

Scale 9477

Link Annot:

Actual flow

2- 7-12
BITZIOS CONS

SATURN

Atkins Ltd /
DVV / ITS

DOWBANK_2012
_AM_BASE.UFS

Scale 9477

Link Annot:

VoverC %

2- 7-12
BITZIOS CONS

SATURN

Atkins Ltd /
DVV / ITS

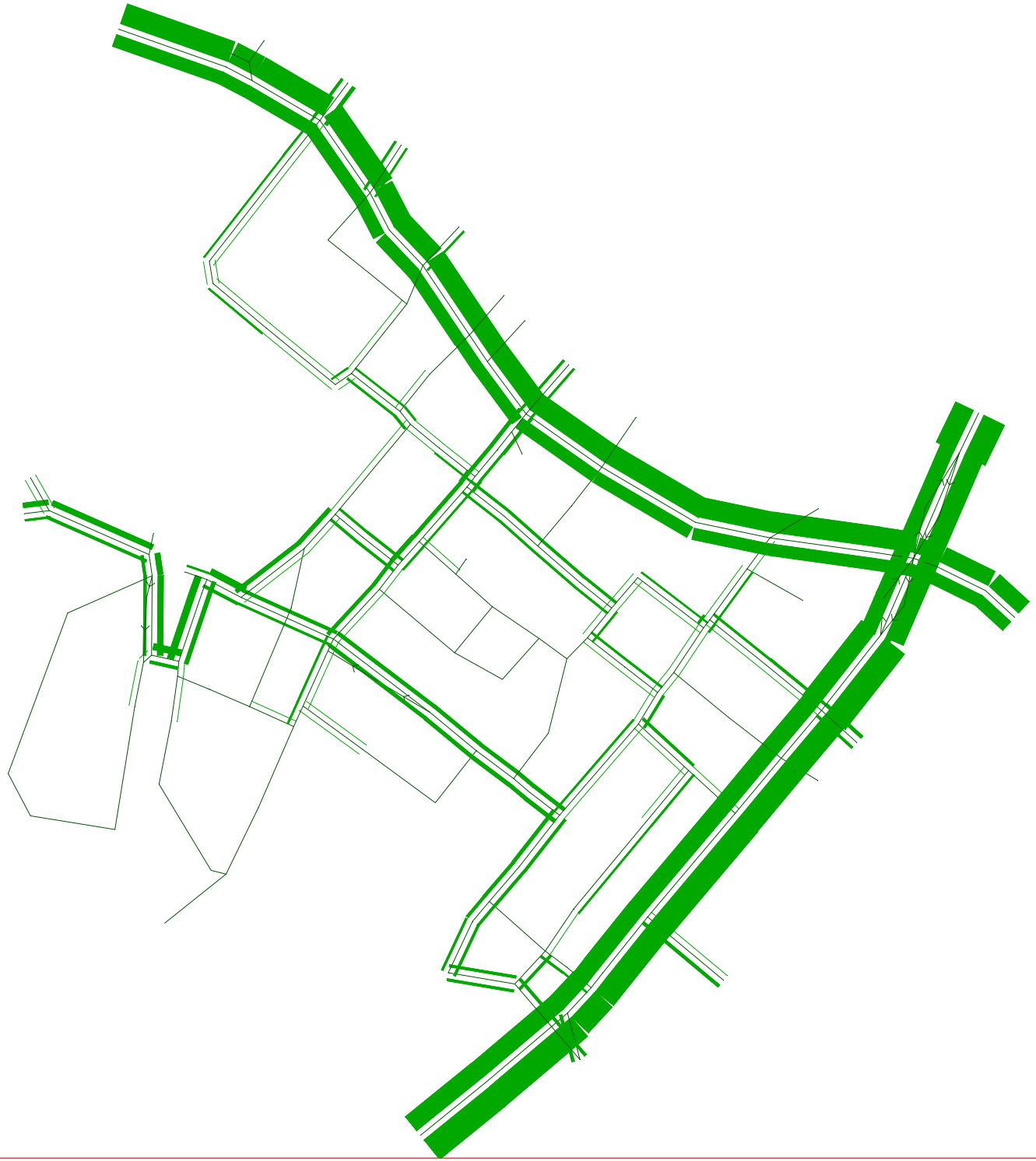
DOWBANK_2012
_PM_BASE.UFS

Scale 9477

Link Annot:

VoverC %

2- 7-12
BITZIOS CONS



SATURN

Atkins Ltd /
DVV / ITS

DOWBANK_2012
_AM_BASE.UFS

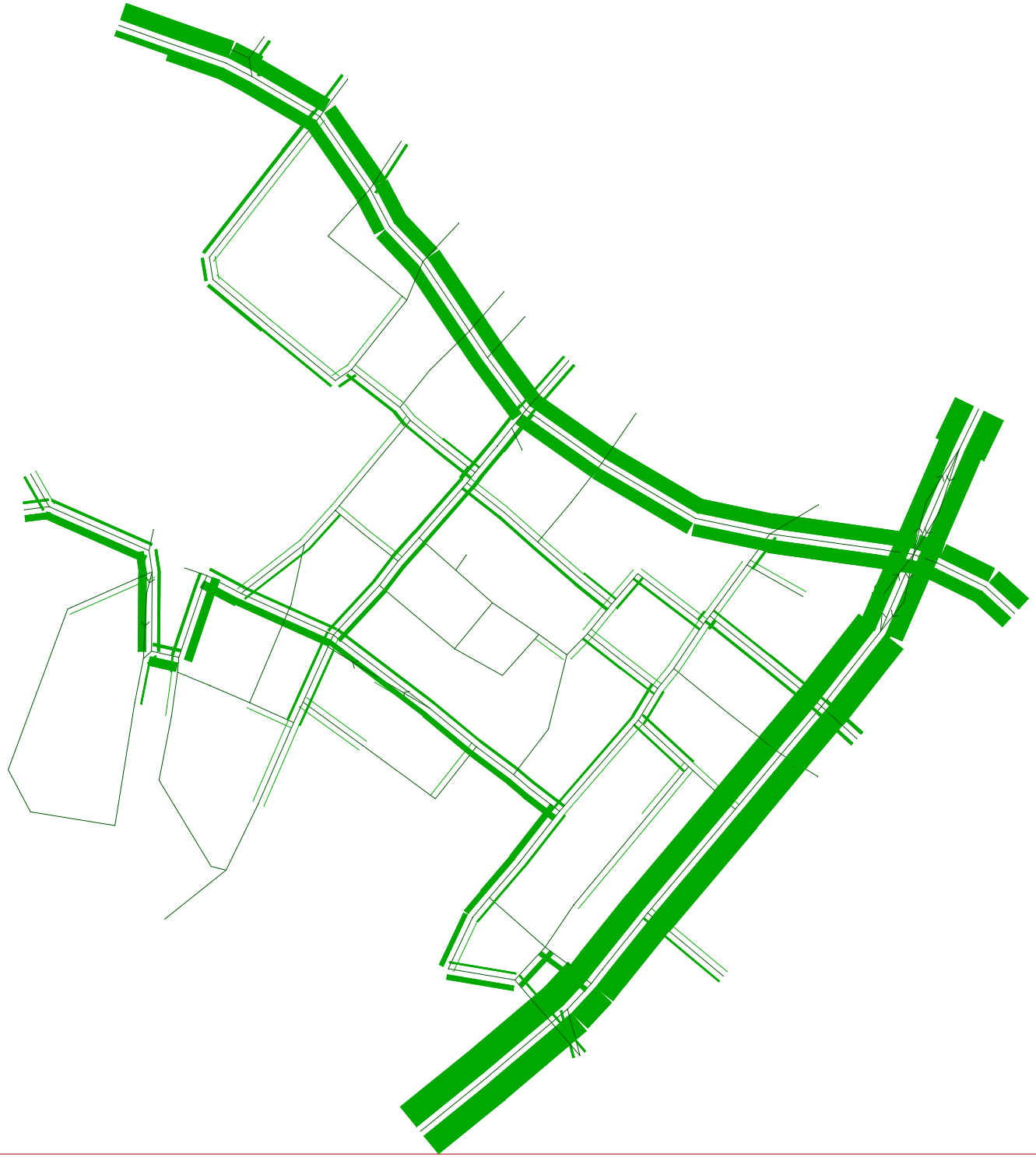
Scale 9477

Link Annot:

Actual flow

Bandwidths =
900./mm

2- 7-12
BITZIOS CONS



SATURN

Atkins Ltd /
DVV / ITS

DOWBANK_2012
_PM_BASE.UFS

Scale 9477

Link Annot:

Actual flow

Bandwidths =
900./mm

2- 7-12
BITZIOS CONS