

Proposed Industrial Warehouse Development

**Lot 2014 McCauley Street,
Matrville**

ACCESS DRIVEWAY APPLICATION REPORT

21 November 2014

Ref 14509

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants 

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Figure 2	Site

1. INTRODUCTION

This report has been prepared to accompany an Application to construct a new vehicular access driveway to service a new industrial warehouse development located at Lot 2014 McCauley Street, Matraville (Figures 1 and 2).

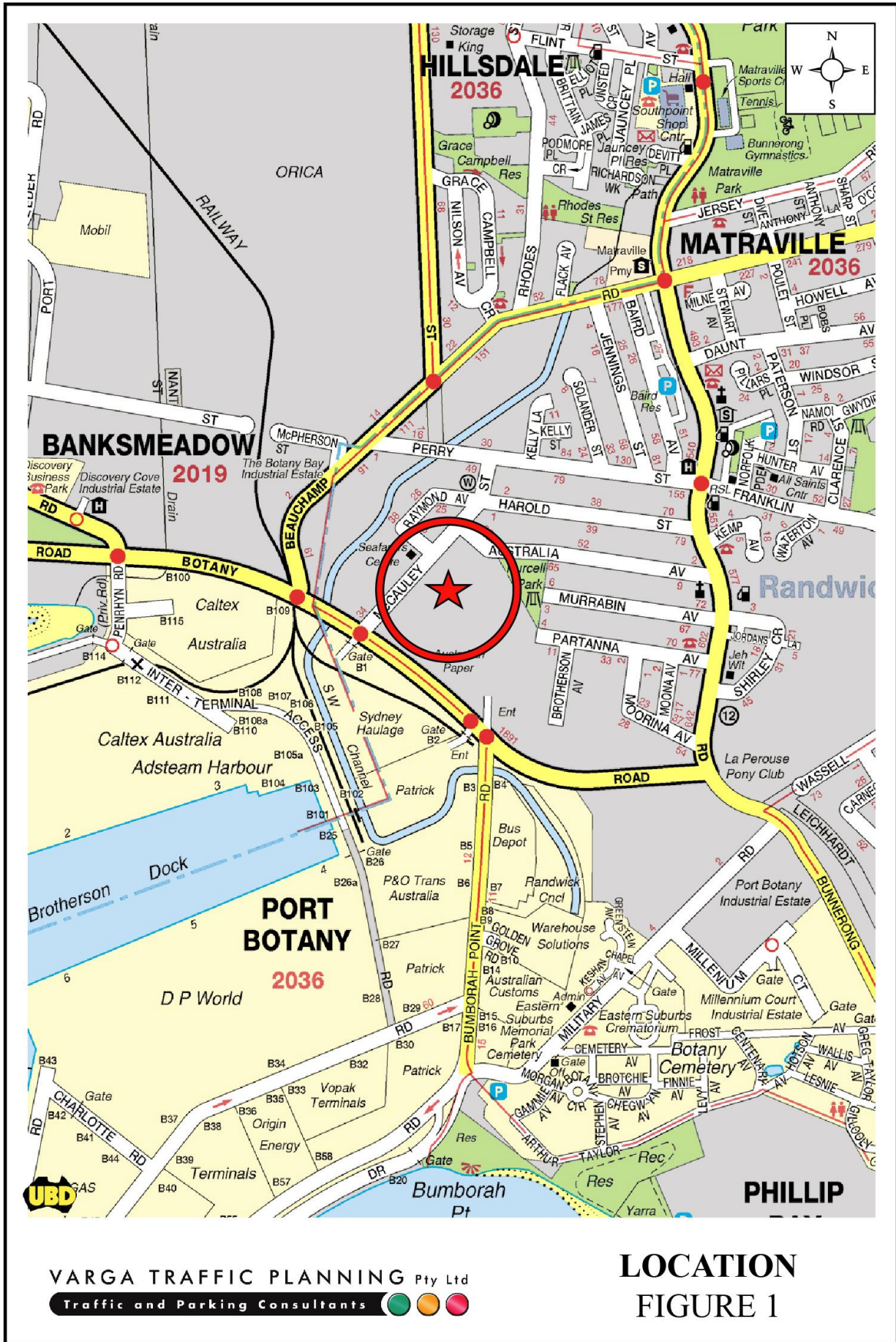
The site is currently serviced by a small 5.0m wide driveway located at the northern end of the McCauley Street site frontage. The existing driveway however is far too small to service the proposed industrial warehouse development and is located in close proximity to the Australia Avenue intersection and residential properties.

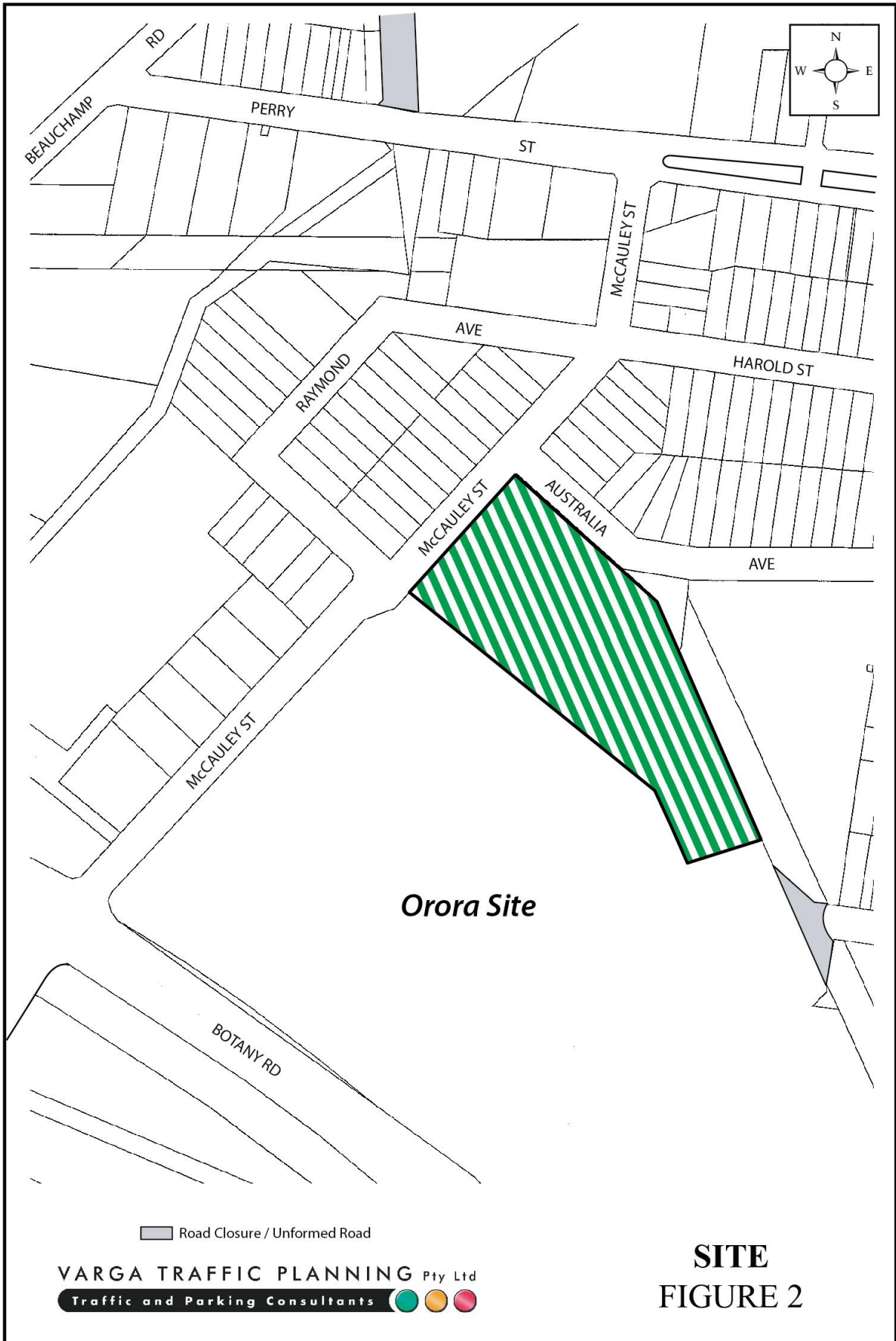
The proposal therefore involves the construction of a new, larger industrial-strength driveway and layback located towards the middle of the McCauley Street site frontage, further away from the Australia Avenue intersection and residential properties. The proposal also involves the removal of the existing redundant driveway and the construction of new kerb and gutter along the remaining site frontage.

The purpose of this report is to assess the traffic and parking implications of the proposed new driveway and to that end this report:

- describes the site and provides details of the development proposal
- reviews the road network in the vicinity of the site, and the traffic conditions on that road network
- estimates the traffic generation potential of the development proposal, and assigns that traffic generation to the road network serving the site
- assesses the traffic implications of the development proposal in terms of road network capacity
- reviews the geometric design features of the proposed driveway for compliance with the relevant codes and standards

- undertake a swept turning path analysis of the largest vehicles expected to access the site.





2. PROPOSAL

Site

The subject site is located on the south-eastern corner of the McCauley Street and Australia Avenue intersection, and has a street frontage approximately 93.5m in length to McCauley Street.

The subject site forms part of the adjacent Orora paper recycling facility and is surplus land to their operational requirements. Orora are therefore intending to subdivide their site to create the subject site which is currently vacant.

An existing 5.0m wide driveway currently services the site which is located at the far northern end of the McCauley Street site frontage. The existing driveway is inadequate to accommodate the future truck movements associated with the site and will therefore be closed and restored to kerb and gutter. Furthermore, the position of the existing driveway is considered to be too close to Australia Avenue and residential properties.

A recent aerial image of the site is reproduced below.



Source: Nearmap

Proposed Development

This Application seeks consent to construct a new, larger industrial-strength vehicular access driveway and layback located towards the middle of the McCauley Street site frontage, which is to service a new industrial warehouse development on the site. A total of 30 units are proposed within the development, with cumulative floor areas as follows:

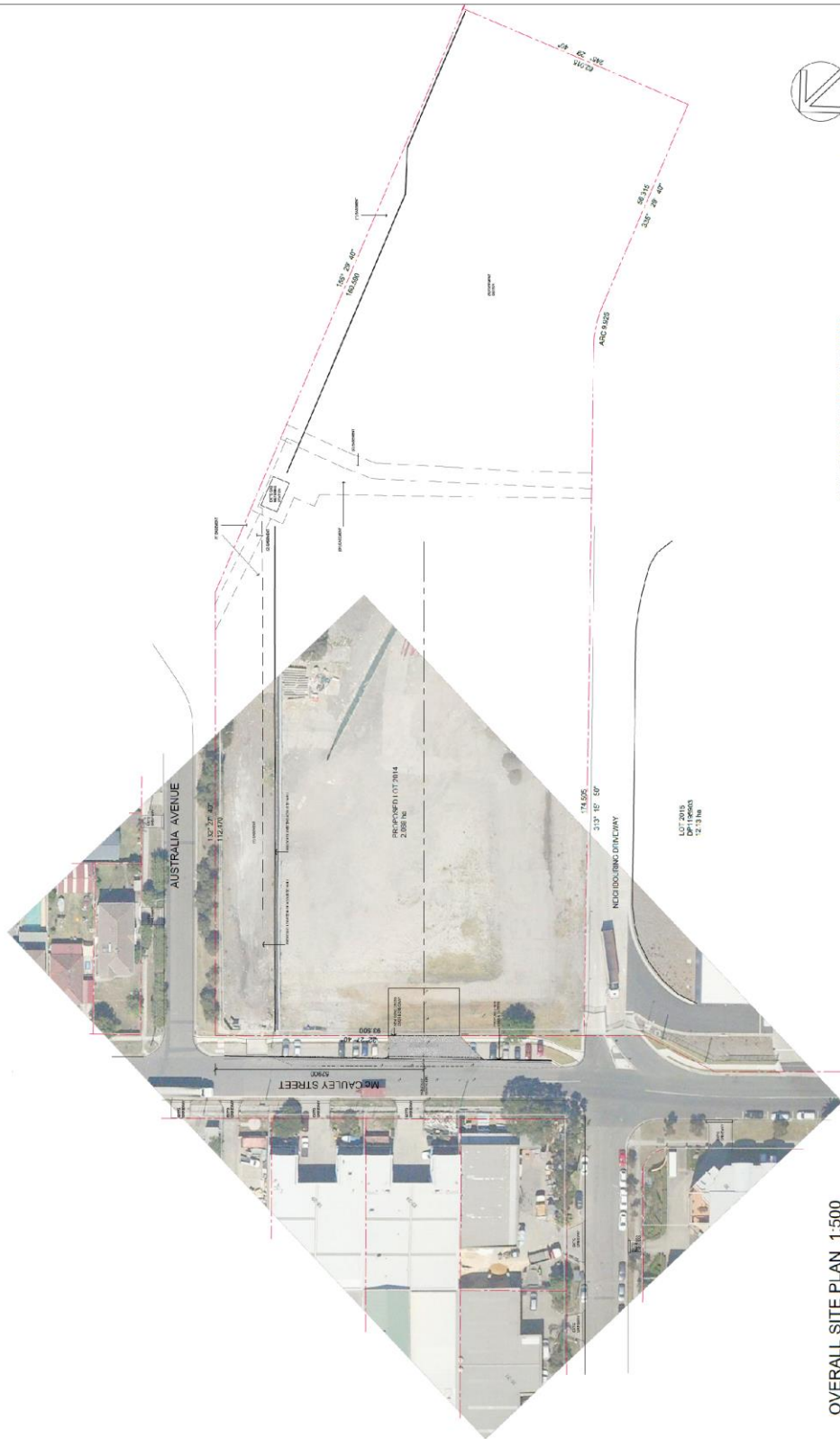
Warehouse component:	9,183m ²
Ancillary office component:	2,036m ²
TOTAL FLOOR AREA:	11,219m²

Kerb and guttering is also proposed along the entire site frontage which will result in a kerb-to-kerb road width of approximately 10.0m.

The proposed new warehouse development is expected to be serviced by a variety of commercial vehicles from 6.4m long SRV trucks up to and including 19.0m long AV trucks.

Plans of the proposed driveway have been prepared by *Pressley & Temelko* and are reproduced in the following pages.

A1 SHEET

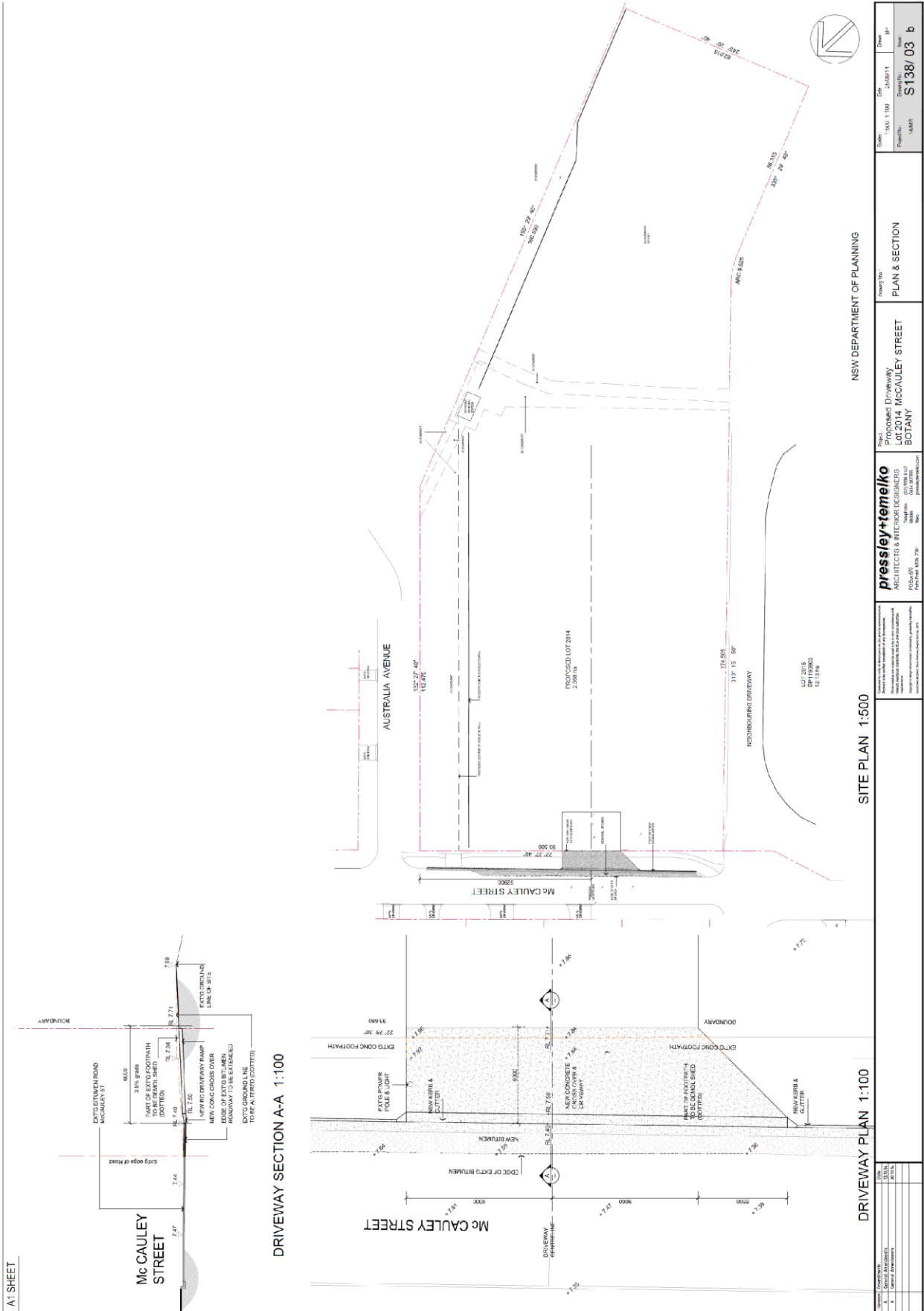


OVERALL SITE PLAN 1:500

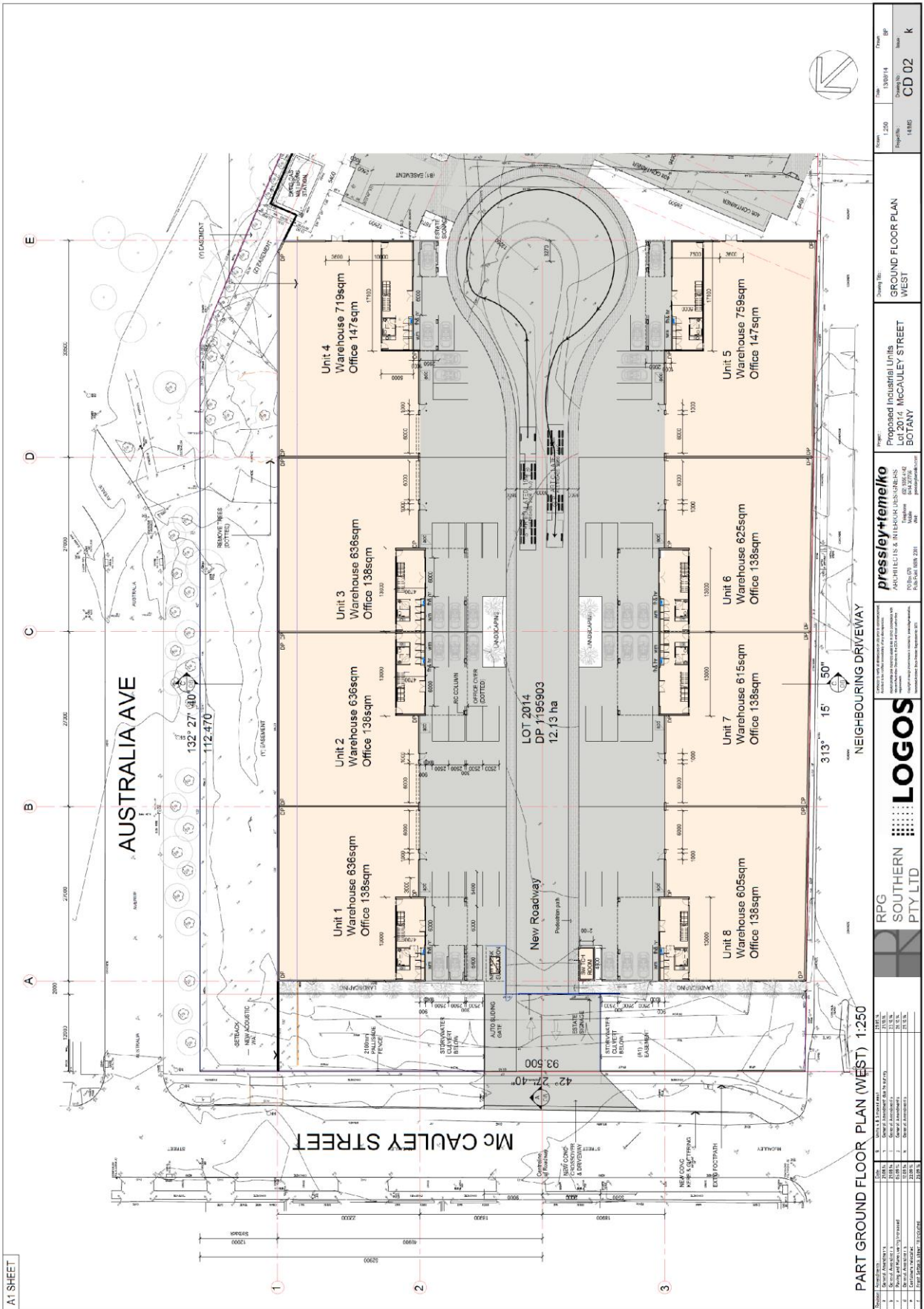


NSW DEPARTMENT OF PLANNING

SHEET NO. 1 DATE 20/04/14	DRAWN BY S1387/02 b	PROJECT NO. 14885	CLIENT OVERALL SITE PLAN	PROJECT NAME Proposed Industrial Units Lot 2014, McCaulley Street SOCIATY	PROJECT NO. 14885	DRAWN BY S1387/02 b
PRESSLEY+TERRILLO ARCHITECTS & INTERIOR DESIGNERS 17/26-27/28 P.O. Box 1000, 2001 Sydney, NSW 2001 Tel: (02) 9554 4142 Fax: (02) 9554 4143 Email: info@pressleyterrillo.com.au		NSW DEPARTMENT OF PLANNING				



<p>Client: VARGA TRAFFIC PLANNING PTY LTD Project: Proposed Driveway Lot 2014, McCAULEY STREET BOTANY Drawn By: S138/03 b Date: 24/08/11 Scale: 1:500</p>	
<p>NSW DEPARTMENT OF PLANNING PLAN & SECTION</p>	
<p>pressley+temelko ARCHITECTS & INTERIOR DESIGNERS 10/150 GARDEN ROAD, BOTANY NSW 2014 PHONE: (02) 9377 9400 FAX: (02) 9377 9401 WWW: WWW.PRESSLEYTEMELKO.COM.AU</p>	
<p>Site Plan 1:500 Proposed Driveway Lot 2014, McCAULEY STREET BOTANY</p>	



A1 SHEET

PART GROUND FLOOR PLAN (WEST) 1:250

<p>Lot 2014 DP 1195903 12.13 ha</p>	<p>Proposed Industrial Units Lot 2014, McCAULEY STREET BOTANY</p>	<p>Project No: 130014</p>	<p>Client: CD 02</p>
<p>Scale: 1:250</p>	<p>Drawn By: 18185</p>	<p>Checked By: 18185</p>	<p>Date: 18/05/2014</p>
<p>Project No: 130014</p>	<p>Client: CD 02</p>	<p>Project No: 130014</p>	<p>Client: CD 02</p>
<p>Project No: 130014</p>	<p>Client: CD 02</p>	<p>Project No: 130014</p>	<p>Client: CD 02</p>

pressley+temelko
 ARCHITECTS & INTERIORS
 100/102-104/106
 100/102-104/106
 100/102-104/106
 100/102-104/106

RPG SOUTHERN PTY LTD

LOGOS

3. TRAFFIC ASSESSMENT

Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken as part of this traffic study. The traffic surveys were undertaken in McCauley Street where it intersects with Raymond Street (south).

The results of the traffic surveys are reproduced in Appendix A and reveal that two-way traffic past the site frontage is typically in the order of 100 vehicles per hour during both the morning and afternoon peak periods.

Projected Traffic Generation

An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)*.

The RMS *Guidelines* are based on extensive surveys of a wide range of land uses and nominates the following traffic generation rates which are applicable to the development proposal:

Commercial Premises

2.0 peak hour vehicle trips per 100m² GFA

Industrial Warehouses

0.5 peak hour vehicle trips per 100m² GFA

Application of the above traffic generation rates to the warehouse and ancillary office components of the development proposal yields a traffic generation potential of approximately 86 vehicle trips per hour during commuter peak periods as set out below:

Projected Future Traffic Generation Potential

Warehouse Component (9,183m ²):	46 peak hour vehicle trips
Ancillary Office Component (2,036m ²):	40 peak hour vehicle trips
TOTAL TRAFFIC GENERATION POTENTIAL:	86 peak hour vehicle trips

Traffic Implications - Road Network Capacity

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network. Those effects can be assessed using the SIDRA program which is widely used by the RMS and many LGA's for this purpose. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages.

The results of the SIDRA analysis of the McCauley Street and the proposed site access driveway reproduced in the following pages, revealing that under the projected future traffic demands expected to be generated by the development proposal, the access driveway intersection is expected to operate at *Level of Service "A"*, with average vehicle delays in the order of 3 seconds/vehicle, and 95th percentile queue lengths of *less than* 1 vehicle.

In the circumstances, it is clear that the proposed development will not have any unacceptable traffic implications in terms of road network capacity or result in any appreciable delays at the McCauley Street/Raymond Avenue/Orora access driveway intersection.

Furthermore, it is proposed to restrict *all* heavy vehicle movements to right-in/left-out, approaching/departing via the Botany Road & McCauley Street signalised intersection.

MOVEMENT SUMMARY

Site: Proposed PM

McCauley St & Proposed Site Access Driveway
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: McCauley St (S)											
2	T1	58	13.8	0.062	0.3	LOS A	0.3	3.1	0.19	0.17	58.6
3	R2	29	79.3	0.062	6.8	LOS A	0.3	3.1	0.19	0.17	52.6
Approach		87	35.6	0.062	2.5	NA	0.3	3.1	0.19	0.17	56.5
East: Proposed Site Access Driveway (E)											
4	L2	45	51.1	0.046	6.4	LOS A	0.2	1.7	0.16	0.55	51.1
6	R2	10	0.0	0.046	5.8	LOS A	0.2	1.7	0.16	0.55	52.6
Approach		55	41.8	0.046	6.3	LOS A	0.2	1.7	0.16	0.55	51.4
North: McCauley St (N)											
7	L2	2	0.0	0.032	5.5	LOS A	0.0	0.0	0.00	0.02	58.1
8	T1	54	16.7	0.032	0.0	LOS A	0.0	0.0	0.00	0.02	59.8
Approach		56	16.1	0.032	0.2	NA	0.0	0.0	0.00	0.02	59.7
All Vehicles		198	31.8	0.062	2.9	NA	0.3	3.1	0.13	0.23	55.8

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

Vehicle movement LOS values are based on average delay per movement

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Processed: Monday, 27 October 2014 11:58:01 AM
 SIDRA INTERSECTION 6.0.24.4877
 Project: C:\Users\Chris\Documents\SIDRA 6 Jobs\14509 McCauley St, Matraville\MCC_ACCP.sip6
 8000110, 6016654, VARGA TRAFFIC PLANNING, PLUS / 1PC

**SIDRA
 INTERSECTION 6**

MOVEMENT SUMMARY

▽ Site: Proposed AM

McCauley St & Proposed Site Access Driveway
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: McCauley St (S)											
2	T1	42	4.8	0.060	0.3	LOS A	0.3	2.7	0.18	0.28	57.4
3		45	51.1	0.060	6.4	LOS A	0.3	2.7	0.18	0.28	52.9
Approach		87	28.7	0.060	3.4	NA	0.3	2.7	0.18	0.28	55.0
East: Proposed Site Access Driveway (E)											
4	L2	29	79.3	0.028	6.8	LOS A	0.1	1.3	0.16	0.54	50.0
6	R2	2	0.0	0.028	5.8	LOS A	0.1	1.3	0.16	0.54	52.6
Approach		31	74.2	0.028	6.7	LOS A	0.1	1.3	0.16	0.54	50.1
North: McCauley St (N)											
7	L2	10	0.0	0.034	5.5	LOS A	0.0	0.0	0.00	0.09	57.5
8	T1	54	5.6	0.034	0.0	LOS A	0.0	0.0	0.00	0.09	59.1
Approach		64	4.7	0.034	0.9	NA	0.0	0.0	0.00	0.09	58.9
All Vehicles		182	28.0	0.060	3.1	NA	0.3	2.7	0.12	0.26	55.4

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

Vehicle movement LOS values are based on average delay per movement

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Criteria for Interpreting Results of Sidra Analysis

1. *Level of Service (LOS)*

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

2. *Average Vehicle Delay (AVD)*

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation.	Good operation.
B	15 to 28	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
C	29 to 42	Satisfactory.	Satisfactory but accident study required.
D	43 to 56	Operating near capacity.	Near capacity and accident study required.
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.

3. *Degree of Saturation (DS)*

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals¹ both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

¹ The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.

4. VEHICULAR ACCESS DRIVEWAY

Existing/Proposed Kerbside Parking Restrictions

No Stopping / No Parking restrictions apply along the western side of McCauley Street in the vicinity of the site and proposed driveway location. Due to the lack of kerb and gutter along the eastern side of McCauley Street, informal unrestricted 90° parking currently occurs along the site frontage.

As part of the proposed works, new kerb and gutter is to be constructed along the entire site frontage, stretching from Australia Avenue to the Orora driveway opposite Raymond Avenue, resulting in a kerb-to-kerb road width of approximately 10.0m.

It is also proposed to restrict the eastern side of McCauley Street, south of the proposed driveway location, which will assist with the swept path requirements of the larger semi-trailers.

Driveway Design

The proposed industrial warehouse development is expected to be serviced by a variety of vehicles from 6.4m long SRV trucks up to and including 19.0m long AV trucks. The proposed vehicular access driveway has therefore been designed to accommodate the swept turning path requirements of these semi-trailers, allowing them to enter and exit the site in a forward direction at all times whilst also staying on the correct side of the frontage road and new internal road, as illustrated on the following pages.

The proposed location of the new driveway towards the middle of the McCauley Street site frontage is considered to be the most desirable position given it is located approximately midway between Australia Avenue and the neighbouring Orora driveway, thereby reducing the potential for conflicts with local residential traffic and service vehicles.

McCauley Street in the vicinity of the proposed access driveway is straight and level with good visibility in both directions. The design of the layback will ultimately be in accordance with the Authority's specifications.

Furthermore, the Applicant has indicated their commitment to the installation of an island or similar traffic control device to prevent heavy vehicles turning right out of the site when exiting.

In summary, the proposed vehicular access driveway satisfies the relevant requirements specified in the Australian Standards as well as the swept path requirements for semi-trailers and it is therefore concluded that the proposed development will not have any unacceptable servicing or access implications.

EXT'G DRIVEWAY

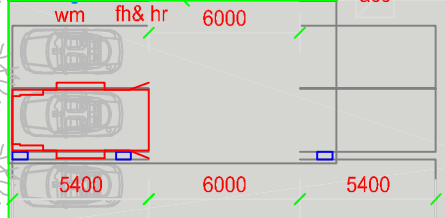
2100mm PALLISADE FENCE

13000

3000 DP acc 10

STORMWATER CULVERT BELOW

900 1000 2500 2500 300 2500 2500



AUTO SLIDING GATE

NEW KIOSK SUBSTATION

EXT'G DRIVEWAY

Centreline of Roadway CENTRELINE

NEW CONC CROSSOVER & DRIVEWAY



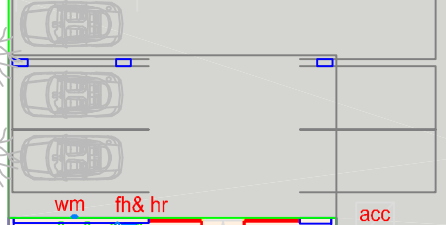
Pedestrian path

ESTATE SIGNAGE

SWITCH ROOM 4800 2100

STORMWATER CULVERT BELOW

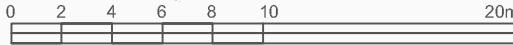
300 2500 2500 1000 900



NEW CONC KERB & CUTTING

EXT'G FOOTPATH

19m Semi Truck Turning Path



Scale 1:300 @ A4 Size

13000

10

EXT'G DRIVEWAY

2100mm PALLISADE FENCE

13000

3000

DP

acc

STORMWATER CULVERT BELOW

900

1000

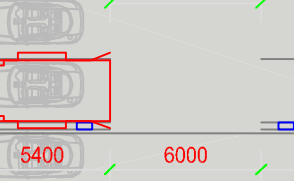
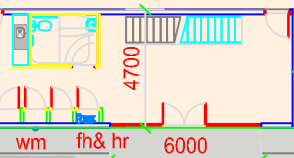
2500

2500

300

2500

2500



AUTO SLIDING GATE

NEW KIOSK SUBSTATION

EXT'G DRIVEWAY

Central Line of Roadway

NEW CONC CROSSOVER & DRIVEWAY



ESTATE SIGNAGE

Pedestrian path

SWITCH ROOM

4800

2100

STORMWATER CULVERT BELOW

900

1000

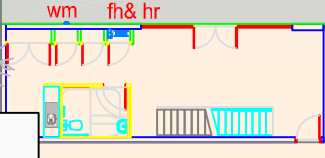
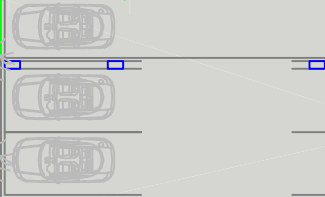
2500

2500

300

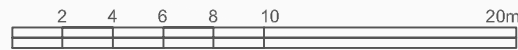
2500

2500



NEW CONC KERB & GUTTERING

19m Semi Truck Turning Path



Scale 1:300 @ A4 Size

EXT'G FOOTPATH

13000

APPENDIX A

TRAFFIC SURVEY DATA



R.O.A.R. DATA

Reliable, Original & Authentic Results

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

Client : Varga Traffic Planning
Job No/Name : 5362 MATRAVILLE McCauley St
Day/Date : Thursday 16th October 2014

Lights	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Time Per	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0645	0	9	1	1	0	0	5	8	0	0	0	0	24
0645 - 0700	0	9	5	2	0	2	8	10	0	1	0	1	38
0700 - 0715	0	12	1	4	0	1	7	6	0	0	0	0	31
0715 - 0730	0	3	5	2	0	1	12	5	0	1	0	1	30
0730 - 0745	0	12	4	3	0	1	2	6	0	2	0	0	30
0745 - 0800	0	13	3	3	1	1	5	6	0	0	0	0	32
0800 - 0815	0	5	0	1	0	0	1	7	0	1	0	1	16
0815 - 0830	0	9	2	1	0	0	3	8	0	1	0	2	26
0830 - 0845	0	13	3	2	0	2	2	12	0	1	0	0	35
0845 - 0900	0	9	1	1	0	0	1	5	0	0	0	0	17
0900 - 0915	0	11	1	1	0	0	1	6	0	0	0	1	21
0915 - 0930	0	10	3	3	0	1	0	6	0	2	0	0	25
Period End	0	115	29	24	1	9	47	85	0	9	0	6	325

Lights	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Peak Time	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0730	0	33	12	9	0	4	32	29	0	2	0	2	123
0645 - 0745	0	36	15	11	0	5	29	27	0	4	0	2	129
0700 - 0800	0	40	13	12	1	4	26	23	0	3	0	1	123
0715 - 0815	0	33	12	9	1	3	20	24	0	4	0	2	108
0730 - 0830	0	39	9	8	1	2	11	27	0	4	0	3	104
0745 - 0845	0	40	8	7	1	3	11	33	0	3	0	3	109
0800 - 0900	0	36	6	5	0	2	7	32	0	3	0	3	94
0815 - 0915	0	42	7	5	0	2	7	31	0	2	0	3	99
0830 - 0930	0	43	8	7	0	3	4	29	0	3	0	1	98
PEAK HOUR	0	36	15	11	0	5	29	27	0	4	0	2	129

Heavies	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Time Per	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0645	0	0	0	0	0	1	0	1	0	3	0	0	5
0645 - 0700	0	0	0	0	0	1	0	0	0	2	0	1	4
0700 - 0715	0	1	1	0	0	0	0	0	0	1	0	0	3
0715 - 0730	0	1	0	0	0	0	0	0	0	1	0	0	2
0730 - 0745	0	0	0	0	0	0	0	0	0	3	0	1	4
0745 - 0800	0	0	0	0	0	0	0	0	0	2	0	0	2
0800 - 0815	0	0	0	0	0	0	0	1	0	3	0	0	4
0815 - 0830	0	1	0	0	0	0	0	2	0	1	0	0	4
0830 - 0845	0	0	1	0	0	0	0	0	0	1	0	0	2
0845 - 0900	0	0	0	0	0	0	0	1	0	2	0	0	3
0900 - 0915	0	1	0	1	0	0	0	0	0	2	0	1	5
0915 - 0930	0	0	0	0	0	1	0	5	0	1	0	0	7
Period End	0	4	2	1	0	3	0	10	0	22	0	3	45

Heavies	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Peak Per	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0730	0	2	1	0	0	2	0	1	0	7	0	1	14
0645 - 0745	0	2	1	0	0	1	0	0	0	7	0	2	13
0700 - 0800	0	2	1	0	0	0	0	0	0	7	0	1	11
0715 - 0815	0	1	0	0	0	0	0	1	0	9	0	1	12
0730 - 0830	0	1	0	0	0	0	0	3	0	9	0	1	14
0745 - 0845	0	1	1	0	0	0	0	3	0	7	0	0	12
0800 - 0900	0	1	1	0	0	0	0	4	0	7	0	0	13
0815 - 0915	0	2	1	1	0	0	0	3	0	6	0	1	14
0830 - 0930	0	1	1	1	0	1	0	6	0	6	0	1	17
PEAK HOUR	0	2	1	0	0	1	0	0	0	7	0	2	13

Combined	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Time Per	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0645	0	9	1	1	0	1	5	9	0	3	0	0	29
0645 - 0700	0	9	5	2	0	3	8	10	0	3	0	2	42
0700 - 0715	0	13	2	4	0	1	7	6	0	1	0	0	34
0715 - 0730	0	4	5	2	0	1	12	5	0	2	0	1	32
0730 - 0745	0	12	4	3	0	1	2	6	0	5	0	1	34
0745 - 0800	0	13	3	3	1	1	5	6	0	2	0	0	34
0800 - 0815	0	5	0	1	0	0	1	8	0	4	0	1	20
0815 - 0830	0	10	2	1	0	0	3	10	0	2	0	2	30
0830 - 0845	0	13	4	2	0	2	2	12	0	2	0	0	37
0845 - 0900	0	9	1	1	0	0	1	6	0	2	0	0	20
0900 - 0915	0	12	1	2	0	0	1	6	0	2	0	2	26
0915 - 0930	0	10	3	3	0	2	0	11	0	3	0	0	32
Period End	0	119	31	25	1	12	47	95	0	31	0	9	370

Combined	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
Peak Per	L	I	R	L	I	R	L	I	R	L	I	R	
0630 - 0730	0	35	13	9	0	6	32	30	0	9	0	3	137
0645 - 0745	0	38	16	11	0	6	29	27	0	11	0	4	142
0700 - 0800	0	42	14	12	1	4	26	23	0	10	0	2	134
0715 - 0815	0	34	12	9	1	3	20	25	0	13	0	3	120
0730 - 0830	0	40	9	8	1	2	11	30	0	13	0	4	118
0745 - 0845	0	41	9	7	1	3	11	36	0	10	0	3	121
0800 - 0900	0	37	7	5	0	2	7	36	0	10	0	3	107
0815 - 0915	0	44	8	6	0	2	7	34	0	8	0	4	113
0830 - 0930	0	44	9	8	0	4	4	35	0	9	0	2	115
PEAK HOUR	0	38	16	11	0	6	29	27	0	11	0	4	142



R.O.A.R DATA

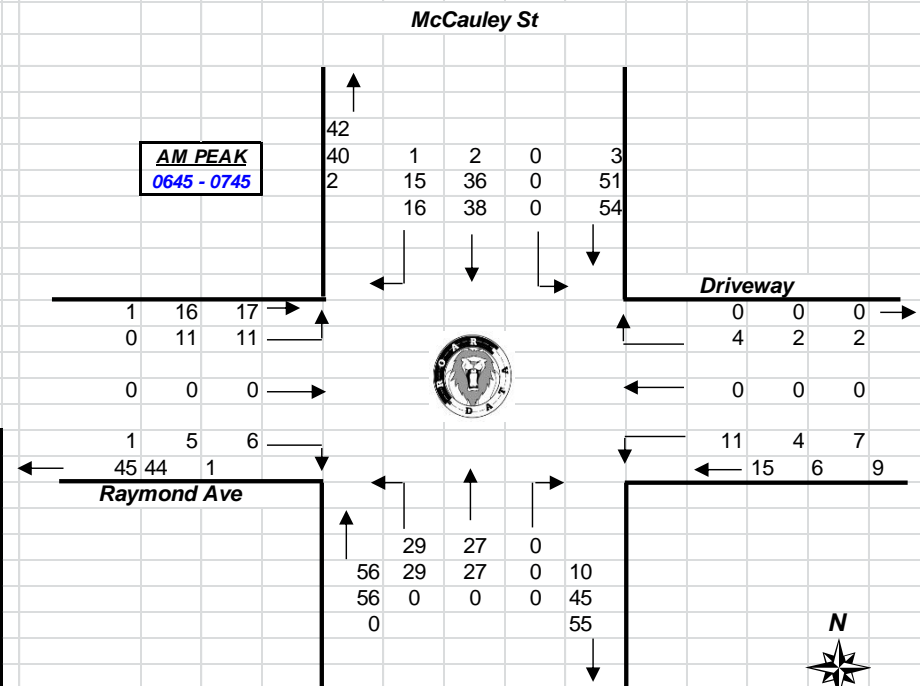
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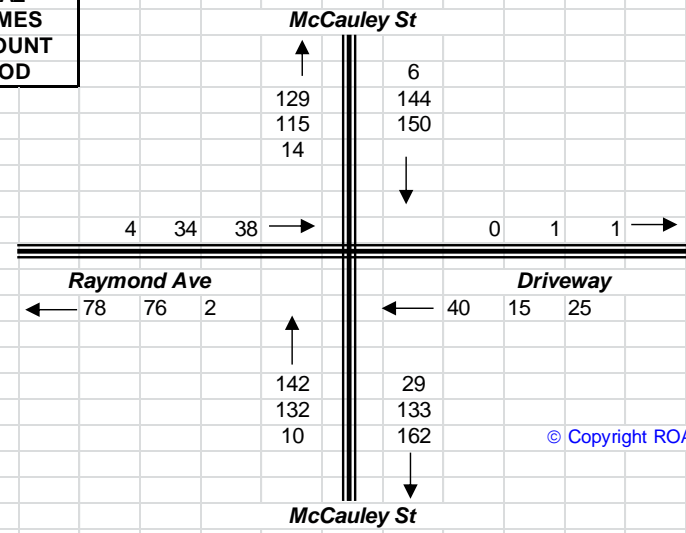
Client : Varga Traffic Planning
 Job No/Name : 5362 MATRAVILLE McCauley St
 Day/Date : Thursday 16th October 2014

Peds	NORTH	WEST	SOUTH	EAST	TOT
	McCauley St	Raymond Ave	McCauley St	Driveway	
Time Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	
0630 - 0645	0	0	0	0	0
0645 - 0700	0	0	0	0	0
0700 - 0715	0	0	0	0	0
0715 - 0730	0	0	0	0	0
0730 - 0745	0	0	0	1	1
0745 - 0800	0	0	0	1	1
0800 - 0815	0	0	0	1	1
0815 - 0830	0	1	0	0	1
0830 - 0845	0	2	0	1	3
0845 - 0900	0	0	0	0	0
0900 - 0915	0	1	0	0	1
0915 - 0930	0	2	0	1	3
Period End	0	6	0	5	11

Peds	NORTH	WEST	SOUTH	EAST	TOT
	McCauley St	Raymond Ave	McCauley St	Driveway	
Peak Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	
0630 - 0730	0	0	0	0	0
0645 - 0745	0	0	0	1	1
0700 - 0800	0	0	0	2	2
0715 - 0815	0	0	0	3	3
0730 - 0830	0	1	0	3	4
0745 - 0845	0	3	0	3	6
0800 - 0900	0	3	0	2	5
0815 - 0915	0	4	0	1	5
0830 - 0930	0	5	0	2	7
PEAK HR	0	0	0	1	1



TOTAL VOLUMES FOR COUNT PERIOD



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Client : Varga Traffic Planning

Job No/Name : 5362 MATRIVILLE McCauley St

Day/Date : Thursday 16th October 2014

Lights	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
1530 - 1545	0	8	1	4	1	1	2	9	0	0	0	1	27
1545 - 1600	0	6	4	3	1	4	5	10	0	0	0	0	33
1600 - 1615	0	9	0	5	0	19	2	9	0	0	0	1	45
1615 - 1630	0	11	1	3	0	2	2	9	0	0	0	0	28
1630 - 1645	0	13	2	2	0	6	1	8	0	0	0	0	32
1645 - 1700	0	9	0	3	0	1	3	6	0	1	0	1	24
1700 - 1715	0	11	0	0	0	1	1	16	0	0	0	0	29
1715 - 1730	0	6	0	4	0	2	2	12	0	0	0	0	26
1730 - 1745	0	2	1	3	0	2	1	11	0	1	0	0	21
1745 - 1800	0	5	0	1	0	0	0	4	0	0	0	0	10
1800 - 1815	0	5	0	1	0	5	0	8	0	1	0	1	21
1815 - 1830	0	6	1	2	0	4	0	5	0	0	0	0	18
Period End	0	91	10	31	2	47	19	107	0	3	0	4	314

Lights	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
Peak Time	L	I	R	L	I	R	L	I	R	L	I	R	TOT
1530 - 1630	0	34	6	15	2	26	11	37	0	0	0	2	133
1545 - 1645	0	39	7	13	1	31	10	36	0	0	0	1	138
1600 - 1700	0	42	3	13	0	28	8	32	0	1	0	2	129
1615 - 1715	0	44	3	8	0	10	7	39	0	1	0	1	113
1630 - 1730	0	39	2	9	0	10	7	42	0	1	0	1	111
1645 - 1745	0	28	1	10	0	6	7	45	0	2	0	1	100
1700 - 1800	0	24	1	8	0	5	4	43	0	1	0	0	86
1715 - 1815	0	18	1	9	0	9	3	35	0	2	0	1	78
1730 - 1830	0	18	2	7	0	11	1	28	0	2	0	1	70
PEAK HOUR	0	39	7	13	1	31	10	36	0	0	0	1	138

Heavies	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
1530 - 1545	0	0	2	0	0	0	0	1	0	3	0	0	6
1545 - 1600	0	2	1	0	0	0	1	1	0	0	0	0	5
1600 - 1615	0	2	0	1	0	0	1	5	0	1	0	0	10
1615 - 1630	0	0	1	0	0	0	0	1	0	1	0	0	3
1630 - 1645	0	3	0	0	0	0	2	0	0	1	0	0	6
1645 - 1700	0	2	0	0	0	0	2	1	0	1	0	0	6
1700 - 1715	0	2	0	0	0	0	1	0	0	0	0	0	3
1715 - 1730	0	1	0	0	0	0	0	1	0	1	0	0	3
1730 - 1745	0	1	1	0	0	0	1	2	0	1	0	0	6
1745 - 1800	0	1	0	0	0	0	1	1	0	0	0	0	3
1800 - 1815	0	0	0	0	0	0	2	1	0	1	0	0	4
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
Period End	0	14	5	1	0	0	11	14	0	10	0	0	55

Heavies	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
Peak Per	L	I	R	L	I	R	L	I	R	L	I	R	TOT
1530 - 1630	0	4	4	1	0	0	2	8	0	5	0	0	24
1545 - 1645	0	7	2	1	0	0	4	7	0	3	0	0	24
1600 - 1700	0	7	1	1	0	0	5	7	0	4	0	0	25
1615 - 1715	0	7	1	0	0	0	5	2	0	3	0	0	18
1630 - 1730	0	8	0	0	0	0	5	2	0	3	0	0	18
1645 - 1745	0	6	1	0	0	0	4	4	0	3	0	0	18
1700 - 1800	0	5	1	0	0	0	3	4	0	2	0	0	15
1715 - 1815	0	3	1	0	0	0	4	5	0	3	0	0	16
1730 - 1830	0	2	1	0	0	0	4	4	0	2	0	0	13
PEAK HOUR	0	7	2	1	0	0	4	7	0	3	0	0	24

Combined	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
1530 - 1545	0	8	3	4	1	1	2	10	0	3	0	1	33
1545 - 1600	0	8	5	3	1	4	6	11	0	0	0	0	38
1600 - 1615	0	11	0	6	0	19	3	14	0	1	0	1	55
1615 - 1630	0	11	2	3	0	2	2	10	0	1	0	0	31
1630 - 1645	0	16	2	2	0	6	3	8	0	1	0	0	38
1645 - 1700	0	11	0	3	0	1	5	7	0	2	0	1	30
1700 - 1715	0	13	0	0	0	1	2	16	0	0	0	0	32
1715 - 1730	0	7	0	4	0	2	2	13	0	1	0	0	29
1730 - 1745	0	3	2	3	0	2	2	13	0	2	0	0	27
1745 - 1800	0	6	0	1	0	0	1	5	0	0	0	0	13
1800 - 1815	0	5	0	1	0	5	2	9	0	2	0	1	25
1815 - 1830	0	6	1	2	0	4	0	5	0	0	0	0	18
Period End	0	105	15	32	2	47	30	121	0	13	0	4	369

Combined	NORTH			WEST			SOUTH			EAST			TOT
	McCauley St			Raymond Ave			McCauley St			Driveway			
	L	I	R	L	I	R	L	I	R	L	I	R	
Peak Per	L	I	R	L	I	R	L	I	R	L	I	R	TOT
1530 - 1630	0	38	10	16	2	26	13	45	0	5	0	2	157
1545 - 1645	0	46	9	14	1	31	14	43	0	3	0	1	162
1600 - 1700	0	49	4	14	0	28	13	39	0	5	0	2	154
1615 - 1715	0	51	4	8	0	10	12	41	0	4	0	1	131
1630 - 1730	0	47	2	9	0	10	12	44	0	4	0	1	129
1645 - 1745	0	34	2	10	0	6	11	49	0	5	0	1	118
1700 - 1800	0	29	2	8	0	5	7	47	0	3	0	0	101
1715 - 1815	0	21	2	9	0	9	7	40	0	5	0	1	94
1730 - 1830	0	20	3	7	0	11	5	32	0	4	0	1	83
PEAK HOUR	0	46	9	14	1	31	14	43	0	3	0	1	162



R.O.A.R DATA

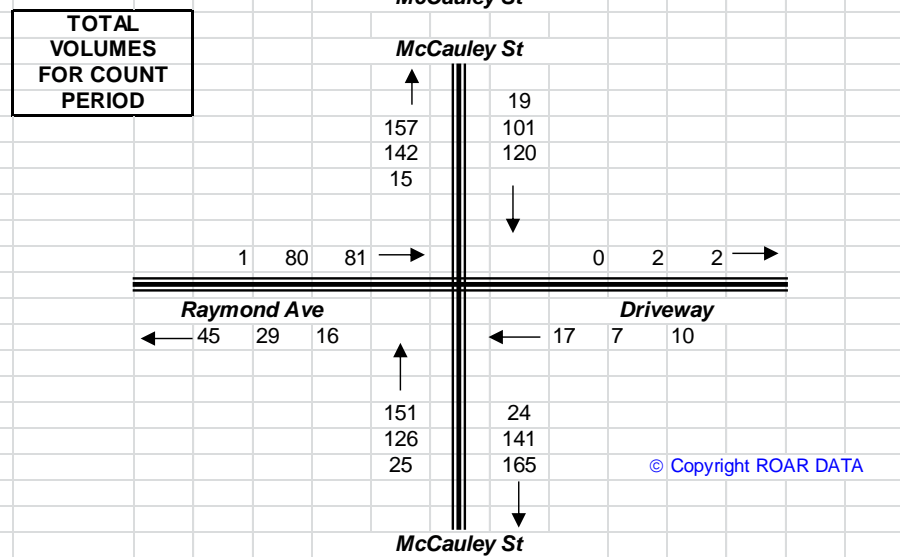
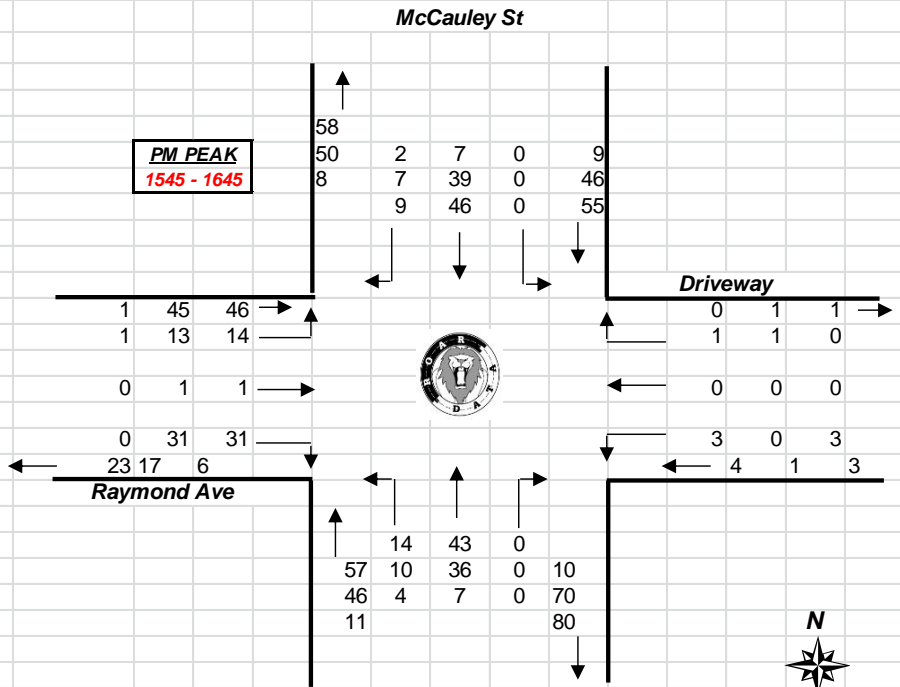
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Client : Varga Traffic Planning
 Job No/Name : 5362 MATRAVILLE McCauley St
 Day/Date : Thursday 16th October 2014

Peds	NORTH	WEST	SOUTH	EAST	TOT
	McCauley St	Raymond Ave	McCauley St	Driveway	
Time Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	
1530 - 1545	0	0	0	0	0
1545 - 1600	0	0	0	0	0
1600 - 1615	0	0	3	0	3
1615 - 1630	0	0	0	0	0
1630 - 1645	1	1	0	1	3
1645 - 1700	0	1	0	0	1
1700 - 1715	4	4	0	4	12
1715 - 1730	0	0	0	0	0
1730 - 1745	1	1	0	1	3
1745 - 1800	2	0	0	2	4
1800 - 1815	1	0	0	1	2
1815 - 1830	0	0	0	0	0
Period End	9	7	3	9	28

Peds	NORTH	WEST	SOUTH	EAST	TOT
	McCauley St	Raymond Ave	McCauley St	Driveway	
Peak Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	
1530 - 1630	0	0	3	0	3
1545 - 1645	1	1	3	1	6
1600 - 1700	1	2	3	1	7
1615 - 1715	5	6	0	5	16
1630 - 1730	5	6	0	5	16
1645 - 1745	5	6	0	5	16
1700 - 1800	7	5	0	7	19
1715 - 1815	4	1	0	4	9
1730 - 1830	4	1	0	4	9
PEAK HR	1	1	3	1	6



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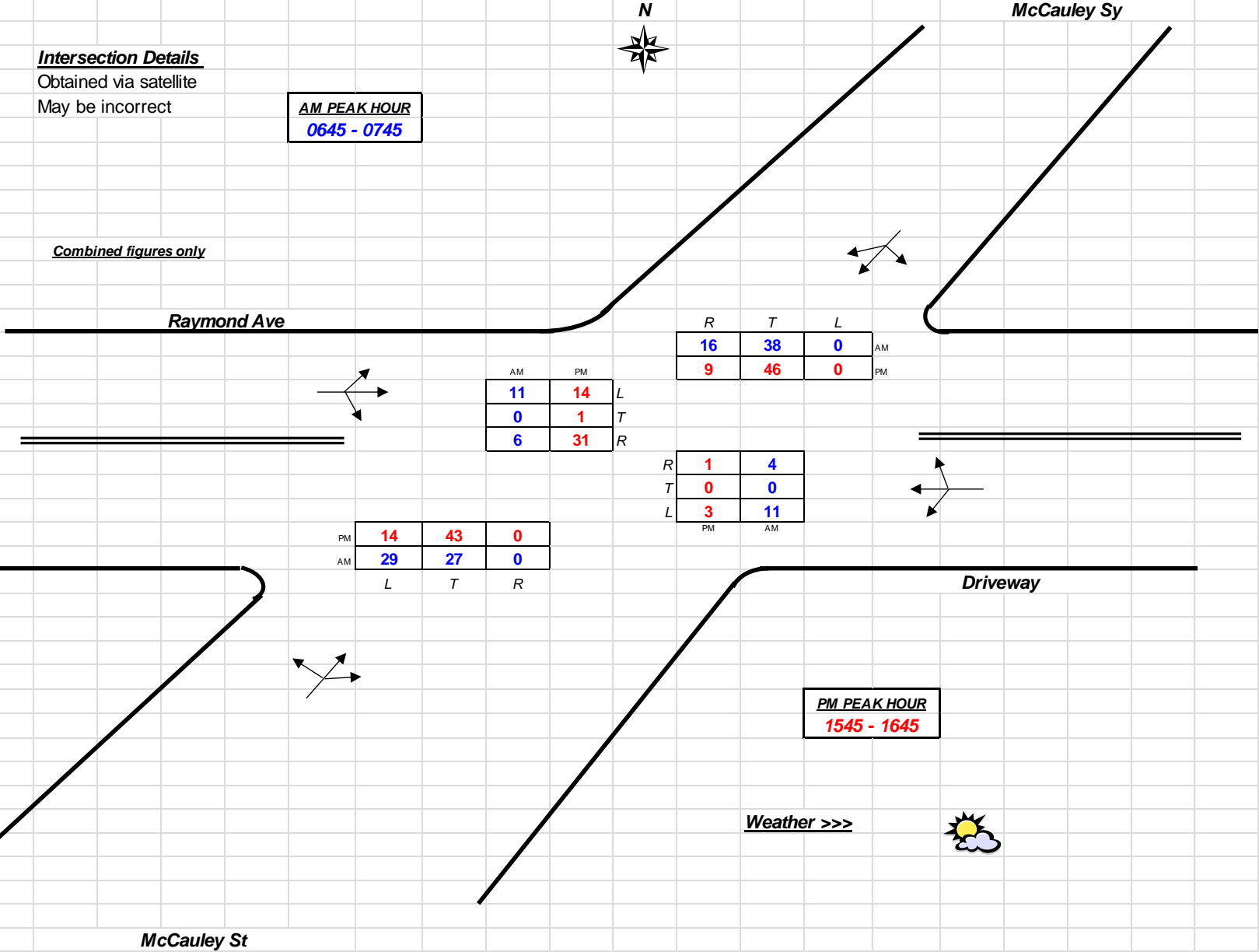
Client : Varga Traffic Planning
Job No/Name : 5362 MATRAVILLE McCauley St
Day/Date : Thursday 16th October 2014

Intersection Details

Obtained via satellite
May be incorrect

AM PEAK HOUR
0645 - 0745

Combined figures only



Raymond Ave

McCauley Sy

Driveway

McCauley St

R	T	L	
16	38	0	AM
9	46	0	PM

AM	PM	
11	14	L
0	1	T
6	31	R

R	1	4
T	0	0
L	3	11
	PM	AM

PM	14	43	0
AM	29	27	0
	L	T	R

PM PEAK HOUR
1545 - 1645

Weather >>>

