Proposed Childcare Centre

49 Gibbes Street, Regentville

TRAFFIC AND PARKING ASSESSMENT REPORT

21 June 2019

Ref 19185

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

Suite 6, 20 Young Street, Neutral Bay NSW 2089 - PO Box 1868, Neutral Bay NSW 2089, Ph: 9904 3224

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LIST OF ILLUSTRATIONS

1. INTRODUCTION

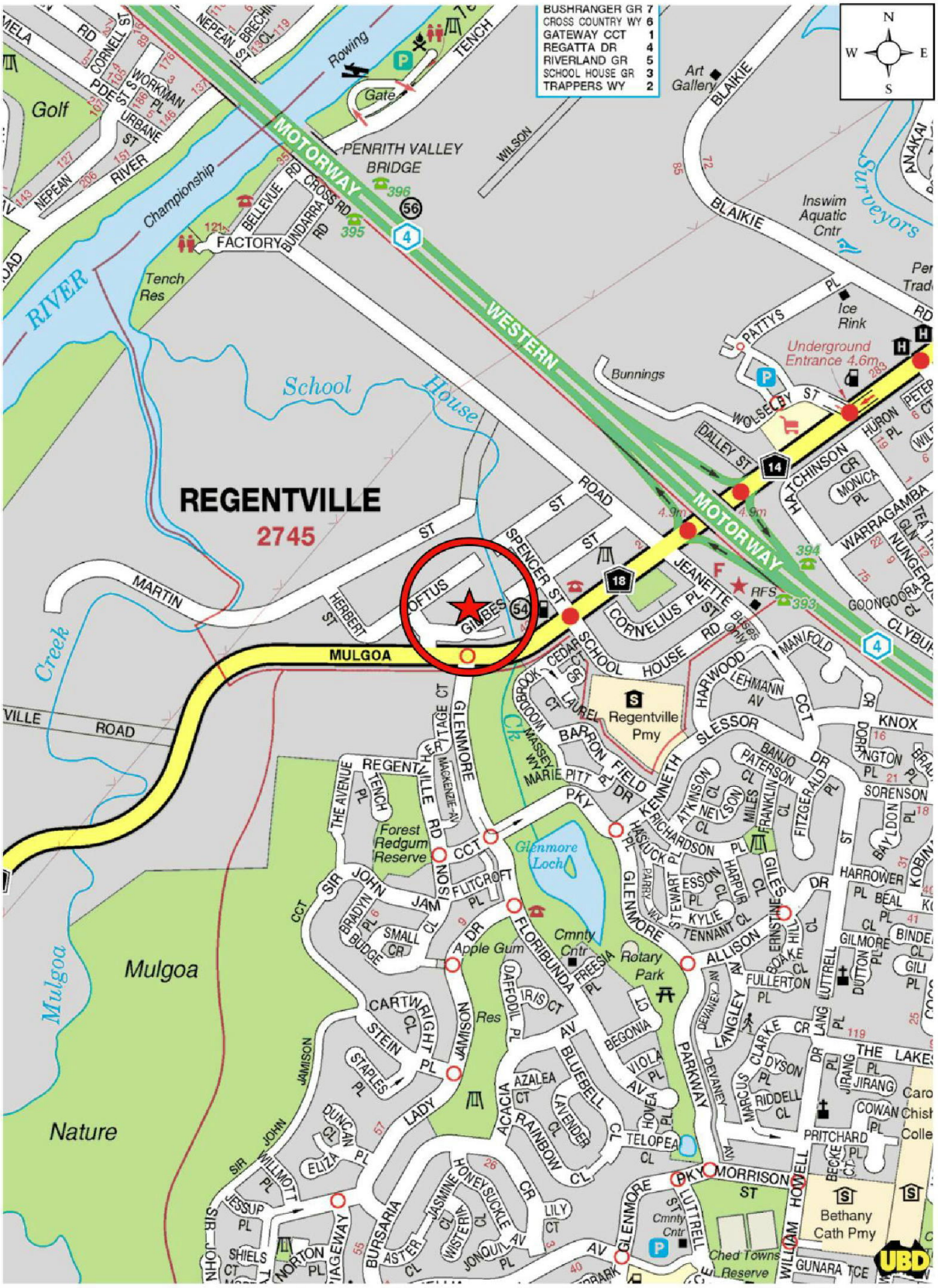
This report has been prepared to accompany a development application to Council for a proposal to construct a new childcare centre which is to be located at 49 Gibbes Street, Regentville (Figures 1 and 2).

The proposed development involves the demolition of the existing dwelling house on the site to facilitate the construction of a new purpose-built childcare centre which seeks to accommodate up to 66 children and 11 staff and operate between 7:00am and 6:00pm, Monday to Friday.

Off-street parking for the childcare centre is to be provided for a total of 18 cars in a new at-grade car parking area within the front setback of the site. Vehicular access to the car parking facilities is to be provided via separate entry and exit driveways located off Gibbes Street.

The purpose of this report is to assess the traffic and parking implications of the development proposal 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 car parking facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street car parking provided on the site.



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LOCATION
FIGURE 1

2. PROPOSED DEVELOPMENT

Site

The subject site is located on the northern side of Gibbes Street, approximately 120m north-east of Mulgoa Road. The site has a street frontage of approximately 30m in length to Gibbes Street and occupies an area of 1,393m².

The subject site is currently occupied by a single residential dwelling house with off-street parking. Vehicular access to the site is provided via a single driveway located off Gibbes Street. A recent aerial image of the site and its surroundings is reproduced below.

Proposed Development

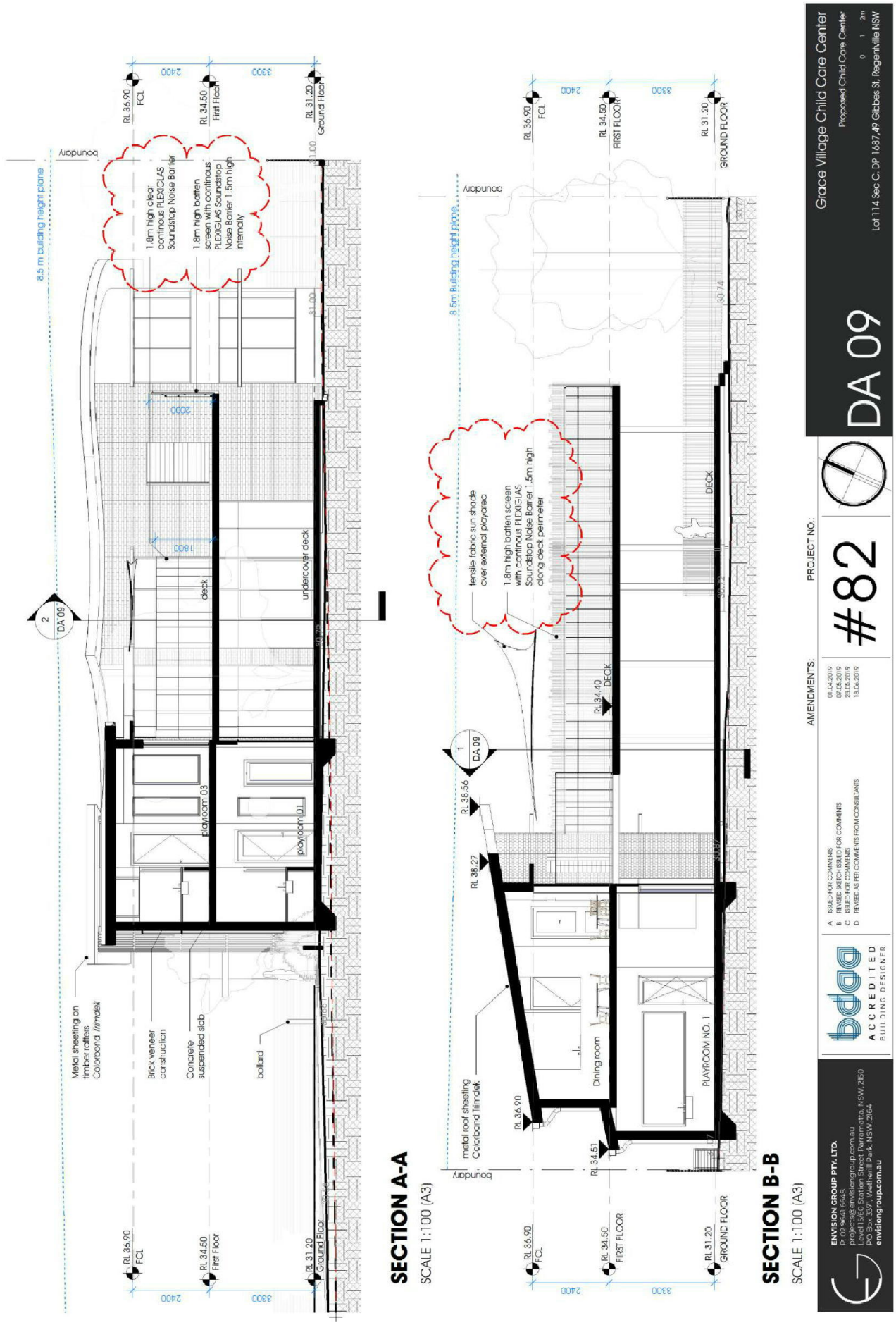
The proposed development involves the demolition of the existing dwelling house on the site to facilitate the construction of a new purpose-built childcare centre. The proposed childcare centre seeks to cater for 66 children and 11 staff and operate between 7:00am and 6:00pm, Monday to Friday.

Off-street parking is proposed for a total of 18 cars in a new at-grade car parking area, in accordance with Council and RMS's numerical requirements, comprising 7 drop-off/pick-up spaces (including a disabled space) and 11 staff spaces. In this regard, the drop-off/pick-up spaces are located closest to the building entry in accordance with desirable design principles. Vehicular access to the car parking facilities is to be provided via separate new entry and exit driveways located off Gibbes Street.

Deliveries to the proposed childcare centre are expected to be undertaken by a variety of light commercial vehicles such as white vans, utilities and the like, which are capable of fitting into a conventional parking space. In this regard, deliveries will be scheduled to arrive *outside* of peak periods when the on-site car park will be largely empty, with the exception of the staff parking area.

Waste collection for the proposed development is to be undertaken from the kerbside area directly outside the site frontage in Gibbes Street by a private contractor. Collection will be undertaken *outside* of peak periods when traffic activity in Gibbes Street will be minimal.

Plans of the proposed development have been prepared by *Envision Group* and are reproduced in the following pages.



3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

The M4 Motorway is classified by the RMS as a *State Road* and provides the key east-west road link in the area, which extends from Concord in Sydney's inner west to Lapstone at the foothills of the Blue Mountains. It typically carries two traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island. All intersections with the M4 Motorway are grade-separated.

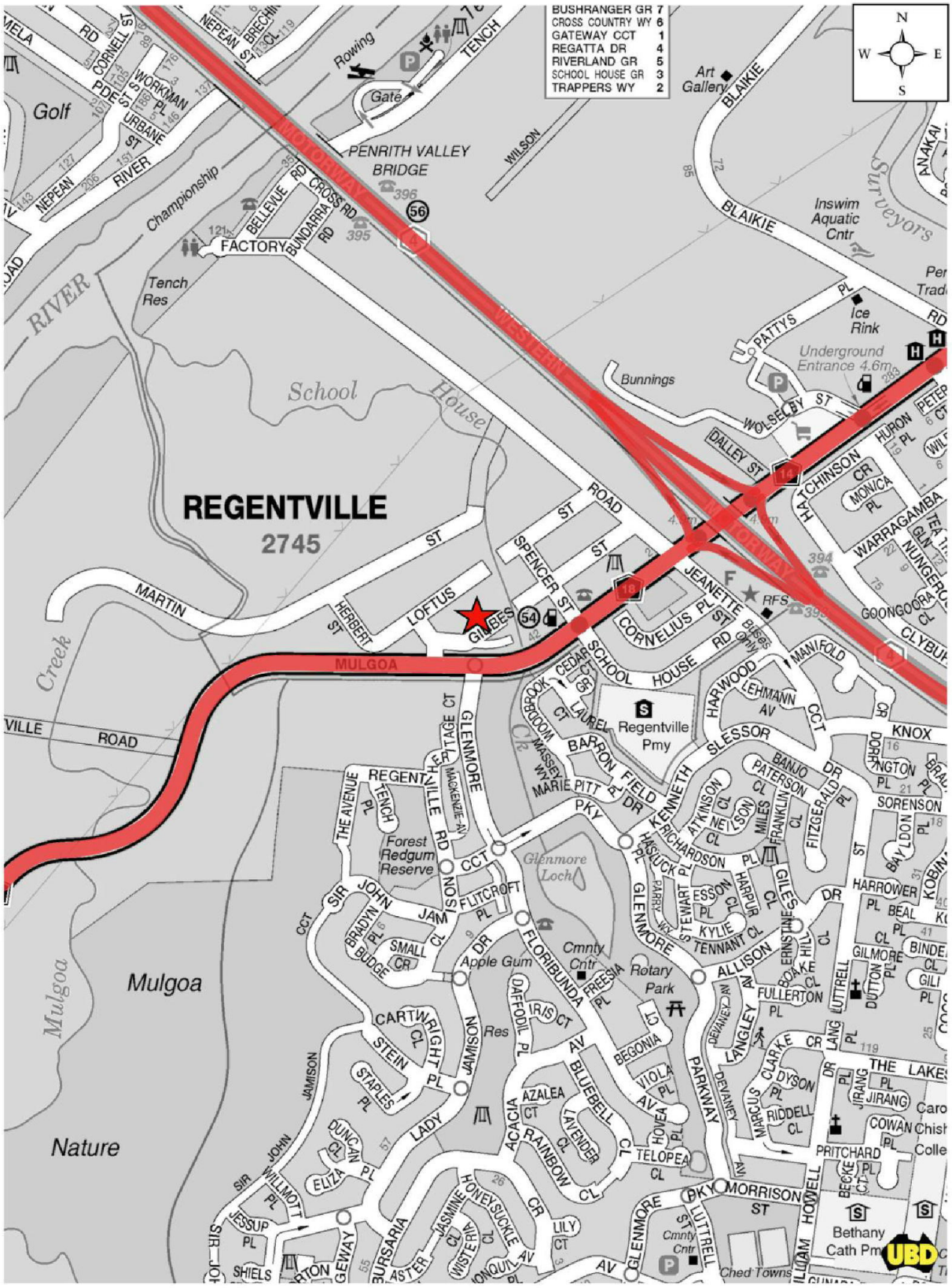
Mulgoa Road is also classified by the RMS as *State Road* which provides the key north-south road linking Penrith to Wallacia. It typically carries one to two traffic lanes in each direction in the vicinity of the site with turning lanes provided at key locations.

Gibbes Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of the road.

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60km/h SPEED LIMIT which applies to Mulgoa Road
- a 50 km/h SPEED LIMIT which applies to Gibbes Street and all other local roads in the area
- a ROUNDABOUT in Mulgoa Street where it intersects with Glenmore Parkway



- TRAFFIC SIGNALS in Mulgoa Road where it intersects with Spenser Street/School House Road

- an UNFORMED section of road in Gibbes Street which precludes vehicular access between the western and eastern ends.

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 Mulgoa Road where it intersects with Gibbes on Tuesday 30th April, 2019. The results of the traffic surveys are reproduced in full in Appendix A and reveal that:

- two-way traffic flows in Mulgoa Road are typically in the order of 800-900 vehicles per hour (vph) during weekday commuter peak periods

- two-way traffic flows in Gibbes Street are lower, typically in the order of 70-90 vph during weekday commuter 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:

Childcare Centres

AM: 0.8 peak vehicle trips per child

PM: 0.7 peak vehicle trips per child

Application of the above traffic generation rates to the 66 children outlined in the development proposal yields a traffic generation potential of approximately 53 vehicle trips during the AM commuter peak period (i.e. 26 vehicle movements TO and 27 vehicle movements FROM) and approximately 46 vehicle trips during the PM commuter peak period (i.e. 23 vehicle movements TO and 23 vehicle movements FROM).

That projected increase in the traffic generation potential of the site as a consequence of the development proposal is minimal and will not have any unacceptable traffic implications in terms of road network capacity, as is demonstrated by the following section of this report.

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 NETWORK 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 NETWORK capacity analysis of the surrounding intersections are reproduced in Appendix B and summarised in the table on the following page, revealing that:

- the Mulgoa Road and Gibbes Street intersection currently operates at a *Level of Service "A"*, including all individual turning movements, with overall average vehicle delays in the order of 1 second per vehicle

- under the projected increase in projected future traffic demands expected to be generated by the development proposal, the Mulgoa Road and Gibbes Street intersection is expected to continue to operate at *Level of Service "A"*, with increases in average vehicle delays of ***less than 1*** second per vehicle.

In essence, the capacity analysis confirms that the traffic generation potential of the development proposal on the subject site will not have any appreciable effect on the performance of nearby intersections, nor will any intersections upgrades be required.

TABLE 3.1 - SUMMARY RESULTS OF SIDRA ANALYSIS OF SURROUNDING ROAD NETWORK

Key Indicators	Existing Traffic Demand		Projected Development Traffic Demand	
	AM	PM	AM	PM
Mulgoa Road & Gibbes Street				
LOS	A	A	A	A
DOS	0.272	0.315	0.274	0.329
AVD (Sec/Veh)	0.8	0.6	1.3	1.0
Gibbes Street & Gibbes Street				
LOS	A	A	A	A
DOS	0.027	0.024	0.303	0.036
AVD (Sec/Veh)	3.1	0.9	3.8	2.3

LOS – Level of Service; DOS – Degree of Saturation; AVD – Average Vehicle Delays

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 signals[1] 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. PARKING IMPLICATIONS

Existing Kerbside Parking Restrictions

Given the residential nature of Gibbes Street and the surrounding area, there are generally no kerbside parking restrictions which apply in the vicinity of the site, including along the site frontage.

Off-Street Parking Provisions

The off-street parking requirements applicable to the development proposal are specified in Council's *Development Control Plan 2014, Section C10 Transport Access and Parking* in the following terms:

> **Childcare centres**
> 1 space per 10 children, *plus*
> 1 per employee

Application of the above *DCP 2014* parking requirements to the 66 children and 11 staff outlined in the development proposal yields an off-street parking requirement of 18 off-street parking spaces.

By way of comparison, reference is also made to the Roads and Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 5 – Parking Requirements for Specific Land Uses (October 2002).*

The RMS *Guidelines* are based on extensive surveys of a wide range of land uses and nominates the following off-street parking requirement for childcare centres:

> **Childcare centres**
> 1 space per 4 children

Application of the above RMS *Guidelines* parking requirements to the 66 children outlined in the development proposal yields an off-street parking requirement of 17 off-street parking spaces.

The proposed development makes provision for a total of 18 off-street parking spaces, comprising 7 drop-off/pick-up spaces and 11 staff spaces, thereby satisfying both Council's *DCP 2014* and RMS requirements.

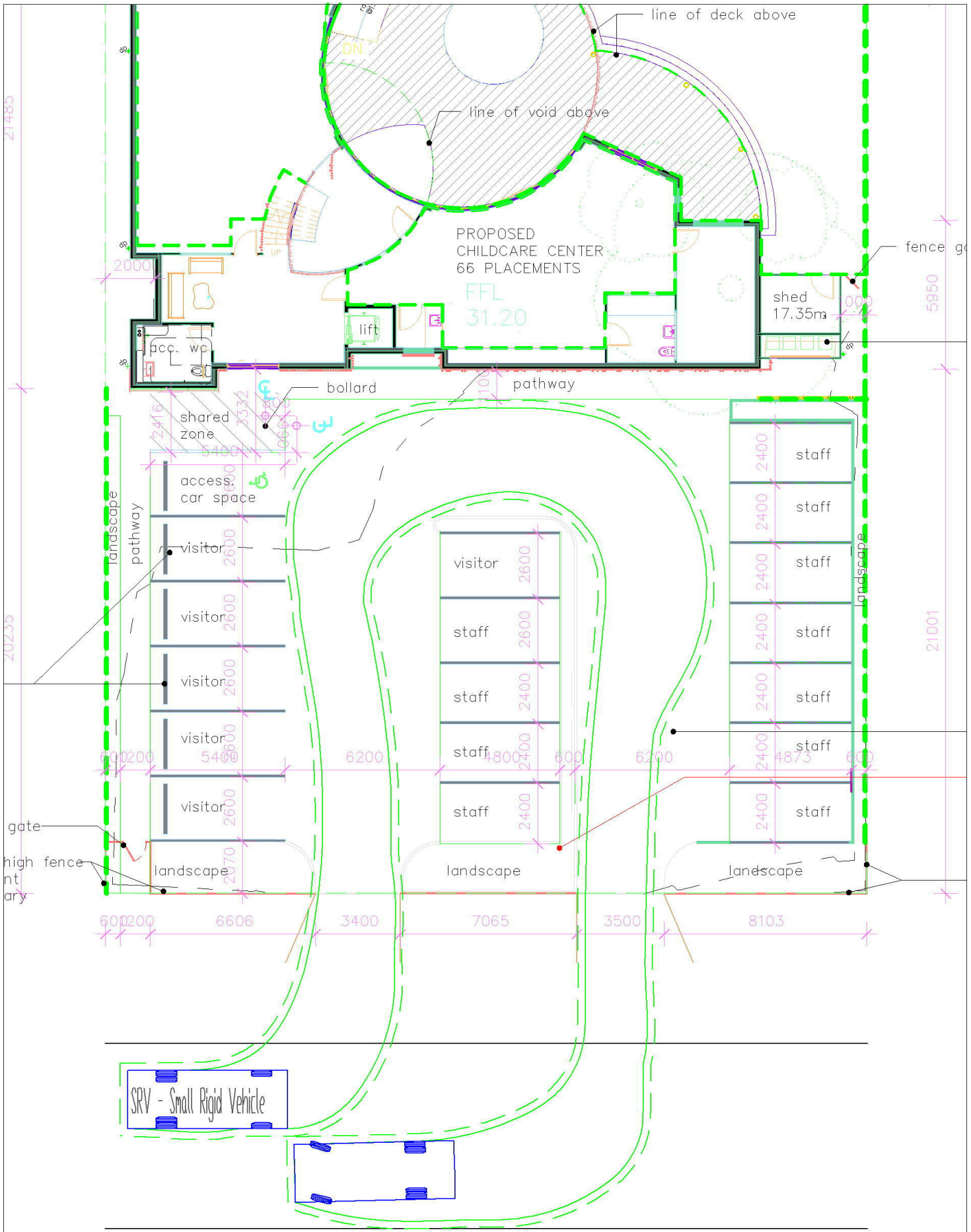
Furthermore, the RMS *Guidelines* indicates that the average length of stay for parents dropping off or picking up children at a childcare centre is in the order of "6.8 minutes". As such, each drop-off/pick-up parking space is capable of turning over 8.8 cars per hour.

Application of this turnover rate to the provision of 7 off-street parking spaces yields a total of 62 cars (i.e. children) per hour being accommodated. Given that drop-offs are typically dispersed over a 2 hour period in the morning and afternoon, this equates to a potential 124 drop-offs in the morning and afternoon i.e. *well in excess* of likely requirements.

The geometric design layout of the proposed car parking facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1 – 2004* in respect of parking space dimensions, aisle width, driveway width and driveway location.

The vehicular access arrangements have been designed to accommodate the swept turning path requirements of the 6.4m long small rigid truck (i.e. similar in size to an ambulance), allowing it, and vehicles smaller, to circulate through the car park without difficulty and to enter and exit the site in a forward direction at all times.

In summary, the proposed parking facilities satisfy the relevant requirements specified in Council's *DCP 2014*, the RMS *Guidelines* as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking implications.



VARGA TRAFFIC PLANNING Pty Ltd ABN 86 071 782 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1808 Neutral Bay, NSW 2089 www.vargatraffic.com.au Sydney, Australia	DRAWING TITLE 6.4m SRV Truck Swept Turning Path	1:200 @ A4	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants
PROJECT CHILDCARE CENTRE DEVELOPMENT	ADDRESS 49 Gibbes Street, Regentville	PROJECT NO. 19185 REVIEWED CP	DATE DRAWN 2019-6-21 PREPARED TN

APPENDIX A

TRAFFIC SURVEY DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 7071 REGENTVILLE Gibbes St
Day/Date : Tuesday 30th April 2019

Lights	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	5	0	0	1	0	1	7
0745 - 0800	6	1	1	5	3	2	18
0800 - 0815	16	0	0	2	1	6	25
0815 - 0830	9	0	0	2	1	8	20
0830 - 0845	7	1	1	2	1	5	17
0845 - 0900	15	0	0	1	1	8	25
0900 - 0915	6	0	0	2	3	7	18
0915 - 0930	8	0	1	5	5	2	21
Per End	**72**	**2**	**3**	**20**	**15**	**39**	**151**

Heavies	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0
0830 - 0845	1	0	0	0	0	0	1
0845 - 0900	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0
Per End	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Combined	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	5	0	0	1	0	1	7
0745 - 0800	6	1	1	5	3	2	18
0800 - 0815	16	0	0	2	1	6	25
0815 - 0830	9	0	0	2	1	8	20
0830 - 0845	8	1	1	2	1	5	18
0845 - 0900	15	0	0	1	1	8	25
0900 - 0915	6	0	0	2	3	7	18
0915 - 0930	8	0	1	5	5	2	21
Per End	**73**	**2**	**3**	**20**	**15**	**39**	**152**

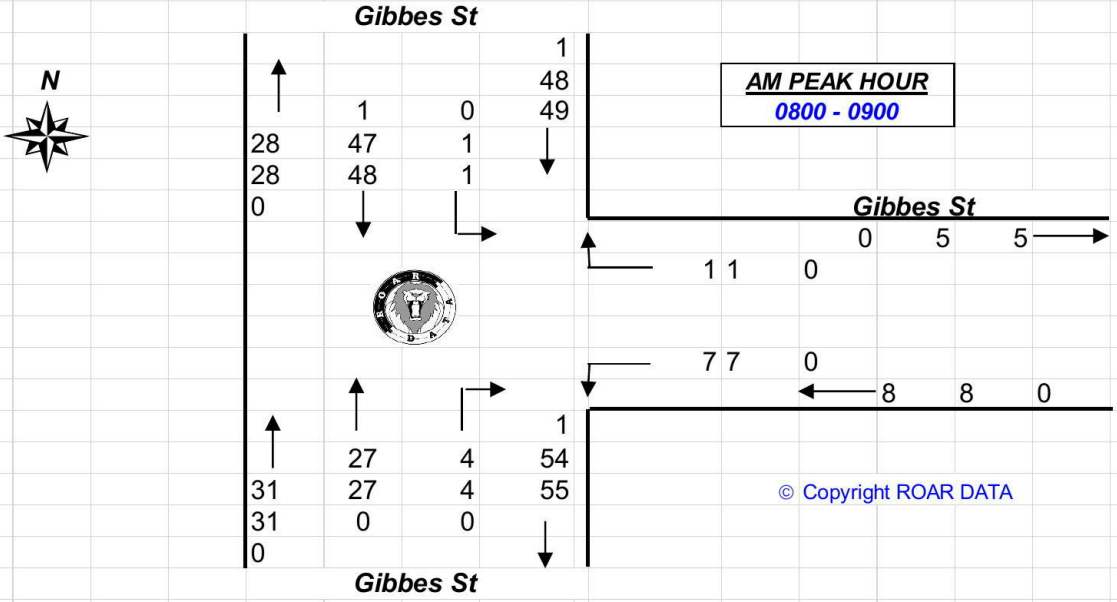
Lights	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	36	1	1	10	5	17	70
0745 - 0845	38	2	2	11	6	21	80
0800 - 0900	47	1	1	7	4	27	87
0815 - 0915	37	1	1	7	6	28	80
0830 - 0930	36	1	2	10	10	22	81
PEAK HR	**47**	**1**	**1**	**7**	**4**	**27**	**87**

Heavies	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	0	0	0	0	0	0	0
0745 - 0845	1	0	0	0	0	0	1
0800 - 0900	1	0	0	0	0	0	1
0815 - 0915	1	0	0	0	0	0	1
0830 - 0930	1	0	0	0	0	0	1
PEAK HR	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Combined	NORTH		EAST		SOUTH		
	Gibbes St		Gibbes St		Gibbes St		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	36	1	1	10	5	17	70
0745 - 0845	39	2	2	11	6	21	81
0800 - 0900	48	1	1	7	4	27	88
0815 - 0915	38	1	1	7	6	28	81
0830 - 0930	37	1	2	10	10	22	82
PEAK HR	**48**	**1**	**1**	**7**	**4**	**27**	**88**

Peds	NORTH	EAST	SOUTH	
Time Per	Gibbes St	Gibbes St	Gibbes St	TOT
0730 - 0745				0
0745 - 0800		NOT		0
0800 - 0815		REQUIRED		0
0815 - 0830				0
0830 - 0845				0
0845 - 0900				0
0900 - 0915				0
0915 - 0930				0
Per End	**0**	**0**		**0**

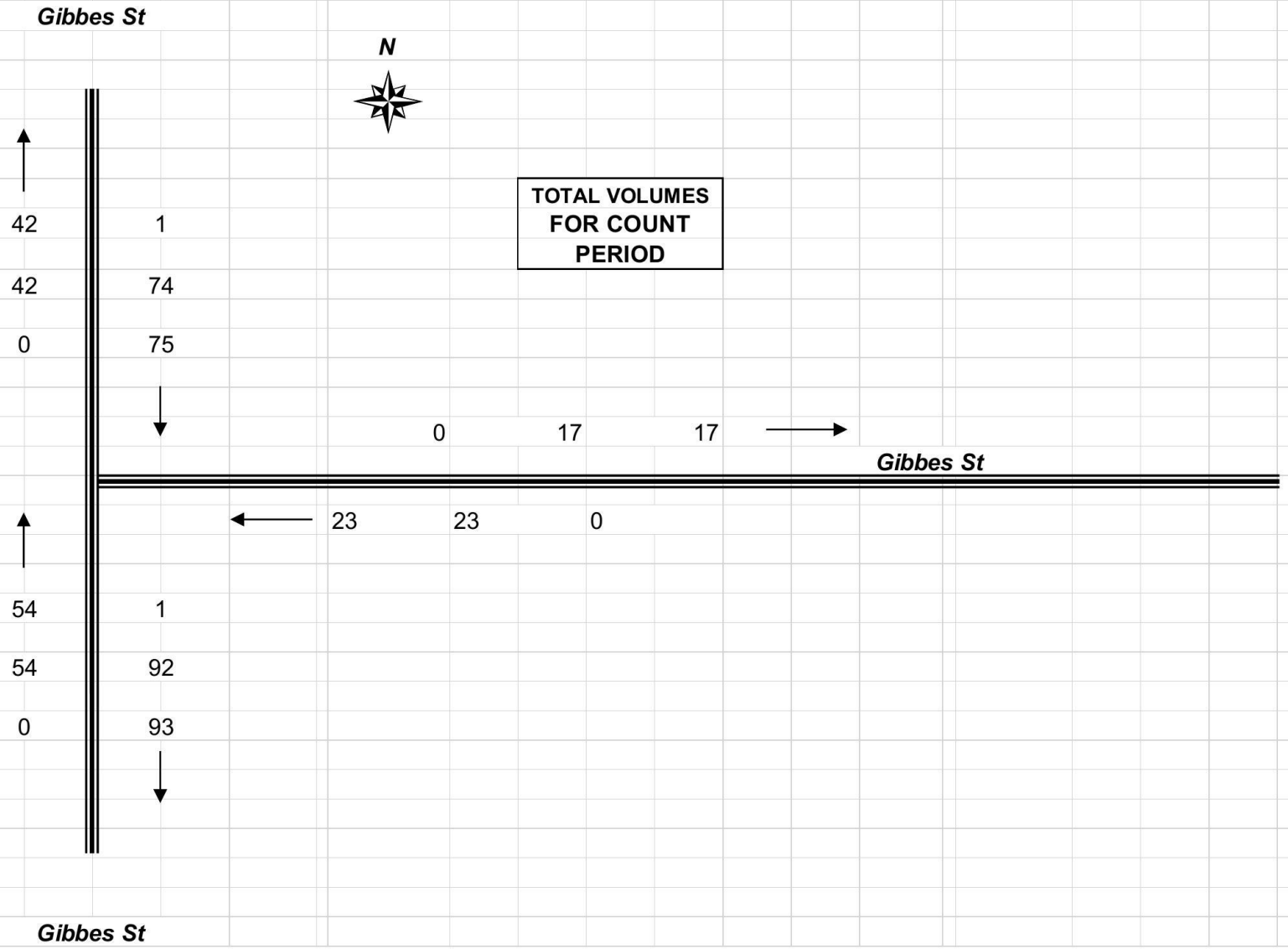
	NORTH	EAST	SOUTH	
Peak Per	Gibbes St	Gibbes St	Gibbes St	TOT
0730 - 0830	0	0	0	0
0745 - 0845	0	0	0	0
0800 - 0900	0	0	0	0
0815 - 0915	0	0	0	0
0830 - 0930	0	0	0	0
PEAK HR				



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

Client : Varga Traffic Planning
Job No/Name : 7071 REGENTVILLE Gibbes St
Day/Date : Tuesday 30th April 2019

AM



R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client	: Varga Traffic Planning
Job no/Name	: 7071 REGENTVILLE Gibbes St
Day/Date	: Tuesday 30th April 2019

Lights

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	4	0	0	1	0	4	**9**
1445 - 1500	7	1	0	1	0	4	**13**
1500 - 1515	4	0	0	2	1	4	**11**
1515 - 1530	7	0	0	1	2	14	**24**
1530 - 1545	9	0	0	2	1	4	**16**
1545 - 1600	7	1	1	0	1	9	**19**
1600 - 1615	5	1	0	0	1	10	**17**
1615 - 1630	3	0	0	2	3	9	**17**
1630 - 1645	9	0	0	2	2	8	**21**
1645 - 1700	6	0	0	0	3	10	**19**
1700 - 1715	5	0	0	2	4	5	**16**
1715 - 1730	8	0	0	0	4	5	**17**
1730 - 1745	5	0	0	1	4	6	**16**
1745 - 1800	9	0	1	3	5	9	**27**
1800 - 1815	3	0	0	1	1	11	**16**
1815 - 1830	7	0	0	2	2	4	**15**
Per End	**98**	**3**	**2**	**20**	**34**	**116**	**273**

Heavies

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	0	0	0	0	0	0	**0**
1445 - 1500	0	0	0	0	0	0	**0**
1500 - 1515	0	0	0	0	0	0	**0**
1515 - 1530	0	0	0	0	0	0	**0**
1530 - 1545	0	0	0	0	0	0	**0**
1545 - 1600	0	0	0	0	0	1	**1**
1600 - 1615	0	0	0	0	0	0	**0**
1615 - 1630	0	0	0	0	0	1	**1**
1630 - 1645	0	0	0	0	0	0	**0**
1645 - 1700	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	**0**
1800 - 1815	0	0	0	0	0	0	**0**
1815 - 1830	0	0	0	0	0	0	**0**
Per End	**0**	**0**	**0**	**0**	**0**	**2**	**2**

Combined

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	4	0	0	1	0	4	**9**
1445 - 1500	7	1	0	1	0	4	**13**
1500 - 1515	4	0	0	2	1	4	**11**
1515 - 1530	7	0	0	1	2	14	**24**
1530 - 1545	9	0	0	2	1	4	**16**
1545 - 1600	7	1	1	0	1	10	**20**
1600 - 1615	5	1	0	0	1	10	**17**
1615 - 1630	3	0	0	2	3	10	**18**
1630 - 1645	9	0	0	2	2	8	**21**
1645 - 1700	6	0	0	0	3	10	**19**
1700 - 1715	5	0	0	2	4	5	**16**
1715 - 1730	8	0	0	0	4	5	**17**
1730 - 1745	5	0	0	1	4	6	**16**
1745 - 1800	9	0	1	3	5	9	**27**
1800 - 1815	3	0	0	1	1	11	**16**
1815 - 1830	7	0	0	2	2	4	**15**
Per End	**98**	**3**	**2**	**20**	**34**	**118**	**275**

Lights

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	22	1	0	5	3	26	**57**
1445 - 1545	27	1	0	6	4	26	**64**
1500 - 1600	27	1	1	5	5	31	**70**
1515 - 1615	28	2	1	3	5	37	**76**
1530 - 1630	24	2	1	4	6	32	**69**
1545 - 1645	24	2	1	4	7	36	**74**
1600 - 1700	23	1	0	4	9	37	**74**
1615 - 1715	23	0	0	6	12	32	**73**
1630 - 1730	28	0	0	4	13	28	**73**
1645 - 1745	24	0	0	3	15	26	**68**
1700 - 1800	27	0	1	6	17	25	**76**
1715 - 1815	25	0	1	5	14	31	**76**
1730 - 1830	24	0	1	7	12	30	**74**
PEAK HR	**24**	**2**	**1**	**4**	**7**	**36**	**74**

Heavies

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	0	0	0	0	0	0	**0**
1445 - 1545	0	0	0	0	0	0	**0**
1500 - 1600	0	0	0	0	0	1	**1**
1515 - 1615	0	0	0	0	0	1	**1**
1530 - 1630	0	0	0	0	0	2	**2**
1545 - 1645	0	0	0	0	0	2	**2**
1600 - 1700	0	0	0	0	0	1	**1**
1615 - 1715	0	0	0	0	0	1	**1**
1630 - 1730	0	0	0	0	0	0	**0**
1645 - 1745	0	0	0	0	0	0	**0**
1700 - 1800	0	0	0	0	0	0	**0**
1715 - 1815	0	0	0	0	0	0	**0**
1730 - 1830	0	0	0	0	0	0	**0**
PEAK HR	**0**	**0**	**0**	**0**	**0**	**2**	**2**

Combined

	NORTH		EAST		SOUTH		
	Gibbes St		*Gibbes St*		*Gibbes St*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	22	1	0	5	3	26	**57**
1445 - 1545	27	1	0	6	4	26	**64**
1500 - 1600	27	1	1	5	5	32	**71**
1515 - 1615	28	2	1	3	5	38	**77**
1530 - 1630	24	2	1	4	6	34	**71**
1545 - 1645	24	2	1	4	7	38	**76**
1600 - 1700	23	1	0	4	9	38	**75**
1615 - 1715	23	0	0	6	12	33	**74**
1630 - 1730	28	0	0	4	13	28	**73**
1645 - 1745	24	0	0	3	15	26	**68**
1700 - 1800	27	0	1	6	17	25	**76**
1715 - 1815	25	0	1	5	14	31	**76**
1730 - 1830	24	0	1	7	12	30	**74**
PEAK HR	**24**	**2**	**1**	**4**	**7**	**38**	**76**

R.O.A.R. DATA

Reliable, Original & Authentic Results

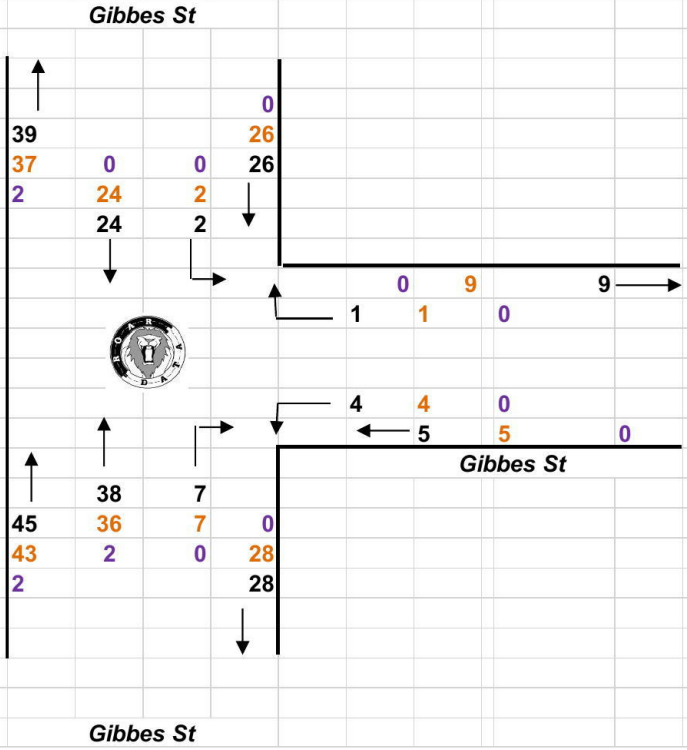
Ph.88196847, Mob.0418-239019

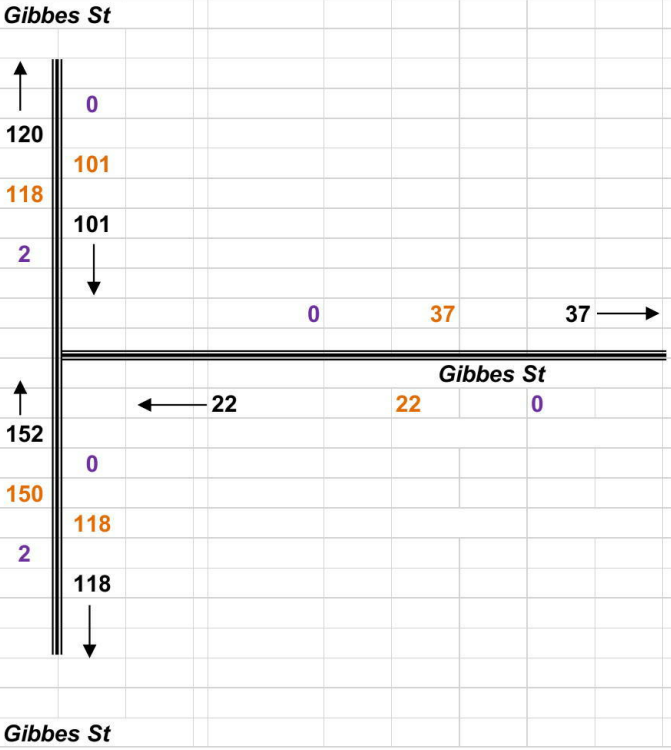
Client	: Varga Traffic Planning
Job no/Name	: 7071 REGENTVILLE Gibbes St
Day/Date	: Tuesday 30th April 2019

PM PEAK HOUR
1545 - 1645

TOTAL VOLUMES FOR COUNT PERIOD

N





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client	: Varga Traffic Planning
Job No/Name	: 7071 REGENTVILLE Gibbes St
Day/Date	: Tuesday 30th April 2019

Intersection Layout

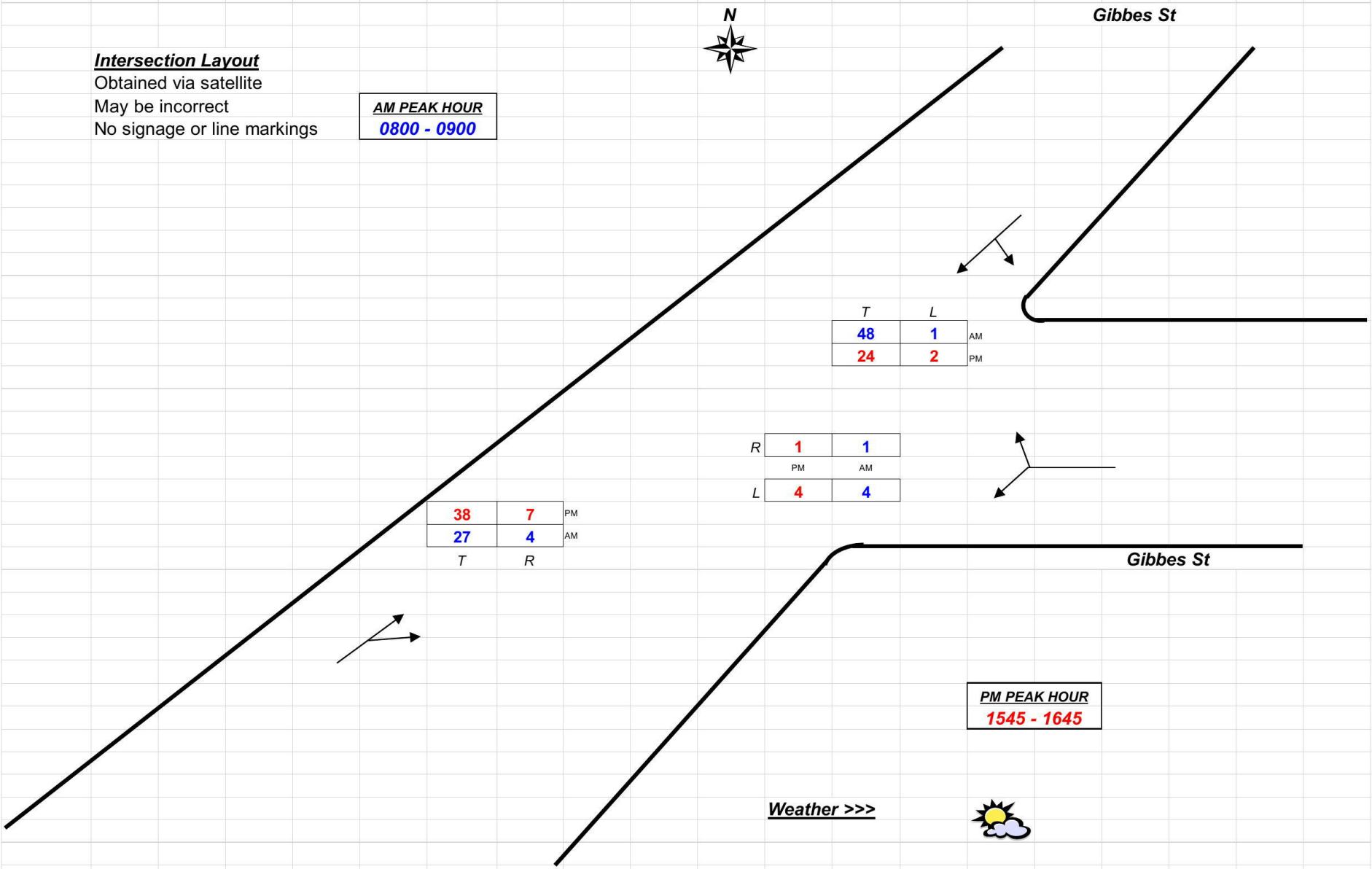
Obtained via satellite

May be incorrect

No signage or line markings

AM PEAK HOUR

0800 - 0900



PM PEAK HOUR

1545 - 1645

Weather >>>

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning

Job No/Name : 7071 REGE

Day/Date : Tuesday 30th April 2019

Lights	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	96	1	0	6	0	59	**162**
0745 - 0800	106	0	0	11	5	48	**170**
0800 - 0815	137	1	1	17	6	59	**221**
0815 - 0830	140	1	0	11	8	76	**236**
0830 - 0845	121	1	0	9	5	81	**217**
0845 - 0900	117	0	0	16	9	69	**211**
0900 - 0915	95	1	0	8	9	92	**205**
0915 - 0930	111	0	1	12	7	59	**190**
Per End	**923**	**5**	**2**	**90**	**49**	**543**	**1612**

Heavies	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	1	0	0	0	0	3	**4**
0745 - 0800	4	0	0	0	0	2	**6**
0800 - 0815	3	0	0	0	0	1	**4**
0815 - 0830	1	0	0	0	0	0	**1**
0830 - 0845	1	0	0	1	0	2	**4**
0845 - 0900	2	0	0	0	0	2	**4**
0900 - 0915	1	0	0	0	0	3	**4**
0915 - 0930	1	0	0	0	0	0	**1**
Per End	**14**	**0**	**0**	**1**	**0**	**13**	**28**

Combined	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Time Per	T	L	R	L	R	T	TOT
0730 - 0745	97	1	0	6	0	62	**166**
0745 - 0800	110	0	0	11	5	50	**176**
0800 - 0815	140	1	1	17	6	60	**225**
0815 - 0830	141	1	0	11	8	76	**237**
0830 - 0845	122	1	0	10	5	83	**221**
0845 - 0900	119	0	0	16	9	71	**215**
0900 - 0915	96	1	0	8	9	95	**209**
0915 - 0930	112	0	1	12	7	59	**191**
Per End	**937**	**5**	**2**	**91**	**49**	**556**	**1640**

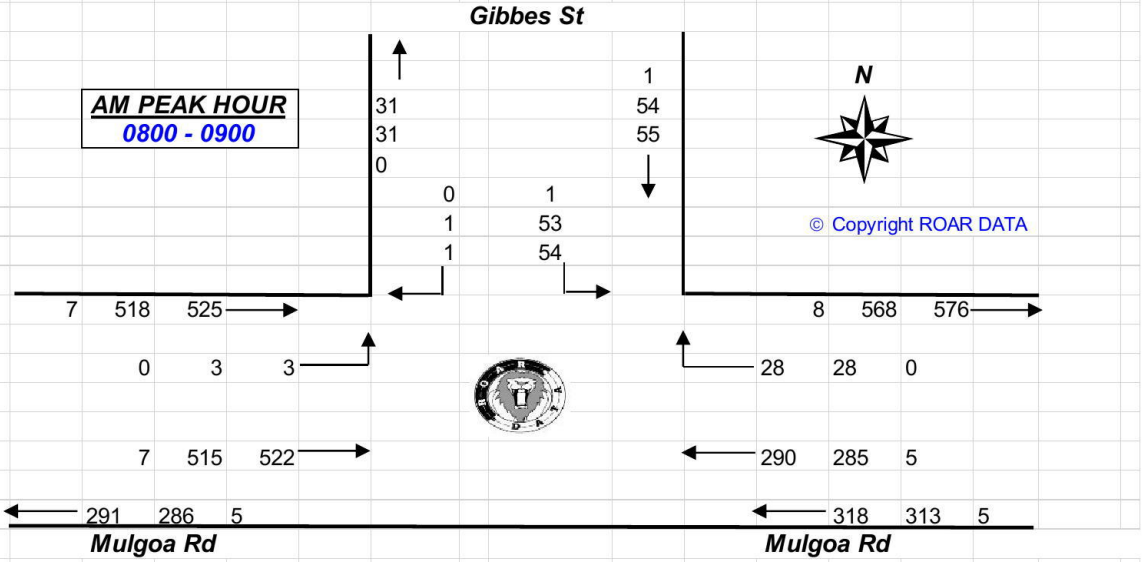
Lights	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	479	3	1	45	19	242	**789**
0745 - 0845	504	3	1	48	24	264	**844**
0800 - 0900	515	3	1	53	28	285	**885**
0815 - 0915	473	3	0	44	31	318	**869**
0830 - 0930	444	2	1	45	30	301	**823**
PEAK HR	**515**	**3**	**1**	**53**	**28**	**285**	**885**

Heavies	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	9	0	0	0	0	6	**15**
0745 - 0845	9	0	0	1	0	5	**15**
0800 - 0900	7	0	0	1	0	5	**13**
0815 - 0915	5	0	0	1	0	7	**13**
0830 - 0930	5	0	0	1	0	7	**13**
PEAK HR	**7**	**0**	**0**	**1**	**0**	**5**	**13**

Combined	WEST		NORTH		EAST		
	Mulgoa Rd		Gibbes St		Mulgoa Rd		
Peak Per	T	L	R	L	R	T	TOT
0730 - 0830	488	3	1	45	19	248	**804**
0745 - 0845	513	3	1	49	24	269	**859**
0800 - 0900	522	3	1	54	28	290	**898**
0815 - 0915	478	3	0	45	31	325	**882**
0830 - 0930	449	2	1	46	30	308	**836**
PEAK HR	**522**	**3**	**1**	**54**	**28**	**290**	**898**

Peds	WEST	NORTH	EAST	
Time Per	Mulgoa Rd	Gibbes St	Mulgoa Rd	TOT
0730 - 0745	0	0	0	**0**
0745 - 0800	0	0	0	**0**
0800 - 0815	0	0	0	**0**
0815 - 0830	0	0	0	**0**
0830 - 0845	0	0	1	**1**
0845 - 0900	0	0	0	**0**
0900 - 0915	0	0	0	**0**
0915 - 0930	0	0	0	**0**
Per End	**0**	**0**	**1**	**1**

	WEST	NORTH	EAST	
Peak Per	Mulgoa Rd	Gibbes St	Mulgoa Rd	TOT
0730 - 0830	0	0	0	**0**
0745 - 0845	0	0	1	**1**
0800 - 0900	0	0	1	**1**
0815 - 0915	0	0	1	**1**
0830 - 0930	0	0	1	**1**
PEAK HR	**0**	**0**	**1**	**1**



R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

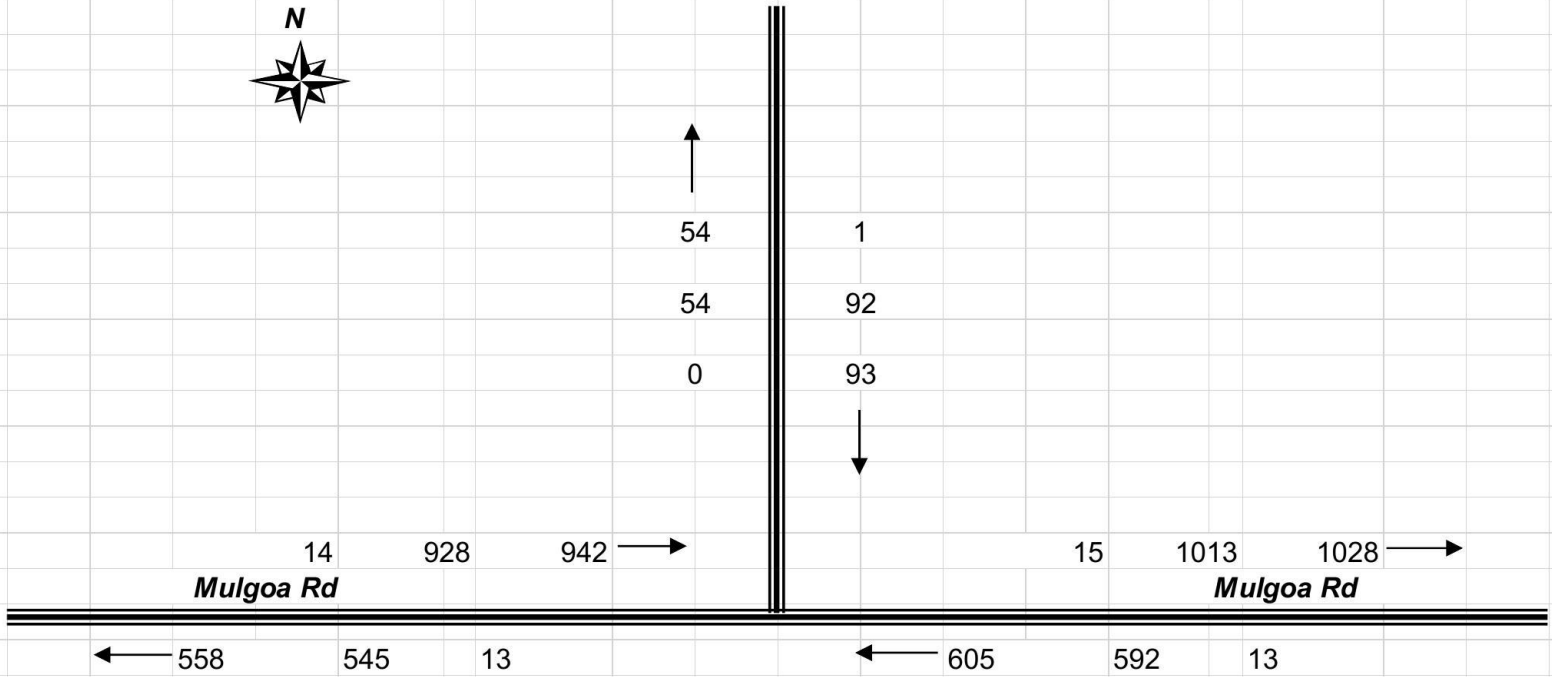
Client : Varga Traffic Planning

Job No/Name : 7071 REGENTVILLE Gibbes St

Day/Date : Tuesday 30th April 2019

TOTAL VOLUMES FOR COUNT PERIOD

AM



R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning

Job No/Name : 7071 REGENTVILLE Gibbes St

Day/Date : Tuesday 30th April 2019

Number of queues from roundabout to Gibbes St

Queues	EAST	
	Mulgoa Rd	
Time Per	To	Block
0730 - 0745	0	0
0745 - 0800	0	0
0800 - 0815	0	0
0815 - 0830	0	0
0830 - 0845	0	0
0845 - 0900	0	0
0900 - 0915	0	0
0915 - 0930	0	0
Per End	**0**	**0**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 7071 REGENTVILLE Gibbes St
Day/Date : Tuesday 30th April 2019

Lights

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	61	0	0	5	4	53	**123**
1445 - 1500	65	0	0	8	4	90	**167**
1500 - 1515	54	1	0	6	4	113	**178**
1515 - 1530	91	1	0	8	15	114	**229**
1530 - 1545	121	0	3	8	5	105	**242**
1545 - 1600	126	1	0	7	9	101	**244**
1600 - 1615	104	1	0	5	10	108	**228**
1615 - 1630	85	1	0	5	11	108	**210**
1630 - 1645	76	0	1	10	10	129	**226**
1645 - 1700	100	0	0	6	13	120	**239**
1700 - 1715	82	0	1	6	9	158	**256**
1715 - 1730	84	1	1	7	8	132	**233**
1730 - 1745	74	1	2	4	9	119	**209**
1745 - 1800	71	1	0	12	13	141	**238**
1800 - 1815	58	0	0	4	12	125	**199**
1815 - 1830	44	1	0	9	5	97	**156**
Per End	**1296**	**9**	**8**	**110**	**141**	**1813**	**3377**

Heavies

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	0	0	0	0	0	2	**2**
1445 - 1500	2	0	0	0	0	3	**5**
1500 - 1515	2	0	0	0	0	3	**5**
1515 - 1530	1	0	0	0	0	7	**8**
1530 - 1545	1	0	0	0	0	3	**4**
1545 - 1600	3	0	0	0	1	5	**9**
1600 - 1615	2	0	0	0	0	2	**4**
1615 - 1630	2	0	0	0	1	6	**9**
1630 - 1645	2	0	0	0	0	3	**5**
1645 - 1700	6	0	0	0	0	4	**10**
1700 - 1715	2	0	0	0	0	0	**2**
1715 - 1730	3	0	0	0	0	1	**4**
1730 - 1745	1	0	0	0	0	0	**1**
1745 - 1800	2	0	0	0	0	4	**6**
1800 - 1815	0	0	0	0	0	1	**1**
1815 - 1830	1	0	0	0	0	1	**2**
Per End	**30**	**0**	**0**	**0**	**2**	**45**	**77**

Combined

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Time Per	T	L	R	L	R	T	TOT
1430 - 1445	61	0	0	5	4	55	**125**
1445 - 1500	67	0	0	8	4	93	**172**
1500 - 1515	56	1	0	6	4	116	**183**
1515 - 1530	92	1	0	8	15	121	**237**
1530 - 1545	122	0	3	8	5	108	**246**
1545 - 1600	129	1	0	7	10	106	**253**
1600 - 1615	106	1	0	5	10	110	**232**
1615 - 1630	87	1	0	5	12	114	**219**
1630 - 1645	78	0	1	10	10	132	**231**
1645 - 1700	106	0	0	6	13	124	**249**
1700 - 1715	84	0	1	6	9	158	**258**
1715 - 1730	87	1	1	7	8	133	**237**
1730 - 1745	75	1	2	4	9	119	**210**
1745 - 1800	73	1	0	12	13	145	**244**
1800 - 1815	58	0	0	4	12	126	**200**
1815 - 1830	45	1	0	9	5	98	**158**
Per End	**1326**	**9**	**8**	**110**	**143**	**1858**	**3454**

Lights

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	271	2	0	27	27	370	**697**
1445 - 1545	331	2	3	30	28	422	**816**
1500 - 1600	392	3	3	29	33	433	**893**
1515 - 1615	442	3	3	28	39	428	**943**
1530 - 1630	436	3	3	25	35	422	**924**
1545 - 1645	391	3	1	27	40	446	**908**
1600 - 1700	365	2	1	26	44	465	**903**
1615 - 1715	343	1	2	27	43	515	**931**
1630 - 1730	342	1	3	29	40	539	**954**
1645 - 1745	340	2	4	23	39	529	**937**
1700 - 1800	311	3	4	29	39	550	**936**
1715 - 1815	287	3	3	27	42	517	**879**
1730 - 1830	247	3	2	29	39	482	**802**
PEAK HR	**342**	**1**	**3**	**29**	**40**	**539**	**954**

Heavies

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	5	0	0	0	0	15	**20**
1445 - 1545	6	0	0	0	0	16	**22**
1500 - 1600	7	0	0	0	1	18	**26**
1515 - 1615	7	0	0	0	1	17	**25**
1530 - 1630	8	0	0	0	2	16	**26**
1545 - 1645	9	0	0	0	2	16	**27**
1600 - 1700	12	0	0	0	1	15	**28**
1615 - 1715	12	0	0	0	1	13	**26**
1630 - 1730	13	0	0	0	0	8	**21**
1645 - 1745	12	0	0	0	0	5	**17**
1700 - 1800	8	0	0	0	0	5	**13**
1715 - 1815	6	0	0	0	0	6	**12**
1730 - 1830	4	0	0	0	0	6	**10**
PEAK HR	**13**	**0**	**0**	**0**	**0**	**8**	**21**

Combined

	WEST		NORTH		EAST		
	Mulgoa Rd		*Gibbes St*		*Mulgoa Rd*		
Peak Per	T	L	R	L	R	T	TOT
1430 - 1530	276	2	0	27	27	385	**717**
1445 - 1545	337	2	3	30	28	438	**838**
1500 - 1600	399	3	3	29	34	451	**919**
1515 - 1615	449	3	3	28	40	445	**968**
1530 - 1630	444	3	3	25	37	438	**950**
1545 - 1645	400	3	1	27	42	462	**935**
1600 - 1700	377	2	1	26	45	480	**931**
1615 - 1715	355	1	2	27	44	528	**957**
1630 - 1730	355	1	3	29	40	547	**975**
1645 - 1745	352	2	4	23	39	534	**954**
1700 - 1800	319	3	4	29	39	555	**949**
1715 - 1815	293	3	3	27	42	523	**891**
1730 - 1830	251	3	2	29	39	488	**812**
PEAK HR	**355**	**1**	**3**	**29**	**40**	**547**	**975**

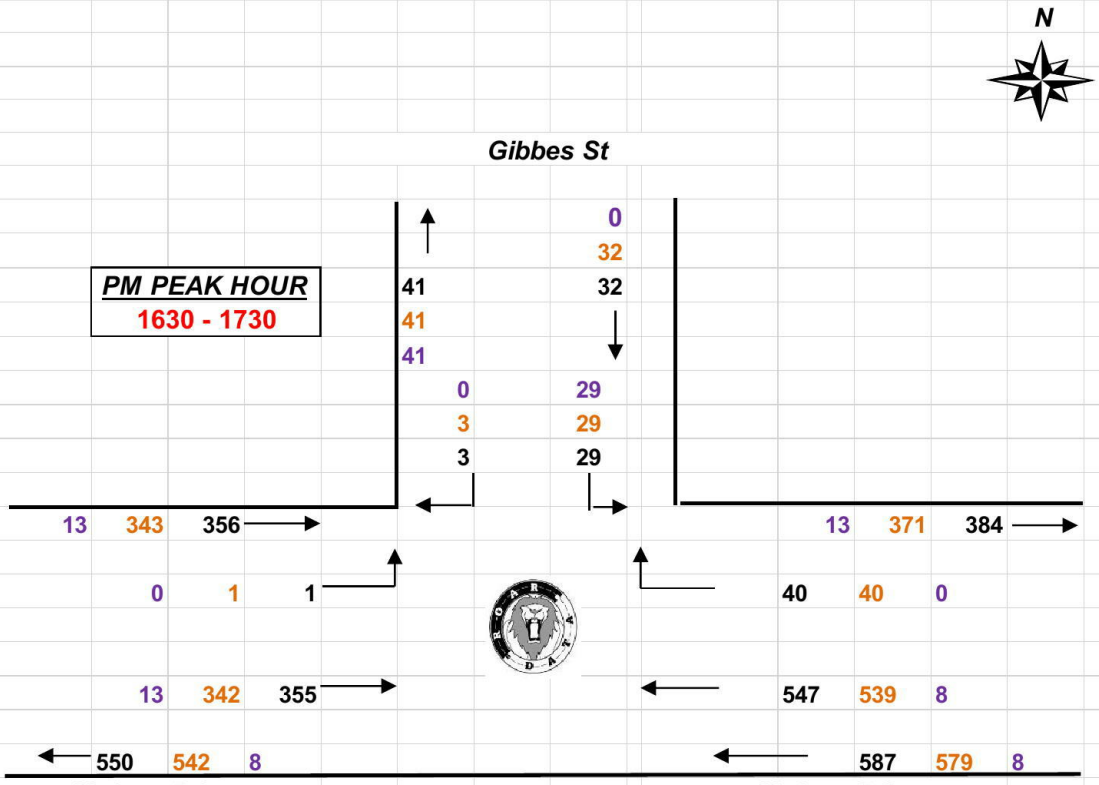
R.O.A.R. DATA

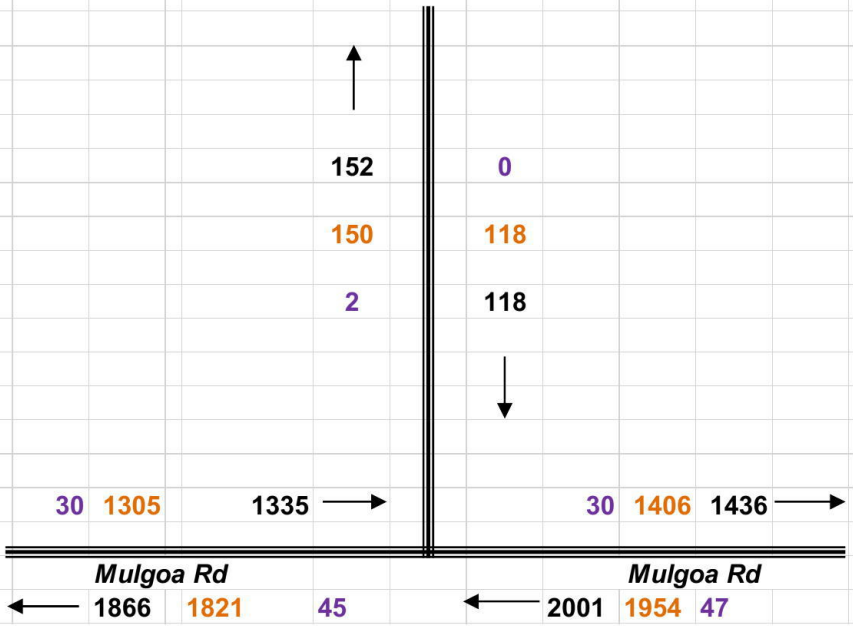
Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client	: Varga Traffic Planning
Job No/Name	: 7071 REGENTVILLE Gibbes St
Day/Date	: Tuesday 30th April 2019

TOTAL VOLUMES FOR COUNT PERIOD





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 7071 REGENTVILLE Gibbes St
Day/Date : Tuesday 30th April 2019

PEDS	WEST	NORTH	EAST	
	Mulgoa Rd	*Gibbes St*	*Mulgoa Rd*	
Time Per	UNCLASS	UNCLASS	UNCLASS	TOT
1430 - 1445	0	0	0	**0**
1445 - 1500	0	0	0	**0**
1500 - 1515	0	0	0	**0**
1515 - 1530	0	0	0	**0**
1530 - 1545	0	0	0	**0**
1545 - 1600	0	0	0	**0**
1600 - 1615	0	0	0	**0**
1615 - 1630	0	0	0	**0**
1630 - 1645	0	0	0	**0**
1645 - 1700	0	0	0	**0**
1700 - 1715	0	0	0	**0**
1715 - 1730	0	0	0	**0**
1730 - 1745	0	0	0	**0**
1745 - 1800	0	0	0	**0**
1800 - 1815	0	0	0	**0**
1815 - 1830	0	0	0	**0**
Per End	**0**	**0**	**0**	**0**

PEDS	WEST	NORTH	EAST	
	Mulgoa Rd	*Gibbes St*	*Mulgoa Rd*	
Peak Per	UNCLASS	UNCLASS	UNCLASS	TOT
1430 - 1530	45	0	1954	**1999**
1445 - 1545	45	0	1954	**1999**
1500 - 1600	0	0	0	**0**
1515 - 1615	0	0	0	**0**
1530 - 1630	0	0	0	**0**
1545 - 1645	0	0	0	**0**
1600 - 1700	0	0	0	**0**
1615 - 1715	0	0	0	**0**
1630 - 1730	0	0	0	**0**
1645 - 1745	0	0	0	**0**
1700 - 1800	0	0	0	**0**
1715 - 1815	0	0	0	**0**
1730 - 1830	0	0	0	**0**
PEAK HR	**0**	**0**	**0**	**0**

R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning

Job No/Name : 7071 REGENTVILLE Gibbes St

Day/Date : Tuesday 30th April 2019

Number of queues from roundabout to Gibbes St

Queues	EAST	
	Mulgoa Rd	
Time Per	**To**	**Block**
1430 - 1445	0	0
1445 - 1500	0	0
1500 - 1515	0	0
1515 - 1530	0	0
1530 - 1545	0	0
1545 - 1600	0	0
1600 - 1615	0	0
1615 - 1630	0	0
1630 - 1645	0	0
1645 - 1700	0	0
1700 - 1715	0	0
1715 - 1730	0	0
1730 - 1745	0	0
1745 - 1800	0	0
1800 - 1815	0	0
1815 - 1830	0	0
Per End	**0**	**0**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

Client	: Varga Traffic Planning
Job No/Name	: 7071 REGENTVILLE Gibbes St
Day/Date	: Tuesday 30th April 2019

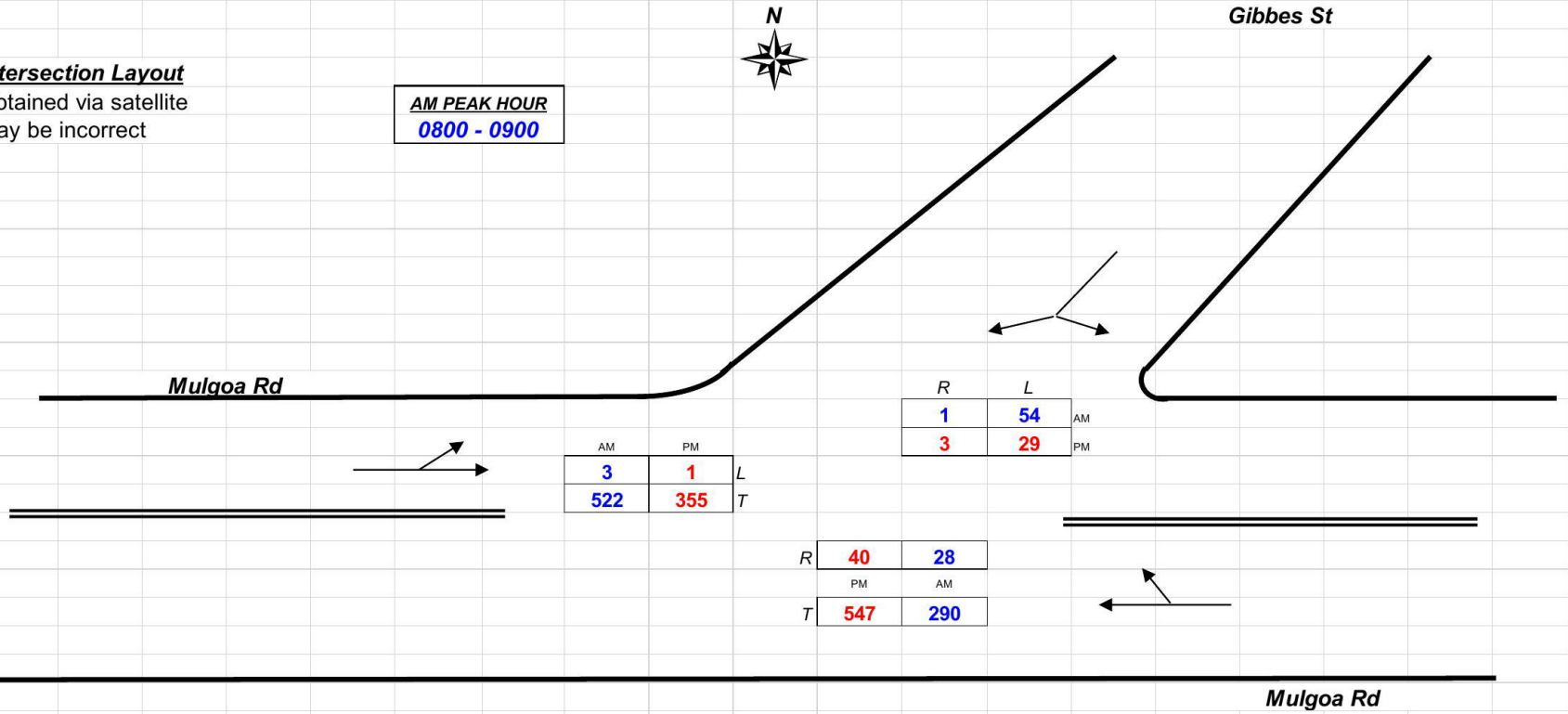
Intersection Layout

Obtained via satellite

May be incorrect

AM PEAK HOUR

0800 - 0900



PM PEAK HOUR

1630 - 1730

Weather >>>

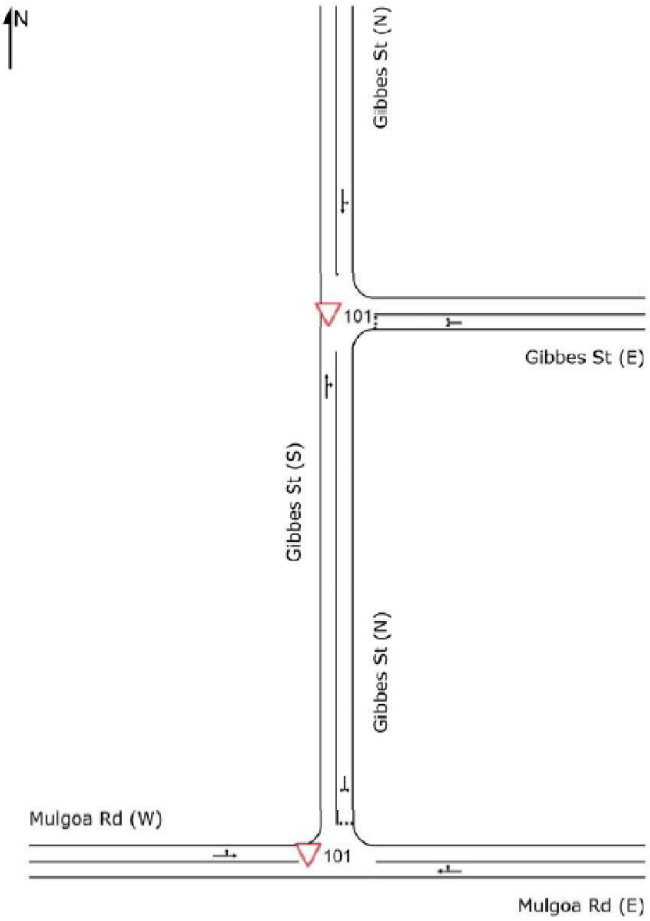
APPENDIX B

SIDRA MOVEMENT SUMMARIES

NETWORK LAYOUT

Network: N101 [Existing AM]

New Network
Network Category: (None)



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
▽101	NA	MUL_GIBX AM
▽101	NA	GIB_GIBX AM

Organisation: VARGA TRAFFIC PLANNING | Created: Tuesday, 14 May 2019 8:41:44 AM
Project: Z:\DATA\Data\Jobs01\Jobs\19work\19185T_49GibbesStRegentville\SIDRA\Existing Network.sip8

MOVEMENT SUMMARY

Site: 101 [MUL_GIBX AM]

Network: N101 [Existing AM]

Mulgoa Road & Gibbes Street, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mulgoa Rd (E)														
5	T1	290	1.7	290	1.7	0.178	0.4	LOS A	0.1	0.9	0.13	0.06	0.13	58.9
6	R2	28	0.0	28	0.0	0.178	8.0	LOS A	0.1	0.9	0.13	0.06	0.13	57.9
Approach		318	1.6	318	1.6	0.178	1.1	NA	0.1	0.9	0.13	0.06	0.13	58.9
North: Gibbes St (N)														
7	L2	54	1.9	54	1.9	0.059	6.7	LOS A	0.1	0.6	0.49	0.67	0.49	48.3
9	R2	1	0.0	1	0.0	0.059	9.5	LOS A	0.1	0.6	0.49	0.67	0.49	47.9
Approach		55	1.8	55	1.8	0.059	6.8	LOS A	0.1	0.6	0.49	0.67	0.49	48.3
West: Mulgoa Rd (W)														
10	L2	3	0.0	3	0.0	0.272	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
11	T1	522	1.3	522	1.3	0.272	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		525	1.3	525	1.3	0.272	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		898	1.4	898	1.4	0.272	0.8	NA	0.1	0.9	0.08	0.06	0.08	58.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [MUL_GIBX PM]

Network: N101 [Existing PM]

Mulgoa Road & Gibbes Street, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mulgoa Rd (E)														
5	T1	547	1.5	547	1.5	0.315	0.2	LOS A	0.2	1.2	0.09	0.04	0.09	59.2
6	R2	40	0.0	40	0.0	0.315	7.3	LOS A	0.2	1.2	0.09	0.04	0.09	58.5
Approach		587	1.4	587	1.4	0.315	0.7	NA	0.2	1.2	0.09	0.04	0.09	59.2
North: Gibbes St (N)														
7	L2	29	0.0	29	0.0	0.031	5.8	LOS A	0.0	0.3	0.41	0.59	0.41	48.7
9	R2	3	0.0	3	0.0	0.031	10.6	LOS A	0.0	0.3	0.41	0.59	0.41	48.3
Approach		32	0.0	32	0.0	0.031	6.2	LOS A	0.0	0.3	0.41	0.59	0.41	48.7
West: Mulgoa Rd (W)														
10	L2	1	0.0	1	0.0	0.187	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
11	T1	355	3.7	355	3.7	0.187	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		356	3.7	356	3.7	0.187	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
All Vehicles		975	2.2	975	2.2	0.315	0.6	NA	0.2	1.2	0.07	0.05	0.07	59.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [MUL_GIBP AM]

Network: N101 [Proposed AM]

Mulgoa Road & Gibbes Street, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mulgoa Rd (E)														
5	T1	290	1.7	290	1.7	0.196	0.6	LOS A	0.2	1.5	0.20	0.09	0.20	58.4
6	R2	46	0.0	46	0.0	0.196	8.1	LOS A	0.2	1.5	0.20	0.09	0.20	56.9
Approach		336	1.5	336	1.5	0.196	1.7	NA	0.2	1.5	0.20	0.09	0.20	58.3
North: Gibbes St (N)														
7	L2	59	1.7	59	1.7	0.101	6.8	LOS A	0.1	1.0	0.52	0.72	0.52	47.8
9	R2	20	0.0	20	0.0	0.101	9.8	LOS A	0.1	1.0	0.52	0.72	0.52	47.5
Approach		79	1.3	79	1.3	0.101	7.6	LOS A	0.1	1.0	0.52	0.72	0.52	47.7
West: Mulgoa Rd (W)														
10	L2	8	0.0	8	0.0	0.274	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
11	T1	522	1.3	522	1.3	0.274	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.9
Approach		530	1.3	530	1.3	0.274	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.9
All Vehicles		945	1.4	945	1.4	0.274	1.3	NA	0.2	1.5	0.12	0.10	0.12	58.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [MUL_GIBP PM]

Network: N101 [Proposed PM]

Mulgoa Road & Gibbes Street, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Mulgoa Rd (E)														
5	T1	547	1.5	547	1.5	0.329	0.3	LOS A	0.3	1.8	0.13	0.06	0.13	58.9
6	R2	57	0.0	57	0.0	0.329	7.4	LOS A	0.3	1.8	0.13	0.06	0.13	57.9
Approach		604	1.3	604	1.3	0.329	1.0	NA	0.3	1.8	0.13	0.06	0.13	58.9
North: Gibbes St (N)														
7	L2	33	0.0	33	0.0	0.074	5.8	LOS A	0.1	0.7	0.47	0.67	0.47	47.7
9	R2	20	0.0	20	0.0	0.074	11.0	LOS A	0.1	0.7	0.47	0.67	0.47	47.3
Approach		53	0.0	53	0.0	0.074	7.8	LOS A	0.1	0.7	0.47	0.67	0.47	47.6
West: Mulgoa Rd (W)														
10	L2	5	0.0	5	0.0	0.189	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
11	T1	355	3.7	355	3.7	0.189	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.9
Approach		360	3.6	360	3.6	0.189	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.9
All Vehicles		1017	2.1	1017	2.1	0.329	1.0	NA	0.3	1.8	0.10	0.07	0.10	58.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [GIB_GIBX AM]

Network: N101 [Existing AM]

Mulgoa Road & Gibbes Sttreet, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibbes St (S)														
2	T1	27	0.0	27	0.0	0.016	0.0	LOS A	0.0	0.1	0.04	0.07	0.04	49.5
3	R2	4	0.0	4	0.0	0.016	4.7	LOS A	0.0	0.1	0.04	0.07	0.04	48.5
Approach		31	0.0	31	0.0	0.016	0.6	NA	0.0	0.1	0.04	0.07	0.04	49.4
East: Gibbes St (E)														
4	L2	7	0.0	7	0.0	0.005	4.6	LOS A	0.0	0.1	0.01	0.53	0.01	44.5
6	R2	1	0.0	1	0.0	0.005	4.7	LOS A	0.0	0.1	0.01	0.53	0.01	46.2
Approach		8	0.0	8	0.0	0.005	4.6	LOS A	0.0	0.1	0.01	0.53	0.01	44.9
North: Gibbes St (N)														
7	L2	48	2.1	48	2.1	0.027	4.6	LOS A	0.0	0.0	0.00	0.52	0.00	46.7
8	T1	1	0.0	1	0.0	0.027	0.0	LOS A	0.0	0.0	0.00	0.52	0.00	44.6
Approach		49	2.0	49	2.0	0.027	4.5	NA	0.0	0.0	0.00	0.52	0.00	46.6
All Vehicles		88	1.1	88	1.1	0.027	3.1	NA	0.0	0.1	0.01	0.36	0.01	47.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

▽ Site: 101 [GIB_GIBX PM]

Network: N101 [Existing PM]

Mulgoa Road & Gibbes Sttreet, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibbes St (S)														
2	T1	38	5.3	38	5.3	0.024	0.0	LOS A	0.0	0.1	0.03	0.09	0.03	49.4
3	R2	7	0.0	7	0.0	0.024	4.6	LOS A	0.0	0.1	0.03	0.09	0.03	48.5
Approach		45	4.4	45	4.4	0.024	0.7	NA	0.0	0.1	0.03	0.09	0.03	49.3
East: Gibbes St (E)														
4	L2	4	0.0	4	0.0	0.003	4.6	LOS A	0.0	0.0	0.08	0.51	0.08	44.2
6	R2	1	0.0	1	0.0	0.003	4.8	LOS A	0.0	0.0	0.08	0.51	0.08	46.0
Approach		5	0.0	5	0.0	0.003	4.7	LOS A	0.0	0.0	0.08	0.51	0.08	44.8
North: Gibbes St (N)														
7	L2	2	0.0	2	0.0	0.013	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	49.3
8	T1	24	0.0	24	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.5
Approach		26	0.0	26	0.0	0.013	0.4	NA	0.0	0.0	0.00	0.04	0.00	49.5
All Vehicles		76	2.6	76	2.6	0.024	0.9	NA	0.0	0.1	0.02	0.10	0.02	49.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [GIB_GIBP AM]

Network: N101 [Proposed AM]

Mulgoa Road & Gibbes Sttreet, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibbes St (S)														
2	T1	27	0.0	27	0.0	0.030	0.1	LOS A	0.0	0.3	0.12	0.27	0.12	48.2
3	R2	27	0.0	27	0.0	0.030	4.7	LOS A	0.0	0.3	0.12	0.27	0.12	47.3
Approach		54	0.0	54	0.0	0.030	2.4	NA	0.0	0.3	0.12	0.27	0.12	47.7
East: Gibbes St (E)														
4	L2	10	0.0	10	0.0	0.027	4.6	LOS A	0.0	0.3	0.01	0.55	0.01	44.3
6	R2	25	0.0	25	0.0	0.027	4.8	LOS A	0.0	0.3	0.01	0.55	0.01	46.1
Approach		35	0.0	35	0.0	0.027	4.7	LOS A	0.0	0.3	0.01	0.55	0.01	45.8
North: Gibbes St (N)														
7	L2	51	2.0	51	2.0	0.028	4.6	LOS A	0.0	0.0	0.00	0.52	0.00	46.7
8	T1	1	0.0	1	0.0	0.028	0.0	LOS A	0.0	0.0	0.00	0.52	0.00	44.6
Approach		52	1.9	52	1.9	0.028	4.5	NA	0.0	0.0	0.00	0.52	0.00	46.6
All Vehicles		141	0.7	141	0.7	0.030	3.8	NA	0.0	0.3	0.05	0.43	0.05	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.

MOVEMENT SUMMARY

Site: 101 [GIB_GIBP PM]

Network: N101 [Proposed PM]

Mulgoa Road & Gibbes Sttreet, Regentville
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibbes St (S)														
2	T1	38	5.3	38	5.3	0.036	0.0	LOS A	0.1	0.4	0.07	0.23	0.07	48.5
3	R2	28	0.0	28	0.0	0.036	4.6	LOS A	0.1	0.4	0.07	0.23	0.07	47.6
Approach		66	3.0	66	3.0	0.036	2.0	NA	0.1	0.4	0.07	0.23	0.07	48.1
East: Gibbes St (E)														
4	L2	25	0.0	25	0.0	0.018	4.6	LOS A	0.0	0.2	0.08	0.51	0.08	44.2
6	R2	3	0.0	3	0.0	0.018	4.9	LOS A	0.0	0.2	0.08	0.51	0.08	46.0
Approach		28	0.0	28	0.0	0.018	4.6	LOS A	0.0	0.2	0.08	0.51	0.08	44.5
North: Gibbes St (N)														
7	L2	4	0.0	4	0.0	0.014	4.6	LOS A	0.0	0.0	0.00	0.08	0.00	49.1
8	T1	24	0.0	24	0.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	49.1
Approach		28	0.0	28	0.0	0.014	0.7	NA	0.0	0.0	0.00	0.08	0.00	49.1
All Vehicles		122	1.6	122	1.6	0.036	2.3	NA	0.1	0.4	0.06	0.26	0.06	47.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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.