Planning Proposal for a
Proposed Medical Centre

Level 2 – 84D Roberts Avenue, Mortdale

TRAFFIC AND PARKING ASSESSMENT REPORT

26 February 2024

Ref 24039

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 planning proposal to Georges River Council for a medical centre to be located within Level 2 of an existing mixed-use development located at 84D Roberts Avenue, Mortdale (Figures 1 and 2).

This planning proposal seeks to amend the *Georges River Local Environmental Plan 2021* (*GRLEP 2021*) to allow a medical centre to be located within the existing Mortdale Plaza. The planning proposal envisages the partial fitout to Level 2 of the existing Mortdale Plaza for a medical centre with an approximate gross floor area of 600m^2.

The planning proposal proposes *no changes* to the existing building form, off-street parking facilities nor vehicular access arrangement.

It is envisaged that the proposed medical centre will cater primarily for the needs of employees working nearby and also local residents within the surrounding *E4 – General Industrial* and *R2 - Low Density Residential* zoned lands, including within the existing mixed used building itself.

Existing tenants within the development include a large Woolworths supermarket, BWS, a child care centre and a gymnasium. This will invariably reduce the traffic and parking implications when compared to other stand-alone medical centres as patients will undertake multi-purpose trips.

Off-street parking will be provided within the existing off-street car parking areas on site in accordance with Council's *DCP* requirements.

The purpose of this report is to assess the traffic and parking implications of the planning proposal and to that end this report:

- describes the site and provides details of the planning proposal

- reviews the road network in the vicinity of the site, and the traffic conditions on that road network

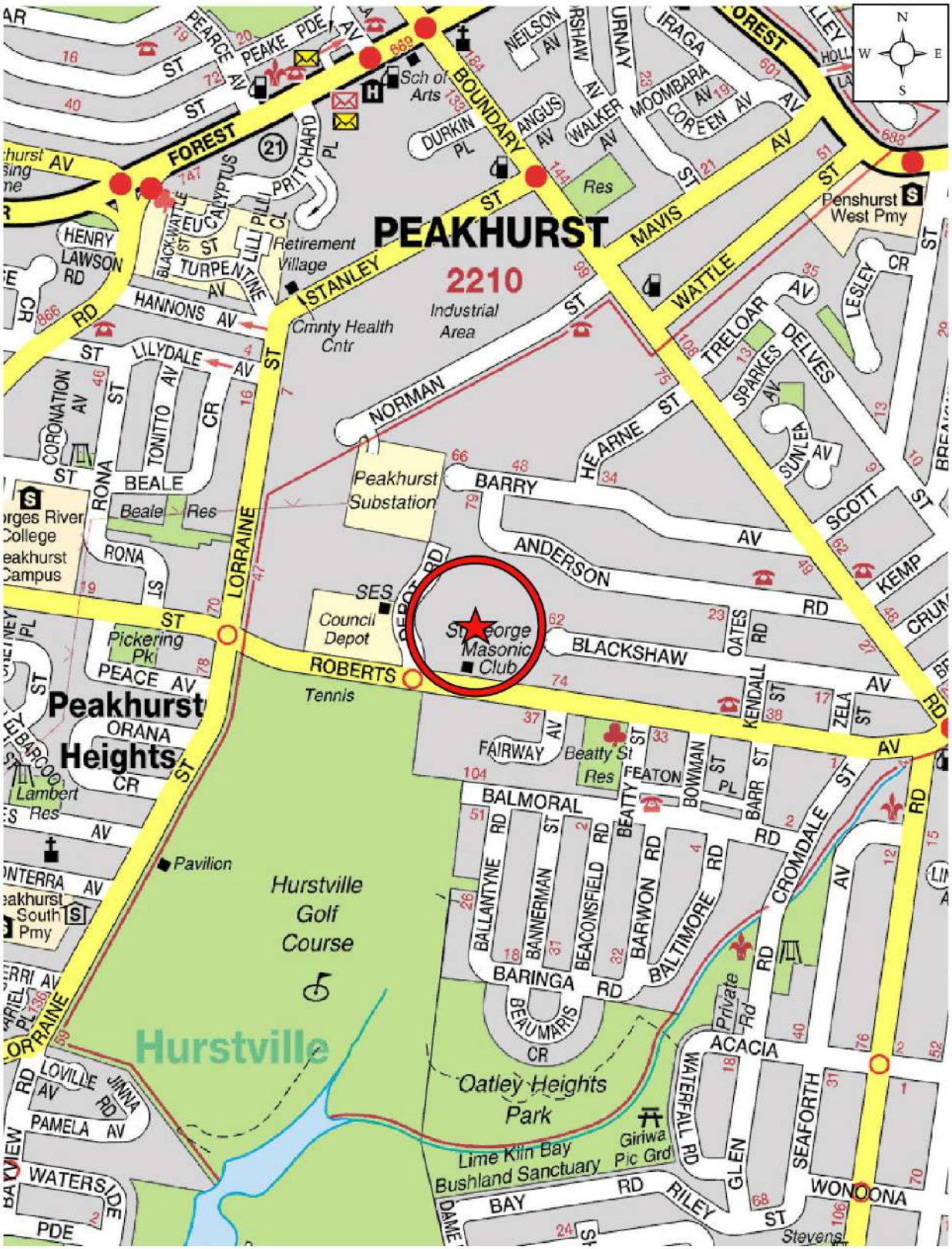
- reviews the public transport services available in the vicinity of the site

- estimates the traffic generation potential of the planning proposal and assigns that traffic generation to the road network serving the site

- assesses the traffic implications of the planning proposal in terms of road network capacity

- reviews the geometric design features of the proposed car parking and loading facilities for compliance with the relevant codes and standards

- assesses the adequacy and suitability of the quantum of off-street car parking and loading provided on the site.



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LOCATION
FIGURE 1

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SITE
FIGURE 2

2. PLANNING PROPOSAL

Site

The subject site is located on land zoned *E4 - General Industrial*, on the northern side of Roberts Avenue, between Depot Road and Fairway Avenue. The site has a street frontage approximately 15 metres in length to Roberts Avenue and occupies an area of approximately 1.12ha. A recent aerial image of the site and its surroundings is reproduced below.

Source: MetroMap

The subject site is currently occupied by the Mortdale Plaza, a local shopping plaza with established occupants comprising a café, pharmacy, a gymnasium, a child care centre, as well as a Woolworths supermarket (including BWS), within a three-storey mixed used building.

The floor area within Level 2 of the existing building – i.e. the level of the proposed medical centre – is approximately 2,140m^2 as follows:

Childcare Centre (Shop 6):	1,280m^2
Retail Tenancy (shop 7):	860m^2
TOTAL FLOOR AREA:	**2,140m^2**

In this regard, it is noted that the retail tenancy on Level 2 of the existing building has been *vacant*, and not been fitted out since the completion of the development.

Off-street parking on Level 2 of the Mortdale Plaza is currently provided for 34 cars.

The loading/servicing needs of the childcare centre are minimal, and are currently undertaken by a variety of light commercial vehicles such as vans, utilities and wagons, which are capable of fitting into a conventional car parking space.

Loading/servicing for the Woolworths Supermarket is undertaken by a variety of commercial trucks ranging from small, medium and large rigid trucks up to and including semi-trailers. A dedicated loading dock is provided for Woolworths on the ground floor level, along the north-western corner of the existing building.

Vehicular access to the car parking and loading facilities is provided via a two-way driveway off the Roberts Avenue roundabout, as shown in the image below.

Previously Approved Development Consents

The subject site has been granted a number of development consents, including MOD2013/0014 and DA2020/0452 which specify the following floor areas within the Mortdale Plaza development:

MOD2013/0014	
Ground floor – supermarket & pharmacy:	4,165m^2
Ground floor – café:	80m^2
First floor – gymnasium:	1,883m^2
Second floor – bulky goods retailing:	1,568m^2
Second floor – office space:	781m^2
TOTAL FLOOR AREA:	**8,477m^2**
DA2020/0452	
Second floor – childcare centre (94 children):	1,280m^2
TOTAL FLOOR AREA:	**1,280m^2**

Off-street parking for Mortdale Plaza is currently provided for a total of 422 cars within the existing building, including the 17 car parking spaces for the previously approved childcare centre on level 2.

Plans of the existing development have been prepared by *FLDC Architects* and *Liskowski Architects* and are reproduced in Appendix A.

Existing Planning Controls

The primary instrument that governs the types of land use permitted of the development on site is contained within the *Georges River Local Environmental Plan 2021* (*GRLEP 2021*). As noted in the foregoing, the subject site is located on land zoned *E4 - General Industrial* where a medical centre is not permitted, as it falls under 'Health services facilities' which are not permitted in *E4 - General Industrial* zoned lands.

Planning Proposal

GRLEP 2021 Schedule 1, Item 5 allows for additional permitted uses over the site, including retail premises and childcare centre, which are prohibited in the *E4 - General Industrial* zone. This planning proposal therefore seeks approval to include a medical centre as an additional permitted use on the subject site.

The proposed changes to the planning controls have the potential to achieve a fitout of the existing Mortdale Plaza building level 2 for a medical centre with a GFA of 600m^2.

As noted in the foregoing, the second level consists of two existing tenancies, a childcare centre catering to 94 children located within the front half of the level and fronting Roberts Avenue (shop 6), and a retail tenancy located within the rear half (shop 7).

Concept plans of the planning proposal shows the 600m^2 medical centre located within the back half of level 2 – i.e. "Shop 7" – and the remainder of the existing retail tenancy (approximately 238m^2 GFA) will remain vacant.

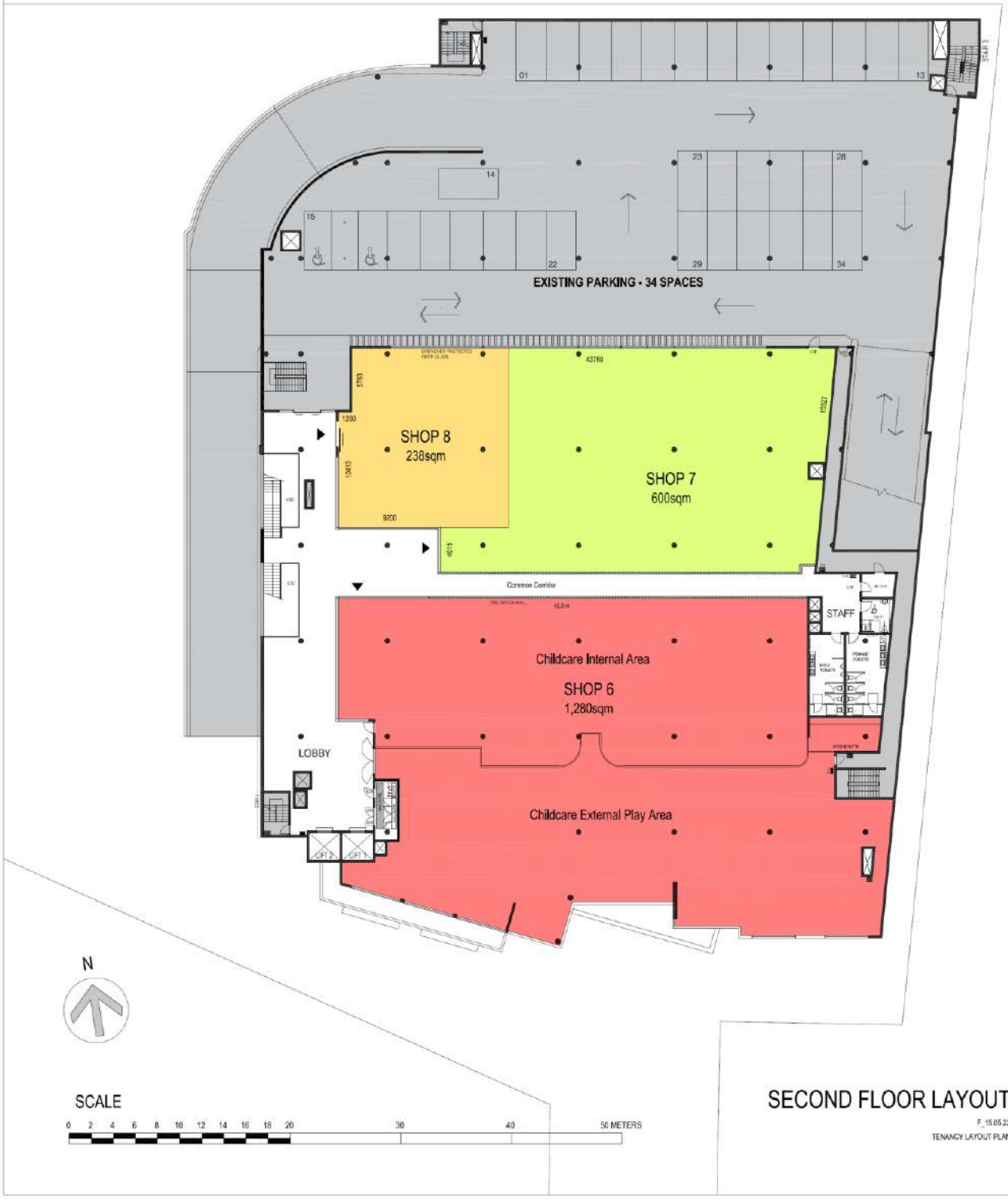
Off-street parking will be provided in the existing car parking areas on site in accordance with Council's *Georges River DCP 2021* and relevant Australian Standards requirements.

It is pertinent to note that the proposed parking allocation to the medical centre will *not* remove parking from "Shop 6" or any other approved tenancies, as detailed in Chapter 4 of this report.

No change is proposed to the geometric design layout of the proposed car parking areas, vehicular access or the proposed basement footprint, which are to be retained *unchanged*, consistent with existing development on site.

Concept plans of the planning proposal have been prepared by *Think Planners* and are reproduced in the following pages.

NOTE: AREAS AND LAYOUT (SHOP 7 & SHOP 8 BOUNDARIES) ARE INDICTIVE ONLY



3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by Transport for New South Wales (TfNSW) is illustrated on Figure 3.

Forest Road is classified by TfNSW as a *State Road* and provides the key east-west road link in the area, linking Peakhurst to Hurstville. It typically carries two traffic lanes in each direction in the vicinity of the site, with kerbside parking generally permitted outside of commuter peak periods.

Boundary Road is classified by TfNSW as a *Regional Road* and provides a key north-south road link in the area, linking Peakhurst to Oatley. It typically carries two traffic lanes in each direction in the vicinity of the site with additional lanes provided at key locations.

Roberts Avenue is a local, unclassified road which performs the function of an east-west *collector route* through the area. Kerbside parking is generally permitted on both sides of the road.

Existing Traffic Controls

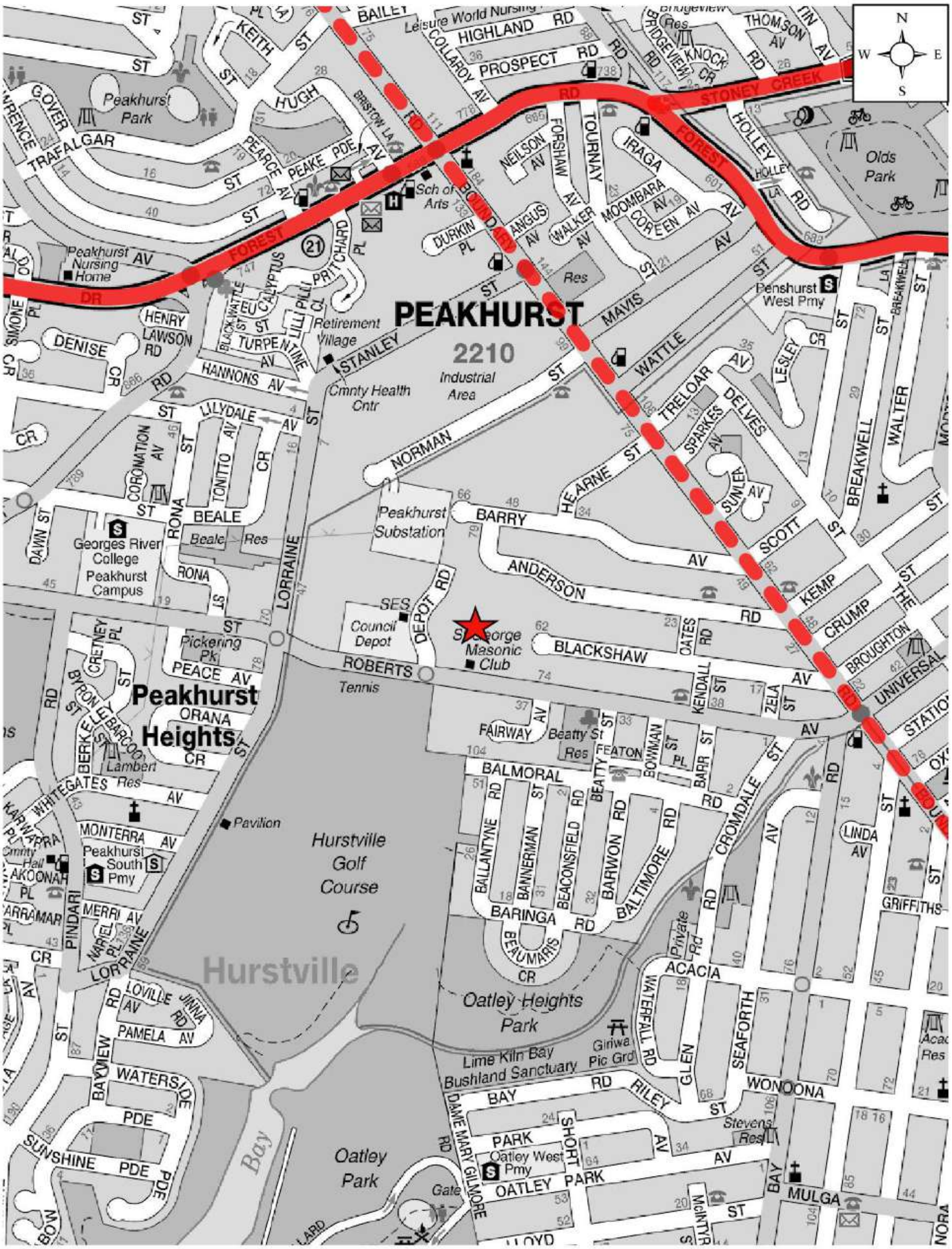
The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 50 km/h SPEED LIMIT which applies to Roberts Avenue and all other local roads in the area

- a ROUNDABOUT in Roberts Avenue where it intersects with Depot Road and also the subject site (No. 84D Roberts Road)

- GIVE WAY restrictions in Fairway Avenue where it intersects with Roberts Avenue

- a PEDESTRIAN REFUGE ISLAND located in Roberts Road, directly outside the site.


N
S
E
W
PEAKHURST
2210
Industrial Area
Peakhurst Heights
Hurstville
Hurstville Golf Course
Oatley Heights Park
Oatley Park
Olds Park
Peakhurst Park
Lime Kiln Bay Bushland Sanctuary
St George Masonic Club
Council Depot
SES
Peakhurst Substation
Georges River College Peakhurst Campus
Penshurst West Pmy
Peakhurst South Pmy
Oatley West Pmy
Retirement Village
Cmnty Health Cntr
Peakhurst Nursing Home
Leisure World Nursing
Sch of Arts
Pickering Pk
Tennis
Pavilion
Beale Res
Beatty St Res
Lambert Res
Stevens Res
Giriwa Pic Grd
FOREST RD
STONEY CREEK RD
FOREST DR
BOUNDARY RD
HIGHLAND RD
PROSPECT RD
STANLEY ST
NORMAN ST
MAVIS ST
WATTLE ST
BARRY AV
ANDERSON RD
BLACKSHAW AV
ROBERTS AV
DEPOT RD
LORRAINE ST
BEALE ST
RONA ST
PEACE AV
ORANA CR
FAIRWAY AV
BALMORAL RD
BARINGA RD
BEAUMARIS CR
ACACIA ST
BAY RD
PARK RD
OATLEY PARK AV
DAME MARY GILMORE RD
WATERFALL RD
CROMDALE ST
WONOONA PDE
MULGA RD
HEARNE ST
TRELOAR AV
DELVES ST
SCOTT ST
KEMP ST
CRUMP ST
BROUGHTON ST
UNIVERSAL ST
BREAKWELL ST
WALTER ST
HOLLEY RD
IRAGA AV
MOOMBARA AV
COREEN AV
TOURNAY AV
FORSHAW AV
NEILSON AV
ANGUS AV
WALKER AV
DURKIN PL
PRITCHARD PL
HANNONS AV
LILYDALE AV
DENISE CR
HENRY LAWSON RD
TRAFALGAR ST
HUGH ST
PEAKE PDE
PEARCE AV
WATERSIDE PDE
SUNSHINE PDE
BAYVIEW ST
PAMELA AV
MONTERRA AV
WHITEGATES AV

Key:

State Road

Regional Road

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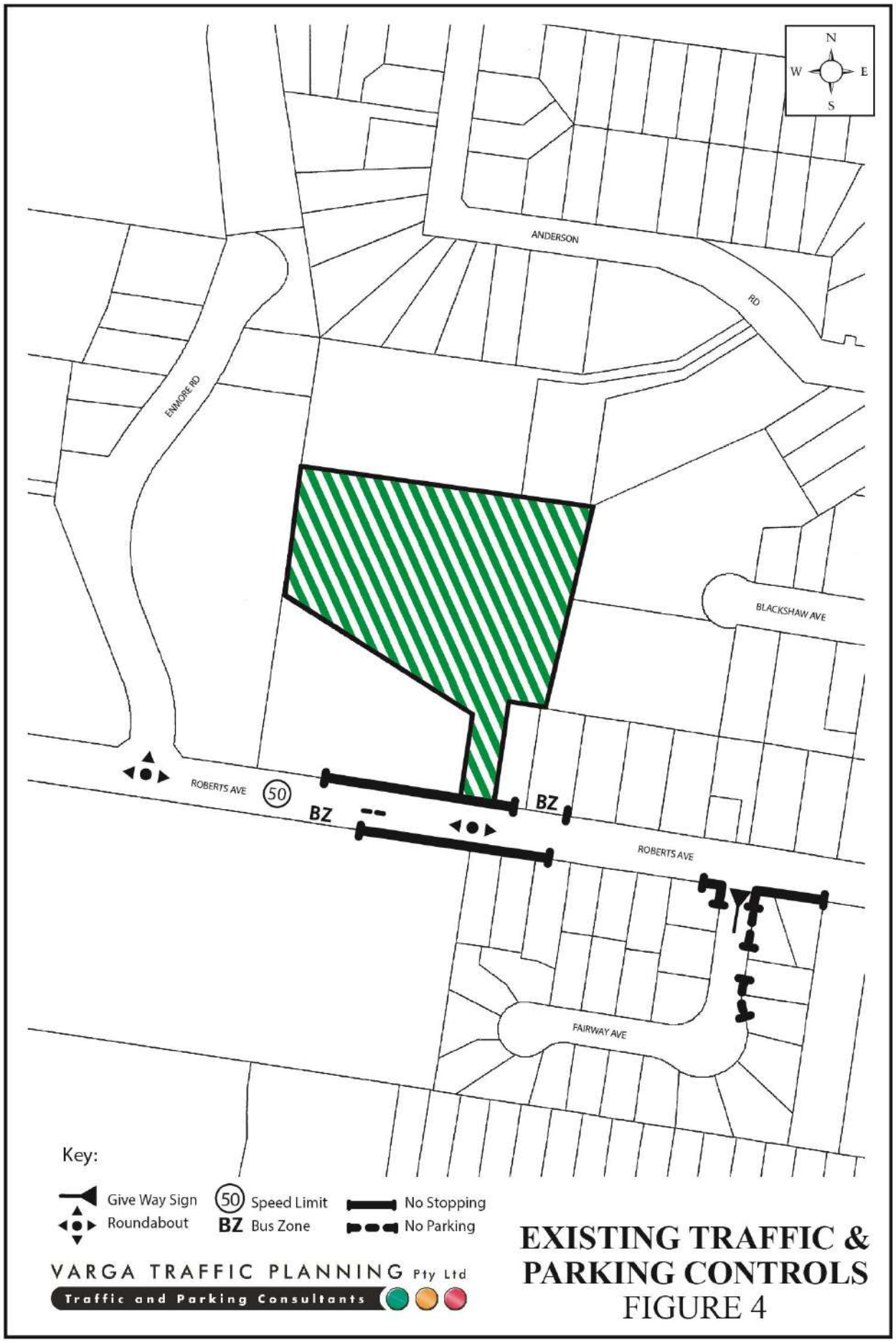
ROAD HIERARCHY

FIGURE 3


N
W
E
S
ANDERSON
RD
ENMORE RD
BLACKSHAW AVE
ROBERTS AVE
50
BZ
BZ
ROBERTS AVE
FAIRWAY AVE
Key:
Give Way Sign
Roundabout
50 Speed Limit
BZ Bus Zone
No Stopping
No Parking
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Traffic and Parking Consultants
EXISTING TRAFFIC & PARKING CONTROLS
FIGURE 4

Existing Traffic Conditions

In order to gain an accurate appreciation of the existing traffic conditions on the road network in the vicinity of the site, peak period traffic surveys were undertaken as part of this traffic study on Wednesday 14th February 2024, at the following intersections:

- Roberts Avenue & Lorraine Street & Isaac Street
- Roberts Avenue & Site Access Driveway
- Roberts Avenue & Boundary Road & Universal Street

It is noted that the morning and afternoon "network" peak periods for the above traffic surveys are different from each other. Therefore, the "network" peak periods of the Roberts Avenue / Boundary Road / Universal Street intersection, 7:30am – 8:30am for the AM peak period and 5:00pm-6:00pm for the PM peak period, have been adopted for the purposes of this assessment.

The results of the traffic surveys are reproduced in full in Appendix B, revealing that:

- two-way traffic flows in Roberts Avenue are typically in the order of 1,654-1,971 vehicles per hour (vph) in the AM and PM peak hours

- two-way traffic flows in Lorraine Street are typically in the order of 709-746 vph in the AM and PM peak hours

- two-way traffic flows in Boundary Road are typically in the order of 1,502-1,890 vph in the AM and PM peak hours

- the traffic generation potential of the existing site at Site Access Driveway was in the order of 298-692 vph in the AM and PM peak hours.

Projected Traffic Generation

The traffic implications of development proposals primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network.

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:

Extended hours medical centre
8.8 peak hour vehicle trips per 100m^2 GFA

Application of the above traffic generation rate to the 600m^2 GFA of medical centre as outlined in the planning proposal yields a traffic generation potential of approximately 53 vph during both the *morning* and *afternoon* commuter peak periods.

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the approved/existing retail uses within the subject tenancy, in order to determine the *nett increase (or decrease)* in traffic generation potential expected to occur as a consequence of the planning proposal.

The RMS *Guidelines* nominates the following traffic generation rate which is applicable to the *approved* retail/commercial uses within "Shop 6" of the existing development:

Commercial Premises
2.0 peak hour vehicle trips per 100m^2 GFA

Application of the above "commercial premises" traffic generation rate nominated in the RMS *Guidelines* to the "Shop 7" partial floor area of 600m^2 yields a traffic generation potential of approximately 12 peak hour vehicle trips.

Accordingly, it is likely that the planning proposal will result in a *nett increase* in the traffic generation potential the site of approximately 41 vph during the weekday AM and PM peak periods.

In practice however, the planning proposal is expected to generate *somewhat less* traffic than the above traffic generation rates would suggest, because as noted in the foregoing, the medical centre as outlined in the planning proposal is expected to cater largely for patients living nearby and of employees working nearby within the surrounding *E4 – General Industrial* zone, including within the Mortdale Plaza complex itself. This will invariably reduce the traffic generation potential when compared to other stand-alone medical centres as patients will undertake multi-purpose trips.

Furthermore, whilst doctor's appointments are generally booked at 15 min to 30 min intervals, it is noted that a considerable number of consultations are now occurring over the phone or internet. This has resulted in a reduction in the number of patients needing to visit medical centres, and consequently a reduction in traffic and parking demands.

However, for a more conservative assessment it has been assumed that the existing "Shop 7" is vacant, and that *all* of the projected future traffic flows of 53 vph during both the AM and PM commuter peak periods, will be new or *additional* to the existing traffic flows currently using the adjacent road network.

That projected "increase" in the traffic generation potential of the site as a consequence of the planning proposal is minimal, and will clearly 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 program which is widely used by the TfNSW and many LGA's for this purpose. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages.

Roberts Avenue / Lorraine Street / Isaac Street Intersection

- the intersection currently operates at *Level of Service "A"* under the existing traffic demands during the weekday AM peak hour with total average vehicle delays in the order of 11.7 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "A"* during the weekday AM peak hour, with increases in total average vehicle delays of ***less than*** 1 seconds/vehicle

- the intersection currently operates at *Level of Service "A"* under the existing traffic demands during the weekday PM peak hour with total average vehicle delays in the order of 7.6 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "A"* during the weekday PM peak hour, with increases in total average vehicle delays of ***less than*** 1 seconds/vehicle.

Roberts Avenue / Site Access Driveway Intersection

- the intersection currently operates at *Level of Service "A"* under the existing traffic demands during the weekday AM peak hour with total average vehicle delays in the order of 5.5 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "A"* during the weekday AM peak hour, with increases in total average vehicle delays of ***less than*** 1 seconds/vehicle

- the intersection currently operates at *Level of Service "A"* under the existing traffic demands during the weekday PM peak hour with total average vehicle delays in the order of 8.9 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "A"* during the weekday PM peak hour, with increases in total average vehicle delays of ***less than*** 2 seconds/vehicle.

Roberts Avenue / Boundary Road / Universal Street Intersection

- the intersection currently operates at *Level of Service "C"* under the existing traffic demands during the weekday AM peak hour with total average vehicle delays in the order of 31.5 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "C"* during the weekday AM peak hour, with increases in total average vehicle delays of ***less than*** 1 seconds/vehicle

- the intersection currently operates at *Level of Service "C"* under the existing traffic demands during the weekday PM peak hour with total average vehicle delays in the order of 39.4 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the intersection is expected to continue to operate at *Level of Service "C"* during the weekday PM peak hour, with increases in total average vehicle delays of ***less than*** 3 seconds/vehicle.

The results of the SIDRA analysis of the surrounding intersections are also summarised on the table reproduced on the following page.

SIDRA Modelling Results

Intersection	Key Indicators	Existing AM Traffic Demand	Projected AM Traffic Demand	Existing PM Traffic Demand	Projected PM Traffic Demand
Roberts Avenue & Lorraine Street & Isaac Street	LoS	A	A	A	A
	DoS	0.880	0.888	0.784	0.792
	Delay	11.7	12.1	7.6	7.8
Roberts Avenue & Site Access Driveway	LoS	A	A	A	A
	DoS	0.693	0.717	0.855	0.879
	Delay	5.5	5.7	8.9	10.2
Roberts Avenue & Boundary Road & Universal Street	LoS	C	C	C	C
	DoS	0.789	0.809	0.932	0.961
	Delay	31.5	32.3	39.4	41.6

LoS = Levels of Service
DoS = Degree of Saturation
Delay = Total average vehicle delay (seconds per vehicle)

The detailed SIDRA *movements summaries* are reproduced in full in Appendix C, with criteria for evaluating the results of the analysis reproduced in the following pages.

In essence, the SIDRA capacity analysis has found that all intersections in the vicinity of the site will continue to operate at current *Levels of Service*, with *negligible* increases in average vehicle delays and that no road improvements or intersection upgrades will be required as a consequence of the planning proposal.

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

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

- NO STOPPING restrictions along both sides of Roberts Avenue, in the vicinity of the roundabout and pedestrian refuge island, including along the site frontage

- generally UNRESTRICTED kerbside parking elsewhere in Roberts Avenue and throughout the local area

- BUS ZONES located at regular intervals along both sides of Roberts Avenue including immediately east of the site.

Off-Street Parking Provisions

The off-street parking requirements applicable to the proposed development proposal are specified in Council's *Georges River Development Control Plan 2021 (Amendment No.3), Chapter 3.13 –Parking Access and Transport* document in the following terms:

> **Table 1 – Parking Requirements**
> **Specific Commercial / Retail – Non-residential accommodation development outside the Hurstville and Kogarah Strategic Centres**
> Medical Centre: ≥800m walking distance of Railway station – 1 space per 30m^2 (GFA)

Application of the above parking requirements to the medical centre as outlined in the planning proposal yields an off-street parking requirement of 20 car parking spaces.

The above parking requirements are satisfied by the proposed provision of 20 car parking spaces within the existing off-street car parking areas on site, thereby satisfying Council's *GRDCP 2021* requirements.

Notwithstanding, if the development was assessed as an entirely new application, the total development on the site would require the provision of 345 parking spaces, as set out below:

Georges River DCP 2021 – PARKING REQUIREMENTS		
		REQUIRED
Parking Provisions	**Supermarket/Pharmacy (4,248m^2):**	212.4 spaces
	Café (23m^2):	0.8 spaces
	Ground Floor Sub-Total:	**213.2 spaces**
	Gymnasium (1,817m^2):	81.8 spaces
	First Floor Sub-Total:	**81.8 spaces**
	Retail (238m^2):	5.9 spaces
	Childcare Centre (94 children & 16 staff):	23.7 spaces
	Medical Centre (600m^2):	20.0 spaces
	Sub-Total:	**49.6 spaces**
	TOTAL:	**344.6 spaces**

As noted in the foregoing, the Mortdale Plaza development provides for a total of 422 cars within the existing building. The above assessment therefore confirms that there will be adequate parking provided on-site for the medical centre as outlined in the planning proposal and all other existing uses.

The geometric design layout of the car parking facilities has been designed and constructed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6* in respect of parking bay dimensions and aisle widths.

Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

- the planning proposal seeks approval to include a medical centre as an additional permitted use on the subject site, resulting in the potential for the fitout of the existing level 2 tenancy for a 600m^2 medical centre

- analysis based on the traffic generation rates published by TfNSW indicates that the proposed development will result in a *nett increase* in the traffic generation potential of the site of approximately 41 vph when compared with the previously approved uses on the site

- the SIDRA capacity analysis of the public road intersections in the vicinity of the site indicates that:

  - the projected "additional" traffic flows expected to be generated by the planning proposal (i.e. assuming that the site is currently vacant) indicates that there will be *no change* in current *Levels of Service* to any of the intersections located around the perimeter of the site, and

  - no road improvements or intersection upgrades would be required as a consequence of the planning proposal

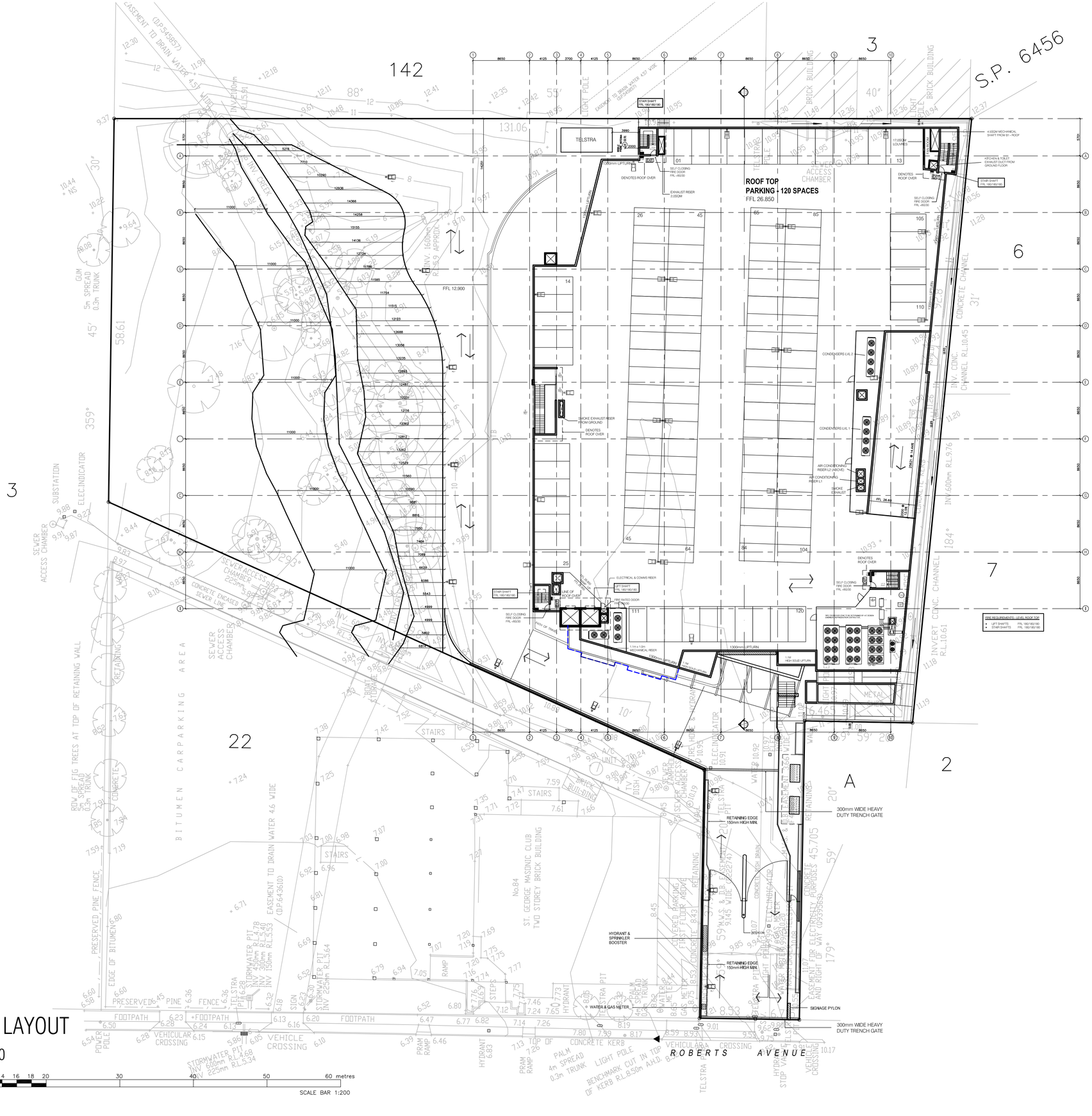
- the future car parking facilities will be provided in accordance with Council's requirements and the relevant Australian Standards

- the future vehicular access arrangements will be via the existing vehicular access driveway in Roberts Avenue with *no changes* proposed.

It is therefore reasonable to conclude that the planning proposal will not have any unacceptable implications in terms of road network capacity or off-street parking/access requirements.

APPENDIX A

PREVIOUSLY APPROVED ARCHITECTURAL PLANS (MOD2013/0014 & DA2020/0452)



SITE / ROOF LAYOUT

scale 1:300

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200

Project:	No. 84D ROBERTS AVE, MORTDALE.
Client:	- ROMANOUS
	- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS
Drawing Title :	SITE LAYOUT ROOF TOP LAYOUT
	CC APPLICATION
job no :	11/08
date :	01.08.14
revision :	X

REV :	REVISION COMMENTS :	DATE :
I	ISSUE FOR APPROVAL	05.09.12
T	ISSUE FOR APPROVAL	23.10.12
U	ISSUE FOR APPROVAL	21.02.13
V	ISSUE FOR APPROVAL	20.03.13
W	ISSUE FOR APPROVAL	03.05.13
X	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS, MAIPM Architect - Managing Director Registration 8140
P.O. BOX 158 ROSEMARY 1445
p) 02 9588 FLDC web: www.fldc.com.au
f) 02 9590 8592 email: info@fldc.com.au

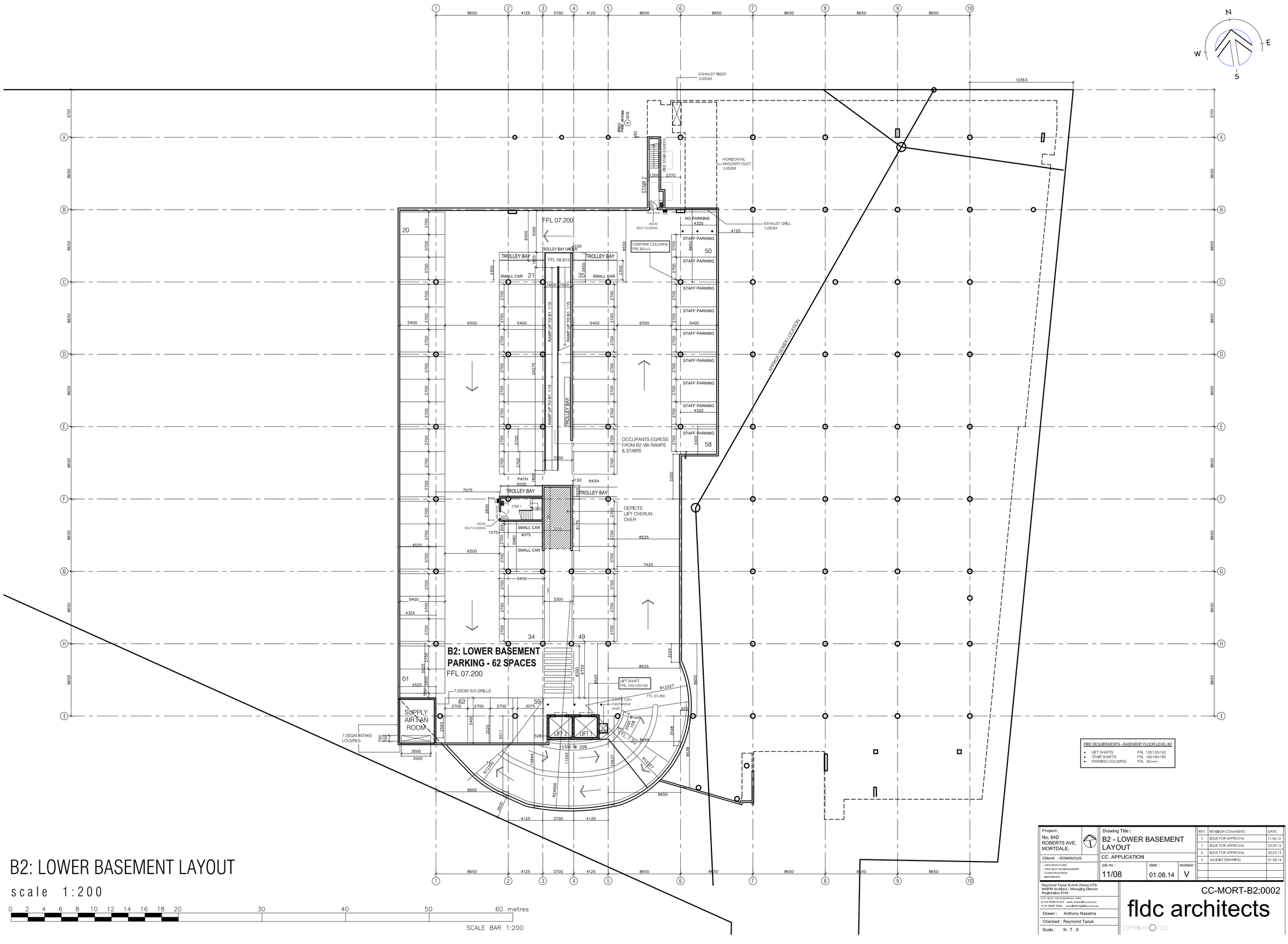
Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N.T.S

CC-MORT-ROOF:0007

fldc architects



FIRE REQUIREMENTS - BASEMENT FLOOR LEVEL B2

• LIFT SHAFTS	FRL 120/120/120
• STAIR SHAFTS	FRL 180/180/180
• PARKING COLUMNS	FRL 60/-/-

B2: LOWER BASEMENT LAYOUT

scale 1:200

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200

Project: No. 84D ROBERTS AVE, MORTDALE.		Drawing Title : B2 - LOWER BASEMENT LAYOUT		REV:	REVISION COMMENTS :	DATE :
				S	ISSUE FOR APPROVAL	11.06.12
Client: - ROMANOUS		CC APPLICATION		T	ISSUE FOR APPROVAL	05.09.12
- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS		job no : 11/08	date : 01.08.14	revision : V	U	ISSUE FOR APPROVAL	20.03.13
					V	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS, MAPM Architect - Managing Director Registration 8140
P.O. BOX 159 KOGARAH 1485
p) 02 9588 FLDC web) www.fldc.com.au
f) 02 9580 8592 email) info@fldc.com.au

Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N.T.S

CC-MORT-B2:0002

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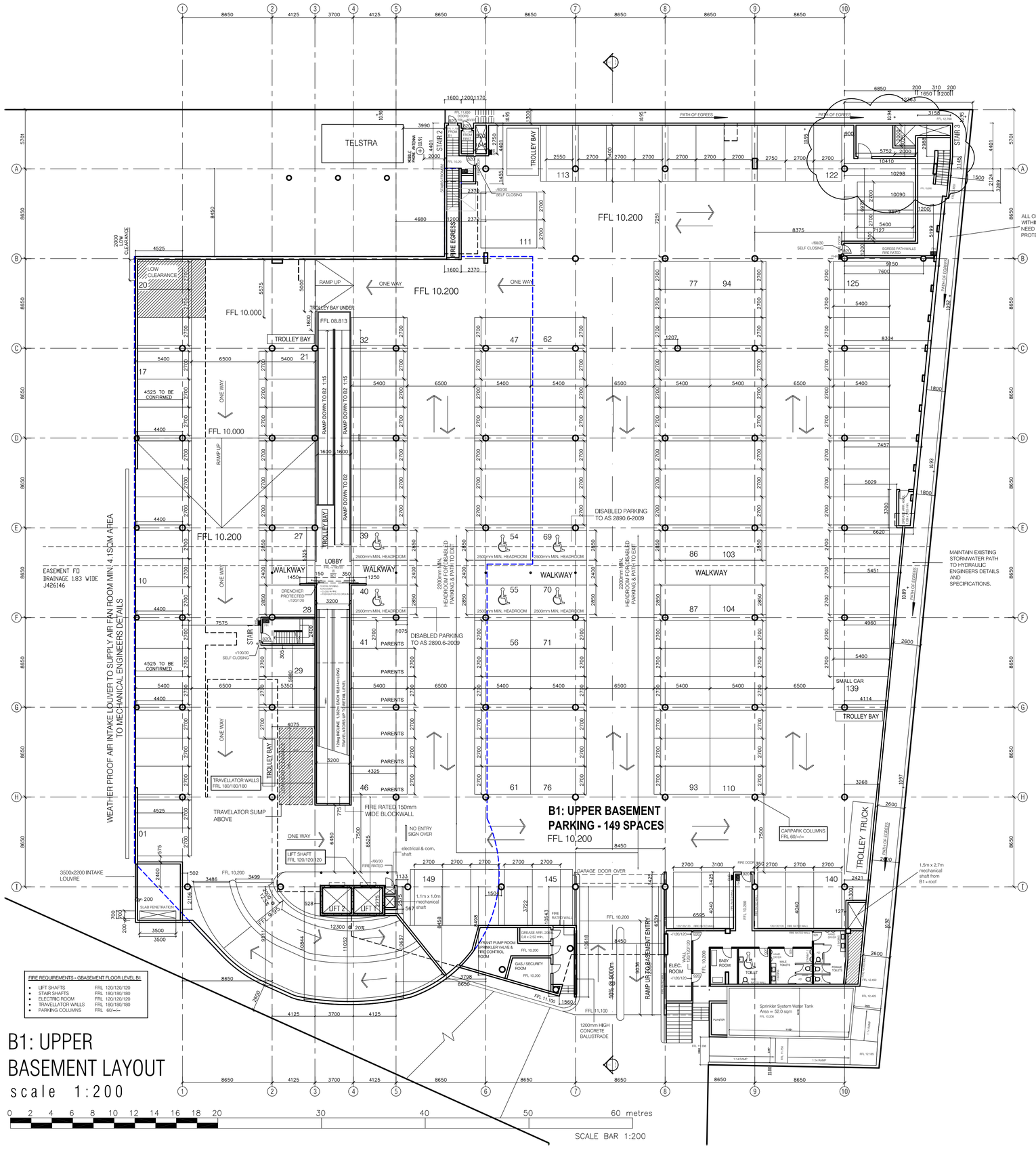


FIRE REQUIREMENTS - GBASEMENT FLOOR LEVEL B1

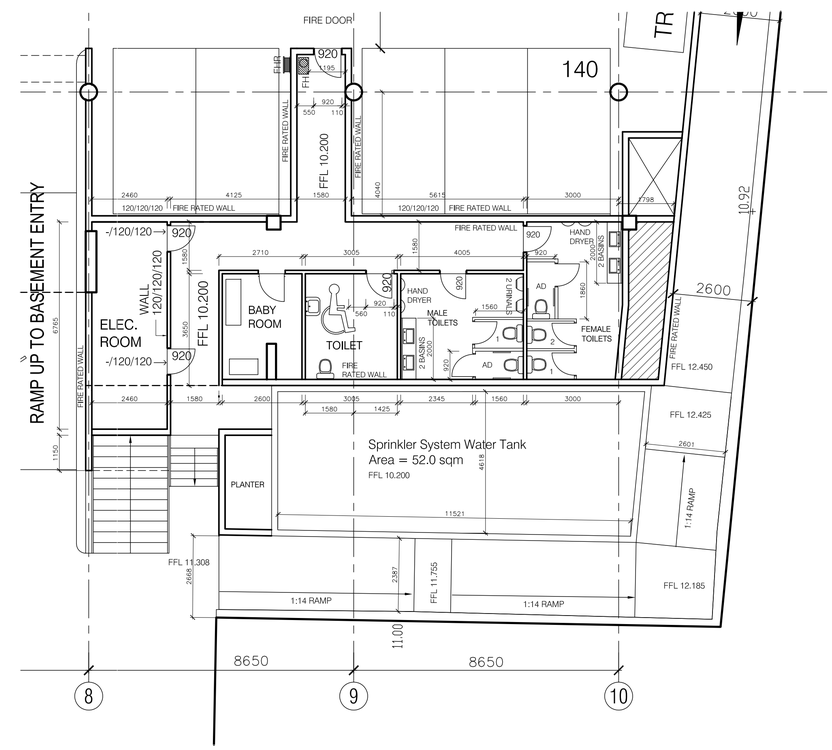
• LIFT SHAFTS	FRL 120/120/120
• STAIR SHAFTS	FRL 180/180/180
• ELECTRIC ROOM	FRL 120/120/120
• TRAVELLATOR WALLS	FRL 180/180/180
• PARKING COLUMNS	FRL 60/--/--

B1: UPPER BASEMENT LAYOUT

scale 1:200

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200



B1: TOILET LAYOUT

scale 1:100

Project:	Drawing Title:	REV	REVISION COMMENTS:	DATE:
No. 84D ROBERTS AVE, MORTDALE.	B1 - UPPER BASEMENT LAYOUT	S	ISSUE FOR APPROVAL	31.05.12
Client: - ROMANOUS GROUP	CC APPLICATION	T	ISSUE FOR APPROVAL	11.06.12
- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS	job no: 11/08 / date: 01.08.14 / revision: X	U	ISSUE FOR APPROVAL	05.09.12
		V	ISSUE FOR APPROVAL	23.10.12
		W	ISSUE FOR APPROVAL	20.03.13
		X	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS, MAIPM Architect - Managing Director Registration 8140
P.O. BOX 158 ROSEMARY 1445
p) 02 9588 FLDC web: www.fldc.com.au
f) 02 9580 8592 email: fmail@fldc.com.au

Drawn: Anthony Nassima

Checked: Raymond Taouk

Scale: N.T.S

CC-MORT-B1:0003

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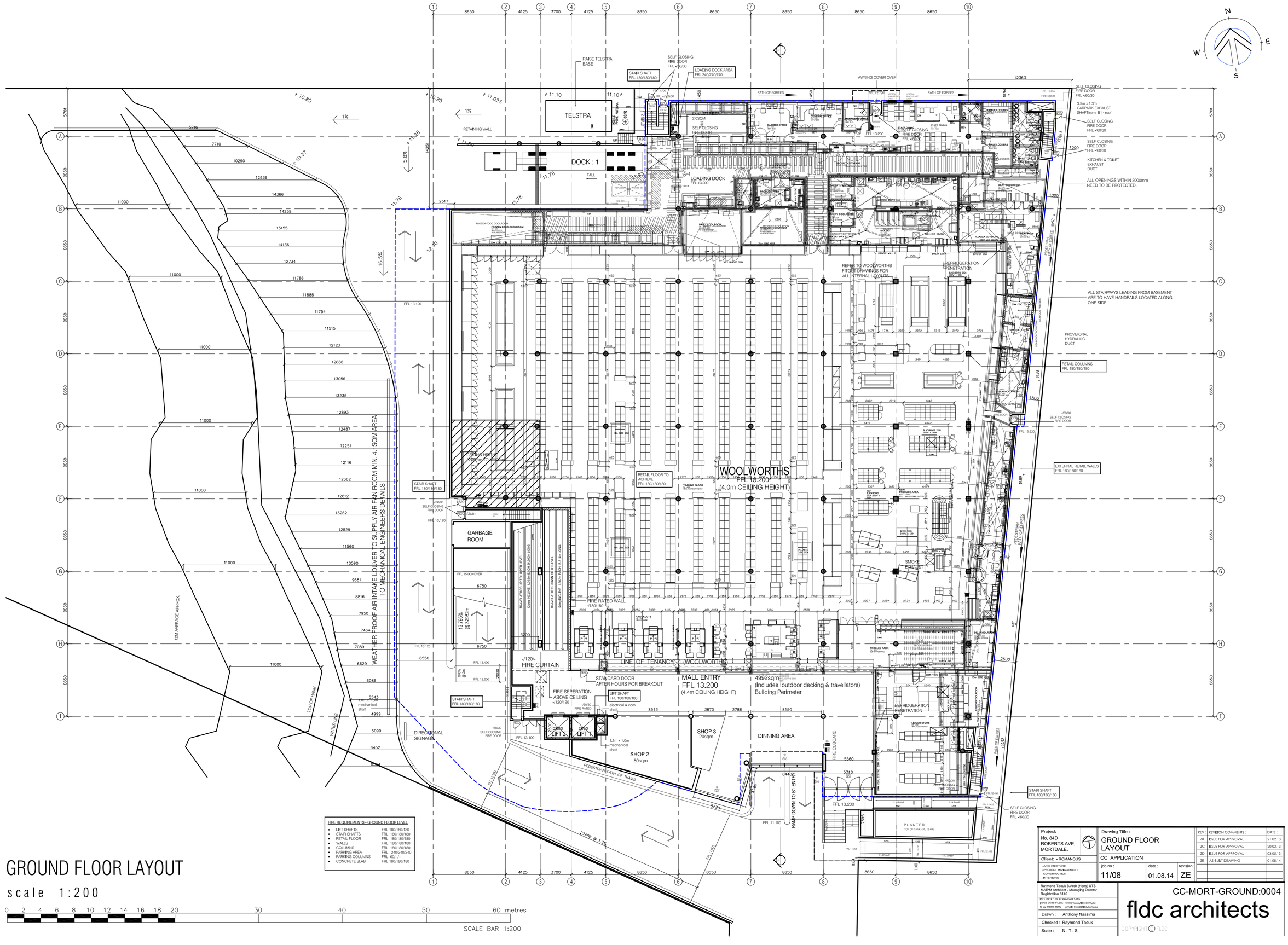

FIRE REQUIREMENTS - GROUND FLOOR LEVEL	
• LIFT SHAFTS	FRL 180/180/180
• STAIR SHAFTS	FRL 180/180/180
• RETAIL FLOOR	FRL 180/180/180
• WALLS	FRL 180/180/180
• COLUMNS	FRL 180/180/180
• PARKING AREA	FRL 240/240/240
• PARKING COLUMNS	FRL 60/--/--
• CONCRETE SLAB	FRL 180/180/180

GROUND FLOOR LAYOUT

scale 1:200

Project:
No. 84D
ROBERTS AVE,
MORTDALE.

Client: - ROMANOUS

- ARCHITECTURE
- PROJECT MANAGEMENT
- CONSTRUCTION
- INTERIORS

Drawing Title :
GROUND FLOOR LAYOUT

CC APPLICATION

job no : 11/08
date : 01.08.14
revision : ZE

REV :	REVISION COMMENTS :	DATE :
ZB	ISSUE FOR APPROVAL	21.02.13
ZC	ISSUE FOR APPROVAL	20.03.13
ZD	ISSUE FOR APPROVAL	03.05.13
ZE	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS,
MAIPM Architect - Managing Director
Registration 8140
P.O. BOX 159 KOGARAH 1485
p) 02 9588 FLDC web: www.fldc.com.au
f) 02 9580 8592 email: info@fldc.com.au

Drawn : Anthony Nassima
Checked : Raymond Taouk
Scale : N . T . S

CC-MORT-GROUND:0004

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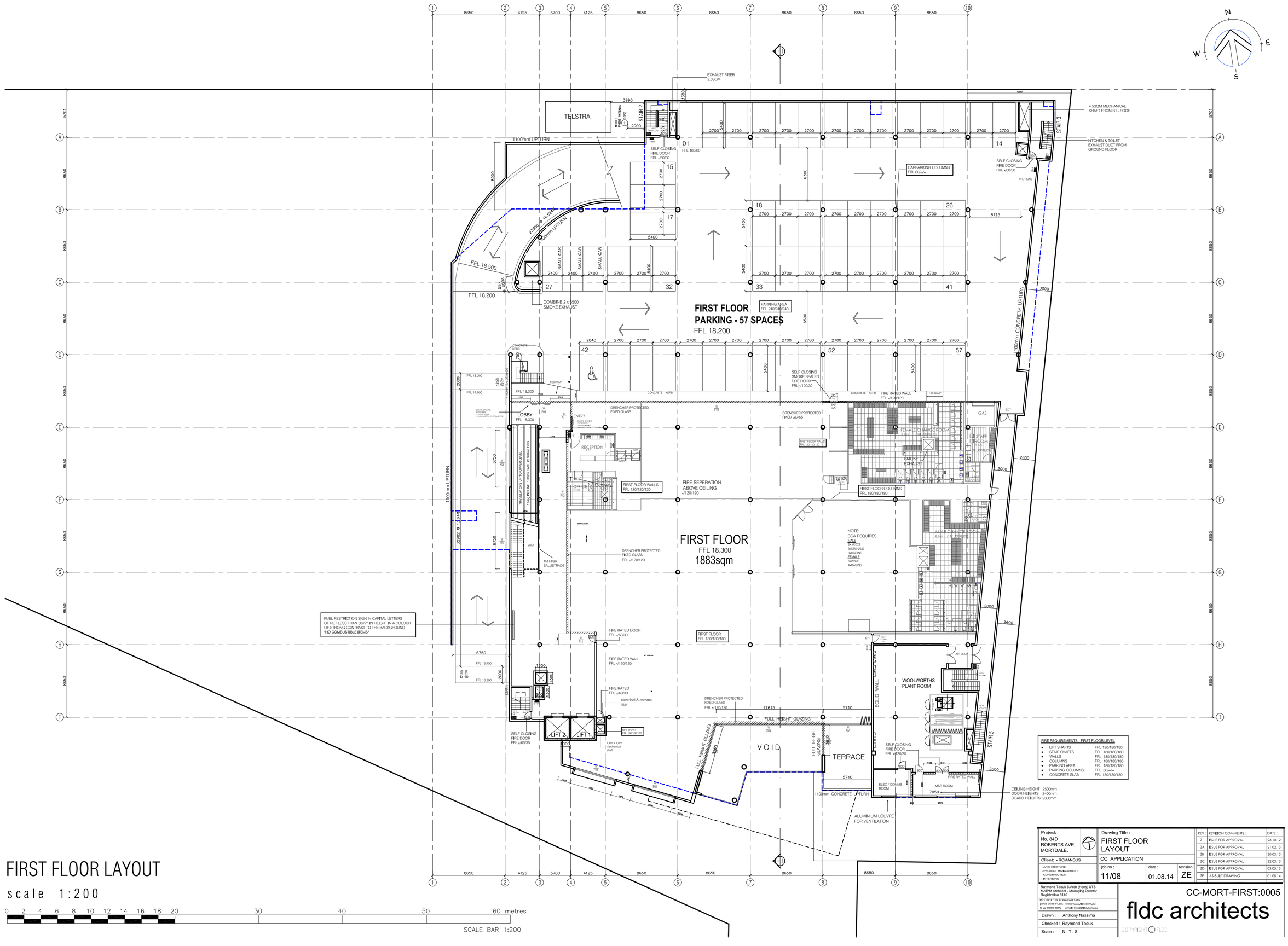

FIRST FLOOR LAYOUT

scale 1:200

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200

Project:	Drawing Title :	REV :	REVISION COMMENTS :	DATE :
No. 84D ROBERTS AVE, MORTDALE.	FIRST FLOOR LAYOUT	Z	ISSUE FOR APPROVAL	23.10.12
Client: - ROMANOUS	CC APPLICATION	ZA	ISSUE FOR APPROVAL	21.02.13
- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS	job no : 11/08 / date : 01.08.14 / revision : ZE	ZB	ISSUE FOR APPROVAL	20.03.13
		ZC	ISSUE FOR APPROVAL	22.03.13
		ZD	ISSUE FOR APPROVAL	03.05.13
		ZE	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS, MAPM Architect - Managing Director Registration 8140
P.O. BOX 159 ROSEMARY 1466
p) 02 9585 FLDC web: www.fldc.com.au
f) 02 9580 8592 email: info@fldc.com.au

Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N . T . S

CC-MORT-FIRST:0005

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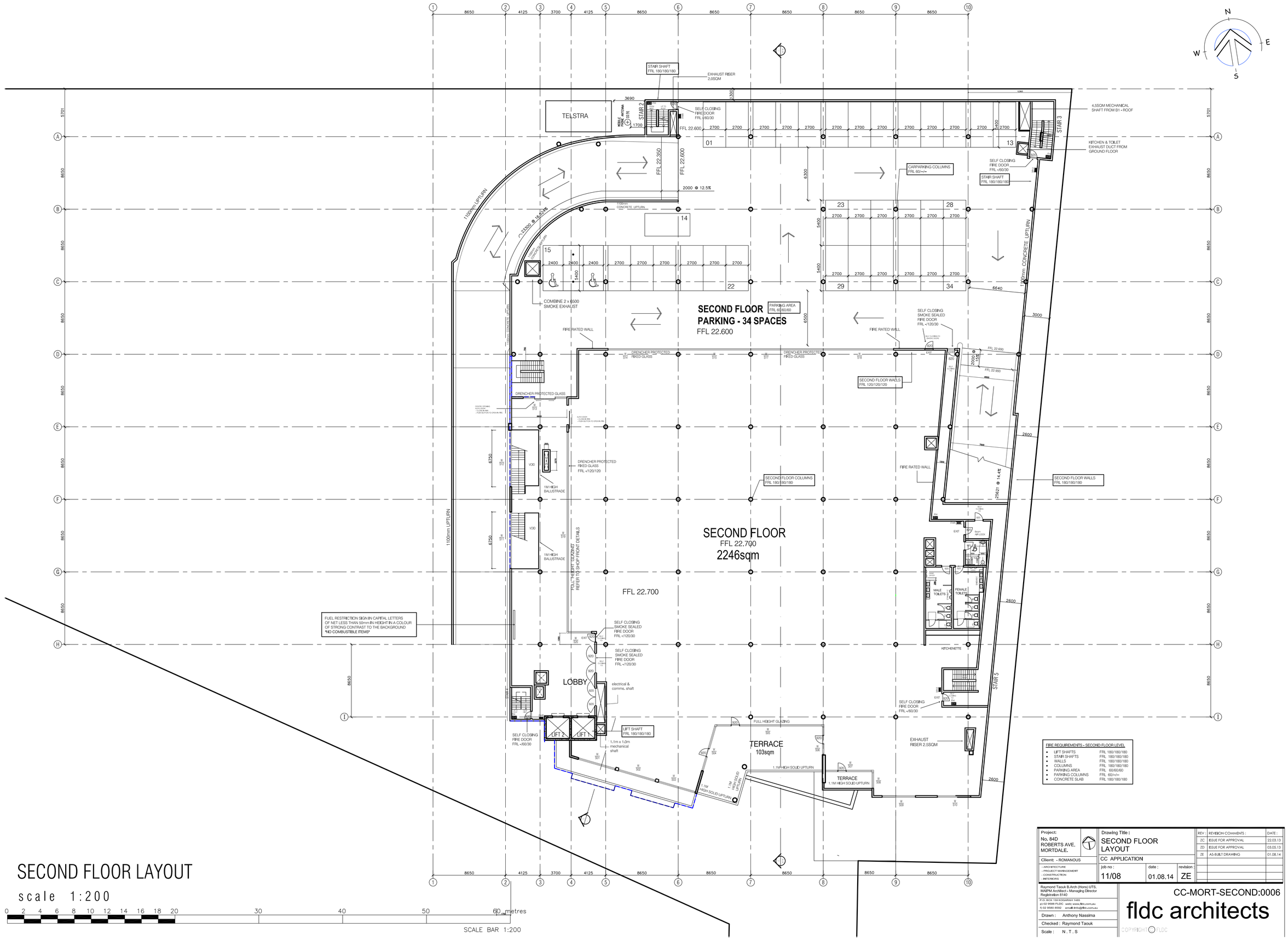

FIRE REQUIREMENTS - SECOND FLOOR LEVEL

• LIFT SHAFTS	FRL 180/180/180
• STAIR SHAFTS	FRL 180/180/180
• WALLS	FRL 180/180/180
• COLUMNS	FRL 180/180/180
• PARKING AREA	FRL 60/60/60
• PARKING COLUMNS	FRL 60/--/--
• CONCRETE SLAB	FRL 180/180/180

SECOND FLOOR LAYOUT

scale 1:200

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200

Project:
No. 84D
ROBERTS AVE,
MORTDALE.

Client: - ROMANOUS

- ARCHITECTURE
- PROJECT MANAGEMENT
- CONSTRUCTION
- INTERIORS

Drawing Title :
SECOND FLOOR
LAYOUT

CC APPLICATION

job no : 11/08 | date : 01.08.14 | revision : ZE

REV :	REVISION COMMENTS :	DATE :
ZC	ISSUE FOR APPROVAL	22.03.13
ZD	ISSUE FOR APPROVAL	03.05.13
ZE	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS,
MAIPM Architect - Managing Director
Registration 8140
P.O. BOX 139 KOGARAH 1485
p 02 9588 FLDC web: www.fldc.com.au
f 02 9580 8582 email: info@fldc.com.au

Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N , T , S

CC-MORT-SECOND:0006

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ROOF TOP LAYOUT

scale 1:200

0 2 4 6 8 10 12 14 16 18 20 30 40 50 60 metres

SCALE BAR 1:200

Project: No. 84D ROBERTS AVE, MORTDALE.	Drawing Title : ROOF TOP FLOOR LAYOUT
Client: - ROMANOUS	CC APPLICATION
- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS	job no : 11/08 · date : 01.08.14 · revision : X

REV.	REVISION COMMENTS :	DATE :
S	ISSUE FOR APPROVAL	05.09.12
T	ISSUE FOR APPROVAL	23.10.12
U	ISSUE FOR APPROVAL	21.02.13
V	ISSUE FOR APPROVAL	20.03.13
W	ISSUE FOR APPROVAL	03.05.13
X	AS-BUILT DRAWING	01.08.14

Raymond Taouk B.Arch (Hons) UTS, MAIPM Architect - Managing Director Registration 8140

P.O. BOX 130 ROSEHILL 1466
p) 02 9568 FLDC web: www.fldc.com.au
f) 02 9580 8592 email: info@fldc.com.au

Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N . T . S

CC-MORT-ROOF:0007

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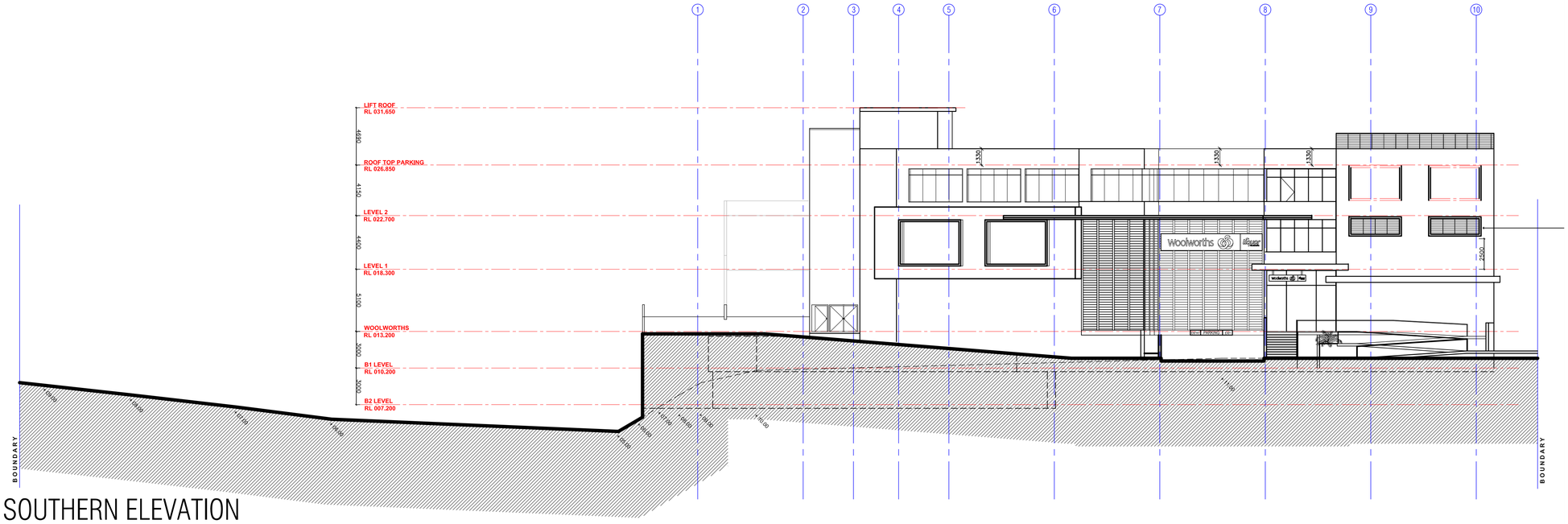
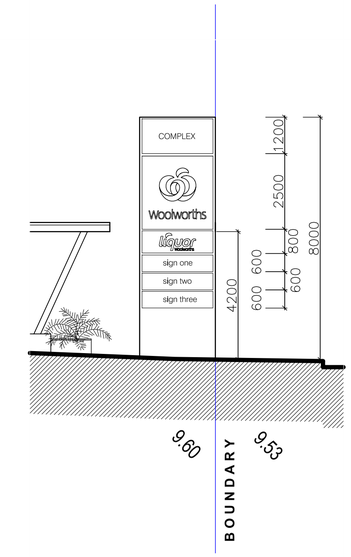


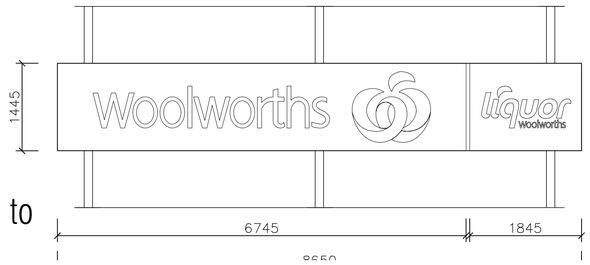
SOUTHERN ELEVATION

scale 1:200



FRONT AWNING ELEVATION

scale 1:100

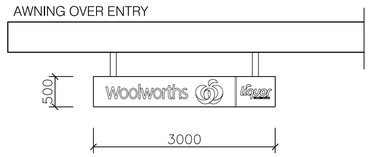


ENTRY SIGN DETAIL - Fixed to Vertical Louvre Supports

scale 1:50

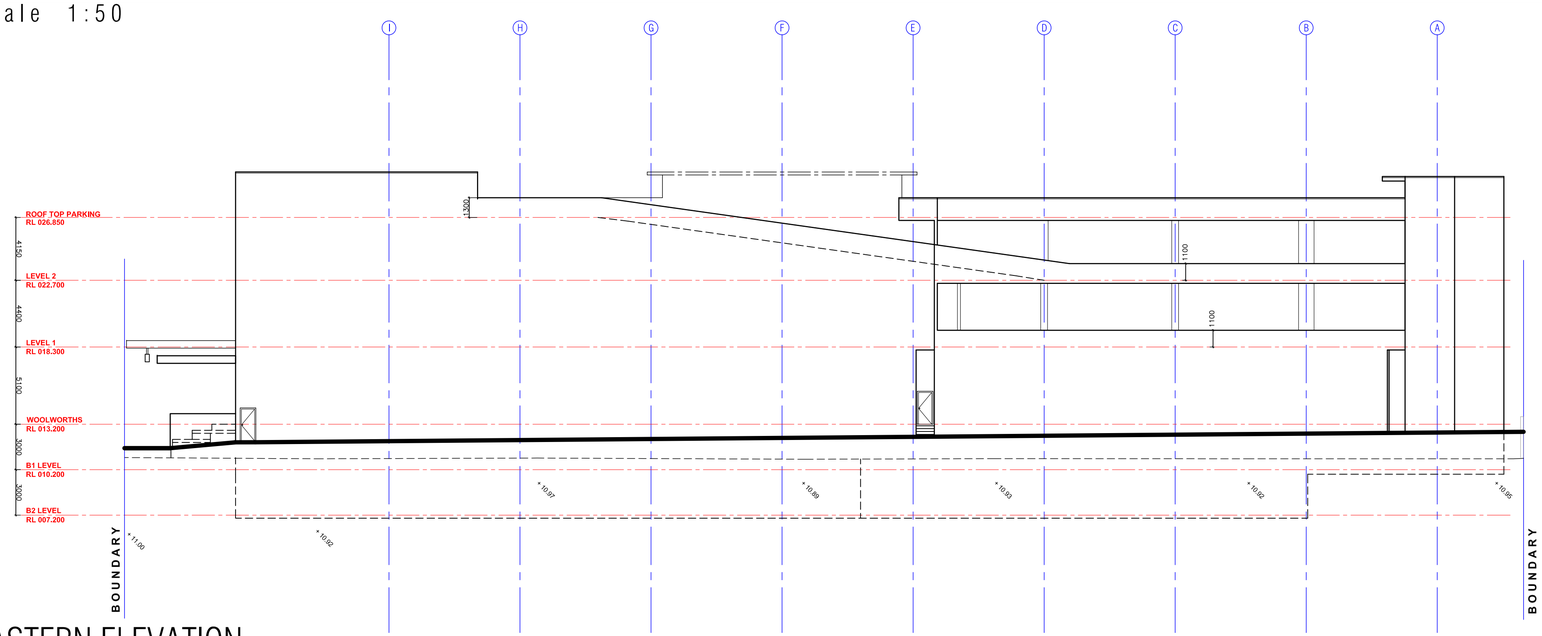
ENTRY PARKING SIGN DETAIL - Fixed to Awning

scale 1:50



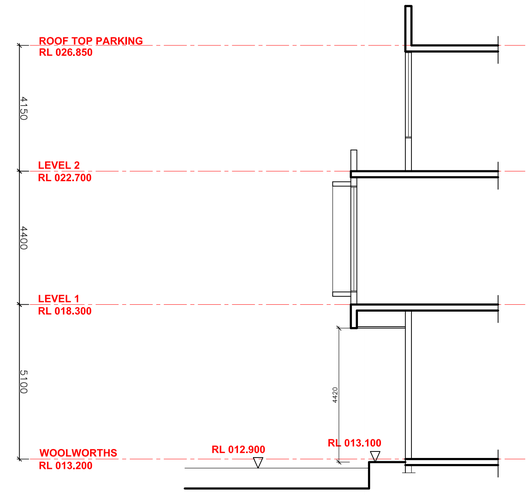
ENTRY SIGN DETAIL - Fixed to Awning

scale 1:50



EASTERN ELEVATION

scale 1:200



SECTION B - B

scale 1:100

Project:
No. 84D
ROBERTS AVE,
MORTDALE.

Client: - ROMANOUS

- ARCHITECTURE
- PROJECT MANAGEMENT
- CONSTRUCTION
- INTERIORS

Drawing Title :
SOUTHERN / EASTERN ELEVATIONS

CC APPLICATION

job no : 11/08
date : 03.05.13
revision : J

REV :	REVISION COMMENTS :	DATE :
H	ISSUE FOR APPROVAL	25.09.12
I	ISSUE FOR APPROVAL	08.04.13
J	ISSUE FOR APPROVAL	03.05.13

Raymond Taouk B.Arch (Hons) UTS,
MAIPM Architect - Managing Director
Registration 8140
P.O. BOX 150 KOGARAH 1485
p) 02 9588 FLDC web: www.fldc.com.au
f) 02 9588 8592 email: info@fldc.com.au

Drawn : Anthony Nassima
Checked : Raymond Taouk
Scale : N.T.S

CC-MORT-ROOF:008

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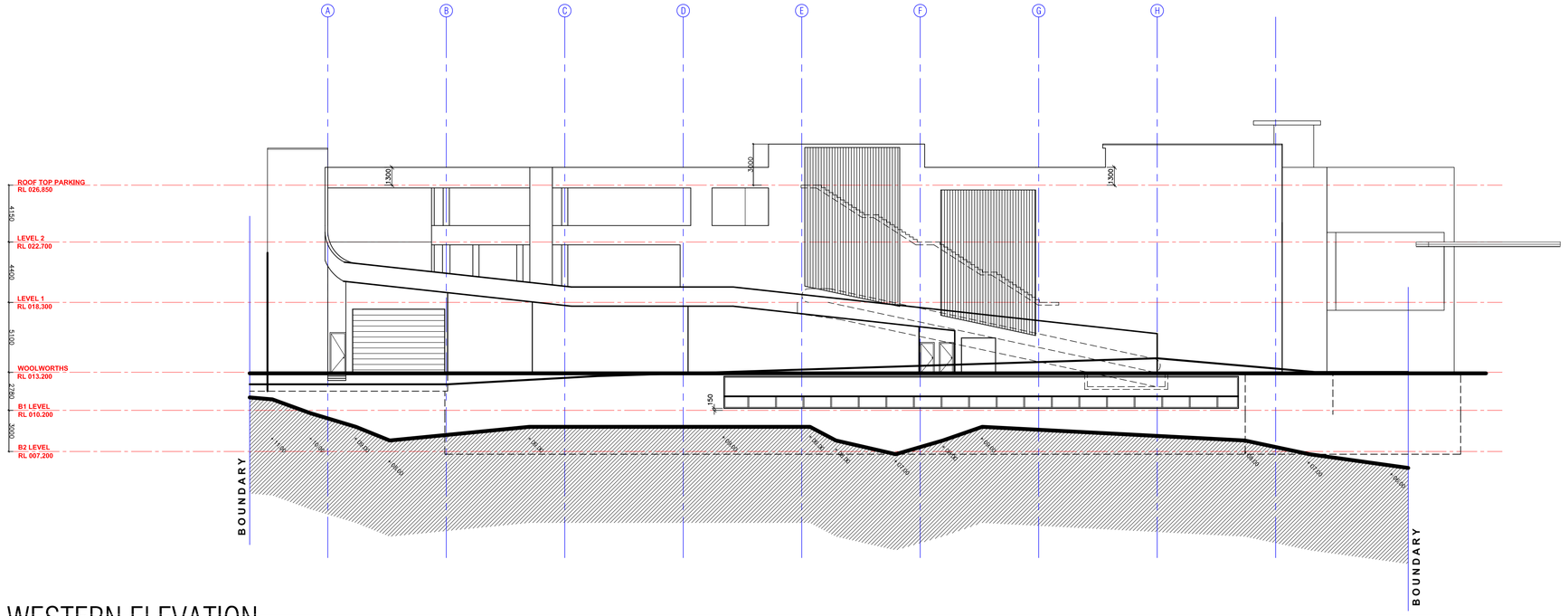
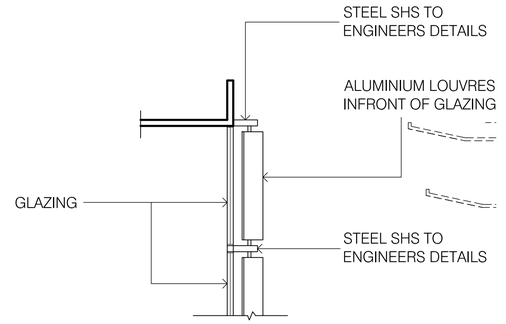


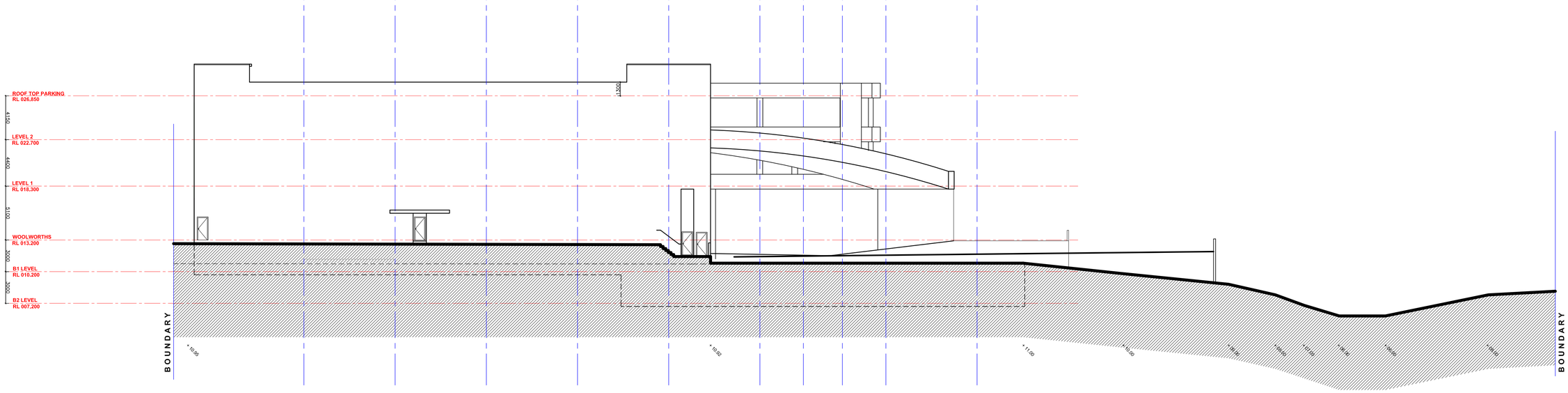
WESTERN ELEVATION

scale 1:200



TYPICAL WINDOW/LOUVRE DETAIL

scale 1:100



NORTHERN ELEVATION

scale 1:200

Project: No, 84D ROBERTS AVE, MORTDALE.	Drawing Title : NORTHERN / WESTERN ELEVATIONS			REV :	REVISION COMMENTS :	DATE :
Client: - ROMANOUS	CC APPLICATION			H	ISSUE FOR APPROVAL	25.09.12
- ARCHITECTURE - PROJECT MANAGEMENT - CONSTRUCTION - INTERIORS	job no : 11/08	date : 03.05.13	revision : J	I	ISSUE FOR APPROVAL	28.03.13
				J	ISSUE FOR APPROVAL	03.05.13

Raymond Taouk B.Arch (Hons) UTS,
MAIPM Architect - Managing Director
Registration 6140
P.O. BOX 159 KOGARAH 1485
p) 02 9588 FLDC web: www.fldc.com.au
f) 02 9585 8592 email: info@fldc.com.au

Drawn : Anthony Nassima

Checked : Raymond Taouk

Scale : N . T . S

CC-MORT-ROOF:009

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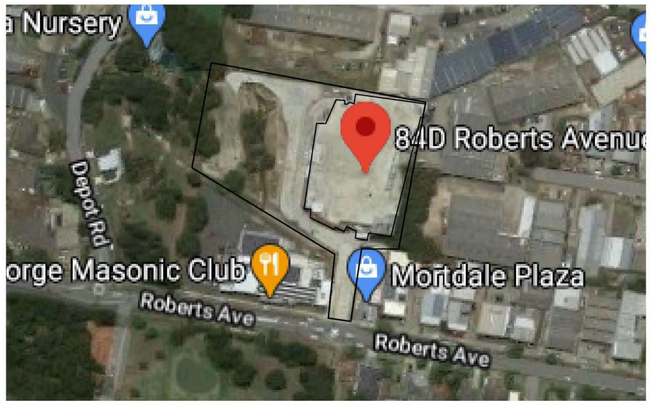


1 LOCALITY PLAN

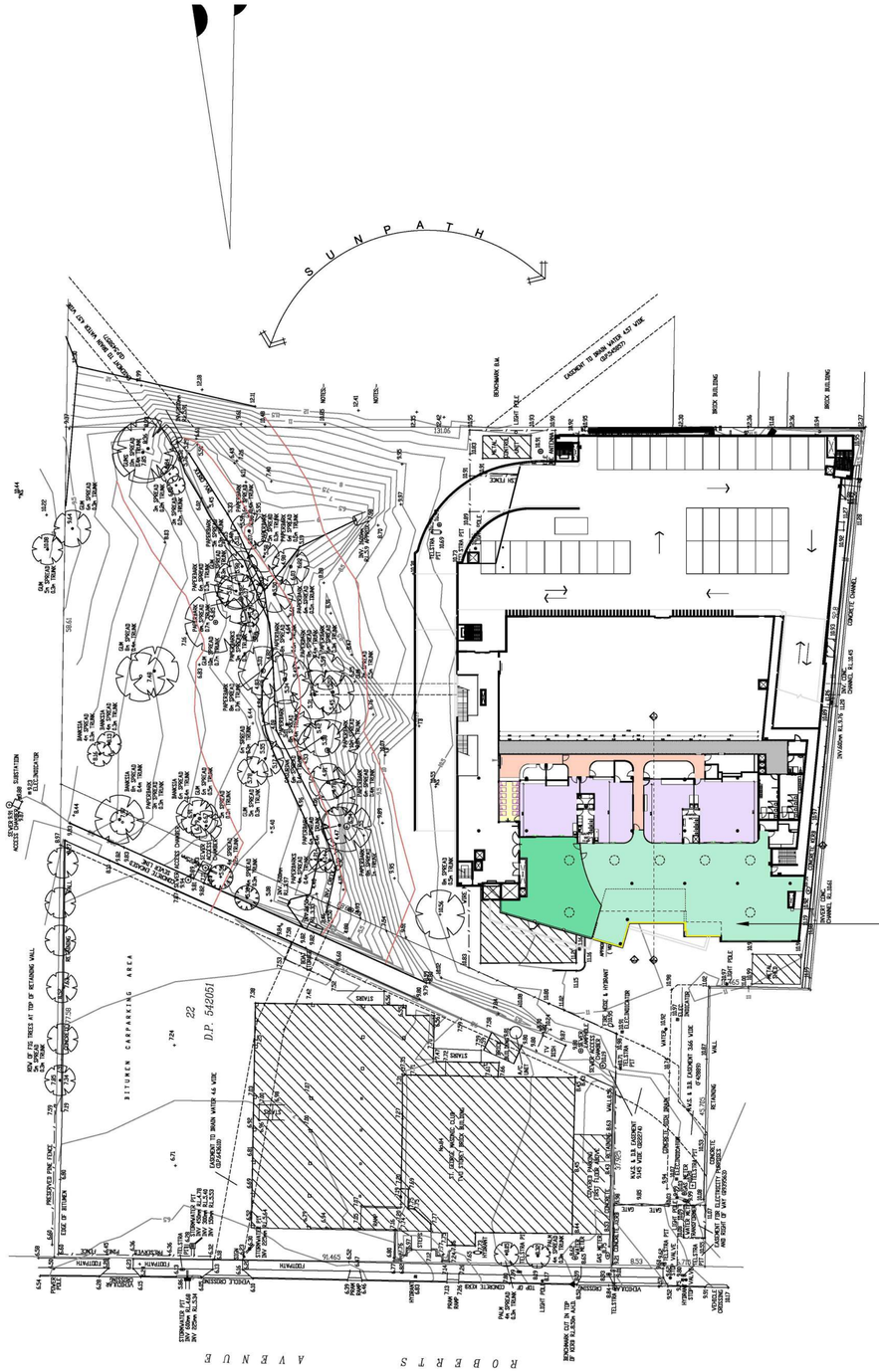
SHEET LIST

UNENCUMBERED AREA CALCULATIONS

LEVEL 2	PLACES	REQ AREA	ACTUAL AREA	STAFF REQ
0-2 YRS ROOM 1	24	78 M2	80.5 M2	5 at 1:4 ratio
2-3 YRS ROOM 2	20	65 M2	66.1 M2	4 at 1:5 ratio
3-4 YRS ROOM 3	20	65 M2	65.2 M2	2 at 1:10 ratio
4-6 YRS ROOM 4	30	97.5 M2	98.2 M2	3 at 1:10 ratio
TOTAL	94	305.5M2	310M2	15

OUTDOOR PLAY AREA CALCULATIONS

TOTAL	94	658M2	658.8M2



1 SITE PLAN
SCALE 1:500,000

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	A	06/08/2020	-
DEVELOPMENT APPLICATION	B	05/11/2020	
DEVELOPMENT APPLICATION	C	01/06/2021	
DEVELOPMENT APPLICATION	D	23/07/2021	

NOTES . THIS DRAWING IS NOT FOR CONSTRUCTION
- ALL BUILDING WORK TO COMPLY WITH BCA AND SAA CODES AND RELEVANT AUTHORITIES REQUIREMENTS.
- ALL STEEL, CONCRETE AND TIMBER WORK TO BE IN ACCORDANCE WITH STRUCTURAL ENGINEERS SPECIFICATIONS AND RELEVANT SAA CODES. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER.
- ALL DIMENSIONS TO BE CONFIRMED ON SITE. CONTACT THE ARCHITECT IF ANY DOUBT OR DISCREPANCY ARISES.
- READ FIGURED DIMENSIONS IN PREFERENCE TO SCALING.
-

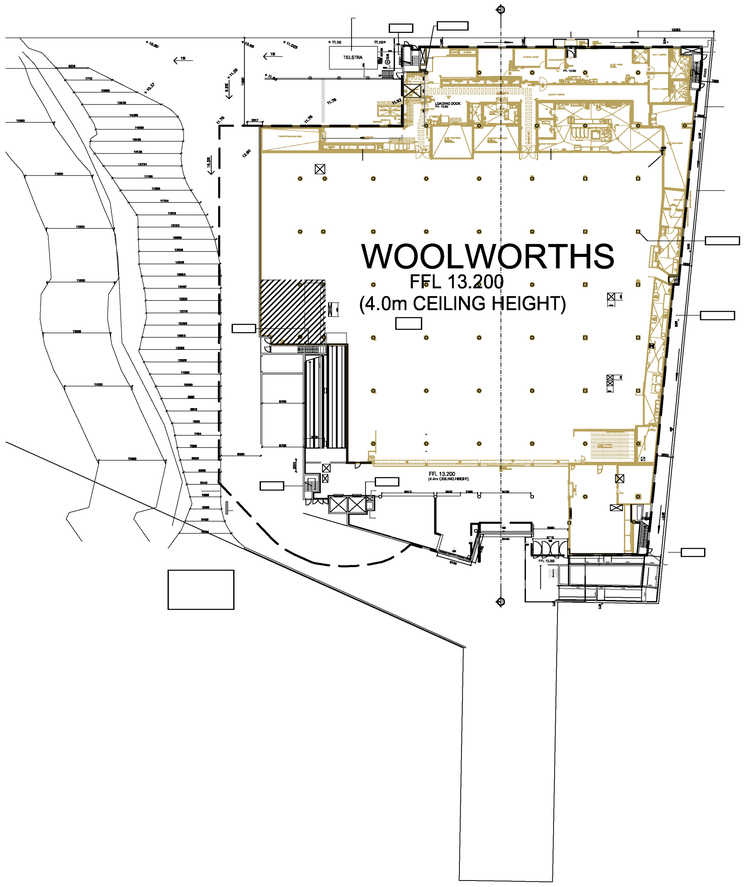
PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

SITE PLAN/COVER PAGE

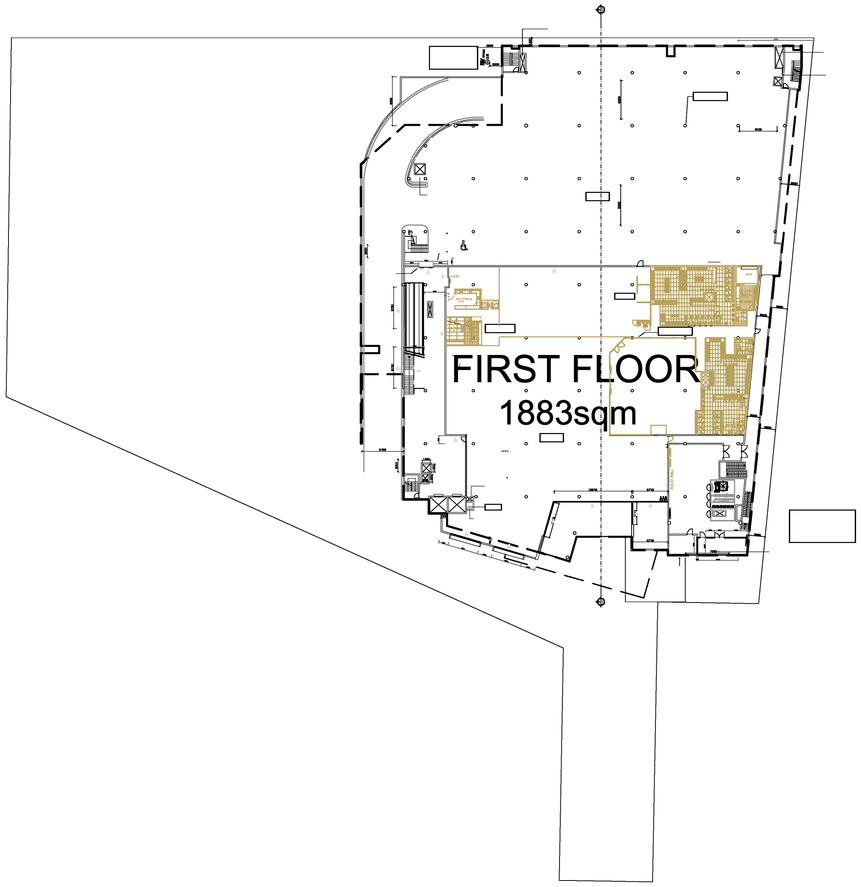
LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski 4224
PH 02 9212 3266, E info@liskowski.com.au

TRUE NORTH:

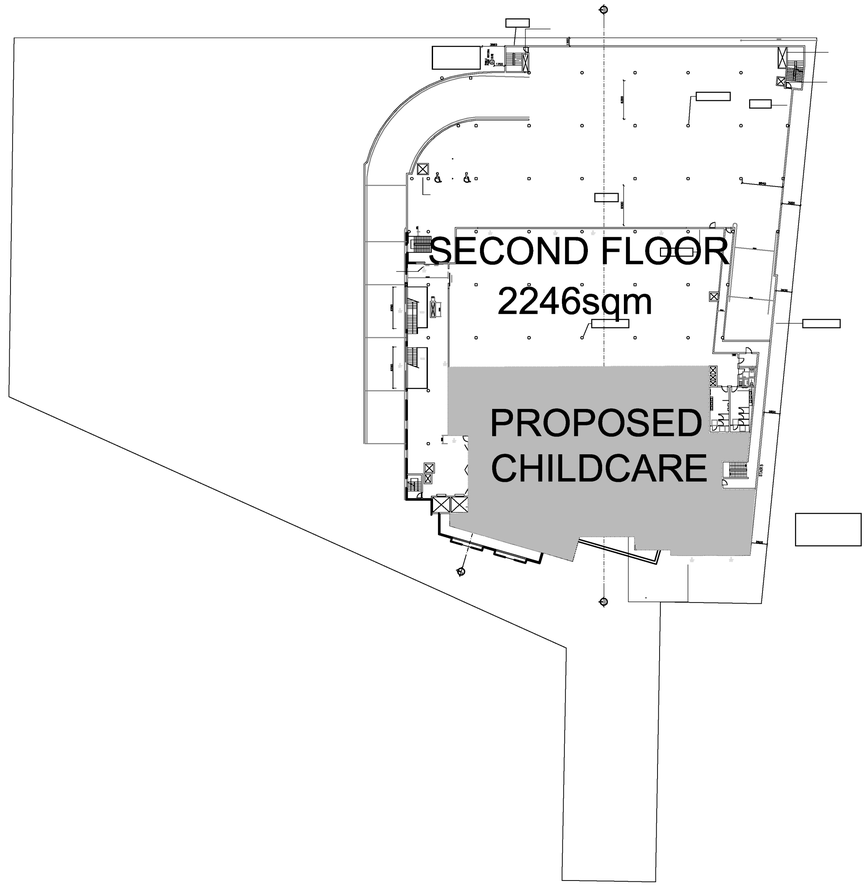
SCALE: AS SHOWN
DATE: 23 JULY 2021
DWG NO: 200303 DA 00 D



1 TENANCY USE - GROUND FLOOR
SCALE 1:500,000



2 TENANCY USE - FIRST FLOOR
SCALE 1:500,000



3 TENANCY USE - SECOND FLOOR
SCALE 1:500,000

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	A	05/11/2020	-

NOTES . THIS DRAWING IS NOT FOR CONSTRUCTION

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- READ FIGURED DIMENSIONS IN PREFERENCE TO SCALING.
-

PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

TENANCY USE PLANS

LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski: 4224
PH: 02 9212 3266, E: info@lliskowski.com.au

TRUE NORTH:

SCALE: AS SHOWN
DATE: 05 NOV 2020
DWG NO: 200303 DA 08 A

EXISTING TENANCY

DA 01
DA 07

COMMON CORRIDOR

LOBBY

CENTRE ENTRANCE

EXISTING GLAZING TO BE ALTERED TO NEW AUTO SLIDING DOOR ENTRANCE

SAFETY GATE

RECEPTION

MANAGERS OFFICE

STORE

SIGN IN

PIGEON HOLES

COT ROOM

1800 HIGH TRANSLUCENT WINDOWS REFER TO SHOP FRONT ELEVATION

EXISTING DOOR TO BE REMOVED & REPLACED WITH FIXED TRANSLUCENT GLAZING

EXISTING DOORS TO REMAIN CLOSED, FIRE EGRESS ONLY

PARENTS MEETING ROOM

STORE ROOM

BTL PREP

F/ MW

D/W

NAPPY WC 14.4M²

CRAFT

ROOM 1
0-2 INDOOR PLAY
UNENCUMBERED AREA 80.5m2
24 CHILDREN
REQUIRED AREA 78.0m²

ROOM 2
2-3 INDOOR PLAY
UNENCUMBERED AREA 66.1m2
20 CHILDREN
REQUIRED AREA 65m²

CHILDREN DINING ROOM

TEMPORARY WASTE STORAGE

STAFF ROOM 21M2

STAFF LOCKER

KITCHENETTE

ROOM 3
3-4 INDOOR PLAY
UNENCUMBERED AREA 65.2m2
20 CHILDREN
REQUIRED AREA 65.0m²

ROOM 4
5-6 INDOOR PLAY
UNENCUMBERED AREA 98.2m2
30 CHILDREN
REQUIRED AREA 97.5m²

SHARED WC

ACCESS TO COMMON WC

common

FH

FHR

EXIT

AIR LOCK

TOILET

MALE TOILETS

FEMALE TOILETS

WASTE STORAGE LOCATION

L'DRY

store

KITCHEN 20m2

LAMINATED BENCHTOPS

SPACE FOR LARGE FRIDGE/FREEZER

WALLS TO DETAIL FOR PEST CONTROL

SAFE HAVEN

STORE

MECHANICAL VENTILATION THROUGH ROOF TO MECHANICAL ENG. DETAILS

COOK TOP WITH OVEN UNDER AND RANGE HOOD ABOVE AS REQUIRED BY BCA TO AS1668.1 & AS1688.2

CONCRETE BASE UNDER CABINETS FOR PEST CONTROL

SPACE FOR MICROWAVE UNDER OR ON BENCH

CONCRETE BASE UNDER CABINETS FOR PEST CONTROL

OPEN SELVES ABOVE 25MM OFF WALL

DOUBLE BASIN

APPROXIMATE POSITION OF CEILING FANS

LINE OF PLAY SPACE PARTITION FENCE AND GATE

0-2 OUTDOOR PLAY
UNENCUMBERED AREA 168.3m2
24 CHILDREN
REQUIRED AREA 168m²

2-6 OUTDOOR PLAY
UNENCUMBERED AREA 490.5m2
70 CHILDREN
REQUIRED AREA 490.0m²

LINE EXISTING GLAZING TO BE REMOVED

HATCHED AREA DENOTES AREA OPEN TO THE SKY

LINE OF ROOF OVER

LINE OF ROOF OVER & EXTENT OF EXISTING GLAZING TO BE REMOVED

REFER TO LANDSCAPE ARCHITECTURE PLANS FOR ALL OUTDOOR PLAYSPACE

REFER TO LANDSCAPE ARCHITECTURE PLANS FOR ALL OUTDOOR PLAYSPACE

DEMOLISH EXISTING MASONRY WALL

DEMOLISH EXITING MASONRY WALL

REMOVE EXISTING GLAZING & FIX 900MM GLAZED BALUSTRADE TO THE EXISTING 1M CONCRETE UPTURN TO PROVIDE NATURAL VENTILATION & MEET THE REQUIRED 1800 MM HIGH ACOUSTIC SAFETY BARRIER ALONG THE PERIMETER OF OUTDOOR PLAY AREA AS PER ACOUSTIC REPORT

STAIR 4

LIFT 2

LIFT 1

sliding door

LEGEND

- INDOOR UNENCUMBERED PLAY
- OUTDOOR UNENCUMBERED PLAY
- COMMON AREA
- WALL/WINDOW TO BE DEMOLISHED
- EXISTING MASONRY WALL
- FLOOR AREA OPEN TO THE SKY

WALL LEGEND

- W1 13MM PLASTERBOARD LINED 76MM GALVANISED STEEL STUD TO 1000MM GLAZED ABOVE TO U/S CEILING. PAINTED BOTH SIDES
- W2 FULL 76MM GALVANISED STEEL STUD PARTITION WALLS. PAINTED PLASTERBOARD WALL TO UNDERSIDE OF CEILING
- W3 FULL GLAZED WALL TO U/S CEILING TO MANUFACTURER SPECIFICATION. POWDER COATED ALUMINIUM FRAME AND COLOUR TO SELECT.
- W4 MASONRY BLOCK WALL-NOM 200MM THICK
- W5 EXISTING EXTERNAL WALL NOM, 1M HIGH UPTURN WITH 900MM GLAZING FIXED WITH SPIGGOTS, TO ACOUSTIC ENGINEERS REQUIREMENTS WITH A MINIMUM HEIGHT OF 1800MM
- W6 EXISTING EXTERNAL WALL WITH 1M HIGH UPTURN & GLAZING TO UNDERSIDE OF CEILING GLAZING

CEILING FANS FIXED TO CEILING IN OUTDOOR PLAY

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

1/01 LEVEL 2 FLOOR PLAN
1:100

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	A	22/06/20	-
DEVELOPMENT APPLICATION	B	28/07/20	-
DEVELOPMENT APPLICATION	C	06/08/20	-
DEVELOPMENT APPLICATION	D	05/11/20	-
DEVELOPMENT APPLICATION	E	01/06/21	-
DEVELOPMENT APPLICATION	F	23/07/21	

DRAWING NOT FOR CONSTRUCTION

NOTES . THIS DRAWING IS NOT FOR CONSTRUCTION
- ALL BUILDING WORK TO COMPLY WITH BCA AND SAA CODES AND RELEVANT AUTHORITIES REQUIREMENTS.
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- READ FIGURED DIMENSIONS IN PREFERENCE TO SCALING.

PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

GENERAL ARRANGEMENT PLANS

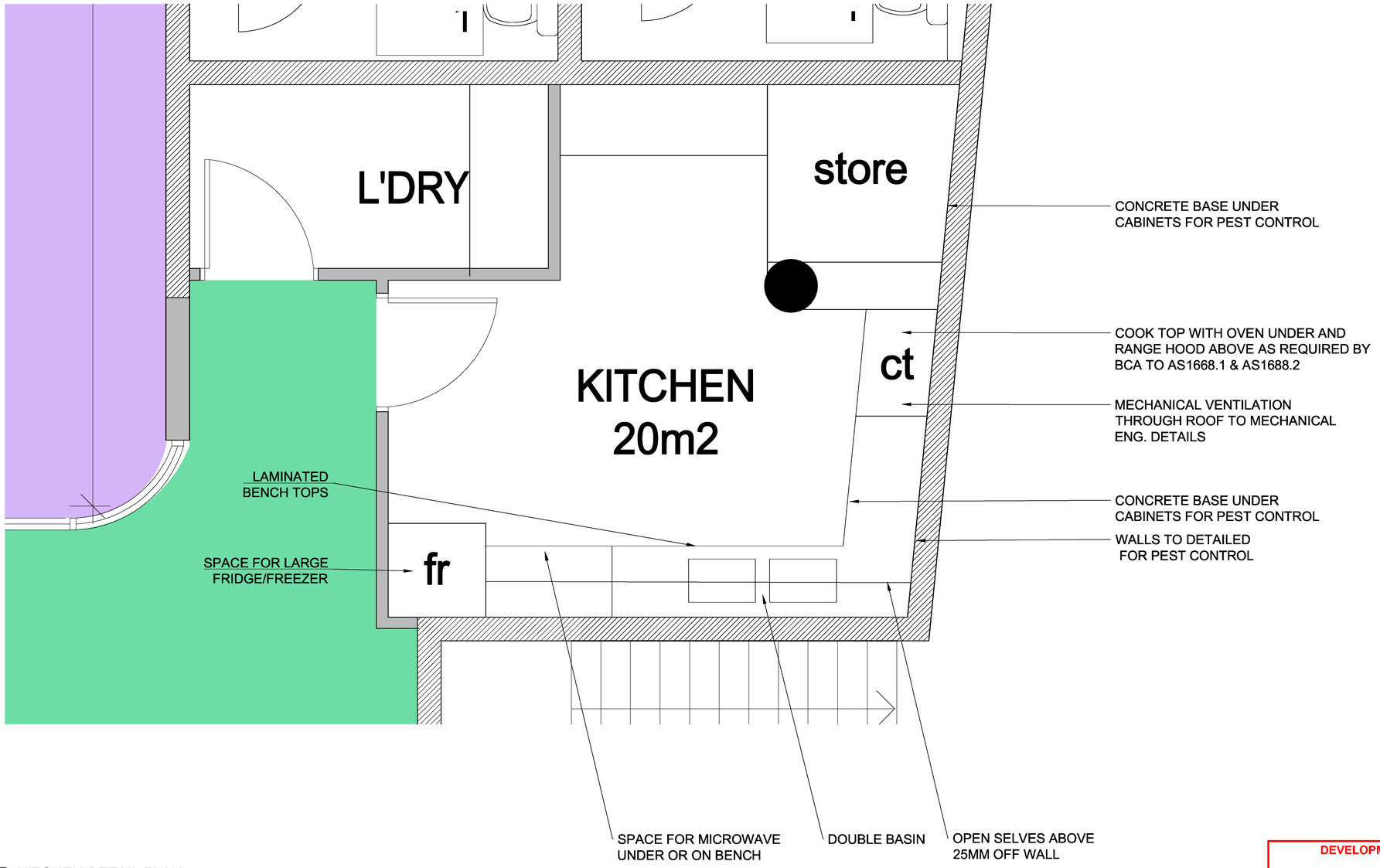
LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski 4224
PH 02 9212 3266, E info@liskowski.com.au

TRUE NORTH:

SCALE: 1:100 @A1

DATE: 23 JULY 2021

DWG NO: 200303 DA 01 F



1/01 KITCHEN DETAIL PLAN
1:20

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	A	05/11/20	-

DRAWING NOT FOR CONSTRUCTION

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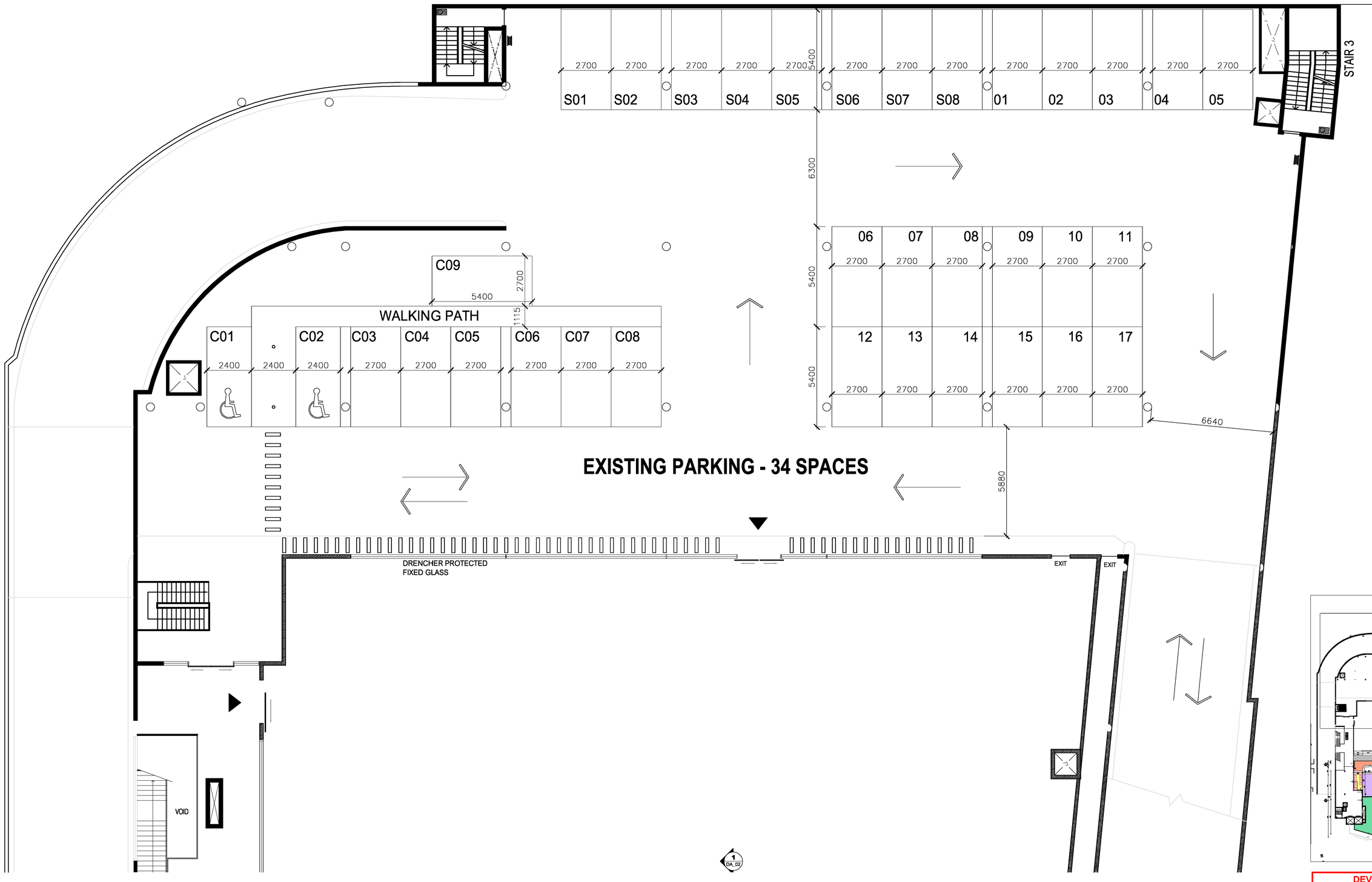
PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

KITCHEN DETAIL PLAN

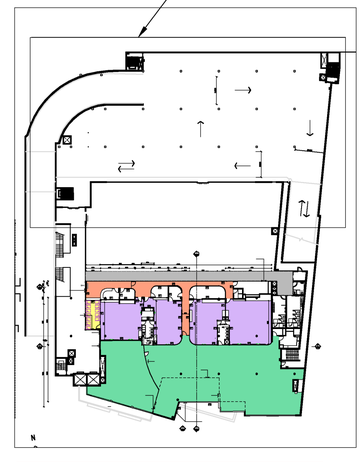
LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski 4224
PH 02 9212 3266, E info@liskowski.com.au

TRUE NORTH:

SCALE: 1:20 @A1
DATE: 05 NOV 2020
DWG NO: 200303 DA 09 /



1/01 LEVEL 2 FLOOR PLAN
1:100



DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA 2020/0452

Endorsement Date: 15 September 2021

Subject to attached conditions

PARKING CALCULATIONS

Child Drop off Parking = 9

Staff Parking = 8

Remaining Parking = 17

GEORGES RIVER COUNCIL

ISSUE	DATE	AMENDMENT
LOPMENT APPLICATION A	05/11/20	-

DRAWING NOT FOR CONSTRUCTION

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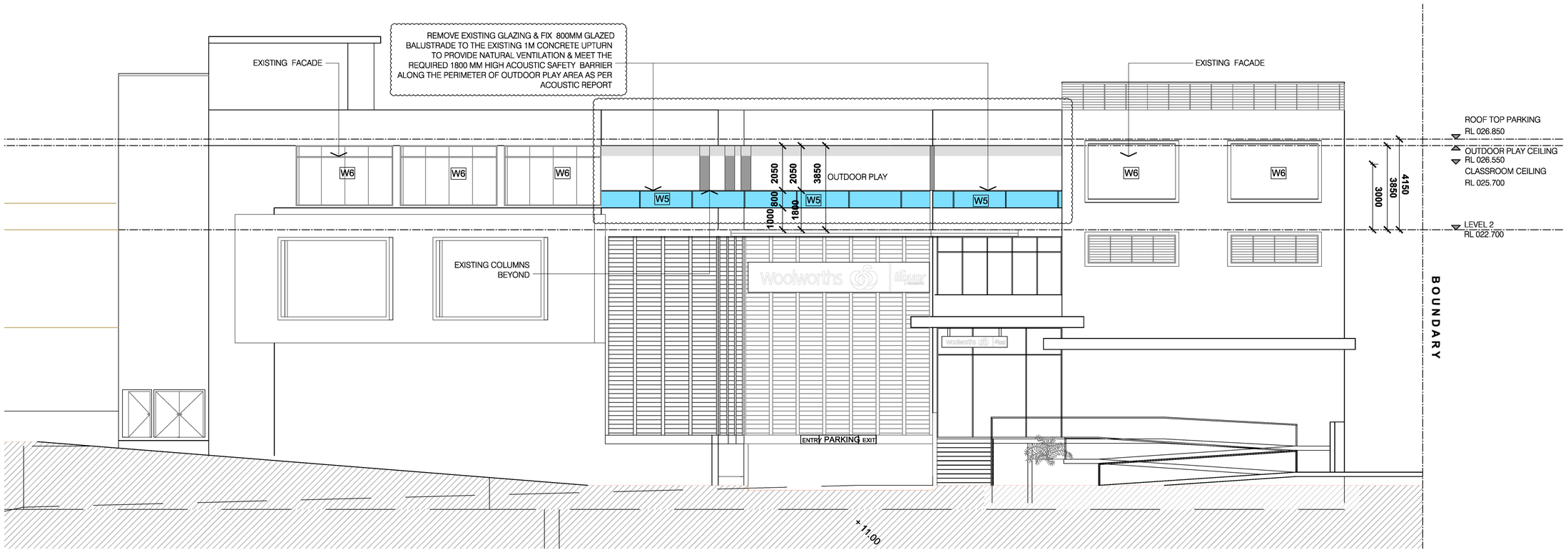
PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

CAR PARKING PLAN

LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski 4224
PH 02 9212 3266, E info@lisowski.com.au

TRUE NORTH:

SCALE: 1:100 @A1
DATE: 05 NOV 2020
DWG NO: 200303 DA 07 A



LEGEND

- INDOOR UNENCUMBERED PLAY
- OUTDOOR UNENCUMBERED PLAY
- COMMON AREA
- WALL/WINDOW TO BE DEMOLISHED
- EXISTING MASONRY WALL
- EXISTING MASONRY WALL

WALL LEGEND

- W1 13MM PLASTERBOARD LINED 76MM GALVANISED STEEL STUD TO 1000MM GLAZED ABOVE TO U/S CEILING. PAINTED BOTH SIDES
- W2 FULL 76MM GALVANISED STEEL STUD PARTITION WALLS. PAINTED PLASTERBOARD WALL TO UNDERSIDE OF CEILING
- W3 FULL GLAZED WALL TO U/S CEILING TO MANUFACTURER SPECIFICATION. POWDER COATED ALUMINIUM FRAME AND COLOUR TO SELECT.
- W4 MASONRY BLOCK WALL-NOM 200MM THICK
- W5 EXISTING EXTERNAL WALL NOM, 1M HIGH UPTURN WITH 900MM GLAZING FIXED WITH SPIGGOTS, TO ACOUSTIC ENGINEERS REQUIREMENTS WITH A MINIMUM HEIGHT OF 1800MM
- W6 EXISTING EXTERNAL WALL WITH 1M HIGH UPTURN & GLAZING TO UNDERSIDE OF CEILING GLAZING
- CEILING FANS FIXED TO CEILING IN OUTDOOR PLAY

1/02 LEVEL 2 SOUTHERN ELEVATION
1:100

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	C	04/06/21	-
DEVELOPMENT APPLICATION	D	23/07/21	-
			-
			-
			-

DRAWING NOT FOR CONSTRUCTION

NOTES . THIS DRAWING IS NOT FOR CONSTRUCTION

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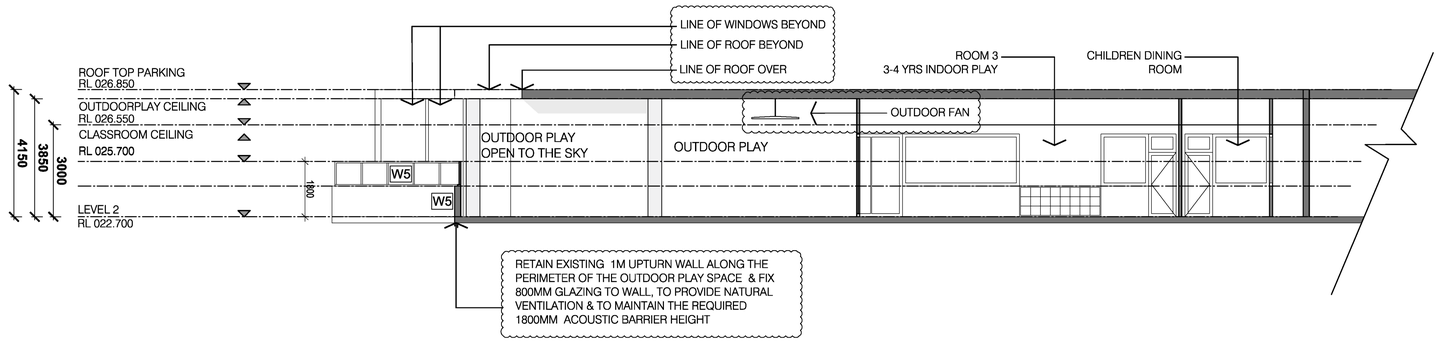
-

PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

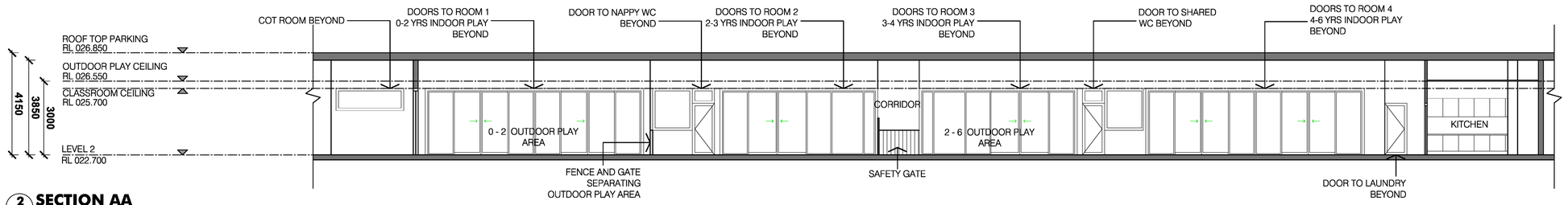
SOUTH ELEVATION

LISKOWSKI ARCHITECTS
Nominated Architect Laurie Liskowski 4224
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
PH 02 9212 2066, E info@liskowski.com.au

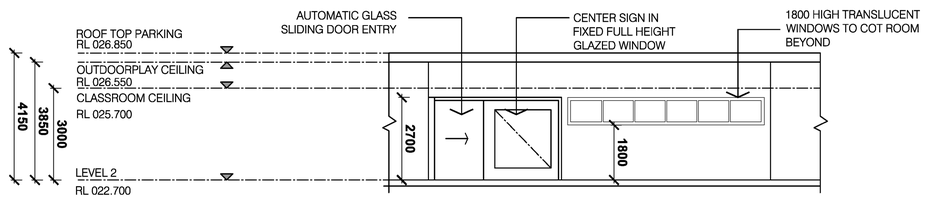
SCALE: 1:100 @A1
DATE: 23 JULY 2021
DWG NO: 200303 DA 02 D



3/03 SECTION AA
1:100



2/03 SECTION AA
1:100



1/03 CHILDCARE ENTRANCE
1:100

LEGEND

- INDOOR UNENCUMBERED PLAY
- OUTDOOR UNENCUMBERED PLAY
- COMMON AREA
- WALL/WINDOW TO BE DEMOLISHED
- EXISTING MASONRY WALL
- FLOOR AREA OPEN TO THE SKY

WALL LEGEND

- W1 13MM PLASTERBOARD LINED 76MM GALVANISED STEEL STUD TO 1000MM GLAZED ABOVE TO U/S CEILING. PAINTED BOTH SIDES
- W2 FULL 76MM GALVANISED STEEL STUD PARTITION WALLS. PAINTED PLASTERBOARD WALL TO UNDERSIDE OF CEILING
- W3 FULL GLAZED WALL TO U/S CEILING TO MANUFACTURER SPECIFICATION. POWDER COATED ALUMINIUM FRAME AND COLOUR TO SELECT.
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- W6 EXISTING EXTERNAL WALL WITH 1M HIGH UPTURN & GLAZING TO UNDERSIDE OF CEILING GLAZING

CEILING FANS FIXED TO CEILING IN OUTDOOR PLAY

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

GEORGES RIVER COUNCIL

FOR	ISSUE	DATE	AMENDMENT
DEVELOPMENT APPLICATION	C	25/06/21	-
DEVELOPMENT APPLICATION	D	23/07/21	-

DRAWING NOT FOR CONSTRUCTION

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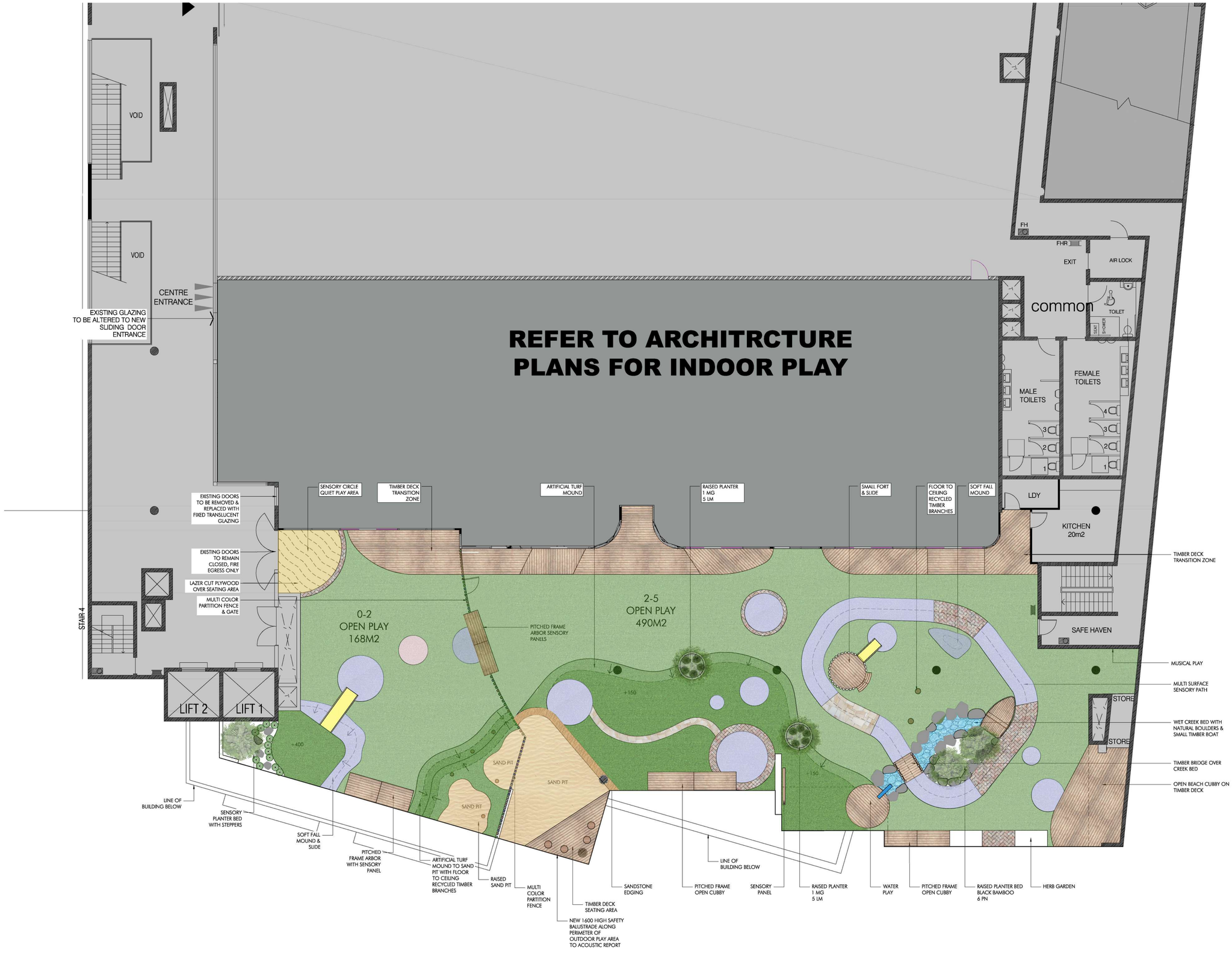
-

PROPOSED CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

SECTIONS & ELEVATIONS

LISKOWSKI ARCHITECTS
SUITE 107, 59 GREAT BUCKINGHAM STREET, REDFERN, NSW 2016
Nominated Architect Laurie Liskowski 4224
PH 02 9212 3266, E info@liskowski.com.au

SCALE: 1:100 @A1
DATE: 23 JULY 2021
DWG NO: 200303 DA 03 D



LEGEND

- ARTIFICIAL TURF
- SAND PIT
- TIMBER DECK/TRANSITION ZONE
- SOFTFALL RUBBER TO SPEC
- PROPOSED SHRUB PLANTING
- SANDSTONE
- COBBLE STONE
- SENSORY SOFT FALL CIRCLES
- PLANTER BED
- HERB GARDEN
- RECYCLED BRICK
- WET CREEK BED

01 LANDSCAPE PLAY SPACE SECOND FLOOR PLAN
1:100

DEVELOPMENT PLANS

These are the plans referred to in Development Consent DA2020/0452

Endorsement Date: 16 September 2021

Subject to attached conditions

For	Description	Date
DA	DEVELOPMENT APPLICATION	30.05.2020
REVIEW		25.06.2021

Job Number:	Drawing Number:	Issue		
LA	DA 01	B	DM	DB

True North

Project: PROPOSED NEW CHILDCARE CENTRE
LEVEL 2, 84d ROBERTS ROAD MORTDALE

Drawing Name: Landscape Second Floor Plan

DRAWING NOT FOR CONSTRUCTION

GEORGES RIVER COUNCIL

GREENSCAPE®
Landscape Architecture + Design

22/686 NEW SOUTH HEAD ROAD, ROSE BAY 2029 e. info@greenscapedesign.com.au

Schedule of Tenants

Mortdale Plaza - 84D Roberts Ave, Mortdal

PROPERTY ADDRESS	TENANT	GENERAL USE	AREA (sqm)
Shop 1/ 84D Roberts Ave, Mortdale (Ground)	Woolworths Limited	Supermarket	3990
Shop 2/ 84D Roberts Ave, Mortdale (Ground)	Diana Sadig	Chemist	78
Shop 3/ 84D Roberts Ave, Mortdale (Ground)	The Brasserie Club	Café	23
Shop 4/ 84D Roberts Ave, Mortdale (Ground)	BWS Liquor	Liquor Shop	180
Shop 5/ 84D Roberts Ave, Mortdale (Level 1)	Crunch	Fitness	1817
Shop 6/ 84D Roberts Ave, Mortdale (Level 2)	VACANT	Childcare	1280
Shop 7/ 84D Roberts Ave, Mortdale (Level 2)	VACANT	Specialty Retail	1069
ATM / CBA	Commonwealth Bank	Kiosk	N/A

APPENDIX B

TRAFFIC SURVEY DATA

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Roberts Ave and Lorraine St, Mortdale

GPS	-33.968489, 151.059869
Date:	Wed 14/02/24
Weather:	Fine
Suburban:	Mortdale
Customer:	Varga

North:	Lorraine St
East:	Roberts Ave
South:	Lorraine St
West:	Isaac St

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-6:30 PM
Traffic Peak	AM:	8:00 AM-9:00 AM
	PM:	5:00 PM-6:00 PM

All Vehicles

Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	8	2	3	0	6	43	11	0	16	7	1	0	2	74	13	1046	
6:45	7:00	1	11	6	16	1	9	68	12	0	20	13	2	0	2	93	18	1271	
7:00	7:15	1	5	12	10	1	14	61	12	0	31	16	1	1	4	94	20	1475	
7:15	7:30	0	4	3	5	0	11	68	18	0	23	18	2	0	5	122	26	1621	
7:30	7:45	0	8	9	13	1	17	108	19	0	40	17	3	0	1	141	34	1801	
7:45	8:00	2	16	5	15	1	23	115	15	0	52	18	3	0	2	174	35	1934	
8:00	8:15	2	8	7	12	0	22	116	16	0	38	19	9	0	3	152	25	1941	Peak
8:15	8:30	2	14	4	13	0	20	124	22	0	58	16	11	3	3	162	33	1933	
8:30	8:45	3	20	10	16	0	26	141	28	0	55	25	6	5	7	169	33	1833	
8:45	9:00	5	10	22	17	0	18	123	35	0	29	20	5	0	10	148	41		
9:00	9:15	2	17	14	20	0	18	93	26	1	47	21	7	0	7	128	20		
9:15	9:30	2	14	12	22	3	18	96	18	0	26	22	8	0	5	114	25		
15:30	15:45	5	19	15	15	0	20	147	41	0	39	19	10	1	5	110	18	1759	
15:45	16:00	3	16	20	17	2	21	142	26	0	26	9	6	1	2	132	15	1725	
16:00	16:15	4	26	19	32	1	24	137	33	0	25	13	6	0	4	109	17	1692	
16:15	16:30	4	16	16	18	2	16	138	27	0	20	9	4	1	7	111	18	1735	
16:30	16:45	4	20	15	29	1	23	142	26	0	22	15	6	1	4	106	16	1811	
16:45	17:00	0	20	13	22	0	14	164	24	0	16	14	3	1	5	94	15	1856	
17:00	17:15	2	24	10	24	7	23	183	25	0	26	10	3	2	5	131	18	1892	Peak
17:15	17:30	1	21	16	37	1	16	154	46	0	27	16	5	1	4	119	19	1831	
17:30	17:45	1	21	17	21	0	18	172	35	0	22	9	8	1	4	124	22	1788	
17:45	18:00	1	22	13	16	1	22	153	28	0	32	17	5	3	1	110	17		
18:00	18:15	5	25	14	17	8	15	133	29	0	19	11	4	0	5	134	13		
18:15	18:30	1	14	13	15	1	14	161	40	0	22	17	5	0	1	123	13		

Peak Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	12	52	43	58	0	86	504	101	0	180	80	31	8	23	631	132	1941
17:00	18:00	5	88	56	98	9	79	662	134	0	107	52	21	7	14	484	76	1892

Pedestrians Crossing

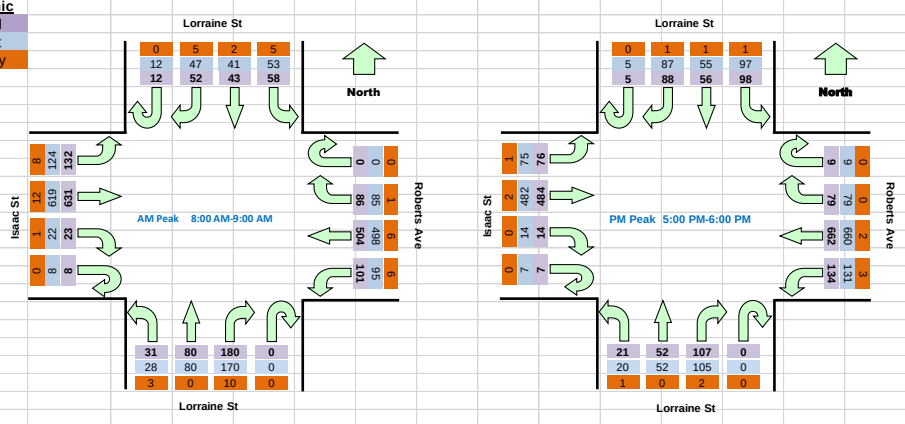
Time		Approach Lorrai		Approach Roberts		Approach Lorrai		st Approach Isaac		Hourly Tot
Period Star	Period End	estboun	astboun	outhbour	orthbour	estboun	astboun	outhbour	orthbour	
6:30	6:45	0	0	0	0	0	0	0	0	18
6:45	7:00	1	4	2	0	0	1	0	0	20
7:00	7:15	0	0	0	1	2	0	0	0	15
7:15	7:30	0	5	0	2	0	0	0	0	12
7:30	7:45	1	0	0	1	0	0	0	0	26
7:45	8:00	0	0	0	3	0	0	0	0	30
8:00	8:15	0	0	0	0	0	0	0	0	34
8:15	8:30	9	1	0	4	7	0	0	0	36
8:30	8:45	1	1	1	2	1	0	0	0	15
8:45	9:00	0	2	0	3	2	0	0	0	
9:00	9:15	0	2	0	0	0	0	0	0	
9:15	9:30	0	0	0	0	0	0	0	0	
15:30	15:45	2	0	0	0	1	0	0	0	15
15:45	16:00	2	2	0	3	2	0	0	0	14
16:00	16:15	1	1	0	0	0	1	0	0	6
16:15	16:30	0	0	0	0	0	0	0	0	9
16:30	16:45	0	0	1	1	0	0	0	0	12
16:45	17:00	0	0	0	0	0	1	0	0	20
17:00	17:15	0	0	1	0	5	0	0	0	21
17:15	17:30	0	0	2	0	1	0	0	0	17
17:30	17:45	1	1	1	1	1	5	0	0	17
17:45	18:00	1	1	0	0	0	0	0	0	
18:00	18:15	1	0	0	1	0	0	0	0	
18:15	18:30	1	0	2	0	0	0	0	0	

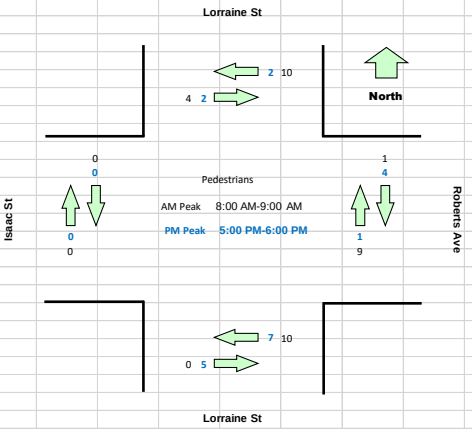
Peak Time		Approach Lorrai		Approach Roberts		Approach Lorrai		st Approach Isaac		Peak
Period Star	Period End	estboun	astboun	outhbour	orthbour	estboun	astboun	outhbour	orthbour	hour
8:00	9:00	10	4	1	9	10	0	0	0	34
17:00	18:00	2	2	4	1	7	5	0	0	21

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	8	2	3	0	5	39	8	0	14	6	1	0	1	71	13
6:45	7:00	1	10	6	14	0	8	64	10	0	19	12	2	0	2	88	16
7:00	7:15	1	3	12	7	1	14	60	11	0	30	16	1	0	4	90	20
7:15	7:30	0	3	3	5	0	11	67	16	0	21	18	2	0	3	118	26
7:30	7:45	0	8	8	10	1	17	108	16	0	40	15	3	0	1	138	33
7:45	8:00	1	13	5	13	1	23	114	15	0	50	18	3	0	1	173	33
8:00	8:15	2	8	6	11	0	22	115	16	0	35	19	8	0	3	150	22
8:15	8:30	2	11	4	12	0	20	121	20	0	57	16	9	3	2	159	31
8:30	8:45	3	20	9	14	0	26	140	26	0	53	25	6	5	7	168	31
8:45	9:00	5	8	22	16	0	17	122	33	0	25	20	5	0	10	142	40
9:00	9:15	2	17	14	17	0	18	88	26	1	46	20	7	0	7	127	18
9:15	9:30	2	12	11	21	2	18	95	17	0	26	22	8	0	5	111	25
15:30	15:45	5	19	15	15	0	20	145	38	0	39	18	10	1	5	108	17
15:45	16:00	3	16	20	17	2	21	140	25	0	26	9	6	1	2	130	14
16:00	16:15	4	25	19	32	1	24	134	33	0	23	13	6	0	4	105	15
16:15	16:30	4	16	16	18	2	16	136	25	0	20	9	4	1	7	111	17
16:30	16:45	4	20	15	28	1	23	138	25	0	21	15	6	1	4	105	16
16:45	17:00	0	19	13	22	0	14	160	24	0	16	14	3	1	5	92	13
17:00	17:15	2	24	10	23	7	23	183	24	0	25	10	3	2	5	131	18
17:15	17:30	1	21	16	37	1	16	153	45	0	27	16	5	1	4	119	19
17:30	17:45	1	21	17	21	0	18	172	34	0	22	9	7	1	4	124	22
17:45	18:00	1	21	12	16	1	22	152	28	0	31	17	5	3	1	108	16
18:00	18:15	5	25	14	17	8	15	132	28	0	18	11	4	0	5	134	13
18:15	18:30	1	14	13	15	1	14	161	40	0	22	17	5	0	1	122	12

Peak Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
8:00	9:00	12	47	41	53	0	85	498	95	0	170	80	28	8	22	619	124	1882
17:00	18:00	5	87	55	97	9	79	660	131	0	105	52	20	7	14	482	75	1878

Heavy Vehicles

Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	0	0	0	1	4	3	0	2	1	0	0	1	3	0
6:45	7:00	0	1	0	2	1	1	4	2	0	1	1	0	0	0	5	2
7:00	7:15	0	2	0	3	0	0	1	1	0	1	0	0	1	0	4	0
7:15	7:30	0	1	0	0	0	0	1	2	0	2	0	0	0	2	4	0
7:30	7:45	0	0	1	3	0	0	0	3	0	0	2	0	0	0	3	1
7:45	8:00	1	3	0	2	0	0	1	0	0	2	0	0	0	1	1	2
8:00	8:15	0	0	1	1	0	0	1	0	0	3	0	1	0	0	2	3
8:15	8:30	0	3	0	1	0	0	3	2	0	1	0	2	0	1	3	2
8:30	8:45	0	0	1	2	0	0	1	2	0	2	0	0	0	0	1	2
8:45	9:00	0	2	0	1	0	1	1	2	0	4	0	0	0	0	6	1
9:00	9:15	0	0	0	3	0	0	5	0	0	1	1	0	0	0	1	2
9:15	9:30	0	2	1	1	1	0	1	1	0	0	0	0	0	0	3	0
15:30	15:45	0	0	0	0	0	0	2	3	0	0	1	0	0	0	2	1
15:45	16:00	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	1
16:00	16:15	0	1	0	0	0	0	3	0	0	2	0	0	0	0	4	2
16:15	16:30	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1
16:30	16:45	0	0	0	1	0	0	4	1	0	1	0	0	0	0	1	0
16:45	17:00	0	1	0	0	0	0	4	0	0	0	0	0	0	0	2	2
17:00	17:15	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
17:45	18:00	0	1	1	0	0	0	1	0	0	1	0	0	0	0	2	1
18:00	18:15	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

Peak Time		North Approach Lorraine St				East Approach Roberts Ave				South Approach Lorraine St				West Approach Isaac St				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
8:00	9:00	0	5	2	5	0	1	6	6	0	10	0	3	0	1	12	8	59
17:00	18:00	0	1	1	1	0	0	2	3	0	2	0	1	0	0	2	1	14

TRANS TRAFFIC SURVEY

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TURNING MOVEMENT SURVEY

Intersection of Roberts Ave and Site Access, Mortdale

GPS	-33.969491, 151.064855
Date:	Wed 14/02/24
Weather:	Fine
Suburban:	Mortdale
Customer:	Varga

North:	Site Access
East:	Roberts Ave
South:	N/A
West:	Roberts Ave

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-6:30 PM
Traffic Peak	AM:	7:45 AM-8:45 AM
	PM:	5:00 PM-6:00 PM

All Vehicles

Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Av			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
6:30	6:45	0	16	14	0	17	50	0	87	7	974	
6:45	7:00	0	8	10	2	13	82	0	109	16	1157	
7:00	7:15	0	8	20	3	20	81	0	119	17	1351	
7:15	7:30	0	15	15	2	11	87	0	129	16	1486	
7:30	7:45	0	15	16	3	24	137	2	167	10	1654	
7:45	8:00	0	15	17	4	16	134	2	223	23	1772	Peak
8:00	8:15	0	13	19	4	23	141	1	182	20	1755	
8:15	8:30	0	20	24	4	16	153	0	199	27	1739	
8:30	8:45	0	12	15	4	37	191	0	211	22	1655	
8:45	9:00	0	18	16	3	19	184	0	150	27		
9:00	9:15	0	21	19	0	33	128	0	152	34		
9:15	9:30	0	16	24	2	35	121	0	127	34		
15:30	15:45	0	30	21	5	39	185	0	140	34	1759	
15:45	16:00	0	21	36	8	39	167	0	131	35	1751	
16:00	16:15	0	33	42	0	52	157	1	125	36	1769	
16:15	16:30	0	39	38	2	55	141	0	110	37	1830	
16:30	16:45	0	44	47	4	37	141	2	127	44	1917	
16:45	17:00	0	38	48	2	55	177	0	101	34	1949	
17:00	17:15	0	42	43	5	53	180	0	137	47	1971	Peak
17:15	17:30	0	33	57	2	51	189	2	127	48	1907	
17:30	17:45	0	37	40	3	38	187	1	143	29	1853	
17:45	18:00	0	40	52	3	49	171	0	129	33		
18:00	18:15	0	35	43	2	31	151	1	138	42		
18:15	18:30	0	43	38	2	47	173	0	112	40		

Peak Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Av			Peak
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total
7:45	8:45	0	60	75	16	92	619	3	815	92	1772
17:00	18:00	0	152	192	13	191	727	3	536	157	1971

Pedestrians Crossing

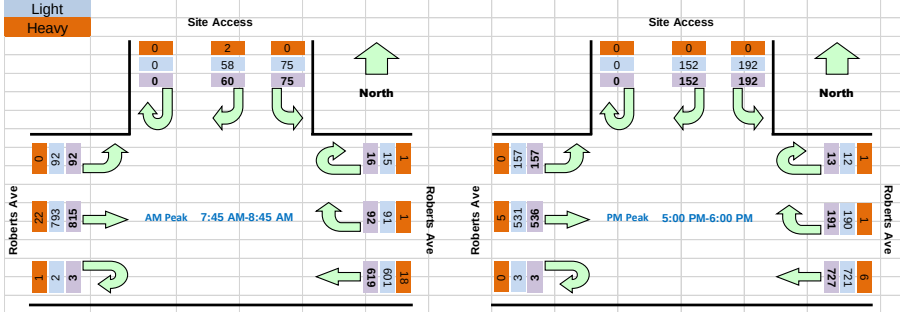
Time		Approach Site A		Approach Roberts		Approach Roberts		Hourly Tot
Period Start	Period End	Westboun	Eastboun	outhbour	orthbour	outhbour	orthbour	
6:30	6:45	0	0	0	0	0	0	5
6:45	7:00	0	0	0	0	0	0	6
7:00	7:15	0	0	1	0	0	0	7
7:15	7:30	1	3	0	0	0	0	9
7:30	7:45	1	0	0	0	0	0	10
7:45	8:00	0	0	0	0	0	1	11
8:00	8:15	3	0	0	0	0	0	14
8:15	8:30	2	3	0	0	0	0	15
8:30	8:45	1	0	0	0	0	1	18
8:45	9:00	0	2	0	1	0	1	
9:00	9:15	2	1	0	0	1	0	
9:15	9:30	4	4	0	0	0	0	
15:30	15:45	4	0	0	0	0	0	19
15:45	16:00	2	2	2	1	0	0	16
16:00	16:15	1	1	0	0	0	0	11
16:15	16:30	3	2	1	0	0	0	18
16:30	16:45	1	0	0	0	0	0	16
16:45	17:00	0	2	0	0	0	0	19
17:00	17:15	5	1	2	1	0	0	18
17:15	17:30	2	1	0	0	1	0	10
17:30	17:45	1	3	0	0	0	0	9
17:45	18:00	1	0	0	0	0	0	
18:00	18:15	1	0	0	0	0	0	
18:15	18:30	2	1	0	0	0	0	

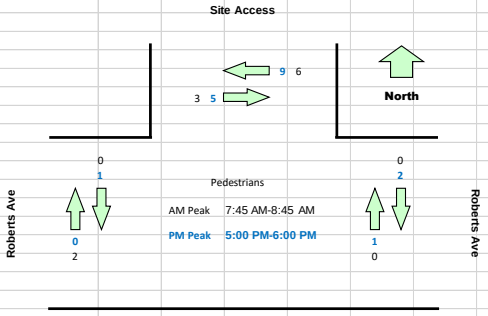
Peak Time		Approach Site A		Approach Roberts		Approach Roberts		Peak
Period Start	Period End	Westboun	Eastboun	outhbour	orthbour	outhbour	orthbour	total
7:45	8:45	6	3	0	0	0	2	11
17:00	18:00	9	5	2	1	1	0	18

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Ave		
Period Start	**Period End**	U	R	L	U	R	WB	U	EB	L
6:30	6:45	0	16	14	0	17	42	0	83	7
6:45	7:00	0	8	10	2	13	74	0	101	16
7:00	7:15	0	8	20	3	20	80	0	108	17
7:15	7:30	0	15	15	2	11	83	0	124	15
7:30	7:45	0	15	16	3	24	134	2	164	10
7:45	8:00	0	15	17	4	15	132	1	218	23
8:00	8:15	0	13	19	4	23	139	1	177	20
8:15	8:30	0	18	24	3	16	149	0	192	27
8:30	8:45	0	12	15	4	37	181	0	206	22
8:45	9:00	0	18	16	3	19	170	0	145	27
9:00	9:15	0	21	19	0	33	122	0	149	34
9:15	9:30	0	16	24	2	35	118	0	124	34
15:30	15:45	0	29	21	5	39	180	0	137	34
15:45	16:00	0	21	36	8	38	163	0	129	35
16:00	16:15	0	33	42	0	52	155	1	120	36
16:15	16:30	0	39	38	2	55	137	0	109	37
16:30	16:45	0	44	47	4	37	137	2	125	44
16:45	17:00	0	38	48	2	55	173	0	98	34
17:00	17:15	0	42	43	5	53	179	0	135	47
17:15	17:30	0	33	57	2	50	187	2	127	48
17:30	17:45	0	37	40	2	38	185	1	143	29
17:45	18:00	0	40	52	3	49	170	0	126	33
18:00	18:15	0	35	43	2	31	149	1	137	42
18:15	18:30	0	43	38	2	47	173	0	111	40

Peak Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Ave			Peak
Period Start	**Period End**	U	R	L	U	R	WB	U	EB	L	**total**
7:45	8:45	0	58	75	15	91	601	2	793	92	1727
17:00	18:00	0	152	192	12	190	721	3	531	157	1958

Heavy Vehicles

Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Av		
Period Start	**Period End**	U	R	L	U	R	WB	U	EB	L
6:30	6:45	0	0	0	0	0	8	0	4	0
6:45	7:00	0	0	0	0	0	8	0	8	0
7:00	7:15	0	0	0	0	0	1	0	11	0
7:15	7:30	0	0	0	0	0	4	0	5	1
7:30	7:45	0	0	0	0	0	3	0	3	0
7:45	8:00	0	0	0	0	1	2	1	5	0
8:00	8:15	0	0	0	0	0	2	0	5	0
8:15	8:30	0	2	0	1	0	4	0	7	0
8:30	8:45	0	0	0	0	0	10	0	5	0
8:45	9:00	0	0	0	0	0	14	0	5	0
9:00	9:15	0	0	0	0	0	6	0	3	0
9:15	9:30	0	0	0	0	0	3	0	3	0
15:30	15:45	0	1	0	0	0	5	0	3	0
15:45	16:00	0	0	0	0	1	4	0	2	0
16:00	16:15	0	0	0	0	0	2	0	5	0
16:15	16:30	0	0	0	0	0	4	0	1	0
16:30	16:45	0	0	0	0	0	4	0	2	0
16:45	17:00	0	0	0	0	0	4	0	3	0
17:00	17:15	0	0	0	0	0	1	0	2	0
17:15	17:30	0	0	0	0	1	2	0	0	0
17:30	17:45	0	0	0	1	0	2	0	0	0
17:45	18:00	0	0	0	0	0	1	0	3	0
18:00	18:15	0	0	0	0	0	2	0	1	0
18:15	18:30	0	0	0	0	0	0	0	1	0

Peak Time		North Approach Site Acces			East Approach Roberts Ave			West Approach Roberts Av			Peak
Period Start	**Period End**	U	R	L	U	R	WB	U	EB	L	**total**
7:45	8:45	0	2	0	1	1	18	1	22	0	45
17:00	18:00	0	0	0	1	1	6	0	5	0	13

TRANS TRAFFIC SURVEY

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TURNING MOVEMENT SURVEY

Intersection of Universal St and Boundary Rd, Mortdale

GPS	-33.970223, 151.073626
Date:	Wed 14/02/24
Weather:	Overcast
Suburban:	Mortdale
Customer:	Varga

North:	Boundary Rd
East:	Universal St
South:	Boundary Rd
West:	Roberts Ave

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-6:30 PM
Traffic Peak	AM:	7:30 AM-8:30 AM
	PM:	5:00 PM-6:00 PM

All Vehicles

Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	11	58	3	0	6	17	0	0	2	87	28	0	49	30	19	1527	
6:45	7:00	0	20	74	2	0	5	21	0	0	0	115	45	0	56	31	29	1764	
7:00	7:15	0	17	73	3	0	7	21	1	0	0	95	52	0	68	41	26	1850	
7:15	7:30	0	18	51	2	0	7	24	1	0	2	118	38	0	79	56	19	1950	
7:30	7:45	0	14	88	7	0	9	40	5	0	3	140	73	0	73	77	18	2021	Peak
7:45	8:00	0	16	72	8	0	5	33	2	0	2	102	50	0	96	81	17	1979	
8:00	8:15	0	31	73	13	0	8	56	2	0	1	118	40	0	74	78	10	1978	
8:15	8:30	0	19	84	16	0	7	59	4	0	2	90	50	0	54	95	6	1928	
8:30	8:45	0	25	82	17	0	13	61	2	0	0	74	74	0	68	79	10	1899	
8:45	9:00	0	22	76	21	0	8	69	5	0	1	88	51	0	60	66	16		
9:00	9:15	0	28	68	14	0	8	72	0	0	0	91	49	0	48	52	24		
9:15	9:30	0	37	56	12	0	12	56	5	0	3	97	50	0	56	50	23		
15:30	15:45	0	19	125	8	0	10	74	3	0	6	124	93	0	53	41	16	2209	
15:45	16:00	0	29	104	9	0	9	66	4	0	2	110	90	0	79	51	19	2149	
16:00	16:15	0	31	125	4	0	8	82	4	0	1	74	91	0	64	60	20	2155	
16:15	16:30	0	21	119	10	0	6	48	3	0	2	79	92	0	58	46	17	2214	
16:30	16:45	0	24	104	11	0	8	65	3	0	3	66	91	0	56	63	18	2323	
16:45	17:00	0	42	129	10	0	6	97	4	0	0	70	89	0	60	52	19	2417	
17:00	17:15	0	40	129	7	0	10	89	4	0	3	93	135	0	47	52	14	2443	Peak
17:15	17:30	0	29	118	15	0	5	83	1	0	3	98	96	0	83	63	16	2373	
17:30	17:45	0	28	129	16	0	14	80	2	0	1	94	106	0	73	49	14	2295	
17:45	18:00	0	33	113	12	0	10	82	2	0	3	96	99	0	75	55	24		
18:00	18:15	0	37	98	3	0	11	78	4	0	1	94	83	0	54	68	22		
18:15	18:30	0	30	122	10	0	10	77	4	0	1	78	79	0	59	51	11		

Peak Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:30	8:30	0	80	317	44	0	29	188	13	0	8	450	213	0	297	331	51	2021
17:00	18:00	0	130	489	50	0	39	334	9	0	10	381	436	0	278	219	68	2443

Pedestrians Crossing

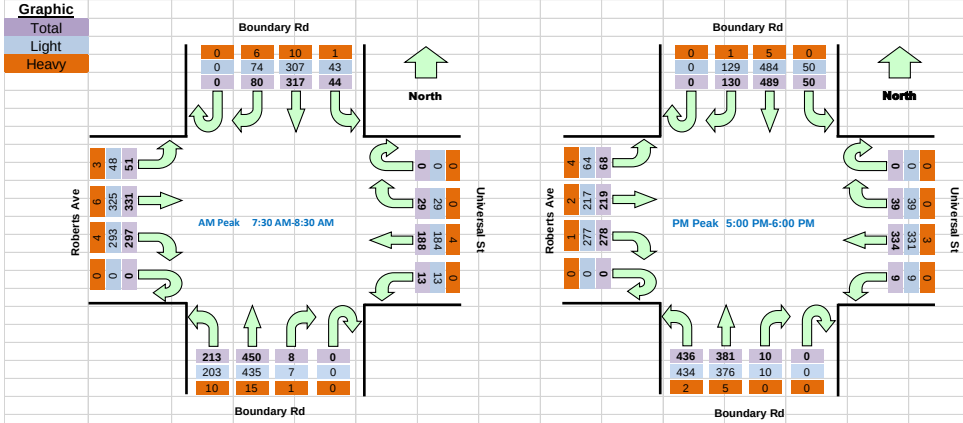
Time		Approach Bounda	Approach Bounda	Approach Univers	Approach Univers	Approach Bounda	Approach Bounda	Approach Robert	Approach Robert	Hourly Tot
Period Start	Period End	estboun	astboun	outhboun	orthboun	estboun	astboun	outhboun	orthboun	
6:30	6:45	0	0	0	0	1	0	0	0	26
6:45	7:00	1	0	2	2	0	2	1	1	40
7:00	7:15	0	3	2	0	0	0	1	0	41
7:15	7:30	1	0	2	2	0	1	2	2	47
7:30	7:45	1	1	0	0	2	8	3	0	47
7:45	8:00	0	0	4	3	0	2	1	0	44
8:00	8:15	2	1	0	1	0	3	5	0	41
8:15	8:30	0	1	2	0	1	3	2	1	39
8:30	8:45	0	1	4	1	2	1	1	2	31
8:45	9:00	2	0	0	1	0	0	2	2	
9:00	9:15	0	1	1	0	1	4	1	2	
9:15	9:30	0	0	0	1	1	0	0	0	
15:30	15:45	0	2	1	0	2	1	2	1	32
15:45	16:00	2	1	0	3	2	0	0	0	34
16:00	16:15	2	0	0	0	3	0	0	0	34
16:15	16:30	1	2	1	0	3	3	0	0	34
16:30	16:45	1	0	0	0	5	2	1	2	26
16:45	17:00	0	0	1	2	3	1	0	1	21
17:00	17:15	0	2	0	0	0	2	1	0	19
17:15	17:30	0	0	2	0	0	0	0	0	16
17:30	17:45	2	2	2	0	0	0	0	0	22
17:45	18:00	0	1	0	0	3	1	1	0	
18:00	18:15	1	0	0	1	0	0	0	0	
18:15	18:30	0	0	2	0	2	1	0	3	

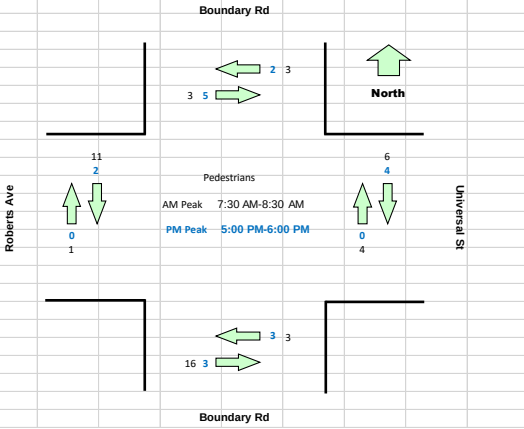
Peak Time		Approach Bounda	Approach Bounda	Approach Univers	Approach Univers	Approach Bounda	Approach Bounda	Approach Robert	Approach Robert	Peak hour
Period Start	Period End	estboun	astboun	outhboun	orthboun	estboun	astboun	outhboun	orthboun	
7:30	8:30	3	3	6	4	3	16	11	1	47
17:00	18:00	2	5	4	0	3	3	2	0	19

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	11	55	2	0	6	16	0	0	0	84	28	0	48	29	19
6:45	7:00	0	19	67	2	0	5	18	0	0	0	107	40	0	52	30	28
7:00	7:15	0	17	68	3	0	7	20	1	0	0	92	50	0	61	40	24
7:15	7:30	0	16	46	2	0	7	24	1	0	2	114	36	0	76	53	17
7:30	7:45	0	12	84	7	0	9	39	5	0	2	135	71	0	71	77	18
7:45	8:00	0	15	70	8	0	5	33	2	0	2	100	48	0	96	80	17
8:00	8:15	0	31	69	12	0	8	56	2	0	1	116	39	0	74	76	8
8:15	8:30	0	16	84	16	0	7	56	4	0	2	84	45	0	52	92	5
8:30	8:45	0	24	80	17	0	13	61	2	0	0	73	66	0	68	73	10
8:45	9:00	0	20	71	20	0	8	65	5	0	1	86	45	0	60	63	15
9:00	9:15	0	27	63	14	0	8	70	0	0	0	87	47	0	47	51	23
9:15	9:30	0	35	55	12	0	11	55	5	0	3	91	50	0	54	50	23
15:30	15:45	0	19	122	8	0	10	74	3	0	6	120	89	0	51	39	16
15:45	16:00	0	27	101	9	0	9	64	4	0	2	105	88	0	77	51	18
16:00	16:15	0	28	123	4	0	8	81	4	0	1	73	91	0	63	58	19
16:15	16:30	0	21	118	10	0	5	46	3	0	2	77	91	0	56	46	17
16:30	16:45	0	24	102	11	0	8	64	3	0	3	64	89	0	56	62	18
16:45	17:00	0	41	129	9	0	6	96	4	0	0	69	88	0	60	52	18
17:00	17:15	0	39	127	7	0	10	88	4	0	3	92	135	0	47	51	14
17:15	17:30	0	29	117	15	0	5	82	1	0	3	98	96	0	83	63	14
17:30	17:45	0	28	128	16	0	14	79	2	0	1	91	105	0	73	49	14
17:45	18:00	0	33	112	12	0	10	82	2	0	3	95	98	0	74	54	22
18:00	18:15	0	37	98	3	0	11	77	4	0	1	92	82	0	54	68	22
18:15	18:30	0	28	121	10	0	9	77	4	0	1	75	79	0	58	50	11

Peak Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	74	307	43	0	29	184	13	0	7	435	203	0	293	325	48	1961
17:00	18:00	0	129	484	50	0	39	331	9	0	10	376	434	0	277	217	64	2420

Heavy Vehicles

Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	3	1	0	0	1	0	0	2	3	0	0	1	1	0
6:45	7:00	0	1	7	0	0	0	3	0	0	0	8	5	0	4	1	1
7:00	7:15	0	0	5	0	0	0	1	0	0	0	3	2	0	7	1	2
7:15	7:30	0	2	5	0	0	0	0	0	0	0	4	2	0	3	3	2
7:30	7:45	0	2	4	0	0	0	1	0	0	1	5	2	0	2	0	0
7:45	8:00	0	1	2	0	0	0	0	0	0	0	2	2	0	0	1	0
8:00	8:15	0	0	4	1	0	0	0	0	0	0	2	1	0	0	2	2
8:15	8:30	0	3	0	0	0	0	3	0	0	0	6	5	0	2	3	1
8:30	8:45	0	1	2	0	0	0	0	0	0	0	1	8	0	0	6	0
8:45	9:00	0	2	5	1	0	0	4	0	0	0	2	6	0	0	3	1
9:00	9:15	0	1	5	0	0	0	2	0	0	0	4	2	0	1	1	1
9:15	9:30	0	2	1	0	0	1	1	0	0	0	6	0	0	2	0	0
15:30	15:45	0	0	3	0	0	0	0	0	0	0	4	4	0	2	2	0
15:45	16:00	0	2	3	0	0	0	2	0	0	0	5	2	0	2	0	1
16:00	16:15	0	3	2	0	0	0	1	0	0	0	1	0	0	1	2	1
16:15	16:30	0	0	1	0	0	1	2	0	0	0	2	1	0	2	0	0
16:30	16:45	0	0	2	0	0	0	1	0	0	0	2	2	0	0	1	0
16:45	17:00	0	1	0	1	0	0	1	0	0	0	1	1	0	0	0	1
17:00	17:15	0	1	2	0	0	0	1	0	0	0	1	0	0	0	1	0
17:15	17:30	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
17:30	17:45	0	0	1	0	0	0	1	0	0	0	3	1	0	0	0	0
17:45	18:00	0	0	1	0	0	0	0	0	0	0	1	1	0	1	1	2
18:00	18:15	0	0	0	0	0	0	1	0	0	0	2	1	0	0	0	0
18:15	18:30	0	2	1	0	0	1	0	0	0	0	3	0	0	1	1	0

Peak Time		North Approach Boundary Rd				East Approach Universal St				South Approach Boundary Rd				West Approach Roberts Ave				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	6	10	1	0	0	4	0	0	1	15	10	0	4	6	3	60
17:00	18:00	0	1	5	0	0	0	3	0	0	0	5	2	0	1	2	4	23

APPENDIX C

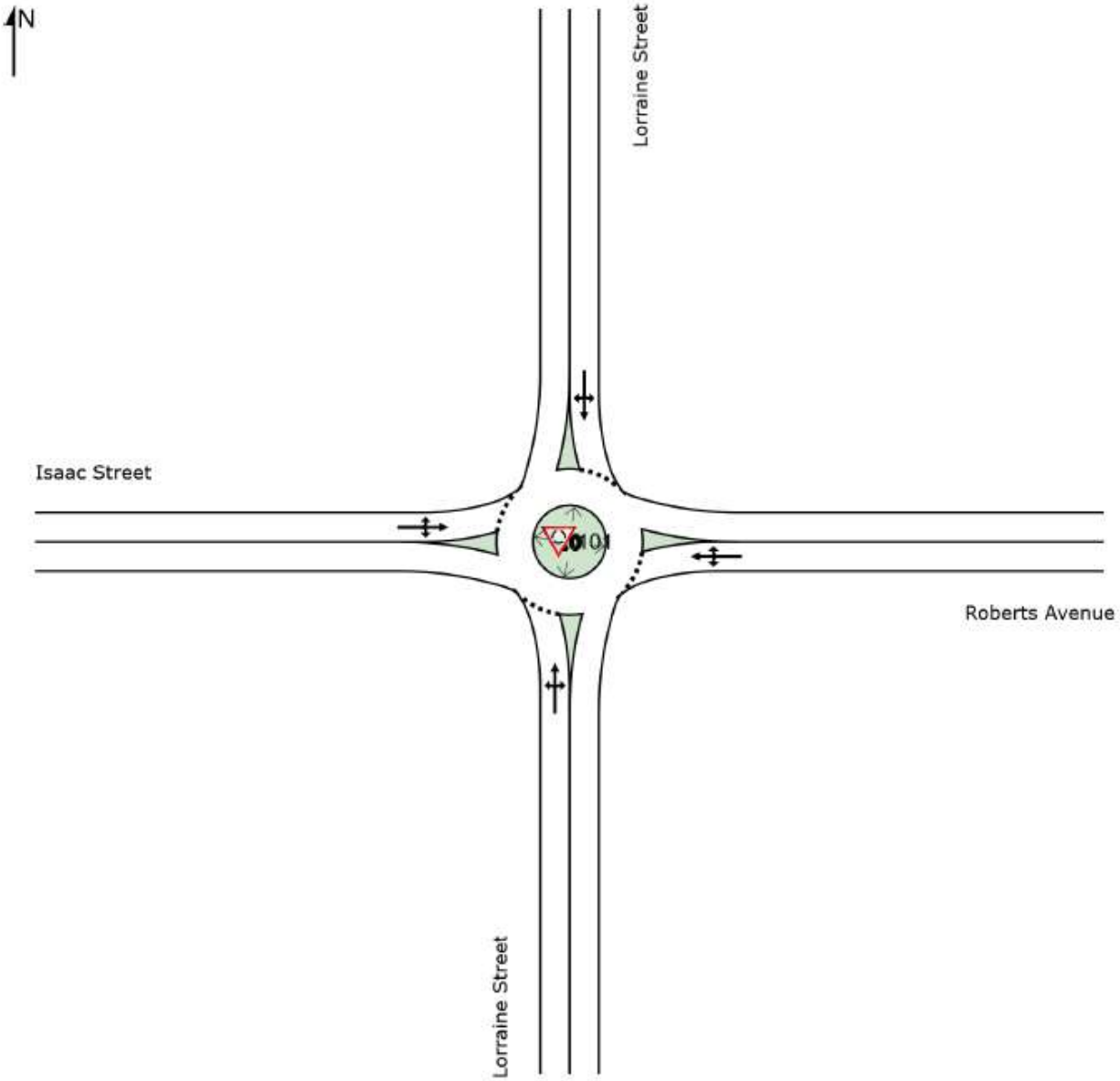
SIDRA MOVEMENT SUMMARIES

SITE LAYOUT

Site: 101 [AM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lorraine Street														
1	L2	26	3	27	11.5	0.430	9.8	LOS A	3.0	21.6	0.79	0.90	0.84	42.7
2	T1	70	2	74	2.9	0.430	9.2	LOS A	3.0	21.6	0.79	0.90	0.84	43.4
3	R2	188	6	198	3.2	0.430	12.4	LOS A	3.0	21.6	0.79	0.90	0.84	41.8
Approach		284	11	299	3.9	0.430	11.4	LOS A	3.0	21.6	0.79	0.90	0.84	42.3
East: Roberts Avenue														
4	L2	72	5	76	6.9	0.505	4.6	LOS A	4.7	33.2	0.43	0.49	0.43	44.7
5	T1	463	5	487	1.1	0.505	4.3	LOS A	4.7	33.2	0.43	0.49	0.43	45.5
6	R2	82	0	86	0.0	0.505	7.4	LOS A	4.7	33.2	0.43	0.49	0.43	45.4
Approach		617	10	649	1.6	0.505	4.7	LOS A	4.7	33.2	0.43	0.49	0.43	45.4
North: Lorraine Street														
7	L2	53	7	56	13.2	0.300	11.8	LOS A	2.0	15.4	0.90	0.94	0.90	40.4
8	T1	25	2	26	8.0	0.300	11.2	LOS A	2.0	15.4	0.90	0.94	0.90	42.6
9	R2	46	6	48	13.0	0.300	14.8	LOS B	2.0	15.4	0.90	0.94	0.90	42.4
Approach		124	15	131	12.1	0.300	12.8	LOS A	2.0	15.4	0.90	0.94	0.90	41.7
West: Isaac Street														
10	L2	127	8	134	6.3	0.880	17.7	LOS B	18.3	131.1	1.00	1.21	1.61	39.9
11	T1	629	9	662	1.4	0.880	17.2	LOS B	18.3	131.1	1.00	1.21	1.61	38.7
12	R2	9	2	9	22.2	0.880	21.5	LOS B	18.3	131.1	1.00	1.21	1.61	40.1
Approach		765	19	805	2.5	0.880	17.3	LOS B	18.3	131.1	1.00	1.21	1.61	39.0
All Vehicles		1790	55	1884	3.1	0.880	11.7	LOS A	18.3	131.1	0.76	0.89	1.03	41.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [PM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lorraine Street														
1	L2	21	1	22	4.8	0.398	12.3	LOS A	2.9	20.7	0.93	0.99	0.99	41.6
2	T1	52	0	55	0.0	0.398	11.8	LOS A	2.9	20.7	0.93	0.99	0.99	42.1
3	R2	107	2	113	1.9	0.398	15.2	LOS B	2.9	20.7	0.93	0.99	0.99	40.4
Approach		180	3	189	1.7	0.398	13.9	LOS A	2.9	20.7	0.93	0.99	0.99	41.1
East: Roberts Avenue														
4	L2	134	3	141	2.2	0.784	6.8	LOS A	11.5	80.6	0.84	0.66	0.88	43.6
5	T1	662	2	697	0.3	0.784	6.5	LOS A	11.5	80.6	0.84	0.66	0.88	44.3
6	R2	79	0	83	0.0	0.784	9.7	LOS A	11.5	80.6	0.84	0.66	0.88	44.1
Approach		875	5	921	0.6	0.784	6.8	LOS A	11.5	80.6	0.84	0.66	0.88	44.2
North: Lorraine Street														
7	L2	98	1	103	1.0	0.378	8.7	LOS A	2.5	17.8	0.80	0.86	0.80	42.3
8	T1	56	1	59	1.8	0.378	8.5	LOS A	2.5	17.8	0.80	0.86	0.80	44.2
9	R2	88	1	93	1.1	0.378	11.7	LOS A	2.5	17.8	0.80	0.86	0.80	44.0
Approach		242	3	255	1.2	0.378	9.7	LOS A	2.5	17.8	0.80	0.86	0.80	43.4
West: Isaac Street														
10	L2	76	1	80	1.3	0.586	6.2	LOS A	5.1	36.1	0.70	0.66	0.70	45.1
11	T1	484	2	509	0.4	0.586	5.9	LOS A	5.1	36.1	0.70	0.66	0.70	44.9
12	R2	14	0	15	0.0	0.586	9.1	LOS A	5.1	36.1	0.70	0.66	0.70	45.6
Approach		574	3	604	0.5	0.586	6.0	LOS A	5.1	36.1	0.70	0.66	0.70	44.9
All Vehicles		1871	14	1969	0.7	0.784	7.6	LOS A	11.5	80.6	0.80	0.72	0.82	44.0

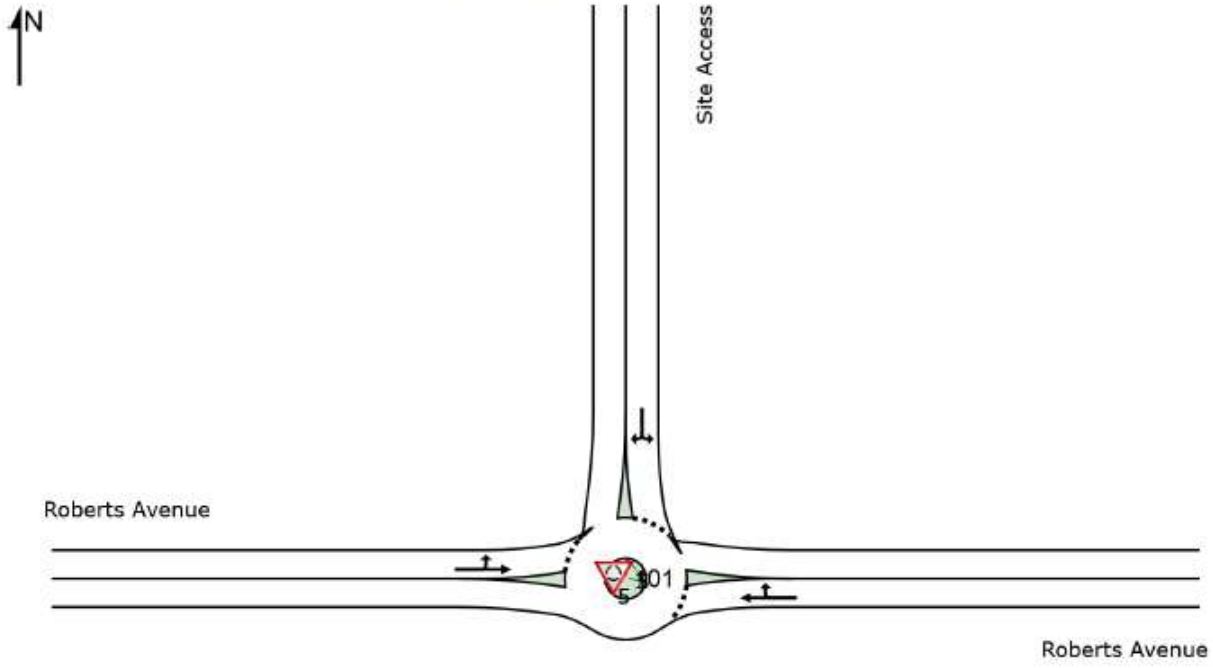
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [AM Peak Roberts Ave & Site Access (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Peak Roberts Ave & Site Access (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Roberts Avenue														
5	T1	565	11	595	1.9	0.520	4.6	LOS A	5.5	39.3	0.42	0.52	0.42	44.6
6	R2	79	1	83	1.3	0.520	10.0	LOS A	5.5	39.3	0.42	0.52	0.42	31.9
Approach		644	12	678	1.9	0.520	5.3	LOS A	5.5	39.3	0.42	0.52	0.42	43.1
North: Site Access														
7	L2	76	0	80	0.0	0.280	6.8	LOS A	1.8	12.7	0.84	0.81	0.84	28.7
9	R2	63	2	66	3.2	0.280	7.0	LOS A	1.8	12.7	0.84	0.81	0.84	23.6
Approach		139	2	146	1.4	0.280	6.9	LOS A	1.8	12.7	0.84	0.81	0.84	26.7
West: Roberts Avenue														
10	L2	80	0	84	0.0	0.693	7.7	LOS A	8.9	63.6	0.57	0.52	0.57	26.5
11	T1	771	20	812	2.6	0.693	5.1	LOS A	8.9	63.6	0.57	0.52	0.57	44.4
Approach		851	20	896	2.4	0.693	5.4	LOS A	8.9	63.6	0.57	0.52	0.57	43.1
All Vehicles		1634	34	1720	2.1	0.693	5.5	LOS A	8.9	63.6	0.53	0.55	0.53	41.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [PM Peak Roberts Ave & Site Access (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Roberts Avenue														
5	T1	727	6	765	0.8	0.855	9.4	LOS A	17.8	125.4	1.00	0.72	1.11	41.9
6	R2	191	1	201	0.5	0.855	14.7	LOS B	17.8	125.4	1.00	0.72	1.11	29.9
Approach		918	7	966	0.8	0.855	10.5	LOS A	17.8	125.4	1.00	0.72	1.11	39.4
North: Site Access														
7	L2	192	0	202	0.0	0.541	6.6	LOS A	4.7	32.8	0.88	0.98	1.02	28.8
9	R2	152	0	160	0.0	0.541	6.6	LOS A	4.7	32.8	0.88	0.98	1.02	23.8
Approach		344	0	362	0.0	0.541	6.6	LOS A	4.7	32.8	0.88	0.98	1.02	26.9
West: Roberts Avenue														
10	L2	157	0	165	0.0	0.708	10.0	LOS A	9.2	64.9	0.85	0.72	0.90	25.7
11	T1	536	5	564	0.9	0.708	7.4	LOS A	9.2	64.9	0.85	0.72	0.90	43.4
Approach		693	5	729	0.7	0.708	8.0	LOS A	9.2	64.9	0.85	0.72	0.90	40.1
All Vehicles		1955	12	2058	0.6	0.855	8.9	LOS A	17.8	125.4	0.93	0.76	1.02	37.5

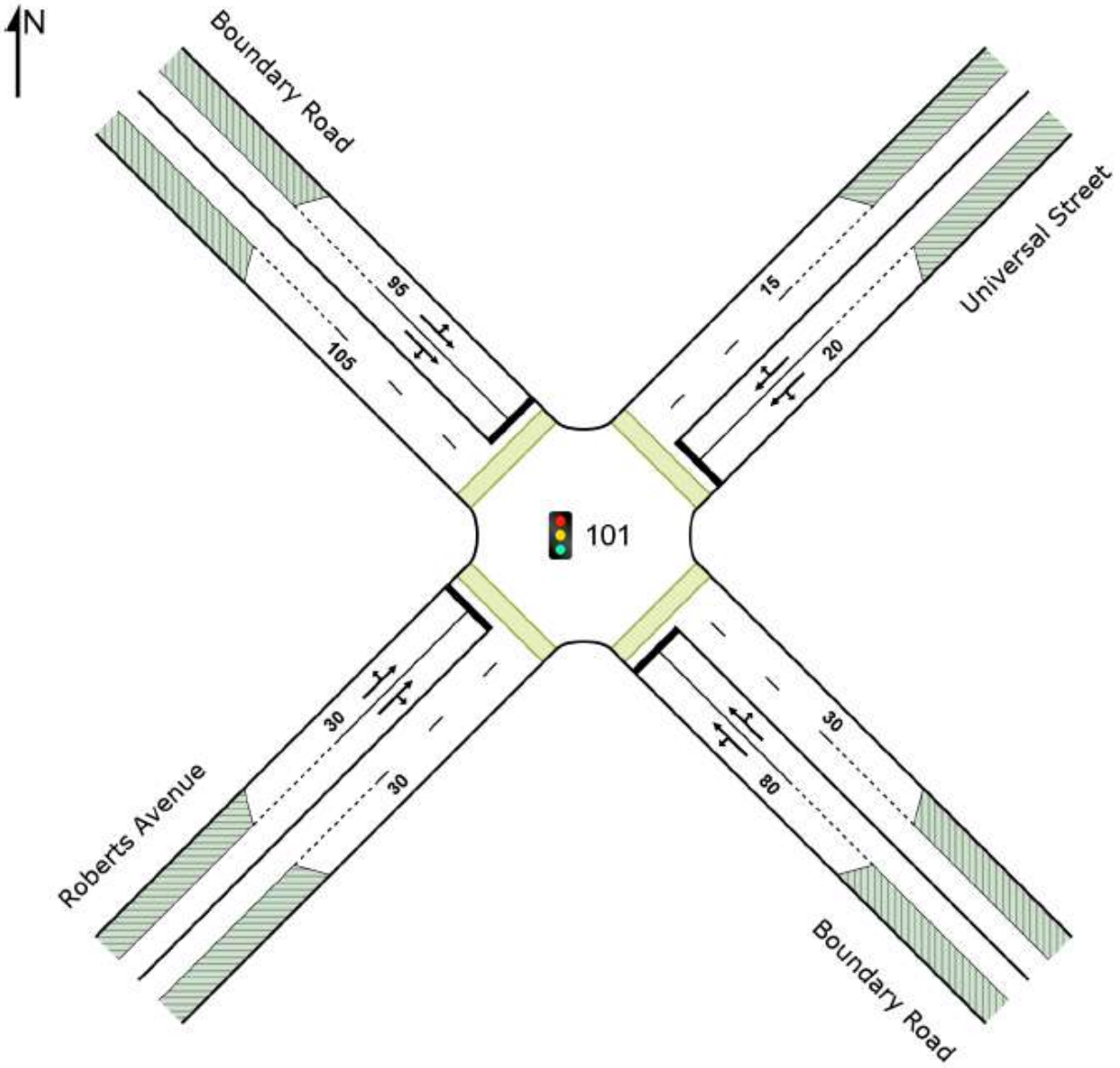
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [AM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 115 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Boundary Road														
1	L2	213	10	224	4.7	0.457	37.7	LOS C	12.2	88.5	0.84	0.79	0.84	25.5
2	T1	450	15	474	3.3	0.789	39.7	LOS C	22.7	163.5	0.94	0.87	1.00	26.7
3	R2	8	1	8	12.5	*0.789	45.1	LOS D	22.7	163.5	0.95	0.89	1.02	30.1
Approach		671	26	706	3.9	0.789	39.1	LOS C	22.7	163.5	0.91	0.85	0.95	26.4
NorthEast: Universal Street														
4	L2	13	0	14	0.0	0.055	17.0	LOS B	1.5	10.5	0.47	0.44	0.47	41.2
5	T1	188	4	198	2.1	0.224	15.3	LOS B	5.5	39.2	0.56	0.51	0.56	37.6
6	R2	29	0	31	0.0	0.224	20.9	LOS B	5.5	39.2	0.58	0.53	0.58	37.9
Approach		230	4	242	1.7	0.224	16.1	LOS B	5.5	39.2	0.55	0.51	0.55	37.9
NorthWest: Boundary Road														
7	L2	44	1	46	2.3	0.602	39.2	LOS C	17.8	128.0	0.89	0.78	0.89	30.4
8	T1	317	10	334	3.2	0.602	35.3	LOS C	17.8	128.0	0.89	0.78	0.89	28.3
9	R2	80	6	84	7.5	0.692	62.8	LOS E	5.0	37.4	1.00	0.87	1.16	16.5
Approach		441	17	464	3.9	0.692	40.7	LOS C	17.8	128.0	0.91	0.80	0.94	26.1
SouthWest: Roberts Avenue														
10	L2	51	3	54	5.9	0.617	20.1	LOS B	12.2	87.2	0.59	0.54	0.59	33.1
11	T1	331	6	348	1.8	0.617	14.6	LOS B	12.2	87.2	0.59	0.54	0.59	38.1
12	R2	297	4	313	1.3	*0.776	33.5	LOS C	14.1	99.6	0.76	0.84	0.87	26.5
Approach		679	13	715	1.9	0.776	23.3	LOS B	14.1	99.6	0.66	0.67	0.71	32.3
All Vehicles		2021	60	2127	3.0	0.789	31.5	LOS C	22.7	163.5	0.79	0.74	0.82	29.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Boundary Road												
P1	Full	19	20	51.7	LOS E	0.1	0.1	0.95	0.95	216.9	214.8	0.99
NorthEast: Universal Street												
P2	Full	10	11	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
NorthWest: Boundary Road												
P3	Full	6	6	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
SouthWest: Roberts Avenue												
P4	Full	12	13	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
All Pedestrians		47	49	51.7	LOS E	0.1	0.1	0.95	0.95	216.9	214.8	0.99

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [PM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Existing)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 115 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Boundary Road														
1	L2	436	2	459	0.5	0.638	35.3	LOS C	20.4	143.5	0.85	0.83	0.85	26.3
2	T1	381	5	401	1.3	0.613	32.7	LOS C	19.0	134.3	0.88	0.77	0.88	29.1
3	R2	10	0	11	0.0	0.613	37.3	LOS C	19.0	134.3	0.88	0.77	0.88	32.6
Approach		827	7	871	0.8	0.638	34.1	LOS C	20.4	143.5	0.87	0.80	0.87	27.7
NorthEast: Universal Street														
4	L2	9	0	9	0.0	0.107	21.6	LOS B	3.0	21.3	0.56	0.48	0.56	39.2
5	T1	334	3	352	0.9	0.434	20.0	LOS B	10.7	75.2	0.65	0.58	0.65	35.3
6	R2	39	0	41	0.0	0.434	25.5	LOS B	10.7	75.2	0.69	0.62	0.69	35.7
Approach		382	3	402	0.8	0.434	20.6	LOS B	10.7	75.2	0.65	0.58	0.65	35.5
NorthWest: Boundary Road														
7	L2	50	0	53	0.0	0.881	47.7	LOS D	32.0	226.0	0.91	0.95	1.09	27.9
8	T1	489	5	515	1.0	0.881	43.9	LOS D	32.0	226.0	0.91	0.95	1.09	25.6
9	R2	130	1	137	0.8	*0.907	79.5	LOS F	9.9	69.8	1.00	1.10	1.56	14.0
Approach		669	6	704	0.9	0.907	51.1	LOS D	32.0	226.0	0.93	0.98	1.18	23.1
SouthWest: Roberts Avenue														
10	L2	68	4	72	5.9	0.537	23.9	LOS B	10.0	71.3	0.64	0.59	0.64	30.3
11	T1	219	2	231	0.9	0.537	18.4	LOS B	10.0	71.3	0.64	0.59	0.64	35.7
12	R2	278	1	293	0.4	*0.932	72.7	LOS F	20.6	144.8	0.90	1.07	1.39	17.2
Approach		565	7	595	1.2	0.932	45.8	LOS D	20.6	144.8	0.77	0.83	1.01	23.7
All Vehicles		2443	23	2572	0.9	0.932	39.4	LOS C	32.0	226.0	0.83	0.82	0.95	26.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Boundary Road												
P1	Full	6	6	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
NorthEast: Universal Street												
P2	Full	4	4	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
NorthWest: Boundary Road												
P3	Full	7	7	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
SouthWest: Roberts Avenue												
P4	Full	2	2	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
All Pedestrians		19	20	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99

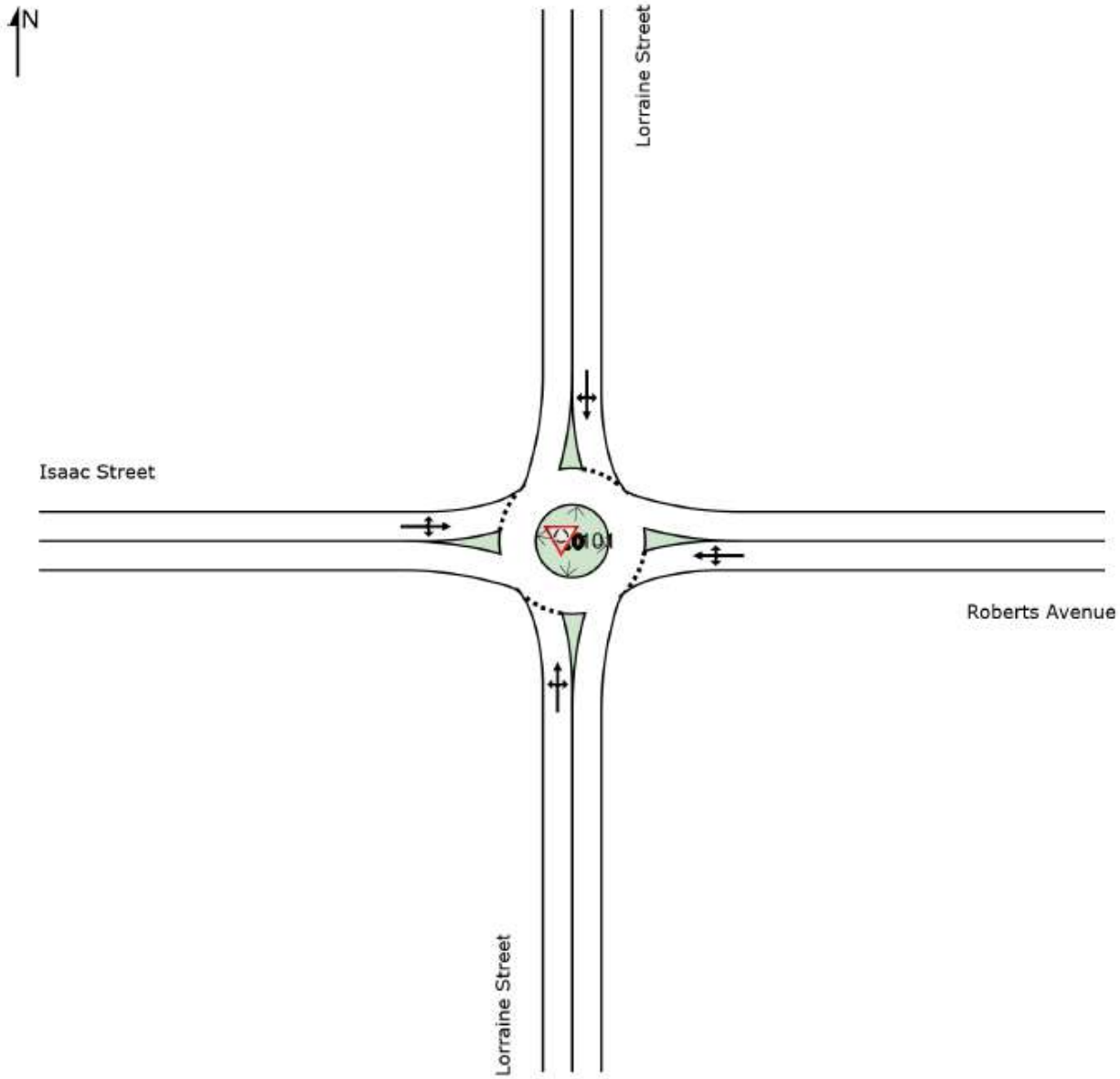
Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: 101 [AM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [AM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lorraine Street														
1	L2	26	3	27	11.5	0.434	10.0	LOS A	3.1	22.1	0.80	0.91	0.86	42.6
2	T1	70	2	74	2.9	0.434	9.3	LOS A	3.1	22.1	0.80	0.91	0.86	43.3
3	R2	190	6	200	3.2	0.434	12.5	LOS A	3.1	22.1	0.80	0.91	0.86	41.7
Approach		286	11	301	3.8	0.434	11.5	LOS A	3.1	22.1	0.80	0.91	0.86	42.2
East: Roberts Avenue														
4	L2	73	5	77	6.8	0.511	4.6	LOS A	4.8	34.0	0.43	0.49	0.43	44.7
5	T1	470	5	495	1.1	0.511	4.3	LOS A	4.8	34.0	0.43	0.49	0.43	45.5
6	R2	83	0	87	0.0	0.511	7.5	LOS A	4.8	34.0	0.43	0.49	0.43	45.3
Approach		626	10	659	1.6	0.511	4.7	LOS A	4.8	34.0	0.43	0.49	0.43	45.4
North: Lorraine Street														
7	L2	54	7	57	13.0	0.306	11.9	LOS A	2.0	15.8	0.90	0.95	0.90	40.3
8	T1	25	2	26	8.0	0.306	11.4	LOS A	2.0	15.8	0.90	0.95	0.90	42.6
9	R2	46	6	48	13.0	0.306	14.9	LOS B	2.0	15.8	0.90	0.95	0.90	42.3
Approach		125	15	132	12.0	0.306	12.9	LOS A	2.0	15.8	0.90	0.95	0.90	41.6
West: Isaac Street														
10	L2	127	8	134	6.3	0.888	18.5	LOS B	19.2	137.4	1.00	1.23	1.66	39.6
11	T1	635	9	668	1.4	0.888	18.0	LOS B	19.2	137.4	1.00	1.23	1.66	38.3
12	R2	9	2	9	22.2	0.888	22.4	LOS B	19.2	137.4	1.00	1.23	1.66	39.7
Approach		771	19	812	2.5	0.888	18.2	LOS B	19.2	137.4	1.00	1.23	1.66	38.5
All Vehicles		1808	55	1903	3.0	0.888	12.1	LOS A	19.2	137.4	0.76	0.91	1.05	41.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [PM Peak Roberts Ave & Isaac St & Lorraine St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lorraine Street														
1	L2	21	1	22	4.8	0.409	12.7	LOS A	3.1	21.7	0.94	1.01	1.01	41.4
2	T1	52	0	55	0.0	0.409	12.2	LOS A	3.1	21.7	0.94	1.01	1.01	41.9
3	R2	109	2	115	1.8	0.409	15.5	LOS B	3.1	21.7	0.94	1.01	1.01	40.2
Approach		182	3	192	1.6	0.409	14.3	LOS A	3.1	21.7	0.94	1.01	1.01	40.9
East: Roberts Avenue														
4	L2	135	3	142	2.2	0.792	6.9	LOS A	11.9	83.8	0.85	0.66	0.90	43.5
5	T1	669	2	704	0.3	0.792	6.6	LOS A	11.9	83.8	0.85	0.66	0.90	44.3
6	R2	80	0	84	0.0	0.792	9.8	LOS A	11.9	83.8	0.85	0.66	0.90	44.1
Approach		884	5	931	0.6	0.792	7.0	LOS A	11.9	83.8	0.85	0.66	0.90	44.1
North: Lorraine Street														
7	L2	100	1	105	1.0	0.384	8.8	LOS A	2.6	18.2	0.81	0.86	0.81	42.2
8	T1	56	1	59	1.8	0.384	8.6	LOS A	2.6	18.2	0.81	0.86	0.81	44.1
9	R2	88	1	93	1.1	0.384	11.8	LOS A	2.6	18.2	0.81	0.86	0.81	44.0
Approach		244	3	257	1.2	0.384	9.8	LOS A	2.6	18.2	0.81	0.86	0.81	43.4
West: Isaac Street														
10	L2	76	1	80	1.3	0.593	6.3	LOS A	5.3	37.3	0.70	0.67	0.72	45.1
11	T1	489	2	515	0.4	0.593	6.1	LOS A	5.3	37.3	0.70	0.67	0.72	44.8
12	R2	14	0	15	0.0	0.593	9.3	LOS A	5.3	37.3	0.70	0.67	0.72	45.6
Approach		579	3	609	0.5	0.593	6.2	LOS A	5.3	37.3	0.70	0.67	0.72	44.9
All Vehicles		1889	14	1988	0.7	0.792	7.8	LOS A	11.9	83.8	0.81	0.73	0.84	43.9

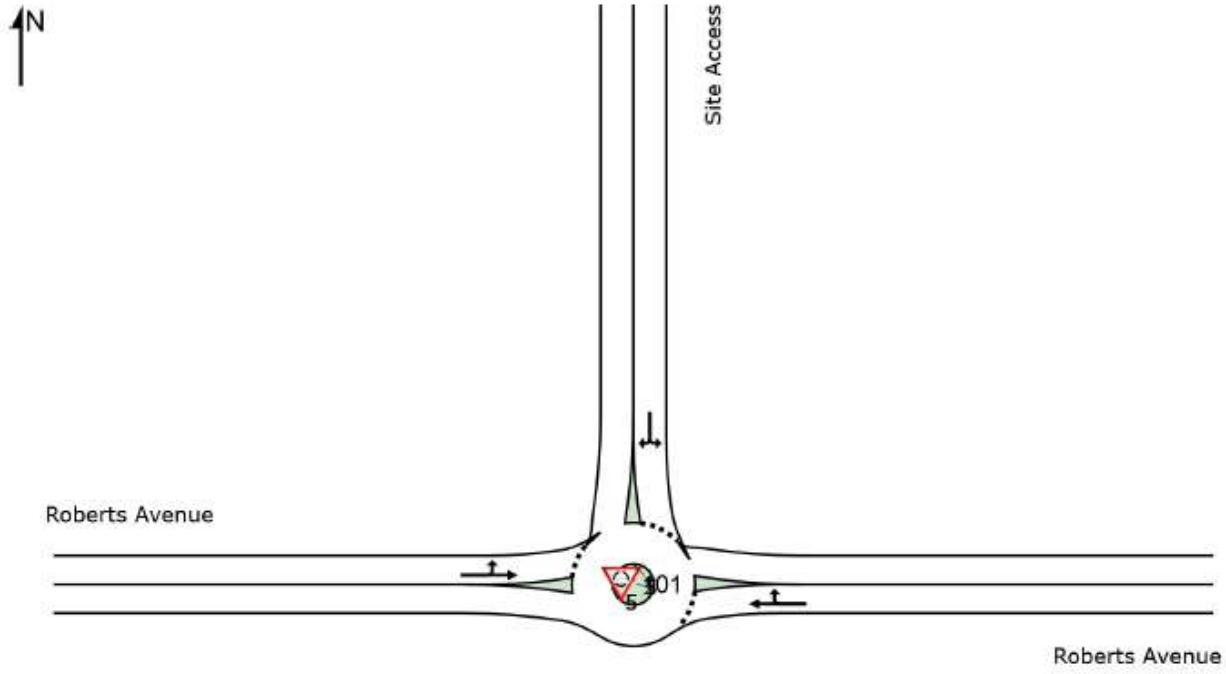
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [AM Peak Roberts Ave & Site Access (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: VARGA TRAFFIC PLANNING | Licence: PLUS / 1PC | Created: Friday, 23 February 2024 8:34:55 AM
Project: Z:\DATA\Data\Jobs01\Jobs\24work\24039_84DRobertsAveMortdale\SIDRA\240222 SIDRA.sip9

MOVEMENT SUMMARY

Site: 101 [AM Peak Roberts Ave & Site Access (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Roberts Avenue														
5	T1	565	11	595	1.9	0.541	4.8	LOS A	5.8	41.6	0.46	0.54	0.46	44.4
6	R2	91	1	96	1.1	0.541	10.1	LOS A	5.8	41.6	0.46	0.54	0.46	31.8
Approach		656	12	691	1.8	0.541	5.5	LOS A	5.8	41.6	0.46	0.54	0.46	42.7
North: Site Access														
7	L2	88	0	93	0.0	0.328	7.0	LOS A	2.2	15.3	0.87	0.85	0.87	28.6
9	R2	72	2	76	2.8	0.328	7.1	LOS A	2.2	15.3	0.87	0.85	0.87	23.6
Approach		160	2	168	1.3	0.328	7.0	LOS A	2.2	15.3	0.87	0.85	0.87	26.7
West: Roberts Avenue														
10	L2	89	0	94	0.0	0.717	7.9	LOS A	9.5	68.1	0.63	0.54	0.63	26.4
11	T1	771	20	812	2.6	0.717	5.4	LOS A	9.5	68.1	0.63	0.54	0.63	44.2
Approach		860	20	905	2.3	0.717	5.7	LOS A	9.5	68.1	0.63	0.54	0.63	42.8
All Vehicles		1676	34	1764	2.0	0.717	5.7	LOS A	9.5	68.1	0.59	0.57	0.59	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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 [PM Peak Roberts Ave & Site Access (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Roberts Avenue														
5	T1	727	6	765	0.8	0.879	11.2	LOS A	20.7	145.7	1.00	0.76	1.18	40.8
6	R2	203	1	214	0.5	0.879	16.5	LOS B	20.7	145.7	1.00	0.76	1.18	29.1
Approach		930	7	979	0.8	0.879	12.3	LOS A	20.7	145.7	1.00	0.76	1.18	38.3
North: Site Access														
7	L2	204	0	215	0.0	0.578	7.3	LOS A	5.3	37.3	0.90	1.05	1.08	28.6
9	R2	161	0	169	0.0	0.578	7.3	LOS A	5.3	37.3	0.90	1.05	1.08	23.5
Approach		365	0	384	0.0	0.578	7.3	LOS A	5.3	37.3	0.90	1.05	1.08	26.6
West: Roberts Avenue														
10	L2	166	0	175	0.0	0.730	10.8	LOS A	10.2	71.7	0.89	0.75	0.97	25.3
11	T1	536	5	564	0.9	0.730	8.2	LOS A	10.2	71.7	0.89	0.75	0.97	42.8
Approach		702	5	739	0.7	0.730	8.8	LOS A	10.2	71.7	0.89	0.75	0.97	39.4
All Vehicles		1997	12	2102	0.6	0.879	10.2	LOS A	20.7	145.7	0.94	0.81	1.09	36.6

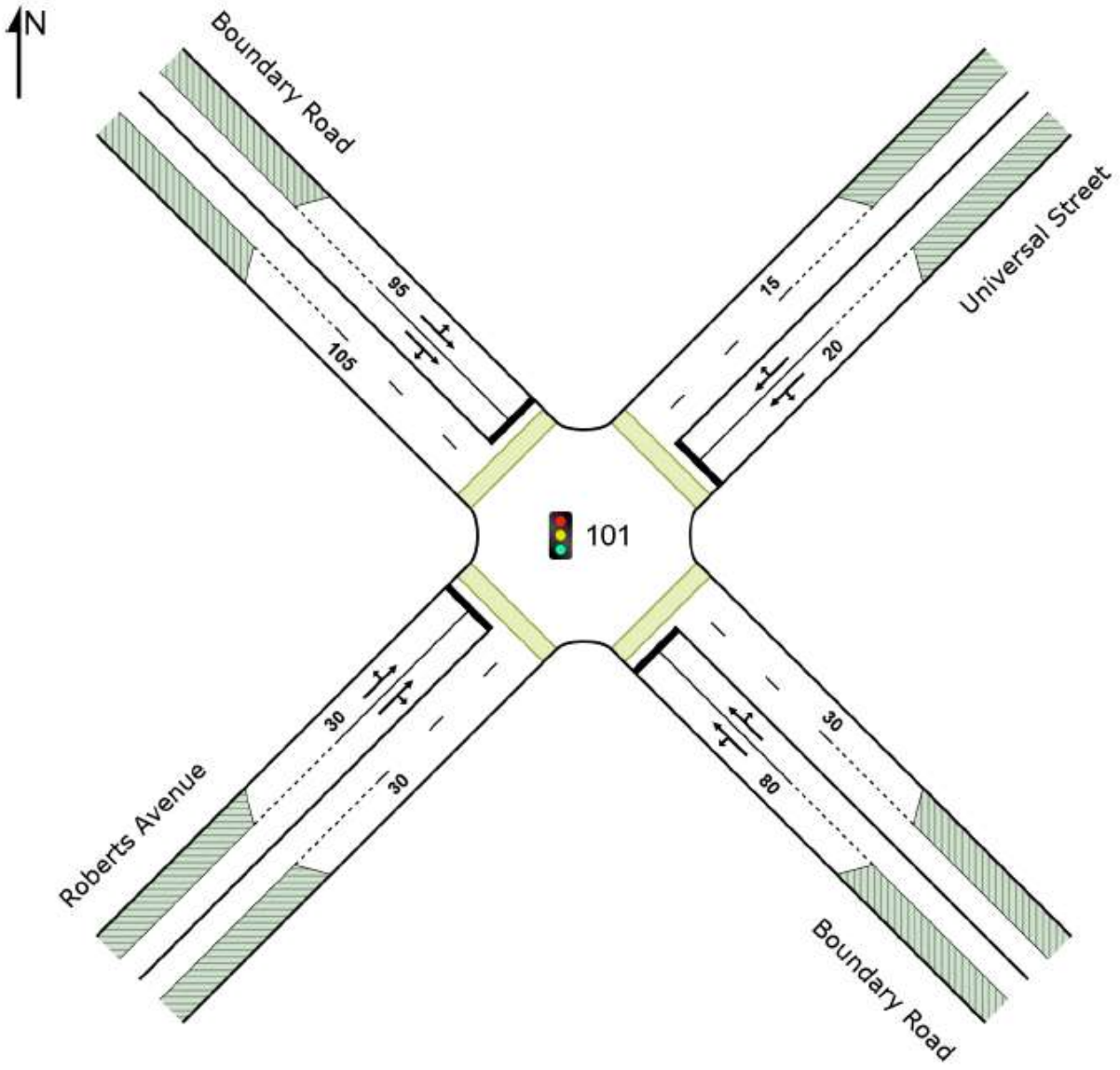
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [AM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: VARGA TRAFFIC PLANNING | Licence: PLUS / 1PC | Created: Friday, 23 February 2024 8:34:58 AM
Project: Z:\DATA\Data\Jobs01\Jobs\24work\24039_84DRobertsAveMortdale\SIDRA\240222 SIDRA.sip9

MOVEMENT SUMMARY

Site: 101 [AM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 115 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Boundary Road														
1	L2	218	10	229	4.6	0.461	37.8	LOS C	12.3	89.6	0.84	0.79	0.84	25.4
2	T1	450	15	474	3.3	0.798	40.2	LOS C	23.0	165.9	0.94	0.88	1.01	26.5
3	R2	8	1	8	12.5	*0.798	45.6	LOS D	23.0	165.9	0.95	0.89	1.03	30.0
Approach		676	26	712	3.8	0.798	39.5	LOS C	23.0	165.9	0.91	0.85	0.96	26.2
NorthEast: Universal Street														
4	L2	13	0	14	0.0	0.057	17.0	LOS B	1.5	10.7	0.47	0.43	0.47	41.2
5	T1	193	4	203	2.1	0.230	15.4	LOS B	5.6	40.1	0.56	0.51	0.56	37.6
6	R2	29	0	31	0.0	0.230	20.9	LOS B	5.6	40.1	0.58	0.53	0.58	37.9
Approach		235	4	247	1.7	0.230	16.1	LOS B	5.6	40.1	0.56	0.51	0.56	37.9
NorthWest: Boundary Road														
7	L2	44	1	46	2.3	0.602	39.2	LOS C	17.8	128.0	0.89	0.78	0.89	30.4
8	T1	317	10	334	3.2	0.602	35.3	LOS C	17.8	128.0	0.89	0.78	0.89	28.3
9	R2	82	6	86	7.3	0.716	63.6	LOS E	5.2	38.7	1.00	0.89	1.19	16.4
Approach		443	17	466	3.8	0.716	41.0	LOS C	17.8	128.0	0.91	0.80	0.95	26.0
SouthWest: Roberts Avenue														
10	L2	52	3	55	5.8	0.633	20.2	LOS B	12.5	89.2	0.59	0.55	0.59	33.1
11	T1	337	6	355	1.8	0.633	14.6	LOS B	12.5	89.2	0.59	0.55	0.59	38.1
12	R2	302	4	318	1.3	*0.809	37.7	LOS C	15.3	108.4	0.77	0.87	0.93	25.0
Approach		691	13	727	1.9	0.809	25.1	LOS B	15.3	108.4	0.67	0.69	0.74	31.4
All Vehicles		2045	60	2153	2.9	0.809	32.3	LOS C	23.0	165.9	0.79	0.75	0.84	28.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Boundary Road												
P1	Full	19	20	51.7	LOS E	0.1	0.1	0.95	0.95	216.9	214.8	0.99
NorthEast: Universal Street												
P2	Full	10	11	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
NorthWest: Boundary Road												
P3	Full	6	6	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
SouthWest: Roberts Avenue												
P4	Full	12	13	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
All Pedestrians		47	49	51.7	LOS E	0.1	0.1	0.95	0.95	216.9	214.8	0.99

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [PM Peak Boundary Rd & Roberts Ave & Universal St (Site Folder: Proposed)]

84D Roberts Ave, Mortdale
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 115 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Boundary Road														
1	L2	442	2	465	0.5	0.688	36.3	LOS C	21.1	148.3	0.87	0.84	0.87	25.9
2	T1	381	5	401	1.3	0.629	33.7	LOS C	19.3	136.3	0.89	0.78	0.89	28.8
3	R2	10	0	11	0.0	0.629	38.2	LOS C	19.3	136.3	0.89	0.78	0.89	32.3
Approach		833	7	877	0.8	0.688	35.1	LOS C	21.1	148.3	0.88	0.81	0.88	27.4
NorthEast: Universal Street														
4	L2	9	0	9	0.0	0.107	21.1	LOS B	3.0	21.2	0.55	0.47	0.55	39.5
5	T1	338	3	356	0.9	0.431	19.4	LOS B	10.6	74.9	0.64	0.57	0.64	35.6
6	R2	39	0	41	0.0	0.431	24.8	LOS B	10.6	74.9	0.68	0.61	0.68	36.0
Approach		386	3	406	0.8	0.431	20.0	LOS B	10.6	74.9	0.65	0.57	0.65	35.8
NorthWest: Boundary Road														
7	L2	50	0	53	0.0	0.897	51.6	LOS D	33.5	236.3	0.93	0.99	1.14	26.9
8	T1	489	5	515	1.0	0.897	47.8	LOS D	33.5	236.3	0.93	0.99	1.14	24.6
9	R2	132	1	139	0.8	*0.961	97.1	LOS F	11.2	79.2	1.00	1.19	1.76	12.1
Approach		671	6	706	0.9	0.961	57.8	LOS E	33.5	236.3	0.94	1.03	1.26	21.6
SouthWest: Roberts Avenue														
10	L2	69	4	73	5.8	0.546	23.3	LOS B	10.1	71.8	0.63	0.59	0.63	30.7
11	T1	224	2	236	0.9	0.546	17.9	LOS B	10.1	71.8	0.63	0.59	0.63	36.0
12	R2	284	1	299	0.4	*0.940	75.2	LOS F	21.5	150.8	0.90	1.08	1.41	16.8
Approach		577	7	607	1.2	0.940	46.8	LOS D	21.5	150.8	0.76	0.83	1.02	23.5
All Vehicles		2467	23	2597	0.9	0.961	41.6	LOS C	33.5	236.3	0.83	0.84	0.98	25.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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* Critical Movement (Signal Timing)

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Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
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NorthEast: Universal Street												
P2	Full	4	4	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
NorthWest: Boundary Road												
P3	Full	7	7	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
SouthWest: Roberts Avenue												
P4	Full	2	2	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99
All Pedestrians		19	20	51.7	LOS E	0.0	0.0	0.95	0.95	216.9	214.8	0.99

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.