Port Macquarie Aquatic Centre

Site Investigation Transport Review

PREPARED FOR CO-OP STUDIO | 19 OCTOBER 2023 | 300304850

We design with community in mind

Stantec

Revision

Revision	Date	Comment	Prepared By	Approved By
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Karen McNatty

For and on behalf of

Stantec Australia Pty Ltd

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Acknowledgment of Country

In the spirit of reconciliation, Stantec acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

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1. Introduction

1.1 Background

This report supports a Development Application for development of a proposed aquatic facility in Port Macquarie, located in Macquarie Park at 42 Gordon Street. The new Aquatic Centre is proposed to replace the existing Port Macquarie Olympic Pool at 28 Gordon Street, Port Macquarie. The proposal incorporates new indoor and outdoor pool and leisure facilities, a gymnasium, amenities and change rooms, and a café.

CO-OP Studios engaged Stantec in May 2023 to complete a Transport Impact Assessment as part of the redevelopment.

1.2 Site Context

The project offers a unique opportunity to meet the recreational needs for one of the fastest growing regional areas in NSW. The Port Macquarie Olympic Pool is now 55 years old and requires a significant upgrade to meet the future demands of the community.

In 2005, Council identified Macquarie Park as the preferred site for an upgraded facility being a greenfield site large enough to accommodate the proposal. Council has recently revisited the project as part of an Aquatic Facilities Strategic Review.

1.3 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- existing traffic and parking conditions surrounding the site
- suitability of the proposed parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site
- the transport impact of the development proposal on the surrounding road network.

1.4 Pre-lodgement Meeting Advice

Council provided pre-lodgement advice following a meeting held on Tuesday 18 April 2023. Stantec has reproduced the advice with key responses to transport related issues identified during the meeting in Table 2.1.

Table 1.1 – Pre-Lodgement meeting advice

Item	Port Macquarie Hastings Council comments	Stantec comments
Engineering		
4	Internal access aisles and parking bays will be assessed for conformance with AS 2890, and in particular part 1 for cars, part 2 for garbage and delivery trucks, and part 6 for disabled parking (if required by the BCA or other standards). Specific comments on the plans provided: • Show the AS 2890 turning templates on drawings to demonstrate the below criteria have been achieved. • Provide splay corners at the entrance to the access handle to enhance sight lines to/for pedestrians (2890.1 Figure 3.3). • Minimum roadway width of 5.5m (2890.1 Clause 2.5.2) - narrowing of 3.6m can be accepted for this development if passing opportunities for vehicles are provided at both ends. • Entry to and exit from site is to be in a forwards only manner. Provision for a Class 1A turning bay (3 point turn or better) is required near the end of the access aisle	The car park layout and loading area have been designed to generally comply with Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004, AS/NZS2890.6:2022 and AS/NZS2890.6:2022), subject to adoption of minor design review comments contained in Appendix B. Detailed commentary around design is provided in Section 4.4 and 5.4 of this report, and design review including swept path assessment provided in Appendix B. All vehicles would enter and exit in a forward direction, splay corners will be provided at each site access and road widths are all a minimum of 5.5 metres, with exception of the one-way event access road that alternates between 4.38 metres and 6.5 metres.
3/5	Due to the likely traffic generated by the development, the driveway crossing within the road reserve shall conform to Council's ASD 202	We defer to the Civil Engineer to respond on

Item	Port Macquarie Hastings Council comments	Stantec comments
	heavy duty standard drawing as a minimum.	general compliance with ASD 202. Notwithstanding, with regards to note 6 of ASD 202, we note that the width of each driveway has been designed to accommodate the required turning paths of each design vehicle, as shown in Appendix B.
6	A Traffic Impact Assessment (TIA) will be required: • TIA is to be prepared by a qualified and/or experienced traffic consultant. • TIA is to be prepared in accordance with guidelines contained in the Roads and Maritime Services Guide to Traffic Generating Developments (2002), and AUSTROADS Guide to Traffic Management, Part 12: Traffic Impacts of Development.	This TIA has been prepared by a qualified traffic consultant and in accordance with noted guidelines.
	• TIA should use data obtained from an existing facility which operates in a similar manner to the proposed facility, and comment on any differences in operation.	Stantec completed a detailed review of existing facilities similar to that proposed, within town centres with similar transport context and demographics, and found no suitable sites that would be appropriate for estimating parking demand at the proposed site. Detailed review of the parking demand characteristics has been provided in section 4.1 and 4.2 of the report.
	• The likely traffic generation should be quantified, in terms of the number of vehicle trips during peak hours, number of trips per day, and breakdown of the types of vehicle users (e.g. residents' cars, buses, staff cars, service trucks). • The likely 85th percentile (time-weighted) parking demand is to be quantified. • Comment on the likely traffic and parking demand ten years after the development.	The parking demand and adequacy of supply is detailed in section 4.1 and 4.2 of the report. The traffic generated by the development and impact on the network is provided in section 6 of the report.
	• Please provide carparking layout(s) including the proposed vehicle circulation. Please also indicate bus circulation and set-down/pick up locations.	The vehicle circulation is illustrated in Section 3 of the report, with swept path assessment provided in Appendix B.
7	If a new "Plant Access" driveway is proposed off Gordon Street, this driveway crossing within the road reserve will also need to Council's ASD 202 heavy duty standard drawing as a minimum. Please also provide the sweep paths, demonstrating how a medium rigid vehicle would enter and leave the site in a forward manner only.	We defer to the Civil Engineer to respond on general compliance with ASD 202. Notwithstanding, with regards to note 6 of ASD 202, we note that the width of the plant access driveway has been designed to accommodate turning paths of vehicles up to and including 8.8m MRV, as shown in Appendix B. All vehicles would enter and exit in a forward direction.

1.5 References

In preparing this report, reference has been made to the following:

- inspections of the site and its surrounds
- Port Macquarie-Hastings Development Control Plan (DCP) 2011
- Port Macquarie-Hastings Local Environmental Plan (LEP) 2011
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- Architectural plans as prepared by CO-OP and referenced in this report
- The Port Macquarie-Hastings Council Aquatic Facilities Strategy (2019) report, prepared by Otium Planning Group
- other documents and data as referenced in this report.

2. Existing Conditions

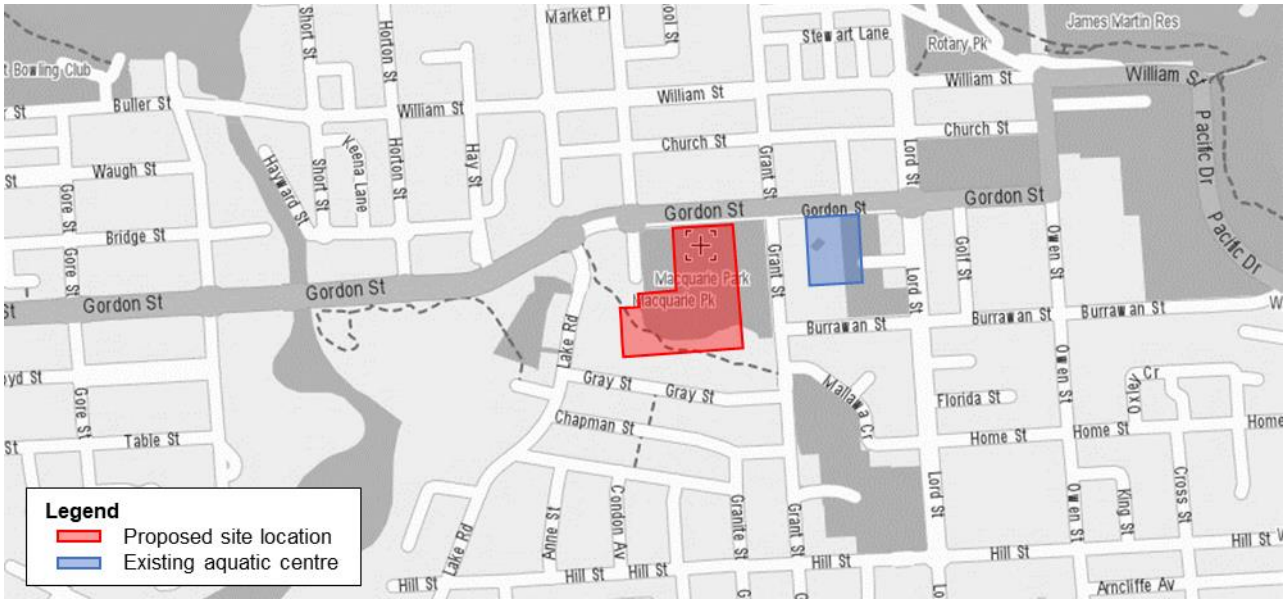
2.1 Location

The subject site is at 42 Gordon Street, Port Macquarie and is proposed to occupy the majority of the existing Macquarie Park with a frontage of 100 metres to Gordon Street to the north, 30 metres to Munster Street to the north-west, 90 metres to Grant Street to the east and 350 metres to Wrights Creek to the south. The site currently has a land use classification as Public Recreation (RE1) and consists of three soccer fields, a collection of netball courts at its southern boundary, associated amenities and two car parking facilities.

The existing Port Macquarie Olympic Pool is at 28 Gordon Street, Port Macquarie, 200 metres east of the proposed site. The surrounding land uses are dominated by low and medium density residential to the south, with commercial, community and retail uses along Grant Street and north-west of the site in Port Macquarie town centre.

The location of the site and its extents is shown in Figure 2-1 and Figure 2-2, while the LEP land use map is shown in Figure 2-3.

Figure 2-1 – Subject Site and its environs

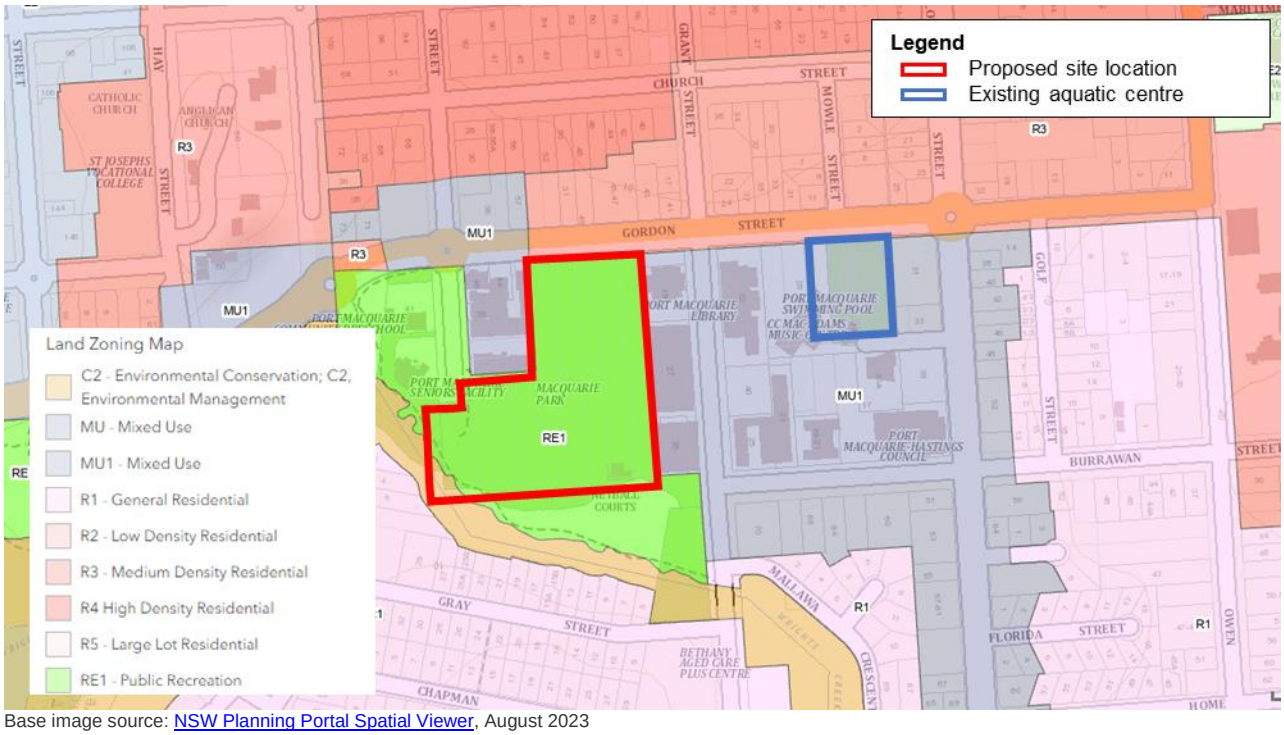


Base image source: Sydway, May 2023

Figure 2-2 – Aerial image

Base image source: Nearmap, August 2023

Figure 2-3 – Land Zoning Map LEP 2011



Base image source: NSW Planning Portal Spatial Viewer, August 2023

2.2 Transport Network

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW (TfNSW) responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules, most recently amended on 19 March 2018.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.

Sub-Arterial Roads – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).

Collector Roads – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.

Local Roads – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

A summary of the existing road network is tabulated in Table 2.1 and select photos of key roads shown in Figure 2-4 to Figure 2-7.

Table 2.1 – Road network summary

Name	Function	Description
Gordon Street	Sub-Arterial	• East-west orientation • Forms an extension of Oxley Highway east of Hastings River Road to the west of the site and terminates at Owen Street east of the site • Four-lane, two-way configuration near the site, with a central median • Posted 60km/hr speed limit • Approximately 23m road width and 30m road reserve • Parking is permitted on both sides of the road.
Lord Street	Sub-Arterial	• North-south orientation • Stewart Street in the north turning into Kennedy Drive in the south • Four-lane, two-way configuration near the site, with a central median • Posted 50km/h speed limit • Approximately 22m road width and 30m road reserve • Parking is permitted on both sides of the road
Munster Street	Collector Road	• North-south orientation and forms cul-de-sac south of Gordon Street • Two-lane, two way configuration near the site • Posted 50km/h speed limit, functionally lower • Approximately 22m road width and 30m road reserve • Perpendicular angled parking is permitted on both sides of the road
Grant Street	Collector Road	• North-south orientation • Two-lane, two-way configuration near the site • Posted 50km/h speed limit • Approximately 20m road width and 30m road reserve • Time-restricted angled parking provided on both sides of the road
Burrawan Street	Local Road	• East-west orientation with two-lane, two-way configuration near the site • Posted 50km/h speed limit • Approximately 17m road width and 30m road reserve • A combination of parallel and perpendicular parking along the street, with varying time restriction.

Figure 2-4 – Gordon Street (looking west from Munster Street)

Figure 2-5 – Gordon Street (looking east towards Lord Street)

Figure 2-6 – Grant Street (looking north to Gordon Street)

Figure 2-7 – Munster Street (looking north to Gordon Street)

2.3 Road Network Operation

2.3.1 Previous Transport Study

As part of a comprehensive Local Government Area (LGA) Traffic Study and Port Macquarie Transport Networking Improvement Planning Project, Port Macquarie-Hastings Council (Council) has prepared an LGA wide traffic model, comprising a mesoscopic scale model of the entire LGA with a hybrid microsimulation core, calibrated and validated to traffic conditions in February 2020.

Outcomes from the most recent traffic study are not publicly available. Notwithstanding, based on preliminary mesoscopic modelling prepared in 2018/ 2019, the Port Macquarie-Hastings LGA Traffic Study Plain English Summary Report prepared in October 2019 recommends a road network strategy to manage the Port Macquarie-Hastings Road network for the next 20 years. This includes a combination of new road links, key corridor upgrades, localised works and rural road improvements. Key outcomes from the Traffic Study (October 2019) pertaining directly to the site include:

- The study recommends focusing on traffic management in the CBD area, with a focus on safety, accessibility, and pedestrian movement.
- Local works are recommended at the Gordon Street/ Horton Street intersection, located 400 metres west of Munster Street, including upgrading the intersection from a roundabout to traffic signals to increase capacity and increase pedestrian safety.

- Corridor works are recommended along Lake Road and Ocean Drive to improve access to/ from side streets hence assumed to have limited benefit to corridor performance generally.
- A new orbital road is proposed and expected to have significant benefits to the operation of the regions road network.

2.3.2 Updated Traffic Volumes

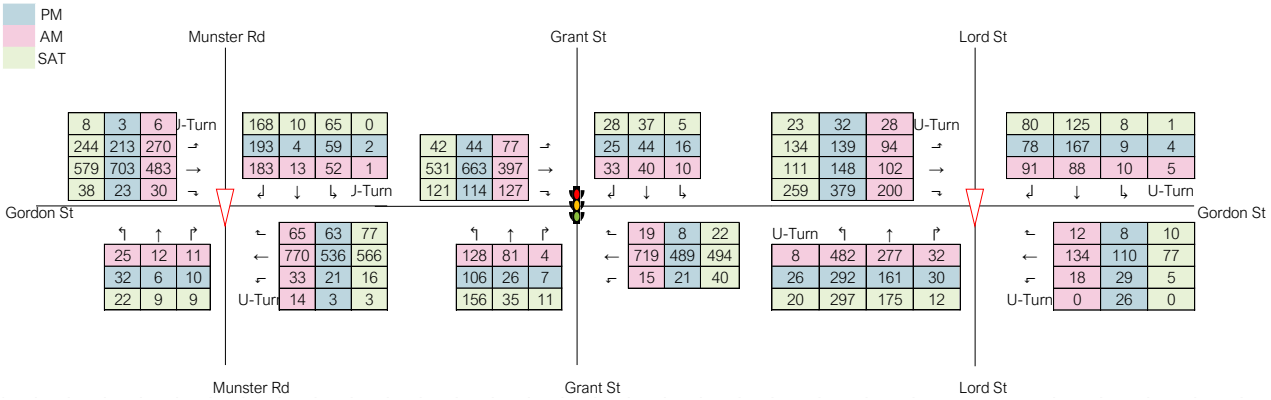
Stantec commissioned traffic movement counts on key roads in the vicinity of the site on Friday, 18 August and Saturday, 19 August 2023 during the following peak periods:

- Friday, 6:00am to 9:00am and 3:00pm to 6:00pm
- Saturday 10:30am to 1:30pm.

The common weekday AM and PM peak and Saturday midday peak hours were found to occur from 8:00 am to 9:00 am, 3:00 pm to 4:00 pm and 11:15am to 12:15pm respectively.

The weekday AM and PM and Saturday midday peak hour traffic volumes are summarised in Figure 2.8.

Figure 2.8: Existing weekday AM/PM and Saturday midday peak hour traffic volumes



2.4 Intersection Operation

The operation of the key intersections within the study area has been assessed using SIDRA INTERSECTION[1], a modelling software package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by the Transport for NSW, is vehicle delay. SIDRA INTERSECTION determines the average delay that vehicles encounter and provides a measure of the level of service.

Table 2.2 shows the criteria that SIDRA INTERSECTION adopts in assessing the level of service.

Table 2.2: SIDRA INTERSECTION Level of Service Criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
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 crash study required
D	43 to 56	Near capacity	Near capacity, crash study required
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

All intersections have been modelled as a SIDRA network model. SCATS phasing data for the Gordon Street/ Grant Road signalised intersection on each survey day has also been obtained from TfNSW to assist with calibrating and validating the traffic model.

[1] Program used under license from Akcelik & Associates Pty Ltd.

Table 2.3 presents a summary of the existing operation of the intersection, with full results presented in Appendix A of this report.

Table 2.3: Existing Operating Conditions

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	Average queue (m)	Level of Service (LOS)
Gordon Street Road/ Munster Street	AM	0.09	13	1	LOS A
	PM	0.45	14	7	LOS A
	Saturday	0.40	13	6	LOS A
Gordon Street/ Grant Road	AM	0.54	15	36	LOS B
	PM	0.49	13	30	LOS A
	Saturday	0.39	13	22	LOS A
Gordon Road/ Lord Road	AM	0.22	12	3	LOS A
	PM	0.09	13	1	LOS A
	Saturday	0.05	12	1	LOS A

The results presented in Table 2.3 indicate that all intersections currently operate well within all peak hours at LOS B or better. Average queue lengths are minor with most intersections presenting queues less than 36 metres in length.

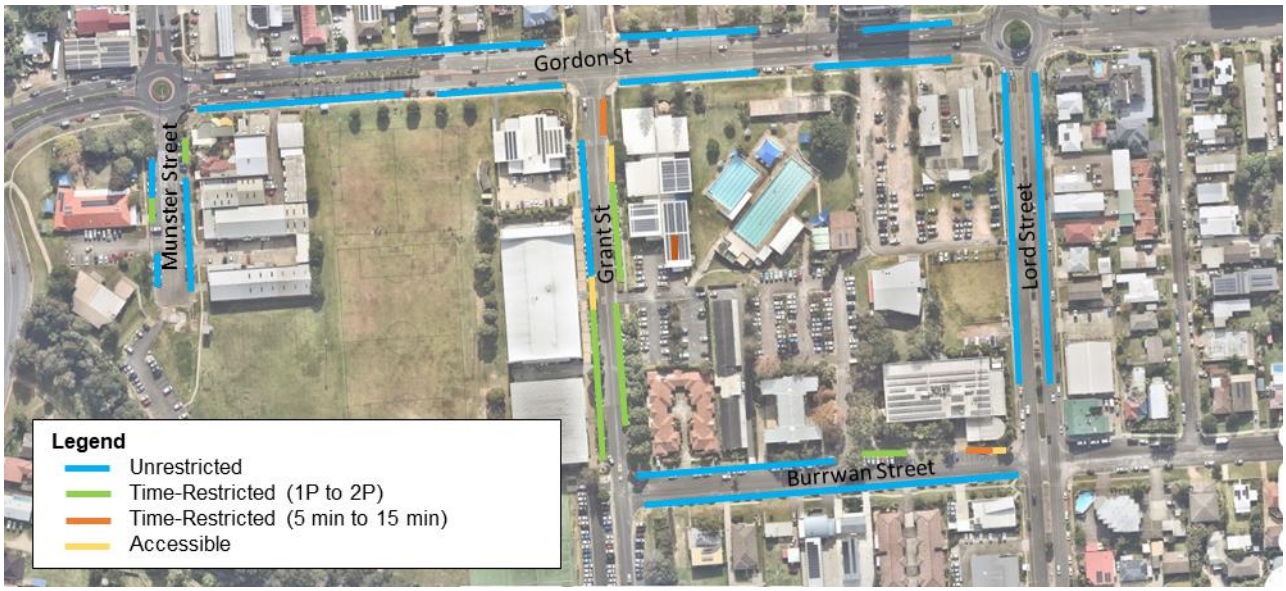
On the basis of the above assessment, it is clear that all intersections operate well with minimal queues and delays on all approaches.

2.5 Car Parking

2.5.1 On-Street Supply

Stantec compiled an inventory of publicly available on-street car parking within the study area. The car parking survey area is shown indicatively in Figure 2-9, with the breakdown of the car parking supply and corresponding restrictions detailed in Table 2.4.

Figure 2-9 – On-street parking study area



Base image source: Nearmap

Table 2.4 – On-street parking supply

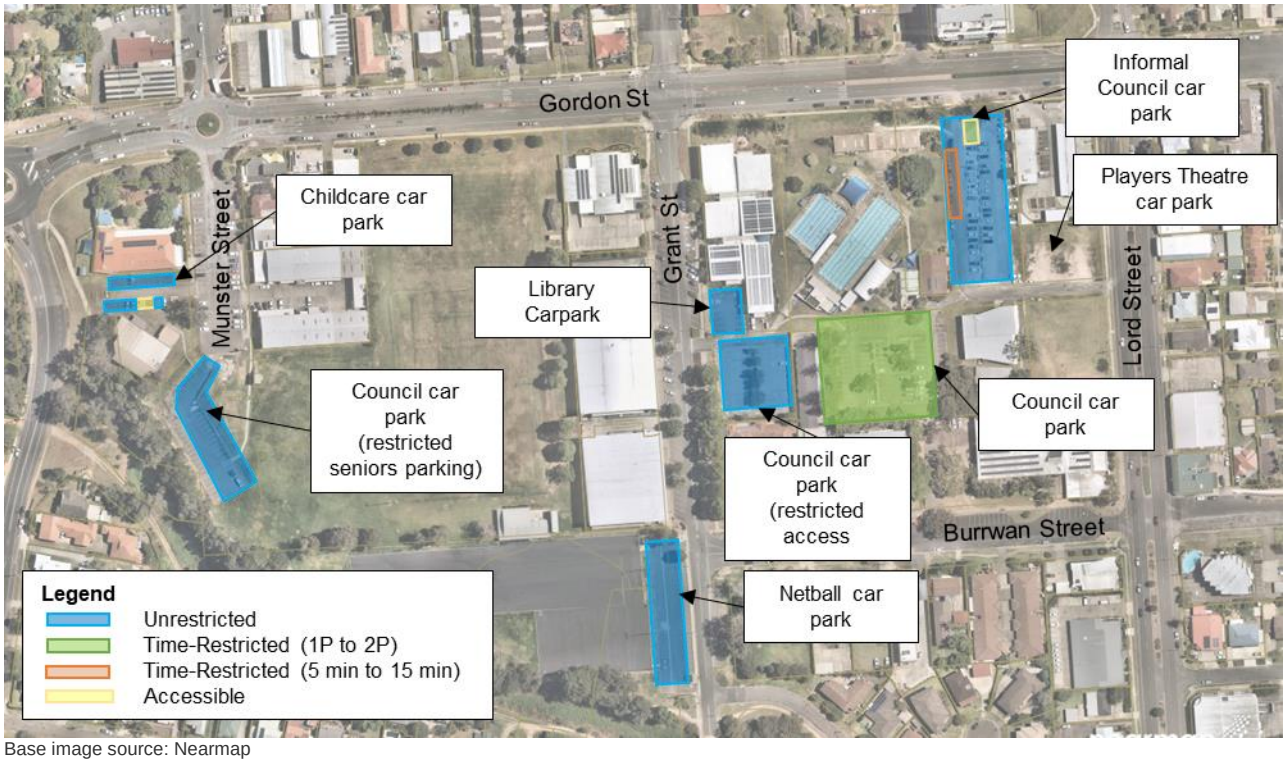
Street Name	Restrictions	Supply
Gordon Street	Unrestricted	59
Lord Street	Unrestricted	28
Munster Street	Unrestricted	32
	IP parking	14
Grant Street	Unrestricted	13
	2P parking	57
	5 min parking	1
	Accessible	5
Burrawan Street	Unrestricted	39
	2P parking	12
	15 min parking	4
	Accessible	1
	Total	**265 spaces**

As shown, most of the study area streets include unrestricted kerbside parking, including parking on both sides of Gordon Street, Lord Street and Burrawan Street. Munster Street includes a mix of unrestricted and time restricted parking while Grant Street is mostly time restricted, reflecting the demand profiles associated with the commercial land uses in the immediate area.

2.5.2 Off-Street Parking

Stantec also compiled an inventory of publicly available off-street car parking, with the survey area shown in Figure 2-10 and breakdown detailed in Table 2.5.

Figure 2-10 – Off-street parking study area



Base image source: Nearmap

Table 2.5 – Off-street parking supply

Parking Area	Restriction	Supply
Child Care	Unrestricted	10
	Accessible	2
Council car park	Restricted Users – Senior Citizens and CSU only	48
Library	Unrestricted	12
	Restricted parking area	50
Council Informal car park	Unrestricted	63
	Time-Restricted – 5 min	3
Players' Theatre	Unrestricted	37
Council car park	Time-Restricted – 2P	84
	Accessible	2
Netball	Unrestricted	46
	Accessible	2
	Total	**359 spaces**

As shown, there is ample supply of public car parking near the site, including around 190 spaces within the Council and Players Theatre car parks accessed from Burrawan Street, Lord Street and Gordon Street. It is understood the Council informal car park serves as the primary car park for the existing Olympic pool.

An off-street Council car park with capacity for 48 vehicles is south-west of the site. The car park is unrestricted though limited for use by senior citizens and Charles Sturt University (CSU) only. Another 48 space car park is south-east of the site with access via Grant Street and primarily for use by the netball courts.

2.5.3 Demand

Parking demand surveys were completed within the nominated survey area on Tuesday 8 December 2020 (between 2pm and 7pm) and Wednesday 9 December 2020 between 8am and 1pm. A summary of on street and off-street parking demand in each location is detailed in Table 2.6 and Table 2.7, with a summary parking demand illustrated in Table 2.6. The southern section of the library car park appeared to be closed during the survey however it is understood that restricted user parking is common and as a result a broad parking demand profile has been incorporated into Table 2.7 and Figure 2-11 based on our knowledge of the area (including a separate site visit in November 2020) and aerial imagery.

Table 2.6 – Weekday parking demand for the surrounding area – on-street

Location	Supply	Demand										
		8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm
Munster St	46	18	35	35	36	42	44	37	36	28	17	11
Grant St	76	24	41	58	62	54	59	54	43	30	13	11
Gordon St	59	16	26	32	39	34	32	28	28	19	18	15
Burrawan St	52[1]	12	24	24	24	23	19	25	15	14	7	7
Lord St	28	7	12	13	13	11	11	12	10	9	7	2
TOTAL	**261**	**77**	**138**	**162**	**174**	**164**	**165**	**156**	**132**	**100**	**62**	**46**

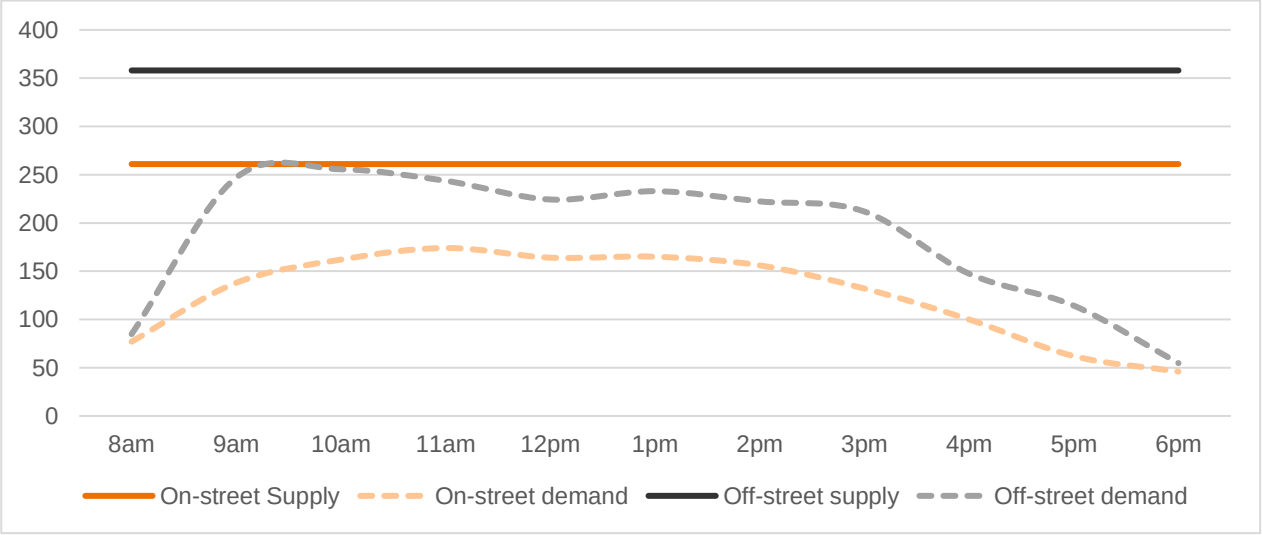
[1] On the survey day, four spaces along Burrawan Street were temporarily removed for kerb works.

Table 2.7 – Weekday parking demand for the surrounding area – off-street

Location	Supply	Demand										
		8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm
Council Car Park (Seniors)	48	0	2	8	7	11	14	16	4	4	2	0
Netball	48	12	44	44	44	38	41	38	38	18	0	0
Child Care	12	2	5	12	11	11	12	13	9	5	5	2
Council Informal	65	25	51	50	45	39	38	34	53	29	39	12
Players' Theatre	37	8	37	36	33	28	30	26	28	28	20	18
Council	86	26	83	82	82	81	81	80	57	52	33	18
Library (nth)	12	2	5	4	4	1	2	2	2	0	0	0
Library (sth) [2]	50	10	20	20	18	15	15	13	21	11	15	5
TOTAL	**358**	**85**	**247**	**256**	**244**	**224**	**233**	**222**	**212**	**147**	**114**	**55**

[1] As discussed, on the day of the survey the southern portion of the library car park appeared to be closed however Stantec understand that typically, parking for restricted users is generally permitted. A profile of parking demand for this parking area has therefore been assumed based on Stantec's site visit in November 2020 and review of aerial imagery.

Figure 2-11 – On-street and off-street weekday car parking demand profile



The parking surveys indicate a total of 619 parking spaces throughout the study area including 261 on-street spaces and 358 off-street spaces. Peak demand occurs around 10am and 11am and equates to about 420 spaces, or 67 per cent of supply. There were about 200 vacant spaces at this time.

Council's informal car park east of the existing aquatic centre was observed to have moderate to high parking demand across the day, with two general peaks between about 9:00am to 11:00am and another around 3:00pm. These peaks represent a demand of about 50 spaces, 75 per cent of the supply.

Site observations and discussions with Council indicate that this car park is regularly used by aquatic centre users, mostly on account of convenience to the centre access on Gordon Street. Gordon Street is also a convenient parking location.

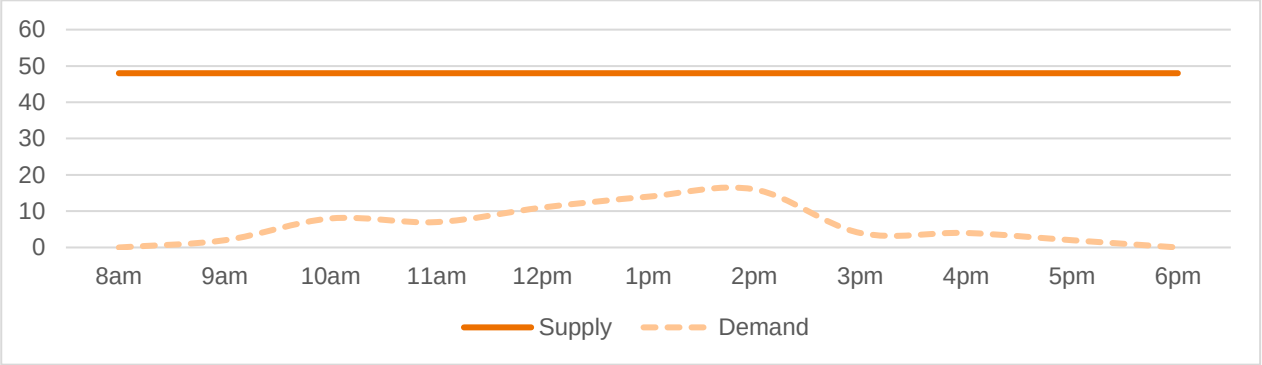
Munster Street and Grant Street were observed to have moderate to high demand for parking across the day, including a peak demand of 44 spaces on Munster Street at 1:00pm (96 per cent occupied) and 62 spaces on Grant Street between 10:00am to 1:00pm (76 per cent).

2.5.4 On-Site Car Parking Demand Profiles

Council Car Park (Restricted Seniors and CSU parking)

It is recognised that the existing car park located at the north-western portion of the site is reserved for use by senior citizens or CSU. The observed car parking demand profile detailed in Table 2.6 is illustrated in Figure 2-12 and indicates that on the day of the survey, the car park experienced a maximum demand for 16 on site spaces at 2:00pm, equating to 33 per cent of total supply.

Figure 2-12 – Council car park (restricted seniors and CSU parking) weekday demand profile



To understand seasonal and weekday variations to demand for on-site parking at the Council car park, Stantec has completed desktop parking surveys using Nearmap aerial imagery covering a three-year period between January 2017 and April 2023. The results of the assessment are summarised in Figure 2-13, noting that Nearmap images are typically generated between 10:00am and 2:00pm, coinciding with the observed peak demand for parking.

Figure 2-13 – Historic car parking demand – Council car park (restricted seniors and CSU parking)

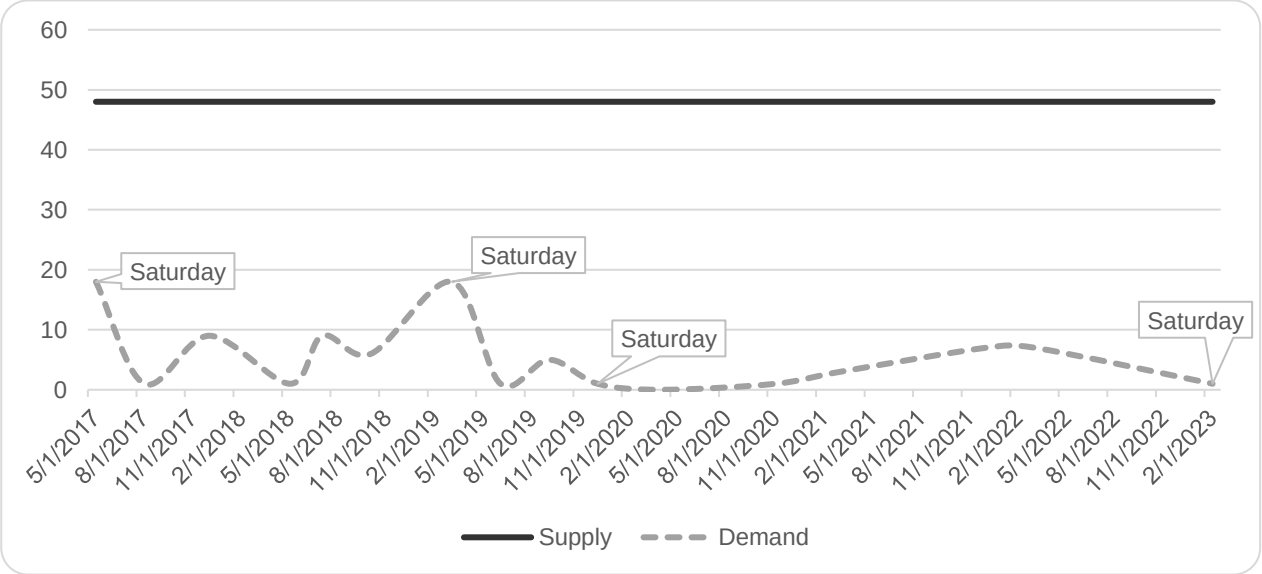
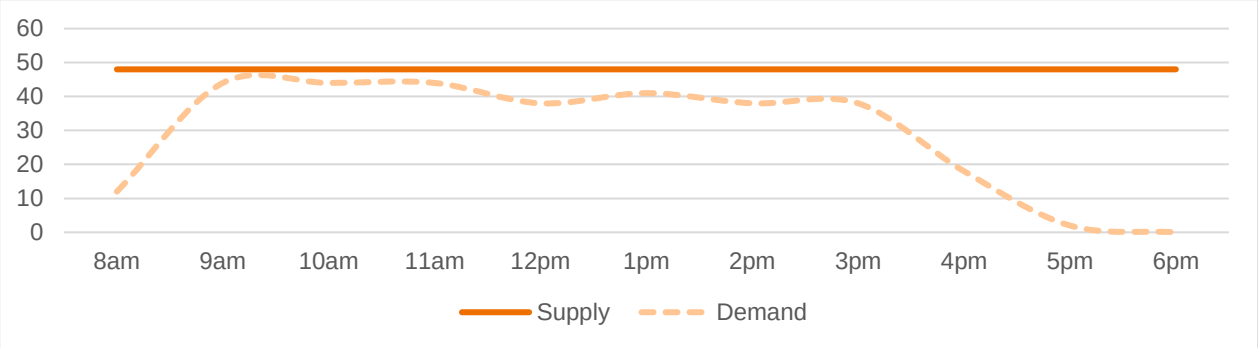


Figure 2-13 indicates that parking demands for the on-site Council car park are low across the year, with a peak demand of nine spaces on weekdays (20 per cent of supply) and 18 spaces on Saturdays (40 per cent). Overall, peak demand does not appear to exceed 20 spaces with limited, if any demand in the morning and afternoon/ evening periods.

Netball Car Park

The observed car parking demand profile for the netball car park detailed in Table 2.6 is illustrated in Figure 2-14 and indicates that on the day of the survey, the car park experienced a maximum demand of 44 on-site spaces between 9:00am and 11:00am, equating to 92 per cent of total supply.

Figure 2-14 – Netball car park weekday demand profile



2.6 Existing Site, Uses and Operation

2.6.1 Overview

The existing aquatic centre includes administrative and recreational facilities comprising:

- Office/ administration facilities
- Three outdoor pools:
  - 50 metre competition pool
  - 25 metre pool
  - Learn to swim pool
- Grandstand
- Kiosk
- Change rooms and associated amenities.

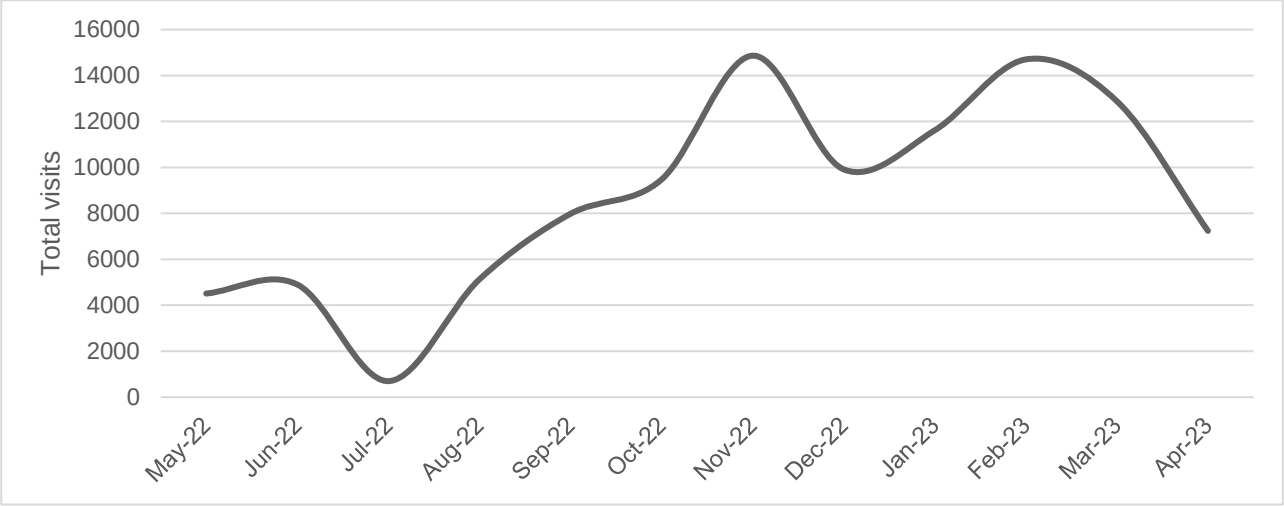
The existing facility provides no formal on-site parking, however users could access the informal council car park to the east as well as parking on street in the vicinity of the site. Pedestrian access is located along the Gordon Street frontage.

2.6.2 Centre Attendance Data

Attendance data was obtained from YMCA as the operators of the Port Macquarie Aquatic Centre from July 2022 to June 2023. Figure 2-15 demonstrates that there are two distinct peak periods of attendance during the year, between January and March as well as between October and December. This is a result of a distinct peak in school swimming classes in November (4,400 patrons in November) and swimming carnivals in February (2,603 patrons and 1,131 spectators in February). Types of users varied from month to month with much of the attendance coming from pass holders, swim classes and adult casual swimmers. The highest recorded attendance was in November 2022 with 14,864 attendees reported, with key patrons including 4,400 school swimming classes, 4,400 casual adult passes, 2050 learn to swim students and 1,100 spectators.

As expected, Figure 2-15 shows that attendance peaks during the summer seasons with dips in attendance during the winter seasons. The largest dip in attendance was recorded during July 2022 with 697 patrons primarily comprising fitness passport holders (82 per cent).

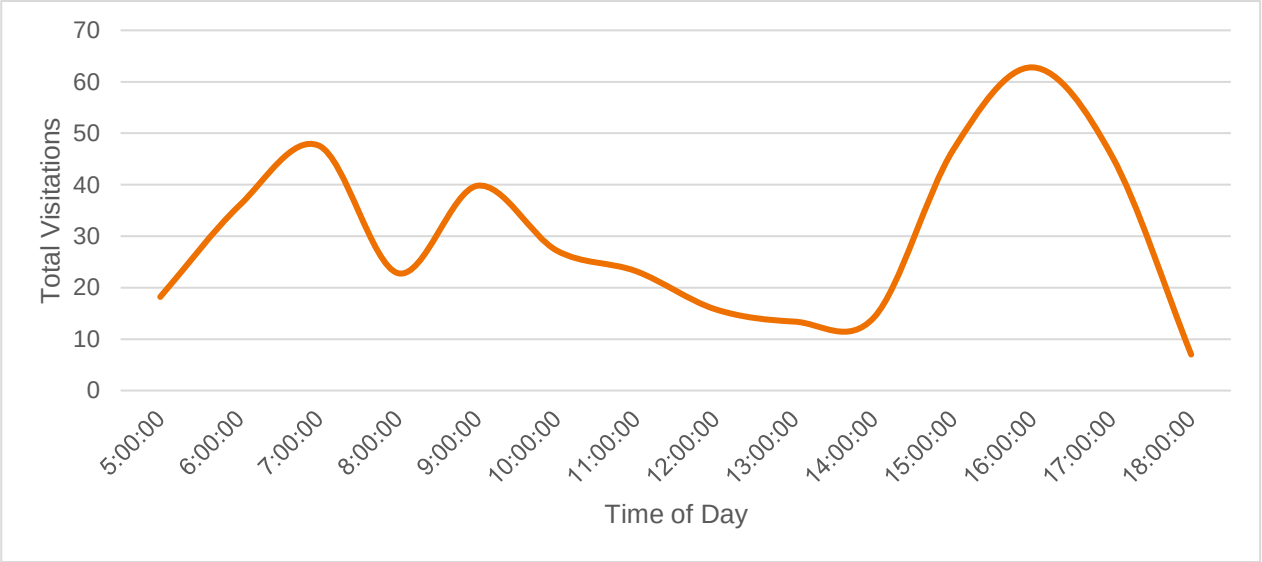
Figure 2-15 – Total number of visits each month (including school groups, spectators etc.) May 2022 to April 2023 excluding July 2022



2.6.3 Pool Visitation Data

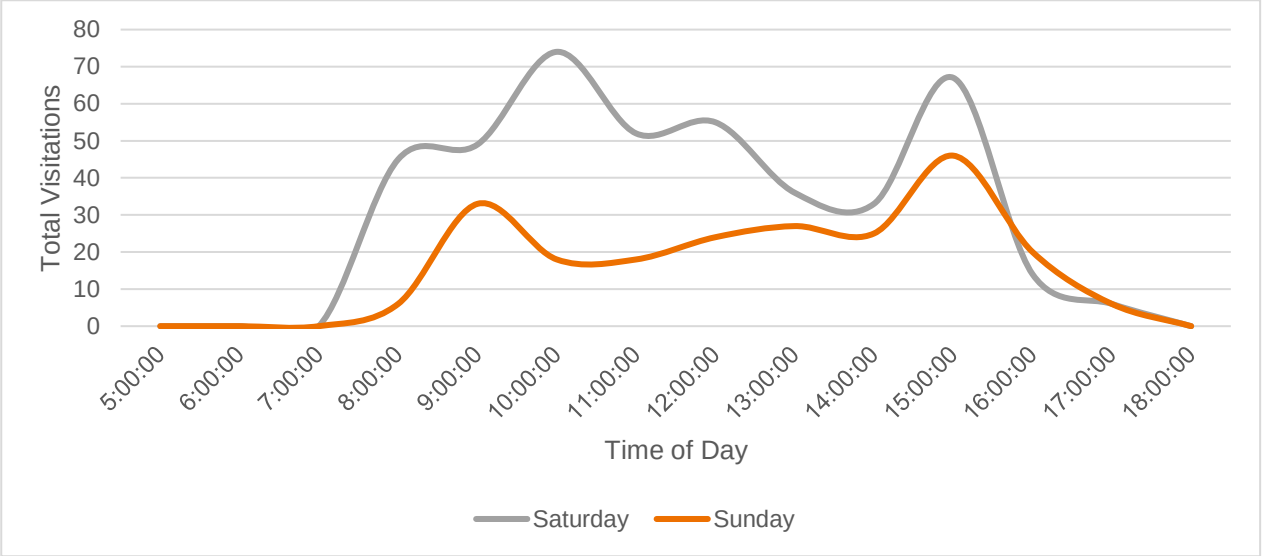
Port Macquarie Olympic Pool has provided visitation data for the pool over a week period from Monday, 30 November 2020 to Sunday, 6 December 2020. The weekday 85th percentile and total weekend visitor profiles are shown in Figure 2-16 and Figure 2-17.

Figure 2-16 – Adjusted 85th percentile weekday visitation [1]



[1] This data has been adjusted to account for atypical activity, including school groups at 10:00am on the Friday (resulting in admission of 100 visitors), and school groups at 4:00pm on the Tuesday (resulting in admission of 365 visitors)

Figure 2-17 – Total weekend visitation



The pool opening hours between October and April are 5:30am to 7:00pm on weekdays and 9:00am to 6:00pm on weekends. Figure 2.14 indicates that on weekdays, three separate peaks are experienced, including an early morning peak between 6:00am to 7:00am, corresponding to squads, aqua aerobics/ classes generally and general admissions, a mid-morning peak at 9:00am and an afternoon peak between 3:00pm to 6:00pm, corresponding to Learn to Swim lessons and general admission users. This generally corresponds with parking demands observed within the informal car park east of the pool, however the car park experiences slightly higher demands during the middle of the day, likely generated by the surrounding commercial uses.

The weekday data was adjusted to exclude any atypical peaks in visitation. This includes school groups at 10:00am on the Friday (resulting in admission of 100 visitors), and school groups at 4:00pm on the Tuesday (resulting in admission of 365 visitors). On both occasions, limited spectator admissions were purchased, indicating the school groups likely arrive as a group and via bus. It is therefore unlikely that these events result in significant demand for parking in the surrounding area.

Figure 2.14 indicates that weekend peaks occur in the morning. The Saturday peak is between 8:00am to 12:00pm, corresponding with learn to swim lessons/ squad training. The Sunday peak is around 9:00am and associated with general admissions. There is also an afternoon peak around 3:00pm.

YMCA took over as operator of the pool in April 2022 and have provided a snapshot of daily attendance data for Port Macquarie Pool for the following periods:

- Average day in September
- Higher demand in April with lap swimmers in morning and event (Splashfest) in afternoon
- Quiet day in May.

The visitor profiles for the relevant periods are shown in Figure 2-18.

Figure 2-18 – Select weekday visitations

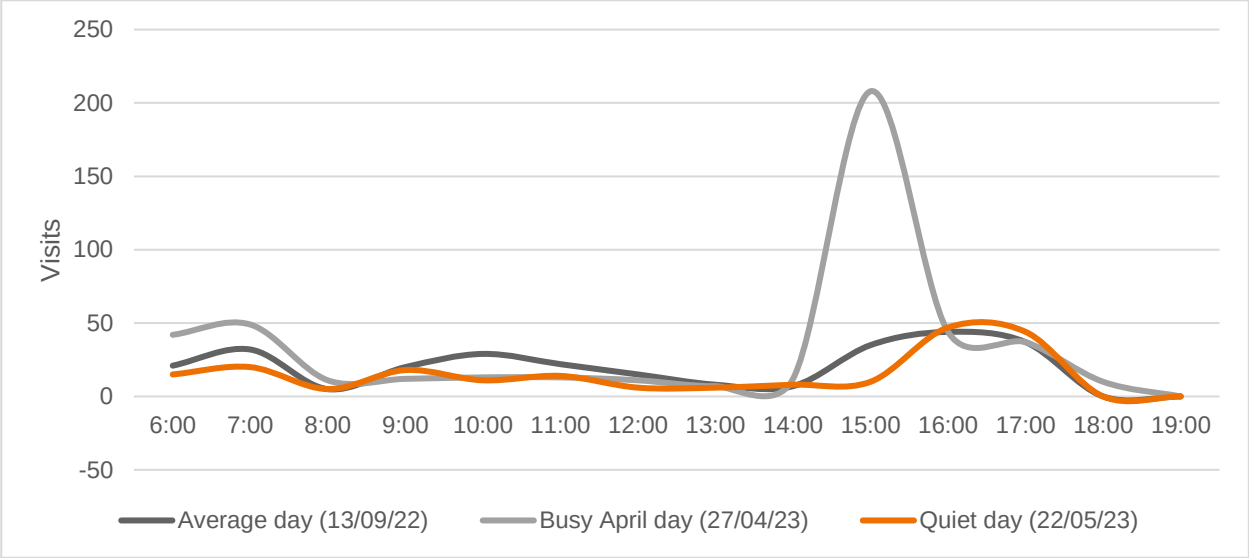


Figure 2-18 indicates similar demand profiles as the December 2020 data, with a distinct peak around 6:00am to 7:00am, and then again around 9:00am to 10:00am, with a PM peak between 3:00pm to 6:00pm.

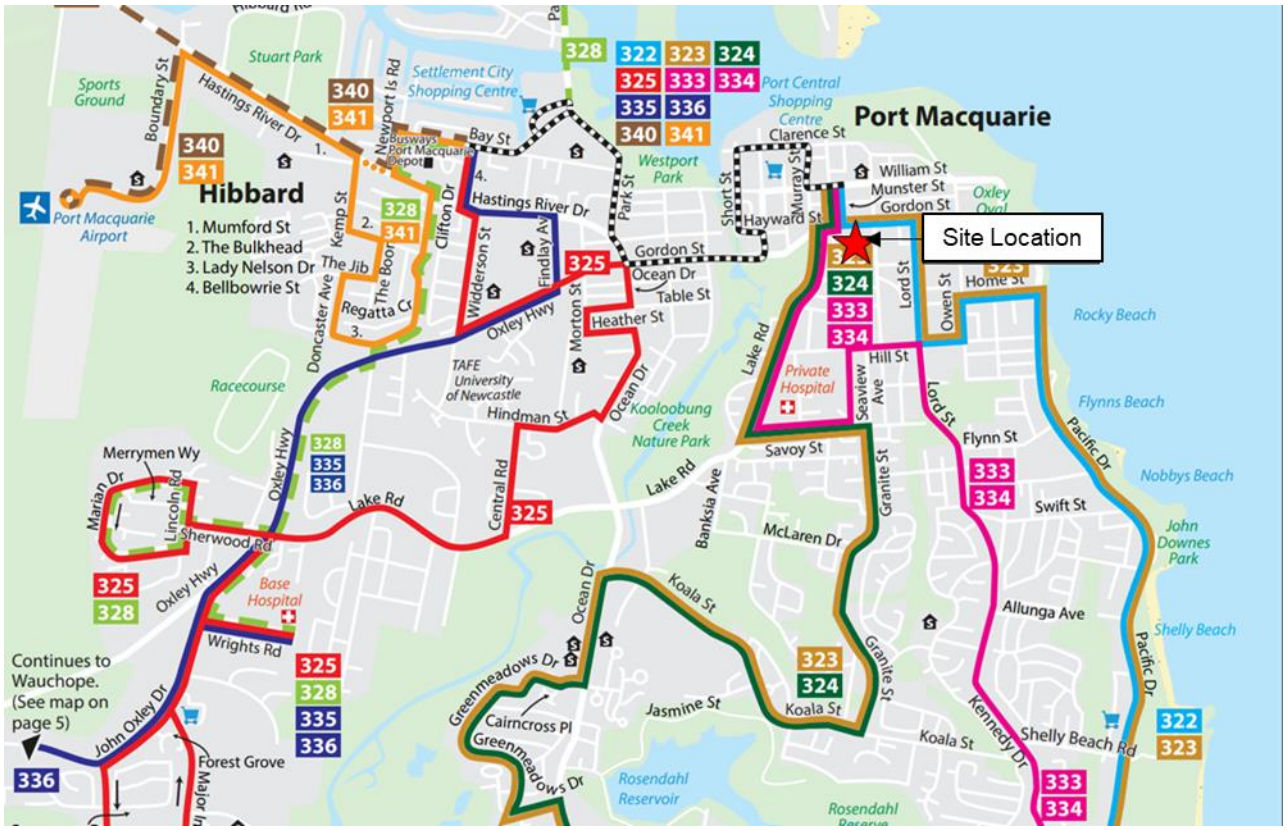
2.7 Public Transport

The site is supported by a range of bus services that operate along Gordon Street and Munster Street, providing services south to Lighthouse Beach and north through the town centre to Settlement City Shopping Centre, as detailed in Table 2.8 and illustrated in Figure 2-19.

Table 2.8 – Public transport summary

Service	Route #	Route Description	Frequency On/ Off-Peak
Bus	322	Port Macquarie to Lighthouse Plaza via Pacific Drive	Every hour (only morning and afternoon services)
	323	Port Macquarie to Lighthouse Beach	Every hour (only afternoon services)
	324	Port Macquarie Marbuk Avenue to Settlement City	Every 30-60 mins
	333	Port Macquarie to Kendall via Bonny Hills	1 per hour/ 1 per 2 hours
	334	Lighthouse Plaza to Settlement City	Every hour

Figure 2-19 – Bus stop location and routes



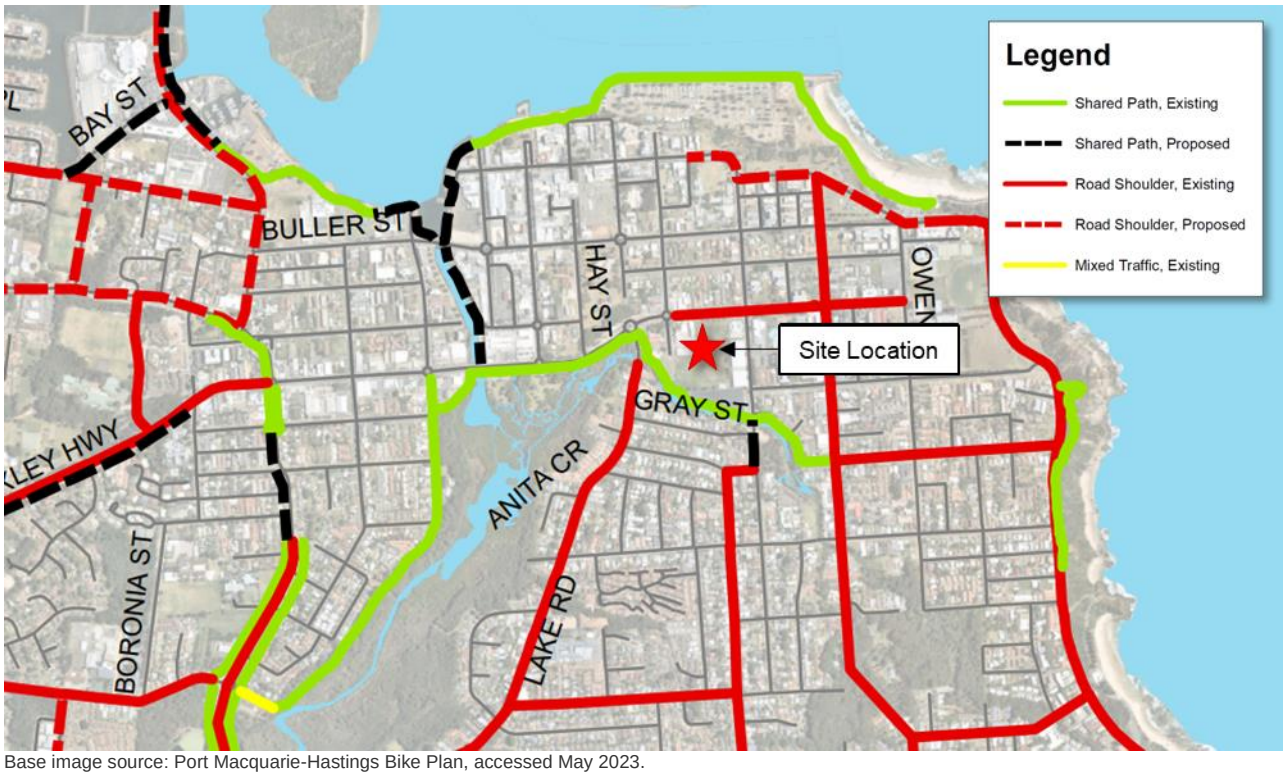
Base image source: Google Maps, accessed July 2023.

2.8 Pedestrian and Cycling Infrastructure

Well established footpaths are provided on both sides of most surrounding roads. The site is conveniently located five minutes from Port Macquarie city centre, with formalised pedestrian crossing opportunities towards the town centre provided at the Gordon Street/ Grant Street signalised intersection. Mid-block crossings and at the Munster Street roundabout are also provided.

Road shoulders along the arterial road network facilitate cycling between key destinations within Port Macquarie, as detailed in the Port Macquarie-Hastings Bike Plan 2021 illustrated in Figure 2-20.

Figure 2-20 – Surrounding cycling network

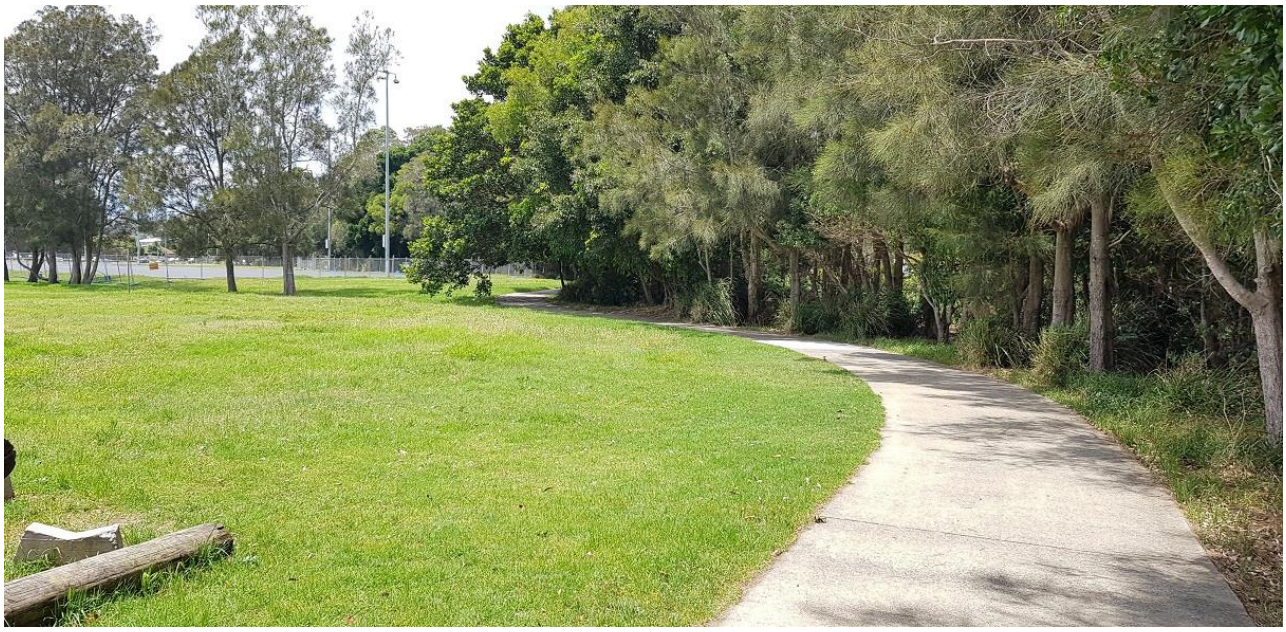


Base image source: Port Macquarie-Hastings Bike Plan, accessed May 2023.

The Wrights Creek shared path travels along the southern boundary of the site between Lord Street and Gordon Street, providing practical access to the site from the surrounding residential areas. The path continues south along the Kooloonbung Creek Nature Reserve, connecting the site with south-west Port Macquarie. The path is also intended to be extended east along Home Street towards the coast. Taking advantage of these routes through a range of sustainable and active travel initiatives could be investigated as part of broader green travel planning for the site.

The Wrights Creek shared path is shown in Figure 2-21.

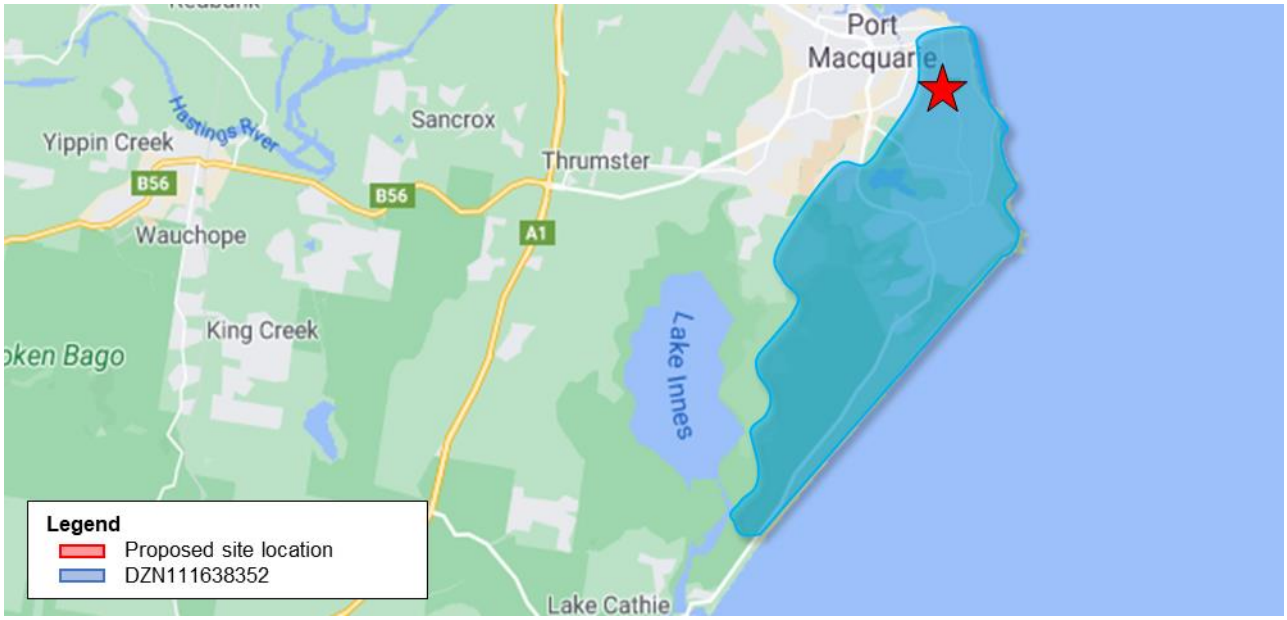
Figure 2-21 – Wrights Creek shared path



2.9 Existing Travel Behaviour

Journey to work data has been sourced from the Australian Bureau of Statistics (ABS) 2016[2] census and provides an idea of existing travel patterns to the local area. Figure 2-22 details the catchment of census data analysed which corresponds to the ABS 2016 Destination Zone (DZN) 11638352, comprising Port Macquarie – East.

Figure 2-22 – Existing travel mode share to Port Macquarie East [1]



Base image source: Google Maps, accessed August 2023`

[2] Smallest geographical area available for analysis

Table 2.9 provides a summary of the existing modes of travel to work for the surrounding area. The results indicate that driving is the most common mode of transport to the area, with 93 per cent of trips made via private vehicle (as driver or passenger), followed by walking. No trips were by public transport.

Table 2.9 – Existing travel mode share to Port Macquarie East

Mode of Travel	Mode Share [1]
Car, as Driver	85%
Car, as Passenger	8%
Bus	0%
Motorcycle/ Scooter	1%
Bicycle	1%
Walk	4%

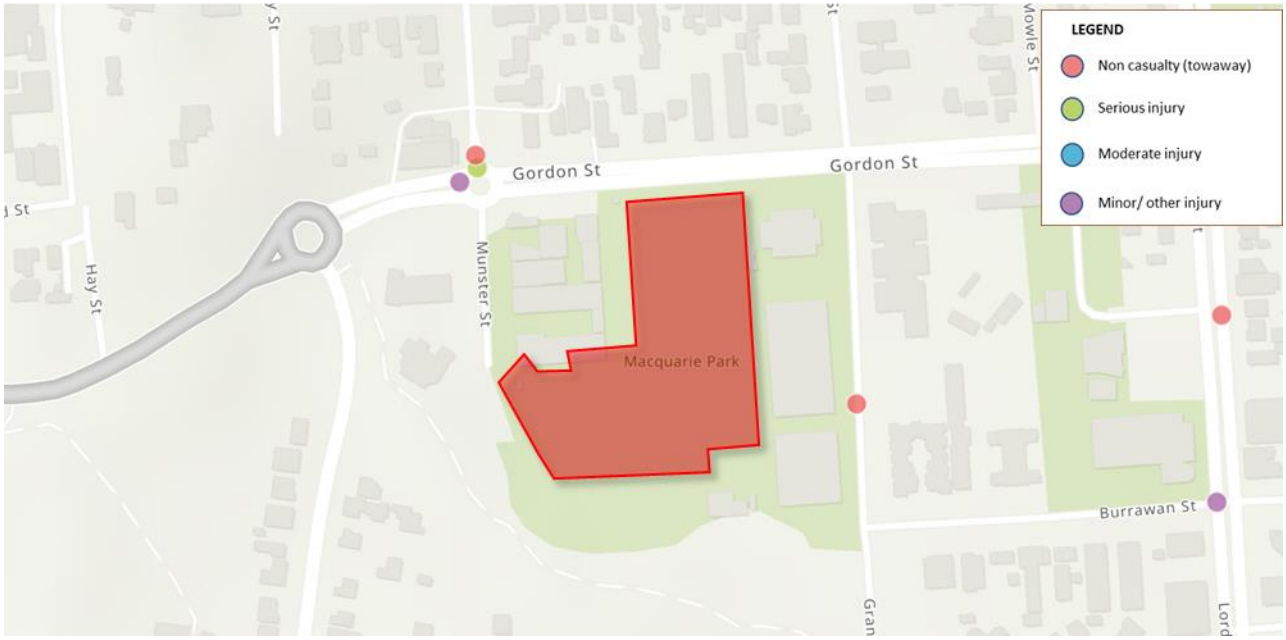
[1] Does not include residents who worked at home, did not go to work or who were not applicable.

2.10 Crash History

An analysis of Transport for NSW's most recent five-year period of available crash data (2017 - 2021) has been undertaken for the roads surrounding the site. The locations and severity of the crash data for the five-year period is shown in Figure 2-23.

[2] Greater Sydney was subject to COVID-19 lockdowns on 2021 Census night. It is likely that travels patterns in areas outside of greater Sydney may also be impacted given temporary changes to work from home policies etc. As such, 2021 JTW data may not be a good representation of typical JTW behaviors and 2016 data has been referenced instead.

Figure 2-23 – Historical Crashes, 2017 to 2021



Source: https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats, accessed May 2023

The following statistics can be drawn from the crash data for the period 2017 to 2021:

- a total of six collisions occurred near the site
- no fatalities were recorded during the period
- approximately 50 per cent of crashes resulted in an injury, including one resulting in serious injuries
- one collision at the Munster Street/ Gordon Street roundabout involved a pedestrian and resulted in minor injuries
- the most common collisions were cross traffic collisions and off-road collisions with object.

The above analysis does note a minor cluster of crashes (three crashes) at the Gordon Street/ Munster Street intersection and this will be considered when analysing the proposal.

3. Development Proposal

3.1 Overview

The key facilities to be delivered as part of the proposed development are outlined in Table 3.1. The development is proposed in two stages, with stage 1 delivering core aquatic facilities with ancillary services including office, café and grandstand, as well as a new gymnasium, and stage 2 delivering leisure aquatic facilities (water play and slides) as well as an expansion of the gymnasium area.

Table 3.1 – Area Schedule

Use	Description	GFA/ Pool Area	Other
Current Stage (Stage 1)			
Office	Reception, Office	101m^2	
Café	Kiosk, café	40m^2	
Aquatic Facilities	Indoor Learn to Swim	164m^2	
	Indoor 25m pool	424m^2	6 lanes
	Outdoor 50m pool	1,180m^2	10 lanes
Gymnasium	General	371m^2	
Grandstand	N/a	330m^2	500 seats
Future Stages (Stage 2)			
Aquatic Facilities	Outdoor water play	400m^2	
	Outdoor water slides	400m^2	3 slides
Gymnasium	Expansion	330m^2	

Overall, the key changes from the existing facility includes the expansion of the 50-metre pool from six to 10 lanes, expansion of the learn to swim pool and addition of a gym, water play and water slides.

A summary of the stage 2 ground floor plan, including an overlay of the vehicle access plan on the site layout plan, is respectively provided in Figure 3.1 and Figure 3.2.

Figure 3.1 – Stage 2 Proposed ground floor plan

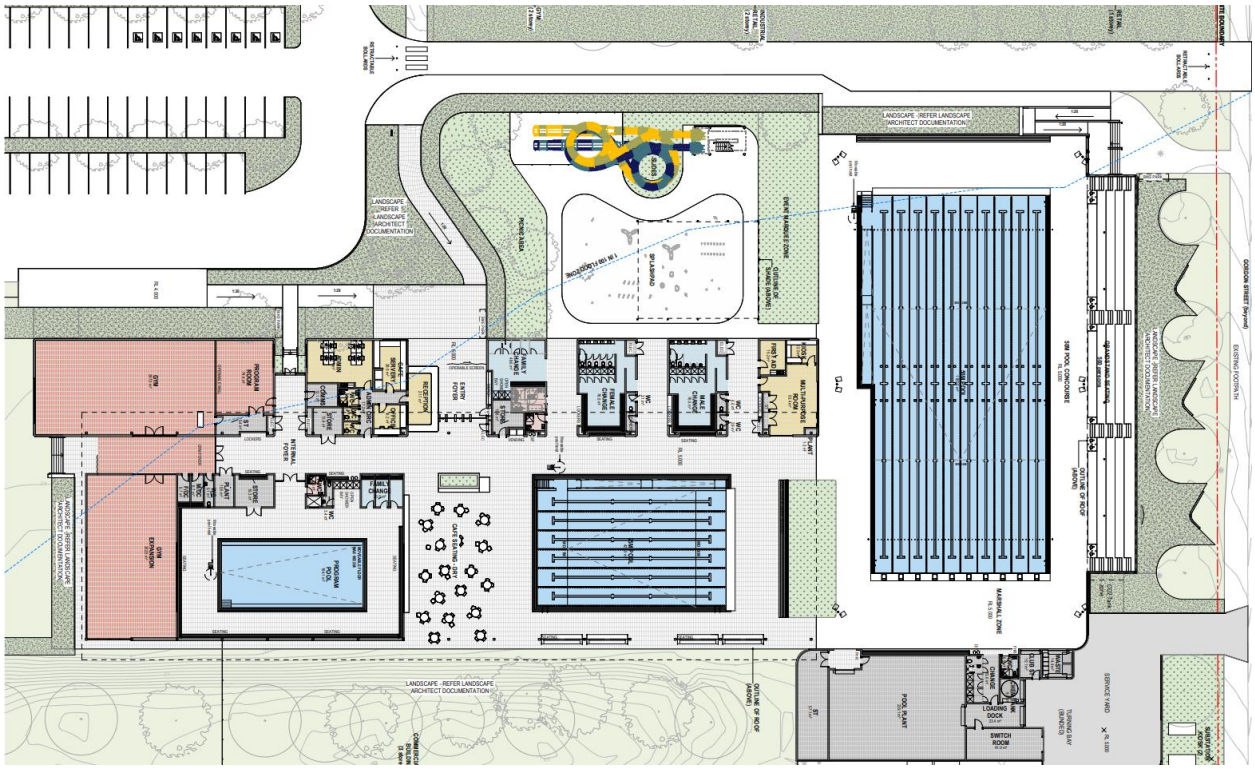


Image Source: Ground Level Plan, DA201, CO-OP, Revision G, 26 September 2023

Figure 3.2 – Stage 2 Proposed site layout – overarching vehicular access plan

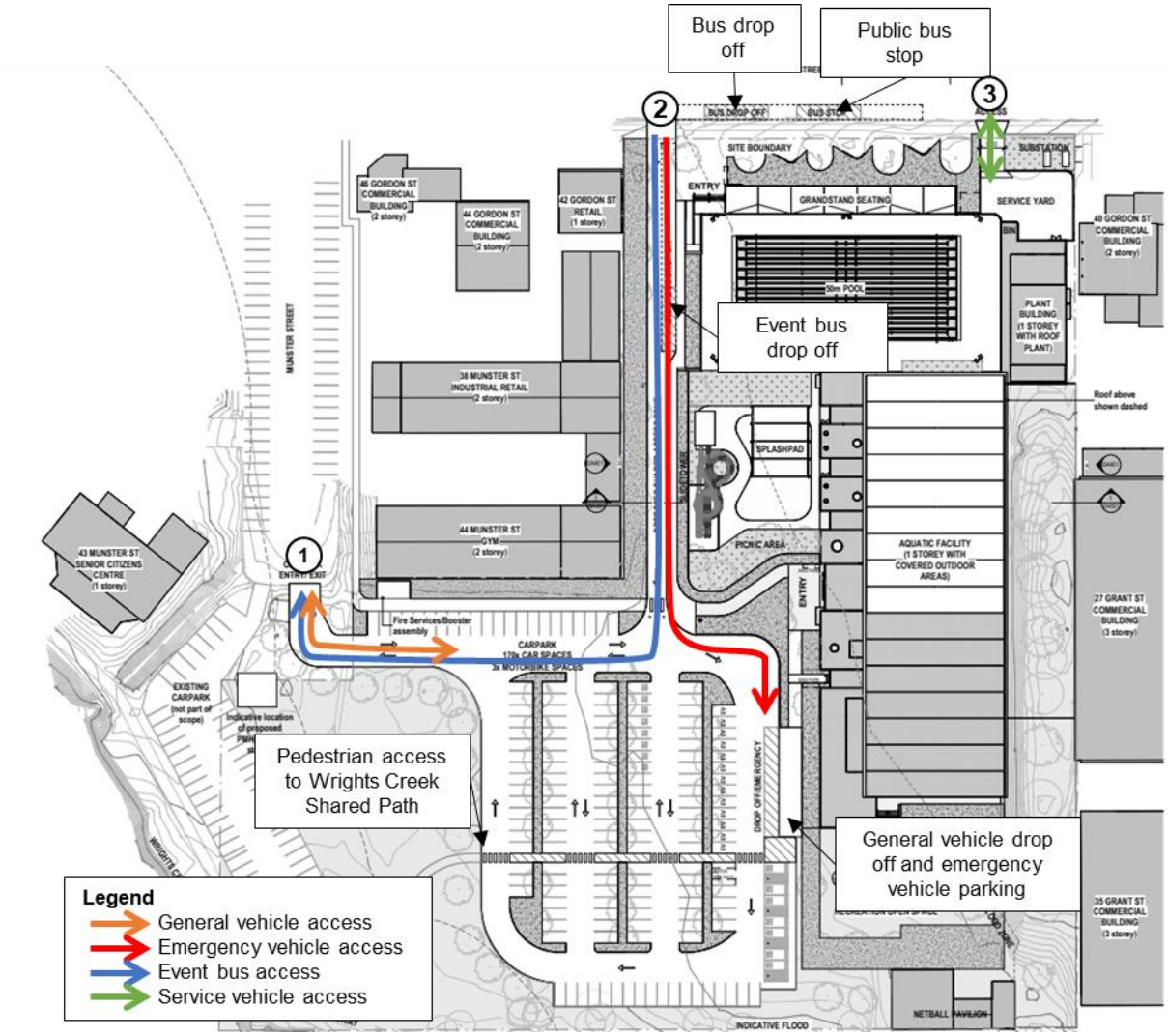


Image Source: Site Plan, DA101, CO-OP, Revision H, 26 September 2023

3.2 Vehicular Access

The proposed development includes three vehicular access points. The primary car park entry/ exit driveway is provided at the southern end of Munster Street. A bus and emergency services only entry driveway is provided along Gordon Street, facilitating north to south movements only, with vehicles to egress site via the Munster Street driveway. A separate loading area access is also provided at the north-eastern edge for service vehicles only.

Munster Street is subject to flooding. To permit vehicles to egress the car park, the bus access from Gordon Street can be converted to allow exit movements, and therefore allow all vehicles to exit the site during such events if and as required.

A summary of the proposed vehicle access arrangements is provided in Table 3.2 and indicated diagrammatically on Figure 3.2. No change to the vehicle access arrangements are proposed between Stage 1 and 2.

Table 3.2 – Proposed vehicle access arrangements

Access	Frontage	Description	Direction	Description
1	Munster Street	Car Park Entry/ Exit	Two way (entry/ exit)	• General vehicle entry/ exit to car park and general vehicle drop off/ pick up area
2	Gordon Street	Bus Entry	One way (entry)	• Special event bus access for pick-up/ drop-off • Emergency vehicle access, if required • Access control (electronic bollards or barrier) to be provided on northern end near Gordon Street to prevent entry by general vehicles • Access can be converted to allow egress movements during flood events, for vehicles to egress the car park directly to Gordon Street rather than egressing via Munster Street
3		Plant Access	Two way (entry/ exit)	• Loading area entry/ exit • Access permitted by approved vehicles only

3.3 Parking and Drop off and Pick Up

A new at-grade car park is proposed immediately west and south of the proposed Aquatic Facility. The car park would have capacity for around 129 spaces in Stage 1 and expanded to 170 cars for Stage 2 and is accessed via the new entry/ exit driveway from Munster Street. The main entrance is proximate to the proposed on-site parking area, reducing the likelihood that users will occupy the existing netball car park.

A general vehicle drop-off/ pick-up area is provided along the western side of the Aquatic Centre and would be appropriate for use by a range of users, primarily including cars and emergency services, however could also be used by buses/ coaches if required.

An indented bus/ coach drop-off/ pick-up area is provided near Gordon Street and adjacent to the public domain, for use during special events only. The site layout allows for straightforward entry by buses and coaches from Gordon Street, and egress via Munster Street.

Clockwise circulation is proposed for the drop off areas, with all general vehicles to enter via Munster Street and all buses to enter via Gordon Street, with all vehicles to exit via Munster Street.

No change to the parking and drop off/ pick up arrangements are proposed between Stage 1 and 2.

3.4 Walking and Cycling Infrastructure

The site entry is located on the western frontage of the building, at the north-eastern corner of the car park. An expansive public domain adjacent to the main entrance would ensure appropriate space to allow for peak events and gathering of people. Pedestrian paths of travel connect seamlessly with Gordon Street, linking users to the public bus stop, on-street parking or through to Port Macquarie town centre. The main pedestrian entrance to the south promotes good connectivity to Wrights Creek shared path, with a pedestrian connection provided through the car park.

Bicycle parking spaces are proposed near the main entry, with end of trip facilities including showers, change rooms and lockers naturally forming part of the facility.

No change to the walking and cycling infrastructure are proposed between Stage 1 and 2.

4. Car Parking

4.1 Car Parking Requirements

4.1.1 DCP Parking Requirements

The car parking provision requirements for different development types are set out in Port Macquarie Hastings Council's Development Control Plan 2013 (DCP 2013) as summarised in Table 4.1.

Table 4.1 – Statutory Car Parking Requirements

Stage	Use	Description	Parking Rate	Size	Parking Requirement	Source
Current (Stage 1)	Office	Reception, Administration, Office	1 per 30m^2	101m^2	3 spaces	DCP (office use)
	Café	Kiosk	1 per 6m^2 serviced area	40m^2	7 spaces	DCP (kiosk)
	Aquatic Facilities	Indoor Learn to Swim	30 plus any additional requirement of Council, depending on location and activity	164m^2	Minimum of 30 spaces	DCP (recreation areas)
		Indoor 25m pool		424m^2		
		Outdoor 50m pool		1,180m^2		
	Gymnasium	General	7.5 per 100m^2	371m^2	28 spaces	DCP (gymnasium)
	Grandstand	N/a	1 per 30m^2	330m^2	11 spaces	DCP (community use)
				Sub-Total	***79 spaces***	
Future (Stage 2)	Leisure Aquatic Facilities	Outdoor water play	30 plus any additional requirement of Council, depending on location and activity	400m^2	30 spaces	DCP (recreation areas)
		Outdoor water slides		400m^2		
	Gymnasium	Expansion	7.5 per 100m^2	333m^2	25 spaces	DCP (gymnasium)
				Sub-Total	***55 spaces***	
				Total	**134 spaces**	

Table 4.1 indicates that the development would be required to provide a minimum of 134 spaces on-site.

However, the DCP does not provide clear guidance on parking requirements for aquatic facilities. As an example, a recreation use has been adopted for the above assessment however this likely underestimates actual demand for parking. Therefore, it is important to understand what the practical or actual parking demand will be across a range of peak periods, as defined below.

4.1.2 Empirical Assessment of Car Parking Demand

Table 4.2 outlines the car parking demand of the proposal as stand-alone uses. In the case of the aquatic facilities and the Grandstand, a first principles assessment has been completed based on person density estimates and/ or sporting attendance.

Given the on-site facilities are estimated to be at least partially ancillary (or complementary) to each other, a 25 and 50 per cent discount has also been applied respectively to the anticipated parking requirement for aquatic facilities and gymnasium. No discount has been applied to stand-alone uses such as office and café.

Table 4.2 – Anticipated Car Parking Requirements

Stage	Use	Description	Anticipated Parking Rate	Size	Anticipated Parking Requirement	Reduced Parking Requirement [1]	Source
Current (Stage 1)	Office	Reception, Administration, Office	1 per 30m^2	101m^2	3 spaces	3 spaces	DCP (office use)
	Café	Kiosk	1 space per employee	4 staff	4 spaces	4 spaces	Empirical assessment [2]
	Aquatic Facilities	Indoor Learn to Swim	1 space per 10m^2	164m^2	16 spaces	12 spaces	Empirical assessment
		Indoor 25m pool		424m^2	42 spaces	32 spaces	
		Outdoor 50m pool	5 spaces per lane	1,180m^2	50 spaces	38 spaces	Empirical assessment [3]
	Gymnasium	General	7.5 per 100m^2	371m^2	28 spaces	21 spaces	DCP (gymnasium)
	Grandstand	N/a	N/a [4]	330m^2	0 spaces	0 spaces	Empirical assessment [4]
	Sub-Total				**143 spaces**	**110 spaces**	
Future (Stage 2)	Leisure Aquatic Facilities	Outdoor water play	1 person per 10m^2, 3 people per car	400m^2	13 spaces	10 spaces	Empirical assessment
		Outdoor water slides		400m^2	13 spaces	10 spaces	
	Gymnasium	General	7.5 per 100m^2	333m^2	25 spaces	19 spaces	DCP (gymnasium)
	Sub-Total				**26 spaces**	**39 spaces**	
Total					**194 spaces**	**149 spaces**	

[1] All aquatic facilities are estimated to be at least partially ancillary (or complementary) to other aquatic facilities (and gymnasium), with users of the learn to swim/ 25m pool likely to also use the leisure facilities before/ after swim lessons. Users of the gym are also likely to use the 25m or 50m pool as well and children likely to use the leisure facilities while parents/ carers are swimming etc. To account for these complementary uses, a 25 per cent discount has been applied to the Aquatic Facilities and gymnasium anticipated parking requirement.

[2] Ancillary services to the pool therefore assumed to generate parking demand by staff only. Assumed kiosk will generate up to four staff.

[3] Assessment based on person per lane density. Typically, demand for four car parking spaces per lane is considered reasonable. A 50 per cent loading has been applied, equating to 5 parking spaces per lane.

[4] Typically, grandstand users include parents/ carers observing child in pool, hence parking demand is captured in outdoor pool use or else users have already participated in pool/ gym activities hence parking demand captured in the relevant use. During special events, such as school swimming carnivals, it is assumed that the entire outdoor area would be hired by the school with students primarily arriving by bus. As such, the outdoor facility parking requirement is expected to sufficiently cater for the Grandstand parking requirement, noting these spaces will likely be used by parents/ carers observing the carnival or teachers/ officials arriving by car.

Table 4.2 indicates that the proposed development would generate a parking demand for around 110 spaces for Stage 1 and 149 spaces for Stage 2 when considering the complimentary nature of all land uses.

To appreciate the likely relationship between parking supply and demand for the proposed development, the temporal parking activity profile(s) of individual land uses across a range of peak parking demand periods, including weekday mid-morning, weekday evening, weekend midday and midweek event (swim carnival), have also been considered as set out in Table 4.3. To ensure a conservative assessment, this is based on the anticipated parking requirements outlined in Table 4.2, without considering the complimentary nature of all land uses.

Table 4.3 – Peak Car Parking Demand Based on Temporal Parking Activity Profiles

Stage	Use	Anticipated Parking requirement	Weekday mid-morning		Weekday evening		Weekend midday[1]		Midweek event (swim carnival)	
Current (Stage 1)	Office	3	100%	3	50%	2	100%	3	100%	3
	Café	4	100%	4	50%	2	100%	4	100%	4
	Learn to Swim	16	75%	12	100%	16	100%	16	75%	12
	25m Pool	42	75%	32	100%	42	100%	42	75%	32
	50m Pool	50	75%	38	70%	35	100%	50	Events	0
	Gymnasium	28	50%	21	100%	28	50%	14	50%	14
	Grandstand		Ancillary		Ancillary		Ancillary		[2]	50
	Sub-Total	***143***		***110***		***125***		***129***		***115***
Future (Stage 2)	Outdoor water play	13	75%	10	25%	3	100%	13	Events	0
	Outdoor water slides	13	75%	10	25%	3	100%	13	Events	0
	Gymnasium	25	75%	19	100%	25	50%	13	50%	13
	Sub-Total	***51***		***39***		***31***		***39***		***13***
Total		**194**		**149**		**156**		**168**		**128**

[1] Represents demand during the peak summer months.
[2] Parking demand generated by parents/ carers, teachers, officials, taken as 1 space per 10 seats.

Table 4.3 indicates that the proposed development generates a parking demand between 110 to 129 spaces for Stage 1, and 130 to 168 spaces for Stage 2.

4.2 Adequacy of Parking Supply

The parking assessment in Section 4.1 intends to review both the statutory and practical parking requirements associated with the proposed redevelopment of Port Macquarie Aquatic Centre. As shown, the DCP does not provide clear guidance on parking requirements for aquatic facilities and likely somewhat underestimates the parking demand for aquatic facilities given it provides a flat rate for parking. The practical parking assessment illustrates how the facility would be used across several peak periods and the complimentary nature of the proposed uses.

Section 4.1 sets out ways to estimate the potential future parking demands of the site. These estimations identify a practical parking demand of between 110 to 129 spaces for Stage 1 and between 149 to 168 spaces**.** The provision of 129 spaces for stage 1 and 170 spaces for stage 2 therefore meets or exceeds the expected parking demand and will adequately accommodate the anticipated parking demand associated with the aquatic centre.

4.3 Accessible Parking

Accessible car parking requirements for different development types are set out in the National Construction Code (NCC), noting DCP 2013 does not set out minimum accessible parking rates. NCC sets out a requirement for one to two per cent of spaces to be accessible. Based on Stage 2 parking supply of 170 spaces, the development is required to provide up to four accessible spaces. The development provides seven accessible parking spaces during Stage 1 and 2 and therefore exceeds this requirement.

4.4 Car Parking Layout Review

The car park layout, including vehicle access from Munster and Gordon Street, has been reviewed against the general requirements of the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2022), with the design review provided in Appendix B. The car park has been designed as a User Class 3 facility. Parking bays meet the minimum dimensional requirements of 2.6 metres wide and 5.4 metres long with 5.8 metre wide aisles. The car parking circulation aisles generally exceed the minimum width requirement of 5.8 metres and range between 6.5 to around 7 metres wide, improving circulation of cars and buses through the car park and user experience when parking.

The accessible spaces are designed to be at least 2.4 metres wide and 5.4 metres long with an adjacent shared area of at least 2.4 metres wide by 5.4 metres next to the parking space in accordance with the AS/NZS 2890.6:2009.

For the drop-off/ pick-up area, a minimum of three-metre-wide indented area has been provided for use by cars, emergency services and if required, bus and coach. The current car park layout provides appropriate internal circulation.

The car park is laid out in a simple and clear manner and ensures the appropriate internal circulation as shown in the swept path assessment included in Appendix B. The main pedestrian entrance to the south-west promotes good connectivity to the car park and avoids patrons parking on street or within the netball car park unnecessarily.

5. Other Parking and Access

5.1 Motorcycle Parking

DCP 2013 does not set out minimum motorcycle parking rates. Notwithstanding, three motorcycle spaces have been provided in stage 1 and 2 car park layouts to accommodate any such minor demands. Motorcycle spaces are required to be with the spaces designed to be 1.2 metres wide and 2.5 metres long in line with AS2890.1 requirements.

5.2 General Vehicle Drop off/ Pick Up

A drop-off/ pick-up area is provided along the western side of the Aquatic Centre and eastern edge of the on-site car park, and would be appropriate for use by a range of users, primarily including cars and emergency services, however could also be used by buses/ coaches if required.

5.3 Bus / Coach

5.3.1 Private Buses / Coaches

During Events

As shown in Figure 3.2, an indented events bus/ coach drop-off/ pick-up area is provided on site near Gordon Street and adjacent to the public domain. This drop off is expected to cater for bus/ coach activities associated with large groups such as school carnivals, gala days and regional events.

The site layout allows for straightforward entry by buses and coaches from Gordon Street, and egress via Munster Street. The Gordon Street entry is restricted to left in movements only. This is not expected to impact operation of the site, given proximity of the entry driveway to the Gordon Street / Lord Street roundabout to the east, permitting buses arriving from the west to turn around.

No designated on-site bus parking is proposed with users expected to include contingencies to understand off-site parking areas in the vicinity.

Non-Events

A further bus stop is provided along Gordon Street, provided to allow for any bus / coach drop off movements during typical operation, i.e. non-event days (such as school swimming classes), if and as required.

5.3.2 Public Buses

The existing bus stop along the site frontage to Gordon Street is proposed to be relocated slightly east and constructed in accordance with the State Bus Infrastructure Guide.

5.4 Loading and Servicing

Considering the proposed uses, it is anticipated that at least one dedicated loading bay would be required to accommodate the servicing demands of the site. This has been accommodated at the north-eastern corner of the site, adjacent to the plant, with a dedicated vehicular access provided to Gordon Street. The loading area is expected to generate nominal traffic across the day.

The driveway and hardstand area have been designed to facilitate access by vehicles up to and including 8.8 metre medium rigid vehicle as requested by Council. Swept paths provided in Appendix B confirm that the access driveway will be functional, with sufficient area for vehicles to manoeuvre as required and to ensure all vehicles enter and exit in a forward direction.

For waste management arrangements, it is recommended the vehicle size expected to service the site is confirmed to ensure it does not exceed the design vehicle.

5.5 Bicycle Parking

The DCP 2013 does not provide specific bicycle parking requirements for developments, including aquatic facilities, but does state that bicycles shall be considered for all developments. To determine the appropriate provision for bicycle parking the Planning Guidelines for Walking and Cycling 2004 has been referenced. The Planning Guidelines stipulates

that swimming pools must provide bicycle parking at rate of 3-5 per cent of staff for long term use and 5-10 per cent for short term use for customers/ visitors.

In accordance with BCA, the centre can accommodate up to around 400 people at one time. Notwithstanding, it is unlikely to achieve this number on a regular basis noting current attendance is currently in the order of up to 60 to 70 people or up to 80 considering staff as detailed in Section 2.6. With that in mind, it would be reasonable to provide bicycle parking assuming up to 200 people on site at one time to cater for both typical days, as well as providing a slight surplus in supply to cater for busier days including events. Based on providing bicycle parking for five per cent of staff/ visitors, it is recommended that 10 bicycle hoops are provided.

Bicycle parking hoops are proposed to be located in the public domain, proximate to the main entrance. Bicycle parking spaces should be designed in accordance with Australian Standard for Bicycle Parking Facilities (AS/NZS2890.3:2015) and Austroads Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management (Austroads, 2016). It is recommended they are provided as part of the public domain near the pedestrian entry.

Shower and change cubicles, as well as lockers, are naturally provided as part of the development for use by both the staff and visitors. If demand necessitates, separate lockers for staff could be provided in future as required. Demand for bicycle parking and end of trip facilities will be also monitored by centre management and adjusted as necessary following opening of the development.

6. Traffic Impact

6.1 Overview

While the redevelopment will result in some uplift in traffic, given the location of the existing facility 200 metres east of the site, the development will primarily result in a redistribution of traffic on the surrounding road network, concentrated at the Gordon Street/ Munster Street roundabout, rather than a significant uplift of new traffic on the road network. Given the expected low traffic volumes generated by the proposal during peak periods, this additional traffic is not expected to compromise the safety or function of the surrounding road network.

Notwithstanding, Stantec collected traffic data at the Gordon Street/ Munster Street, Gordon Street/ Grant Street and Gordon Street/ Lord Street intersections on Friday 18 August and Saturday 19 August 2023 as discussed in Section 2.3. Given the existing pool generates low patronage in August, as shown in Section 2.6, this section superimposes all traffic expected to be generated by the new facility onto the existing traffic volumes, rather than considering only the "net increase" to traffic volumes. This is an inherently conservative approach.

This section also considers full development of the site comprising Stage 1 and Stage 2.

6.2 Traffic Generation

Traffic generation estimates for the proposal have been sourced from TfNSW Guide to Traffic Generating Developments (Guide 2002) and the Technical Direction Updated Traffic Surveys (TDT 2013/04a). Where The Guide does not indicate a traffic generation estimate the expected demand has been estimated based on a first principles assessment.

Gymnasium

Traffic generation estimates for the proposed gym have been sourced from The Guide. The Guide specifies an evening peak hour trip generation for metropolitan sub-regional areas of nine trips per 100 square metres GFA.

Generally gyms experience peak demand during mornings at around 6:00am, and then again at around 9:00am to 10:00am, and hence have a reduced demand profile during the actual road network AM peak period. In estimating the weekday AM peak hour traffic generation rate, a 0.8 factor has been applied to the weekday PM peak hour rate.

Further, gyms typically generate peak traffic on Saturday mornings and afternoons, with reduced traffic demand in the midday period. In estimating the retail weekend midday peak hour traffic generation rate, a 0.5 factor has been applied to the weekday PM peak hour rate.

The gym is therefore expected to generate 50, 63 and 23 vehicle trips in the weekday AM, weekday PM and Saturday midday peak period.

25 and 50 metre pools

Given the lack of relevant traffic generation rates in The Guide, the uplift in traffic generation associated with the new pools has been estimated based on the following empirical assessment considering the expected operation of the pools during the weekday PM peak hour:

- staff are not expected to generate additional vehicle trips during peak periods given shift times would mean they travel to work earlier and leave later
- 25 and 50 metre pool user profile expected to comprise a mix of adult lap swimmers, squads, and learn to swim lessons
- peak periods are anticipated to generate use by up to 40 and 50 patrons per hour for the 25 and 50 metre pools respectively.
- 90 per cent of users (36 patrons for the 25m pool and 45 patrons for the 40m pool) are anticipated to arrive via private vehicle and hence generate traffic
- with an average car occupancy of 1.5 people (given characteristics of families arriving with multiple children), this equates to around 24 and 30 vehicles for the 25 metre and 40 metre pool, respectively. On the basis that about 50 per cent of the vehicles would arrive or depart in any peak hour, there could be an additional 54 vehicle trips (27 in and 27 out) per hour.

Similar to gyms, 25 and 50 metre pools experience less demand during the weekday AM peak. As such, in estimating the weekday AM peak hour traffic generation rate, a 0.8 factor has been applied to the weekday PM peak hour rate, equating to 19 and 24 vehicle trips (43 cumulative vehicle trips) generated by the 25 and 50 metre pool respectively.

The Saturday midday is expected to generate a similar level of demand during the weekday PM peak hour rate, equating to 54 vehicle trips generated by both pools.

Learn to swim pool

Given the lack of relevant traffic generation rates in The Guide, the uplift in traffic generation associated with the new learn to swim pools has been estimated based on the following empirical assessment considering the expected operation of the pools during the weekday PM peak hour:

- staff are not expected to generate additional vehicle trips during peak periods given shift times would mean they travel to work earlier and leave later
- learn to swim pool user profile expected to primarily comprise 30 minute long learn to swim lessons
- peak periods are anticipated to generate an average of five classes at one time with an average of four students, resulting in 20 students per half hour session or 40 students per hour.
- conservatively assuming 100 per cent of users arrive via private vehicle and hence generate traffic
- with an average car occupancy of 1.5 people (given characteristics of families arriving with multiple children), this equates to around 27 vehicles. On the basis that all vehicles either arrive or in any peak hour, there could be an additional 27 vehicle trips (13 in and 14 out) per hour.

The Saturday midday is expected to generate a similar level of demand during the weekday PM peak hour rate, equating to 27 vehicle trips generated. Learn to swim pools are not typically open during the weekday AM peak hour and hence are not expected to generate vehicle trips during the weekday AM peak period.

Outdoor water play/ slides

The new slides and learn to swim pool is expected to generate up to 30 additional traffic movements during the Saturday midday peak period. This is based on the following first principles assessment, completed based on the expected operation of the slides and aqua play area:

- the minor additional staff are not expected to generate additional vehicle trips during peak periods given shift times would mean they travel to work earlier in the morning and leave later in the afternoon
- water slide user profile expected to mostly include children and teenagers, with children only in the aqua play
- peak periods (Saturday midday) are anticipated to generate use by 100 patrons per hour
- 30 per cent of users for the slides (30 patrons) are anticipated to be teenagers who will likely be dropped off or make their own way to the centre by walking, cycling or public transport, hence will be unlikely to generate demand for parking. On the basis that 50 per cent would travel during the peak hour and 50 per cent of these being dropped-off or picked-up, there could be 15 vehicle trips associated with drop-off/ pick-up activity (two vehicle trips per drop off/ pick up)
- 70 per cent of users (70 patrons) are anticipated to be children who will likely arrive with at least one or two other children via private vehicle and hence generate traffic
- the slides and aqua play area are expected to be at least partially ancillary (or complementary) to the existing aquatic facilities. To account for these complementary uses, a 50 per cent discount has been applied to the anticipated number of people generated, resulting in 35 ‘new’ patrons generating traffic
- with an average car occupancy of 2 people (given characteristics of families arriving with multiple children), this equates to around 18 vehicles. On the basis that about 50 per cent of the vehicles would arrive or depart in any peak hour, there could be an additional 18 vehicle trips (nine in and nine out) per hour.

With this in mind, the water slides and aqua play are expected to result in an uplift of 24 vehicle trips on a Saturday midday peak period.

Office/ Café

It is expected that staff will travel outside of peak hours given their shift times would mean they travel to work earlier in the morning and leave later in the afternoon outside of the aquatic centres opening hours. Staff will therefore not drive during peak hours and hence are not expected to generate any vehicle trips during the peak periods.

Summary

On the basis of the above, the proposed development is expected to generate around 93, 144 and 131 vehicle trips in the weekday AM, weekday PM and Saturday midday peak periods.

Based on the above, the traffic generation for the proposed development is set out in Table 6.1.

Table 6.1: Traffic generation

Land Use	Traffic Generation			In/ out Movement Proportion		Traffic Generation (veh movements)								
	AM Peak Hour	PM Peak Hour	Saturday Peak Hour	All Peak Hours		AM Peak Hour			PM Peak Hour			Sat Peak Hour		
				In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Gymnasium	50	63	32	50%	50%	25	25	**50**	31	32	**63**	16	16	**32**
25 and 50m Pool	43	54	48	50%	50%	22	21	**43**	27	27	**54**	24	24	**48**
Learn to Swim Pool	0	27	27	50%	50%	0	0	**0**	14	13	**27**	13	14	**27**
Outdoor water play/ slides	0	0	24	50%	50%	0	0	**0**	0	0	**0**	12	12	**24**
Total	**93**	**144**	**131**			**47**	**46**	**93**	**72**	**72**	**144**	**65**	**66**	**131**

6.3 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development will be influenced by a number of factors, including the:

- configuration of the arterial road network in the immediate vicinity of the site
- existing operation of intersections providing access between the local and arterial road network
- distribution of households in the vicinity of the site
- surrounding employment centres, retail centres and schools in relation to the site
- likely distribution of employee's residences in relation to the site
- configuration of access points to the site.

Traffic associated with the development are distributed across the network based on data from the Port Macquarie Hastings Council Strategy report. The report looks at ABS 2016 data and categorises population distribution based on suburb and planning areas within the Port Macquarie Hastings local government area.

Having consideration to the above and for the purposes of estimating vehicle movements, the following directional distributions have been assumed for visitors/ employees visiting the site:

- Town Beach/ CBD – 1.5%
- Lord Street – 2.4%
- Flynn's Beach – 3%
- Gordon Street – 3.2%
- Westport – 10.2%
- Hastings River Canals – 3.9%
- Shelly Beach/ Bellevue Hill – 15.8%
- Light House Beach / Green Meadows – 6.2%
- Thrumster – 0.7%
- Lake Cathie/ Bonny Hills – 8.8%
- Camden Haven East – 8.3%
- Port Macquarie Rural – 4.7%
- Wauchope – 5.1%
- Rural – 9.4%.

The distribution of traffic has been based on the expected travel patterns between the aquatic centre and residential population distribution as outlined above. Taking into consideration that the site will be accessed via Munster Road, the distribution in the weekday AM and PM and Saturday midday peak periods are assumed as follows:

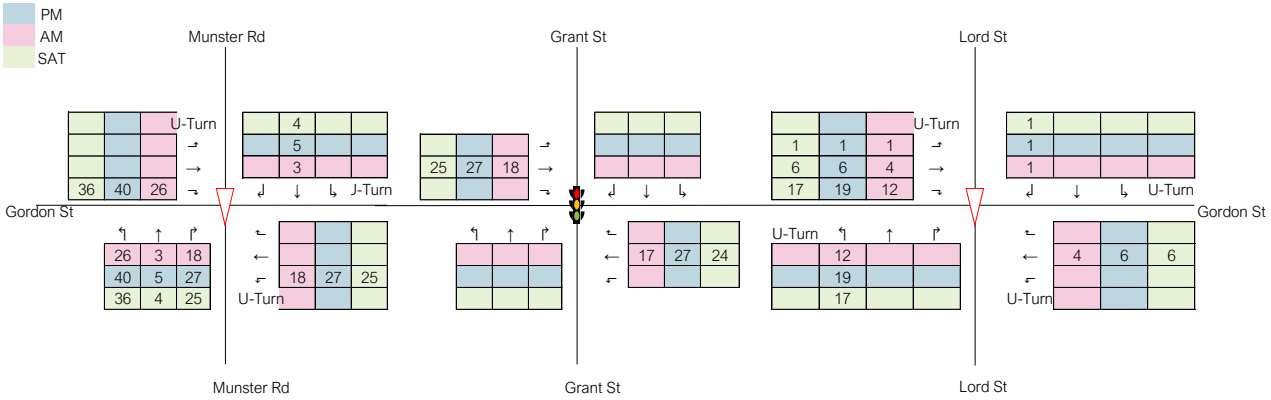
- 55% Gordon Street to/ from the west

- 9% Gordon Street, to/ from east of Lord Street
- 26% Lord Street to/ from the south
- 2% Lord Street to/ from the north
- 1% Grant Street to/from the south
- 7% Munster Road to/from the north.

As discussed in section 3.2 entry and exit to the car park will be via Munster Road and therefore all visitors are expected to access the site via this site access.

Based on the above, the estimated increase in turning movements near the subject site following development in the AM and PM peak hours are summarised in Figure 6-1.

Figure 6-1 –Weekday AM/ PM and Saturday midday peak hour site generated traffic volumes



6.4 Traffic Impact

Table 6.2 presents a summary of the operation of the intersection post development of the site, with full results presented in Appendix A of this report.

Table 6.2: 2023 Post Development Operating Conditions

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	Average queue (m)	Level of Service (LOS)
Gordon Street Road/ Munster Street	AM	0.12	13	2	LOS A
	PM	0.48	15	8	LOS B
	Saturday	0.42	14	7	LOS A
Gordon Street/ Grant Road	AM	0.55	15	37	LOS B
	PM	0.51	14	32	LOS A
	Saturday	0.41	13	23	LOS A
Gordon Road/ Lord Road	AM	0.24	12	3	LOS A
	PM	0.09	13	1	LOS A
	Saturday	0.05	12	1	LOS A

The results presented in Table 6.2 indicate that all intersections will continue to operate well within all peak hours at LOS B or better. It is expected that the overall average delay is expected to increase by up to one second in any peak hour with average queues also expected to increase by up to two metres.

An assessment of the future operation of the intersections for the 10 year horizon, without development, has also been completed. To project the traffic conditions, a background traffic growth of two per cent has been applied to the existing traffic volumes. This accounts for both localised development (under construction, in planning or unknown) and regional transport network growth. Table 6.3 presents a summary of the operation of the intersection post development of the site, with full results presented in Appendix A of this report.

Table 6.3: 2033 Base Operating conditions (Without Development)

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	Average queue (m)	Level of Service (LOS)
Gordon Street Road/ Munster Street	AM	0.53	15	10	B
	PM	0.62	18	12	B
	Saturday	0.54	16	10	B
Gordon Street/ Grant Road	AM	0.65	16	47	B
	PM	0.60	14	39	B
	Saturday	0.47	13	28	B
Gordon Road/ Lord Road	AM	0.29	13	4	B
	PM	0.12	14	2	B
	Saturday	0.06	13	1	B

Similar to 2023 existing conditions and post development operating conditions, Table 6.3 indicates that all intersections will continue to operate well, with a Level of Service B or better for all peak hours in 2033. Compared to the existing conditions as detailed in Table 2.3, it is expected that the overall average delay is expected to increase by up to four seconds in any peak hour with average queues also expected to increase by up to 11 metres (around two cars).

Table 6.4 presents a summary of the operation of the intersection in 2033 post development of the site, with full results presented in Appendix A of this report.

Table 6.4: 2033 Post Development Operating conditions

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	Average queue (m)	Level of Service (LOS)
Gordon Street Road/ Munster Street	AM	0.55	16	11	B
	PM	0.67	20	13	B
	Saturday	0.58	17	11	B
Gordon Street/ Grant Road	AM	0.68	16	48	B
	PM	0.62	14	41	B
	Saturday	0.49	13	29	B
Gordon Road/ Lord Road	AM	0.30	13	4	B
	PM	0.12	14	2	B
	Saturday	0.07	13	1	B

The results presented in Table 6.4 indicate that all intersections will continue to operate well within all peak hours at LOS B or better. It is expected that the overall average delay is expected to increase by up to two seconds in any peak hour with average queues also expected to increase by up to two metres.

7. Conclusion

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

- A new Aquatic Centre is proposed at 42 Gordon Street to replace the existing Port Macquarie Olympic Pool at 28 Gordon Street. The proposal incorporates new indoor and outdoor pool and leisure facilities, a gymnasium, amenities and change rooms, and a café.
- The development is proposed in two stages, with stage 1 delivering core aquatic facilities with ancillary services including office, café and grandstand, as well as a new gymnasium, and stage 2 delivering leisure aquatic facilities (water play and slides) as well as an expansion of the gymnasium area.
- The Port Macquarie Hastings Council's Development Control Plan 2013 identifies that the proposed redevelopment should provide for a minimum of 79 spaces for stage 1 and 134 spaces for stage 2.
- Parking demand for the proposed uses is expected to vary throughout the week, with peak demand for around 110 to 129 spaces in Stage 1 and 149 to 168 spaces for Stage 2 expected.
- The provision of 129 and 170 spaces respectively in Stage 1 and 2 therefore meets or exceeds the expected parking demand and will adequately accommodate the anticipated parking demand associated with the aquatic centre.
- It is recommended a total of 10 bicycle spaces are provided.
- The design of the car park, general vehicle drop-off/ pick-up area and event bus/ coach drop off/ pick up area are considered appropriate and capable of accommodating demands by both cars and buses/ coaches.
- The provision of one loading bay for vehicles up to 8.8 metre medium rigid vehicles is considered suitable for servicing the site.
- The proposed car parking layout is considered consistent with the requirements set out in the Australian Standards for Off Street Parking Facilities (AS/NZS 2890.1:2004 and AS/NZS 2890.6:2009).
- Full development of the site is expected to generate 93, 144 and 131 trips in the weekday AM, PM and Saturday peak hours respectively.
- Intersection modelling indicates that all intersections will continue to operate well, with Level of Service B and therefore with significant spare capacity during each peak hour, in both the 2023 and 2033 post development scenarios. It is expected that as a result of the development, overall average intersection delay is expected to increase by up to three seconds with average queues also expected to increase by up to two metres in any peak hour.
- Overall, the proposed development can be supported from a traffic and transport perspective.

Appendix A. SIDRA Modelling Results

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 230926_port_macquarie_aquatic_centre — **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_AM (Site Folder: Existing)] — **Network: 1 [Existing AM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	26	0.0	26	0.0	0.091	7.4	LOS A	0.2	1.2	0.66	0.78	0.66	47.5
2	T1	13	8.3	13	8.3	0.091	7.8	LOS A	0.2	1.2	0.66	0.78	0.66	45.4
3	R2	12	9.1	12	9.1	0.091	11.7	LOS A	0.2	1.2	0.66	0.78	0.66	40.8
3u	U	1	0.0	1	0.0	0.091	13.0	LOS A	0.2	1.2	0.66	0.78	0.66	46.1
Approach		52	4.1	52	4.1	0.091	8.6	LOS A	0.2	1.2	0.66	0.78	0.66	45.9
East: Gordon Street														
4	L2	35	3.0	35	3.0	0.422	6.3	LOS A	1.2	8.6	0.46	0.57	0.46	45.7
5	T1	811	2.3	811	2.3	0.422	6.5	LOS A	1.2	8.6	0.47	0.59	0.47	51.4
6	R2	68	4.6	68	4.6	0.422	10.6	LOS A	1.2	8.4	0.47	0.61	0.47	46.4
6u	U	15	0.0	15	0.0	0.422	12.3	LOS A	1.2	8.4	0.47	0.61	0.47	38.3
Approach		928	2.5	928	2.5	0.422	6.9	LOS A	1.2	8.6	0.47	0.59	0.47	50.6
North: Munster Street														
7	L2	55	1.9	55	1.9	0.393	7.3	LOS A	0.8	6.0	0.66	0.88	0.70	39.5
8	T1	14	0.0	14	0.0	0.393	7.2	LOS A	0.8	6.0	0.66	0.88	0.70	44.5
9	R2	193	7.7	193	7.7	0.393	11.4	LOS A	0.8	6.0	0.66	0.88	0.70	46.9
9u	U	1	0.0	1	0.0	0.393	12.7	LOS A	0.8	6.0	0.66	0.88	0.70	45.1
Approach		262	6.0	262	6.0	0.393	10.3	LOS A	0.8	6.0	0.66	0.88	0.70	45.7
West: Gordon Street														
10	L2	284	4.4	284	4.4	0.315	5.2	LOS A	1.0	7.3	0.37	0.50	0.37	49.6
11	T1	508	2.9	508	2.9	0.315	5.3	LOS A	1.0	7.3	0.38	0.49	0.38	49.5
12	R2	32	3.3	32	3.3	0.315	9.2	LOS A	1.0	7.1	0.39	0.49	0.39	50.3
12u	U	6	0.0	6	0.0	0.315	11.1	LOS A	1.0	7.1	0.39	0.49	0.39	54.5
Approach		831	3.4	831	3.4	0.315	5.5	LOS A	1.0	7.3	0.38	0.49	0.38	49.6
All Vehicles		2073	3.4	2073	3.4	0.422	6.8	LOS A	1.2	8.6	0.46	0.59	0.47	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_AM (Site Folder: Existing)]

Network: 1 [Existing AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	135	3.1	135	3.1	0.198	17.0	LOS B	1.5	10.8	0.70	0.72	0.70	34.3
2	T1	85	1.2	85	1.2	0.310	23.1	LOS B	1.4	9.8	0.92	0.72	0.92	37.9
3	R2	4	25.0	4	25.0	0.310	27.7	LOS B	1.4	9.8	0.92	0.72	0.92	30.8
Approach		224	2.8	224	2.8	0.310	19.5	LOS B	1.5	10.8	0.79	0.72	0.79	36.1
East: Gordon Street														
4	L2	16	0.0	16	0.0	0.535	20.1	LOS B	5.1	36.0	0.83	0.71	0.83	40.0
5	T1	757	2.2	757	2.2	* 0.535	14.6	LOS B	5.1	36.1	0.83	0.71	0.83	28.1
6	R2	20	0.0	20	0.0	0.036	11.5	LOS A	0.1	0.9	0.61	0.66	0.61	42.3
Approach		793	2.1	793	2.1	0.535	14.6	LOS B	5.1	36.1	0.82	0.71	0.82	29.4
North: Grant Street														
7	L2	11	0.0	11	0.0	0.014	15.9	LOS B	0.1	0.7	0.64	0.63	0.64	35.0
8	T1	42	0.0	42	0.0	* 0.346	24.5	LOS B	1.2	8.8	0.94	0.74	0.94	36.7
9	R2	35	6.1	35	6.1	0.346	29.3	LOS C	1.2	8.8	0.94	0.74	0.94	29.2
Approach		87	2.4	87	2.4	0.346	25.4	LOS B	1.2	8.8	0.90	0.73	0.90	34.2
West: Gordon Street														
10	L2	81	5.2	81	5.2	0.334	18.1	LOS B	2.9	20.6	0.73	0.67	0.73	40.2
11	T1	418	2.5	418	2.5	0.334	12.5	LOS A	2.9	20.9	0.73	0.64	0.73	29.7
12	R2	134	1.6	134	1.6	* 0.284	13.0	LOS A	1.0	7.0	0.74	0.74	0.74	41.1
Approach		633	2.7	633	2.7	0.334	13.3	LOS A	2.9	20.9	0.74	0.66	0.74	35.8
All Vehicles		1737	2.4	1737	2.4	0.535	15.3	LOS B	5.1	36.1	0.79	0.70	0.79	33.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

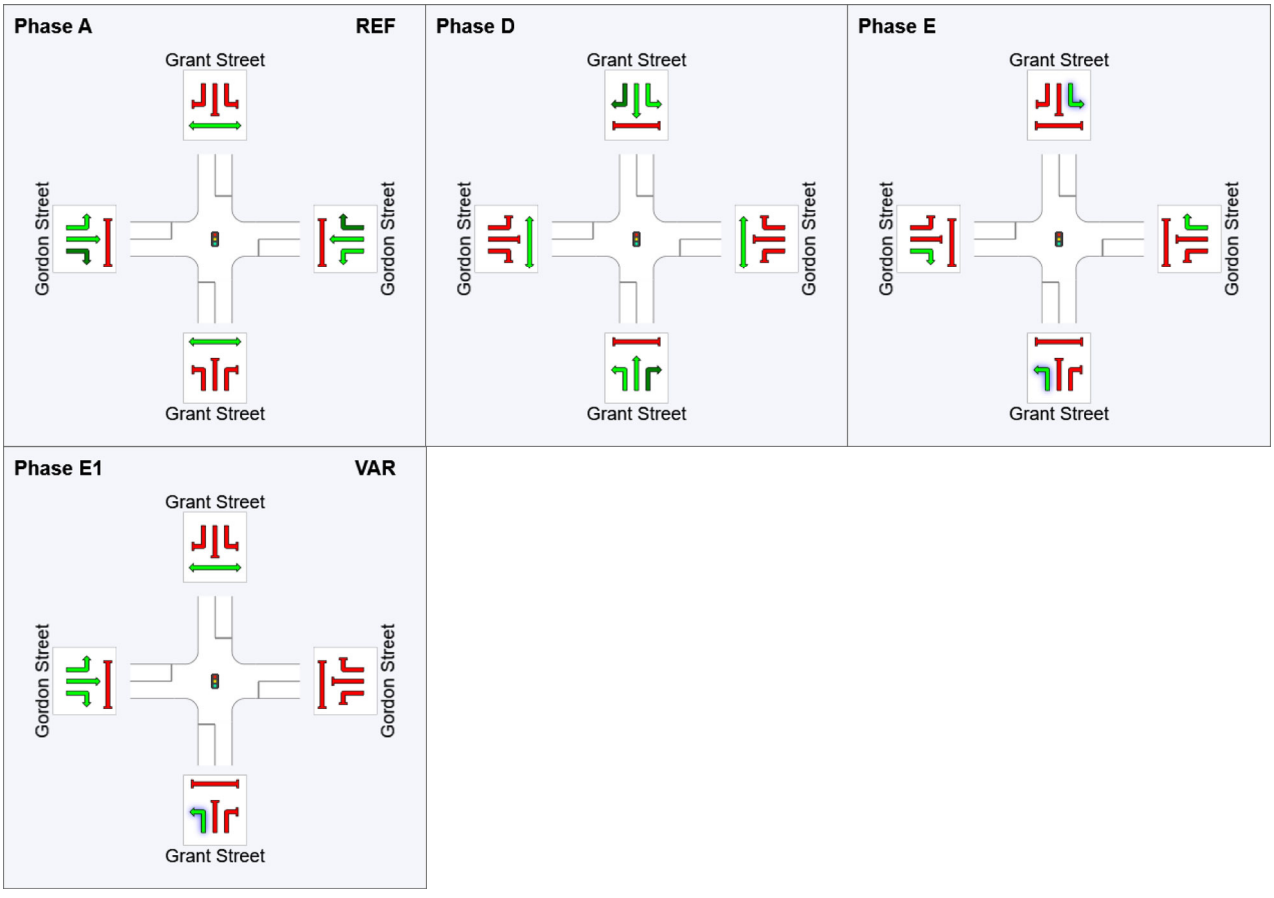
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

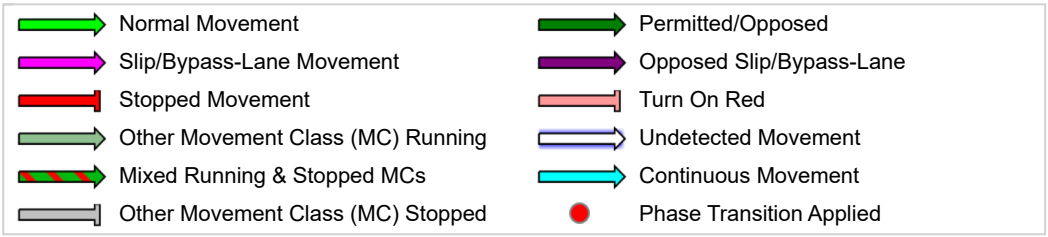
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	185.5	212.8	1.15
East: Gordon Street											
P2	Full	5	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
North: Grant Street											
P3	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	186.8	214.4	1.15
West: Gordon Street											
P4	Full	21	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
All Pedestrians		47	21.8	LOS C	0.0	0.0	0.89	0.89	188.0	216.0	1.15

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	27	42	54
Green Time (sec)	21	9	6	***
Phase Time (sec)	27	15	12	1
Phase Split	49%	27%	22%	2%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_AM (Site Folder: Existing)]

Network: 1 [Existing AM (Network Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	507	2.3	507	2.3	0.430	4.6	LOS A	1.0	6.8	0.47	0.59	0.47	43.7
2	T1	292	1.1	292	1.1	0.327	4.5	LOS A	0.6	4.5	0.44	0.54	0.44	47.3
3	R2	34	3.1	34	3.1	0.327	8.7	LOS A	0.6	4.5	0.44	0.54	0.44	47.3
3u	U	8	0.0	8	0.0	0.327	12.0	LOS A	0.6	4.5	0.44	0.54	0.44	51.1
Approach		841	1.9	841	1.9	0.430	4.8	LOS A	1.0	6.8	0.46	0.57	0.46	45.7
East: Gordon Street														
4	L2	19	5.6	19	5.6	0.083	4.8	LOS A	0.1	1.0	0.43	0.51	0.43	46.3
5	T1	141	1.5	141	1.5	0.083	4.5	LOS A	0.1	1.0	0.43	0.53	0.43	43.5
6	R2	13	0.0	13	0.0	0.083	8.7	LOS A	0.1	1.0	0.44	0.54	0.44	47.3
6u	U	1	0.0	1	0.0	0.083	12.1	LOS A	0.1	1.0	0.44	0.54	0.44	51.0
Approach		174	1.8	174	1.8	0.083	4.8	LOS A	0.1	1.0	0.43	0.53	0.43	44.5
North: Lord Street														
7	L2	11	10.0	11	10.0	0.093	4.7	LOS A	0.2	1.2	0.42	0.48	0.42	49.3
8	T1	93	1.1	93	1.1	0.093	4.2	LOS A	0.2	1.2	0.42	0.48	0.42	47.6
9	R2	96	2.2	96	2.2	0.096	8.5	LOS A	0.2	1.2	0.42	0.66	0.42	40.8
9u	U	5	0.0	5	0.0	0.096	11.9	LOS A	0.2	1.2	0.42	0.66	0.42	49.1
Approach		204	2.1	204	2.1	0.096	6.5	LOS A	0.2	1.2	0.42	0.57	0.42	45.3
West: Gordon Street														
10	L2	99	0.0	99	0.0	0.206	5.9	LOS A	0.4	2.5	0.38	0.58	0.38	46.5
11	T1	107	2.9	107	2.9	0.206	6.0	LOS A	0.4	2.5	0.38	0.58	0.38	48.1
12	R2	211	3.0	211	3.0	0.224	10.1	LOS A	0.4	2.9	0.38	0.70	0.38	45.1
12u	U	29	0.0	29	0.0	0.224	12.1	LOS A	0.4	2.9	0.38	0.70	0.38	35.3
Approach		446	2.1	446	2.1	0.224	8.3	LOS A	0.4	2.9	0.38	0.64	0.38	45.8
All Vehicles		1665	2.0	1665	2.0	0.430	6.0	LOS A	1.0	6.8	0.43	0.58	0.43	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 230926_port_macquarie_aquatic_centre — **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_PM (Site Folder: Existing)] — **Network: 2 [Existing PM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	34	3.1	34	3.1	0.080	6.6	LOS A	0.1	1.0	0.59	0.72	0.59	48.0
2	T1	6	16.7	6	16.7	0.080	7.1	LOS A	0.1	1.0	0.59	0.72	0.59	45.8
3	R2	11	0.0	11	0.0	0.080	10.4	LOS A	0.1	1.0	0.59	0.72	0.59	41.6
3u	U	1	0.0	1	0.0	0.080	12.0	LOS A	0.1	1.0	0.59	0.72	0.59	46.6
Approach		52	4.1	52	4.1	0.080	7.5	LOS A	0.1	1.0	0.59	0.72	0.59	46.8
East: Gordon Street														
4	L2	22	0.0	22	0.0	0.296	6.0	LOS A	0.8	5.3	0.43	0.54	0.43	45.9
5	T1	564	1.3	564	1.3	0.296	6.1	LOS A	0.8	5.3	0.43	0.56	0.43	51.6
6	R2	66	1.6	66	1.6	0.296	10.1	LOS A	0.7	5.2	0.44	0.59	0.44	46.6
6u	U	3	0.0	3	0.0	0.296	12.0	LOS A	0.7	5.2	0.44	0.59	0.44	38.7
Approach		656	1.3	656	1.3	0.296	6.6	LOS A	0.8	5.3	0.43	0.57	0.43	50.8
North: Munster Street														
7	L2	62	1.7	62	1.7	0.446	8.9	LOS A	1.0	6.9	0.71	0.93	0.84	38.2
8	T1	4	0.0	4	0.0	0.446	8.9	LOS A	1.0	6.9	0.71	0.93	0.84	43.7
9	R2	203	2.6	203	2.6	0.446	12.8	LOS A	1.0	6.9	0.71	0.93	0.84	46.1
9u	U	2	0.0	2	0.0	0.446	14.4	LOS A	1.0	6.9	0.71	0.93	0.84	44.3
Approach		272	2.3	272	2.3	0.446	11.9	LOS A	1.0	6.9	0.71	0.93	0.84	44.9
West: Gordon Street														
10	L2	224	2.3	224	2.3	0.360	5.1	LOS A	1.2	8.7	0.35	0.47	0.35	49.6
11	T1	740	1.6	740	1.6	0.360	5.2	LOS A	1.2	8.7	0.35	0.47	0.35	49.8
12	R2	24	0.0	24	0.0	0.360	9.1	LOS A	1.2	8.5	0.36	0.47	0.36	50.5
12u	U	3	0.0	3	0.0	0.360	10.9	LOS A	1.2	8.5	0.36	0.47	0.36	54.8
Approach		992	1.7	992	1.7	0.360	5.3	LOS A	1.2	8.7	0.35	0.47	0.35	49.8
All Vehicles		1971	1.7	1971	1.7	0.446	6.7	LOS A	1.2	8.7	0.43	0.57	0.45	49.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_PM (Site Folder: Existing)]

Network: 2 [Existing PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	112	0.9	112	0.9	0.182	17.4	LOS B	1.2	8.5	0.74	0.72	0.74	34.1
2	T1	27	3.8	27	3.8	0.181	23.1	LOS B	0.5	3.6	0.93	0.69	0.93	37.6
3	R2	7	0.0	7	0.0	0.181	27.7	LOS B	0.5	3.6	0.93	0.69	0.93	30.4
Approach		146	1.4	146	1.4	0.182	19.0	LOS B	1.2	8.5	0.78	0.72	0.78	34.9
East: Gordon Street														
4	L2	22	0.0	22	0.0	0.355	17.1	LOS B	2.9	20.3	0.74	0.63	0.74	41.8
5	T1	515	1.8	515	1.8	0.355	11.6	LOS A	2.9	20.5	0.74	0.63	0.74	31.4
6	R2	8	0.0	8	0.0	0.017	11.2	LOS A	0.0	0.3	0.64	0.64	0.64	42.5
Approach		545	1.7	545	1.7	0.355	11.8	LOS A	2.9	20.5	0.74	0.63	0.74	32.8
North: Grant Street														
7	L2	17	0.0	17	0.0	0.023	15.7	LOS B	0.2	1.1	0.67	0.65	0.67	35.1
8	T1	46	0.0	46	0.0	* 0.418	25.1	LOS B	1.1	7.9	0.98	0.74	0.98	36.6
9	R2	26	0.0	26	0.0	0.418	29.7	LOS C	1.1	7.9	0.98	0.74	0.98	29.1
Approach		89	0.0	89	0.0	0.418	24.7	LOS B	1.1	7.9	0.92	0.73	0.92	34.7
West: Gordon Street														
10	L2	46	2.3	46	2.3	0.492	17.9	LOS B	4.3	30.2	0.79	0.70	0.79	41.1
11	T1	698	1.7	698	1.7	* 0.492	12.4	LOS A	4.3	30.4	0.79	0.69	0.79	30.3
12	R2	120	0.9	120	0.9	* 0.212	10.9	LOS A	0.8	5.3	0.64	0.72	0.64	42.5
Approach		864	1.6	864	1.6	0.492	12.5	LOS A	4.3	30.4	0.77	0.69	0.77	34.6
All Vehicles		1645	1.5	1645	1.5	0.492	13.5	LOS A	4.3	30.4	0.77	0.67	0.77	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

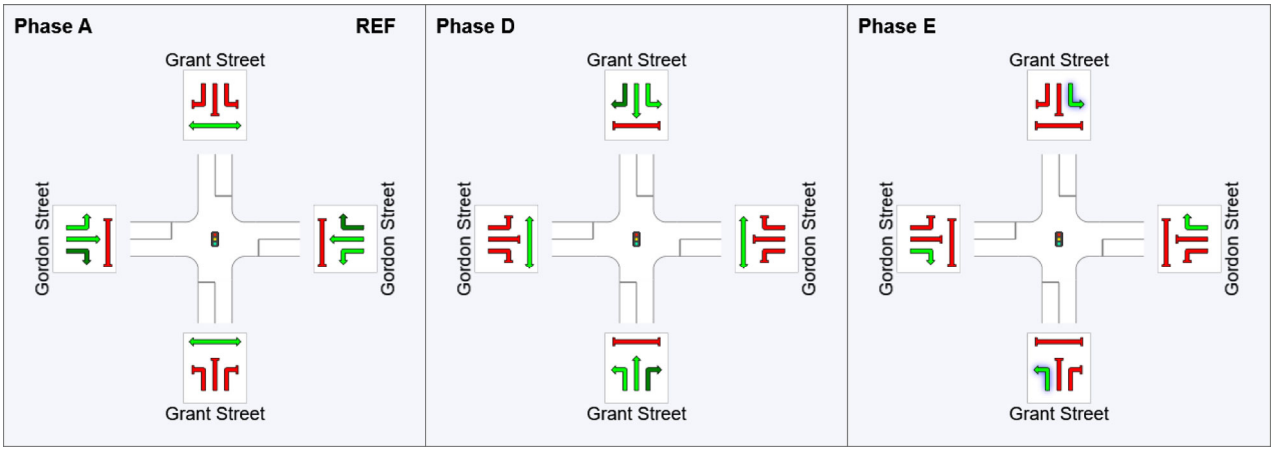
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

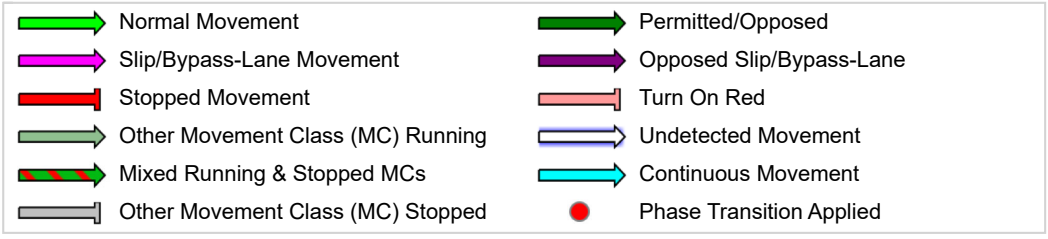
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	5	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		58	19.4	LOS B	0.0	0.0	0.88	0.88	185.1	215.5	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E
Phase Change Time (sec)	0	26	38
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12

Phase Split	52%	24%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 101 [Gordon Street/ Lord Street_PM (Site Folder: Existing)]

Network: 2 [Existing PM (Network Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	307	1.4	307	1.4	0.259	4.3	LOS A	0.5	3.6	0.38	0.54	0.38	44.1
2	T1	169	0.0	169	0.0	0.211	4.1	LOS A	0.4	2.7	0.38	0.53	0.38	47.5
3	R2	32	0.0	32	0.0	0.211	8.2	LOS A	0.4	2.7	0.38	0.53	0.38	47.5
3u	U	27	0.0	27	0.0	0.211	11.6	LOS A	0.4	2.7	0.38	0.53	0.38	51.3
Approach		536	0.8	536	0.8	0.259	4.8	LOS A	0.5	3.6	0.38	0.53	0.38	46.3
East: Gordon Street														
4	L2	31	0.0	31	0.0	0.087	5.7	LOS A	0.2	1.2	0.55	0.60	0.55	46.0
5	T1	116	3.6	116	3.6	0.087	5.6	LOS A	0.2	1.2	0.56	0.61	0.56	42.8
6	R2	8	0.0	8	0.0	0.087	9.8	LOS A	0.2	1.2	0.56	0.62	0.56	46.9
6u	U	1	0.0	1	0.0	0.087	13.2	LOS A	0.2	1.2	0.56	0.62	0.56	50.6
Approach		156	2.7	156	2.7	0.087	5.9	LOS A	0.2	1.2	0.56	0.61	0.56	44.2
North: Lord Street														
7	L2	9	0.0	9	0.0	0.143	5.4	LOS A	0.3	2.1	0.55	0.58	0.55	49.1
8	T1	176	3.0	176	3.0	0.143	5.2	LOS A	0.3	2.1	0.55	0.61	0.55	46.8
9	R2	82	1.3	82	1.3	0.143	9.6	LOS A	0.3	2.1	0.55	0.69	0.55	41.2
9u	U	4	0.0	4	0.0	0.143	12.9	LOS A	0.3	2.1	0.55	0.69	0.55	49.5
Approach		272	2.3	272	2.3	0.143	6.7	LOS A	0.3	2.1	0.55	0.64	0.55	45.8
West: Gordon Street														
10	L2	146	1.4	146	1.4	0.288	5.6	LOS A	0.5	3.7	0.33	0.55	0.33	46.7
11	T1	156	2.0	156	2.0	0.288	5.6	LOS A	0.5	3.7	0.33	0.55	0.33	48.4
12	R2	399	1.3	399	1.3	0.361	9.7	LOS A	0.7	5.2	0.34	0.68	0.34	45.4
12u	U	34	3.1	34	3.1	0.361	11.8	LOS A	0.7	5.2	0.34	0.68	0.34	35.6
Approach		735	1.6	735	1.6	0.361	8.1	LOS A	0.7	5.2	0.33	0.62	0.33	46.1
All Vehicles		1698	1.5	1698	1.5	0.361	6.7	LOS A	0.7	5.2	0.40	0.60	0.40	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 230926_port_macquarie_aquatic_centre

Template: Movement and phasing

Site: 101 [Munster Street/ Gordon Street_SAT (Site Folder: Existing)]

Network: 3 [Existing Sat (Network Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	23	4.5	23	4.5	0.066	6.6	LOS A	0.1	0.8	0.59	0.71	0.59	48.0
2	T1	9	0.0	9	0.0	0.066	6.5	LOS A	0.1	0.8	0.59	0.71	0.59	46.0
3	R2	9	0.0	9	0.0	0.066	10.3	LOS A	0.1	0.8	0.59	0.71	0.59	41.6
3u	U	1	0.0	1	0.0	0.066	12.0	LOS A	0.1	0.8	0.59	0.71	0.59	46.6
Approach		43	2.4	43	2.4	0.066	7.5	LOS A	0.1	0.8	0.59	0.71	0.59	46.5
East: Gordon Street														
4	L2	17	0.0	17	0.0	0.309	6.0	LOS A	0.8	5.5	0.42	0.54	0.42	45.9
5	T1	596	0.0	596	0.0	0.309	6.1	LOS A	0.8	5.5	0.42	0.56	0.42	51.6
6	R2	81	1.3	81	1.3	0.309	10.2	LOS A	0.8	5.4	0.43	0.59	0.43	46.5
6u	U	3	0.0	3	0.0	0.309	12.0	LOS A	0.8	5.4	0.43	0.59	0.43	38.6
Approach		697	0.2	697	0.2	0.309	6.6	LOS A	0.8	5.5	0.42	0.57	0.42	50.8
North: Munster Street														
7	L2	68	1.5	68	1.5	0.399	7.9	LOS A	0.8	5.9	0.68	0.89	0.74	39.2
8	T1	11	0.0	11	0.0	0.399	7.9	LOS A	0.8	5.9	0.68	0.89	0.74	44.4
9	R2	177	2.4	177	2.4	0.399	11.8	LOS A	0.8	5.9	0.68	0.89	0.74	46.9
9u	U	1	0.0	1	0.0	0.399	13.4	LOS A	0.8	5.9	0.68	0.89	0.74	44.9
Approach		257	2.0	257	2.0	0.399	10.6	LOS A	0.8	5.9	0.68	0.89	0.74	45.4
West: Gordon Street														
10	L2	259	2.0	259	2.0	0.344	5.2	LOS A	1.1	8.1	0.37	0.49	0.37	49.6
11	T1	620	1.9	620	1.9	0.344	5.3	LOS A	1.1	8.1	0.38	0.49	0.38	49.5
12	R2	39	0.0	39	0.0	0.344	9.2	LOS A	1.1	8.0	0.38	0.49	0.38	50.3
12u	U	8	0.0	8	0.0	0.344	11.0	LOS A	1.1	8.0	0.38	0.49	0.38	54.5
Approach		926	1.8	926	1.8	0.344	5.5	LOS A	1.1	8.1	0.38	0.49	0.38	49.7
All Vehicles		1923	1.3	1923	1.3	0.399	6.6	LOS A	1.1	8.1	0.44	0.58	0.45	49.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_SAT (Site Folder: Existing)]

Network: 3 [Existing Sat (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	164	0.0	164	0.0	0.237	16.2	LOS B	1.7	12.0	0.72	0.73	0.72	34.8
2	T1	37	0.0	37	0.0	0.165	19.7	LOS B	0.6	4.5	0.88	0.67	0.88	38.9
3	R2	12	0.0	12	0.0	0.165	24.3	LOS B	0.6	4.5	0.88	0.67	0.88	32.1
Approach		213	0.0	213	0.0	0.237	17.3	LOS B	1.7	12.0	0.75	0.72	0.75	35.8
East: Gordon Street														
4	L2	42	0.0	42	0.0	0.389	18.0	LOS B	3.1	21.9	0.77	0.67	0.77	40.9
5	T1	520	0.4	520	0.4	* 0.389	12.5	LOS A	3.2	22.2	0.77	0.66	0.77	30.1
6	R2	23	0.0	23	0.0	0.047	10.9	LOS A	0.1	1.0	0.61	0.66	0.61	42.7
Approach		585	0.4	585	0.4	0.389	12.8	LOS A	3.2	22.2	0.76	0.66	0.76	32.8
North: Grant Street														
7	L2	5	0.0	5	0.0	0.009	17.8	LOS B	0.1	0.4	0.72	0.62	0.72	33.8
8	T1	39	2.7	39	2.7	* 0.266	21.3	LOS B	1.0	6.8	0.91	0.72	0.91	38.0
9	R2	29	0.0	29	0.0	0.266	25.8	LOS B	1.0	6.8	0.91	0.72	0.91	30.8
Approach		74	1.4	74	1.4	0.266	22.8	LOS B	1.0	6.8	0.90	0.71	0.90	35.6
West: Gordon Street														
10	L2	44	0.0	44	0.0	0.343	15.0	LOS B	2.9	20.5	0.68	0.60	0.68	43.0
11	T1	559	0.2	559	0.2	0.343	9.5	LOS A	3.0	20.7	0.68	0.59	0.68	34.1
12	R2	127	0.8	127	0.8	* 0.221	11.2	LOS A	0.8	5.6	0.67	0.72	0.67	42.3
Approach		731	0.3	731	0.3	0.343	10.1	LOS A	3.0	20.7	0.68	0.61	0.68	37.8
All Vehicles		1602	0.3	1602	0.3	0.389	12.6	LOS A	3.2	22.2	0.73	0.65	0.73	35.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

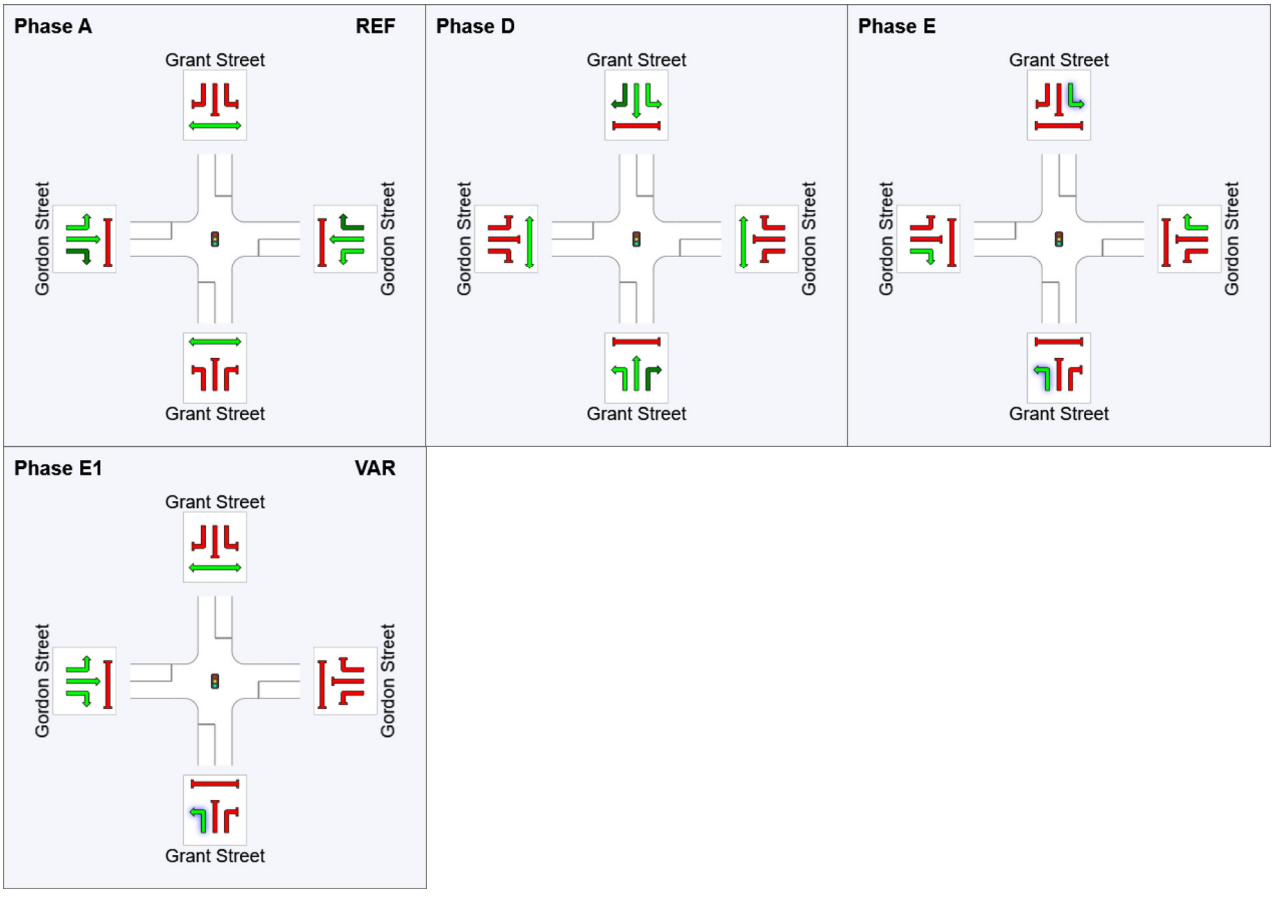
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

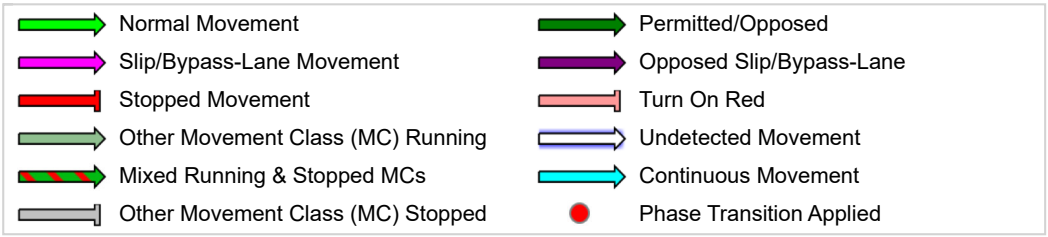
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		53	19.4	LOS B	0.0	0.0	0.88	0.88	184.9	215.2	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	25	40	46
Green Time (sec)	19	9	3	***
Phase Time (sec)	25	12	9	4
Phase Split	50%	24%	18%	8%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_SAT (Site Folder: Existing)]

Network: 3 [Existing Sat (Network Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	313	0.3	313	0.3	0.251	4.1	LOS A	0.5	3.3	0.34	0.51	0.34	44.3
2	T1	184	0.6	184	0.6	0.198	3.9	LOS A	0.4	2.5	0.34	0.49	0.34	47.7
3	R2	13	0.0	13	0.0	0.198	8.1	LOS A	0.4	2.5	0.34	0.49	0.34	47.8
3u	U	21	0.0	21	0.0	0.198	11.5	LOS A	0.4	2.5	0.34	0.49	0.34	51.7
Approach		531	0.4	531	0.4	0.251	4.4	LOS A	0.5	3.3	0.34	0.50	0.34	46.4
East: Gordon Street														
4	L2	5	0.0	5	0.0	0.048	4.9	LOS A	0.1	0.6	0.45	0.51	0.45	46.3
5	T1	81	0.0	81	0.0	0.048	4.7	LOS A	0.1	0.6	0.46	0.53	0.46	43.3
6	R2	11	0.0	11	0.0	0.048	8.9	LOS A	0.1	0.6	0.46	0.56	0.46	47.0
6u	U	1	0.0	1	0.0	0.048	12.3	LOS A	0.1	0.6	0.46	0.56	0.46	50.7
Approach		98	0.0	98	0.0	0.048	5.2	LOS A	0.1	0.6	0.46	0.53	0.46	44.3
North: Lord Street														
7	L2	8	0.0	8	0.0	0.106	4.7	LOS A	0.2	1.4	0.44	0.50	0.44	49.5
8	T1	132	0.0	132	0.0	0.106	4.4	LOS A	0.2	1.4	0.44	0.53	0.44	47.2
9	R2	84	0.0	84	0.0	0.106	8.7	LOS A	0.2	1.4	0.45	0.64	0.45	41.4
9u	U	1	0.0	1	0.0	0.106	12.1	LOS A	0.2	1.4	0.45	0.64	0.45	49.6
Approach		225	0.0	225	0.0	0.106	6.0	LOS A	0.2	1.4	0.44	0.57	0.44	45.8
West: Gordon Street														
10	L2	141	0.0	141	0.0	0.229	5.4	LOS A	0.4	2.7	0.31	0.53	0.31	46.8
11	T1	117	0.0	117	0.0	0.229	5.4	LOS A	0.4	2.7	0.31	0.53	0.31	48.5
12	R2	273	0.4	273	0.4	0.248	9.6	LOS A	0.4	3.1	0.31	0.67	0.31	45.5
12u	U	24	0.0	24	0.0	0.248	11.6	LOS A	0.4	3.1	0.31	0.67	0.31	35.8
Approach		555	0.2	555	0.2	0.248	7.7	LOS A	0.4	3.1	0.31	0.60	0.31	46.2
All Vehicles		1408	0.2	1408	0.2	0.251	6.0	LOS A	0.5	3.3	0.35	0.55	0.35	46.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_AM (Site Folder: 2023 Pdev)] | **Network: 4 [Pdev AM (Network Folder: Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	54	0.0	54	0.0	0.177	7.7	LOS A	0.3	2.4	0.69	0.84	0.69	47.2
2	T1	16	6.7	16	6.7	0.177	8.1	LOS A	0.3	2.4	0.69	0.84	0.69	45.1
3	R2	31	3.4	31	3.4	0.177	11.7	LOS A	0.3	2.4	0.69	0.84	0.69	40.3
3u	U	1	0.0	1	0.0	0.177	13.3	LOS A	0.3	2.4	0.69	0.84	0.69	45.8
Approach		101	2.1	101	2.1	0.177	9.0	LOS A	0.3	2.4	0.69	0.84	0.69	45.4
East: Gordon Street														
4	L2	54	2.0	54	2.0	0.443	6.6	LOS A	1.3	9.1	0.49	0.59	0.49	45.6
5	T1	811	2.3	811	2.3	0.443	6.8	LOS A	1.3	9.1	0.49	0.61	0.49	51.2
6	R2	68	4.6	68	4.6	0.443	10.9	LOS A	1.2	8.8	0.50	0.63	0.50	46.2
6u	U	15	0.0	15	0.0	0.443	12.6	LOS A	1.2	8.8	0.50	0.63	0.50	38.1
Approach		947	2.4	947	2.4	0.443	7.2	LOS A	1.3	9.1	0.49	0.61	0.49	50.4
North: Munster Street														
7	L2	55	1.9	55	1.9	0.411	7.7	LOS A	0.9	6.5	0.68	0.90	0.75	39.1
8	T1	17	0.0	17	0.0	0.411	7.7	LOS A	0.9	6.5	0.68	0.90	0.75	44.3
9	R2	193	7.7	193	7.7	0.411	11.9	LOS A	0.9	6.5	0.68	0.90	0.75	46.7
9u	U	1	0.0	1	0.0	0.411	13.2	LOS A	0.9	6.5	0.68	0.90	0.75	44.9
Approach		265	6.0	265	6.0	0.411	10.8	LOS A	0.9	6.5	0.68	0.90	0.75	45.4
West: Gordon Street														
10	L2	284	4.4	284	4.4	0.334	5.4	LOS A	1.1	7.6	0.41	0.51	0.41	49.5
11	T1	508	2.9	508	2.9	0.334	5.5	LOS A	1.1	7.6	0.42	0.52	0.42	49.1
12	R2	59	1.8	59	1.8	0.334	9.4	LOS A	1.0	7.5	0.42	0.52	0.42	50.1
12u	U	6	0.0	6	0.0	0.334	11.2	LOS A	1.0	7.5	0.42	0.52	0.42	54.2
Approach		858	3.3	858	3.3	0.334	5.8	LOS A	1.1	7.6	0.42	0.52	0.42	49.4
All Vehicles		2172	3.2	2172	3.2	0.443	7.1	LOS A	1.3	9.1	0.50	0.62	0.50	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_AM (Site Folder: 2023 Pdev)]

Network: 4 [Pdev AM (Network Folder: Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	135	3.1	135	3.1	0.198	17.0	LOS B	1.5	10.8	0.70	0.72	0.70	34.3
2	T1	85	1.2	85	1.2	0.310	23.1	LOS B	1.4	9.8	0.92	0.72	0.92	37.9
3	R2	4	25.0	4	25.0	0.310	27.7	LOS B	1.4	9.8	0.92	0.72	0.92	30.8
Approach		224	2.8	224	2.8	0.310	19.5	LOS B	1.5	10.8	0.79	0.72	0.79	36.1
East: Gordon Street														
4	L2	16	0.0	16	0.0	0.547	20.2	LOS B	5.2	37.1	0.83	0.72	0.83	39.9
5	T1	775	2.2	775	2.2	* 0.547	14.7	LOS B	5.2	37.1	0.83	0.72	0.83	28.0
6	R2	20	0.0	20	0.0	0.037	11.5	LOS A	0.1	0.9	0.61	0.66	0.61	42.3
Approach		811	2.1	811	2.1	0.547	14.7	LOS B	5.2	37.1	0.83	0.72	0.83	29.3
North: Grant Street														
7	L2	11	0.0	11	0.0	0.014	15.9	LOS B	0.1	0.7	0.64	0.63	0.64	35.0
8	T1	42	0.0	42	0.0	* 0.346	24.5	LOS B	1.2	8.8	0.94	0.74	0.94	36.7
9	R2	35	6.1	35	6.1	0.346	29.3	LOS C	1.2	8.8	0.94	0.74	0.94	29.2
Approach		87	2.4	87	2.4	0.346	25.4	LOS B	1.2	8.8	0.90	0.73	0.90	34.2
West: Gordon Street														
10	L2	81	5.2	81	5.2	0.346	18.2	LOS B	3.0	21.5	0.74	0.67	0.74	40.2
11	T1	437	2.4	437	2.4	0.346	12.6	LOS A	3.1	21.8	0.74	0.64	0.74	29.6
12	R2	134	1.6	134	1.6	* 0.287	13.0	LOS A	1.0	7.0	0.74	0.74	0.74	41.1
Approach		652	2.6	652	2.6	0.346	13.4	LOS A	3.1	21.8	0.74	0.66	0.74	35.6
All Vehicles		1774	2.4	1774	2.4	0.547	15.3	LOS B	5.2	37.1	0.79	0.70	0.79	33.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

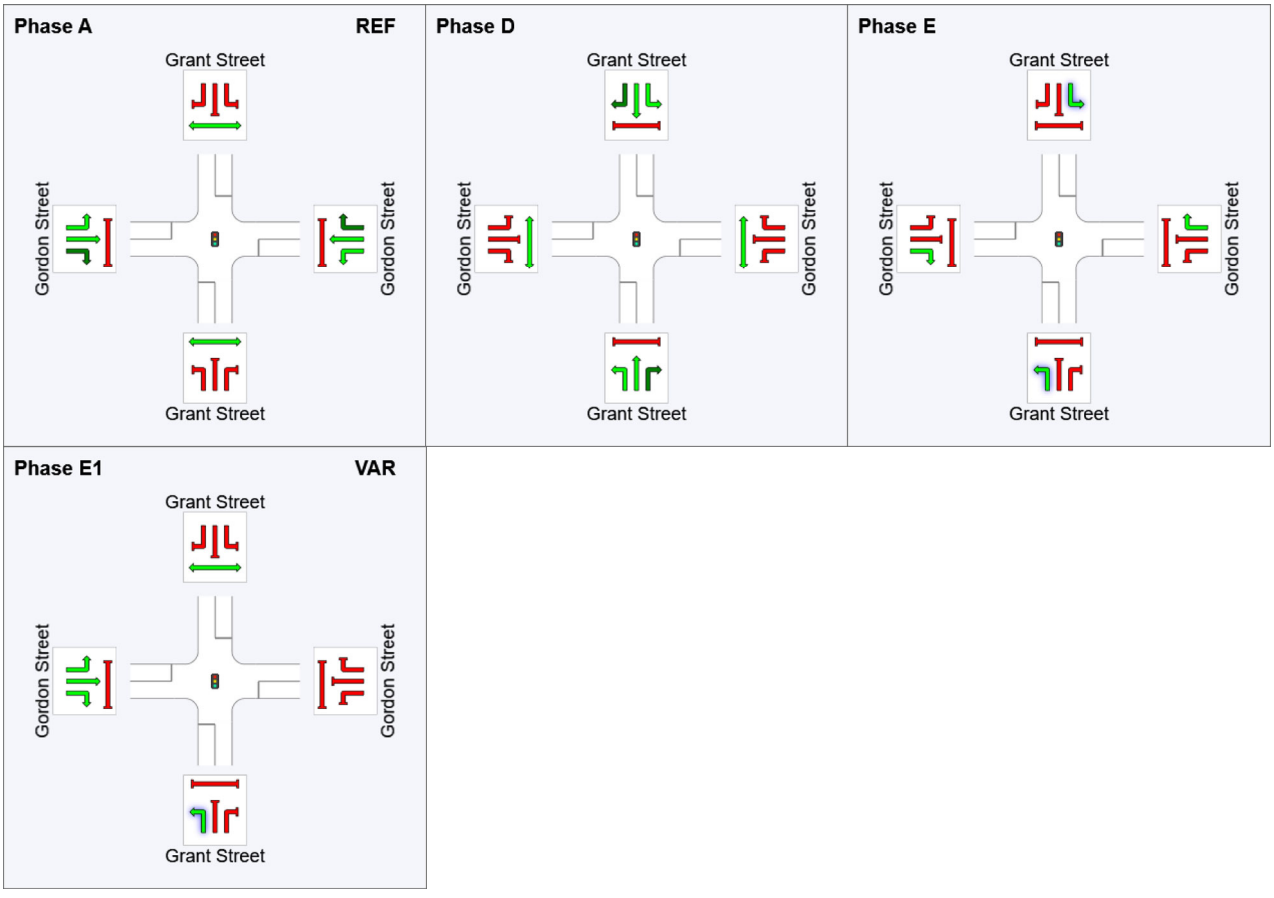
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

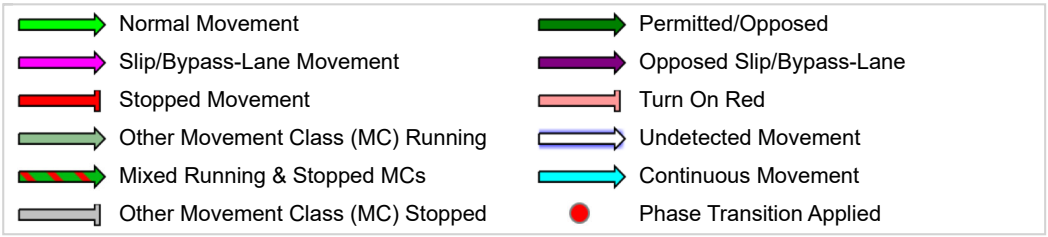
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	185.5	212.8	1.15
East: Gordon Street											
P2	Full	5	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
North: Grant Street											
P3	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	186.8	214.4	1.15
West: Gordon Street											
P4	Full	21	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
All Pedestrians		47	21.8	LOS C	0.0	0.0	0.89	0.89	188.0	216.0	1.15

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	27	42	54
Green Time (sec)	21	9	6	***
Phase Time (sec)	27	15	12	1
Phase Split	49%	27%	22%	2%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_AM (Site Folder: 2023 Pdev)]

Network: 4 [Pdev AM (Network Folder: Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	520	2.2	520	2.2	0.441	4.7	LOS A	1.0	7.1	0.48	0.59	0.48	43.7
2	T1	292	1.1	292	1.1	0.330	4.5	LOS A	0.6	4.6	0.45	0.54	0.45	47.3
3	R2	34	3.1	34	3.1	0.330	8.7	LOS A	0.6	4.6	0.45	0.54	0.45	47.3
3u	U	8	0.0	8	0.0	0.330	12.0	LOS A	0.6	4.6	0.45	0.54	0.45	51.1
Approach		854	1.8	854	1.8	0.441	4.8	LOS A	1.0	7.1	0.47	0.57	0.47	45.7
East: Gordon Street														
4	L2	19	5.6	19	5.6	0.086	4.8	LOS A	0.2	1.1	0.44	0.52	0.44	46.3
5	T1	145	1.4	145	1.4	0.086	4.5	LOS A	0.2	1.1	0.44	0.53	0.44	43.4
6	R2	13	0.0	13	0.0	0.086	8.7	LOS A	0.1	1.0	0.44	0.55	0.44	47.3
6u	U	1	0.0	1	0.0	0.086	12.1	LOS A	0.1	1.0	0.44	0.55	0.44	51.0
Approach		178	1.8	178	1.8	0.086	4.9	LOS A	0.2	1.1	0.44	0.53	0.44	44.4
North: Lord Street														
7	L2	11	10.0	11	10.0	0.094	4.7	LOS A	0.2	1.2	0.43	0.49	0.43	49.2
8	T1	93	1.1	93	1.1	0.094	4.3	LOS A	0.2	1.2	0.43	0.49	0.43	47.5
9	R2	97	2.2	97	2.2	0.098	8.6	LOS A	0.2	1.3	0.43	0.66	0.43	40.8
9u	U	5	0.0	5	0.0	0.098	11.9	LOS A	0.2	1.3	0.43	0.66	0.43	49.1
Approach		205	2.1	205	2.1	0.098	6.5	LOS A	0.2	1.3	0.43	0.57	0.43	45.3
West: Gordon Street														
10	L2	100	0.0	100	0.0	0.212	6.0	LOS A	0.4	2.6	0.38	0.58	0.38	46.5
11	T1	112	2.8	112	2.8	0.212	6.0	LOS A	0.4	2.6	0.38	0.58	0.38	48.1
12	R2	223	2.8	223	2.8	0.235	10.2	LOS A	0.4	3.0	0.38	0.70	0.38	45.1
12u	U	29	0.0	29	0.0	0.235	12.1	LOS A	0.4	3.0	0.38	0.70	0.38	35.3
Approach		464	2.0	464	2.0	0.235	8.4	LOS A	0.4	3.0	0.38	0.64	0.38	45.8
All Vehicles		1701	1.9	1701	1.9	0.441	6.0	LOS A	1.0	7.1	0.44	0.59	0.44	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_PM (Site Folder: 2023 Pdev)] | **Network: 5 [Pdev PM (Network Folder: Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	76	1.4	76	1.4	0.196	6.9	LOS A	0.4	2.5	0.63	0.80	0.63	47.7
2	T1	12	9.1	12	9.1	0.196	7.2	LOS A	0.4	2.5	0.63	0.80	0.63	45.6
3	R2	39	0.0	39	0.0	0.196	10.7	LOS A	0.4	2.5	0.63	0.80	0.63	41.1
3u	U	1	0.0	1	0.0	0.196	12.4	LOS A	0.4	2.5	0.63	0.80	0.63	46.3
Approach		127	1.7	127	1.7	0.196	8.2	LOS A	0.4	2.5	0.63	0.80	0.63	46.1
East: Gordon Street														
4	L2	51	0.0	51	0.0	0.323	6.3	LOS A	0.8	5.8	0.46	0.58	0.46	45.8
5	T1	564	1.3	564	1.3	0.323	6.5	LOS A	0.8	5.8	0.47	0.59	0.47	51.4
6	R2	66	1.6	66	1.6	0.323	10.6	LOS A	0.8	5.7	0.47	0.62	0.47	46.4
6u	U	3	0.0	3	0.0	0.323	12.4	LOS A	0.8	5.7	0.47	0.62	0.47	38.3
Approach		684	1.2	684	1.2	0.323	6.9	LOS A	0.8	5.8	0.47	0.59	0.47	50.4
North: Munster Street														
7	L2	62	1.7	62	1.7	0.481	9.7	LOS A	1.1	7.7	0.75	0.96	0.91	37.6
8	T1	9	0.0	9	0.0	0.481	9.7	LOS A	1.1	7.7	0.75	0.96	0.91	43.3
9	R2	203	2.6	203	2.6	0.481	13.7	LOS A	1.1	7.7	0.75	0.96	0.91	45.7
9u	U	2	0.0	2	0.0	0.481	15.2	LOS B	1.1	7.7	0.75	0.96	0.91	43.9
Approach		277	2.3	277	2.3	0.481	12.7	LOS A	1.1	7.7	0.75	0.96	0.91	44.4
West: Gordon Street														
10	L2	224	2.3	224	2.3	0.391	5.3	LOS A	1.3	9.2	0.41	0.50	0.41	49.4
11	T1	740	1.6	740	1.6	0.391	5.5	LOS A	1.3	9.2	0.42	0.51	0.42	49.2
12	R2	66	0.0	66	0.0	0.391	9.4	LOS A	1.3	9.1	0.43	0.51	0.43	50.1
12u	U	3	0.0	3	0.0	0.391	11.2	LOS A	1.3	9.1	0.43	0.51	0.43	54.3
Approach		1034	1.6	1034	1.6	0.391	5.7	LOS A	1.3	9.2	0.42	0.51	0.42	49.4
All Vehicles		2122	1.6	2122	1.6	0.481	7.1	LOS A	1.3	9.2	0.49	0.61	0.51	48.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_PM (Site Folder: 2023 Pdev)]

Network: 5 [Pdev PM (Network Folder: Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	113	0.9	113	0.9	0.183	17.4	LOS B	1.2	8.6	0.74	0.73	0.74	34.1
2	T1	27	3.8	27	3.8	0.181	23.1	LOS B	0.5	3.6	0.93	0.69	0.93	37.6
3	R2	7	0.0	7	0.0	0.181	27.7	LOS B	0.5	3.6	0.93	0.69	0.93	30.4
Approach		147	1.4	147	1.4	0.183	19.0	LOS B	1.2	8.6	0.78	0.72	0.78	34.9
East: Gordon Street														
4	L2	22	0.0	22	0.0	0.373	17.2	LOS B	3.0	21.6	0.75	0.64	0.75	41.7
5	T1	543	1.7	543	1.7	0.373	11.7	LOS A	3.1	21.7	0.75	0.64	0.75	31.3
6	R2	8	0.0	8	0.0	0.017	11.2	LOS A	0.0	0.3	0.64	0.64	0.64	42.5
Approach		574	1.7	574	1.7	0.373	11.9	LOS A	3.1	21.7	0.75	0.64	0.75	32.6
North: Grant Street														
7	L2	17	0.0	17	0.0	0.023	15.7	LOS B	0.2	1.1	0.67	0.65	0.67	35.1
8	T1	46	0.0	46	0.0	* 0.418	25.1	LOS B	1.1	7.9	0.98	0.74	0.98	36.6
9	R2	26	0.0	26	0.0	0.418	29.7	LOS C	1.1	7.9	0.98	0.74	0.98	29.1
Approach		89	0.0	89	0.0	0.418	24.7	LOS B	1.1	7.9	0.92	0.73	0.92	34.7
West: Gordon Street														
10	L2	46	2.3	46	2.3	0.510	18.1	LOS B	4.5	31.6	0.80	0.70	0.80	41.0
11	T1	726	1.6	726	1.6	* 0.510	12.5	LOS A	4.5	31.8	0.80	0.69	0.80	30.2
12	R2	120	0.9	120	0.9	* 0.216	11.2	LOS A	0.8	5.3	0.66	0.72	0.66	42.3
Approach		893	1.5	893	1.5	0.510	12.6	LOS A	4.5	31.8	0.78	0.70	0.78	34.3
All Vehicles		1703	1.5	1703	1.5	0.510	13.5	LOS A	4.5	31.8	0.78	0.68	0.78	34.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

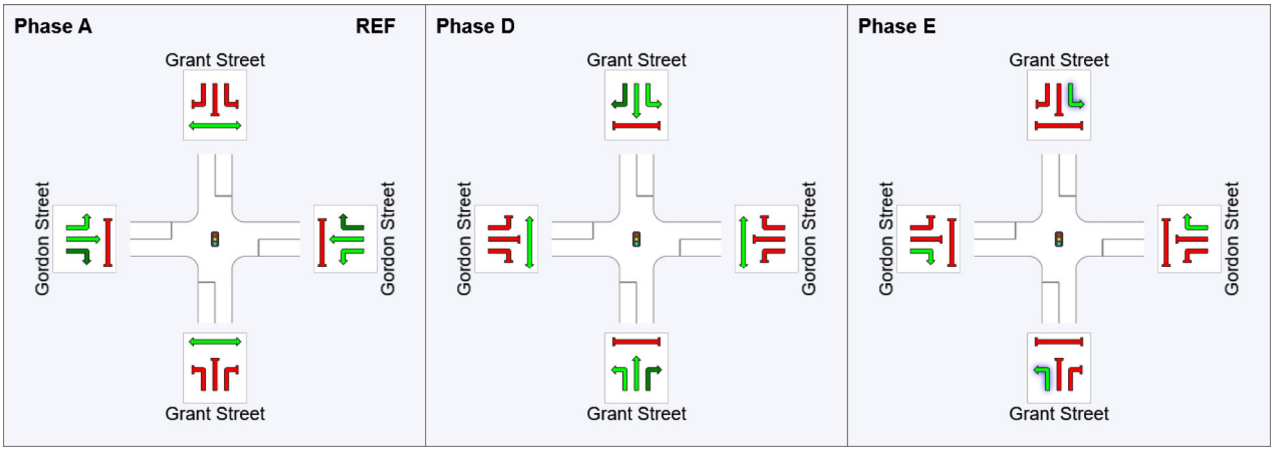
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

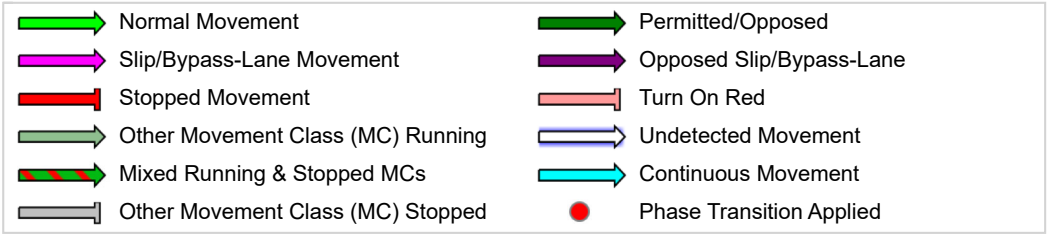
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	5	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		58	19.4	LOS B	0.0	0.0	0.88	0.88	185.1	215.5	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E
Phase Change Time (sec)	0	26	38
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12

Phase Split	52%	24%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 101 [Gordon Street/ Lord Street_PM (Site Folder: 2023 Pdev)]

Network: 5 [Pdev PM (Network Folder: Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	327	1.3	327	1.3	0.276	4.3	LOS A	0.5	3.9	0.39	0.54	0.39	44.1
2	T1	169	0.0	169	0.0	0.215	4.1	LOS A	0.4	2.8	0.39	0.54	0.39	47.4
3	R2	32	0.0	32	0.0	0.215	8.3	LOS A	0.4	2.8	0.39	0.54	0.39	47.5
3u	U	27	0.0	27	0.0	0.215	11.7	LOS A	0.4	2.8	0.39	0.54	0.39	51.3
Approach		556	0.8	556	0.8	0.276	4.9	LOS A	0.5	3.9	0.39	0.54	0.39	46.2
East: Gordon Street														
4	L2	31	0.0	31	0.0	0.091	5.8	LOS A	0.2	1.3	0.57	0.61	0.57	46.0
5	T1	122	3.4	122	3.4	0.091	5.7	LOS A	0.2	1.3	0.57	0.62	0.57	42.7
6	R2	8	0.0	8	0.0	0.091	10.0	LOS A	0.2	1.3	0.57	0.63	0.57	46.8
6u	U	1	0.0	1	0.0	0.091	13.4	LOS A	0.2	1.3	0.57	0.63	0.57	50.5
Approach		162	2.6	162	2.6	0.091	6.0	LOS A	0.2	1.3	0.57	0.62	0.57	44.0
North: Lord Street														
7	L2	9	0.0	9	0.0	0.145	5.5	LOS A	0.3	2.2	0.56	0.59	0.56	49.0
8	T1	176	3.0	176	3.0	0.145	5.4	LOS A	0.3	2.2	0.56	0.62	0.56	46.7
9	R2	83	1.3	83	1.3	0.145	9.7	LOS A	0.3	2.1	0.56	0.70	0.56	41.1
9u	U	4	0.0	4	0.0	0.145	13.0	LOS A	0.3	2.1	0.56	0.70	0.56	49.4
Approach		273	2.3	273	2.3	0.145	6.8	LOS A	0.3	2.2	0.56	0.64	0.56	45.7
West: Gordon Street														
10	L2	147	1.4	147	1.4	0.296	5.6	LOS A	0.5	3.8	0.33	0.55	0.33	46.7
11	T1	162	1.9	162	1.9	0.296	5.6	LOS A	0.5	3.8	0.33	0.55	0.33	48.4
12	R2	419	1.3	419	1.3	0.377	9.8	LOS A	0.8	5.5	0.34	0.68	0.34	45.4
12u	U	34	3.1	34	3.1	0.377	11.8	LOS A	0.8	5.5	0.34	0.68	0.34	35.6
Approach		762	1.5	762	1.5	0.377	8.2	LOS A	0.8	5.5	0.34	0.62	0.34	46.0
All Vehicles		1753	1.5	1753	1.5	0.377	6.7	LOS A	0.8	5.5	0.41	0.60	0.41	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre — **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_SAT (Site Folder: 2023 Pdev)] — **Network: 6 [Pdev Sat (Network Folder: Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	61	1.7	61	1.7	0.172	6.9	LOS A	0.3	2.2	0.62	0.79	0.62	47.7
2	T1	14	0.0	14	0.0	0.172	6.8	LOS A	0.3	2.2	0.62	0.79	0.62	45.6
3	R2	36	0.0	36	0.0	0.172	10.7	LOS A	0.3	2.2	0.62	0.79	0.62	41.1
3u	U	1	0.0	1	0.0	0.172	12.3	LOS A	0.3	2.2	0.62	0.79	0.62	46.3
Approach		112	0.9	112	0.9	0.172	8.1	LOS A	0.3	2.2	0.62	0.79	0.62	45.9
East: Gordon Street														
4	L2	43	0.0	43	0.0	0.335	6.3	LOS A	0.9	6.0	0.45	0.57	0.45	45.8
5	T1	596	0.0	596	0.0	0.335	6.5	LOS A	0.9	6.0	0.46	0.59	0.46	51.4
6	R2	81	1.3	81	1.3	0.335	10.5	LOS A	0.8	5.9	0.46	0.62	0.46	46.4
6u	U	3	0.0	3	0.0	0.335	12.4	LOS A	0.8	5.9	0.46	0.62	0.46	38.2
Approach		723	0.1	723	0.1	0.335	6.9	LOS A	0.9	6.0	0.46	0.59	0.46	50.4
North: Munster Street														
7	L2	68	1.5	68	1.5	0.423	8.4	LOS A	0.9	6.5	0.71	0.92	0.80	38.8
8	T1	15	0.0	15	0.0	0.423	8.4	LOS A	0.9	6.5	0.71	0.92	0.80	44.1
9	R2	177	2.4	177	2.4	0.423	12.4	LOS A	0.9	6.5	0.71	0.92	0.80	46.6
9u	U	1	0.0	1	0.0	0.423	13.9	LOS A	0.9	6.5	0.71	0.92	0.80	44.7
Approach		261	2.0	261	2.0	0.423	11.1	LOS A	0.9	6.5	0.71	0.92	0.80	45.0
West: Gordon Street														
10	L2	257	2.0	257	2.0	0.367	5.4	LOS A	1.2	8.5	0.42	0.51	0.42	49.4
11	T1	609	1.9	609	1.9	0.367	5.5	LOS A	1.2	8.5	0.43	0.52	0.43	49.0
12	R2	78	0.0	78	0.0	0.367	9.4	LOS A	1.2	8.4	0.44	0.53	0.44	50.0
12u	U	8	0.0	8	0.0	0.367	11.3	LOS A	1.2	8.4	0.44	0.53	0.44	54.1
Approach		953	1.8	953	1.8	0.367	5.9	LOS A	1.2	8.5	0.43	0.52	0.43	49.4
All Vehicles		2048	1.2	2048	1.2	0.423	7.0	LOS A	1.2	8.5	0.49	0.61	0.50	48.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_SAT (Site Folder: 2023 Pdev)]

Network: 6 [Pdev Sat (Network Folder: Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	164	0.0	164	0.0	0.237	16.2	LOS B	1.7	12.0	0.72	0.73	0.72	34.8
2	T1	37	0.0	37	0.0	0.165	19.7	LOS B	0.6	4.5	0.88	0.67	0.88	38.9
3	R2	12	0.0	12	0.0	0.165	24.3	LOS B	0.6	4.5	0.88	0.67	0.88	32.1
Approach		213	0.0	213	0.0	0.237	17.3	LOS B	1.7	12.0	0.75	0.72	0.75	35.8
East: Gordon Street														
4	L2	42	0.0	42	0.0	0.406	18.1	LOS B	3.3	23.1	0.78	0.67	0.78	40.9
5	T1	545	0.4	545	0.4	* 0.406	12.6	LOS A	3.3	23.3	0.78	0.66	0.78	30.0
6	R2	23	0.0	23	0.0	0.048	10.9	LOS A	0.1	1.0	0.61	0.66	0.61	42.7
Approach		611	0.3	611	0.3	0.406	12.9	LOS A	3.3	23.3	0.77	0.66	0.77	32.6
North: Grant Street														
7	L2	5	0.0	5	0.0	0.009	17.8	LOS B	0.1	0.4	0.72	0.62	0.72	33.8
8	T1	39	2.7	39	2.7	* 0.266	21.3	LOS B	1.0	6.8	0.91	0.72	0.91	38.0
9	R2	29	0.0	29	0.0	0.266	25.8	LOS B	1.0	6.8	0.91	0.72	0.91	30.8
Approach		74	1.4	74	1.4	0.266	22.8	LOS B	1.0	6.8	0.90	0.71	0.90	35.6
West: Gordon Street														
10	L2	44	0.0	44	0.0	0.358	15.1	LOS B	3.1	21.6	0.69	0.61	0.69	42.9
11	T1	585	0.2	585	0.2	0.358	9.6	LOS A	3.1	21.8	0.69	0.60	0.69	34.0
12	R2	127	0.8	127	0.8	* 0.225	11.2	LOS A	0.8	5.6	0.67	0.72	0.67	42.3
Approach		757	0.3	757	0.3	0.358	10.2	LOS A	3.1	21.8	0.68	0.62	0.68	37.7
All Vehicles		1654	0.3	1654	0.3	0.406	12.6	LOS A	3.3	23.3	0.73	0.65	0.73	35.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
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)

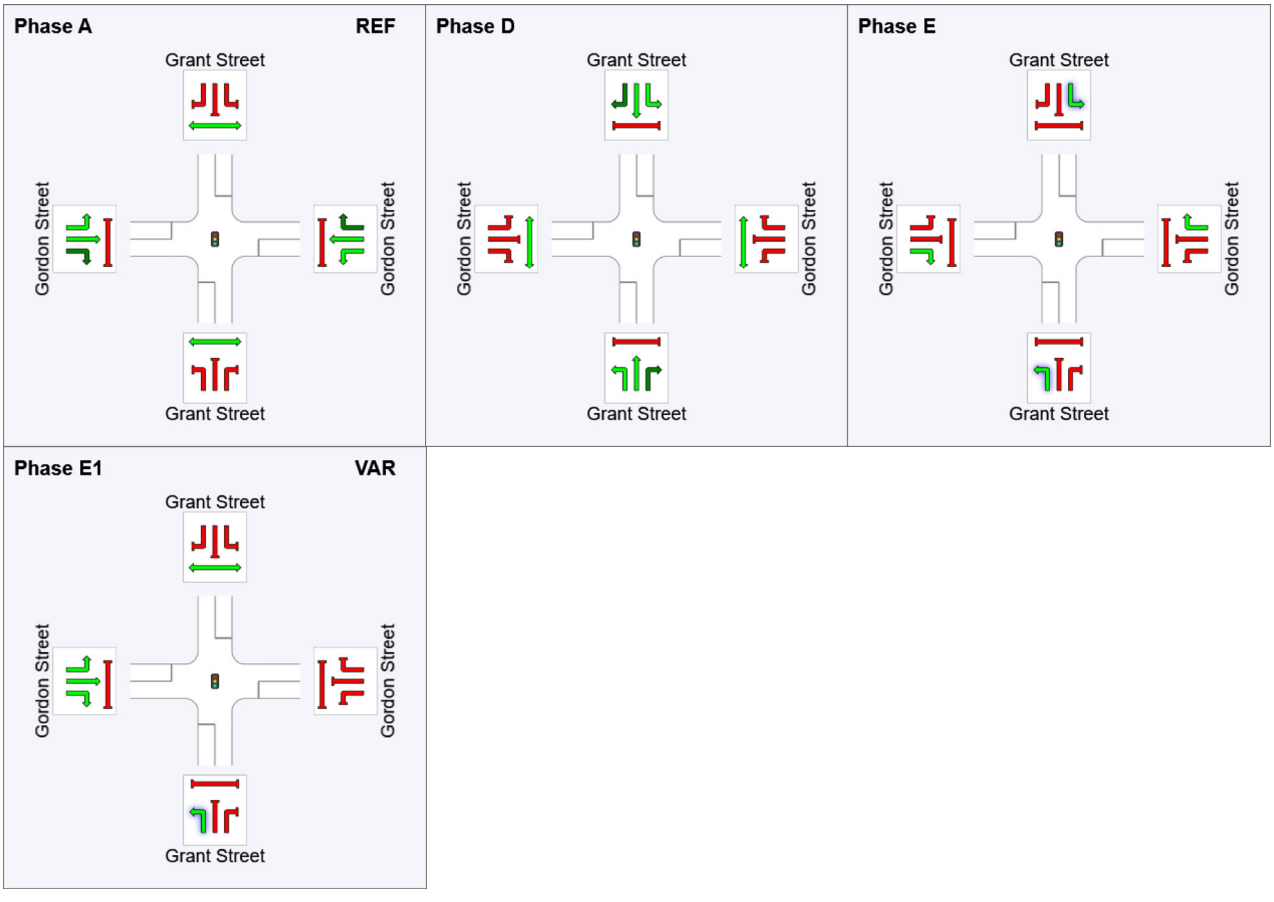
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

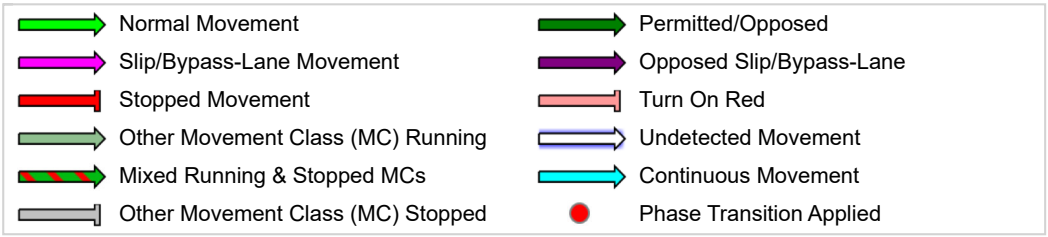
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		53	19.4	LOS B	0.0	0.0	0.88	0.88	184.9	215.2	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	25	40	46
Green Time (sec)	19	9	3	***
Phase Time (sec)	25	12	9	4
Phase Split	50%	24%	18%	8%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_SAT (Site Folder: 2023 Pdev)]

Network: 6 [Pdev Sat (Network Folder: Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	331	0.3	331	0.3	0.266	4.1	LOS A	0.5	3.6	0.35	0.51	0.35	44.3
2	T1	184	0.6	184	0.6	0.201	4.0	LOS A	0.4	2.5	0.35	0.49	0.35	47.7
3	R2	13	0.0	13	0.0	0.201	8.1	LOS A	0.4	2.5	0.35	0.49	0.35	47.8
3u	U	21	0.0	21	0.0	0.201	11.5	LOS A	0.4	2.5	0.35	0.49	0.35	51.6
Approach		548	0.4	548	0.4	0.266	4.4	LOS A	0.5	3.6	0.35	0.51	0.35	46.4
East: Gordon Street														
4	L2	5	0.0	5	0.0	0.052	5.0	LOS A	0.1	0.6	0.46	0.52	0.46	46.3
5	T1	87	0.0	87	0.0	0.052	4.7	LOS A	0.1	0.6	0.47	0.54	0.47	43.2
6	R2	11	0.0	11	0.0	0.052	9.0	LOS A	0.1	0.6	0.47	0.57	0.47	47.0
6u	U	1	0.0	1	0.0	0.052	12.4	LOS A	0.1	0.6	0.47	0.57	0.47	50.7
Approach		104	0.0	104	0.0	0.052	5.3	LOS A	0.1	0.6	0.47	0.54	0.47	44.2
North: Lord Street														
7	L2	8	0.0	8	0.0	0.108	4.8	LOS A	0.2	1.4	0.45	0.51	0.45	49.4
8	T1	132	0.0	132	0.0	0.108	4.5	LOS A	0.2	1.4	0.45	0.53	0.45	47.2
9	R2	85	0.0	85	0.0	0.108	8.8	LOS A	0.2	1.4	0.46	0.65	0.46	41.3
9u	U	1	0.0	1	0.0	0.108	12.2	LOS A	0.2	1.4	0.46	0.65	0.46	49.5
Approach		226	0.0	226	0.0	0.108	6.1	LOS A	0.2	1.4	0.46	0.58	0.46	45.7
West: Gordon Street														
10	L2	142	0.0	142	0.0	0.238	5.4	LOS A	0.4	2.9	0.31	0.53	0.31	46.8
11	T1	123	0.0	123	0.0	0.238	5.4	LOS A	0.4	2.9	0.31	0.53	0.31	48.5
12	R2	291	0.4	291	0.4	0.263	9.6	LOS A	0.5	3.3	0.31	0.67	0.31	45.5
12u	U	24	0.0	24	0.0	0.263	11.6	LOS A	0.5	3.3	0.31	0.67	0.31	35.8
Approach		580	0.2	580	0.2	0.263	7.7	LOS A	0.5	3.3	0.31	0.61	0.31	46.2
All Vehicles		1459	0.2	1459	0.2	0.266	6.1	LOS A	0.5	3.6	0.36	0.56	0.36	46.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_AM (Site Folder: 2033 Base (Without Development))] | **Network: 13 [Base AM 2033 (Network Folder: 2033 Base (without development))]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	32	0.0	32	0.0	0.127	8.7	LOS A	0.2	1.8	0.74	0.85	0.74	46.8
2	T1	16	6.7	16	6.7	0.127	9.0	LOS A	0.2	1.8	0.74	0.85	0.74	44.7
3	R2	14	7.7	14	7.7	0.127	12.9	LOS B	0.2	1.8	0.74	0.85	0.74	39.7
3u	U	1	0.0	1	0.0	0.127	14.2	LOS B	0.2	1.8	0.74	0.85	0.74	45.4
Approach		62	3.4	62	3.4	0.127	9.8	LOS A	0.2	1.8	0.74	0.85	0.74	45.1
East: Gordon Street														
4	L2	42	2.5	42	2.5	0.549	7.1	LOS A	1.8	12.7	0.55	0.62	0.55	45.3
5	T1	988	2.3	988	2.3	0.549	7.3	LOS A	1.8	12.7	0.55	0.64	0.56	50.8
6	R2	83	5.1	83	5.1	0.549	11.6	LOS B	1.7	12.5	0.56	0.67	0.57	45.9
6u	U	18	0.0	18	0.0	0.549	13.3	LOS B	1.7	12.5	0.56	0.67	0.57	37.3
Approach		1132	2.5	1132	2.5	0.549	7.7	LOS A	1.8	12.7	0.55	0.65	0.56	50.1
North: Munster Street														
7	L2	66	1.6	66	1.6	0.532	9.7	LOS A	1.4	9.9	0.76	0.98	0.94	37.6
8	T1	20	0.0	20	0.0	0.532	9.7	LOS A	1.4	9.9	0.76	0.98	0.94	43.3
9	R2	235	7.6	235	7.6	0.532	13.9	LOS B	1.4	9.9	0.76	0.98	0.94	45.5
9u	U	1	0.0	1	0.0	0.532	15.2	LOS B	1.4	9.9	0.76	0.98	0.94	43.8
Approach		322	5.9	322	5.9	0.532	12.8	LOS B	1.4	9.9	0.76	0.98	0.94	44.3
West: Gordon Street														
10	L2	346	4.6	346	4.6	0.395	5.5	LOS A	1.4	10.0	0.45	0.52	0.45	49.4
11	T1	620	2.9	620	2.9	0.395	5.6	LOS A	1.4	10.0	0.46	0.52	0.46	49.0
12	R2	39	2.7	39	2.7	0.395	9.5	LOS A	1.4	9.7	0.46	0.52	0.46	50.0
12u	U	7	0.0	7	0.0	0.395	11.3	LOS B	1.4	9.7	0.46	0.52	0.46	54.2
Approach		1013	3.4	1013	3.4	0.395	5.7	LOS A	1.4	10.0	0.46	0.52	0.46	49.3
All Vehicles		2528	3.3	2528	3.3	0.549	7.6	LOS A	1.8	12.7	0.55	0.64	0.57	48.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_AM (Site Folder: 2033 Base (Without Development))]

Network: 13 [Base AM 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	164	3.2	164	3.2	0.242	17.3	LOS B	1.9	13.5	0.72	0.74	0.72	34.1
2	T1	104	1.0	104	1.0	0.382	23.5	LOS C	1.7	12.2	0.93	0.73	0.93	37.8
3	R2	5	20.0	5	20.0	0.382	28.0	LOS C	1.7	12.2	0.93	0.73	0.93	30.6
Approach		274	2.7	274	2.7	0.382	19.8	LOS B	1.9	13.5	0.80	0.74	0.80	36.0
East: Gordon Street														
4	L2	19	0.0	19	0.0	0.652	21.1	LOS C	6.6	46.7	0.88	0.77	0.88	39.4
5	T1	922	2.3	922	2.3	* 0.652	15.5	LOS B	6.6	46.8	0.88	0.77	0.88	27.2
6	R2	24	0.0	24	0.0	0.048	11.7	LOS B	0.2	1.2	0.63	0.67	0.63	42.1
Approach		965	2.2	965	2.2	0.652	15.5	LOS B	6.6	46.8	0.87	0.76	0.88	28.5
North: Grant Street														
7	L2	13	0.0	13	0.0	0.017	15.9	LOS B	0.1	0.9	0.64	0.64	0.64	35.0
8	T1	52	0.0	52	0.0	* 0.450	26.0	LOS C	1.5	11.0	0.97	0.76	0.97	36.2
9	R2	42	5.0	42	5.0	0.450	30.7	LOS C	1.5	11.0	0.97	0.76	0.97	28.6
Approach		106	2.0	106	2.0	0.450	26.6	LOS C	1.5	11.0	0.93	0.74	0.93	33.7
West: Gordon Street														
10	L2	99	5.3	99	5.3	0.407	18.6	LOS B	3.6	26.1	0.76	0.69	0.76	39.9
11	T1	509	2.5	509	2.5	0.407	13.0	LOS B	3.7	26.5	0.76	0.66	0.76	29.1
12	R2	163	1.3	163	1.3	* 0.380	14.4	LOS B	1.2	8.6	0.82	0.77	0.82	40.2
Approach		772	2.6	772	2.6	0.407	14.0	LOS B	3.7	26.5	0.77	0.69	0.77	35.2
All Vehicles		2117	2.4	2117	2.4	0.652	16.1	LOS B	6.6	46.8	0.83	0.73	0.83	33.0

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

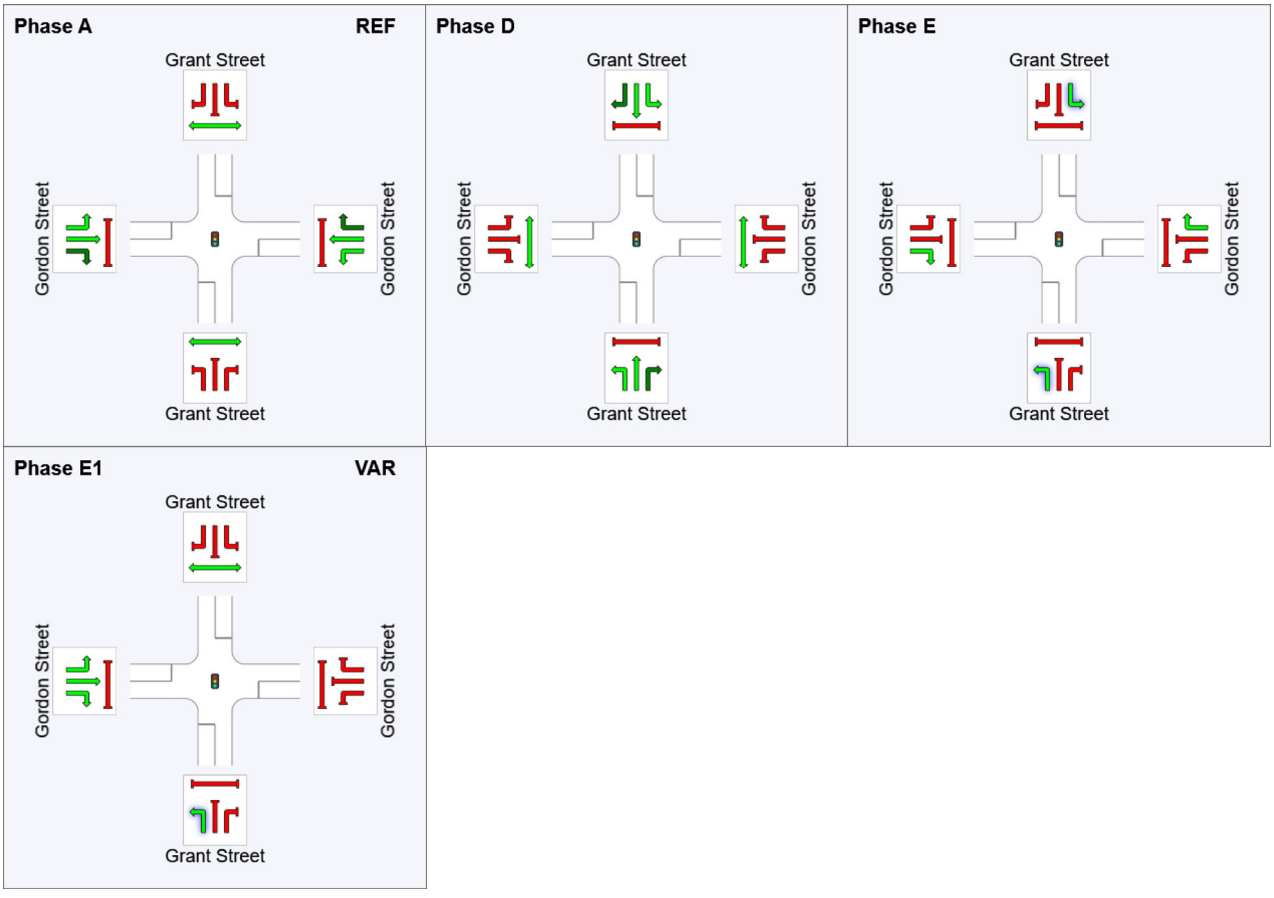
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

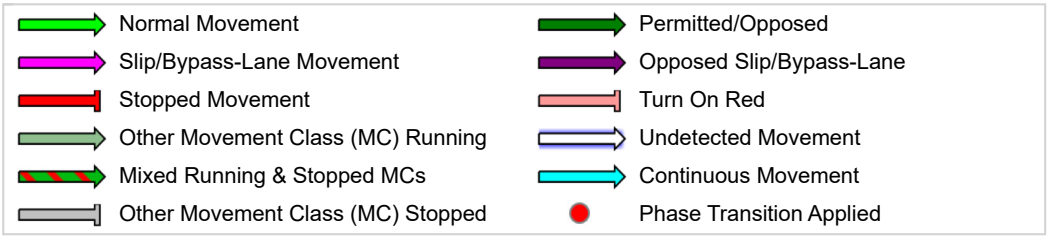
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	185.5	212.8	1.15
East: Gordon Street											
P2	Full	5	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
North: Grant Street											
P3	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	186.8	214.4	1.15
West: Gordon Street											
P4	Full	21	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
All Pedestrians		47	21.8	LOS C	0.0	0.0	0.89	0.89	188.0	216.0	1.15

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	27	42	54
Green Time (sec)	21	9	6	***
Phase Time (sec)	27	15	12	1
Phase Split	49%	27%	22%	2%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_AM (Site Folder: 2033 Base (Without Development))]

Network: 13 [Base AM 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	619	2.2	619	2.2	0.543	5.3	LOS A	1.4	10.1	0.57	0.67	0.59	43.3
2	T1	356	1.2	356	1.2	0.416	4.9	LOS A	0.9	6.2	0.52	0.58	0.52	47.0
3	R2	41	2.6	41	2.6	0.416	9.1	LOS A	0.9	6.2	0.52	0.58	0.52	47.0
3u	U	11	0.0	11	0.0	0.416	12.4	LOS B	0.9	6.2	0.52	0.58	0.52	50.8
Approach		1026	1.8	1026	1.8	0.543	5.4	LOS A	1.4	10.1	0.55	0.63	0.56	45.4
East: Gordon Street														
4	L2	23	4.5	23	4.5	0.107	5.1	LOS A	0.2	1.4	0.48	0.55	0.48	46.2
5	T1	172	1.2	172	1.2	0.107	4.8	LOS A	0.2	1.4	0.49	0.57	0.49	43.2
6	R2	16	0.0	16	0.0	0.107	9.1	LOS A	0.2	1.3	0.49	0.59	0.49	47.1
6u	U	1	0.0	1	0.0	0.107	12.5	LOS B	0.2	1.3	0.49	0.59	0.49	50.8
Approach		212	1.5	212	1.5	0.107	5.2	LOS A	0.2	1.4	0.49	0.57	0.49	44.2
North: Lord Street														
7	L2	13	8.3	13	8.3	0.118	4.9	LOS A	0.2	1.6	0.47	0.52	0.47	49.1
8	T1	113	0.9	113	0.9	0.118	4.5	LOS A	0.2	1.6	0.47	0.52	0.47	47.4
9	R2	117	1.8	117	1.8	0.124	8.8	LOS A	0.2	1.7	0.48	0.69	0.48	40.6
9u	U	6	0.0	6	0.0	0.124	12.2	LOS B	0.2	1.7	0.48	0.69	0.48	49.0
Approach		248	1.7	248	1.7	0.124	6.7	LOS A	0.2	1.7	0.47	0.60	0.47	45.1
West: Gordon Street														
10	L2	121	0.0	121	0.0	0.270	6.5	LOS A	0.5	3.6	0.44	0.62	0.44	46.2
11	T1	131	3.2	131	3.2	0.270	6.5	LOS A	0.5	3.6	0.44	0.62	0.44	47.8
12	R2	257	2.9	257	2.9	0.290	10.6	LOS B	0.6	4.1	0.44	0.73	0.44	44.9
12u	U	36	0.0	36	0.0	0.290	12.6	LOS B	0.6	4.1	0.44	0.73	0.44	34.8
Approach		544	2.1	544	2.1	0.290	8.9	LOS A	0.6	4.1	0.44	0.68	0.44	45.5
All Vehicles		2031	1.9	2031	1.9	0.543	6.5	LOS A	1.4	10.1	0.51	0.64	0.51	45.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre

Template: Movement and phasing

Site: 101 [Munster Street/ Gordon Street_PM (Site Folder: 2033 Base (Without Development))]

Network: 14 [Base PM 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	41	2.6	41	2.6	0.108	7.4	LOS A	0.2	1.4	0.65	0.79	0.65	47.5
2	T1	7	14.3	7	14.3	0.108	7.9	LOS A	0.2	1.4	0.65	0.79	0.65	45.4
3	R2	13	0.0	13	0.0	0.108	11.2	LOS B	0.2	1.4	0.65	0.79	0.65	40.9
3u	U	1	0.0	1	0.0	0.108	12.9	LOS B	0.2	1.4	0.65	0.79	0.65	46.1
Approach		62	3.4	62	3.4	0.108	8.3	LOS A	0.2	1.4	0.65	0.79	0.65	46.4
East: Gordon Street														
4	L2	27	0.0	27	0.0	0.383	6.5	LOS A	1.1	7.5	0.50	0.59	0.50	45.6
5	T1	687	1.4	687	1.4	0.383	6.7	LOS A	1.1	7.5	0.50	0.61	0.50	51.2
6	R2	81	1.3	81	1.3	0.383	10.7	LOS B	1.0	7.3	0.51	0.63	0.51	46.2
6u	U	4	0.0	4	0.0	0.383	12.6	LOS B	1.0	7.3	0.51	0.63	0.51	37.9
Approach		800	1.3	800	1.3	0.383	7.1	LOS A	1.1	7.5	0.50	0.61	0.50	50.4
North: Munster Street														
7	L2	76	1.4	76	1.4	0.615	12.3	LOS B	1.6	11.5	0.82	1.05	1.14	35.7
8	T1	5	0.0	5	0.0	0.615	12.3	LOS B	1.6	11.5	0.82	1.05	1.14	42.0
9	R2	247	2.6	247	2.6	0.615	16.3	LOS B	1.6	11.5	0.82	1.05	1.14	44.2
9u	U	2	0.0	2	0.0	0.615	17.8	LOS B	1.6	11.5	0.82	1.05	1.14	42.5
Approach		331	2.2	331	2.2	0.615	15.3	LOS B	1.6	11.5	0.82	1.05	1.14	42.8
West: Gordon Street														
10	L2	274	2.3	274	2.3	0.449	5.3	LOS A	1.7	12.0	0.43	0.49	0.43	49.4
11	T1	902	1.5	902	1.5	0.449	5.4	LOS A	1.7	12.0	0.44	0.49	0.44	49.3
12	R2	29	0.0	29	0.0	0.449	9.3	LOS A	1.7	11.8	0.44	0.49	0.44	50.2
12u	U	4	0.0	4	0.0	0.449	11.2	LOS B	1.7	11.8	0.44	0.49	0.44	54.4
Approach		1209	1.7	1209	1.7	0.449	5.5	LOS A	1.7	12.0	0.43	0.49	0.43	49.4
All Vehicles		2402	1.7	2402	1.7	0.615	7.5	LOS A	1.7	12.0	0.51	0.61	0.56	48.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_PM (Site Folder: 2033 Base (Without Development))]

Network: 14 [Base PM 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	136	0.8	136	0.8	0.221	17.6	LOS B	1.5	10.5	0.75	0.74	0.75	33.9
2	T1	34	3.1	34	3.1	0.228	23.3	LOS C	0.6	4.5	0.94	0.70	0.94	37.5
3	R2	9	0.0	9	0.0	0.228	27.9	LOS C	0.6	4.5	0.94	0.70	0.94	30.2
Approach		179	1.2	179	1.2	0.228	19.2	LOS B	1.5	10.5	0.80	0.73	0.80	34.8
East: Gordon Street														
4	L2	27	0.0	27	0.0	0.433	17.6	LOS B	3.6	25.8	0.77	0.67	0.77	41.5
5	T1	627	1.8	627	1.8	0.433	12.0	LOS B	3.7	26.0	0.77	0.66	0.77	30.8
6	R2	11	0.0	11	0.0	0.023	11.9	LOS B	0.1	0.4	0.68	0.65	0.68	42.0
Approach		665	1.7	665	1.7	0.433	12.2	LOS B	3.7	26.0	0.77	0.66	0.77	32.2
North: Grant Street														
7	L2	21	0.0	21	0.0	0.029	15.7	LOS B	0.2	1.4	0.67	0.65	0.67	35.1
8	T1	57	0.0	57	0.0	* 0.524	25.6	LOS C	1.4	9.8	0.99	0.78	1.04	36.4
9	R2	32	0.0	32	0.0	0.524	30.2	LOS C	1.4	9.8	0.99	0.78	1.04	28.9
Approach		109	0.0	109	0.0	0.524	25.1	LOS C	1.4	9.8	0.93	0.76	0.97	34.5
West: Gordon Street														
10	L2	57	1.9	57	1.9	0.599	18.7	LOS B	5.5	38.9	0.84	0.74	0.84	40.6
11	T1	851	1.6	851	1.6	* 0.599	13.1	LOS B	5.5	39.2	0.84	0.73	0.84	29.5
12	R2	146	0.7	146	0.7	* 0.280	11.6	LOS B	0.9	6.6	0.70	0.74	0.70	42.0
Approach		1054	1.5	1054	1.5	0.599	13.2	LOS B	5.5	39.2	0.82	0.73	0.82	33.8
All Vehicles		2007	1.5	2007	1.5	0.599	14.1	LOS B	5.5	39.2	0.81	0.71	0.81	33.7

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

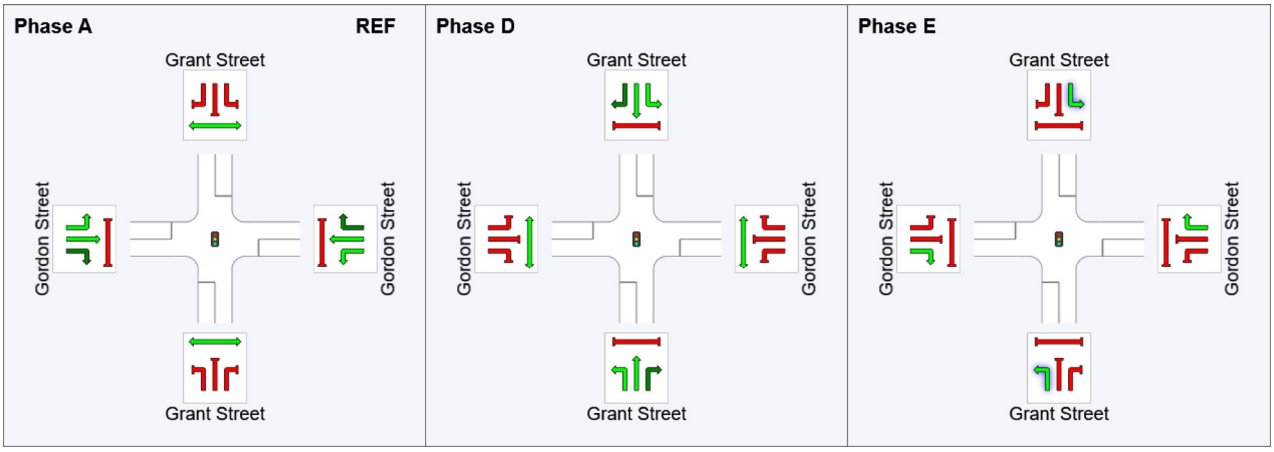
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

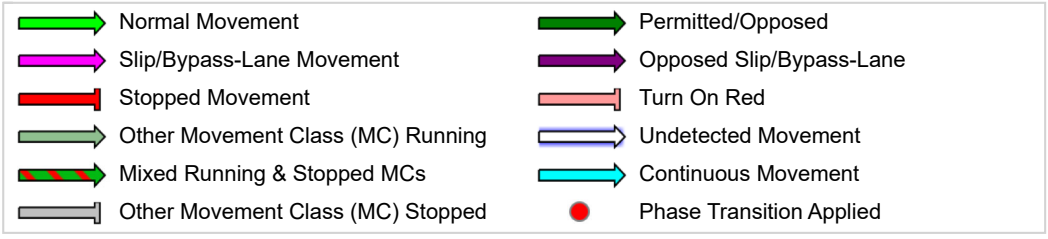
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	5	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		58	19.4	LOS B	0.0	0.0	0.88	0.88	185.1	215.5	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E
Phase Change Time (sec)	0	26	38
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12

Phase Split	52%	24%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 101 [Gordon Street/ Lord Street_PM (Site Folder: 2033 Base (Without Development))]

Network: 14 [Base PM 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	375	1.4	375	1.4	0.326	4.6	LOS A	0.7	4.8	0.45	0.58	0.45	43.8
2	T1	206	0.0	206	0.0	0.267	4.3	LOS A	0.5	3.6	0.44	0.56	0.44	47.3
3	R2	39	0.0	39	0.0	0.267	8.5	LOS A	0.5	3.6	0.44	0.56	0.44	47.3
3u	U	34	0.0	34	0.0	0.267	11.9	LOS B	0.5	3.6	0.44	0.56	0.44	51.1
Approach		654	0.8	654	0.8	0.326	5.1	LOS A	0.7	4.8	0.44	0.57	0.44	46.1
East: Gordon Street														
4	L2	37	0.0	37	0.0	0.116	6.4	LOS A	0.2	1.8	0.63	0.66	0.63	45.7
5	T1	141	3.7	141	3.7	0.116	6.5	LOS A	0.2	1.8	0.64	0.68	0.64	42.3
6	R2	11	0.0	11	0.0	0.116	10.7	LOS B	0.2	1.7	0.64	0.69	0.64	46.6
6u	U	1	0.0	1	0.0	0.116	14.1	LOS B	0.2	1.7	0.64	0.69	0.64	50.2
Approach		189	2.8	189	2.8	0.116	6.7	LOS A	0.2	1.8	0.64	0.67	0.64	43.7
North: Lord Street														
7	L2	12	0.0	12	0.0	0.189	6.1	LOS A	0.4	3.1	0.63	0.65	0.63	48.8
8	T1	215	2.9	215	2.9	0.189	5.9	LOS A	0.4	3.1	0.63	0.67	0.63	46.5
9	R2	100	1.1	100	1.1	0.189	10.3	LOS B	0.4	3.0	0.63	0.75	0.63	40.6
9u	U	5	0.0	5	0.0	0.189	13.7	LOS B	0.4	3.0	0.63	0.75	0.63	49.0
Approach		332	2.2	332	2.2	0.189	7.4	LOS A	0.4	3.1	0.63	0.70	0.63	45.4
West: Gordon Street														
10	L2	178	1.2	178	1.2	0.366	6.0	LOS A	0.7	5.1	0.38	0.58	0.38	46.5
11	T1	189	2.2	189	2.2	0.366	6.0	LOS A	0.7	5.1	0.38	0.58	0.38	48.1
12	R2	486	1.3	486	1.3	0.458	10.2	LOS B	1.0	7.4	0.40	0.70	0.40	45.2
12u	U	41	2.6	41	2.6	0.458	12.2	LOS B	1.0	7.4	0.40	0.70	0.40	35.3
Approach		895	1.5	895	1.5	0.458	8.6	LOS A	1.0	7.4	0.39	0.65	0.39	45.8
All Vehicles		2069	1.5	2069	1.5	0.458	7.1	LOS A	1.0	7.4	0.47	0.64	0.47	45.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre — **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_SAT (Site Folder: 2033 Base (Without Development))] — **Network: 15 [Base Sat 2033 (Network Folder: 2033 Base (without development))]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	28	3.7	28	3.7	0.091	7.4	LOS A	0.2	1.2	0.65	0.77	0.65	47.5
2	T1	12	0.0	12	0.0	0.091	7.3	LOS A	0.2	1.2	0.65	0.77	0.65	45.5
3	R2	12	0.0	12	0.0	0.091	11.1	LOS B	0.2	1.2	0.65	0.77	0.65	40.9
3u	U	1	0.0	1	0.0	0.091	12.8	LOS B	0.2	1.2	0.65	0.77	0.65	46.2
Approach		53	2.0	53	2.0	0.091	8.3	LOS A	0.2	1.2	0.65	0.77	0.65	46.1
East: Gordon Street														
4	L2	21	0.0	21	0.0	0.401	6.5	LOS A	1.1	7.8	0.49	0.59	0.49	45.6
5	T1	726	0.0	726	0.0	0.401	6.7	LOS A	1.1	7.8	0.49	0.61	0.49	51.2
6	R2	99	1.1	99	1.1	0.401	10.8	LOS B	1.1	7.6	0.50	0.64	0.50	46.2
6u	U	4	0.0	4	0.0	0.401	12.6	LOS B	1.1	7.6	0.50	0.64	0.50	37.8
Approach		851	0.1	851	0.1	0.401	7.2	LOS A	1.1	7.8	0.49	0.61	0.49	50.4
North: Munster Street														
7	L2	83	1.3	83	1.3	0.538	10.3	LOS B	1.3	9.5	0.77	0.99	0.98	37.3
8	T1	13	0.0	13	0.0	0.538	10.3	LOS B	1.3	9.5	0.77	0.99	0.98	43.1
9	R2	216	2.4	216	2.4	0.538	14.3	LOS B	1.3	9.5	0.77	0.99	0.98	45.5
9u	U	1	0.0	1	0.0	0.538	15.8	LOS B	1.3	9.5	0.77	0.99	0.98	43.6
Approach		313	2.0	313	2.0	0.538	13.0	LOS B	1.3	9.5	0.77	0.99	0.98	43.9
West: Gordon Street														
10	L2	313	0.0	313	0.0	0.422	5.4	LOS A	1.5	10.8	0.45	0.51	0.45	49.4
11	T1	743	0.6	743	0.6	0.422	5.5	LOS A	1.5	10.8	0.46	0.51	0.46	49.0
12	R2	48	2.2	48	2.2	0.422	9.5	LOS A	1.5	10.6	0.46	0.51	0.46	50.0
12u	U	11	10.0	11	10.0	0.422	11.5	LOS B	1.5	10.6	0.46	0.51	0.46	53.8
Approach		1115	0.6	1115	0.6	0.422	5.7	LOS A	1.5	10.8	0.46	0.51	0.46	49.3
All Vehicles		2331	0.6	2331	0.6	0.538	7.3	LOS A	1.5	10.8	0.52	0.62	0.54	48.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_SAT (Site Folder: 2033 Base (Without Development))]

Network: 15 [Base Sat 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	200	0.0	200	0.0	0.289	16.5	LOS B	2.1	14.9	0.74	0.75	0.74	34.6
2	T1	45	0.0	45	0.0	0.200	19.9	LOS B	0.8	5.6	0.89	0.69	0.89	38.9
3	R2	14	0.0	14	0.0	0.200	24.5	LOS C	0.8	5.6	0.89	0.69	0.89	32.0
Approach		259	0.0	259	0.0	0.289	17.5	LOS B	2.1	14.9	0.77	0.73	0.77	35.6
East: Gordon Street														
4	L2	52	0.0	52	0.0	0.474	18.5	LOS B	4.0	27.8	0.80	0.70	0.80	40.6
5	T1	634	0.3	634	0.3	* 0.474	13.0	LOS B	4.0	28.1	0.80	0.69	0.80	29.5
6	R2	28	0.0	28	0.0	0.071	11.9	LOS B	0.2	1.3	0.66	0.67	0.66	42.0
Approach		714	0.3	714	0.3	0.474	13.3	LOS B	4.0	28.1	0.80	0.69	0.80	32.2
North: Grant Street														
7	L2	6	0.0	6	0.0	0.011	17.8	LOS B	0.1	0.5	0.72	0.63	0.72	33.8
8	T1	47	2.2	47	2.2	* 0.338	21.7	LOS C	1.2	8.4	0.93	0.73	0.93	37.8
9	R2	36	0.0	36	0.0	0.338	26.2	LOS C	1.2	8.4	0.93	0.73	0.93	30.6
Approach		89	1.2	89	1.2	0.338	23.2	LOS C	1.2	8.4	0.91	0.73	0.91	35.4
West: Gordon Street														
10	L2	54	0.0	54	0.0	0.418	15.4	LOS B	3.7	26.1	0.71	0.64	0.71	42.7
11	T1	681	0.2	681	0.2	0.418	9.9	LOS A	3.8	26.3	0.71	0.62	0.71	33.4
12	R2	155	0.7	155	0.7	* 0.311	12.2	LOS B	1.1	7.4	0.73	0.74	0.73	41.6
Approach		889	0.2	889	0.2	0.418	10.6	LOS B	3.8	26.3	0.72	0.64	0.72	37.2
All Vehicles		1952	0.3	1952	0.3	0.474	13.1	LOS B	4.0	28.1	0.76	0.68	0.76	35.2

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

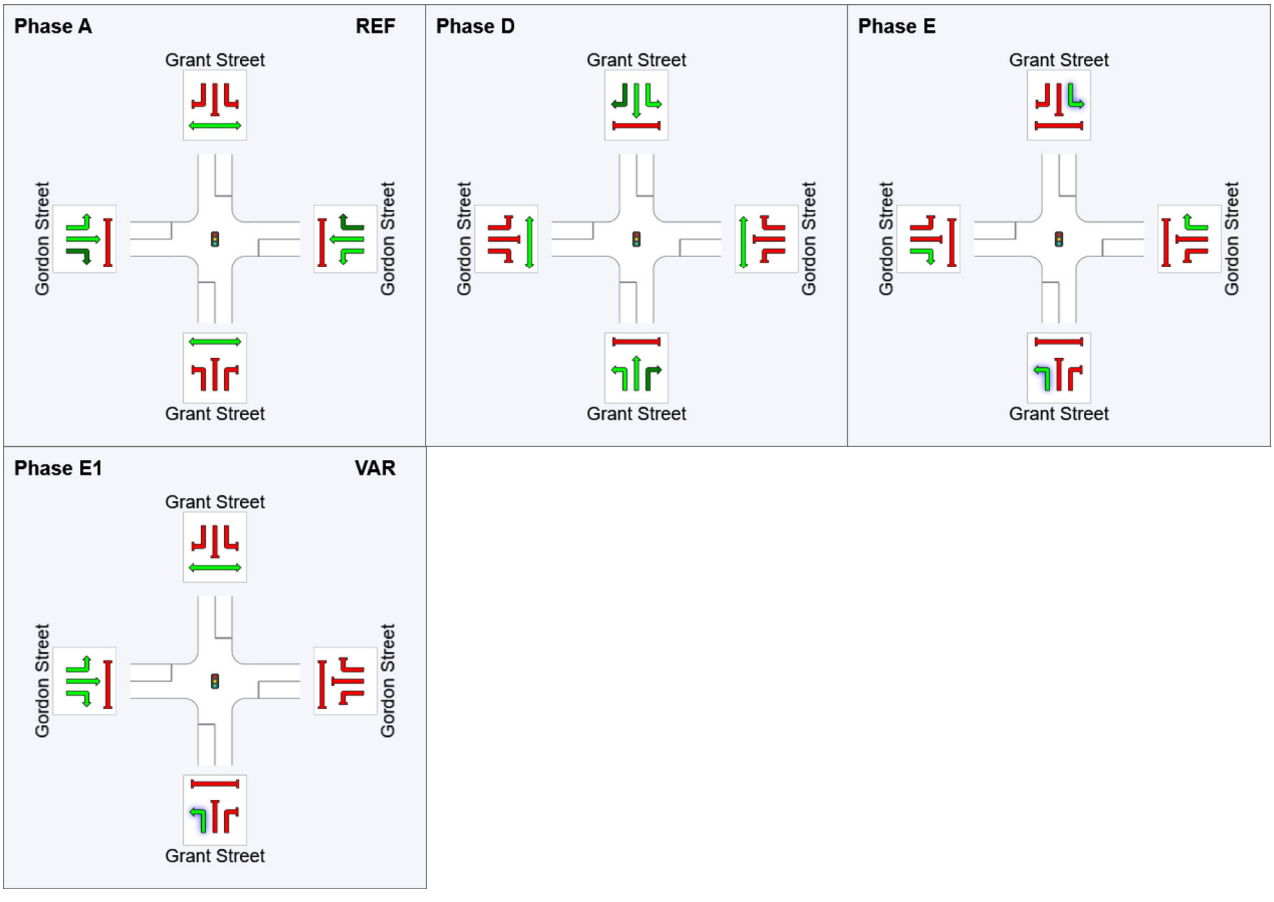
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

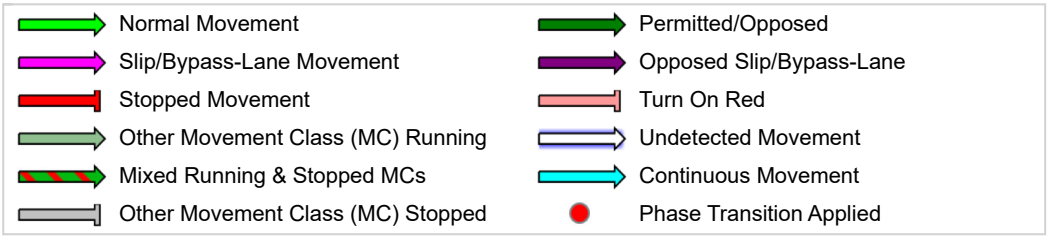
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		53	19.4	LOS B	0.0	0.0	0.88	0.88	184.9	215.2	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	25	40	46
Green Time (sec)	19	9	2	***
Phase Time (sec)	25	13	8	4
Phase Split	50%	26%	16%	8%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_SAT (Site Folder: 2033 Base (Without Development))]

Network: 15 [Base Sat 2033 (Network Folder: 2033 Base (without development))]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	381	0.3	381	0.3	0.314	4.3	LOS A	0.6	4.4	0.39	0.54	0.39	44.1
2	T1	224	0.5	224	0.5	0.248	4.1	LOS A	0.5	3.2	0.39	0.51	0.39	47.6
3	R2	16	0.0	16	0.0	0.248	8.3	LOS A	0.5	3.2	0.39	0.51	0.39	47.6
3u	U	25	0.0	25	0.0	0.248	11.7	LOS B	0.5	3.2	0.39	0.51	0.39	51.4
Approach		646	0.3	646	0.3	0.314	4.6	LOS A	0.6	4.4	0.39	0.53	0.39	46.2
East: Gordon Street														
4	L2	6	0.0	6	0.0	0.063	5.3	LOS A	0.1	0.8	0.51	0.55	0.51	46.1
5	T1	99	0.0	99	0.0	0.063	5.1	LOS A	0.1	0.8	0.51	0.58	0.51	42.9
6	R2	13	0.0	13	0.0	0.063	9.4	LOS A	0.1	0.8	0.52	0.60	0.52	46.8
6u	U	1	0.0	1	0.0	0.063	12.8	LOS B	0.1	0.8	0.52	0.60	0.52	50.5
Approach		119	0.0	119	0.0	0.063	5.6	LOS A	0.1	0.8	0.51	0.58	0.51	44.0
North: Lord Street														
7	L2	11	0.0	11	0.0	0.136	5.0	LOS A	0.3	1.9	0.50	0.54	0.50	49.3
8	T1	160	0.0	160	0.0	0.136	4.7	LOS A	0.3	1.9	0.50	0.56	0.50	47.0
9	R2	103	0.0	103	0.0	0.136	9.1	LOS A	0.3	1.8	0.50	0.68	0.50	41.1
9u	U	1	0.0	1	0.0	0.136	12.5	LOS B	0.3	1.8	0.50	0.68	0.50	49.4
Approach		275	0.0	275	0.0	0.136	6.4	LOS A	0.3	1.9	0.50	0.61	0.50	45.6
West: Gordon Street														
10	L2	172	0.0	172	0.0	0.291	5.7	LOS A	0.5	3.7	0.36	0.56	0.36	46.6
11	T1	142	0.0	142	0.0	0.291	5.7	LOS A	0.5	3.7	0.36	0.56	0.36	48.3
12	R2	333	0.3	333	0.3	0.314	9.9	LOS A	0.6	4.2	0.36	0.69	0.36	45.3
12u	U	29	0.0	29	0.0	0.314	11.9	LOS B	0.6	4.2	0.36	0.69	0.36	35.5
Approach		676	0.2	676	0.2	0.314	8.0	LOS A	0.6	4.2	0.36	0.63	0.36	46.1
All Vehicles		1716	0.2	1716	0.2	0.314	6.3	LOS A	0.6	4.4	0.40	0.58	0.40	45.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_AM (Site Folder: 2033 Post Development)] | **Network: 7 [Pdev AM 2033 (Network Folder: 2033 Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	59	0.0	59	0.0	0.229	9.0	LOS A	0.5	3.3	0.77	0.89	0.77	46.4
2	T1	19	5.6	19	5.6	0.229	9.4	LOS A	0.5	3.3	0.77	0.89	0.77	44.4
3	R2	33	3.2	33	3.2	0.229	13.1	LOS B	0.5	3.3	0.77	0.89	0.77	39.3
3u	U	1	0.0	1	0.0	0.229	14.6	LOS B	0.5	3.3	0.77	0.89	0.77	45.1
Approach		112	1.9	112	1.9	0.229	10.3	LOS B	0.5	3.3	0.77	0.89	0.77	44.6
East: Gordon Street														
4	L2	61	1.7	61	1.7	0.573	7.6	LOS A	2.0	13.9	0.57	0.65	0.59	45.2
5	T1	988	2.3	988	2.3	0.573	7.9	LOS A	2.0	13.9	0.57	0.68	0.60	50.5
6	R2	83	5.1	83	5.1	0.573	12.3	LOS B	1.9	13.8	0.58	0.70	0.62	45.4
6u	U	18	0.0	18	0.0	0.573	14.0	LOS B	1.9	13.8	0.58	0.70	0.62	36.2
Approach		1151	2.5	1151	2.5	0.573	8.3	LOS A	2.0	13.9	0.57	0.68	0.60	49.6
North: Munster Street														
7	L2	66	1.6	66	1.6	0.552	10.3	LOS B	1.4	10.5	0.78	1.00	0.99	37.1
8	T1	20	0.0	20	0.0	0.552	10.3	LOS B	1.4	10.5	0.78	1.00	0.99	43.0
9	R2	235	7.6	235	7.6	0.552	14.5	LOS B	1.4	10.5	0.78	1.00	0.99	45.2
9u	U	1	0.0	1	0.0	0.552	15.8	LOS B	1.4	10.5	0.78	1.00	0.99	43.5
Approach		322	5.9	322	5.9	0.552	13.4	LOS B	1.4	10.5	0.78	1.00	0.99	43.9
West: Gordon Street														
10	L2	346	4.6	346	4.6	0.415	5.7	LOS A	1.4	10.4	0.49	0.54	0.49	49.2
11	T1	620	2.9	620	2.9	0.415	5.8	LOS A	1.4	10.4	0.50	0.54	0.50	48.7
12	R2	65	1.6	65	1.6	0.415	9.7	LOS A	1.4	10.1	0.50	0.54	0.50	49.8
12u	U	7	0.0	7	0.0	0.415	11.5	LOS B	1.4	10.1	0.50	0.54	0.50	54.0
Approach		1039	3.3	1039	3.3	0.415	6.0	LOS A	1.4	10.4	0.50	0.54	0.50	49.1
All Vehicles		2623	3.2	2623	3.2	0.573	8.1	LOS A	2.0	13.9	0.58	0.67	0.62	48.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_AM (Site Folder: 2033 Post Development)]

Network: 7 [Pdev AM 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	164	3.2	164	3.2	0.242	17.3	LOS B	1.9	13.5	0.72	0.74	0.72	34.1
2	T1	104	1.0	104	1.0	0.382	23.5	LOS C	1.7	12.2	0.93	0.73	0.93	37.8
3	R2	5	20.0	5	20.0	0.382	28.0	LOS C	1.7	12.2	0.93	0.73	0.93	30.6
Approach		274	2.7	274	2.7	0.382	19.8	LOS B	1.9	13.5	0.80	0.74	0.80	36.0
East: Gordon Street														
4	L2	19	0.0	19	0.0	0.665	21.3	LOS C	6.8	48.3	0.88	0.78	0.90	39.2
5	T1	941	2.2	941	2.2	* 0.665	15.8	LOS B	6.8	48.4	0.88	0.78	0.90	26.9
6	R2	24	0.0	24	0.0	0.048	11.7	LOS B	0.2	1.2	0.63	0.67	0.63	42.1
Approach		984	2.1	984	2.1	0.665	15.8	LOS B	6.8	48.4	0.88	0.78	0.89	28.2
North: Grant Street														
7	L2	13	0.0	13	0.0	0.017	15.9	LOS B	0.1	0.9	0.64	0.64	0.64	35.0
8	T1	52	0.0	52	0.0	* 0.450	26.0	LOS C	1.5	11.0	0.97	0.76	0.97	36.2
9	R2	42	5.0	42	5.0	0.450	30.7	LOS C	1.5	11.0	0.97	0.76	0.97	28.6
Approach		106	2.0	106	2.0	0.450	26.6	LOS C	1.5	11.0	0.93	0.74	0.93	33.7
West: Gordon Street														
10	L2	99	5.3	99	5.3	0.420	18.7	LOS B	3.8	27.0	0.77	0.69	0.77	39.9
11	T1	528	2.4	528	2.4	0.420	13.1	LOS B	3.8	27.4	0.77	0.67	0.77	29.1
12	R2	163	1.3	163	1.3	* 0.383	14.4	LOS B	1.2	8.6	0.82	0.77	0.82	40.2
Approach		791	2.5	791	2.5	0.420	14.0	LOS B	3.8	27.4	0.78	0.69	0.78	35.1
All Vehicles		2155	2.3	2155	2.3	0.665	16.2	LOS B	6.8	48.4	0.83	0.74	0.84	32.8

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

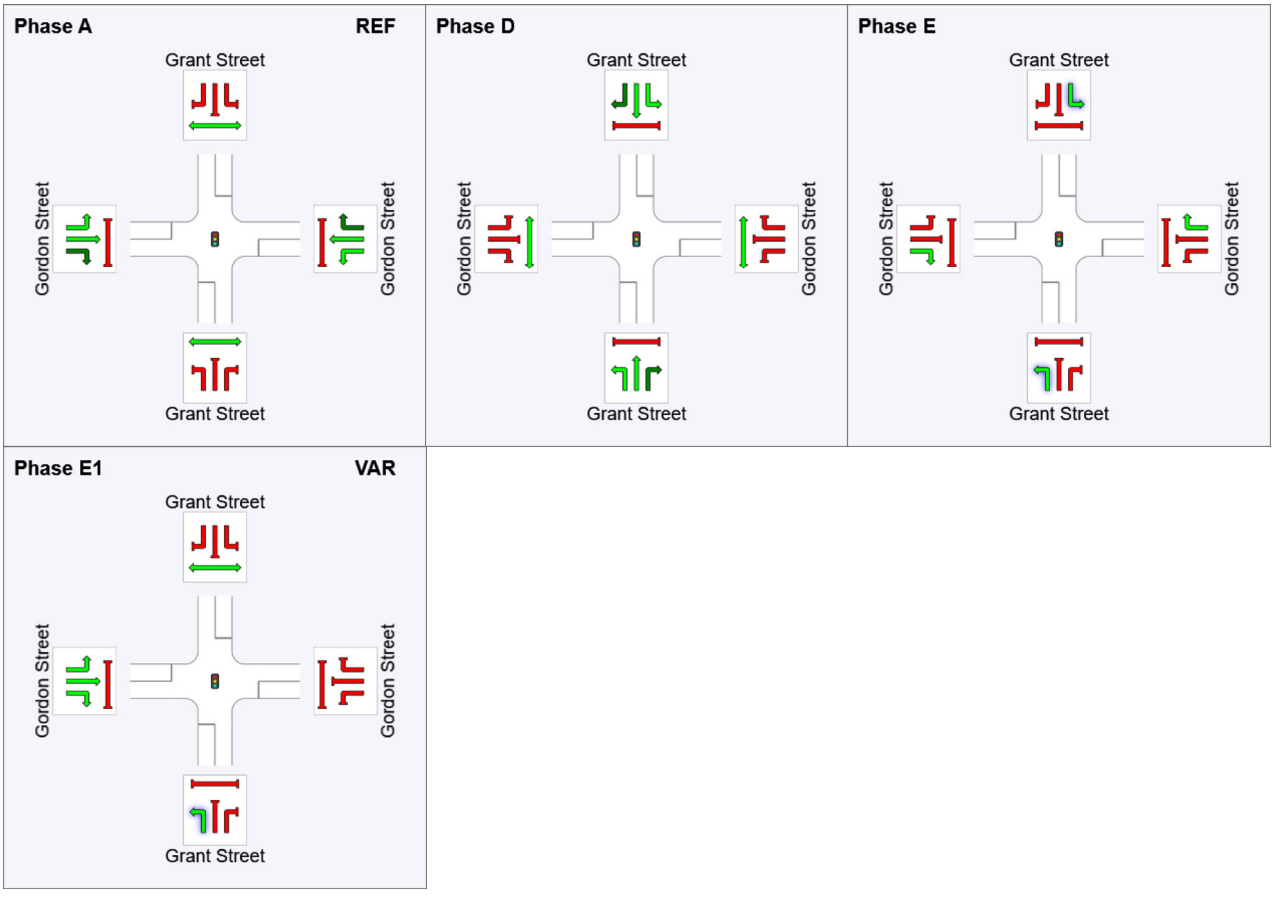
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

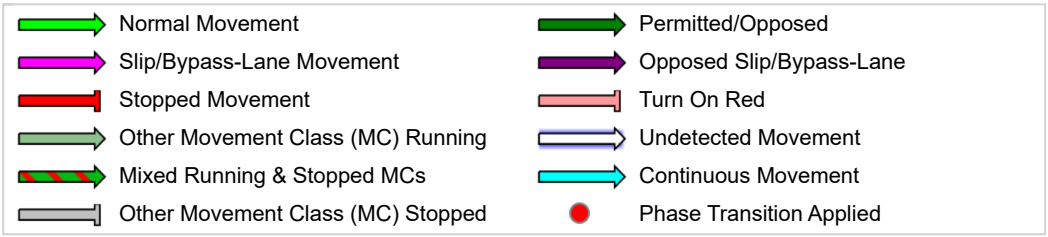
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	185.5	212.8	1.15
East: Gordon Street											
P2	Full	5	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
North: Grant Street											
P3	Full	11	21.8	LOS C	0.0	0.0	0.89	0.89	186.8	214.4	1.15
West: Gordon Street											
P4	Full	21	21.8	LOS C	0.0	0.0	0.89	0.89	189.5	218.0	1.15
All Pedestrians		47	21.8	LOS C	0.0	0.0	0.89	0.89	188.0	216.0	1.15

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	27	42	54
Green Time (sec)	21	9	6	***
Phase Time (sec)	27	15	12	1
Phase Split	49%	27%	22%	2%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_AM (Site Folder: 2033 Post Development)]

Network: 7 [Pdev AM 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	632	2.2	632	2.2	0.555	5.4	LOS A	1.5	10.6	0.58	0.68	0.61	43.3
2	T1	356	1.2	356	1.2	0.420	4.9	LOS A	0.9	6.3	0.53	0.59	0.53	47.0
3	R2	41	2.6	41	2.6	0.420	9.2	LOS A	0.9	6.3	0.53	0.59	0.53	47.0
3u	U	11	0.0	11	0.0	0.420	12.5	LOS B	0.9	6.3	0.53	0.59	0.53	50.8
Approach		1039	1.8	1039	1.8	0.555	5.5	LOS A	1.5	10.6	0.56	0.64	0.58	45.3
East: Gordon Street														
4	L2	23	4.5	23	4.5	0.110	5.2	LOS A	0.2	1.4	0.49	0.55	0.49	46.2
5	T1	176	1.2	176	1.2	0.110	4.9	LOS A	0.2	1.4	0.49	0.57	0.49	43.1
6	R2	16	0.0	16	0.0	0.110	9.1	LOS A	0.2	1.4	0.50	0.59	0.50	47.0
6u	U	1	0.0	1	0.0	0.110	12.5	LOS B	0.2	1.4	0.50	0.59	0.50	50.8
Approach		216	1.5	216	1.5	0.110	5.2	LOS A	0.2	1.4	0.49	0.57	0.49	44.1
North: Lord Street														
7	L2	13	8.3	13	8.3	0.119	5.0	LOS A	0.2	1.6	0.48	0.52	0.48	49.1
8	T1	113	0.9	113	0.9	0.119	4.5	LOS A	0.2	1.6	0.48	0.52	0.48	47.3
9	R2	118	1.8	118	1.8	0.126	8.9	LOS A	0.2	1.7	0.49	0.69	0.49	40.6
9u	U	6	0.0	6	0.0	0.126	12.2	LOS B	0.2	1.7	0.49	0.69	0.49	48.9
Approach		249	1.7	249	1.7	0.126	6.8	LOS A	0.2	1.7	0.48	0.61	0.48	45.1
West: Gordon Street														
10	L2	121	0.0	121	0.0	0.276	6.5	LOS A	0.5	3.7	0.44	0.62	0.44	46.1
11	T1	135	3.1	135	3.1	0.276	6.6	LOS A	0.5	3.7	0.44	0.62	0.44	47.7
12	R2	269	2.7	269	2.7	0.303	10.7	LOS B	0.6	4.3	0.45	0.73	0.45	44.9
12u	U	36	0.0	36	0.0	0.303	12.6	LOS B	0.6	4.3	0.45	0.73	0.45	34.8
Approach		561	2.1	561	2.1	0.303	8.9	LOS A	0.6	4.3	0.45	0.68	0.45	45.5
All Vehicles		2065	1.8	2065	1.8	0.555	6.5	LOS A	1.5	10.6	0.51	0.64	0.52	45.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_PM (Site Folder: 2033 Post Development)] | **Network: 8 [Pdev PM 2033 (Network Folder: 2033 Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	83	1.3	83	1.3	0.239	7.8	LOS A	0.5	3.2	0.69	0.85	0.69	47.2
2	T1	13	8.3	13	8.3	0.239	8.2	LOS A	0.5	3.2	0.69	0.85	0.69	45.1
3	R2	41	0.0	41	0.0	0.239	11.6	LOS B	0.5	3.2	0.69	0.85	0.69	40.3
3u	U	1	0.0	1	0.0	0.239	13.3	LOS B	0.5	3.2	0.69	0.85	0.69	45.8
Approach		138	1.5	138	1.5	0.239	9.0	LOS A	0.5	3.2	0.69	0.85	0.69	45.6
East: Gordon Street														
4	L2	56	0.0	56	0.0	0.415	6.9	LOS A	1.2	8.2	0.53	0.62	0.53	45.4
5	T1	687	1.4	687	1.4	0.415	7.1	LOS A	1.2	8.2	0.53	0.64	0.53	51.0
6	R2	81	1.3	81	1.3	0.415	11.2	LOS B	1.1	7.9	0.54	0.66	0.54	46.0
6u	U	4	0.0	4	0.0	0.415	13.0	LOS B	1.1	7.9	0.54	0.66	0.54	37.5
Approach		828	1.3	828	1.3	0.415	7.5	LOS A	1.2	8.2	0.53	0.64	0.53	50.0
North: Munster Street														
7	L2	76	1.4	76	1.4	0.665	14.0	LOS B	1.9	13.2	0.85	1.09	1.25	34.7
8	T1	11	0.0	11	0.0	0.665	14.0	LOS B	1.9	13.2	0.85	1.09	1.25	41.2
9	R2	247	2.6	247	2.6	0.665	18.0	LOS B	1.9	13.2	0.85	1.09	1.25	43.4
9u	U	2	0.0	2	0.0	0.665	19.5	LOS B	1.9	13.2	0.85	1.09	1.25	41.7
Approach		336	2.2	336	2.2	0.665	17.0	LOS B	1.9	13.2	0.85	1.09	1.25	41.9
West: Gordon Street														
10	L2	274	2.3	274	2.3	0.483	5.6	LOS A	1.8	12.7	0.49	0.52	0.49	49.2
11	T1	902	1.5	902	1.5	0.483	5.7	LOS A	1.8	12.7	0.51	0.53	0.51	48.7
12	R2	72	0.0	72	0.0	0.483	9.7	LOS A	1.8	12.5	0.51	0.54	0.51	49.8
12u	U	4	0.0	4	0.0	0.483	11.5	LOS B	1.8	12.5	0.51	0.54	0.51	54.0
Approach		1252	1.6	1252	1.6	0.483	6.0	LOS A	1.8	12.7	0.50	0.53	0.50	49.0
All Vehicles		2554	1.6	2554	1.6	0.665	8.1	LOS A	1.9	13.2	0.57	0.66	0.62	47.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_PM (Site Folder: 2033 Post Development)]

Network: 8 [Pdev PM 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	137	0.8	137	0.8	0.222	17.6	LOS B	1.5	10.6	0.75	0.74	0.75	33.9
2	T1	34	3.1	34	3.1	0.228	23.3	LOS C	0.6	4.5	0.94	0.70	0.94	37.5
3	R2	9	0.0	9	0.0	0.228	27.9	LOS C	0.6	4.5	0.94	0.70	0.94	30.2
Approach		180	1.2	180	1.2	0.228	19.2	LOS B	1.5	10.6	0.80	0.73	0.80	34.8
East: Gordon Street														
4	L2	27	0.0	27	0.0	0.451	17.7	LOS B	3.8	27.1	0.78	0.67	0.78	41.4
5	T1	656	1.8	656	1.8	0.451	12.1	LOS B	3.8	27.3	0.78	0.67	0.78	30.7
6	R2	11	0.0	11	0.0	0.024	11.9	LOS B	0.1	0.4	0.68	0.65	0.68	42.0
Approach		694	1.7	694	1.7	0.451	12.3	LOS B	3.8	27.3	0.78	0.67	0.78	32.1
North: Grant Street														
7	L2	21	0.0	21	0.0	0.029	15.7	LOS B	0.2	1.4	0.67	0.65	0.67	35.1
8	T1	57	0.0	57	0.0	* 0.524	25.7	LOS C	1.4	9.8	0.99	0.78	1.04	36.4
9	R2	32	0.0	32	0.0	0.524	30.2	LOS C	1.4	9.8	0.99	0.78	1.04	28.9
Approach		109	0.0	109	0.0	0.524	25.1	LOS C	1.4	9.8	0.93	0.76	0.97	34.5
West: Gordon Street														
10	L2	57	1.9	57	1.9	0.618	18.8	LOS B	5.7	40.6	0.85	0.75	0.85	40.5
11	T1	879	1.6	879	1.6	* 0.618	13.2	LOS B	5.8	40.8	0.85	0.74	0.85	29.3
12	R2	146	0.7	146	0.7	* 0.285	11.6	LOS B	0.9	6.6	0.70	0.74	0.70	42.0
Approach		1082	1.5	1082	1.5	0.618	13.3	LOS B	5.8	40.8	0.83	0.74	0.83	33.6
All Vehicles		2065	1.4	2065	1.4	0.618	14.1	LOS B	5.8	40.8	0.81	0.72	0.82	33.5

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

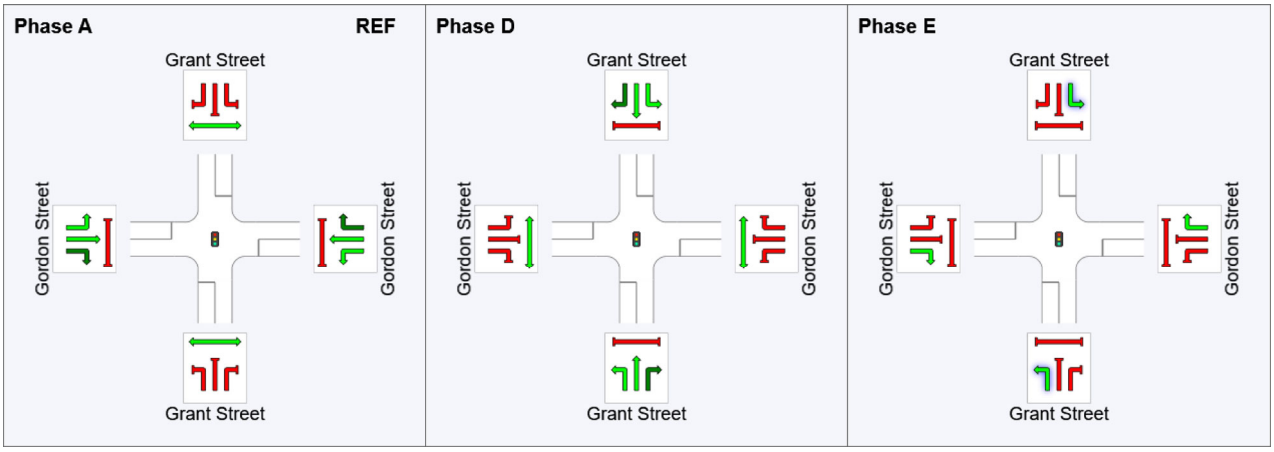
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

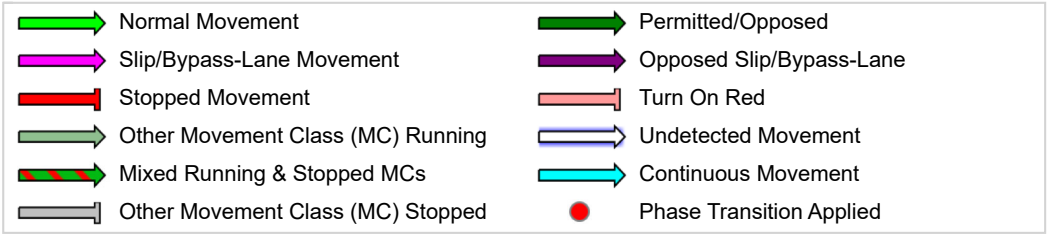
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	5	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		58	19.4	LOS B	0.0	0.0	0.88	0.88	185.1	215.5	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E
Phase Change Time (sec)	0	26	38
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12

Phase Split	52%	24%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 101 [Gordon Street/ Lord Street_PM (Site Folder: 2033 Post Development)]

Network: 8 [Pdev PM 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	395	1.3	395	1.3	0.345	4.6	LOS A	0.7	5.1	0.46	0.59	0.46	43.8
2	T1	206	0.0	206	0.0	0.272	4.4	LOS A	0.5	3.7	0.44	0.57	0.44	47.2
3	R2	39	0.0	39	0.0	0.272	8.6	LOS A	0.5	3.7	0.44	0.57	0.44	47.3
3u	U	34	0.0	34	0.0	0.272	12.0	LOS B	0.5	3.7	0.44	0.57	0.44	51.1
Approach		674	0.8	674	0.8	0.345	5.1	LOS A	0.7	5.1	0.45	0.58	0.45	46.0
East: Gordon Street														
4	L2	37	0.0	37	0.0	0.122	6.6	LOS A	0.3	1.9	0.65	0.67	0.65	45.6
5	T1	147	3.6	147	3.6	0.122	6.6	LOS A	0.3	1.9	0.65	0.68	0.65	42.2
6	R2	11	0.0	11	0.0	0.122	10.9	LOS B	0.3	1.8	0.65	0.70	0.65	46.5
6u	U	1	0.0	1	0.0	0.122	14.3	LOS B	0.3	1.8	0.65	0.70	0.65	50.1
Approach		196	2.7	196	2.7	0.122	6.9	LOS A	0.3	1.9	0.65	0.68	0.65	43.6
North: Lord Street														
7	L2	12	0.0	12	0.0	0.193	6.2	LOS A	0.5	3.2	0.65	0.66	0.65	48.7
8	T1	215	2.9	215	2.9	0.193	6.1	LOS A	0.5	3.2	0.65	0.68	0.65	46.4
9	R2	101	1.0	101	1.0	0.193	10.5	LOS B	0.4	3.1	0.65	0.75	0.65	40.5
9u	U	5	0.0	5	0.0	0.193	13.8	LOS B	0.4	3.1	0.65	0.75	0.65	48.9
Approach		333	2.2	333	2.2	0.193	7.5	LOS A	0.5	3.2	0.65	0.70	0.65	45.3
West: Gordon Street														
10	L2	180	1.2	180	1.2	0.377	6.1	LOS A	0.8	5.3	0.38	0.58	0.38	46.5
11	T1	197	2.1	197	2.1	0.377	6.1	LOS A	0.8	5.3	0.38	0.58	0.38	48.1
12	R2	506	1.2	506	1.2	0.475	10.2	LOS B	1.1	7.8	0.40	0.70	0.40	45.1
12u	U	41	2.6	41	2.6	0.475	12.2	LOS B	1.1	7.8	0.40	0.70	0.40	35.2
Approach		924	1.5	924	1.5	0.475	8.6	LOS A	1.1	7.8	0.40	0.65	0.40	45.8
All Vehicles		2126	1.5	2126	1.5	0.475	7.2	LOS A	1.1	7.8	0.48	0.64	0.48	45.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 231019_port_macquarie_aquatic_centre | **Template: Movement and phasing**

Site: 101 [Munster Street/ Gordon Street_SAT (Site Folder: 2033 Post Development)] | **Network: 9 [Pdev Sat 2033 (Network Folder: 2033 Post Development)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Munster Street														
1	L2	66	1.6	66	1.6	0.209	7.7	LOS A	0.4	2.8	0.69	0.85	0.69	47.2
2	T1	16	0.0	16	0.0	0.209	7.7	LOS A	0.4	2.8	0.69	0.85	0.69	45.2
3	R2	38	0.0	38	0.0	0.209	11.5	LOS B	0.4	2.8	0.69	0.85	0.69	40.4
3u	U	1	0.0	1	0.0	0.209	13.2	LOS B	0.4	2.8	0.69	0.85	0.69	45.8
Approach		121	0.9	121	0.9	0.209	9.0	LOS A	0.4	2.8	0.69	0.85	0.69	45.4
East: Gordon Street														
4	L2	46	0.0	46	0.0	0.430	6.9	LOS A	1.2	8.4	0.52	0.61	0.52	45.5
5	T1	726	0.0	726	0.0	0.430	7.1	LOS A	1.2	8.4	0.52	0.64	0.52	51.0
6	R2	99	1.1	99	1.1	0.430	11.2	LOS B	1.2	8.2	0.53	0.66	0.53	46.0
6u	U	4	0.0	4	0.0	0.430	13.0	LOS B	1.2	8.2	0.53	0.66	0.53	37.4
Approach		876	0.1	876	0.1	0.430	7.6	LOS A	1.2	8.4	0.52	0.64	0.52	50.1
North: Munster Street														
7	L2	83	1.3	83	1.3	0.575	11.3	LOS B	1.5	10.6	0.80	1.02	1.06	36.6
8	T1	18	0.0	18	0.0	0.575	11.3	LOS B	1.5	10.6	0.80	1.02	1.06	42.6
9	R2	216	2.4	216	2.4	0.575	15.3	LOS B	1.5	10.6	0.80	1.02	1.06	44.9
9u	U	1	0.0	1	0.0	0.575	16.8	LOS B	1.5	10.6	0.80	1.02	1.06	43.1
Approach		318	2.0	318	2.0	0.575	14.0	LOS B	1.5	10.6	0.80	1.02	1.06	43.3
West: Gordon Street														
10	L2	313	0.0	313	0.0	0.452	5.6	LOS A	1.6	11.4	0.50	0.53	0.50	49.2
11	T1	743	0.6	743	0.6	0.452	5.8	LOS A	1.6	11.4	0.51	0.55	0.51	48.6
12	R2	86	1.2	86	1.2	0.452	9.8	LOS A	1.6	11.3	0.52	0.55	0.52	49.7
12u	U	11	10.0	11	10.0	0.452	11.9	LOS B	1.6	11.3	0.52	0.55	0.52	53.4
Approach		1153	0.5	1153	0.5	0.452	6.1	LOS A	1.6	11.4	0.51	0.54	0.51	49.0
All Vehicles		2467	0.6	2467	0.6	0.575	7.8	LOS A	1.6	11.4	0.56	0.65	0.60	48.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 4195 [Gordon Street/ Grant Street_SAT (Site Folder: 2033 Post Development)]

Network: 9 [Pdev Sat 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, D, E, E1*, E2*
Output Phase Sequence: A, D, E, E1*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Grant Street														
1	L2	201	0.0	201	0.0	0.291	16.5	LOS B	2.1	15.0	0.74	0.75	0.74	34.6
2	T1	45	0.0	45	0.0	0.200	19.9	LOS B	0.8	5.6	0.89	0.69	0.89	38.9
3	R2	14	0.0	14	0.0	0.200	24.5	LOS C	0.8	5.6	0.89	0.69	0.89	32.0
Approach		260	0.0	260	0.0	0.291	17.5	LOS B	2.1	15.0	0.77	0.73	0.77	35.6
East: Gordon Street														
4	L2	52	0.0	52	0.0	0.491	18.6	LOS B	4.1	29.0	0.81	0.71	0.81	40.5
5	T1	659	0.3	659	0.3	* 0.491	13.1	LOS B	4.2	29.4	0.81	0.70	0.81	29.4
6	R2	28	0.0	28	0.0	0.069	11.7	LOS B	0.2	1.3	0.66	0.67	0.66	42.1
Approach		739	0.3	739	0.3	0.491	13.4	LOS B	4.2	29.4	0.80	0.70	0.80	32.0
North: Grant Street														
7	L2	6	0.0	6	0.0	0.010	17.0	LOS B	0.1	0.5	0.70	0.62	0.70	34.3
8	T1	47	2.2	47	2.2	* 0.338	21.7	LOS C	1.2	8.4	0.93	0.73	0.93	37.8
9	R2	36	0.0	36	0.0	0.338	26.2	LOS C	1.2	8.4	0.93	0.73	0.93	30.6
Approach		89	1.2	89	1.2	0.338	23.2	LOS C	1.2	8.4	0.91	0.73	0.91	35.4
West: Gordon Street														
10	L2	54	0.0	54	0.0	0.453	16.3	LOS B	4.1	28.4	0.74	0.66	0.74	42.1
11	T1	707	0.1	707	0.1	0.453	10.8	LOS B	4.1	28.6	0.74	0.65	0.74	32.3
12	R2	155	0.7	155	0.7	* 0.316	12.5	LOS B	1.1	7.4	0.75	0.75	0.75	41.4
Approach		916	0.2	916	0.2	0.453	11.4	LOS B	4.1	28.6	0.75	0.67	0.75	36.3
All Vehicles		2004	0.3	2004	0.3	0.491	13.4	LOS B	4.2	29.4	0.78	0.69	0.78	34.8

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

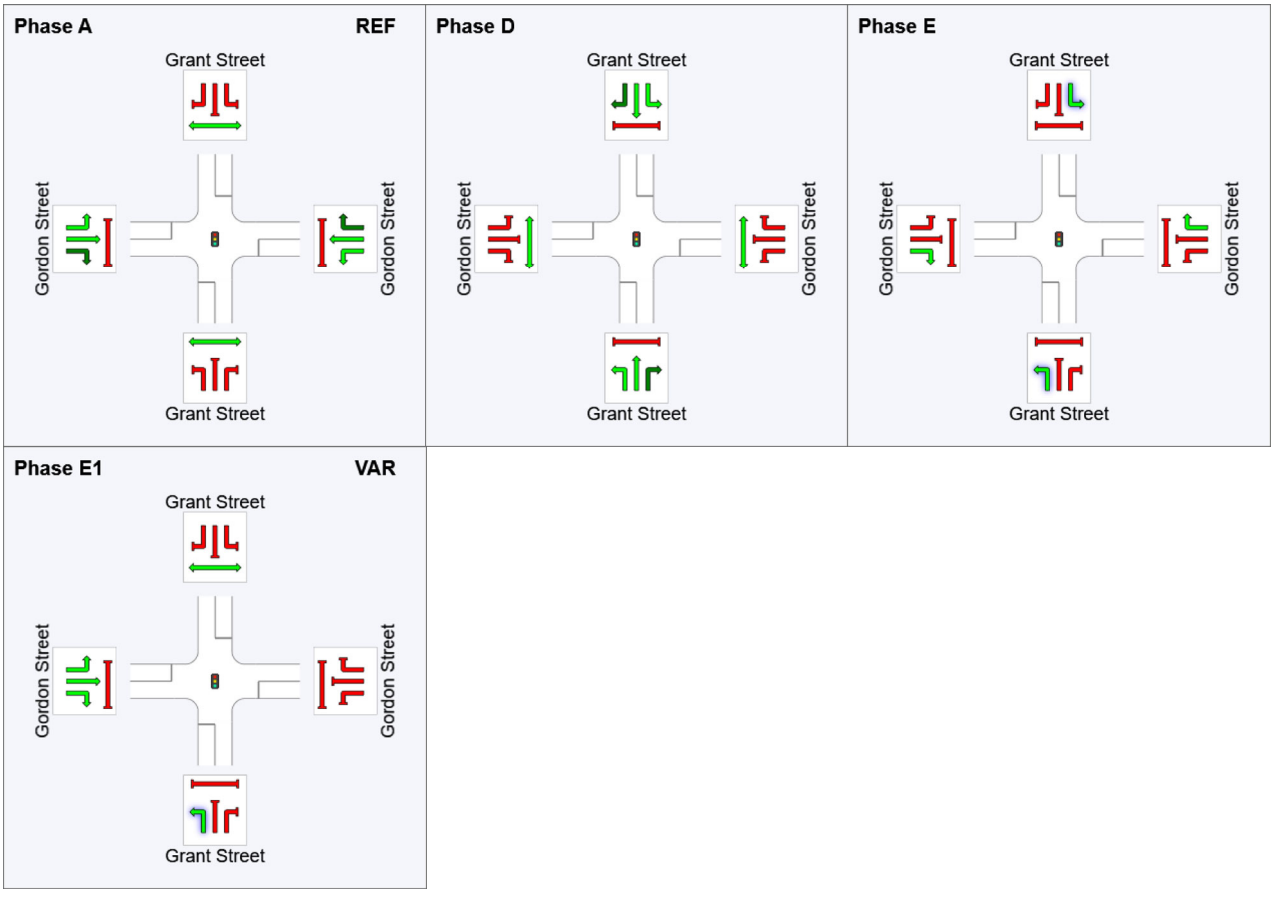
Pedestrian Movement Performance

Mov	Dem.	Aver.	Level of	AVERAGE BACK OF	Prop.	Effective	Travel	Travel	Aver.

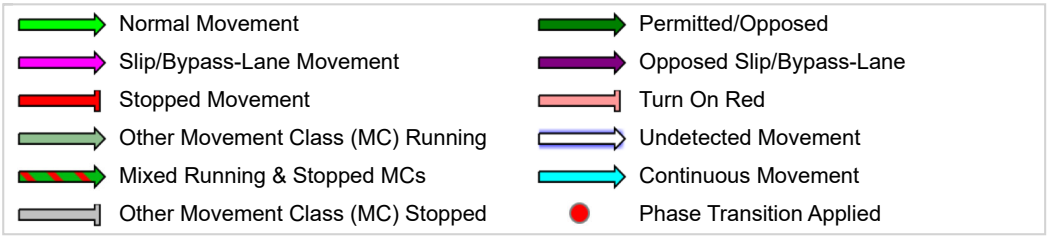
ID	Crossing	Flow	Delay	Service	QUEUE [Ped	QUEUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Grant Street											
P1	Full	21	19.4	LOS B	0.0	0.0	0.88	0.88	183.1	212.8	1.16
East: Gordon Street											
P2	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
North: Grant Street											
P3	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	184.3	214.4	1.16
West: Gordon Street											
P4	Full	11	19.4	LOS B	0.0	0.0	0.88	0.88	187.1	218.0	1.17
All Pedestrians		53	19.4	LOS B	0.0	0.0	0.88	0.88	184.9	215.2	1.16

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.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	D	E	E1
Phase Change Time (sec)	0	25	40	47
Green Time (sec)	19	9	3	***
Phase Time (sec)	25	13	9	3
Phase Split	50%	26%	18%	6%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Site: 101 [Gordon Street/ Lord Street_SAT (Site Folder: 2033 Post Development)]

Network: 9 [Pdev Sat 2033 (Network Folder: 2033 Post Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Street														
1	L2	399	0.3	399	0.3	0.330	4.4	LOS A	0.7	4.7	0.40	0.55	0.40	44.0
2	T1	224	0.5	224	0.5	0.252	4.2	LOS A	0.5	3.3	0.40	0.52	0.40	47.5
3	R2	16	0.0	16	0.0	0.252	8.4	LOS A	0.5	3.3	0.40	0.52	0.40	47.6
3u	U	25	0.0	25	0.0	0.252	11.8	LOS B	0.5	3.3	0.40	0.52	0.40	51.4
Approach		664	0.3	664	0.3	0.330	4.7	LOS A	0.7	4.7	0.40	0.54	0.40	46.2
East: Gordon Street														
4	L2	6	0.0	6	0.0	0.066	5.4	LOS A	0.1	0.9	0.52	0.56	0.52	46.1
5	T1	105	0.0	105	0.0	0.066	5.2	LOS A	0.1	0.9	0.52	0.58	0.52	42.9
6	R2	13	0.0	13	0.0	0.066	9.5	LOS A	0.1	0.8	0.53	0.61	0.53	46.8
6u	U	1	0.0	1	0.0	0.066	12.9	LOS B	0.1	0.8	0.53	0.61	0.53	50.5
Approach		125	0.0	125	0.0	0.066	5.7	LOS A	0.1	0.9	0.52	0.58	0.52	43.9
North: Lord Street														
7	L2	11	0.0	11	0.0	0.138	5.1	LOS A	0.3	1.9	0.51	0.55	0.51	49.2
8	T1	160	0.0	160	0.0	0.138	4.8	LOS A	0.3	1.9	0.51	0.57	0.51	47.0
9	R2	104	0.0	104	0.0	0.138	9.2	LOS A	0.3	1.9	0.52	0.69	0.52	41.1
9u	U	1	0.0	1	0.0	0.138	12.6	LOS B	0.3	1.9	0.52	0.69	0.52	49.3
Approach		276	0.0	276	0.0	0.138	6.5	LOS A	0.3	1.9	0.51	0.61	0.51	45.5
West: Gordon Street														
10	L2	173	0.0	173	0.0	0.299	5.7	LOS A	0.6	3.9	0.36	0.56	0.36	46.6
11	T1	148	0.0	148	0.0	0.299	5.7	LOS A	0.6	3.9	0.36	0.56	0.36	48.3
12	R2	351	0.3	351	0.3	0.329	9.9	LOS A	0.6	4.5	0.36	0.69	0.36	45.3
12u	U	29	0.0	29	0.0	0.329	11.9	LOS B	0.6	4.5	0.36	0.69	0.36	35.5
Approach		701	0.2	701	0.2	0.329	8.1	LOS A	0.6	4.5	0.36	0.63	0.36	46.1
All Vehicles		1766	0.2	1766	0.2	0.330	6.4	LOS A	0.7	4.7	0.41	0.59	0.41	45.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix B. Swept Path Analysis

MINIMUM HEIGHT CLEARANCES TO STRUCTURE AND SERVICES SHOULD BE PROVIDED AT;
4.5m ABOVE SERVICE VEHICLE ACCESS AND LOADING DOCK AREAS
2.5m ABOVE DISABLED PARKING BAYS (AS2890.6:2022)
2.2m ABOVE CIRCULATION AISLES AND PARKING SPACES.

N

BUS ENTRY DRIVEWAY NEEDS TO BE SPLAYED TO ACCOMMODATE A 14.5m COACH SWEPT PATH FROM LEFT LANE. (SUBJECT TO DETAILED DESIGN)

GORDON S

ENSURE 2.5m x 2m CLEAR SIGHT LINES ARE PROVIDED AT THE PROPERTY LINE TO ENSURE ADEQUATE VISIBILITY TO PEDESTRIANS FOR EXITING VEHICLES

SITE BOUNDARY

REMOVABLE/RETRACTABLE BOLLARDS MUST BE MANAGED TO ENSURE VEHICLES DON'T QUEUE ACROSS FOOTPATH OR ONTO GORDON STREET

GRANDSTAND SEATING

50m POOL

6.55

RECOMMEND PROVIDING MINIMUM 6.6m WIDE ACCESS ROAD (3.5m WIDE THROUGH LANE AND 3.1m WIDE BUS LANE)

BOLLARD SHOULD BE LOCATED CLEAR OF VEHICLE LOADING AND MANOEUVRING AREA

POOL PLANT

ADDITIONAL PLANT AS PART OF STAGE 2 WORKS

ARCHITECTURAL BASE IN BLUE
DRAWING DA162
REVISION D
BY CO.OP STUDIO
DATED 26.09.2023

\\AU2019-PPFS01\SHARED_PROJECTS\300304850\TECHNICAL\DRAWINGS\300304850-02-P8.DWG PLOTTED BY RIMAC, MARKO ON 19/10/2023 AT 13:02

Stantec

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

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PORT MACQUARIE AQUATIC CENTRE
STAGE 1 & 2 WORKS

CAR PARKING MODIFICATIONS

DRAWING NO. 300304850-02-01 SHEET 01 OF 14 ISSUE P8

MINIMUM HEIGHT CLEARANCES TO STRUCTURE AND SERVICES SHOULD BE PROVIDED AT;
4.5m ABOVE SERVICE VEHICLE ACCESS AND LOADING DOCK AREAS
2.5m ABOVE DISABLED PARKING BAYS (AS2890.6:2022)
2.2m ABOVE CIRCULATION AISLES AND PARKING SPACES.

MUNSTER STREET

CARPARK ENTRY/ EXIT

PROPOSED SHARED

4.38

REMOVABLE/RETRACTABLE BOLLARDS TO BE MANAGED ON-SITE

CHANGE ZONE

PICNIC AREA

ENTRY

N

7.20

EXISTING CARPARK (not part of scope)

PUMP STATION

6

6.19

6.50

9.90

6.50

GYM

STAGE 1 RO

DROP OFF/EMERGENCY

LONG RADIUS BUS GROUNDS 2017 (A)

CARPARK
129 car spaces
+ 3 Motorbike

PASSIVE LAWN AREA

WRIGHTS CREEK

CYCLEWAY

0.63

6.50

0.63

7.02

WHEEL STOPS, IF DEEMED REQUIRED, SHOULD BE LOCATED 0.9m FROM THE END OF SPACE WITH NO OR LOW KERB. MEASURED TO THE POINT OF CONTACT WITH VEHICLE TYRE.

ARCHITECTURAL BASE IN BLUE
DRAWING DA161
REVISION D
BY CO.OP STUDIO
DATED 26.09.2023

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APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

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PORT MACQUARIE AQUATIC CENTRE
STAGE 1 WORKS

CAR PARKING MODIFICATIONS

DRAWING NO. 300304850-02-02 SHEET 02 OF 14 ISSUE P8

MINIMUM HEIGHT CLEARANCES TO STRUCTURE AND SERVICES SHOULD BE PROVIDED AT;
4.5m ABOVE SERVICE VEHICLE ACCESS AND LOADING DOCK AREAS
2.5m ABOVE DISABLED PARKING BAYS (AS2890.6:2022)
2.2m ABOVE CIRCULATION AISLES AND PARKING SPACES.

MUNSTER STREET

PROPOSED SHADED

4.38

SLIDES

SPLASHPAD

N

REMOVABLE/RETRACTABLE BOLLARDS TO BE MANAGED ON-SITE

EXISTING CARPARK (not part of scope)

STAGE 2 PARKING
41 ADDITIONAL CAR SPACES

7.20

8.55

6.50

6.50

6.50

9.90

6.50

GYM

LONG RIGID BUS 12.5m (10)

PASSIVE LAWN AREA

WRIGHTS CREEK

CYCLEWAY

0.63

6.50

0.63

WHEEL STOPS, IF DEEMED REQUIRED, SHOULD BE LOCATED 0.9m FROM THE END OF SPACE WITH NO OR LOW KERB. MEASURED TO THE POINT OF CONTACT WITH VEHICLE TYRE.

MODIFY KERB/LINEMARKING TO ACCOMMODATE 14.5m COACH SWEPT PATHS

7.02

7.02

7.02

ARCHITECTURAL BASE IN BLUE
DRAWING DA162
REVISION D
BY CO.OP STUDIO
DATED 26.09.2023

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PORT MACQUARIE AQUATIC CENTRE
STAGE 2 WORKS

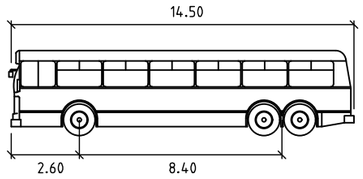
CAR PARKING MODIFICATIONS

DRAWING NO. 300304850-02-03 SHEET 03 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

N

GORDON STREET

LONG RIGID BUS
AUSTROADS 2013 (AU)

SITE BOUNDARY

GRANDSTAND SEATING

50m POOL

POOL PLANT

MUNSTER STREET

SHARED ZONE

SLIDES

SPLASHPAD

Stantec

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DESIGN CHECK I.BISSAKER
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DATE ISSUED 19 OCTOBER 2023

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PORT MACQUARIE AQUATIC CENTRE
STAGE 1 & 2 WORKS

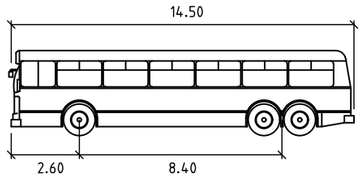
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-04 SHEET 04 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

N

GORDON STREET

SITE BOUNDARY

LONG RIGID BUS AUSTROADS 2013 (AU)

GRANDSTAND SEATING

50m POOL

POOL PLANT

MUNSTER STREET

SHARED ZONE

SLIDES

SPLASHPAD

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CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 1 & 2 WORKS

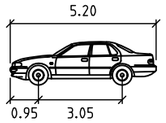
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-05 SHEET 05 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

MUNSTER STREET

CARPARK ENTRY/ EXIT

PROPOSED SHARED ZONE

PICNIC AREA

ENTR

EXISTING CARPARK (not part of scope)

PUMP STATION

PASSIVE LAWN AREA

WRIGHTS CREEK

CARPARK
129 car spaces
+ 3 Motorbike

DROP OFF/EMERGENCY

CYCLEW

N

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DESIGNED	M.RIMAC
DESIGN CHECK	I.BISSAKER
APPROVED BY	K.MCNATTY
DATE ISSUED	19 OCTOBER 2023
SCALE	A3 0 2.5 5 10 1:500
CAD FILE NO.	300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 1 WORKS

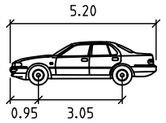
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-06 SHEET 06 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

MUNSTER STREET

PROPOSED SHARED ZONE

SLIDES

SPLASHPAD

N

EXISTING CARPARK (not part of scope)

STAGE 2 PARKING 41 ADDITIONAL CAR SPACES

PASSIVE LAWN AREA

WRIGHTS CREEK

CYCLEW

LONG RIGID BUS AUSTROADS 2013 (AV)

\\AU2019-PRFS01\SHARED_PROJECTS\300304850\TECHNICAL\DRAWINGS\300304850-02-P8.DWG PLOTTED BY RIMAC, MARKO ON 19/10/2023 AT 13:02

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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
BEWARE OF UNDERGROUND SERVICES
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DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE STAGE 2 WORKS

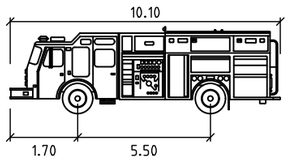
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-07 SHEET 07 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



NSWFB Appliance

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

MUNSTER STREET

CARPARK ENTRY/ EXIT

PROPOSED SHARED ZONE

PICNIC AREA

ENTR

EXISTING CARPARK (not part of scope)

PUMP STATION

PASSIVE LAWN AREA

WRIGHTS CREEK

DROP OFF/EMERGENCY

CARPARK
429 car spaces
+ 3 Motorbike

CYCLE

N

Stantec

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
BEWARE OF UNDERGROUND SERVICES
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DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 1 WORKS

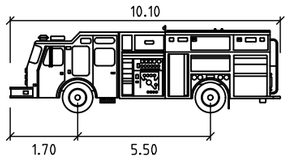
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-08 SHEET 08 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



NSWFB Appliance

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

MUNSTER STREET

PROPOSED SHARED ZONE

SLIDES

SPLASHPAD

N

EXISTING CARPARK (not part of scope)

STAGE 2 PARKING 41 ADDITIONAL CAR SPACES

PASSIVE LAWN AREA

WRIGHTS CREEK

CYCLE

Stantec

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY
SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 2 WORKS

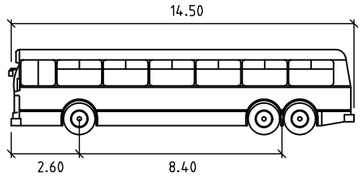
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-09 SHEET 09 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

MUNSTER STREET

CARPARK ENTRY/ EXIT

SHARED ZONE

PICNIC AREA

ENTR

EXISTING CARPARK (not part of scope)

PUMP STATION

PASSIVE LAWN AREA

WRIGHTS CREEK

CARPARK
129 car spaces
+ 3 Motorbike

DROP OFF/EMERGENC

CYCLE

N

\\AU2019-PPFS01\SHARED_PROJECTS\300304850\TECHNICAL\DRAWINGS\300304850-02-P8.DWG PLOTTED BY RIMAC, MARKO ON 19/10/2023 AT 13:02

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PRELIMINARY PLAN
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DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 1 WORKS

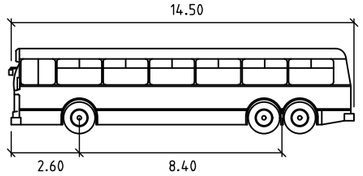
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-10 SHEET 10 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

MUNSTER STREET

CARPARK ENTRY/ EXIT

LONG RIGID BUS AUSTROADS 2019 (W)

SHARED ZONE

PICNIC AREA

ENTR

EXISTING CARPARK (not part of scope)

PUMP STATION

PASSIVE LAWN AREA

WRIGHTS CREEK

CARPARK
129 car spaces
+ 3 Motorbike

DROP OFF/EMERGENCY

CYCLE

N

\\AU2019-PFPSS01\SHARED_PROJECTS\300304850\TECHNICAL\DRAWINGS\300304850-02-P8.DWG PLOTTED BY RIMAC, MARKO ON 19/10/2023 AT 13:02

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PRELIMINARY PLAN
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SCALE A3 0 2.5 5 10 1:500

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PORT MACQUARIE AQUATIC CENTRE
STAGE 1 WORKS

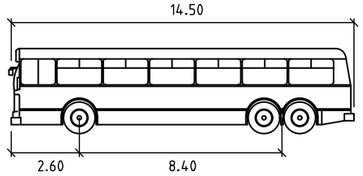
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-11 SHEET 11 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

MUNSTER STREET

LONG RIGID BUS (AV) AUSTROADS 2013

SHARED ZONE

SLIDES

SPLASHPAD

N

EXISTING CARPARK (not part of scope)

STAGE 2 PARKING 41 ADDITIONAL CAR SPACES

PASSIVE LAWN AREA

WRIGHTS CREEK

CYCLEW

LONG RIGID BUS (AV) AUSTROADS 2013

\\AU2019-PPFSS01\SHARED_PROJECTS\300304850\TECHNICAL\DRAWINGS\300304850-02-P8.DWG PLOTTED BY RIMAC, MARKO ON 19/10/2023 AT 13:02

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DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE STAGE 2 WORKS

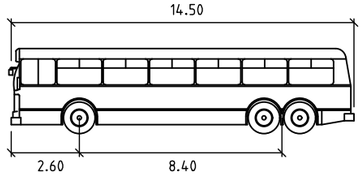
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-12 SHEET 12 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



LONG RIGID BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 46.4

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DESIGNED M.RIMAC	DESIGN CHECK I.BISSAKER
APPROVED BY K.MCNATTY	DATE ISSUED 19 OCTOBER 2023

SCALE A3 0 2.5 5 10 1:500

CAD FILE NO. 300304850-02-P8.DWG

PORT MACQUARIE AQUATIC CENTRE
STAGE 2 WORKS

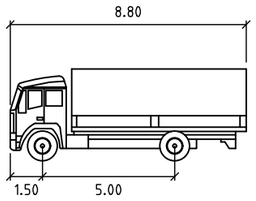
VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-13 SHEET 13 OF 14 ISSUE P8

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

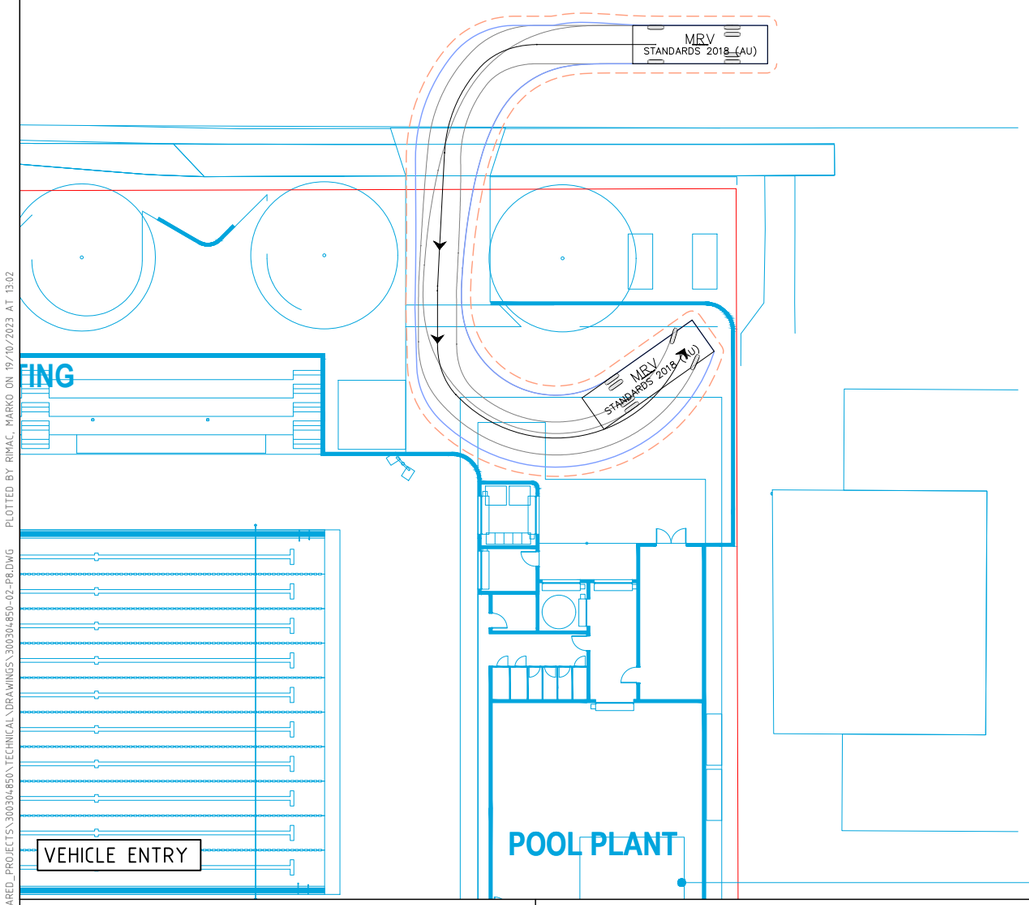


MRV

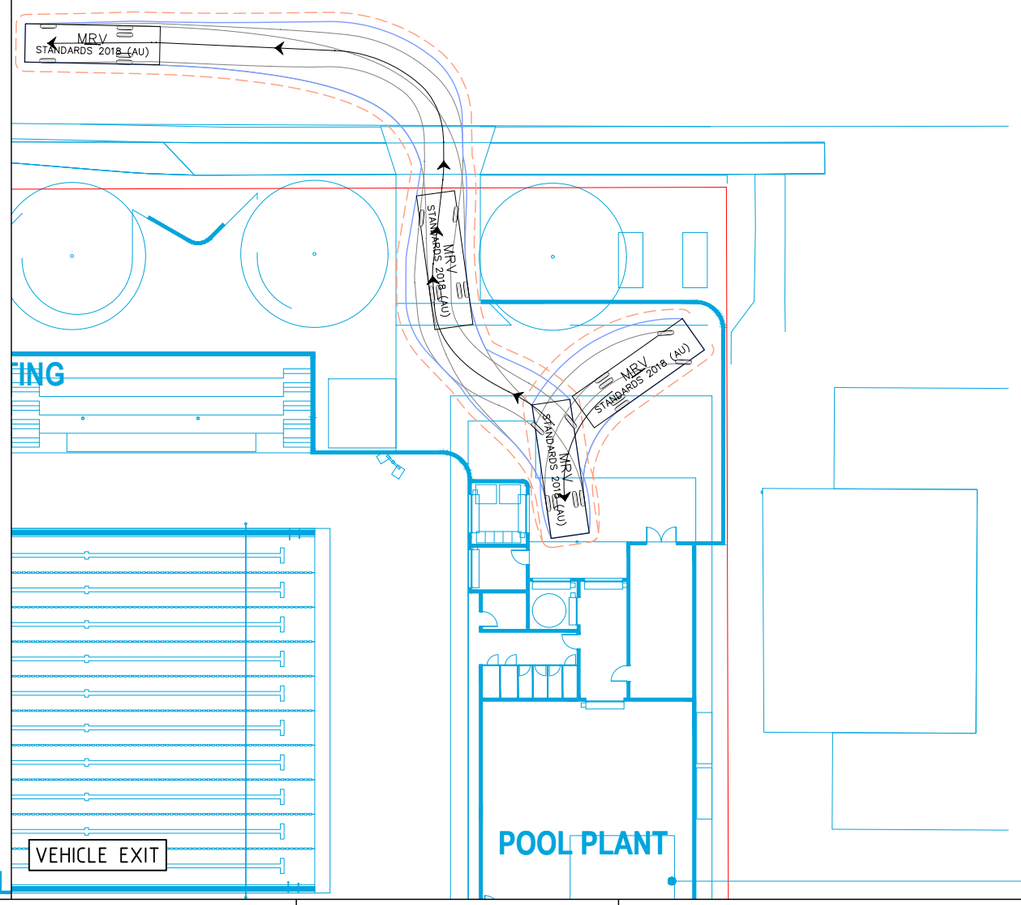
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

N

GORDON STREET



GORDON STREET



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SCALE A3 0 2 4 8 1:400

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PORT MACQUARIE AQUATIC CENTRE
STAGE 1 & 2 WORKS

VEHICLE SWEPT PATH ASSESSMENT

DRAWING NO. 300304850-02-14 SHEET 14 OF 14 ISSUE P8

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