

Initial Traffic Impact Assessment Report

38-50 MacArthur
Street, Sale

Client

Issued
3/10/2025



Melbourne Office
1 Glenferrie Road
PO Box 61
Malvern VIC 3144
Tel: (03) 9524 8888

beveridgewilliams.com.au

BW
Beveridge Williams

Client: [REDACTED]

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Prepared by: [REDACTED]

Checked by: [REDACTED]

Authorised by: [REDACTED]

Project Manager: [REDACTED]

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Revision Table

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1.0	Development Plan submission	22/08/2025	[REDACTED]	[REDACTED]
1.1	Development Plan Application – Initial Feedback and Comments	03/10/2025	[REDACTED]	[REDACTED]

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1. INTRODUCTION

1.1. Overview

Beveridge Williams has been engaged by [REDACTED] to prepare a traffic impact assessment (TIA), for the proposed development at 38-50 MacArthur Street, Sale. This report will assess the traffic generation and distribution; car parking provision; and suitability of access arrangements. This report will be produced in two stages:

- An initial report submitted to accompany the development plan, including assessment of the following aspects:
 - Surrounding road network and existing conditions.
 - Strategic planning documents relevant to the site.
 - Proposed loading arrangements, including swept path analysis.
 - Bicycle and car parking requirements from a statutory perspective.
 - Existing Active Transport arrangements in the vicinity of the project site.
 - Proposed access and carparking arrangements
 - Carpark and ramp design
 - Holistic traffic considerations
- An addendum report to be submitted with the planning permit, including:
 - Consideration of empirical traffic and parking surveys undertaken in the vicinity of the project site.
 - Detailed assessment and modelling of current and future traffic generation and parking demands from an empirical perspective.

Beveridge Williams has also produced a Waste Management Plan, separate to the Traffic Impact Assessment report, to accompany the Development Plan application.

The proposed development will consist of a supermarket (3,746m²), retail tenancies (2,126m² – of which, 233m² is assumed to be a Food & Beverage tenancy) and an office (2,706m²) on a project site area of approximately 8,235m², supporting the Sale CBD precinct from a commercial perspective and ensuring the adequate provision of retail and office spaces in a convenient location.

The purpose of this Report is to document the findings from the assessment of the proposed development and to support the Development Plan application to Wellington Shire Council from a traffic perspective.

1.2. Project Background

The proposed mixed-use development is located in an existing shopping precinct (adjacent the Gippsland (shopping) Centre) near the centre of the Sale township and will replace an existing use (Bunnings). Sale is located approximately 190 kilometres east of Melbourne and is within the municipality of Wellington Shire Council. The project site area is generally bound by MacArthur Street (north), Desailly Street (east), New Railway Road (south) and Pearson Street (west).

The project area is demonstrated in Figure 1. Once completed, the Development will comprise a supermarket, retail tenancies (including a restaurant/café), and an office space.

1.3. Development Plan Application – Initial Feedback from Council

The initial TIA was submitted to Wellington Shire Council on 22nd August 2025 as part of the Development Plan application. Subsequent to this, Beveridge Williams received Initial Comments and Feedback from Wellington Shire Council dated 15th September 2025. The relevant comments pertaining to the TIA are provided below in *italics* with Beveridge William's response in *blue*.

Traffic

Provision of Parking

*The provision of car parking as outlined in part 5. Parking and Access Assessment. Specifically, the report notes a shortfall of 27 standard parking spaces and a surplus of 1 accessible space. Based on the surrounding on-street parking availability and the information in the report, this is considered acceptable based on the reasoning provided. *Noted.**

Timing of Deliveries

It is noted that an addendum to this report will further assess whether the proposed loading arrangements are appropriate, particularly in relation to the timing of delivery vehicles accessing New Railway Road. To avoid blocking New Railway Road, delivery schedules should be managed so that vehicles do not obstruct the roadway. Similarly, vehicles accessing the online pick-up area should be timed to prevent queuing and overflow onto Pearson Street. Delivery schedules may also need to be aware of any residential properties in the area, particularly on the western side of Pearson Street.

Response

The addendum report will review queueing arrangements and time limit for the online pick-up area to reduce potential impact on surrounding areas.

Traffic Movements and Vehicle Access

Consideration should be given to traffic movements around the entrance and exit from the basement car park, intersection of Desailly Street and New Railway Road and the parking aisles located to the east of these intersections. There will be an increase in the number of conflict points as a result of the traffic movements generated by the basement car park. Suggest left turn only onto Desailly Street to improve traffic flow. *Noted. Beveridge William seconds adopting a left-turn only onto Desailly Street to improve traffic flow and safety.*

Sight Distances for Pedestrians

It appears that pedestrian sight distances have been considered for vehicles exiting the basement car park and the online pick-up area. We are happy with what is currently proposed for the area around the basement car park/Desailly Street intersection. Please confirm that there are no walls or other visual obstructions that could impact driver visibility when exiting the online pick-up area.

Response

2m by 2.5m corner splays will be provided to the footpath when exiting the online pick-up area.

Cycling Connections

We note that bike parking spaces are located in the basement car park. Suggest considering how cyclists would safely access this location.

Response

Cyclists will share the same ramp as cars; appropriate signage and markings will be implemented to notify drivers of this arrangement. As these are staff parking spaces future staff also will be informed that they are able to use the two lifts to access the basement bicycle parking.

Footpaths and Macarthur Street

Footpath between kerb and steps should be a minimum of 1.5m, and path between steps and building line should be a minimum of 2.5m. The kerb on Macarthur Street may need to be moved into the road pavement to accommodate this.

Response.

The architectural plans by ThextonSmith will be updated to include the suggested minimum footpath widths.

Open Space Initial Comments / Feedback

Desailly Street – Public Realm

- Relocate bike hoops from the corner of Desailly Street and Macarthur Street. The location is not ideal and may create concerns from road users around sight line issues and public safety.

Response

Discussions with Council and the Architect (ThextonSmith) regarding this are ongoing. To ensure road users' safety a visibility check for on-street cycle parking will be performed once the final location has been determined.

1.4. Reference Documents

In preparing this assessment, Beveridge Williams have referenced the following information and documents:

- Wellington Shire Planning Scheme.
- Wellington Shire Council Register of Public Roads.
- Australian Standards, including AS2890.1, AS2890.2 and AS2890.6.
- Sale, Wurruk and Longford Structure Plan.
- Sale CBD Precinct Plan.
- Sale CBD Traffic Management and Car Parking Study.
- Shire of Wellington's Urban Path Plans.
- RMS NSW Guide to Transport Impact Assessment.
- RMS NSW Guide to Traffic Generating Developments.
- National Construction Code (NCC).

2. EXISTING CONDITIONS

2.1. Project site

Figure 1 shows the project site located at 38-50 MacArthur Street, Sale. The site comprises a total area of approximately 8,235 m². It is bordered by MacArthur Street (north), Desailly Street (east), New Railway Road (south), and Pearson Street (west). Residential dwellings are located to the north and northwest of the project site whilst commercial developments are located to the northeast, east, south and west of the project site. The existing use of the subject site is a Bunnings hardware store. The Gippsland Shopping Centre is to the south of the site.



Figure 1: Project Site Aerial (Source: NearMap)

Figure 2 shows the project site in relation to the Sale township. The project site is located approximately 800m to the southeast of the Sale railway station.

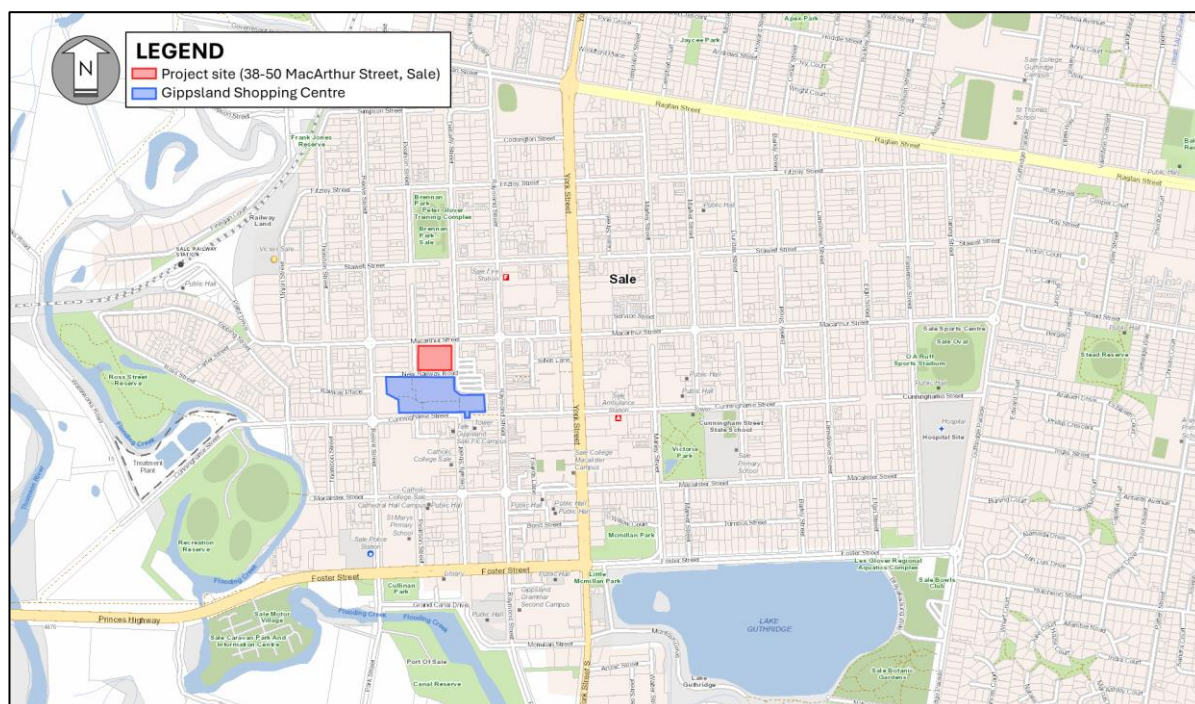


Figure 2: Project Site Context (Source: VicPlan)

2.2. Project Site Zoning and Overlays

Figure 3 shows the project site and the surrounding land zoning, summarised below:

- The project site is zoned as Commercial Zone – Schedule 1 (CZ1).
- North of the site is zoned as General Residential Zone – Schedule 1 (GRZ1).
- East, south and west of the site is zoned as Commercial Zone – Schedule 1 (CZ1).

The following overlays apply to the project site:

- Design and Development Overlay – Schedule 6 (DDO6).
- Development Plan Overlay – Schedule 1 (DPO1).

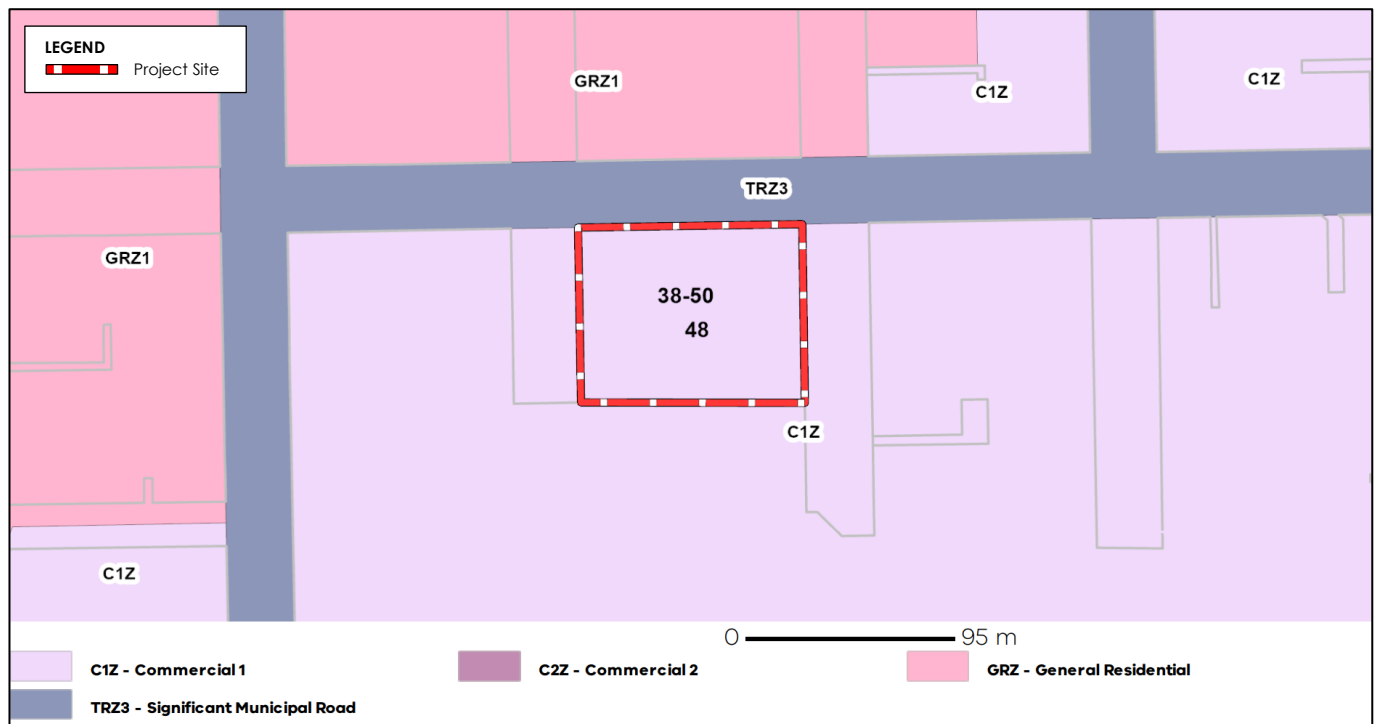


Figure 3: Zoning Configuration Surrounding the Project Site (Source: VicPlan)

2.3. Existing Road Network

Table 1 summarises the surrounding road network. The road types are per the Wellington Shire Council Register of Public Roads.

Table 1: Summary of Existing Road Network

ROAD NAME	TYPE	WIDTH	SPEED LIMIT
MacArthur Street	Link Road	Carriageway: 22.5m Reserve: 30m	60 km/h
Desailly Street	Local Access A - Road	Carriageway: 20.7m Reserve: 30m	50 km/h
New Railway Road	Private road	Carriageway: ~4.5m Reserve: ~8.2m	20 km/h (posted)
Pearson Street	Local Access B - Road	Carriageway: 19m Reserve: 30m	50 km/h

2.3.1. MacArthur Street

MacArthur Street is a Link Road orientated in an east-west direction. Adjacent the frontage of the site, MacArthur Street consists of one traffic lane in each direction separated by a central median contained within a road reserve of approximately 30m. There is parallel parking and a bicycle lane on the northern and southern sides of the carriageway. The central median contains a 90-degree parking aisle and there are footpaths on the northern and southern sides of the road reserve. MacArthur Street intersects with Desailly Street on the northeast corner of the project site, and with Pearson Street on the northwest corner of the project site.

2.3.2. Desailly Street

Desailly Street is a Local Access A – Road orientated in a north-south direction. Adjacent the frontage of the site, Desailly Street consists of a two-way carriageway with 90-degree parking on both sides of the carriageway contained within a road reserve of approximately 30m. There are footpaths on both the eastern and western sides of the road reserve. Desailly Street intersects with MacArthur Street on the northeast corner of the site and continues to the north, whilst it terminates at New Railway Road to the south of the site.

2.3.3. New Railway Road

New Railway Road is a private road orientated in an east-west direction that dog legs to the southeast of the subject site. New Railway Road is a one-way road that begins at Raymond Street to the east of the project site and terminates at Gippsland Shopping Centre carpark located along Reeve Street (to the west of the project site). Along the southern frontage of the project site, New Railway Road has a carriageway of approximately 4.5m contained within a road reserve of approximately 8.2m. New Railway Road intersects with Desailly Street on the southeast corner of the project site and intersects with Pearson Street on the southwest corner of the project site.

2.3.4. Pearson Street

Pearson Street is a Local Access B Road that is orientated in a north-south direction. Adjacent the project site, Pearson Street has a carriageway of approximately 19m that allows for two-way flow and 90-degree parking on both sides of the carriageway, contained within a road reserve of approximately 30m. Pearson Street terminates at New Railway Road on the southwest corner of the project site, and intersects with MacArthur Street on the northwest corner of the project site. Pearson Street terminates as a residential court-bowl approximately 150m to the north of MacArthur Street.

2.4. Active Transport and Public Transport

Figure 4 shows the existing Public Transport Network in the vicinity of the project site and Figure 5 shows the bus stops within approximately walkable distance of the site.

- A bus terminal is located on the southern side of the Gippsland Shopping Centre that services local trips (bus routes 1-6) and regional trips (V/Line coaches). This is approximately a 400m (6 minute) walk from the project site.
- A bus stop servicing route 4 is located on Reeve Street to the south of Cunninghame Street that is a 500m (7 minute) walk from the project site.
- A pair of bus stops servicing route 4 are located near the MacArthur Street / Thomson Street intersection that are a 350m (5 minute) walk from the project site.
- A bus stop servicing routes 2 and 5 is located along Raymond Street to the north of Raymond Street / MacArthur Street intersection that is a 400m (6 minute) walk from the project site.

Therefore, based on the above summary and the below diagrams, it is considered that there is significant public and active transport available to potential users of the proposed development, reducing the reliance on cars. The active and public transport infrastructure would be beneficial to all proposed uses, and both staff/employees and customers/shoppers.

Figure 6 depicts the existing active transport infrastructure in the vicinity of the site.

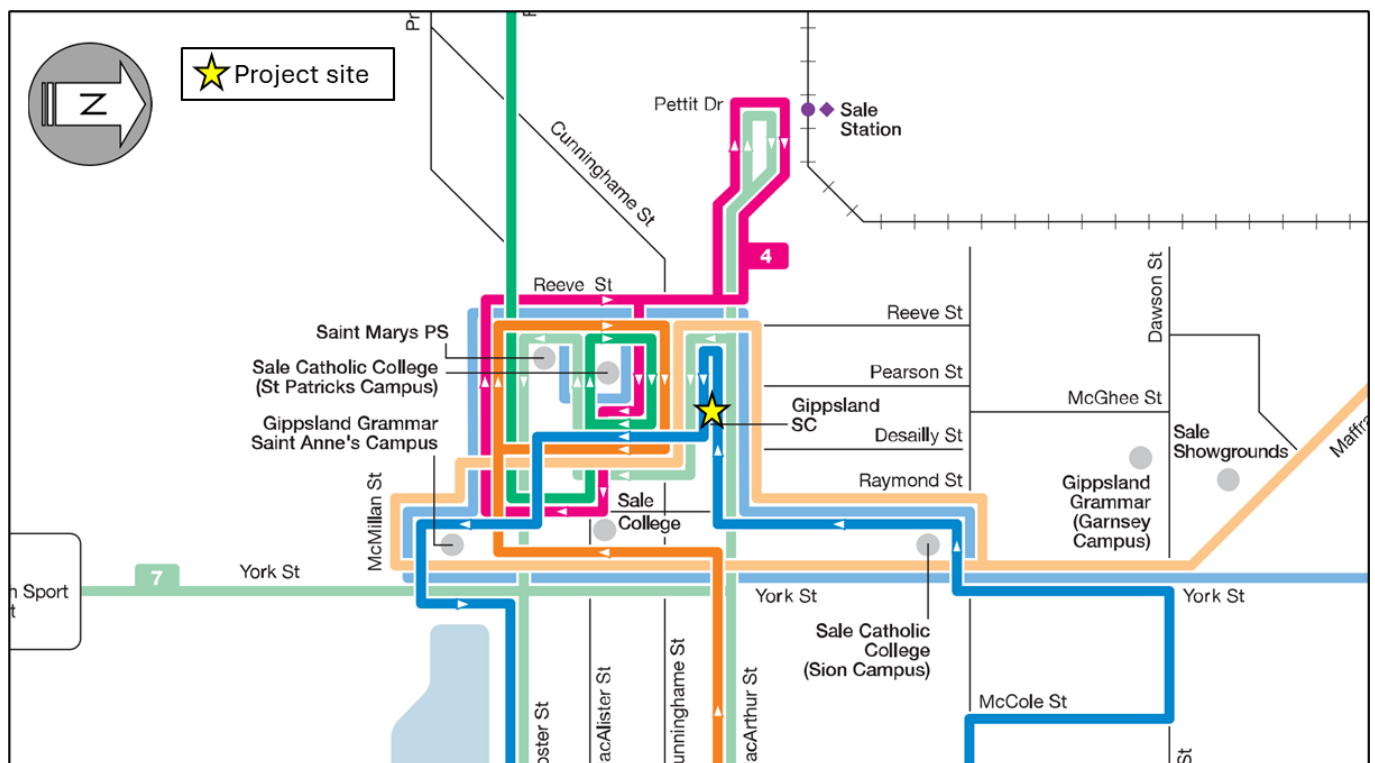


Figure 4: Public Transport Network (Source: PTV)

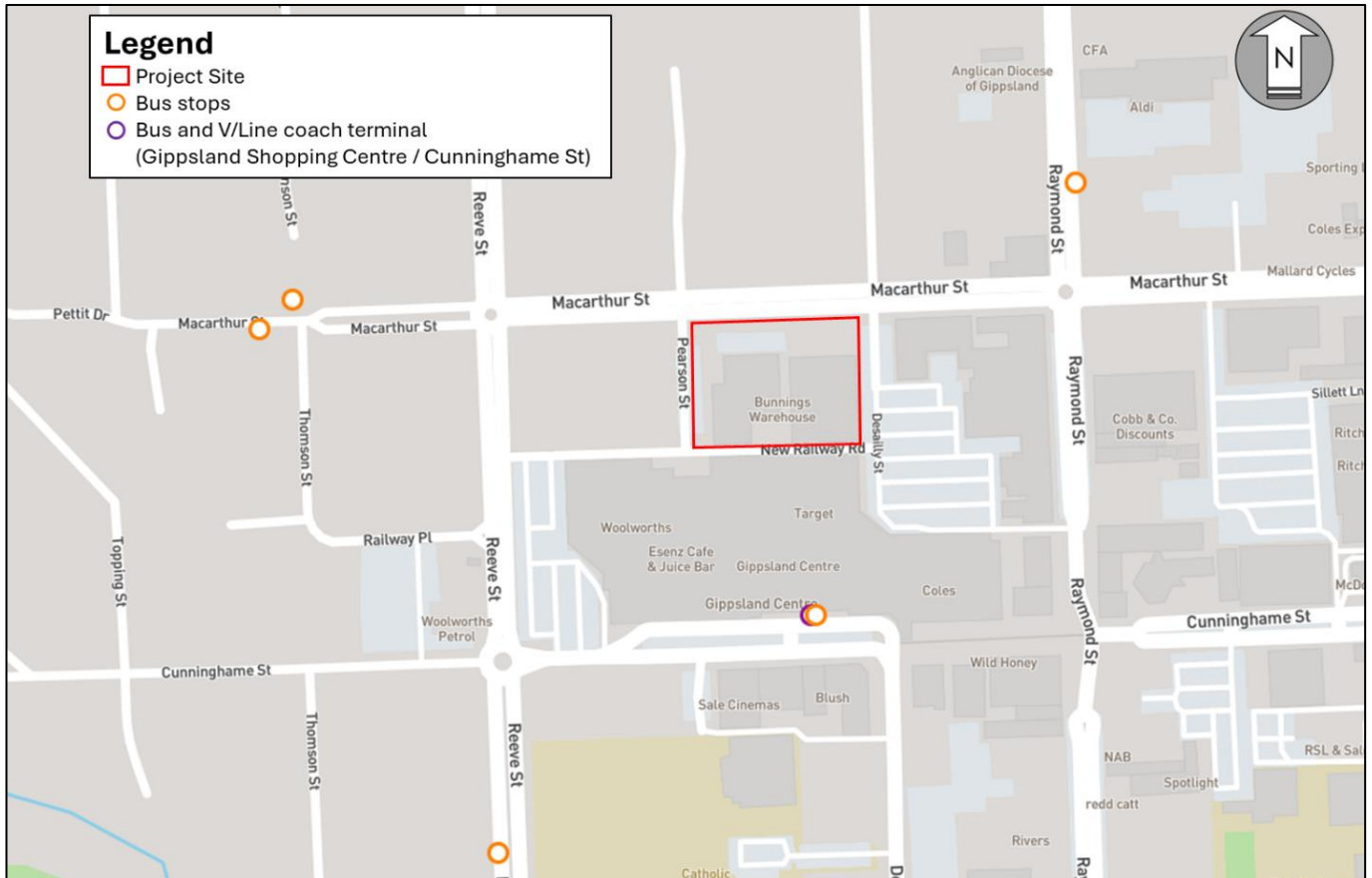


Figure 5: Bus stops within walkable distance of the project site (Source: Transport Victoria)

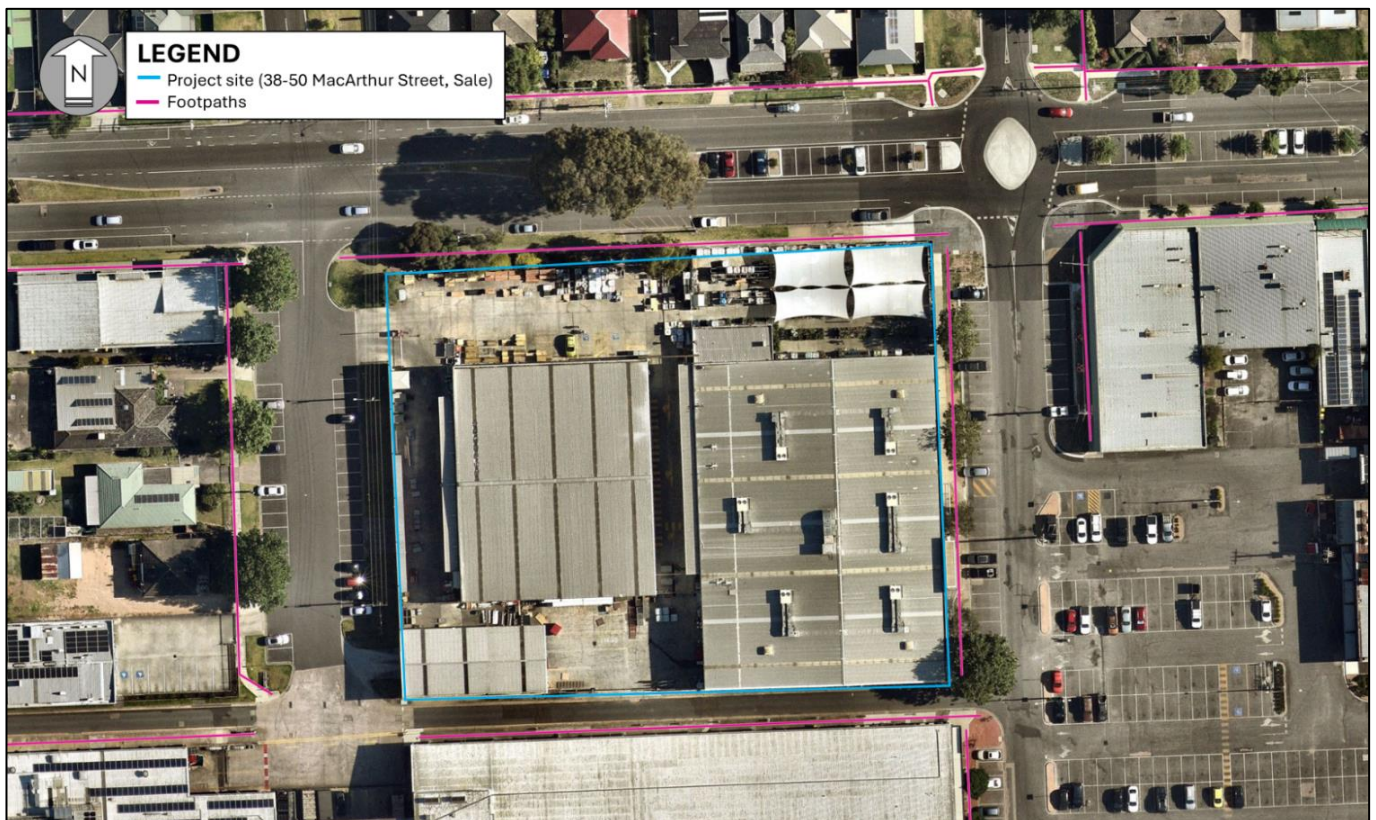


Figure 6: Existing Active Transport Network (Source: NearMap)

2.5. Existing Traffic and Parking Surveys

2.5.1. Turning Movement Counts

Beveridge Williams has commissioned Turning Movement Counts at the following intersections for Thursday 7th August from 8:00am to 6:00pm and Saturday 9th August from 9:30am to 2:00pm.

- MacArthur Street / Pearson Street intersection.
- MacArthur Street / Desailly Street roundabout.
- MacArthur Street / Raymond Street roundabout.
- Desailly Street / New Railway Road intersection.

2.5.2. Tube Counts

Beveridge Williams has commissioned tube counts at the following locations from Saturday 2nd August 2025 to Saturday 9th August 2025.

- New Railway Road (western leg of Raymond Street / New Railway Road intersection)
- Desailly Street (southern leg of MacArthur Street / Desailly Street intersection)
- New Railway Road (midblock between Desailly Street and Pearson Street)
- Pearson Street (midblock between MacArthur Street and New Railway Road)

2.5.3. Parking Surveys

Beveridge Williams has commissioned parking surveys at the following locations on Thursday 7th August from 8:00am to 6:00pm and Saturday 9th August from 9:30am to 2:00pm.

- On-street parking
 - MacArthur Street (Reeve Street to Raymond Street)
 - Pearson Street (residential court bowl to New Railway Road)
 - Desailly Street (Stawell Street to MacArthur Street)
- Off-street parking
 - Shared off-street parking east of project site (accessed via New Railway Road and Desailly Street)
 - Gippsland Shopping Centre off-street parking east of Reeve Street
 - Gippsland Shopping Centre off-street parking west of Reeve Street

The traffic and parking survey results are provided in Appendix C and will be analysed as part of the addendum report.

Figure 7 depicts the Turning Movement Counts, Tube Counts and Parking Survey locations in relation to the site.



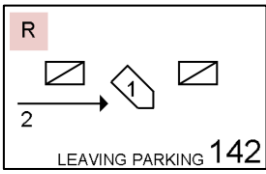
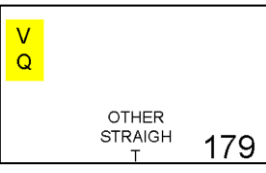
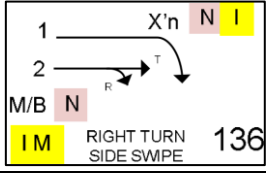
Figure 7: Traffic and Parking Survey locations in relation to the project site (Source: Beveridge Williams)

2.6. Road Crash History

A review of the crash history data from DTP Victorian Road Crash Data was undertaken for the surrounding roads (MacArthur Street, Desailly Street, New Railway Road and Pearson Street) along the frontage of the project site. Table 2 provides a summary of the crash history for a ~10-year period. It is noted that the records do not pick up near misses and that there is a 7-month reporting lag.

The recorded crash history in the vicinity of the site does not indicate any crash trend that requires urgent remedial actions.

Table 2: Road Crash History Data

#	LOCATION	ACCIDENT TYPE / SEVERITY	DATE (DD/MM/YYYY)	COLLISION CODE DESCRIPTION
1	Along Desailly Street adjacent the project site (38-50 MacArthur Street)	Leaving Parking (Collision with vehicle) (other injury accident)	04/12/2013	Leaving Parking 
2		Other accidents-off straight not included in DCAs 170-175 (collision with a fixed object) (other injury accident)	09/06/2014	Other Straight 
3		Right turn sideswipe (Collision with vehicle) (other injury accident)	06/01/2018	Right turn sideswipe 

3. STRATEGIC DOCUMENTS

3.1. Sale, Wurruk and Longford Structure Plan

The Sale, Wurruk and Longford Structure Plan was prepared in August 2010 by Wellington Shire Council to provide an overarching strategic plan for development (retail, industry, residential etc) within the townships of Sale, Wurruk and Longford and was prepared in line with Wellington Shire Council's 2030 Strategic Vision.

- The proposed development at the project site would fall under the commercial growth types of (1) within the centre of the Sale CBD and (2) at the edge of the CBD.
- The proposed development generally meets the objectives and strategies outlined for commercial development.
- The proposed development, by replacing the existing Bunnings site, would fulfil a specific commercial development objective by replacing a bulky goods retailer with a more location-appropriate development (i.e. supermarket, retail, restaurant/café, office).

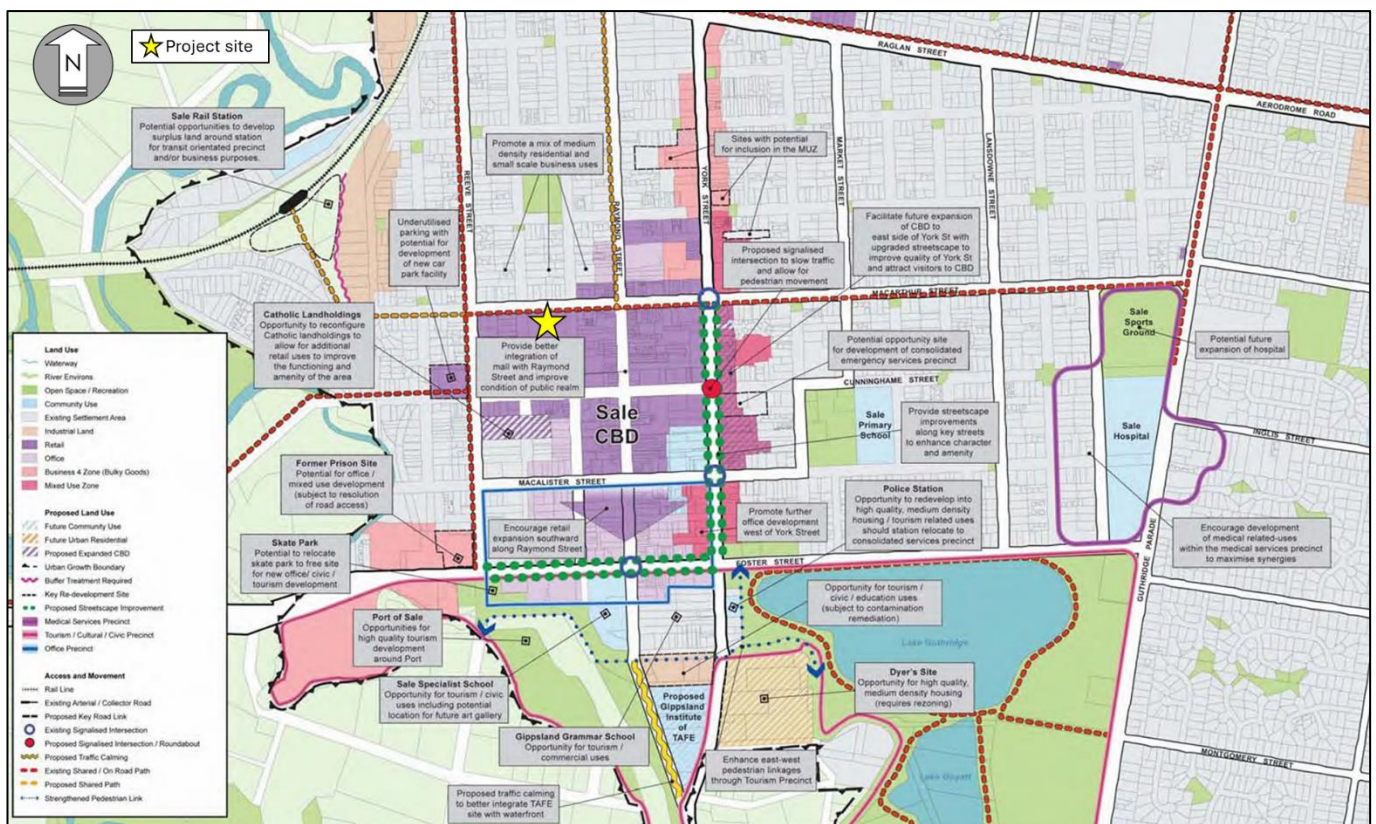


Figure 8: Sale, Wurruk and Longford Structure Plan – Commercial Development excerpt (Source: Shire of Wellington)

3.2. Sale CBD Precinct Plan

The Sale CBD Precinct Plan, which builds upon various strategic documents prepared by Wellington Shire Council including Sale, Wurruk and Longford Structure Plan (2010), Sale CBD Traffic Management and Car Parking Study (2008) and Sale Master Plan (2009), provides a guide to the development of the CBD.

- Gippsland Shopping Centre is identified as a major retail attraction.
- The project site is identified as being within the core retail precinct.
 - The Sale CBD Precinct Plan envisages the core retail precinct expanding in the northward direction.

3.3. Sale CBD Traffic Management and Car Parking Study

The Sale CBD Traffic Management and Car Parking Study (2008) was prepared by TraffixGroup on behalf of Wellington Shire Council to understand existing traffic management and parking within the Sale CBD and to identify possible solutions and improvements.

It is noted that Council has recently upgraded the MacArthur Street / Desailly Street intersection to a roundabout with safer pedestrian crossings.

3.4. Urban Path Plans

Wellington Shire Council undertakes all new major path projects in line with the Urban Paths Plan. It is noted that the current plan (as of August 2025) is expected to be revised late 2026. Additional footpath and shared path infrastructure to the north and west of the project site may be undertaken as part of future capital works subject to further investigations and funding.

4. THE PROPOSAL

4.1. Overview

A breakdown of the proposed uses is provided below:

- Supermarket - total area of 3,746m² with 2,688m² Front-of-house (FOH) and 1,058m² Back-Of-House (BOH)
- 6 retail tenancies (2,126m²)
 - Retail 1 (1,194 m²), 3 (230 m²), 4 (216 m²), 5 (160 m²) and 7 (93 m²) (total area of 1,893m²)
 - Retail 2 (total area of 233m²)
 - Assumed to be a Food & Beverage (F&B) tenancy – a restaurant/café.
 - Based on RMS restaurant data, a measure of 3.275m² of Gross Floor Area (GFA) per seat has been adopted. Therefore, based on a conversion factor of 0.95 from total area to Gross Floor Area, there is capacity for approximately 68 (peak hour) patrons.
- Commercial (total area of 2,706m² including 83m² of lobby) (assumed to be Office)

The supermarket and retail tenancies are located on the ground floor whilst the office is located on the first floor.

The basement consists mostly of car parking and is accessible via a ramp from Desailly Street (for cars) and via a moving walkway, stairs and lifts (for pedestrians).

The Development Plan is excerpted in Figure 9 (Ground Floor), Figure 10 (First floor), and Figure 11 (Basement) and is attached as Appendix A.

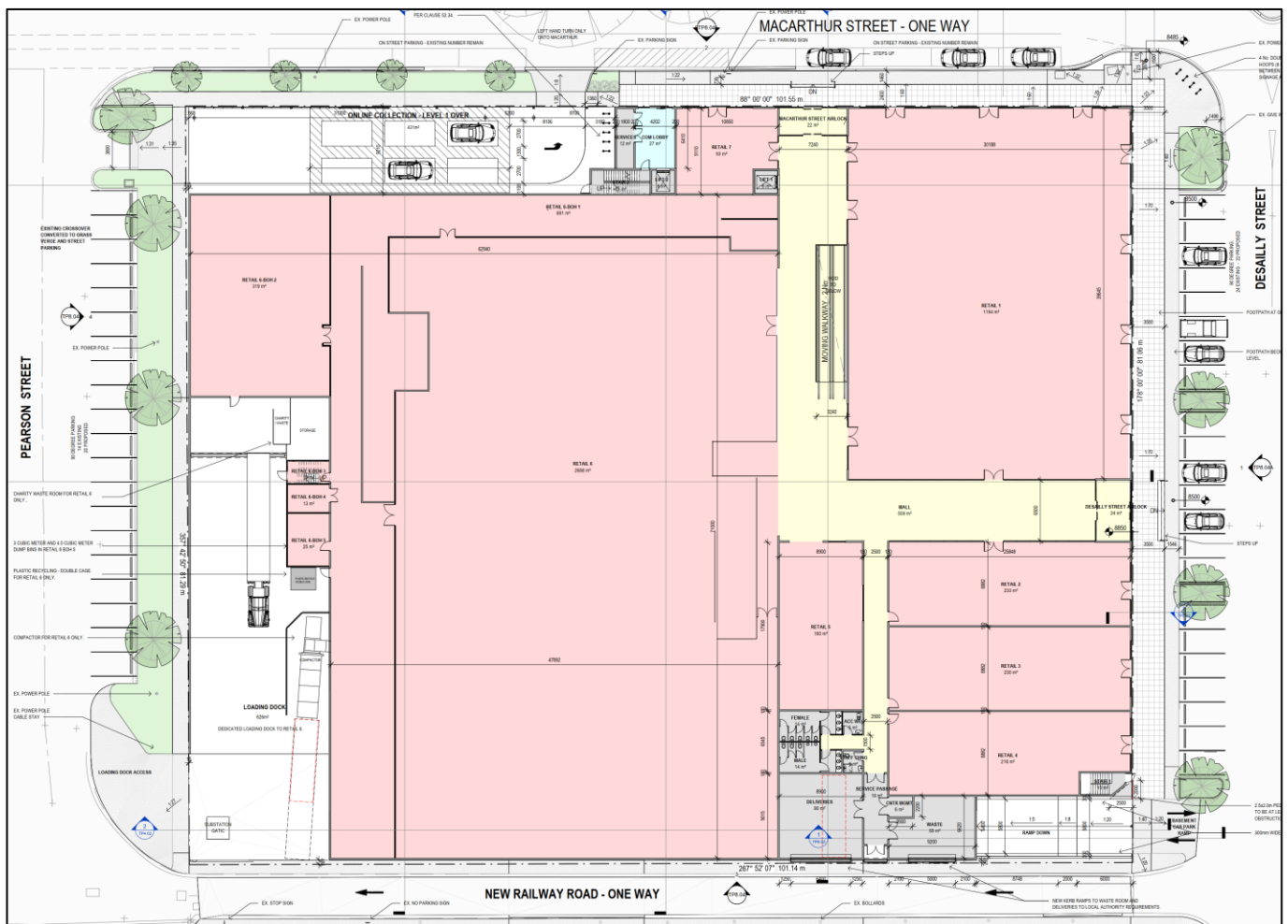


Figure 9: Ground Floor - Development Plan excerpt (Source: ThextonSmith)

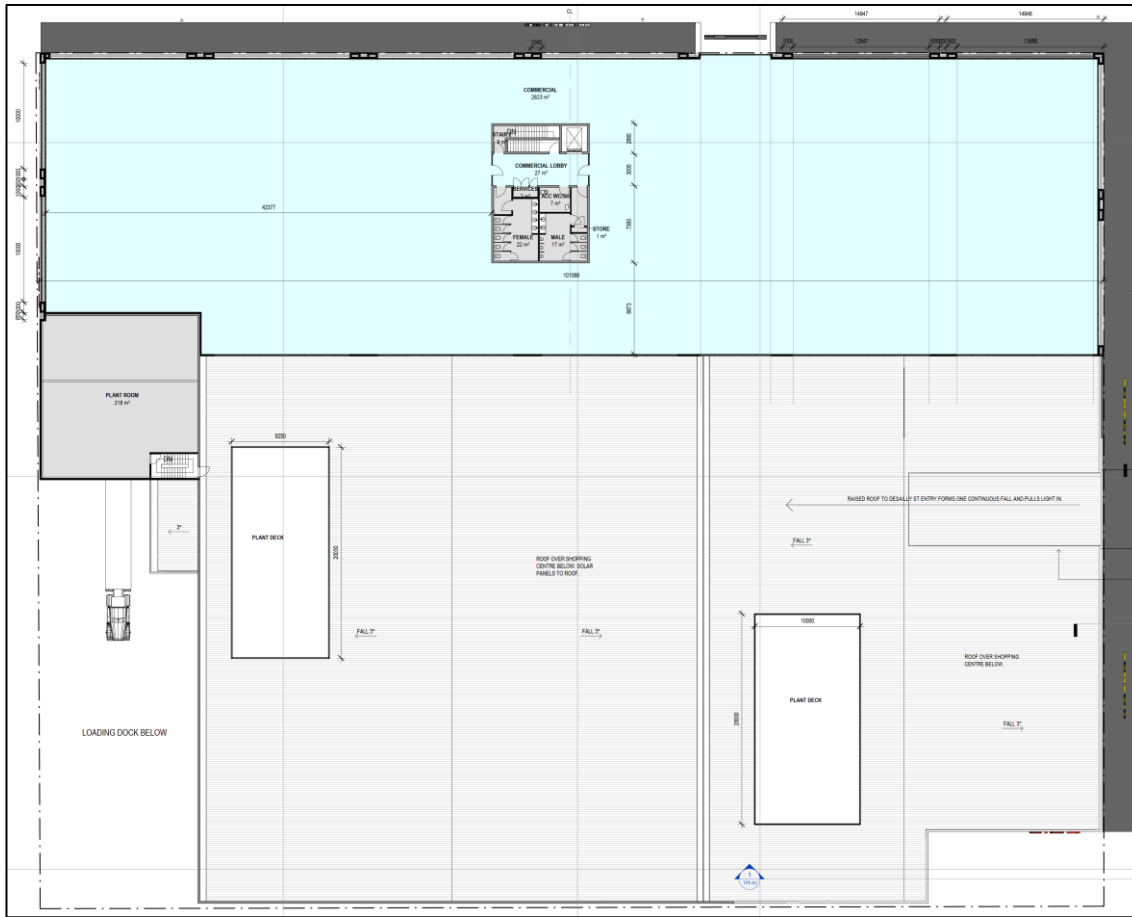


Figure 10: First Floor - Development Plan excerpt (Source: ThextonSmith)

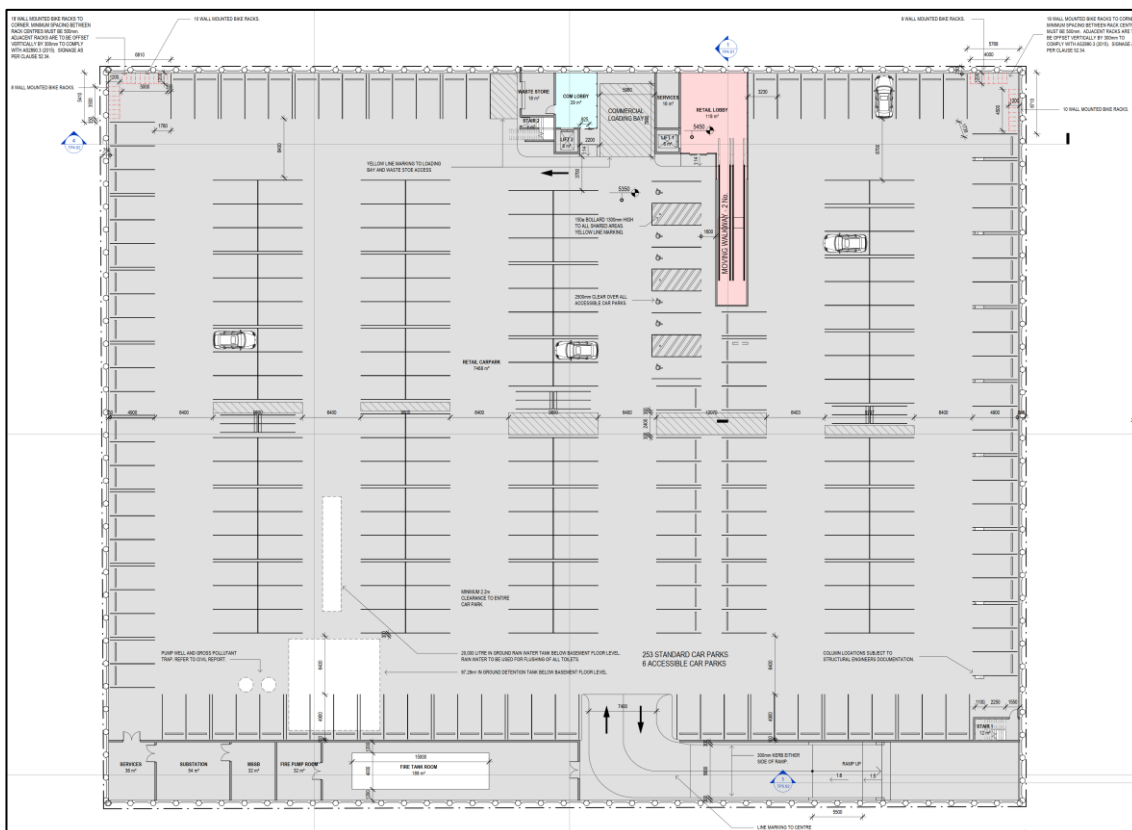


Figure 11: Basement - Development Plan excerpt (Source: ThextonSmith)

4.2. Proposed Access Arrangements

The proposed access arrangements for the project site are depicted in Figure 12.

- New Railway Road will continue to remain one-way in the westward direction.
- B85 and B99 vehicles will access the basement carpark from the north and south approaches of Desailly Street.
- Movements out of the basement carpark will be restricted to left-out only to improve traffic flow and safety.
- 8.8m Medium Rigid Vehicles (MRVs) and 12.5m Heavy Rigid Vehicles (HRVs) will access the retail loading bay and service the office tenancy by entering Desailly Street from MacArthur Street, entering and exiting out of New Railway Road, and exiting from Pearson Street onto MacArthur Street.
 - 8.8m MRVs can ingress and egress from the retail loading bay with sufficient clearance.
 - 12.5m HRVs will be required to stage in New Railway Road while they are loaded/unloaded.
 - 8.8m MRVs and 12.5m HRVs servicing the office tenancy will be required to stage in New Railway Road.
- Small deliveries (i.e. vehicles smaller than the B99 envelope) for the office tenancy can be loaded/unloaded in the Commercial Loading Zone located in the basement adjacent the lift servicing the commercial area.
- Pedestrians will be able to enter the mall from entrances on MacArthur Street and Desailly Street.
- Pedestrians will be able to access the basement via a moving walkway, stairs and lifts.
- Cyclists will be able to access the basement bicycle spaces via the ramp onto Desailly Street. Appropriate signage will be implemented to warn drivers. Additionally, cyclists will also be able to utilise the two lifts to the basement.
- B99 and B85 vehicles will turn into Pearson Street from MacArthur Street and then enter the online collection point area from Pearson Street. The online collection point movements are counterclockwise with vehicles exiting onto MacArthur Street with a left turn (vehicles wanting to head eastwards will be required to undertake a U-turn at the MacArthur Street / Pearson Street intersection).
- The supermarket loading bay will be serviced by a combination of vehicles, including 12.5m HRVs and 19m semis. Both vehicle types will ingress and egress from Pearson Street via MacArthur Street / Pearson Street intersection.

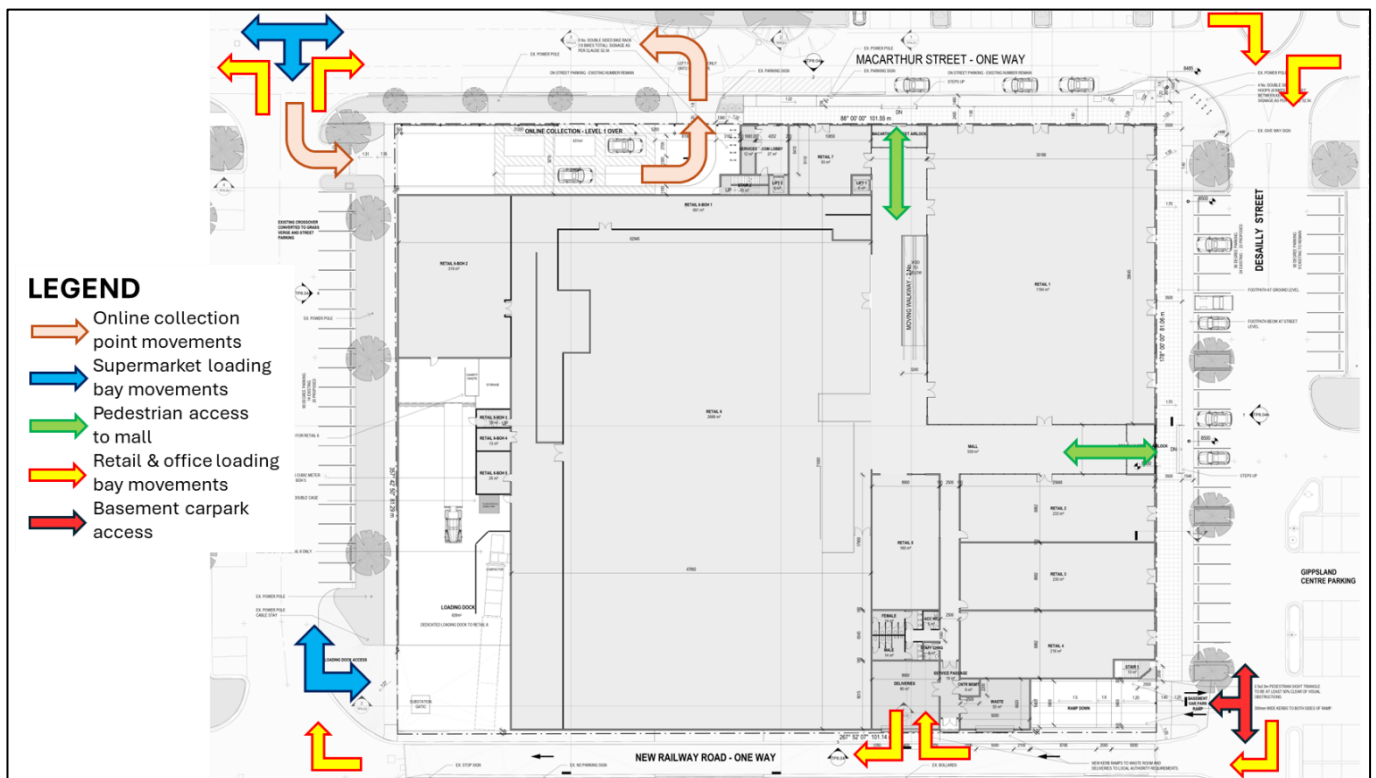


Figure 12: Proposed Access Arrangements

4.3. Loading Bays

The proposed loading bay locations and access arrangements are as follows:

- Supermarket loading bay is accessed from Pearson Street via a range of vehicle types including Heavy Rigid Vehicles (HRVs) and 19m semis.
- Retail loading bay is accessible from New Railway Road for 8.8m Medium Rigid Vehicles (MRVs). Heavy Rigid Vehicles are required to unload/load within New Railway Road.
- Commercial (office) loading zone is located within the basement carpark and services small deliveries (i.e. B99 vehicles or smaller).

4.4. Waste Collection Arrangements

The waste management and collection arrangements for the project site are detailed in a separate Waste Management Plan prepared by Beveridge Williams.

4.5. Online collection point

The online collection point will allow for two lanes of three collection point spaces (6 collection spaces in total), plus 4 additional spaces of storage on-site and 1 space between the footpath and road carriageway.

5. PARKING AND ACCESS ASSESSMENT

5.1. Car Parking Provision

5.1.1. Assumptions

The following assumptions regarding the potential uses have been adopted:

- A conversion factor of 95% has been adopted to convert total area to Gross Floor Area.
- The RMS Guide to Traffic Generating Developments says that typically 75% of the gross floor area may be deemed as gross leasable floor area depending upon the development.
- Multi-purpose trips have not been incorporated into the following analysis.
- Undiverted and diverted drop-in trips have also not been incorporated into the following analysis as implementation of these calculations is generally aided by empirical observation of existing traffic/parking movements.
- Peak parking generation for the retail shops, offices and supermarket are taken to occur simultaneously. Based on RMS data, the restaurant will experience approximately 40% of the peak hour demand.
- A rate of 3.275 m² of Gross Floor Area per patron for the restaurant has been adopted from RMS data.

To provide a robust assessment the parking provision requirements are contemplated for a weekday, since no office parking demand will occur on the weekend.

5.1.2. Wellington Planning Scheme Car Parking Requirements

'Retail premises' are not listed in Table 1 of Clause 52.06 of the Wellington Planning Scheme. However, the following uses are nested within 'retail premises' per Clause 73.03 and are therefore considered to be applicable:

- 'Food and drink premises other than listed in this table'
 - 4 to each 100 m² of leasable floor area
- 'Shop other than listed in this table'
 - 4 to each 100 m² of leasable floor area

Supermarkets, restaurants and offices are listed in Table 1 of Clause 52.06 of the Wellington Planning Scheme with the following rates:

- 'Supermarket'
 - 5 to each 100 m² of leasable floor area
- 'Restaurant'
 - 0.4 to each patron permitted.
- 'Office other than listed in this table'.
 - 3.5 spaces to each 100 m² of net floor area

Table 3 summarises the standard car parking provision requirements for each use.

5.1.3. Accessible Car Parking Requirements

Per the National Construction Code, it is deemed that:

- 'Supermarket, 'Food and drink premises', 'Restaurant' and 'shops' would be classed as Class 6 buildings (uses), which are:
 - "a shop or other building used for the sale of goods by retail or the supply of services direct to the public."
 - required to provide accessible spaces per the following rate:
 - "With up to 1000 carparking spaces - 1 accessible space for every 50 carparking spaces or part thereof."
- 'Offices' would be classified as a Class 5 building (use), which are:
 - "an office building used for professional or commercial purposes".
 - required to provide accessible spaces per the following rate:
 - "1 accessible space for every 100 carparking spaces or part thereof."

Table 3 summarises the accessible car parking provision requirements for each use.

The car parking requirements for the mixed-use development based on Clause 52.06 of the Wellington Planning Scheme and the National Construction Code (NCC) are broken down below in Table 3.

Table 3: Car Parking Requirements

COMPONENT	RELEVANT FLOOR AREA (M ²)	CAR PARKING RATE	CAR PARKING PROVISION REQUIREMENTS	ACCESSIBLE CAR PARKING RATE	ACCESSIBLE CAR PARKING REQUIREMENTS
Supermarket	2,669m ² (GLFA)	5 to each 100 m ² of leasable floor area	133	1 accessible space for every 50 carparking spaces	2.66
Office	2,571m ² (GFA / Net Floor Area)	3.5 spaces to each 100 m ² of net floor area	89	1 accessible space for every 100 carparking spaces	0.89
Retail	1,349m ² (GLFA)	4 spaces to each 100m ² of leasable floor area	53	1 accessible space for every 50 carparking spaces	1.06
Restaurant	221m ² (GFA) ~27 patrons (non-peak)	0.4 to each patron permitted	10		0.2
TOTAL	~6,810m²	-	285	-	4.81 (5) spaces

5.1.4. Car Parking Demand Assessment

Contemplating only the basement carparking, the proposed provision of 259 spaces (including 6 accessible spaces) represents a shortfall of 27 standard spaces and a surplus of 1 accessible space (26 total spaces).

Based on the Wellington Planning Scheme Clause 52.06-7, a car parking demand assessment is required to reduce the number of car parking spaces as outlined in Clause 52.06-5. The following provides an assessment taking into consideration the existing on-street parking adjacent the project site and the addition of the proposed basement car parking.

The project site is currently occupied by an existing use (Bunnings) that does not provide on-site parking and it would be expected that customers would use the on-street parking and the off-street parking area to the east of the project site. From the on-street parking there is a provision of 54 car spaces located around the perimeter of the project site. From initial review of aerial imagery, the on-street parking spaces are not fully utilised and have capacity for parking. Parking surveys have been commissioned for the on-street and off-street parking areas around the project site, and analysis of the results will be provided in the addendum.

There are on-road bicycle lanes on MacArthur Street that provide cycling links east-west across Sale. The project site will also provide street level bicycle parking hoops and secure basement bicycle parking for staff in line with the Wellington Planning Scheme. These facilities will provide the opportunity for mode shift and encourage the use of cycling to travel to and from the project site.

The online collection point provides a space for supermarket customers to collect their online shopping purchase. It is anticipated they would use the dedicated collection point and likely be there for less than 5 minutes before leaving. Using this service would avoid the need to park for long periods of time.

Based on the existing 54 on-street parking spaces; the 259 off-street parking spaces provided in the basement level; the availability of public and active transport as discussed in section 2.4; and the bicycle parking and online collection point, it is considered the on-site car parking provision of 253 standard spaces and 6 accessible spaces (259 total spaces) is appropriate for the project site based on Clause 52.06 of the Planning Scheme and the NCC.

5.1.5. Existing Car Parking Demand Estimate (Bunnings)

To provide further insight into the estimated parking demand from the Bunnings use, the following section provides an estimate of the carparking required based on Clause 52.06.

It is considered that the existing use (Bunnings) falls into two categories per the Wellington Shire Planning Scheme:

- Trade supplies
 - 10% of the site area is required as carparking.
 - It is assumed that 25m² is required per car space.
- Restricted retail premises
 - 3 spaces to each 100m² of leasable floor area

Based on the existing conditions plan provided by ThextonSmith, Bunnings has a total floor area of approximately 6,100m² with the following usage breakdown:

- Nursery and Garden Supplies (1,831.8 m²) (50:50 split between trade supplies and restricted retail premises)
- Trade / Timber (1,565.4 m²) (trade supplies)
- Retail (2,711.6 m²) (restricted retail premises)

Therefore, based on the above, an existing statutory carparking requirement of 86 spaces per Clause 52.06 has been calculated:

- 2,585 m² (GLFA) of restricted retail premises (77 spaces)
- 2,481 m² of trade supplies (9 spaces)

Per the National Construction Code, it is deemed that:

- 'Restricted retail premises' would be classed as Class 6 buildings (uses), which are:
 - "a shop or other building used for the sale of goods by retail or the supply of services direct to the public."
 - required to provide accessible spaces per the following rate:
 - "With up to 1000 carparking spaces - 1 accessible space for every 50 carparking spaces or part thereof."
- 'Trade Supplies' would be classified as a Class 7 building (use), which are:
 - (class 7b) "a building that is used for storage, or display of goods or produce for sale by wholesale."
 - required to provide accessible spaces per the following rate:
 - "1 accessible space for every 100 carparking spaces or part thereof."

Based on the above, two accessible spaces are required for the existing use.

From this high-level assessment, it can be seen that the Bunnings would need 86 total spaces, inclusive of two accessible spaces, that would have been accommodated by the existing on-street and off-street spaces already provided.

5.2. Car Parking Design Requirements

An assessment of Design Standards 1 and 2 from the Wellington Planning Scheme Clause 52.06-9 has been undertaken for the proposed basement car park layout.

5.2.1. Design Standard 1

Table 4 outlines the design standard relating to accessways from Clause 52.06-9.

Table 4: Wellington Planning Scheme Clause 52.06-9 Design Standard 1

REQUIREMENT	DESIGN RESPONSE
Be at least 3 metres wide.	Satisfied
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide.	Satisfied

Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre.	Not Applicable
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres.	Satisfied (ramp)
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	Satisfied
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Transport Zone 2 or Transport Zone 3.	Satisfied
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.	Satisfied.
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6 metres from the road carriageway.	Satisfied

It is noted that the locations and dimensions of the columns will need to be adjusted to facilitate the carparking space design envelope once the architects have received structural advice.

5.2.2. Design Standard 2

Table 5 outlines the minimum dimensions for standard car spaces per Clause 52.06-9 Design Standard 2.

Table 5: Wellington Planning Scheme Clause 52.06-9 Design Standard 2

ANGLE OF CAR PARKING	ACCESSWAY WIDTH	CAR SPACE WIDTH	CAR SPACE LENGTH	DESIGN RESPONSE
90°	6.4m	2.6m	4.9m	Satisfied

Disabled spaces (accessible spaces) must be provided in accordance with AS2890.6. and the National Construction Code (NCC). Disabled car parking spaces may encroach into the accessway width specified in Table 5 by 500mm.

Accessible spaces should ideally be provided in sets of two for maximum space efficiency with:

- Minimum dimensions per AS2890.6 and the Planning Scheme.
- Two accessible spaces of 4.9m length and minimum 2.4m width (can be 2.6m wide for consistency and flexibility with standard car parking spaces) flanking a common shared space of 4.9m long by 2.4m wide (can be 2.6m wide for consistency and flexibility) allowing for a 0.5m encroachment into the 6.4m accessway.
- Accessible car spaces should be located so that they are easily accessed and convenient to the relevant uses.

5.3. On-Street Parking

The provision of additional on-street parking will be consistent with the existing on-street carparking provisions.

5.4. Basement carpark height requirements for DDA accessibility

A minimum of 2.2m overhead headroom is required for the path of vehicular travel from the carpark entrance to the accessible parking spaces and from those spaces to the carpark exit. Above the accessible spaces, 2.5m overhead clearance is required.

5.5. Ramp grade and headroom

The basement carpark ramp grades and headroom have been assessed using vertical swept path analysis (see Appendix B) and against AS2890.1 Off-Street Parking.

5.6. Basement carpark vehicle circulation

A swept path assessment of the proposed car park layout (provided in Appendix B) demonstrates that B99 and B85 vehicles are able to pass with adequate clearance for critical areas. To manage traffic flow within the basement carpark, the following 'Give Way' linemarking is proposed (see Figure 13).

Chevron linemarking is recommended at the entrances to the ramp to guide vehicles as per Figure 14. All pavement markings should be provided in accordance with AS1742 and VicRoads Traffic Engineering Manual Volume 2.

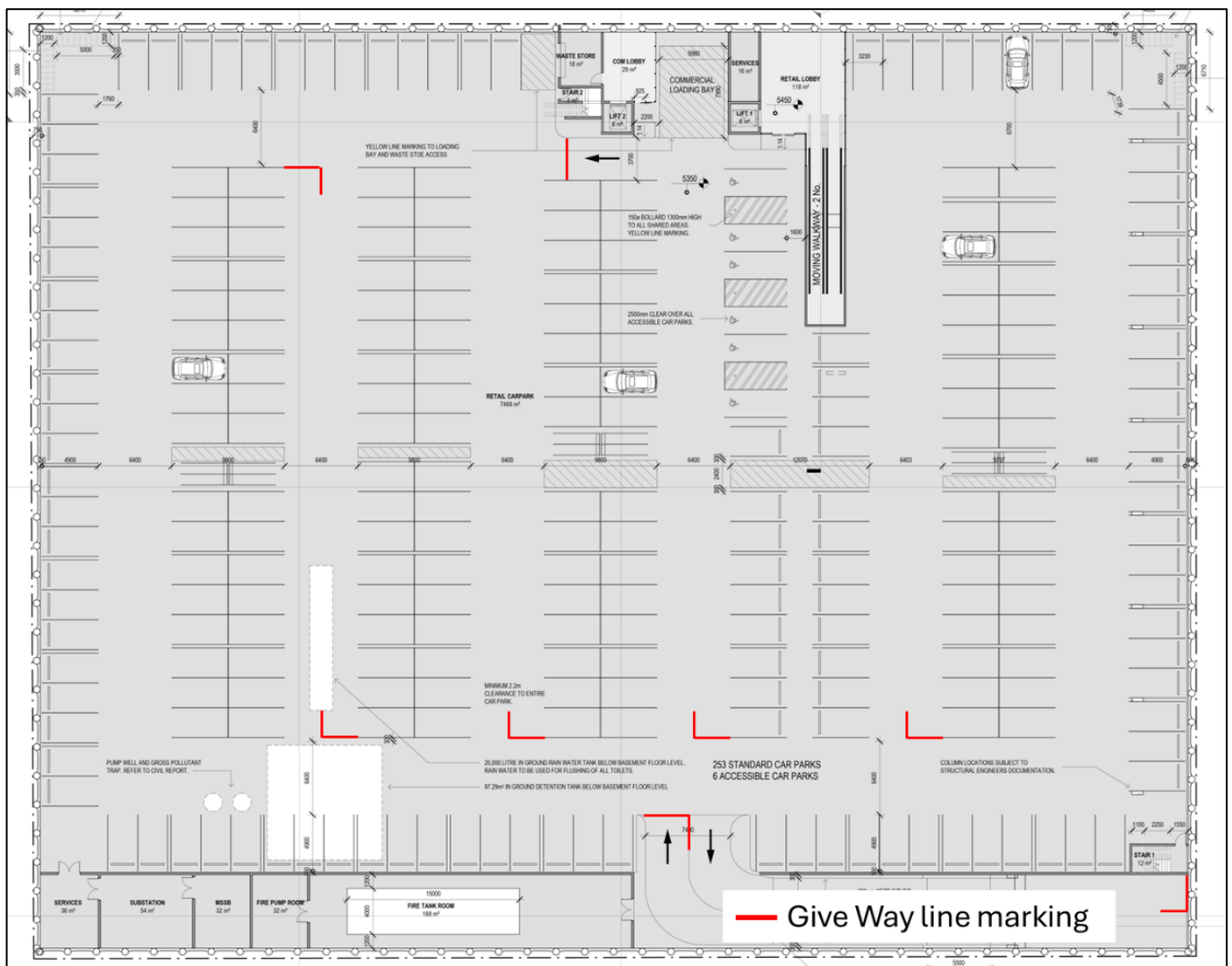


Figure 13: Proposed Basement Carpark Give-Way Linemarking

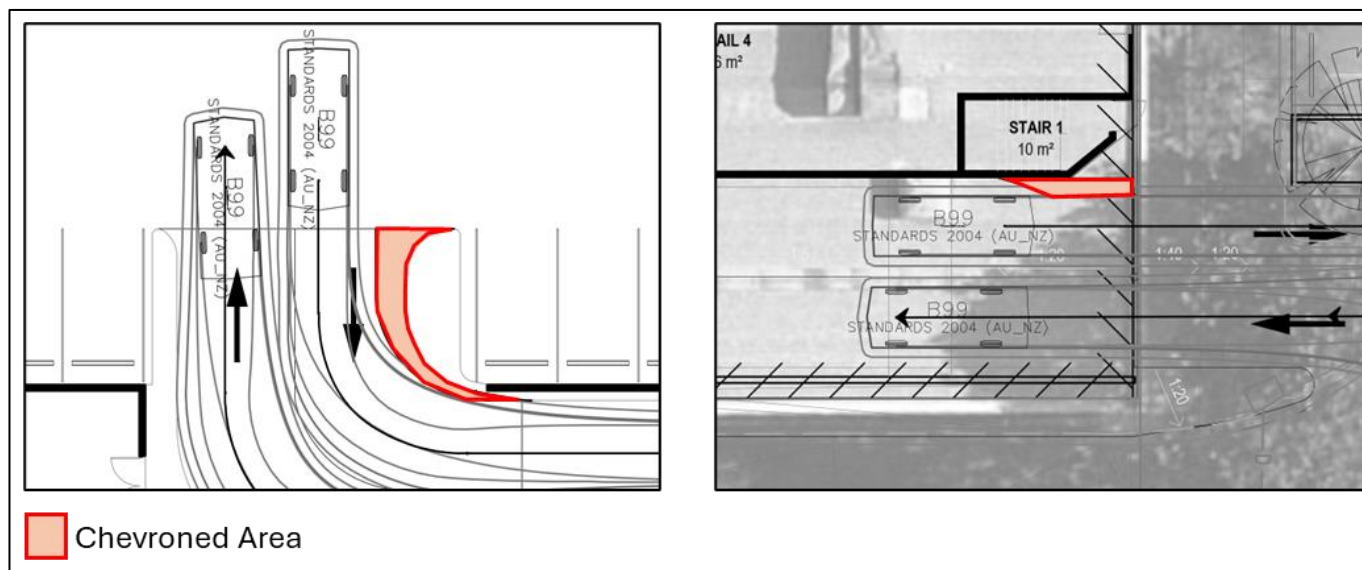


Figure 14: Proposed Linemarking at ramp entrances

5.7. Loading Bay Design

Clause 65.01 of the Wellington Planning Scheme states that:

"Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: ... The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts"

AS2890.2 Off-street commercial vehicle facilities provides the following guidance with respect to any proposed loading bay arrangements:

- The service area should be designed to mitigate conflict between pedestrian movement and vehicles.
- A minor service area may be located on part of the internal roadway system at the site provided the occasional obstruction to other traffic by manoeuvring trucks can be tolerated.

The proposed loading areas (supermarket, retail and commercial) have been designed to mitigate conflicts with pedestrians and other vehicles whilst considering the various constraints presented by the site and the surrounding streets. The proposed loading bay arrangements for the site are considered to be appropriate, noting that New Railway Road is a private road and currently is used for deliveries.

The addendum to this report will further consider the appropriateness of the proposed loading arrangements by understanding the timing of existing delivery vehicles accessing New Railway Road.

5.7.1. Supermarket Loading Bay

The supermarket loading bays will meet the minimum bay width of 3.5m and length of 12.5m and 20.0m to accommodate a HRV and 19m articulated vehicle. Based on architectural plans provided to Beveridge Williams, the supermarket loading bay will meet the minimum vertical clearance of 4.5m requirement for HRVs and articulated vehicles (19m semi).

The following AS2890.2 gradient requirements are required to be met within the supermarket loading bay and the retail loading bay:

- The maximum gradient within a service area (excluding service bays) is 12.5% measured in any direction.
- The maximum gradient within a service bay shall be 4% measured in any direction.

5.7.2. Retail Loading Area

The retail loading area will have a depth of approximately 9m and a width of approximately 8.9m. Whilst the vehicle will partially extend into the New Railway Road reserve during unloading/loading, this will not adversely impede traffic and pedestrian movements along New Railway Road. Based on architectural plans by ThextonSmith, the retail loading bay will meet the minimum vertical clearance requirement of 4.5m for MRVs.

5.7.3. Commercial Loading Bay

The commercial loading zone, which is located within the basement carpark adjacent the commercial lift, is sufficient to accommodate rear and side loading from B99 vehicles. The commercial loading zone has a width of 5.98m and a length of 7.99m.

5.8. Online Collection Point operation

The proposed online collection point is suitable from an operational perspective.

The proposed online collection point will reduce the overall parking demand and improve overall traffic flow.

The relevant section of Clause 52.06-9 which outlines the requirements regarding visual obstructions:

Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.

Based on the architectural plans, the proposed façade arrangement adjacent the online collection point exit satisfies these requirements.

6. BICYCLE PARKING CONSIDERATIONS

6.1. Bicycle Space Design Requirements

Clause 52.34 of Wellington Planning Scheme as it relates to bicycle parking is listed below:

- Provide a space for a bicycle of minimum dimensions of 1.7m in length, 1.2m in height, and 0.7m in width at the handlebars.
- Be located to allow a bicycle to be ridden to within 30m of the bicycle parking space.
- Be located to provide convenient access from surrounding bicycle routes and main building entrances.

AS2890.3 Bicycle Parking outlines the requirements for the design of bicycle parking spaces and should be referred to when considering the provision of bicycle spaces from a design perspective. In particular, the following is noted:

- Bicycle parking should be located to cause minimal disruption to other users but also be easily accessible to cyclists and close to their destinations.
- The bicycle hoop should be suitably offset from buildings or fences.
- The bicycle space envelope is provided on both sides of the bicycle hoop.
- The following offsets from the relevant accessway should be provided: 0.3m for a footpath, or 0.5m from back of kerb of the carpark.
- Bicycle facilities should be located in well-lit areas, and where passive surveillance is likely.
 - Bicycle parking facilities used at night shall be appropriately lit to minimise theft and vandalism, and to increase pedestrian and cyclist safety.
- Appropriate regulatory and information signage should be provided.

Where possible, the provision of bicycle spaces for the project site should reflect the above.

6.2. Bicycle Parking Requirement

Under Clause 52.34 of the Wellington Planning Scheme, whilst several categories could be considered to apply, the bicycle provision requirements for 'Retail premises other than specified in this table' have been adopted to generally reflect the likely overall nature of future uses (noting the 'shop' use rate is less restrictive and the floor area available to the public for the 'restaurant' is unknown). The 'Office other than listed in this table' has been adopted to reflect the Office use:

- The following bicycle parking rates are applicable for a 'Retail premises other than specified in this table' use:
 - For employees:
 - 1 to each 300 sq m of leasable floor area
 - For Visitors/Shoppers:
 - 1 to each 500 sq m of leasable floor area
- The following bicycle parking rates are applicable for an 'Office other than specified in this table' use:
 - For employees:
 - 1 to each 300 sq m of net floor area if the net floor area exceeds 1000 sq m.
 - For Visitors:
 - 1 to each 1000 sq m of net floor area if the net floor area exceeds 1000 sq m.

Table 6: Bicycle Parking Provision Requirements

COMPONENT	FLOOR AREA (M ²)	EMPLOYEE BICYCLE RATE	BICYCLE PARKING PROVISION REQUIREMENTS (EMPLOYEE)	VISITOR / SHOPPER BICYCLE RATE	BICYCLE PARKING PROVISION REQUIREMENTS (VISITOR / SHOPPER)	TOTAL BICYCLE PARKING
Retail premises other than specified in this table (supermarket)	2,669 (GLFA)	1 to each 300m ² of leasable floor area	8.90 (9)	1 to each 500m ² of leasable floor area	5.34 (5)	14

COMPONENT	FLOOR AREA (M ²)	EMPLOYEE BICYCLE RATE	BICYCLE PARKING PROVISION REQUIREMENTS (EMPLOYEE)	VISITOR / SHOPPER BICYCLE RATE	BICYCLE PARKING PROVISION REQUIREMENTS (VISITOR / SHOPPER)	TOTAL BICYCLE PARKING
Retail premises other than specified in this table (other tenancies)	1,570 (GLFA)	1 to each 300m ² of leasable floor area	5.23 (5)	1 to each 500m ² of leasable floor area	3.14 (3)	8
Office other than specified in this table	2,571 (GFA)	1 to each 300 sq m of net floor area	8.57 (9)	1 to each 1,000 sq m of net floor area	2.57 (3)	12

A total of 34 bicycle spaces (23 employee and 11 shopper/visitor) will be required per Clause 52.34 of the Wellington Planning Scheme.

The Wellington Planning Scheme states that a bicycle space for an employee must be provided either in a bicycle locker or at a bicycle rail in a lockable compound.

1 set of 19 and 1 set of 18 bicycle spaces will be provided in the northeast and northwest corners of the basement carpark for employees. A surplus of 14 bicycle spaces for employees will be provided.

18 visitor/shopper spaces will be provided on the MacArthur Street frontage with 8 bicycle spaces (4 hoops) located on Council land (southwest corner of the MacArthur Street / Desailly Street intersection – location is indicative) and 10 spaces (5 hoops) located adjacent the online collection point. This equates to a surplus of 7 visitor spaces. Furthermore, it is noted that the provision of bicycle spaces associated with the project site is significantly above the existing bicycle space provision for both the existing site (Bunnings) and the surrounding land uses. Therefore, it is considered that the provision of bicycle spaces is in line with Clause 52.34.

6.3. Other bicycle facilities – Showers and Change Rooms

For 'Retail premises other than specified in this table' and 'Office other than specified in this table', the following requirements for other bicycle facilities apply per Clause 52.34 of the Wellington Planning Scheme:

- Showers:
 - Employee: If 5 or more employee bicycle spaces are required, 1 shower for the first 5 employee bicycle spaces, plus 1 to each 10 employee bicycle spaces thereafter.
 - Visitor/Shopper: None.
- Change rooms:
 - Employee: 1 change room or direct access to a communal change room to each shower. The change room may be a combined shower and change room.
 - Visitor/Shopper: None.

Approximately 3 showers and 3 change rooms are required based on Clause 52.34. 1 shower in an accessible water closet will be provided for the non-supermarket retail tenancies, plus 1 shower in an accessible water closet for each of the supermarket and office. Therefore, the provision of shower and change rooms per Clause 52.34 is satisfied.

7. TRAFFIC CONSIDERATIONS

Holistic considerations of the proposed development from a traffic perspective have been outlined in the following section. The addendum will contain empirical analysis of expected peak hour traffic generation volumes generated by the project site, as well as modelling of existing and future traffic conditions.

The capacity of the surrounding road network and intersections to accommodate the traffic generated by the project site will be analysed as part of the addendum, noting that a clear understanding of realistic traffic volumes and flows will require empirical data from the traffic surveys.

7.1. Alignment with Shire of Wellington Strategic Documents

Based on a review of relevant strategic documents prepared by the Wellington Shire Council, it is considered that the proposed development is consistent with the future planned development of the Sale CBD:

- Sale, Wurruk and Longford Structure Plan:
 - Identifies the project site as being within the existing retail use.
 - The proposed development generally meets the objectives and strategies outlined for commercial development.
 - The Structure Plan identifies four broad types of commercial growth: (1) within the centre of the Sale CBD, (2) at the edge of the CBD, (3) at neighbourhood retail hubs, and (4) distant from the Sale CBD and neighbourhood hubs. It is considered that the project site falls somewhere between classification 1 and 2.
 - The project site development will have essentially facilitated the relocation of the existing large-format, bulky goods use (Bunnings).
- Sale CBD Precinct Plan
 - Gippsland Shopping Centre is identified as a major retail attraction. The project site would expand upon this.
 - The project site is identified as being within the core retail precinct.
 - The Sale CBD Precinct Plan envisages the core retail precinct expanding in the northward direction.

It is also noted that the project site is aligned with existing, surrounding land uses (e.g. the Gippsland Shopping Centre is located to the south of the project site).

7.2. Peak hour traffic generation profiles

Description of the peak hour traffic generation profiles for the potential uses have been provided below.

- Office
 - Monday to Friday traffic generation.
 - Based on the Transport for NSW (formerly RTA) data, office blocks generally have peak hour traffic around 8:00am to 9:00am, 12:00pm to 1:00pm and 5:00pm to 6:00pm.
 - The AM peak hour is usually critical for offices.
- Shopping centre (supermarket and retail tenancies)
 - The peak hour traffic generation profiles for the supermarket and retail tenancies are expected to be similar to existing, surrounding land uses and will therefore be informed by the empirical analysis in the addendum.
- Restaurant/café
 - Whilst it has been assumed that the restaurant/café would be open for 7 days a week for the waste generation calculations, restaurants/café are generally closed for one or two days a week (e.g. Monday or Tuesday).
 - Based on Traffic Authority of NSW data, restaurant peak hours are generally 7:00pm to 8:00pm with significantly less traffic generation around 5:00pm to 6:00pm.
 - If the restaurant/café is open for breakfast and lunch, peak hour times are expected to occur around 9:00am to 10:00am and from 12:00pm to 1:00pm.
 - The PM peak hour is usually critical for restaurants.

7.3. Network Traffic Considerations

The traffic trips associated with the project site form a portion of the overall network traffic. Therefore, the context of the project site traffic will influence the network traffic, and vice versa. A traffic assessment is, therefore, required to incorporate these network traffic considerations to ensure a more accurate estimation of the traffic volumes associated with and generated by the project site.

- It is envisaged that a substantial proportion of trips to the project site would be multi-purpose trips, either for visiting other tenancies within the project site (i.e. visitors to the supermarket would often shop at the other retail tenancies) or the surrounding, external land uses (given the project site is within a shopping precinct).
- A significant portion of trips to the site would also be undiverted drop-in trips (i.e. dropping off at the supermarket on the way home from work). At the local and regional level, undiverted drop-in trips do not represent additional trips. Diverted drop in trips may have a localised impact but would not have a significant affect/additional impact at the regional level, as they are pre-existing (i.e. they are already on the network, similar to undiverted drop-in trips).

8. CONCLUSION

8.1. Overview

An initial traffic impact assessment was completed for the proposed development at 38-50 MacArthur Street, Sale located within the Shire of Wellington. The proposed development consists of a supermarket, multiple retail tenancies (including one that has been assumed to be a restaurant), and a commercial (office) space. Pedestrian access to the proposed development is from MacArthur Street and Desailly Street. The basement carpark is accessible via a ramp from Desailly Street. Supermarket loading and waste collection occurs via Pearson Street, whilst retail and commercial loading and waste collection occurs from New Railway Road.

The initial TIA has considered many aspects of the proposed development, including car parking provision, bicycle parking provision, carpark and access design, active and public transport, and holistic traffic considerations. The traffic assessment and modelling, and parking survey analysis will be provided in the addendum.

The initial TIA was submitted to Wellington Shire Council on 22nd August 2025 as part of the Development Plan application. Subsequent to this, Beveridge Williams received Initial Comments and Feedback from Wellington Shire Council dated 15th September 2025. These comments have been addressed in the updated version (v1.1) of this report or will be addressed in the addendum report.

8.2. Key Findings

The findings outlined in this Report are summarised below:

- The Wellington Shire strategic planning documents are supportive of the proposed development.
- There is substantial active and public transport in the vicinity of the site, which will be of significant benefit to the proposed uses.
- The recorded crash history in the vicinity of the site does not indicate any crash trend that requires urgent remedial actions.
- The proposed standard and accessible car parking provision is appropriate per Clause 52.06 of the Wellington Shire Planning Scheme and the National Construction Code (NCC).
 - The proposed carparking provision for the project site (253 standard spaces and 6 accessible spaces) plus the adjacent on-street parking (54 spaces) is greater than the statutory and NCC car parking requirements of 285 total spaces (280 standard spaces and 5 accessible spaces).
- The carpark has been designed in accordance with AS2890.1 Off-Street Parking, AS2890.6 Off-Street parking for people with disabilities and Clause 52.06 where appropriate.
 - The column placement will need to be updated once structural engineering advice is received to ensure that the carpark clearance envelope is satisfied per Clause 52.06.
- The carpark ramp design is suitable and has been designed per AS2890.1 Off-Street Parking and has been assessed using 2D vertical swept path analysis for B99 and B85 vehicles.
 - The ramp headroom is required to be designed to reflect the wheelbase of a B99 vehicle.
- A total of 34 bicycle spaces (23 employee and 11 shopper/visitor) are required per Clause 52.34 of the Wellington Shire Planning Scheme. The proposed bicycle provision meets this requirement, with 37 employee bicycle spaces (surplus of 14 spaces) and 18 visitor/shopper spaces (surplus of 7 spaces).
- The proposed loading arrangements for the supermarket, retail tenancies, restaurant, and office are appropriate from a traffic engineering perspective.
- The operational movements for the online collection point are appropriate and will be beneficial from a traffic and parking perspective.
- The proposed development is consistent with the proposed future development of the Sale CBD and shopping precinct. The expected traffic generation characteristics of the proposed development would not be inconsistent with the existing, surrounding land uses.

8.3. Recommendations

The recommendations outlined in this Report are summarised below:

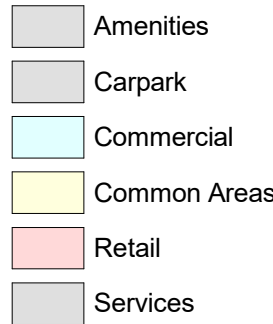
- Provide a lockable bicycle compound for employees at the proposed bicycle racks in the basement.
- Provide Give Way linemarking within the basement carpark per Figure 13.
- Provide chevron linemarking at the entrances to the ramp to guide vehicles per Figure 14.

- Ensure that the column placement is updated once structural engineering advice is received to ensure that the carpark clearance envelope is satisfied per Clause 52.06.
- Indicative location of bicycle parking on the southwest corner of MacArthur Street / Desailly Street intersection should be reviewed to ensure that it does not impede vehicle and pedestrian sightlines.
- Trailers and caravans should be prohibited from accessing the online collection point.
- A minimum of 2.2m overhead is required throughout the entirety of the carpark. Above the accessible spaces, 2.5m overhead clearance is required.
- The ramp headroom requirements are to be designed for the wheelbase of a B99 vehicle.
- Implement appropriate signage and markings in basement carpark (including ramp) to warn drivers of cyclists.
- Inform future staff of basement bicycle access arrangements.
- Adopt a left-turn only onto Desailly Street for the basement carpark to improve traffic flow and safety.
- 2m by 2.5m corner splays will be provided to the footpath when exiting the online pick-up area.
- Undertake a visibility check once final location of bicycle hoops on the corner of Desailly Street and MacArthur Street has been determined.

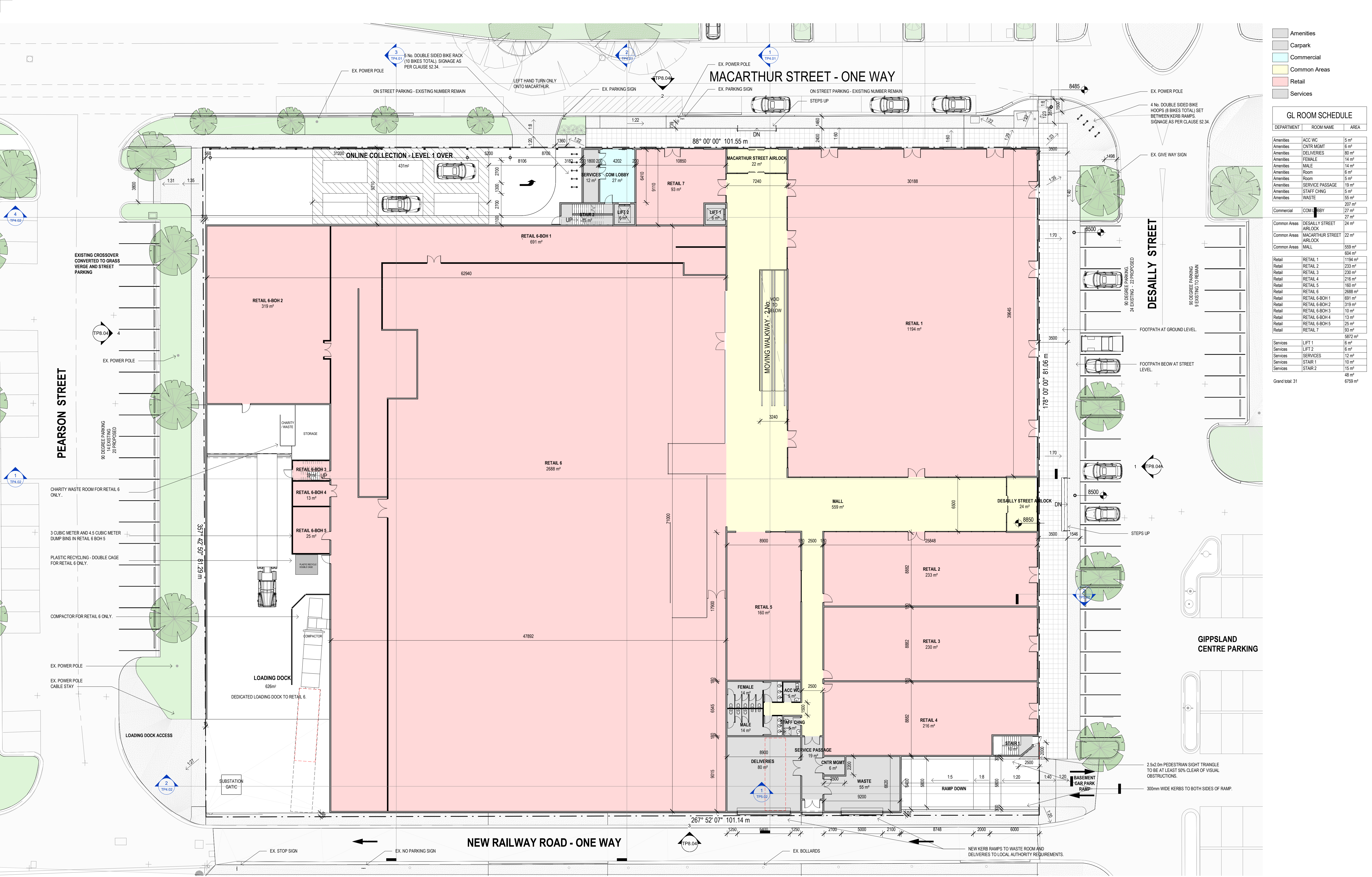
In conclusion, the proposed development affords suitable access, circulation, parking, loading and waste collection arrangements. The addendum report will assess the development from traffic modelling and parking survey perspectives.

Beveridge Williams
October 2025

APPENDIX A: DEVELOPMENT PLAN



BASEMENT ROOM SCHEDULE		
DEPARTMENT	ROOM NAME	AREA
Carpark	RETAIL CARPARK	7468 m ²
		7468 m ²
Commercial	COM LOBBY	29 m ²
		29 m ²
Retail	RETAIL LOBBY	118 m ²
		118 m ²
Services	FIRE PUMP ROOM	32 m ²
Services	FIRE TANK ROOM	188 m ²
Services	LIFT 1	6 m ²
Services	LIFT 2	6 m ²
Services	MSSB	36 m ²
Services	SERVICES	32 m ²
Services	SERVICES	36 m ²
Services	STAIR 1	12 m ²
Services	STAIR 2	4 m ²
Services	SUBSTATION	54 m ²
Services	WASTE STORE	18 m ²
		4037 m ²
Grand total: 14		8013 m ²



- Amenities
- Carpark
- Commercial
- Common Areas
- Retail
- Services

GL ROOM SCHEDULE

DEPARTMENT	ROOM NAME	AREA
Amenities	ACC WC	5 m²
Amenities	CNTR MGMT	6 m²
Amenities	DELIVERIES	80 m²
Amenities	FEMALE	14 m²
Amenities	MALE	14 m²
Amenities	Room	5 m²
Amenities	SERVICE PASSAGE	19 m²
Amenities	STAFF CHNG	5 m²
Amenities	WASTE	55 m²
Commercial	COM LOBBY	207 m²
Commercial	COM LOBBY	27 m²
Common Areas	DESAILLY STREET AIRLOCK	24 m²
Common Areas	MACARTHUR STREET AIRLOCK	22 m²
Common Areas	MALL	559 m²
Retail	RETAIL 1	1194 m²
Retail	RETAIL 2	233 m²
Retail	RETAIL 3	230 m²
Retail	RETAIL 4	216 m²
Retail	RETAIL 5	160 m²
Retail	RETAIL 6	2688 m²
Retail	RETAIL 6-BOH 1	691 m²
Retail	RETAIL 6-BOH 2	319 m²
Retail	RETAIL 6-BOH 3	13 m²
Retail	RETAIL 6-BOH 4	25 m²
Retail	RETAIL 6-BOH 5	25 m²
Retail	RETAIL 7	93 m²
Services	LIFT 1	6 m²
Services	LIFT 2	6 m²
Services	SERVICES	12 m²
Services	STAIR 1	10 m²
Services	STAIR 2	15 m²
Grand total:	31	6759 m²

REV.	DESCRIPTION	DATE
P1	SCHEMATIC DESIGN 01	05/06/2025
P2	TENANT ISSUE	11/06/2025
P3	PRE-APP ISSUE	23/06/2025
P4	PRELIMINARY ISSUE	14/08/2025
01	TOWN PLANNING ISSUE	15/08/2025

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ANY DISCREPANCIES ARE TO BE REFERRED TO THE ARCHITECT PRIOR TO PROCEEDING WITH WORK.

PROJECT ADDRESS:
38-50 MACARTHUR STREET - SALE

CLIENT:

PROJECT NAME:
38-50 MACARTHUR

SCALE @ A1
1 : 200

DATE:
09/02/15

DRAWING TITLE:
PROPOSED GROUND LEVEL PLAN

DRAWING STATUS:
TOWN PLANNING

PROJECT NO:
0146

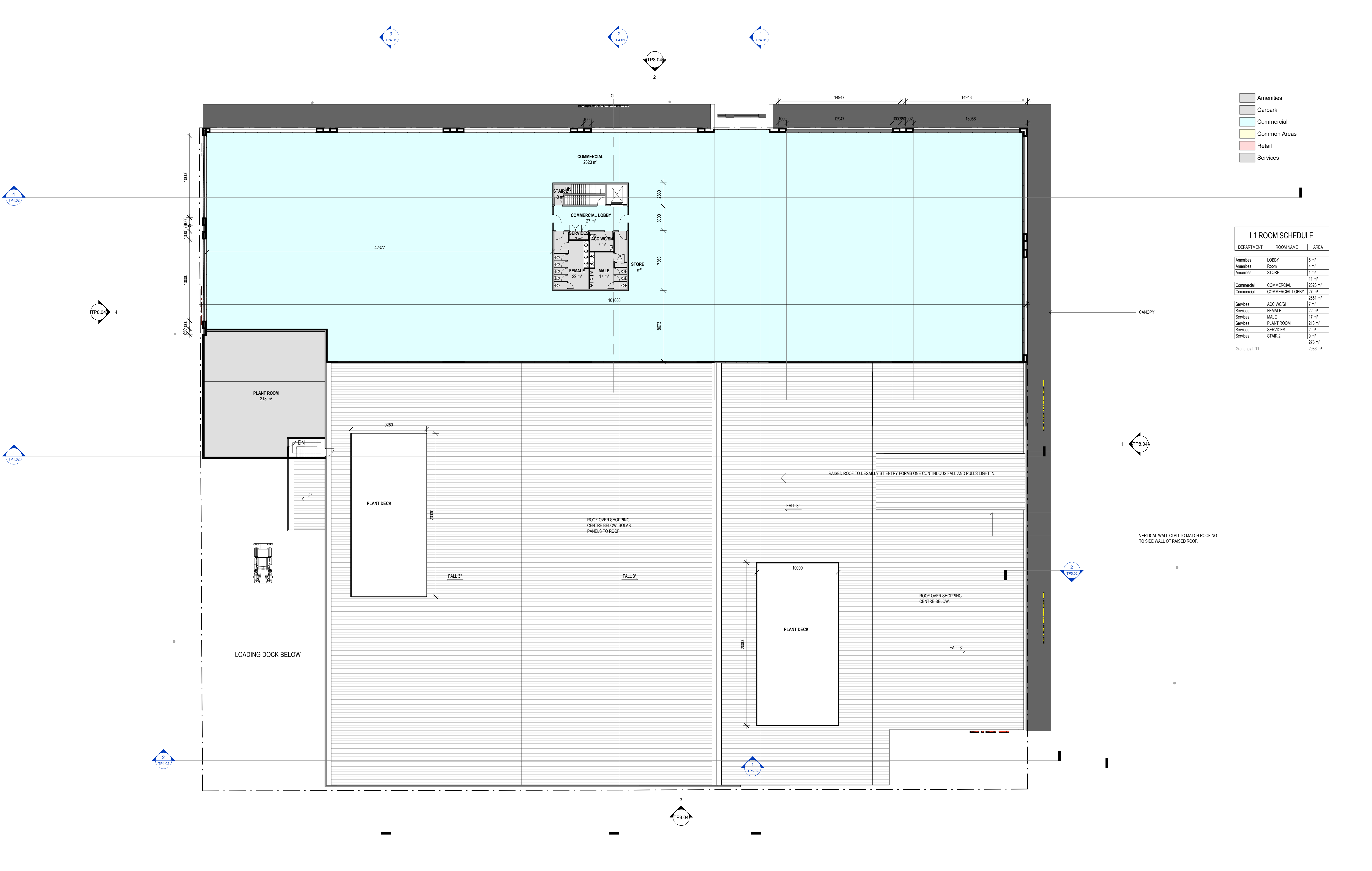
thextonsmithTM
Suite 108, 134 Cambridge Street, Collingwood VIC, 3066
e : studio@thextonsmith.com w : www.thextonsmith.com

15/08/2025 2:42:06 PM

DRAWING NO:
TP2.02

REVISION:
01

SECTION:



L1 ROOM SCHEDULE		
DEPARTMENT	ROOM NAME	AREA
Amenities	LOBBY	6 m²
	Room	4 m²
	STORE	1 m²
Commercial	COMMERCIAL	2623 m²
	COMMERCIAL LOBBY	27 m²
		2651 m²
Services	ACC W/SH	7 m²
	FEMALE	22 m²
	MALE	17 m²
	PLANT ROOM	218 m²
	SERVICES	2 m²
	STAIR 2	9 m²
Grand total: 11		2936 m²

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REV.	DESCRIPTION	DATE
P1	SCHEMATIC DESIGN 01	05/06/2025
P2	TENANT ISSUE	11/06/2025
P3	PRE-APP ISSUE	23/06/2025
P4	PRELIMINARY ISSUE	14/08/2025
01	TOWN PLANNING ISSUE	15/08/2025

PROJECT ADDRESS:
38-50 MACARTHUR STREET - SALE

CLIENT:

PROJECT NAME:
38-50 MACARTHUR

SCALE @ A1
1 : 200

DATE:
05/28/25

DRAWING TITLE:
PROPOSED LEVEL 1 PLAN

DRAWING STATUS:
TOWN PLANNING

PROJECT NO.
0146

thextonsmithTM
Suite 109, 134 Cambridge Street, Collingwood VIC, 3066
e : studio@thextonsmith.com w : www.thextonsmith.com

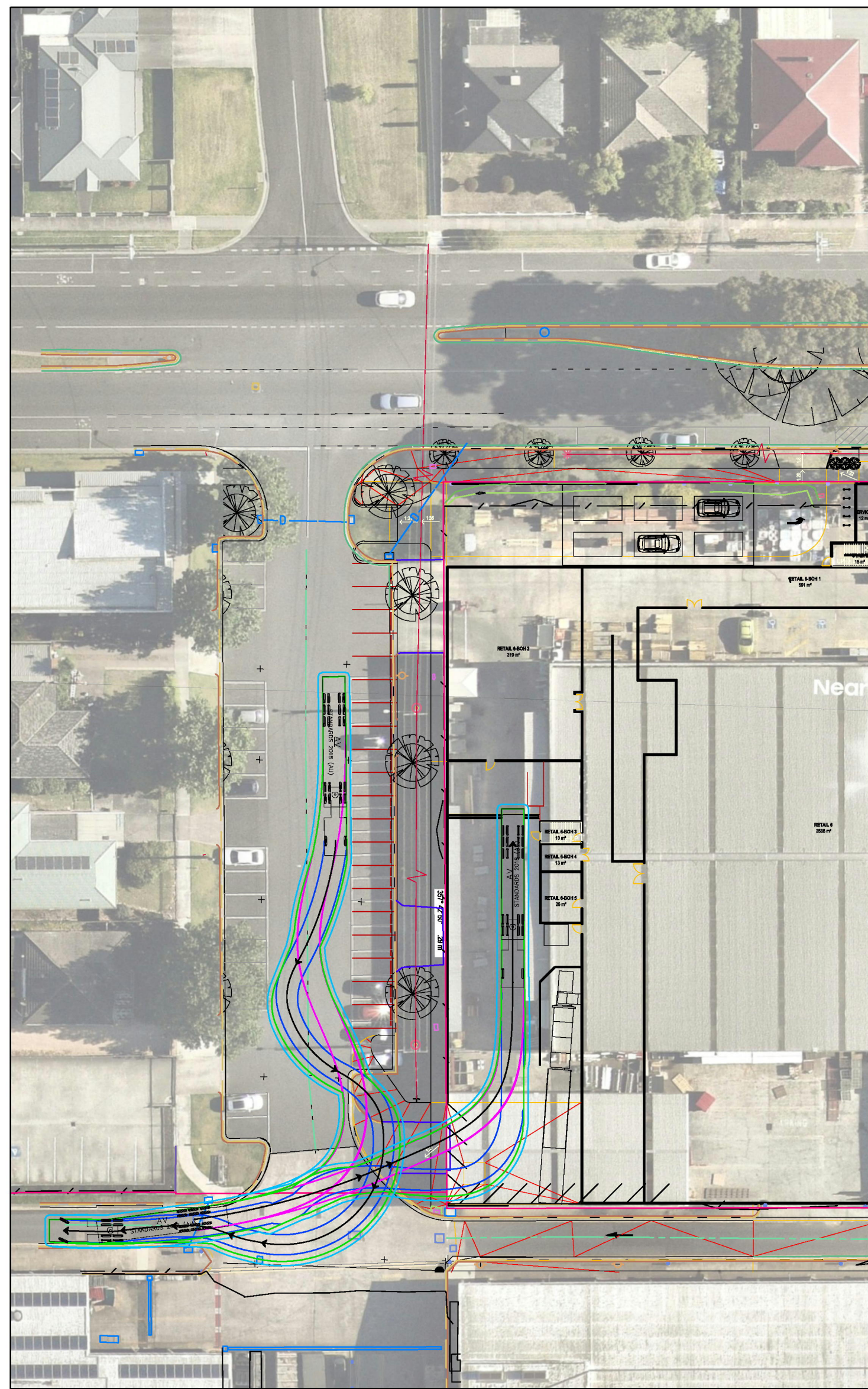
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TP2.03

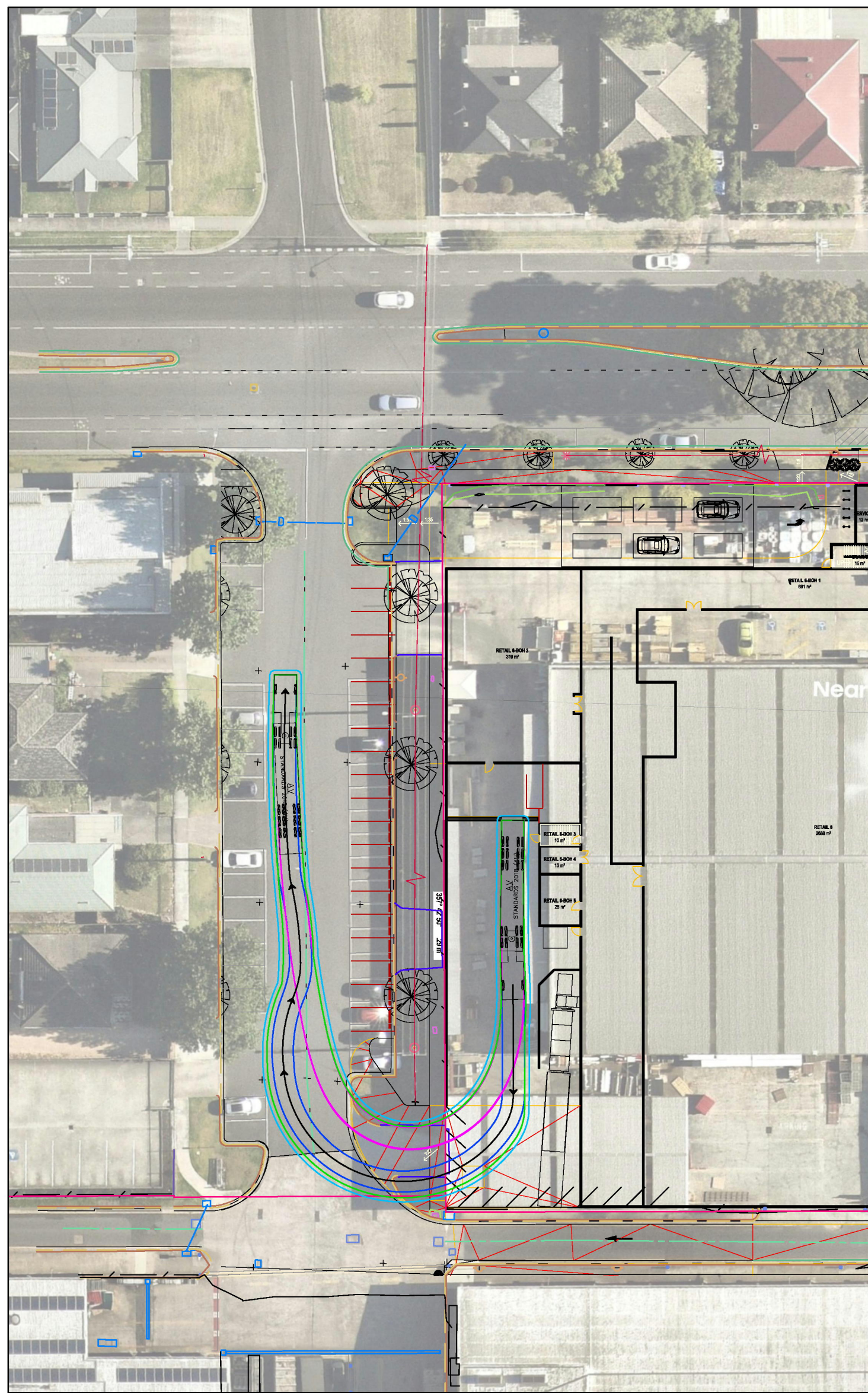
REVISION:
01

SECTION:

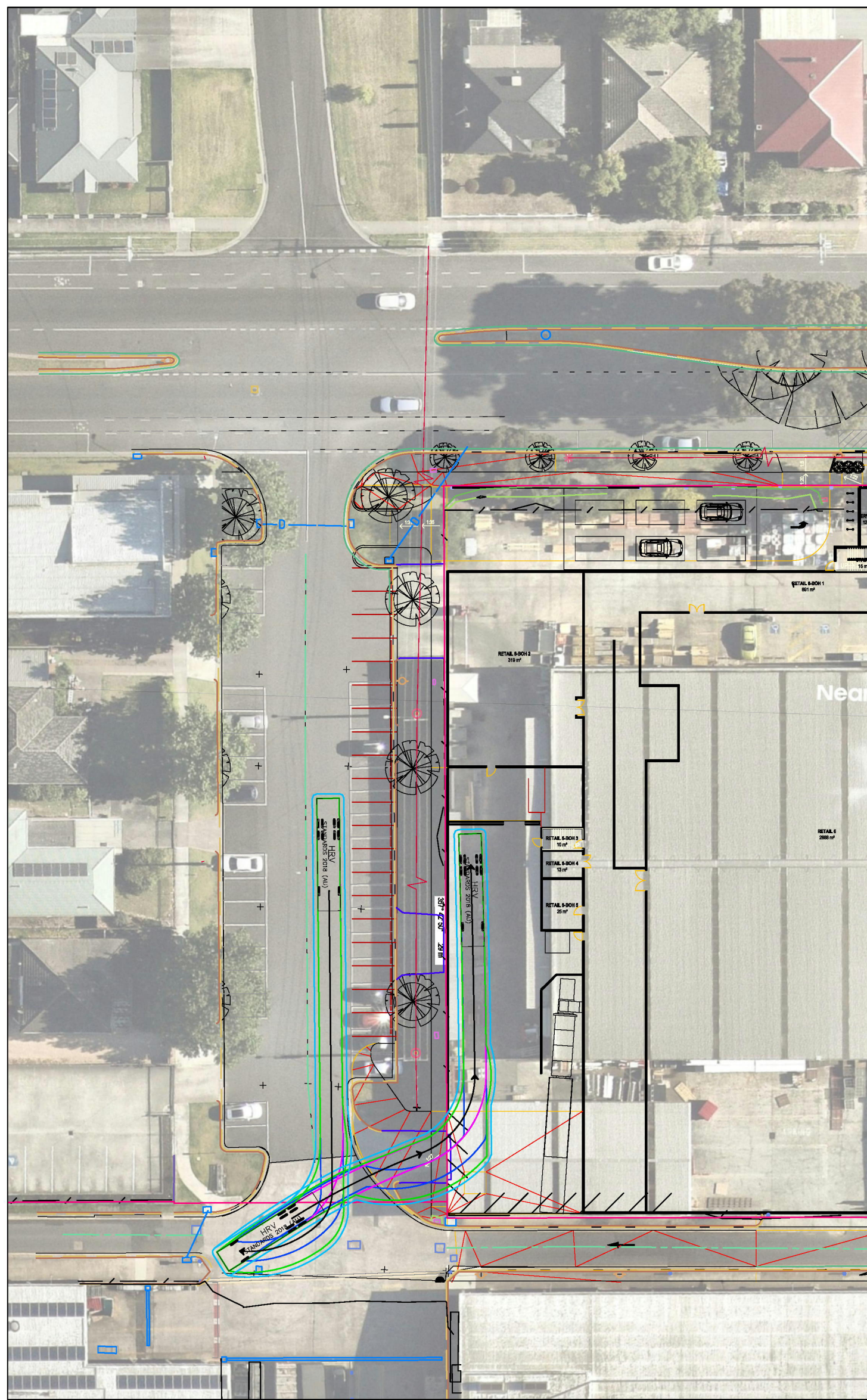
APPENDIX B: SWEPT PATH ANALYSIS



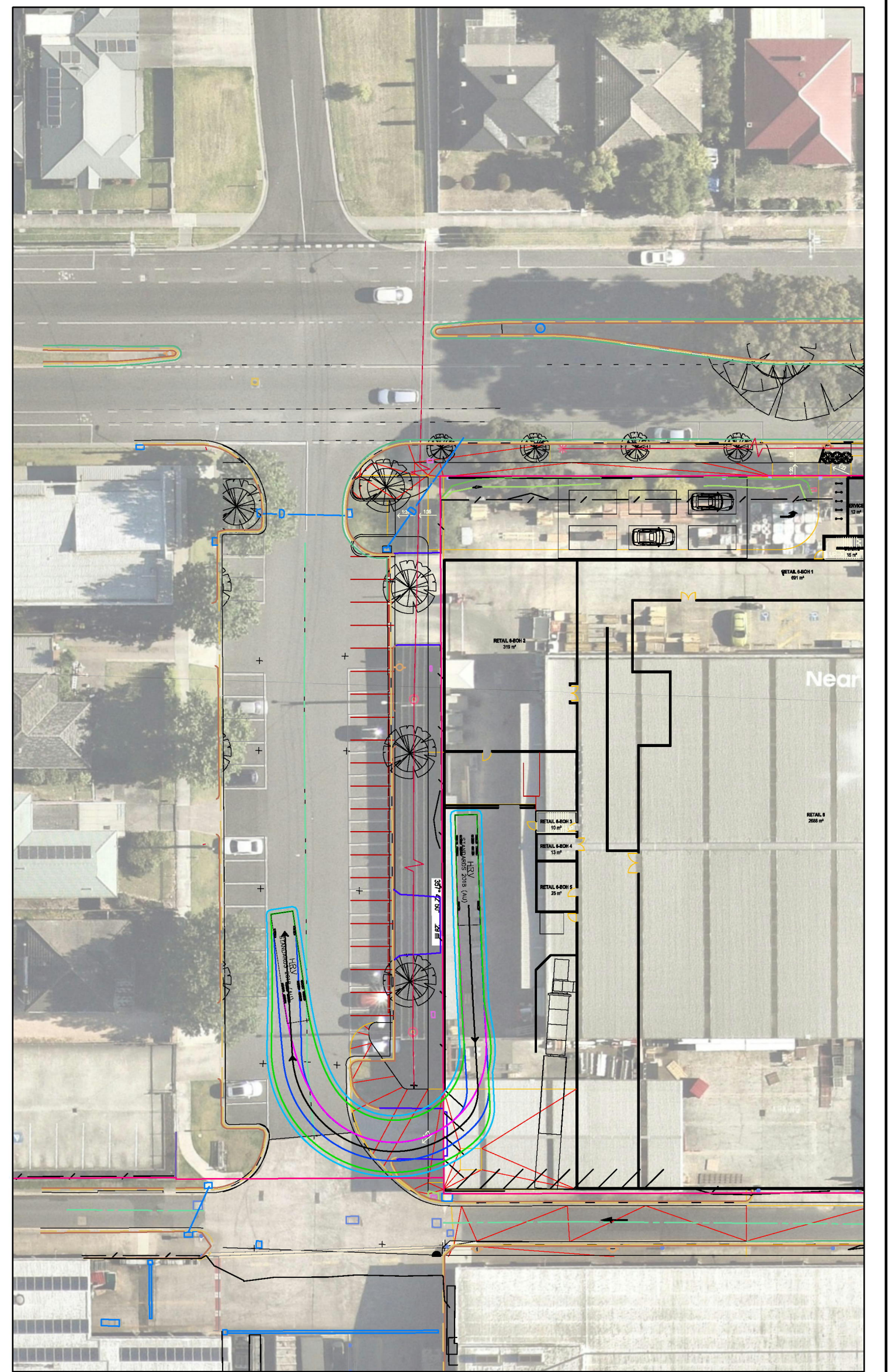
Supermarket loading bay - 19m semi - Ingress



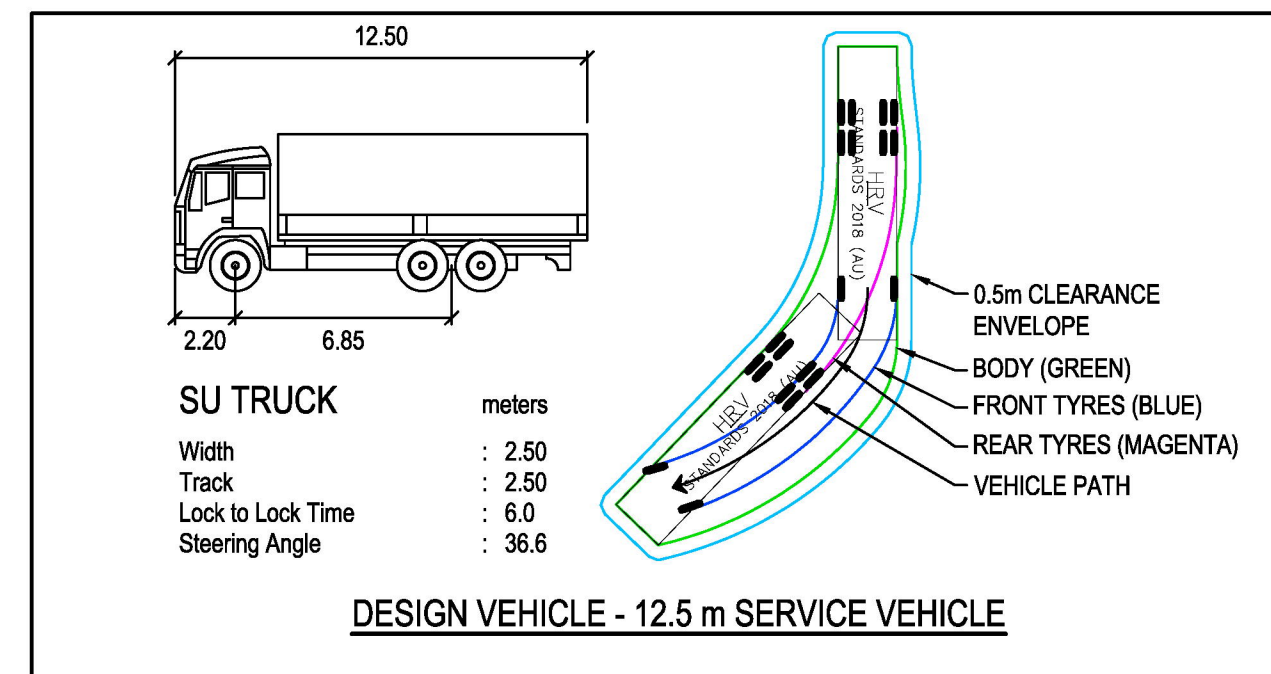
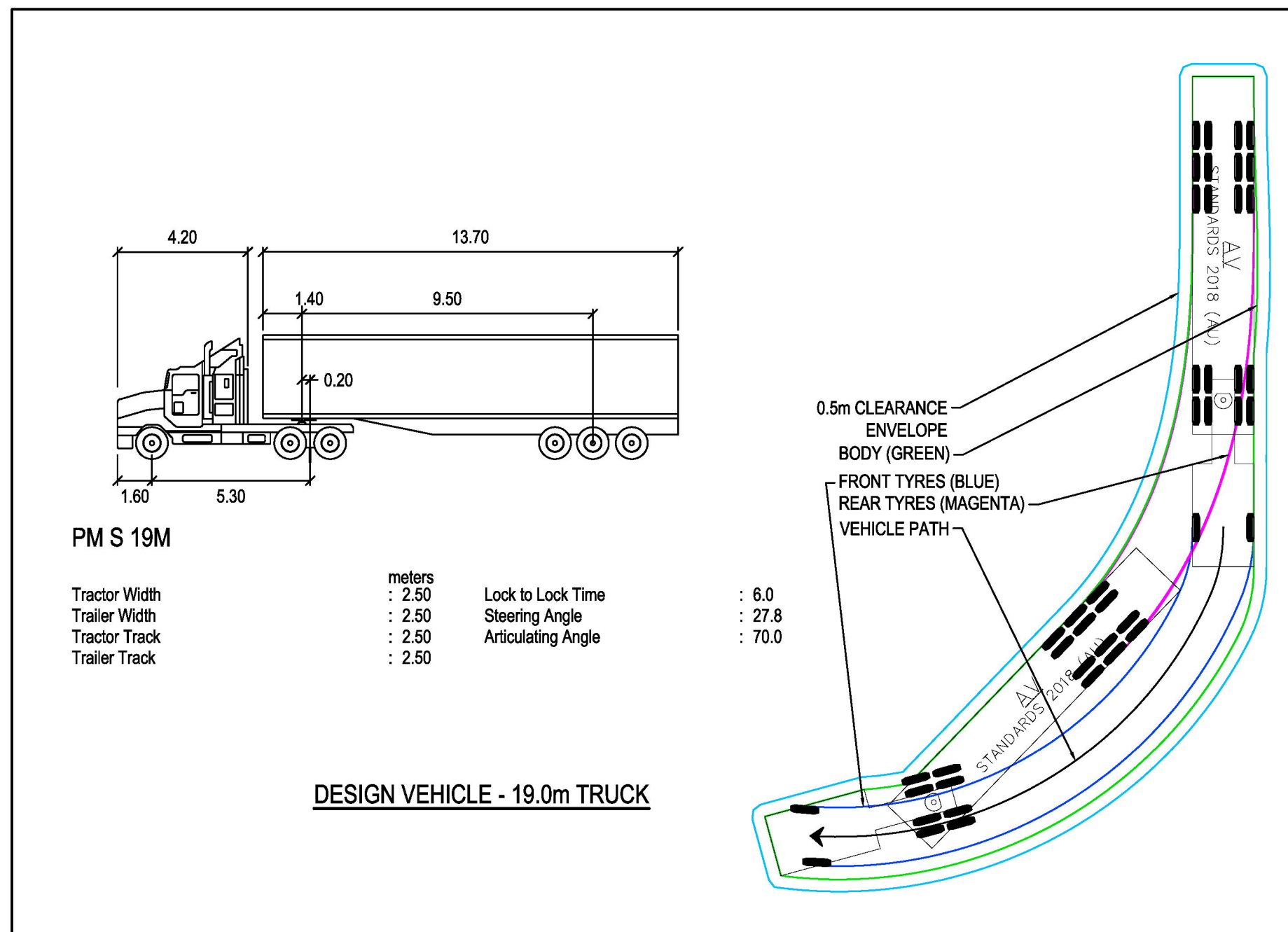
Supermarket loading bay - 19m semi - Egress



Supermarket loading bay - HRV - Ingress

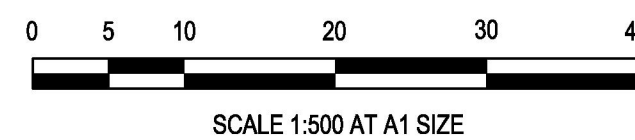


Supermarket loading bay - HRV - Egress



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Development & Infrastructure Consultants

1 Glenferrie Road
Malvern VIC 3144

ph: 03 9524 8888
www.beveridgewilliams.com.au

Project Details
38-50 MacArthur Street, Sale
Mixed Use Development
WELLINGTON SHIRE COUNCIL

Drawing Title
VEHICLE TURNING MOVEMENTS
SHEET 1 OF 5
Supermarket Loading Bay Movements

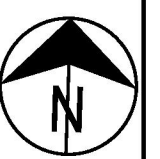
Sheet 01 of 05

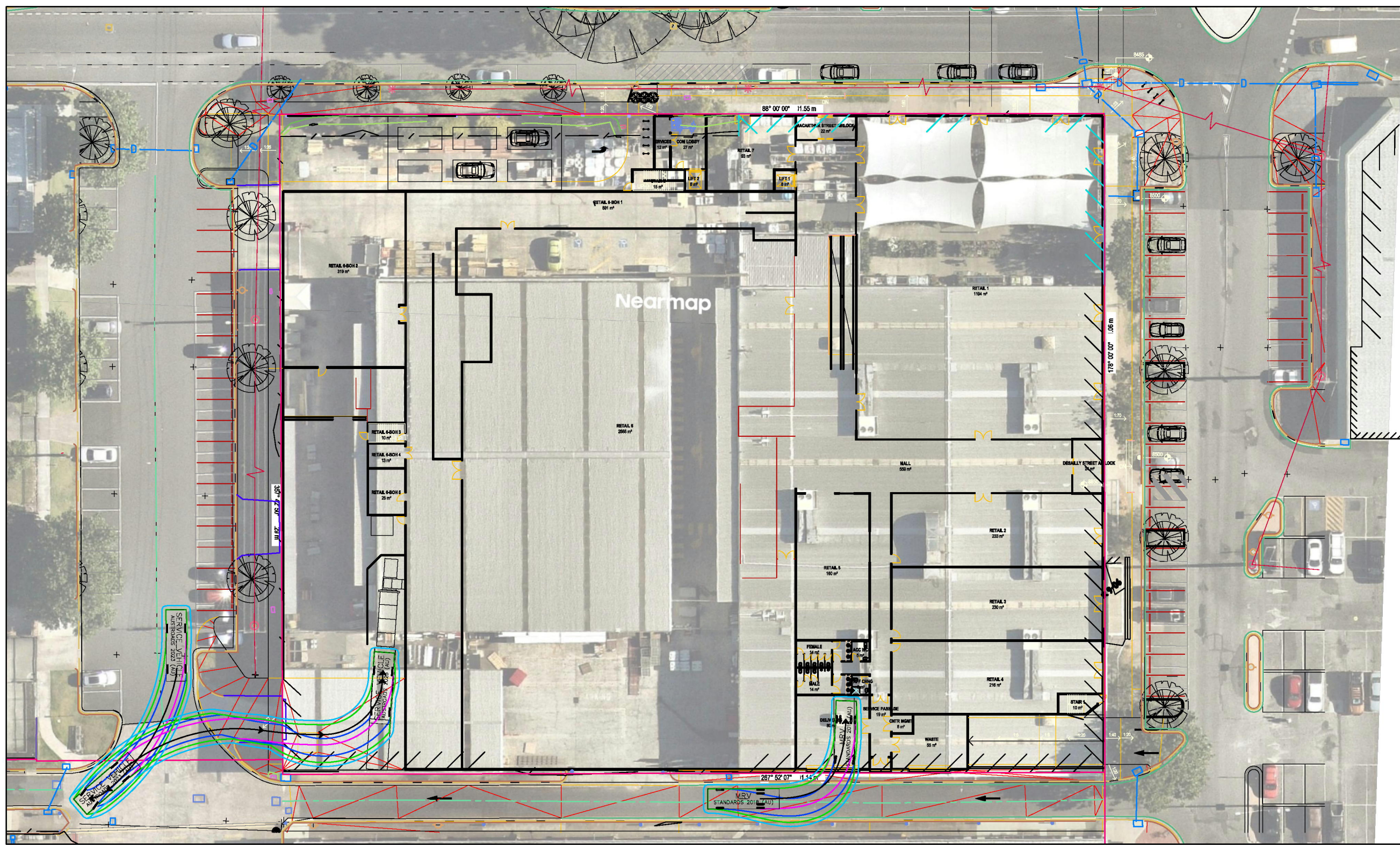
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Project Ref
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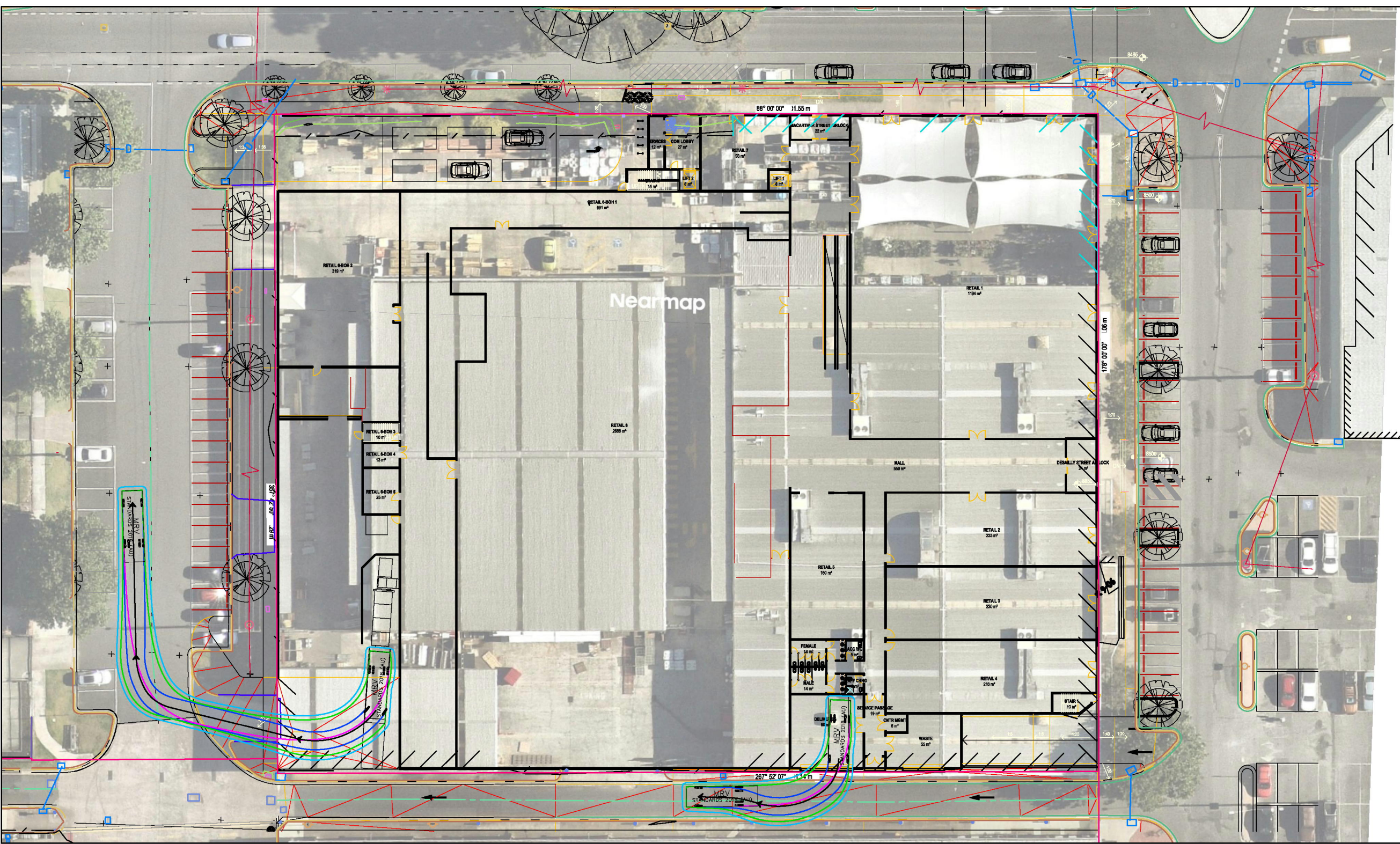
Stage No
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Drawing No
940

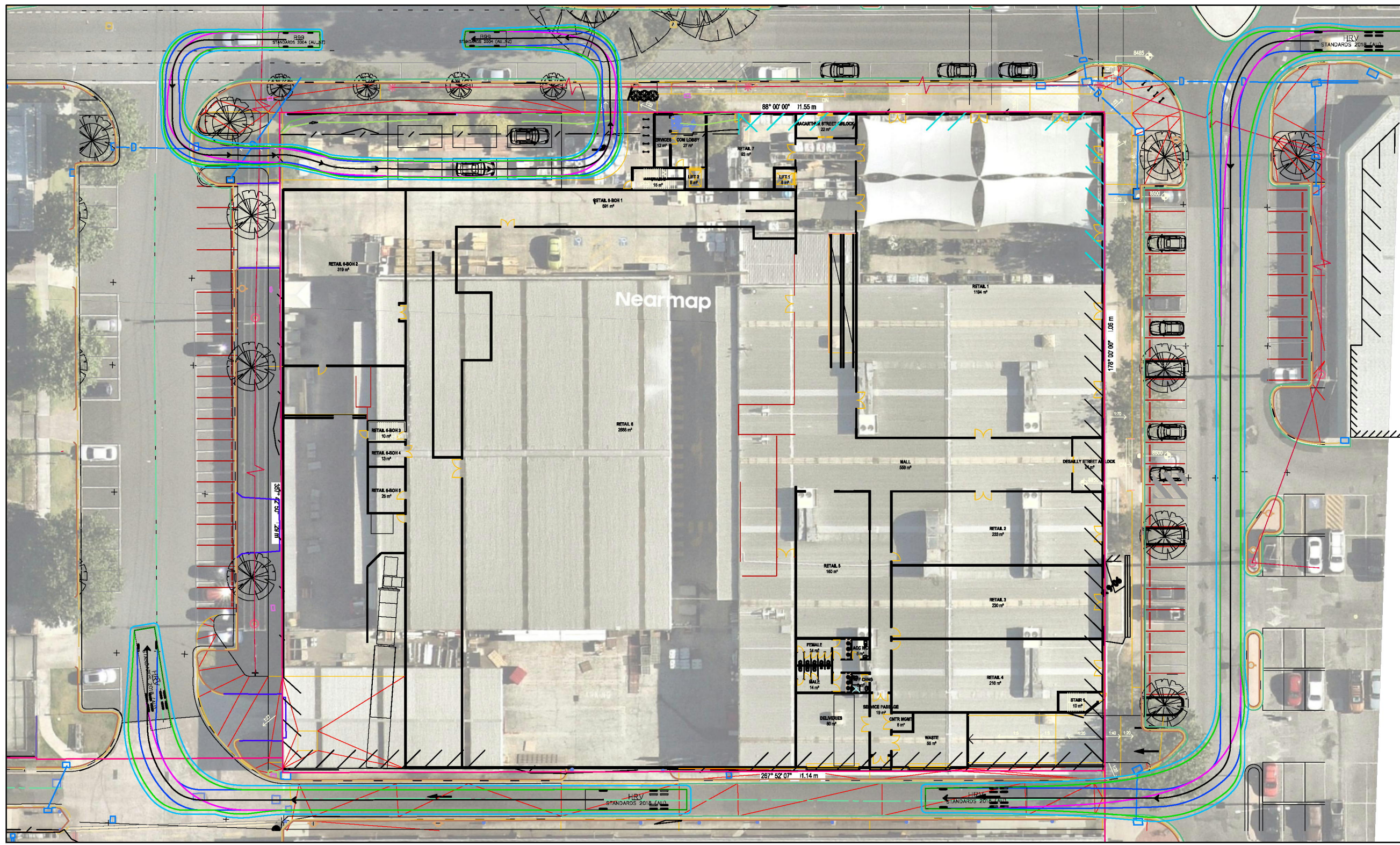




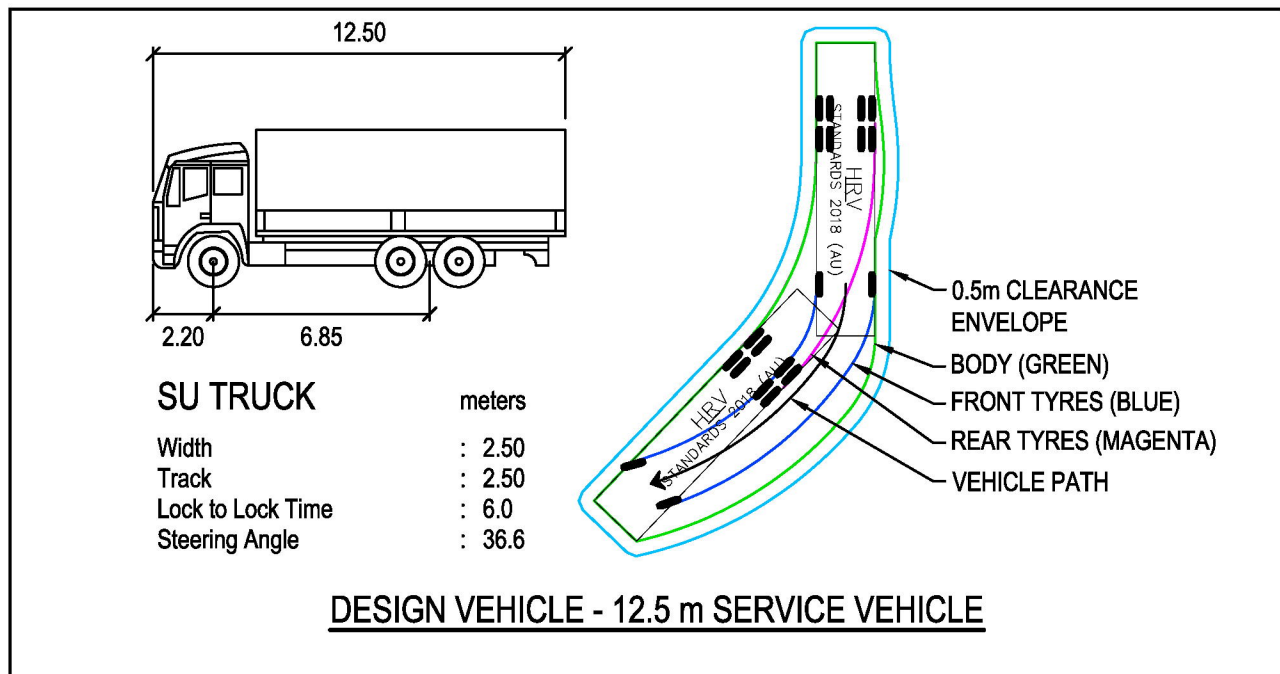
Supermarket loading bay - MRV - Compactor collection - Ingress
Retail loading bay - MRV - Ingress



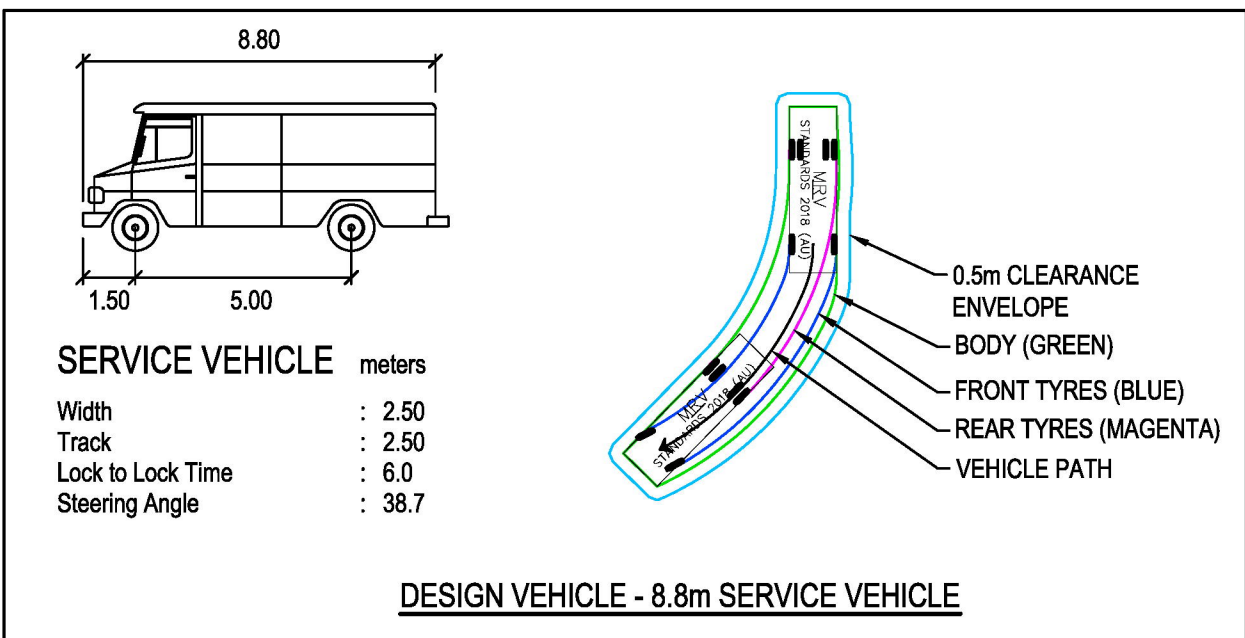
Supermarket loading bay - MRV - Compactor collection - Egress
Retail loading bay - MRV - Egress



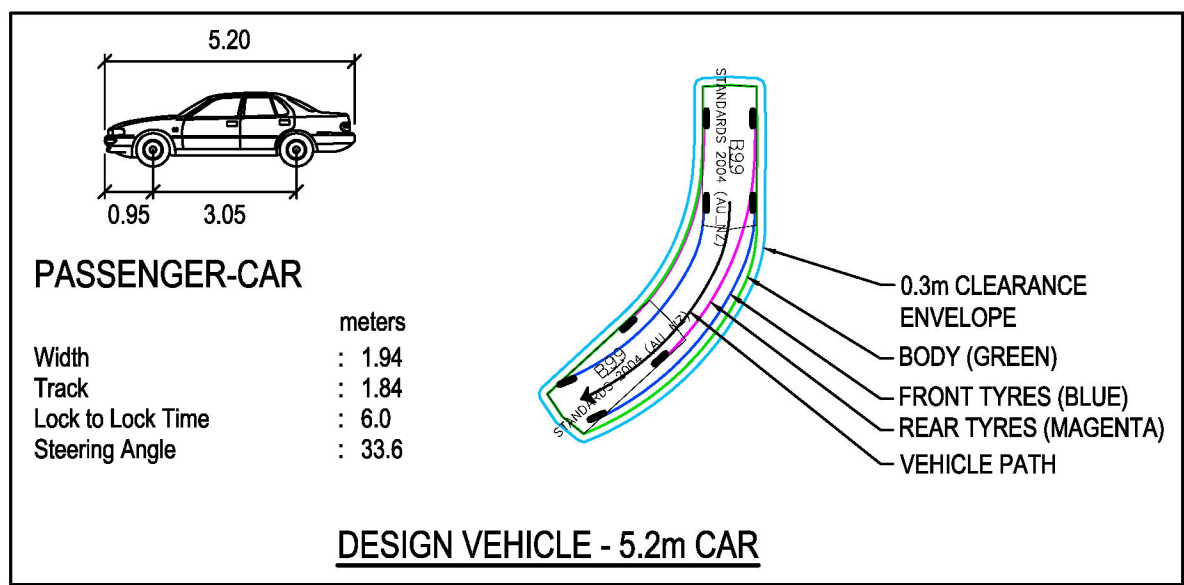
HRV - Circulating Movements
B99 - Online collection point movements



DESIGN VEHICLE - 12.5 m SERVICE VEHICLE



DESIGN VEHICLE - 8.8m SERVICE VEHICLE

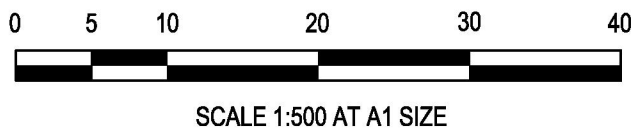


DESIGN VEHICLE - 5.2m CAR

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Malvern VIC 3144

ph: 03 9524 8888
www.beveridgewilliams.com.au

Project Details
38-50 MacArthur Street, Sale
Mixed Use Development
WELLINGTON SHIRE COUNCIL

Drawing Title
VEHICLE TURNING MOVEMENTS
SHEET 2 OF 5
Supermarket & Retail Loading Bay Movements

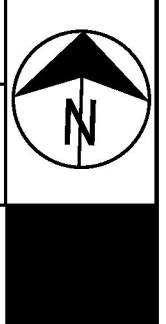
Sheet 02 of 05

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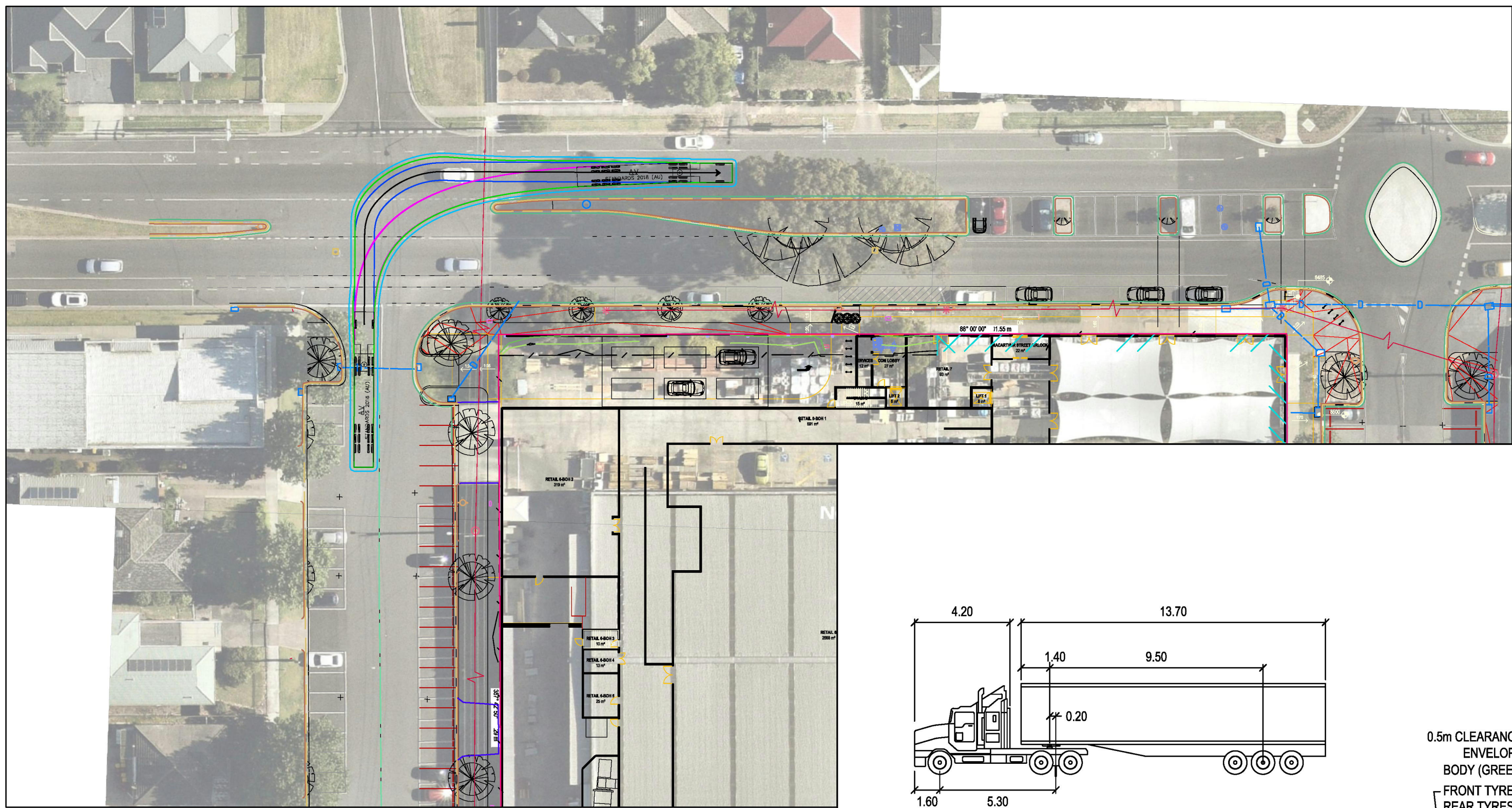
Project Ref
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Stage No
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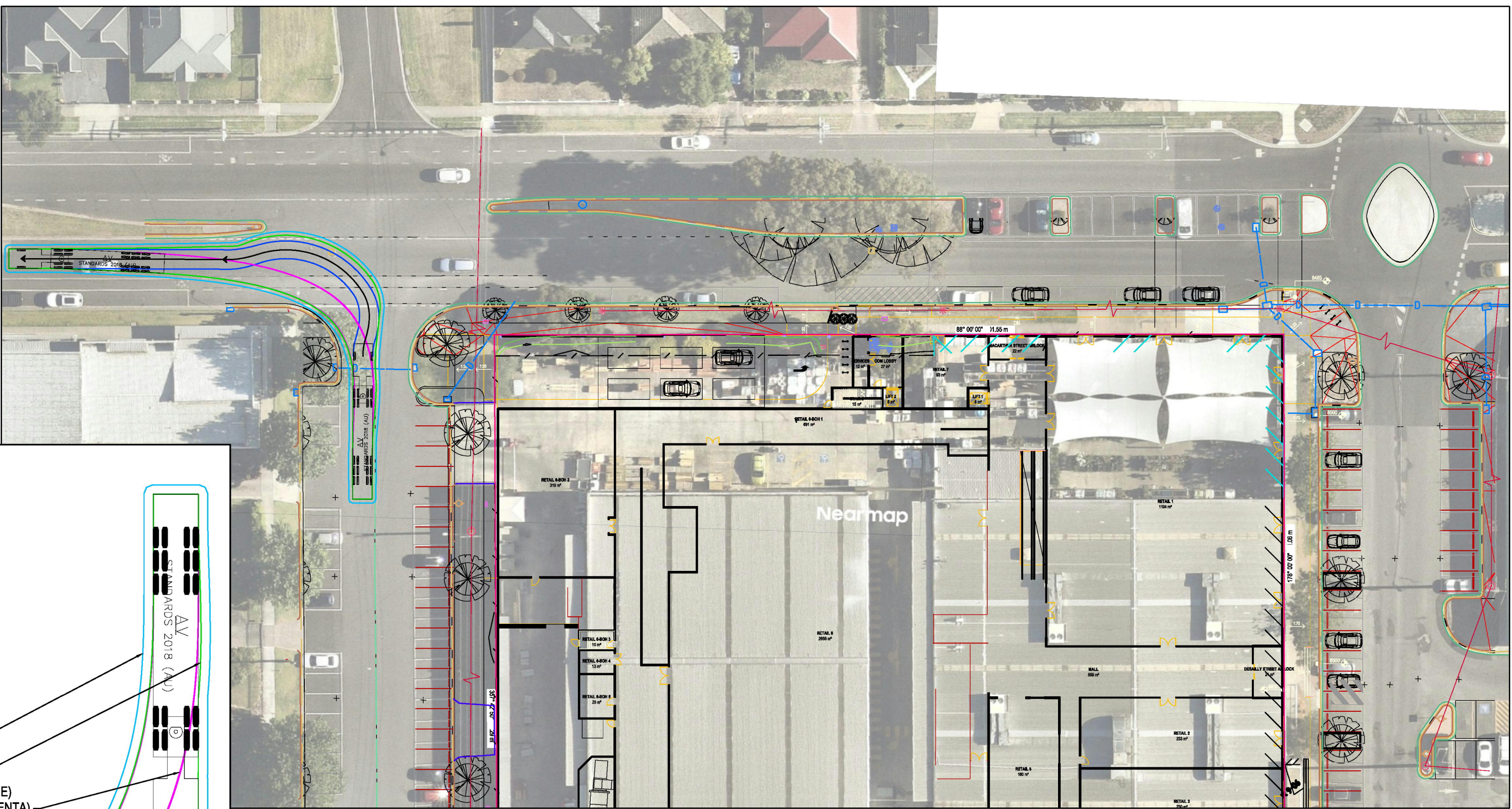
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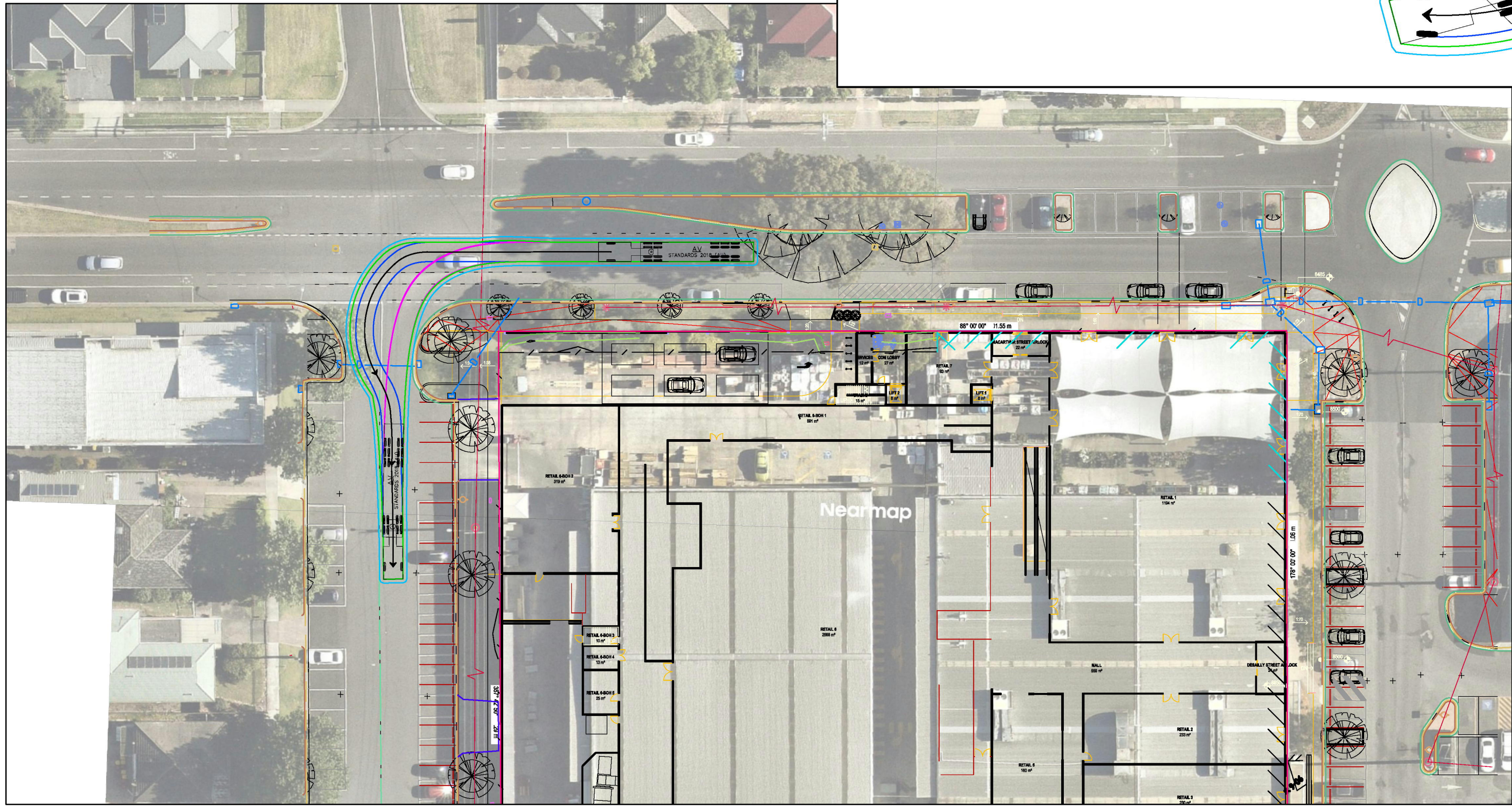
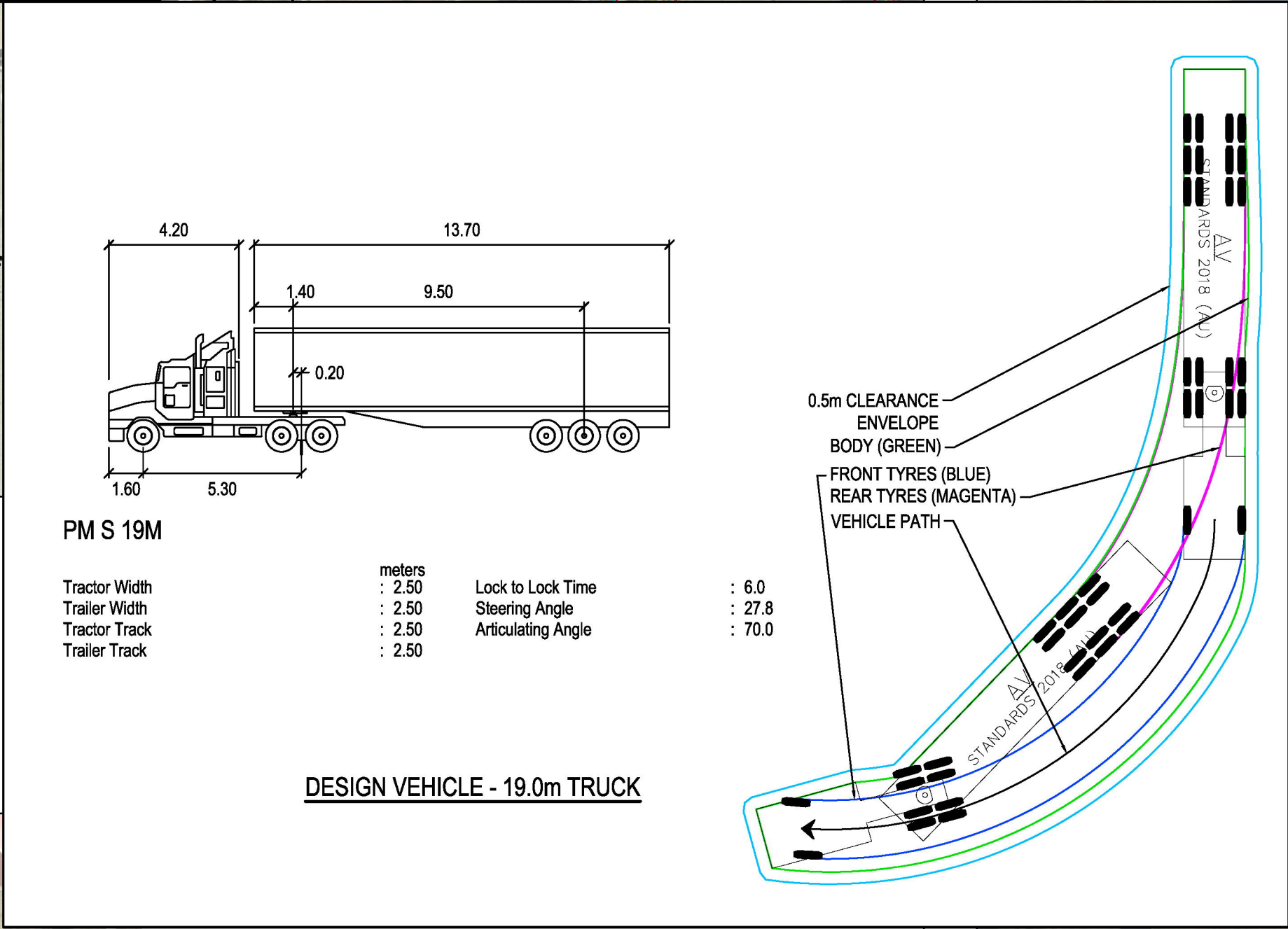
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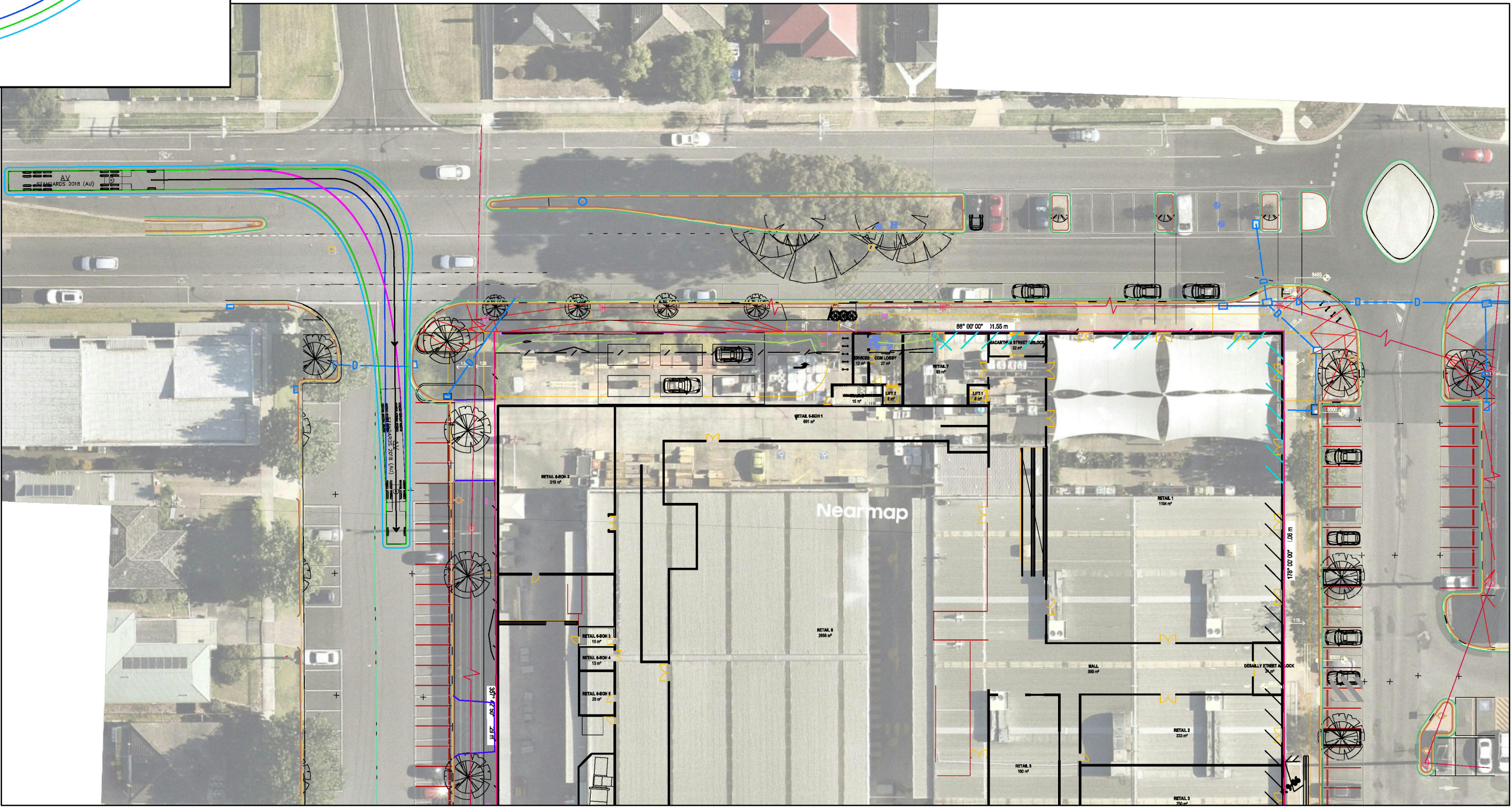
MacArthur Street / Pearson Street intersection - 19m semi - East - Egress



MacArthur Street / Pearson Street intersection - 19m semi - West - Egress



MacArthur Street / Pearson Street intersection - 19m semi - East - Ingress



MacArthur Street / Pearson Street intersection - 19m semi - West - Ingress

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ph: 03 9524 8888
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Project Details
38-50 MacArthur Street, Sale
Mixed Use Development
WELLINGTON SHIRE COUNCIL

Drawing Title
VEHICLE TURNING MOVEMENTS
SHEET 3 OF 5
19m Semi Movements

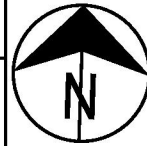
Sheet 03 of 05

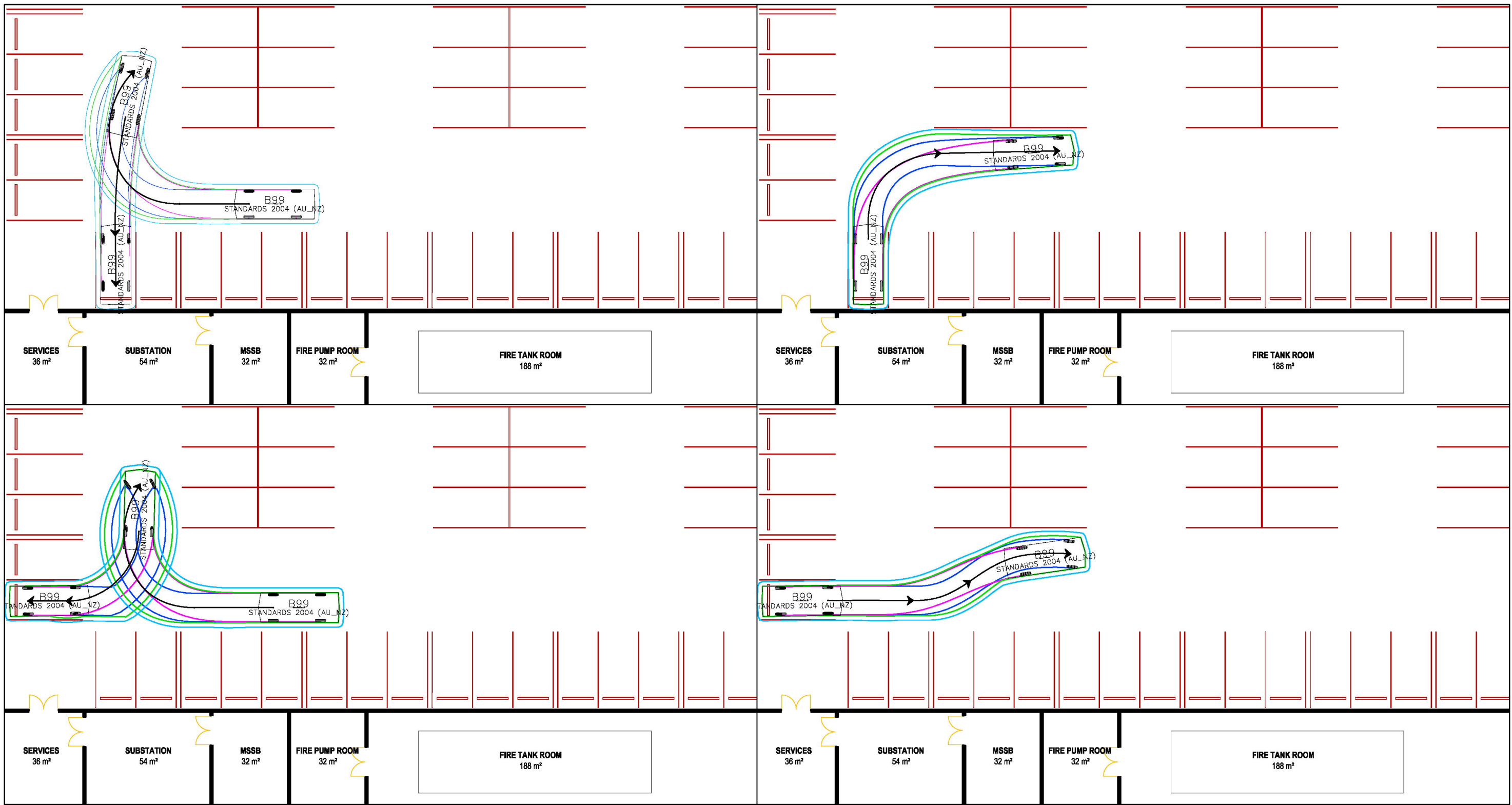
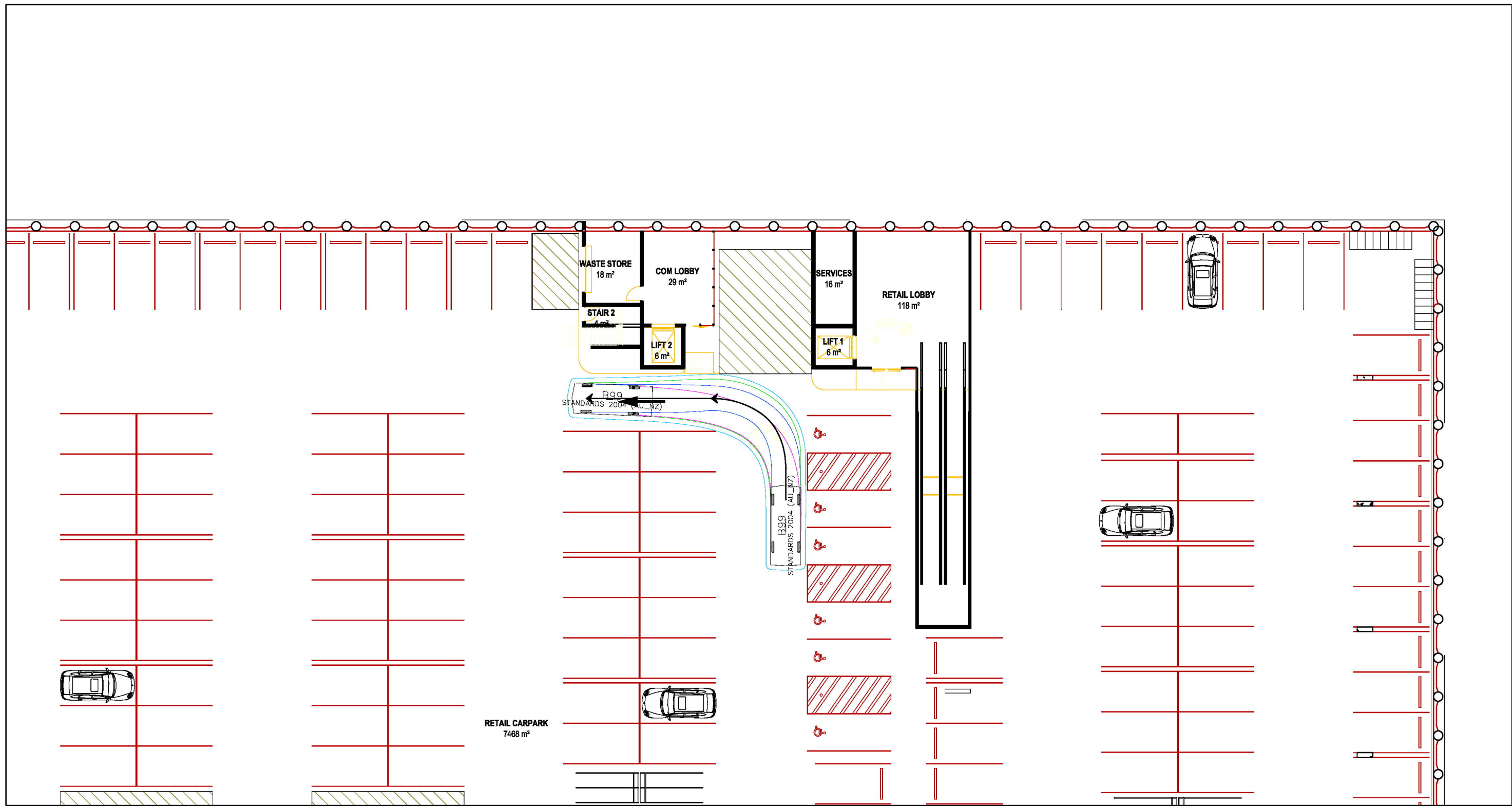
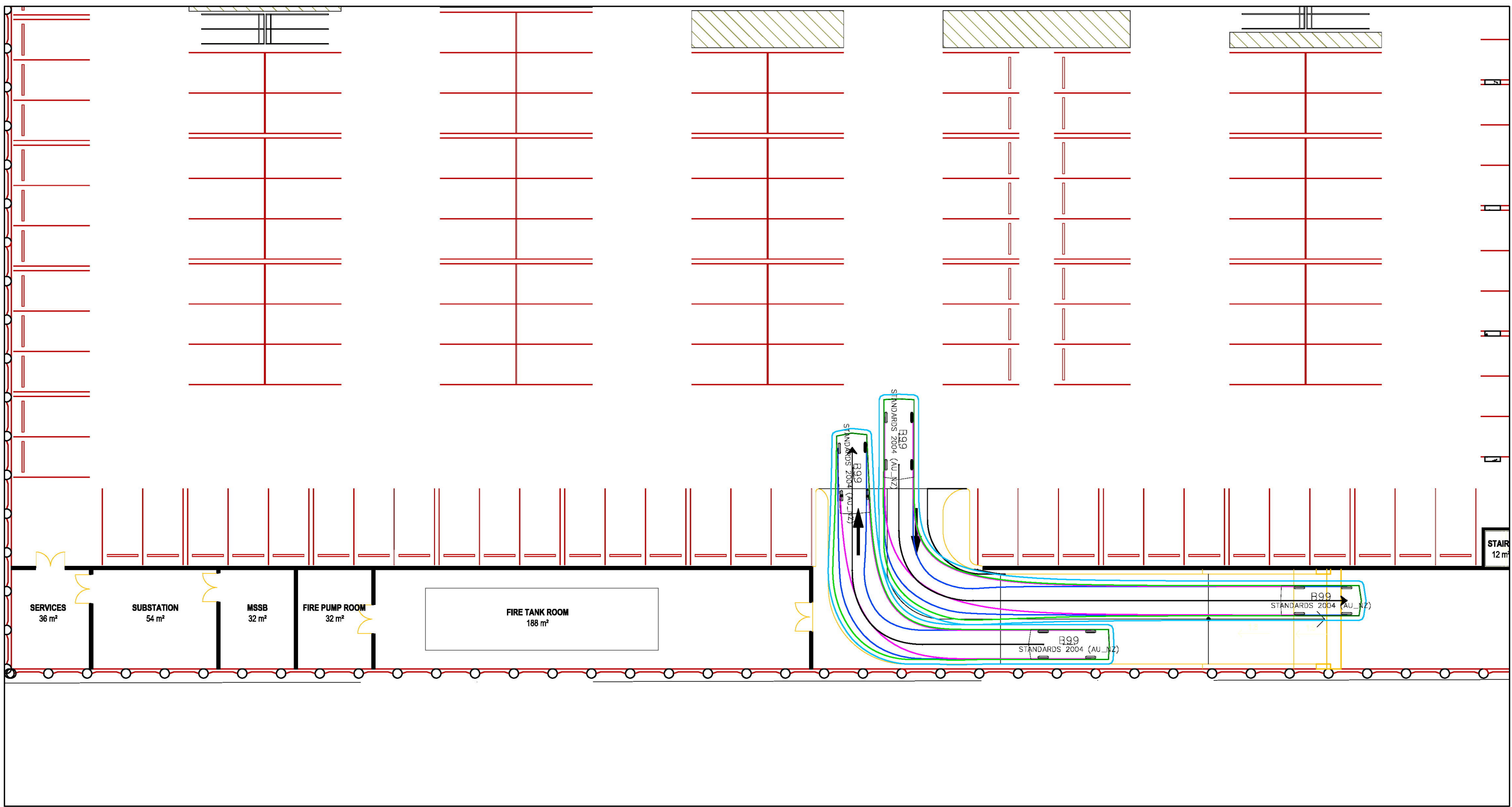
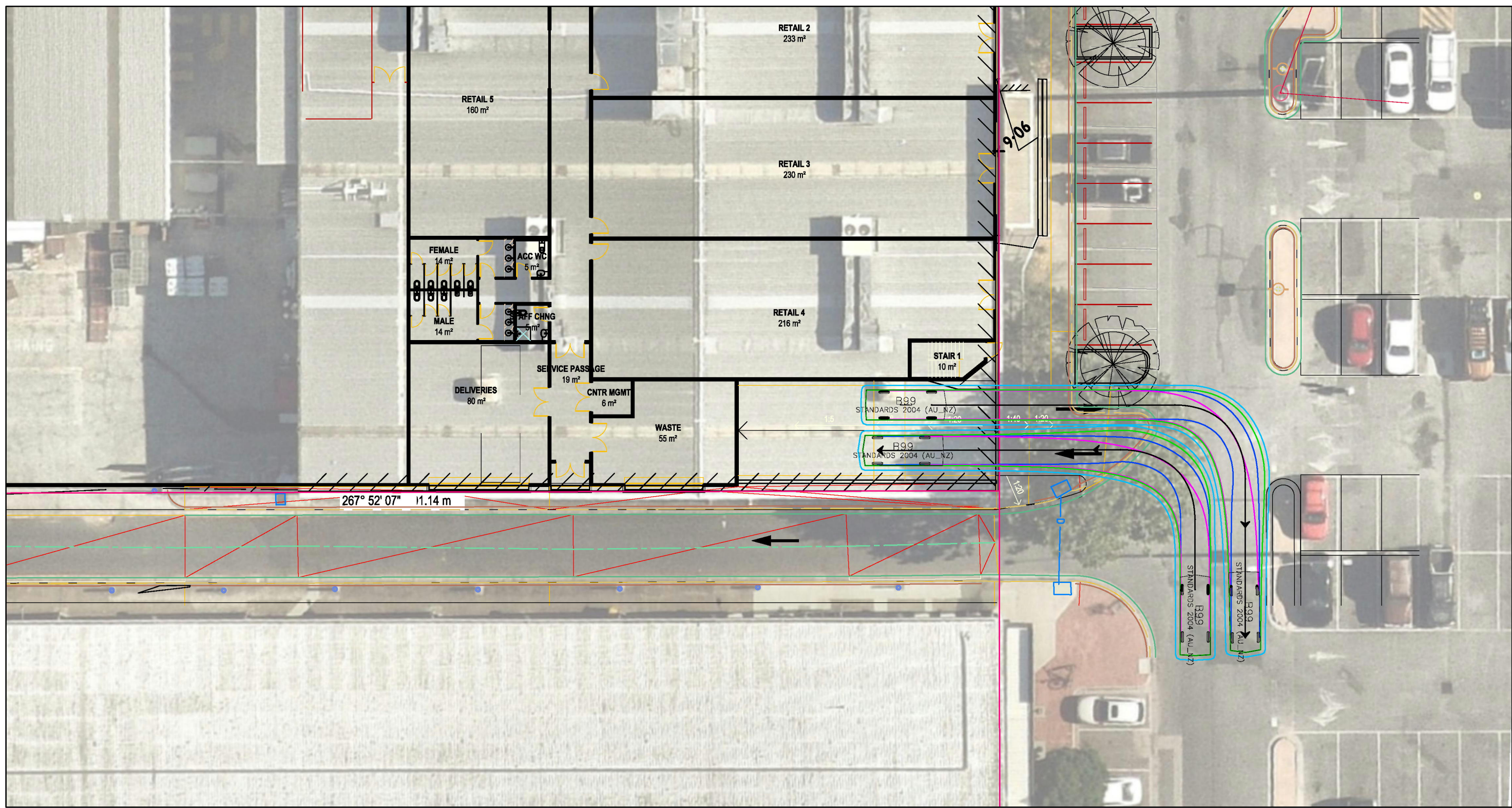
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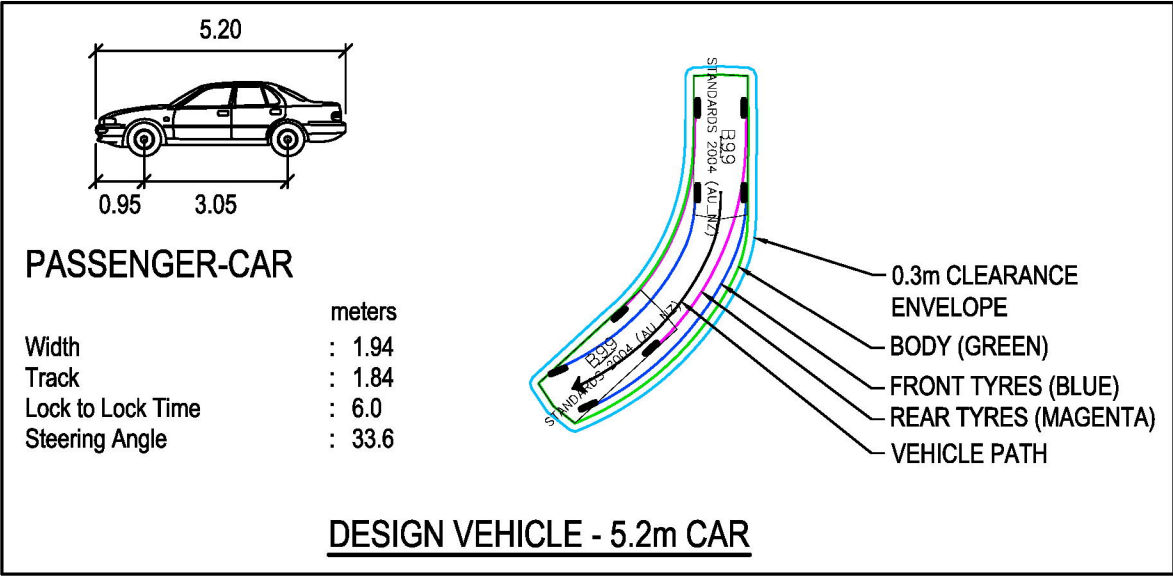
Stage No
[Redacted]

Drawing No
942





TOP LEFT: Ground Floor Car Park Entrance - B99 & B99
TOP RIGHT: Basement Car Park Entrance - B99 & B99
BOTTOM LEFT: Northern One-way circulation - B99
BOTTOM RIGHT: Car Space Ingress and Egress - B99



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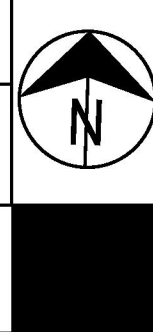
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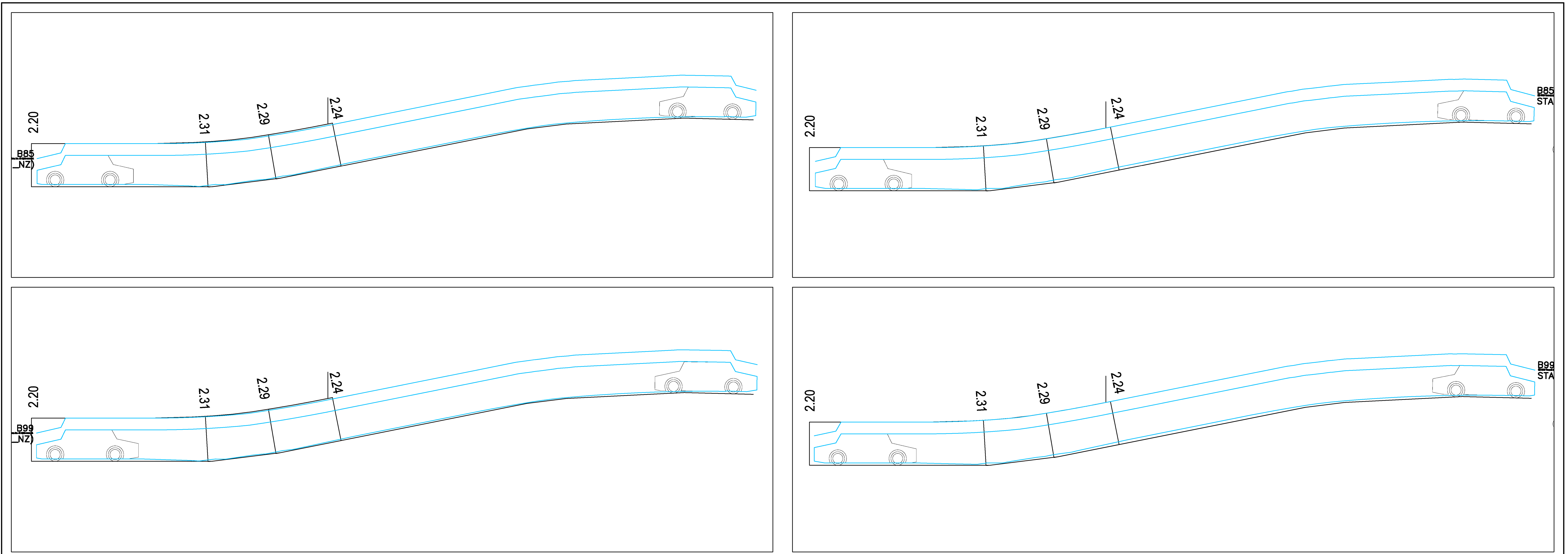
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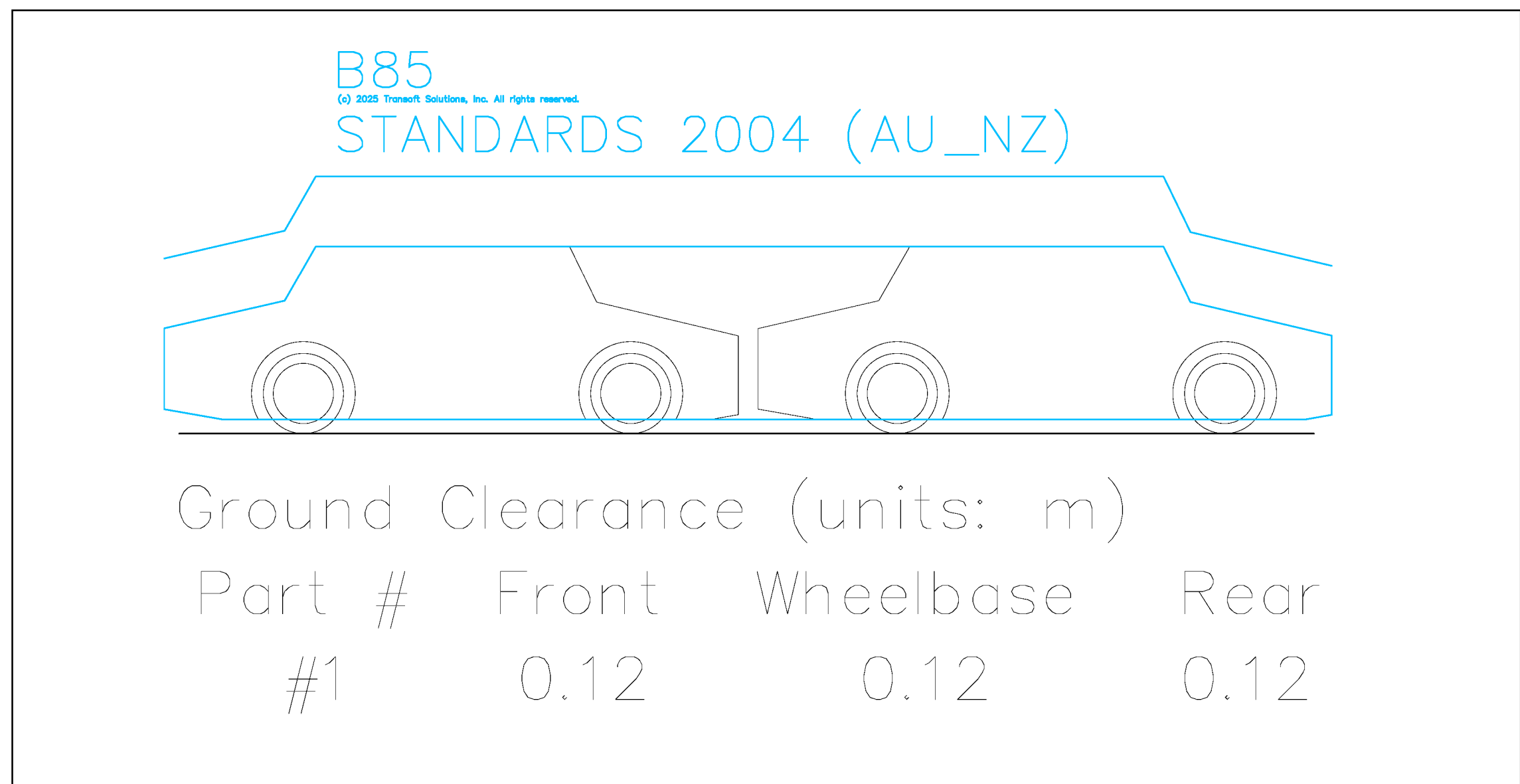
Project Details
38-50 MacArthur Street, Sale
Mixed Use Development
WELLINGTON SHIRE COUNCIL
Drawing Title
VEHICLE TURNING MOVEMENTS
SHEET 4 OF 5
Basement Car Park Movements

Sheet 04 of 05
Scale
1:250 @ A1
Project Ref
2402360
Drawing No
943

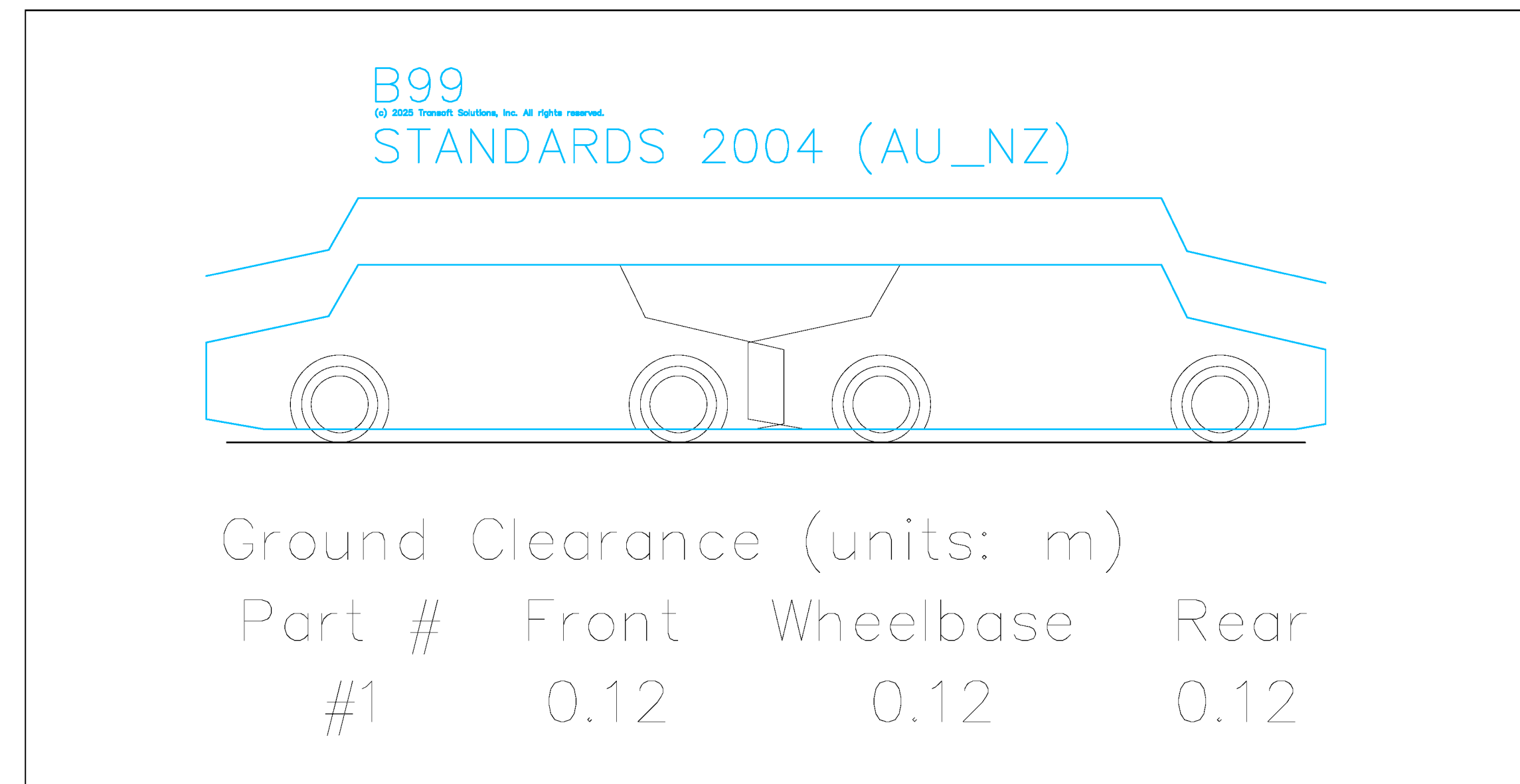




TOP ROW: Ramp - B85 - Down (Left) and Up (Right)
BOTTOM ROW: Ramp - B99 - Down (Left) and Up (Right)



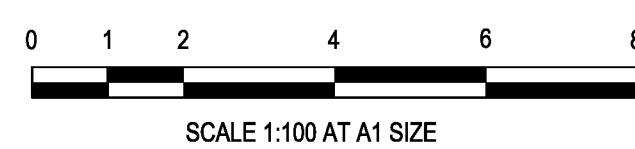
Vehicle height = 1.60m, Overhead clearance = 0.6m



Vehicle height = 1.60m, Overhead clearance = 0.6m

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ph: 03 9524 8888

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Project Details

38-50 MacArthur Street, Sale
Mixed Use Development
WELLINGTON SHIRE COUNCIL

Drawing Title

VEHICLE TURNING MOVEMENTS
SHEET 5 OF 5
Ramp Clearance Checks

Sheet 05 of 05		
Scale	1:100 @ A1	
Project Ref	Stage No	Drawing No
2402360		944

APPENDIX C: TRAFFIC AND PARKING SURVEYS

Intersection of New Railway Rd and Desailly St, Sale

GPS -38.106191, 147.063951

Date:	Thu 07/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	N/A
South:	Desailly St
West:	New Railway Rd

Survey	AM:	8:00 AM-12:00 PM
Period	PM:	12:00 PM-6:00 PM
Traffic	AM:	11:00 AM-12:00 PM
Peak	PM:	3:45 PM-4:45 PM

All Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
8:00	8:15	0	2	9	0	7	0	0	0	0	102	
8:15	8:30	0	1	15	0	10	2	0	0	0	120	
8:30	8:45	0	0	13	0	15	0	0	0	0	125	
8:45	9:00	0	2	16	0	10	0	0	0	0	127	
9:00	9:15	0	2	16	0	18	0	0	0	0	143	
9:15	9:30	0	0	17	0	14	2	0	0	0	150	
9:30	9:45	0	0	11	0	19	0	0	0	0	169	
9:45	10:00	0	2	20	0	22	0	0	0	0	193	
10:00	10:15	0	1	14	0	25	3	0	0	0	199	
10:15	10:30	0	2	25	0	19	6	0	0	0	211	
10:30	10:45	0	3	17	0	32	2	0	0	0	214	
10:45	11:00	0	3	18	0	23	6	0	0	0	214	
11:00	11:15	0	2	27	0	19	7	0	0	0	216	Peak
11:15	11:30	0	2	15	0	34	4	0	0	0		
11:30	11:45	0	3	27	0	22	2	0	0	0		
11:45	12:00	0	4	20	0	26	2	0	0	0		
12:00	12:15	0	4	18	0	20	0	0	0	0	212	
12:15	12:30	0	2	19	0	32	4	0	0	0	226	
12:30	12:45	0	2	18	0	29	7	0	0	0	225	
12:45	13:00	0	1	23	0	30	3	0	0	0	224	
13:00	13:15	0	1	24	0	25	6	0	0	0	214	
13:15	13:30	0	0	25	0	27	4	0	0	0	197	
13:30	13:45	0	5	20	0	26	4	0	0	0	196	
13:45	14:00	0	3	12	0	28	4	0	0	0	203	
14:00	14:15	0	2	12	0	21	4	0	0	0	200	
14:15	14:30	0	2	22	0	27	4	0	0	0	208	
14:30	14:45	0	2	25	0	32	3	0	0	0	201	
14:45	15:00	0	0	22	0	20	2	0	0	0	201	
15:00	15:15	0	1	13	0	31	2	0	0	0	224	
15:15	15:30	0	2	21	0	20	5	0	0	0	230	
15:30	15:45	0	1	28	0	29	4	0	0	0	231	
15:45	16:00	0	1	27	0	35	3	0	0	1	234	Peak
16:00	16:15	0	1	21	0	30	1	0	0	0	214	
16:15	16:30	0	2	16	0	31	0	0	0	0	220	

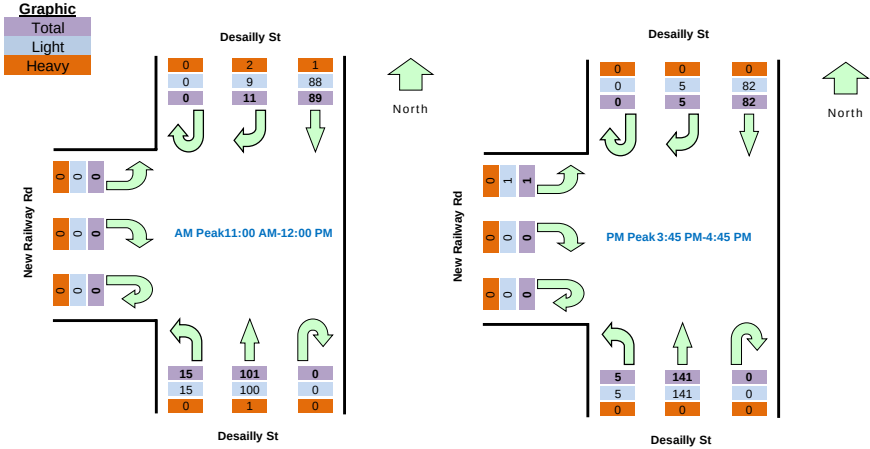
Pedestrians Crossing

Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
8:00	8:15	1	4	2	0	0	0	51
8:15	8:30	2	3	0	0	3	1	64
8:30	8:45	4	2	0	0	6	1	92
8:45	9:00	6	9	2	0	4	1	104
9:00	9:15	6	4	3	2	1	4	118
9:15	9:30	6	15	5	3	7	1	154
9:30	9:45	11	8	2	0	0	4	171
9:45	10:00	6	10	6	7	5	2	212
10:00	10:15	12	16	5	6	6	11	227
10:15	10:30	13	10	6	1	7	17	233
10:30	10:45	26	16	0	4	13	7	238
10:45	11:00	12	21	0	0	10	8	233
11:00	11:15	16	18	8	4	7	9	227
11:15	11:30	11	14	3	3	15	13	
11:30	11:45	23	11	2	3	11	11	
11:45	12:00	10	16	2	1	7	9	
12:00	12:15	11	7	4	0	13	14	209
12:15	12:30	13	16	5	3	16	2	202
12:30	12:45	12	14	5	6	4	17	194
12:45	13:00	6	15	8	4	12	2	186
13:00	13:15	11	5	5	4	10	7	193
13:15	13:30	12	15	2	2	10	6	190
13:30	13:45	18	12	6	1	4	9	176
13:45	14:00	13	18	4	3	8	8	180
14:00	14:15	13	7	1	3	6	9	177
14:15	14:30	10	7	6	2	1	7	163
14:30	14:45	13	13	7	1	7	13	174
14:45	15:00	12	13	5	2	7	12	162
15:00	15:15	7	10	3	2	2	1	172
15:15	15:30	13	9	0	8	3	11	205
15:30	15:45	12	12	6	2	7	3	202
15:45	16:00	19	14	6	1	9	12	184
16:00	16:15	10	23	10	3	7	5	169
16:15	16:30	12	9	7	1	3	9	153

16:30	16:45	0	1	18	0	45	1	0	0	0	224	
16:45	17:00	0	0	20	0	25	2	0	0	0	213	
17:00	17:15	0	0	30	0	26	3	0	0	0	219	
17:15	17:30	0	0	21	0	29	3	0	0	0		
17:30	17:45	0	1	18	0	34	1	0	0	0		
17:45	18:00	0	2	16	0	32	3	0	0	0		

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
11:00	12:00	0	11	89	0	101	15	0	0	0	216
15:45	16:45	0	5	82	0	141	5	0	0	1	234

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

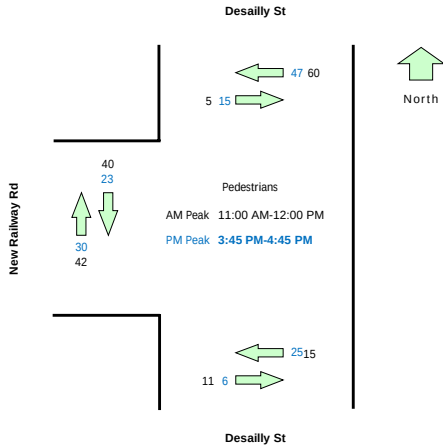


Light Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
8:00	8:15	0	1	9	0	7	0	0	0	0
8:15	8:30	0	0	15	0	10	2	0	0	0
8:30	8:45	0	0	13	0	15	0	0	0	0
8:45	9:00	0	1	16	0	10	0	0	0	0
9:00	9:15	0	1	15	0	17	0	0	0	0
9:15	9:30	0	0	17	0	14	2	0	0	0
9:30	9:45	0	0	11	0	18	0	0	0	0
9:45	10:00	0	1	20	0	22	0	0	0	0
10:00	10:15	0	1	14	0	25	3	0	0	0
10:15	10:30	0	1	25	0	19	6	0	0	0
10:30	10:45	0	2	17	0	31	2	0	0	0
10:45	11:00	0	2	18	0	23	6	0	0	0
11:00	11:15	0	1	27	0	18	7	0	0	0
11:15	11:30	0	1	14	0	34	4	0	0	0
11:30	11:45	0	3	27	0	22	2	0	0	0
11:45	12:00	0	4	20	0	26	2	0	0	0

16:30	16:45	6	7	2	1	4	4	148
16:45	17:00	13	10	1	4	11	7	152
17:00	17:15	10	13	5	2	3	9	125
17:15	17:30	7	7	5	10	4	3	
17:30	17:45	7	6	3	0	6	6	
17:45	18:00	3	6	4	0	4	2	

Peak Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
11:00	12:00	60	59	15	11	40	42	
15:45	16:45	47	53	25	6	23	30	184



12:00	12:15	0	3	18	0	20	0	0	0	0
12:15	12:30	0	2	19	0	32	4	0	0	0
12:30	12:45	0	2	18	0	29	7	0	0	0
12:45	13:00	0	1	23	0	30	3	0	0	0
13:00	13:15	0	1	24	0	25	6	0	0	0
13:15	13:30	0	0	25	0	27	4	0	0	0
13:30	13:45	0	4	20	0	26	4	0	0	0
13:45	14:00	0	3	12	0	28	4	0	0	0
14:00	14:15	0	2	12	0	21	4	0	0	0
14:15	14:30	0	2	22	0	27	4	0	0	0
14:30	14:45	0	1	25	0	32	3	0	0	0
14:45	15:00	0	0	22	0	20	2	0	0	0
15:00	15:15	0	1	13	0	31	2	0	0	0
15:15	15:30	0	2	21	0	20	5	0	0	0
15:30	15:45	0	1	28	0	29	4	0	0	0
15:45	16:00	0	1	27	0	35	3	0	0	1
16:00	16:15	0	1	21	0	30	1	0	0	0
16:15	16:30	0	2	16	0	31	0	0	0	0
16:30	16:45	0	1	18	0	45	1	0	0	0
16:45	17:00	0	0	20	0	25	2	0	0	0
17:00	17:15	0	0	30	0	26	3	0	0	0
17:15	17:30	0	0	20	0	29	3	0	0	0
17:30	17:45	0	1	18	0	34	1	0	0	0
17:45	18:00	0	2	16	0	32	3	0	0	0

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway St			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	9	88	0	100	15	0	0	0	212
15:45	16:45	0	5	82	0	141	5	0	0	1	234

Heavy Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway St		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
8:00	8:15	0	1	0	0	0	0	0	0	0
8:15	8:30	0	1	0	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	0	0	0
8:45	9:00	0	1	0	0	0	0	0	0	0
9:00	9:15	0	1	1	0	1	0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0
9:30	9:45	0	0	0	0	1	0	0	0	0
9:45	10:00	0	1	0	0	0	0	0	0	0
10:00	10:15	0	0	0	0	0	0	0	0	0
10:15	10:30	0	1	0	0	0	0	0	0	0
10:30	10:45	0	1	0	0	1	0	0	0	0
10:45	11:00	0	1	0	0	0	0	0	0	0
11:00	11:15	0	1	0	0	1	0	0	0	0
11:15	11:30	0	1	1	0	0	0	0	0	0

Intersection of MacArthur St and Desailly St, Sale

GPS -38.105276, 147.063942

Date:	Thu 07/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	MacArthur St
South:	Desailly St
West:	MacArthur St

Survey	AM:	8:00 AM-12:00 PM
Period	PM:	12:00 PM-6:00 PM
Traffic	AM:	10:45 AM-11:45 AM
Peak	PM:	3:15 PM-4:15 PM

All Vehicles

Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	2	1	3	1	1	22	10	0	8	1	5	0	10	40	1	626	
8:15	8:30	0	6	0	2	0	8	35	23	0	20	2	2	0	9	61	2	693	
8:30	8:45	0	5	1	4	1	2	47	20	0	17	0	5	0	8	54	4	691	
8:45	9:00	0	2	0	3	0	1	50	28	0	10	2	7	0	10	69	1	689	
9:00	9:15	0	1	0	4	1	1	43	27	0	18	0	10	0	13	54	0	718	
9:15	9:30	0	1	1	3	3	1	50	24	0	23	3	11	0	9	39	0	749	
9:30	9:45	0	2	0	4	1	1	39	28	0	23	4	5	1	7	46	5	761	
9:45	10:00	0	0	0	0	1	1	57	41	0	38	3	12	1	12	45	1	811	
10:00	10:15	0	3	3	3	0	1	41	26	0	39	2	11	0	14	57	3	802	
10:15	10:30	0	2	2	2	1	0	47	33	0	30	3	11	0	17	34	0	812	
10:30	10:45	0	2	2	2	0	1	69	27	0	46	3	8	0	15	40	1	866	
10:45	11:00	0	2	2	2	3	0	41	29	0	37	2	14	1	14	53	3	893	Peak
11:00	11:15	0	1	3	1	3	2	48	41	0	32	5	17	1	10	48	1	887	
11:15	11:30	0	0	2	1	4	1	56	31	0	49	6	20	0	16	48	0		
11:30	11:45	0	1	0	1	2	2	59	42	0	36	3	23	0	12	62	0		
11:45	12:00	0	1	1	0	2	2	54	30	0	33	2	12	0	8	52	0		
12:00	12:15	0	1	0	1	2	3	59	36	0	29	4	19	1	20	59	5	966	
12:15	12:30	0	0	0	1	3	3	47	31	0	41	7	20	1	13	50	1	946	
12:30	12:45	0	5	2	2	3	1	56	37	0	52	3	13	1	12	65	3	952	
12:45	13:00	0	1	4	2	1	0	70	37	0	58	4	12	0	8	55	2	911	
13:00	13:15	0	1	1	2	3	4	46	39	0	35	5	15	1	14	51	2	866	
13:15	13:30	0	3	1	3	0	1	54	35	0	45	2	15	0	9	56	0	834	
13:30	13:45	0	5	1	0	2	3	44	30	0	50	2	13	1	10	52	1	824	
13:45	14:00	0	1	2	1	1	4	58	26	0	31	8	19	0	17	39	2	858	
14:00	14:15	0	2	1	2	0	0	46	24	0	37	8	11	0	10	44	2	858	
14:15	14:30	0	2	2	1	2	1	60	36	0	30	2	14	0	17	45	2	898	
14:30	14:45	0	1	3	3	1	3	57	42	0	58	4	16	1	9	47	3	919	
14:45	15:00	0	3	1	4	1	1	45	32	0	44	3	17	0	12	43	3	954	
15:00	15:15	0	3	1	2	1	2	76	31	0	38	6	13	0	6	47	1	1026	
15:15	15:30	0	1	3	0	0	0	61	28	0	38	1	16	0	20	66	1	1033	Peak
15:30	15:45	0	5	4	1	4	4	75	42	0	41	5	12	2	16	67	5	1008	
15:45	16:00	0	0	0	1	1	2	76	44	1	48	5	22	2	18	60	1	939	
16:00	16:15	0	2	4	2	1	0	74	28	0	40	7	15	0	10	49	2	877	
16:15	16:30	0	0	2	3	1	1	45	27	0	48	6	12	0	11	50	4	874	
16:30	16:45	0	1	1	2	0	2	56	28	0	48	4	11	0	11	48	2	890	
16:45	17:00	0	4	0	0	2	1	60	29	0	39	3	7	0	12	60	2	863	
17:00	17:15	0	4	2	3	0	1	61	39	0	47	7	8	2	12	45	0	802	
17:15	17:30	0	3	1	4	4	4	59	18	0	43	4	14	0	17	53	2		
17:30	17:45	0	3	2	4	0	1	54	23	0	39	10	9	0	9	33	0		
17:45	18:00	0	3	0	3	1	1	28	22	0	31	7	18	0	5	38	1		

Peak Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	4	7	5	12	5	204	143	0	154	16	74	2	52	211	4	893
15:15	16:15	0	8	11	4	6	6	286	142	1	167	18	65	4	64	242	9	1033

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

Graphic

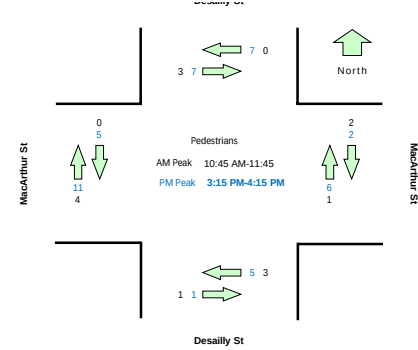
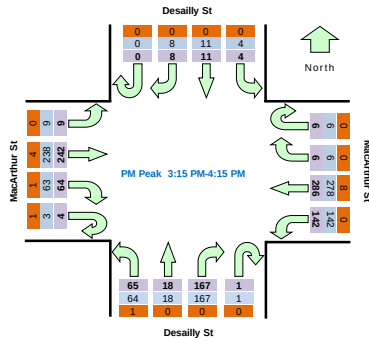
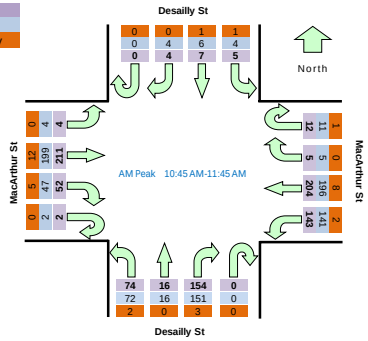
Pedestrians Crossing

Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hourly Total
8:00	8:15	0	0	3	0	1	0	0	0	39
8:15	8:30	0	1	7	0	1	4	0	0	41
8:30	8:45	3	3	1	0	1	1	3	0	31
8:45	9:00	1	2	2	2	2	0	1	0	21
9:00	9:15	0	3	0	0	3	0	0	0	23
9:15	9:30	0	2	1	0	0	0	0	0	21
9:30	9:45	0	0	0	1	0	1	0	0	22
9:45	10:00	1	0	8	0	1	1	1	0	35
10:00	10:15	0	0	0	2	0	1	0	1	24
10:15	10:30	0	1	0	1	0	1	0	1	23
10:30	10:45	2	4	1	0	0	2	1	5	25
10:45	11:00	0	0	0	0	1	0	0	0	14
11:00	11:15	0	0	0	1	0	0	0	2	17
11:15	11:30	0	2	1	0	1	1	0	1	
11:30	11:45	0	1	1	0	1	0	0	1	
11:45	12:00	0	0	0	0	2	1	0	1	
12:00	12:15	0	1	1	1	1	2	0	2	36
12:15	12:30	2	0	1	1	2	1	2	0	32
12:30	12:45	3	0	0	0	0	2	3	0	26
12:45	13:00	1	0	1	3	2	1	3	0	22
13:00	13:15	0	0	0	0	2	0	1	1	21
13:15	13:30	0	0	1	0	0	0	0	2	21
13:30	13:45	0	0	1	0	1	2	0	0	26
13:45	14:00	0	1	2	3	1	2	0	1	27
14:00	14:15	0	1	0	0	0	2	0	1	21
14:15	14:30	1	1	2	0	2	0	0	2	23
14:30	14:45	0	0	0	0	1	1	0	3	24
14:45	15:00	1	0	0	0	1	0	0	2	30
15:00	15:15	0	0	2	2	0	2	0	0	39
15:15	15:30	1	2	0	0	2	0	1	3	44
15:30	15:45	0	0	1	3	2	0	3	2	38
15:45	16:00	3	3	0	3	0	0	1	3	30
16:00	16:15	3	2	1	0	1	1	0	3	20
16:15	16:30	0	0	1	0	0	1	1	0	20
16:30	16:45	0	2	0	1	0	0	0	0	26
16:45	17:00	0	0	2	0	0	1	0	0	25
17:00	17:15	1	1	1	3	1	2	1	1	26
17:15	17:30	2	1	4	1	0	1	0	0	
17:30	17:45	0	1	0	1	0	0	0	0	
17:45	18:00	0	1	0	1	0	0	0	2	

Peak Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Peak
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hour total
10:45	11:45	0	3	2	1	3	1	0	4	14
15:15	16:15	7	7	2	6	5	1	5	11	44

Desailly St

Total
Light
Heavy



Light Vehicles

Time		North Approach Desaillie St				East Approach MacArthur St				South Approach Desaillie St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	2	1	3	1	1	20	10	0	8	1	5	0	9	38	1
8:15	8:30	0	6	0	2	0	8	33	22	0	20	2	0	0	9	59	2
8:30	8:45	0	4	1	4	1	2	44	20	0	17	0	5	0	8	51	4
8:45	9:00	0	2	0	3	0	1	47	28	0	10	2	7	0	8	68	1
9:00	9:15	0	1	0	4	1	1	42	24	0	17	0	9	0	13	52	0
9:15	9:30	0	1	1	3	3	1	47	24	0	23	3	9	0	9	37	0
9:30	9:45	0	2	0	4	1	1	38	28	0	22	4	5	1	7	44	5
9:45	10:00	0	0	0	0	1	1	54	41	0	38	3	11	1	11	43	1
10:00	10:15	0	3	3	3	0	1	40	25	0	38	2	10	0	13	55	3
10:15	10:30	0	2	2	1	0	0	46	33	0	30	3	11	0	16	33	0
10:30	10:45	0	2	2	2	0	1	68	26	0	46	3	7	0	15	36	0
10:45	11:00	0	2	1	1	3	0	38	29	0	37	2	14	1	12	49	3
11:00	11:15	0	1	3	1	3	2	47	40	0	30	5	16	1	9	42	1
11:15	11:30	0	0	2	1	3	1	53	30	0	49	6	20	0	14	47	0
11:30	11:45	0	1	0	1	2	2	58	42	0	35	3	22	0	12	61	0
11:45	12:00	0	1	1	0	2	2	52	30	0	33	2	12	0	8	52	0
12:00	12:15	0	1	0	1	2	3	58	36	0	29	4	19	1	19	59	5
12:15	12:30	0	0	0	0	2	3	46	31	0	41	7	20	1	12	46	1
12:30	12:45	0	4	2	2	3	1	55	37	0	51	3	13	1	12	63	3
12:45	13:00	0	1	4	2	1	0	69	37	0	58	4	12	0	7	53	2
13:00	13:15	0	1	1	2	3	4	42	39	0	34	4	15	1	13	48	2
13:15	13:30	0	3	1	3	0	1	53	35	0	45	2	15	0	9	55	0
13:30	13:45	0	5	1	0	2	3	44	30	0	50	2	13	1	9	52	1
13:45	14:00	0	1	2	1	1	4	57	25	0	31	8	19	0	17	39	2
14:00	14:15	0	2	1	2	0	0	44	24	0	37	8	11	0	10	44	2
14:15	14:30	0	2	2	1	2	1	56	36	0	30	2	13	0	17	44	2
14:30	14:45	0	1	3	3	1	3	56	41	0	58	4	16	1	8	44	3
14:45	15:00	0	3	1	4	1	1	43	32	0	43	3	17	0	12	42	3
15:00	15:15	0	3	1	2	1	2	76	31	0	38	6	13	0	6	45	1
15:15	15:30	0	1	3	0	0	0	61	28	0	38	1	16	0	20	66	1
15:30	15:45	0	5	4	1	4	4	70	42	0	41	5	12	1	16	67	5
15:45	16:00	0	0	0	1	1	2	74	44	1	48	5	21	2	17	59	1
16:00	16:15	0	2	4	2	1	0	73	28	0	40	7	15	0	10	46	2
16:15	16:30	0	0	2	3	1	1	45	27	0	48	6	12	0	11	49	4
16:30	16:45	0	1	1	2	0	2	56	28	0	48	4	11	0	10	48	2
16:45	17:00	0	4	0	0	2	1	60	29	0	39	3	7	0	12	58	2
17:00	17:15	0	4	2	3	0	1	61	39	0	47	7	8	2	12	44	0
17:15	17:30	0	3	1	4	4	4	59	18	0	43	4	14	0	16	53	2

[illegible]

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of MacArthur St and Pearson St, Sale

GPS -38.105322, 147.062446

Date: Thu 07/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Pearson St
East: MacArthur St
South: Pearson St
West: MacArthur St

Survey AM: 8:00 AM-12:00 PM
Period PM: 12:00 PM-6:00 PM
Traffic AM: 10:45 AM-11:45 AM
Peak PM: 3:15 PM-4:15 PM

All Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	0	0	1	0	1	23	4	0	1	0	0	0	2	50	0	482	
8:15	8:30	0	1	0	1	0	0	33	6	0	1	0	3	0	5	70	0	527	
8:30	8:45	0	0	0	2	0	1	50	6	0	2	0	1	2	6	63	0	533	
8:45	9:00	0	0	0	1	0	0	53	3	0	0	0	1	1	10	77	1	512	
9:00	9:15	0	0	0	0	0	0	51	3	0	5	0	0	1	5	62	0	499	
9:15	9:30	0	0	0	0	0	0	59	6	0	4	0	7	1	4	45	0	509	
9:30	9:45	0	0	0	0	0	0	44	2	0	2	0	4	0	4	56	0	496	
9:45	10:00	0	0	0	0	0	1	64	3	0	3	0	2	0	5	56	0	528	
10:00	10:15	0	0	0	0	0	0	55	1	0	3	0	3	1	3	71	0	528	
10:15	10:30	0	0	0	0	1	0	53	1	0	5	0	2	0	6	45	0	529	
10:30	10:45	0	0	0	0	0	0	72	3	0	4	0	5	0	7	53	0	561	
10:45	11:00	0	0	0	0	0	1	53	5	0	4	0	2	1	0	68	0	578	Peak
11:00	11:15	0	2	0	0	1	0	63	4	0	6	0	4	0	4	54	0	577	
11:15	11:30	0	1	0	0	0	0	66	8	0	5	0	2	1	2	60	0		
11:30	11:45	0	0	0	0	1	0	82	3	0	7	0	2	0	2	64	0		
11:45	12:00	0	0	0	3	1	1	61	6	0	6	0	2	1	0	52	0		
12:00	12:15	0	1	0	0	1	0	71	7	0	6	0	2	0	5	77	0	631	
12:15	12:30	0	0	0	0	0	0	66	4	0	6	0	2	1	3	63	1	596	
12:30	12:45	0	0	0	0	0	0	66	4	0	9	0	6	0	1	72	1	589	
12:45	13:00	0	0	0	0	1	1	79	6	0	2	0	2	0	4	61	0	565	
13:00	13:15	0	2	0	0	2	0	58	3	0	7	0	2	0	2	58	1	551	
13:15	13:30	0	0	0	0	0	0	64	7	0	4	0	0	0	3	61	0	538	
13:30	13:45	0	1	0	0	0	1	54	7	0	6	0	2	0	6	58	0	548	
13:45	14:00	0	0	0	0	0	0	68	12	0	7	0	4	0	4	47	0	550	
14:00	14:15	0	1	0	0	0	1	54	5	0	3	0	3	0	2	53	0	537	
14:15	14:30	0	0	0	1	1	0	72	3	0	4	0	5	0	2	61	0	573	
14:30	14:45	0	1	0	0	1	0	66	5	0	10	0	1	1	1	50	1	593	
14:45	15:00	0	1	0	0	0	0	64	2	0	6	1	3	1	3	47	1	643	
15:00	15:15	0	1	0	2	0	2	91	4	0	3	0	1	1	2	50	1	697	
15:15	15:30	0	0	0	0	0	0	70	7	0	2	0	0	1	0	88	1	700	Peak
15:30	15:45	0	0	0	0	0	0	84	9	0	5	0	2	3	2	82	0	666	
15:45	16:00	0	0	0	1	0	1	95	4	0	2	0	1	0	3	76	0	608	
16:00	16:15	0	0	0	0	0	0	90	4	0	3	0	2	1	1	60	0	576	
16:15	16:30	0	0	0	2	0	2	57	1	0	5	0	5	0	4	59	0	551	
16:30	16:45	0	0	0	1	0	1	65	1	0	7	0	0	0	3	51	0	560	
16:45	17:00	0	0	0	0	0	2	69	1	0	2	0	1	0	2	73	1	540	
17:00	17:15	0	1	0	0	1	0	72	2	0	6	0	0	0	0	51	3	482	
17:15	17:30	0	0	0	0	1	0	70	3	0	5	0	2	0	1	62	0		
17:30	17:45	0	0	0	2	0	1	67	0	0	0	0	1	0	1	37	0		
17:45	18:00	0	0	0	0	0	1	46	2	0	2	0	1	0	0	41	0		

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
10:45	11:45	0	3	0	0	2	1	264	20	0	22	0	10	2	8	246	0	578	
15:15	16:15	0	0	0	1	0	1	339	24	0	12	0	5	5	6	306	1	700	

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

Graphic

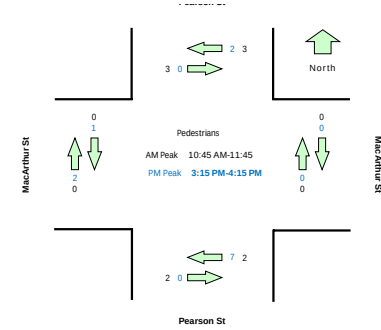
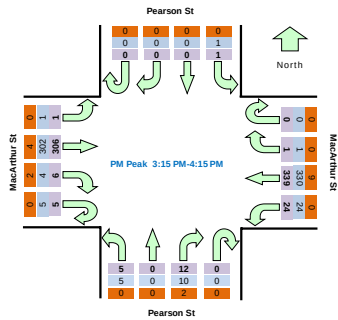
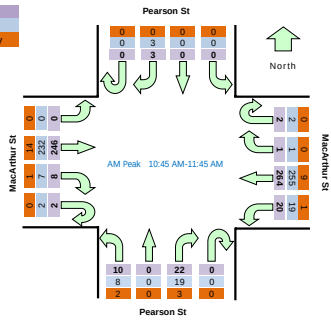
Pedestrians Crossing

Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Hourly Total	Peak
8:00	8:15	0	0	0	0	1	0	0	0	14	
8:15	8:30	0	0	1	0	1	1	1	0	15	
8:30	8:45	2	1	3	0	0	0	0	0	13	
8:45	9:00	1	0	1	0	0	0	1	0	11	
9:00	9:15	0	0	1	0	1	0	0	0	9	
9:15	9:30	0	2	0	0	0	0	0	0	13	
9:30	9:45	0	0	2	0	2	0	0	0	14	
9:45	10:00	0	0	0	0	0	1	0	0	14	
10:00	10:15	1	0	1	0	1	1	0	2	15	
10:15	10:30	0	3	0	0	0	0	0	0	11	
10:30	10:45	0	0	2	0	2	0	0	0	13	
10:45	11:00	0	1	0	0	0	1	0	0	10	
11:00	11:15	1	1	0	0	0	0	0	0	9	
11:15	11:30	2	1	0	0	1	1	0	0		
11:30	11:45	0	0	0	0	1	0	0	0		
11:45	12:00	0	0	0	0	0	0	0	1		
12:00	12:15	0	0	1	0	0	0	0	1	10	
12:15	12:30	0	0	0	0	1	1	0	0	9	
12:30	12:45	1	0	0	2	0	0	0	0	8	
12:45	13:00	0	0	1	1	0	1	0	0	8	
13:00	13:15	0	0	0	0	1	0	0	0	5	
13:15	13:30	0	0	0	0	1	0	0	0	6	
13:30	13:45	1	1	0	0	1	0	0	0	8	
13:45	14:00	0	0	0	0	0	0	0	0	8	
14:00	14:15	0	0	0	0	0	1	0	1	10	
14:15	14:30	1	0	1	0	1	0	0	0	10	
14:30	14:45	0	0	2	1	0	0	0	0	11	
14:45	15:00	1	0	0	0	1	0	0	0	11	
15:00	15:15	0	0	0	0	0	2	0	0	10	
15:15	15:30	0	0	0	0	2	0	0	2	12	
15:30	15:45	0	0	0	0	3	0	0	0	11	
15:45	16:00	0	0	0	0	0	0	1	0	9	
16:00	16:15	2	0	0	0	2	0	0	0	14	
16:15	16:30	1	2	0	0	0	0	0	0	11	
16:30	16:45	0	0	0	0	0	1	0	0	12	
16:45	17:00	2	0	0	1	0	3	0	0	13	
17:00	17:15	0	0	0	1	0	0	0	0	8	
17:15	17:30	2	1	0	0	0	1	0	0		
17:30	17:45	0	0	0	0	0	2	0	0		
17:45	18:00	0	0	0	1	0	0	0	0		

Peak Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Hour	Peak
10:45	11:45	3	3	0	0	2	2	0	0	10	
15:15	16:15	2	0	0	0	7	0	1	2	12	

Pearson St

Total
Light
Heavy



Light Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	0	0	1	0	1	21	4	0	1	0	0	0	2	47	0
8:15	8:30	0	1	0	1	0	0	31	6	0	1	0	2	0	4	67	0
8:30	8:45	0	0	0	2	0	1	47	5	0	1	0	1	2	4	62	0
8:45	9:00	0	0	0	1	0	0	50	3	0	0	0	1	1	10	74	1
9:00	9:15	0	0	0	0	0	0	49	3	0	5	0	0	1	5	60	0
9:15	9:30	0	0	0	0	0	0	54	6	0	4	0	5	1	4	43	0
9:30	9:45	0	0	0	0	0	0	43	2	0	2	0	3	0	4	54	0
9:45	10:00	0	0	0	0	0	1	60	3	0	3	0	2	0	4	53	0
10:00	10:15	0	0	0	0	0	0	53	1	0	3	0	2	1	3	68	0
10:15	10:30	0	0	0	0	1	0	52	1	0	5	0	2	0	6	43	0
10:30	10:45	0	0	0	0	0	0	70	3	0	2	0	5	0	5	50	0
10:45	11:00	0	0	0	0	0	1	51	4	0	4	0	2	1	0	62	0
11:00	11:15	0	2	0	0	1	0	61	4	0	5	0	2	0	3	48	0
11:15	11:30	0	1	0	0	0	0	63	8	0	4	0	2	1	2	58	0
11:30	11:45	0	0	0	0	1	0	80	3	0	6	0	2	0	2	64	0
11:45	12:00	0	0	0	3	1	1	59	6	0	6	0	2	1	0	52	0
12:00	12:15	0	1	0	0	1	0	71	6	0	6	0	2	0	4	76	0
12:15	12:30	0	0	0	0	0	0	66	3	0	4	0	1	1	3	60	1
12:30	12:45	0	0	0	0	0	0	65	4	0	9	0	4	0	1	70	1
12:45	13:00	0	0	0	0	1	1	77	6	0	2	0	2	0	3	58	0
13:00	13:15	0	2	0	0	2	0	56	2	0	6	0	1	0	2	55	1
13:15	13:30	0	0	0	0	0	0	63	7	0	4	0	0	0	3	60	0
13:30	13:45	0	1	0	0	0	1	53	7	0	6	0	2	0	5	57	0
13:45	14:00	0	0	0	0	0	0	67	12	0	7	0	4	0	4	47	0
14:00	14:15	0	1	0	0	0	1	53	4	0	3	0	2	0	2	53	0
14:15	14:30	0	0	0	1	1	0	68	2	0	4	0	5	0	2	59	0
14:30	14:45	0	1	0	0	1	0	65	5	0	8	0	1	1	1	49	1
14:45	15:00	0	1	0	0	0	0	62	2	0	6	0	3	1	3	46	1
15:00	15:15	0	1	0	1	0	2	91	4	0	3	0	1	1	2	49	1
15:15	15:30	0	0	0	0	0	0	70	7	0	2	0	0	1	0	88	1
15:30	15:45	0	0	0	0	0	0	79	9	0	5	0	2	3	2	81	0
15:45	16:00	0	0	0	1	0	1	93	4	0	2	0	1	0	2	74	0
16:00	16:15	0	0	0	0	0	0	88	4	0	1	0	2	1	0	59	0
16:15	16:30	0	0	0	2	0	2	57	1	0	5	0	5	0	4	58	0
16:30	16:45	0	0	0	1	0	1	65	1	0	6	0	0	0	3	50	0
16:45	17:00	0	0	0	0	0	2	69	1	0	2	0	1	0	2	72	1
17:00	17:15	0	1	0	0	1	0	72	2	0	6	0	0	0	0	50	3
17:15	17:30	0	0	0	0	1	0	70	3	0	5	0	2	0	1	61	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	3	0	0	2	1	255	19	0	19	0	8	2	7	232	0	548
15:15	16:15	0	0	0	1	0	1	330	24	0	10	0	5	5	4	302	1	683

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	0	0	0	0	0	9	1	0	3	0	2	0	1	14	0	30
15:15	16:15	0	0	0	0	0	0	9	0	0	2	0	0	0	2	4	0	17

[illegible]

[illegible]

Intersection of MacArthur St and Raymond St, Sale

GPS -38.105216, 147.065458

Date: Thu 07/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Raymond St
East: MacArthur St
South: Raymond St
West: MacArthur St

Survey AM: 8:00 AM-12:00 PM
Period PM: 12:00 PM-6:00 PM
Traffic AM: 10:45 AM-11:45 AM
Peak PM: 12:00 PM-1:00 PM

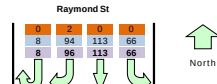
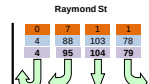
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	7	20	10	0	1	23	9	1	5	15	4	1	13	31	8	952	
8:15	8:30	0	22	26	15	0	8	41	11	5	4	19	7	0	12	55	14	1067	
8:30	8:45	1	22	42	15	0	8	36	20	1	12	30	8	0	10	50	15	1090	
8:45	9:00	0	17	44	23	0	7	55	27	13	8	16	8	0	16	47	14	1113	
9:00	9:15	1	16	25	14	2	9	45	20	9	18	18	10	0	23	34	19	1106	
9:15	9:30	0	19	23	10	2	12	45	26	4	16	22	17	0	19	32	15	1135	
9:30	9:45	1	23	33	16	2	10	39	28	10	14	26	18	1	13	42	17	1144	
9:45	10:00	0	26	35	10	0	14	57	15	11	12	18	5	0	17	49	19	1180	
10:00	10:15	1	15	35	13	1	9	39	28	7	16	18	15	0	25	56	14	1233	
10:15	10:30	1	19	28	6	1	13	43	30	5	20	16	20	0	19	36	14	1238	
10:30	10:45	3	23	32	16	0	15	50	28	6	19	27	22	0	16	51	21	1311	
10:45	11:00	0	23	27	17	2	16	44	43	9	25	26	15	0	20	55	19	1318	Peak
11:00	11:15	2	18	28	15	2	11	54	23	7	9	24	17	0	20	51	16	1292	
11:15	11:30	1	35	24	24	1	14	43	27	9	17	33	18	0	16	57	25		
11:30	11:45	1	19	25	23	2	9	53	29	12	16	25	24	2	18	56	22		
11:45	12:00	1	24	22	18	3	12	47	29	11	17	22	19	2	12	56	20		
12:00	12:15	1	23	41	14	6	10	56	36	10	25	25	21	1	20	54	15	1453	Peak
12:15	12:30	2	28	29	14	5	15	39	37	13	21	34	18	0	13	67	19	1409	
12:30	12:45	2	24	29	18	8	9	45	33	11	24	26	24	0	28	65	24	1403	
12:45	13:00	3	21	14	20	8	18	68	23	5	13	30	24	1	23	75	25	1378	
13:00	13:15	3	34	30	19	4	7	44	28	5	16	18	14	3	23	47	19	1319	
13:15	13:30	0	25	28	16	2	18	53	27	7	19	29	19	0	20	65	20	1298	
13:30	13:45	3	21	21	14	4	10	47	35	12	18	39	11	0	19	69	22	1275	
13:45	14:00	6	24	26	22	1	10	49	21	11	23	28	19	0	15	47	10	1265	
14:00	14:15	2	21	30	17	0	8	37	28	4	25	22	16	0	9	55	19	1262	
14:15	14:30	1	20	23	16	3	13	67	35	3	26	24	13	0	21	48	12	1283	
14:30	14:45	1	25	14	19	1	10	58	25	6	25	19	25	0	24	61	22	1305	
14:45	15:00	1	28	31	9	1	16	41	34	5	18	26	12	0	17	55	15	1340	
15:00	15:15	2	28	24	10	1	6	56	28	3	20	22	18	0	15	63	18	1393	
15:15	15:30	0	23	33	9	3	13	65	25	5	15	35	17	0	21	57	26	1438	
15:30	15:45	1	28	34	15	1	8	71	21	6	13	29	26	0	23	66	28	1414	
15:45	16:00	0	27	29	15	2	10	73	26	17	15	28	16	1	21	61	21	1373	
16:00	16:15	0	17	33	18	0	12	58	28	7	24	44	17	0	17	63	21	1334	
16:15	16:30	1	23	26	14	2	12	38	33	6	23	29	16	0	19	61	20	1321	
16:30	16:45	2	21	25	17	3	13	50	19	8	22	32	18	1	25	57	16	1289	
16:45	17:00	2	31	22	16	2	10	52	24	11	15	21	13	0	17	63	24	1222	
17:00	17:15	0	22	31	12	2	13	64	23	8	27	32	16	0	13	66	17	1103	
17:15	17:30	1	13	22	9	3	9	44	25	4	13	28	18	0	16	66	20		
17:30	17:45	0	23	18	16	2	14	40	28	2	17	13	15	0	15	45	14		
17:45	18:00	2	14	10	8	2	4	29	12	2	9	25	11	0	8	50	18		

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	hour total	
10:45	11:45	4	95	104	79	7	50	194	122	37	67	108	74	2	74	219	82	1318	
12:00	13:00	8	96	113	66	27	52	208	129	39	83	115	87	2	84	261	83	1453	

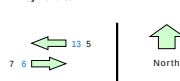
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy

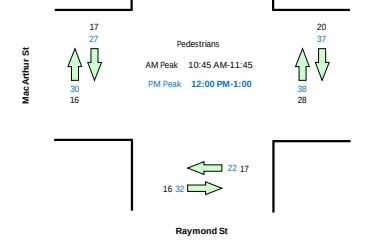
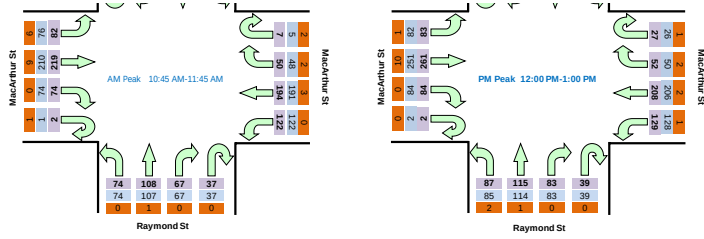


Raymond St



Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hourly Total	
8:00	8:15	1	1	1	2	2	0	3	2	58	
8:15	8:30	3	0	6	2	0	1	3	3	61	
8:30	8:45	2	1	4	4	0	0	5	1	66	
8:45	9:00	0	2	2	3	1	1	0	2	70	
9:00	9:15	0	1	4	2	3	2	1	2	74	
9:15	9:30	1	3	7	6	1	1	2	2	89	
9:30	9:45	0	0	3	4	4	3	5	2	90	
9:45	10:00	0	1	2	4	1	1	2	4	84	
10:00	10:15	0	0	9	4	4	1	4	8	90	
10:15	10:30	2	1	4	3	1	1	5	7	95	
10:30	10:45	0	3	3	5	0	1	2	1	110	
10:45	11:00	2	1	5	3	2	1	6	1	126	
11:00	11:15	0	2	4	7	5	8	5	4	156	
11:15	11:30	1	2	7	13	3	4	3	6		
11:30	11:45	2	2	4	5	7	3	3	5		
11:45	12:00	5	2	18	10	5	6	3	2		
12:00	12:15	4	0	7	5	7	6	9	8	205	
12:15	12:30	1	4	14	16	1	6	6	6	206	
12:30	12:45	4	0	13	10	10	13	3	7	195	
12:45	13:00	4	2	3	7	4	7	9	9	174	
13:00	13:15	7	0	4	6	8	1	9	12	152	
13:15	13:30	4	5	7	8	3	2	10	4	139	
13:30	13:45	2	5	4	5	3	7	5	8	127	
13:45	14:00	1	4	2	4	4	5	1	2	125	
14:00	14:15	4	2	6	8	2	2	3	7	126	
14:15	14:30	3	0	6	7	3	5	5	2	107	
14:30	14:45	1	2	5	10	4	6	6	3	101	
14:45	15:00	0	0	3	4	3	0	5	9	88	
15:00	15:15	0	0	4	2	1	2	5	1	84	
15:15	15:30	1	2	3	5	4	3	2	5	96	
15:30	15:45	0	2	6	8	3	1	2	2	87	
15:45	16:00	2	2	2	1	3	1	5	4	82	
16:00	16:15	3	1	2	5	1	5	4	6	81	
16:15	16:30	0	0	0	5	3	4	0	4	74	
16:30	16:45	1	2	2	2	1	3	3	5	62	
16:45	17:00	0	1	5	0	7	0	3	3	51	
17:00	17:15	1	2	0	5	2	4	0	6	48	
17:15	17:30	0	0	1	1	0	1	0	1		
17:30	17:45	0	0	0	4	2	1	0	1		
17:45	18:00	0	0	10	4	2	0	0	0		

Peak Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hour total	
10:45	11:45	5	7	20	28	17	16	17	16	126	
12:00	13:00	13	6	37	38	22	32	27	30	205	



Light Vehicles

Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	6	20	9	0	1	22	9	1	5	15	4	1	13	30	7
8:15	8:30	0	22	26	15	0	8	38	11	4	4	19	7	0	12	53	14
8:30	8:45	1	21	42	15	0	7	35	18	1	11	30	8	0	10	49	13
8:45	9:00	0	15	44	23	0	5	54	26	13	8	16	8	0	16	46	14
9:00	9:15	1	15	25	14	2	9	42	20	9	18	18	10	0	23	32	18
9:15	9:30	0	18	23	9	2	11	42	25	4	15	22	17	0	18	31	15
9:30	9:45	1	23	32	16	0	10	39	28	10	14	26	18	1	13	39	17
9:45	10:00	0	25	34	10	0	14	55	15	11	12	18	5	0	17	47	19
10:00	10:15	1	13	35	13	1	9	39	28	7	16	18	15	0	25	53	14
10:15	10:30	1	19	28	5	1	13	42	30	5	19	16	20	0	19	36	13
10:30	10:45	3	23	31	16	0	15	48	28	6	19	26	22	0	16	48	20
10:45	11:00	0	20	26	16	1	16	43	43	9	25	26	15	0	20	51	18
11:00	11:15	2	17	28	15	1	9	53	23	7	9	23	17	0	20	47	13
11:15	11:30	1	32	24	24	1	14	43	27	9	17	33	18	0	16	56	24
11:30	11:45	1	19	25	23	2	9	52	29	12	16	25	24	1	18	56	21
11:45	12:00	1	23	22	17	3	12	47	29	11	17	22	19	1	12	56	20
12:00	12:15	1	23	41	14	6	10	56	36	10	25	25	20	1	20	54	15
12:15	12:30	2	27	29	14	5	15	39	36	13	21	33	17	0	13	61	19
12:30	12:45	2	23	29	18	8	8	45	33	11	24	26	24	0	28	63	23
12:45	13:00	3	21	14	20	7	17	66	23	5	13	30	24	1	23	73	25
13:00	13:15	3	32	30	18	4	7	42	28	5	16	18	14	2	23	45	18
13:15	13:30	0	25	28	16	2	18	53	27	7	19	29	19	0	20	64	20
13:30	13:45	3	21	21	14	3	8	47	35	12	18	39	11	0	19	69	22
13:45	14:00	6	23	26	22	1	10	47	21	11	23	28	19	0	15	47	10
14:00	14:15	2	19	30	17	0	8	36	28	4	25	22	16	0	9	55	19
14:15	14:30	1	19	23	16	3	13	66	35	3	26	24	13	0	21	47	12
14:30	14:45	1	24	14	19	1	10	57	25	6	25	19	25	0	24	58	22
14:45	15:00	1	27	31	9	1	16	40	34	5	18	26	12	0	17	55	13
15:00	15:15	2	28	24	10	1	6	56	28	3	20	22	18	0	15	62	17
15:15	15:30	0	23	33	9	3	13	65	25	5	15	35	17	0	21	57	26
15:30	15:45	1	24	34	15	1	8	70	21	6	13	29	26	0	23	66	28
15:45	16:00	0	26	29	15	2	10	71	26	17	14	28	16	1	21	60	21
16:00	16:15	0	17	33	18	0	12	58	28	7	24	44	17	0	17	60	21
16:15	16:30	1	23	26	14	2	11	38	33	6	23	29	16	0	19	60	20
16:30	16:45	2	21	25	17	3	13	50	19	8	22	32	18	1	25	56	16
16:45	17:00	2	31	22	16	2	10	52	23	11	15	21	13	0	17	63	23
17:00	17:15	0	22	31	12	2	13	64	23	8	27	32	16	0	13	65	17
17:15	17:30	1	13	22	9	3	9	44	25	4	13	28	18	0	16	66	20
17:30	17:45	0	23	18	15	2	14	40	28	2	17	13	15	0	15	45	14
17:45	18:00	2	14	10	8	2	4	29	12	2	9	25	11	0	8	50	18

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	4	88	103	78	5	48	191	122	37	67	107	74	1	74	210	76	1285
12:00	13:00	8	94	113	66	26	50	206	128	39	83	114	85	2	84	251	82	1431

Heavy Vehicles

Heavy Vehicles																	
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L

[illegible]

Intersection of New Railway Rd and Desailly St, Sale

GPS -38.106191, 147.063951

Date:	Sat 09/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	N/A
South:	Desailly St
West:	New Railway Rd

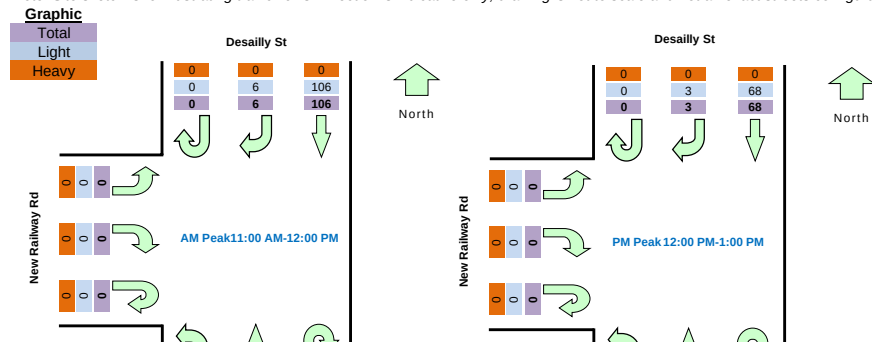
Survey	AM: 9:30 AM-12:00 PM
Period	PM: 12:00 PM-2:00 PM
Traffic	AM: 11:00 AM-12:00 PM
Peak	PM: 12:00 PM-1:00 PM

All Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
9:30	9:45	0	0	20	0	22	1	0	0	0	185	
9:45	10:00	0	0	14	0	25	1	0	0	0	203	
10:00	10:15	0	0	18	0	26	3	0	0	0	235	
10:15	10:30	0	0	19	0	34	2	0	0	0	253	
10:30	10:45	0	3	29	0	27	2	0	0	0	260	
10:45	11:00	0	5	35	0	28	4	0	0	0	270	
11:00	11:15	0	2	25	0	33	5	0	0	0	271	Peak
11:15	11:30	0	1	28	0	29	4	0	0	0		
11:30	11:45	0	1	30	0	36	4	0	0	0		
11:45	12:00	0	2	23	0	41	7	0	0	0		
12:00	12:15	0	0	23	0	38	2	0	0	0	224	Peak
12:15	12:30	0	1	15	0	26	3	0	0	0	202	
12:30	12:45	0	1	17	0	41	2	0	0	0	210	
12:45	13:00	0	1	13	0	36	5	0	0	0	209	
13:00	13:15	0	2	16	0	21	2	0	0	0	219	
13:15	13:30	0	1	14	0	34	4	0	0	0		
13:30	13:45	0	2	21	0	31	6	0	0	0		
13:45	14:00	0	5	22	0	36	2	0	0	0		

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	6	106	0	139	20	0	0	0	271
12:00	13:00	0	3	68	0	141	12	0	0	0	224

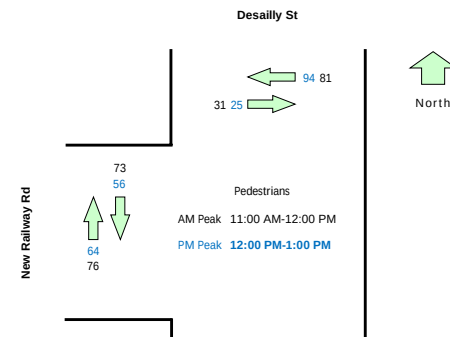
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Pedestrians Crossing

Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
9:30	9:45	14	15	9		11	13	239
9:45	10:00	9	7	3	4	6	6	271
10:00	10:15	15	20	4	1	14	6	342
10:15	10:30	25	12	8	5	21	11	383
10:30	10:45	21	20	9	8	19	17	395
10:45	11:00	25	21	12	7	24	17	383
11:00	11:15	26	9	8	9	31	18	354
11:15	11:30	24	22	6	6	17	19	
11:30	11:45	22	22	4	6	10	18	
11:45	12:00	9	20	10	2	15	21	
12:00	12:15	24	14	14	3	13	21	351
12:15	12:30	31	28	6	2	13	17	361
12:30	12:45	20	26	4	6	17	15	369
12:45	13:00	19	20	8	6	13	11	362
13:00	13:15	21	31	6	6	18	17	344
13:15	13:30	19	25	7	13	20	21	
13:30	13:45	24	24	6	2	14	11	
13:45	14:00	14	21	7	2	7	8	

Peak Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
11:00	12:00	81	73	28	23	73	76	354
12:00	13:00	94	88	32	13	56	64	347



Intersection of MacArthur St and Desailly St, Sale

GPS -38.105276, 147.063942

Date:	Sat 09/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	MacArthur St
South:	Desailly St
West:	MacArthur St

Survey Period:	AM: 9:30 AM-12:00 PM
PM:	12:00 PM-2:00 PM
Traffic Peak:	AM: 11:00 AM-12:00 PM
PM:	12:00 PM-1:00 PM

All Vehicles

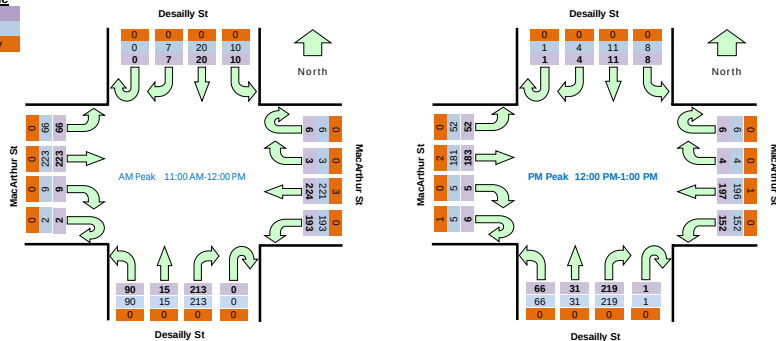
Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	0	1	2	1	0	1	34	33	0	31	0	5	0	0	24	12	728	
9:45	10:00	0	0	1	1	2	0	35	34	0	33	2	14	0	3	53	11	806	
10:00	10:15	1	0	3	4	0	2	43	37	0	34	3	8	0	0	31	14	866	
10:15	10:30	0	3	5	0	0	1	46	34	0	44	3	13	0	4	48	14	958	
10:30	10:45	0	1	1	2	2	1	45	50	0	44	4	15	0	0	43	14	1017	
10:45	11:00	0	3	2	2	3	0	57	50	0	38	6	14	1	1	52	20	1059	
11:00	11:15	0	2	5	2	1	2	55	57	0	45	5	24	0	3	52	19	1081	Peak
11:15	11:30	0	1	4	4	2	1	59	47	0	53	1	25	0	1	65	11		
11:30	11:45	0	3	5	0	3	0	50	48	0	58	4	16	1	2	50	24		
11:45	12:00	0	1	6	4	0	0	60	41	0	57	5	25	1	3	56	12		
12:00	12:15	0	2	1	2	1	1	44	46	0	60	8	18	3	1	48	20	946	Peak
12:15	12:30	0	0	4	1	2	2	44	38	1	46	6	14	1	0	53	7	892	
12:30	12:45	1	1	5	0	1	1	61	28	0	67	9	16	1	3	47	12	877	
12:45	13:00	0	1	1	5	2	0	48	40	0	46	8	18	1	1	35	13	824	
13:00	13:15	0	4	1	2	1	3	39	35	0	41	2	24	0	0	39	10	813	
13:15	13:30	0	0	2	1	2	1	38	31	0	47	3	17	0	0	47	15		
13:30	13:45	0	1	2	2	0	2	37	47	0	57	6	14	1	2	23	6		
13:45	14:00	0	4	4	2	1	2	41	29	0	45	4	14	0	0	46	16		

Peak Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	hour	total
11:00	12:00	0	7	20	10	6	3	224	193	0	213	15	90	2	9	223	66	1081	
12:00	13:00	1	4	11	8	6	4	197	152	1	219	31	66	6	5	183	52	946	

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

Graphic

Total
Light
Heavy



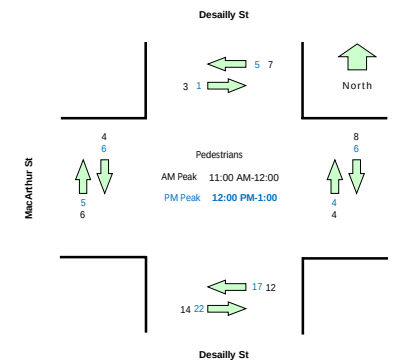
Light Vehicles

Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St					
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
9:30	9:45	0	1	2	1	0	1	34	33	0	31	0	5	0	0	23	12		
9:45	10:00	0	0	1	1	2	0	34	34	0	33	2	14	0	3	53	11		
10:00	10:15	1	0	3	4	0	2	42	37	0	34	3	8	0	0	29	14		
10:15	10:30	0	3	5	0	0	1	46	34	0	44	2	12	0	4	48	14		
10:30	10:45	0	1	1	2	2	1	44	50	0	44	4	15	0	0	43	14		

Pedestrians Crossing

Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hourly Total	
9:30	9:45	0	4	2	0	2	2	0	1	59	
9:45	10:00	2	1	2	0	7	1	0	0	64	
10:00	10:15	0	1	0	2	5	8	1	1	69	
10:15	10:30	0	1	5	2	7	2	0	0	63	
10:30	10:45	0	0	1	1	3	7	3	1	67	
10:45	11:00	2	0	4	1	5	3	3	0	61	
11:00	11:15	2	1	3	0	3	1	0	2	58	
11:15	11:30	5	1	1	2	4	1	3	4		
11:30	11:45	0	1	1	1	4	2	1	0		
11:45	12:00	0	0	3	1	1	10	0	0		
12:00	12:15	2	0	1	2	3	5	5	2	66	
12:15	12:30	1	0	2	2	9	7	0	2	58	
12:30	12:45	1	1	1	0	3	8	0	1	51	
12:45	13:00	1	0	2	0	2	2	1	0	53	
13:00	13:15	0	1	1	0	4	3	1	2	58	
13:15	13:30	0	2	8	2	3	0	0	1		
13:30	13:45	0	4	0	1	5	3	0	4		
13:45	14:00	0	3	2	2	2	1	0	3		

Peak Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hour	total
11:00	12:00	7	3	8	4	12	14	4	6	58	
12:00	13:00	5	1	6	4	17	22	6	5	66	



10:45	11:00	0	3	2	2	3	0	57	50	0	38	6	14	1	1	52	20
11:00	11:15	0	2	5	2	1	2	53	57	0	45	5	24	0	3	52	19
11:15	11:30	0	1	4	4	2	1	58	47	0	53	1	25	0	1	65	11
11:30	11:45	0	3	5	0	3	0	50	48	0	58	4	16	1	2	50	24
11:45	12:00	0	1	6	4	0	0	60	41	0	57	5	25	1	3	56	12
12:00	12:15	0	2	1	2	1	1	43	46	0	60	8	18	2	1	47	20
12:15	12:30	0	0	4	1	2	2	44	38	1	46	6	14	1	0	53	7
12:30	12:45	1	1	5	0	1	1	61	28	0	67	9	16	1	3	46	12
12:45	13:00	0	1	1	5	2	0	48	40	0	46	8	18	1	1	35	13
13:00	13:15	0	4	1	2	1	3	39	35	0	41	2	24	0	0	39	10
13:15	13:30	0	0	2	1	2	1	38	31	0	47	3	17	0	0	47	15
13:30	13:45	0	1	2	2	0	2	37	47	0	57	6	14	1	2	23	6
13:45	14:00	0	4	4	2	1	2	40	29	0	45	4	14	0	0	46	16

Heavy Vehicles																	
Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:45	10:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:00	10:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
10:15	10:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
10:30	10:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:45	11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	11:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45	13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

[illegible]

[illegible]

Intersection of MacArthur St and Pearson St, Sale

GPS -38.105322, 147.062446

Date: Sat 09/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Pearson St
East: MacArthur St
South: Pearson St
West: MacArthur St

Survey Period: AM: 9:30 AM-12:00 PM
 PM: 12:00 PM-2:00 PM
Traffic Peak: AM: 11:00 AM-12:00 PM
 PM: 12:00 PM-1:00 PM

All Vehicles

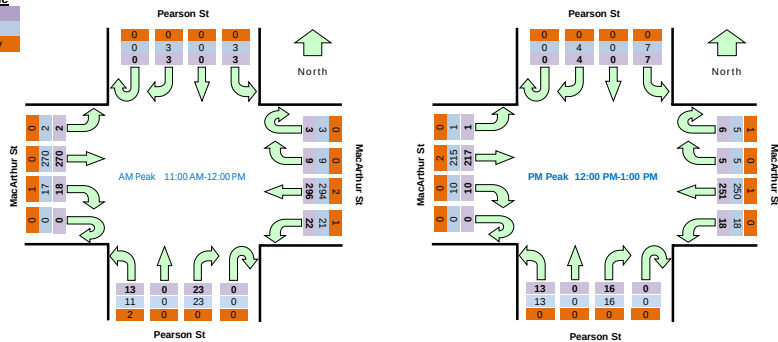
Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	0	0	0	0	0	0	35	4	0	5	0	4	0	1	31	0	431	
9:45	10:00	0	0	0	0	0	0	48	3	0	6	0	3	0	2	61	0	476	
10:00	10:15	0	0	0	2	0	1	43	6	0	3	0	2	0	2	42	0	511	
10:15	10:30	0	0	0	2	0	1	51	6	0	2	0	1	0	5	59	0	573	
10:30	10:45	0	0	0	0	0	0	54	6	0	2	0	5	0	3	55	0	618	
10:45	11:00	0	0	0	2	1	0	69	4	0	2	0	5	0	5	70	0	652	
11:00	11:15	0	0	0	1	1	2	69	9	0	6	0	2	0	3	69	1	662	Peak
11:15	11:30	0	3	0	1	0	4	78	2	0	6	0	4	0	6	67	1		
11:30	11:45	0	0	0	1	1	2	68	5	0	5	0	2	0	5	70	0		
11:45	12:00	0	0	0	0	1	1	81	6	0	6	0	5	0	4	64	0		
12:00	12:15	0	0	0	4	3	4	59	3	0	4	0	4	0	5	66	0	548	Peak
12:15	12:30	0	1	0	2	2	0	58	4	0	3	0	2	0	1	54	0	520	
12:30	12:45	0	1	0	1	1	0	76	3	0	6	0	6	0	3	55	1	506	
12:45	13:00	0	2	0	0	0	1	58	8	0	3	0	1	0	1	42	0	443	
13:00	13:15	0	0	0	2	0	0	69	2	0	4	0	2	0	2	42	1	453	
13:15	13:30	0	0	0	1	0	3	49	0	0	2	0	1	0	1	56	0		
13:30	13:45	0	0	0	0	1	1	51	2	0	0	0	3	0	1	31	0		
13:45	14:00	0	1	0	0	0	0	56	3	0	5	0	1	0	5	55	0		

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	hour total	
11:00	12:00	0	3	0	3	3	9	296	22	0	23	0	13	0	18	270	2	662	
12:00	13:00	0	4	0	7	6	5	251	18	0	16	0	13	0	10	217	1	548	

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

Graphic

Total
 Light
 Heavy



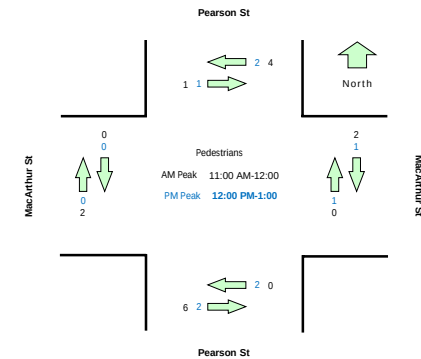
Light Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St					
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
9:30	9:45	0	0	0	0	0	0	35	4	0	5	0	4	0	0	30	0		
9:45	10:00	0	0	0	0	0	0	47	3	0	6	0	2	0	1	61	0		
10:00	10:15	0	0	0	2	0	1	43	5	0	2	0	2	0	1	41	0		
10:15	10:30	0	0	0	2	0	1	50	6	0	2	0	1	0	5	59	0		
10:30	10:45	0	0	0	0	0	0	53	6	0	2	0	5	0	2	55	0		

Pedestrians Crossing

Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
9:30	9:45	0	2	0	0	0	0	0	0	15	
9:45	10:00	1	2	1	1	1	0	0	1	16	
10:00	10:15	0	1	0	0	0	3	0	0	9	
10:15	10:30	0	0	0	1	0	0	0	1	12	
10:30	10:45	0	2	0	0	0	1	0	0	13	
10:45	11:00	0	0	0	0	0	0	0	0	10	
11:00	11:15	2	1	0	0	0	3	0	1	15	
11:15	11:30	2	0	0	0	0	0	0	1		
11:30	11:45	0	0	0	0	0	0	0	0		
11:45	12:00	0	0	2	0	0	3	0	0		
12:00	12:15	0	0	0	0	1	1	0	0	9	
12:15	12:30	1	0	0	1	0	1	0	0	7	
12:30	12:45	1	1	1	0	0	0	0	0	7	
12:45	13:00	0	0	0	0	1	0	0	0	8	
13:00	13:15	0	0	0	0	0	0	0	0	13	
13:15	13:30	0	2	0	0	0	1	0	0		
13:30	13:45	0	0	0	0	1	2	1	0		
13:45	14:00	1	0	5	0	0	0	0	0		

Peak Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
11:00	12:00	4	1	2	0	0	6	0	2	15	
12:00	13:00	2	1	1	1	2	2	0	0	9	



10:45	11:00	0	0	0	2	1	0	69	4	0	2	0	4	0	5	70	0
11:00	11:15	0	0	0	1	1	2	68	8	0	6	0	2	0	3	69	1
11:15	11:30	0	3	0	1	0	4	77	2	0	6	0	3	0	5	67	1
11:30	11:45	0	0	0	1	1	2	68	5	0	5	0	2	0	5	70	0
11:45	12:00	0	0	0	0	1	1	81	6	0	6	0	4	0	4	64	0
12:00	12:15	0	0	0	4	2	4	58	3	0	4	0	4	0	5	65	0
12:15	12:30	0	1	0	2	2	0	58	4	0	3	0	2	0	1	54	0
12:30	12:45	0	1	0	1	1	0	76	3	0	6	0	6	0	3	54	1
12:45	13:00	0	2	0	0	0	1	58	8	0	3	0	1	0	1	42	0
13:00	13:15	0	0	0	2	0	0	69	2	0	4	0	2	0	2	42	1
13:15	13:30	0	0	0	1	0	3	49	0	0	2	0	1	0	1	56	0
13:30	13:45	0	0	0	0	1	1	51	2	0	0	0	3	0	1	31	0
13:45	14:00	0	1	0	0	0	0	55	3	0	5	0	1	0	5	55	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	3	0	3	3	9	294	21	0	23	0	11	0	17	270	2	656
12:00	13:00	0	4	0	7	5	5	250	18	0	16	0	13	0	10	215	1	544

Heavy Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St			
		U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
Period Start	Period End	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
9:30	9:45	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
9:45	10:00	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0
10:00	10:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
10:15	10:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:30	10:45	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
10:45	11:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
11:00	11:15	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12:00	12:15	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45	13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period	Start/End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	0	0	0	0	0	2	1	0	0	0	2	0	1	0	0	6
12:00	13:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	4

Cyclists

[illegible]

[illegible]

Intersection of MacArthur St and Raymond St, Sale

GPS -38.105216, 147.065458

Date: Sat 09/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Raymond St
East: MacArthur St
South: Raymond St
West: MacArthur St

Survey Period: AM: 9:30 AM-12:00 PM
PM: 12:00 PM-2:00 PM
Traffic Peak: AM: 10:30 AM-11:30 AM
PM: 12:00 PM-1:00 PM

All Vehicles

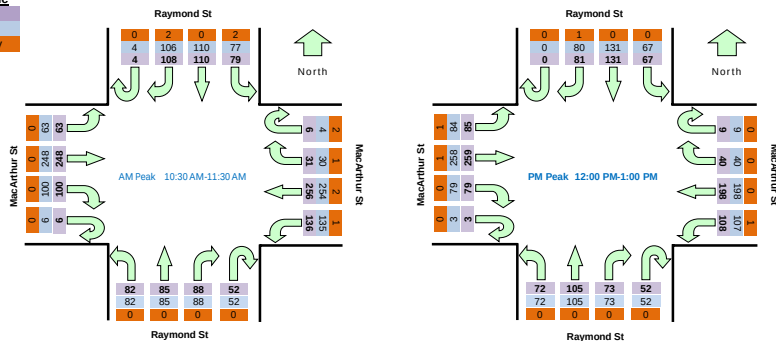
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	1	24	28	13	0	6	31	28	10	15	14	8	1	7	30	15	1128	
9:45	10:00	1	20	37	8	1	7	40	32	10	13	25	14	0	20	48	16	1247	
10:00	10:15	0	27	23	24	1	8	47	23	7	20	22	12	0	15	43	9	1307	
10:15	10:30	0	24	29	15	1	10	49	27	14	16	22	17	0	19	60	21	1391	
10:30	10:45	4	26	17	23	2	8	57	37	19	24	19	20	2	18	59	15	1454	Peak
10:45	11:00	0	25	28	17	3	8	68	37	11	14	23	19	1	25	58	15	1438	
11:00	11:15	0	27	31	17	0	9	71	32	12	23	21	20	2	25	59	16	1452	
11:15	11:30	0	30	34	22	1	6	60	30	10	27	22	23	1	32	72	17		
11:30	11:45	1	23	29	17	3	7	58	20	9	18	23	19	5	20	58	24		
11:45	12:00	1	21	31	21	1	19	53	29	12	20	21	22	2	25	68	20		
12:00	12:15	0	18	30	24	2	12	56	30	8	16	27	15	1	23	65	23	1362	Peak
12:15	12:30	0	29	38	12	3	9	41	28	13	24	27	24	1	20	58	31	1304	
12:30	12:45	0	13	32	15	0	13	47	24	13	15	21	17	1	19	75	17	1213	
12:45	13:00	0	21	31	16	4	6	54	26	18	18	30	16	0	17	61	14	1164	
13:00	13:15	0	20	22	12	3	9	45	26	6	20	31	14	0	18	50	16	1104	
13:15	13:30	1	20	20	10	0	6	41	20	11	19	13	12	0	22	56	16		
13:30	13:45	0	23	17	8	2	4	52	24	10	7	26	10	0	16	60	14		
13:45	14:00	0	11	18	13	1	4	51	21	8	19	23	12	0	14	61	16		

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
10:30	11:30	4	108	110	79	6	31	256	136	52	88	85	82	6	100	248	63	1454	
12:00	13:00	0	81	131	67	9	40	198	108	52	73	105	72	3	79	259	85	1362	

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

Graphic

Total
Light
Heavy



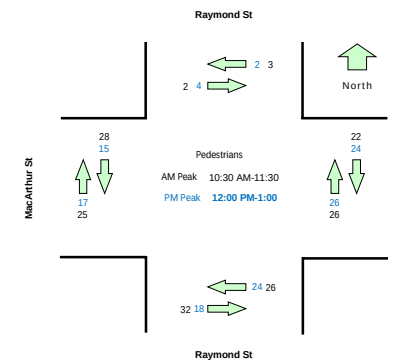
Light Vehicles

Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	1	24	28	13	0	6	31	28	10	15	14	8	1	7	29	15
9:45	10:00	1	19	37	8	1	7	40	32	10	13	25	14	0	20	48	16
10:00	10:15	0	26	23	23	1	8	47	22	7	20	22	12	0	15	42	8
10:15	10:30	0	24	29	14	1	9	49	27	14	16	21	17	0	19	60	21
10:30	10:45	4	25	17	23	2	8	57	37	19	24	19	20	2	18	59	15

Pedestrians Crossing

Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
9:30	9:45	1	1	5	3	2	6	0	4	116	
9:45	10:00	0	1	1	4	8	2	12	1	124	
10:00	10:15	1	1	6	2	3	10	4	3	146	
10:15	10:30	4	0	5	7	4	7	5	3	153	
10:30	10:45	1	0	8	6	4	7	3	1	164	
10:45	11:00	0	0	4	10	6	11	13	7	172	
11:00	11:15	0	0	5	4	7	4	9	8	167	
11:15	11:30	2	2	5	6	9	10	3	9		
11:30	11:45	4	0	5	6	8	5	3	7		
11:45	12:00	0	0	4	8	11	13	8	2		
12:00	12:15	1	0	1	3	4	4	6	3	130	
12:15	12:30	0	1	7	7	4	4	3	3	131	
12:30	12:45	1	1	13	10	15	8	5	5	121	
12:45	13:00	0	2	3	6	1	2	1	6	85	
13:00	13:15	1	1	3	5	3	0	7	3	74	
13:15	13:30	0	1	2	2	4	8	2	0		
13:30	13:45	2	3	1	2	4	9	0	1		
13:45	14:00	0	0	0	1	3	4	2	0		

Peak Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
10:30	11:30	3	2	22	26	26	32	28	25	164	
12:00	13:00	2	4	24	26	24	18	15	17	130	



10:45	11:00	0	25	28	16	2	8	68	37	11	14	23	19	1	25	58	15
11:00	11:15	0	27	31	16	0	8	69	31	12	23	21	20	2	25	59	16
11:15	11:30	0	29	34	22	0	6	60	30	10	27	22	23	1	32	72	17
11:30	11:45	1	23	29	17	3	7	58	20	9	18	23	19	5	20	58	24
11:45	12:00	1	21	31	21	1	19	53	29	12	20	21	22	2	25	68	20
12:00	12:15	0	17	30	24	2	12	56	29	8	16	27	15	1	23	65	22
12:15	12:30	0	29	38	12	3	9	41	28	13	24	27	24	1	20	58	31
12:30	12:45	0	13	32	15	0	13	47	24	13	15	21	17	1	19	75	17
12:45	13:00	0	21	31	16	4	6	54	26	18	18	30	16	0	17	60	14
13:00	13:15	0	20	22	12	3	9	45	26	6	20	31	14	0	18	50	16
13:15	13:30	1	20	20	10	0	6	41	20	11	19	13	12	0	22	56	16
13:30	13:45	0	23	17	8	2	4	52	24	10	7	26	10	0	16	60	14
13:45	14:00	0	10	18	13	1	4	51	21	8	19	23	12	0	14	61	16

[illegible][illegible]

TRANS TRAFFIC SURVEY

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AUTOMATIC COUNT SUMMARY

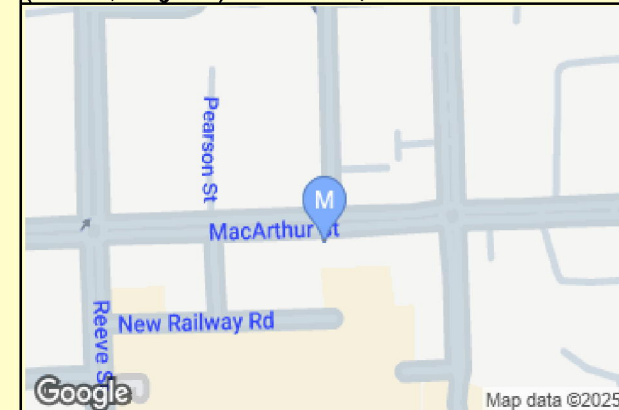
Street Name :	Desailly St	Location :	South of MacArthur St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD12RWSA	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24118	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information		Lat 38° 6' 19.76 South Long 147° 3' 49.92 East	Direction of Travel		
			Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		4,733	2,827	1,906
	7 Day Average		4,579	2,678	1,901
Weekday	AM	10:00	477	296	181
Peak hour starts	PM	15:00	507	334	173
Speeds : (Km/Hr)	85th Percentile		24.1	25.0	23.3
	Average		21.2	21.6	20.7
Classification % :		Light Vehicles up to 5.5m	95.7%	95.5%	96.0%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.105490, 147.063868



[Speed Data](#)

[Speed Graph](#)

[Speed Bin](#)

[Volume Data](#)

[Volume Graph](#)

[Classification](#)

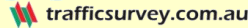


QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY



Site Desailly St

Direction ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	10:00	10:00	11:00	10:00	11:00	11:00	N/A	10:00	N/A	10:00	N/A	11:00
PM Peak	13:00	15:00	16:00	12:00	14:00	12:00	13:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	3	3	0	0	3	4	3	16	2	9	2	7	4
01:00	1	0	0	3	0	3	2	9	1	4	1	5	3
02:00	2	1	0	1	1	0	0	5	1	5	1	0	0
03:00	4	2	2	3	0	0	0	11	2	11	2	0	0
04:00	12	12	13	13	18	8	2	78	11	68	14	10	5
05:00	27	16	17	22	20	10	9	121	17	102	20	19	10
06:00	67	63	76	83	73	41	29	432	62	362	72	70	35
07:00	102	59	73	81	156	88	47	606	87	471	94	135	68
08:00	224	223	205	197	249	172	101	1371	196	1098	220	273	137
09:00	392	292	425	309	386	304	261	2369	338	1804	361	565	283
10:00	527	425	511	386	536	526	368	3279	468	2385	477	894	447
11:00	411	318	387	429	408	578	456	2987	427	1953	391	1034	517
12:00	372	326	350	460	428	600	438	2974	425	1936	387	1038	519
13:00	472	465	455	422	467	432	456	3169	453	2281	456	888	444
14:00	437	431	462	431	560	434	393	3148	450	2321	464	827	414
15:00	423	623	520	459	513	386	346	3270	467	2538	508	732	366
16:00	441	455	521	402	393	359	327	2898	414	2212	442	686	343
17:00	412	297	418	385	294	250	287	2343	335	1806	361	537	269
18:00	218	209	177	113	158	180	161	1216	174	875	175	341	171
19:00	128	187	145	135	172	107	92	966	138	767	153	199	100
20:00	67	69	71	167	155	55	48	632	90	529	106	103	52
21:00	21	50	19	7	69	11	13	190	27	166	33	24	12
22:00	4	1	2	5	0	4	2	18	3	12	2	6	3
23:00	1	6	1	0	1	2	2	13	2	9	2	4	2
Total	4768	4533	4850	4513	5060	4554	3843	32121	4589	23724	4745	8397	4199
% Heavy	3.54%	5.23%	4.35%	4.85%	5.00%	3.12%	3.72%	4.28%		4.59%		3.39%	

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AUTOMATIC COUNT SUMMARY

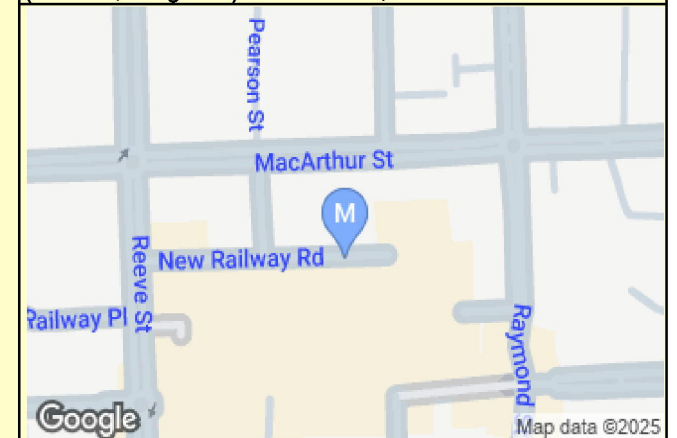
Street Name :	New Railway Rd	Location :	West of Desailly St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD00QXA4	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24116	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information Lat 38° 6' 22.45 South Long 147° 3' 48.51 East			Direction of Travel		
			Both directions	Westbound	Eastbound
Traffic Volume : (Vehicles/Day)		Weekdays Average	270	270	0
		7 Day Average	261	261	0
Weekday	AM	11:00	30	30	0
Peak hour start	PM	14:00	27	27	0
Speeds : (Km/Hr)		85th Percentile	30.2	30.2	N/A
		Average	25.7	25.7	N/A
Classification % :		Light Vehicles up to 5.5m	87.6%	87.6%	N/A

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.106235, 147.063475



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY

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Site New Railway Rd

Direction Westbound ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	11:00	11:00	10:00	10:00	11:00	11:00	N/A	11:00	N/A	11:00	N/A	11:00
PM Peak	13:00	12:00	14:00	13:00	14:00	12:00	13:00	N/A	12:00	N/A	14:00	N/A	12:00
00:00	2	1	2	1	1	4	0	11	2	7	1	4	2
01:00	1	2	0	1	1	1	0	6	1	5	1	1	1
02:00	0	1	0	0	0	0	0	1	0	1	0	0	0
03:00	0	0	0	1	0	1	1	3	0	1	0	2	1
04:00	2	2	2	3	3	2	0	14	2	12	2	2	1
05:00	1	0	0	2	3	0	0	6	1	6	1	0	0
06:00	5	4	3	5	3	2	1	23	3	20	4	3	2
07:00	4	1	10	5	13	4	3	40	6	33	7	7	4
08:00	11	12	10	7	17	6	5	68	10	57	11	11	6
09:00	15	21	11	6	23	16	8	100	14	76	15	24	12
10:00	29	22	23	26	36	17	16	169	24	136	27	33	17
11:00	25	44	24	26	31	51	23	224	32	150	30	74	37
12:00	20	30	22	23	27	36	27	185	26	122	24	63	32
13:00	29	23	12	27	15	30	34	170	24	106	21	64	32
14:00	24	27	32	19	35	24	21	182	26	137	27	45	23
15:00	26	25	18	19	24	25	16	153	22	112	22	41	21
16:00	24	15	26	8	26	21	20	140	20	99	20	41	21
17:00	17	29	28	13	28	10	18	143	20	115	23	28	14
18:00	12	12	14	8	17	10	10	83	12	63	13	20	10
19:00	1	4	11	10	8	10	3	47	7	34	7	13	7
20:00	4	4	6	7	7	15	3	46	7	28	6	18	9
21:00	7	9	3	5	12	2	1	39	6	36	7	3	2
22:00	1	0	0	0	0	2	1	4	1	1	0	3	2
23:00	0	1	2	0	0	1	0	4	1	3	1	1	1
Total	260	289	259	222	330	290	211	1861	266	1360	272	501	251
% Heavy	14.23%	9.34%	12.36%	16.22%	14.85%	10.00%	8.06%	12.20%		13.31%		9.18%	

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AUTOMATIC COUNT SUMMARY

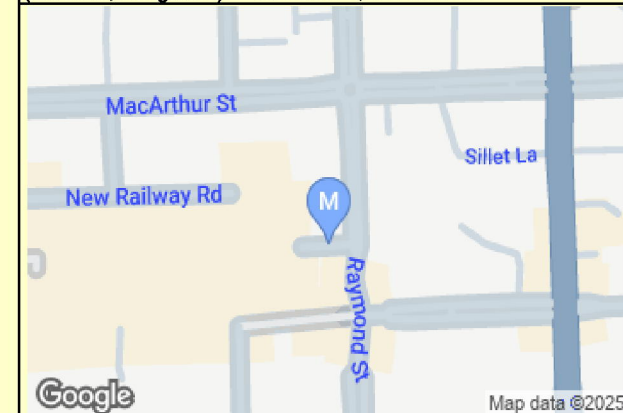
Street Name :	New Railway Rd	Location :	West of Raymond St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	CX20WTP7/P	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24117	Speed Zone :	20 km/h
Prepared By :		Email:	

GPS information		Direction of Travel		
Lat	38° 6' 24.02 South	Both directions	Westbound	Eastbound
Long	147° 3' 54.72 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	777	777	0
	7 Day Average	747	747	0
Weekday	AM	79	79	0
Peak hour start	PM	77	77	0
Speeds : (Km/Hr)	85th Percentile	17.3	17.3	N/A
	Average	14.8	14.8	N/A
Classification % :	Light Vehicles up to 5.5m	97.6%	97.6%	N/A

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.106671, 147.065199



[Speed Data](#)

[Volume Data](#)

[Speed Graph](#)

[Volume Graph](#)

[Speed Bin](#)

[Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY

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Site New Railway Rd

Direction Westbound ▼

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Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	11:00	11:00	10:00	10:00	11:00	11:00	11:00	N/A	11:00	N/A	11:00	N/A	11:00
PM Peak	12:00	15:00	15:00	13:00	15:00	12:00	12:00	N/A	12:00	N/A	15:00	N/A	12:00
00:00	1	0	1	0	0	0	0	2	0	2	0	0	0
01:00	1	0	0	1	1	2	0	5	1	3	1	2	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	1	0	3	0	2	2	9	1	5	1	4	2
04:00	2	1	2	2	1	1	1	10	1	8	2	2	1
05:00	3	3	2	2	0	2	2	14	2	10	2	4	2
06:00	4	4	13	8	17	10	6	62	9	46	9	16	8
07:00	12	17	24	18	19	10	6	106	15	90	18	16	8
08:00	34	32	43	32	46	26	26	239	34	187	37	52	26
09:00	47	64	47	64	61	70	31	384	55	283	57	101	51
10:00	73	66	87	80	79	99	64	548	78	385	77	163	82
11:00	78	82	67	80	88	116	72	583	83	395	79	188	94
12:00	76	72	73	74	71	87	76	529	76	366	73	163	82
13:00	74	66	57	75	70	71	59	472	67	342	68	130	65
14:00	66	69	68	65	74	61	51	454	65	342	68	112	56
15:00	75	76	83	65	84	62	62	507	72	383	77	124	62
16:00	64	69	76	68	73	44	52	446	64	350	70	96	48
17:00	63	60	63	55	65	31	49	386	55	306	61	80	40
18:00	33	27	39	40	38	32	18	227	32	177	35	50	25
19:00	20	27	23	28	22	11	14	145	21	120	24	25	13
20:00	11	17	12	14	12	10	7	83	12	66	13	17	9
21:00	4	3	2	5	4	0	2	20	3	18	4	2	1
22:00	0	1	1	1	0	2	1	6	1	3	1	3	2
23:00	1	0	0	0	0	1	0	2	0	1	0	1	1
Total	743	757	783	780	825	750	601	5239	748	3888	778	1351	676
% Heavy	3.63%	2.38%	1.66%	3.46%	2.55%	1.87%	1.16%	2.42%		2.73%		1.55%	

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AUTOMATIC COUNT SUMMARY

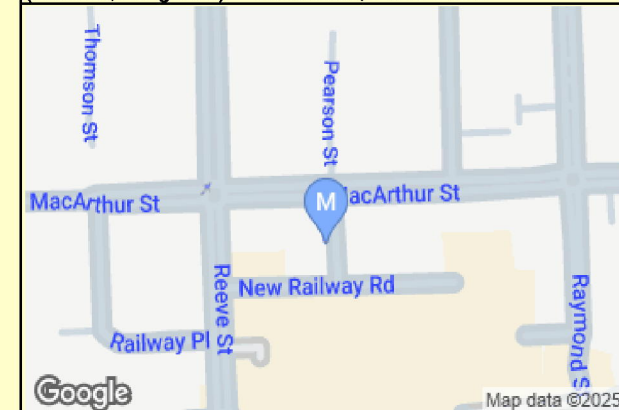
Street Name :	Pearson St	Location :	South of MacArthur St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD629P9C	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24119	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information		Lat 38° 6' 21.02 South Long 147° 3' 44.45 East	Direction of Travel		
			Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		391	176	215
	7 Day Average		328	148	180
Weekday	AM	10:00	41	22	19
Peak hour starts	PM	14:00	37	18	19
Speeds : (Km/Hr)	85th Percentile		28.3	27.3	29.6
	Average		24.1	23.2	25.2
Classification % :		Light Vehicles up to 5.5m	84.3%	84.9%	83.8%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.105839, 147.062348



[Speed Data](#)

[Speed Graph](#)

[Speed Bin](#)

[Volume Data](#)

[Volume Graph](#)

[Classification](#)

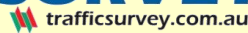


QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY



Site Pearson St

Direction Both directions ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	08:00	09:00	08:00	10:00	11:00	10:00	N/A	10:00	N/A	10:00	N/A	11:00
PM Peak	13:00	13:00	14:00	12:00	14:00	12:00	16:00	N/A	14:00	N/A	14:00	N/A	12:00
00:00	1	1	0	0	0	2	0	4	1	2	0	2	1
01:00	1	0	0	1	0	0	2	4	1	2	0	2	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	0	1	0	0	1	3	0	2	0	1	1
04:00	6	2	5	5	10	4	1	33	5	28	6	5	3
05:00	2	4	7	5	4	9	6	37	5	22	4	15	8
06:00	10	12	10	16	12	7	6	73	10	60	12	13	7
07:00	9	1	2	6	11	9	0	38	5	29	6	9	5
08:00	33	39	39	35	32	15	13	206	29	178	36	28	14
09:00	41	28	51	26	34	17	7	204	29	180	36	24	12
10:00	47	32	46	31	53	13	14	236	34	209	42	27	14
11:00	34	30	47	35	38	32	9	225	32	184	37	41	21
12:00	27	28	38	38	35	17	10	193	28	166	33	27	14
13:00	40	43	34	37	30	15	12	211	30	184	37	27	14
14:00	35	36	47	29	44	9	14	214	31	191	38	23	12
15:00	22	42	37	30	36	4	12	183	26	167	33	16	8
16:00	35	29	36	31	28	2	20	181	26	159	32	22	11
17:00	25	15	21	16	15	8	11	111	16	92	18	19	10
18:00	20	24	12	7	11	5	3	82	12	74	15	8	4
19:00	12	14	9	8	12	3	6	64	9	55	11	9	5
20:00	2	1	2	5	8	0	0	18	3	18	4	0	0
21:00	4	4	3	1	6	3	7	28	4	18	4	10	5
22:00	0	2	0	4	0	2	0	8	1	6	1	2	1
23:00	1	7	0	0	2	0	0	10	1	10	2	0	0
Total	407	395	446	367	421	176	154	2366	338	2036	407	330	165
% Heavy	15.48%	16.71%	14.13%	18.26%	15.91%	17.05%	16.23%	16.10%		16.01%		16.67%	

TRANS TRAFFIC SURVEY

Map and Surveyed Area

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TRANS TRAFFIC SURVEY

Parking Occupancy Survey

Date:	Wednesday, 22 August 2018
Time:	10:00 AM - 12:00 PM
Location:	MacArthur Street, Sale
Surveyor:	SA

Area	Map Ref	Section	Side	Restriction	Clear Way	Capacity	Parking Occupancy															
							04:00	04:30	05:00	05:30	06:00	06:30	07:00	07:30	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30
1		MacArthur St	Between St to Princes St	North	unrestricted	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2				South	unrestricted	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3			Princes St to Denbigh St	North	unrestricted	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4				South	unrestricted	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5				South	unrestricted	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6			Denbigh St to Maynard St	North	SP Main Sign Main Pk, Main Sign Sid	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7				South	SP Main Sign Main Pk, Main Sign Sid	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8				South	SP Main Sign Main Pk, Main Sign Sid	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9		Princes St	Collier St to MacArthur St	North	unrestricted	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10				South	unrestricted	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11		MacArthur St to New Publishing Rd	North	SP	SP	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12				South	unrestricted	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13		Denbigh St	Edward St to MacArthur St	North	unrestricted	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14				South	unrestricted	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15				South	No Chipping	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16				South	unrestricted	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17				South	No Chipping	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	CPH				P All Day Parking Meter	168	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
19	CPH				SP Main Sign Main Pk, Main Sign Sid	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20					SP Disabled Only Main Sign Main Pk, Main Sign Sid	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21					SP Main Sign Main Pk, Main Sign Sid	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22					SP Disabled Only Main Sign Main Pk, Main Sign Sid	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23					SP Main Sign Main Pk, Main Sign Sid	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24					SP Main Sign Main Pk, Main Sign Sid	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25					SP Main Sign Main Pk, Main Sign Sid	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26					SP Main Sign Main Pk, Main Sign Sid	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	CPH				SP Main Sign Main Pk, Main Sign Sid	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28					SP Main Sign Main Pk, Main Sign Sid	209	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
29					SP Disabled Only	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30					SP Main Sign Main Pk, Main Sign Sid	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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TRANS TRAFFIC SURVEY

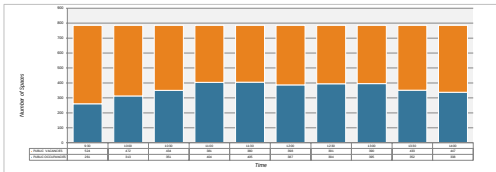


Parking Occupancy Survey

Date:	Wednesday 9 August 2023
Location:	MacArthur Street, Sale
Job:	SA 20230801_121 (08/08/23)
Project:	SA
Customer:	TfL

Public Parking (SA)	Map Ref	Street	Section	Side	Restriction	Clear Way	Capacity	Parking Occupancy									
								9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00
L		MacArthur St	Pearson St to Pearson St	North	Unrestricted		7	0	0	0	0	0	0	0	0	2	2
L				South	Unrestricted		8	0	0	0	0	0	0	0	1	0	0
L			Pearson St to Densley St	North	Unrestricted		11	1	1	1	2	2	2	2	3	3	3
L				South	Unrestricted		12	4	4	4	6	7	7	7	6	5	4
L				South	Unrestricted		10	3	3	3	5	5	5	5	5	5	5
L			Densley St to Raymond St	North	2P Stern-Open Mon-Fri, Stern-Open Sat		9	0	0	0	1	2	5	0	2	3	2
L				South	2P Stern-Open Mon-Fri, Stern-Open Sat		22	5	4	10	9	11	9	7	5	5	4
L				South	2P Stern-Open Mon-Fri, Stern-Open Sat		10	4	3	4	7	7	7	6	1	2	2
L		Pearson St	Car-On-Sat to MacArthur St	West	Unrestricted		13	0	0	0	0	1	5	0	0	0	0
L				East	Unrestricted		16	0	0	0	0	0	1	0	0	0	0
L			MacArthur St to New Chalkway Rd	West	2P		17	0	0	1	1	2	3	2	1	1	2
L				East	Unrestricted		16	5	4	3	5	4	4	5	4	4	4
L		Densley St	Stowell St to MacArthur St	West	Unrestricted		13	0	0	1	1	1	1	1	1	1	1
R					No Stopping		1	0	0	0	0	0	0	0	0	0	0
L				East	Unrestricted		16	2	2	1	1	2	3	2	2	2	2
R					No Stopping		1	0	0	0	0	0	0	0	0	0	0
L	CPD				P All Day Parking Area		165	34	45	37	38	37	41	40	38	37	36
L	CPD				2P Stern-Open Mon-Fri, Stern-Open Sat		213	37	45	74	79	85	67	75	79	65	66
L					2P Disabled Only Stern-Open Mon-Fri, Stern-Open Sat		2	0	0	1	1	0	0	0	1	1	0
L					2P Stern-Open Mon-Fri, Stern-Open Sat		41	16	23	25	28	25	29	23	20	21	20
L					2P Disabled Only Stern-Open Mon-Fri, Stern-Open Sat		2	0	0	0	0	0	0	0	0	0	0
L					2P Parents with Primary Stern-Open Mon-Fri, Stern-Open Sat		2	1	0	0	0	0	0	0	0	0	0
L					Woodcocks Direct to Boat		4	1	2	1	0	0	0	0	1	0	1
L					P 15mins Stern-Open Mon-Fri, Stern-Open Sat		12	5	5	9	9	7	11	11	11	10	7
L					Loading Zone		1	0	0	0	0	0	0	0	0	0	0
L	CPD				2P Stern-Open Mon-Fri, Stern-Open Sat		27	10	17	16	21	18	24	25	21	16	15
L					2P Stern-Open Mon-Fri, Stern-Open Sat		208	127	126	143	136	140	170	177	173	169	153
L					P Disabled Only		7	1	3	2	3	2	1	2	0	3	0
L					2P Parents with Primary Stern-Open Mon-Fri, Stern-Open Sat		4	3	3	4	0	3	3	3	3	3	3
L					2P Stern-Open Mon-Fri, Stern-Open Sat Motorcycle Parking		2	0	0	0	0	0	0	0	0	0	0
L					2P Reserved Harvey Norman		8	5	7	7	7	7	6	4	5	5	6
L					2P Disabled Only Reserved Harvey Norman		1	0	0	0	0	0	0	0	0	0	0
PUBLIC CAPACITY								785	785	785	785	785	785	785	785	785	785
PUBLIC OCCUPANCIES								261	313	351	404	405	387	394	395	352	338
PUBLIC VACANCIES								524	472	434	381	380	398	391	390	433	447
PUBLIC % OCCUPANCIES								33%	40%	45%	51%	52%	49%	50%	50%	45%	43%

not available for public parking



MEMO – 001

Project Number: 2402360

Date: 23 October 2025

Project Name: 38-50 MacArthur Street, Sale

Subject: Addendum Report – Empirical Traffic and Parking Analysis

To:		Company:	Wellington Shire Council	Email:		Phone:	
From:		Company:	Beveridge Williams	Email:		Phone:	

Distribution

Cc:		Company:	Beveridge Williams	Email:		Phone:	
Cc:		Company:	Beveridge Williams	Email:		Phone:	
Cc:		Company:	Beveridge Williams	Email:		Phone:	

Background

A Development Plan application was submitted to Wellington Shire Council on 22nd August 2025 that proposed development of the existing site of 38-50 MacArthur Street, Sale (currently occupied by Bunnings) to form a supermarket, several retail tenancies (including a restaurant), and a commercial (office) space. A basement carpark is proposed to accommodate parking demand from these uses.

An Initial Traffic Impact Assessment and a Waste Management Plan were produced to accompany the Development Plan application. Council provided initial feedback on these two documents on 15th September 2025. This feedback has been addressed by updated versions of the Initial Traffic Impact Assessment and Waste Management Plan, and the Addendum Traffic Report (this document).

Facts and Matters Relied Upon

In preparing this assessment, Beveridge Williams have referenced the following information and documents:

- RMS Technical Direction 2013/04a.
- RMS Guide to Transport Impact Assessment.
- RMS Bulky Goods Hardware Store (2009) analysis report.
- RMS Restaurant (1981) Data and Analysis report.

Purpose

The purpose of this memo is to evaluate the proposed development from an empirical parking and traffic perspective:

- Undertake an assessment of the existing loading/unloading vehicle movements along the surrounding streets to assess the impact of the project site and understand the capacity of the surrounding road network to cater for the post-development loading/unloading vehicle movements.
- Undertake empirical traffic analysis to understand the impact of the project site on the surrounding road network and intersections.

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Beveridge Williams

Melbourne Office Tel: (03) 9524 8888

1 Glenferrie Road Fax: (03) 9524 8899

Malvern Vic 3144

www.beveridgewilliams.com.au

- Undertake a car parking demand assessment of the on-street and off-street parking provisions in the close vicinity of the project site and provide its findings.

Memo Structure

This memo will assess the project site from a traffic, parking and loading capacity perspective. A broad outline of the memo structure is provided below:

- **Loading/Unloading Movement Analysis**
- **Traffic Analysis**
- **Parking Analysis**
- **Online Collection Point Analysis**

Loading/Unloading Movement Analysis

An analysis of the existing movements of small, medium and large trucks along the roads surrounding the project site is presented below and in Figure 1.

- The majority of existing truck movements are small trucks.
- Almost all truck movements occur between 7am and 5pm.
- Overall truck movements along New Railway Road (west of Raymond Street and west of Desailly Street) are low with an average peak hour weekday traffic of less than 5 vehicles per hour.
- Truck movements are highest along Desailly Street. These truck movements would likely be associated with the existing Bunnings use as well as the land uses surrounding the adjacent off-street carpark.

It is estimated that up to five (5) 19m semi movements and fifteen (15) 12.5m Heavy Rigid Vehicle (HRV) movements would occur each day for the supermarket. As these movements are expected to occur throughout the entirety of the day (24/7 – 24-hour access is sought to the store), this would represent an increase of 1-2 heavy vehicles per hour along Desailly Street attributable to the supermarket. The 19m semi deliveries will generally be scheduled early in the morning, outside of morning peak hour and in two-hour delivery windows with slack to allow for delays in loading/unloading and traffic congestion.

The following delivery vehicle movements are estimated for the retail tenancies between 7am and 5pm:

- 3 delivery vehicles per retail tenancy per day (up to 1 Medium Rigid Vehicle (MRVs) and 2 light vehicles)
 - 18 delivery vehicles in total for the retail tenancies per day (up to 6 MRVs and 12 light vehicles)
- 4 delivery vehicles for the restaurant per day (up to 1 MRV and 3 light vehicles)
- 2 delivery vehicles for the office per day (up to 2 light vehicles)
 - Outside of waste pickup, the office use would generate negligible heavy vehicle movements.

Based on the above, the following maximum increases (i.e. not considering the reductions due to Bunnings traffic) could be expected along the streets adjacent to the subject site between 7am and 5pm:

- Desailly Street
 - 24 delivery vehicles per day (up to 7 MRVs and 17 light vehicles)
 - 2 delivery vehicles per hour (1 vehicle every 25 minutes) between 7am and 5pm
- New Railway Road
 - 22 delivery vehicles per day (up to 7 MRVs and 15 light vehicles) between 7am and 5pm
 - 2 delivery vehicles per hour (1 vehicle every 27 minutes)

- Pearson Street
 - 42 delivery vehicles per day (up to 5 19m semis, 15 HRVs, 7 MRVs and 15 light vehicles)
 - 4 delivery vehicles per hour (1 vehicle every 14 minutes)
 - 3 heavy vehicles per hour (1 vehicle every 22 minutes)

It is noted that the above is considered to be a conservative estimate and that the above volumes will be offset by the reduction in the delivery vehicle movements associated with the relocation of the Bunnings site.

Post development, this would result in peak delivery vehicle movements of 6 (1 vehicle every 10 minutes) and 13 (approximately 1 delivery vehicle every 5 minutes) heavy vehicle movements per hour along New Railway Road and Pearson Street respectively. Desailly Street would experience a slight increase of 2 truck movements per hour, approximately a 6% increase, not accounting for the reduction in delivery traffic associated with the relocation of the Bunnings. This is considered to be appropriate from a traffic perspective.

Based on the above, the proposed loading/unloading arrangements along New Railway Road and Pearson Street for the retail and commercial vehicles are considered appropriate.



Figure 1: Existing Average Heavy Vehicle Movements along the surrounding roads

Traffic Modelling Approach

General

The following intersections have been modelled in SIDRA as part of the traffic assessment to understand the traffic impact of the project site on the surrounding road network:

- MacArthur Street / Raymond Street intersection (existing)

- MacArthur Street / Desailly Street intersection (existing)
- MacArthur Street / Pearson Street intersection (existing)
- Desailly Street / New Railway Road intersection (existing)
- Desailly Street / Basement Carpark intersection (proposed)

A 10-year period has been contemplated to assess the future, post-development performance of the existing road network to accommodate the anticipated traffic movements from the proposed development.

Therefore, the traffic assessment presented in the following sections will consider the following traffic conditions:

- Existing traffic conditions (traffic survey data)
 - Includes existing Bunnings traffic
- Existing traffic conditions @ 10 years
 - Includes existing Bunnings traffic; and
 - Network traffic (modelled using an annual 1.5% compound growth rate along MacArthur Street and Raymond Street).
- Post-development traffic conditions @ 10 years
 - Includes Project site traffic (supermarket, retail, commercial) minus existing Bunnings traffic.
 - Network traffic (modelled using an annual 1.5% compound growth rate along MacArthur Street and Raymond Street).

SIDRA Intersection Traffic Modelling Software Package

To assess the different traffic conditions and intersections outlined in this memo, SIDRA Intersection software has been utilised. The SIDRA Intersection software package has been developed to assess intersection operation / performance by providing information on the capacity of an intersection with regard to a number of parameters. The key parameters which are considered relevant are as follows:

- Degree of Saturation (DoS)
 - The DoS represents the ratio of the traffic volume making a particular movement compared to the maximum capacity for that particular movement. As a general rule, the value of the DoS has a corresponding rating depending on the ratio as shown below in Table 1:

Degree of Saturation	Level of Service
Up to 0.60	Excellent
0.61 – 0.70	Very Good
0.71 – 0.80	Good
0.81 – 0.90	Fair
0.91 – 1.00	Poor
Above 1.00	Very Poor

Table 1: Value of DoS and Level of Service

- It is noted that whilst the range of 0.91 – 1.00 is rated as 'poor', it is acceptable for some critical movements at an intersection to be operating within this range during high peak periods, reflecting actual conditions in a significant number of suburban signalised intersections.
- Average Delay (seconds)
 - Average delay is the time delay that can be expected for all vehicles undertaking a particular movement in seconds during the peak hour.

- 95th Percentile (95thile) Queue
 - 95thile queue represents the maximum queue length in metres that can be expected in 95% of observed queue lengths in the peak hour.

It is noted the Department of Transport and Planning (DTP) outlines the target maximum degree of saturation (DoS) of the critical movement as follows:

- At signalised intersections,
 - 0.9 (desirable)
 - 0.95 (maximum)
- At unsignalised intersections,
 - 0.80 (desirable)
 - 0.85 (maximum)

AustRoads GTM Part 3 outlines practical degree of saturations for signals (0.9), roundabouts (0.85) and unsignalised intersections (0.8). From AustRoads, the practical DOS (equatable to DTP's 'desirable' DOS) for a roundabout is 0.85 and DTP guidelines outline the maximum DOS can be 0.05 higher than the desired. Therefore, for the purposes of this assessment, the maximum DOS for a roundabout is 0.9.

However, it is noted that within Victoria it is not uncommon for intersections (including roundabouts) to exceed a degree of saturation of 1.0 during AM and PM peak periods.

Existing Traffic Conditions

The following intersections were surveyed on Thursday 7th August 2025 from 8:00am to 6:00pm and Saturday 9th August 2025 from 9:30am to 2:00pm.

- MacArthur Street / Raymond Street intersection,
- MacArthur Street / Desailly Street intersection,
- MacArthur Street / Pearson Street intersection, and
- Desailly Street / New Railway Road intersection.

Figure 2 shows the AM and PM vehicle movements for the anticipated future site peak hour timing, 8:00am to 9:00am and 5:00pm to 6:00pm on Thursday 7th August.

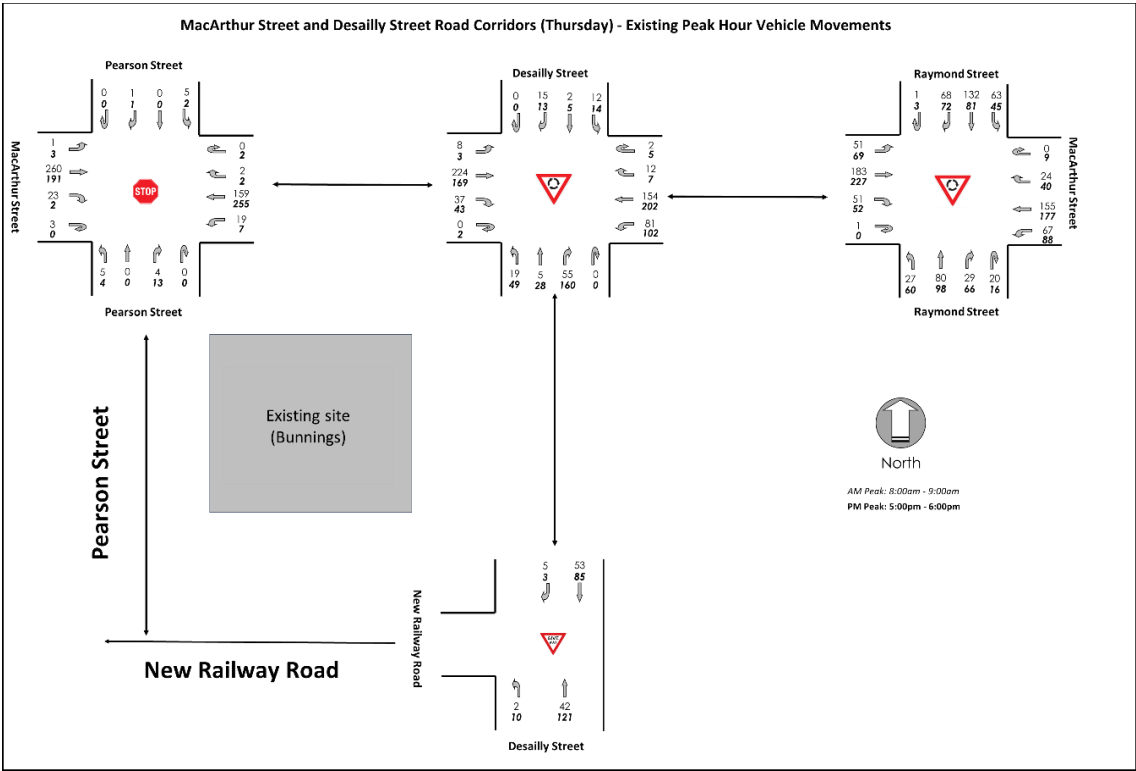


Figure 2: Existing Turning Movement Counts (Thursday) – MacArthur & Desailly Street corridor

Figure 3 shows the peak hour vehicle movements for 11:00am to 12:00pm on Saturday 9th August.

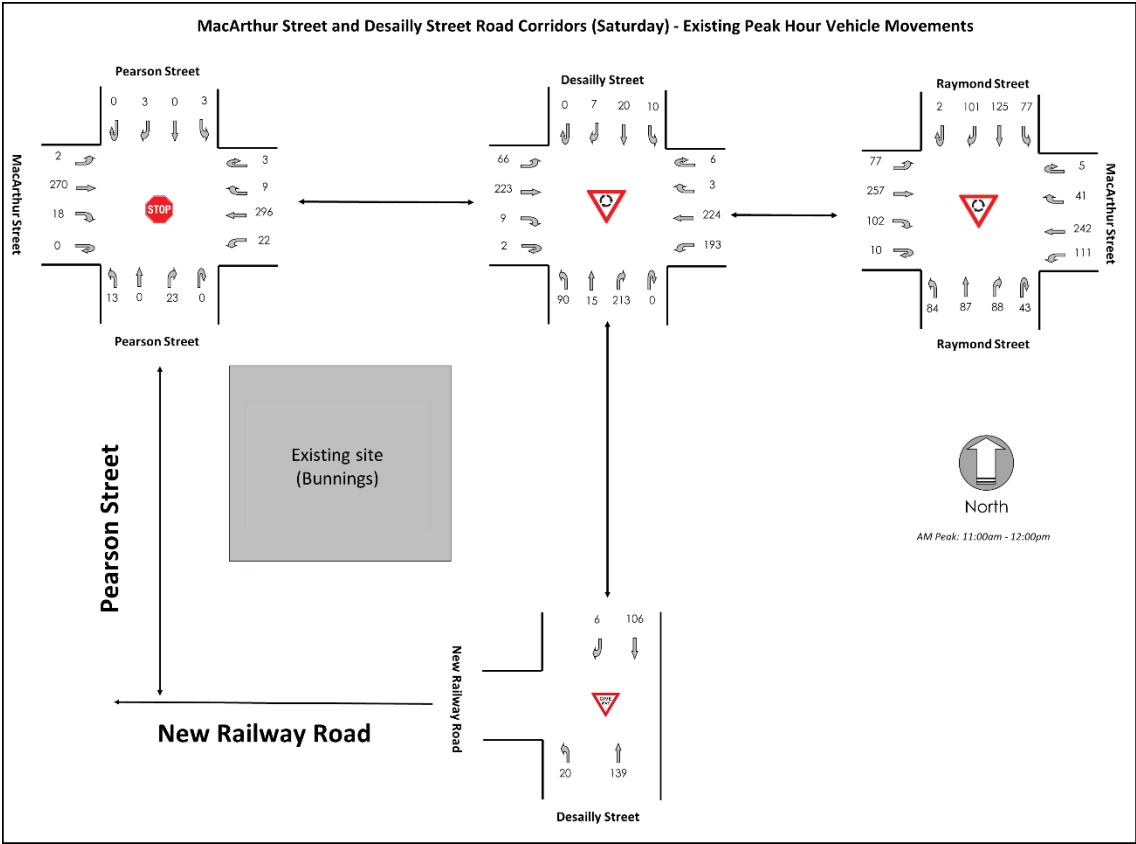


Figure 3: Existing Turning Movement Counts (Saturday) – MacArthur & Desailly Street corridor

The SIDRA Intersection performance results for MacArthur Street / Raymond Street (Table 2), MacArthur Street / Desailly Street (Table 3), MacArthur Street / Pearson Street (Table 4), and Desailly Street / New Railway Road (Table 5) intersections are presented below. The following comments are in relation to the intersection performance results, which are presented below, of the above intersections.

- All intersections are anticipated to operate under 'Excellent' Level of Service for the existing conditions with minimal delays and queues.
- All DoS values are below DTP's desirable degree of saturation for unsignalised intersections and roundabouts.
- The highest DoS value (0.440) is experienced for the east leg (MacArthur Street) of the Raymond Street / MacArthur Street intersection (generally the critical intersection).
- From a network perspective, Saturday peak hour is considered to be more critical than the Thursday AM and PM peak hours.
- The longest average delay (14.6s) is recorded on the south approach (Pearson Street) of the MacArthur Street / Pearson Street intersection during the Saturday peak period.
- The longest 95th percentile queue (22.2m) is recorded on the west approach (MacArthur Street) of the MacArthur Street / Raymond Street intersection during the Saturday peak period.
- The below performance results are considered to be acceptable for unsignalised intersections and roundabouts.

	Degree of Saturation (DoS)	Average Delay (s)	95 th percentile Queue Length (m)
Thursday - AM			
North: Raymond Street	0.267	6.0	11.4
East: MacArthur Street	0.253	5.3	11.0
South: Raymond Street	0.153	6.0	6.0
West: MacArthur Street	0.253	4.8	11.0
Thursday - PM			
North: Raymond Street	0.217	6.9	9.0
East: MacArthur Street	0.296	5.2	13.0
South: Raymond Street	0.243	6.4	10.1
West: MacArthur Street	0.330	5.2	15.0
Saturday - Peak			
North: Raymond Street	0.373	8.1	17.6
East: MacArthur Street	0.440	6.5	21.7
South: Raymond Street	0.337	7.8	15.5
West: MacArthur Street	0.435	6.1	22.2

Table 2: Existing Intersection Performance – MacArthur Street / Raymond Street intersection

	Degree of Saturation (DoS)	Average Delay (s)	95 th percentile Queue Length (m)
Thursday - AM			
North: Desailly Street	0.034	7.1	1.2
East: MacArthur Street	0.207	4.1	8.4
South: Desailly Street	0.078	6.9	2.7
West: MacArthur Street	0.231	4.4	9.8
Thursday - PM			

North: Desailly Street	0.038	7.0	1.3
East: MacArthur Street	0.257	4.1	11.0
South: Desailly Street	0.241	7.3	9.6
West: MacArthur Street	0.224	5.5	9.2
Saturday - Peak			
North: Desailly Street	0.047	6.7	1.7
East: MacArthur Street	0.321	3.9	15.5
South: Desailly Street	0.324	7.5	13.8
West: MacArthur Street	0.318	5.4	14.2

Table 3: Existing Intersection Performance – MacArthur Street / Desailly Street intersection

	Degree of Saturation (DoS)	Average Delay (s)	95 th percentile Queue Length (m)
Thursday - AM			
North: Pearson Street	0.010	6.4	0.3
East: MacArthur Street	0.101	0.6	0.1
South: Pearson Street	0.023	12.3	0.6
West: MacArthur Street	0.144	0.5	0.7
Thursday - PM			
North: Pearson Street	0.007	6.7	0.2
East: MacArthur Street	0.142	0.2	0.1
South: Pearson Street	0.041	12.1	1.0
West: MacArthur Street	0.106	0.2	0.1
Saturday - Peak			
North: Pearson Street	0.015	8.7	0.4
East: MacArthur Street	0.173	0.5	0.3
South: Pearson Street	0.100	14.6	2.6
West: MacArthur Street	0.147	0.4	0.5

Table 4: Existing Intersection Performance – MacArthur Street / Pearson Street intersection

	Degree of Saturation (DoS)	Average Delay (s)	95 th percentile Queue Length (m)
Thursday - AM			
North: Desailly Street	0.034	0.1	0.3
South: Desailly Street	0.024	0.0	0.0
Thursday - PM			
North: Desailly Street	0.048	0.0	0.1
South: Desailly Street	0.070	0.0	0.0
Saturday - Peak			
North: Desailly Street	0.061	0.1	0.3
South: Desailly Street	0.085	0.0	0.0

Table 5: Existing Intersection Performance – Desailly Street / New Railway Road Intersection

Site-Generated Traffic Volumes and Characteristics

Site Generated Traffic Volumes

The following data sources and assumptions were used to obtain the traffic generation rates for each component:

- **Bunnings Hardware store (existing):**
 - The trip rates for Bunnings have been adopted from the Bulky Goods Hardware Store (2009) analysis report.
- **Shopping Centres (Retail and Supermarket) (proposed):**
 - The peak generation rates for the retail and supermarket components have been adopted from the peak generation model for large shopping centres in RMS Guide to Transport Impact Assessment.
 - Per RMS Technical Direction TDT 2013/04a, a factor of 55% has been applied to the PM peak hour rate for the supermarket and retail components to yield the AM peak hour rate.
- **Office (proposed):**
 - Office block trip generation rates were obtained from RMS Guide to Transport Impact Assessment.
 - For conservative purposes, the Sydney trip rates have been adopted in lieu of the regional trip rates.
- **Restaurant (proposed):**
 - A rate of 3.275m² of Gross Floor Area (GFA) per patron for the restaurant has been adopted from RMS data.
 - Therefore, a capacity of 68 patrons has been considered based on a GFA of 221m².
 - For conservative purposes, 100% occupancy of the restaurant seats has been assumed. However, 85% occupancy is generally considered to be more reflective of restaurant traffic generation.
 - Based on analysis of RMS Restaurant data, it is conservatively assumed that non-critical (AM) peak demand is 40% of critical (PM) peak demand.

	Existing	Proposed				Resultant
	Bunnings	Shopping Centre		Office	Restaurant	Total
		Supermarket	Retail			
GLFA (m ²)	5,066	2,669	1,349	2,571	221	1,744
AM Peak Hour Rate	-0.0204	0.07535	0.0176	0.0169	0.1424* (number of patrons) + 1.2	-
PM Peak Hour Rate	-0.0284	0.137	0.032	0.012	0.356 * (number of patrons) + 3	-
Daily Rate	-0.3975	1.455	0.288	0.1129	0.6	-
AM Peak Hour Trips	-103	201	24	43	11	+176
PM Peak Hour Trips	-144	366	43	31	27	+323
Daily Trips	-2,014	3883	389	290	133	+2681

Table 6: Anticipated Traffic Volumes

The following assumptions have been adopted to determine the traffic distribution of existing (Bunnings) and proposed (supermarket, retail, restaurant, and office) uses.

- All uses are assumed to have the same traffic distribution.
- The Thursday AM peak hour distribution has been adopted for the Thursday PM peak hour distribution and Saturday peak hour distribution.
- No traffic is assumed to exit right out of the basement carpark.
- No changes to the existing traffic along New Railway Road are proposed.
- 36 U-turn traffic movements for the east approach (MacArthur Street) of the MacArthur Street / Pearson Street intersection have been adopted for all peak hour scenarios to understand the impact of the proposed online collection point on the performance of this intersection and the network.

Route/Destination	Percentage (%)	Route/Destination	Percentage (%)
North via Desailly	3%	South via Reeve Street	9%
North via Raymond	14%	West via MacArthur Street	5%
East via MacArthur Street	40%	North via Reeve Street	9%
South via Raymond Street (Egress)	15%	Pearson Street Movements	5%

Table 7: Existing (Bunnings) and Proposed (Retail, supermarket, office and restaurant) traffic distribution

Figure 4 (Thursday) and Figure 5 (Saturday) depict the resultant site-generated traffic movements in 10 years for the MacArthur Street & Desailly Street corridor.

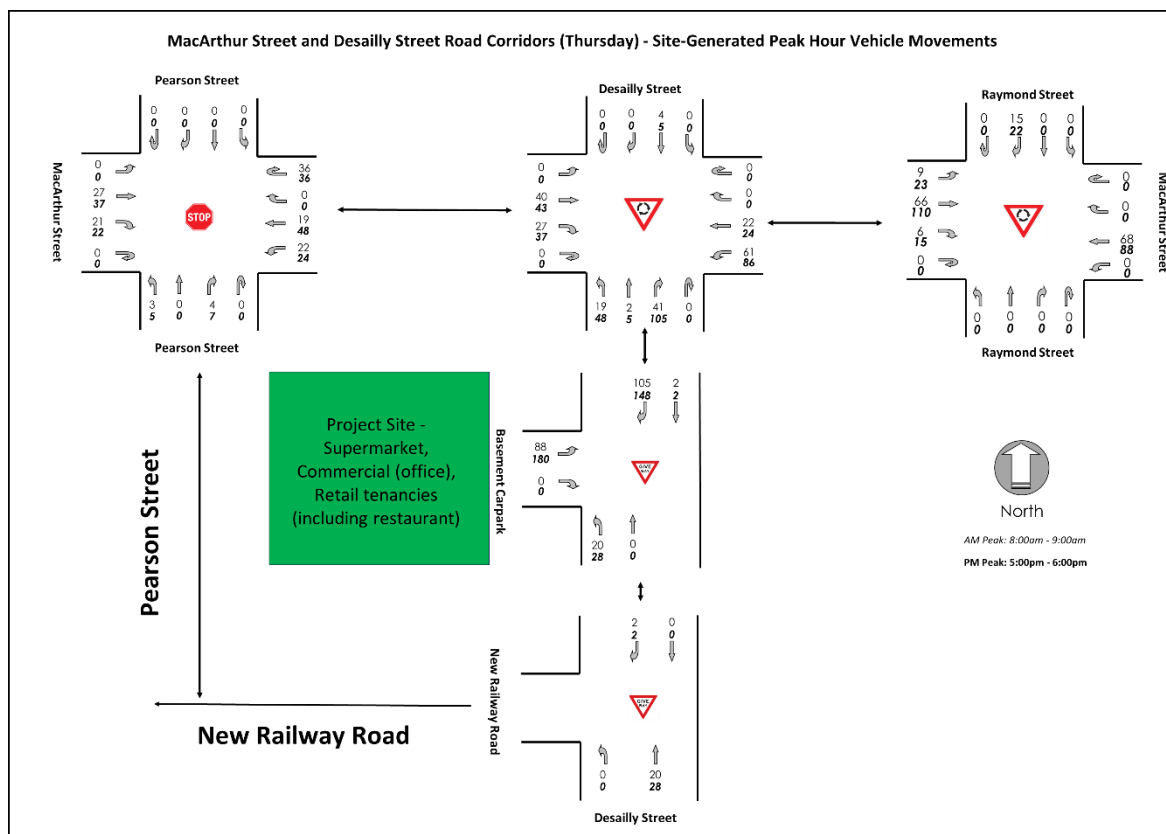


Figure 4: Resultant Site-Generated Peak Hour Vehicle Movements (Thursday) @ 10 years – MacArthur & Desailly Street corridor

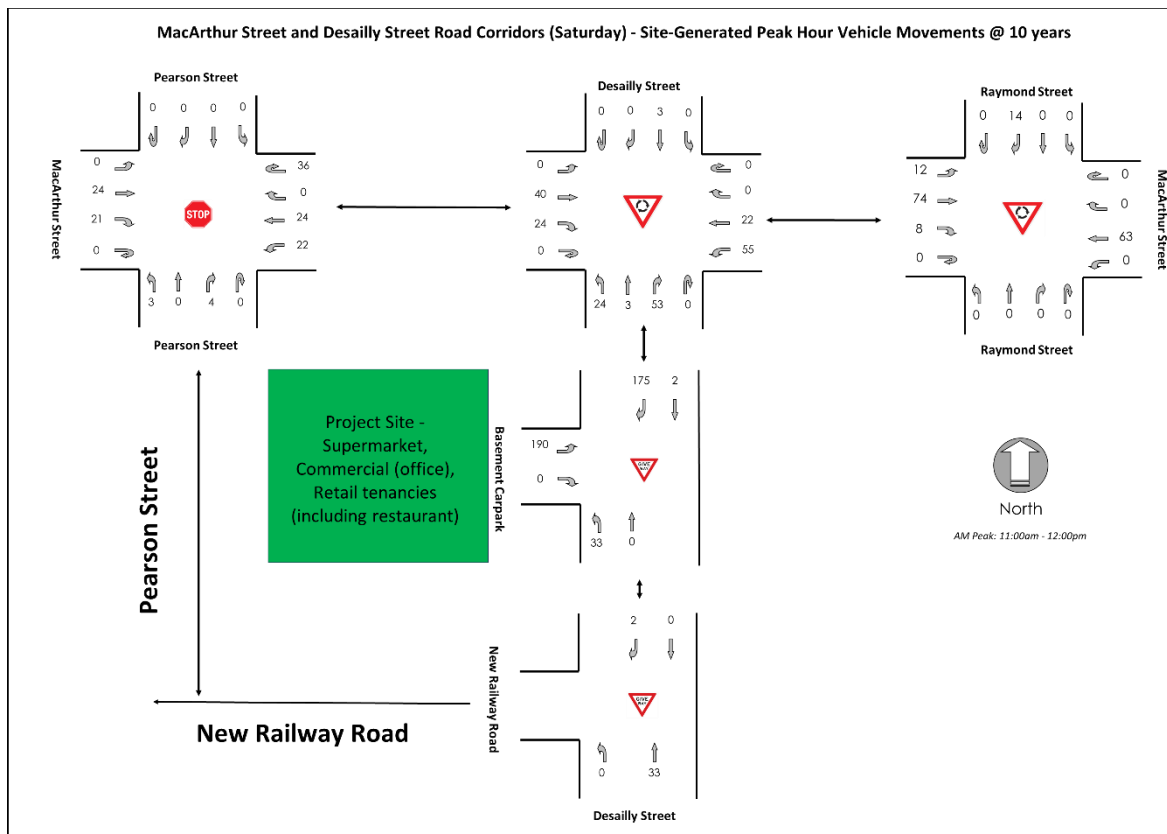


Figure 5: Resultant Site-Generated Peak Hour Vehicle Movements (Saturday) @ 10 years – MacArthur & Desailly Street corridor

Future Traffic Conditions (Existing and post-development @ 10 years)

General assumptions

- A compound growth rate of 1.5% has been applied along MacArthur Street and Raymond Street.
- Existing traffic volumes (outside of Bunnings) are largely expected to be maintained.

Existing Peak Hour Movements @ 10 years

Figure 6 (Thursday) and Figure 7 (Saturday) depict the existing traffic movements in 10 years for the MacArthur Street & Desailly Street corridor.

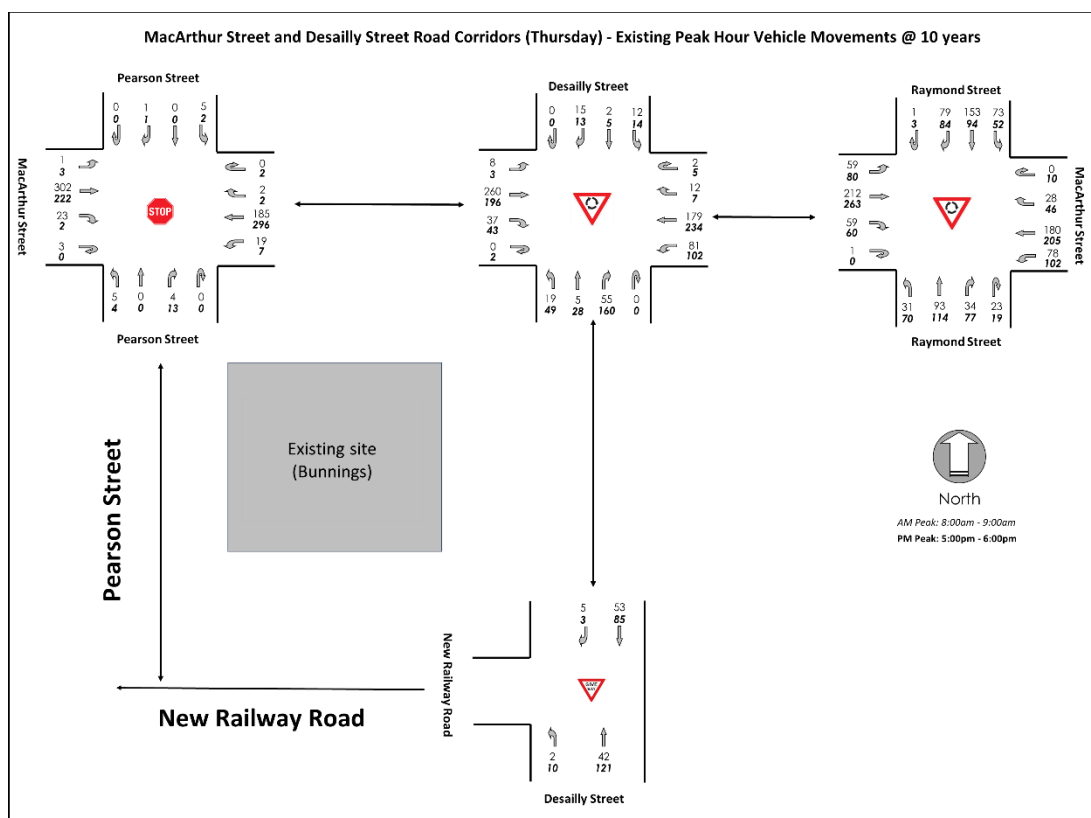


Figure 6: Existing Peak Hour Vehicle Movements (Thursday) @ 10 years – MacArthur & Desailly Street corridor

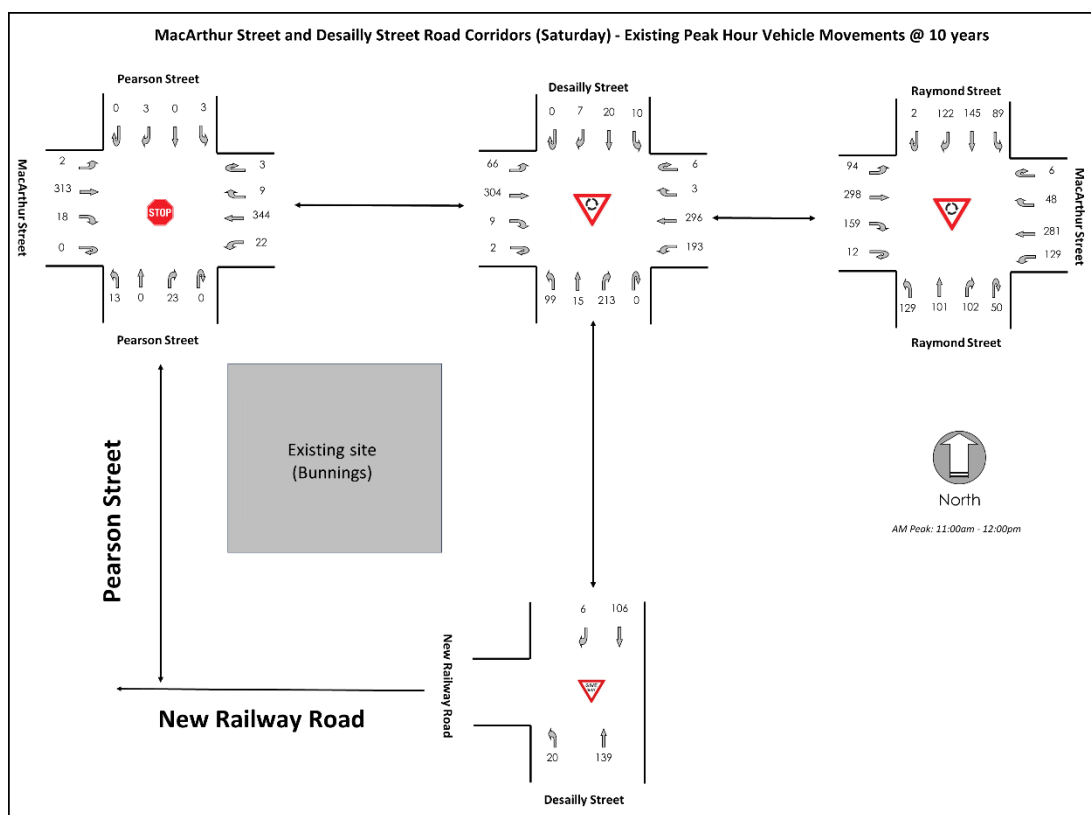


Figure 7: Existing Peak Hour Vehicle Movements (Saturday) @ 10 years – MacArthur & Desailly Street corridor

Post-Development Peak Hour Vehicle Movements @ 10 years

Figure 8 (Thursday) and Figure 9 (Saturday) depict the post-development traffic movements in 10 years for the MacArthur Street & Desailly Street corridor.

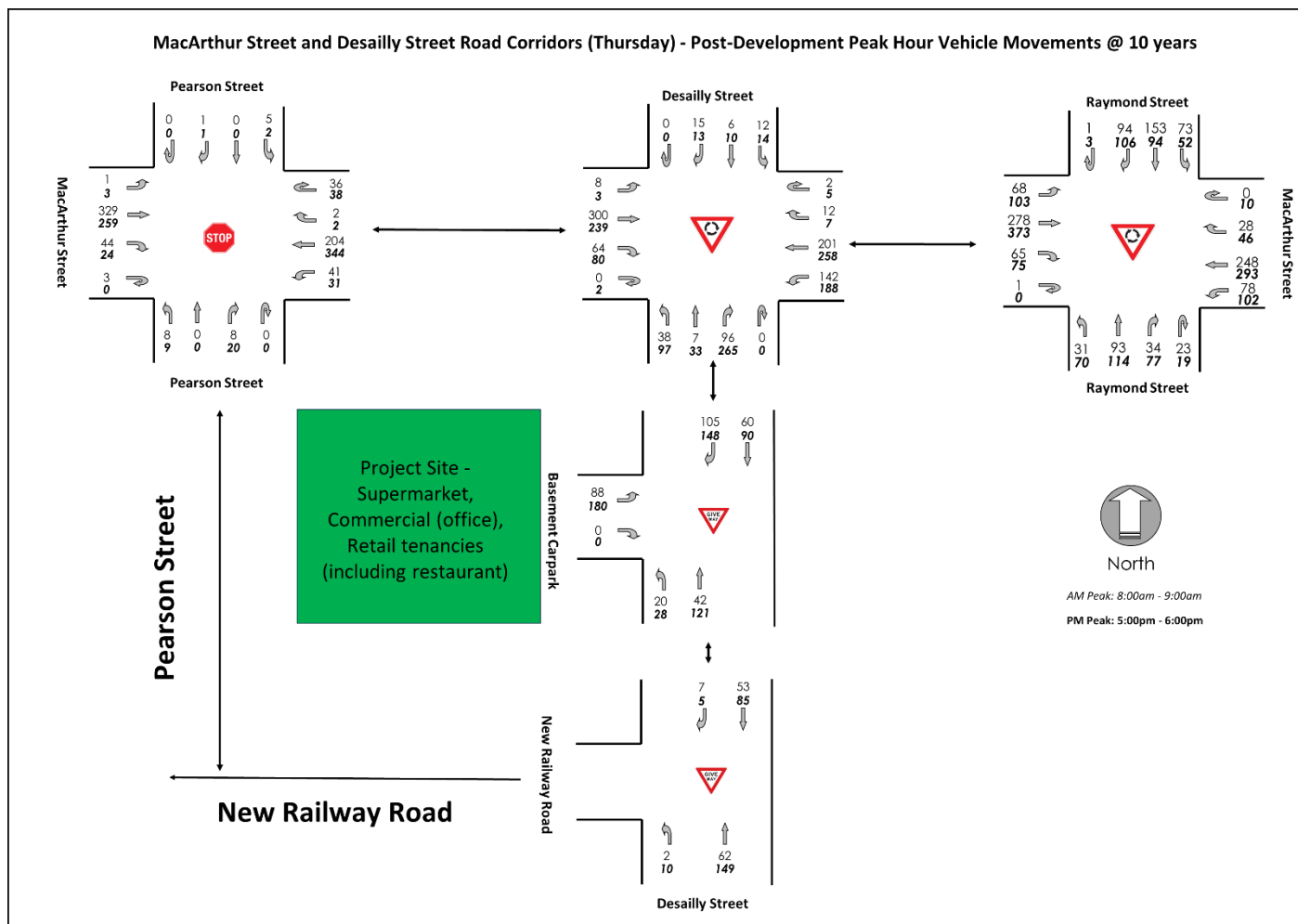


Figure 8: Post-Development Peak Hour Vehicle Movements (Thursday) @ 10 years – MacArthur & Desailly Street corridor

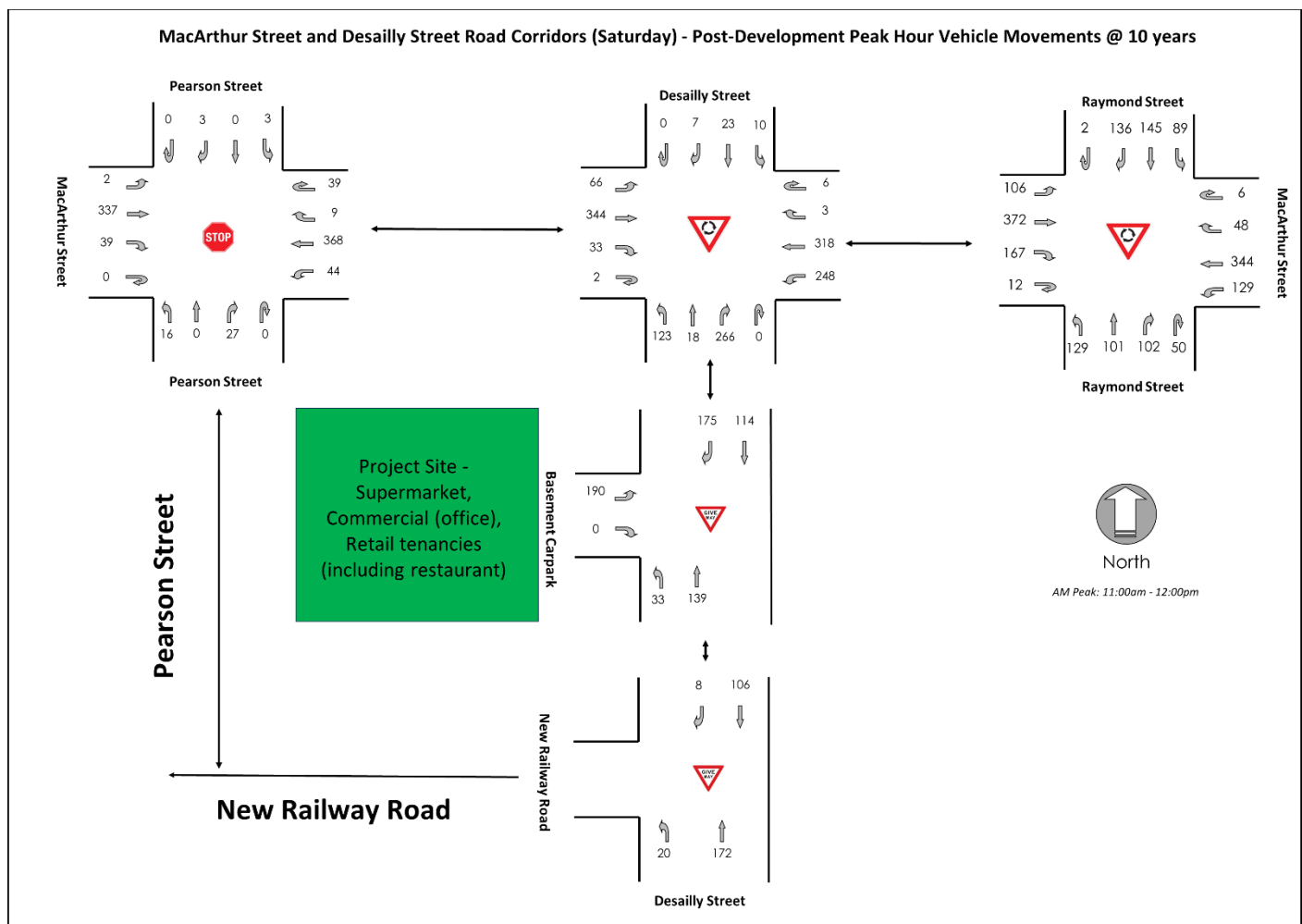


Figure 9: Post-Development Peak Hour Vehicle Movements (Saturday) @ 10 years – MacArthur & Desailly Street corridor

Intersection Performance Comparison (Existing and Post-Development @ 10 years)

The following should be noted in relation to the intersection performance results:

- Queues are temporary in nature and would occur during the key period within a given peak hour.
- It is common for queues to exceed capacity within metropolitan areas and particularly for growth areas.
- The queues represent 95%ile queues and average queues (i.e. 50th %ile) result in less queuing more often.
- The projected queues would have minimal impacts to upstream intersections.

MacArthur Street / Raymond Street intersection

Table 8 compares the existing and post-development intersection performance in 10 years for the MacArthur Street / Raymond Street intersection.

Performance Measure	Leg	Existing @10 years	Post-Development @ 10 years	Increase (+)
Thursday - AM				
Degree of Saturation	North: Raymond St	0.322	0.363	0.041
	East: MacArthur St	0.305	0.388	0.083
	South: Raymond St	0.184	0.200	0.016

	West: MacArthur St	0.301	0.372	0.071
Average Delay (s)	North: Raymond St	6.4	7.2	0.8
	East: MacArthur St	5.7	6.0	0.3
	South: Raymond St	6.3	6.9	0.6
	West: MacArthur St	5.0	5.0	0.0
Queue Length (m)	North: Raymond St	14.5	16.9	2.4
	East: MacArthur St	14.0	19.1	5.1
	South: Raymond St	7.5	8.4	0.9
	West: MacArthur St	13.8	18.4	4.6
Thursday - PM				
Degree of Saturation	North: Raymond St	0.266	0.334	0.068
	East: MacArthur St	0.355	0.457	0.102
	South: Raymond St	0.295	0.330	0.035
	West: MacArthur St	0.397	0.537	0.140
Average Delay (s)	North: Raymond St	7.4	8.7	1.3
	East: MacArthur St	5.5	5.9	0.4
	South: Raymond St	6.8	7.7	0.9
	West: MacArthur St	5.6	5.8	0.2
Queue Length (m)	North: Raymond St	11.6	15.7	4.1
	East: MacArthur St	16.5	23.5	7.0
	South: Raymond St	12.9	15.1	2.2
	West: MacArthur St	19.3	30.5	11.2
Saturday - Peak				
Degree of Saturation	North: Raymond St	0.476	0.592	0.116
	East: MacArthur St	0.544	0.665	0.121
	South: Raymond St	0.421	0.507	0.086
	West: MacArthur St	0.529	0.669	0.140
Average Delay (s)	North: Raymond St	9.8	14.0	4.2
	East: MacArthur St	8.1	11.2	3.1
	South: Raymond St	8.5	10.2	1.7
	West: MacArthur St	6.6	8.4	1.8
Queue Length (m)	North: Raymond St	26.3	40.7	14.4
	East: MacArthur St	32.9	51.6	18.7
	South: Raymond St	20.8	29.7	8.9
	West: MacArthur St	29.6	52.3	22.7

Table 8: MacArthur Street / Raymond Street Intersection Performance Comparison

The critical period for the MacArthur Street / Raymond Street intersection is expected to be the Saturday peak period, with a maximum degree of saturation of 0.669 (classified as a 'Very Good' Level of Service) experienced on the west approach. All DoS values are below the threshold of DTP's desirable degree of saturation.

The longest 95th percentile queue is recorded on the western approach during the Saturday peak period with a queue length of approximately 52.3 metres (approximately 7 vehicles). The project site would result in a maximum increase of 22.7m (approximately 3-4 vehicles) compared to the existing @ 10 years scenario.

The average delay across all approaches is expected to be approximately ~14 seconds or less for the peak periods.

As demonstrated in Table 8, it is expected that the project site would have minimal impact on the overall performance of the MacArthur Street / Raymond Street intersection in terms of saturation, delays and queue

lengths. Maximum increases to the saturation (+0.140), delays (+4.2 seconds) and queue lengths (+22.7 metres – approximately 3-4 vehicles) for each individual leg are also modest.

The above performance results are considered to be acceptable for a roundabout.

MacArthur Street / Desailly Street intersection

For the MacArthur Street / Desailly Street intersection, a comparison of the existing and post-development intersection performance in 10 years is presented below.

Performance Measure	Leg	Existing @10 years	Post-Development @ 10 years	Increase (+)
Thursday - AM				
Degree of Saturation	North: Desailly St	0.035	0.044	0.009
	East: MacArthur St	0.226	0.310	0.084
	South: Desailly St	0.080	0.146	0.066
	West: MacArthur St	0.260	0.338	0.078
Average Delay (s)	North: Desailly St	7.4	7.9	0.5
	East: MacArthur St	4.1	4.4	0.3
	South: Desailly St	7.0	7.2	0.2
	West: MacArthur St	4.4	4.9	0.5
Queue Length (m)	North: Desailly St	1.2	1.6	0.4
	East: MacArthur St	9.4	14.3	4.9
	South: Desailly St	2.8	5.5	2.7
	West: MacArthur St	11.5	16.3	4.8
Thursday - PM				
Degree of Saturation	North: Desailly St	0.039	0.054	0.015
	East: MacArthur St	0.281	0.396	0.115
	South: Desailly St	0.248	0.422	0.174
	West: MacArthur St	0.251	0.378	0.127
Average Delay (s)	North: Desailly St	7.2	8.4	1.2
	East: MacArthur St	4.1	4.5	0.4
	South: Desailly St	7.5	8.0	0.5
	West: MacArthur St	5.5	6.8	1.3
Queue Length (m)	North: Desailly St	1.4	2.1	0.7
	East: MacArthur St	12.4	20.3	7.9
	South: Desailly St	9.9	20.1	10.2
	West: MacArthur St	10.6	17.9	7.3
Saturday - Peak				
Degree of Saturation	North: Desailly St	0.048	0.062	0.014
	East: MacArthur St	0.347	0.454	0.107
	South: Desailly St	0.337	0.456	0.119
	West: MacArthur St	0.355	0.502	0.147
Average Delay (s)	North: Desailly St	7.0	8.3	1.3
	East: MacArthur St	3.9	4.2	0.3
	South: Desailly St	7.8	8.5	0.7
	West: MacArthur St	5.4	6.4	1.0
Queue Length (m)	North: Desailly St	1.8	2.5	0.7
	East: MacArthur St	17.3	25.3	8.0

	South: Desailly St	14.4	21.9	7.5
	West: MacArthur St	16.5	26.8	10.3

Table 9: MacArthur Street / Desailly Street Intersection Performance Comparison

The critical period for the MacArthur Street / Desailly Street intersection is expected to be the Saturday peak period, with a maximum degree of saturation of 0.502 (classified as an 'Excellent' Level of Service) experienced on the west approach. All DoS values are below the threshold of DTP's desirable degree of saturation.

The longest 95th percentile queue is recorded on the eastern approach during the Saturday peak period with a queue length of approximately 25.3 metres (approximately 4 vehicles). For the Saturday peak period, the project site would result in a maximum increase of 10.3m (~2 vehicles) compared to the existing @ 10 years scenario.

The average delay across all approaches is expected to be less than 10 seconds for the peak periods.

As demonstrated in Table 9, it is expected that the project site would have minimal impact on the overall performance of the MacArthur Street / Desailly Street intersection in terms of saturation, delays and queue lengths. Maximum increases to the saturation (+0.174), delays (+1.3 seconds) and queue lengths (+10.3 metres – approximately 2 vehicles) for each individual leg are also modest.

The above performance results are considered to be acceptable for a roundabout.

MacArthur Street / Pearson Street intersection

For the MacArthur Street / Pearson Street intersection, a comparison of the existing and post-development intersection performance in 10 years is presented below.

Performance Measure	Leg	Existing @10 years	Post-Development @ 10 years	Increase (+)
Thursday - AM				
Degree of Saturation	North: Pearson St	0.011	0.012	0.001
	East: MacArthur St	0.115	0.138	0.023
	South: Pearson St	0.026	0.066	0.040
	West: MacArthur St	0.168	0.183	0.015
Average Delay (s)	North: Pearson St	6.8	7.3	0.5
	East: MacArthur St	0.5	1.8	1.3
	South: Pearson St	13.4	18.9	5.5
	West: MacArthur St	0.5	0.7	0.2
Queue Length (m)	North: Pearson St	0.3	0.3	0.0
	East: MacArthur St	0.1	1.5	1.4
	South: Pearson St	0.7	1.9	1.2
	West: MacArthur St	0.7	1.2	0.5
Thursday - PM				
Degree of Saturation	North: Pearson St	0.008	0.009	0.001
	East: MacArthur St	0.164	0.204	0.040
	South: Pearson St	0.046	0.114	0.068
	West: MacArthur St	0.122	0.143	0.021
Average Delay (s)	North: Pearson St	7.2	8.1	0.9
	East: MacArthur St	0.2	1.1	0.9
	South: Pearson St	13.3	18.8	5.5
	West: MacArthur St	0.2	0.6	0.4

Queue Length (m)	North: Pearson St	0.2	0.2	0.0
	East: MacArthur St	0.1	1.4	1.3
	South: Pearson St	1.2	2.9	1.7
	West: MacArthur St	0.1	0.7	0.6
Saturday - Peak				
Degree of Saturation	North: Pearson St	0.018	0.020	0.002
	East: MacArthur St	0.199	0.225	0.026
	South: Pearson St	0.119	0.201	0.082
	West: MacArthur St	0.170	0.183	0.013
Average Delay (s)	North: Pearson St	9.8	10.9	1.1
	East: MacArthur St	0.5	1.3	0.8
	South: Pearson St	16.7	22.8	6.1
	West: MacArthur St	0.4	0.7	0.3
Queue Length (m)	North: Pearson St	0.4	0.5	0.1
	East: MacArthur St	0.3	1.7	1.4
	South: Pearson St	3.1	5.2	2.1
	West: MacArthur St	0.5	1.2	0.7

Table 10: MacArthur Street / Pearson Street Intersection Performance Comparison

The critical period for the MacArthur Street / Pearson Street intersection is expected to be the Saturday peak period, with a maximum degree of saturation of 0.225 (classified as an 'Excellent' Level of Service) experienced on the east approach. All DoS values are below the threshold of DTP's desirable degree of saturation.

The longest 95th percentile queue is recorded on the southern approach during the Saturday peak period with a queue length of approximately 5.2 metres (less than 1 vehicle). For the Saturday peak period, the project site would result in a maximum increase of 2.1m (less than 1 vehicle) compared to the existing @ 10 years scenario.

The average delay across approaches is generally expected to be approximately 10 seconds or less for the peak periods, with the south approach experiencing delays of around 20 seconds.

As demonstrated in Table 10, it is expected that the project site would have minimal impact on the overall performance of the MacArthur Street / Pearson Street intersection in terms of saturation, delays and queue lengths. Maximum increases to the saturation (+0.082), delays (+6.1 seconds) and queue lengths (+2.1 metres – less than 1 vehicle) for each individual leg are also minimal.

The above performance results are considered to be acceptable for an unsignalised intersection.

Desailly Street / New Railway Road intersection

For the Desailly Street / New Railway Road intersection, a comparison of the existing and post-development intersection performance in 10 years is presented below.

Performance Measure	Leg	Existing @10 years	Post-Development @ 10 years	Increase (+)
Thursday - AM				
Degree of Saturation	North: Desailly St	0.034	0.036	0.002
	South: Desailly St	0.024	0.035	0.011
Average Delay (s)	North: Desailly St	0.1	0.2	0.1
	South: Desailly St	0.0	0.0	0.0
	North: Desailly St	0.3	0.5	0.2

Queue Length (m)	South: Desailly St	0.0	0.0	0.0
Thursday - PM				
Degree of Saturation	North: Desailly St	0.048	0.051	0.003
	South: Desailly St	0.070	0.085	0.015
Average Delay (s)	North: Desailly St	0.0	0.1	0.1
	South: Desailly St	0.0	0.0	0.0
Queue Length (m)	North: Desailly St	0.1	0.3	0.2
	South: Desailly St	0.0	0.0	0.0
Saturday - Peak				
Degree of Saturation	North: Desailly St	0.061	0.064	0.003
	South: Desailly St	0.085	0.103	0.018
Average Delay (s)	North: Desailly St	0.1	0.2	0.1
	South: Desailly St	0.0	0.0	0.0
Queue Length (m)	North: Desailly St	0.3	0.5	0.2
	South: Desailly St	0.0	0.0	0.0

Table 11: Desailly Street / New Railway Road Intersection Performance Comparison

The critical period for the Desailly Street / New Railway Road intersection is expected to be the Saturday peak period, with a maximum degree of saturation of 0.103 (classified as an 'Excellent' Level of Service) experienced on the south approach. All DoS values are below the threshold of DTP's desirable degree of saturation.

The longest 95th percentile queue is recorded on the north approach during the Saturday peak period with a queue length of approximately 0.5 metres (less than 1 vehicle).

The average delay across all approaches is expected to be less than 5 seconds for the peak periods.

As demonstrated in Table 11, it is expected that the project site would have minimal impact on the overall performance of the Desailly Street / New Railway Road intersection in terms of saturation, delays and queue lengths. Maximum increases to the saturation (+0.018), delays (+0.2 seconds) and queue lengths (+0.2 metres – less than 1 vehicle) for each individual leg are also minimal.

The above performance results are considered to be acceptable for an unsignalised intersection.

Desailly Street / Basement Car Park Entrance intersection

For the Desailly Street / Basement Car Park Entrance intersection, the SIDRA results for the post-development intersection performance in 10 years is presented below.

	Degree of Saturation (DoS)	Average Delay (s)	95 th percentile Queue Length (m)
Thursday - AM			
North: Desailly St	0.099	0.6	3.4
South: Desailly St	0.034	0.0	0.0
West: Basement Carpark	0.059	0.1	1.7
Thursday - PM			
North: Desailly St	0.149	0.9	5.3
South: Desailly St	0.080	0.0	0.0
West: Basement Carpark	0.129	0.4	3.9
Saturday - Peak			
North: Desailly St	0.183	1.0	6.6
South: Desailly St	0.093	0.0	0.0
West: Basement Carpark	0.138	0.5	4.2

Table 12: Intersection Performance – Desailly Street / Basement Car Park Entrance intersection

The critical period for the Desailly Street / Basement Car Park Entrance intersection is expected to be the Saturday peak period, with a maximum degree of saturation of 0.183 (classified as an 'Excellent' Level of Service) experienced on the north approach. All DoS values are below the threshold of DTP's desirable degree of saturation.

The longest 95th percentile queue is recorded on the northern approach during the Saturday peak period with a queue length of 6.6 metres (approximately 1 vehicle).

The average delay across all approaches is expected to be less than 5 seconds for the peak periods.

As demonstrated in Table 12, it is expected that the proposed Desailly Street / Basement Car Park Entrance intersection would have low saturation, delays and queue lengths.

The above performance results are considered to be acceptable for an unsignalised intersection.

Therefore, based on the results and analysis for the five intersections, the impact of the traffic from the project site on the surrounding road network and intersections is considered appropriate.

Empirical Parking Analysis

To gain an understanding of the existing parking conditions within the vicinity of the subject site, Beveridge Williams commissioned car parking occupancy surveys within approximately 250 m of walking distance from the project site. These surveys were conducted on:

- Thursday, 7 August 2025, 8:00 am to 6:00 pm at 30-minute intervals; and
- Saturday, 9 August 2025 9:30 am to 2:00 pm at 30-minute intervals.

The survey locations are shown in Figure 10 below.

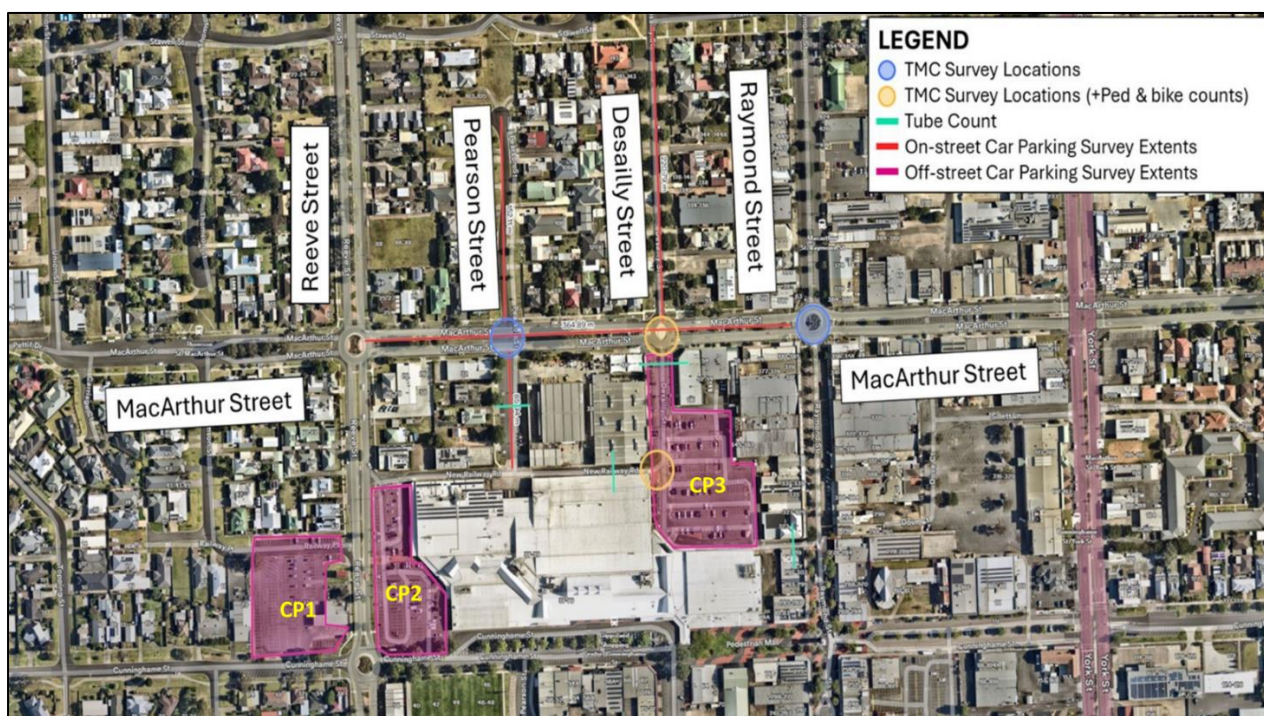


Figure 10: Car Parking Occupancy Survey Locations & Extents

Based on the surveys undertaken, a total of 787 standard and accessible parking spaces (approximately 298 long term spaces and 489 short term (less than 4 hours) spaces) comprising both on-street and off-street parking were identified as available within the study area. However, it is noted that this supply includes 29 spaces where customer parking is either not permitted or subject to restrictions. To ensure an accurate assessment of usable parking capacity, it is considered appropriate to exclude these restricted spaces from the analysis. The excluded parking zones are listed below:

- No Stopping Zones;
- Direct to Boot parking spaces (equivalent to online collection spaces)
- ¼ P Zones;
- Loading Zones;
- Reserved Parking Spaces – Harvey Norman

Table 13 below summarises the eligible parking spaces along with their respective parking restrictions. A total parking capacity of 758 spaces is available at the surveyed locations.

PARKING RESTRICTIONS	ELIGIBLE SPACES
Unrestricted	122
2P 9am-6pm Mon-Fri, 9am-1pm Sat	68
2P	17
P All Day Parking Area	169
2P 9am-6pm Mon-Fri, 9am-5pm Sat	322
2P Disabled Only 9am-6pm Mon-Fri, 9am-5pm Sat	2
3P 9am-6pm Mon-Fri, 9am-5pm Sat	41
3P Disabled Only 9am-6pm Mon-Fri, 9am-5pm Sat	2
3P Parents with Prams 9am-6pm Mon-Fri, 9am-5pm Sat	2
P Disabled Only	7

2P Parents with Prams 9am-6pm Mon-Fri, 9am-5pm Sat	4
2P 9am-6pm Mon-Fri, 9am-1pm Sat Motorcycle Parking	2
Total	758

Table 13: Eligible Parking Spaces

The results of the parking occupancy surveys are discussed below and presented in Figure 11 (Thursday) and Figure 12 (Saturday).

Figure 11 below presents the parking survey results for Thursday. The peak parking occupancy occurred at 12:30pm at which time **304 vacant spaces** were available across the surveyed locations. Following this peak period, parking demand showed a gradual decline, with a minor increase observed at 4:00pm, followed by a significant decrease thereafter. Detailed parking surveys are enclosed to this addendum report.

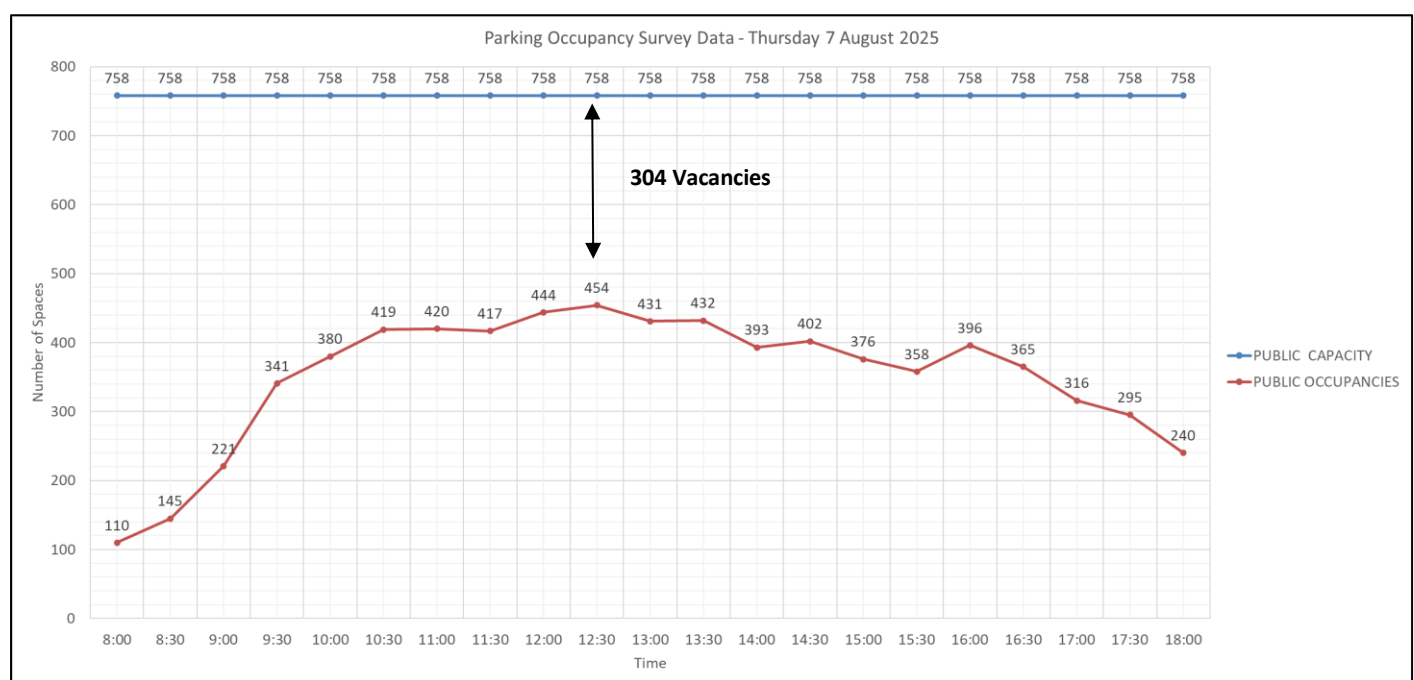


Figure 11: Car Parking Occupancy Survey Result – Thursday 7 August 2025

Figure 12 below presents the parking survey results for Saturday. The peak parking occupancy occurred at 11:30am, at which time **367 vacant spaces** were available across the surveyed locations. Following the peak period, parking occupancy generally remained consistent till 1:00 pm followed by a slight decline.

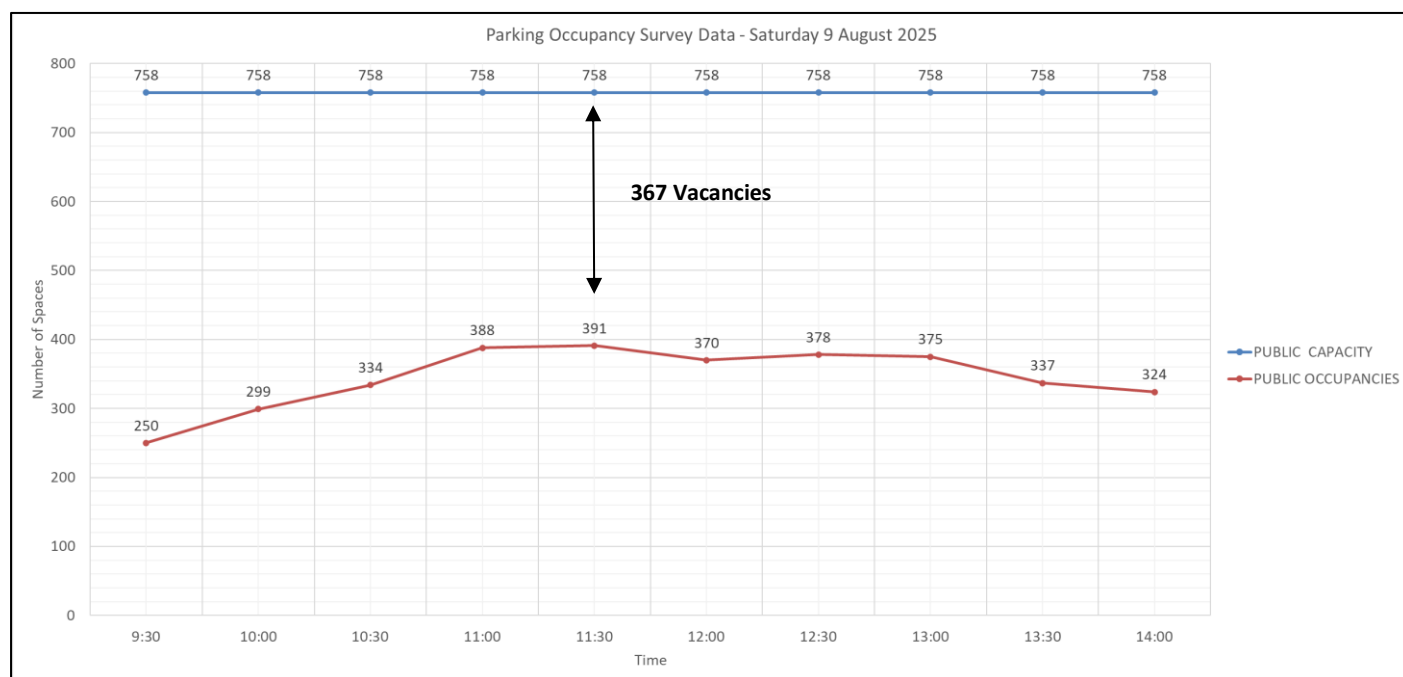


Figure 12: Car Parking Occupancy Survey Result – Saturday 9 August 2025

Statutory Car Parking Requirements

The below statutory parking rates and requirements are per the Planning Scheme and the National Construction Code (NCC) and are taken from the Initial Traffic Impact Assessment report.

- 133 spaces (~3 accessible) for the supermarket
- 89 (~1 accessible) spaces for the office
- 53 (~1 accessible) spaces for the retail
- 10 (~0 accessible) spaces for the restaurant

Basement Car Parking Provision

The proposed development plan has a provision of 259 spaces comprising 253 standard and 6 accessible spaces. This represents a shortfall of 27 standard spaces and a surplus of 1 accessible space, equating to a total shortfall of 26 spaces from Planning Scheme requirement. As discussed previously, there are 304 spaces available within the surrounding area to cater for the shortfall of 27 on-site, standard spaces. Also, the proposed provision of the basement parking represents an improvement from the existing Bunnings' undersupply of car parking spaces.

Anticipated Car Parking Demand

The Transport for New South Wales (TfNSW) trip generation data indicates that supermarkets typically experience peak activity during weekday mornings and evenings, particularly after standard work hours. On weekends, supermarket visitation tends to peak shortly after midday.

In contrast, it can also be noted that restaurants generally peak during the evening hours and are notably busier on weekends compared to weekdays.

The proposed office development is also expected to remain closed on weekends, effectively reducing the on-site parking demand by 89 parking spaces. These spaces could then be utilised by other developments on the site during their respective peak periods.

Noting the above, it can be considered that different land uses proposed for the site are likely to experience different peak hours and as a result, peak parking demands are unlikely to overlap significantly, leading to more efficient use of the proposed on-site parking spaces.

Adequacy of Parking Provisions

As shown in Figure 11 and Figure 12 above, there is a total capacity of 758 parking spaces in the vicinity of the subject site and significant unutilised car parking capacity, with **304** and **367 vacant** spaces on Thursday and Saturday, respectively, during the peak hour. Outside of the peak hours, there is reduced parking demand.

The existing off-street parking areas CP1 and CP2 included in the parking survey (refer to Figure 10) are located closer to Gippsland Centre. These areas have a combined capacity of 329 spaces. Notwithstanding that parking demand generated by the project site could potentially be accommodated by these spaces, there is still a capacity of 429 parking spaces within close vicinity of the project site with **150** and **180 vacancies** on Thursday and Saturday, respectively, when these carparks (CP1 and CP2) are excluded. Figure 13 (Thursday) and Figure 14 (Saturday) below present this information.

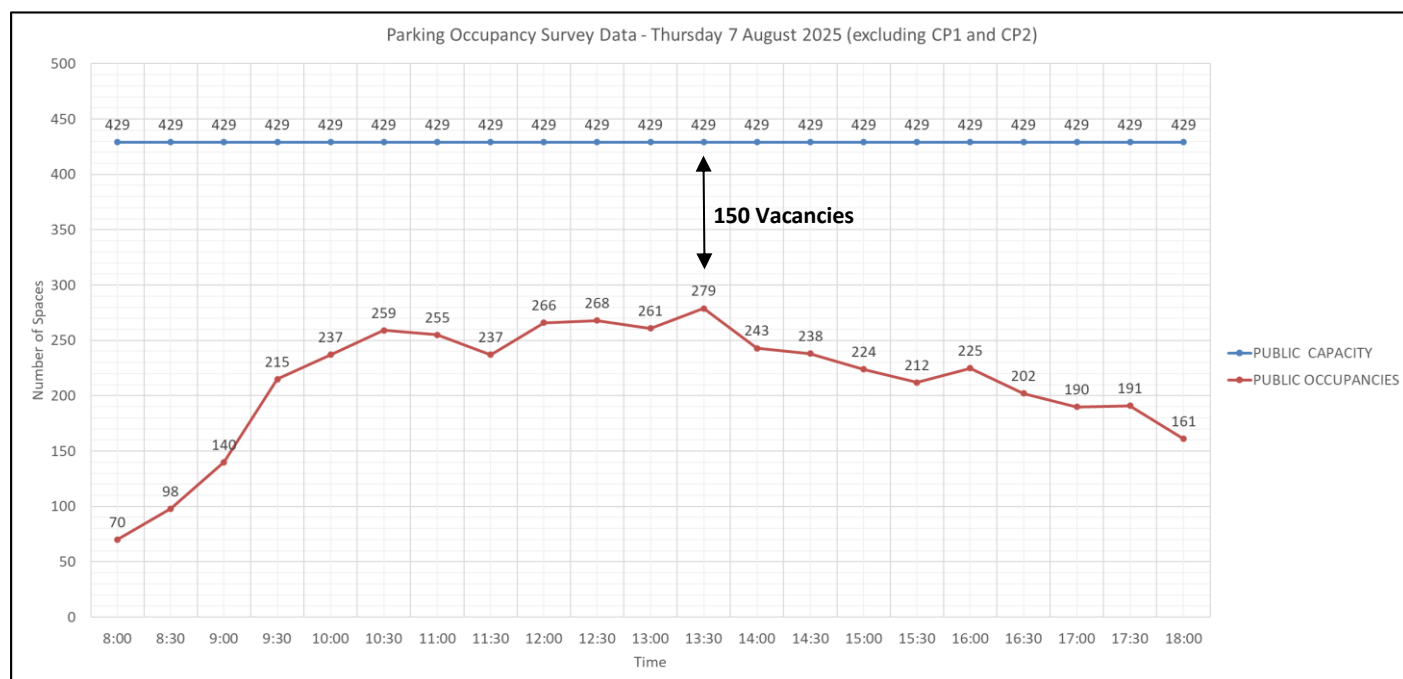


Figure 13: Car Parking Occupancy Survey Result (Excluding CP1 and CP2) – Thursday 7 August 2025

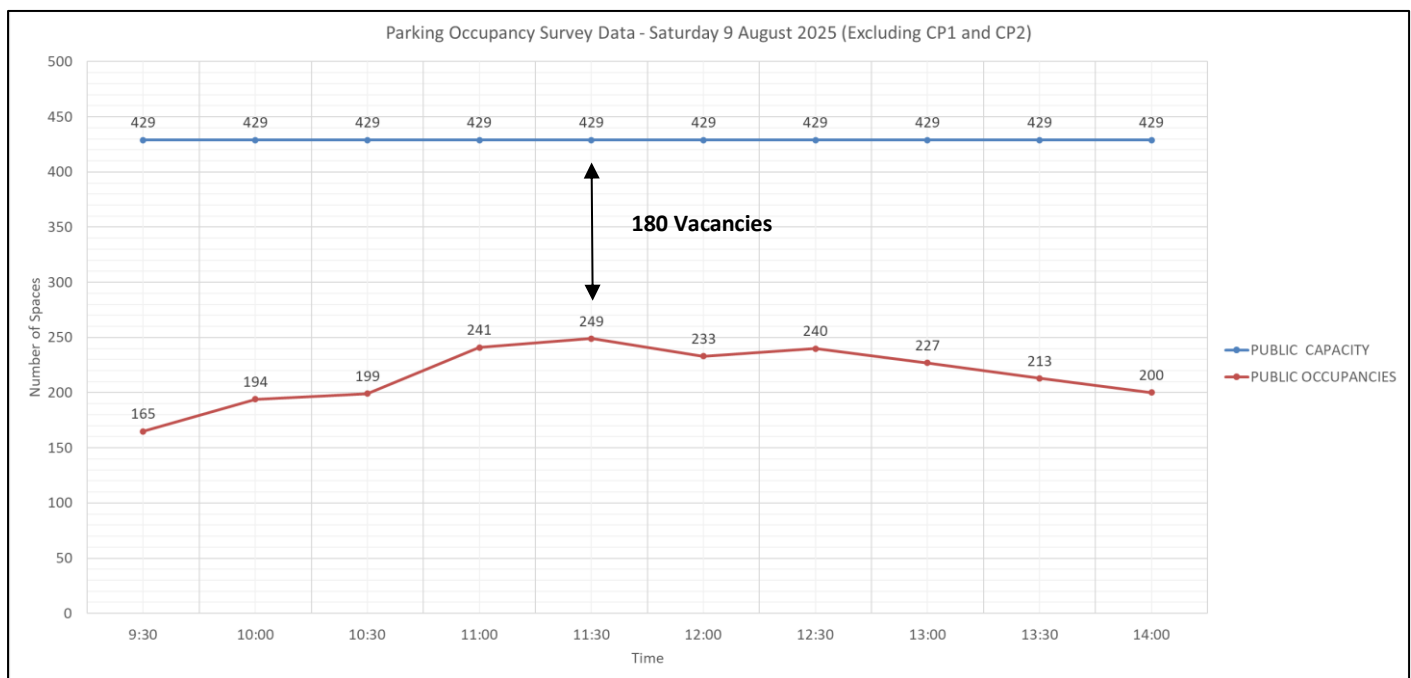


Figure 14: Car Parking Occupancy Survey Result (Excluding CP1 and CP2) – Saturday 9 August 2025

The different peak parking demand periods for the different land uses will lead to a reduced overall peak parking demand and more efficient use of the proposed on-site parking spaces.

The provision of the online collection point will further reduce parking demand.

With regards to location, the subject site is generally located within the town centre and good walking distance access is provided to a wide range of amenities such as Gippsland Centre, supermarkets, retail shops, cafes, school, health, social and recreational services. Therefore, multi-purpose trips are expected to form a significant component of trips to the project site.

The subject site is also well connected with footpaths and due its town centric location, some staff or visitors are likely walk or cycle to the subject site contributing to less parking demands. Adequate pedestrian and bicycle infrastructure, including bicycle parking and appropriate footpath widths, is proposed to facilitate this.

Furthermore, the project site has excellent bus transport connectivity with a bus terminal and several other bus stops located within walkable distance of the project site. The Gippsland Shopping Centre bus terminal provides local as well as regional connectivity.

Therefore, based on the parking analysis presented above, it is concluded that the shortfall of 26 on-site spaces is expected to be comfortably accommodated by the nearby on and off-street parking spaces located near the project site and there are reasonable grounds for the Council to accept a carparking dispensation for the proposed development at 38-50 MacArthur Street, Sale.

The availability of ample on and off-street parking spaces located within close proximity to the project site is expected to adequately service the proposed site without unduly impacting the car parking amenity of the surrounding precinct.

Online Collection Point analysis

The online collection point will allow for two lanes of three online collection point spaces (6 online collection point spaces in total), plus 4 additional spaces of storage on-site and 1 space between the footpath and road carriageway.

The traffic surveys undertaken on Thursday, 7 August 2025 and Saturday, 9 August 2025 captured the Woolworths Direct to Boot car parking occupancy levels throughout the day. Thursday was generally considered to be a busier day for the Direct to Boot service. There was only one instance on Thursday and one instance on Saturday where all 4 spaces of the Direct to Boot service were occupied.

The online collection point has a 50% greater capacity than the existing Direct to Boot service, plus 5 overflow parking spaces within the online collection point area

Based on the above, it is considered that the operation of the online collection point is appropriate from a traffic engineering perspective.

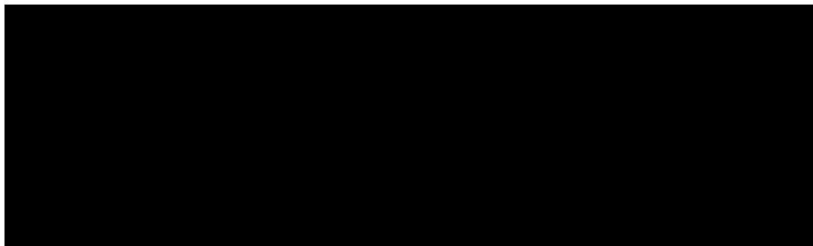
The supermarket operator will be responsible for ensuring that the collection times are appropriately allocated and that the inventory is ready for pick-up at the start of the allocated time period.

Conclusion

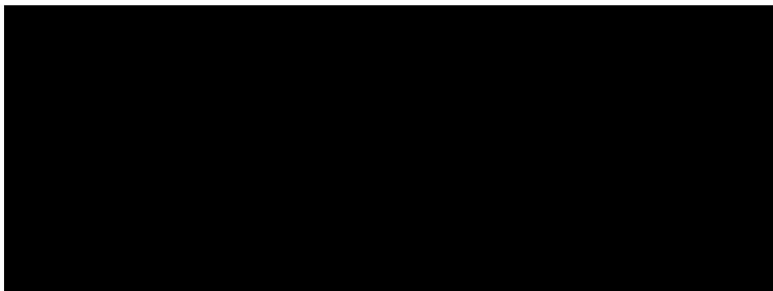
An addendum traffic report, to complement the Initial Traffic Impact Assessment report and Waste Management Plan compiled by Beveridge Williams, has been produced for the proposed mixed-use development at 38-50 MacArthur Street, Sale. The following provides a summary of the findings outlined in this Memorandum.

- The surrounding road network can adequately accommodate the proposed delivery movements.
- The proposed mixed-use development considered reasonable having due regard to the impact on the surrounding road network from a traffic engineering perspective.
- It is considered that the proposal would meet the intent of DTP guidelines and requirements in relation to the intersection and road network performance.
- There is sufficient existing capacity in the surrounding on-street and off-street parking to cater for any overflow parking demand. It is also noted that there is significant off-street parking availability for the Gippsland Shopping Centre.
- The online collection point is expected to operate appropriately from a traffic engineering perspective.

Should you have any queries, please do not hesitate to contact the undersigned.



BEVERIDGE WILLIAMS



BEVERIDGE WILLIAMS

SIDRA Intersection results are enclosed to this memo.

Intersection of New Railway Rd and Desailly St, Sale

GPS -38.106191, 147.063951

Date:	Thu 07/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	N/A
South:	Desailly St
West:	New Railway Rd

Survey	AM:	8:00 AM-12:00 PM
Period	PM:	12:00 PM-6:00 PM
Traffic	AM:	11:00 AM-12:00 PM
Peak	PM:	3:45 PM-4:45 PM

All Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
8:00	8:15	0	2	9	0	7	0	0	0	0	102	
8:15	8:30	0	1	15	0	10	2	0	0	0	120	
8:30	8:45	0	0	13	0	15	0	0	0	0	125	
8:45	9:00	0	2	16	0	10	0	0	0	0	127	
9:00	9:15	0	2	16	0	18	0	0	0	0	143	
9:15	9:30	0	0	17	0	14	2	0	0	0	150	
9:30	9:45	0	0	11	0	19	0	0	0	0	169	
9:45	10:00	0	2	20	0	22	0	0	0	0	193	
10:00	10:15	0	1	14	0	25	3	0	0	0	199	
10:15	10:30	0	2	25	0	19	6	0	0	0	211	
10:30	10:45	0	3	17	0	32	2	0	0	0	214	
10:45	11:00	0	3	18	0	23	6	0	0	0	214	
11:00	11:15	0	2	27	0	19	7	0	0	0	216	Peak
11:15	11:30	0	2	15	0	34	4	0	0	0		
11:30	11:45	0	3	27	0	22	2	0	0	0		
11:45	12:00	0	4	20	0	26	2	0	0	0		
12:00	12:15	0	4	18	0	20	0	0	0	0	212	
12:15	12:30	0	2	19	0	32	4	0	0	0	226	
12:30	12:45	0	2	18	0	29	7	0	0	0	225	
12:45	13:00	0	1	23	0	30	3	0	0	0	224	
13:00	13:15	0	1	24	0	25	6	0	0	0	214	
13:15	13:30	0	0	25	0	27	4	0	0	0	197	
13:30	13:45	0	5	20	0	26	4	0	0	0	196	
13:45	14:00	0	3	12	0	28	4	0	0	0	203	
14:00	14:15	0	2	12	0	21	4	0	0	0	200	
14:15	14:30	0	2	22	0	27	4	0	0	0	208	
14:30	14:45	0	2	25	0	32	3	0	0	0	201	
14:45	15:00	0	0	22	0	20	2	0	0	0	201	
15:00	15:15	0	1	13	0	31	2	0	0	0	224	
15:15	15:30	0	2	21	0	20	5	0	0	0	230	
15:30	15:45	0	1	28	0	29	4	0	0	0	231	
15:45	16:00	0	1	27	0	35	3	0	0	1	234	Peak
16:00	16:15	0	1	21	0	30	1	0	0	0	214	
16:15	16:30	0	2	16	0	31	0	0	0	0	220	

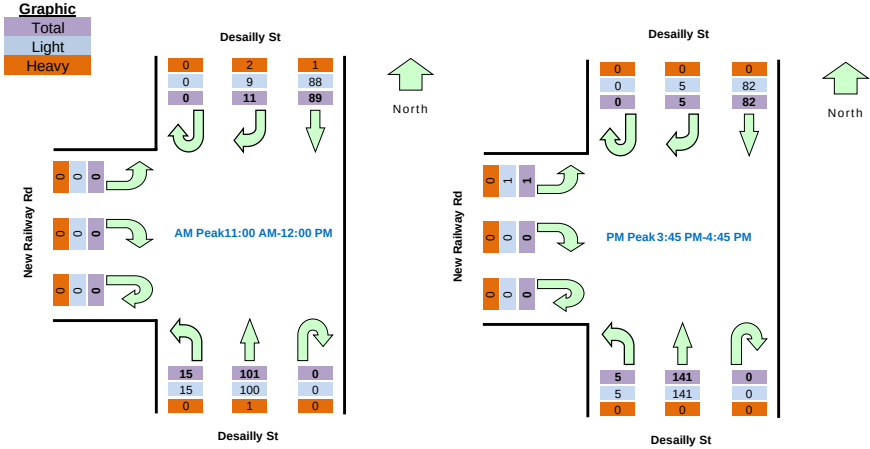
Pedestrians Crossing

Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
8:00	8:15	1	4	2	0	0	0	51
8:15	8:30	2	3	0	0	3	1	64
8:30	8:45	4	2	0	0	6	1	92
8:45	9:00	6	9	2	0	4	1	104
9:00	9:15	6	4	3	2	1	4	118
9:15	9:30	6	15	5	3	7	1	154
9:30	9:45	11	8	2	0	0	4	171
9:45	10:00	6	10	6	7	5	2	212
10:00	10:15	12	16	5	6	6	11	227
10:15	10:30	13	10	6	1	7	17	233
10:30	10:45	26	16	0	4	13	7	238
10:45	11:00	12	21	0	0	10	8	233
11:00	11:15	16	18	8	4	7	9	227
11:15	11:30	11	14	3	3	15	13	
11:30	11:45	23	11	2	3	11	11	
11:45	12:00	10	16	2	1	7	9	
12:00	12:15	11	7	4	0	13	14	209
12:15	12:30	13	16	5	3	16	2	202
12:30	12:45	12	14	5	6	4	17	194
12:45	13:00	6	15	8	4	12	2	186
13:00	13:15	11	5	5	4	10	7	193
13:15	13:30	12	15	2	2	10	6	190
13:30	13:45	18	12	6	1	4	9	176
13:45	14:00	13	18	4	3	8	8	180
14:00	14:15	13	7	1	3	6	9	177
14:15	14:30	10	7	6	2	1	7	163
14:30	14:45	13	13	7	1	7	13	174
14:45	15:00	12	13	5	2	7	12	162
15:00	15:15	7	10	3	2	2	1	172
15:15	15:30	13	9	0	8	3	11	205
15:30	15:45	12	12	6	2	7	3	202
15:45	16:00	19	14	6	1	9	12	184
16:00	16:15	10	23	10	3	7	5	169
16:15	16:30	12	9	7	1	3	9	153

16:30	16:45	0	1	18	0	45	1	0	0	0	224	
16:45	17:00	0	0	20	0	25	2	0	0	0	213	
17:00	17:15	0	0	30	0	26	3	0	0	0	219	
17:15	17:30	0	0	21	0	29	3	0	0	0		
17:30	17:45	0	1	18	0	34	1	0	0	0		
17:45	18:00	0	2	16	0	32	3	0	0	0		

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
11:00	12:00	0	11	89	0	101	15	0	0	0	216
15:45	16:45	0	5	82	0	141	5	0	0	1	234

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

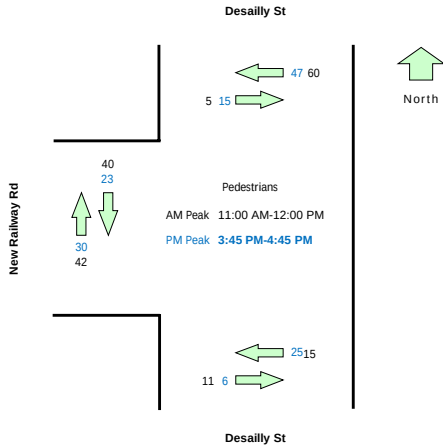


Light Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
8:00	8:15	0	1	9	0	7	0	0	0	0
8:15	8:30	0	0	15	0	10	2	0	0	0
8:30	8:45	0	0	13	0	15	0	0	0	0
8:45	9:00	0	1	16	0	10	0	0	0	0
9:00	9:15	0	1	15	0	17	0	0	0	0
9:15	9:30	0	0	17	0	14	2	0	0	0
9:30	9:45	0	0	11	0	18	0	0	0	0
9:45	10:00	0	1	20	0	22	0	0	0	0
10:00	10:15	0	1	14	0	25	3	0	0	0
10:15	10:30	0	1	25	0	19	6	0	0	0
10:30	10:45	0	2	17	0	31	2	0	0	0
10:45	11:00	0	2	18	0	23	6	0	0	0
11:00	11:15	0	1	27	0	18	7	0	0	0
11:15	11:30	0	1	14	0	34	4	0	0	0
11:30	11:45	0	3	27	0	22	2	0	0	0
11:45	12:00	0	4	20	0	26	2	0	0	0

16:30	16:45	6	7	2	1	4	4	148
16:45	17:00	13	10	1	4	11	7	152
17:00	17:15	10	13	5	2	3	9	125
17:15	17:30	7	7	5	10	4	3	
17:30	17:45	7	6	3	0	6	6	
17:45	18:00	3	6	4	0	4	2	

Peak Time	North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound
11:00	12:00	60	59	15	11	40	42
15:45	16:45	47	53	25	6	23	30



12:00	12:15	0	3	18	0	20	0	0	0	0
12:15	12:30	0	2	19	0	32	4	0	0	0
12:30	12:45	0	2	18	0	29	7	0	0	0
12:45	13:00	0	1	23	0	30	3	0	0	0
13:00	13:15	0	1	24	0	25	6	0	0	0
13:15	13:30	0	0	25	0	27	4	0	0	0
13:30	13:45	0	4	20	0	26	4	0	0	0
13:45	14:00	0	3	12	0	28	4	0	0	0
14:00	14:15	0	2	12	0	21	4	0	0	0
14:15	14:30	0	2	22	0	27	4	0	0	0
14:30	14:45	0	1	25	0	32	3	0	0	0
14:45	15:00	0	0	22	0	20	2	0	0	0
15:00	15:15	0	1	13	0	31	2	0	0	0
15:15	15:30	0	2	21	0	20	5	0	0	0
15:30	15:45	0	1	28	0	29	4	0	0	0
15:45	16:00	0	1	27	0	35	3	0	0	1
16:00	16:15	0	1	21	0	30	1	0	0	0
16:15	16:30	0	2	16	0	31	0	0	0	0
16:30	16:45	0	1	18	0	45	1	0	0	0
16:45	17:00	0	0	20	0	25	2	0	0	0
17:00	17:15	0	0	30	0	26	3	0	0	0
17:15	17:30	0	0	20	0	29	3	0	0	0
17:30	17:45	0	1	18	0	34	1	0	0	0
17:45	18:00	0	2	16	0	32	3	0	0	0

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway St			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	9	88	0	100	15	0	0	0	212
15:45	16:45	0	5	82	0	141	5	0	0	1	234

Heavy Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway St		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
8:00	8:15	0	1	0	0	0	0	0	0	0
8:15	8:30	0	1	0	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	0	0	0
8:45	9:00	0	1	0	0	0	0	0	0	0
9:00	9:15	0	1	1	0	1	0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0
9:30	9:45	0	0	0	0	1	0	0	0	0
9:45	10:00	0	1	0	0	0	0	0	0	0
10:00	10:15	0	0	0	0	0	0	0	0	0
10:15	10:30	0	1	0	0	0	0	0	0	0
10:30	10:45	0	1	0	0	1	0	0	0	0
10:45	11:00	0	1	0	0	0	0	0	0	0
11:00	11:15	0	1	0	0	1	0	0	0	0
11:15	11:30	0	1	1	0	0	0	0	0	0

Intersection of MacArthur St and Desailly St, Sale

GPS -38.105276, 147.063942

Date:	Thu 07/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	MacArthur St
South:	Desailly St
West:	MacArthur St

Survey	AM:	8:00 AM-12:00 PM
Period	PM:	12:00 PM-6:00 PM
Traffic	AM:	10:45 AM-11:45 AM
Peak	PM:	3:15 PM-4:15 PM

All Vehicles

Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	2	1	3	1	1	22	10	0	8	1	5	0	10	40	1	626	
8:15	8:30	0	6	0	2	0	8	35	23	0	20	2	2	0	9	61	2	693	
8:30	8:45	0	5	1	4	1	2	47	20	0	17	0	5	0	8	54	4	691	
8:45	9:00	0	2	0	3	0	1	50	28	0	10	2	7	0	10	69	1	689	
9:00	9:15	0	1	0	4	1	1	43	27	0	18	0	10	0	13	54	0	718	
9:15	9:30	0	1	1	3	3	1	50	24	0	23	3	11	0	9	39	0	749	
9:30	9:45	0	2	0	4	1	1	39	28	0	23	4	5	1	7	46	5	761	
9:45	10:00	0	0	0	0	1	1	57	41	0	38	3	12	1	12	45	1	811	
10:00	10:15	0	3	3	3	0	1	41	26	0	39	2	11	0	14	57	3	802	
10:15	10:30	0	2	2	2	1	0	47	33	0	30	3	11	0	17	34	0	812	
10:30	10:45	0	2	2	2	0	1	69	27	0	46	3	8	0	15	40	1	866	
10:45	11:00	0	2	2	2	3	0	41	29	0	37	2	14	1	14	53	3	893	Peak
11:00	11:15	0	1	3	1	3	2	48	41	0	32	5	17	1	10	48	1	887	
11:15	11:30	0	0	2	1	4	1	56	31	0	49	6	20	0	16	48	0		
11:30	11:45	0	1	0	1	2	2	59	42	0	36	3	23	0	12	62	0		
11:45	12:00	0	1	1	0	2	2	54	30	0	33	2	12	0	8	52	0		
12:00	12:15	0	1	0	1	2	3	59	36	0	29	4	19	1	20	59	5	966	
12:15	12:30	0	0	0	1	3	3	47	31	0	41	7	20	1	13	50	1	946	
12:30	12:45	0	5	2	2	3	1	56	37	0	52	3	13	1	12	65	3	952	
12:45	13:00	0	1	4	2	1	0	70	37	0	58	4	12	0	8	55	2	911	
13:00	13:15	0	1	1	2	3	4	46	39	0	35	5	15	1	14	51	2	866	
13:15	13:30	0	3	1	3	0	1	54	35	0	45	2	15	0	9	56	0	834	
13:30	13:45	0	5	1	0	2	3	44	30	0	50	2	13	1	10	52	1	824	
13:45	14:00	0	1	2	1	1	4	58	26	0	31	8	19	0	17	39	2	858	
14:00	14:15	0	2	1	2	0	0	46	24	0	37	8	11	0	10	44	2	858	
14:15	14:30	0	2	2	1	2	1	60	36	0	30	2	14	0	17	45	2	898	
14:30	14:45	0	1	3	3	1	3	57	42	0	58	4	16	1	9	47	3	919	
14:45	15:00	0	3	1	4	1	1	45	32	0	44	3	17	0	12	43	3	954	
15:00	15:15	0	3	1	2	1	2	76	31	0	38	6	13	0	6	47	1	1026	
15:15	15:30	0	1	3	0	0	0	61	28	0	38	1	16	0	20	66	1	1033	Peak
15:30	15:45	0	5	4	1	4	4	75	42	0	41	5	12	2	16	67	5	1008	
15:45	16:00	0	0	0	1	1	2	76	44	1	48	5	22	2	18	60	1	939	
16:00	16:15	0	2	4	2	1	0	74	28	0	40	7	15	0	10	49	2	877	
16:15	16:30	0	0	2	3	1	1	45	27	0	48	6	12	0	11	50	4	874	
16:30	16:45	0	1	1	2	0	2	56	28	0	48	4	11	0	11	48	2	890	
16:45	17:00	0	4	0	0	2	1	60	29	0	39	3	7	0	12	60	2	863	
17:00	17:15	0	4	2	3	0	1	61	39	0	47	7	8	2	12	45	0	802	
17:15	17:30	0	3	1	4	4	4	59	18	0	43	4	14	0	17	53	2		
17:30	17:45	0	3	2	4	0	1	54	23	0	39	10	9	0	9	33	0		
17:45	18:00	0	3	0	3	1	1	28	22	0	31	7	18	0	5	38	1		

Peak Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	4	7	5	12	5	204	143	0	154	16	74	2	52	211	4	893
15:15	16:15	0	8	11	4	6	6	286	142	1	167	18	65	4	64	242	9	1033

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

[Graphic](#)

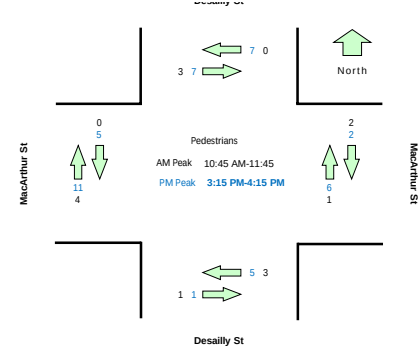
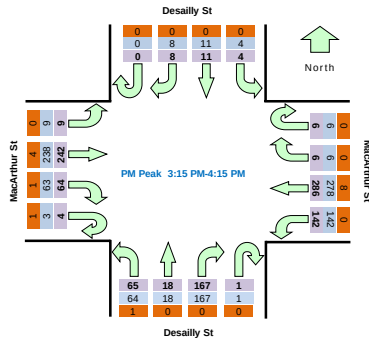
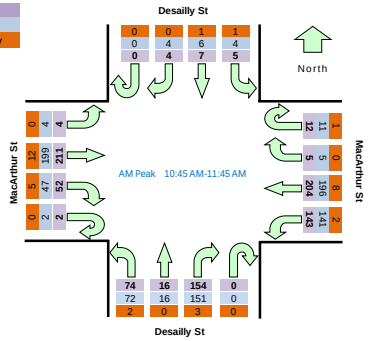
Pedestrians Crossing

Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hourly Total
8:00	8:15	0	0	3	0	1	0	0	0	39
8:15	8:30	0	1	7	0	1	4	0	0	41
8:30	8:45	3	3	1	0	1	1	3	0	31
8:45	9:00	1	2	2	2	2	0	1	0	21
9:00	9:15	0	3	0	0	3	0	0	0	23
9:15	9:30	0	2	1	0	0	0	0	0	21
9:30	9:45	0	0	0	1	0	1	0	0	22
9:45	10:00	1	0	8	0	1	1	1	0	35
10:00	10:15	0	0	0	2	0	1	0	1	24
10:15	10:30	0	1	0	1	0	1	0	1	23
10:30	10:45	2	4	1	0	0	2	1	5	25
10:45	11:00	0	0	0	0	1	0	0	0	14
11:00	11:15	0	0	0	1	0	0	0	2	17
11:15	11:30	0	2	1	0	1	1	0	1	
11:30	11:45	0	1	1	0	1	0	0	1	
11:45	12:00	0	0	0	0	2	1	0	1	
12:00	12:15	0	1	1	1	1	2	0	2	36
12:15	12:30	2	0	1	1	2	1	2	0	32
12:30	12:45	3	0	0	0	0	2	3	0	26
12:45	13:00	1	0	1	3	2	1	3	0	22
13:00	13:15	0	0	0	0	2	0	1	1	21
13:15	13:30	0	0	1	0	0	0	0	2	21
13:30	13:45	0	0	1	0	1	2	0	0	26
13:45	14:00	0	1	2	3	1	2	0	1	27
14:00	14:15	0	1	0	0	0	2	0	1	21
14:15	14:30	1	1	2	0	2	0	0	2	23
14:30	14:45	0	0	0	0	1	1	0	3	24
14:45	15:00	1	0	0	0	1	0	0	2	30
15:00	15:15	0	0	2	2	0	2	0	0	39
15:15	15:30	1	2	0	0	2	0	1	3	44
15:30	15:45	0	0	1	3	2	0	3	2	38
15:45	16:00	3	3	0	3	0	0	1	3	30
16:00	16:15	3	2	1	0	1	1	0	3	20
16:15	16:30	0	0	1	0	0	1	1	0	20
16:30	16:45	0	2	0	1	0	0	0	0	26
16:45	17:00	0	0	2	0	0	1	0	0	25
17:00	17:15	1	1	1	3	1	2	1	1	26
17:15	17:30	2	1	4	1	0	1	0	0	
17:30	17:45	0	1	0	1	0	0	0	0	
17:45	18:00	0	1	0	1	0	0	0	2	

Peak Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Peak
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hour total
10:45	11:45	0	3	2	1	3	1	0	4	14
15:15	16:15	7	7	2	6	5	1	5	11	44

Desailly St

Total
Light
Heavy



Light Vehicles

Time		North Approach Desaillie St				East Approach MacArthur St				South Approach Desaillie St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	2	1	3	1	1	20	10	0	8	1	5	0	9	38	1
8:15	8:30	0	6	0	2	0	8	33	22	0	20	2	0	0	9	59	2
8:30	8:45	0	4	1	4	1	2	44	20	0	17	0	5	0	8	51	4
8:45	9:00	0	2	0	3	0	1	47	28	0	10	2	7	0	8	68	1
9:00	9:15	0	1	0	4	1	1	42	24	0	17	0	9	0	13	52	0
9:15	9:30	0	1	1	3	3	1	47	24	0	23	3	9	0	9	37	0
9:30	9:45	0	2	0	4	1	1	38	28	0	22	4	5	1	7	44	5
9:45	10:00	0	0	0	0	1	1	54	41	0	38	3	11	1	11	43	1
10:00	10:15	0	3	3	3	0	1	40	25	0	38	2	10	0	13	55	3
10:15	10:30	0	2	2	1	0	0	46	33	0	30	3	11	0	16	33	0
10:30	10:45	0	2	2	2	0	1	68	26	0	46	3	7	0	15	36	0
10:45	11:00	0	2	1	1	3	0	38	29	0	37	2	14	1	12	49	3
11:00	11:15	0	1	3	1	3	2	47	40	0	30	5	16	1	9	42	1
11:15	11:30	0	0	2	1	3	1	53	30	0	49	6	20	0	14	47	0
11:30	11:45	0	1	0	1	2	2	58	42	0	35	3	22	0	12	61	0
11:45	12:00	0	1	1	0	2	2	52	30	0	33	2	12	0	8	52	0
12:00	12:15	0	1	0	1	2	3	58	36	0	29	4	19	1	19	59	5
12:15	12:30	0	0	0	0	2	3	46	31	0	41	7	20	1	12	46	1
12:30	12:45	0	4	2	2	3	1	55	37	0	51	3	13	1	12	63	3
12:45	13:00	0	1	4	2	1	0	69	37	0	58	4	12	0	7	53	2
13:00	13:15	0	1	1	2	3	4	42	39	0	34	4	15	1	13	48	2
13:15	13:30	0	3	1	3	0	1	53	35	0	45	2	15	0	9	55	0
13:30	13:45	0	5	1	0	2	3	44	30	0	50	2	13	1	9	52	1
13:45	14:00	0	1	2	1	1	4	57	25	0	31	8	19	0	17	39	2
14:00	14:15	0	2	1	2	0	0	44	24	0	37	8	11	0	10	44	2
14:15	14:30	0	2	2	1	2	1	56	36	0	30	2	13	0	17	44	2
14:30	14:45	0	1	3	3	1	3	56	41	0	58	4	16	1	8	44	3
14:45	15:00	0	3	1	4	1	1	43	32	0	43	3	17	0	12	42	3
15:00	15:15	0	3	1	2	1	2	76	31	0	38	6	13	0	6	45	1
15:15	15:30	0	1	3	0	0	0	61	28	0	38	1	16	0	20	66	1
15:30	15:45	0	5	4	1	4	4	70	42	0	41	5	12	1	16	67	5
15:45	16:00	0	0	0	1	1	2	74	44	1	48	5	21	2	17	59	1
16:00	16:15	0	2	4	2	1	0	73	28	0	40	7	15	0	10	46	2
16:15	16:30	0	0	2	3	1	1	45	27	0	48	6	12	0	11	49	4
16:30	16:45	0	1	1	2	0	2	56	28	0	48	4	11	0	10	48	2
16:45	17:00	0	4	0	0	2	1	60	29	0	39	3	7	0	12	58	2
17:00	17:15	0	4	2	3	0	1	61	39	0	47	7	8	2	12	44	0
17:15	17:30	0	3	1	4	4	4	59	18	0	43	4	14	0	16	53	2

17:30	17:45	0	3	2	4	0	1	54	23	0	39	10	9	0	9	33	0
17:45	18:00	0	3	0	3	1	1	28	22	0	31	7	18	0	5	38	1

Peak Time		North Approach				East Approach				South Approach				West Approach				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	4	6	4	11	5	196	141	0	151	16	72	2	47	199	4	
15:15	16:15	0	8	11	4	6	6	278	142	1	167	18	64	3	63	238	9	

Heavy Vehicles

Time		North Approach				East Approach				South Approach				West Approach			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	0
8:15	8:30	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0
8:30	8:45	0	1	0	0	0	0	3	0	0	0	0	0	0	0	3	0
8:45	9:00	0	0	0	0	0	0	3	0	0	0	0	0	0	2	1	0
9:00	9:15	0	0	0	0	0	0	1	3	0	1	0	1	0	0	2	0
9:15	9:30	0	0	0	0	0	0	3	0	0	0	0	2	0	0	2	0
9:30	9:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0
9:45	10:00	0	0	0	0	0	0	3	0	0	0	0	1	0	1	2	0
10:00	10:15	0	0	0	0	0	0	1	1	0	1	0	1	0	1	2	0
10:15	10:30	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0
10:30	10:45	0	0	0	0	0	0	1	1	0	0	0	1	0	0	4	1
10:45	11:00	0	0	1	1	0	0	3	0	0	0	0	0	0	2	4	0
11:00	11:15	0	0	0	0	0	0	1	1	0	2	0	1	0	1	6	0
11:15	11:30	0	0	0	0	1	0	3	1	0	0	0	0	0	2	1	0
11:30	11:45	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
11:45	12:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
12:15	12:30	0	0	0	1	1	0	1	0	0	0	0	0	0	1	4	0
12:30	12:45	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2	0
12:45	13:00	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0
13:00	13:15	0	0	0	0	0	0	4	0	0	1	1	0	0	1	3	0
13:15	13:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
13:45	14:00	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
14:00	14:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
14:15	14:30	0	0	0	0	0	0	4	0	0	0	0	1	0	0	1	0
14:30	14:45	0	0	0	0	0	0	1	1	0	0	0	0	0	1	3	0
14:45	15:00	0	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0
15:00	15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
15:15	15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	5	0	0	0	0	0	1	0	0	0
15:45	16:00	0	0	0	0	0	0	2	0	0	0	0	1	0	1	1	0
16:00	16:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0
16:15	16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:00	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach				East Approach				South Approach				West Approach				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	0	1	1	1	0	8	2	0	3	0	2	0	5	12	0	35
15:15	16:15	0	0	0	0	0	0	8	0	0	0	0	1	1	1	4	0	15

Cyclists

[illegible]

[illegible]

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

Intersection of MacArthur St and Pearson St, Sale

GPS -38.105322, 147.062446

Date: Thu 07/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Pearson St
East: MacArthur St
South: Pearson St
West: MacArthur St

Survey AM: 8:00 AM-12:00 PM
Period PM: 12:00 PM-6:00 PM
Traffic AM: 10:45 AM-11:45 AM
Peak PM: 3:15 PM-4:15 PM

All Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	0	0	1	0	1	23	4	0	1	0	0	0	2	50	0	482	
8:15	8:30	0	1	0	1	0	0	33	6	0	1	0	3	0	5	70	0	527	
8:30	8:45	0	0	0	2	0	1	50	6	0	2	0	1	2	6	63	0	533	
8:45	9:00	0	0	0	1	0	0	53	3	0	0	0	1	1	10	77	1	512	
9:00	9:15	0	0	0	0	0	0	51	3	0	5	0	0	1	5	62	0	499	
9:15	9:30	0	0	0	0	0	0	59	6	0	4	0	7	1	4	45	0	509	
9:30	9:45	0	0	0	0	0	0	44	2	0	2	0	4	0	4	56	0	496	
9:45	10:00	0	0	0	0	0	1	64	3	0	3	0	2	0	5	56	0	528	
10:00	10:15	0	0	0	0	0	0	55	1	0	3	0	3	1	3	71	0	528	
10:15	10:30	0	0	0	0	1	0	53	1	0	5	0	2	0	6	45	0	529	
10:30	10:45	0	0	0	0	0	0	72	3	0	4	0	5	0	7	53	0	561	
10:45	11:00	0	0	0	0	0	1	53	5	0	4	0	2	1	0	68	0	578	Peak
11:00	11:15	0	2	0	0	1	0	63	4	0	6	0	4	0	4	54	0	577	
11:15	11:30	0	1	0	0	0	0	66	8	0	5	0	2	1	2	60	0		
11:30	11:45	0	0	0	0	1	0	82	3	0	7	0	2	0	2	64	0		
11:45	12:00	0	0	0	3	1	1	61	6	0	6	0	2	1	0	52	0		
12:00	12:15	0	1	0	0	1	0	71	7	0	6	0	2	0	5	77	0	631	
12:15	12:30	0	0	0	0	0	0	66	4	0	6	0	2	1	3	63	1	596	
12:30	12:45	0	0	0	0	0	0	66	4	0	9	0	6	0	1	72	1	589	
12:45	13:00	0	0	0	0	1	1	79	6	0	2	0	2	0	4	61	0	565	
13:00	13:15	0	2	0	0	2	0	58	3	0	7	0	2	0	2	58	1	551	
13:15	13:30	0	0	0	0	0	0	64	7	0	4	0	0	0	3	61	0	538	
13:30	13:45	0	1	0	0	0	1	54	7	0	6	0	2	0	6	58	0	548	
13:45	14:00	0	0	0	0	0	0	68	12	0	7	0	4	0	4	47	0	550	
14:00	14:15	0	1	0	0	0	1	54	5	0	3	0	3	0	2	53	0	537	
14:15	14:30	0	0	0	1	1	0	72	3	0	4	0	5	0	2	61	0	573	
14:30	14:45	0	1	0	0	1	0	66	5	0	10	0	1	1	1	50	1	593	
14:45	15:00	0	1	0	0	0	0	64	2	0	6	1	3	1	3	47	1	643	
15:00	15:15	0	1	0	2	0	2	91	4	0	3	0	1	1	2	50	1	697	
15:15	15:30	0	0	0	0	0	0	70	7	0	2	0	0	1	0	88	1	700	Peak
15:30	15:45	0	0	0	0	0	0	84	9	0	5	0	2	3	2	82	0	666	
15:45	16:00	0	0	0	1	0	1	95	4	0	2	0	1	0	3	76	0	608	
16:00	16:15	0	0	0	0	0	0	90	4	0	3	0	2	1	1	60	0	576	
16:15	16:30	0	0	0	2	0	2	57	1	0	5	0	5	0	4	59	0	551	
16:30	16:45	0	0	0	1	0	1	65	1	0	7	0	0	0	3	51	0	560	
16:45	17:00	0	0	0	0	0	2	69	1	0	2	0	1	0	2	73	1	540	
17:00	17:15	0	1	0	0	1	0	72	2	0	6	0	0	0	0	51	3	482	
17:15	17:30	0	0	0	0	1	0	70	3	0	5	0	2	0	1	62	0		
17:30	17:45	0	0	0	2	0	1	67	0	0	0	0	1	0	1	37	0		
17:45	18:00	0	0	0	0	0	1	46	2	0	2	0	1	0	0	41	0		

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
10:45	11:45	0	3	0	0	2	1	264	20	0	22	0	10	2	8	246	0	578	
15:15	16:15	0	0	0	1	0	1	339	24	0	12	0	5	5	6	306	1	700	

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

Graphic

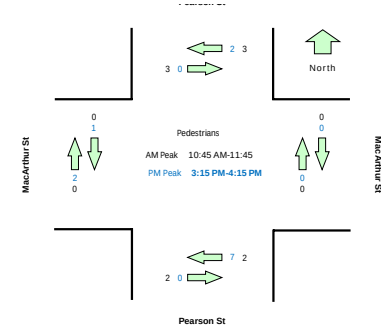
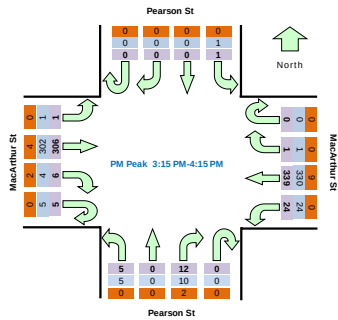
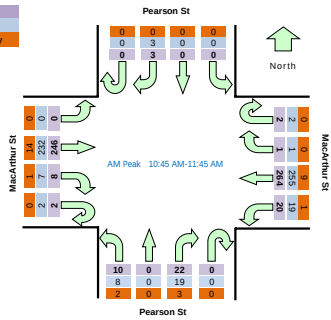
Pedestrians Crossing

Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Hourly Total	Peak
8:00	8:15	0	0	0	0	1	0	0	0	14	
8:15	8:30	0	0	1	0	1	1	1	0	15	
8:30	8:45	2	1	3	0	0	0	0	0	13	
8:45	9:00	1	0	1	0	0	0	1	0	11	
9:00	9:15	0	0	1	0	1	0	0	0	9	
9:15	9:30	0	2	0	0	0	0	0	0	13	
9:30	9:45	0	0	2	0	2	0	0	0	14	
9:45	10:00	0	0	0	0	0	1	0	0	14	
10:00	10:15	1	0	1	0	1	1	0	2	15	
10:15	10:30	0	3	0	0	0	0	0	0	11	
10:30	10:45	0	0	2	0	2	0	0	0	13	
10:45	11:00	0	1	0	0	0	1	0	0	10	
11:00	11:15	1	1	0	0	0	0	0	0	9	
11:15	11:30	2	1	0	0	1	1	0	0		
11:30	11:45	0	0	0	0	1	0	0	0		
11:45	12:00	0	0	0	0	0	0	0	1		
12:00	12:15	0	0	1	0	0	0	0	1	10	
12:15	12:30	0	0	0	0	1	1	0	0	9	
12:30	12:45	1	0	0	2	0	0	0	0	8	
12:45	13:00	0	0	1	1	0	1	0	0	8	
13:00	13:15	0	0	0	0	1	0	0	0	5	
13:15	13:30	0	0	0	0	1	0	0	0	6	
13:30	13:45	1	1	0	0	1	0	0	0	8	
13:45	14:00	0	0	0	0	0	0	0	0	8	
14:00	14:15	0	0	0	0	0	1	0	1	10	
14:15	14:30	1	0	1	0	1	0	0	0	10	
14:30	14:45	0	0	2	1	0	0	0	0	11	
14:45	15:00	1	0	0	0	1	0	0	0	11	
15:00	15:15	0	0	0	0	0	2	0	0	10	
15:15	15:30	0	0	0	0	2	0	0	2	12	
15:30	15:45	0	0	0	0	3	0	0	0	11	
15:45	16:00	0	0	0	0	0	0	1	0	9	
16:00	16:15	2	0	0	0	2	0	0	0	14	
16:15	16:30	1	2	0	0	0	0	0	0	11	
16:30	16:45	0	0	0	0	0	1	0	0	12	
16:45	17:00	2	0	0	1	0	3	0	0	13	
17:00	17:15	0	0	0	1	0	0	0	0	8	
17:15	17:30	2	1	0	0	0	1	0	0		
17:30	17:45	0	0	0	0	0	2	0	0		
17:45	18:00	0	0	0	1	0	0	0	0		

Peak Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Hour	Peak
10:45	11:45	3	3	0	0	2	2	0	0	10	
15:15	16:15	2	0	0	0	7	0	1	2	12	

Pearson St

Total
Light
Heavy



Light Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	0	0	1	0	1	21	4	0	1	0	0	0	2	47	0
8:15	8:30	0	1	0	1	0	0	31	6	0	1	0	2	0	4	67	0
8:30	8:45	0	0	0	2	0	1	47	5	0	1	0	1	2	4	62	0
8:45	9:00	0	0	0	1	0	0	50	3	0	0	0	1	1	10	74	1
9:00	9:15	0	0	0	0	0	0	49	3	0	5	0	0	1	5	60	0
9:15	9:30	0	0	0	0	0	0	54	6	0	4	0	5	1	4	43	0
9:30	9:45	0	0	0	0	0	0	43	2	0	2	0	3	0	4	54	0
9:45	10:00	0	0	0	0	0	1	60	3	0	3	0	2	0	4	53	0
10:00	10:15	0	0	0	0	0	0	53	1	0	3	0	2	1	3	68	0
10:15	10:30	0	0	0	0	1	0	52	1	0	5	0	2	0	6	43	0
10:30	10:45	0	0	0	0	0	0	70	3	0	2	0	5	0	5	50	0
10:45	11:00	0	0	0	0	0	1	51	4	0	4	0	2	1	0	62	0
11:00	11:15	0	2	0	0	1	0	61	4	0	5	0	2	0	3	48	0
11:15	11:30	0	1	0	0	0	0	63	8	0	4	0	2	1	2	58	0
11:30	11:45	0	0	0	0	1	0	80	3	0	6	0	2	0	2	64	0
11:45	12:00	0	0	0	3	1	1	59	6	0	6	0	2	1	0	52	0
12:00	12:15	0	1	0	0	1	0	71	6	0	6	0	2	0	4	76	0
12:15	12:30	0	0	0	0	0	0	66	3	0	4	0	1	1	3	60	1
12:30	12:45	0	0	0	0	0	0	65	4	0	9	0	4	0	1	70	1
12:45	13:00	0	0	0	0	1	1	77	6	0	2	0	2	0	3	58	0
13:00	13:15	0	2	0	0	2	0	56	2	0	6	0	1	0	2	55	1
13:15	13:30	0	0	0	0	0	0	63	7	0	4	0	0	0	3	60	0
13:30	13:45	0	1	0	0	0	1	53	7	0	6	0	2	0	5	57	0
13:45	14:00	0	0	0	0	0	0	67	12	0	7	0	4	0	4	47	0
14:00	14:15	0	1	0	0	0	1	53	4	0	3	0	2	0	2	53	0
14:15	14:30	0	0	0	1	1	0	68	2	0	4	0	5	0	2	59	0
14:30	14:45	0	1	0	0	1	0	65	5	0	8	0	1	1	1	49	1
14:45	15:00	0	1	0	0	0	0	62	2	0	6	0	3	1	3	46	1
15:00	15:15	0	1	0	1	0	2	91	4	0	3	0	1	1	2	49	1
15:15	15:30	0	0	0	0	0	0	70	7	0	2	0	0	1	0	88	1
15:30	15:45	0	0	0	0	0	0	79	9	0	5	0	2	3	2	81	0
15:45	16:00	0	0	0	1	0	1	93	4	0	2	0	1	0	2	74	0
16:00	16:15	0	0	0	0	0	0	88	4	0	1	0	2	1	0	59	0
16:15	16:30	0	0	0	2	0	2	57	1	0	5	0	5	0	4	58	0
16:30	16:45	0	0	0	1	0	1	65	1	0	6	0	0	0	3	50	0
16:45	17:00	0	0	0	0	0	2	69	1	0	2	0	1	0	2	72	1
17:00	17:15	0	1	0	0	1	0	72	2	0	6	0	0	0	0	50	3
17:15	17:30	0	0	0	0	1	0	70	3	0	5	0	2	0	1	61	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	3	0	0	2	1	255	19	0	19	0	8	2	7	232	0	548
15:15	16:15	0	0	0	1	0	1	330	24	0	10	0	5	5	4	302	1	683

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	0	0	0	0	0	0	9	1	0	3	0	2	0	1	14	0	30
15:15	16:15	0	0	0	0	0	0	9	0	0	2	0	0	0	2	4	0	17

[illegible]

[illegible]

Intersection of MacArthur St and Raymond St, Sale

GPS -38.105216, 147.065458

Date: Thu 07/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Raymond St
East: MacArthur St
South: Raymond St
West: MacArthur St

Survey AM: 8:00 AM-12:00 PM
Period PM: 12:00 PM-6:00 PM
Traffic AM: 10:45 AM-11:45 AM
Peak PM: 12:00 PM-1:00 PM

All Vehicles

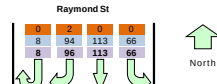
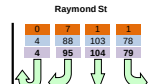
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
8:00	8:15	0	7	20	10	0	1	23	9	1	5	15	4	1	13	31	8	952	
8:15	8:30	0	22	26	15	0	8	41	11	5	4	19	7	0	12	55	14	1067	
8:30	8:45	1	22	42	15	0	8	36	20	1	12	30	8	0	10	50	15	1090	
8:45	9:00	0	17	44	23	0	7	55	27	13	8	16	8	0	16	47	14	1113	
9:00	9:15	1	16	25	14	2	9	45	20	9	18	18	10	0	23	34	19	1106	
9:15	9:30	0	19	23	10	2	12	45	26	4	16	22	17	0	19	32	15	1135	
9:30	9:45	1	23	33	16	2	10	39	28	10	14	26	18	1	13	42	17	1144	
9:45	10:00	0	26	35	10	0	14	57	15	11	12	18	5	0	17	49	19	1180	
10:00	10:15	1	15	35	13	1	9	39	28	7	16	18	15	0	25	56	14	1233	
10:15	10:30	1	19	28	6	1	13	43	30	5	20	16	20	0	19	36	14	1238	
10:30	10:45	3	23	32	16	0	15	50	28	6	19	27	22	0	16	51	21	1311	
10:45	11:00	0	23	27	17	2	16	44	43	9	25	26	15	0	20	55	19	1318	Peak
11:00	11:15	2	18	28	15	2	11	54	23	7	9	24	17	0	20	51	16	1292	
11:15	11:30	1	35	24	24	1	14	43	27	9	17	33	18	0	16	57	25		
11:30	11:45	1	19	25	23	2	9	53	29	12	16	25	24	2	18	56	22		
11:45	12:00	1	24	22	18	3	12	47	29	11	17	22	19	2	12	56	20		
12:00	12:15	1	23	41	14	6	10	56	36	10	25	25	21	1	20	54	15	1453	Peak
12:15	12:30	2	28	29	14	5	15	39	37	13	21	34	18	0	13	67	19	1409	
12:30	12:45	2	24	29	18	8	9	45	33	11	24	26	24	0	28	65	24	1403	
12:45	13:00	3	21	14	20	8	18	68	23	5	13	30	24	1	23	75	25	1378	
13:00	13:15	3	34	30	19	4	7	44	28	5	16	18	14	3	23	47	19	1319	
13:15	13:30	0	25	28	16	2	18	53	27	7	19	29	19	0	20	65	20	1298	
13:30	13:45	3	21	21	14	4	10	47	35	12	18	39	11	0	19	69	22	1275	
13:45	14:00	6	24	26	22	1	10	49	21	11	23	28	19	0	15	47	10	1265	
14:00	14:15	2	21	30	17	0	8	37	28	4	25	22	16	0	9	55	19	1262	
14:15	14:30	1	20	23	16	3	13	67	35	3	26	24	13	0	21	48	12	1283	
14:30	14:45	1	25	14	19	1	10	58	25	6	25	19	25	0	24	61	22	1305	
14:45	15:00	1	28	31	9	1	16	41	34	5	18	26	12	0	17	55	15	1340	
15:00	15:15	2	28	24	10	1	6	56	28	3	20	22	18	0	15	63	18	1393	
15:15	15:30	0	23	33	9	3	13	65	25	5	15	35	17	0	21	57	26	1438	
15:30	15:45	1	28	34	15	1	8	71	21	6	13	29	26	0	23	66	28	1414	
15:45	16:00	0	27	29	15	2	10	73	26	17	15	28	16	1	21	61	21	1373	
16:00	16:15	0	17	33	18	0	12	58	28	7	24	44	17	0	17	63	21	1334	
16:15	16:30	1	23	26	14	2	12	38	33	6	23	29	16	0	19	61	20	1321	
16:30	16:45	2	21	25	17	3	13	50	19	8	22	32	18	1	25	57	16	1289	
16:45	17:00	2	31	22	16	2	10	52	24	11	15	21	13	0	17	63	24	1222	
17:00	17:15	0	22	31	12	2	13	64	23	8	27	32	16	0	13	66	17	1103	
17:15	17:30	1	13	22	9	3	9	44	25	4	13	28	18	0	16	66	20		
17:30	17:45	0	23	18	16	2	14	40	28	2	17	13	15	0	15	45	14		
17:45	18:00	2	14	10	8	2	4	29	12	2	9	25	11	0	8	50	18		

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	hour total	
10:45	11:45	4	95	104	79	7	50	194	122	37	67	108	74	2	74	219	82	1318	
12:00	13:00	8	96	113	66	27	52	208	129	39	83	115	87	2	84	261	83	1453	

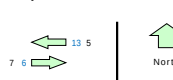
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



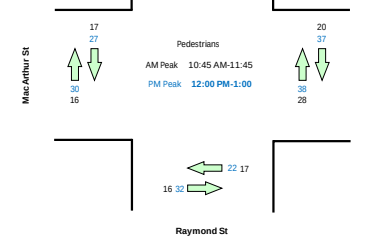
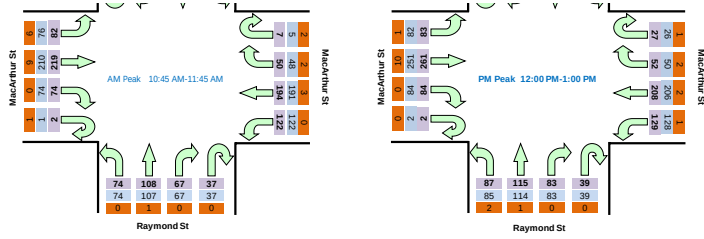
Raymond St



Pedestrians Crossing

Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hourly Total	
8:00	8:15	1	1	1	2	2	0	3	2	58	
8:15	8:30	3	0	6	2	0	1	3	3	61	
8:30	8:45	2	1	4	4	0	0	5	1	66	
8:45	9:00	0	2	2	3	1	1	0	2	70	
9:00	9:15	0	1	4	2	3	2	1	2	74	
9:15	9:30	1	3	7	6	1	1	2	2	89	
9:30	9:45	0	0	3	4	4	3	5	2	90	
9:45	10:00	0	1	2	4	1	1	2	4	84	
10:00	10:15	0	0	9	4	4	1	4	8	90	
10:15	10:30	2	1	4	3	1	1	5	7	95	
10:30	10:45	0	3	3	5	0	1	2	1	110	
10:45	11:00	2	1	5	3	2	1	6	1	126	
11:00	11:15	0	2	4	7	5	8	5	4	156	
11:15	11:30	1	2	7	13	3	4	3	6		
11:30	11:45	2	2	4	5	7	3	3	5		
11:45	12:00	5	2	18	10	5	6	3	2		
12:00	12:15	4	0	7	5	7	6	9	8	205	
12:15	12:30	1	4	14	16	1	6	6	6	206	
12:30	12:45	4	0	13	10	10	13	3	7	195	
12:45	13:00	4	2	3	7	4	7	9	9	174	
13:00	13:15	7	0	4	6	8	1	9	12	152	
13:15	13:30	4	5	7	8	3	2	10	4	139	
13:30	13:45	2	5	4	5	3	7	5	8	127	
13:45	14:00	1	4	2	4	4	5	1	2	125	
14:00	14:15	4	2	6	8	2	2	3	7	126	
14:15	14:30	3	0	6	7	3	5	5	2	107	
14:30	14:45	1	2	5	10	4	6	6	3	101	
14:45	15:00	0	0	3	4	3	0	5	9	88	
15:00	15:15	0	0	4	2	1	2	5	1	84	
15:15	15:30	1	2	3	5	4	3	2	5	96	
15:30	15:45	0	2	6	8	3	1	2	2	87	
15:45	16:00	2	2	2	1	3	1	5	4	82	
16:00	16:15	3	1	2	5	1	5	4	6	81	
16:15	16:30	0	0	0	5	3	4	0	4	74	
16:30	16:45	1	2	2	2	1	3	3	5	62	
16:45	17:00	0	1	5	0	7	0	3	3	51	
17:00	17:15	1	2	0	5	2	4	0	6	48	
17:15	17:30	0	0	1	1	0	1	0	1		
17:30	17:45	0	0	0	4	2	1	0	1		
17:45	18:00	0	0	10	4	2	0	0	0		

Peak Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	hour total	
10:45	11:45	5	7	20	28	17	16	17	16	126	
12:00	13:00	13	6	37	38	22	32	27	30	205	



Light Vehicles

Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
8:00	8:15	0	6	20	9	0	1	22	9	1	5	15	4	1	13	30	7
8:15	8:30	0	22	26	15	0	8	38	11	4	4	19	7	0	12	53	14
8:30	8:45	1	21	42	15	0	7	35	18	1	11	30	8	0	10	49	13
8:45	9:00	0	15	44	23	0	5	54	26	13	8	16	8	0	16	46	14
9:00	9:15	1	15	25	14	2	9	42	20	9	18	18	10	0	23	32	18
9:15	9:30	0	18	23	9	2	11	42	25	4	15	22	17	0	18	31	15
9:30	9:45	1	23	32	16	0	10	39	28	10	14	26	18	1	13	39	17
9:45	10:00	0	25	34	10	0	14	55	15	11	12	18	5	0	17	47	19
10:00	10:15	1	13	35	13	1	9	39	28	7	16	18	15	0	25	53	14
10:15	10:30	1	19	28	5	1	13	42	30	5	19	16	20	0	19	36	13
10:30	10:45	3	23	31	16	0	15	48	28	6	19	26	22	0	16	48	20
10:45	11:00	0	20	26	16	1	16	43	43	9	25	26	15	0	20	51	18
11:00	11:15	2	17	28	15	1	9	53	23	7	9	23	17	0	20	47	13
11:15	11:30	1	32	24	24	1	14	43	27	9	17	33	18	0	16	56	24
11:30	11:45	1	19	25	23	2	9	52	29	12	16	25	24	1	18	56	21
11:45	12:00	1	23	22	17	3	12	47	29	11	17	22	19	1	12	56	20
12:00	12:15	1	23	41	14	6	10	56	36	10	25	25	20	1	20	54	15
12:15	12:30	2	27	29	14	5	15	39	36	13	21	33	17	0	13	61	19
12:30	12:45	2	23	29	18	8	8	45	33	11	24	26	24	0	28	63	23
12:45	13:00	3	21	14	20	7	17	66	23	5	13	30	24	1	23	73	25
13:00	13:15	3	32	30	18	4	7	42	28	5	16	18	14	2	23	45	18
13:15	13:30	0	25	28	16	2	18	53	27	7	19	29	19	0	20	64	20
13:30	13:45	3	21	21	14	3	8	47	35	12	18	39	11	0	19	69	22
13:45	14:00	6	23	26	22	1	10	47	21	11	23	28	19	0	15	47	10
14:00	14:15	2	19	30	17	0	8	36	28	4	25	22	16	0	9	55	19
14:15	14:30	1	19	23	16	3	13	66	35	3	26	24	13	0	21	47	12
14:30	14:45	1	24	14	19	1	10	57	25	6	25	19	25	0	24	58	22
14:45	15:00	1	27	31	9	1	16	40	34	5	18	26	12	0	17	55	13
15:00	15:15	2	28	24	10	1	6	56	28	3	20	22	18	0	15	62	17
15:15	15:30	0	23	33	9	3	13	65	25	5	15	35	17	0	21	57	26
15:30	15:45	1	24	34	15	1	8	70	21	6	13	29	26	0	23	66	28
15:45	16:00	0	26	29	15	2	10	71	26	17	14	28	16	1	21	60	21
16:00	16:15	0	17	33	18	0	12	58	28	7	24	44	17	0	17	60	21
16:15	16:30	1	23	26	14	2	11	38	33	6	23	29	16	0	19	60	20
16:30	16:45	2	21	25	17	3	13	50	19	8	22	32	18	1	25	56	16
16:45	17:00	2	31	22	16	2	10	52	23	11	15	21	13	0	17	63	23
17:00	17:15	0	22	31	12	2	13	64	23	8	27	32	16	0	13	65	17
17:15	17:30	1	13	22	9	3	9	44	25	4	13	28	18	0	16	66	20
17:30	17:45	0	23	18	15	2	14	40	28	2	17	13	15	0	15	45	14
17:45	18:00	2	14	10	8	2	4	29	12	2	9	25	11	0	8	50	18

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
10:45	11:45	4	88	103	78	5	48	191	122	37	67	107	74	1	74	210	76	1285
12:00	13:00	8	94	113	66	26	50	206	128	39	83	114	85	2	84	251	82	1431

Heavy Vehicles

Heavy Vehicles																	
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L

[illegible]

Intersection of New Railway Rd and Desailly St, Sale

GPS -38.106191, 147.063951

Date:	Sat 09/08/25
Weather:	Overcast
Suburban:	Sale
Customer:	BW

North:	Desailly St
East:	N/A
South:	Desailly St
West:	New Railway Rd

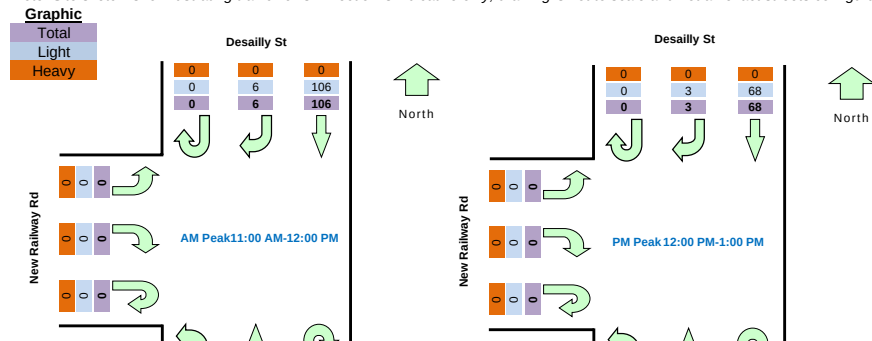
Survey	AM: 9:30 AM-12:00 PM
Period	PM: 12:00 PM-2:00 PM
Traffic	AM: 11:00 AM-12:00 PM
Peak	PM: 12:00 PM-1:00 PM

All Vehicles

Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
9:30	9:45	0	0	20	0	22	1	0	0	0	185	
9:45	10:00	0	0	14	0	25	1	0	0	0	203	
10:00	10:15	0	0	18	0	26	3	0	0	0	235	
10:15	10:30	0	0	19	0	34	2	0	0	0	253	
10:30	10:45	0	3	29	0	27	2	0	0	0	260	
10:45	11:00	0	5	35	0	28	4	0	0	0	270	
11:00	11:15	0	2	25	0	33	5	0	0	0	271	Peak
11:15	11:30	0	1	28	0	29	4	0	0	0		
11:30	11:45	0	1	30	0	36	4	0	0	0		
11:45	12:00	0	2	23	0	41	7	0	0	0		
12:00	12:15	0	0	23	0	38	2	0	0	0	224	Peak
12:15	12:30	0	1	15	0	26	3	0	0	0	202	
12:30	12:45	0	1	17	0	41	2	0	0	0	210	
12:45	13:00	0	1	13	0	36	5	0	0	0	209	
13:00	13:15	0	2	16	0	21	2	0	0	0	219	
13:15	13:30	0	1	14	0	34	4	0	0	0		
13:30	13:45	0	2	21	0	31	6	0	0	0		
13:45	14:00	0	5	22	0	36	2	0	0	0		

Peak Time		North Approach Desailly St			South Approach Desailly St			West Approach New Railway Rd			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
11:00	12:00	0	6	106	0	139	20	0	0	0	271
12:00	13:00	0	3	68	0	141	12	0	0	0	224

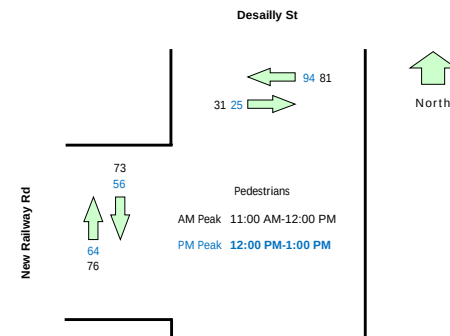
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Pedestrians Crossing

Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
9:30	9:45	14	15	9		11	13	239
9:45	10:00	9	7	3	4	6	6	271
10:00	10:15	15	20	4	1	14	6	342
10:15	10:30	25	12	8	5	21	11	383
10:30	10:45	21	20	9	8	19	17	395
10:45	11:00	25	21	12	7	24	17	383
11:00	11:15	26	9	8	9	31	18	354
11:15	11:30	24	22	6	6	17	19	
11:30	11:45	22	22	4	6	10	18	
11:45	12:00	9	20	10	2	15	21	
12:00	12:15	24	14	14	3	13	21	351
12:15	12:30	31	28	6	2	13	17	361
12:30	12:45	20	26	4	6	17	15	369
12:45	13:00	19	20	8	6	13	11	362
13:00	13:15	21	31	6	6	18	17	344
13:15	13:30	19	25	7	13	20	21	
13:30	13:45	24	24	6	2	14	11	
13:45	14:00	14	21	7	2	7	8	

Peak Time		North Approach Desailly St		South Approach Desailly St		West Approach New Railway Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
11:00	12:00	81	73	28	23	73	76	354
12:00	13:00	94	88	32	13	56	64	347



Intersection of MacArthur St and Desailly St, Sale

GPS -38.105276, 147.063942

Date: Sat 09/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Desailly St
East: MacArthur St
South: Desailly St
West: MacArthur St

Survey Period: AM: 9:30 AM-12:00 PM
 PM: 12:00 PM-2:00 PM
Traffic Peak: AM: 11:00 AM-12:00 PM
 PM: 12:00 PM-1:00 PM

All Vehicles

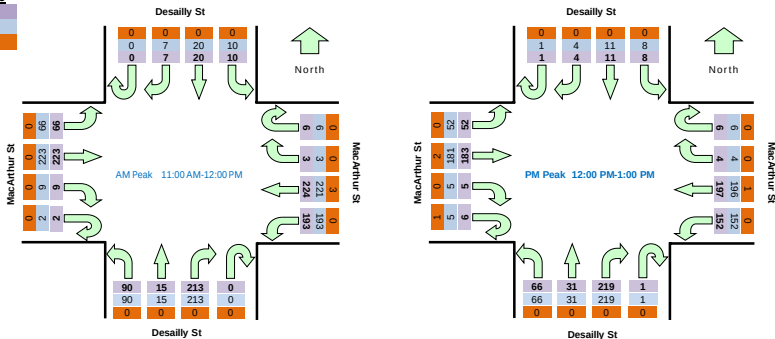
Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	0	1	2	1	0	1	34	33	0	31	0	5	0	0	24	12	728	
9:45	10:00	0	0	1	1	2	0	35	34	0	33	2	14	0	3	53	11	806	
10:00	10:15	1	0	3	4	0	2	43	37	0	34	3	8	0	0	31	14	866	
10:15	10:30	0	3	5	0	0	1	46	34	0	44	3	13	0	4	48	14	958	
10:30	10:45	0	1	1	2	2	1	45	50	0	44	4	15	0	0	43	14	1017	
10:45	11:00	0	3	2	2	3	0	57	50	0	38	6	14	1	1	52	20	1059	
11:00	11:15	0	2	5	2	1	2	55	57	0	45	5	24	0	3	52	19	1081	Peak
11:15	11:30	0	1	4	4	2	1	59	47	0	53	1	25	0	1	65	11		
11:30	11:45	0	3	5	0	3	0	50	48	0	58	4	16	1	2	50	24		
11:45	12:00	0	1	6	4	0	0	60	41	0	57	5	25	1	3	56	12		
12:00	12:15	0	2	1	2	1	1	44	46	0	60	8	18	3	1	48	20	946	Peak
12:15	12:30	0	0	4	1	2	2	44	38	1	46	6	14	1	0	53	7	892	
12:30	12:45	1	1	5	0	1	1	61	28	0	67	9	16	1	3	47	12	877	
12:45	13:00	0	1	1	5	2	0	48	40	0	46	8	18	1	1	35	13	824	
13:00	13:15	0	4	1	2	1	3	39	35	0	41	2	24	0	0	39	10	813	
13:15	13:30	0	0	2	1	2	1	38	31	0	47	3	17	0	0	47	15		
13:30	13:45	0	1	2	2	0	2	37	47	0	57	6	14	1	2	23	6		
13:45	14:00	0	4	4	2	1	2	41	29	0	45	4	14	0	0	46	16		

Peak Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
11:00	12:00	0	7	20	10	6	3	224	193	0	213	15	90	2	9	223	66	1081	
12:00	13:00	1	4	11	8	6	4	197	152	1	219	31	66	6	5	183	52	946	

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

Graphic

Total
 Light
 Heavy



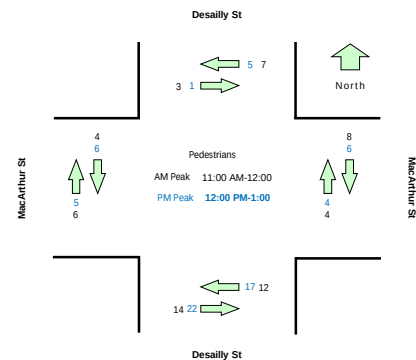
Light Vehicles

Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	0	1	2	1	0	1	34	33	0	31	0	5	0	0	23	12
9:45	10:00	0	0	1	1	2	0	34	34	0	33	2	14	0	3	53	11
10:00	10:15	1	0	3	4	0	2	42	37	0	34	3	8	0	0	29	14
10:15	10:30	0	3	5	0	0	1	46	34	0	44	2	12	0	4	48	14
10:30	10:45	0	1	1	2	2	1	44	50	0	44	4	15	0	0	43	14

Pedestrians Crossing

Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
9:30	9:45	0	4	2	0	2	2	0	1	59
9:45	10:00	2	1	2	0	7	1	0	0	64
10:00	10:15	0	1	0	2	5	8	1	1	69
10:15	10:30	0	1	5	2	7	2	0	0	63
10:30	10:45	0	0	1	1	3	7	3	1	67
10:45	11:00	2	0	4	1	5	3	3	0	61
11:00	11:15	2	1	3	0	3	1	0	2	58
11:15	11:30	5	1	1	2	4	1	3	4	
11:30	11:45	0	1	1	1	4	2	1	0	
11:45	12:00	0	0	3	1	1	10	0	0	
12:00	12:15	2	0	1	2	3	5	5	2	66
12:15	12:30	1	0	2	2	9	7	0	2	58
12:30	12:45	1	1	1	0	3	8	0	1	51
12:45	13:00	1	0	2	0	2	2	1	0	53
13:00	13:15	0	1	1	0	4	3	1	2	58
13:15	13:30	0	2	8	2	3	0	0	1	
13:30	13:45	0	4	0	1	5	3	0	4	
13:45	14:00	0	3	2	2	2	1	0	3	

Peak Time		North Approach Desailly St		East Approach MacArthur St		South Approach Desailly St		West Approach MacArthur St		Peak hour total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
11:00	12:00	7	3	8	4	12	14	4	6	58
12:00	13:00	5	1	6	4	17	22	6	5	66



10:45	11:00	0	3	2	2	3	0	57	50	0	38	6	14	1	1	52	20
11:00	11:15	0	2	5	2	1	2	53	57	0	45	5	24	0	3	52	19
11:15	11:30	0	1	4	4	2	1	58	47	0	53	1	25	0	1	65	11
11:30	11:45	0	3	5	0	3	0	50	48	0	58	4	16	1	2	50	24
11:45	12:00	0	1	6	4	0	0	60	41	0	57	5	25	1	3	56	12
12:00	12:15	0	2	1	2	1	1	43	46	0	60	8	18	2	1	47	20
12:15	12:30	0	0	4	1	2	2	44	38	1	46	6	14	1	0	53	7
12:30	12:45	1	1	5	0	1	1	61	28	0	67	9	16	1	3	46	12
12:45	13:00	0	1	1	5	2	0	48	40	0	46	8	18	1	1	35	13
13:00	13:15	0	4	1	2	1	3	39	35	0	41	2	24	0	0	39	10
13:15	13:30	0	0	2	1	2	1	38	31	0	47	3	17	0	0	47	15
13:30	13:45	0	1	2	2	0	2	37	47	0	57	6	14	1	2	23	6
13:45	14:00	0	4	4	2	1	2	40	29	0	45	4	14	0	0	46	16

Peak Time		North Approach Dummy St				East Approach MacArthur St				South Approach Dummy St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	7	20	10	6	3	221	193	0	213	15	90	2	9	223	66	
12:00	13:00	1	4	11	8	6	4	196	152	1	219	31	66	5	5	181	52	

Heavy Vehicles																	
Time		North Approach Desailly St				East Approach MacArthur St				South Approach Desailly St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:45	10:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:00	10:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
10:15	10:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
10:30	10:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:45	11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	11:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45	13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Bailey St				East Approach MacArthur St				South Approach Desaiy St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
12:00	13:00	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0	4

[illegible]

[illegible]

Intersection of MacArthur St and Pearson St, Sale

GPS -38.105322, 147.062446

Date: Sat 09/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Pearson St
East: MacArthur St
South: Pearson St
West: MacArthur St

Survey Period: AM: 9:30 AM-12:00 PM
 PM: 12:00 PM-2:00 PM
Traffic Peak: AM: 11:00 AM-12:00 PM
 PM: 12:00 PM-1:00 PM

All Vehicles

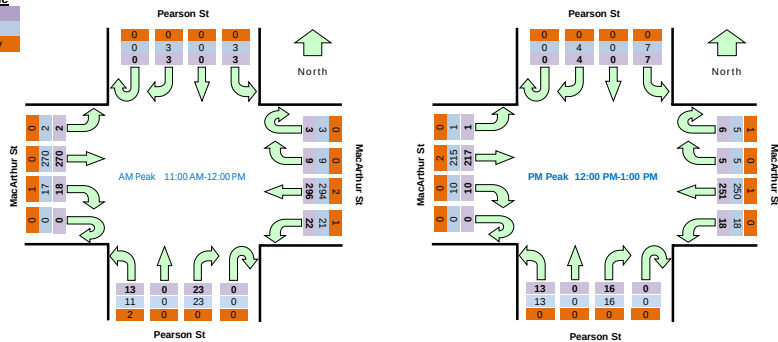
Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	0	0	0	0	0	0	35	4	0	5	0	4	0	1	31	0	431	
9:45	10:00	0	0	0	0	0	0	48	3	0	6	0	3	0	2	61	0	476	
10:00	10:15	0	0	0	2	0	1	43	6	0	3	0	2	0	2	42	0	511	
10:15	10:30	0	0	0	2	0	1	51	6	0	2	0	1	0	5	59	0	573	
10:30	10:45	0	0	0	0	0	0	54	6	0	2	0	5	0	3	55	0	618	
10:45	11:00	0	0	0	2	1	0	69	4	0	2	0	5	0	5	70	0	652	
11:00	11:15	0	0	0	1	1	2	69	9	0	6	0	2	0	3	69	1	662	Peak
11:15	11:30	0	3	0	1	0	4	78	2	0	6	0	4	0	6	67	1		
11:30	11:45	0	0	0	1	1	2	68	5	0	5	0	2	0	5	70	0		
11:45	12:00	0	0	0	0	1	1	81	6	0	6	0	5	0	4	64	0		
12:00	12:15	0	0	0	4	3	4	59	3	0	4	0	4	0	5	66	0	548	Peak
12:15	12:30	0	1	0	2	2	0	58	4	0	3	0	2	0	1	54	0	520	
12:30	12:45	0	1	0	1	1	0	76	3	0	6	0	6	0	3	55	1	506	
12:45	13:00	0	2	0	0	0	1	58	8	0	3	0	1	0	1	42	0	443	
13:00	13:15	0	0	0	2	0	0	69	2	0	4	0	2	0	2	42	1	453	
13:15	13:30	0	0	0	1	0	3	49	0	0	2	0	1	0	1	56	0		
13:30	13:45	0	0	0	0	1	1	51	2	0	0	0	3	0	1	31	0		
13:45	14:00	0	1	0	0	0	0	56	3	0	5	0	1	0	5	55	0		

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	hour total	
11:00	12:00	0	3	0	3	3	9	296	22	0	23	0	13	0	18	270	2	662	
12:00	13:00	0	4	0	7	6	5	251	18	0	16	0	13	0	10	217	1	548	

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

Graphic

Total
Light
Heavy



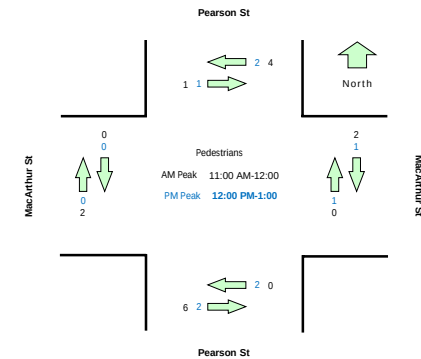
Light Vehicles

Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St					
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
9:30	9:45	0	0	0	0	0	0	35	4	0	5	0	4	0	0	0	30	0	
9:45	10:00	0	0	0	0	0	0	47	3	0	6	0	2	0	1	61	0		
10:00	10:15	0	0	0	2	0	1	43	5	0	2	0	2	0	1	41	0		
10:15	10:30	0	0	0	2	0	1	50	6	0	2	0	1	0	5	59	0		
10:30	10:45	0	0	0	0	0	0	53	6	0	2	0	5	0	2	55	0		

Pedestrians Crossing

Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
9:30	9:45	0	2	0	0	0	0	0	0	0	15
9:45	10:00	1	2	1	1	1	0	0	1	1	16
10:00	10:15	0	1	0	0	0	3	0	0	0	9
10:15	10:30	0	0	0	1	0	0	0	0	1	12
10:30	10:45	0	2	0	0	0	1	0	0	0	13
10:45	11:00	0	0	0	0	0	0	0	0	0	10
11:00	11:15	2	1	0	0	0	3	0	1	15	
11:15	11:30	2	0	0	0	0	0	0	1		
11:30	11:45	0	0	0	0	0	0	0	0		
11:45	12:00	0	0	2	0	0	3	0	0		
12:00	12:15	0	0	0	0	1	1	0	0	9	
12:15	12:30	1	0	0	1	0	1	0	0	7	
12:30	12:45	1	1	1	0	0	0	0	0	7	
12:45	13:00	0	0	0	0	1	0	0	0	8	
13:00	13:15	0	0	0	0	0	0	0	0	13	
13:15	13:30	0	2	0	0	0	1	0	0		
13:30	13:45	0	0	0	0	1	2	1	0		
13:45	14:00	1	0	5	0	0	0	0	0		

Peak Time		North Approach Pearson St		East Approach MacArthur St		South Approach Pearson St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
11:00	12:00	4	1	2	0	0	6	0	2	15	
12:00	13:00	2	1	1	1	2	2	0	0	9	



10:45	11:00	0	0	0	2	1	0	69	4	0	2	0	4	0	5	70	0
11:00	11:15	0	0	0	1	1	2	68	8	0	6	0	2	0	3	69	1
11:15	11:30	0	3	0	1	0	4	77	2	0	6	0	3	0	5	67	1
11:30	11:45	0	0	0	1	1	2	68	5	0	5	0	2	0	5	70	0
11:45	12:00	0	0	0	0	1	1	81	6	0	6	0	4	0	4	64	0
12:00	12:15	0	0	0	4	2	4	58	3	0	4	0	4	0	5	65	0
12:15	12:30	0	1	0	2	2	0	58	4	0	3	0	2	0	1	54	0
12:30	12:45	0	1	0	1	1	0	76	3	0	6	0	6	0	3	54	1
12:45	13:00	0	2	0	0	0	1	58	8	0	3	0	1	0	1	42	0
13:00	13:15	0	0	0	2	0	0	69	2	0	4	0	2	0	2	42	1
13:15	13:30	0	0	0	1	0	3	49	0	0	2	0	1	0	1	56	0
13:30	13:45	0	0	0	0	1	1	51	2	0	0	0	3	0	1	31	0
13:45	14:00	0	1	0	0	0	0	55	3	0	5	0	1	0	5	55	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	3	0	3	3	9	294	21	0	23	0	11	0	17	270	2	656
12:00	13:00	0	4	0	7	5	5	250	18	0	16	0	13	0	10	215	1	544

Heavy Vehicles																	
Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
9:45	10:00	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0
10:00	10:15	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0
10:15	10:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:30	10:45	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
10:45	11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
11:00	11:15	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:00	12:15	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45	13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Pearson St				East Approach MacArthur St				South Approach Pearson St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
11:00	12:00	0	0	0	0	0	0	2	1	0	0	0	2	0	1	0	0	6
12:00	13:00	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	4

[illegible]

[illegible]

Intersection of MacArthur St and Raymond St, Sale

GPS -38.105216, 147.065458

Date: Sat 09/08/25
Weather: Overcast
Suburban: Sale
Customer: BW

North: Raymond St
East: MacArthur St
South: Raymond St
West: MacArthur St

Survey Period: AM: 9:30 AM-12:00 PM
PM: 12:00 PM-2:00 PM
Traffic Peak: AM: 10:30 AM-11:30 AM
PM: 12:00 PM-1:00 PM

All Vehicles

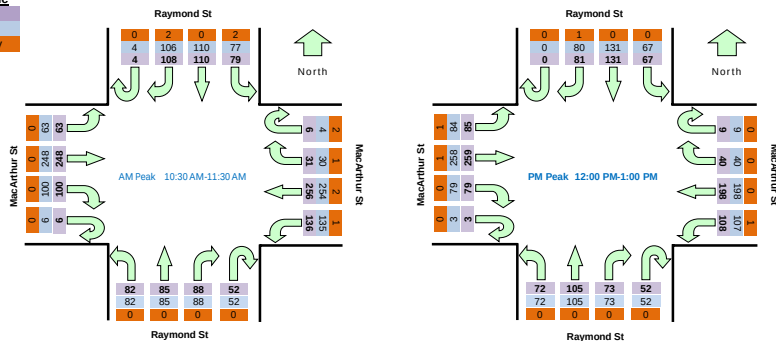
Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
9:30	9:45	1	24	28	13	0	6	31	28	10	15	14	8	1	7	30	15	1128	
9:45	10:00	1	20	37	8	1	7	40	32	10	13	25	14	0	20	48	16	1247	
10:00	10:15	0	27	23	24	1	8	47	23	7	20	22	12	0	15	43	9	1307	
10:15	10:30	0	24	29	15	1	10	49	27	14	16	22	17	0	19	60	21	1391	
10:30	10:45	4	26	17	23	2	8	57	37	19	24	19	20	2	18	59	15	1454	Peak
10:45	11:00	0	25	28	17	3	8	68	37	11	14	23	19	1	25	58	15	1438	
11:00	11:15	0	27	31	17	0	9	71	32	12	23	21	20	2	25	59	16	1452	
11:15	11:30	0	30	34	22	1	6	60	30	10	27	22	23	1	32	72	17		
11:30	11:45	1	23	29	17	3	7	58	20	9	18	23	19	5	20	58	24		
11:45	12:00	1	21	31	21	1	19	53	29	12	20	21	22	2	25	68	20		
12:00	12:15	0	18	30	24	2	12	56	30	8	16	27	15	1	23	65	23	1362	Peak
12:15	12:30	0	29	38	12	3	9	41	28	13	24	27	24	1	20	58	31	1304	
12:30	12:45	0	13	32	15	0	13	47	24	13	15	21	17	1	19	75	17	1213	
12:45	13:00	0	21	31	16	4	6	54	26	18	18	30	16	0	17	61	14	1164	
13:00	13:15	0	20	22	12	3	9	45	26	6	20	31	14	0	18	50	16	1104	
13:15	13:30	1	20	20	10	0	6	41	20	11	19	13	12	0	22	56	16		
13:30	13:45	0	23	17	8	2	4	52	24	10	7	26	10	0	16	60	14		
13:45	14:00	0	11	18	13	1	4	51	21	8	19	23	12	0	14	61	16		

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L		
10:30	11:30	4	108	110	79	6	31	256	136	52	88	85	82	6	100	248	63	1454	
12:00	13:00	0	81	131	67	9	40	198	108	52	73	105	72	3	79	259	85	1362	

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

Graphic

Total
Light
Heavy



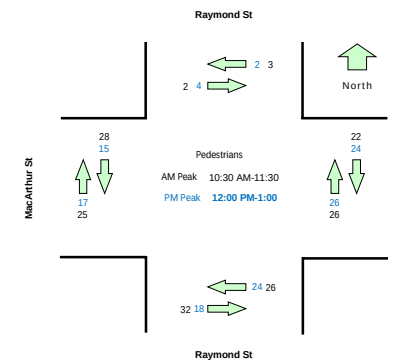
Light Vehicles

Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	1	24	28	13	0	6	31	28	10	15	14	8	1	7	29	15
9:45	10:00	1	19	37	8	1	7	40	32	10	13	25	14	0	20	48	16
10:00	10:15	0	26	23	23	1	8	47	22	7	20	22	12	0	15	42	8
10:15	10:30	0	24	29	14	1	9	49	27	14	16	21	17	0	19	60	21
10:30	10:45	4	25	17	23	2	8	57	37	19	24	19	20	2	18	59	15

Pedestrians Crossing

Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Hourly Total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
9:30	9:45	1	1	5	3	2	6	0	4	116	
9:45	10:00	0	1	1	4	8	2	12	1	124	
10:00	10:15	1	1	6	2	3	10	4	3	146	
10:15	10:30	4	0	5	7	4	7	5	3	153	
10:30	10:45	1	0	8	6	4	7	3	1	164	
10:45	11:00	0	0	4	10	6	11	13	7	172	
11:00	11:15	0	0	5	4	7	4	9	8	167	
11:15	11:30	2	2	5	6	9	10	3	9		
11:30	11:45	4	0	5	6	8	5	3	7		
11:45	12:00	0	0	4	8	11	13	8	2		
12:00	12:15	1	0	1	3	4	4	6	3	130	
12:15	12:30	0	1	7	7	4	4	3	3	131	
12:30	12:45	1	1	13	10	15	8	5	5	121	
12:45	13:00	0	2	3	6	1	2	1	6	85	
13:00	13:15	1	1	3	5	3	0	7	3	74	
13:15	13:30	0	1	2	2	4	8	2	0		
13:30	13:45	2	3	1	2	4	9	0	1		
13:45	14:00	0	0	0	1	3	4	2	0		

Peak Time		North Approach Raymond St		East Approach MacArthur St		South Approach Raymond St		West Approach MacArthur St		Peak hour total	
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound		
10:30	11:30	3	2	22	26	26	32	28	25	164	
12:00	13:00	2	4	24	26	24	18	15	17	130	



10:45	11:00	0	25	28	16	2	8	68	37	11	14	23	19	1	25	58	15
11:00	11:15	0	27	31	16	0	8	69	31	12	23	21	20	2	25	59	16
11:15	11:30	0	29	34	22	0	6	60	30	10	27	22	23	1	32	72	17
11:30	11:45	1	23	29	17	3	7	58	20	9	18	23	19	5	20	58	24
11:45	12:00	1	21	31	21	1	19	53	29	12	20	21	22	2	25	68	20
12:00	12:15	0	17	30	24	2	12	56	29	8	16	27	15	1	23	65	22
12:15	12:30	0	29	38	12	3	9	41	28	13	24	27	24	1	20	58	31
12:30	12:45	0	13	32	15	0	13	47	24	13	15	21	17	1	19	75	17
12:45	13:00	0	21	31	16	4	6	54	26	18	18	30	16	0	17	60	14
13:00	13:15	0	20	22	12	3	9	45	26	6	20	31	14	0	18	50	16
13:15	13:30	1	20	20	10	0	6	41	20	11	19	13	12	0	22	56	16
13:30	13:45	0	23	17	8	2	4	52	24	10	7	26	10	0	16	60	14
13:45	14:00	0	10	18	13	1	4	51	21	8	19	23	12	0	14	61	16

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
12:00	11:30	4	106	110	77	4	30	254	135	52	88	85	82	6	100	248	63	
13:30	13:00	0	80	131	67	9	40	198	107	52	73	105	72	3	79	258	84	1358

[illegible]

Peak Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St				Peak total	
Period	Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB		L
10:30		11:30	0	2	0	2	2	1	2	1	0	0	0	0	0	0	0	0	10
12:00		13:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	4

Time		North Approach Raymond St				East Approach MacArthur St				South Approach Raymond St				West Approach MacArthur St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
9:30	9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	10:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:00	10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	11:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:15	11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	11:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

12:30	12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	13:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
13:15	13:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
13:30	13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	14:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

T. 1300 82 88 82 - F. 1300 83 88 83 - E. traffic@trafficsurvey.com.au - W. www.trafficsurvey.com.au

AUTOMATIC COUNT SUMMARY

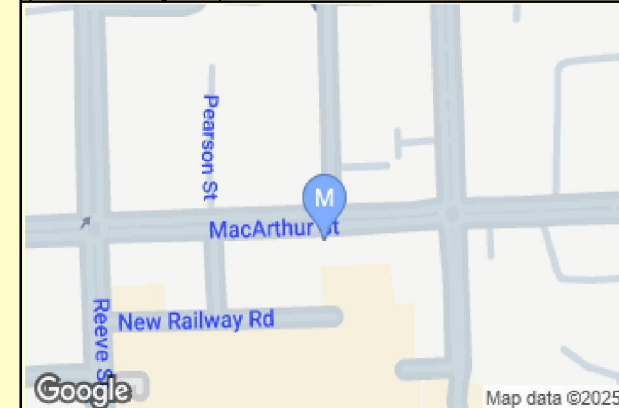
Street Name :	Desailly St	Location :	South of MacArthur St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD12RWSA	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24118	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information		Lat 38° 6' 19.76 South Long 147° 3' 49.92 East	Direction of Travel		
			Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		4,733	2,827	1,906
	7 Day Average		4,579	2,678	1,901
Weekday	AM	10:00	477	296	181
Peak hour starts	PM	15:00	507	334	173
Speeds : (Km/Hr)	85th Percentile		24.1	25.0	23.3
	Average		21.2	21.6	20.7
Classification % :		Light Vehicles up to 5.5m	95.7%	95.5%	96.0%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.105490, 147.063868



[Speed Data](#)

[Speed Graph](#)

[Speed Bin](#)

[Volume Data](#)

[Volume Graph](#)

[Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY

 trafficsurvey.com.au

Site Desailly St

Direction ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	10:00	10:00	11:00	10:00	11:00	11:00	N/A	10:00	N/A	10:00	N/A	11:00
PM Peak	13:00	15:00	16:00	12:00	14:00	12:00	13:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	3	3	0	0	3	4	3	16	2	9	2	7	4
01:00	1	0	0	3	0	3	2	9	1	4	1	5	3
02:00	2	1	0	1	1	0	0	5	1	5	1	0	0
03:00	4	2	2	3	0	0	0	11	2	11	2	0	0
04:00	12	12	13	13	18	8	2	78	11	68	14	10	5
05:00	27	16	17	22	20	10	9	121	17	102	20	19	10
06:00	67	63	76	83	73	41	29	432	62	362	72	70	35
07:00	102	59	73	81	156	88	47	606	87	471	94	135	68
08:00	224	223	205	197	249	172	101	1371	196	1098	220	273	137
09:00	392	292	425	309	386	304	261	2369	338	1804	361	565	283
10:00	527	425	511	386	536	526	368	3279	468	2385	477	894	447
11:00	411	318	387	429	408	578	456	2987	427	1953	391	1034	517
12:00	372	326	350	460	428	600	438	2974	425	1936	387	1038	519
13:00	472	465	455	422	467	432	456	3169	453	2281	456	888	444
14:00	437	431	462	431	560	434	393	3148	450	2321	464	827	414
15:00	423	623	520	459	513	386	346	3270	467	2538	508	732	366
16:00	441	455	521	402	393	359	327	2898	414	2212	442	686	343
17:00	412	297	418	385	294	250	287	2343	335	1806	361	537	269
18:00	218	209	177	113	158	180	161	1216	174	875	175	341	171
19:00	128	187	145	135	172	107	92	966	138	767	153	199	100
20:00	67	69	71	167	155	55	48	632	90	529	106	103	52
21:00	21	50	19	7	69	11	13	190	27	166	33	24	12
22:00	4	1	2	5	0	4	2	18	3	12	2	6	3
23:00	1	6	1	0	1	2	2	13	2	9	2	4	2
Total	4768	4533	4850	4513	5060	4554	3843	32121	4589	23724	4745	8397	4199
% Heavy	3.54%	5.23%	4.35%	4.85%	5.00%	3.12%	3.72%	4.28%		4.59%		3.39%	

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AUTOMATIC COUNT SUMMARY

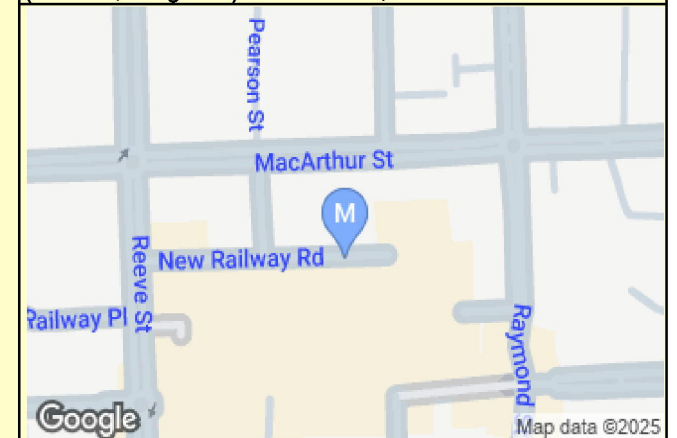
Street Name :	New Railway Rd	Location :	West of Desailly St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD00QXA4	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24116	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information Lat 38° 6' 22.45 South Long 147° 3' 48.51 East			Direction of Travel		
			Both directions	Westbound	Eastbound
Traffic Volume : (Vehicles/Day)		Weekdays Average	270	270	0
		7 Day Average	261	261	0
Weekday	AM	11:00	30	30	0
Peak hour start	PM	14:00	27	27	0
Speeds : (Km/Hr)		85th Percentile	30.2	30.2	N/A
		Average	25.7	25.7	N/A
Classification % :		Light Vehicles up to 5.5m	87.6%	87.6%	N/A

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.106235, 147.063475



[Speed Data](#) [Speed Graph](#) [Speed Bin](#)
[Volume Data](#) [Volume Graph](#) [Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015
OH&S SYSTEM CERTIFIED TO ISO 4801:2001
ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

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Site New Railway Rd

Direction Westbound ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	11:00	11:00	10:00	10:00	11:00	11:00	N/A	11:00	N/A	11:00	N/A	11:00
PM Peak	13:00	12:00	14:00	13:00	14:00	12:00	13:00	N/A	12:00	N/A	14:00	N/A	12:00
00:00	2	1	2	1	1	4	0	11	2	7	1	4	2
01:00	1	2	0	1	1	1	0	6	1	5	1	1	1
02:00	0	1	0	0	0	0	0	1	0	1	0	0	0
03:00	0	0	0	1	0	1	1	3	0	1	0	2	1
04:00	2	2	2	3	3	2	0	14	2	12	2	2	1
05:00	1	0	0	2	3	0	0	6	1	6	1	0	0
06:00	5	4	3	5	3	2	1	23	3	20	4	3	2
07:00	4	1	10	5	13	4	3	40	6	33	7	7	4
08:00	11	12	10	7	17	6	5	68	10	57	11	11	6
09:00	15	21	11	6	23	16	8	100	14	76	15	24	12
10:00	29	22	23	26	36	17	16	169	24	136	27	33	17
11:00	25	44	24	26	31	51	23	224	32	150	30	74	37
12:00	20	30	22	23	27	36	27	185	26	122	24	63	32
13:00	29	23	12	27	15	30	34	170	24	106	21	64	32
14:00	24	27	32	19	35	24	21	182	26	137	27	45	23
15:00	26	25	18	19	24	25	16	153	22	112	22	41	21
16:00	24	15	26	8	26	21	20	140	20	99	20	41	21
17:00	17	29	28	13	28	10	18	143	20	115	23	28	14
18:00	12	12	14	8	17	10	10	83	12	63	13	20	10
19:00	1	4	11	10	8	10	3	47	7	34	7	13	7
20:00	4	4	6	7	7	15	3	46	7	28	6	18	9
21:00	7	9	3	5	12	2	1	39	6	36	7	3	2
22:00	1	0	0	0	0	2	1	4	1	1	0	3	2
23:00	0	1	2	0	0	1	0	4	1	3	1	1	1
Total	260	289	259	222	330	290	211	1861	266	1360	272	501	251
% Heavy	14.23%	9.34%	12.36%	16.22%	14.85%	10.00%	8.06%	12.20%		13.31%		9.18%	

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AUTOMATIC COUNT SUMMARY

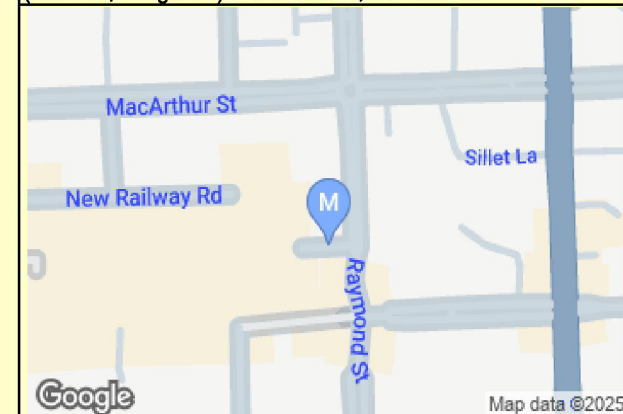
Street Name :	New Railway Rd	Location :	West of Raymond St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	CX20WTP7/P	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24117	Speed Zone :	20 km/h
Prepared By :		Email:	

GPS information		Direction of Travel		
Lat	38° 6' 24.02 South	Both directions	Westbound	Eastbound
Long	147° 3' 54.72 East			
Traffic Volume : (Vehicles/Day)	Weekdays Average	777	777	0
	7 Day Average	747	747	0
Weekday	AM	79	79	0
Peak hour start	PM	77	77	0
Speeds : (Km/Hr)	85th Percentile	17.3	17.3	N/A
	Average	14.8	14.8	N/A
Classification % :	Light Vehicles up to 5.5m	97.6%	97.6%	N/A

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.106671, 147.065199



[Speed Data](#)

[Volume Data](#)

[Speed Graph](#)

[Volume Graph](#)

[Speed Bin](#)

[Classification](#)



QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY

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Site New Railway Rd

Direction Westbound ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	11:00	11:00	10:00	10:00	11:00	11:00	11:00	N/A	11:00	N/A	11:00	N/A	11:00
PM Peak	12:00	15:00	15:00	13:00	15:00	12:00	12:00	N/A	12:00	N/A	15:00	N/A	12:00
00:00	1	0	1	0	0	0	0	2	0	2	0	0	0
01:00	1	0	0	1	1	2	0	5	1	3	1	2	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	1	0	3	0	2	2	9	1	5	1	4	2
04:00	2	1	2	2	1	1	1	10	1	8	2	2	1
05:00	3	3	2	2	0	2	2	14	2	10	2	4	2
06:00	4	4	13	8	17	10	6	62	9	46	9	16	8
07:00	12	17	24	18	19	10	6	106	15	90	18	16	8
08:00	34	32	43	32	46	26	26	239	34	187	37	52	26
09:00	47	64	47	64	61	70	31	384	55	283	57	101	51
10:00	73	66	87	80	79	99	64	548	78	385	77	163	82
11:00	78	82	67	80	88	116	72	583	83	395	79	188	94
12:00	76	72	73	74	71	87	76	529	76	366	73	163	82
13:00	74	66	57	75	70	71	59	472	67	342	68	130	65
14:00	66	69	68	65	74	61	51	454	65	342	68	112	56
15:00	75	76	83	65	84	62	62	507	72	383	77	124	62
16:00	64	69	76	68	73	44	52	446	64	350	70	96	48
17:00	63	60	63	55	65	31	49	386	55	306	61	80	40
18:00	33	27	39	40	38	32	18	227	32	177	35	50	25
19:00	20	27	23	28	22	11	14	145	21	120	24	25	13
20:00	11	17	12	14	12	10	7	83	12	66	13	17	9
21:00	4	3	2	5	4	0	2	20	3	18	4	2	1
22:00	0	1	1	1	0	2	1	6	1	3	1	3	2
23:00	1	0	0	0	0	1	0	2	0	1	0	1	1
Total	743	757	783	780	825	750	601	5239	748	3888	778	1351	676
% Heavy	3.63%	2.38%	1.66%	3.46%	2.55%	1.87%	1.16%	2.42%		2.73%		1.55%	

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AUTOMATIC COUNT SUMMARY

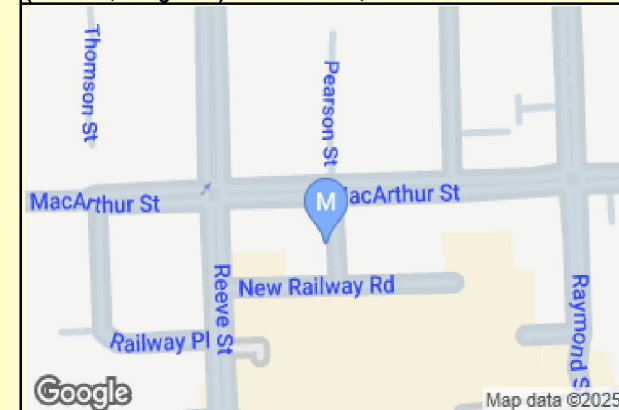
Street Name :	Pearson St	Location :	South of MacArthur St
Suburb :	Sale	Start Date :	00:00 Sat 02/August/2025
Machine ID:	MD629P9C	Finish Date :	00:00 Sat 09/August/2025
Site ID:	24119	Speed Zone :	50 km/h
Prepared By :		Email:	

GPS information		Lat 38° 6' 21.02 South Long 147° 3' 44.45 East	Direction of Travel		
			Both directions	Northbound	Southbound
Traffic Volume : (Vehicles/Day)	Weekdays Average		391	176	215
	7 Day Average		328	148	180
Weekday	AM	10:00	41	22	19
Peak hour starts	PM	14:00	37	18	19
Speeds : (Km/Hr)	85th Percentile		28.3	27.3	29.6
	Average		24.1	23.2	25.2
Classification % :		Light Vehicles up to 5.5m	84.3%	84.9%	83.8%

Location

GPS Information [Load Google Map \(internet required\)](#)

(Latitude, Longitude) -38.105839, 147.062348



[Speed Data](#)

[Speed Graph](#)

[Speed Bin](#)

[Volume Data](#)

[Volume Graph](#)

[Classification](#)

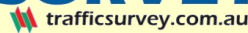


QUALITY ASSURED COMPANY BY ISO 9001:2015

OH&S SYSTEM CERTIFIED TO ISO 4801:2001

ENVIRONMENT MANAGEMENT SYSTEM CERTIFIED TO ISO14001:2015

TRANS TRAFFIC SURVEY



Site Pearson St

Direction Both directions ▼

[Back to Site Summary Page](#)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	4/08/2025	5/08/2025	6/08/2025	7/08/2025	8/08/2025	2/08/2025	3/08/2025	Total	Average	Total	Average	Total	Average
AM Peak	10:00	08:00	09:00	08:00	10:00	11:00	10:00	N/A	10:00	N/A	10:00	N/A	11:00
PM Peak	13:00	13:00	14:00	12:00	14:00	12:00	16:00	N/A	14:00	N/A	14:00	N/A	12:00
00:00	1	1	0	0	0	2	0	4	1	2	0	2	1
01:00	1	0	0	1	0	0	2	4	1	2	0	2	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	0	1	0	0	1	3	0	2	0	1	1
04:00	6	2	5	5	10	4	1	33	5	28	6	5	3
05:00	2	4	7	5	4	9	6	37	5	22	4	15	8
06:00	10	12	10	16	12	7	6	73	10	60	12	13	7
07:00	9	1	2	6	11	9	0	38	5	29	6	9	5
08:00	33	39	39	35	32	15	13	206	29	178	36	28	14
09:00	41	28	51	26	34	17	7	204	29	180	36	24	12
10:00	47	32	46	31	53	13	14	236	34	209	42	27	14
11:00	34	30	47	35	38	32	9	225	32	184	37	41	21
12:00	27	28	38	38	35	17	10	193	28	166	33	27	14
13:00	40	43	34	37	30	15	12	211	30	184	37	27	14
14:00	35	36	47	29	44	9	14	214	31	191	38	23	12
15:00	22	42	37	30	36	4	12	183	26	167	33	16	8
16:00	35	29	36	31	28	2	20	181	26	159	32	22	11
17:00	25	15	21	16	15	8	11	111	16	92	18	19	10
18:00	20	24	12	7	11	5	3	82	12	74	15	8	4
19:00	12	14	9	8	12	3	6	64	9	55	11	9	5
20:00	2	1	2	5	8	0	0	18	3	18	4	0	0
21:00	4	4	3	1	6	3	7	28	4	18	4	10	5
22:00	0	2	0	4	0	2	0	8	1	6	1	2	1
23:00	1	7	0	0	2	0	0	10	1	10	2	0	0
Total	407	395	446	367	421	176	154	2366	338	2036	407	330	165
% Heavy	15.48%	16.71%	14.13%	18.26%	15.91%	17.05%	16.23%	16.10%		16.01%		16.67%	

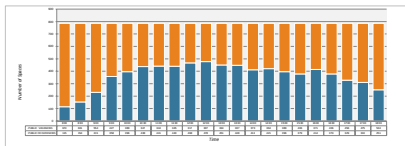
TRANS TRAFFIC SURVEY

Map and Surveyed Area

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	not available for public parking
--	----------------------------------



TRANS TRAFFIC SURVEY

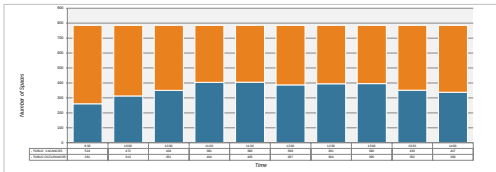


Parking Occupancy Survey

Date:	Wednesday 9 August 2023
Location:	MacArthur Street, Sale
Job:	SA 20230801_121 (08/08/23)
Project:	SA
Customer:	TfL

Public Parking (SA)	Map Ref	Street	Section	Side	Restriction	Clear Way	Capacity	Parking Occupancy									
								9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00
L		MacArthur St	Pearson St to Pearson St	North	Unrestricted		7	0	0	0	0	0	0	0	0	2	2
L				South	Unrestricted		8	0	0	0	0	0	0	0	1	0	0
L			Pearson St to Densley St	North	Unrestricted		11	1	1	1	2	2	2	2	3	3	3
L				South	Unrestricted		12	4	4	4	6	7	7	7	6	5	4
L				South	Unrestricted		10	3	3	3	5	5	5	5	5	5	5
L			Densley St to Raymond St	North	2P Born-Gym Mon-Fri, Born-Gym Sat		9	0	0	0	1	2	5	0	2	3	2
L				South	2P Born-Gym Mon-Fri, Born-Gym Sat		22	5	4	10	9	11	9	7	5	5	4
L				South	2P Born-Gym Mon-Fri, Born-Gym Sat		10	4	3	4	7	7	7	6	1	2	2
L		Pearson St	Car-On-Sat to MacArthur St	West	Unrestricted		13	0	0	0	0	1	5	0	0	0	0
L				East	Unrestricted		16	0	0	0	0	0	1	0	0	0	0
L			MacArthur St to New Chalkway Rd	West	2P		17	0	0	1	1	2	3	2	1	1	2
L				East	Unrestricted		16	5	4	3	5	4	4	5	4	4	4
L		Densley St	Stowell St to MacArthur St	West	Unrestricted		13	0	0	1	1	1	1	1	1	1	1
R					No Stopping		1	0	0	0	0	0	0	0	0	0	0
L				East	Unrestricted		16	2	2	1	1	2	3	2	2	2	2
R					No Stopping		1	0	0	0	0	0	0	0	0	0	0
L	CP1				P All Day Parking Area		165	34	45	37	38	37	41	40	38	37	36
L	CP2				2P Born-Gym Mon-Fri, Born-Gym Sat		213	37	45	74	79	85	67	75	79	65	66
L					2P Disabled Only Born-Gym Mon-Fri, Born-Gym Sat		2	0	0	1	1	0	0	0	1	1	0
L					2P Born-Gym Mon-Fri, Born-Gym Sat		41	16	23	25	28	25	26	23	20	21	20
L					2P Disabled Only Born-Gym Mon-Fri, Born-Gym Sat		2	0	0	0	0	0	0	0	0	0	0
L					2P Parents with Parents Born-Gym Mon-Fri, Born-Gym Sat		2	1	0	0	0	0	0	0	0	0	0
L					Woodcocks Direct to Boat		4	1	2	1	0	0	0	0	4	0	1
L					P 15mins Born-Gym Mon-Fri, Born-Gym Sat		12	5	5	9	9	7	11	11	11	10	7
L					Loading Zone		1	0	0	0	0	0	0	0	0	0	0
L	CP3				2P Born-Gym Mon-Fri, Born-Gym Sat		27	10	17	16	21	18	24	25	21	16	15
L					2P Born-Gym Mon-Fri, Born-Gym Sat		208	127	126	143	136	140	170	177	173	169	153
L					P Disabled Only		7	1	3	2	3	2	1	2	0	3	0
L					2P Parents with Parents Born-Gym Mon-Fri, Born-Gym Sat		4	3	3	4	0	3	3	3	3	3	3
L					2P Born-Gym Mon-Fri, Born-Gym Sat Motorcycle Parking		2	0	0	0	0	0	0	0	0	0	0
L					2P Reserved Harvey Norman		8	5	7	7	7	7	6	4	5	5	6
L					2P Disabled Only Reserved Harvey Norman		1	0	0	0	0	0	0	0	0	0	0
PUBLIC CAPACITY								785	785	785	785	785	785	785	785	785	785
PUBLIC OCCUPANCIES								261	313	351	404	405	387	394	395	352	338
PUBLIC VACANCIES								524	472	434	381	380	398	391	390	433	447
PUBLIC % OCCUPANCIES								33%	40%	45%	51%	52%	49%	50%	50%	45%	43%

not available for public parking

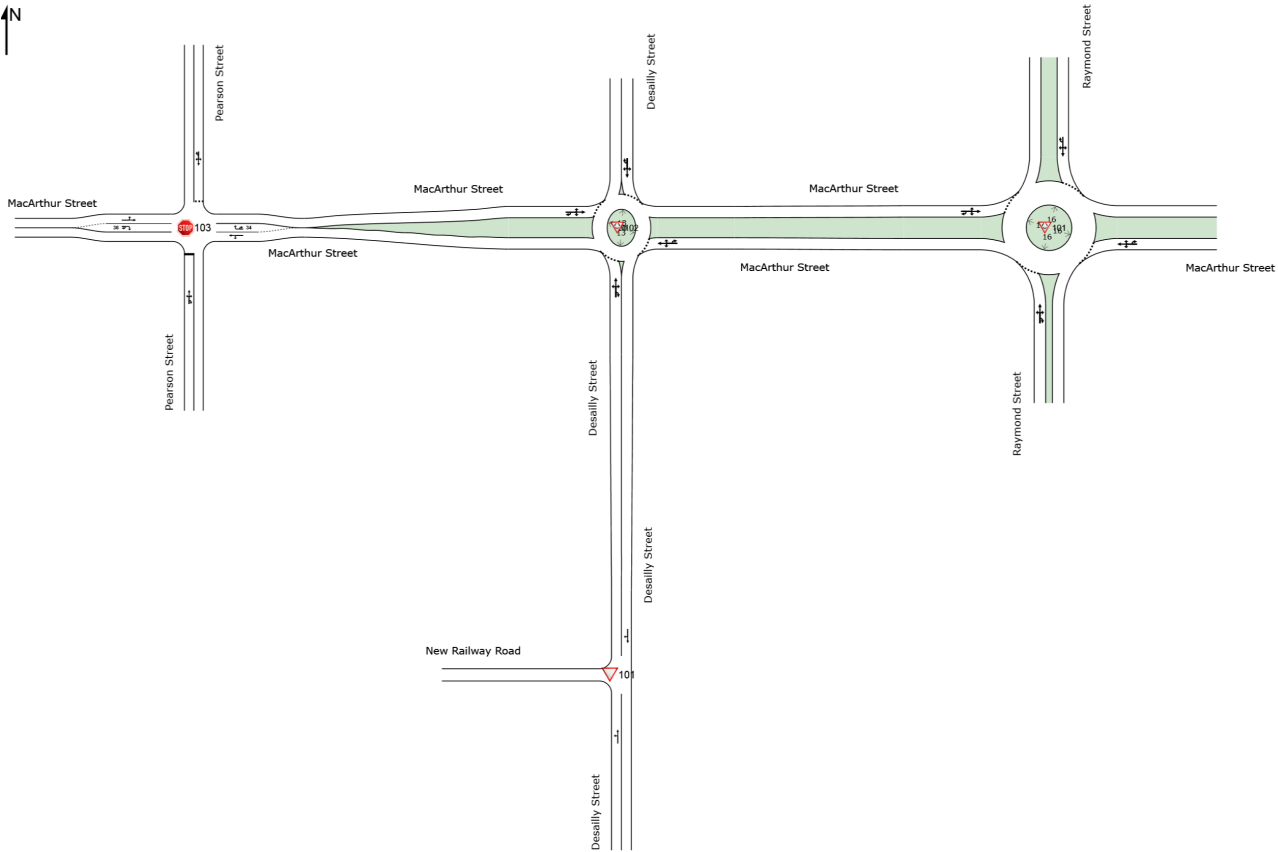


NETWORK LAYOUT

■ Network: N101 [Existing - Thursday - AM (Network Folder: General)]

MacArthur Street and Desailly Street network
Network Category: Existing Design

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



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽101	NA	EX-THU-AM: Raymond / MacArthur
▽102	NA	EX-THU-AM: Desailly / MacArthur
STOP103	NA	EX-THU-AM: Pearson / MacArthur
▽101	NA	EX-THU-AM: Desailly / New Railway

MOVEMENT SUMMARY

 Site: 101 [EX-THU-AM: Raymond / MacArthur (Site Folder: Existing - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [Existing - Thursday - AM (Network Folder: General)]

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Raymond Street															
1	L2	All MCs	28	0.0	28	0.0	0.153	4.5	LOS A	0.8	6.0	0.46	0.54	0.46	33.9
2	T1	All MCs	84	0.0	84	0.0	0.153	4.5	LOS A	0.8	6.0	0.46	0.54	0.46	40.2
3	R2	All MCs	31	3.4	31	3.4	0.153	8.6	LOS A	0.8	6.0	0.46	0.54	0.46	39.1
3u	U	All MCs	21	5.0	21	5.0	0.153	10.4	LOS B	0.8	6.0	0.46	0.54	0.46	37.1
Approach			164	1.3	164	1.3	0.153	6.0	LOS A	0.8	6.0	0.46	0.54	0.46	38.9
East: MacArthur Street															
4	L2	All MCs	71	4.5	71	4.5	0.253	4.9	LOS A	1.5	11.0	0.51	0.53	0.51	40.2
5	T1	All MCs	163	3.9	163	3.9	0.253	4.9	LOS A	1.5	11.0	0.51	0.53	0.51	37.6
6	R2	All MCs	25	12.5	25	12.5	0.253	9.2	LOS A	1.5	11.0	0.51	0.53	0.51	40.6
6u	U	All MCs	1	0.0	1	0.0	0.253	10.6	LOS B	1.5	11.0	0.51	0.53	0.51	40.8
Approach			260	4.9	260	4.9	0.253	5.3	LOS A	1.5	11.0	0.51	0.53	0.51	38.9
North: Raymond Street															
7	L2	All MCs	66	1.6	66	1.6	0.267	4.9	LOS A	1.6	11.4	0.52	0.56	0.52	40.9
8	T1	All MCs	139	0.0	139	0.0	0.267	4.9	LOS A	1.6	11.4	0.52	0.56	0.52	40.2
9	R2	All MCs	72	5.9	72	5.9	0.267	9.1	LOS A	1.6	11.4	0.52	0.56	0.52	37.0
9u	U	All MCs	1	0.0	1	0.0	0.267	10.7	LOS B	1.6	11.4	0.52	0.56	0.52	40.5
Approach			278	1.9	278	1.9	0.267	6.0	LOS A	1.6	11.4	0.52	0.56	0.52	39.8
West: MacArthur Street															
10	L2	All MCs	54	5.9	54	5.9	0.253	4.1	LOS A	1.5	11.0	0.39	0.47	0.39	40.0
11	T1	All MCs	193	2.7	193	2.7	0.253	4.1	LOS A	1.5	11.0	0.39	0.47	0.39	40.5
12	R2	All MCs	54	0.0	54	0.0	0.253	8.1	LOS A	1.5	11.0	0.39	0.47	0.39	37.7
12u	U	All MCs	1	0.0	1	0.0	0.253	9.8	LOS A	1.5	11.0	0.39	0.47	0.39	33.3
Approach			301	2.8	301	2.8	0.253	4.8	LOS A	1.5	11.0	0.39	0.47	0.39	39.9
All Vehicles			1003	2.8	1003	2.8	0.267	5.5	LOS A	1.6	11.4	0.47	0.52	0.47	39.5

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 102 [EX-THU-AM: Desailly / MacArthur (Site Folder: Existing - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [Existing - Thursday - AM (Network Folder: General)]

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Desailly Street															
1	L2	All MCs	20	0.0	20	0.0	0.078	4.5	LOS A	0.4	2.7	0.37	0.59	0.37	27.9
2	T1	All MCs	5	0.0	5	0.0	0.078	4.4	LOS A	0.4	2.7	0.37	0.59	0.37	37.9
3	R2	All MCs	58	0.0	58	0.0	0.078	7.9	LOS A	0.4	2.7	0.37	0.59	0.37	27.9
3u	U	All MCs	1	0.0	1	0.0	0.078	9.4	LOS A	0.4	2.7	0.37	0.59	0.37	27.9
Approach			84	0.0	84	0.0	0.078	6.9	LOS A	0.4	2.7	0.37	0.59	0.37	29.1
East: MacArthur Street															
4	L2	All MCs	85	1.2	85	1.2	0.207	4.2	LOS A	1.2	8.4	0.22	0.44	0.22	34.7
5	T1	All MCs	162	6.5	162	6.5	0.207	3.8	LOS A	1.2	8.4	0.22	0.44	0.22	34.7
6	R2	All MCs	13	0.0	13	0.0	0.207	7.1	LOS A	1.2	8.4	0.22	0.44	0.22	40.0
6u	U	All MCs	2	0.0	2	0.0	0.207	8.7	LOS A	1.2	8.4	0.22	0.44	0.22	34.7
Approach			262	4.4	262	4.4	0.207	4.1	LOS A	1.2	8.4	0.22	0.44	0.22	35.2
North: Desailly Street															
7	L2	All MCs	13	0.0	13	0.0	0.034	5.1	LOS A	0.2	1.2	0.47	0.60	0.47	36.1
8	T1	All MCs	2	0.0	2	0.0	0.034	5.1	LOS A	0.2	1.2	0.47	0.60	0.47	36.1
9	R2	All MCs	16	6.7	16	6.7	0.034	8.8	LOS A	0.2	1.2	0.47	0.60	0.47	36.1
9u	U	All MCs	1	0.0	1	0.0	0.034	10.1	LOS B	0.2	1.2	0.47	0.60	0.47	39.7
Approach			32	3.3	32	3.3	0.034	7.1	LOS A	0.2	1.2	0.47	0.60	0.47	36.3
West: MacArthur Street															
10	L2	All MCs	8	0.0	8	0.0	0.231	4.3	LOS A	1.4	9.8	0.27	0.45	0.27	40.1
11	T1	All MCs	236	3.6	236	3.6	0.231	3.9	LOS A	1.4	9.8	0.27	0.45	0.27	34.1
12	R2	All MCs	39	8.1	39	8.1	0.231	7.4	LOS A	1.4	9.8	0.27	0.45	0.27	34.1
12u	U	All MCs	1	0.0	1	0.0	0.231	8.8	LOS A	1.4	9.8	0.27	0.45	0.27	34.1
Approach			284	4.1	284	4.1	0.231	4.4	LOS A	1.4	9.8	0.27	0.45	0.27	34.5
All Vehicles			662	3.7	662	3.7	0.231	4.7	LOS A	1.4	9.8	0.27	0.47	0.27	34.2

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [EX-THU-AM: Pearson / MacArthur (Site Folder: Existing - Thursday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - AM (Network Folder: General)]**

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec		veh	m				km/h
South: Pearson Street															
1	L2	All MCs	5	20.0	5	20.0	0.023	9.2	LOS A	0.1	0.6	0.41	0.84	0.41	27.7
2	T1	All MCs	1	0.0	1	0.0	0.023	12.3	LOS B	0.1	0.6	0.41	0.84	0.41	30.6
3	R2	All MCs	4	25.0	4	25.0	0.023	17.2	LOS C	0.1	0.6	0.41	0.84	0.41	21.3
3u	U	All MCs	1	0.0	1	0.0	0.023	8.2	LOS A	0.1	0.6	0.41	0.84	0.41	26.6
Approach			12	18.2	12	18.2	0.023	12.3	LOS B	0.1	0.6	0.41	0.84	0.41	26.3
East: MacArthur Street															
4	L2	All MCs	20	5.3	20	5.3	0.101	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	43.4
5	T1	All MCs	167	6.3	167	6.3	0.101	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	48.7
6	R2	All MCs	2	0.0	2	0.0	0.003	5.4	LOS A	0.0	0.1	0.38	0.54	0.38	36.2
6u	U	All MCs	1	0.0	1	0.0	0.003	7.5	LOS A	0.0	0.1	0.38	0.54	0.38	31.1
Approach			191	6.1	191	6.1	0.101	0.6	NA	0.0	0.1	0.01	0.07	0.01	47.9
North: Pearson Street															
7	L2	All MCs	5	0.0	5	0.0	0.010	5.7	LOS A	0.0	0.3	0.13	0.50	0.13	33.4
8	T1	All MCs	1	0.0	1	0.0	0.010	7.6	LOS A	0.0	0.3	0.13	0.50	0.13	36.0
9	R2	All MCs	1	0.0	1	0.0	0.010	9.6	LOS A	0.0	0.3	0.13	0.50	0.13	36.4
9u	U	All MCs	1	0.0	1	0.0	0.010	5.8	LOS A	0.0	0.3	0.13	0.50	0.13	36.9
Approach			8	0.0	8	0.0	0.010	6.4	LOS A	0.0	0.3	0.13	0.50	0.13	34.9
West: MacArthur Street															
10	L2	All MCs	1	0.0	1	0.0	0.144	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.1
11	T1	All MCs	274	3.8	274	3.8	0.144	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
12	R2	All MCs	24	13.0	24	13.0	0.020	5.3	LOS A	0.1	0.7	0.31	0.54	0.31	33.3
12u	U	All MCs	3	0.0	3	0.0	0.020	6.8	LOS A	0.1	0.7	0.31	0.54	0.31	35.3
Approach			302	4.5	302	4.5	0.144	0.5	NA	0.1	0.7	0.03	0.05	0.03	46.5
All Vehicles			513	5.3	513	5.3	0.144	0.9	NA	0.1	0.7	0.03	0.08	0.03	46.1

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 101 [EX-THU-AM: Desailly / New Railway (Site Folder: Existing - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Existing - Thursday - AM (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Desailly Street															
1	L2	All MCs	2	0.0	2	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	44	0.0	44	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			46	0.0	46	0.0	0.024	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	56	0.0	56	0.0	0.034	0.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
9	R2	All MCs	5	60.0	5	60.0	0.034	1.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
Approach			61	5.2	61	5.2	0.034	0.1	NA	0.0	0.3	0.04	0.02	0.04	19.9
All Vehicles			107	2.9	107	2.9	0.034	0.1	NA	0.0	0.3	0.02	0.01	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [EX-THU-PM: Raymond / MacArthur (Site Folder: Existing - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - PM (Network Folder: General)]**

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Raymond Street															
1	L2	All MCs	63	0.0	63	0.0	0.243	4.9	LOS A	1.4	10.1	0.53	0.58	0.53	33.3
2	T1	All MCs	103	0.0	103	0.0	0.243	4.9	LOS A	1.4	10.1	0.53	0.58	0.53	39.9
3	R2	All MCs	69	0.0	69	0.0	0.243	9.0	LOS A	1.4	10.1	0.53	0.58	0.53	38.8
3u	U	All MCs	17	0.0	17	0.0	0.243	10.7	LOS B	1.4	10.1	0.53	0.58	0.53	37.2
Approach			253	0.0	253	0.0	0.243	6.4	LOS A	1.4	10.1	0.53	0.58	0.53	38.3
East: MacArthur Street															
4	L2	All MCs	93	0.0	93	0.0	0.296	4.5	LOS A	1.9	13.0	0.48	0.51	0.48	40.2
5	T1	All MCs	186	0.0	186	0.0	0.296	4.5	LOS A	1.9	13.0	0.48	0.51	0.48	37.6
6	R2	All MCs	42	0.0	42	0.0	0.296	8.6	LOS A	1.9	13.0	0.48	0.51	0.48	40.9
6u	U	All MCs	9	0.0	9	0.0	0.296	10.3	LOS B	1.9	13.0	0.48	0.51	0.48	40.8
Approach			331	0.0	331	0.0	0.296	5.2	LOS A	1.9	13.0	0.48	0.51	0.48	39.2
North: Raymond Street															
7	L2	All MCs	47	2.2	47	2.2	0.217	5.4	LOS A	1.3	9.0	0.57	0.60	0.57	40.3
8	T1	All MCs	85	0.0	85	0.0	0.217	5.3	LOS A	1.3	9.0	0.57	0.60	0.57	39.6
9	R2	All MCs	76	0.0	76	0.0	0.217	9.4	LOS A	1.3	9.0	0.57	0.60	0.57	36.1
9u	U	All MCs	3	0.0	3	0.0	0.217	11.1	LOS B	1.3	9.0	0.57	0.60	0.57	39.9
Approach			212	0.5	212	0.5	0.217	6.9	LOS A	1.3	9.0	0.57	0.60	0.57	38.9
West: MacArthur Street															
10	L2	All MCs	73	0.0	73	0.0	0.330	4.6	LOS A	2.1	15.0	0.51	0.52	0.51	39.6
11	T1	All MCs	239	0.4	239	0.4	0.330	4.6	LOS A	2.1	15.0	0.51	0.52	0.51	40.0
12	R2	All MCs	55	0.0	55	0.0	0.330	8.7	LOS A	2.1	15.0	0.51	0.52	0.51	37.2
12u	U	All MCs	1	0.0	1	0.0	0.330	10.4	LOS B	2.1	15.0	0.51	0.52	0.51	32.4
Approach			367	0.3	367	0.3	0.330	5.2	LOS A	2.1	15.0	0.51	0.52	0.51	39.5
All Vehicles			1162	0.2	1162	0.2	0.330	5.8	LOS A	2.1	15.0	0.52	0.54	0.52	39.0

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [EX-THU-PM: Desailly / MacArthur (Site Folder: Existing - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - PM (Network Folder: General)]**

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	52	0.0	52	0.0	0.241	4.9	LOS A	1.4	9.6	0.46	0.60	0.46	27.4
2	T1	All MCs	29	0.0	29	0.0	0.241	4.9	LOS A	1.4	9.6	0.46	0.60	0.46	37.6
3	R2	All MCs	168	0.0	168	0.0	0.241	8.4	LOS A	1.4	9.6	0.46	0.60	0.46	27.4
3u	U	All MCs	1	0.0	1	0.0	0.241	9.8	LOS A	1.4	9.6	0.46	0.60	0.46	27.4
Approach			251	0.0	251	0.0	0.241	7.3	LOS A	1.4	9.6	0.46	0.60	0.46	29.7
East: MacArthur Street															
4	L2	All MCs	107	0.0	107	0.0	0.257	4.2	LOS A	1.6	11.0	0.25	0.44	0.25	34.5
5	T1	All MCs	213	0.0	213	0.0	0.257	3.8	LOS A	1.6	11.0	0.25	0.44	0.25	34.5
6	R2	All MCs	7	0.0	7	0.0	0.257	7.2	LOS A	1.6	11.0	0.25	0.44	0.25	40.0
6u	U	All MCs	5	0.0	5	0.0	0.257	8.7	LOS A	1.6	11.0	0.25	0.44	0.25	34.5
Approach			333	0.0	333	0.0	0.257	4.1	LOS A	1.6	11.0	0.25	0.44	0.25	34.8
North: Desailly Street															
7	L2	All MCs	15	0.0	15	0.0	0.038	5.5	LOS A	0.2	1.3	0.51	0.61	0.51	36.1
8	T1	All MCs	5	0.0	5	0.0	0.038	5.5	LOS A	0.2	1.3	0.51	0.61	0.51	36.1
9	R2	All MCs	14	0.0	14	0.0	0.038	8.9	LOS A	0.2	1.3	0.51	0.61	0.51	36.1
9u	U	All MCs	1	0.0	1	0.0	0.038	10.4	LOS B	0.2	1.3	0.51	0.61	0.51	39.7
Approach			35	0.0	35	0.0	0.038	7.0	LOS A	0.2	1.3	0.51	0.61	0.51	36.3
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.224	5.2	LOS A	1.3	9.2	0.45	0.53	0.45	38.9
11	T1	All MCs	178	0.6	178	0.6	0.224	4.8	LOS A	1.3	9.2	0.45	0.53	0.45	32.1
12	R2	All MCs	45	2.3	45	2.3	0.224	8.2	LOS A	1.3	9.2	0.45	0.53	0.45	32.1
12u	U	All MCs	2	0.0	2	0.0	0.224	9.7	LOS A	1.3	9.2	0.45	0.53	0.45	32.1
Approach			228	0.9	228	0.9	0.224	5.5	LOS A	1.3	9.2	0.45	0.53	0.45	32.3
All Vehicles			846	0.2	846	0.2	0.257	5.5	LOS A	1.6	11.0	0.38	0.52	0.38	32.6

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [EX-THU-PM: Pearson / MacArthur (Site Folder: Existing - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - PM (Network Folder: General)]**

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	4	0.0	4	0.0	0.041	8.8	LOS A	0.1	1.0	0.37	0.81	0.37	28.5
2	T1	All MCs	1	0.0	1	0.0	0.041	12.3	LOS B	0.1	1.0	0.37	0.81	0.37	30.0
3	R2	All MCs	14	0.0	14	0.0	0.041	13.4	LOS B	0.1	1.0	0.37	0.81	0.37	20.6
3u	U	All MCs	1	0.0	1	0.0	0.041	7.9	LOS A	0.1	1.0	0.37	0.81	0.37	26.1
Approach			20	0.0	20	0.0	0.041	12.1	LOS B	0.1	1.0	0.37	0.81	0.37	23.9
East: MacArthur Street															
4	L2	All MCs	7	0.0	7	0.0	0.142	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	44.8
5	T1	All MCs	268	0.0	268	0.0	0.142	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.6
6	R2	All MCs	2	0.0	2	0.0	0.004	5.1	LOS A	0.0	0.1	0.32	0.55	0.32	36.2
6u	U	All MCs	2	0.0	2	0.0	0.004	6.9	LOS A	0.0	0.1	0.32	0.55	0.32	31.1
Approach			280	0.0	280	0.0	0.142	0.2	NA	0.0	0.1	0.00	0.02	0.00	49.2
North: Pearson Street															
7	L2	All MCs	2	0.0	2	0.0	0.007	5.3	LOS A	0.0	0.2	0.13	0.50	0.13	33.0
8	T1	All MCs	1	0.0	1	0.0	0.007	7.4	LOS A	0.0	0.2	0.13	0.50	0.13	35.7
9	R2	All MCs	1	0.0	1	0.0	0.007	9.4	LOS A	0.0	0.2	0.13	0.50	0.13	36.1
9u	U	All MCs	1	0.0	1	0.0	0.007	5.8	LOS A	0.0	0.2	0.13	0.50	0.13	36.6
Approach			5	0.0	5	0.0	0.007	6.7	LOS A	0.0	0.2	0.13	0.50	0.13	35.2
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.106	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	46.0
11	T1	All MCs	201	1.0	201	1.0	0.106	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.6
12	R2	All MCs	2	0.0	2	0.0	0.003	5.4	LOS A	0.0	0.1	0.37	0.54	0.37	33.6
12u	U	All MCs	1	0.0	1	0.0	0.003	7.4	LOS A	0.0	0.1	0.37	0.54	0.37	34.8
Approach			207	1.0	207	1.0	0.106	0.2	NA	0.0	0.1	0.01	0.02	0.01	48.9
All Vehicles			513	0.4	513	0.4	0.142	0.7	NA	0.1	1.0	0.02	0.06	0.02	47.5

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [EX-THU-PM: Desailly / New Railway (Site Folder: Existing - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing - Thursday - PM (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh. veh	Dist] m				
South: Desailly Street															
1	L2	All MCs	11	0.0	11	0.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	127	0.0	127	0.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			138	0.0	138	0.0	0.070	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	89	1.2	89	1.2	0.048	0.0	LOS A	0.0	0.1	0.02	0.01	0.02	20.0
9	R2	All MCs	3	0.0	3	0.0	0.048	1.0	LOS A	0.0	0.1	0.02	0.01	0.02	19.9
Approach			93	1.1	93	1.1	0.048	0.0	NA	0.0	0.1	0.02	0.01	0.02	20.0
All Vehicles			231	0.5	231	0.5	0.070	0.0	NA	0.0	0.1	0.01	0.00	0.01	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [EX-SAT-PEAK: Raymond / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak (Network Folder: General)]**

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Raymond Street															
1	L2	All MCs	88	0.0	88	0.0	0.337	5.8	LOS A	2.2	15.5	0.65	0.64	0.65	31.7
2	T1	All MCs	92	0.0	92	0.0	0.337	5.8	LOS A	2.2	15.5	0.65	0.64	0.65	38.8
3	R2	All MCs	93	0.0	93	0.0	0.337	9.9	LOS A	2.2	15.5	0.65	0.64	0.65	37.8
3u	U	All MCs	45	0.0	45	0.0	0.337	11.6	LOS B	2.2	15.5	0.65	0.64	0.65	36.1
Approach			318	0.0	318	0.0	0.337	7.8	LOS A	2.2	15.5	0.65	0.64	0.65	36.8
East: MacArthur Street															
4	L2	All MCs	117	0.9	117	0.9	0.440	5.9	LOS A	3.1	21.7	0.68	0.62	0.68	39.2
5	T1	All MCs	255	0.8	255	0.8	0.440	6.0	LOS A	3.1	21.7	0.68	0.62	0.68	36.1
6	R2	All MCs	43	2.4	43	2.4	0.440	10.1	LOS B	3.1	21.7	0.68	0.62	0.68	39.9
6u	U	All MCs	5	20.0	5	20.0	0.440	12.5	LOS B	3.1	21.7	0.68	0.62	0.68	39.5
Approach			420	1.3	420	1.3	0.440	6.5	LOS A	3.1	21.7	0.68	0.62	0.68	37.8
North: Raymond Street															
7	L2	All MCs	81	1.3	81	1.3	0.373	6.7	LOS A	2.5	17.6	0.72	0.67	0.72	39.4
8	T1	All MCs	132	0.0	132	0.0	0.373	6.7	LOS A	2.5	17.6	0.72	0.67	0.72	38.5
9	R2	All MCs	106	1.0	106	1.0	0.373	10.8	LOS B	2.5	17.6	0.72	0.67	0.72	34.8
9u	U	All MCs	2	0.0	2	0.0	0.373	12.5	LOS B	2.5	17.6	0.72	0.67	0.72	39.0
Approach			321	0.7	321	0.7	0.373	8.1	LOS A	2.5	17.6	0.72	0.67	0.72	37.9
West: MacArthur Street															
10	L2	All MCs	81	0.0	81	0.0	0.435	5.0	LOS A	3.2	22.2	0.60	0.57	0.60	38.8
11	T1	All MCs	271	0.0	271	0.0	0.435	5.0	LOS A	3.2	22.2	0.60	0.57	0.60	39.1
12	R2	All MCs	107	0.0	107	0.0	0.435	9.1	LOS A	3.2	22.2	0.60	0.57	0.60	36.3
12u	U	All MCs	11	0.0	11	0.0	0.435	10.8	LOS B	3.2	22.2	0.60	0.57	0.60	31.2
Approach			469	0.0	469	0.0	0.435	6.1	LOS A	3.2	22.2	0.60	0.57	0.60	38.4
All Vehicles			1528	0.5	1528	0.5	0.440	7.0	LOS A	3.2	22.2	0.66	0.62	0.66	37.8

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [EX-SAT-PEAK: Desailly / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak (Network Folder: General)]**

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	95	0.0	95	0.0	0.324	5.2	LOS A	2.0	13.8	0.50	0.61	0.50	27.2
2	T1	All MCs	16	0.0	16	0.0	0.324	5.1	LOS A	2.0	13.8	0.50	0.61	0.50	37.4
3	R2	All MCs	224	0.0	224	0.0	0.324	8.6	LOS A	2.0	13.8	0.50	0.61	0.50	27.2
3u	U	All MCs	1	0.0	1	0.0	0.324	10.1	LOS B	2.0	13.8	0.50	0.61	0.50	27.2
Approach			336	0.0	336	0.0	0.324	7.5	LOS A	2.0	13.8	0.50	0.61	0.50	28.1
East: MacArthur Street															
4	L2	All MCs	203	0.0	203	0.0	0.321	4.1	LOS A	2.2	15.5	0.21	0.43	0.21	34.9
5	T1	All MCs	236	1.3	236	1.3	0.321	3.6	LOS A	2.2	15.5	0.21	0.43	0.21	34.9
6	R2	All MCs	3	0.0	3	0.0	0.321	7.0	LOS A	2.2	15.5	0.21	0.43	0.21	40.2
6u	U	All MCs	6	0.0	6	0.0	0.321	8.6	LOS A	2.2	15.5	0.21	0.43	0.21	34.9
Approach			448	0.7	448	0.7	0.321	3.9	LOS A	2.2	15.5	0.21	0.43	0.21	35.0
North: Desailly Street															
7	L2	All MCs	11	0.0	11	0.0	0.047	6.0	LOS A	0.2	1.7	0.56	0.61	0.56	36.4
8	T1	All MCs	21	0.0	21	0.0	0.047	6.0	LOS A	0.2	1.7	0.56	0.61	0.56	36.4
9	R2	All MCs	7	0.0	7	0.0	0.047	9.4	LOS A	0.2	1.7	0.56	0.61	0.56	36.4
9u	U	All MCs	1	0.0	1	0.0	0.047	10.9	LOS B	0.2	1.7	0.56	0.61	0.56	39.9
Approach			40	0.0	40	0.0	0.047	6.7	LOS A	0.2	1.7	0.56	0.61	0.56	36.6
West: MacArthur Street															
10	L2	All MCs	69	0.0	69	0.0	0.318	5.6	LOS A	2.0	14.2	0.53	0.54	0.53	39.0
11	T1	All MCs	235	0.0	235	0.0	0.318	5.2	LOS A	2.0	14.2	0.53	0.54	0.53	32.0
12	R2	All MCs	9	0.0	9	0.0	0.318	8.6	LOS A	2.0	14.2	0.53	0.54	0.53	32.0
12u	U	All MCs	2	0.0	2	0.0	0.318	10.1	LOS B	2.0	14.2	0.53	0.54	0.53	32.0
Approach			316	0.0	316	0.0	0.318	5.4	LOS A	2.0	14.2	0.53	0.54	0.53	34.6
All Vehicles			1140	0.3	1140	0.3	0.324	5.5	LOS A	2.2	15.5	0.39	0.52	0.39	33.0

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [EX-SAT-PEAK: Pearson / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak (Network Folder: General)]**

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	14	15.4	14	15.4	0.100	10.2	LOS B	0.4	2.6	0.59	0.91	0.59	25.9
2	T1	All MCs	1	0.0	1	0.0	0.100	15.4	LOS C	0.4	2.6	0.59	0.91	0.59	28.4
3	R2	All MCs	24	0.0	24	0.0	0.100	17.4	LOS C	0.4	2.6	0.59	0.91	0.59	18.8
3u	U	All MCs	1	0.0	1	0.0	0.100	8.1	LOS A	0.4	2.6	0.59	0.91	0.59	24.5
Approach			40	5.3	40	5.3	0.100	14.6	LOS B	0.4	2.6	0.59	0.91	0.59	22.5
East: MacArthur Street															
4	L2	All MCs	23	4.5	23	4.5	0.173	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	43.9
5	T1	All MCs	312	0.7	312	0.7	0.173	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.2
6	R2	All MCs	9	0.0	9	0.0	0.011	5.4	LOS A	0.0	0.3	0.38	0.56	0.38	36.3
6u	U	All MCs	3	0.0	3	0.0	0.011	7.6	LOS A	0.0	0.3	0.38	0.56	0.38	31.2
Approach			347	0.9	347	0.9	0.173	0.5	NA	0.0	0.3	0.01	0.06	0.01	48.2
North: Pearson Street															
7	L2	All MCs	3	0.0	3	0.0	0.015	5.7	LOS A	0.1	0.4	0.31	0.49	0.31	29.9
8	T1	All MCs	1	0.0	1	0.0	0.015	9.8	LOS A	0.1	0.4	0.31	0.49	0.31	33.2
9	R2	All MCs	3	0.0	3	0.0	0.015	12.3	LOS B	0.1	0.4	0.31	0.49	0.31	33.8
9u	U	All MCs	1	0.0	1	0.0	0.015	5.9	LOS A	0.1	0.4	0.31	0.49	0.31	34.5
Approach			8	0.0	8	0.0	0.015	8.7	LOS A	0.1	0.4	0.31	0.49	0.31	32.8
West: MacArthur Street															
10	L2	All MCs	2	0.0	2	0.0	0.147	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.0
11	T1	All MCs	284	0.0	284	0.0	0.147	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	All MCs	19	5.6	19	5.6	0.016	5.8	LOS A	0.1	0.5	0.41	0.57	0.41	33.4
12u	U	All MCs	1	0.0	1	0.0	0.016	7.9	LOS A	0.1	0.5	0.41	0.57	0.41	35.0
Approach			306	0.3	306	0.3	0.147	0.4	NA	0.1	0.5	0.03	0.04	0.03	47.3
All Vehicles			702	0.9	702	0.9	0.173	1.4	NA	0.4	2.6	0.06	0.10	0.06	45.3

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 101 [EX-SAT-PEAK: Desailly / New Railway (Site Folder: Existing - Saturday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Existing - Saturday - Peak (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	21	0.0	21	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	146	0.0	146	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			167	0.0	167	0.0	0.085	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	112	0.0	112	0.0	0.061	0.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
9	R2	All MCs	6	0.0	6	0.0	0.061	1.2	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
Approach			118	0.0	118	0.0	0.061	0.1	NA	0.0	0.3	0.04	0.02	0.04	19.9
All Vehicles			285	0.0	285	0.0	0.085	0.0	NA	0.0	0.3	0.02	0.01	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

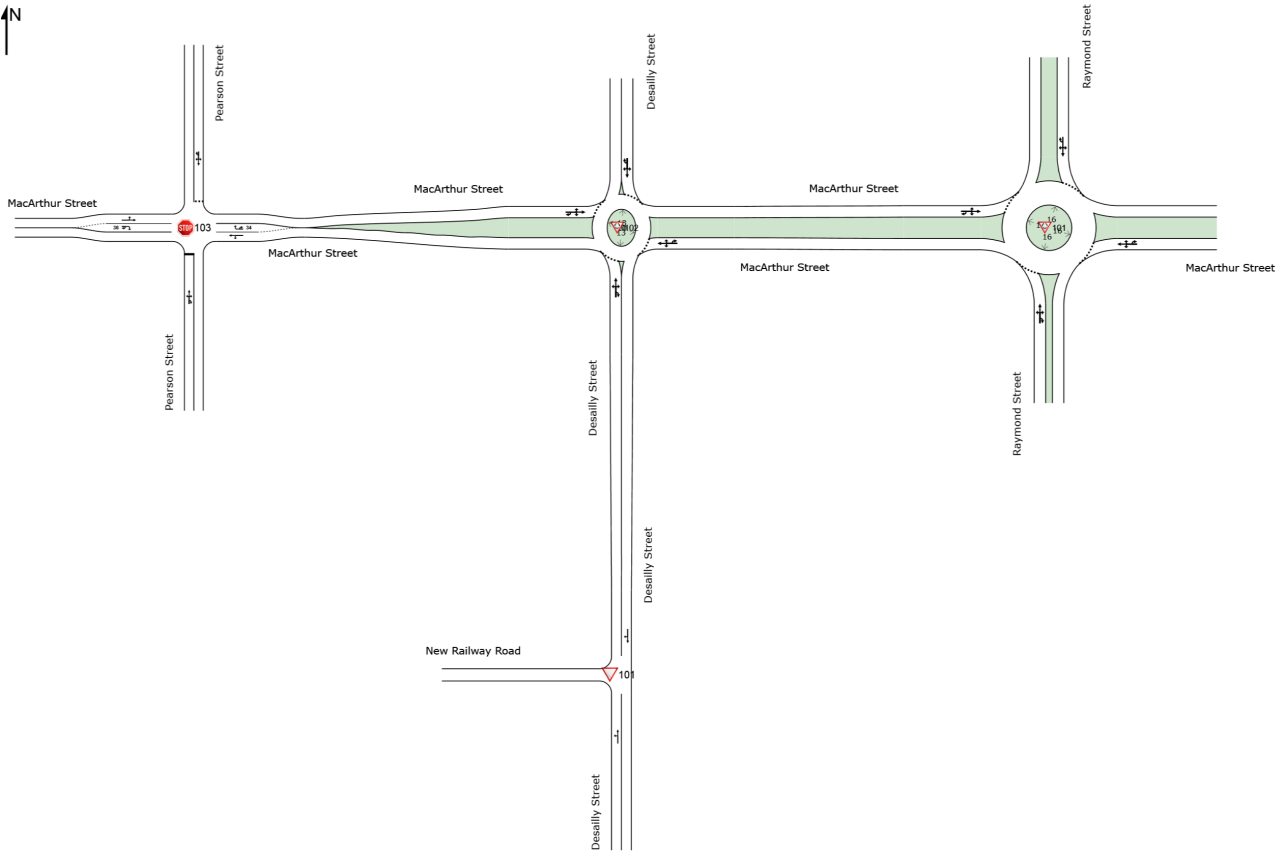
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

NETWORK LAYOUT

■ Network: N101 [Existing - Thursday - AM @ 10 years
(Network Folder: General)]

MacArthur Street and Desailly Street network
Network Category: Existing Design

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



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽101	NA	EX-THU-AM: Raymond / MacArthur
▽102	NA	EX-THU-AM: Desailly / MacArthur
STOP103	NA	EX-THU-AM: Pearson / MacArthur
▽101	NA	EX-THU-AM: Desailly / New Railway

MOVEMENT SUMMARY

 **Site: 101 [EX-THU-AM: Raymond / MacArthur (Site Folder: Existing - Thursday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - AM @ 10 years (Network Folder: General)]**

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Raymond Street															
1	L2	All MCs	33	0.0	33	0.0	0.184	4.8	LOS A	1.1	7.5	0.51	0.56	0.51	33.4
2	T1	All MCs	98	0.0	98	0.0	0.184	4.8	LOS A	1.1	7.5	0.51	0.56	0.51	40.0
3	R2	All MCs	35	3.4	35	3.4	0.184	8.9	LOS A	1.1	7.5	0.51	0.56	0.51	38.8
3u	U	All MCs	24	5.0	24	5.0	0.184	10.7	LOS B	1.1	7.5	0.51	0.56	0.51	36.8
Approach			191	1.3	191	1.3	0.184	6.3	LOS A	1.1	7.5	0.51	0.56	0.51	38.6
East: MacArthur Street															
4	L2	All MCs	82	4.5	82	4.5	0.305	5.3	LOS A	1.9	14.0	0.57	0.56	0.57	39.8
5	T1	All MCs	189	3.9	189	3.9	0.305	5.3	LOS A	1.9	14.0	0.57	0.56	0.57	37.1
6	R2	All MCs	29	12.5	29	12.5	0.305	9.6	LOS A	1.9	14.0	0.57	0.56	0.57	40.3
6u	U	All MCs	1	0.0	1	0.0	0.305	11.0	LOS B	1.9	14.0	0.57	0.56	0.57	40.5
Approach			302	4.9	302	4.9	0.305	5.7	LOS A	1.9	14.0	0.57	0.56	0.57	38.5
North: Raymond Street															
7	L2	All MCs	77	1.6	77	1.6	0.322	5.3	LOS A	2.0	14.5	0.58	0.59	0.58	40.6
8	T1	All MCs	161	0.0	161	0.0	0.322	5.3	LOS A	2.0	14.5	0.58	0.59	0.58	39.9
9	R2	All MCs	83	5.9	83	5.9	0.322	9.5	LOS A	2.0	14.5	0.58	0.59	0.58	36.5
9u	U	All MCs	1	0.0	1	0.0	0.322	11.1	LOS B	2.0	14.5	0.58	0.59	0.58	40.2
Approach			323	1.9	323	1.9	0.322	6.4	LOS A	2.0	14.5	0.58	0.59	0.58	39.5
West: MacArthur Street															
10	L2	All MCs	62	5.9	62	5.9	0.301	4.3	LOS A	1.9	13.8	0.45	0.49	0.45	39.7
11	T1	All MCs	224	2.7	224	2.7	0.301	4.3	LOS A	1.9	13.8	0.45	0.49	0.45	40.2
12	R2	All MCs	62	0.0	62	0.0	0.301	8.3	LOS A	1.9	13.8	0.45	0.49	0.45	37.4
12u	U	All MCs	1	0.0	1	0.0	0.301	10.0	LOS B	1.9	13.8	0.45	0.49	0.45	32.8
Approach			349	2.8	349	2.8	0.301	5.0	LOS A	1.9	13.8	0.45	0.49	0.45	39.6
All Vehicles			1164	2.8	1164	2.8	0.322	5.8	LOS A	2.0	14.5	0.53	0.55	0.53	39.1

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [EX-THU-AM: Desailly / MacArthur (Site Folder: Existing - Thursday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - AM @ 10 years (Network Folder: General)]**

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	20	0.0	20	0.0	0.080	4.6	LOS A	0.4	2.8	0.39	0.60	0.39	27.7
2	T1	All MCs	5	0.0	5	0.0	0.080	4.6	LOS A	0.4	2.8	0.39	0.60	0.39	37.8
3	R2	All MCs	58	0.0	58	0.0	0.080	8.0	LOS A	0.4	2.8	0.39	0.60	0.39	27.7
3u	U	All MCs	1	0.0	1	0.0	0.080	9.5	LOS A	0.4	2.8	0.39	0.60	0.39	27.7
Approach			84	0.0	84	0.0	0.080	7.0	LOS A	0.4	2.8	0.39	0.60	0.39	29.0
East: MacArthur Street															
4	L2	All MCs	85	1.2	85	1.2	0.226	4.2	LOS A	1.3	9.4	0.22	0.44	0.22	34.7
5	T1	All MCs	188	6.5	188	6.5	0.226	3.8	LOS A	1.3	9.4	0.22	0.44	0.22	34.7
6	R2	All MCs	13	0.0	13	0.0	0.226	7.1	LOS A	1.3	9.4	0.22	0.44	0.22	40.1
6u	U	All MCs	2	0.0	2	0.0	0.226	8.7	LOS A	1.3	9.4	0.22	0.44	0.22	34.7
Approach			288	4.6	288	4.6	0.226	4.1	LOS A	1.3	9.4	0.22	0.44	0.22	35.2
North: Desailly Street															
7	L2	All MCs	13	0.0	13	0.0	0.035	5.4	LOS A	0.2	1.2	0.49	0.61	0.49	35.8
8	T1	All MCs	2	0.0	2	0.0	0.035	5.3	LOS A	0.2	1.2	0.49	0.61	0.49	35.8
9	R2	All MCs	16	6.7	16	6.7	0.035	9.0	LOS A	0.2	1.2	0.49	0.61	0.49	35.8
9u	U	All MCs	1	0.0	1	0.0	0.035	10.3	LOS B	0.2	1.2	0.49	0.61	0.49	39.5
Approach			32	3.3	32	3.3	0.035	7.4	LOS A	0.2	1.2	0.49	0.61	0.49	36.0
West: MacArthur Street															
10	L2	All MCs	8	0.0	8	0.0	0.260	4.3	LOS A	1.6	11.5	0.28	0.44	0.28	40.1
11	T1	All MCs	274	3.6	274	3.6	0.260	3.9	LOS A	1.6	11.5	0.28	0.44	0.28	34.1
12	R2	All MCs	39	8.1	39	8.1	0.260	7.4	LOS A	1.6	11.5	0.28	0.44	0.28	34.1
12u	U	All MCs	1	0.0	1	0.0	0.260	8.8	LOS A	1.6	11.5	0.28	0.44	0.28	34.1
Approach			322	4.0	322	4.0	0.260	4.4	LOS A	1.6	11.5	0.28	0.44	0.28	34.5
All Vehicles			726	3.8	726	3.8	0.260	4.7	LOS A	1.6	11.5	0.28	0.47	0.28	34.2

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 103 [EX-THU-AM: Pearson / MacArthur (Site Folder: Existing - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [Existing - Thursday - AM @ 10 years (Network Folder: General)]

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	5	20.0	5	20.0	0.026	9.4	LOS A	0.1	0.7	0.45	0.83	0.45	26.8
2	T1	All MCs	1	0.0	1	0.0	0.026	13.5	LOS B	0.1	0.7	0.45	0.83	0.45	29.6
3	R2	All MCs	4	25.0	4	25.0	0.026	19.7	LOS C	0.1	0.7	0.45	0.83	0.45	20.2
3u	U	All MCs	1	0.0	1	0.0	0.026	8.2	LOS A	0.1	0.7	0.45	0.83	0.45	25.7
Approach			12	18.2	12	18.2	0.026	13.4	LOS B	0.1	0.7	0.45	0.83	0.45	25.3
East: MacArthur Street															
4	L2	All MCs	20	5.3	20	5.3	0.115	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	43.5
5	T1	All MCs	194	6.3	194	6.3	0.115	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	48.9
6	R2	All MCs	2	0.0	2	0.0	0.003	5.5	LOS A	0.0	0.1	0.41	0.55	0.41	36.0
6u	U	All MCs	1	0.0	1	0.0	0.003	7.8	LOS A	0.0	0.1	0.41	0.55	0.41	30.8
Approach			217	6.1	217	6.1	0.115	0.5	NA	0.0	0.1	0.01	0.06	0.01	48.1
North: Pearson Street															
7	L2	All MCs	5	0.0	5	0.0	0.011	5.9	LOS A	0.0	0.3	0.14	0.50	0.14	32.7
8	T1	All MCs	1	0.0	1	0.0	0.011	8.6	LOS A	0.0	0.3	0.14	0.50	0.14	35.5
9	R2	All MCs	1	0.0	1	0.0	0.011	10.8	LOS B	0.0	0.3	0.14	0.50	0.14	35.9
9u	U	All MCs	1	0.0	1	0.0	0.011	5.8	LOS A	0.0	0.3	0.14	0.50	0.14	36.4
Approach			8	0.0	8	0.0	0.011	6.8	LOS A	0.0	0.3	0.14	0.50	0.14	34.3
West: MacArthur Street															
10	L2	All MCs	1	0.0	1	0.0	0.168	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.1
11	T1	All MCs	318	3.8	318	3.8	0.168	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
12	R2	All MCs	24	13.0	24	13.0	0.021	5.5	LOS A	0.1	0.7	0.33	0.55	0.33	33.2
12u	U	All MCs	3	0.0	3	0.0	0.021	7.0	LOS A	0.1	0.7	0.33	0.55	0.33	35.2
Approach			346	4.4	346	4.4	0.168	0.5	NA	0.1	0.7	0.03	0.05	0.03	46.9
All Vehicles			583	5.3	583	5.3	0.168	0.8	NA	0.1	0.7	0.03	0.07	0.03	46.4

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 101 [EX-THU-AM: Desailly / New Railway (Site Folder: Existing - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Existing - Thursday - AM @ 10 years (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	2	0.0	2	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	44	0.0	44	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			46	0.0	46	0.0	0.024	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	56	0.0	56	0.0	0.034	0.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
9	R2	All MCs	5	60.0	5	60.0	0.034	1.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
Approach			61	5.2	61	5.2	0.034	0.1	NA	0.0	0.3	0.04	0.02	0.04	19.9
All Vehicles			107	2.9	107	2.9	0.034	0.1	NA	0.0	0.3	0.02	0.01	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [EX-THU-PM: Raymond / MacArthur (Site Folder: Existing - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - PM @ 10 years (Network Folder: General)]**

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Raymond Street															
1	L2	All MCs	73	0.0	73	0.0	0.295	5.3	LOS A	1.8	12.9	0.59	0.60	0.59	32.7
2	T1	All MCs	120	0.0	120	0.0	0.295	5.3	LOS A	1.8	12.9	0.59	0.60	0.59	39.5
3	R2	All MCs	81	0.0	81	0.0	0.295	9.4	LOS A	1.8	12.9	0.59	0.60	0.59	38.5
3u	U	All MCs	20	0.0	20	0.0	0.295	11.1	LOS B	1.8	12.9	0.59	0.60	0.59	36.9
Approach			293	0.0	293	0.0	0.295	6.8	LOS A	1.8	12.9	0.59	0.60	0.59	38.0
East: MacArthur Street															
4	L2	All MCs	108	0.0	108	0.0	0.355	4.8	LOS A	2.4	16.5	0.55	0.54	0.55	39.9
5	T1	All MCs	216	0.0	216	0.0	0.355	4.9	LOS A	2.4	16.5	0.55	0.54	0.55	37.1
6	R2	All MCs	49	0.0	49	0.0	0.355	8.9	LOS A	2.4	16.5	0.55	0.54	0.55	40.6
6u	U	All MCs	11	0.0	11	0.0	0.355	10.7	LOS B	2.4	16.5	0.55	0.54	0.55	40.5
Approach			384	0.0	384	0.0	0.355	5.5	LOS A	2.4	16.5	0.55	0.54	0.55	38.8
North: Raymond Street															
7	L2	All MCs	55	2.2	55	2.2	0.266	5.9	LOS A	1.7	11.6	0.63	0.63	0.63	39.9
8	T1	All MCs	99	0.0	99	0.0	0.266	5.8	LOS A	1.7	11.6	0.63	0.63	0.63	39.1
9	R2	All MCs	88	0.0	88	0.0	0.266	9.9	LOS A	1.7	11.6	0.63	0.63	0.63	35.5
9u	U	All MCs	4	0.0	4	0.0	0.266	11.6	LOS B	1.7	11.6	0.63	0.63	0.63	39.5
Approach			246	0.5	246	0.5	0.266	7.4	LOS A	1.7	11.6	0.63	0.63	0.63	38.4
West: MacArthur Street															
10	L2	All MCs	84	0.0	84	0.0	0.397	5.0	LOS A	2.7	19.3	0.58	0.55	0.58	39.2
11	T1	All MCs	277	0.4	277	0.4	0.397	5.0	LOS A	2.7	19.3	0.58	0.55	0.58	39.5
12	R2	All MCs	64	0.0	64	0.0	0.397	9.0	LOS A	2.7	19.3	0.58	0.55	0.58	36.7
12u	U	All MCs	1	0.0	1	0.0	0.397	10.8	LOS B	2.7	19.3	0.58	0.55	0.58	31.8
Approach			426	0.3	426	0.3	0.397	5.6	LOS A	2.7	19.3	0.58	0.55	0.58	39.1
All Vehicles			1349	0.2	1349	0.2	0.397	6.2	LOS A	2.7	19.3	0.58	0.57	0.58	38.6

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [EX-THU-PM: Desailly / MacArthur (Site Folder: Existing - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Thursday - PM @ 10 years (Network Folder: General)]**

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	52	0.0	52	0.0	0.248	5.2	LOS A	1.4	9.9	0.49	0.62	0.49	27.2
2	T1	All MCs	29	0.0	29	0.0	0.248	5.1	LOS A	1.4	9.9	0.49	0.62	0.49	37.4
3	R2	All MCs	168	0.0	168	0.0	0.248	8.6	LOS A	1.4	9.9	0.49	0.62	0.49	27.2
3u	U	All MCs	1	0.0	1	0.0	0.248	10.1	LOS B	1.4	9.9	0.49	0.62	0.49	27.2
Approach			251	0.0	251	0.0	0.248	7.5	LOS A	1.4	9.9	0.49	0.62	0.49	29.4
East: MacArthur Street															
4	L2	All MCs	107	0.0	107	0.0	0.281	4.2	LOS A	1.8	12.4	0.26	0.44	0.26	34.5
5	T1	All MCs	247	0.0	247	0.0	0.281	3.8	LOS A	1.8	12.4	0.26	0.44	0.26	34.5
6	R2	All MCs	7	0.0	7	0.0	0.281	7.2	LOS A	1.8	12.4	0.26	0.44	0.26	39.9
6u	U	All MCs	5	0.0	5	0.0	0.281	8.7	LOS A	1.8	12.4	0.26	0.44	0.26	34.5
Approach			367	0.0	367	0.0	0.281	4.1	LOS A	1.8	12.4	0.26	0.44	0.26	34.7
North: Desailly Street															
7	L2	All MCs	15	0.0	15	0.0	0.039	5.7	LOS A	0.2	1.4	0.53	0.62	0.53	35.8
8	T1	All MCs	5	0.0	5	0.0	0.039	5.6	LOS A	0.2	1.4	0.53	0.62	0.53	35.8
9	R2	All MCs	14	0.0	14	0.0	0.039	9.1	LOS A	0.2	1.4	0.53	0.62	0.53	35.8
9u	U	All MCs	1	0.0	1	0.0	0.039	10.6	LOS B	0.2	1.4	0.53	0.62	0.53	39.5
Approach			35	0.0	35	0.0	0.039	7.2	LOS A	0.2	1.4	0.53	0.62	0.53	36.0
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.251	5.2	LOS A	1.5	10.6	0.46	0.53	0.46	38.9
11	T1	All MCs	206	0.6	206	0.6	0.251	4.8	LOS A	1.5	10.6	0.46	0.53	0.46	32.1
12	R2	All MCs	45	2.3	45	2.3	0.251	8.2	LOS A	1.5	10.6	0.46	0.53	0.46	32.1
12u	U	All MCs	2	0.0	2	0.0	0.251	9.7	LOS A	1.5	10.6	0.46	0.53	0.46	32.1
Approach			257	0.9	257	0.9	0.251	5.5	LOS A	1.5	10.6	0.46	0.53	0.46	32.3
All Vehicles			909	0.3	909	0.3	0.281	5.5	LOS A	1.8	12.4	0.39	0.52	0.39	32.5

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 103 [EX-THU-PM: Pearson / MacArthur (Site Folder: Existing - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [Existing - Thursday - PM @ 10 years (Network Folder: General)]

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	4	0.0	4	0.0	0.046	9.1	LOS A	0.2	1.2	0.41	0.79	0.41	27.5
2	T1	All MCs	1	0.0	1	0.0	0.046	13.6	LOS B	0.2	1.2	0.41	0.79	0.41	29.0
3	R2	All MCs	14	0.0	14	0.0	0.046	15.0	LOS B	0.2	1.2	0.41	0.79	0.41	19.5
3u	U	All MCs	1	0.0	1	0.0	0.046	7.9	LOS A	0.2	1.2	0.41	0.79	0.41	25.0
Approach			20	0.0	20	0.0	0.046	13.3	LOS B	0.2	1.2	0.41	0.79	0.41	22.8
East: MacArthur Street															
4	L2	All MCs	7	0.0	7	0.0	0.164	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	44.8
5	T1	All MCs	312	0.0	312	0.0	0.164	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.7
6	R2	All MCs	2	0.0	2	0.0	0.004	5.2	LOS A	0.0	0.1	0.35	0.55	0.35	36.1
6u	U	All MCs	2	0.0	2	0.0	0.004	7.1	LOS A	0.0	0.1	0.35	0.55	0.35	31.0
Approach			323	0.0	323	0.0	0.164	0.2	NA	0.0	0.1	0.00	0.02	0.00	49.3
North: Pearson Street															
7	L2	All MCs	2	0.0	2	0.0	0.008	5.4	LOS A	0.0	0.2	0.14	0.50	0.14	32.2
8	T1	All MCs	1	0.0	1	0.0	0.008	8.4	LOS A	0.0	0.2	0.14	0.50	0.14	35.1
9	R2	All MCs	1	0.0	1	0.0	0.008	10.6	LOS B	0.0	0.2	0.14	0.50	0.14	35.5
9u	U	All MCs	1	0.0	1	0.0	0.008	5.8	LOS A	0.0	0.2	0.14	0.50	0.14	36.1
Approach			5	0.0	5	0.0	0.008	7.2	LOS A	0.0	0.2	0.14	0.50	0.14	34.6
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.122	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	46.0
11	T1	All MCs	233	1.0	233	1.0	0.122	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.7
12	R2	All MCs	2	0.0	2	0.0	0.003	5.5	LOS A	0.0	0.1	0.40	0.55	0.40	33.5
12u	U	All MCs	1	0.0	1	0.0	0.003	7.7	LOS A	0.0	0.1	0.40	0.55	0.40	34.7
Approach			240	1.0	240	1.0	0.122	0.2	NA	0.0	0.1	0.01	0.01	0.01	49.0
All Vehicles			588	0.4	588	0.4	0.164	0.7	NA	0.2	1.2	0.02	0.05	0.02	47.7

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 101 [EX-THU-PM: Desailly / New Railway (Site Folder: Existing - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Existing - Thursday - PM @ 10 years (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: Desailly Street															
1	L2	All MCs	11	0.0	11	0.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	127	0.0	127	0.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			138	0.0	138	0.0	0.070	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	89	1.2	89	1.2	0.048	0.0	LOS A	0.0	0.1	0.02	0.01	0.02	20.0
9	R2	All MCs	3	0.0	3	0.0	0.048	1.0	LOS A	0.0	0.1	0.02	0.01	0.02	19.9
Approach			93	1.1	93	1.1	0.048	0.0	NA	0.0	0.1	0.02	0.01	0.02	20.0
All Vehicles			231	0.5	231	0.5	0.070	0.0	NA	0.0	0.1	0.01	0.00	0.01	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [EX-SAT-PEAK: Raymond / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak @ 10 years (Network Folder: General)]**

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Raymond Street															
1	L2	All MCs	103	0.0	103	0.0	0.421	6.5	LOS A	3.0	20.8	0.74	0.68	0.74	30.8
2	T1	All MCs	106	0.0	106	0.0	0.421	6.5	LOS A	3.0	20.8	0.74	0.68	0.74	38.2
3	R2	All MCs	108	0.0	108	0.0	0.421	10.5	LOS B	3.0	20.8	0.74	0.68	0.74	37.2
3u	U	All MCs	53	0.0	53	0.0	0.421	12.3	LOS B	3.0	20.8	0.74	0.68	0.74	35.5
Approach			369	0.0	369	0.0	0.421	8.5	LOS A	3.0	20.8	0.74	0.68	0.74	36.1
East: MacArthur Street															
4	L2	All MCs	136	0.9	136	0.9	0.544	7.6	LOS A	4.7	32.9	0.78	0.72	0.87	38.2
5	T1	All MCs	296	0.8	296	0.8	0.544	7.6	LOS A	4.7	32.9	0.78	0.72	0.87	34.7
6	R2	All MCs	50	2.4	50	2.4	0.544	11.7	LOS B	4.7	32.9	0.78	0.72	0.87	39.0
6u	U	All MCs	6	20.0	6	20.0	0.544	14.3	LOS B	4.7	32.9	0.78	0.72	0.87	38.6
Approach			487	1.3	487	1.3	0.544	8.1	LOS A	4.7	32.9	0.78	0.72	0.87	36.6
North: Raymond Street															
7	L2	All MCs	94	1.3	94	1.3	0.476	8.4	LOS A	3.7	26.3	0.82	0.76	0.90	38.2
8	T1	All MCs	153	0.0	153	0.0	0.476	8.4	LOS A	3.7	26.3	0.82	0.76	0.90	37.2
9	R2	All MCs	123	1.0	123	1.0	0.476	12.5	LOS B	3.7	26.3	0.82	0.76	0.90	33.0
9u	U	All MCs	2	0.0	2	0.0	0.476	14.1	LOS B	3.7	26.3	0.82	0.76	0.90	37.8
Approach			373	0.7	373	0.7	0.476	9.8	LOS A	3.7	26.3	0.82	0.76	0.90	36.4
West: MacArthur Street															
10	L2	All MCs	94	0.0	94	0.0	0.529	5.6	LOS A	4.2	29.6	0.70	0.61	0.70	38.2
11	T1	All MCs	314	0.0	314	0.0	0.529	5.6	LOS A	4.2	29.6	0.70	0.61	0.70	38.5
12	R2	All MCs	125	0.0	125	0.0	0.529	9.6	LOS A	4.2	29.6	0.70	0.61	0.70	35.7
12u	U	All MCs	12	0.0	12	0.0	0.529	11.4	LOS B	4.2	29.6	0.70	0.61	0.70	30.3
Approach			545	0.0	545	0.0	0.529	6.6	LOS A	4.2	29.6	0.70	0.61	0.70	37.8
All Vehicles			1774	0.5	1774	0.5	0.544	8.1	LOS A	4.7	32.9	0.76	0.69	0.80	36.8

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [EX-SAT-PEAK: Desailly / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak @ 10 years (Network Folder: General)]**

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	95	0.0	95	0.0	0.337	5.5	LOS A	2.1	14.4	0.54	0.63	0.54	26.7
2	T1	All MCs	16	0.0	16	0.0	0.337	5.4	LOS A	2.1	14.4	0.54	0.63	0.54	37.1
3	R2	All MCs	224	0.0	224	0.0	0.337	8.9	LOS A	2.1	14.4	0.54	0.63	0.54	26.7
3u	U	All MCs	1	0.0	1	0.0	0.337	10.4	LOS B	2.1	14.4	0.54	0.63	0.54	26.7
Approach			336	0.0	336	0.0	0.337	7.8	LOS A	2.1	14.4	0.54	0.63	0.54	27.7
East: MacArthur Street															
4	L2	All MCs	203	0.0	203	0.0	0.347	4.1	LOS A	2.5	17.3	0.21	0.43	0.21	34.9
5	T1	All MCs	274	1.3	274	1.3	0.347	3.7	LOS A	2.5	17.3	0.21	0.43	0.21	34.9
6	R2	All MCs	3	0.0	3	0.0	0.347	7.0	LOS A	2.5	17.3	0.21	0.43	0.21	40.2
6u	U	All MCs	6	0.0	6	0.0	0.347	8.6	LOS A	2.5	17.3	0.21	0.43	0.21	34.9
Approach			486	0.8	486	0.8	0.347	3.9	LOS A	2.5	17.3	0.21	0.43	0.21	35.0
North: Desailly Street															
7	L2	All MCs	11	0.0	11	0.0	0.048	6.2	LOS A	0.3	1.8	0.58	0.63	0.58	36.1
8	T1	All MCs	21	0.0	21	0.0	0.048	6.2	LOS A	0.3	1.8	0.58	0.63	0.58	36.1
9	R2	All MCs	7	0.0	7	0.0	0.048	9.7	LOS A	0.3	1.8	0.58	0.63	0.58	36.1
9u	U	All MCs	1	0.0	1	0.0	0.048	11.2	LOS B	0.3	1.8	0.58	0.63	0.58	39.7
Approach			40	0.0	40	0.0	0.048	7.0	LOS A	0.3	1.8	0.58	0.63	0.58	36.3
West: MacArthur Street															
10	L2	All MCs	69	0.0	69	0.0	0.355	5.7	LOS A	2.4	16.5	0.55	0.54	0.55	38.9
11	T1	All MCs	272	0.0	272	0.0	0.355	5.2	LOS A	2.4	16.5	0.55	0.54	0.55	31.9
12	R2	All MCs	9	0.0	9	0.0	0.355	8.6	LOS A	2.4	16.5	0.55	0.54	0.55	31.9
12u	U	All MCs	2	0.0	2	0.0	0.355	10.2	LOS B	2.4	16.5	0.55	0.54	0.55	31.9
Approach			353	0.0	353	0.0	0.355	5.4	LOS A	2.4	16.5	0.55	0.54	0.55	34.3
All Vehicles			1216	0.3	1216	0.3	0.355	5.5	LOS A	2.5	17.3	0.41	0.52	0.41	32.8

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [EX-SAT-PEAK: Pearson / MacArthur (Site Folder: Existing - Saturday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Existing - Saturday - Peak @ 10 years (Network Folder: General)]**

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	14	15.4	14	15.4	0.119	10.6	LOS B	0.4	3.1	0.64	0.93	0.64	24.5
2	T1	All MCs	1	0.0	1	0.0	0.119	17.8	LOS C	0.4	3.1	0.64	0.93	0.64	26.9
3	R2	All MCs	24	0.0	24	0.0	0.119	20.4	LOS C	0.4	3.1	0.64	0.93	0.64	17.2
3u	U	All MCs	1	0.0	1	0.0	0.119	8.1	LOS A	0.4	3.1	0.64	0.93	0.64	23.0
Approach			40	5.3	40	5.3	0.119	16.7	LOS C	0.4	3.1	0.64	0.93	0.64	20.9
East: MacArthur Street															
4	L2	All MCs	23	4.5	23	4.5	0.199	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	44.0
5	T1	All MCs	362	0.7	362	0.7	0.199	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.3
6	R2	All MCs	9	0.0	9	0.0	0.011	5.6	LOS A	0.0	0.3	0.41	0.57	0.41	36.1
6u	U	All MCs	3	0.0	3	0.0	0.011	7.9	LOS A	0.0	0.3	0.41	0.57	0.41	31.0
Approach			397	0.9	397	0.9	0.199	0.5	NA	0.0	0.3	0.01	0.05	0.01	48.4
North: Pearson Street															
7	L2	All MCs	3	0.0	3	0.0	0.018	5.9	LOS A	0.1	0.4	0.35	0.49	0.35	28.4
8	T1	All MCs	1	0.0	1	0.0	0.018	11.6	LOS B	0.1	0.4	0.35	0.49	0.35	32.0
9	R2	All MCs	3	0.0	3	0.0	0.018	14.5	LOS B	0.1	0.4	0.35	0.49	0.35	32.7
9u	U	All MCs	1	0.0	1	0.0	0.018	5.9	LOS A	0.1	0.4	0.35	0.49	0.35	33.5
Approach			8	0.0	8	0.0	0.018	9.8	LOS A	0.1	0.4	0.35	0.49	0.35	31.5
West: MacArthur Street															
10	L2	All MCs	2	0.0	2	0.0	0.170	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.0
11	T1	All MCs	330	0.0	330	0.0	0.170	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	All MCs	19	5.6	19	5.6	0.017	6.0	LOS A	0.1	0.5	0.44	0.59	0.44	33.3
12u	U	All MCs	1	0.0	1	0.0	0.017	8.3	LOS A	0.1	0.5	0.44	0.59	0.44	34.8
Approach			352	0.3	352	0.3	0.170	0.4	NA	0.1	0.5	0.02	0.04	0.02	47.6
All Vehicles			798	0.8	798	0.8	0.199	1.4	NA	0.4	3.1	0.05	0.09	0.05	45.5

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [EX-SAT-PEAK: Desailly / New Railway (Site Folder: Existing - Saturday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing - Saturday - Peak @ 10 years (Network Folder: General)]

Desailly Street and New Railay Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	21	0.0	21	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	146	0.0	146	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			167	0.0	167	0.0	0.085	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	112	0.0	112	0.0	0.061	0.0	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
9	R2	All MCs	6	0.0	6	0.0	0.061	1.2	LOS A	0.0	0.3	0.04	0.02	0.04	19.9
Approach			118	0.0	118	0.0	0.061	0.1	NA	0.0	0.3	0.04	0.02	0.04	19.9
All Vehicles			285	0.0	285	0.0	0.085	0.0	NA	0.0	0.3	0.02	0.01	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

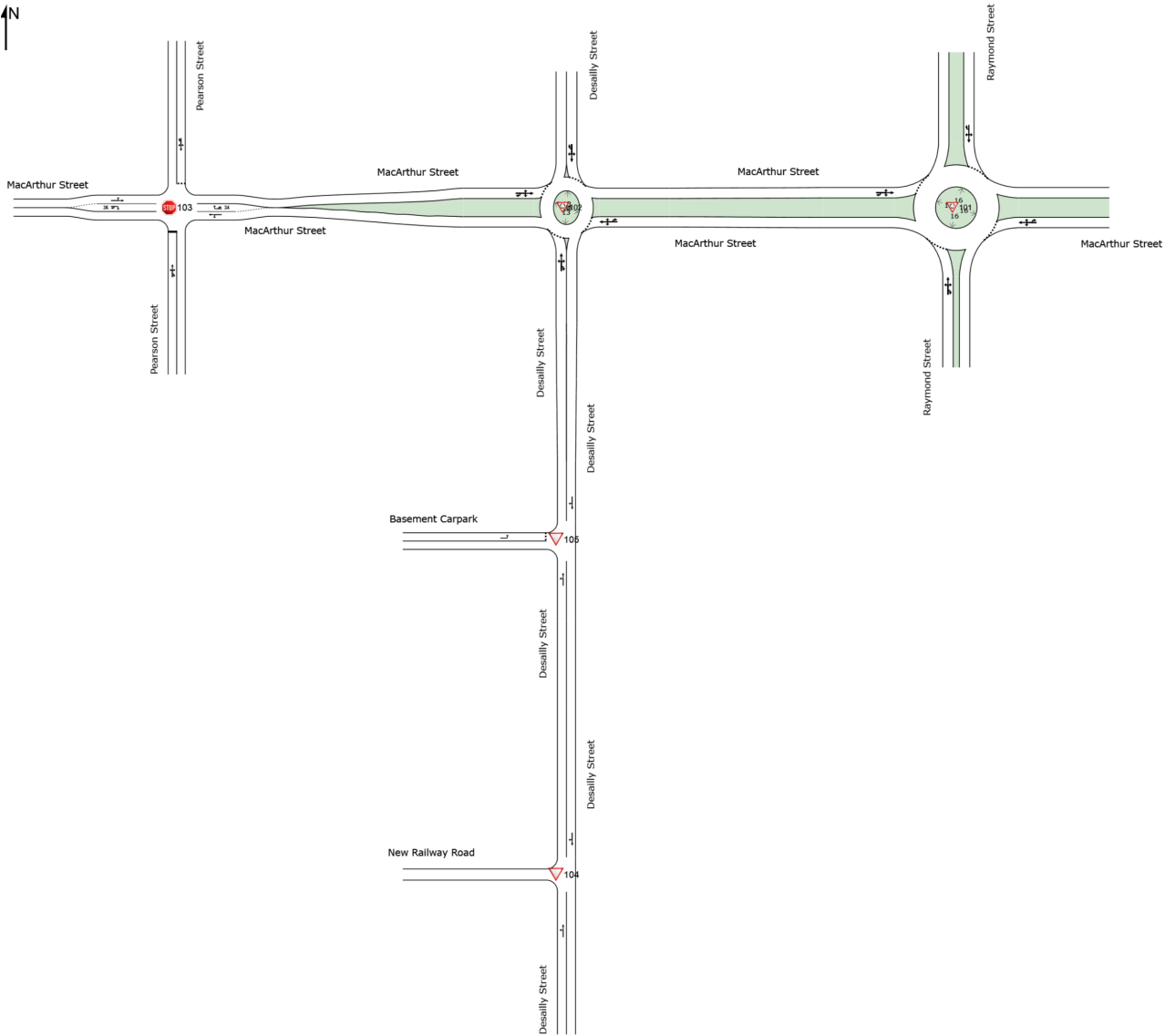
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

NETWORK LAYOUT

Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

MacArthur Street and Desailly Street network
Network Category: Existing Design

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



SITES IN NETWORK		
Site ID	CCG ID	Site Name
 101	NA	PD-10-THU-AM: Raymond / MacArthur
 102	NA	PD-10-THU-AM: Desailly / MacArthur
 103	NA	PD-10-THU-AM: Pearson / MacArthur
 104	NA	PD-10-THU-AM: Desailly / New Railway
 105	NA	PD-10-THU-AM: Desailly / Basement Carpark

MOVEMENT SUMMARY

 **Site: 101 [PD-10-THU-AM: Raymond / MacArthur (Site Folder: Post-Development - Thursday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]						[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Raymond Street															
1	L2	All MCs	33	0.0	33	0.0	0.200	5.3	LOS A	1.2	8.4	0.58	0.60	0.58	32.7
2	T1	All MCs	98	0.0	98	0.0	0.200	5.3	LOS A	1.2	8.4	0.58	0.60	0.58	39.5
3	R2	All MCs	36	2.9	36	2.9	0.200	9.5	LOS A	1.2	8.4	0.58	0.60	0.58	38.4
3u	U	All MCs	24	4.3	24	4.3	0.200	11.3	LOS B	1.2	8.4	0.58	0.60	0.58	36.4
Approach			191	1.1	191	1.1	0.200	6.9	LOS A	1.2	8.4	0.58	0.60	0.58	38.2
East: MacArthur Street															
4	L2	All MCs	82	3.8	82	3.8	0.388	5.6	LOS A	2.6	19.1	0.63	0.58	0.63	39.5
5	T1	All MCs	261	4.4	261	4.4	0.388	5.6	LOS A	2.6	19.1	0.63	0.58	0.63	36.6
6	R2	All MCs	29	10.7	29	10.7	0.388	9.9	LOS A	2.6	19.1	0.63	0.58	0.63	40.1
6u	U	All MCs	1	0.0	1	0.0	0.388	11.3	LOS B	2.6	19.1	0.63	0.58	0.63	40.2
Approach			374	4.8	374	4.8	0.388	6.0	LOS A	2.6	19.1	0.63	0.58	0.63	37.9
North: Raymond Street															
7	L2	All MCs	77	1.4	77	1.4	0.363	5.9	LOS A	2.4	16.9	0.66	0.63	0.66	40.1
8	T1	All MCs	161	0.0	161	0.0	0.363	5.9	LOS A	2.4	16.9	0.66	0.63	0.66	39.3
9	R2	All MCs	99	6.4	99	6.4	0.363	10.2	LOS B	2.4	16.9	0.66	0.63	0.66	35.7
9u	U	All MCs	1	0.0	1	0.0	0.363	11.7	LOS B	2.4	16.9	0.66	0.63	0.66	39.6
Approach			338	2.2	338	2.2	0.363	7.2	LOS A	2.4	16.9	0.66	0.63	0.66	38.7
West: MacArthur Street															
10	L2	All MCs	72	4.4	72	4.4	0.372	4.4	LOS A	2.6	18.4	0.48	0.49	0.48	39.6
11	T1	All MCs	293	3.2	293	3.2	0.372	4.4	LOS A	2.6	18.4	0.48	0.49	0.48	40.0
12	R2	All MCs	68	0.0	68	0.0	0.372	8.4	LOS A	2.6	18.4	0.48	0.49	0.48	37.3
12u	U	All MCs	1	0.0	1	0.0	0.372	10.1	LOS B	2.6	18.4	0.48	0.49	0.48	32.6
Approach			434	2.9	434	2.9	0.372	5.0	LOS A	2.6	18.4	0.48	0.49	0.48	39.6
All Vehicles			1336	3.0	1336	3.0	0.388	6.1	LOS A	2.6	19.1	0.58	0.57	0.58	38.7

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 102 [PD-10-THU-AM: Desailly / MacArthur (Site Folder: Post-Development - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ ■ Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	40	0.0	40	0.0	0.146	4.8	LOS A	0.8	5.5	0.44	0.61	0.44	27.1
2	T1	All MCs	7	0.0	7	0.0	0.146	4.8	LOS A	0.8	5.5	0.44	0.61	0.44	37.5
3	R2	All MCs	101	1.0	101	1.0	0.146	8.3	LOS A	0.8	5.5	0.44	0.61	0.44	27.1
3u	U	All MCs	1	0.0	1	0.0	0.146	9.7	LOS A	0.8	5.5	0.44	0.61	0.44	27.1
Approach			149	0.7	149	0.7	0.146	7.2	LOS A	0.8	5.5	0.44	0.61	0.44	28.1
East: MacArthur Street															
4	L2	All MCs	149	2.8	149	2.8	0.310	4.5	LOS A	2.0	14.3	0.32	0.46	0.32	33.8
5	T1	All MCs	212	6.5	212	6.5	0.310	4.1	LOS A	2.0	14.3	0.32	0.46	0.32	33.8
6	R2	All MCs	13	0.0	13	0.0	0.310	7.4	LOS A	2.0	14.3	0.32	0.46	0.32	39.6
6u	U	All MCs	2	0.0	2	0.0	0.310	8.9	LOS A	2.0	14.3	0.32	0.46	0.32	33.8
Approach			376	4.8	376	4.8	0.310	4.4	LOS A	2.0	14.3	0.32	0.46	0.32	34.2
North: Desailly Street															
7	L2	All MCs	13	0.0	13	0.0	0.044	6.1	LOS A	0.2	1.6	0.57	0.65	0.57	35.1
8	T1	All MCs	6	0.0	6	0.0	0.044	6.1	LOS A	0.2	1.6	0.57	0.65	0.57	35.1
9	R2	All MCs	16	6.7	16	6.7	0.044	9.8	LOS A	0.2	1.6	0.57	0.65	0.57	35.1
9u	U	All MCs	1	0.0	1	0.0	0.044	11.0	LOS B	0.2	1.6	0.57	0.65	0.57	39.0
Approach			36	2.9	36	2.9	0.044	7.9	LOS A	0.2	1.6	0.57	0.65	0.57	35.3
West: MacArthur Street															
10	L2	All MCs	8	0.0	8	0.0	0.338	4.7	LOS A	2.2	16.3	0.38	0.48	0.38	39.4
11	T1	All MCs	316	3.7	316	3.7	0.338	4.3	LOS A	2.2	16.3	0.38	0.48	0.38	32.9
12	R2	All MCs	67	7.8	67	7.8	0.338	7.8	LOS A	2.2	16.3	0.38	0.48	0.38	32.9
12u	U	All MCs	1	0.0	1	0.0	0.338	9.2	LOS A	2.2	16.3	0.38	0.48	0.38	32.9
Approach			393	4.3	393	4.3	0.338	4.9	LOS A	2.2	16.3	0.38	0.48	0.38	33.2
All Vehicles			954	3.9	954	3.9	0.338	5.2	LOS A	2.2	16.3	0.37	0.50	0.37	32.9

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [PD-10-THU-AM: Pearson / MacArthur (Site Folder: Post-Development - Thursday - AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Veh. veh	Dist]									
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Pearson Street															
1	L2	All MCs	8	37.5	8	37.5	0.066	10.5	LOS B	0.2	1.9	0.60	0.89	0.60	22.7
2	T1	All MCs	1	0.0	1	0.0	0.066	15.4	LOS C	0.2	1.9	0.60	0.89	0.60	26.0
3	R2	All MCs	8	37.5	8	37.5	0.066	29.0	LOS D	0.2	1.9	0.60	0.89	0.60	16.4
3u	U	All MCs	1	0.0	1	0.0	0.066	8.5	LOS A	0.2	1.9	0.60	0.89	0.60	22.2
Approach			19	33.3	19	33.3	0.066	18.9	LOS C	0.2	1.9	0.60	0.89	0.60	20.7
East: MacArthur Street															
4	L2	All MCs	43	4.9	43	4.9	0.138	4.6	LOS A	0.0	0.0	0.00	0.09	0.00	42.8
5	T1	All MCs	215	5.9	215	5.9	0.138	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	48.1
6	R2	All MCs	2	0.0	2	0.0	0.052	5.8	LOS A	0.2	1.5	0.47	0.68	0.47	34.2
6u	U	All MCs	39	0.0	39	0.0	0.052	8.3	LOS A	0.2	1.5	0.47	0.68	0.47	28.2
Approach			299	4.9	299	4.9	0.138	1.8	NA	0.2	1.5	0.07	0.17	0.07	44.8
North: Pearson Street															
7	L2	All MCs	5	0.0	5	0.0	0.012	6.0	LOS A	0.0	0.3	0.15	0.49	0.15	32.0
8	T1	All MCs	1	0.0	1	0.0	0.012	10.1	LOS B	0.0	0.3	0.15	0.49	0.15	34.9
9	R2	All MCs	1	0.0	1	0.0	0.012	12.2	LOS B	0.0	0.3	0.15	0.49	0.15	35.3
9u	U	All MCs	1	0.0	1	0.0	0.012	5.8	LOS A	0.0	0.3	0.15	0.49	0.15	36.0
Approach			8	0.0	8	0.0	0.012	7.3	LOS A	0.0	0.3	0.15	0.49	0.15	33.7
West: MacArthur Street															
10	L2	All MCs	1	0.0	1	0.0	0.183	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.1
11	T1	All MCs	346	4.3	346	4.3	0.183	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
12	R2	All MCs	46	9.1	46	9.1	0.038	5.6	LOS A	0.2	1.2	0.36	0.57	0.36	33.4
12u	U	All MCs	3	0.0	3	0.0	0.038	7.2	LOS A	0.2	1.2	0.36	0.57	0.36	35.2
Approach			397	4.8	397	4.8	0.183	0.7	NA	0.2	1.2	0.05	0.07	0.05	45.5
All Vehicles			723	5.5	723	5.5	0.183	1.7	NA	0.2	1.9	0.07	0.14	0.07	43.6

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 104 [PD-10-THU-AM: Desailly / New Railway (Site Folder: Post-Development - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

Desailly Street and New Railway Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Desailly Street															
1	L2	All MCs	2	0.0	2	0.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	65	1.6	65	1.6	0.035	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			67	1.6	67	1.6	0.035	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	56	0.0	56	0.0	0.036	0.1	LOS A	0.1	0.5	0.06	0.04	0.06	19.9
9	R2	All MCs	7	71.4	7	71.4	0.036	0.9	LOS A	0.1	0.5	0.06	0.04	0.06	19.8
Approach			63	8.3	63	8.3	0.036	0.2	NA	0.1	0.5	0.06	0.04	0.06	19.9
All Vehicles			131	4.8	131	4.8	0.036	0.1	NA	0.1	0.5	0.03	0.02	0.03	19.9

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 105 [PD-10-THU-AM: Desailly / Basement Carpark (Site Folder: Post-Development - Thursday - AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - AM @ 10 years (Network Folder: General)]

Basement carpark entrance onto Desailly Street
Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]		v/c	sec		[Veh. veh	Dist]				km/h
			veh/h	%	veh/h	%					m				
South: Desailly Street															
1	L2	All MCs	21	0.0	21	0.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	44	0.0	44	0.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			65	0.0	65	0.0	0.034	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	63	8.3	63	8.3	0.099	0.2	LOS A	0.5	3.4	0.16	0.13	0.16	19.0
9	R2	All MCs	111	0.0	111	0.0	0.099	0.8	LOS A	0.5	3.4	0.16	0.13	0.16	19.3
Approach			174	3.0	174	3.0	0.099	0.6	NA	0.5	3.4	0.16	0.13	0.16	19.2
West: Basement Carpark															
10	L2	All MCs	93	0.0	93	0.0	0.059	0.1	LOS A	0.2	1.7	0.12	0.03	0.12	19.2
Approach			93	0.0	93	0.0	0.059	0.1	LOS A	0.2	1.7	0.12	0.03	0.12	19.2
All Vehicles			332	1.6	332	1.6	0.099	0.3	NA	0.5	3.4	0.12	0.08	0.12	19.3

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [PD-10-THU-PM: Raymond / MacArthur (Site Folder: Post-Development - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - PM @ 10 years (Network Folder: General)]

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec		veh	m				km/h
South: Raymond Street															
1	L2	All MCs	74	0.0	74	0.0	0.330	6.2	LOS A	2.2	15.1	0.68	0.65	0.68	31.7
2	T1	All MCs	120	0.0	120	0.0	0.330	6.2	LOS A	2.2	15.1	0.68	0.65	0.68	38.8
3	R2	All MCs	81	0.0	81	0.0	0.330	10.2	LOS B	2.2	15.1	0.68	0.65	0.68	37.8
3u	U	All MCs	20	0.0	20	0.0	0.330	12.0	LOS B	2.2	15.1	0.68	0.65	0.68	36.1
Approach			295	0.0	295	0.0	0.330	7.7	LOS A	2.2	15.1	0.68	0.65	0.68	37.2
East: MacArthur Street															
4	L2	All MCs	107	0.0	107	0.0	0.457	5.3	LOS A	3.3	23.5	0.64	0.57	0.64	39.4
5	T1	All MCs	308	1.0	308	1.0	0.457	5.3	LOS A	3.3	23.5	0.64	0.57	0.64	36.4
6	R2	All MCs	48	0.0	48	0.0	0.457	9.4	LOS A	3.3	23.5	0.64	0.57	0.64	40.2
6u	U	All MCs	11	0.0	11	0.0	0.457	11.1	LOS B	3.3	23.5	0.64	0.57	0.64	40.1
Approach			475	0.7	475	0.7	0.457	5.9	LOS A	3.3	23.5	0.64	0.57	0.64	37.9
North: Raymond Street															
7	L2	All MCs	55	1.9	55	1.9	0.334	7.0	LOS A	2.2	15.7	0.75	0.70	0.75	38.9
8	T1	All MCs	99	0.0	99	0.0	0.334	6.9	LOS A	2.2	15.7	0.75	0.70	0.75	38.0
9	R2	All MCs	112	0.0	112	0.0	0.334	11.0	LOS B	2.2	15.7	0.75	0.70	0.75	34.1
9u	U	All MCs	3	0.0	3	0.0	0.334	12.7	LOS B	2.2	15.7	0.75	0.70	0.75	38.5
Approach			268	0.4	268	0.4	0.334	8.7	LOS A	2.2	15.7	0.75	0.70	0.75	37.0
West: MacArthur Street															
10	L2	All MCs	108	0.0	108	0.0	0.537	5.2	LOS A	4.3	30.5	0.66	0.57	0.66	38.7
11	T1	All MCs	393	1.1	393	1.1	0.537	5.3	LOS A	4.3	30.5	0.66	0.57	0.66	39.1
12	R2	All MCs	79	0.0	79	0.0	0.537	9.3	LOS A	4.3	30.5	0.66	0.57	0.66	36.2
12u	U	All MCs	1	0.0	1	0.0	0.537	11.1	LOS B	4.3	30.5	0.66	0.57	0.66	31.0
Approach			581	0.7	581	0.7	0.537	5.8	LOS A	4.3	30.5	0.66	0.57	0.66	38.6
All Vehicles			1619	0.5	1619	0.5	0.537	6.7	LOS A	4.3	30.5	0.67	0.61	0.67	37.9

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 102 [PD-10-THU-PM: Desailly / MacArthur (Site Folder: Post-Development - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - PM @ 10 years (Network Folder: General)]

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec		veh	m				km/h
South: Desailly Street															
1	L2	All MCs	102	0.0	102	0.0	0.422	5.7	LOS A	2.9	20.1	0.60	0.64	0.60	26.0
2	T1	All MCs	35	0.0	35	0.0	0.422	5.6	LOS A	2.9	20.1	0.60	0.64	0.60	36.8
3	R2	All MCs	279	0.4	279	0.4	0.422	9.1	LOS A	2.9	20.1	0.60	0.64	0.60	26.0
3u	U	All MCs	1	0.0	1	0.0	0.422	10.6	LOS B	2.9	20.1	0.60	0.64	0.60	26.0
Approach			417	0.3	417	0.3	0.422	8.0	LOS A	2.9	20.1	0.60	0.64	0.60	27.7
East: MacArthur Street															
4	L2	All MCs	198	1.1	198	1.1	0.396	4.7	LOS A	2.9	20.3	0.39	0.47	0.39	33.2
5	T1	All MCs	272	0.4	272	0.4	0.396	4.2	LOS A	2.9	20.3	0.39	0.47	0.39	33.2
6	R2	All MCs	7	0.0	7	0.0	0.396	7.6	LOS A	2.9	20.3	0.39	0.47	0.39	39.3
6u	U	All MCs	5	0.0	5	0.0	0.396	9.1	LOS A	2.9	20.3	0.39	0.47	0.39	33.2
Approach			482	0.7	482	0.7	0.396	4.5	LOS A	2.9	20.3	0.39	0.47	0.39	33.4
North: Desailly Street															
7	L2	All MCs	15	0.0	15	0.0	0.054	7.1	LOS A	0.3	2.1	0.65	0.68	0.65	34.3
8	T1	All MCs	11	0.0	11	0.0	0.054	7.1	LOS A	0.3	2.1	0.65	0.68	0.65	34.3
9	R2	All MCs	14	0.0	14	0.0	0.054	10.5	LOS B	0.3	2.1	0.65	0.68	0.65	34.3
9u	U	All MCs	1	0.0	1	0.0	0.054	12.0	LOS B	0.3	2.1	0.65	0.68	0.65	38.5
Approach			40	0.0	40	0.0	0.054	8.4	LOS A	0.3	2.1	0.65	0.68	0.65	34.4
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.378	6.3	LOS A	2.5	17.9	0.63	0.61	0.63	37.8
11	T1	All MCs	252	1.3	252	1.3	0.378	5.9	LOS A	2.5	17.9	0.63	0.61	0.63	30.3
12	R2	All MCs	84	2.5	84	2.5	0.378	9.3	LOS A	2.5	17.9	0.63	0.61	0.63	30.3
12u	U	All MCs	2	0.0	2	0.0	0.378	10.8	LOS B	2.5	17.9	0.63	0.61	0.63	30.3
Approach			341	1.5	341	1.5	0.378	6.8	LOS A	2.5	17.9	0.63	0.61	0.63	30.4
All Vehicles			1280	0.7	1280	0.7	0.422	6.4	LOS A	2.9	20.3	0.53	0.57	0.53	30.7

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [PD-10-THU-PM: Pearson / MacArthur (Site Folder: Post-Development - Thursday - PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - PM @ 10 years (Network Folder: General)]

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: Pearson Street															
1	L2	All MCs	9	22.2	9	22.2	0.114	11.1	LOS B	0.4	2.9	0.65	0.95	0.65	23.0
2	T1	All MCs	1	0.0	1	0.0	0.114	16.5	LOS C	0.4	2.9	0.65	0.95	0.65	25.6
3	R2	All MCs	21	10.0	21	10.0	0.114	23.0	LOS C	0.4	2.9	0.65	0.95	0.65	15.9
3u	U	All MCs	1	0.0	1	0.0	0.114	8.2	LOS A	0.4	2.9	0.65	0.95	0.65	21.7
Approach			33	12.9	33	12.9	0.114	18.8	LOS C	0.4	2.9	0.65	0.95	0.65	19.2
East: MacArthur Street															
4	L2	All MCs	33	3.2	33	3.2	0.204	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	43.9
5	T1	All MCs	362	0.0	362	0.0	0.204	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.0
6	R2	All MCs	2	0.0	2	0.0	0.047	5.5	LOS A	0.2	1.4	0.41	0.65	0.41	34.9
6u	U	All MCs	40	0.0	40	0.0	0.047	7.6	LOS A	0.2	1.4	0.41	0.65	0.41	29.3
Approach			437	0.2	437	0.2	0.204	1.1	NA	0.2	1.4	0.04	0.10	0.04	46.9
North: Pearson Street															
7	L2	All MCs	2	0.0	2	0.0	0.009	5.6	LOS A	0.0	0.2	0.15	0.49	0.15	30.7
8	T1	All MCs	1	0.0	1	0.0	0.009	10.6	LOS B	0.0	0.2	0.15	0.49	0.15	33.9
9	R2	All MCs	1	0.0	1	0.0	0.009	13.0	LOS B	0.0	0.2	0.15	0.49	0.15	34.4
9u	U	All MCs	1	0.0	1	0.0	0.009	5.8	LOS A	0.0	0.2	0.15	0.49	0.15	35.1
Approach			5	0.0	5	0.0	0.009	8.1	LOS A	0.0	0.2	0.15	0.49	0.15	33.4
West: MacArthur Street															
10	L2	All MCs	3	0.0	3	0.0	0.143	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	46.0
11	T1	All MCs	273	1.2	273	1.2	0.143	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.7
12	R2	All MCs	25	4.2	25	4.2	0.023	6.0	LOS A	0.1	0.7	0.44	0.60	0.44	33.4
12u	U	All MCs	1	0.0	1	0.0	0.023	8.3	LOS A	0.1	0.7	0.44	0.60	0.44	34.8
Approach			302	1.4	302	1.4	0.143	0.6	NA	0.1	0.7	0.04	0.06	0.04	46.5
All Vehicles			777	1.2	777	1.2	0.204	1.7	NA	0.4	2.9	0.07	0.12	0.07	44.6

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 104 [PD-10-THU-PM: Desailly / New Railway (Site Folder: Post-Development - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Post-Development - Thursday - PM @ 10 years (Network Folder: General)]

Desailly Street and New Railway Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Desailly Street															
1	L2	All MCs	11	0.0	11	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	157	0.0	157	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			167	0.0	167	0.0	0.085	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	89	1.2	89	1.2	0.051	0.1	LOS A	0.0	0.3	0.05	0.03	0.05	19.9
9	R2	All MCs	5	40.0	5	40.0	0.051	1.3	LOS A	0.0	0.3	0.05	0.03	0.05	19.8
Approach			95	3.3	95	3.3	0.051	0.1	NA	0.0	0.3	0.05	0.03	0.05	19.9
All Vehicles			262	1.2	262	1.2	0.085	0.1	NA	0.0	0.3	0.02	0.01	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 105 [PD-10-THU-PM: Desailly / Basement Carpark (Site Folder: Post-Development - Thursday - PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Thursday - PM @ 10 years (Network Folder: General)]

Basement carpark entrance onto Desailly Street
Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	29	0.0	29	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	127	0.0	127	0.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			157	0.0	157	0.0	0.080	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	95	3.3	95	3.3	0.149	0.5	LOS A	0.7	5.3	0.27	0.20	0.27	18.7
9	R2	All MCs	156	0.0	156	0.0	0.149	1.1	LOS A	0.7	5.3	0.27	0.20	0.27	19.0
Approach			251	1.3	251	1.3	0.149	0.9	NA	0.7	5.3	0.27	0.20	0.27	18.9
West: Basement Carpark															
10	L2	All MCs	189	0.0	189	0.0	0.129	0.4	LOS A	0.6	3.9	0.23	0.10	0.23	18.5
Approach			189	0.0	189	0.0	0.129	0.4	LOS A	0.6	3.9	0.23	0.10	0.23	18.5
All Vehicles			597	0.5	597	0.5	0.149	0.5	NA	0.7	5.3	0.19	0.12	0.19	18.9

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [PD-10-SAT-PEAK: Raymond / MacArthur (Site Folder: Post-Development - Saturday - Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Saturday - Peak @ 10 years (Network Folder: General)]

4-way roundabout of Raymond Street & MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: Raymond Street															
1	L2	All MCs	136	0.0	136	0.0	0.507	8.3	LOS A	4.2	29.7	0.84	0.77	0.93	28.9
2	T1	All MCs	106	0.0	106	0.0	0.507	8.3	LOS A	4.2	29.7	0.84	0.77	0.93	36.8
3	R2	All MCs	107	0.0	107	0.0	0.507	12.4	LOS B	4.2	29.7	0.84	0.77	0.93	35.9
3u	U	All MCs	53	0.0	53	0.0	0.507	14.1	LOS B	4.2	29.7	0.84	0.77	0.93	34.1
Approach			402	0.0	402	0.0	0.507	10.2	LOS B	4.2	29.7	0.84	0.77	0.93	34.3
East: MacArthur Street															
4	L2	All MCs	136	0.8	136	0.8	0.665	10.7	LOS B	7.3	51.6	0.90	0.87	1.16	35.4
5	T1	All MCs	362	1.2	362	1.2	0.665	10.7	LOS B	7.3	51.6	0.90	0.87	1.16	31.1
6	R2	All MCs	51	2.1	51	2.1	0.665	14.8	LOS B	7.3	51.6	0.90	0.87	1.16	36.5
6u	U	All MCs	6	16.7	6	16.7	0.665	17.4	LOS B	7.3	51.6	0.90	0.87	1.16	36.2
Approach			555	1.3	555	1.3	0.665	11.2	LOS B	7.3	51.6	0.90	0.87	1.16	33.2
North: Raymond Street															
7	L2	All MCs	94	1.1	94	1.1	0.592	12.5	LOS B	5.8	40.7	0.95	0.91	1.21	35.0
8	T1	All MCs	153	0.0	153	0.0	0.592	12.5	LOS B	5.8	40.7	0.95	0.91	1.21	33.7
9	R2	All MCs	143	0.7	143	0.7	0.592	16.6	LOS B	5.8	40.7	0.95	0.91	1.21	28.7
9u	U	All MCs	2	0.0	2	0.0	0.592	18.3	LOS B	5.8	40.7	0.95	0.91	1.21	34.7
Approach			392	0.5	392	0.5	0.592	14.0	LOS B	5.8	40.7	0.95	0.91	1.21	32.6
West: MacArthur Street															
10	L2	All MCs	112	0.0	112	0.0	0.669	7.3	LOS A	7.5	52.3	0.82	0.71	0.92	37.1
11	T1	All MCs	392	0.5	392	0.5	0.669	7.3	LOS A	7.5	52.3	0.82	0.71	0.92	37.4
12	R2	All MCs	176	0.0	176	0.0	0.669	11.3	LOS B	7.5	52.3	0.82	0.71	0.92	34.5
12u	U	All MCs	13	0.0	13	0.0	0.669	13.1	LOS B	7.5	52.3	0.82	0.71	0.92	28.7
Approach			692	0.3	692	0.3	0.669	8.4	LOS A	7.5	52.3	0.82	0.71	0.92	36.6
All Vehicles			2040	0.6	2040	0.6	0.669	10.6	LOS B	7.5	52.3	0.87	0.80	1.04	34.4

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 102 [PD-10-SAT-PEAK: Desailly / MacArthur (Site Folder: Post-Development - Saturday - Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Saturday - Peak @ 10 years (Network Folder: General)]

4-way roundabout of Desailly Street and MacArthur Street
Site Category: Existing Design
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				km/h
			veh/h	%	veh/h	%	v/c	sec			m				
South: Desailly Street															
1	L2	All MCs	129	0.0	129	0.0	0.456	6.2	LOS A	3.1	21.9	0.65	0.66	0.65	25.3
2	T1	All MCs	19	0.0	19	0.0	0.456	6.2	LOS A	3.1	21.9	0.65	0.66	0.65	36.3
3	R2	All MCs	280	0.0	280	0.0	0.456	9.6	LOS A	3.1	21.9	0.65	0.66	0.65	25.3
3u	U	All MCs	1	0.0	1	0.0	0.456	11.1	LOS B	3.1	21.9	0.65	0.66	0.65	25.3
Approach			429	0.0	429	0.0	0.456	8.5	LOS A	3.1	21.9	0.65	0.66	0.65	26.2
East: MacArthur Street															
4	L2	All MCs	261	0.4	261	0.4	0.454	4.4	LOS A	3.6	25.3	0.32	0.44	0.32	33.9
5	T1	All MCs	335	1.3	335	1.3	0.454	3.9	LOS A	3.6	25.3	0.32	0.44	0.32	33.9
6	R2	All MCs	3	0.0	3	0.0	0.454	7.3	LOS A	3.6	25.3	0.32	0.44	0.32	39.6
6u	U	All MCs	6	0.0	6	0.0	0.454	8.8	LOS A	3.6	25.3	0.32	0.44	0.32	33.9
Approach			605	0.9	605	0.9	0.454	4.2	LOS A	3.6	25.3	0.32	0.44	0.32	33.9
North: Desailly Street															
7	L2	All MCs	11	0.0	11	0.0	0.062	7.6	LOS A	0.4	2.5	0.69	0.69	0.69	34.3
8	T1	All MCs	24	0.0	24	0.0	0.062	7.6	LOS A	0.4	2.5	0.69	0.69	0.69	34.3
9	R2	All MCs	7	0.0	7	0.0	0.062	11.1	LOS B	0.4	2.5	0.69	0.69	0.69	34.3
9u	U	All MCs	1	0.0	1	0.0	0.062	12.6	LOS B	0.4	2.5	0.69	0.69	0.69	38.5
Approach			43	0.0	43	0.0	0.062	8.3	LOS A	0.4	2.5	0.69	0.69	0.69	34.5
West: MacArthur Street															
10	L2	All MCs	69	0.0	69	0.0	0.502	6.4	LOS A	3.8	26.8	0.69	0.61	0.69	38.1
11	T1	All MCs	362	0.6	362	0.6	0.502	6.0	LOS A	3.8	26.8	0.69	0.61	0.69	30.5
12	R2	All MCs	35	3.0	35	3.0	0.502	9.5	LOS A	3.8	26.8	0.69	0.61	0.69	30.5
12u	U	All MCs	2	0.0	2	0.0	0.502	10.9	LOS B	3.8	26.8	0.69	0.61	0.69	30.5
Approach			468	0.7	468	0.7	0.502	6.4	LOS A	3.8	26.8	0.69	0.61	0.69	32.5
All Vehicles			1546	0.5	1546	0.5	0.502	6.1	LOS A	3.8	26.8	0.53	0.56	0.53	31.3

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 103 [PD-10-SAT-PEAK: Pearson / MacArthur (Site Folder: Post-Development - Saturday - Peak)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Post-Development - Saturday - Peak @ 10 years (Network Folder: General)]

Pearson Street and MacArthur Street X-Intersection
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Veh. veh	Dist]									
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Pearson Street															
1	L2	All MCs	17	25.0	17	25.0	0.201	12.0	LOS B	0.7	5.2	0.71	1.02	0.74	20.8
2	T1	All MCs	1	0.0	1	0.0	0.201	20.8	LOS C	0.7	5.2	0.71	1.02	0.74	23.3
3	R2	All MCs	28	7.4	28	7.4	0.201	29.7	LOS D	0.7	5.2	0.71	1.02	0.74	13.9
3u	U	All MCs	1	0.0	1	0.0	0.201	8.8	LOS A	0.7	5.2	0.71	1.02	0.74	19.6
Approach			47	13.3	47	13.3	0.201	22.8	LOS C	0.7	5.2	0.71	1.02	0.74	17.3
East: MacArthur Street															
4	L2	All MCs	46	4.5	46	4.5	0.225	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	43.5
5	T1	All MCs	387	0.5	387	0.5	0.225	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	48.7
6	R2	All MCs	9	0.0	9	0.0	0.060	5.8	LOS A	0.2	1.7	0.47	0.68	0.47	34.5
6u	U	All MCs	41	0.0	41	0.0	0.060	8.3	LOS A	0.2	1.7	0.47	0.68	0.47	28.6
Approach			484	0.9	484	0.9	0.225	1.3	NA	0.2	1.7	0.05	0.12	0.05	46.3
North: Pearson Street															
7	L2	All MCs	3	0.0	3	0.0	0.020	6.1	LOS A	0.1	0.5	0.38	0.48	0.38	27.1
8	T1	All MCs	1	0.0	1	0.0	0.020	13.7	LOS B	0.1	0.5	0.38	0.48	0.38	30.9
9	R2	All MCs	3	0.0	3	0.0	0.020	16.5	LOS C	0.1	0.5	0.38	0.48	0.38	31.7
9u	U	All MCs	1	0.0	1	0.0	0.020	5.9	LOS A	0.1	0.5	0.38	0.48	0.38	32.5
Approach			8	0.0	8	0.0	0.020	10.9	LOS B	0.1	0.5	0.38	0.48	0.38	30.4
West: MacArthur Street															
10	L2	All MCs	2	0.0	2	0.0	0.183	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	46.0
11	T1	All MCs	355	0.3	355	0.3	0.183	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
12	R2	All MCs	41	5.1	41	5.1	0.038	6.3	LOS A	0.2	1.2	0.47	0.63	0.47	33.1
12u	U	All MCs	1	0.0	1	0.0	0.038	8.7	LOS A	0.2	1.2	0.47	0.63	0.47	34.7
Approach			399	0.8	399	0.8	0.183	0.7	NA	0.2	1.2	0.05	0.07	0.05	45.9
All Vehicles			939	1.5	939	1.5	0.225	2.2	NA	0.7	5.2	0.09	0.15	0.09	43.1

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 104 [PD-10-SAT-PEAK: Desailly / New Railway (Site Folder: Post-Development - Saturday - Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Post-Development - Saturday - Peak @ 10 years (Network Folder: General)]

Desailly Street and New Railway Road Intersection
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
			veh/h		veh/h		v/c	sec			m				km/h
South: Desailly Street															
1	L2	All MCs	21	0.0	21	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	181	0.0	181	0.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			202	0.0	202	0.0	0.103	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	112	0.0	112	0.0	0.064	0.1	LOS A	0.1	0.5	0.06	0.04	0.06	19.9
9	R2	All MCs	8	25.0	8	25.0	0.064	1.4	LOS A	0.1	0.5	0.06	0.04	0.06	19.8
Approach			120	1.8	120	1.8	0.064	0.2	NA	0.1	0.5	0.06	0.04	0.06	19.9
All Vehicles			322	0.7	322	0.7	0.103	0.1	NA	0.1	0.5	0.02	0.02	0.02	20.0

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 105 [PD-10-SAT-PEAK: Desailly / Basement Carpark
(Site Folder: Post-Development - Saturday - Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Post-Development - Saturday - Peak
@ 10 years (Network Folder: General)]

Basement carpark entrance onto Desailly Street
Site Category: Proposed Design 1
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Desailly Street															
1	L2	All MCs	35	0.0	35	0.0	0.093	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
2	T1	All MCs	146	0.0	146	0.0	0.093	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	20.0
Approach			181	0.0	181	0.0	0.093	0.0	NA	0.0	0.0	0.00	0.00	0.00	20.0
North: Desailly Street															
8	T1	All MCs	120	1.8	120	1.8	0.183	0.6	LOS A	0.9	6.6	0.30	0.22	0.30	18.6
9	R2	All MCs	184	0.0	184	0.0	0.183	1.2	LOS A	0.9	6.6	0.30	0.22	0.30	19.0
Approach			304	0.7	304	0.7	0.183	1.0	NA	0.9	6.6	0.30	0.22	0.30	18.9
West: Basement Carpark															
10	L2	All MCs	200	0.0	200	0.0	0.138	0.5	LOS A	0.6	4.2	0.26	0.12	0.26	18.4
Approach			200	0.0	200	0.0	0.138	0.5	LOS A	0.6	4.2	0.26	0.12	0.26	18.4
All Vehicles			685	0.3	685	0.3	0.183	0.6	NA	0.9	6.6	0.21	0.13	0.21	18.8

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

Vehicle movement LOS values are based on average delay per movement.

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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