Engineering a better future for over 20 years!

Multiple Lots – Pinjarra Road, George Street and Murray Street- Pinjarra Town Centre

Proposed Aldi Store and McDonald's

Transport Impact Assessment

PREPARED FOR:
Aldi Stores and McDonald's Australia Pty Ltd

June 2025

Document history and status

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1 Introduction and Background

This Transport Impact Assessment (TIA) has been prepared by Transcore in relation to the proposed Aldi Store and McDonald's restaurant to be located Multiple Lots – Pinjarra Road, George Street and Murray Street in Pinjarra Town Centre.

The subject site is bound by Pinjarra Road to the north east, Murray Street to the north west, George Street to the south east and existing retail shops to the south west as shown in **Figure 1**.

The subject site is primarily vacant, featuring an existing heritage building, the Masonic Hall, along Pinjarra Road. The potential future use of this heritage building and any future development plans related to it are not part of this Development Application.

Key issues that will be addressed in this report include traffic generation and distribution, access arrangement, capacity analysis, parking supply and service vehicle movements.

Figure 1: Site location

2 Development Proposal

A copy of the proposed development plan is included in **Appendix A**.

The proposed development includes the construction of an Aldi Store and McDonald's restaurant comprising the following elements:

- An Aldi Store with approximately 1,503m^2 NLA including a liquor store at the northwestern part of the site.
- A McDonald's restaurant with drive through facility and approximately 375m^2 GLA at the northeastern part of the site.
- A service bay for the McDonald's restaurant.
- A service bay for the proposed Aldi Store; and,
- A total of 118 parking bays including 4 ACROD bays on site plus two wait bays and 15 drive through queueing space for the McDonald's restaurant.

Access/egress to/from the proposed development is proposed by the following crossovers (refer **Figure 2**):

- A new left in/ left out crossover on Pinjarra Road centrally located between Murray Street and George Street. Appropriate signage and line marking is recommended to enforce the left in/ left out nature of the crossover;
- An existing full-movement crossover on George Street about 60m from the stop line at the signalised intersection of Pinjarra Road/ George Street; and,
- An existing full movement crossover on Murray Street about 60m from the roundabout intersection of Murray Street/ Pinjarra Road.

Deliveries and waste collections will be accommodated within the development site. Pedestrians will access the development via the existing paths on all abutting roads.

Turn path analysis has been conducted for a 19m semi-trailer, as well as 12.5m service vehicle servicing the proposed development. The analysis shows that the service vehicles can enter and exit the development satisfactorily. The turn path analyses for the proposed development are provided in **Appendix B**.

Figure 2: Location of proposed crossovers

3 Existing Situation

3.1 Existing Land Use

As shown in **Figure 1**, the subject site is currently largely vacant. An existing heritage building, the Masonic Hall, exists along Pinjarra Road but it is not part of this development.

3.2 Existing Road Network

The location of the subject site in the Peel Region Scheme is provided in **Figure 3**.

Figure 3: Location of the site within Peel Region Scheme

Pinjarra Road, forming the northeastern boundary of the subject site is classified as a *Primary Regional Road* and operates under a 60 km/h speed limit. The road is constructed with a single 3.5m traffic lane in the northwest bound direction and two 3.5m lanes in southeast bound direction, with a 2m-wide painted median in front of the subject site, as shown in **Figure 4**. Pinjarra Road forms a roundabout intersection with Murray Street to the northwest, and a signalised intersection with George Street to the southeast.

Figure 4. Southeast-bound view along Pinjarra Road

George Street, forming the southeastern boundary of the subject site, is classified as a *Primary Regional Road* and operates under a 60 km/h speed limit. The road is constructed with 4 lanes of traffic fronting the subject site, with a narrow 1m-wide solid median in front of the subject site. The median stops short of the existing subject site crossover. A 2.5m shared path is in place along this road fronting the subject site (refer **Figure 5**).

Figure 5: Northeastern bound view on George Street

Murray Street, forming the northwestern boundary of the subject site, is classified as an *Access Road* in Main Roads WA Road hierarchy map and operates under a 50 km/h speed limit and a 2.5m shared path fronting the subject site (refer **Figure 6**).

Figure 6: Murray Street northeast bound view

3.3 Existing Traffic Volume on Roads

The data obtained from Main Roads WA website are shown in Figure 7.

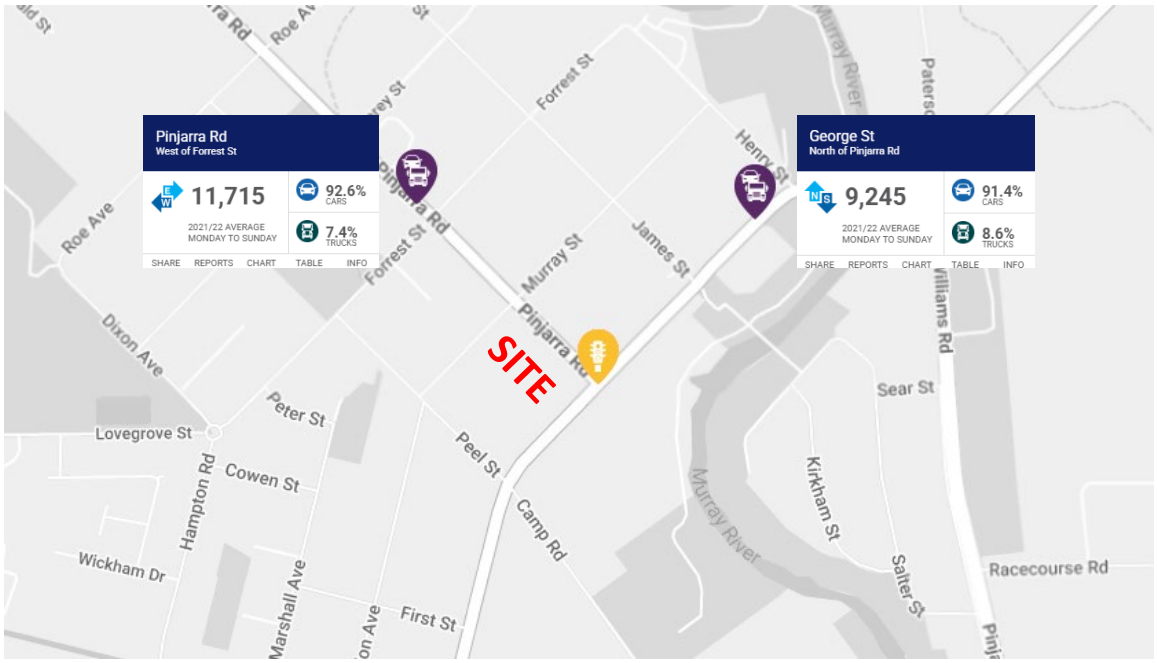

Figure 7: Main Roads WA traffic map data at the vicinity of the site

Transcore organised a video traffic survey at the roundabout intersection of Pinjarra Road/ Murray Steet for Friday 2nd May and Saturday 3rd May 2025. Transcore also obtained the latest SCATS data at the signalised intersection of Pinjarra Road/ George Street. The peak hour traffic volumes at the intersections are illustrated in Figure 8.

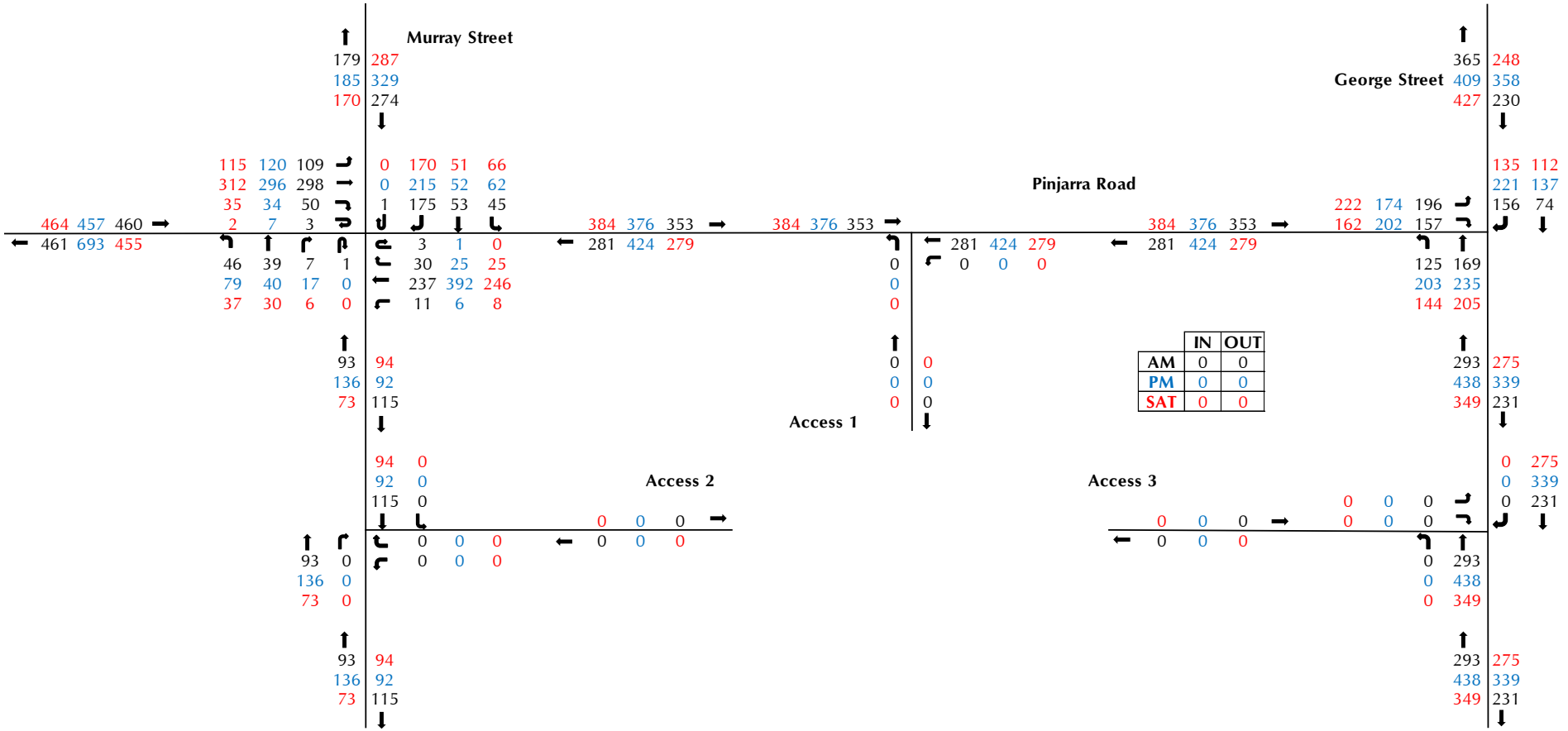

Figure 8: Existing traffic volumes, AM, PM and Saturday mid-day peak hours

3.4 Crash Records

Information available on Main Roads WA website indicates that 18 crashes were recorded at the below intersections during the five-year period ending December 2024 (refer **Table 1**).

- Pinjarra Road/ George Street; and,
- Pinjarra Road/ Murray Street.

At the Pinjarra Road / George Street intersection, there were a total of 11 crashes reported. This includes 2 major property damage only (PDO) incidents, 5 minor PDO incidents, and 3 medical incidents. The nature of the crashes reveals a number of right-angle collisions (totalling 6). Additionally, there were 5 rear-end collisions.

The Pinjarra Road / Murray Street intersection recorded a total of 7 crashes. This included 1 major PDO incident, 2 minor PDO incidents, and 3 medical incidents. Similar to the first intersection, there were 6 right-angle crashes. Notably, there were no rear-end collisions reported at this intersection.

Table 1: Detailed crash history (Source: Main Roads Website)

LOCATION	Total	PDO MAJOR	PDO MINOR	MEDICAL	RIGHT ANGLE	REAR END
Pinjarra Road/ George Street	11	2	5	3	6	5
Pinjarra Road/ Murray Street	7	1	2	3	6	0

3.5 Public Transport Access

As shown in **Figure 9**, the closest existing Transperth bus route to the subject site is route 600 and 605 which provides connection to Mandurah Station. The nearest bus stop is located on Pinjarra Road fronting the subject site.

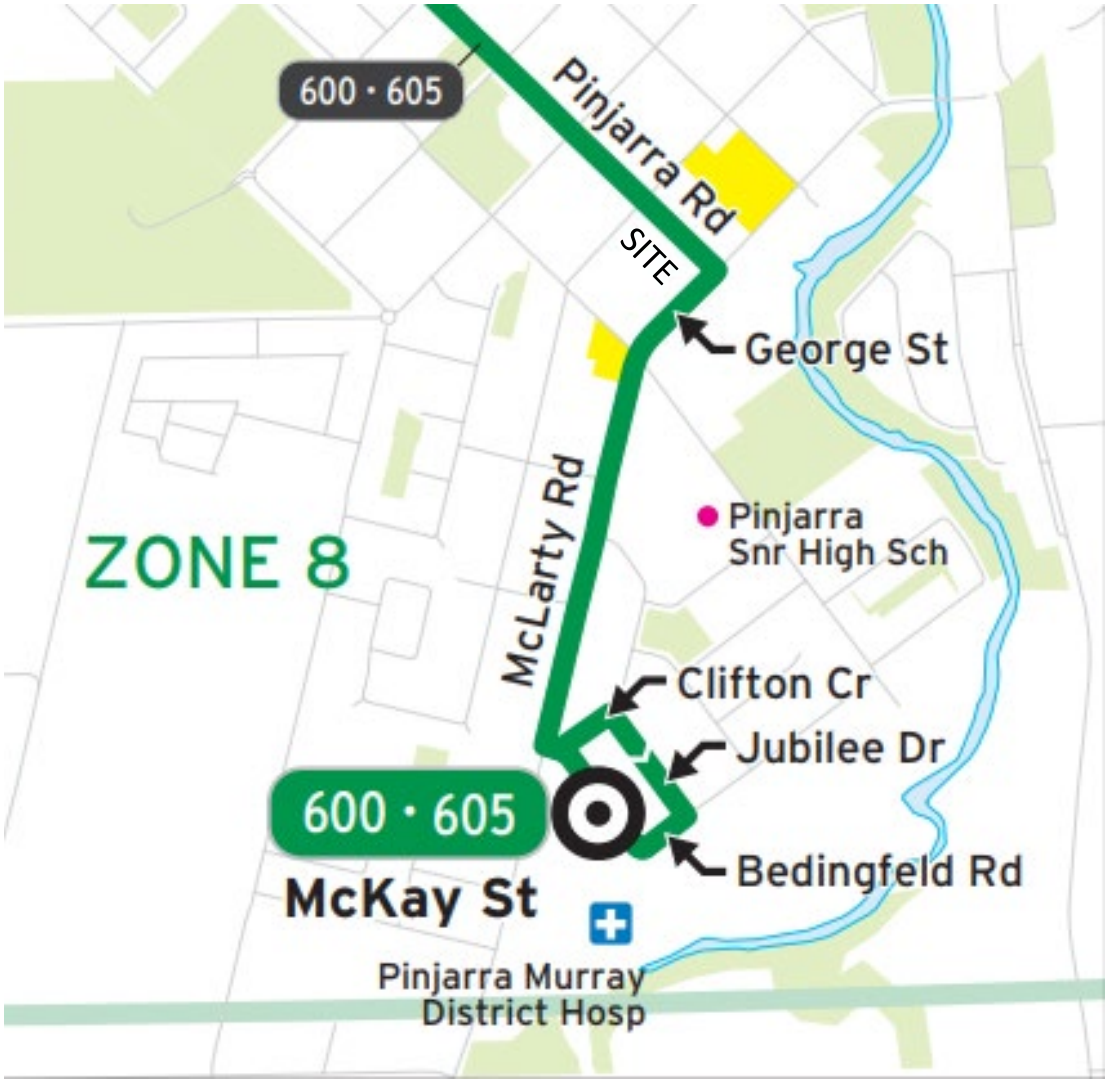

Figure 9: Existing public transport

3.6 Pedestrian and Cyclist Facilities

Pedestrian and cyclist can access the site using the existing 2.5m wide shared paths on the abutting roads.

4 Provision for Service Vehicles

The largest vehicle expected to use the site is a 19.0 m semi-trailer, which will be used by Aldi for deliveries.

A 19.0 m semi-trailer would access Aldi's loading bay via the Murray Street crossover, turning left to enter the site. The semi-trailer would then reverse into the loading bay using the available space within the parking aisle. Upon completing unloading, the semi-trailer would exit the site in forward gear via the George Street crossover. The turn paths for entry and exit of the 19.0 m semi-trailer are illustrated in Sk15 and Sk16 in **Appendix B**.

The proposed McDonald's restaurant would be serviced by a 12.5m service vehicle, which would enter via the crossover on George Street, and then reverse into the loading bay. Upon completing loading/unloading the 12.5m service vehicle would exit the site in forward gear through the crossover on Murray Street, as shown in Sk19 and Sk20 in **Appendix B**.

Additionally, a turn path analysis undertaken for a B99 passenger vehicle indicates satisfactory entry, circulation, and exit within the proposed McDonald's drive through lanes, as illustrated in Sk18 in **Appendix B**.

5 Traffic Assessment

5.1 Assessment Period

Due to the nature of the development, it is expected that the highest demand on the local road network capacity will be experienced during the combined peak hour business activity of the development and the peak commuter traffic activity during the weekday morning and afternoon peak periods as well as Saturday mid-day peak hour.

The assessment year for post development scenario is assumed to be 2026 (opening year) with 10-years post development is assumed to be 2036.

5.2 Trip Generation

The traffic volumes anticipated to be generated by the proposed McDonald's restaurant have been estimated using trip generation rates derived from the ITE *Trip Generation Manual (11th Edition)*. The updated traffic survey for RTA NSW document (TDT 2013/2014) was used to establish the applicable traffic generation rates for the proposed Aldi Store. It should be noted that the proposed liquor store is part of the Aldi Store and its traffic generation is included in the Aldi trip generation estimation.

Table 2 summarises the daily and peak hour trip generation of the proposed development. **Table 3** shows the passing and non-passing trade components of the trip generation.

The ITE *Trip Generation Handbook (3rd Edition)* provides additional information on internal trips within a mixed-use development. Based on the information provided it is estimated that approximately 10% of the trips visiting the proposed development would be internal trips (cross trade) within the proposed development.

Accordingly, it is estimated that the proposed development would generate approximately 3,240 trips per regular weekday with approximately 250vph in AM, 294vph in PM weekday peak hours and 427vph in Saturday mid-day peak hour (both inbound and outbound).

Table 2: Trip generation of the proposed development

Land use	Quantity	Daily Rate	AM peak	SAT peak	PM peak	Cross Trade	Daily Trips	AM Trip	SAT Trip	PM Trip	AM		SAT		PM	
											IN	OUT	IN	OUT	IN	OUT
Fast food outlet with drive through	375	5.03	0.48	0.59	0.36	0.10	1698	162	201	120	81	81	100	101	60	60
Supermarket (ALDI)	1543	1.11	0.06	0.16	0.13	0.10	1541	87	226	174	44	43	113	113	87	87
Total traffic							**3240**	**250**	**427**	**294**	**125**	**125**	**213**	**214**	**147**	**147**

Table 3: Passing trade and non-passing trade component of the trip generation

Passing Trade Component

		AM		Sat-PM		PM	
	Daily Trips	IN	OUT	IN	OUT	IN	OUT
50%	849	41	41	50	50	30	30
36%	555	16	16	41	41	31	31
	1404	**57**	**57**	**91**	**91**	**61**	**61**

Primary Trips Component

	AM		Sat-PM		PM	
Daily Trips	IN	OUT	IN	OUT	IN	OUT
849	40	40	50	51	30	30
986	28	27	72	72	56	56
1836	**68**	**68**	**122**	**123**	**86**	**86**

5.3 Trip Distribution

The distribution of trips for the proposed development has been estimated based on the distribution of surrounding residential areas and the catchment area of the proposed development.

The resulting modelled traffic distribution of the proposed development is summarised in Table 4.

Table 4: Traffic distribution

Route/Approach	Primary Trips	Pass-by Trips
George Street (north)	20%	20%
George Street (south)	20%	20%
Muray Street (north)	20%	20%
Muray Street (south)	10%	20%
Pinjarra Road (west)	30%	20%

The traffic movements generated by the proposed development have been manually assigned to the adjacent road network and the resulting traffic movements generated by this development are shown in Figure 10. The negative numbers in this figure reflects the impact of the pass by trips on background traffic..

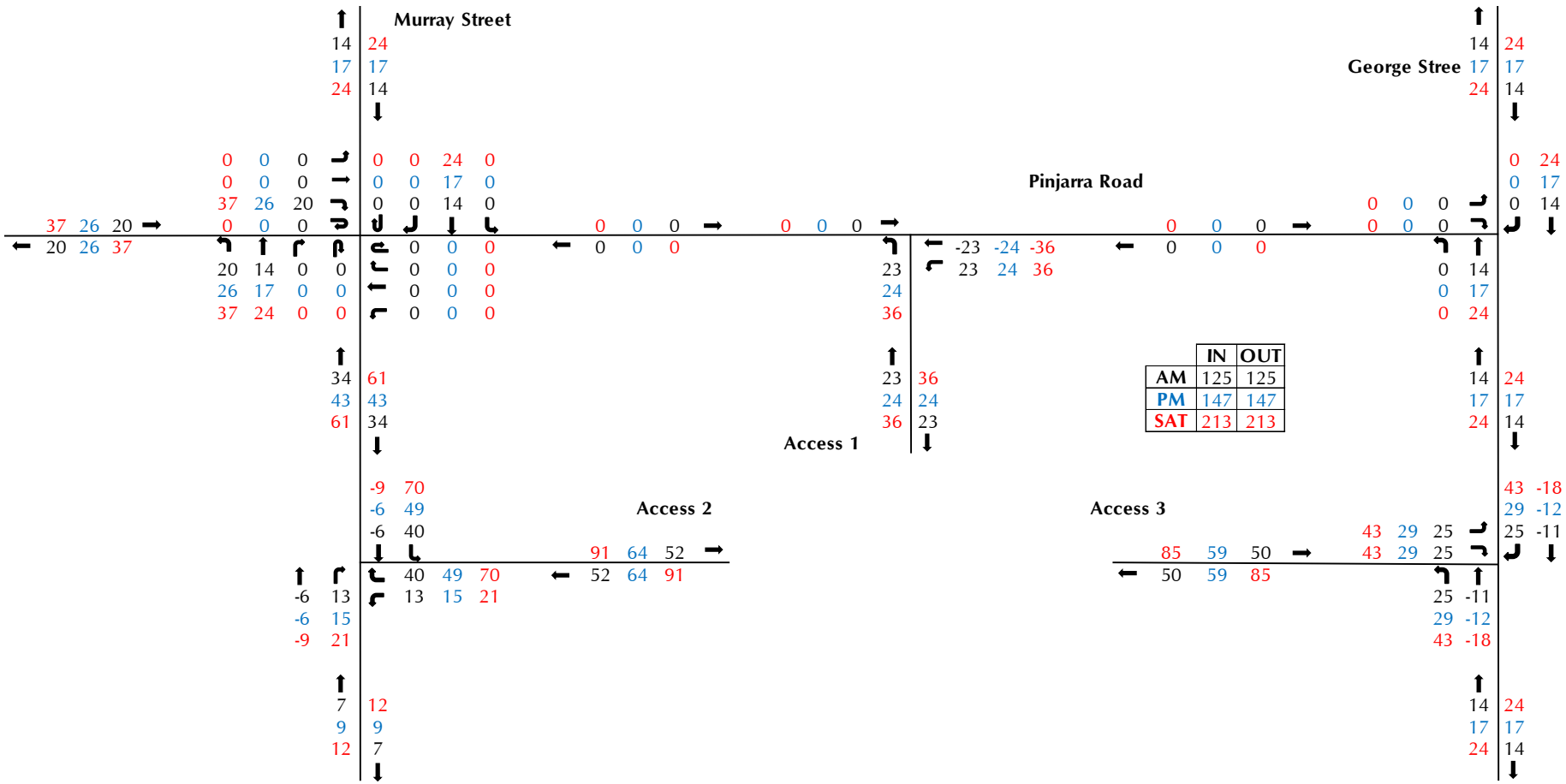

Figure 10: Proposed development traffic, AM, PM and Saturday mid-day peak hours

5.4 Traffic Flow

Future year base traffic flows on abutting roads have been estimated by factoring up the current traffic flows by applying a compound growth rate of 2% per year.

Figure 11 and **Figure 12** illustrate projected traffic on abutting roads plus development traffic in 2026 and 2036 respectively.

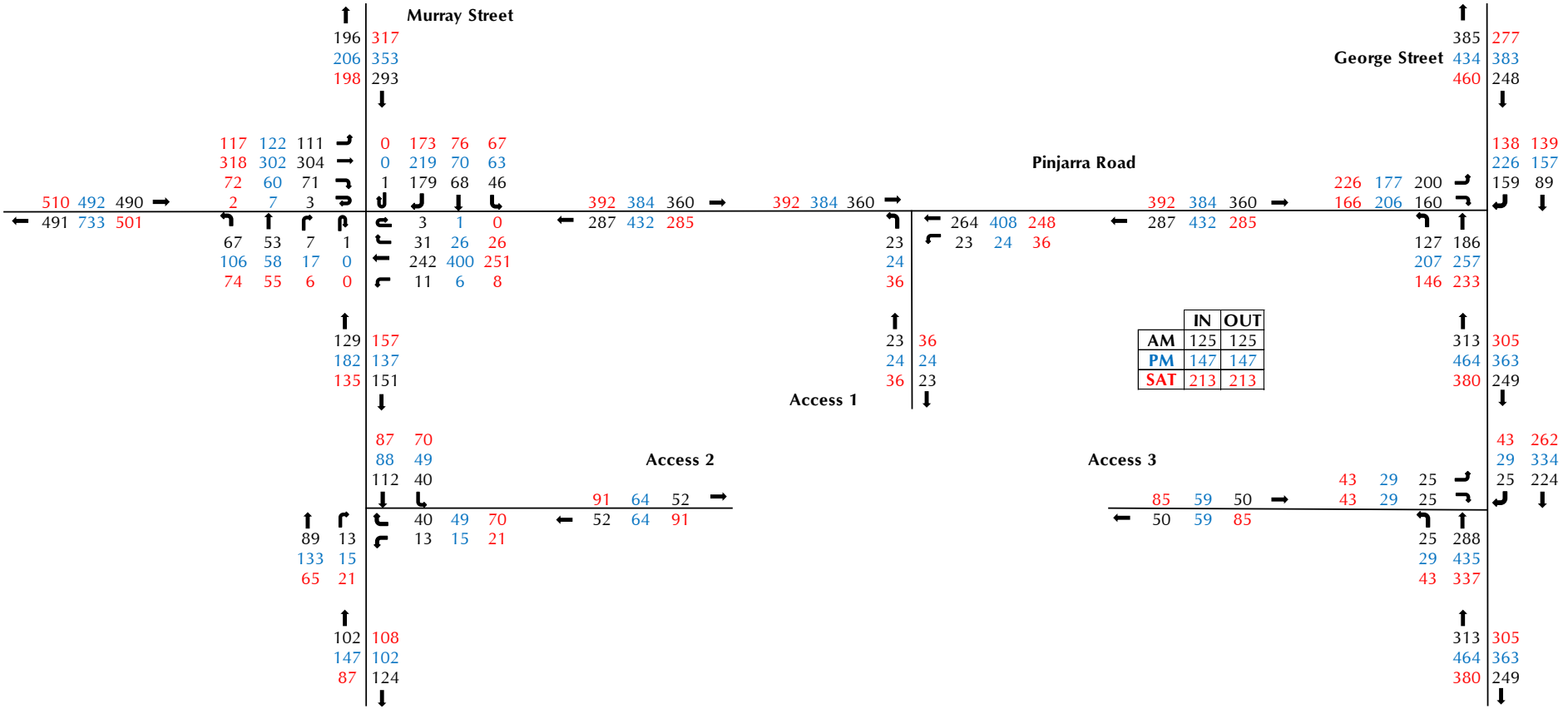

Figure 11: 2026 traffic volumes, AM, PM and Saturday mid-day peak hours

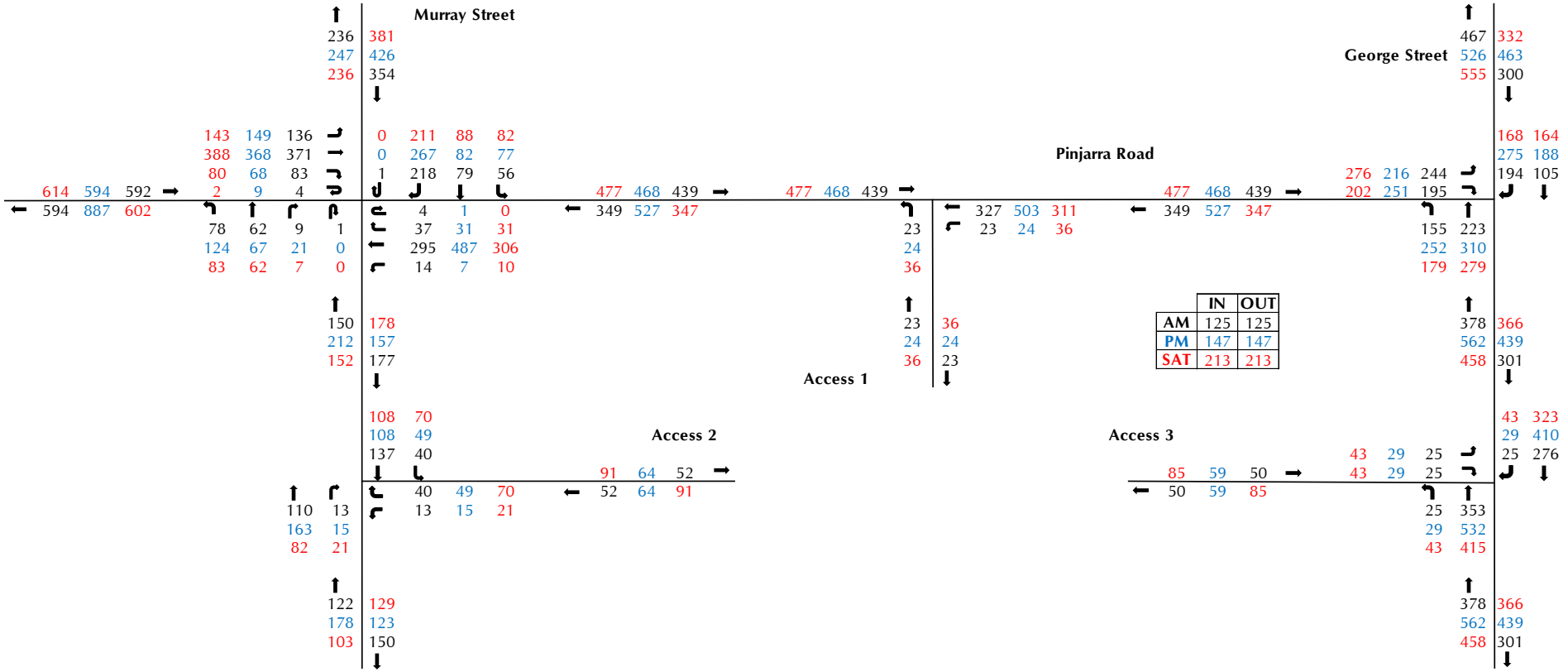

Figure 12: 2036 traffic volumes, AM, PM and Saturday mid-day peak hours

5.5 Analysis of Local Intersections & Crossovers

The development crossover on Pinjarra Road, George Street and Murray Street as well as intersections of Pinjarra Road with George Street and Murray Street have been analysed in SIDRA Network computer software package, for existing, 2026 and 2036 peak hours.

SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay is the average of all travel time delays for vehicles through the intersection.
- 95% Queue is the queue length below which 95% of all observed queue lengths fall.

Figure 13 illustrates the network layout modelled in SIDRA for year 2026 and 2036 with full development of the site.

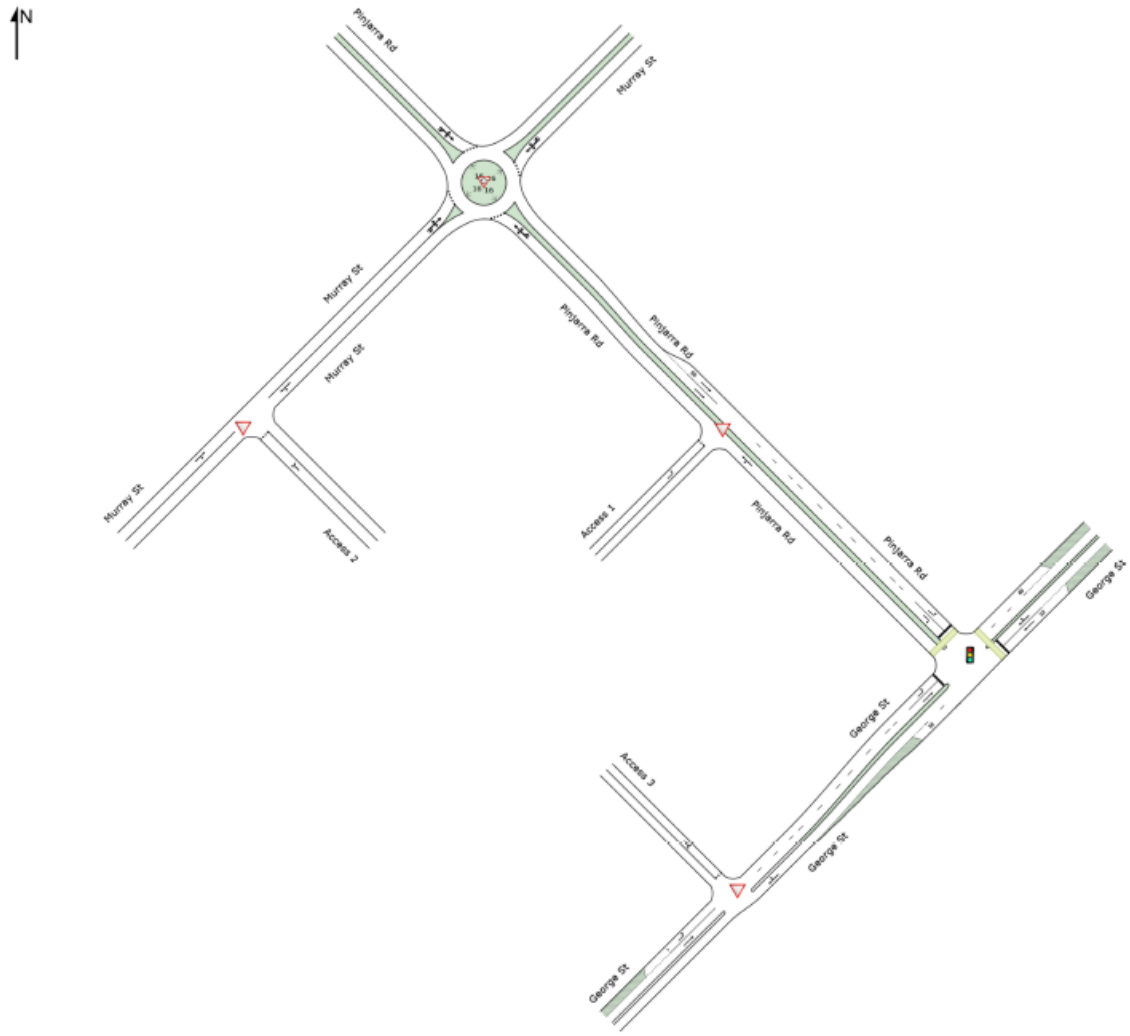

Figure 13: SIDRA network layout

The SIDRA analysis has been undertaken in accordance with current MRWA operational modelling guidelines including separate input of different classes of heavy vehicles and the parameters specified by MRWA for those vehicle classes.

The results of the SIDRA analysis are summarised in **Appendix C**.

Signalised intersection of Pinjarra Road/George Street

The SIDRA analysis for the Pinjarra Road/George Street intersection shows that this intersection currently operates satisfactorily and within capacity with overall LOS B or C for all assessed peak hours. In 2026 with development traffic and background traffic growth, the signalised intersection would continue to operate with levels of service B and C during the assessed peak hours. The analysis reported average delays mostly under 23 seconds and manageable queues, indicating generally smooth traffic flow. By 2036, the intersection is reported to sustain acceptable service levels overall (LoS of C), however, certain movements are reported with longer delays and increased queue lengths as anticipated. The 95% queue on George Street in 2036 would occasionally reach back to the development crossover on George Street but it would

dissipate quickly and would not affect the traffic operation of the crossover. Also, right turn movements into George Street crossover are not reported to entail any queues and to impact on southwest bound traffic.

Roundabout intersection of Pinjarra Road/Murray Street

The SIDRA analysis for the Pinjarra Road/Murray Street roundabout intersection indicates that this intersection currently operates satisfactorily and within capacity with overall LOS A for all assessed peak hours. In 2026 and with the additional traffic from the development and growth in background traffic the intersection is reported to continue to operate efficiently during the peak hours, achieving LOS of A for all assessed peak hours. Average vehicle delays are generally reported as under 7 seconds, with maximum queue lengths remaining below 31 meters, which indicates smooth traffic flow and minimal congestion.

For year 2036, the roundabout is reported to maintain an overall LOS A performance. Although some approaches are reported to entail slightly longer delays and increased queue lengths compared to 2026, these are within manageable levels. Overall, the roundabout is projected to sustain a strong level of performance, ensuring consistent and efficient traffic movements during the peak periods.

Development crossovers

The SIDRA analysis shows that in 2026 and 2036, the crossovers will operate efficiently during peak periods, consistently achieving LOS A for all assessed peak hours.

Average vehicle delays are generally low, mostly under 5 seconds, with minimum queue lengths (one vehicle), supporting smooth and efficient traffic flow and minimal congestion.

5.5.1 Network Operation

Relevant SIDRA network outputs were reviewed for the modelled peak hours to assess the operation of the proposed development crossovers and the nearby intersections as an integrated network.

As detailed in **Figure 14**, which represents the critical weekday PM peak hour, occasional queueing is anticipated from the signalised intersection back to the George Street crossover. However, these queues are expected to clear quickly and will not impact the operational performance of the crossover. The George Street crossover is reported to operate at LoS A during all modelled peak hours.

The Pinjarra Road crossover is proposed as a left-in/left-out configuration and will not be affected by potential queueing from the nearby signalised intersection.

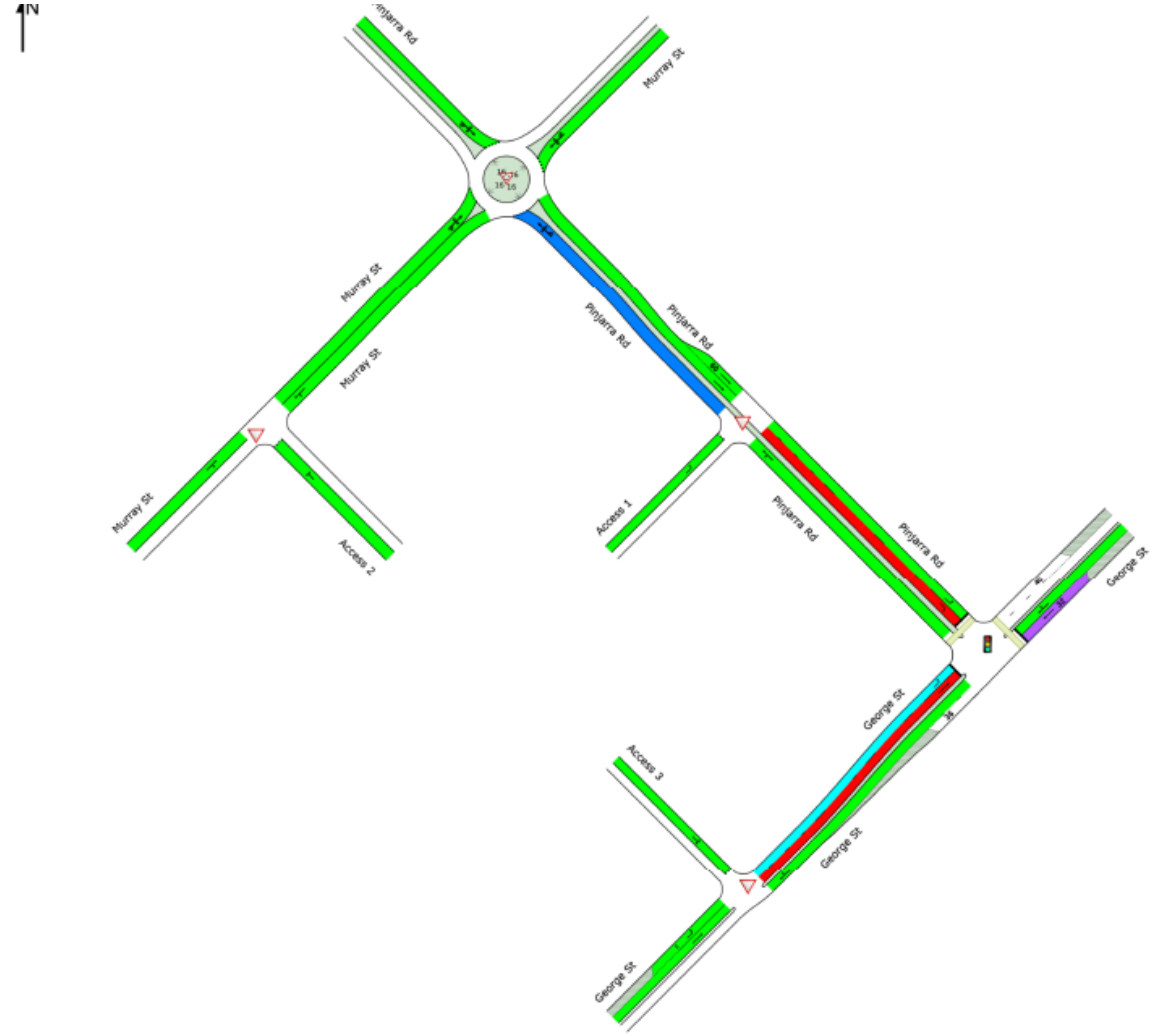

Figure 14: Queue Storage Ratio (Percentile) – Critical Weekday PM peak hour

5.6 Impact on Surrounding Roads and Neighbouring Areas

The WAPC Transport Impact Assessment Guidelines (2016) provides the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed development will not increase traffic on any lanes of the surrounding road network by more than 100 vehicles per hour. Therefore, the development will not elevate traffic flows at or above the WAPC threshold on most surrounding roads, negating the need for further detailed analysis.

5.7 Traffic Noise and Vibration

The WAPC's *State Planning Policy 5.4: Road and Rail Transport Noise and Freight Considerations in Land Use Planning* requires assessment of noise impact on noise-sensitive developments when a road carries more than 20,000vpd in an urban area or 5,000vpd in a rural area.

The traffic generation of the proposed development will be around 3,240vpd and will not increase the traffic flows on any surrounding roads to anywhere near the abovementioned traffic thresholds, so no noise impacts on surrounding areas are anticipated.

5.8 Road Safety

No particular road safety issues have been identified in relation to the proposed development.

6 Parking Assessment

Table II of LPS4 outlines the car parking standards for non-residential land uses. Refer **Table 5** below for an assessment of the proposed development against the LPS4 car parking provisions.

Table 5: LPS4 Car Parking Assessment

Land Use	LPS4 Parking Requirement	Proposed	Required Bays	Proposed Bays
Shop	*1 car parking space per 20m² GFA*	1,487.8m²	74.4	103
Liquor Store	*1 car parking space per 20m² GFA*	55.2m²	2.8	-
Take Away Food Outlet	*1 car parking space per 4 seats and 1 car parking space per 5m² of waiting area*	60 seats + 10m² waiting area	17	15*
		Total	95	118*

* Excludes two wait bays and drive through queuing bays

As outlined above, the proposed development provides a surplus of 23 parking spaces across the subject site and complies with the car parking requirements under LPS4.

Future Use and/or Development - Masonic Hall

The proposed parking supply also accommodates the potential future use and/or development of the Masonic Hall site, indicatively shown as a café or restaurant on the Design Masterplan. While not part of this development application, the proposed parking provision within the future "Aldi lot" will support a café / restaurant with 50 seats and maintain a surplus of parking across the subject site. Refer **Table 6** below.

Table 6: LPS4 Future Car Parking Assessment including Potential Future Use of Masonic Hall as Café/Restaurant

Land Use	LPS4 Parking Requirement	Proposed	Required Bays	Proposed Bays
Shop	*1 car parking space per 20m² GFA*	1,487.8m²	74.4	103
Liquor Store	*1 car parking space per 20m² GFA*	55.2m²	2.8	-
Take Away Food Outlet	*1 car parking space per 4 seats and 1 car parking space per 5m² of waiting area*	60 seats + 10m² waiting area	17	15*
Café/Restaurant	*1 car parking space per 4 seats and 1 car parking space per 5m² of waiting area*	*Assume* 50 seats + 10m² waiting area	14.5	-
		Total	109	118*

* Excludes two wait bays and drive through queuing bays

As demonstrated above, the proposed development will maintain a parking surplus and continue to comply with the car parking requirements under LPS4 with the inclusion of the potential future use and/or development of the Masonic Hall site.

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7 Queue Analysis

NSW Guidelines:

Section 5.8.1 of the New South Wales *Guide to Traffic Generating Developments* deals with the parking requirements for drive-in, take-away food outlets. This clause states that:

"An exclusive area for queuing of cars for a drive through is required (queue length of 5 to 12 cars measured from pick up point). There should also be a minimum of four car spaces for cars queued from the ordering point."

The proposed McDonald's proposes a two-lane drive through facility with two Customer Order Booths (COB). This facility merges into a single lane for payment and pickup. The proposed drive through facility entails provision of at least 15 car queuing capacity within the drive through facility including a combined queuing space for at least six cars at the COBs.

Accordingly, the proposed drive through facility meets and exceeds the NSW guide's recommended drive through queuing area provisions.

8 Public Transport Access

The existing bus services in this area have been noted in Section 3.5 of this report and will provide a satisfactory level of public transport accessibility to the site.

9 Pedestrian and Cyclist Access

The existing pedestrian facilities in this area have been noted in Section 3.6 of this report.

The Perth and Peel Long-Term Cycle Network is illustrated in **Figure 15** highlights the strategic importance of cycling infrastructure in the region. Within this network, Pinjarra Road is designated as a Primary route, while George Street is classified as a Secondary route. Both of these routes are adjacent to the proposed development, emphasizing their significance in promoting sustainable transportation options.

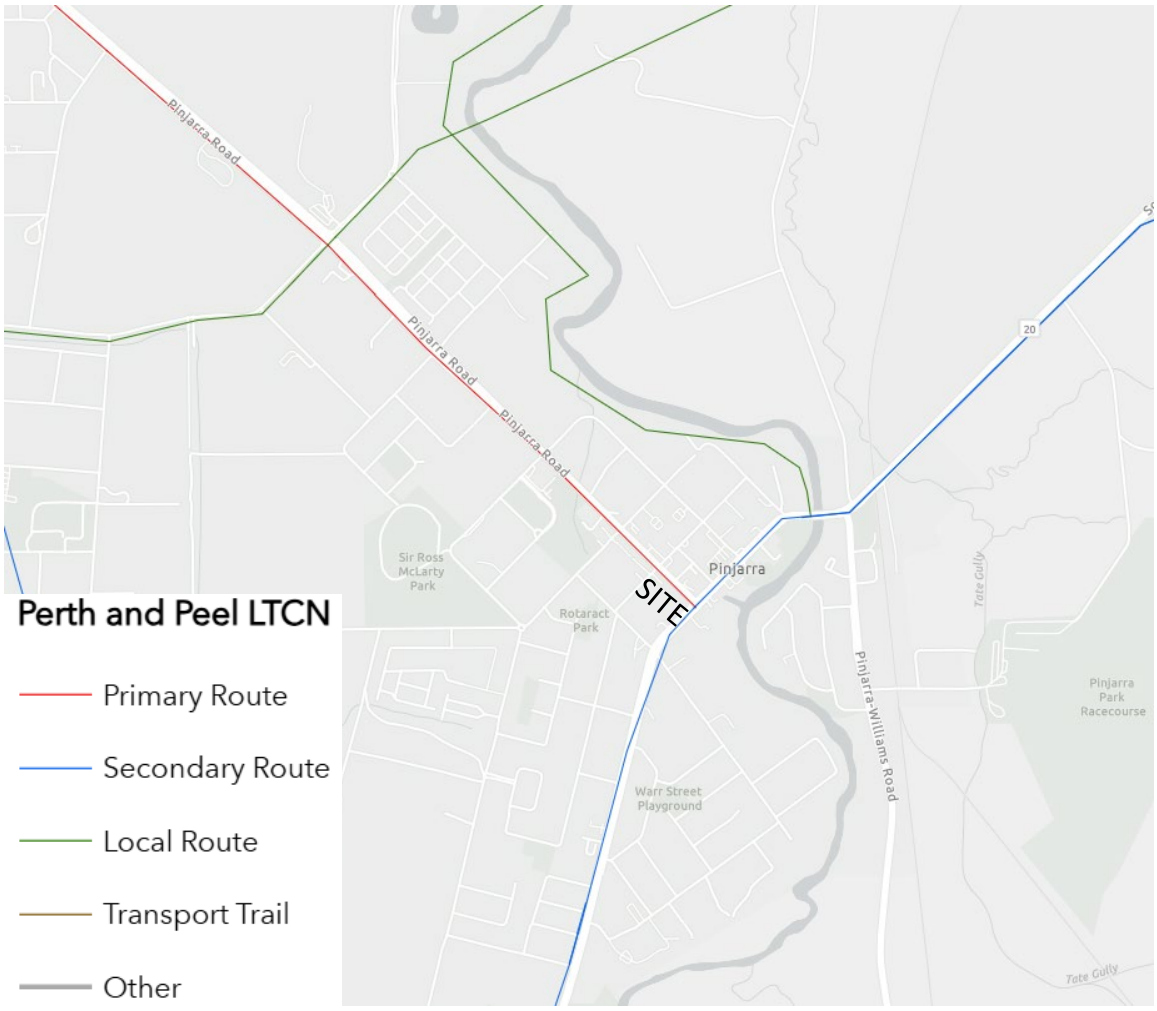


Figure 15: Extract from the Perth and Peel Long-Term Cycle Network (Department of Transport)

10 Conclusions

This Transport Impact Assessment (TIA) has been prepared by Transcore in relation to the proposed Aldi Store and McDonald's restaurant to be located at Multiple Lots – Pinjarra Road, George Street and Murray Street in Pinjarra Town Centre.

The subject site is primarily vacant, featuring an existing heritage building, the Masonic Hall, along Pinjarra Road. The potential future use of this heritage building and any future development plans related to it are not part of this Development Application.

The largest heavy vehicle expected to use the site is a 19.0m semi-trailer. Turn path analysis undertaken for a 19.0m semi-trailer, 12.5m service vehicle and B99 passenger vehicle demonstrates satisfactory entry, egress, and circulation within the site.

Access to and from the proposed development will be facilitated by a new left-in/left-out crossover on Pinjarra Road, situated centrally between Murray Street and George Street. To enforce left in/ left out configuration, appropriate signage and line marking will be implemented at the crossover. Additionally, the development will be served by two existing full-movement crossovers on George Street and Murray Street.

The SIDRA Network analysis shows that the proposed development crossovers would operate satisfactorily with good level of service and minimum delays and queues during the post development and 10 years post development scenarios. The SIDRA Network analysis also confirm that the occasional queue back from the signalised intersection to the development crossover on George Street would dissipate quickly and would not undermine traffic operation of this crossover or George Street.

The subject site has good connectivity to pedestrian footpaths, bicycle paths, and public transport networks in the surrounding area.

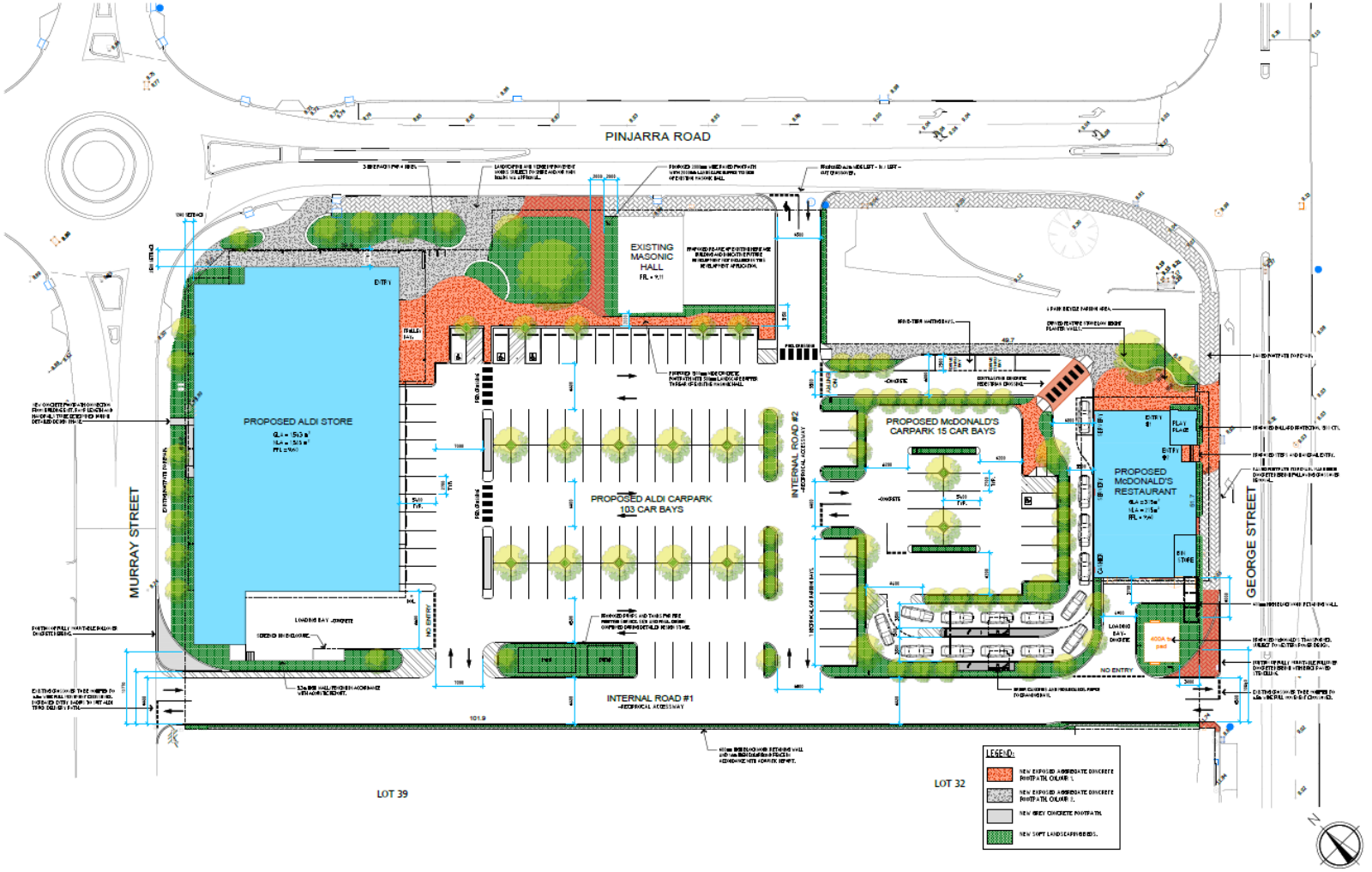
In conclusion, the findings of this Transport Impact Assessment support the proposed development.

Appendix A

PROPOSED DEVELOPMENT PLAN

transcore

Engineering a better future for over 20 years!



REV	DATE	DESCRIPTION

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Project PROPOSED ALDI STORE & McDONALD'S
LOT 2, 3, 4, 31 & 41 MURRAY ST. PINJARRA

Drawing PROPOSED SITE PLAN

TOWN PLANNING

Job No 251677	Drawing No. DA-02
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Date MAY 2025	
Drawn AJJ	Revision 0

Appendix B

TURN PATH ANALYSIS

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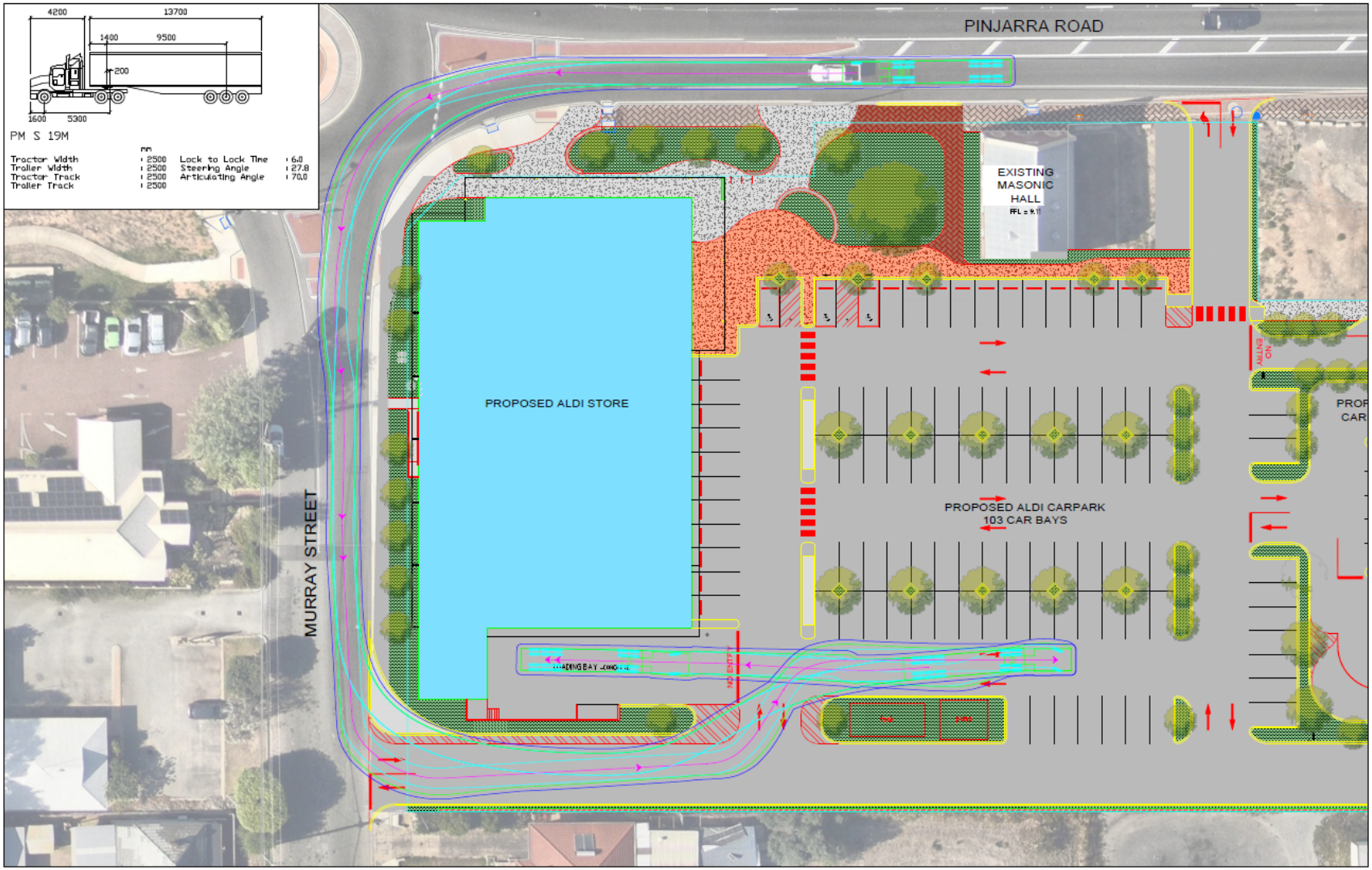


McDonald's and Aldi Development Proposal Pinjarra Town Centre

Austroads 2023: 19m Semi-Trailer

Aldi's Loading Bay Entry

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t24.321.sk15

09/06/2025

Scale: 1:400 @ A3

transcore

McDonald's and Aldi Development Proposal Pinjarra Town Centre

Austroads 2023: 19m Semi-Trailer

Aldi's Loading Bay Exit

LEGEND

Vehicle Body

Wheel Path

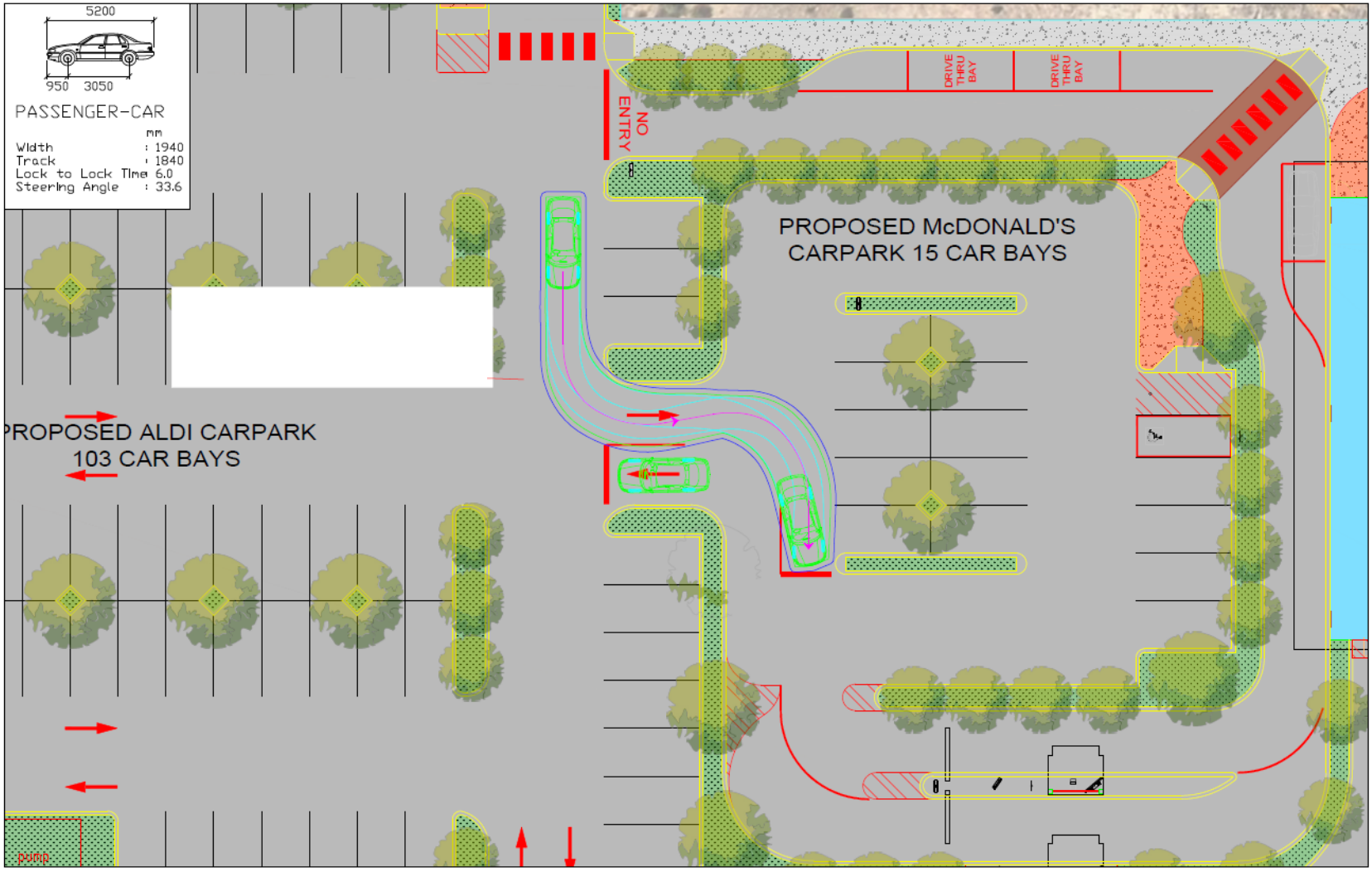
500mm Clearance

t24.321.sk16

09/06/2025

Scale: 1:400 @ A3

transcore



McDonald's and Aldi Development Proposal Pinjarra Town Centre

Austroads 2023: B99 Passenger Car

Simultaneous Entry/Exit to/from McDonalds Parking Bay

LEGEND

Vehicle Body

Wheel Path

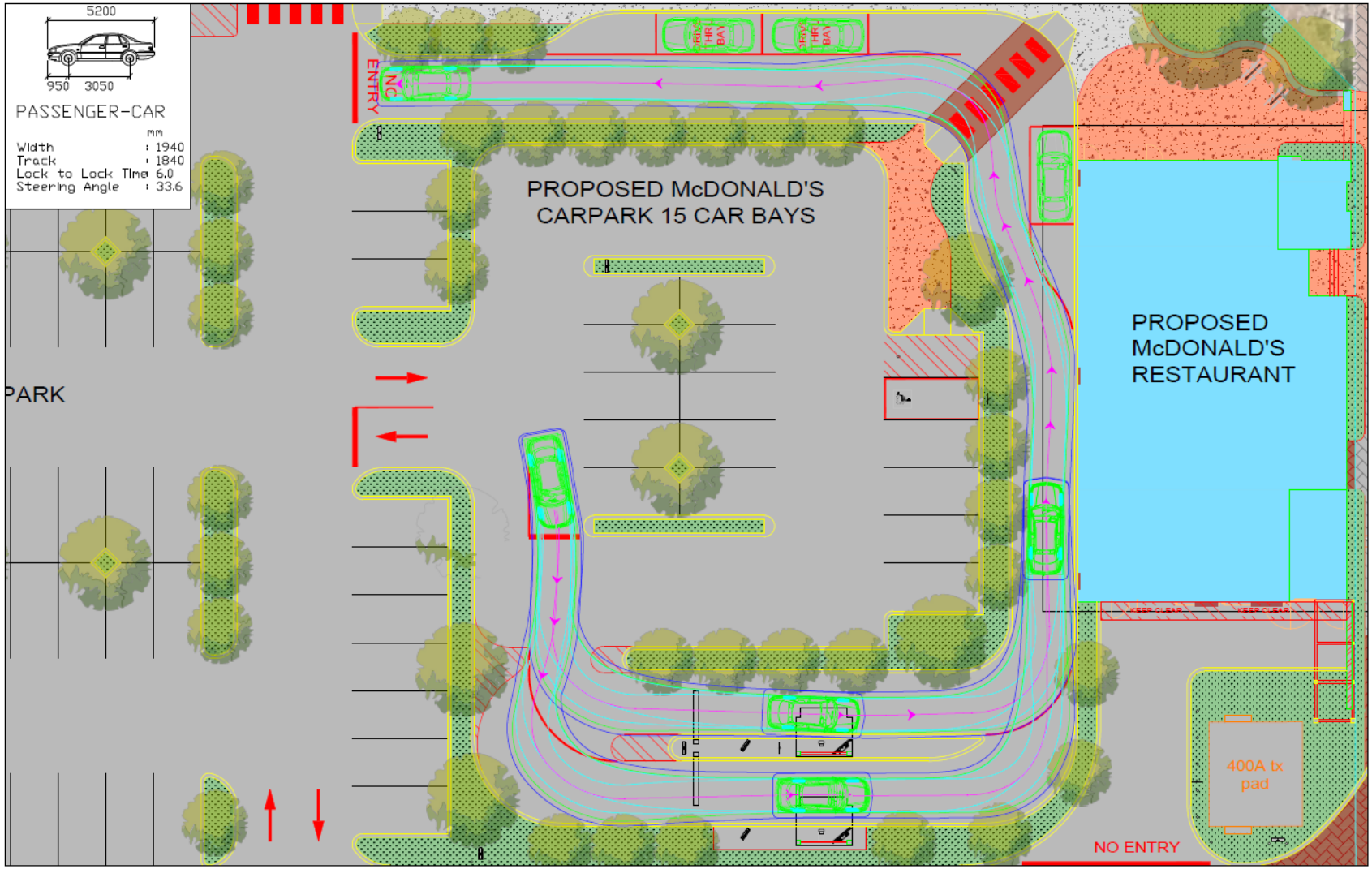
300mm Clearance

t24.321.sk17

09/06/2025

Scale: 1:200 @ A3

transcore



McDonald's and Aldi Development Proposal Pinjarra Town Centre

Austroads 2023: B99 Passenger Car

McDonald's Drive-Through Circulation

LEGEND

Vehicle Body

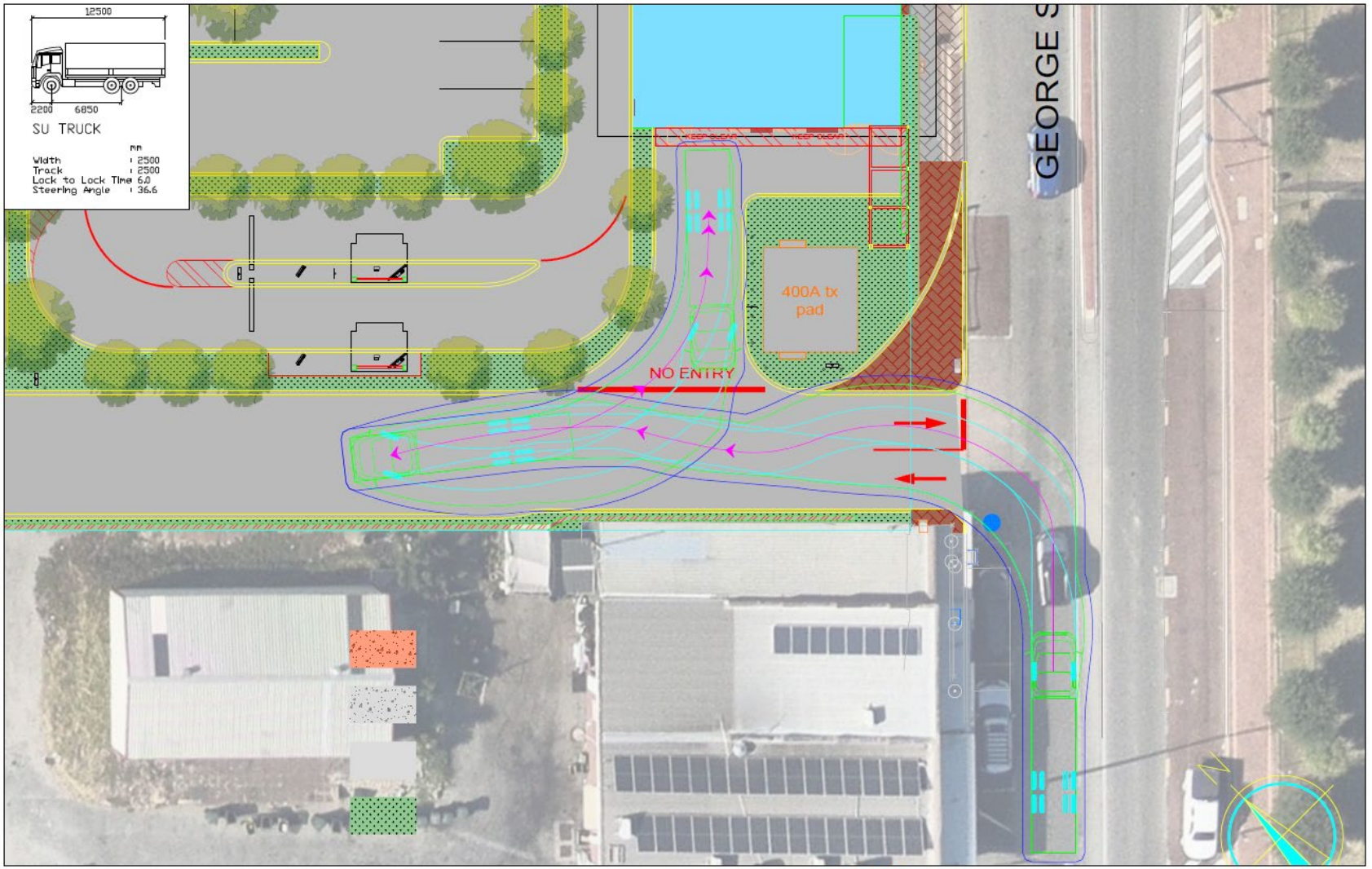
Wheel Path

300mm Clearance

t24.321.sk18

09/06/2025

Scale: 1:200 @ A3



McDonald's and Aldi Development Proposal Pinjarra Town Centre
Austroads 2023: 12.5m Service Vehicle
McDonald's Loading Bay Entry

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.321.sk19
09/06/2025
Scale: 1:200 @ A3

transcore

McDonald's and Aldi Development Proposal Pinjarra Town Centre

Austroads 2023: 12.5m Service Vehicle

McDonald's Loading Bay Exit

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

t24.321.sk20

09/06/2025

Scale: 1:500 @ A3

Appendix C

SIDRA ANALYSIS

Engineering a better future for over 20 years!

Existing

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - Existing - AM (Site Folder: Existing)]

Network: N101 [AM (Network Folder: Existing)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 66 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	78	11.4	78	11.4	0.081	7.4	LOS A	1.1	9.7	0.48	0.38	0.48	41.1
26	R2	164	11.4	164	11.4	*0.552	31.4	LOS C	5.1	42.9	0.96	0.80	0.96	23.9
Approach		242	11.4	242	11.4	0.552	23.7	LOS C	5.1	42.9	0.80	0.66	0.80	30.0
NorthWest: Pinjarra Rd														
27	L2	206	10.4	206	10.4	0.232	14.0	LOS B	3.6	29.2	0.57	0.70	0.57	33.9
29	R2	165	10.4	165	10.4	*0.383	27.2	LOS C	4.5	37.1	0.87	0.78	0.87	31.0
Approach		372	10.4	372	10.4	0.383	19.9	LOS B	4.5	37.1	0.70	0.74	0.70	32.5
SouthWest: George St														
30	L2	132	9.1	132	9.1	0.126	9.8	LOS A	1.7	13.7	0.42	0.65	0.42	39.7
5	T1	178	9.1	178	9.1	*0.359	21.9	LOS C	4.7	38.5	0.84	0.72	0.84	35.1
Approach		309	9.1	309	9.1	0.359	16.7	LOS B	4.7	38.5	0.66	0.69	0.66	36.3
All Vehicles		923	10.2	923	10.2	0.552	19.8	LOS B	5.1	42.9	0.71	0.70	0.71	33.1

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - Existing - AM (Site Folder: Existing)]

Network: N101 [AM (Network Folder: Existing)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	12	7.5	12	7.5	0.305	5.2	LOS A	1.6	12.8	0.44	0.56	0.44	17.1
2	T1	249	7.5	249	7.5	0.305	5.2	LOS A	1.6	12.8	0.44	0.56	0.44	45.5
3	R2	32	7.5	32	7.5	0.305	9.3	LOS A	1.6	12.8	0.44	0.56	0.44	45.5
3u	U	3	7.5	3	7.5	0.305	11.0	LOS B	1.6	12.8	0.44	0.56	0.44	33.6
Approach		296	7.5	296	7.5	0.305	5.7	LOS A	1.6	12.8	0.44	0.56	0.44	44.4
NorthEast: Murray St														
4	L2	47	9.1	47	9.1	0.319	5.9	LOS A	1.9	15.4	0.61	0.72	0.61	40.9
5	T1	56	9.1	56	9.1	0.319	5.9	LOS A	1.9	15.4	0.61	0.72	0.61	28.9
6	R2	184	9.1	184	9.1	0.319	10.0	LOS A	1.9	15.4	0.61	0.72	0.61	45.5
6u	U	1	9.1	1	9.1	0.319	11.7	LOS B	1.9	15.4	0.61	0.72	0.61	46.2
Approach		288	9.1	288	9.1	0.319	8.5	LOS A	1.9	15.4	0.61	0.72	0.61	41.8
NorthWest: Pinjarra Rd														
7	L2	115	10.4	115	10.4	0.376	3.8	LOS A	2.7	21.6	0.33	0.44	0.33	46.4
8	T1	314	10.4	314	10.4	0.376	3.8	LOS A	2.7	21.6	0.33	0.44	0.33	44.0
9	R2	53	10.4	53	10.4	0.376	7.8	LOS A	2.7	21.6	0.33	0.44	0.33	29.9
9u	U	3	10.4	3	10.4	0.376	9.6	LOS A	2.7	21.6	0.33	0.44	0.33	48.2
Approach		484	10.4	484	10.4	0.376	4.2	LOS A	2.7	21.6	0.33	0.44	0.33	42.9
SouthWest: Murray St														
10	L2	48	9.1	48	9.1	0.114	5.7	LOS A	0.7	5.3	0.60	0.61	0.60	43.1
11	T1	41	9.1	41	9.1	0.114	5.8	LOS A	0.7	5.3	0.60	0.61	0.60	44.7
12	R2	7	9.1	7	9.1	0.114	9.8	LOS A	0.7	5.3	0.60	0.61	0.60	24.4
12u	U	1	9.1	1	9.1	0.114	11.6	LOS B	0.7	5.3	0.60	0.61	0.60	11.8
Approach		98	9.1	98	9.1	0.114	6.1	LOS A	0.7	5.3	0.60	0.61	0.60	43.1
All Vehicles		1166	9.2	1166	9.2	0.376	5.8	LOS A	2.7	21.6	0.45	0.55	0.45	42.9

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - Existing - PM (Site Folder: Existing)] **Network: N101 [PM (Network Folder: Existing)]**

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 74 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	144	11.4	144	11.4	0.138	7.0	LOS A	2.2	18.7	0.45	0.37	0.45	41.4
26	R2	233	11.4	233	11.4	*0.760	36.4	LOS D	8.6	72.5	0.97	0.93	1.16	22.5
Approach		377	11.4	377	11.4	0.760	25.2	LOS C	8.6	72.5	0.77	0.71	0.89	30.0
NorthWest: Pinjarra Rd														
27	L2	183	10.4	183	10.4	0.207	15.2	LOS B	3.5	28.7	0.56	0.70	0.56	33.4
29	R2	213	10.4	213	10.4	*0.552	32.7	LOS C	7.0	57.4	0.93	0.81	0.93	28.9
Approach		396	10.4	396	10.4	0.552	24.6	LOS C	7.0	57.4	0.76	0.76	0.76	30.8
SouthWest: George St														
30	L2	214	9.1	214	9.1	0.210	11.2	LOS B	3.3	27.5	0.46	0.67	0.46	38.5
5	T1	247	9.1	247	9.1	*0.462	23.8	LOS C	7.3	60.4	0.85	0.75	0.85	34.5
Approach		461	9.1	461	9.1	0.462	18.0	LOS B	7.3	60.4	0.67	0.71	0.67	35.6
All Vehicles		1234	10.2	1234	10.2	0.760	22.3	LOS C	8.6	72.5	0.73	0.73	0.77	32.3

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - Existing - PM (Site Folder: Existing)] **Network: N101 [PM (Network Folder: Existing)]**

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	6	7.5	6	7.5	0.472	5.8	LOS A	3.0	23.3	0.52	0.60	0.52	17.0
2	T1	413	7.5	413	7.5	0.472	5.8	LOS A	3.0	23.3	0.52	0.60	0.52	45.3
3	R2	26	7.5	26	7.5	0.472	9.9	LOS A	3.0	23.3	0.52	0.60	0.52	45.2
3u	U	1	7.5	1	7.5	0.472	11.6	LOS B	3.0	23.3	0.52	0.60	0.52	33.1
Approach		446	7.5	446	7.5	0.472	6.0	LOS A	3.0	23.3	0.52	0.60	0.52	44.9
NorthEast: Murray St														
4	L2	65	9.1	65	9.1	0.382	6.0	LOS A	2.4	19.5	0.64	0.73	0.64	40.8
5	T1	55	9.1	55	9.1	0.382	6.0	LOS A	2.4	19.5	0.64	0.73	0.64	28.9
6	R2	226	9.1	226	9.1	0.382	10.1	LOS B	2.4	19.5	0.64	0.73	0.64	45.4
6u	U	1	9.1	1	9.1	0.382	11.8	LOS B	2.4	19.5	0.64	0.73	0.64	46.1
Approach		347	9.1	347	9.1	0.382	8.7	LOS A	2.4	19.5	0.64	0.73	0.64	42.2
NorthWest: Pinjarra Rd														
7	L2	126	10.4	126	10.4	0.378	3.8	LOS A	2.8	22.5	0.35	0.44	0.35	46.4
8	T1	312	10.4	312	10.4	0.378	3.8	LOS A	2.8	22.5	0.35	0.44	0.35	43.9
9	R2	36	10.4	36	10.4	0.378	7.9	LOS A	2.8	22.5	0.35	0.44	0.35	29.9
9u	U	7	10.4	7	10.4	0.378	9.6	LOS A	2.8	22.5	0.35	0.44	0.35	48.2
Approach		481	10.4	481	10.4	0.378	4.2	LOS A	2.8	22.5	0.35	0.44	0.35	43.6
SouthWest: Murray St														
10	L2	83	9.1	83	9.1	0.202	8.0	LOS A	1.4	11.0	0.76	0.74	0.76	41.2
11	T1	42	9.1	42	9.1	0.202	8.0	LOS A	1.4	11.0	0.76	0.74	0.76	42.6
12	R2	18	9.1	18	9.1	0.202	12.1	LOS B	1.4	11.0	0.76	0.74	0.76	20.4
12u	U	1	9.1	1	9.1	0.202	13.8	LOS B	1.4	11.0	0.76	0.74	0.76	11.2
Approach		144	9.1	144	9.1	0.202	8.5	LOS A	1.4	11.0	0.76	0.74	0.76	40.6
All Vehicles		1419	9.0	1419	9.0	0.472	6.3	LOS A	3.0	23.3	0.52	0.59	0.52	43.3

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - Existing - SAT (Site Folder: Existing)]

Network: N101 [SAT (Network Folder: Existing)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 65 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	118	11.4	118	11.4	0.449	8.7	LOS A	4.3	36.2	0.52	0.43	0.52	40.5
26	R2	142	11.4	142	11.4	*0.449	28.5	LOS C	4.3	36.2	0.91	0.78	0.91	24.9
Approach		260	11.4	260	11.4	0.449	19.5	LOS B	4.3	36.2	0.74	0.62	0.74	32.7
NorthWest: Pinjarra Rd														
27	L2	234	10.4	234	10.4	0.252	13.3	LOS B	3.9	31.5	0.55	0.70	0.55	34.3
29	R2	171	10.4	171	10.4	*0.389	26.7	LOS C	4.6	37.6	0.87	0.78	0.87	31.2
Approach		404	10.4	404	10.4	0.389	18.9	LOS B	4.6	37.6	0.68	0.74	0.68	32.9
SouthWest: George St														
30	L2	152	9.1	152	9.1	0.150	10.4	LOS B	2.0	16.7	0.45	0.66	0.45	39.2
5	T1	216	9.1	216	9.1	*0.479	23.8	LOS C	6.0	49.2	0.89	0.76	0.89	34.5
Approach		367	9.1	367	9.1	0.479	18.3	LOS B	6.0	49.2	0.71	0.72	0.71	35.6
All Vehicles		1032	10.2	1032	10.2	0.479	18.8	LOS B	6.0	49.2	0.71	0.70	0.71	33.9

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - Existing - SAT (Site Folder: Existing)]

Network: N101 [SAT (Network Folder: Existing)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	8	7.5	8	7.5	0.298	5.0	LOS A	1.6	12.5	0.43	0.54	0.43	17.1
2	T1	259	7.5	259	7.5	0.298	5.0	LOS A	1.6	12.5	0.43	0.54	0.43	45.6
3	R2	26	7.5	26	7.5	0.298	9.1	LOS A	1.6	12.5	0.43	0.54	0.43	45.6
3u	U	1	7.5	1	7.5	0.298	10.8	LOS B	1.6	12.5	0.43	0.54	0.43	33.8
Approach		295	7.5	295	7.5	0.298	5.4	LOS A	1.6	12.5	0.43	0.54	0.43	44.9
NorthEast: Murray St														
4	L2	69	9.1	69	9.1	0.333	5.9	LOS A	2.0	16.1	0.61	0.71	0.61	41.1
5	T1	54	9.1	54	9.1	0.333	5.9	LOS A	2.0	16.1	0.61	0.71	0.61	29.0
6	R2	179	9.1	179	9.1	0.333	10.0	LOS A	2.0	16.1	0.61	0.71	0.61	45.6
6u	U	1	9.1	1	9.1	0.333	11.7	LOS B	2.0	16.1	0.61	0.71	0.61	46.3
Approach		303	9.1	303	9.1	0.333	8.3	LOS A	2.0	16.1	0.61	0.71	0.61	41.9
NorthWest: Pinjarra Rd														
7	L2	121	10.4	121	10.4	0.367	3.6	LOS A	2.6	21.0	0.28	0.41	0.28	46.6
8	T1	328	10.4	328	10.4	0.367	3.6	LOS A	2.6	21.0	0.28	0.41	0.28	44.3
9	R2	37	10.4	37	10.4	0.367	7.7	LOS A	2.6	21.0	0.28	0.41	0.28	30.1
9u	U	2	10.4	2	10.4	0.367	9.4	LOS A	2.6	21.0	0.28	0.41	0.28	48.4
Approach		488	10.4	488	10.4	0.367	4.0	LOS A	2.6	21.0	0.28	0.41	0.28	43.8
SouthWest: Murray St														
10	L2	39	9.1	39	9.1	0.090	5.6	LOS A	0.5	4.1	0.59	0.60	0.59	43.2
11	T1	32	9.1	32	9.1	0.090	5.7	LOS A	0.5	4.1	0.59	0.60	0.59	44.7
12	R2	6	9.1	6	9.1	0.090	9.7	LOS A	0.5	4.1	0.59	0.60	0.59	24.5
12u	U	1	9.1	1	9.1	0.090	11.5	LOS B	0.5	4.1	0.59	0.60	0.59	11.9
Approach		78	9.1	78	9.1	0.090	6.1	LOS A	0.5	4.1	0.59	0.60	0.59	43.0
All Vehicles		1164	9.2	1164	9.2	0.367	5.6	LOS A	2.6	21.0	0.43	0.54	0.43	43.4

2026

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2026 - AM (Site Folder: 2026)]

Network: N101 [AM (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	236	11.5	236	11.5	0.163	0.3	LOS A	0.2	2.0	0.09	0.06	0.09	48.9
6	R2	26	2.0	26	2.0	0.163	6.2	LOS A	0.2	2.0	0.09	0.06	0.09	43.3
Approach		262	10.5	262	10.5	0.163	0.9	NA	0.2	2.0	0.09	0.06	0.09	48.8
NorthWest: Access 3														
7	L2	26	2.0	26	2.0	0.066	1.1	LOS A	0.3	1.9	0.47	0.39	0.47	13.6
9	R2	26	2.0	26	2.0	0.066	4.6	LOS A	0.3	1.9	0.47	0.39	0.47	41.5
Approach		53	2.0	53	2.0	0.066	2.9	LOS A	0.3	1.9	0.47	0.39	0.47	37.0
SouthWest: George St														
10	L2	26	2.0	26	2.0	0.015	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	303	9.1	303	9.1	0.176	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		329	8.5	329	8.5	0.176	0.4	NA	0.0	0.0	0.00	0.04	0.00	49.3
All Vehicles		644	8.8	644	8.8	0.176	0.8	NA	0.3	2.0	0.07	0.08	0.07	48.3

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2026 - AM (Site Folder: 2026)]

Network: N101 [AM (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	14	2.0	14	2.0	0.051	0.4	LOS A	0.2	1.3	0.26	0.20	0.26	43.5
9	R2	42	2.0	42	2.0	0.051	1.3	LOS A	0.2	1.3	0.26	0.20	0.26	16.5
Approach		56	2.0	56	2.0	0.051	1.1	LOS A	0.2	1.3	0.26	0.20	0.26	34.4
NorthEast: Murray St														
10	L2	42	2.0	42	2.0	0.087	4.3	LOS A	0.0	0.0	0.00	0.14	0.00	36.4
11	T1	118	9.1	118	9.1	0.087	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	48.5
Approach		160	7.2	160	7.2	0.087	1.1	NA	0.0	0.0	0.00	0.14	0.00	47.7
SouthWest: Murray St														
5	T1	94	9.1	94	9.1	0.060	0.1	LOS A	0.1	0.7	0.08	0.07	0.08	48.7
6	R2	14	2.0	14	2.0	0.060	5.1	LOS A	0.1	0.7	0.08	0.07	0.08	48.9
Approach		107	8.2	107	8.2	0.060	0.7	NA	0.1	0.7	0.08	0.07	0.08	48.8
All Vehicles		323	6.6	323	6.6	0.087	1.0	NA	0.2	1.3	0.07	0.13	0.07	46.9

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2026 - AM (Site Folder: 2026)]

Network: N101 [AM (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	24	2.0	24	2.0	0.162	4.1	LOS A	0.0	0.0	0.00	0.04	0.00	22.7
11	T1	278	7.5	278	7.5	0.162	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	46.5
Approach		302	7.1	302	7.1	0.162	0.3	NA	0.0	0.0	0.00	0.04	0.00	42.0
NorthWest: Pinjarra Rd														
5	T1	379	10.4	379	10.4	0.108	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach		379	10.4	379	10.4	0.108	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
SouthWest: Access 1														
7	L2	24	2.0	24	2.0	0.019	0.9	LOS A	0.1	0.6	0.35	0.18	0.35	16.4
Approach		24	2.0	24	2.0	0.019	0.9	LOS A	0.1	0.6	0.35	0.18	0.35	16.4
All Vehicles		705	8.7	705	8.7	0.162	0.2	NA	0.1	0.6	0.01	0.02	0.01	45.4

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2026 - AM (Site Folder: 2026)]

Network: N101 [AM (Network Folder: 2026)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 66 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	94	11.4	94	11.4	0.097	7.5	LOS A	1.4	11.8	0.49	0.39	0.49	34.6
26	R2	167	11.4	167	11.4	*0.563	31.5	LOS C	5.2	43.8	0.96	0.80	0.96	23.9
Approach		261	11.4	261	11.4	0.563	22.9	LOS C	5.2	43.8	0.79	0.65	0.79	26.9
NorthWest: Pinjarra Rd														
27	L2	211	10.4	211	10.4	0.237	13.5	LOS B	3.7	29.9	0.57	0.70	0.57	32.5
29	R2	168	10.4	168	10.4	*0.390	26.6	LOS C	4.6	37.8	0.87	0.78	0.87	7.8
Approach		379	10.4	379	10.4	0.390	19.3	LOS B	4.6	37.8	0.70	0.74	0.70	25.5
SouthWest: George St														
30	L2	134	9.1	134	9.1	0.128	9.4	LOS A	1.7	14.0	0.42	0.65	0.42	18.4
5	T1	196	9.1	196	9.1	*0.395	22.0	LOS C	5.2	42.9	0.85	0.73	0.85	28.6
Approach		329	9.1	329	9.1	0.395	16.9	LOS B	5.2	42.9	0.67	0.70	0.67	27.3
All Vehicles		969	10.2	969	10.2	0.563	19.4	LOS B	5.2	43.8	0.72	0.70	0.72	26.5

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2026 - AM (Site Folder: 2026)]

Network: N101 [AM (Network Folder: 2026)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	12	7.5	12	7.5	0.324	5.5	LOS A	2.0	16.1	0.61	0.64	0.61	26.8
2	T1	255	7.5	255	7.5	0.324	5.5	LOS A	2.0	16.1	0.61	0.64	0.61	44.3
3	R2	33	7.5	33	7.5	0.324	9.6	LOS A	2.0	16.1	0.61	0.64	0.61	44.3
3u	U	3	7.5	3	7.5	0.324	11.3	LOS B	2.0	16.1	0.61	0.64	0.61	26.8
Approach		302	7.5	302	7.5	0.324	6.0	LOS A	2.0	16.1	0.61	0.64	0.61	44.1
NorthEast: Murray St														
4	L2	48	9.1	48	9.1	0.353	6.2	LOS A	2.2	17.6	0.65	0.74	0.65	40.7
5	T1	72	9.1	72	9.1	0.353	6.2	LOS A	2.2	17.6	0.65	0.74	0.65	40.7
6	R2	188	9.1	188	9.1	0.353	10.3	LOS B	2.2	17.6	0.65	0.74	0.65	45.4
6u	U	1	9.1	1	9.1	0.353	12.0	LOS B	2.2	17.6	0.65	0.74	0.65	46.1
Approach		309	9.1	309	9.1	0.353	8.7	LOS A	2.2	17.6	0.65	0.74	0.65	44.1
NorthWest: Pinjarra Rd														
7	L2	117	10.4	117	10.4	0.410	3.9	LOS A	3.0	23.8	0.37	0.47	0.37	46.2
8	T1	320	10.4	320	10.4	0.410	3.9	LOS A	3.0	23.8	0.37	0.47	0.37	43.6
9	R2	75	10.4	75	10.4	0.410	8.0	LOS A	3.0	23.8	0.37	0.47	0.37	43.6
9u	U	3	10.4	3	10.4	0.410	9.7	LOS A	3.0	23.8	0.37	0.47	0.37	48.0
Approach		515	10.4	515	10.4	0.410	4.5	LOS A	3.0	23.8	0.37	0.47	0.37	44.6
SouthWest: Murray St														
10	L2	71	9.1	71	9.1	0.163	5.8	LOS A	0.9	7.3	0.62	0.66	0.62	43.1
11	T1	56	9.1	56	9.1	0.163	5.9	LOS A	0.9	7.3	0.62	0.66	0.62	44.7
12	R2	7	9.1	7	9.1	0.163	9.9	LOS A	0.9	7.3	0.62	0.66	0.62	24.3
12u	U	1	9.1	1	9.1	0.163	11.7	LOS B	0.9	7.3	0.62	0.66	0.62	24.3
Approach		135	9.1	135	9.1	0.163	6.1	LOS A	0.9	7.3	0.62	0.66	0.62	43.5
All Vehicles		1261	9.2	1261	9.2	0.410	6.1	LOS A	3.0	23.8	0.52	0.59	0.52	44.2

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2026 - PM (Site Folder: 2026)] **Network: N101 [PM (Network Folder: 2026)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	352	11.5	352	11.5	0.242	0.5	LOS A	0.4	3.3	0.12	0.05	0.12	48.7
6	R2	31	2.0	31	2.0	0.242	7.9	LOS A	0.4	3.3	0.12	0.05	0.12	42.1
Approach		382	10.7	382	10.7	0.242	1.1	NA	0.4	3.3	0.12	0.05	0.12	48.5
NorthWest: Access 3														
7	L2	31	2.0	31	2.0	0.109	1.9	LOS A	0.4	3.0	0.59	0.56	0.59	10.7
9	R2	31	2.0	31	2.0	0.109	8.7	LOS A	0.4	3.0	0.59	0.56	0.59	39.4
Approach		61	2.0	61	2.0	0.109	5.3	LOS A	0.4	3.0	0.59	0.56	0.59	34.0
SouthWest: George St														
10	L2	31	2.0	31	2.0	0.017	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	458	9.1	458	9.1	0.266	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		488	8.7	488	8.7	0.266	0.4	NA	0.0	0.0	0.00	0.03	0.00	49.4
All Vehicles		932	9.1	932	9.1	0.266	1.0	NA	0.4	3.3	0.09	0.07	0.09	48.2

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2026 - PM (Site Folder: 2026)] **Network: N101 [PM (Network Folder: 2026)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	16	2.0	16	2.0	0.063	0.3	LOS A	0.2	1.6	0.26	0.20	0.26	43.5
9	R2	52	2.0	52	2.0	0.063	1.4	LOS A	0.2	1.6	0.26	0.20	0.26	16.6
Approach		67	2.0	67	2.0	0.063	1.2	LOS A	0.2	1.6	0.26	0.20	0.26	34.1
NorthEast: Murray St														
10	L2	52	2.0	52	2.0	0.078	4.3	LOS A	0.0	0.0	0.00	0.19	0.00	34.8
11	T1	93	9.1	93	9.1	0.078	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	48.1
Approach		144	6.6	144	6.6	0.078	1.6	NA	0.0	0.0	0.00	0.19	0.00	46.6
SouthWest: Murray St														
5	T1	140	9.1	140	9.1	0.086	0.1	LOS A	0.1	0.9	0.06	0.06	0.06	49.0
6	R2	16	2.0	16	2.0	0.086	5.1	LOS A	0.1	0.9	0.06	0.06	0.06	49.1
Approach		156	8.4	156	8.4	0.086	0.6	NA	0.1	0.9	0.06	0.06	0.06	49.0
All Vehicles		367	6.5	367	6.5	0.086	1.1	NA	0.2	1.6	0.07	0.14	0.07	46.7

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2026 - PM (Site Folder: 2026)] **Network: N101 [PM (Network Folder: 2026)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	25	2.0	25	2.0	0.243	4.1	LOS A	0.0	0.0	0.00	0.03	0.00	22.8
11	T1	429	7.5	429	7.5	0.243	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
Approach		455	7.2	455	7.2	0.243	0.2	NA	0.0	0.0	0.00	0.03	0.00	44.1
NorthWest: Pinjarra Rd														
5	T1	404	10.4	404	10.4	0.121	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		404	10.4	404	10.4	0.121	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
SouthWest: Access 1														
7	L2	25	2.0	25	2.0	0.023	1.6	LOS A	0.1	0.8	0.45	0.28	0.45	15.6
Approach		25	2.0	25	2.0	0.023	1.6	LOS A	0.1	0.8	0.45	0.28	0.45	15.6
All Vehicles		884	8.5	884	8.5	0.243	0.2	NA	0.1	0.8	0.01	0.02	0.01	45.9

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2026 - PM (Site Folder: 2026)] **Network: N101 [PM (Network Folder: 2026)]**

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 74 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	165	11.4	165	11.4	0.158	7.1	LOS A	2.6	21.7	0.46	0.38	0.46	34.9
26	R2	238	11.4	238	11.4	*0.811	38.9	LOS D	9.2	77.5	0.97	0.99	1.26	21.8
Approach		403	11.4	403	11.4	0.811	25.9	LOS C	9.2	77.5	0.76	0.74	0.93	25.8
NorthWest: Pinjarra Rd														
27	L2	186	10.4	186	10.4	0.211	14.6	LOS B	3.6	29.2	0.56	0.70	0.56	32.0
29	R2	217	10.4	217	10.4	*0.563	32.2	LOS C	7.2	58.7	0.94	0.81	0.94	6.6
Approach		403	10.4	403	10.4	0.563	24.1	LOS C	7.2	58.7	0.76	0.76	0.76	21.8
SouthWest: George St														
30	L2	218	9.1	218	9.1	0.214	10.8	LOS B	3.4	28.1	0.46	0.67	0.46	16.7
5	T1	271	9.1	271	9.1	*0.505	24.0	LOS C	8.2	67.2	0.87	0.76	0.87	27.8
Approach		488	9.1	488	9.1	0.505	18.1	LOS B	8.2	67.2	0.69	0.72	0.69	26.1
All Vehicles		1295	10.2	1295	10.2	0.811	22.4	LOS C	9.2	77.5	0.73	0.74	0.79	24.8

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2026 - PM (Site Folder: 2026)] **Network: N101 [PM (Network Folder: 2026)]**

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	6	7.5	6	7.5	0.508	6.6	LOS A	3.9	30.8	0.73	0.74	0.76	25.8
2	T1	421	7.5	421	7.5	0.508	6.6	LOS A	3.9	30.8	0.73	0.74	0.76	43.8
3	R2	27	7.5	27	7.5	0.508	10.6	LOS B	3.9	30.8	0.73	0.74	0.76	43.8
3u	U	1	7.5	1	7.5	0.508	12.4	LOS B	3.9	30.8	0.73	0.74	0.76	25.8
Approach		456	7.5	456	7.5	0.508	6.8	LOS A	3.9	30.8	0.73	0.74	0.76	43.7
NorthEast: Murray St														
4	L2	66	9.1	66	9.1	0.424	6.4	LOS A	2.8	22.4	0.69	0.76	0.69	40.5
5	T1	74	9.1	74	9.1	0.424	6.4	LOS A	2.8	22.4	0.69	0.76	0.69	40.5
6	R2	231	9.1	231	9.1	0.424	10.5	LOS B	2.8	22.4	0.69	0.76	0.69	45.3
6u	U	1	9.1	1	9.1	0.424	12.2	LOS B	2.8	22.4	0.69	0.76	0.69	46.0
Approach		372	9.1	372	9.1	0.424	8.9	LOS A	2.8	22.4	0.69	0.76	0.69	44.0
NorthWest: Pinjarra Rd														
7	L2	128	10.4	128	10.4	0.419	4.0	LOS A	3.2	25.5	0.41	0.48	0.41	46.2
8	T1	318	10.4	318	10.4	0.419	4.0	LOS A	3.2	25.5	0.41	0.48	0.41	43.5
9	R2	63	10.4	63	10.4	0.419	8.1	LOS A	3.2	25.5	0.41	0.48	0.41	43.5
9u	U	7	10.4	7	10.4	0.419	9.8	LOS A	3.2	25.5	0.41	0.48	0.41	47.9
Approach		517	10.4	517	10.4	0.419	4.6	LOS A	3.2	25.5	0.41	0.48	0.41	44.6
SouthWest: Murray St														
10	L2	112	9.1	112	9.1	0.290	8.0	LOS A	1.9	14.8	0.79	0.82	0.79	41.2
11	T1	61	9.1	61	9.1	0.290	8.1	LOS A	1.9	14.8	0.79	0.82	0.79	42.7
12	R2	18	9.1	18	9.1	0.290	12.1	LOS B	1.9	14.8	0.79	0.82	0.79	20.4
12u	U	1	9.1	1	9.1	0.290	13.9	LOS B	1.9	14.8	0.79	0.82	0.79	20.4
Approach		192	9.1	192	9.1	0.290	8.4	LOS A	1.9	14.8	0.79	0.82	0.79	41.1
All Vehicles		1536	9.1	1536	9.1	0.508	6.8	LOS A	3.9	30.8	0.62	0.67	0.63	43.8

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2026 - SAT (Site Folder: 2026)]

Network: N101 [SAT (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	276	11.5	276	11.5	0.210	0.6	LOS A	0.5	3.9	0.16	0.09	0.16	48.2
6	R2	45	2.0	45	2.0	0.210	6.8	LOS A	0.5	3.9	0.16	0.09	0.16	40.1
Approach		321	10.2	321	10.2	0.210	1.5	NA	0.5	3.9	0.16	0.09	0.16	47.9
NorthWest: Access 3														
7	L2	45	2.0	45	2.0	0.130	1.4	LOS A	0.5	3.8	0.53	0.49	0.53	12.3
9	R2	45	2.0	45	2.0	0.130	6.3	LOS A	0.5	3.8	0.53	0.49	0.53	40.6
Approach		91	2.0	91	2.0	0.130	3.8	LOS A	0.5	3.8	0.53	0.49	0.53	35.7
SouthWest: George St														
10	L2	45	2.0	45	2.0	0.026	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	355	9.1	355	9.1	0.206	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		400	8.3	400	8.3	0.206	0.6	NA	0.0	0.0	0.00	0.06	0.00	49.0
All Vehicles		812	8.3	812	8.3	0.210	1.3	NA	0.5	3.9	0.12	0.12	0.12	47.4

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2026 - SAT (Site Folder: 2026)]

Network: N101 [SAT (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	22	2.0	22	2.0	0.086	0.3	LOS A	0.3	2.3	0.24	0.19	0.24	43.6
9	R2	74	2.0	74	2.0	0.086	1.2	LOS A	0.3	2.3	0.24	0.19	0.24	16.6
Approach		96	2.0	96	2.0	0.086	1.0	LOS A	0.3	2.3	0.24	0.19	0.24	34.1
NorthEast: Murray St														
10	L2	74	2.0	74	2.0	0.089	4.3	LOS A	0.0	0.0	0.00	0.24	0.00	33.5
11	T1	92	9.1	92	9.1	0.089	0.0	LOS A	0.0	0.0	0.00	0.24	0.00	47.6
Approach		165	5.9	165	5.9	0.089	1.9	NA	0.0	0.0	0.00	0.24	0.00	45.4
SouthWest: Murray St														
5	T1	68	9.1	68	9.1	0.052	0.2	LOS A	0.1	1.1	0.15	0.13	0.15	47.7
6	R2	22	2.0	22	2.0	0.052	5.1	LOS A	0.1	1.1	0.15	0.13	0.15	47.9
Approach		91	7.4	91	7.4	0.052	1.4	NA	0.1	1.1	0.15	0.13	0.15	47.7
All Vehicles		352	5.2	352	5.2	0.089	1.5	NA	0.3	2.3	0.10	0.20	0.10	44.5

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2026 - SAT (Site Folder: 2026)]

Network: N101 [SAT (Network Folder: 2026)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	38	2.0	38	2.0	0.160	4.1	LOS A	0.0	0.0	0.00	0.07	0.00	22.4
11	T1	261	7.5	261	7.5	0.160	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	44.8
Approach		299	6.8	299	6.8	0.160	0.5	NA	0.0	0.0	0.00	0.07	0.00	38.6
NorthWest: Pinjarra Rd														
5	T1	413	10.4	413	10.4	0.117	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach		413	10.4	413	10.4	0.117	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
SouthWest: Access 1														
7	L2	38	2.0	38	2.0	0.029	0.9	LOS A	0.1	1.0	0.34	0.18	0.34	16.5
Approach		38	2.0	38	2.0	0.029	0.9	LOS A	0.1	1.0	0.34	0.18	0.34	16.5
All Vehicles		749	8.5	749	8.5	0.160	0.3	NA	0.1	1.0	0.02	0.04	0.02	43.5

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2026 - SAT (Site Folder: 2026)]

Network: N101 [SAT (Network Folder: 2026)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 65 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	146	11.4	146	11.4	0.497	10.6	LOS B	4.9	41.5	0.57	0.47	0.57	32.5
26	R2	145	11.4	145	11.4	*0.497	28.8	LOS C	4.9	41.5	0.93	0.78	0.93	24.9
Approach		292	11.4	292	11.4	0.497	19.7	LOS B	4.9	41.5	0.75	0.63	0.75	28.2
NorthWest: Pinjarra Rd														
27	L2	238	10.4	238	10.4	0.256	12.7	LOS B	3.9	32.2	0.55	0.70	0.55	33.0
29	R2	175	10.4	175	10.4	*0.399	26.1	LOS C	4.7	38.6	0.87	0.78	0.87	7.9
Approach		413	10.4	413	10.4	0.399	18.4	LOS B	4.7	38.6	0.69	0.73	0.69	26.3
SouthWest: George St														
30	L2	154	9.1	154	9.1	0.152	10.0	LOS A	2.1	17.0	0.45	0.66	0.45	17.6
5	T1	245	9.1	245	9.1	*0.544	24.1	LOS C	6.9	57.1	0.91	0.78	0.91	27.8
Approach		399	9.1	399	9.1	0.544	18.7	LOS B	6.9	57.1	0.73	0.73	0.73	26.6
All Vehicles		1103	10.2	1103	10.2	0.544	18.8	LOS B	6.9	57.1	0.72	0.71	0.72	27.0

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2026 - SAT (Site Folder: 2026)]

Network: N101 [SAT (Network Folder: 2026)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	8	7.5	8	7.5	0.324	5.5	LOS A	2.1	16.1	0.61	0.63	0.61	26.9
2	T1	264	7.5	264	7.5	0.324	5.5	LOS A	2.1	16.1	0.61	0.63	0.61	44.4
3	R2	27	7.5	27	7.5	0.324	9.6	LOS A	2.1	16.1	0.61	0.63	0.61	44.3
3u	U	1	7.5	1	7.5	0.324	11.3	LOS B	2.1	16.1	0.61	0.63	0.61	26.9
Approach		301	7.5	301	7.5	0.324	5.9	LOS A	2.1	16.1	0.61	0.63	0.61	44.2
NorthEast: Murray St														
4	L2	71	9.1	71	9.1	0.384	6.3	LOS A	2.5	19.6	0.67	0.75	0.67	40.8
5	T1	80	9.1	80	9.1	0.384	6.4	LOS A	2.5	19.6	0.67	0.75	0.67	40.8
6	R2	182	9.1	182	9.1	0.384	10.4	LOS B	2.5	19.6	0.67	0.75	0.67	45.4
6u	U	1	9.1	1	9.1	0.384	12.2	LOS B	2.5	19.6	0.67	0.75	0.67	46.1
Approach		334	9.1	334	9.1	0.384	8.6	LOS A	2.5	19.6	0.67	0.75	0.67	43.9
NorthWest: Pinjarra Rd														
7	L2	123	10.4	123	10.4	0.422	3.9	LOS A	3.1	25.1	0.37	0.46	0.37	46.3
8	T1	335	10.4	335	10.4	0.422	3.9	LOS A	3.1	25.1	0.37	0.46	0.37	43.7
9	R2	76	10.4	76	10.4	0.422	8.0	LOS A	3.1	25.1	0.37	0.46	0.37	43.7
9u	U	2	10.4	2	10.4	0.422	9.7	LOS A	3.1	25.1	0.37	0.46	0.37	48.0
Approach		536	10.4	536	10.4	0.422	4.5	LOS A	3.1	25.1	0.37	0.46	0.37	44.6
SouthWest: Murray St														
10	L2	78	9.1	78	9.1	0.173	5.8	LOS A	1.0	7.8	0.62	0.66	0.62	43.2
11	T1	58	9.1	58	9.1	0.173	5.9	LOS A	1.0	7.8	0.62	0.66	0.62	44.7
12	R2	6	9.1	6	9.1	0.173	9.9	LOS A	1.0	7.8	0.62	0.66	0.62	24.3
12u	U	1	9.1	1	9.1	0.173	11.7	LOS B	1.0	7.8	0.62	0.66	0.62	24.3
Approach		143	9.1	143	9.1	0.173	6.1	LOS A	1.0	7.8	0.62	0.66	0.62	43.6
All Vehicles		1314	9.3	1314	9.3	0.422	6.0	LOS A	3.1	25.1	0.53	0.60	0.53	44.2

2036

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2036 - AM (Site Folder: 2036)]

Network: N101 [AM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	291	11.5	291	11.5	0.198	0.4	LOS A	0.3	2.4	0.09	0.05	0.09	48.9
6	R2	26	2.0	26	2.0	0.198	6.8	LOS A	0.3	2.4	0.09	0.05	0.09	43.3
Approach		317	10.7	317	10.7	0.198	0.9	NA	0.3	2.4	0.09	0.05	0.09	48.8
NorthWest: Access 3														
7	L2	26	2.0	26	2.0	0.077	1.4	LOS A	0.3	2.2	0.53	0.47	0.53	12.3
9	R2	26	2.0	26	2.0	0.077	6.1	LOS A	0.3	2.2	0.53	0.47	0.53	40.7
Approach		53	2.0	53	2.0	0.077	3.8	LOS A	0.3	2.2	0.53	0.47	0.53	35.8
SouthWest: George St														
10	L2	26	2.0	26	2.0	0.015	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	372	9.1	372	9.1	0.216	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		398	8.6	398	8.6	0.216	0.4	NA	0.0	0.0	0.00	0.04	0.00	49.4
All Vehicles		767	9.0	767	9.0	0.216	0.8	NA	0.3	2.4	0.08	0.07	0.08	48.4

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2036 - AM (Site Folder: 2036)]

Network: N101 [AM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	14	2.0	14	2.0	0.053	0.5	LOS A	0.2	1.4	0.30	0.23	0.30	43.4
9	R2	42	2.0	42	2.0	0.053	1.5	LOS A	0.2	1.4	0.30	0.23	0.30	16.2
Approach		56	2.0	56	2.0	0.053	1.3	LOS A	0.2	1.4	0.30	0.23	0.30	34.1
NorthEast: Murray St														
10	L2	42	2.0	42	2.0	0.101	4.3	LOS A	0.0	0.0	0.00	0.12	0.00	37.0
11	T1	144	9.1	144	9.1	0.101	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	48.7
Approach		186	7.5	186	7.5	0.101	1.0	NA	0.0	0.0	0.00	0.12	0.00	48.1
SouthWest: Murray St														
5	T1	116	9.1	116	9.1	0.072	0.1	LOS A	0.1	0.8	0.07	0.06	0.07	48.9
6	R2	14	2.0	14	2.0	0.072	5.2	LOS A	0.1	0.8	0.07	0.06	0.07	49.0
Approach		129	8.3	129	8.3	0.072	0.6	NA	0.1	0.8	0.07	0.06	0.07	48.9
All Vehicles		372	7.0	372	7.0	0.101	0.9	NA	0.2	1.4	0.07	0.12	0.07	47.4

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2036 - AM (Site Folder: 2036)]

Network: N101 [AM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	24	2.0	24	2.0	0.197	4.1	LOS A	0.0	0.0	0.00	0.04	0.00	22.8
11	T1	344	7.5	344	7.5	0.197	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	47.1
Approach		368	7.1	368	7.1	0.197	0.3	NA	0.0	0.0	0.00	0.04	0.00	43.2
NorthWest: Pinjarra Rd														
5	T1	462	10.4	462	10.4	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		462	10.4	462	10.4	0.131	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
SouthWest: Access 1														
7	L2	24	2.0	24	2.0	0.020	1.2	LOS A	0.1	0.7	0.40	0.22	0.40	16.0
Approach		24	2.0	24	2.0	0.020	1.2	LOS A	0.1	0.7	0.40	0.22	0.40	16.0
All Vehicles		855	8.8	855	8.8	0.197	0.2	NA	0.1	0.7	0.01	0.02	0.01	46.0

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2036 - AM (Site Folder: 2036)]

Network: N101 [AM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	111	11.4	111	11.4	0.124	8.5	LOS A	1.7	14.2	0.54	0.44	0.54	34.1
26	R2	204	11.4	204	11.4	*0.624	28.9	LOS C	5.9	49.6	0.96	0.84	1.02	24.7
Approach		315	11.4	315	11.4	0.624	21.7	LOS C	5.9	49.6	0.82	0.70	0.85	27.3
NorthWest: Pinjarra Rd														
27	L2	257	10.4	257	10.4	0.263	11.2	LOS B	3.7	30.4	0.52	0.69	0.52	33.8
29	R2	205	10.4	205	10.4	*0.432	23.7	LOS C	5.1	41.6	0.86	0.79	0.86	8.6
Approach		462	10.4	462	10.4	0.432	16.7	LOS B	5.1	41.6	0.67	0.73	0.67	26.9
SouthWest: George St														
30	L2	163	9.1	163	9.1	0.166	10.0	LOS B	2.1	17.5	0.47	0.67	0.47	17.6
5	T1	235	9.1	235	9.1	*0.629	25.6	LOS C	6.6	54.7	0.96	0.83	1.00	27.2
Approach		398	9.1	398	9.1	0.629	19.2	LOS B	6.6	54.7	0.76	0.76	0.78	26.0
All Vehicles		1175	10.2	1175	10.2	0.629	18.9	LOS B	6.6	54.7	0.74	0.73	0.76	26.8

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2036 - AM (Site Folder: 2036)]

Network: N101 [AM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	15	7.5	15	7.5	0.424	6.2	LOS A	2.9	23.0	0.71	0.72	0.71	25.8
2	T1	311	7.5	311	7.5	0.424	6.2	LOS A	2.9	23.0	0.71	0.72	0.71	43.8
3	R2	39	7.5	39	7.5	0.424	10.3	LOS B	2.9	23.0	0.71	0.72	0.71	43.8
3u	U	4	7.5	4	7.5	0.424	12.1	LOS B	2.9	23.0	0.71	0.72	0.71	25.8
Approach		368	7.5	368	7.5	0.424	6.7	LOS A	2.9	23.0	0.71	0.72	0.71	43.5
NorthEast: Murray St														
4	L2	59	9.1	59	9.1	0.464	7.6	LOS A	3.4	26.9	0.77	0.85	0.81	39.6
5	T1	83	9.1	83	9.1	0.464	7.6	LOS A	3.4	26.9	0.77	0.85	0.81	39.6
6	R2	229	9.1	229	9.1	0.464	11.7	LOS B	3.4	26.9	0.77	0.85	0.81	44.7
6u	U	1	9.1	1	9.1	0.464	13.5	LOS B	3.4	26.9	0.77	0.85	0.81	45.3
Approach		373	9.1	373	9.1	0.464	10.2	LOS B	3.4	26.9	0.77	0.85	0.81	43.3
NorthWest: Pinjarra Rd														
7	L2	143	10.4	143	10.4	0.507	4.2	LOS A	4.2	33.3	0.46	0.50	0.46	46.0
8	T1	391	10.4	391	10.4	0.507	4.2	LOS A	4.2	33.3	0.46	0.50	0.46	43.2
9	R2	87	10.4	87	10.4	0.507	8.3	LOS A	4.2	33.3	0.46	0.50	0.46	43.2
9u	U	4	10.4	4	10.4	0.507	10.0	LOS B	4.2	33.3	0.46	0.50	0.46	47.7
Approach		625	10.4	625	10.4	0.507	4.8	LOS A	4.2	33.3	0.46	0.50	0.46	44.2
SouthWest: Murray St														
10	L2	82	9.1	82	9.1	0.213	6.8	LOS A	1.3	10.1	0.70	0.73	0.70	42.3
11	T1	65	9.1	65	9.1	0.213	6.9	LOS A	1.3	10.1	0.70	0.73	0.70	43.8
12	R2	9	9.1	9	9.1	0.213	10.9	LOS B	1.3	10.1	0.70	0.73	0.70	22.6
12u	U	1	9.1	1	9.1	0.213	12.7	LOS B	1.3	10.1	0.70	0.73	0.70	22.6
Approach		158	9.1	158	9.1	0.213	7.1	LOS A	1.3	10.1	0.70	0.73	0.70	42.6
All Vehicles		1524	9.2	1524	9.2	0.507	6.8	LOS A	4.2	33.3	0.62	0.66	0.63	43.7

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2036 - PM (Site Folder: 2036)] **Network: N101 [PM (Network Folder: 2036)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	432	11.5	432	11.5	0.295	0.7	LOS A	0.6	4.8	0.13	0.04	0.15	48.4
6	R2	31	2.0	31	2.0	0.295	9.5	LOS A	0.6	4.8	0.13	0.04	0.15	41.1
Approach		462	10.9	462	10.9	0.295	1.3	NA	0.6	4.8	0.13	0.04	0.15	48.3
NorthWest: Access 3														
7	L2	31	2.0	31	2.0	0.141	2.6	LOS A	0.5	3.8	0.68	0.67	0.68	8.9
9	R2	31	2.0	31	2.0	0.141	12.6	LOS B	0.5	3.8	0.68	0.67	0.68	37.6
Approach		61	2.0	61	2.0	0.141	7.6	LOS A	0.5	3.8	0.68	0.67	0.68	31.5
SouthWest: George St														
10	L2	31	2.0	31	2.0	0.017	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	560	9.1	560	9.1	0.325	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		591	8.7	591	8.7	0.325	0.4	NA	0.0	0.0	0.00	0.03	0.00	49.4
All Vehicles		1114	9.3	1114	9.3	0.325	1.1	NA	0.6	4.8	0.09	0.07	0.10	48.1

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2036 - PM (Site Folder: 2036)] **Network: N101 [PM (Network Folder: 2036)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	16	2.0	16	2.0	0.066	0.4	LOS A	0.2	1.7	0.29	0.24	0.29	43.4
9	R2	52	2.0	52	2.0	0.066	1.7	LOS A	0.2	1.7	0.29	0.24	0.29	16.2
Approach		67	2.0	67	2.0	0.066	1.4	LOS A	0.2	1.7	0.29	0.24	0.29	33.8
NorthEast: Murray St														
10	L2	52	2.0	52	2.0	0.089	4.3	LOS A	0.0	0.0	0.00	0.17	0.00	35.6
11	T1	114	9.1	114	9.1	0.089	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	48.3
Approach		165	6.9	165	6.9	0.089	1.4	NA	0.0	0.0	0.00	0.17	0.00	47.1
SouthWest: Murray St														
5	T1	172	9.1	172	9.1	0.104	0.1	LOS A	0.1	0.9	0.06	0.05	0.06	49.1
6	R2	16	2.0	16	2.0	0.104	5.2	LOS A	0.1	0.9	0.06	0.05	0.06	49.3
Approach		187	8.5	187	8.5	0.104	0.5	NA	0.1	0.9	0.06	0.05	0.06	49.1
All Vehicles		420	6.8	420	6.8	0.104	1.0	NA	0.2	1.7	0.07	0.13	0.07	47.1

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2036 - PM (Site Folder: 2036)] **Network: N101 [PM (Network Folder: 2036)]**

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	25	2.0	25	2.0	0.297	4.1	LOS A	0.0	0.0	0.00	0.02	0.00	22.9
11	T1	529	7.5	529	7.5	0.297	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	47.8
Approach		555	7.2	555	7.2	0.297	0.2	NA	0.0	0.0	0.00	0.02	0.00	45.0
NorthWest: Pinjarra Rd														
5	T1	493	10.4	493	10.4	0.162	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		493	10.4	493	10.4	0.162	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
SouthWest: Access 1														
7	L2	25	2.0	25	2.0	0.026	2.2	LOS A	0.1	0.8	0.50	0.34	0.50	14.9
Approach		25	2.0	25	2.0	0.026	2.2	LOS A	0.1	0.8	0.50	0.34	0.50	14.9
All Vehicles		1073	8.6	1073	8.6	0.297	0.2	NA	0.1	0.8	0.01	0.02	0.01	46.4

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2036 - PM (Site Folder: 2036)] **Network: N101 [PM (Network Folder: 2036)]**

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	198	11.4	198	11.4	0.196	7.8	LOS A	3.2	26.6	0.50	0.42	0.50	34.6
26	R2	289	11.4	289	11.4	*0.807	34.3	LOS C	10.3	86.8	0.94	0.97	1.20	23.0
Approach		487	11.4	487	11.4	0.807	23.5	LOS C	10.3	86.8	0.76	0.74	0.91	26.6
NorthWest: Pinjarra Rd														
27	L2	227	10.4	227	10.4	0.226	11.7	LOS B	3.6	29.3	0.49	0.68	0.49	33.6
29	R2	264	10.4	264	10.4	*0.649	31.2	LOS C	8.5	69.8	0.95	0.84	0.99	6.8
Approach		492	10.4	492	10.4	0.649	22.2	LOS C	8.5	69.8	0.74	0.77	0.76	22.7
SouthWest: George St														
30	L2	265	9.1	265	9.1	0.290	13.1	LOS B	4.8	39.5	0.56	0.71	0.56	14.7
5	T1	326	9.1	326	9.1	*0.828	35.5	LOS D	11.9	97.9	1.00	1.03	1.28	24.1
Approach		592	9.1	592	9.1	0.828	25.5	LOS C	11.9	97.9	0.80	0.89	0.96	22.7
All Vehicles		1571	10.2	1571	10.2	0.828	23.8	LOS C	11.9	97.9	0.77	0.81	0.88	24.2

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2036 - PM (Site Folder: 2036)] Network: N101 [PM (Network Folder: 2036)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	7	7.5	7	7.5	0.672	10.2	LOS B	7.4	57.9	0.89	0.98	1.13	21.6
2	T1	513	7.5	513	7.5	0.672	10.2	LOS B	7.4	57.9	0.89	0.98	1.13	41.4
3	R2	33	7.5	33	7.5	0.672	14.3	LOS B	7.4	57.9	0.89	0.98	1.13	41.3
3u	U	1	7.5	1	7.5	0.672	16.0	LOS B	7.4	57.9	0.89	0.98	1.13	21.6
Approach		554	7.5	554	7.5	0.672	10.5	LOS B	7.4	57.9	0.89	0.98	1.13	41.2
NorthEast: Murray St														
4	L2	81	9.1	81	9.1	0.561	9.0	LOS A	4.9	39.0	0.82	0.93	0.96	38.5
5	T1	86	9.1	86	9.1	0.561	9.0	LOS A	4.9	39.0	0.82	0.93	0.96	38.5
6	R2	281	9.1	281	9.1	0.561	13.1	LOS B	4.9	39.0	0.82	0.93	0.96	43.9
6u	U	1	9.1	1	9.1	0.561	14.8	LOS B	4.9	39.0	0.82	0.93	0.96	44.6
Approach		449	9.1	449	9.1	0.561	11.5	LOS B	4.9	39.0	0.82	0.93	0.96	42.5
NorthWest: Pinjarra Rd														
7	L2	157	10.4	157	10.4	0.518	4.2	LOS A	4.5	35.9	0.50	0.51	0.50	45.9
8	T1	387	10.4	387	10.4	0.518	4.3	LOS A	4.5	35.9	0.50	0.51	0.50	43.1
9	R2	72	10.4	72	10.4	0.518	8.3	LOS A	4.5	35.9	0.50	0.51	0.50	43.1
9u	U	9	10.4	9	10.4	0.518	10.1	LOS B	4.5	35.9	0.50	0.51	0.50	47.6
Approach		625	10.4	625	10.4	0.518	4.8	LOS A	4.5	35.9	0.50	0.51	0.50	44.2
SouthWest: Murray St														
10	L2	131	9.1	131	9.1	0.420	11.3	LOS B	3.1	25.0	0.91	0.98	1.00	38.7
11	T1	71	9.1	71	9.1	0.420	11.3	LOS B	3.1	25.0	0.91	0.98	1.00	40.0
12	R2	22	9.1	22	9.1	0.420	15.4	LOS B	3.1	25.0	0.91	0.98	1.00	16.6
12u	U	1	9.1	1	9.1	0.420	17.1	LOS B	3.1	25.0	0.91	0.98	1.00	16.6
Approach		224	9.1	224	9.1	0.420	11.7	LOS B	3.1	25.0	0.91	0.98	1.00	38.3
All Vehicles		1853	9.1	1853	9.1	0.672	9.0	LOS A	7.4	57.9	0.75	0.81	0.86	42.3

MOVEMENT SUMMARY

Site: [George St & Access 3 - 2036 - SAT (Site Folder: 2036)]

Network: N101 [SAT (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
5	T1	340	11.5	340	11.5	0.253	0.7	LOS A	0.6	4.8	0.17	0.08	0.17	48.1
6	R2	45	2.0	45	2.0	0.253	7.8	LOS A	0.6	4.8	0.17	0.08	0.17	39.7
Approach		385	10.4	385	10.4	0.253	1.6	NA	0.6	4.8	0.17	0.08	0.17	47.9
NorthWest: Access 3														
7	L2	45	2.0	45	2.0	0.157	1.9	LOS A	0.6	4.5	0.59	0.57	0.59	10.8
9	R2	45	2.0	45	2.0	0.157	8.6	LOS A	0.6	4.5	0.59	0.57	0.59	39.5
Approach		91	2.0	91	2.0	0.157	5.2	LOS A	0.6	4.5	0.59	0.57	0.59	34.0
SouthWest: George St														
10	L2	45	2.0	45	2.0	0.026	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	43.4
11	T1	437	9.1	437	9.1	0.253	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		482	8.4	482	8.4	0.253	0.5	NA	0.0	0.0	0.00	0.05	0.00	49.2
All Vehicles		958	8.6	958	8.6	0.253	1.4	NA	0.6	4.8	0.12	0.11	0.12	47.5

MOVEMENT SUMMARY

Site: [Murray St & Access 2 - 2036 - SAT (Site Folder: 2036)]

Network: N101 [SAT (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Access 2														
7	L2	22	2.0	22	2.0	0.089	0.4	LOS A	0.3	2.3	0.28	0.22	0.28	43.4
9	R2	74	2.0	74	2.0	0.089	1.4	LOS A	0.3	2.3	0.28	0.22	0.28	16.4
Approach		96	2.0	96	2.0	0.089	1.2	LOS A	0.3	2.3	0.28	0.22	0.28	33.8
NorthEast: Murray St														
10	L2	74	2.0	74	2.0	0.101	4.3	LOS A	0.0	0.0	0.00	0.21	0.00	34.3
11	T1	114	9.1	114	9.1	0.101	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	47.9
Approach		187	6.3	187	6.3	0.101	1.7	NA	0.0	0.0	0.00	0.21	0.00	46.1
SouthWest: Murray St														
5	T1	86	9.1	86	9.1	0.062	0.2	LOS A	0.1	1.2	0.14	0.11	0.14	48.0
6	R2	22	2.0	22	2.0	0.062	5.2	LOS A	0.1	1.2	0.14	0.11	0.14	48.2
Approach		108	7.7	108	7.7	0.062	1.2	NA	0.1	1.2	0.14	0.11	0.14	48.0
All Vehicles		392	5.6	392	5.6	0.101	1.4	NA	0.3	2.3	0.11	0.19	0.11	45.2

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Access 1 - 2036 - SAT (Site Folder: 2036)]

Network: N101 [SAT (Network Folder: 2036)]

Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
10	L2	38	2.0	38	2.0	0.195	4.1	LOS A	0.0	0.0	0.00	0.06	0.00	22.5
11	T1	327	7.5	327	7.5	0.195	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	45.6
Approach		365	6.9	365	6.9	0.195	0.4	NA	0.0	0.0	0.00	0.06	0.00	40.2
NorthWest: Pinjarra Rd														
5	T1	502	10.4	502	10.4	0.143	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		502	10.4	502	10.4	0.143	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
SouthWest: Access 1														
7	L2	38	2.0	38	2.0	0.031	1.2	LOS A	0.1	1.1	0.39	0.22	0.39	16.1
Approach		38	2.0	38	2.0	0.031	1.2	LOS A	0.1	1.1	0.39	0.22	0.39	16.1
All Vehicles		905	8.6	905	8.6	0.195	0.2	NA	0.1	1.1	0.02	0.03	0.02	44.4

MOVEMENT SUMMARY

Site: [Pinjarra Rd & George St - 2036 - SAT (Site Folder: 2036)]

Network: N101 [SAT (Network Folder: 2036)]

Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
NorthEast: George St														
11	T1	173	11.4	173	11.4	0.685	10.3	LOS B	5.8	48.8	0.60	0.50	0.61	32.8
26	R2	177	11.4	177	11.4	*0.685	31.1	LOS C	5.8	48.8	0.98	0.89	1.12	24.1
Approach		349	11.4	349	11.4	0.685	20.8	LOS C	5.8	48.8	0.79	0.70	0.87	27.7
NorthWest: Pinjarra Rd														
27	L2	291	10.4	291	10.4	0.315	12.7	LOS B	4.7	38.2	0.58	0.71	0.58	33.1
29	R2	213	10.4	213	10.4	*0.448	23.8	LOS C	5.3	43.3	0.87	0.79	0.87	8.6
Approach		503	10.4	503	10.4	0.448	17.4	LOS B	5.3	43.3	0.70	0.75	0.70	26.9
SouthWest: George St														
30	L2	188	9.1	188	9.1	0.181	9.2	LOS A	2.3	18.8	0.44	0.66	0.44	18.6
5	T1	294	9.1	294	9.1	*0.682	24.9	LOS C	8.4	69.0	0.96	0.87	1.04	27.5
Approach		482	9.1	482	9.1	0.682	18.8	LOS B	8.4	69.0	0.76	0.79	0.80	26.5
All Vehicles		1335	10.2	1335	10.2	0.685	18.8	LOS B	8.4	69.0	0.74	0.75	0.78	27.0

MOVEMENT SUMMARY

Site: [Pinjarra Rd & Murray St - 2036 - SAT (Site Folder: 2036)]

Network: N101 [SAT (Network Folder: 2036)]

Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
SouthEast: Pinjarra Rd														
1	L2	11	7.5	11	7.5	0.422	6.2	LOS A	2.9	22.9	0.71	0.71	0.71	25.9
2	T1	322	7.5	322	7.5	0.422	6.2	LOS A	2.9	22.9	0.71	0.71	0.71	43.9
3	R2	33	7.5	33	7.5	0.422	10.3	LOS B	2.9	22.9	0.71	0.71	0.71	43.8
3u	U	1	7.5	1	7.5	0.422	12.0	LOS B	2.9	22.9	0.71	0.71	0.71	25.9
Approach		366	7.5	366	7.5	0.422	6.6	LOS A	2.9	22.9	0.71	0.71	0.71	43.7
NorthEast: Murray St														
4	L2	86	9.1	86	9.1	0.504	8.3	LOS A	3.9	31.4	0.79	0.88	0.88	39.3
5	T1	93	9.1	93	9.1	0.504	8.3	LOS A	3.9	31.4	0.79	0.88	0.88	39.3
6	R2	222	9.1	222	9.1	0.504	12.3	LOS B	3.9	31.4	0.79	0.88	0.88	44.5
6u	U	1	9.1	1	9.1	0.504	14.1	LOS B	3.9	31.4	0.79	0.88	0.88	45.1
Approach		402	9.1	402	9.1	0.504	10.5	LOS B	3.9	31.4	0.79	0.88	0.88	42.8
NorthWest: Pinjarra Rd														
7	L2	151	10.4	151	10.4	0.514	4.1	LOS A	4.3	34.7	0.45	0.48	0.45	46.1
8	T1	408	10.4	408	10.4	0.514	4.1	LOS A	4.3	34.7	0.45	0.48	0.45	43.3
9	R2	84	10.4	84	10.4	0.514	8.2	LOS A	4.3	34.7	0.45	0.48	0.45	43.3
9u	U	2	10.4	2	10.4	0.514	9.9	LOS A	4.3	34.7	0.45	0.48	0.45	47.8
Approach		645	10.4	645	10.4	0.514	4.6	LOS A	4.3	34.7	0.45	0.48	0.45	44.3
SouthWest: Murray St														
10	L2	87	9.1	87	9.1	0.216	6.8	LOS A	1.3	10.3	0.70	0.73	0.70	42.4
11	T1	65	9.1	65	9.1	0.216	6.8	LOS A	1.3	10.3	0.70	0.73	0.70	43.9
12	R2	7	9.1	7	9.1	0.216	10.9	LOS B	1.3	10.3	0.70	0.73	0.70	22.7
12u	U	1	9.1	1	9.1	0.216	12.6	LOS B	1.3	10.3	0.70	0.73	0.70	22.7
Approach		161	9.1	161	9.1	0.216	7.0	LOS A	1.3	10.3	0.70	0.73	0.70	42.8
All Vehicles		1575	9.3	1575	9.3	0.514	6.8	LOS A	4.3	34.7	0.62	0.66	0.64	43.6