

PLANS AND DOCUMENTS
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DEVELOPMENT APPROVAL

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Yarrabilba, Precinct 8 ROL 1

Traffic Impact Assessment

Stockland Residential Communities

Level 4, 99 Melbourne Street
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Prepared by:

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Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Stockland Residential Communities (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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1.0 Introduction

SLR Consulting Australia (SLR) has been commissioned by Stockland Residential Communities (**Stockland**) to provide traffic engineering and transport planning advice for the Yarrabilba master planned development area. The Yarrabilba master planned development is located within the extents of the Yarrabilba Priority Development Area (**PDA**), which is situated approximately 20km south of Logan Central and Springwood. When fully developed, it is anticipated that the ultimate Yarrabilba development will yield approximately 17,000 residential dwellings and approximately 45,000 residents.

The traffic and transport aspects of the overall Yarrabilba master plan have been extensively documented within several reports, which are referenced in **Section 1.1**. This report specifically addresses the traffic and transport aspects of Precinct 8 ROL 1. The proposed layout plan for the Precinct 8 ROL 1 application is included at **Appendix A**.

Regarding an assessment of traffic impacts, this report documents the findings from an assessment of the entire Precinct 8, as it is intended for these results to be relied upon during subsequent sub-precinct applications within Precinct 8.

1.1 Previous Reporting

The traffic and transport aspects of the entire Yarrabilba master plan development (and other relevant precincts) have been previously addressed within many documents, including the following:

- *Yarrabilba Master Plan Micro-simulation Modelling - Revised Land Use and Road Network* (Cardno, May 2015).
- *Yarrabilba Movement Infrastructure Master Plan* (Cardno, October 2015) – endorsed by EDQ on 11 November 2015, and on 3 July 2019. **Referred herein as the 'Endorsed MIMP (2019)'**.
- *Yarrabilba Master Plan Development – Movement Infrastructure Master Plan* (SLR, April 2017).
- *Yarrabilba Master Plan Development Traffic Model and Intersection Analysis Data Compendium* (SLR, November 2019) – submitted to and under review by EDQ.
- *Yarrabilba Master Plan Development Movement Infrastructure Master Plan (Revision 8 Version 1.0)* (SLR, October 2022) – submitted to and under review by EDQ. **Referred herein as the 'Current MIMP (2022)'**.
- **It is relevant to note that following feedback and liaison between EDQ and SLR, an update of the latter is currently being prepared and is expected to be issued within the next few months. This version is referred herein as the 'Current MIMP (2025)'**.
- *Yarrabilba Precinct 6 ROL 1- Traffic Impact Assessment* (SLR, August 2023) – approved by EDQ on 23 December 2023.
- *Yarrabilba Precinct 6 ROL 2- Traffic Impact Assessment* (SLR, October 2023) – approved by EDQ on 7 June 2024.

For clarity, it is acknowledged that:

- The October 2015 IMP (Cardno) has been endorsed by EDQ but uses traffic modelling information that is superseded.



- Updated traffic modelling was undertaken in 2018, and the volumes from this are most representative of current Yarrabilba planning and have been used for all traffic design and assessment since 2018.
- The most recent traffic modelling (2018) is included in the Current MIMP (2022) and the Current MIMP (2025) and represents the most recent traffic forecasts and assessment for Yarrabilba.
- The Precinct 8 assessment herein uses volumes from the traffic model update in 2018.

Where relevant, some elements of these reports have been used to inform the traffic assessment herein. In particular, it is intended that the traffic and transport aspects of Precinct 8 is generally consistent with both the Endorsed MIMP (2019) and the Current MIMP (2025).

1.2 Traffic Model Update

The overall Yarrabilba road network and demographics were revised in 2018, which included reference to the initial traffic model (2015) and the Endorsed MIMP (2018). Whilst the demographics have been updated in various precincts, the demographics for the total Yarrabilba PDA are largely unchanged.

The Precinct 8 assessment is based on the most recent traffic model volumes and demographics (2018). This is discussed in **Section 4.0**. The traffic volume results from the 2018 modelling have been considered and incorporated herein. Such results include updated forecasts of traffic volumes and updated intersection capacity analysis. The latter includes key intersections providing access to Precinct 8.

It is recognised that whilst the traffic modelling undertaken in 2018 is still relevant and suitable for use, updated traffic modelling of the entire Yarrabilba transport network is commencing in 2025.



2.0 Proposed Development

The proposed Precinct 8 ROL 1 (**ROL 1**) development covers the whole Precinct 8 area. Primary vehicular access for this precinct will be via Jimbillunga Drive (formerly Ridge East-West Link), which is a Major (Trunk) Collector that provides connectivity to the wider road network and travels east-west through the centre of Precinct 8. It is noted that Yarrabilba Drive (formerly Town Centre North-South Road) is a Sub Arterial road serving the entire Yarrabilba catchment and therefore having a key role in supporting Precinct 8.

The proposed yield of ROL 1 represents the whole of Precinct 8, consisting of 846 residential lots (subject to future applications). This precinct is illustrated on **Figure 1**, in the context of precinct staging and the overall Yarrabilba Development Area.

Figure 1 ROL 1 Site Context



The proposed development plan for ROL 1 has been prepared by RPS and incorporates input from the wider design team (including advice on traffic and transport design matters provided by SLR). The plan is submitted as part of the planning documents for the application and has been used as the basis of the traffic assessment herein.

Based on information provided by Stockland and RPS and as detailed within the precinct layout plan, ROL 1 is proposed to include the following key land uses and yields:

- 846 residential lots,
- Three neighbourhood recreational parks,
- One linear recreational park,
- Linear open space, and
- Three stormwater treatment areas.



The Plan of Development (POD) boundary is illustrated on **Figure 2**, with the full-scale plan of ROL 1 provided at **Appendix A**.

Figure 2 Precinct 8 ROL 1 POD



It is recognised that in the ultimate horizon, **referred to herein as Scenario 2 – Ultimate**, ROL 1 (and the entire Precinct 8) will have vehicle access to the external road network via the following key routes (as well as other routes):

- North / West – Jimbillunga Drive, Mibinba Drive to Waterford-Tamborine Road,
- North - Jimbillunga Drive to Waterford-Tamborine Road,
- North / East - Jimbillunga Drive, Yarrabilba Drive to Waterford-Tamborine Road,
- South / East - Jimbillunga Drive, Hootman Drive to Plunkett Road,
- South – Jimbillunga Drive, Yarrabilba Drive to Plunkett Road, and
- South / East – Jimbillunga Drive, Wentland Avenue to Plunkett Road.

It is recognised that when the development of Precinct 8 ROL 1 opens, it is expected to only have vehicle access to the external road network via the following key routes:

- North – Jimbillunga Drive, Yarrabilba Drive to Waterford-Tamborine Road, and
- North - Jimbillunga Drive to Waterford-Tamborine Road.

A 2031 interim road network to serve ROL 1, **referred to herein as Scenario 1 – Interim (2031)**, is expected to only have vehicle access to the external road network via the following key routes:

- North / East – Jimbillunga Drive, Yarrabilba Drive to Waterford-Tamborine Road,
- North - Jimbillunga Drive to Waterford-Tamborine Road,
- North / West – Jimbillunga Drive, Mibinba Drive to Waterford-Tamborine Road, and



- South / East – Jimbillunga Drive, Hootman Drive to Plunkett Road.

The intersection assessment herein (see **Section 4.0**) considers Scenario 1 – Interim and Scenario 2 – Ultimate above. The assessed road network for Scenarios 1 and 2 is provided at **Appendix B**.

2.1 Pine Forest Way

Pine Forest Way borders the south-western extents of Precinct 8. This road is currently under the jurisdiction of Logan City Council and provides access to nine (9) privately-owned residential properties via the intersection of Waterford-Tamborine Road / Pine Forest Way. It is intended that in the ultimate design horizon, Pine Forest Way will be disconnected from Waterford-Tamborine Road as part of the upgrade of Waterford-Tamborine Road by the Department of Transport and Main Roads (TMR). If / when the latter occurs, access to the external road network, for these nine properties, will be facilitated via the road link of OW-PQ to Jimbillunga Drive, and either south-east or north-west from there.

In the interim, and until Pine Forest Way is disconnected from Waterford-Tamborine Road, the intersection OW will not be formally constructed, and the southern end of road link OW-PQ will be terminated with a private driveway facilitating access to the adjacent lots. As a result, the Pine Forest Way catchment will not have access to Precinct 8 in the interim, and conversely, the Precinct 8 catchment won't have access to Pine Forest Way.

Essentially, this proposed strategy eliminates any traffic generated by Precinct 8 (in either the interim or ultimate road network arrangements) from directly accessing the State-controlled road network via the Waterford-Tamborine Road / Pine Forest Way intersection.



3.0 Design Review

3.1 External Access

Precinct 8 does not include any major road connections that differ from the overall road network connections identified in the Endorsed MIMP (2019) and the Current MIMP (2025), nor does it propose any changes to these roads. Notwithstanding the latter, it is recognised that interim road network arrangements for ROL 1 will exclude some components of these major road connections. As such, the design review undertaken as a part of this traffic assessment focuses on the geometric suitability of the lower-order streets and adjoining road connections specific to the ROL 1 application.

For completeness, the location of ROL 1 has been illustrated on **Figure 2** with respect to the wider road alignments and intersection locations. The access locations to the major road network can be seen in **Figure 3**.

Figure 3 Precinct 8 ROL 1 External Road Connections



3.2 Internal Road Network

The internal roads (and their respective road reserve widths) proposed as part of the ROL 1 development will comprise the following:

- Sub Arterial (33.5m) – Yarrabilba Drive (North of Intersection RQ).
- Sub Arterial (26.5m) – Yarrabilba Drive (South of Intersection RQ to Intersection QWW).
- Major (Trunk) Collector (26.5m) – Jimbillunga Drive (west of Intersection Q to the western extent of ROL 1).
- Local Collector (21.0m).

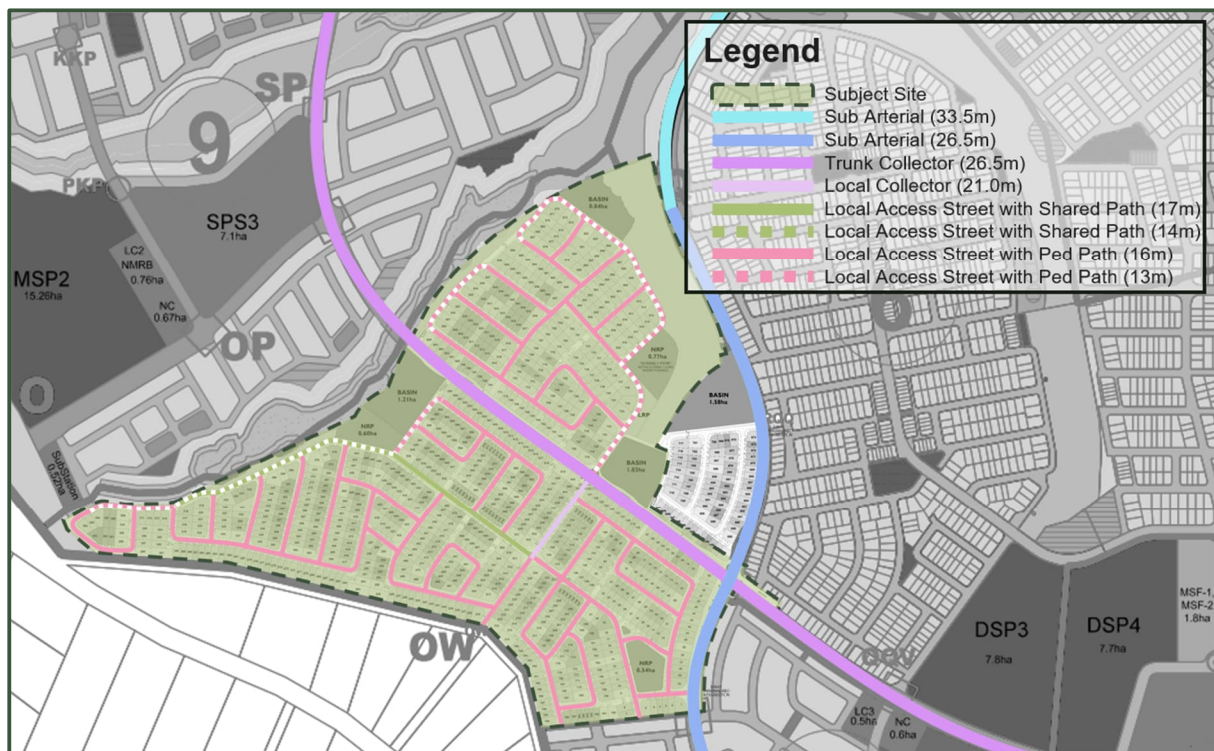


- Local Access Street with Shared Path (17.0m and 14.0m).
- Local Access Street with Pedestrian Path (16.0m and 13.0m).

The allocation of the above road cross sections to the Precinct 8 road network can be seen in **Figure 4**. The road reference points for the Yarrabilba Development are provided at **Appendix B**. The cross sections for the roads within ROL 1 are shown in the Functional Plans prepared by KN Group (at **Appendix C**).

The road hierarchy and general road alignments are generally consistent with those identified in both the Endorsed MIMP (2019) and the Current MIMP (2025).

Figure 4 Proposed Road Network Layout and Hierarchy



The cross sections for each road type have been developed by the project team with traffic input from SLR and were based on the design principles outlined within the Endorsed MIMP (2019) and the Current MIMP (2025). These cross sections are generally consistent with those designed/constructed previously in Yarrabilba and are underpinned by the typical cross sections detailed within the Endorsed MIMP (2019) and the Current MIMP (2025). Where appropriate, these cross sections adopt elements consistent with the EDQ “Street and movement network PDA guideline no. 06”.

It is important to note that the cross sections proposed for ROL 1 (see **Appendix C**) have some differences from those included in the Endorsed MIMP (2019) and the Current MIMP (2025). These differences are not considered significant, and the relevant/appropriate transport functions for all roads are retained/achieved by the proposed cross sections. Therefore, the variations to the cross sections are acceptable for ROL 1.

3.2.1 Road Type Lot Threshold

The Logan City Council (LCC) Planning Scheme 2015 provides planning advice for the road network. Table 3.4.1.4.1 of Schedule 6: Planning Scheme Policies Part 3 Standards (**PSP**)



provides design guidance regarding how many residential lots are to be served by specific road types. This information is provided in **Table 1**.

Table 1 Road Network Planning Guidelines (LCC PSP Table 3.4.1.4.1)

Road Function	Location	Road Type	Catchment Lots/Daily vehicles/Hectares
Access	Urban	Urban Access Street (UAS)	≤75 lots
		Urban Access Road (UAR)	≤300 lots
		Urban Neighbourhood Access Road (UNAR)	≤600 lots
	Non-urban	Rural Access Road (RAR)	-
	Industrial	Industrial Access Road (IAR)	≤120 lots or 12 Ha
	Centres	Main Street (MS)	2 city blocks

The internal road network of ROL 1 has been designed in accordance with such guidelines as EDQ's PDA Guideline No. 6, Queensland Streets, Complete Streets and Austroads in line with the Current MIMP (2025). Nonetheless, the road network internal to Precinct 8 ROL 1 aligns closely with the Urban Access Street (UAS) Road Type, which advises that no more than 75 lots would access each street link. This criterion is met by all streets within Precinct 8 ROL 1.

3.2.2 Emergency Access

To ensure future residents of ROL 1 are provided with secondary access options in the case of emergencies, two emergency vehicle access points have been provided, facilitating access redundancy for residents to Jimbillunga Drive from the north-east and south-western catchments.

3.3 Active Transport Provisions

The key elements of the walk and cycle network proposed in ROL 1 are generally consistent with the higher-order connections and elements within the Endorsed MIMP (2019) and the Current MIMP (2025). It is recognised that some active transport links, as proposed in Precinct 8, are additional to those identified in the Endorsed MIMP (2019) and the Current MIMP (2025).

Key elements of the active transport network relative to ROL 1 have been reproduced below for ease of reference, as identified within the Endorsed MIMP (2019) and the Current MIMP (2025):

- Primary / Principal Cycle Route (as per TMR's PCNP) along Yarrabilba Drive.
- Secondary Cycle Route along Jimbillunga Drive.
- Local Cycle Route following the Local Street (With Shared Path) and Local Collector within Precinct 8.

Within ROL 1, the following specific active transport infrastructure is proposed:

- Yarrabilba Drive (Principal / Primary Cycle Route) will include a Two-Way Cycle Track along the western verge + Shared Path (along the eastern verge).
- Jimbillunga Drive (Principal / Primary Cycle Route) will include a Two-Way Cycle Track along the southern verge + Shared Path along the northern verge.



- The proposed active transport paths achieve outcomes consistent with the active transport network identified in both the Endorsed MIMP (2019) and the Current MIMP (2025).

Figure 5 Proposed Active Transport Provisions



In accordance with the public transport strategy outlined in the Movement IMP, the Yarrabilba Master Plan aims to provide public transport connections within a 500m walking distance of residents within precinct developments.

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Figure 6 Proposed Public Transport Provisions

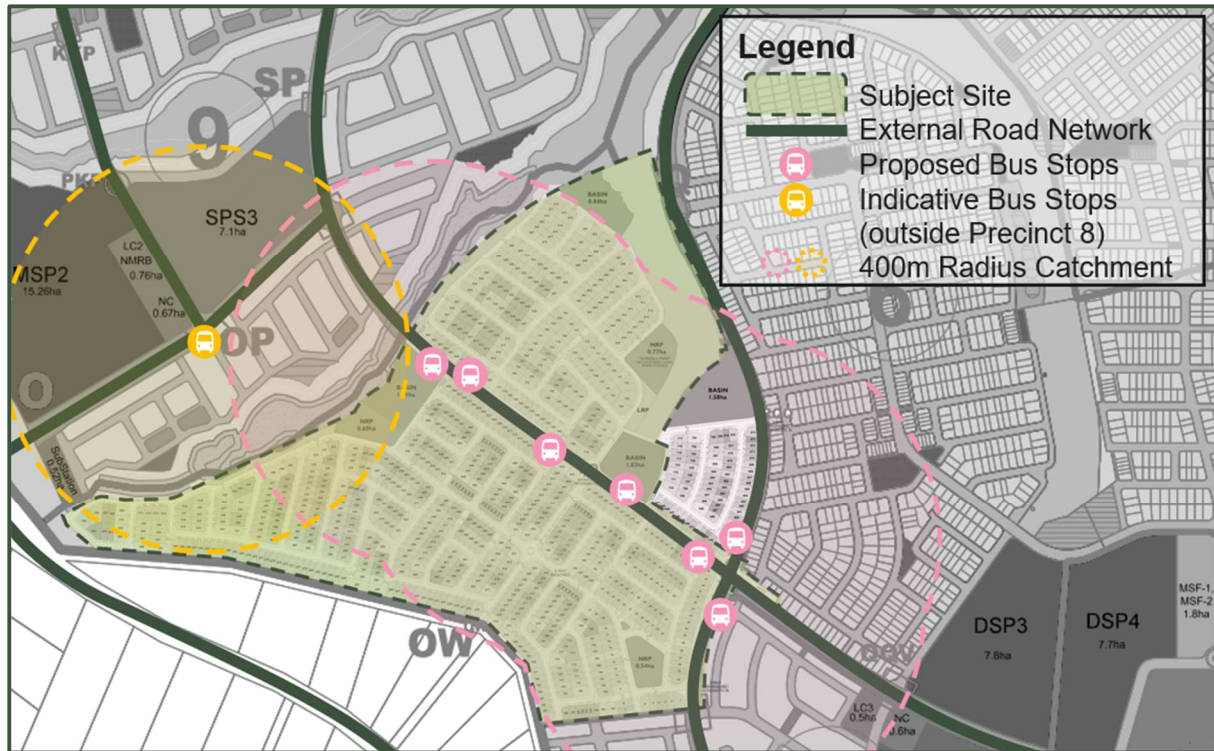


Figure 6 identifies that, when including the indicative bus stop (in orange on Figure 6), most lots in ROL 1 will be within 500m walking distance of a proposed bus stop. Similarly, approximately 12% of the total lots in ROL 1 are not located within the measured 400m radius of proposed bus stop pairs.

This outcome is slightly greater than the target noted in the Movement IMP, which states that “90% of Residential Lots are located within a 500 metre walk of a stop”. It is noted that this applies to the whole of the Yarrabilba PDA, where some precincts will have a proportion greater than 90%. Further to this, the Current MIMP (2025) notes that approximately 90 – 92% of residential lots for the whole of the Yarrabilba PDA will be within a 400m radius walking circle from a PT stop.

It is recognised that bus services may not be implemented by TransLink on the identified routes (this is to be negotiated by contract with the bus operator, Stockland and TransLink), however, the relevant roads have been designed to enable such bus routes to occur. The bus stops will be constructed in accordance with TransLink’s Public Transport Infrastructure Manual (PTIM).

On this basis, the public transport stops proposed within ROL 1 and the wider Precinct 8 will adequately service the catchment and comply with those identified in the Endorsed MIMP (2019) and the Current MIMP (2025).



4.0 Traffic Analysis

4.1 Development Scenarios

As identified in **Section 1.2**, following the completion of the original traffic modelling in 2015, updates to the model were undertaken in 2018. The proposed scenarios (interim and ultimate) assessed within the revised modelling were consistent with those originally assessed. In line with this updated modelling, the analysis herein assesses the same two scenarios, identified as follows:

- Scenario 1: Interim (2031) – assumes partial (approximately 75%) development of the Yarrabilba Masterplan, excluding some precincts to the south and east predominantly. This scenario also assumes that no external road connections to the south via Plunkett Road are constructed.
 - o Used to establish the interim access intersection forms for Precinct 8.
- Scenario 2: Ultimate – which assumes the full development of the wider Yarrabilba Masterplan, with a completed external road network in line with the Movement IMP (including a future connection to the Southern Infrastructure Corridor).
 - o Used to establish the ultimate access intersection forms for Precinct 8.

Refer to **Appendix B**, which provides road network maps for both the interim and ultimate scenarios (Scenarios 1 and 2).

4.2 Trunk Road Background Traffic Volumes

For the purposes of the following analysis, the traffic volumes on Jimbillunga Drive and Yarrabilba Drive for both scenarios were obtained from the 2018 modelling volumes (as reported in the Yarrabilba Master Plan Development Traffic Model and Intersection Analysis Data Compendium (SLR, November 2019)).

4.3 Precinct 8 Development Traffic Assumptions

4.3.1 Traffic Generation

A traffic generation rate of 0.8 vph/lot has been applied to the development yield in Precinct 8, with the total trips for each peak hour shown in **Table 2**.

Table 2 Precinct 8 Trip Generation – Residential

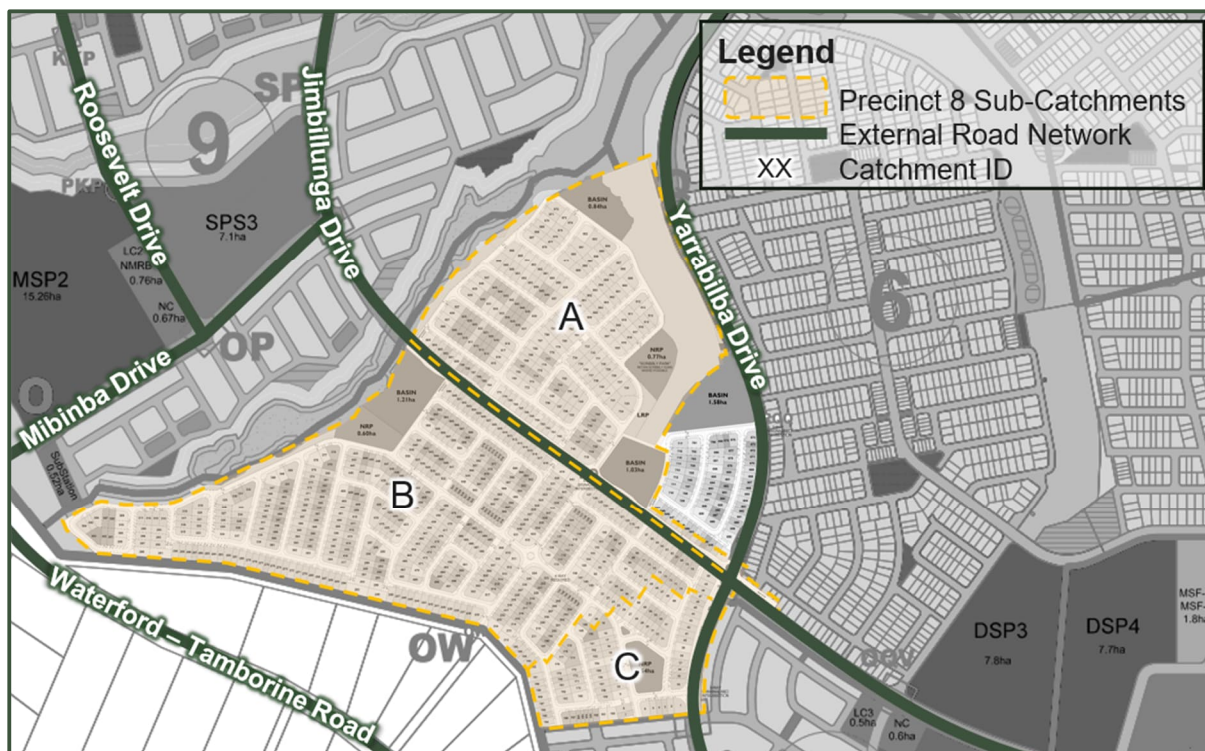
Sub-Precinct	Number of Lots	AM Trip Rate	PM Trip Rate	AM Trips	PM Trips
A	203	0.8 vph/lot	0.8 vph/lot	163	163
B	547			438	438
C	96			78	78
Total	846	-	-	679	679

4.3.2 Traffic Distribution

To quantify the traffic movements at the two site access points, Precinct 8 has been divided into smaller sub-catchments for the purposes of distribution. The identified sub-catchments can be seen in **Figure 7**.



Figure 7 Precinct 8 Sub-Catchments



The distribution of traffic generated by Precinct 8 has been assigned to the external road network consistent with the distribution assumptions adopted in the previously approved trigger analysis, with additional consideration given to the routing of traffic internal to the precinct. These distribution assumptions have been reproduced in **Table 3** for the interim scenarios, and **Table 4** for the ultimate scenario.

Table 3 Distribution of Precinct 8 Traffic – Interim (2031)

Sub-Precinct	To / From Yarrabilba Drive (N)	To / From Yarrabilba Drive (S) ^[1]	To / From Jimbillunga Drive (E)	To / From Jimbillunga Drive (W)
A	0%	0%	12%	88%
B	0%	0%	12%	88%
C	30%	0%	12%	58%

^[1] Yarrabilba Drive (S) link to external road network is incomplete in the interim (2031)



Table 4 Distribution of Precinct 8 Traffic – Ultimate

Sub-Precinct	To / From Yarrabilba Drive (N)	To / From Yarrabilba Drive (S)	To / From Jimbillunga Drive (E)	To / From Jimbillunga Drive (W)
A	0%	10%	12%	78%
B ^[1]	0%	10%	12%	78%
C ^[2]	18%	10%	12%	60%

^[1] Internal links between Sub-Precinct B and C allow traffic to/from Jimbillunga Drive (W) for these two Sub-Precincts to use intersection PQ.

^[2] Internal links between Sub-Precinct B and C allow traffic going to/ from Yarrabilba Drive (S) for these two Sub-Precincts to use intersection QWW.

4.3.3 In / Out Split

In line with previous assessments, typical industry adopted in / out splits have been adopted for the residential component within the Precinct 8 development, summarised in **Table 4**.

Table 5 In / Out Split

Peak Period	Residential Trips	
	IN	OUT
AM	20%	80%
PM	70%	30%

The resultant traffic volume diagrams have been included in **Appendix D**.

4.4 Study Intersections

The following analysis considers the three (3) intersections identified that provide access for and are adjacent to Precinct 8. The intersection locations, along with their interim and ultimate forms, are identified in **Figure 8** and **Table 6**.



Figure 8 Study Intersections

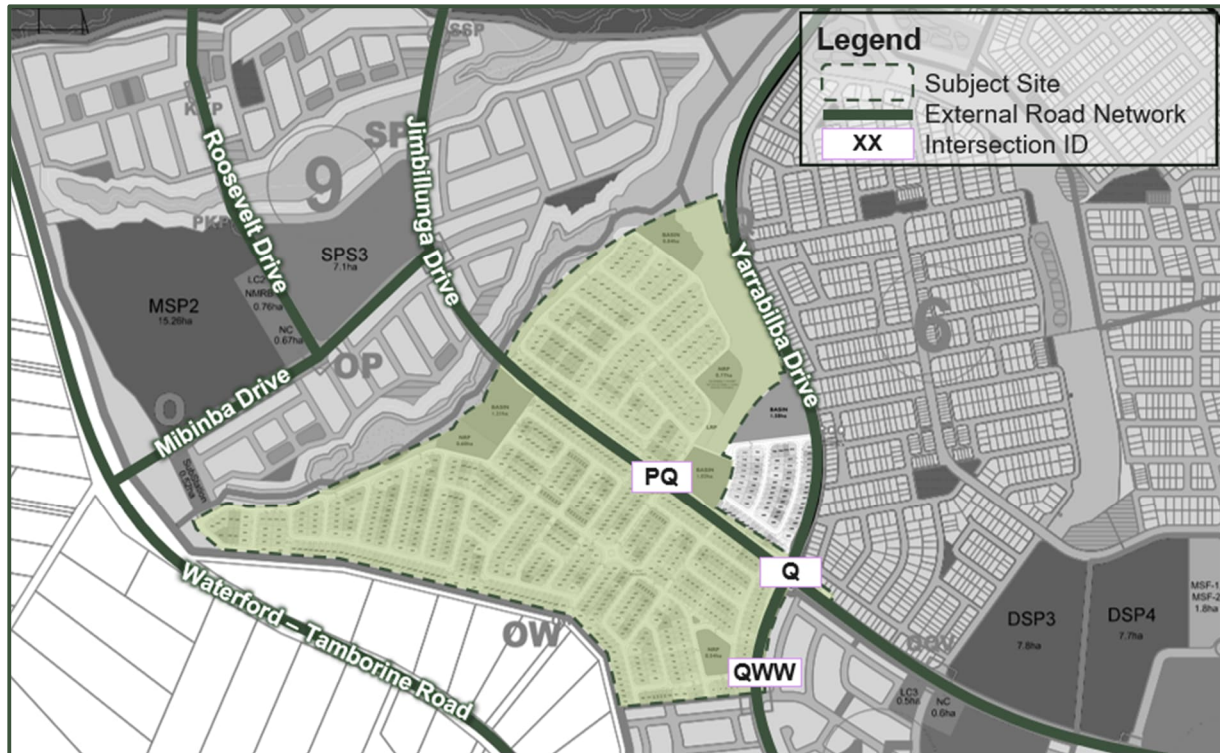


Table 6 Intersection Form

ID	Interim Form	Ultimate Form
Q		
QWW		
PQ		

4.5 Scenario 1 – Interim

The general interim intersection forms of key intersections within Precinct 8 have adopted the ultimate road hierarchy and cross-sectional requirements of the major roads identified in the Movement IMP. The key roads and the lane capacity requirements have been summarised in **Table 7** (noting that additional lanes will be required at intersections).



Table 7 Ultimate Lane Capacity Requirements

Road Name	Link Location	Proposed Traffic Lanes
Yarrabilba Drive	North of Q	2 Lanes
	Q – QWW	2 Lanes
	South of QWW	2 Lanes
Jimbillunga Drive	West of PQ	2 Lanes
	PQ – Q	2 Lanes
	East of Q	2 Lanes

The performance of all key intersections has been assessed in SIDRA Intersection 9.1 to establish the operational performance of the proposed layout. Detailed outputs for Scenario 1 (Interim), including intersection layout plans and movement summaries, have been provided in **Appendix E**. A summary of the results is provided in **Table 8**.

Table 8 Summary of Interim Intersection Results

Intersection Location	Control Type	Operational Element	AM Peak	PM Peak
Node Q	Signalised	DoS	0.53	0.47
		Average Delay (s)	37	37
		95 th ile Queue (m)	64	51
Node QWW	Priority Controlled (T-junction)	DoS	0.03	0.02
		Average Delay (s)	2	3
		95 th ile Queue (m)	1	1
Node PQ	Signalised	DoS	0.68	0.59
		Average Delay (s)	42	33
		95 th ile Queue (m)	106	94

The performance of all key intersections within Precinct 8 in the interim scenario (Scenario 1) is within the maximum operating parameters for signalised (maximum DoS 0.90) and unsignalised (maximum DoS 0.80) intersections.

4.6 Scenario 2 – Ultimate

The performance of all intersections for the ultimate scenario has been assessed in SIDRA 9.1. The analysis results are summarised in **Table 9**, with the detailed outputs (including intersection layout plans) provided in **Appendix F**.



Table 9 Summary of Ultimate Intersection Results

Intersection Location	Control Type	Operational Element	AM Peak	PM Peak
Node Q	Signalised	DoS	0.69	0.55
		Average Delay (s)	37	38
		95 th ile Queue (m)	99	68
Node QWW	Priority Controlled (T-junction)	DoS	0.29	0.27
		Average Delay (s)	1	1
		95 th ile Queue (m)	6	2
Node PQ	Signalised	DoS	0.66	0.75
		Average Delay (s)	43	41
		95 th ile Queue (m)	141	116

The results reported in **Table 9** confirm that the performance of all intersections within Precinct 8 in the ultimate scenario (Scenario 2) is within the adopted maximum operating parameters.

4.7 Intersection Form

The functional drawings for Precinct 8 have been prepared by KN Group to provide sufficient road reserve allocation to accommodate the necessary road and intersection configurations.



5.0 Summary

The following summarises the key conclusions in respect of the traffic and transport aspects of Precinct 8 ROL 1 and considers the need for consistency with the Movement Infrastructure Master Plan (**MIMP**):

- **Road Hierarchy** – The network of roads within and adjacent to Precinct 8 is generally consistent with the road hierarchy identified in both the Endorsed MIMP (2019) and the Current MIMP (2025). The proposed network of roads is appropriate for the proposed ROL 1 development, the future Precinct 8 development, and the overall Yarrabilba development.
- **Key Intersections** – The design form of key intersections within Precinct 8, providing connections to/from each sub-precinct, is appropriate to accommodate the anticipated traffic volumes within Precinct 8. Adequate allowance has been made in these intersection forms to facilitate the needs of the ultimate Yarrabilba development.
- **Local Street Network** – The local street network has been designed to achieve good street design principles, particularly related to local traffic speeds and active transport needs.
- **Cross Sections** – The proposed cross sections in ROL 1, whilst differing in some aspects, are generally consistent with the Endorsed MIMP (2019) and the Current MIMP (2025). The transport functions of these MIMPs are achieved by the proposed cross sections.
- **Active Transport** – The active transport provisions achieve outcomes consistent with the active transport network identified in both the Endorsed MIMP (2019) and the Current MIMP (2025), and these are appropriate to satisfy the needs of ROL 1 in conjunction with the surrounding development of Yarrabilba.
- **Public Transport** – The layout and design of streets within ROL 1 makes the appropriate provision for public transport (bus services) and potential bus stops. This is consistent with what is identified in both the Endorsed MIMP (2019) and the Current MIMP (2025).

6.0 RPEQ Certification

This traffic assessment and report has been prepared under the direction of a Registered Professional Engineer of Queensland (RPEQ) and Road Safety Auditor (as accredited by TMR) who is experienced in traffic engineering, transport planning and road safety. The report is endorsed by this RPEQ accordingly.

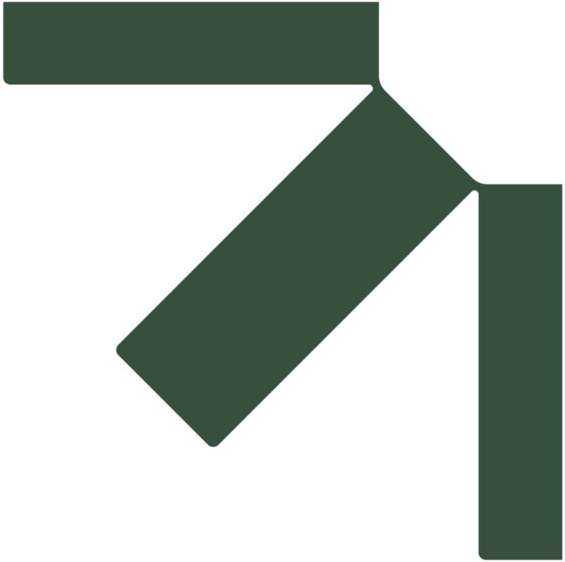
Sincerely,

SLR Consulting Australia



Brendyn Rheinberger, RPEQ #17962
Principal Consultant





Appendix A Development Plans

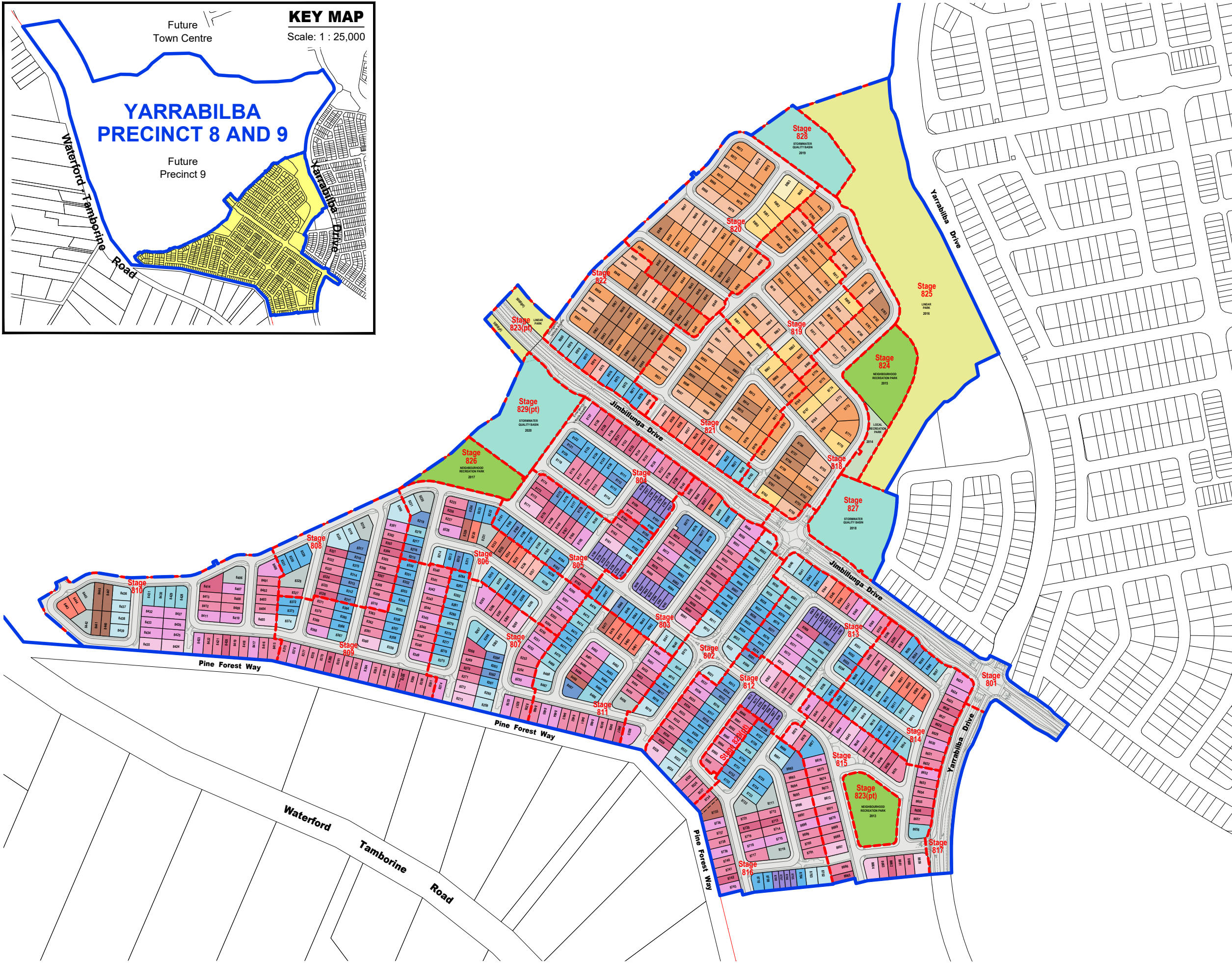
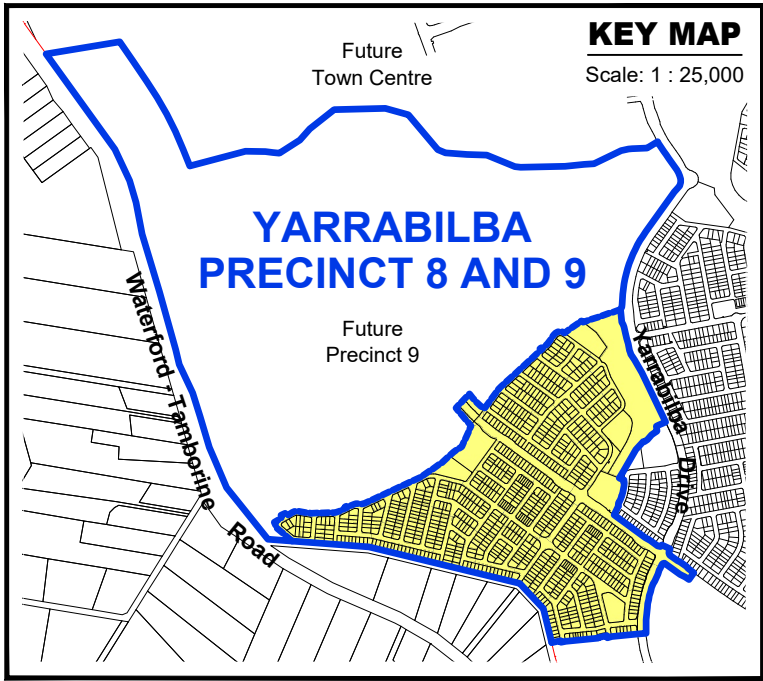
Yarrabilba, Precinct 8 ROL 1

Traffic Impact Assessment

Stockland Residential Communities

SLR Project No.: 620.V11743.00006

30 May 2025



Note:
All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and EDQ approval.

Dimensions have been rounded to the nearest 0.1 metres. Areas have been rounded down to the nearest 5m².

The boundaries shown on this plan should not be used for final detailed engineers design.

Source Information:
Site boundaries: RPS Survey
Adjoining information: DCDB

Legend

- Precinct Boundary
- Application Boundary
- Stage Boundary

Land Budget

Land Use	Overall	
	Area	%
Residential Allotments	33.457 ha	53.1%
Trunk / Collector Roads	4.049 ha	6.4%
Local Roads	15.323 ha	24.3%
Neighbourhood Recreation Park	1.934 ha	3.1%
Local Recreation Park	0.210 ha	0.3%
Linear Park	5.016 ha	8.0%
Drainage Open Space	3.005 ha	4.8%
Total	62.994 ha	100.0%

Yield Breakdown

Allotment Typology	Typical Area	Overall	
25m Deep Product			
25m x 7.5m Terrace	188m²	39	5%
25m x 10.5m	263m²	41	5%
25m x 12.5m	313m²	132	16%
25m x 14m	350m²	59	7%
25m x 16m	400m²	38	4%
Subtotal		309	37%
28m Deep Product			
28m x 10.5m	280m²	5	1%
28m x 12.5m	350m²	23	3%
28m x 14m	392m²	9	1%
Subtotal		37	4%
30m Deep Product			
30m x 10.5m	315m²	47	6%
30m x 12.5m	375m²	171	20%
30m x 14m	420m²	67	8%
30m x 16m	480m²	20	2%
30m x 18m	540m²	1	0%
Subtotal		306	36%
32m Deep Product			
32m x 12.5m	400m²	42	5%
32m x 14m	448m²	75	9%
32m x 16m	512m²	51	6%
32m x 18m	576m²	14	2%
32m x 20m	640m²	1	0%
Subtotal		183	22%
Multi-Family Strata Lots	550m²+	11	1%
Total Residential Allotments		846	100%
Density (calc. includes area of residential lots, local roads and rec. parks)		15.1 dw/ha	

PLAN REF: **AU13933 – 35**

Rev No: **A**
DATE: 30 May 2025
CLIENT: Stockland
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0 50 100 150 200 250 1 : 5,000 @ A3

**YARRABILBA
PRECINCT 8 - APPLICATION 1
RECONFIGURATION OF A LOT - OVERALL**



Stockland

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Land Budget

Land Use	Stage 801	Stage 802	Stage 803	Stage 804	Stage 805	Stage 806	Stage 807	Stage 808	Stage 809	Stage 810	Stage 811	Stage 812	Stage 813	Stage 814	Stage 815	Stage 816	Stage 817	Stage 818	Stage 819	Stage 820	Stage 821	Stage 822	Stage 823	Stage 824	Stage 825	Stage 826	Stage 827	Stage 828	Stage 829	Overall	
	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	%
Residential Allotments	—	1.109 ha	1.695 ha	1.335 ha	1.358 ha	1.490 ha	1.558 ha	1.261 ha	1.927 ha	2.083 ha	1.624 ha	1.271 ha	1.415 ha	1.576 ha	1.665 ha	2.051 ha	—	2.166 ha	1.494 ha	2.283 ha	2.062 ha	1.748 ha	—	—	—	—	—	—	0.286 ha	33.457 ha	53.1%
Trunk / Collector Roads	1.709 ha	0.332 ha	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.699 ha	—	—	—	—	—	1.309 ha	—	—	—	—	—	—	4.049 ha	6.4%
Local Roads	—	0.440 ha	0.894 ha	0.704 ha	0.458 ha	0.815 ha	0.670 ha	0.641 ha	0.707 ha	1.253 ha	0.667 ha	0.630 ha	0.641 ha	0.577 ha	0.981 ha	0.806 ha	—	1.250 ha	0.685 ha	1.004 ha	0.885 ha	0.597 ha	0.018 ha	—	—	—	—	—	—	15.323 ha	24.3%
Neighbourhood Recreation Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.547 ha	0.769 ha	—	0.618 ha	—	—	—	1.934 ha	3.1%
Local Recreation Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.210 ha	—	—	—	—	—	0.210 ha	0.3%
Linear Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.283 ha	—	4.733 ha	—	—	—	—	5.016 ha	8.0%
Drainage Open Space	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.013 ha	—	—	—	1.048 ha	0.776 ha	1.168 ha	3.005 ha	4.8%
Total	1.709 ha	1.881 ha	2.589 ha	2.039 ha	1.816 ha	2.305 ha	2.228 ha	1.902 ha	2.634 ha	3.336 ha	2.291 ha	1.901 ha	2.056 ha	2.153 ha	2.646 ha	2.857 ha	0.699 ha	3.416 ha	2.179 ha	3.287 ha	2.947 ha	2.345 ha	2.170 ha	0.979 ha	4.733 ha	0.618 ha	1.048 ha	0.776 ha	1.454 ha	62.994 ha	100.0%

Yield Breakdown

Allotment Typology	Typical Area	Stage 802	Stage 803	Stage 804	Stage 805	Stage 806	Stage 807	Stage 808	Stage 809	Stage 810	Stage 811	Stage 812	Stage 813	Stage 814	Stage 815	Stage 816	Stage 818	Stage 819	Stage 820	Stage 821	Stage 822	Stage 829	Overall	
25m Deep Product																								
25m x 7.5m Terrace	188m²	—	7	7	7	—	—	—	—	—	—	7	7	—	—	4	—	—	—	—	—	—	39	5%
25m x 10.5m	263m²	3	5	3	5	5	2	4	1	—	1	4	4	1	—	3	—	—	—	—	—	—	41	5%
25m x 12.5m	313m²	12	12	9	10	10	10	6	12	—	6	5	8	13	1	11	—	—	—	2	5	—	132	16%
25m x 14m	350m²	7	3	—	3	3	4	—	2	4	7	3	8	6	1	2	1	—	—	1	4	—	59	7%
25m x 16m	400m²	7	1	2	1	3	3	3	2	4	2	2	3	2	—	3	—	—	—	—	—	—	38	4%
Subtotal		29	28	21	26	21	19	13	17	8	16	21	30	22	2	23	1	—	—	3	9	—	309	37%
28m Deep Product																								
28m x 10.5m	280m²	—	—	—	—	2	—	—	—	—	2	—	—	—	—	1	—	—	—	—	—	—	5	1%
28m x 12.5m	350m²	—	1	—	—	4	—	—	—	2	4	—	2	4	—	—	—	—	—	5	1	—	23	3%
28m x 14m	392m²	—	—	—	—	2	—	—	—	—	—	—	1	1	—	—	—	—	—	3	2	—	9	1%
Subtotal		—	1	—	—	8	—	—	—	2	6	—	3	5	—	1	—	—	—	8	3	—	37	4%
30m Deep Product																								
30m x 10.5m	315m²	—	6	5	5	1	2	6	2	2	3	3	1	3	4	3	—	—	—	—	—	1	47	6%
30m x 12.5m	375m²	—	11	13	8	4	10	9	26	14	11	10	2	10	22	17	—	—	—	—	—	4	171	20%
30m x 14m	420m²	1	4	2	1	4	6	2	6	12	6	2	5	3	6	6	—	—	—	—	—	1	67	8%
30m x 16m	480m²	—	1	—	2	—	3	—	1	3	—	2	1	—	5	1	—	—	—	—	—	1	20	2%
30m x 18m	540m²	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	0%
Subtotal		1	22	20	16	9	21	17	35	31	20	17	9	16	38	27	—	—	—	—	—	7	306	36%
32m Deep Product																								
32m x 12.5m	400m²	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	8	—	9	5	16	—	42	5%
32m x 14m	448m²	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18	14	19	17	7	—	75	9%
32m x 16m	512m²	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11	12	12	10	6	—	51	6%
32m x 18m	576m²	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	4	2	—	—	14	2%
32m x 20m	640m²	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	0%
Subtotal		—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	41	30	45	34	29	—	183	22%
Multi-Family Strata Lots																								
Multi-Family Strata Lots	550m²+	—	—	—	—	2	—	2	—	3	1	—	—	—	—	3	—	—	—	—	—	—	11	1%
Total Residential Allotments																								
Total Residential Allotments		30	51	41	42	40	40	32	52	48	43	38	42	43	40	54	42	30	45	45	41	7	846	100%
Density (calc. includes area of residential lots, local roads and recreation parks)																							15.1 dw/ha	

PLAN REF: AU13933 – 36

Rev No: A
DATE: 30 May 2025
CLIENT: Stockland
DRAWN BY: MM / BM
CHECKED BY: BM



Not to Scale @ A3

YARRABILBA
PRECINCT 8 - APPLICATION 1
DEVELOPMENT STATISTICS



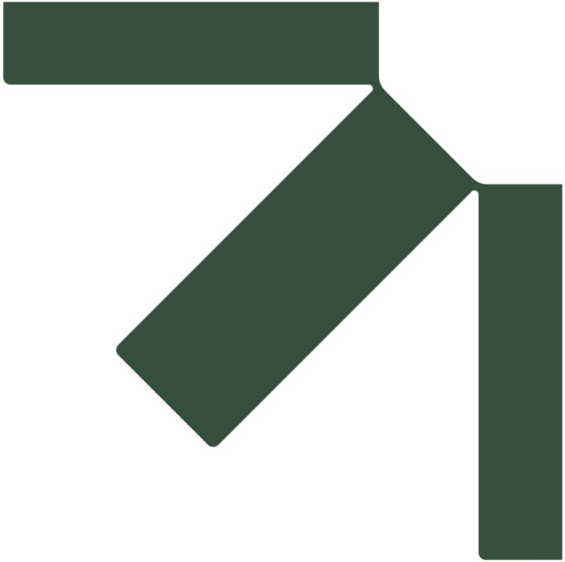
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Appendix B Yarrabilba Road Network Plan

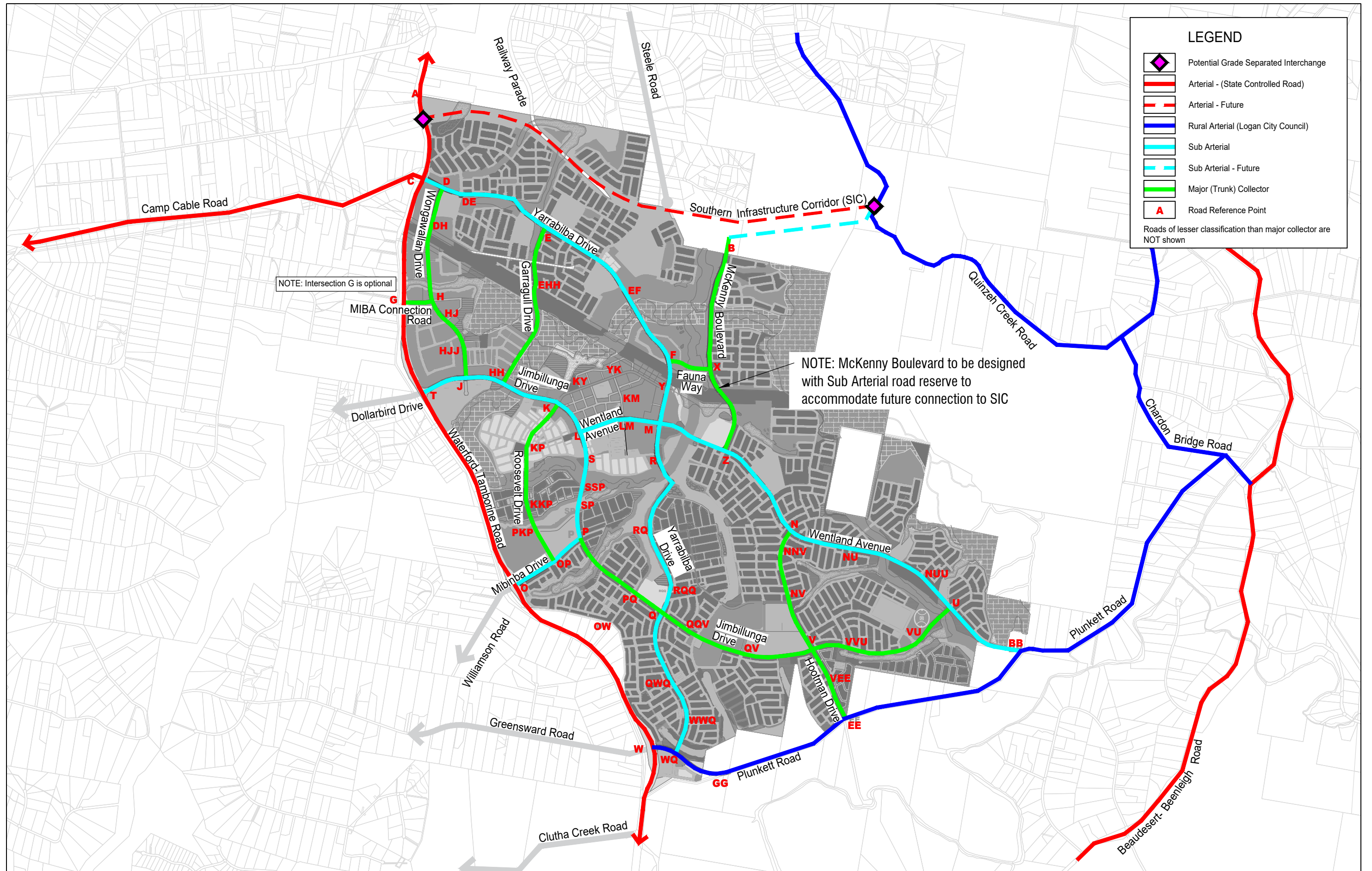
Yarrabilba, Precinct 8 ROL 1

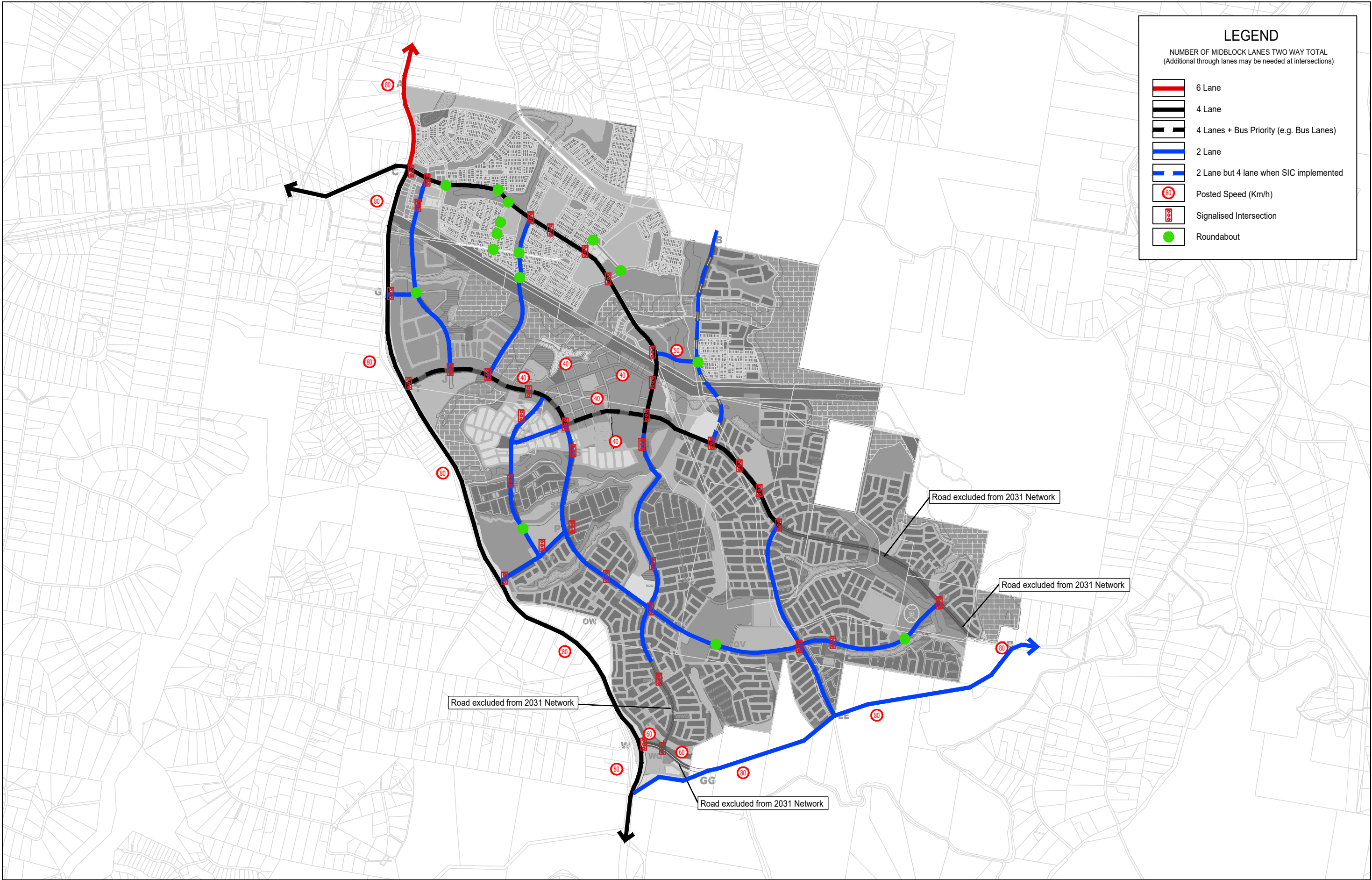
Traffic Impact Assessment

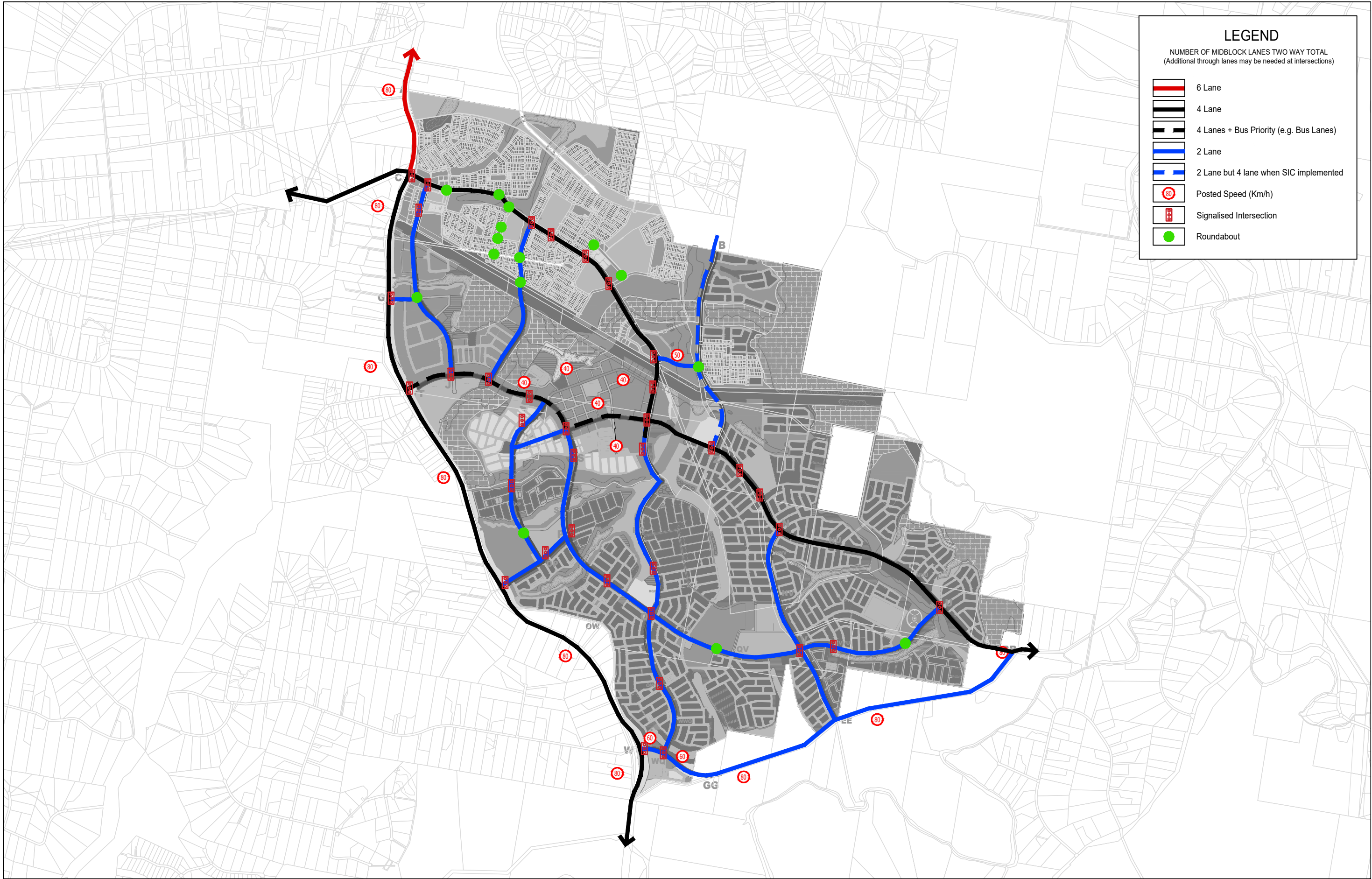
Stockland Residential Communities

SLR Project No.: 620.V11743.00006

30 May 2025





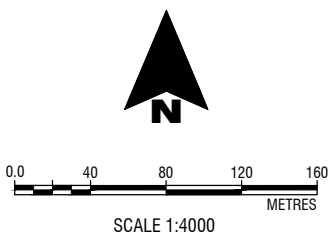


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Project No:	620.11743.00101
Date:	24/01/2025
Drawn by:	AM
Scale:	AS SHOWN
Sheet Size:	A3
Projection:	(GDA94) MGA Zone

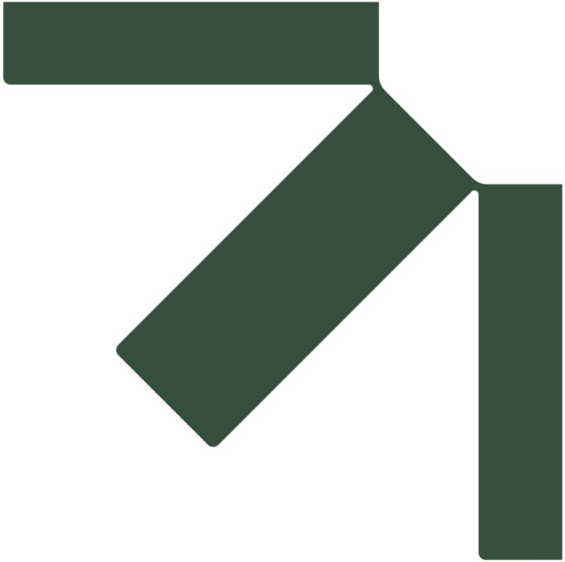


Stockland Residential Communities

Yarrabilba Masterplan

**Ultimate Traffic Model Road Network
(Lanes/Speed/Intersections)**

FIGURE 602



Appendix C Functional Plans

Yarrabilba, Precinct 8 ROL 1

Traffic Impact Assessment

Stockland Residential Communities

SLR Project No.: 620.V11743.00006

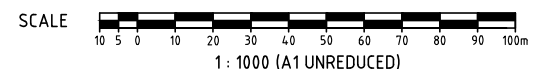
30 May 2025



LEGEND

- LOCAL ACCESS STREET (13.0m WIDE)
- LOCAL ACCESS STREET (14.0m WIDE)
- LOCAL ACCESS STREET (16.0m WIDE)
- LOCAL ACCESS STREET (17.0m WIDE)
- LOCAL COLLECTOR (21.0m WIDE)
- TRUNK COLLECTOR (26.5m WIDE)
- 1.5m PATH
- 2.5m PATH
- 3.0m BIKEPATH
- SHARED PATH
- DRIVEWAY CONFIGURATION TO BE CONFIRMED DURING DETAIL DESIGN
- REFER RPS LANDSCAPE FOR ACCESS RESTRICTION DETAILS

ROADWORKS PLAN
SCALE 1:1000



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FOR
APPROVAL

REVISIONS					
No	Description	DR	DES	CHK	Date
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Project

PRECINCT 8 - ROL1
PRELIMINARY PLANNING
FUNCTIONAL DRAWINGS

Client

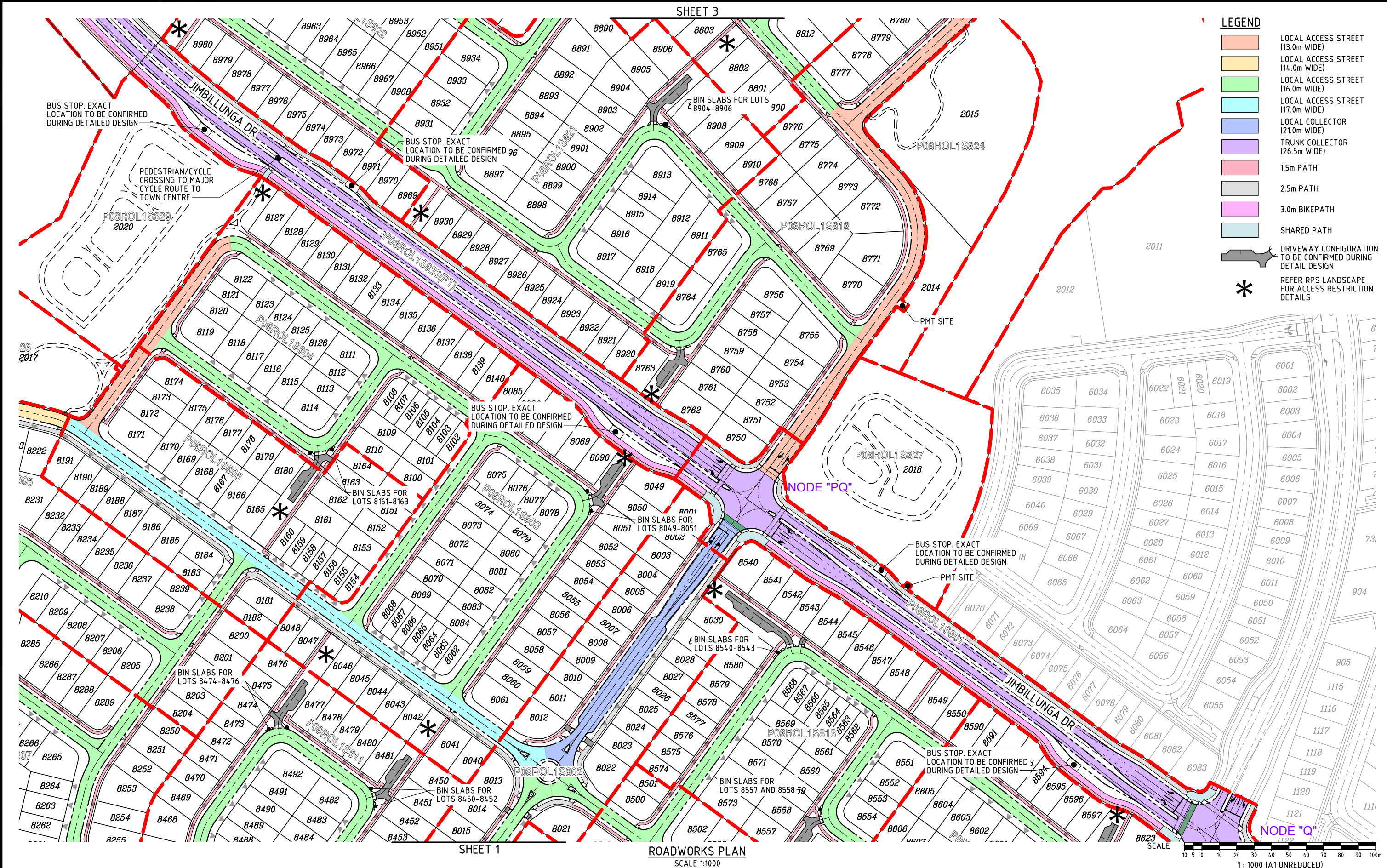
Approved - RPEQ 12805

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Application No.

L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.knigroup.com.au | 07 3017 1900

Drawing Title			
FUNCTIONAL LAYOUT ROADWORKS PLAN SHEET 1			
Scale	AS SHOWN	Sheet	06 of 34
A1	Drawing No 24-153-SK006	Revision	A



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SHEET 2 ROADWORKS PLAN SCALE 1:1000

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APPROVAL

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No	Description	DR	DES	CHK	Date
A	FOR APPROVAL	SLK	JAS	RWM	30.05.25

Project

YARRABILBA

PRECINCT 8 - ROL1
PRELIMINARY PLANNING
FUNCTIONAL DRAWINGS

Client

Stockland

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NORTH

Application No.

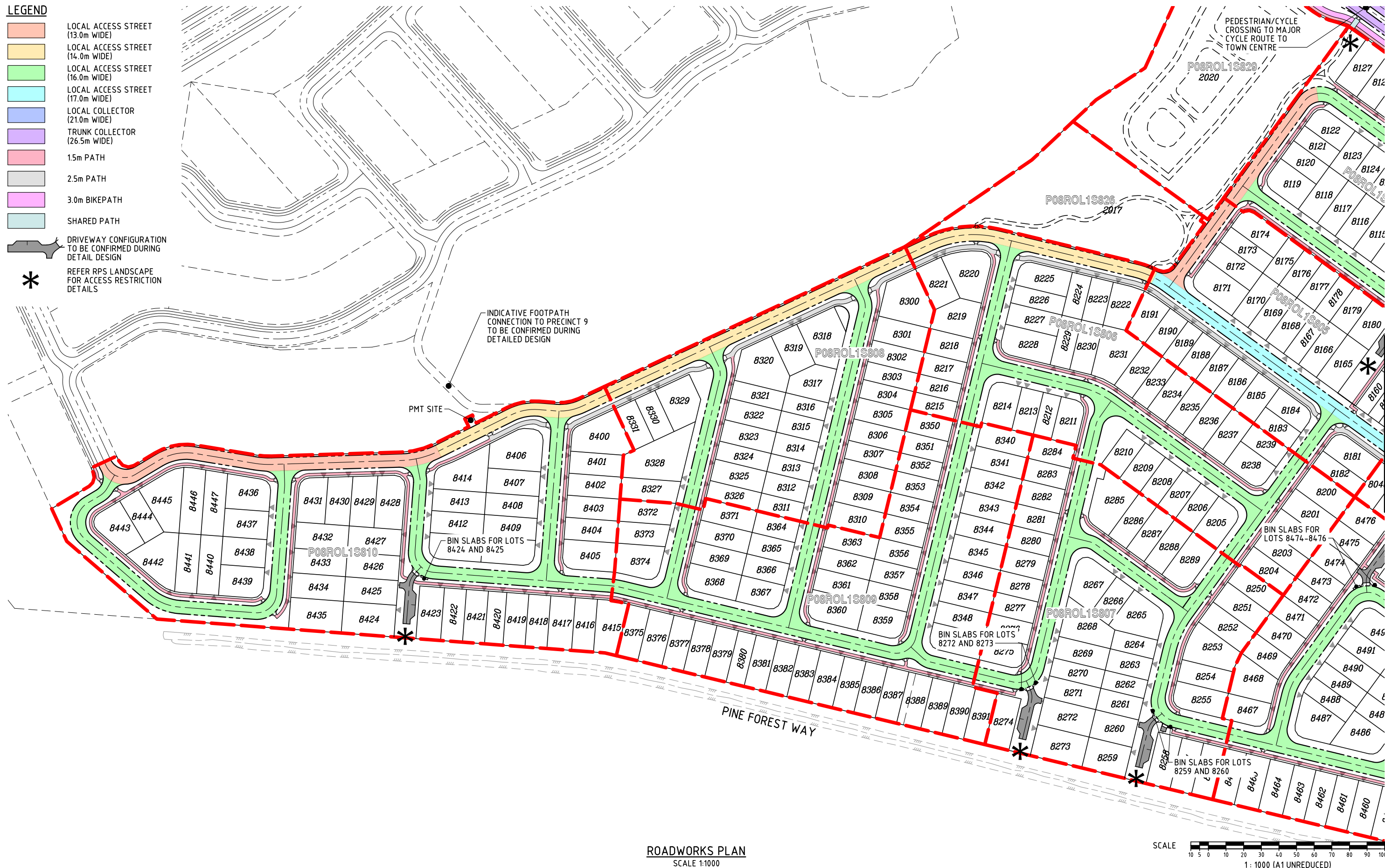
kn group

L1, 62 Astor Terrace, Spring Hill, QLD 4000
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Drawing Title			
FUNCTIONAL LAYOUT ROADWORKS PLAN SHEET 3			
Scale	AS SHOWN	Sheet	08 of 34
A1	Drawing No 24-153-SK008	Revision	A

LEGEND

- LOCAL ACCESS STREET (13.0m WIDE)
- LOCAL ACCESS STREET (14.0m WIDE)
- LOCAL ACCESS STREET (16.0m WIDE)
- LOCAL ACCESS STREET (17.0m WIDE)
- LOCAL COLLECTOR (21.0m WIDE)
- TRUNK COLLECTOR (26.5m WIDE)
- 1.5m PATH
- 2.5m PATH
- 3.0m BIKEPATH
- SHARED PATH
- DRIVEWAY CONFIGURATION TO BE CONFIRMED DURING DETAIL DESIGN
- REFER RPS LANDSCAPE FOR ACCESS RESTRICTION DETAILS



ROADWORKS PLAN
SCALE 1:1000

SCALE
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1 : 1000 (A1 UNREDUCED)

FOR
APPROVAL

REVISIONS					
No	Description	DR	DES	CHK	Date
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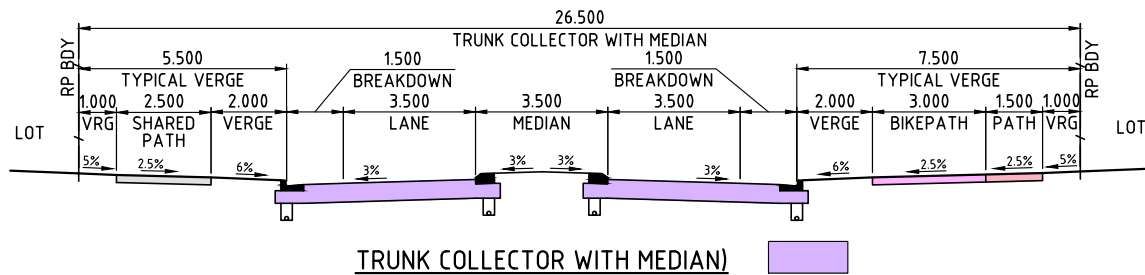
Project
YARRABILBA
PRECINCT 8 - ROL1
PRELIMINARY PLANNING
FUNCTIONAL DRAWINGS

Client
Stockland
Approved - RPEQ 12805

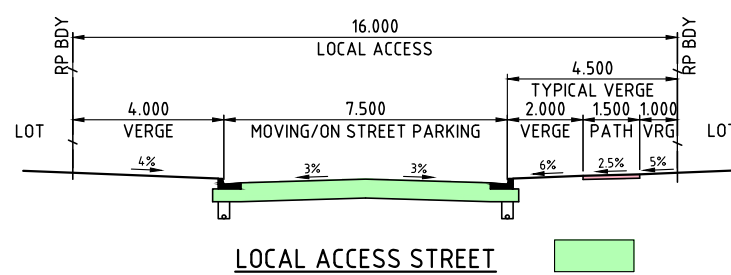
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NORTH
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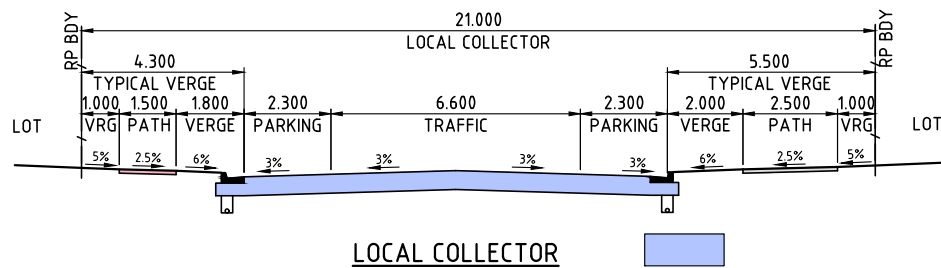
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ROADWORKS PLAN
SHEET 4**
Scale
AS SHOWN
Drawing No
24-153-SK009
Sheet
09 of 34
Revision
A



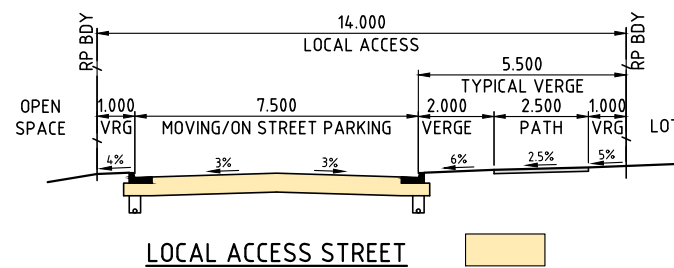
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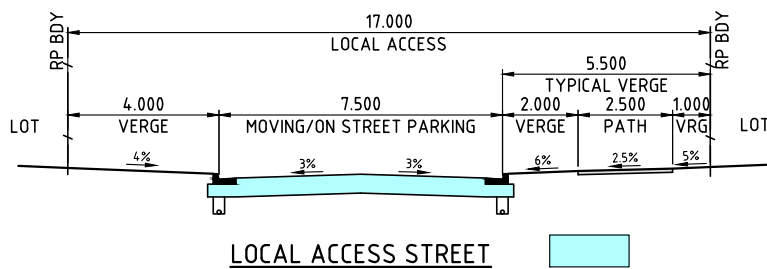
LOCAL ACCESS STREET



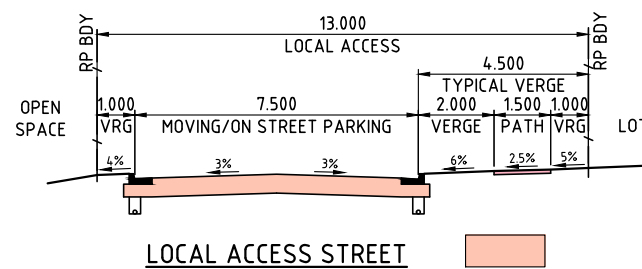
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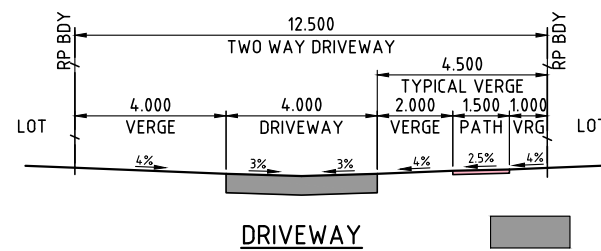
LOCAL ACCESS STREET



LOCAL ACCESS STREET



LOCAL ACCESS STREET



DRIVEWAY

NB
KERB TYPES TO BE CONFIRMED
DURING DETAILED DESIGN



FOR
APPROVAL

REVISIONS					
No	Description	DR	DES	CHK	Date
A	FOR APPROVAL	SLK	JAS	RWM	30.05.25

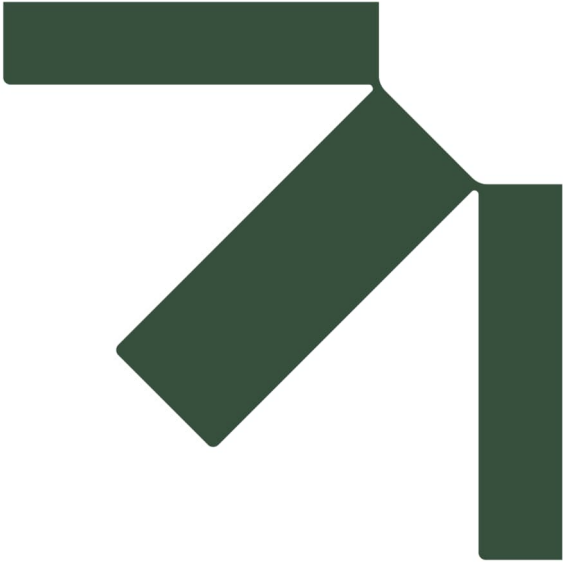
Project
YARRABILBA
PRECINCT 8 - ROL1
PRELIMINARY PLANNING
FUNCTIONAL DRAWINGS

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Drawing Title
**FUNCTIONAL LAYOUT
TYPICAL CROSS SECTIONS**
Scale
AS SHOWN
A1
Drawing No
24-153-SK010
Sheet
10 of 34
Revision
A



Appendix D Traffic Volume Diagrams

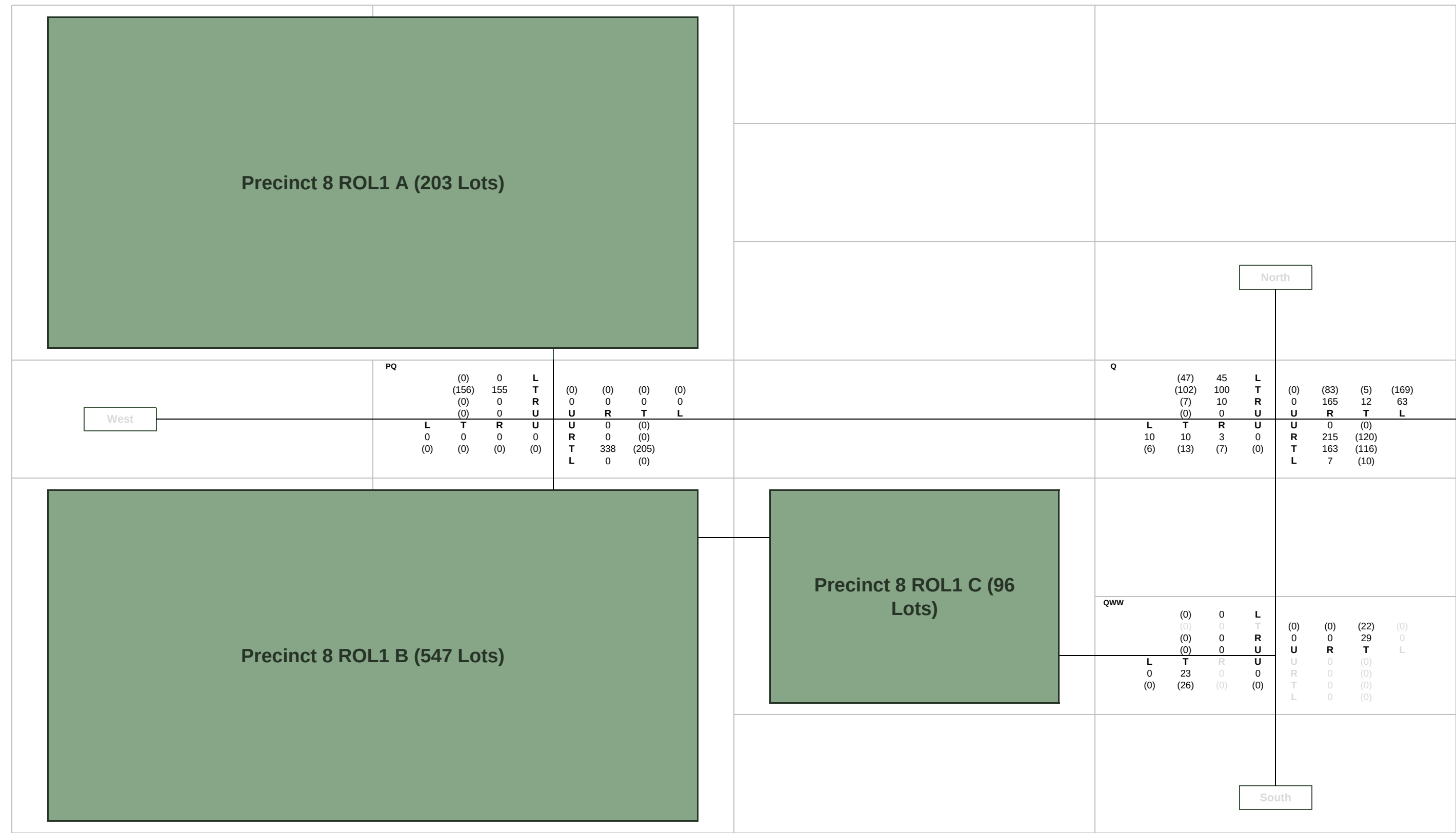
Yarrabilba, Precinct 8 ROL 1

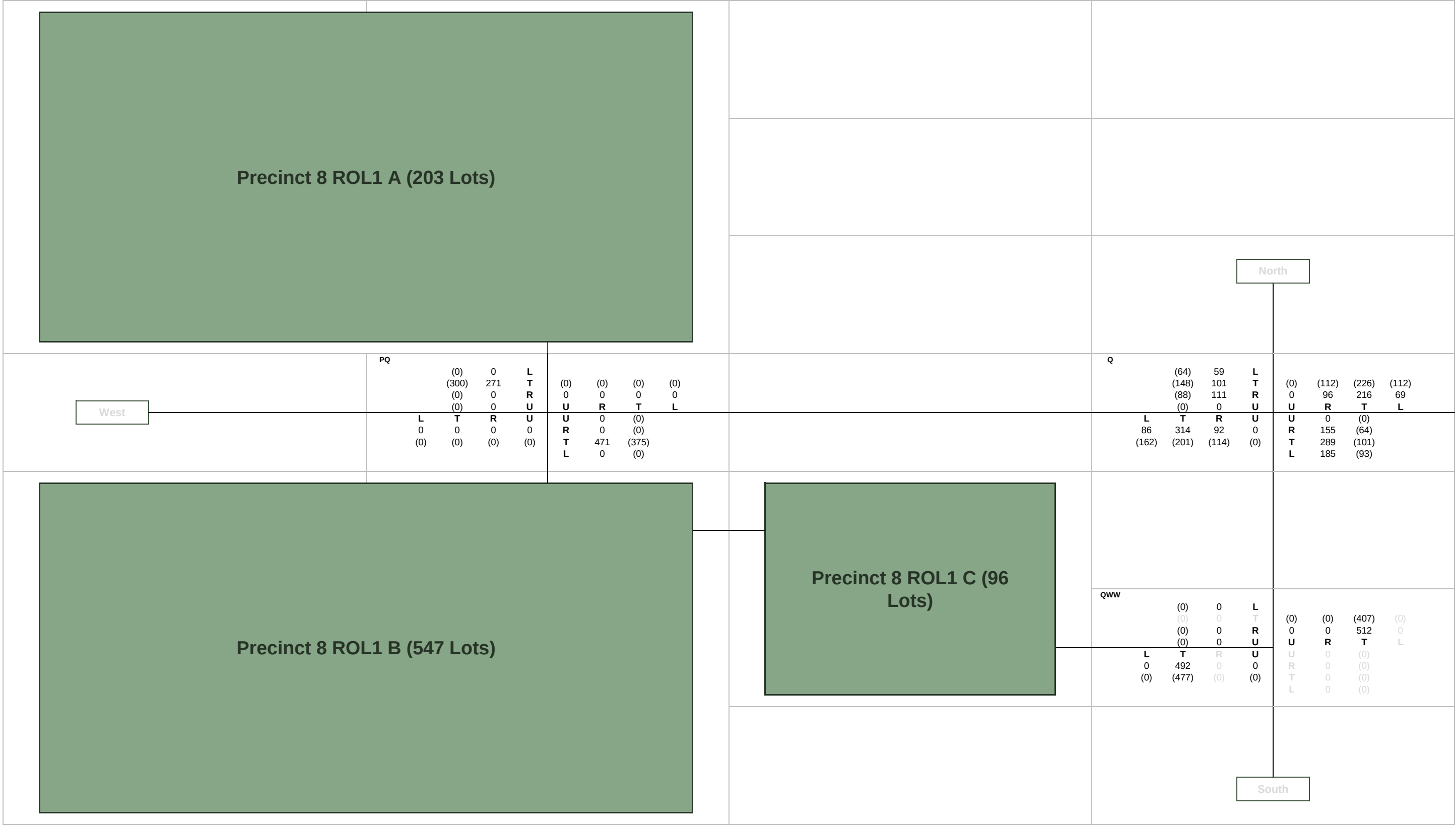
Traffic Impact Assessment

Stockland Residential Communities

SLR Project No.: 620.V11743.00006

30 May 2025

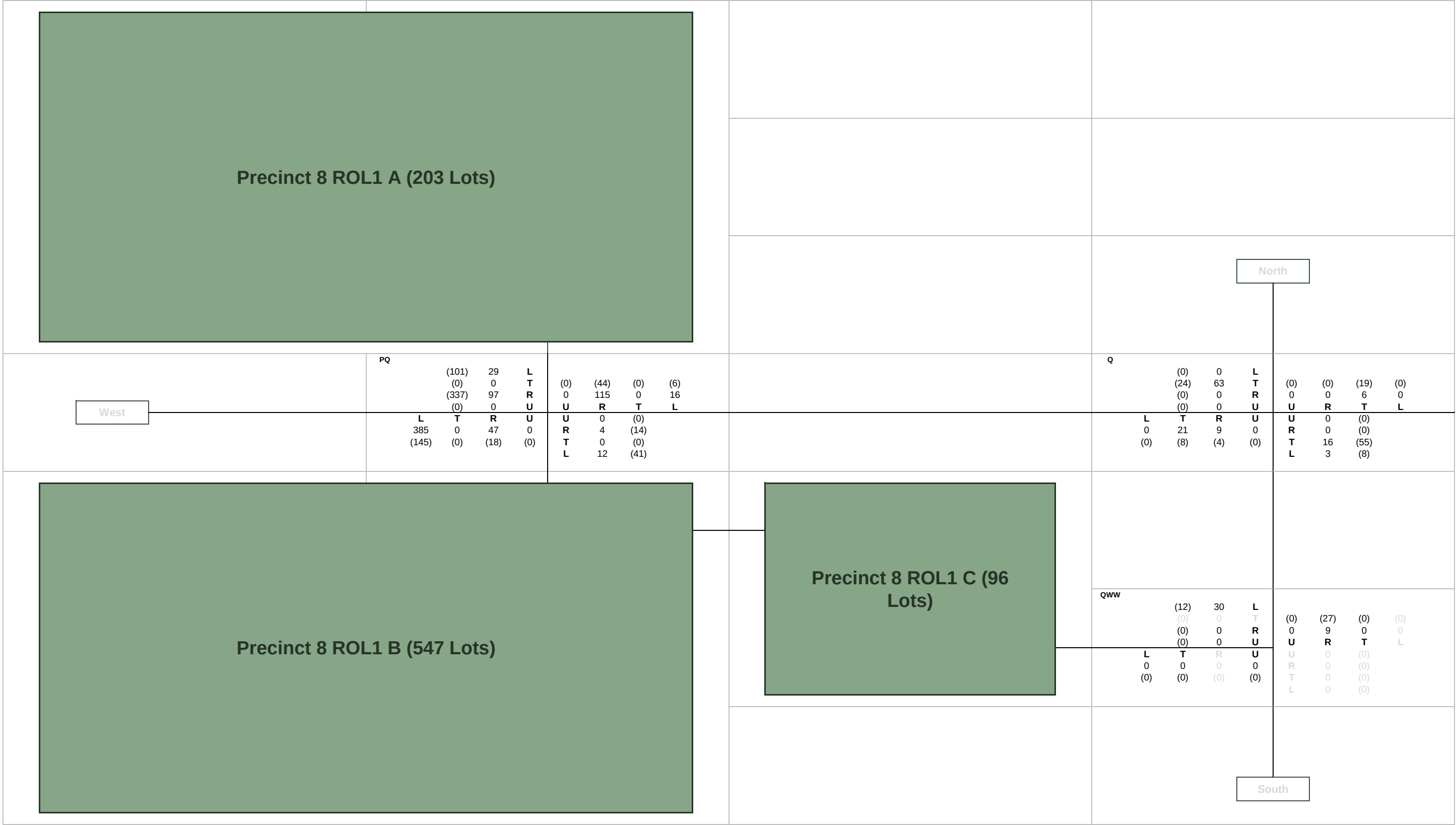




L Left Turn
T Through
R Right Turn
U U-Turn

Legend
00 Weekday AM Peak Hour Volumes
(00) Weekday PM Peak Hour Volumes
Subject Site



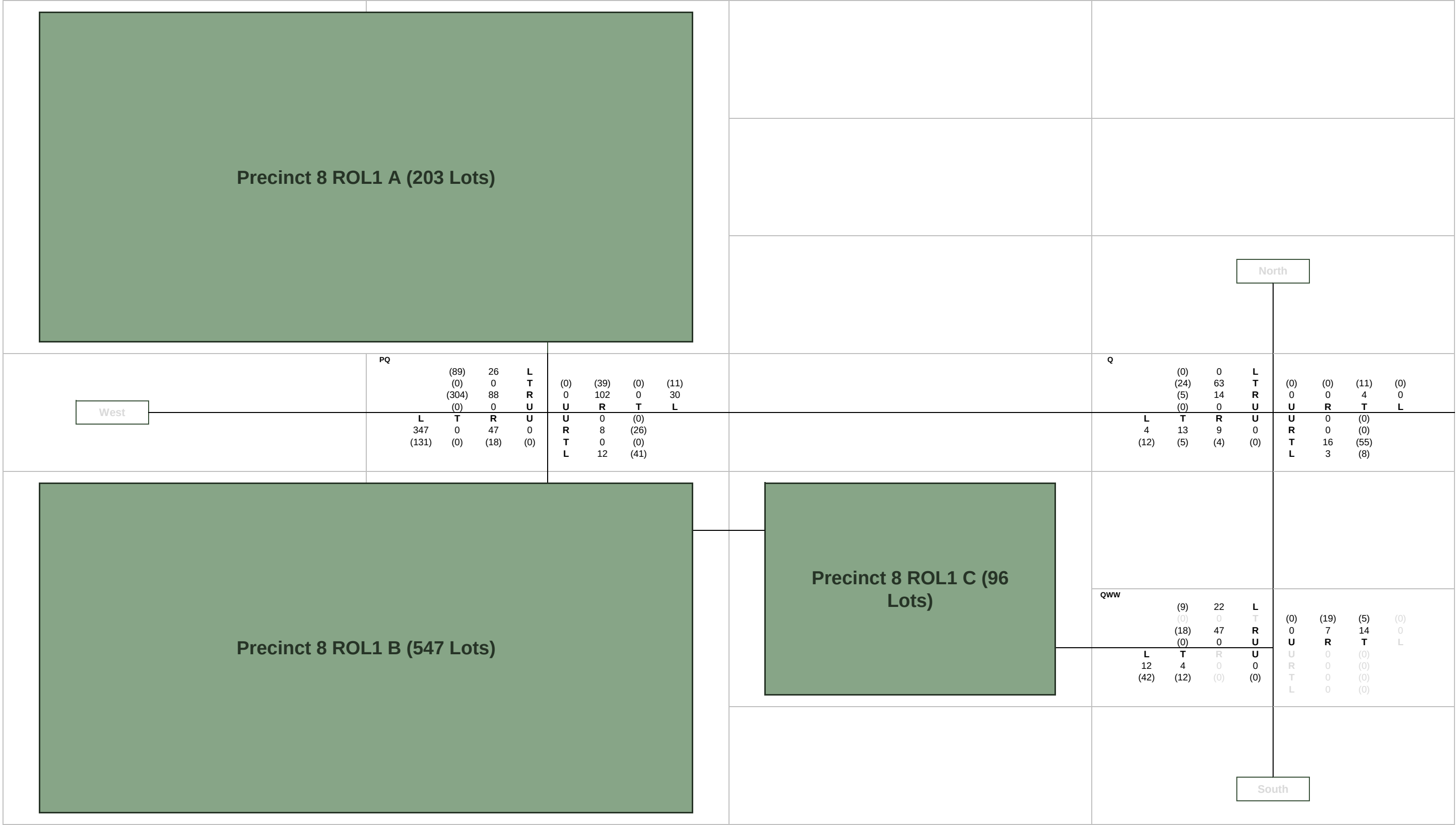


A3
2031 Development Traffic Volumes
620.11743.00006
Yarrabilba Master Plan Development Precinct 8

L Left Turn
T Through
R Right Turn
U U-Turn

Legend
00 Weekday AM Peak Hour Volumes
(00) Weekday PM Peak Hour Volumes
Subject Site



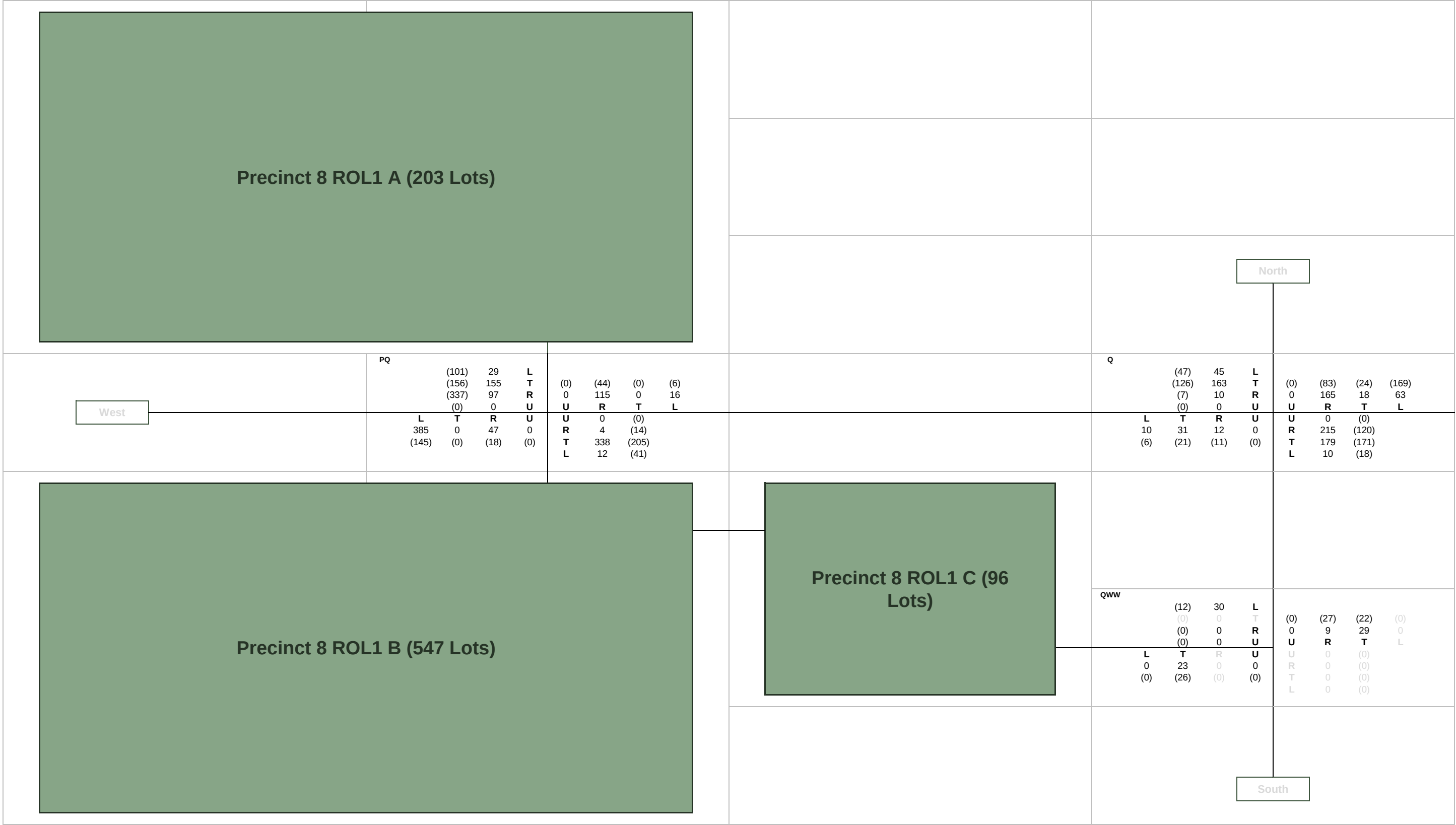


A4
Ultimate Year Development Traffic Volumes
620.11743.00006
Yarrabilba Master Plan Development Precinct 8

L Left Turn
T Through
R Right Turn
U U-Turn

Legend
00 Weekday AM Peak Hour Volumes
(00) Weekday PM Peak Hour Volumes
Subject Site



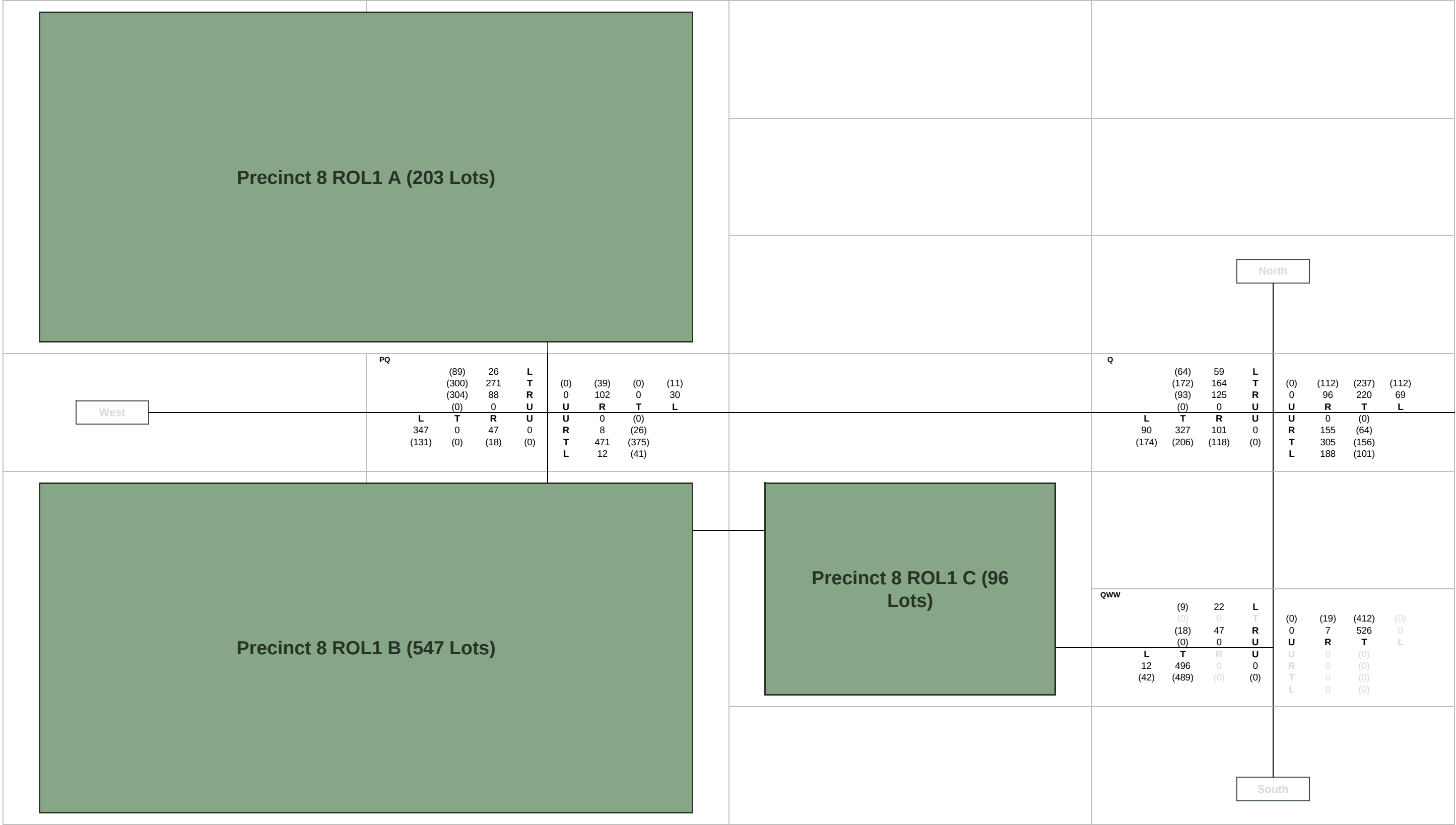


- L Left Turn
- T Through
- R Right Turn
- U U-Turn

Legend

- 00 Weekday AM Peak Hour Volumes
- (00) Weekday PM Peak Hour Volumes
- Subject Site



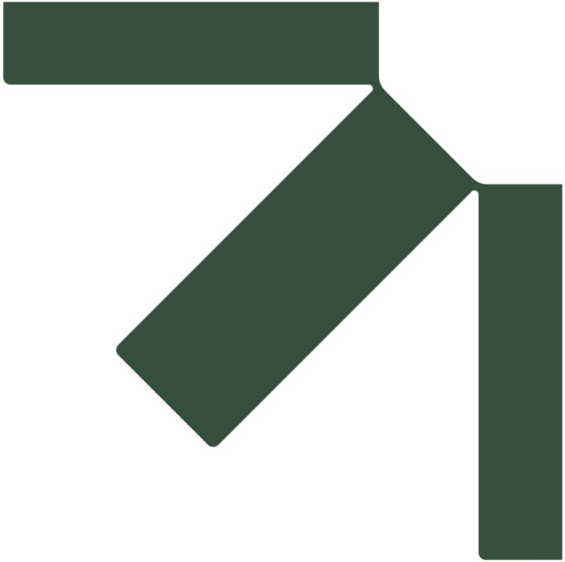


- L Left Turn
- T Through
- R Right Turn
- U U-Turn

Legend

- 00 Weekday AM Peak Hour Volumes
- (00) Weekday PM Peak Hour Volumes
-  Subject Site





Appendix E Detailed SIDRA Outputs Scenario 1 (Interim)

Yarrabilba, Precinct 8 ROL 1

Traffic Impact Assessment

Stockland Residential Communities

SLR Project No.: 620.V11743.00006

30 May 2025

SITE LAYOUT

 **Site: Q [Int Q 2031 AM (Site Folder: General)]**

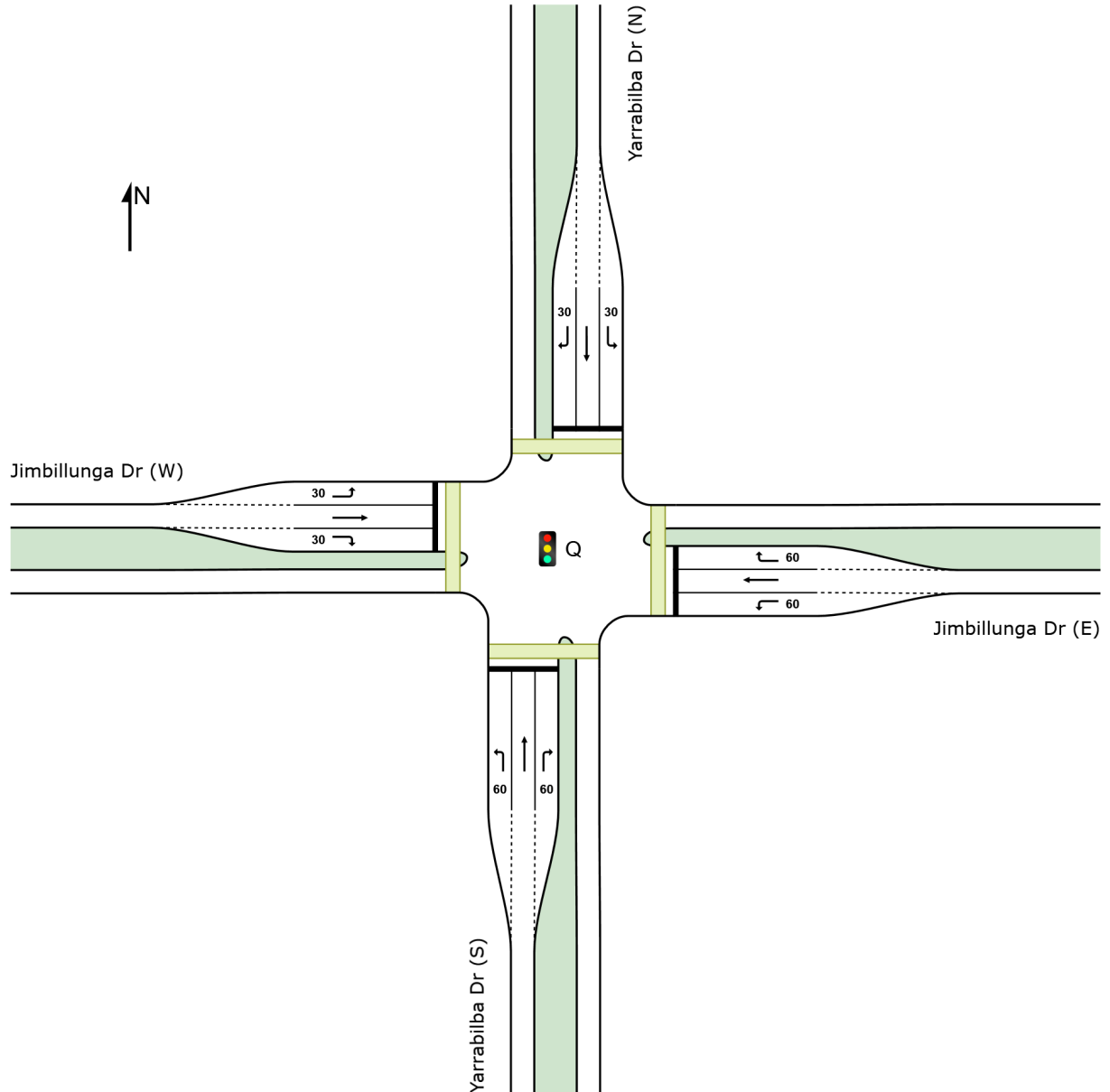
Intersection: Q - Yarrabilba Drive / Jimbillunga Drive

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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Project: H:\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 8 and 9\2025 02 24 - SLR - P8

Intersection Analysis\620.V11743.00006-S01-v0.3 Precinct 8.sip9

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Yarrabilba Dr (S)												
P1	Full	10	11	36.5	LOS D	0.0	0.0	0.90	0.90	51.9	20.0	0.39
East: Jimbillunga Dr (E)												

P2 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
North: Yarrabilba Dr (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
West: Jimbillunga Dr (W)											
P4 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
All Pedestrians	40	42	38.5	LOS D	0.0	0.0	0.93	0.93	53.9	20.0	0.37

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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PHASING SUMMARY

 Site: Q [Int Q 2031 AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: Q - Yarrabilba Drive / Jimbillunga Drive
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

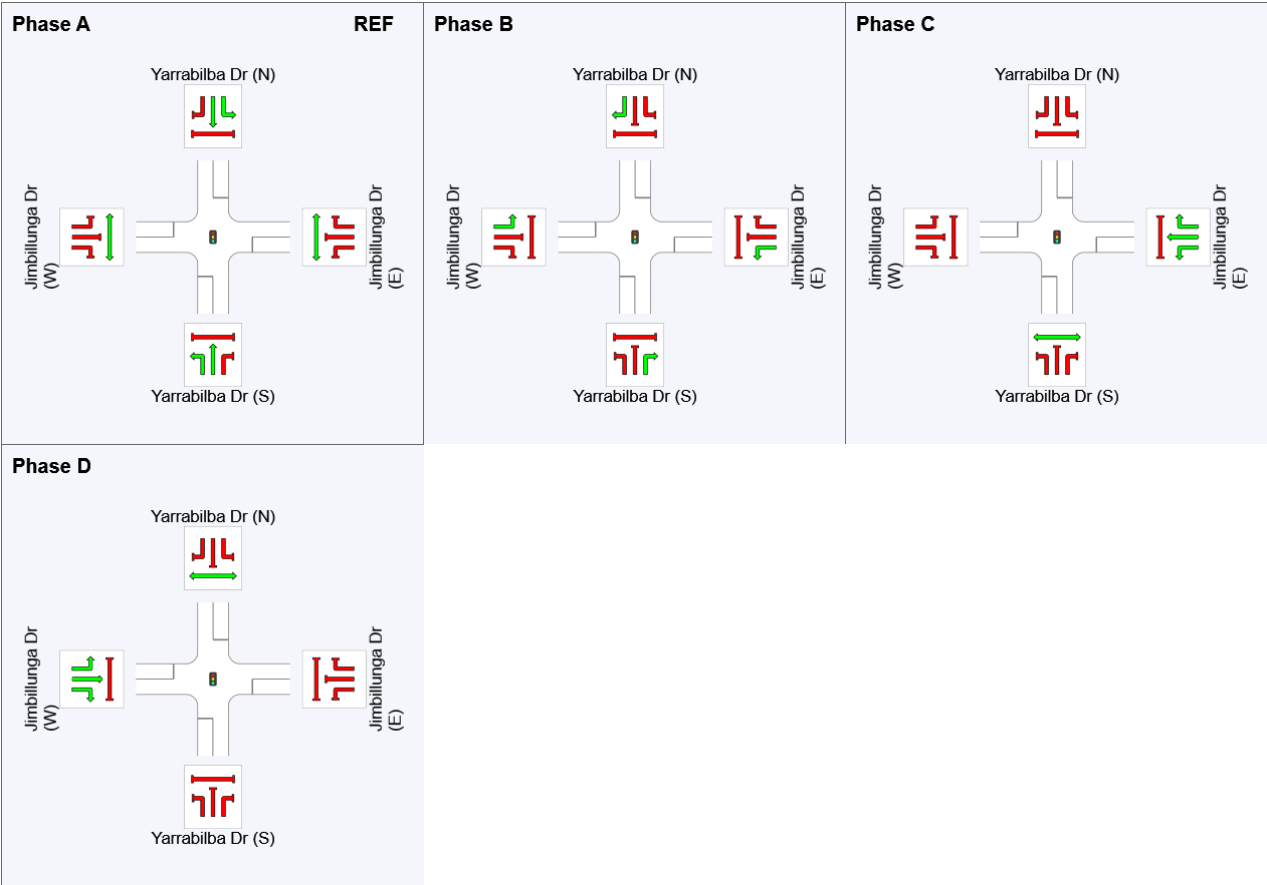
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Green Split Priority has been specified
Phase Sequence: Int Q Phasing
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	18	41	68
Green Time (sec)	12	17	21	16
Phase Time (sec)	18	23	27	22
Phase Split	20%	26%	30%	24%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Yarrabilba Dr (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
East: Jimbillunga Dr (E)												

P2 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
North: Yarrabilba Dr (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
West: Jimbillunga Dr (W)											
P4 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
All Pedestrians	40	42	36.5	LOS D	0.0	0.0	0.90	0.90	51.9	20.0	0.39

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

PHASING SUMMARY

 Site: Q [Int Q 2031 PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: Q - Yarrabilba Drive / Jimbillunga Drive
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

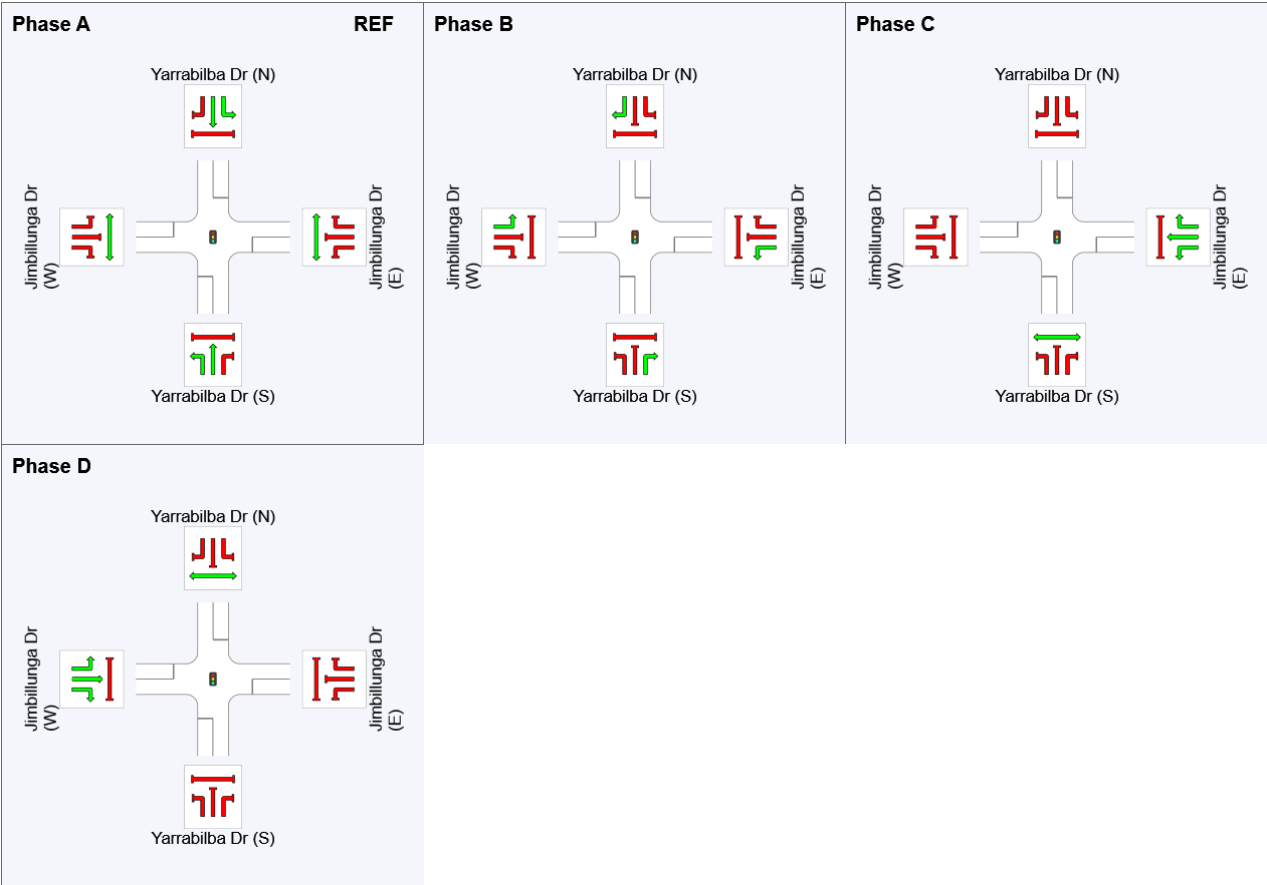
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Green Split Priority has been specified
Phase Sequence: Int Q Phasing
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	30	46	70
Green Time (sec)	24	10	18	14
Phase Time (sec)	30	16	24	20
Phase Split	33%	18%	27%	22%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

SITE LAYOUT

▽ Site: QWW [Int QWW 2031 AM (Site Folder: General)]

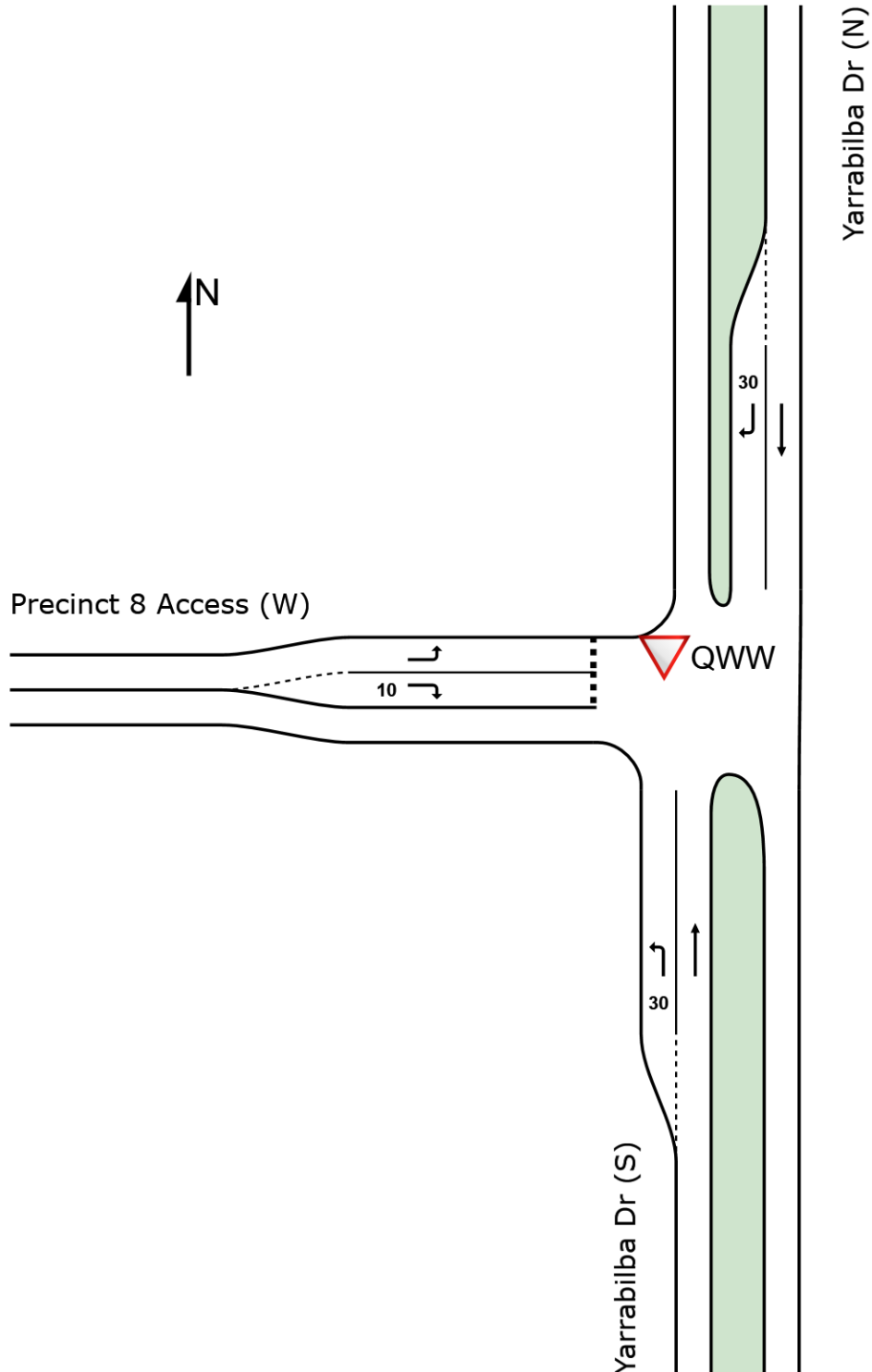
Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Give-Way (Two-Way)

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Intersection Analysis\620.V11743.00006-S01-v0.3 Precinct 8.sip9

MOVEMENT SUMMARY

Site: QWW [Int QWW 2031 AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

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] m				km/h
South: Yarrabilba Dr (S)															
1	L2	All MCs	1	3.0	1	3.0	0.001	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	50.0
2	T1	All MCs	24	3.0	24	3.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			25	3.0	25	3.0	0.013	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.5
North: Yarrabilba Dr (N)															
8	T1	All MCs	31	3.0	31	3.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	9	3.0	9	3.0	0.007	5.6	LOS A	0.0	0.2	0.07	0.55	0.07	43.1
Approach			40	3.0	40	3.0	0.016	1.3	NA	0.0	0.2	0.02	0.13	0.02	56.6
West: Precinct 8 Access (W)															
10	L2	All MCs	32	3.0	32	3.0	0.025	4.7	LOS A	0.1	0.6	0.08	0.50	0.08	42.8
12	R2	All MCs	1	3.0	1	3.0	0.001	4.9	LOS A	0.0	0.0	0.17	0.47	0.17	48.2
Approach			33	3.0	33	3.0	0.025	4.7	LOS A	0.1	0.6	0.08	0.50	0.08	43.0
All Vehicles			98	3.0	98	3.0	0.025	2.2	NA	0.1	0.6	0.04	0.23	0.04	53.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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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MOVEMENT SUMMARY

Site: QWW [Int QWW 2031 PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

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: Yarrabilba Dr (S)															
1	L2	All MCs	1	3.0	1	3.0	0.001	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	50.0
2	T1	All MCs	27	3.0	27	3.0	0.014	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			28	3.0	28	3.0	0.014	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.6
North: Yarrabilba Dr (N)															
8	T1	All MCs	23	3.0	23	3.0	0.012	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
9	R2	All MCs	28	3.0	28	3.0	0.021	5.7	LOS A	0.1	0.5	0.08	0.55	0.08	43.1
Approach			52	3.0	52	3.0	0.021	3.1	NA	0.1	0.5	0.04	0.30	0.04	51.5
West: Precinct 8 Access (W)															
10	L2	All MCs	13	3.0	13	3.0	0.010	4.7	LOS A	0.0	0.3	0.09	0.50	0.09	42.8
12	R2	All MCs	1	3.0	1	3.0	0.001	5.0	LOS A	0.0	0.0	0.19	0.47	0.19	48.1
Approach			14	3.0	14	3.0	0.010	4.7	LOS A	0.0	0.3	0.09	0.50	0.09	43.3
All Vehicles			94	3.0	94	3.0	0.021	2.5	NA	0.1	0.5	0.04	0.25	0.04	53.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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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SITE LAYOUT

 **Site: PQ [Int PQ 2031 AM (Site Folder: General)]**

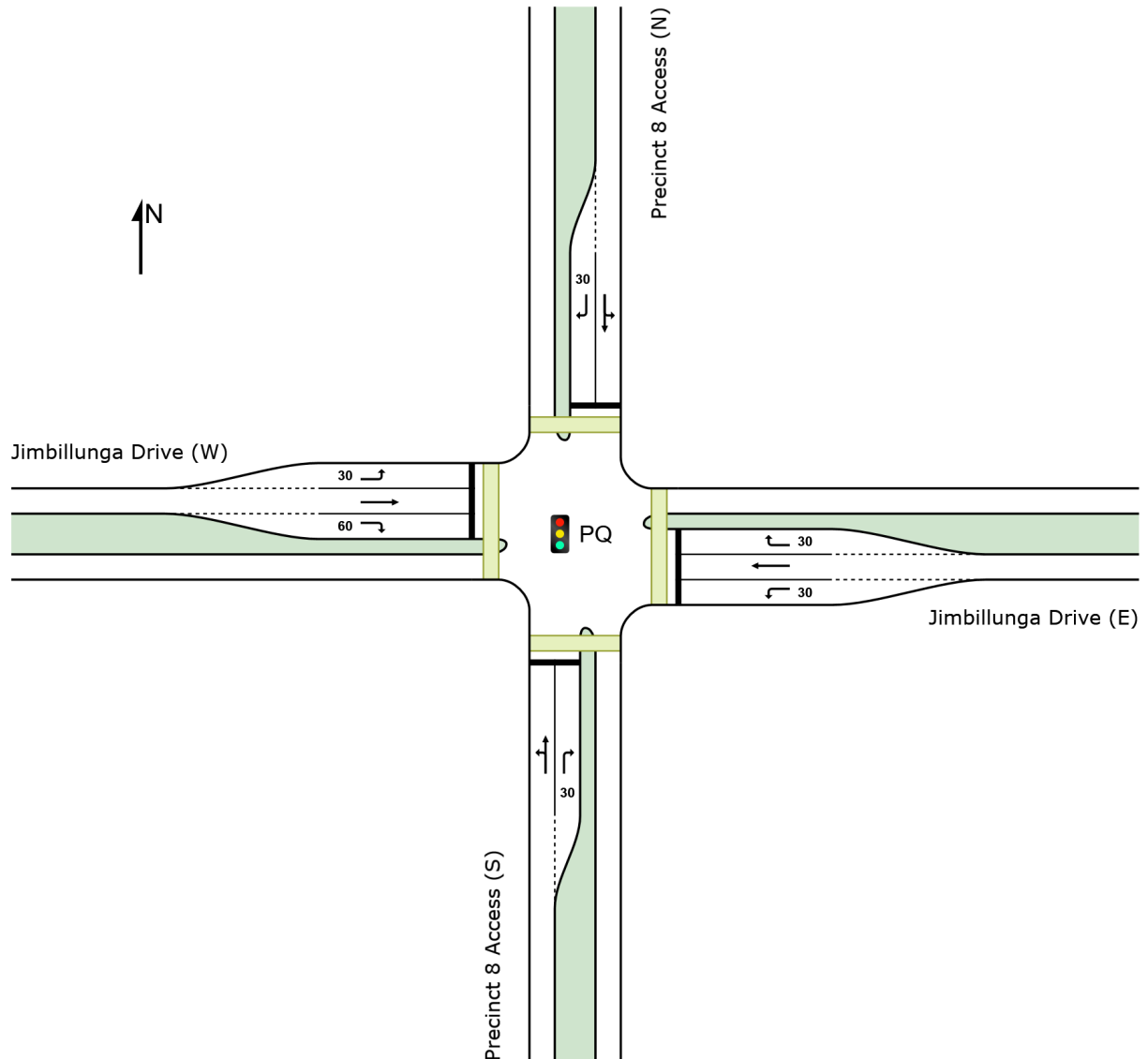
Intersection: PQ - Jimbillunga Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Precinct 8 Access (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
East: Jimbillunga Drive (E)												

P2 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
North: Precinct 8 Access (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
West: Jimbillunga Drive (W)											
P4 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
All Pedestrians	40	42	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04

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

PHASING SUMMARY

 Site: PQ [Int PQ 2031 AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: PQ - Jimbillunga Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Int PQ

Input Phase Sequence: A, B, C, D

Output Phase Sequence: A, B, C, D

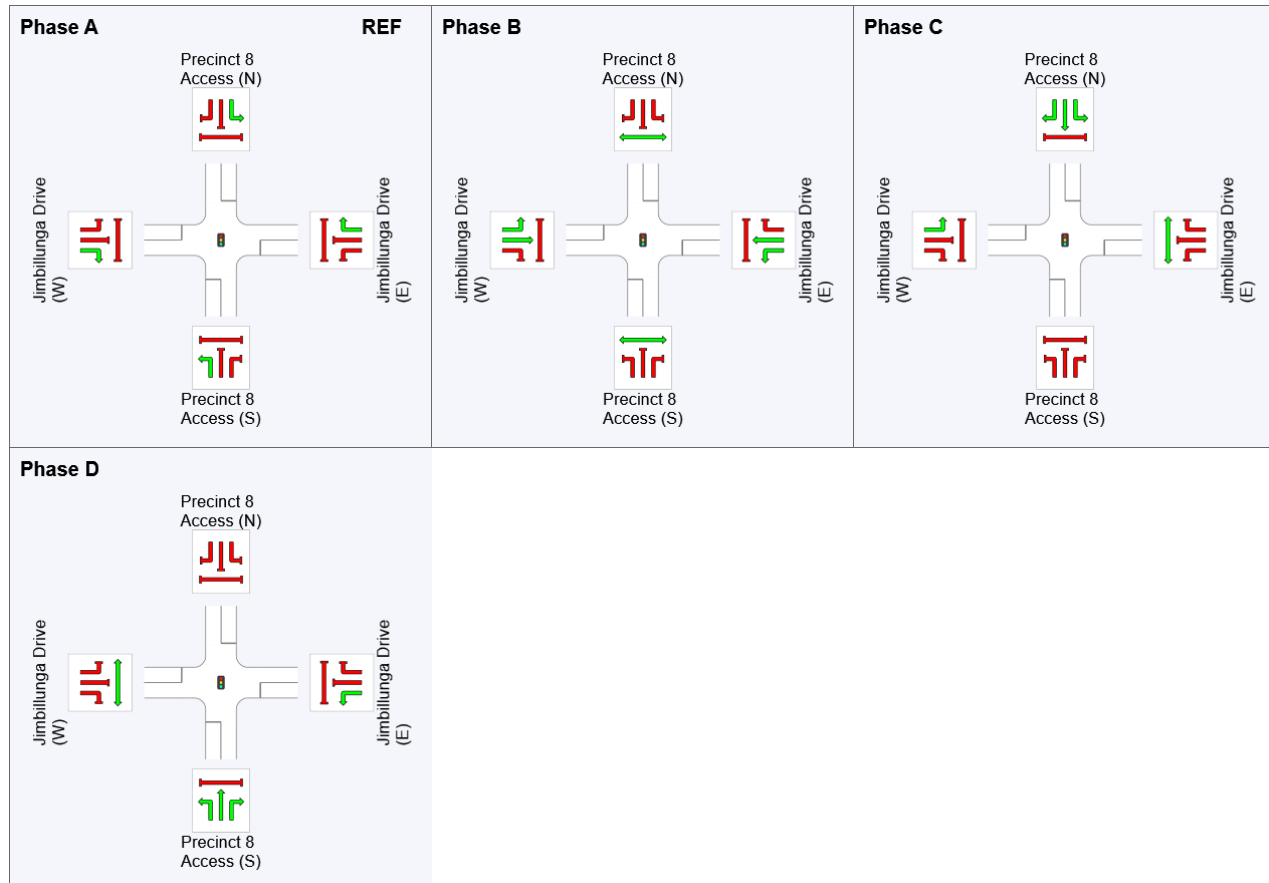
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	14	45	60
Green Time (sec)	8	25	9	24
Phase Time (sec)	14	31	15	30
Phase Split	16%	34%	17%	33%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Precinct 8 Access (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
East: Jimbillunga Drive (E)												

P2 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
North: Precinct 8 Access (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
West: Jimbillunga Drive (W)											
P4 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
All Pedestrians	40	42	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04

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

PHASING SUMMARY

 Site: PQ [Int PQ 2031 PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: PQ - Jimbillunga Drive / Precinct 8 Access
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

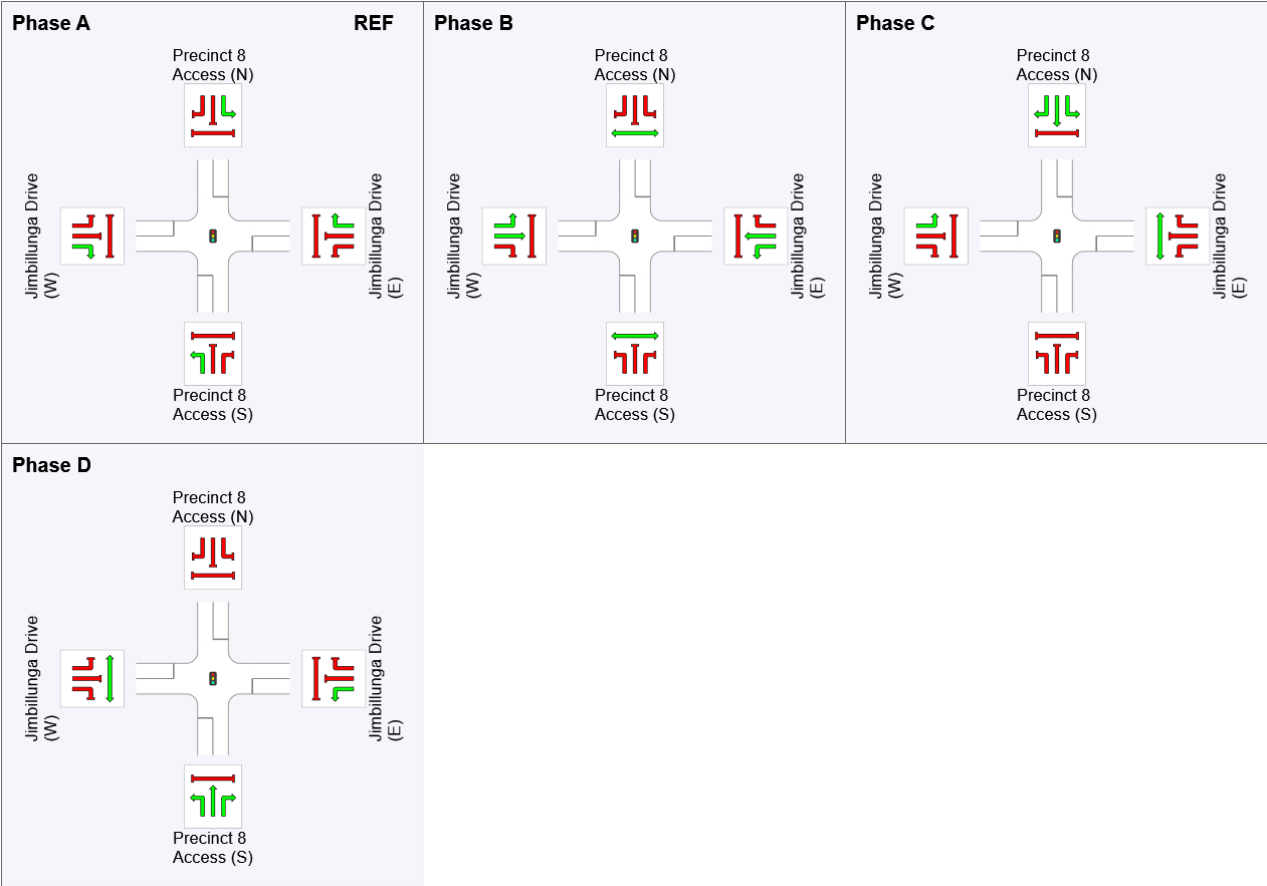
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Int PQ
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	36	60	75
Green Time (sec)	30	18	9	9
Phase Time (sec)	36	24	15	15
Phase Split	40%	27%	17%	17%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

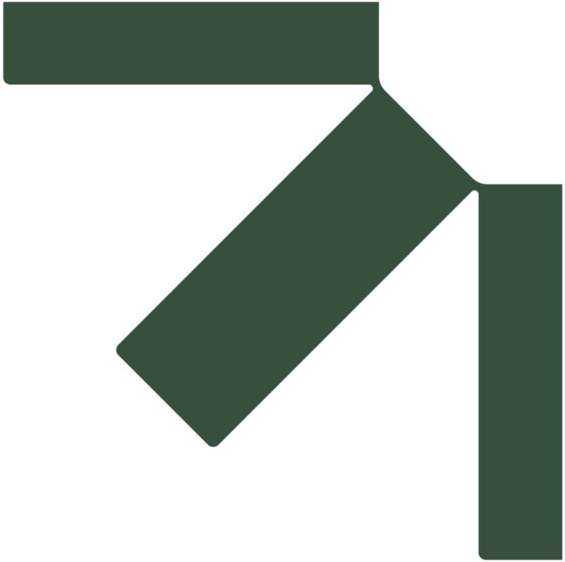
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied



Appendix F Detailed SIDRA Outputs Scenario 2 (Ultimate)

Yarrabilba, Precinct 8 ROL 1

Traffic Impact Assessment

Stockland Residential Communities

SLR Project No.: 620.V11743.00006

30 May 2025

SITE LAYOUT

Site: Q [Int Q Ult AM (Site Folder: General)]

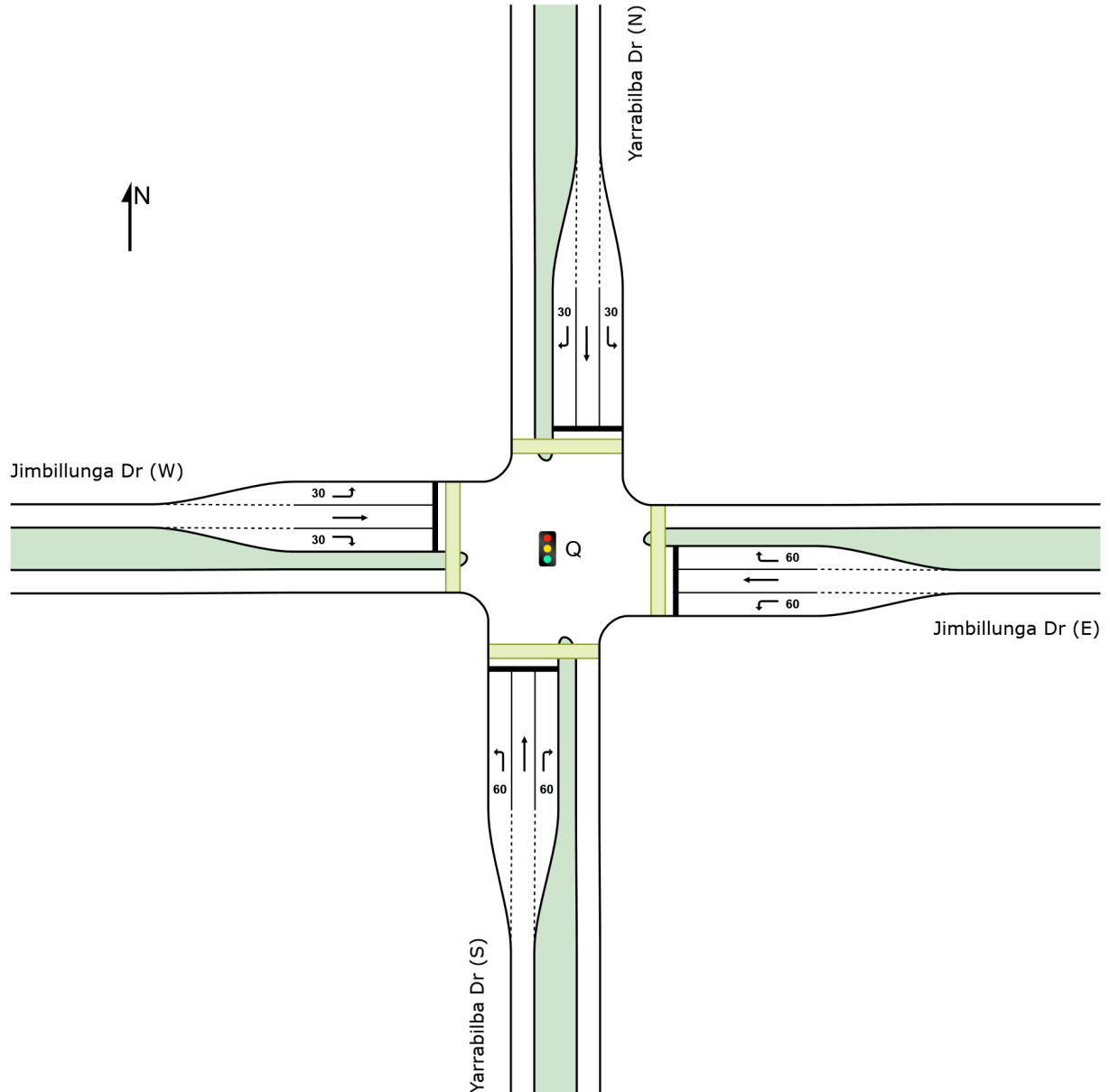
Intersection: Q - Yarrabilba Drive / Jimbillunga Drive

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Yarrabilba Dr (S)												
P1	Full	10	11	35.6	LOS D	0.0	0.0	0.89	0.89	51.0	20.0	0.39
East: Jimbillunga Dr (E)												

P2 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
North: Yarrabilba Dr (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
West: Jimbillunga Dr (W)											
P4 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
All Pedestrians	40	42	35.6	LOS D	0.0	0.0	0.89	0.89	51.0	20.0	0.39

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

PHASING SUMMARY

 Site: Q [Int Q Ult AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: Q - Yarrabilba Drive / Jimbillunga Drive
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

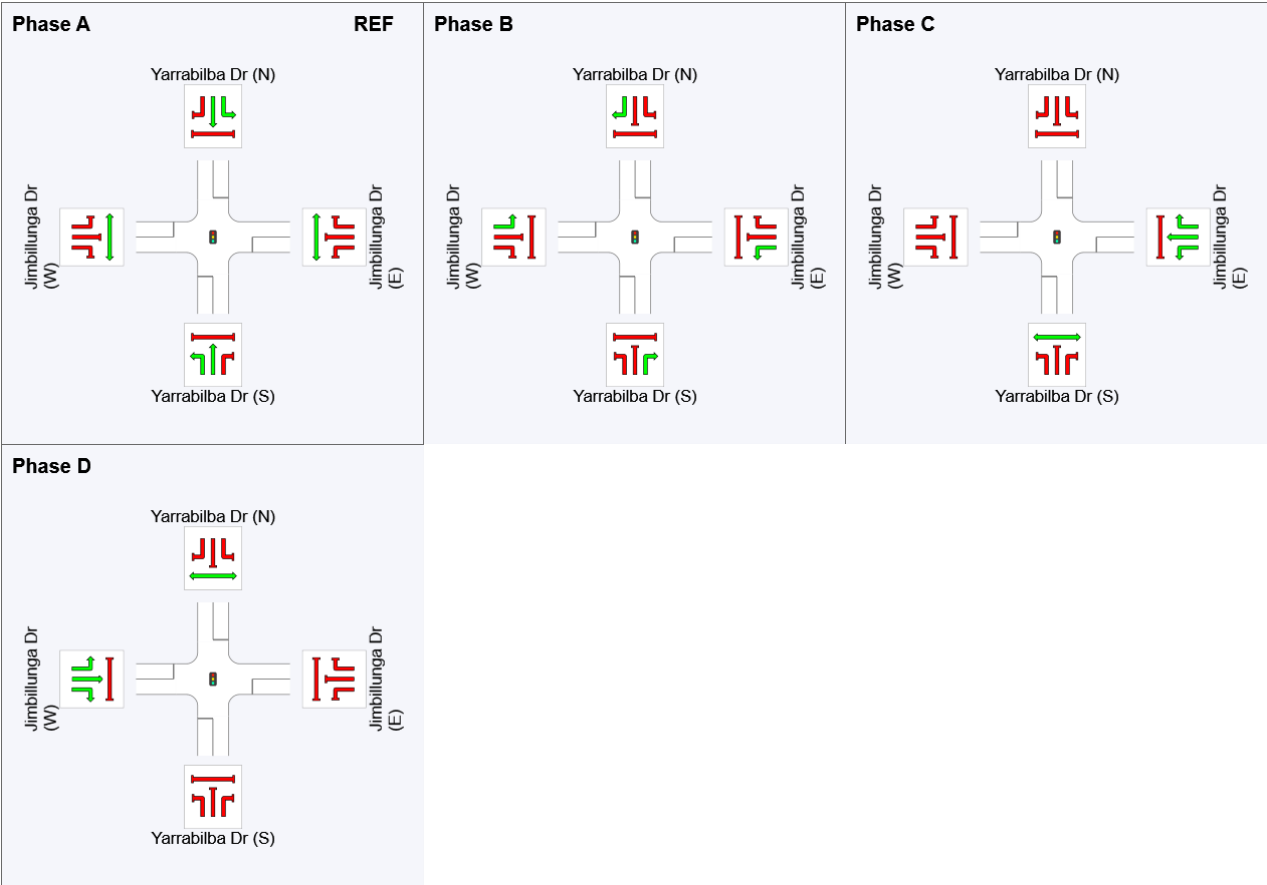
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Green Split Priority has been specified
Phase Sequence: Int Q Phasing
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	30	44	72
Green Time (sec)	24	8	22	12
Phase Time (sec)	30	14	28	18
Phase Split	33%	16%	31%	20%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Yarrabilba Dr (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
East: Jimbillunga Dr (E)												

P2 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
North: Yarrabilba Dr (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	54.6	20.0	0.37
West: Jimbillunga Dr (W)											
P4 Full	10	11	33.8	LOS D	0.0	0.0	0.87	0.87	49.2	20.0	0.41
All Pedestrians	40	42	36.5	LOS D	0.0	0.0	0.90	0.90	51.9	20.0	0.39

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

PHASING SUMMARY

 Site: Q [Int Q Ult PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: Q - Yarrabilba Drive / Jimbillunga Drive
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

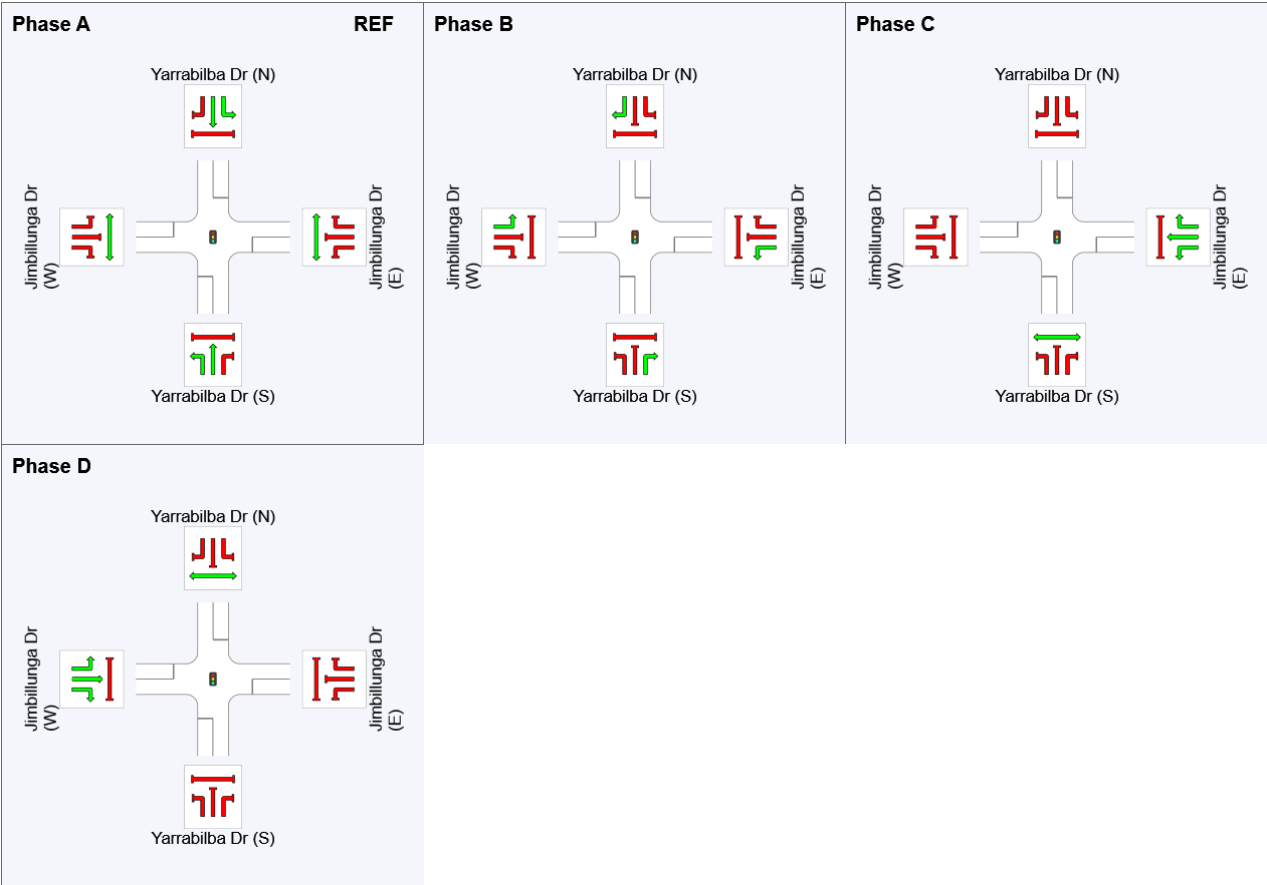
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Green Split Priority has been specified
Phase Sequence: Int Q Phasing
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	30	48	68
Green Time (sec)	24	12	14	16
Phase Time (sec)	30	18	20	22
Phase Split	33%	20%	22%	24%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

SITE LAYOUT

▽ Site: QWW [Int QWW Ult AM (Site Folder: General)]

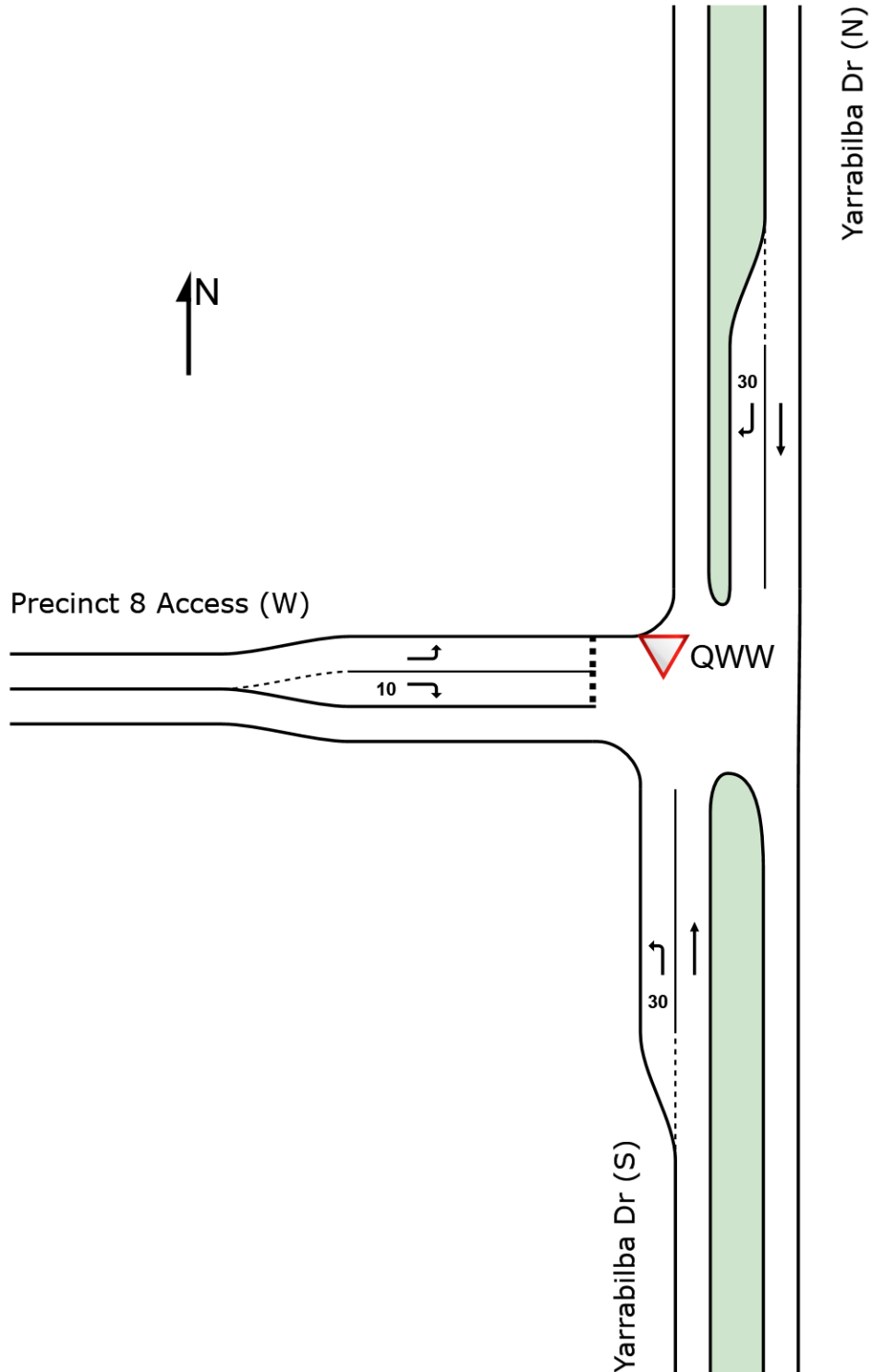
Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Give-Way (Two-Way)

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Project: H:\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 8 and 9\2025 02 24 - SLR - P8
Intersection Analysis\620.V11743.00006-S01-v0.3 Precinct 8.sip9

MOVEMENT SUMMARY

Site: QWW [Int QWW Ult AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

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] m				km/h
South: Yarrabilba Dr (S)															
1	L2	All MCs	13	3.0	13	3.0	0.007	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	50.0
2	T1	All MCs	522	3.0	522	3.0	0.273	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			535	3.0	535	3.0	0.273	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.6
North: Yarrabilba Dr (N)															
8	T1	All MCs	554	3.0	554	3.0	0.289	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	7	3.0	7	3.0	0.010	8.3	LOS A	0.0	0.2	0.45	0.63	0.45	40.4
Approach			561	3.0	561	3.0	0.289	0.1	NA	0.0	0.2	0.01	0.01	0.01	59.6
West: Precinct 8 Access (W)															
10	L2	All MCs	23	3.0	23	3.0	0.032	7.4	LOS A	0.1	0.8	0.49	0.66	0.49	40.1
12	R2	All MCs	49	3.0	49	3.0	0.226	22.1	LOS C	0.8	5.6	0.83	0.94	0.90	36.7
Approach			73	3.0	73	3.0	0.226	17.4	LOS C	0.8	5.6	0.72	0.85	0.77	37.4
All Vehicles			1168	3.0	1168	3.0	0.289	1.2	NA	0.8	5.6	0.05	0.06	0.05	57.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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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MOVEMENT SUMMARY

Site: QWW [Int QWW Ult PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: QWW - Yarrabilba Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

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] m				km/h
South: Yarrabilba Dr (S)															
1	L2	All MCs	44	3.0	44	3.0	0.024	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	50.0
2	T1	All MCs	515	3.0	515	3.0	0.269	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			559	3.0	559	3.0	0.269	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.0
North: Yarrabilba Dr (N)															
8	T1	All MCs	434	3.0	434	3.0	0.227	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	20	3.0	20	3.0	0.026	8.5	LOS A	0.1	0.6	0.47	0.67	0.47	40.2
Approach			454	3.0	454	3.0	0.227	0.4	NA	0.1	0.6	0.02	0.03	0.02	59.1
West: Precinct 8 Access (W)															
10	L2	All MCs	9	3.0	9	3.0	0.013	7.2	LOS A	0.0	0.3	0.48	0.62	0.48	40.2
12	R2	All MCs	19	3.0	19	3.0	0.073	17.4	LOS C	0.2	1.7	0.77	0.89	0.77	39.3
Approach			28	3.0	28	3.0	0.073	14.0	LOS B	0.2	1.7	0.67	0.80	0.67	39.5
All Vehicles			1041	3.0	1041	3.0	0.269	0.8	NA	0.2	1.7	0.03	0.06	0.03	58.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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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Project: H:\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 8 and 9\2025 02 24 - SLR - P8 Intersection Analysis\620.V11743.00006-S01-v0.3 Precinct 8.sip9

SITE LAYOUT

 **Site: PQ [Int PQ Ult AM (Site Folder: General)]**

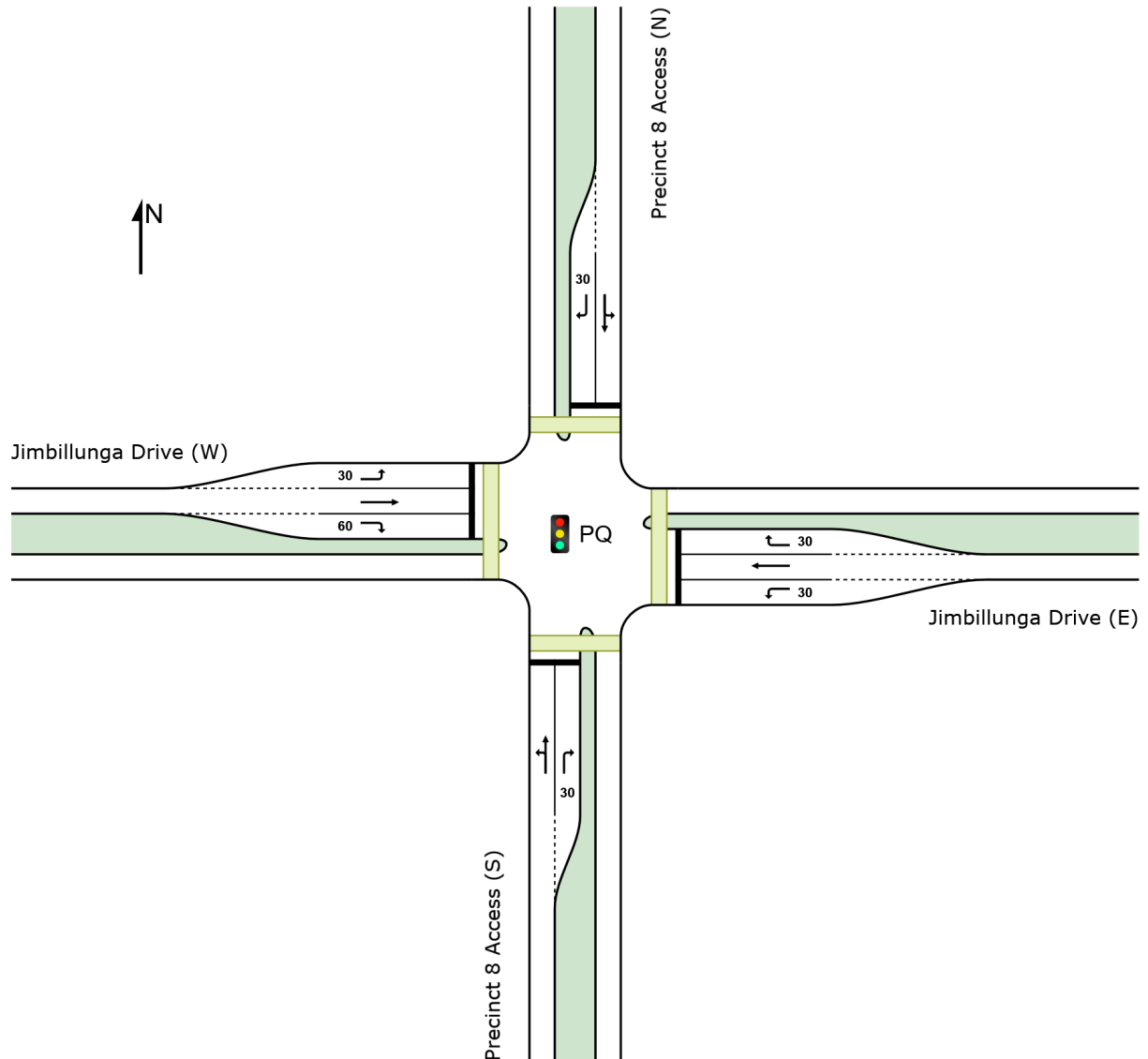
Intersection: PQ - Jimbillunga Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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



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Project: H:\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 8 and 9\2025 02 24 - SLR - P8 Intersection Analysis\620.V11743.00006-S01-v0.3 Precinct 8.sip9

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Precinct 8 Access (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
East: Jimbillunga Drive (E)												

P2 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
North: Precinct 8 Access (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
West: Jimbillunga Drive (W)											
P4 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
All Pedestrians	40	42	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04

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

PHASING SUMMARY

 Site: PQ [Int PQ Ult AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: PQ - Jimbillunga Drive / Precinct 8 Access
Prepared by: JH
Site Category: Proposed Layout
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

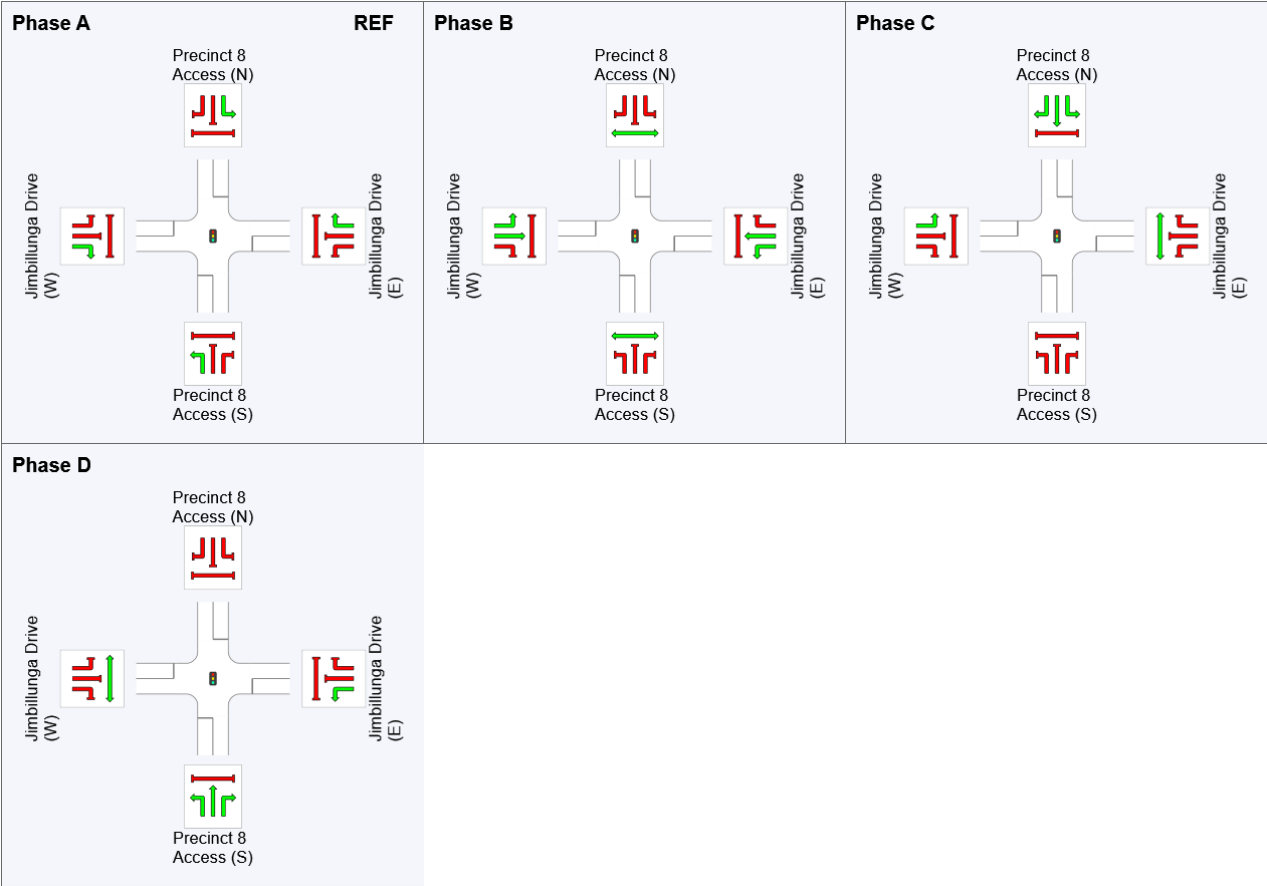
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Int PQ
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	12	50	65
Green Time (sec)	6	32	9	19
Phase Time (sec)	12	38	15	25
Phase Split	13%	42%	17%	28%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Precinct 8 Access (S)												
P1	Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
East: Jimbillunga Drive (E)												

P2 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
North: Precinct 8 Access (N)											
P3 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
West: Jimbillunga Drive (W)											
P4 Full	10	11	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04
All Pedestrians	40	42	39.2	LOS D	0.0	0.0	0.93	0.93	193.1	200.0	1.04

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

PHASING SUMMARY

 Site: PQ [Int PQ Ult PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Intersection: PQ - Jimbillunga Drive / Precinct 8 Access

Prepared by: JH

Site Category: Proposed Layout

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Int PQ

Input Phase Sequence: A, B, C, D

Output Phase Sequence: A, B, C, D

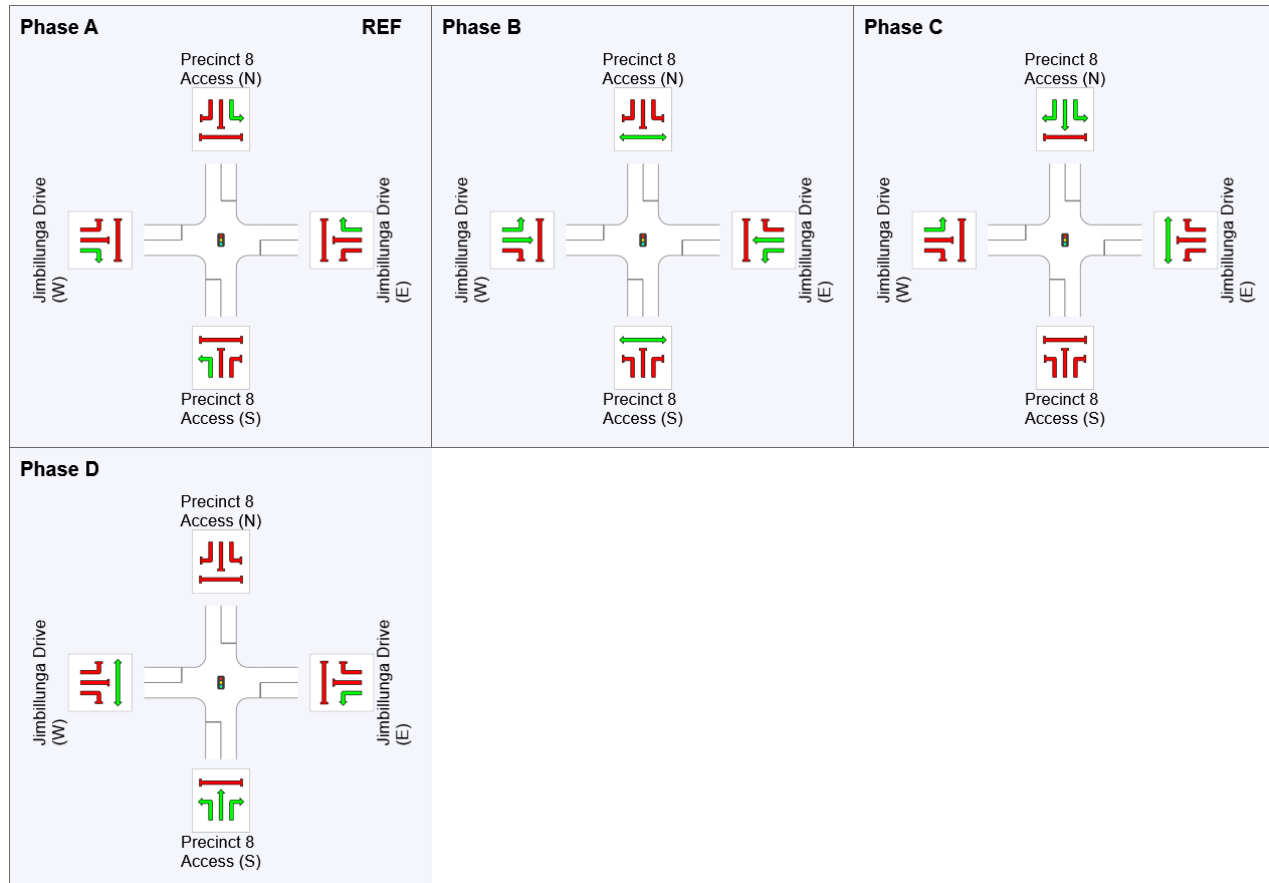
Reference Phase: Phase A

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	27	60	75
Green Time (sec)	21	27	9	9
Phase Time (sec)	27	33	15	15
Phase Split	30%	37%	17%	17%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

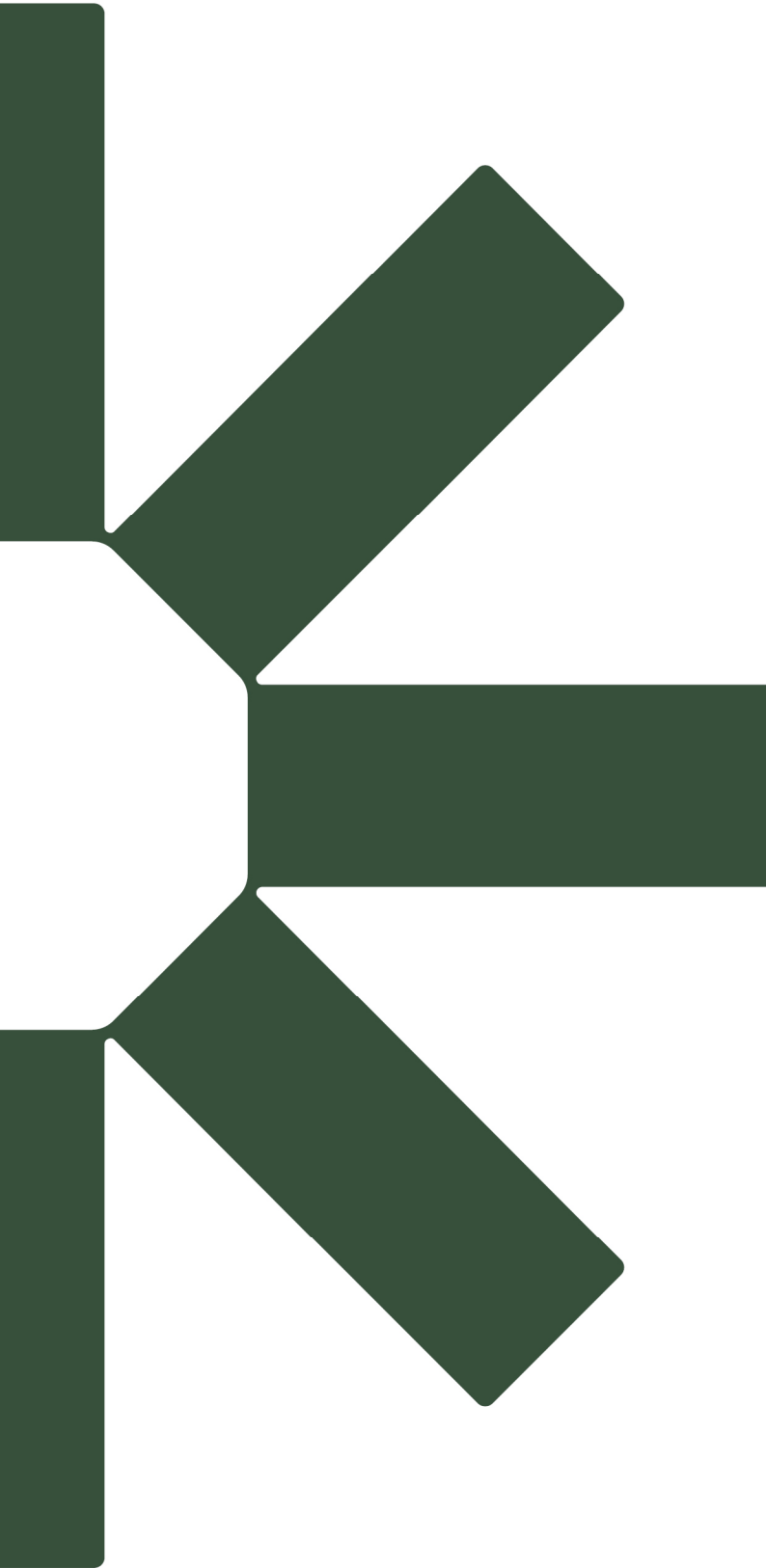
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied



Making Sustainability Happen