MODUS
Transport & Traffic Engineering

Traffic Impact Assessment

39-45 Homestead Drive, Flagstone
Proposed Health Care Services Development

Document Information

Prepared for Dewan Family Practice Pty Ltd	**Job Reference** MOD25068QLD
Project: 39-45 Homestead Drive, Flagstone Proposed Health Care Services Development	

Document Control

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A	7 Nov 2025	Draft	Afaf El Harda	Harj Singh

RPEQ Certification

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RPEQ 22364

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Modus has expanded its capabilities and assembled its systems, capital, and resources to drive value for customers via the delivery of a full suite of traffic engineering services.

Here at Modus, we are a team of engineers with extensive knowledge and experience providing quality service to both public and private sectors, from large contractors and developers to state and local governments.

Whether your project is a small residential development, mixed use development, a large commercial precinct or anything in between, our experienced traffic engineers will apply sound and practical traffic engineering principles to achieve an outstanding outcome for your project.

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Contents

1 Introduction

1.1 Overview

Modus has been commissioned by Dewan Family Practice Pty Ltd to provide traffic and transport advice in relation to the proposed Health Care Services development located at 39-45 Homestead Drive, Flagstone.

This Traffic Engineering Report has been produced by Modus to assess the traffic and transport engineering items in support of the proposed development. A copy of the development plans is provided at **Appendix A**.

1.2 Information Request Responses

Furthermore, Modus notes that this Traffic Impact Assessment formally responds to traffic related Information Request items raised within the Logan City Council (LCC) Information Request, as outlined in Table 1-1.

Table 1-1 LCC Information Request Items

Information Request Commentary	Report Section Where Response Provided
Given the road hierarchy and existing conditions along Homestead Drive, the access arrangement is to be restricted to left-in/left out only. *Ensure the access arrangement is located with sufficient separation from the adjacent Homestead Drive/Bushman Drive roundabout. The separation requirements should be included within the Traffic Impact Assessment.*	Section 4.1
Provide a Traffic Impact Statement (TIS) which includes the following	
The traffic generation of the proposal and its impact on the road network from the year of opening and 10 years after the year opening of the final stage of development.	Section 5.4
A brief description of the existing operational conditions of the road network in the immediate vicinity of the development	Section 2.3
Analysis of the operation of the accesses to the development including a turn warrant assessment.	Section 7
Analysis of the operation of the first intersection, as a minimum, on either side of the accesses.	Section 7
A conceptual geometric layout of the access arrangements.	Appendix B
Provide information on all modes of people and goods movement, including, but not limited to, cars, pedestrians, bicycles, service vehicles and public transport.	Section 4.3 and 5.4

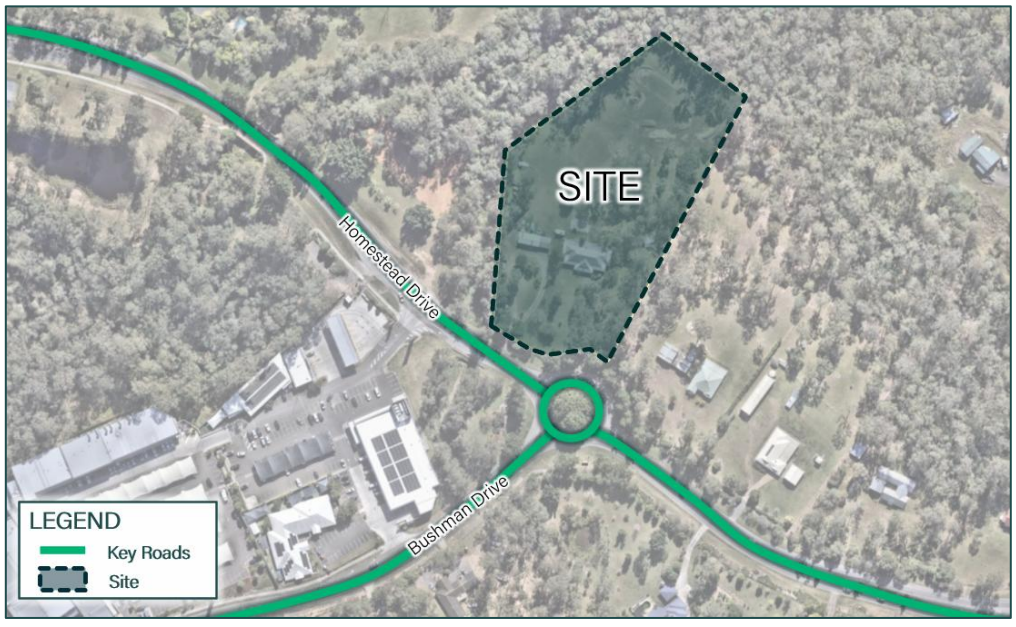
Detail the parking requirements (according to the LPS 2015 requirements) within the development and include turning templates for the largest vehicle movements into, out of and within the site.	Section 4.2
All vehicles shall enter and exit the site in the forward direction. Servicing includes waste removal and furniture and goods loading/unloading and the TIS needs to demonstrate how such servicing is undertaken	Section 4.5
Provide details of the sight distance provided at the site entrance(s) in accordance with AS2890.1 – Off Street Parking and Austroads Guide to Road Design – Part 4A – Unsignalised and Signalised Intersections.	Section 4.1
Professional opinion on the expected traffic impact based on a site observation during the expected critical peak hour and the analysis conducted.	Section 7
Provide details and dimensions of the parking requirements (according to Australian Standard 2890.1 requirements) within the development.	Section 4.4
Provide RPEQ certified turning templates for design vehicle movements into, out of and within the site.	Appendix C
Demonstrate how servicing is undertaken including waste removal and furniture and goods loading/unloading. Evidence all vehicles enter and exit the site in the forward direction.	Section 4.5

2 Existing Conditions

2.1 Site Location

The development site is located at 39-45 Homestead Drive, Flagstone and is bounded by Homestead Drive to the south, vacant land to the north and west and Residential uses to the east. The site is identified as a Rural Residential Zone within the LCC Local Government Area. The site location is shown on Figure 2-1.

Figure 2-1 Site Location



2.2 Existing Road Network

Table 2-1 outlines characteristics of the existing road network in proximity to the development site.

Table 2-1 Key Road Characteristics

Road	Hierarchy	Speed Limit	Typical Form
Homestead Drive	Urban Arterial Dual Carriageway	60km/h	Two lanes, divided
Bushman Drive	Urban Collector Single Carriageway	60km/h	Two lanes, undivided
Blueberry Ash Court	Urban Collector Single Carriageway	50km/h	Two lanes, undivided
Coachwood Drive	Urban Access Street	50km/h	Two lanes, undivided

2.3 Existing Use

The development site is currently occupied by a single Dwelling and two (2) Sheds, with vehicular access through an approximate 3.0m wide crossover.

2.4 Active and Public Transport Facilities

There is no dedicated pedestrian footpath along the development site frontage. Similarly, there are no dedicated bicycle lanes along the surrounding roads.

Additionally, there are no public transport facilities within 400m radius (comfortable 5-minute walk) from the development site. The nearest public transport facility is bus stop that serves school buses, located 1.5km west north of the development site.

3 Proposed Development

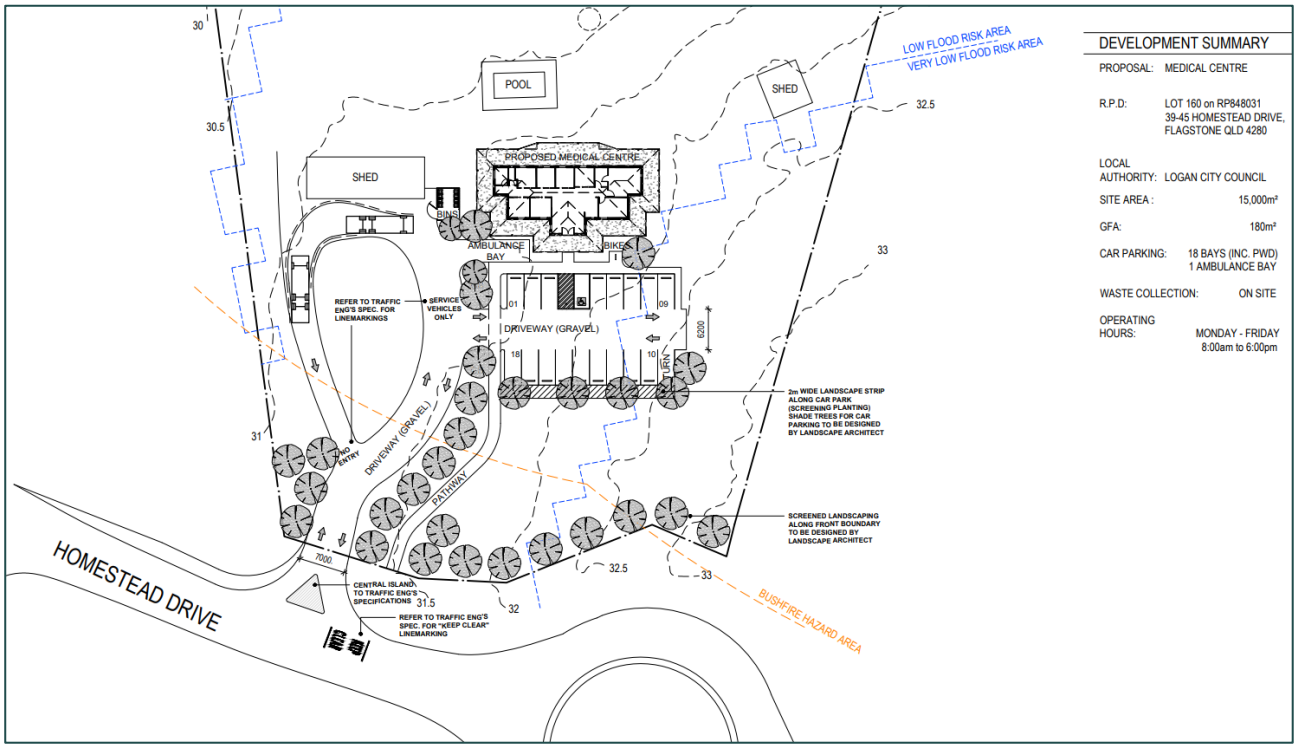
3.1 Overview

The proposed development consists of a Health Care Services use comprising a Gross Floor Area (GFA) of 180 sq.m.

As part of the development, an on-site car parking layout is proposed that contains 18 car parking spaces.

The proposed site plan is illustrated on Figure 3-1. A copy of the development plans can be found at **Appendix A**.

Figure 3-1 Proposed Development Layout



3.2 Development Access

The proposed development will achieve vehicular access via a 7.0m wide crossover along Homestead Drive, of which will accommodate a concrete median island to ensure only left-in / left-out movements are permitted.

4 Traffic and Transport Advice

4.1 Access Design

4.1.1 Driveway Design

In accordance with Australian Standards AS2890.1, the minimum driveway requirement for the proposed development is outlined in Table 4-1.

Table 4-1 Driveway Design Compliance

Road Frontage	AS2890.1 Driveway Design Compliance	Conditions
Homestead Drive	Site Conditions	Local Road Frontage User Class 2 <25 Spaces
	Access Facility Category	2
	Required Driveway Widths	Minimum 6.0m – 9.0m
	Proposed Driveway Width	**7.0m**

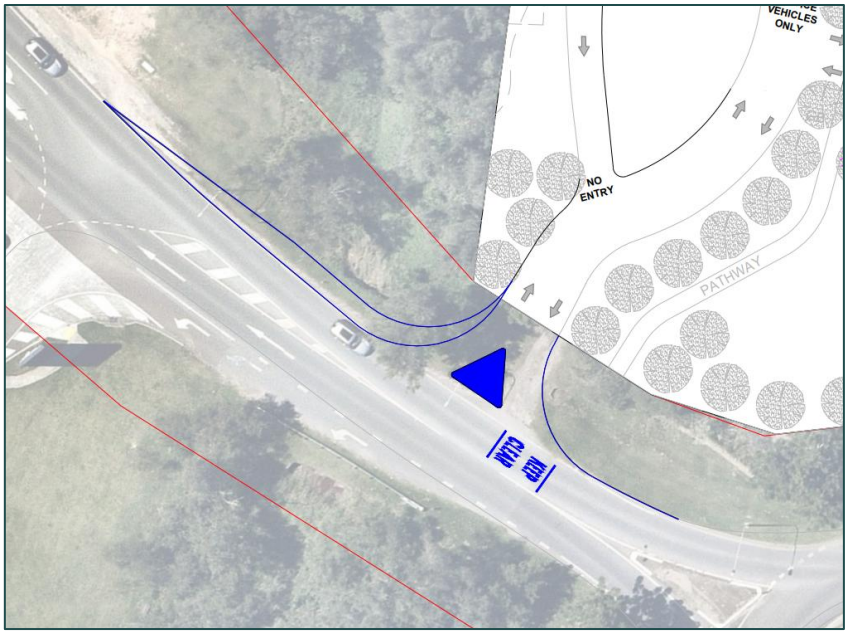
Therefore, the proposed driveway width complies with Australian Standards AS2890.1.

Furthermore, Modus has prepared a Traffic Concept Plan (provided at **Appendix B**) demonstrating the following access arrangements:

- The provision of a concrete median island within the crossover to ensure only left-in / left-out movements are permitted,
- A Basic Left (BAL) turn treatment (refer to Section 7.5 for further information),
- Keep clear line marking along Homestead Drive (refer to Section 7.4 for further information),

The abovementioned access arrangements are illustrated on Figure 4-1 for ease of reference.

Figure 4-1 Recommended Access Arrangements



4.1.2 Driveway Location

In accordance with Australian Standards AS2890.1, development accesses with a Class 2 Access Facility Category are to achieve a 6.0m separation to any formal intersections. Provided that the proposed access location is not located within a 6.0m distance to any formal intersections, the proposed access location is considered acceptable.

Further commentary regarding the driveway location is detailed in Section 7.4.

4.1.3 Safe Intersection Sight Distance

To ensure the proposed access location accommodates sufficient sight distance, Modus has determined the required Safe Intersection Sight Distance (SISD) in accordance with the Austroads Guide to Road Design series.

For ease of reference, the SISD requirement is determined by the equation illustrated on Figure 4-2.

Figure 4-2 Austroads SISD Requirement

Equation 2 provides the formula for SISD:

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)} \quad (2)$$

where

SISD = safe intersection sight distance (m)

D_T = decision time (sec) = observation time (3 sec) + reaction time (sec) – refer to *AGRD Part 3* (Austroads 2016a) for a guide to values

V = operating (85th percentile) speed (km/h)

d = coefficient of deceleration – refer to Table 3.3 and AGRD Part 3 for a guide to values

a = longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade)

Designers should note that SISD:

- is measured along the carriageway from the approaching vehicle to the conflict point; the line of sight having to be clear to a point 7.0 m (5.0 m minimum) back along the side road from the conflict point

Therefore, the minimum SISD requirement for the western approach to the site access is outlined in Table 4-2, as well as the corresponding parameters adopted to inform the SISD requirements.

Table 4-2 Minimum SISD Requirements

Approach Direction to Site Access	SISD Requirement Parameter Adopted				SISD Requirement
	Decision Time	Design Speed	Coefficient of Deceleration	Longitudinal Grade	
Western Approach	5.5 seconds	70 km/hr	0.36	0%	150m

Therefore, the site access location is to accommodate a minimum SISD of 150m on the western approach to the intersection.

The driver perspective located 150m west of the site access is illustrated on Figure 4-3.

Figure 4-3 Driver Perspective at Minimum SISD Requirement

As such, the vehicle sight distance provisions are considered acceptable.

4.1.4 Pedestrian Sight Splays

In accordance with Australian Standards AS2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in length and 2.0m in width from the property boundary.

The proposed egress location ensures sufficient visibility between outbound vehicles and pedestrians along the frontage of the site. Therefore, the proposed pedestrian sight splay provisions are considered acceptable.

4.2 Car Parking Provision

In accordance with the LCC Planning Scheme, the minimum car parking requirements are outlined in Table 4-3.

Table 4-3 Proposed Car Parking Provision

Land Use	Car Parking Rate	Yield	Car Parking Required	Car Parking Provided
Health Care Services	1 space per 10 sq.m GFA plus 1 Ambulance Space	180 sq.m GFA	18 Spaces and 1 Ambulance Space	18 Spaces and 1 Ambulance Space

Therefore, the proposed parking provisions are in accordance with the LCC Planning Scheme.

4.3 Bicycle Parking Provision

In accordance with the LCC Planning Scheme, the minimum bicycle parking requirements are outlined in Table 4-4.

Table 4-4 Proposed Bicycle Parking Provision

Land Use	Bicycle Parking Rate	Yield	Bicycle Parking Required	Bicycle Parking Provided
Health Care Services	1 Staff Space per 100 sq.m GFA 1 Visitor Space per 200 sq.m GFA	180 sq.m GFA	2 Staff Spaces 1 Visitor Space	Capability to store a minimum of 3 bicycle spaces.

Therefore, the proposed bicycle provisions are in accordance with the LCC Planning Scheme.

4.4 Parking Layout

4.4.1 Traffic Operations On-Site

The proposed development accommodates a traffic arrangement on-site in which service vehicle areas are separated from private vehicle areas. As demonstrated on development plans (provided at **Appendix A**) it is recommended that appropriate line marking be implemented to ensure all users are familiar with the traffic arrangements on-site.

4.4.2 Car Parking Layout

Modus has conducted a design review of the car park against the design guidelines within Australian Standards AS2890.1. The compliance has been summarised in Table 4-5.

Table 4-5 Car Parking Layout Compliance

Design Criteria	AS2890 Requirement	Proposed Design	Compliant
Parking Spaces			
Car Space Length - General	Min 5.4m	Min 5.4m	✓
Car Space Width – Medical Centre	Min 2.6m	Min 2.6m	✓
Car Space Width - PWD Space	Min 2.4m plus adjacent 2.4m shared zone	Min 2.4m plus adjacent 2.4m shared zone	✓
Car Parking Door Opening Clearances	Min 0.3m	Min 0.3m	✓
Car Parking Manoeuvring Clearances	Min 0.3m measured 0.75m back from car space entry	Min 0.3m measured 0.75m back from car space entry	✓
Roadways and Parking Aisles			
Minimum Two-Way Circulation Roadway	Min 5.5m	Min 5.5m	✓
Minimum Car Parking Aisle Width	Min 5.8m	Min 5.8m	✓
Termination Aisle Extension	Min 1.0m	Min 1.0m	✓
Maximum Car Parking Length	Max 100.0m	Max 100.0m	✓

Additionally, the development accommodates a turnaround bay on-site.

Therefore, the car parking layout is designed in accordance with Australian Standards 2890.1.

4.4.3 Queueing Provisions

In accordance with Australian Standards 2890.1, the minimum vehicle queuing requirement from the property boundary to the first parking space is 12.0m.

The development accommodates a minimum queueing provision of 12.0m and hence is considered acceptable.

4.5 Servicing Requirements

In accordance with the LCC Planning Scheme, the minimum service vehicle requirement for the proposed development is a Small Rigid Vehicle (SRV) and a Refuse Collection Vehicle (RCV).

On this basis, Modus has undertaken a swept path assessment (provided at **Appendix C**) of which confirms:

- A SRV is able to safely and efficiently manouevre to, within and from the site ensuring a minimum 0.3m to any permanent obstructions, ensuring a forward-in / forward-out arrangement,
- A 10.3m RCV is able to safely and efficiently manouevre to, within and from the site ensuring a minimum 0.3m to any permanent obstructions, ensuring a forward-in / forward-out arrangement.

On this basis, the proposed servicing provisions are considered acceptable.

5 Traffic Assumptions

5.1 Study Intersections

The study intersections for the assessment herein are outlined on Figure 5-1 and are detailed in Table 5-1.

Figure 5-1 Study Intersections

Table 5-1 Study Intersections

Intersection ID	Intersection	Formation
1	Homestead Drive / Blueberry Ash Court / Coachwood Drive	Roundabout
2	Homestead Drive / Site Access	Priority-Controlled
3	Homestead Drive / Bushman Drive	Roundabout

5.2 Background Traffic Volumes

To understand the existing traffic conditions, intersection traffic counts were obtained from Austraffic on Wednesday 30th July 2025 at the Homestead Drive / Blueberry Ash Court / Coachwood Drive and Homestead Drive / Bushman Drive intersections.

A copy of the traffic survey data is enclosed in **Appendix D**, with the adopted network peak hour periods summarised in Table 5-2.

Table 5-2 Assessment Peak Periods

Surveyed Peak Period	
AM Peak	PM Peak
8:00 AM – 9:00 AM	4:15 PM – 5:15 PM

5.3 Traffic Growth

To ensure a conservative assessment, Modus has adopted an average linear growth rate of 2.5% p.a. to inform the theoretical future volumes on the surrounding external road network.

5.4 Traffic Generation

To determine the anticipated traffic generation of the proposed development, Modus has referenced the traffic generation rates for a Medical Centre in line with the TMR Traffic Generation Database as outlined in Table 5-3.

Table 5-3 Development Traffic Generation

Land Use	Yield	Traffic Generation Rates		Traffic Generation Volumes	
		AM Peak	PM Peak	AM Peak	PM Peak
Medical Centre	180 sq.m GFA	7.10 vehicles per 100 sq.m GFA	4.98 vehicles per 100 sq.m GFA	13 vehicles	9 vehicles

5.5 Inbound / Outbound Directional Movements

Table 5-4 outlines the peak hour traffic directional splits for the proposed development land use.

Table 5-4 Inbound / Outbound Development Traffic Generation Distributions

Land Use	AM Peak Hour		PM Peak Hour	
	IN	OUT	IN	OUT
Medical Centre	50%	50%	50%	50%

5.6 External Directional Distributions

The surrounding road network and attractors have been assessed, in conjunction with the observed directional distributions within the traffic survey data, to determine the external distributions for development traffic.

The external distributions are illustrated on the Traffic Network Flow Diagrams provided at **Appendix E**.

6 Operational Assessment

6.1 Assessment Scenarios

To determine the impact of the development on the existing road network, each study intersection has been analysed for the AM and PM peak periods, assessing the development related traffic outlined in the previous report section. The SIDRA results and layouts are provided in **Appendix E**.

In accordance with the TMR Guide to Traffic Impact Assessments (GTIA), the impact assessment year for the site access should be the year of opening and 10 years after the year of opening.

All other intersections are only to consider the year of opening impact assessment year.

For the assessment herein, Modus has assumed that the proposed development will be operational in Year 2027 and therefore indicates the design horizon assessment Year 2037. Table 6-1 summarises the impact assessment scenarios.

Table 6-1 Assessment Scenarios

Impact Assessment Scenario	Study Intersections
2027 BG	1, 3
2037 BG	1, 3
2027 BG + DEV	1, 2, 3
2037 BG + DEV	1, 2, 3

Note: BG refers to Background, DEV refers to proposed development.

6.2 Assessment Criteria

6.2.4 Intersection Degree of Saturation

The performance of each study intersection has been analysed using SIDRA Intersection 9.1 (SIDRA). SIDRA is the primary industry modelling software that estimates the capacity and performance of intersections SIDRA analyses an intersection's Degree of Saturation (DOS), queues and delays. DOS is a measure of the proportion of traffic entering an intersection relative to the intersection's capacity.

Provided that study intersections are priority-controlled and roundabout controlled, **the DOS threshold as defined by TMR is 0.80 and 0.85 for a priority-controlled and roundabout intersection respectively.** If DOS exceeds the abovementioned threshold, it indicates the intersection is nearing its practical capacity and upgrade works may be required.

6.2.5 Intersection Delay

The TMR *Guide to Traffic Impact Assessments* (GTIA) recognises the intersection delay as a greater indicator of intersection performance in comparison to the previous TMR *Guidelines for Assessment of Road Impacts of Development* (GARID) significance on the degree of saturation (DOS). For priority-controlled intersections, where the average peak hour delays for any movement exceed 42 seconds, as outlined in the GTIA, the intersection should be upgraded for safety reasons.

7 Operational Assessment

7.1 Homestead Drive / Blueberry Ash Court / Coachwood Drive Intersection

The Homestead Drive / Blueberry Ash Court / Coachwood Drive intersection is a four-way roundabout, where Homestead Drive is the Major Road. Figure 7-1 illustrates the existing intersection formation and SIDRA layout for this study intersection.

Figure 7-1 Homestead Drive / Blueberry Ash Court / Coachwood Drive Intersection Aerial and SIDRA Layout

Table 7-1 outlines the SIDRA Assessment results for the Homestead Drive / Blueberry Ash Court / Coachwood Drive intersection. The SIDRA results and layouts are provided in **Appendix E.**

Table 7-1 Homestead Drive / Blueberry Ash Court / Coachwood Drive Intersection - SIDRA Results

Scenario	DOS	Average Delay	95th %ile Queue	Critical Movement
AM Peak Period				
2027 BG	0.404	13.9 sec	16.7m	Homestead Drive (W)
2027 BG + DEV	0.408	13.9 sec	16.9m	Homestead Drive (W)
2037 BG	0.510	14.9 sec	24.4m	Homestead Drive (W)
2037 BG + DEV	0.514	14.9 sec	24.7m	Homestead Drive (W)
PM Peak Period				
2027 BG	0.484	14.8 sec	25.9m	Homestead Drive (E)
2027 BG + DEV	0.487	14.8 sec	26.1m	Homestead Drive (E)
2037 BG	0.603	16.4 sec	40.7m	Homestead Drive (E)
2037 BG + DEV	0.606	16.4 sec	41.2m	Homestead Drive (E)

Therefore, the Homestead Drive / Blueberry Ash Court / Coachwood Drive intersection will operate within acceptable performance thresholds for all scenarios.

7.2 Homestead Drive / Site Access Intersection

The Homestead Drive / Site Access intersection will be a three-way intersection where Homestead Drive is the major road. Figure 7-2 illustrates the SIDRA layout for this study intersection.

Figure 7-2 Homestead Drive / Site Access Intersection SIDRA Layout

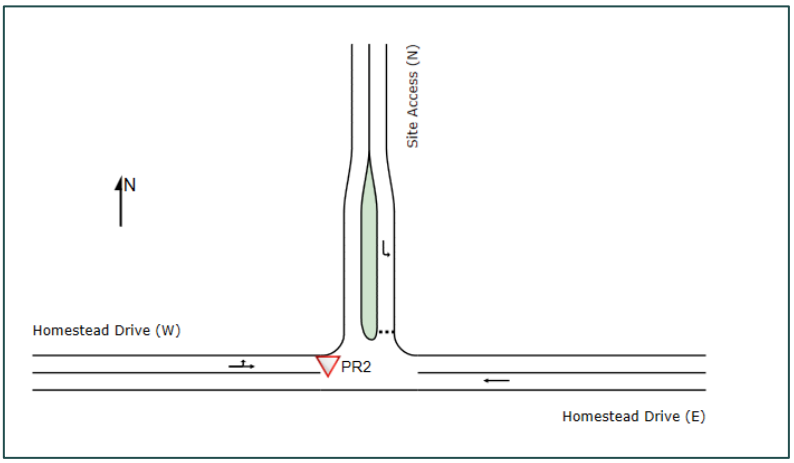


Table 7-2 outlines the SIDRA Assessment results for the Homestead Drive / Site Access intersection. The SIDRA results and layouts are provided in **Appendix E.**

Table 7-2 Homestead Drive / Site Access Intersection - SIDRA Results

Scenario	DOS	Average Delay	95th %ile Queue	Critical Movement
AM Peak Period				
2027 BG + DEV	0.361	8.9 sec	0.2m	Homestead Drive (W)
2037 BG + DEV	0.448	10.7 sec	0.1m	Homestead Drive (W)
PM Peak Period				
2027 BG + DEV	0.446	10.7 sec	0.3m	Homestead Drive (E)
2037 BG + DEV	0.565	10.1 sec	0.2m	Homestead Drive (E)

Therefore, the Homestead Drive / Site Access intersection will operate within acceptable performance thresholds for all scenarios.

7.3 Homestead Drive / Bushman Drive Intersection

The Homestead Drive / Bushman Drive intersection is a three-way roundabout, where Homestead Drive is the Major Road. Figure 7-3 illustrates the existing intersection formation and SIDRA layout for this study intersection.

Figure 7-3 Homestead Drive / Bushman Drive Intersection Aerial and SIDRA Layout

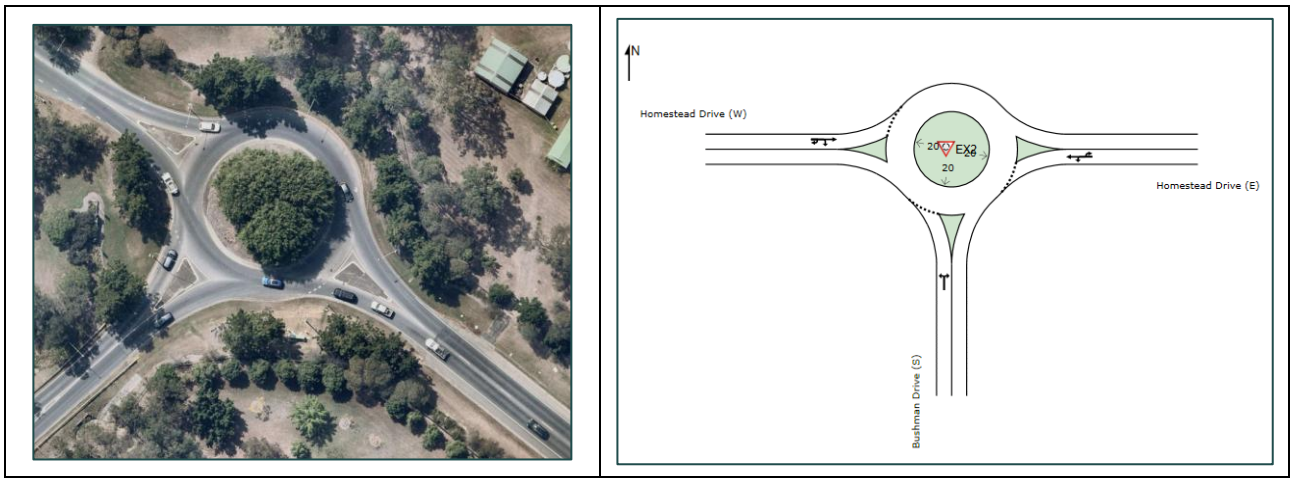


Table 7-3 outlines the SIDRA Assessment results for the Homestead Drive / Bushman Drive intersection. The SIDRA results and layouts are provided in **Appendix E.**

Table 7-3 Homestead Drive / Bushman Drive Intersection - SIDRA Results

Scenario	DOS	Average Delay	95th %ile Queue	Critical Movement
AM Peak Period				
2027 BG	0.559	12.2 sec	36.8m	Homestead Drive (W)
2027 BG + DEV	0.565	12.2 sec	37.5m	Homestead Drive (W)
2037 BG	0.725	13.9 sec	66.8m	Homestead Drive (W)
2037 BG + DEV	0.731	14.0 sec	68.7m	Homestead Drive (W)
PM Peak Period				
2027 BG	0.764	16.4 sec	79.3m	Homestead Drive (E)
2027 BG + DEV	0.769	16.5 sec	80.4m	Homestead Drive (E)
2037 BG	0.978	55.4 sec	294.2m	Homestead Drive (E)
2037 BG + DEV	0.983	57.2 sec	311.3m	Homestead Drive (E)

Therefore, the Homestead Drive / Bushman Drive intersection will operate within acceptable performance thresholds for most scenarios, except for the 10 Year Design Horizon background scenario (with and without development volumes applied).

Provided that the proposed development volumes will not have a significant impact on the performance of this intersection, Modus considers the development impact at the Homestead Drive / Bushman Drive intersection to be acceptable.

7.4 Vehicle Queueing at Site Access Intersection

The SIDRA Assessment results for the Homestead Drive / Bushman Drive intersection for the background Year 2027 scenario (without development volumes applied) indicates the following 95th percentile vehicle queues along the western intersection leg:

- 2027 Background (AM Peak): 36.8m,
- 2027 Background (PM Peak): 37.0m.

This background vehicle queueing is illustrated on Figure 7-4.

Figure 7-4 Vehicle Queueing at Site Access Intersection

Therefore, the 2027 background vehicle queueing at the Homestead Drive / Bushman Drive intersection will effectively extend along the full site frontage. As such, the site access location will be subject to vehicle queuing irrespective of access location.

On this basis, the Traffic Concept Plan (provided at **Appendix B**) demonstrates the recommended implementation of 'Keep Clear Line Marking' along Homestead Drive at the site frontage.

This ensures that sufficient clearance is available for outbound vehicles from the development site to exit onto Homestead Drive.

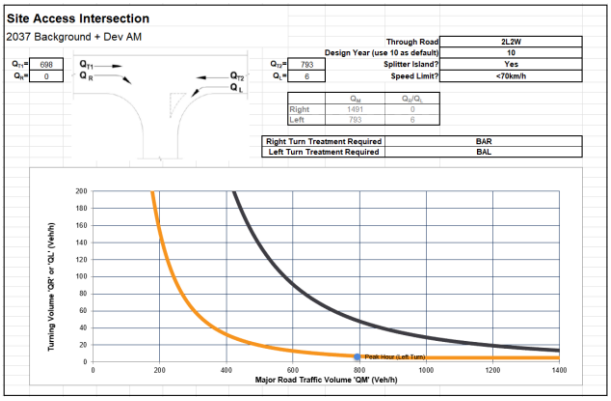
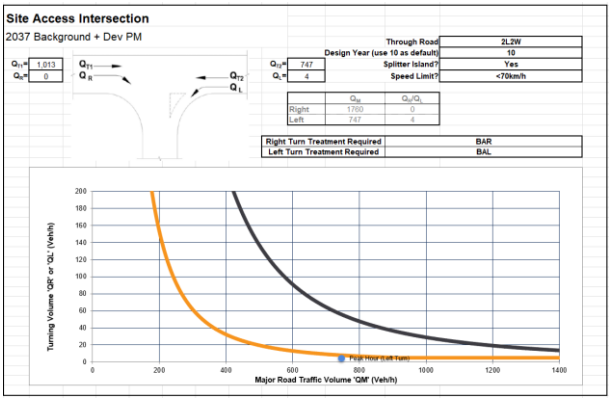
7.5 Turn Warrant Assessment

Modus has conducted a turn warrant assessment to confirm the required left turn treatments provision most suitable for the study intersections. The turn warrant assessment has been conducted in accordance with Austroads 'Guide to Road Design' Part 4A for the following conditions:

- 2037 Background Traffic + Proposed Development Traffic (Design Horizon),
- Design speed of 70 km/hr along Homestead Drive,
- Inclusion of a splitter island at the intersection.

The background and proposed development turn warrant assessment for the site access intersection is outlined in Table 7-4.

Table 7-4 Site Access Turn Warrant Assessment

Year 2037 Background + Development AM Peak	Year 2037 Background + Development PM Peak
	

Therefore, the site access intersection requires a Basic Left (BAL) turn treatment.

On this basis, the Traffic Concept Plan (provided at **Appendix B**) demonstrates the provision of a BAL turn treatment.

8 Summary

Therefore, Modus is of the opinion that the proposed development is acceptable from a traffic engineering perspective and will not have a substantial impact on the safety or efficiency of the external road network.

Should there be any issue with the above, please contact the undersigned.

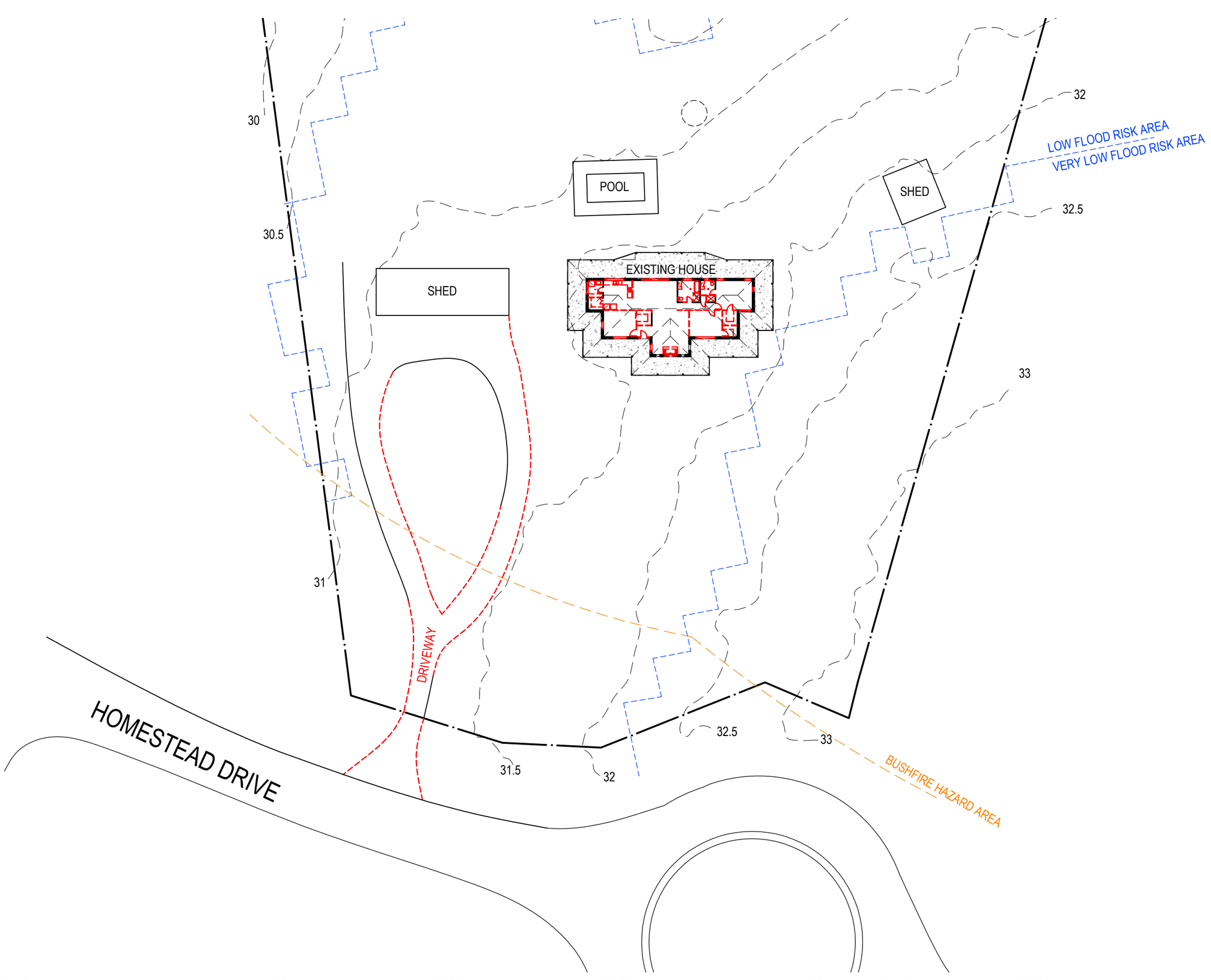
Yours sincerely,

MODUS TRANSPORT AND TRAFFIC ENGINEERING

Harj Singh
Executive Director (RPEQ 22364)

APPENDIX A

Development Plans



LEGEND

DEMO - LINE OF DEMOLITION

DEVELOPMENT SUMMARY

PROPOSAL:	MEDICAL CENTRE
R.P.D:	LOT 160 on RP848031 39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280
LOCAL AUTHORITY:	LOGAN CITY COUNCIL
SITE AREA :	15,000m²
GFA:	180m²
CAR PARKING:	18 BAYS (INC. PWD) 1 AMBULANCE BAY
WASTE COLLECTION:	ON SITE
OPERATING HOURS:	MONDAY - FRIDAY 8:00am to 6:00pm

DESIGN BY:
CHRISTIAN ZAMBELLI
architect@christianzambelli.com
P 0408 266 135 B.Arch BOAQ 4518

CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

NORTH:

SCALE:
1:500@A3

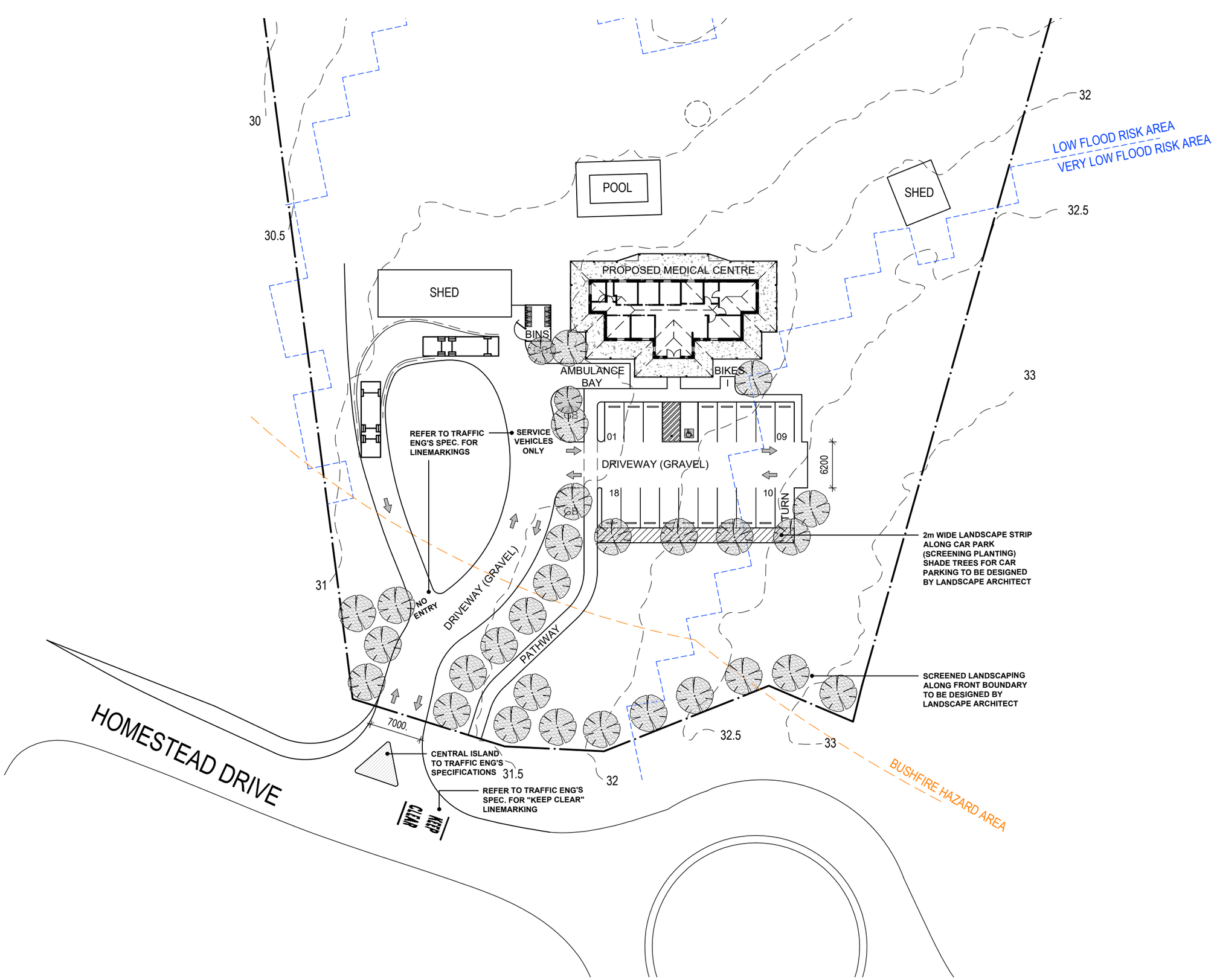
DATE:
28th AUG 2025

THIS DRAWING:
SITE PLAN EXISTING WITH DEMOLITION

PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-101 (2)



LEGEND

LANDSCAPE - TREE

DEVELOPMENT SUMMARY

PROPOSAL:	MEDICAL CENTRE
R.P.D:	LOT 160 on RP848031 39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280
LOCAL AUTHORITY:	LOGAN CITY COUNCIL
SITE AREA :	15,000m²
GFA:	180m²
CAR PARKING:	18 BAYS (INC. PWD) 1 AMBULANCE BAY
WASTE COLLECTION:	ON SITE
OPERATING HOURS:	MONDAY - FRIDAY 8:00am to 6:00pm

DESIGN BY:
CHRISTIAN ZAMBELLI
architect@christianzambelli.com
P 0408 266 135 B.Arch BOAQ 4518

CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

NORTH:

SCALE:
1:500@A3

DATE:
30th OCT 2025

THIS DRAWING:
SITE PLAN PROPOSED

PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

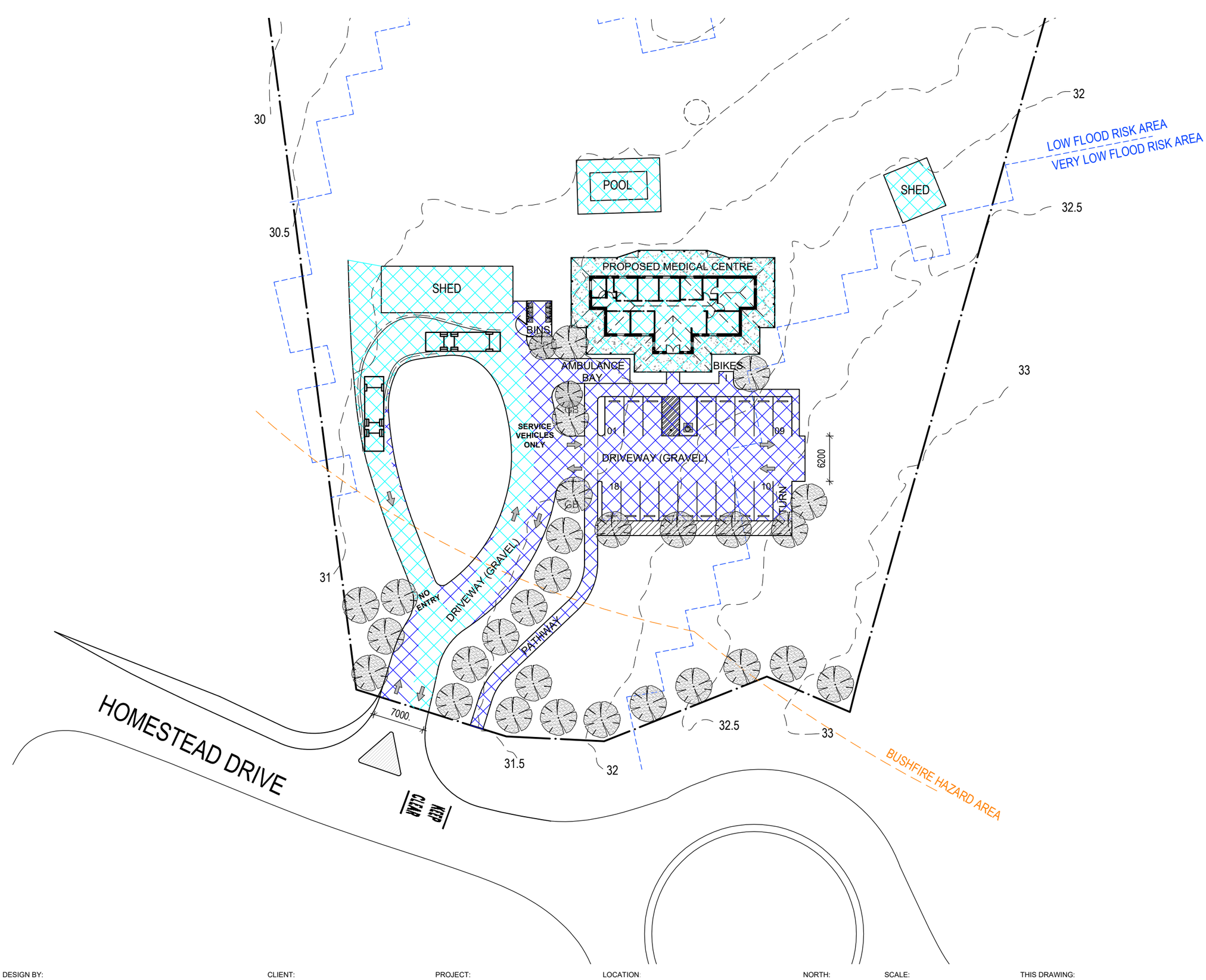
DRAWING (ISSUE):
A-111(3)

IMPERVIOUS AREA

EXISTING = 1190m²

PROPOSED = 890m²

TOTAL = 2080m²



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P 0408 266 135 B.Arch BOAQ 4518

CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

NORTH:

SCALE:
1:500@A3

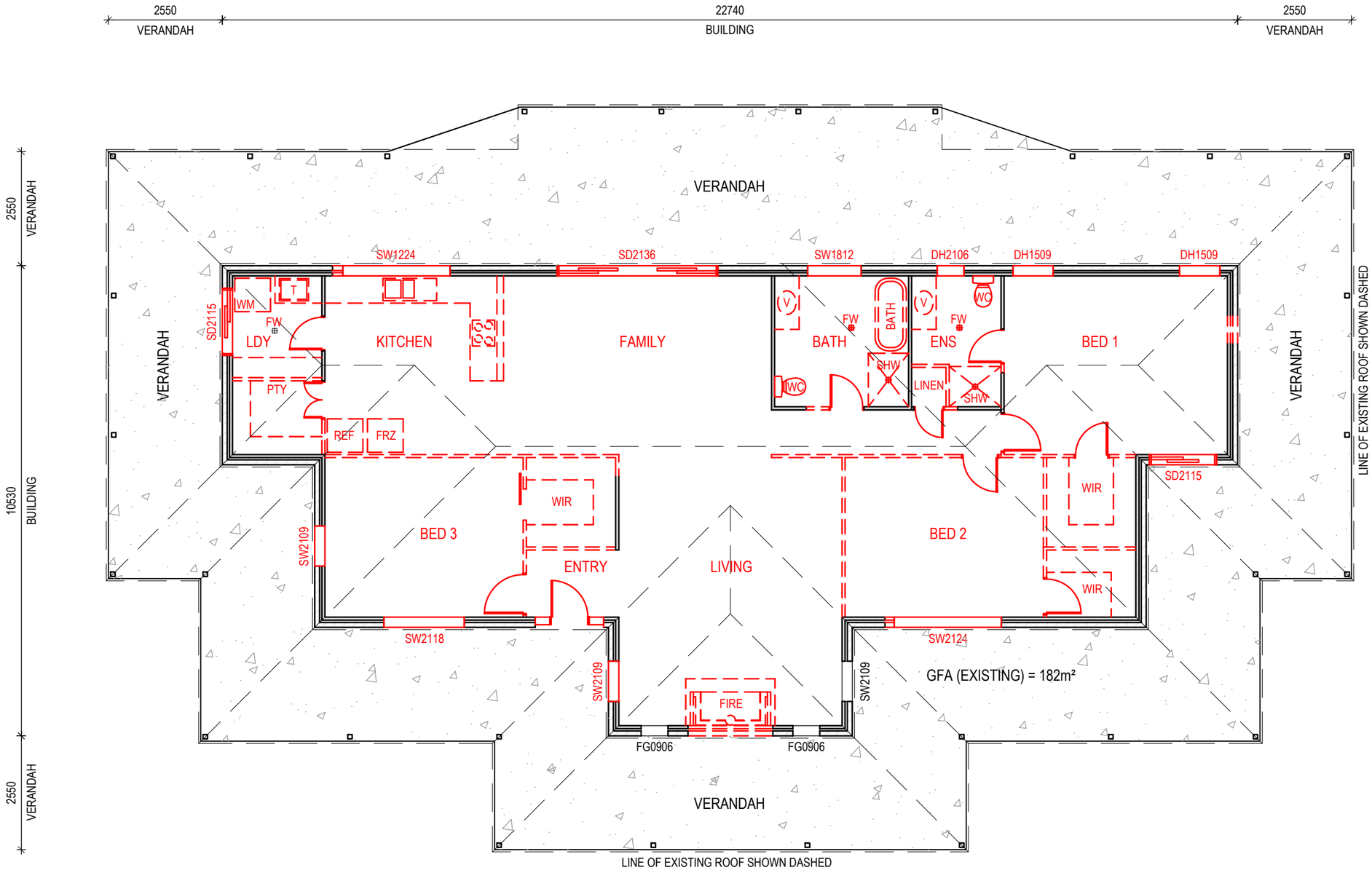
DATE:
30th OCT 2025

THIS DRAWING:
IMPERVIOUS AREA

PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-121 (3)



LEGEND

- DEMO - LINE OF DEMOLITION
- SURFACES - CONCRETE
- WALL - BRICK_EXISTING
- WALL - STUD_TIMBER_EXISTING

DESIGN BY:
CHRISTIAN ZAMBELLI
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P 0408 266 135 B.Arch BOAQ 4518

CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

NORTH:

SCALE:
1:100@A3

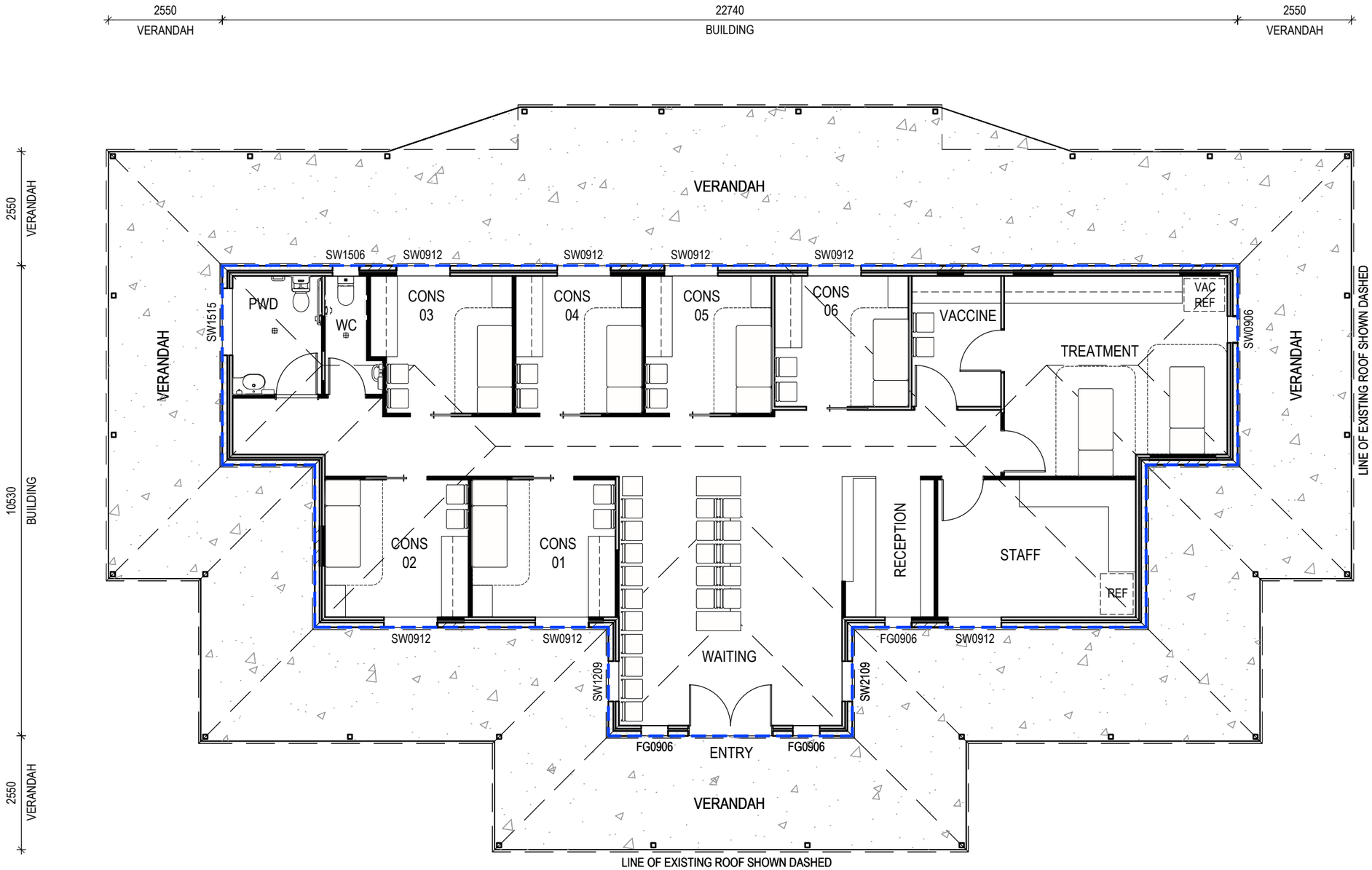
DATE:
24th MAR 2025

THIS DRAWING:
GROUND PLAN EXISTING WITH DEMOLITION

PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-201 (1)



LEGEND

- SURFACES - CONCRETE
- WALL - BRICK
- WALL - BRICK_EXISTING
- WALL - STUD_TIMBER
- WALL - STUD_TIMBER_EXISTING
- GFA = 180m²

DESIGN BY:
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CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

NORTH:

SCALE:
1:100@A3

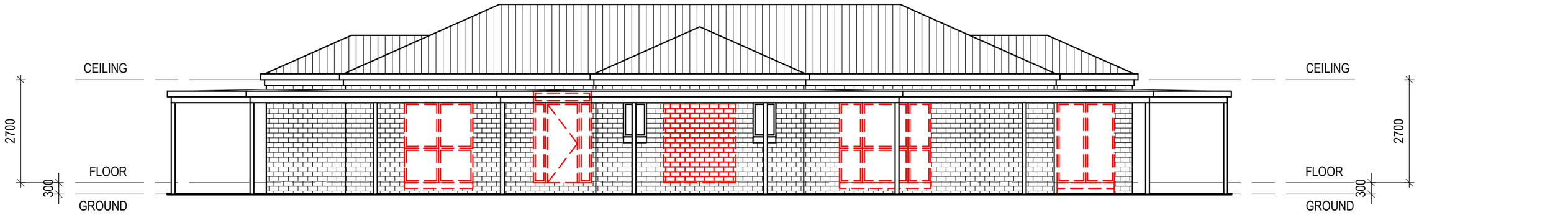
DATE:
30th OCT 2025

THIS DRAWING:
GROUND PLAN PROPOSED

PURPOSE:
DEVELOPMENT ASSESSMENT

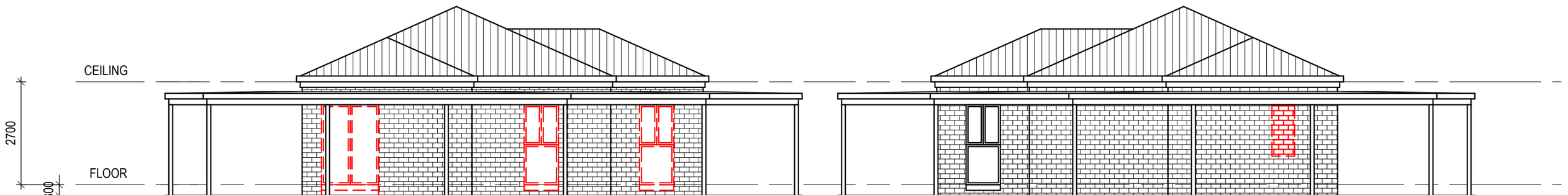
PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-202(2)



1 SOUTHERN ELEVATION

SCALE 1:100

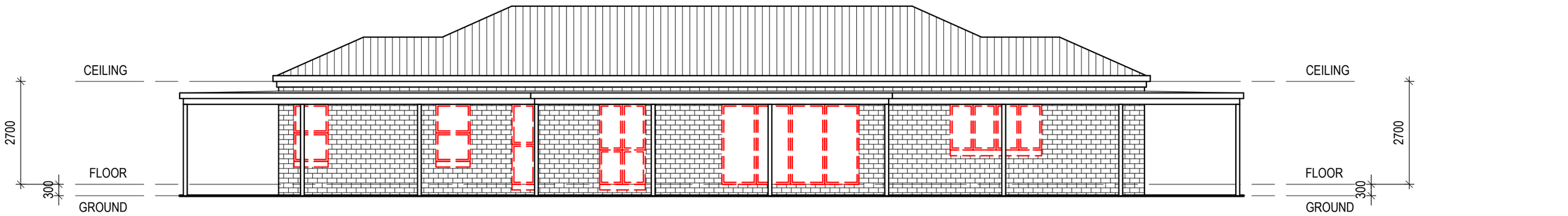


2 WESTERN ELEVATION

SCALE 1:100

3 EASTERN ELEVATION

SCALE 1:100



4 NORTHERN ELEVATION

SCALE 1:100

DESIGN BY:
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CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

SCALE:
1:100@A3

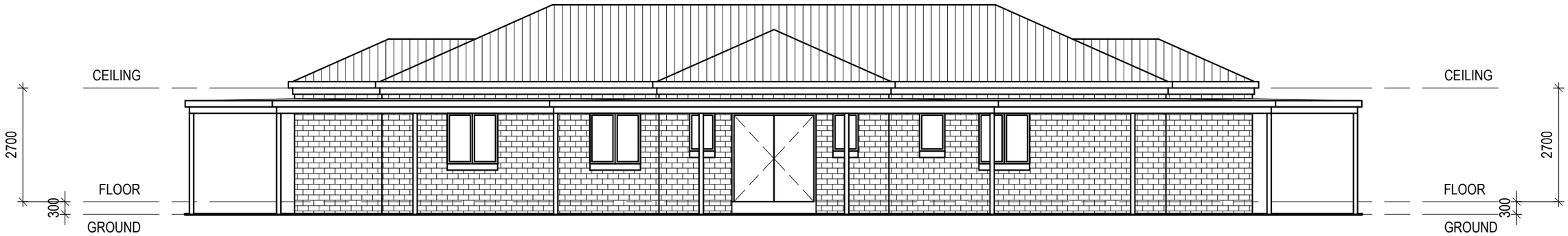
DATE:
24th MAR 2025

THIS DRAWING:
ELEVATIONS EXISTING

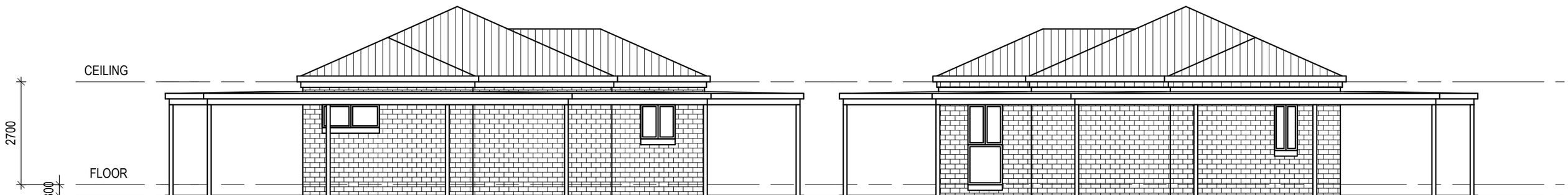
PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-301 (1)



1 SOUTHERN ELEVATION
SCALE 1:100



2 WESTERN ELEVATION
SCALE 1:100

3 EASTERN ELEVATION
SCALE 1:100

4 NORTHERN ELEVATION
SCALE 1:100

DESIGN BY:
CHRISTIAN ZAMBELLI
architect@christianzambelli.com
P 0408 266 135 B.Arch BOAQ 4518

CLIENT:
DEWAN FAMILY PRACTICE PTY LTD

PROJECT:
MEDICAL CENTRE

LOCATION:
39-45 HOMESTEAD DRIVE, FLAGSTONE QLD 4280

SCALE:
1:100@A3

DATE:
24th MAR 2025

THIS DRAWING:
ELEVATIONS PROPOSED

PURPOSE:
DEVELOPMENT ASSESSMENT

PROJECT NUMBER:
P119

DRAWING (ISSUE):
A-302(1)

APPENDIX B

Traffic Concept Plans

N

0 2 4 6 8 10 12 14 16 18 20m
4 3 2 1
SCALE 1:400

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

MODUS TRAFFIC COMMENTS (CLEAN)

DRAWING NUMBER

MOD25068QLD - SK01

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

PRELIMINARY ADVICE ONLY

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MODUS
Transport and Traffic Engineering

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310 Edward Street, BRISBANE CITY QLD 4000

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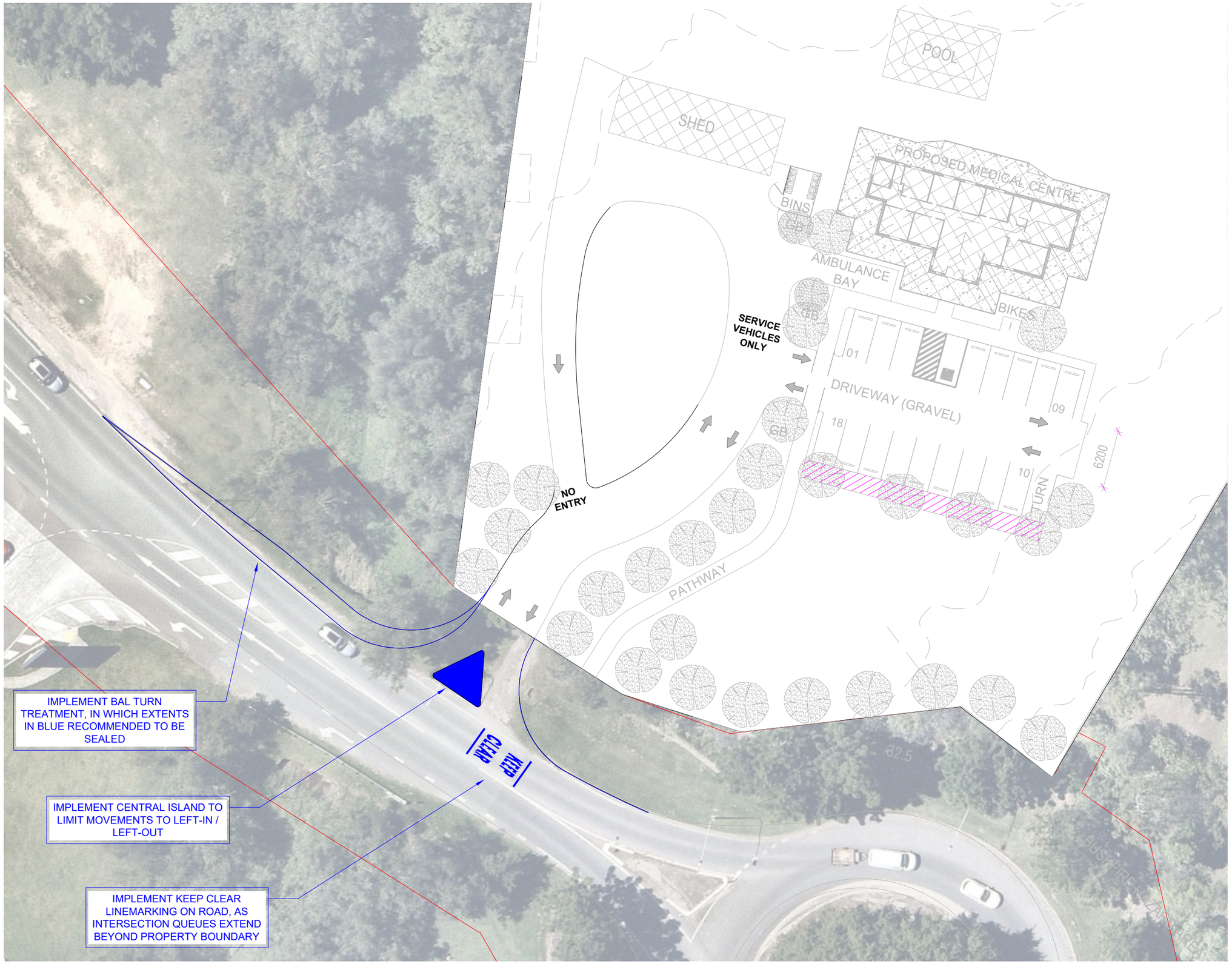

N

0 2 4 6 8 10 12 14 16 18 20m

4 3 2 1

SCALE 1:400

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

MODUS TRAFFIC COMMENTS (NOTES)

DRAWING NUMBER

MOD25068QLD - SK02

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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N

0 2 4 6 8 10 12 14 16 18 20m
4 3 2 1
SCALE 1:400

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

MODUS TRAFFIC COMMENTS (DIMNS)

DRAWING NUMBER

MOD25068QLD - SK03

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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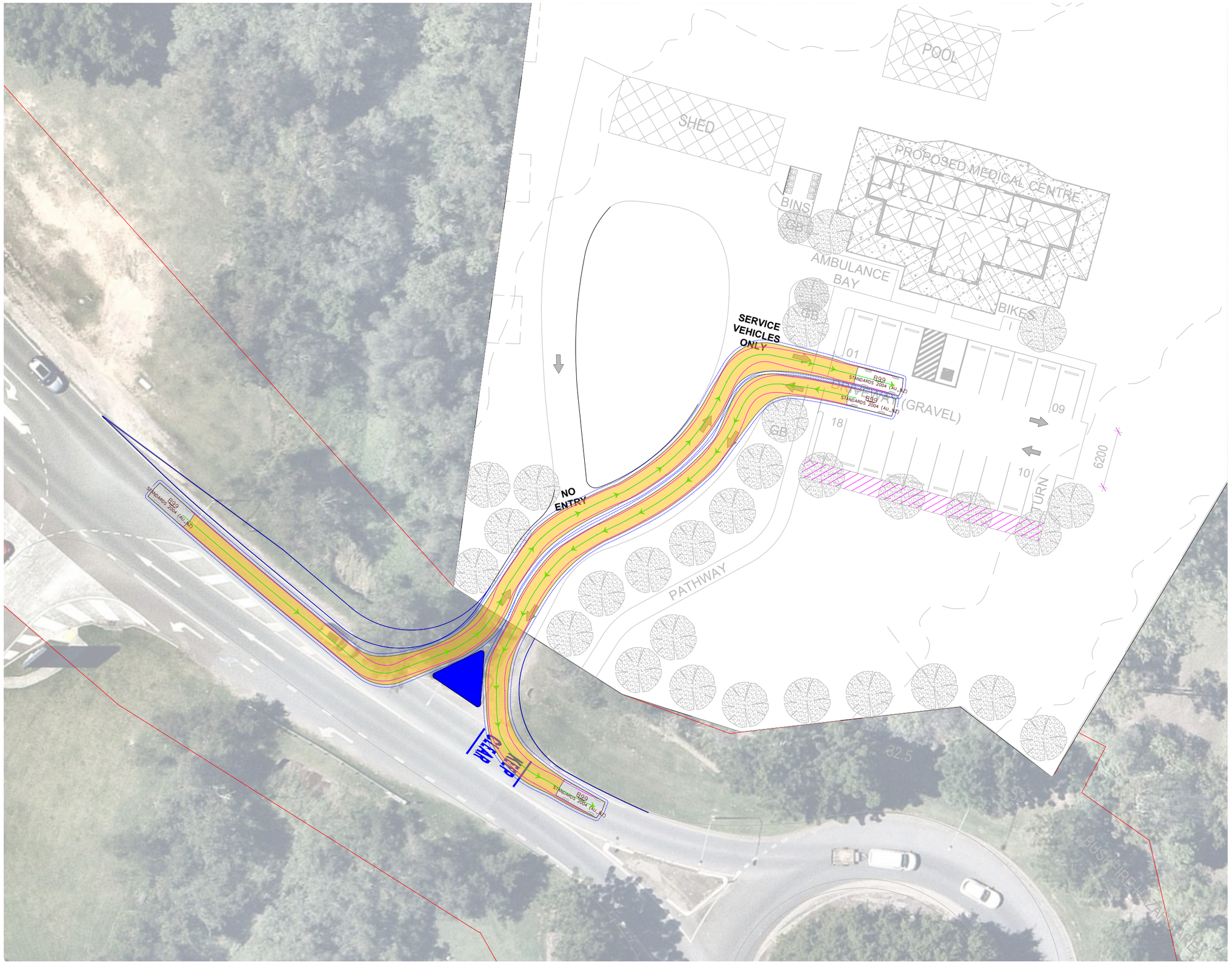
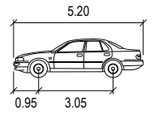
APPENDIX C

Swept Path Assessment



VEHICLE USED IN SIMULATION



B99

	Meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.5

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 2 4 6 8 10 12 14 16 18 20m
4 3 2 1
SCALE 1:400

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

B99 SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25068QLD - SK04

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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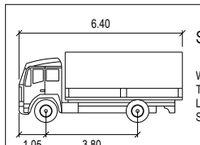
VEHICLE USED IN SIMULATION



SRV

	Meters
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 5 10 15 20 25m

5 4 3 2 1

SCALE 1:500

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

SRV SWEPT PATH

DRAWING NUMBER

MOD25068QLD - SK05

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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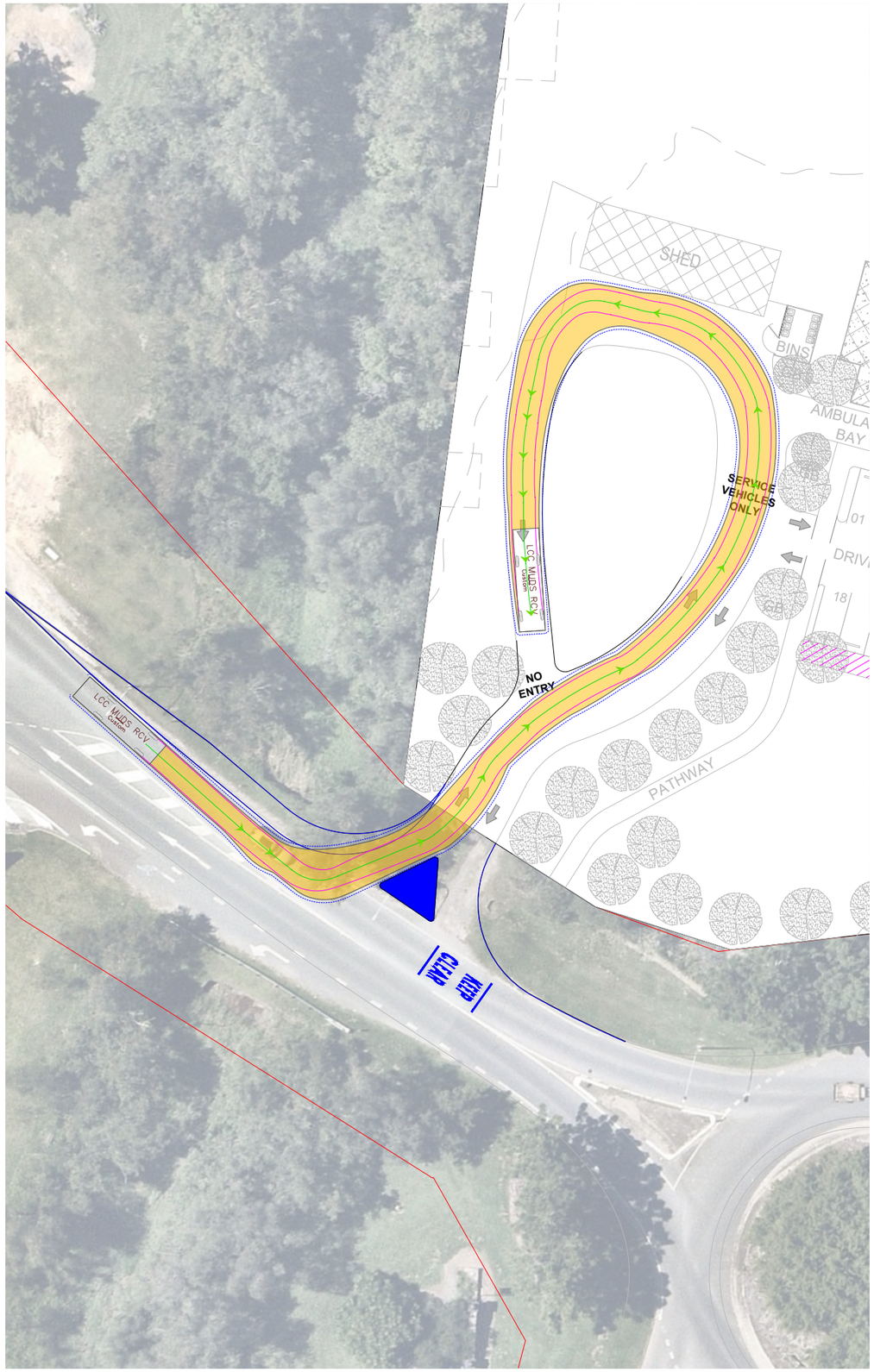

VEHICLE USED IN SIMULATION

Table 2.6.8 - MUDS - (1,100L, 360L, 240L and 140L rear load)	
Drive	6 X 4
Wheel base length	5.180m
Load capacity	20m³
Vehicle length	9.691m
Vehicle tare and gross mass	13.53t to 23t
Vehicle turning circle radius	9.7m wall to wall 9.00m kerb to kerb
Vehicle travel height	3.291m
Vehicle working height	3.3m (minimum 300mm clearance to be provided from obstructions)

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 5 10 15 20 25m

5 4 3 2 1

SCALE 1:500

PROJECT

39-45 HOMESTEAD DRIVE, FLAGSTONE

CLIENT

STEFFAN HARRIES

DRAWING TITLE

LCC MUDS RCV SWEPT PATH

DRAWING NUMBER

MOD25068QLD - SK06

DATE	REVISION
6 NOV 2025	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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Transport and Traffic Engineering

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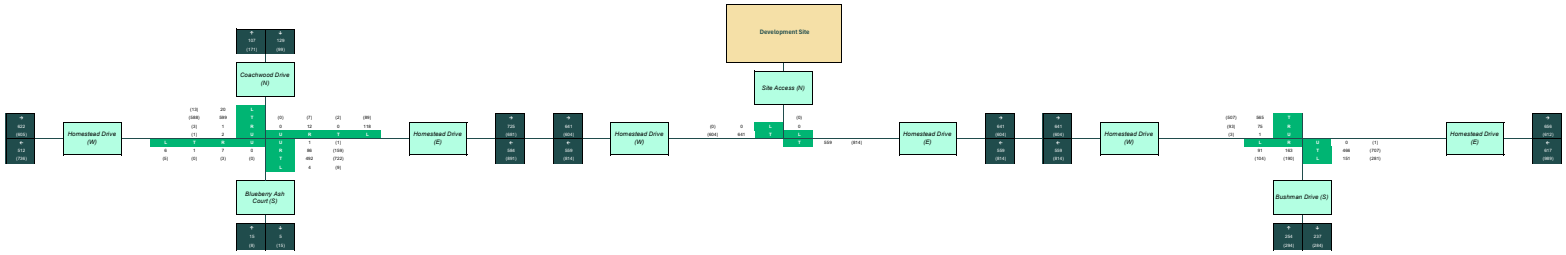
APPENDIX D

Network Flow Diagram

Legend

L	Left turn
T	Through
R	Right turn
U	U-turn
00	AM Peak Hour Volumes
(00)	PM Peak Hour Volumes
	Development Area

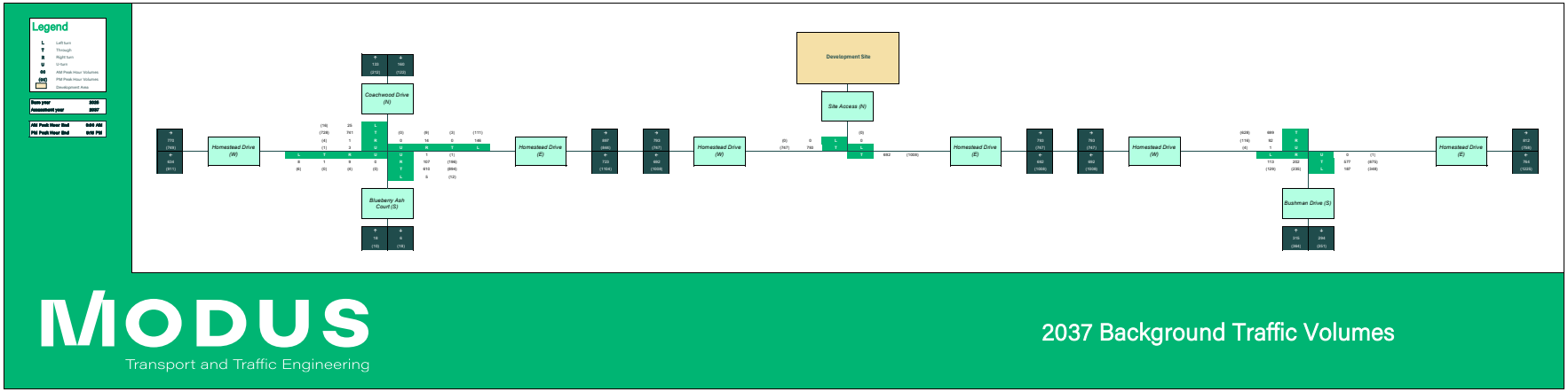
Base year	2025
Assessment year	2027
AM Peak Hour End	9:00 AM
PM Peak Hour End	6:00 PM



MODUS

Transport and Traffic Engineering

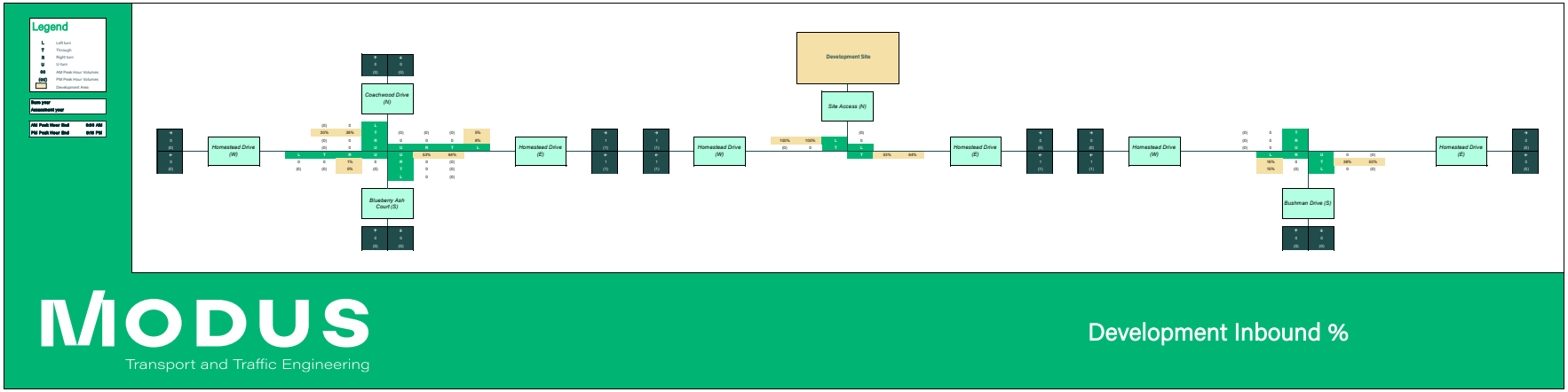
2027 Background Traffic Volumes



MODUS

Transport and Traffic Engineering

2037 Background Traffic Volumes



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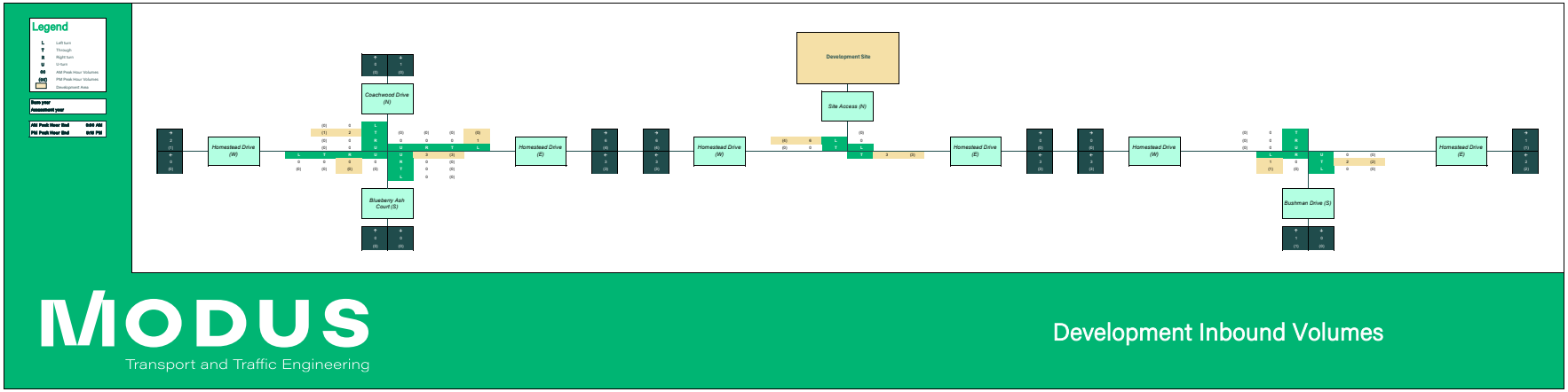
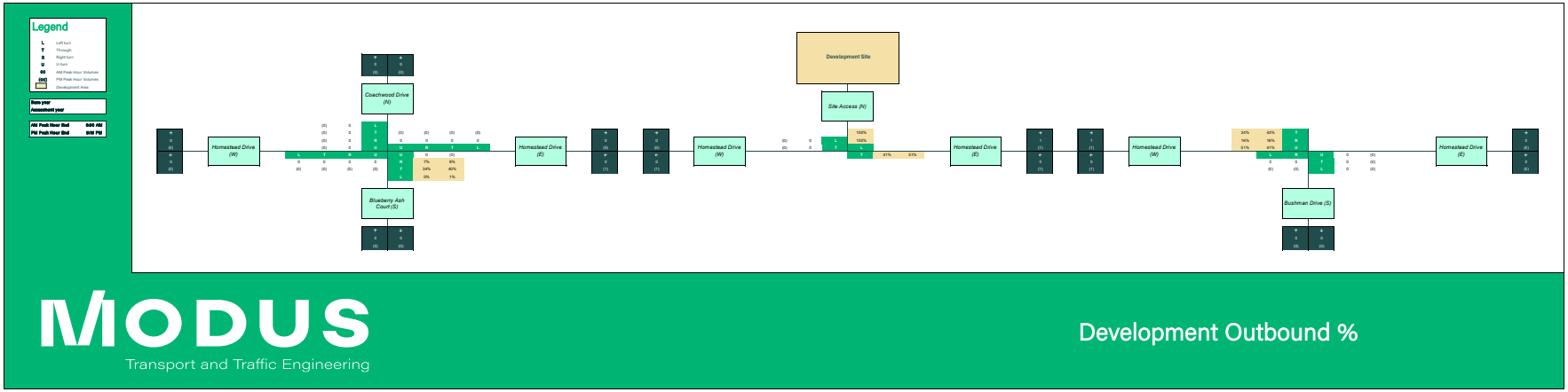
Development Inbound %



MODUS

Transport and Traffic Engineering

Development Inbound Volumes



MODUS

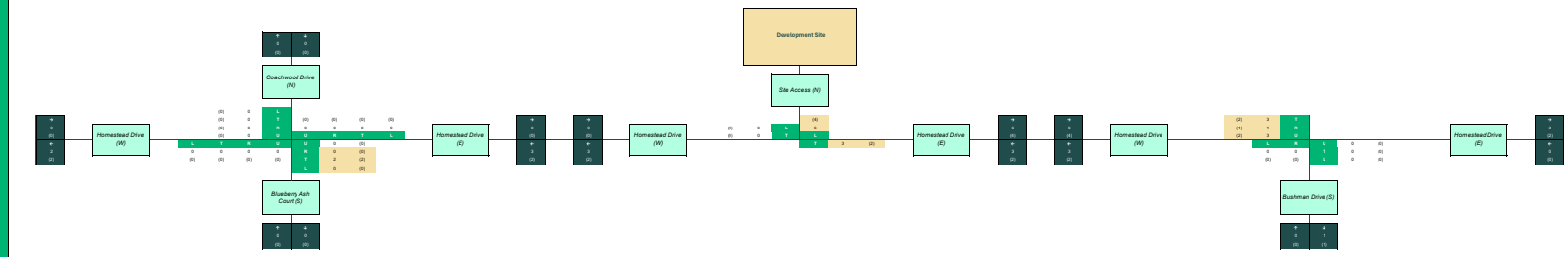
Transport and Traffic Engineering

Development Outbound %

Legend

L	Left turn
T	Through
R	Right turn
U	U-turn
00	AM Peak Hour Volumes
(00)	PM Peak Hour Volumes
	Development Area

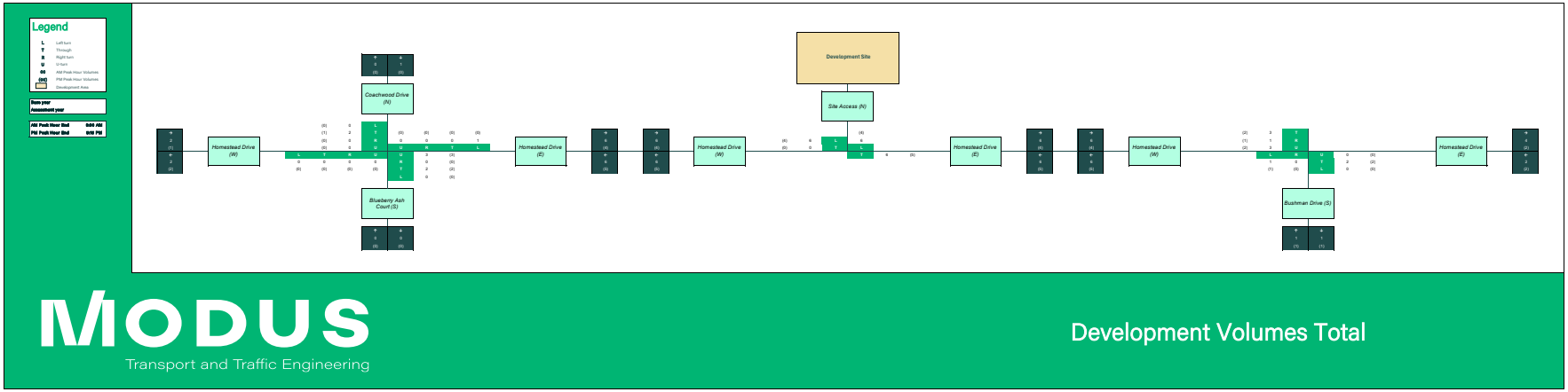
From year	
Assessment year	
AM Peak Hour End	8:00 AM
PM Peak Hour End	9:00 PM



MODUS

Transport and Traffic Engineering

Development Outbound Volumes



MODUS

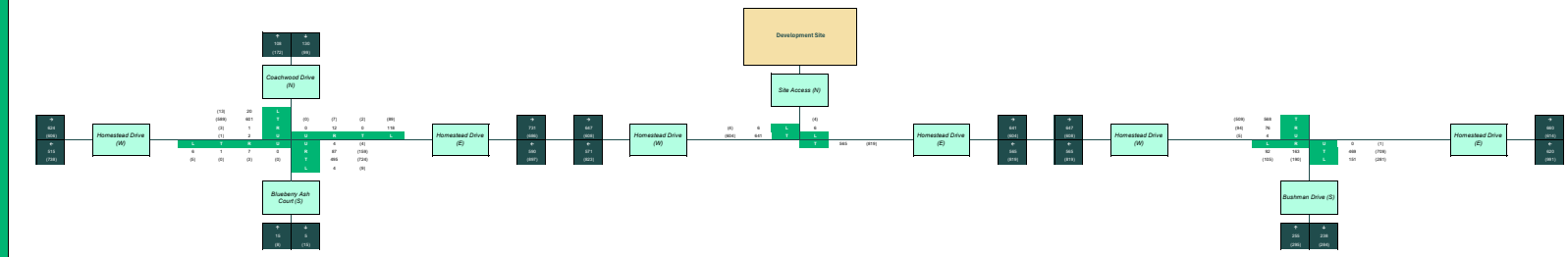
Transport and Traffic Engineering

Development Volumes Total

Legend

L	Left turn
T	Through
R	Right turn
U	U-turn
00	AM Peak Hour Volumes
(00)	PM Peak Hour Volumes
	Development Area

Base year	2025
Assessment year	2027
AM Peak Hour End	9:00 AM
PM Peak Hour End	6:00 PM



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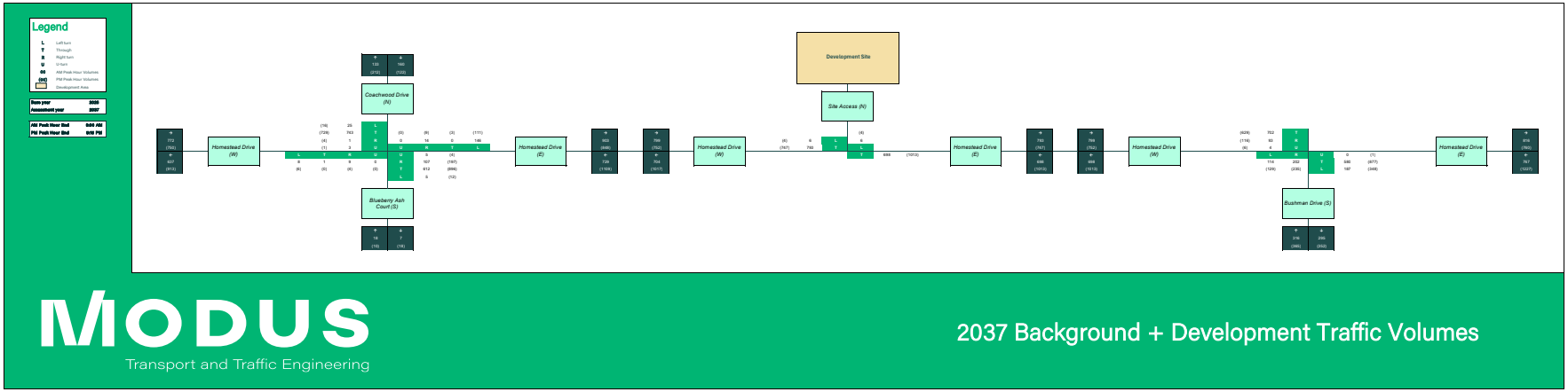
2027 Background + Development Traffic Volumes



MODUS

Transport and Traffic Engineering

2037 Background + Development Traffic Volumes

APPENDIX E

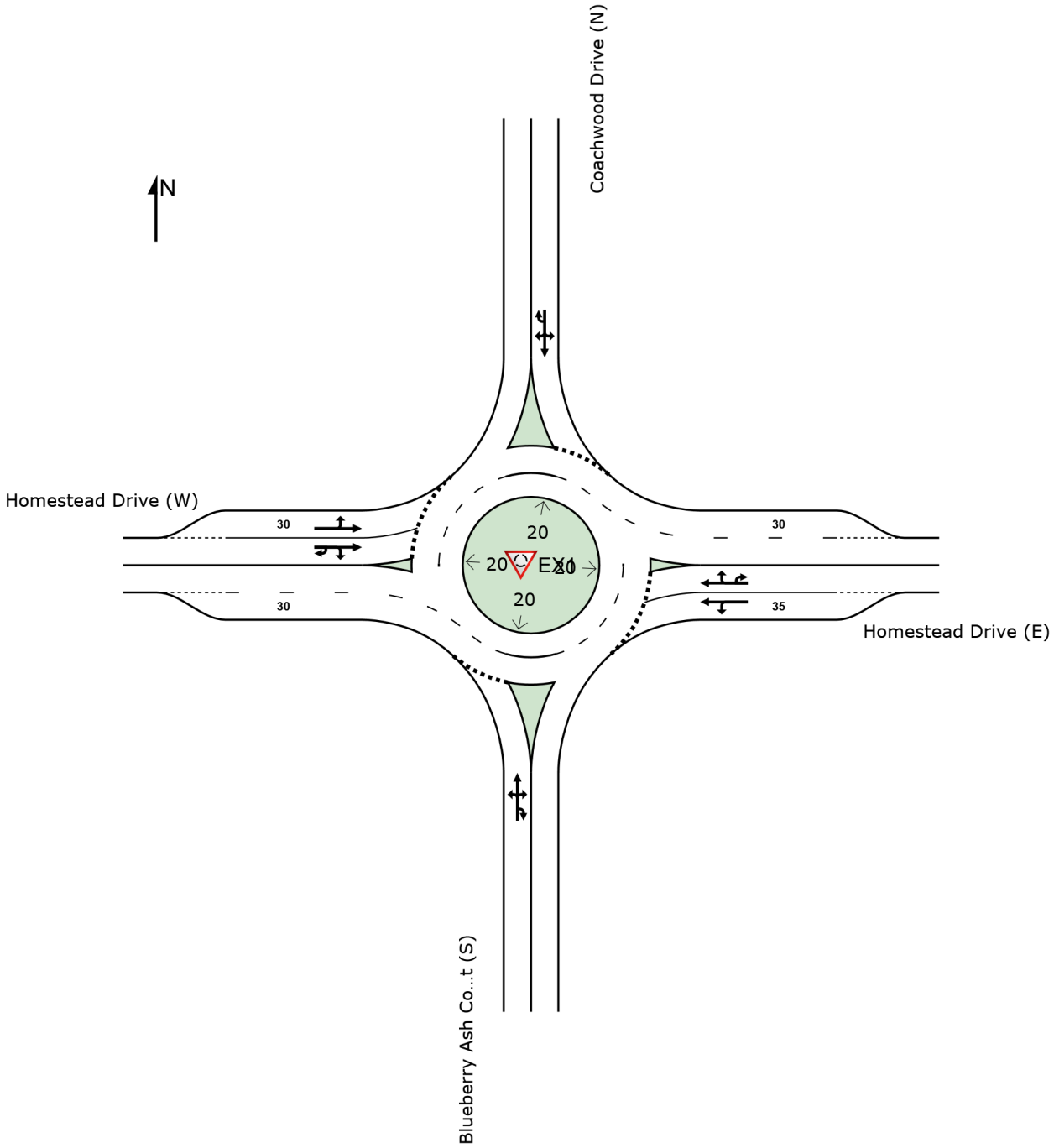
SIDRA Results and Layout

SITE LAYOUT

Site: EX1 [BG2027 AM (Site Folder: BG2027)]

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

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

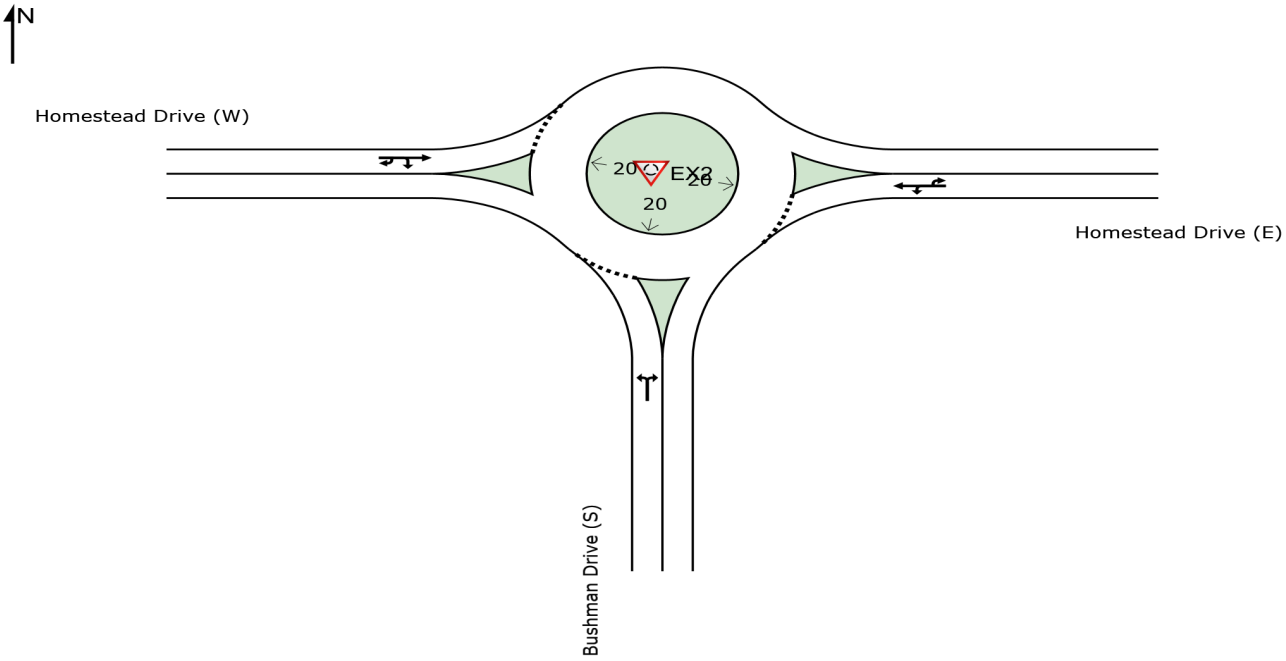


SITE LAYOUT

Site: EX2 [BG2027 AM (Site Folder: BG2027)]

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

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



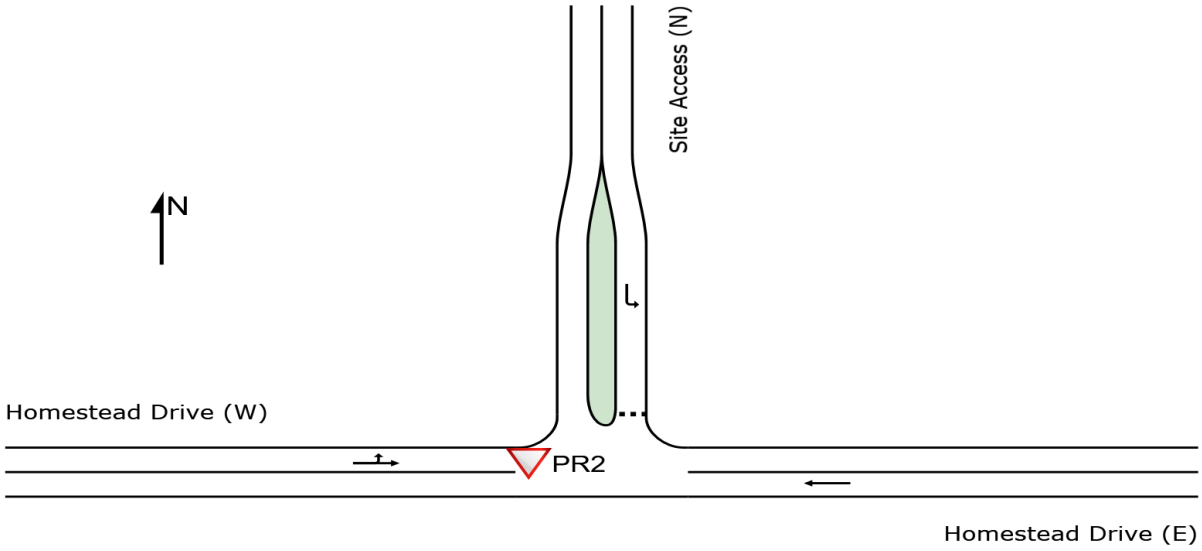
Organisation: MODUS TRAFFIC ENGINEERING PTY LTD | Licence: NETWORK / 1PC | Created: Thursday, 6 November 2025 7:08:23 PM
Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

SITE LAYOUT

Site: PR2 [BG2027 + DEV AM (Site Folder: BG2027 + DEV)]

Homestead Drive / Site Access
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Give-Way (Two-Way)

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



MOVEMENT SUMMARY

Site: EX1 [BG2027 AM (Site Folder: BG2027)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	6	5.0	6	5.0	0.020	7.4	LOS A	0.1	0.6	0.50	0.67	0.50	51.0
2	T1	All MCs	1	5.0	1	5.0	0.020	6.6	LOS A	0.1	0.6	0.50	0.67	0.50	51.3
3	R2	All MCs	7	5.0	7	5.0	0.020	11.2	LOS B	0.1	0.6	0.50	0.67	0.50	50.4
3u	U	All MCs	1	5.0	1	5.0	0.020	13.3	LOS B	0.1	0.6	0.50	0.67	0.50	50.4
Approach			16	5.0	16	5.0	0.020	9.5	LOS A	0.1	0.6	0.50	0.67	0.50	50.7
East: Homestead Drive (E)															
4	L2	All MCs	4	5.0	4	5.0	0.101	4.3	LOS A	0.4	3.3	0.11	0.40	0.11	54.1
5	T1	All MCs	518	5.0	518	5.0	0.327	4.3	LOS A	2.0	14.4	0.11	0.44	0.11	54.1
6	R2	All MCs	91	5.0	91	5.0	0.327	8.8	LOS A	2.0	14.4	0.11	0.44	0.11	53.1
6u	U	All MCs	1	5.0	1	5.0	0.327	10.9	LOS B	2.0	14.4	0.11	0.44	0.11	53.1
Approach			614	5.0	614	5.0	0.327	5.0	LOS A	2.0	14.4	0.11	0.44	0.11	54.0
North: Coachwood Drive (N)															
7	L2	All MCs	124	5.0	124	5.0	0.185	8.5	LOS A	0.8	5.9	0.57	0.69	0.57	52.0
8	T1	All MCs	1	5.0	1	5.0	0.185	7.2	LOS A	0.8	5.9	0.57	0.69	0.57	52.4
9	R2	All MCs	13	5.0	13	5.0	0.185	11.8	LOS B	0.8	5.9	0.57	0.69	0.57	51.5
9u	U	All MCs	1	5.0	1	5.0	0.185	13.9	LOS B	0.8	5.9	0.57	0.69	0.57	51.5
Approach			139	5.0	139	5.0	0.185	8.8	LOS A	0.8	5.9	0.57	0.69	0.57	52.0
West: Homestead Drive (W)															
10	L2	All MCs	21	5.0	21	5.0	0.124	5.1	LOS A	0.5	3.7	0.27	0.45	0.27	53.4
11	T1	All MCs	631	5.0	631	5.0	0.404	4.8	LOS A	2.3	16.7	0.28	0.43	0.28	53.8
12	R2	All MCs	1	5.0	1	5.0	0.404	9.2	LOS A	2.3	16.7	0.28	0.42	0.28	52.8
12u	U	All MCs	2	5.0	2	5.0	0.404	11.3	LOS B	2.3	16.7	0.28	0.42	0.28	52.8
Approach			655	5.0	655	5.0	0.404	4.9	LOS A	2.3	16.7	0.28	0.43	0.28	53.8
All Vehicles			1423	5.0	1423	5.0	0.404	5.4	LOS A	2.3	16.7	0.24	0.46	0.24	53.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

MOVEMENT SUMMARY

Site: EX2 [BG2027 AM (Site Folder: BG2027)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	96	5.0	96	5.0	0.306	7.2	LOS A	1.9	14.0	0.67	0.69	0.67	50.2
3	R2	All MCs	172	5.0	172	5.0	0.306	12.0	LOS B	1.9	14.0	0.67	0.69	0.67	49.7
Approach			267	5.0	267	5.0	0.306	10.3	LOS B	1.9	14.0	0.67	0.69	0.67	49.9
East: Homestead Drive (E)															
4	L2	All MCs	159	5.0	159	5.0	0.472	4.5	LOS A	4.0	29.5	0.36	0.43	0.36	53.2
5	T1	All MCs	491	5.0	491	5.0	0.472	4.7	LOS A	4.0	29.5	0.36	0.43	0.36	53.6
6u	U	All MCs	1	5.0	1	5.0	0.472	11.4	LOS B	4.0	29.5	0.36	0.43	0.36	52.6
Approach			651	5.0	651	5.0	0.472	4.6	LOS A	4.0	29.5	0.36	0.43	0.36	53.5
West: Homestead Drive (W)															
11	T1	All MCs	595	5.0	595	5.0	0.559	5.5	LOS A	5.0	36.8	0.59	0.52	0.59	52.2
12	R2	All MCs	79	5.0	79	5.0	0.559	10.2	LOS B	5.0	36.8	0.59	0.52	0.59	51.3
12u	U	All MCs	1	5.0	1	5.0	0.559	12.2	LOS B	5.0	36.8	0.59	0.52	0.59	51.3
Approach			675	5.0	675	5.0	0.559	6.1	LOS A	5.0	36.8	0.59	0.52	0.59	52.1
All Vehicles			1593	5.0	1593	5.0	0.559	6.2	LOS A	5.0	36.8	0.51	0.51	0.51	52.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: EX3 [BG2027 PM (Site Folder: BG2027)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	5	5.0	5	5.0	0.016	9.6	LOS A	0.1	0.5	0.59	0.70	0.59	50.3
2	T1	All MCs	1	5.0	1	5.0	0.016	8.1	LOS A	0.1	0.5	0.59	0.70	0.59	50.7
3	R2	All MCs	3	5.0	3	5.0	0.016	12.7	LOS B	0.1	0.5	0.59	0.70	0.59	49.8
3u	U	All MCs	1	5.0	1	5.0	0.016	14.8	LOS B	0.1	0.5	0.59	0.70	0.59	49.8
Approach			11	5.0	11	5.0	0.016	10.9	LOS B	0.1	0.5	0.59	0.70	0.59	50.1
East: Homestead Drive (E)															
4	L2	All MCs	9	5.0	9	5.0	0.149	4.3	LOS A	0.7	5.0	0.10	0.40	0.10	54.1
5	T1	All MCs	760	5.0	760	5.0	0.484	4.5	LOS A	3.5	25.9	0.11	0.44	0.11	54.0
6	R2	All MCs	167	5.0	167	5.0	0.484	8.8	LOS A	3.5	25.9	0.12	0.45	0.12	52.9
6u	U	All MCs	1	5.0	1	5.0	0.484	10.8	LOS B	3.5	25.9	0.12	0.45	0.12	52.9
Approach			938	5.0	938	5.0	0.484	5.2	LOS A	3.5	25.9	0.11	0.44	0.11	53.8
North: Coachwood Drive (N)															
7	L2	All MCs	94	5.0	94	5.0	0.139	8.1	LOS A	0.6	4.4	0.56	0.68	0.56	52.2
8	T1	All MCs	2	5.0	2	5.0	0.139	7.0	LOS A	0.6	4.4	0.56	0.68	0.56	52.6
9	R2	All MCs	7	5.0	7	5.0	0.139	11.6	LOS B	0.6	4.4	0.56	0.68	0.56	51.7
9u	U	All MCs	1	5.0	1	5.0	0.139	13.7	LOS B	0.6	4.4	0.56	0.68	0.56	51.7
Approach			104	5.0	104	5.0	0.139	8.4	LOS A	0.6	4.4	0.56	0.68	0.56	52.2
West: Homestead Drive (W)															
10	L2	All MCs	14	5.0	14	5.0	0.131	5.7	LOS A	0.5	4.0	0.35	0.49	0.35	53.0
11	T1	All MCs	619	5.0	619	5.0	0.425	5.3	LOS A	2.5	18.0	0.38	0.47	0.38	53.4
12	R2	All MCs	3	5.0	3	5.0	0.425	9.7	LOS A	2.5	18.0	0.38	0.47	0.38	52.4
12u	U	All MCs	1	5.0	1	5.0	0.425	11.7	LOS B	2.5	18.0	0.38	0.47	0.38	52.4
Approach			637	5.0	637	5.0	0.425	5.3	LOS A	2.5	18.0	0.38	0.47	0.38	53.4
All Vehicles			1689	5.0	1689	5.0	0.484	5.5	LOS A	3.5	25.9	0.24	0.47	0.24	53.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: EX4 [BG2027 PM (Site Folder: BG2027)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	109	5.0	109	5.0	0.493	11.6	LOS B	4.1	30.2	0.92	0.85	1.06	47.4
3	R2	All MCs	200	5.0	200	5.0	0.493	16.4	LOS B	4.1	30.2	0.92	0.85	1.06	46.9
Approach			309	5.0	309	5.0	0.493	14.7	LOS B	4.1	30.2	0.92	0.85	1.06	47.1
East: Homestead Drive (E)															
4	L2	All MCs	296	5.0	296	5.0	0.764	5.2	LOS A	10.9	79.3	0.67	0.48	0.67	52.0
5	T1	All MCs	744	5.0	744	5.0	0.764	5.4	LOS A	10.9	79.3	0.67	0.48	0.67	52.4
6u	U	All MCs	1	5.0	1	5.0	0.764	12.1	LOS B	10.9	79.3	0.67	0.48	0.67	51.4
Approach			1041	5.0	1041	5.0	0.764	5.3	LOS A	10.9	79.3	0.67	0.48	0.67	52.2
West: Homestead Drive (W)															
11	T1	All MCs	534	5.0	534	5.0	0.555	5.7	LOS A	5.1	37.0	0.65	0.55	0.65	51.9
12	R2	All MCs	98	5.0	98	5.0	0.555	10.4	LOS B	5.1	37.0	0.65	0.55	0.65	51.0
12u	U	All MCs	3	5.0	3	5.0	0.555	12.4	LOS B	5.1	37.0	0.65	0.55	0.65	51.0
Approach			635	5.0	635	5.0	0.555	6.5	LOS A	5.1	37.0	0.65	0.55	0.65	51.8
All Vehicles			1985	5.0	1985	5.0	0.764	7.2	LOS A	10.9	79.3	0.70	0.56	0.72	51.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: EX5 [BG2037 AM (Site Folder: BG2037)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	8	5.0	8	5.0	0.028	8.4	LOS A	0.1	0.8	0.55	0.71	0.55	50.5
2	T1	All MCs	1	5.0	1	5.0	0.028	7.3	LOS A	0.1	0.8	0.55	0.71	0.55	50.9
3	R2	All MCs	9	5.0	9	5.0	0.028	11.9	LOS B	0.1	0.8	0.55	0.71	0.55	50.0
3u	U	All MCs	1	5.0	1	5.0	0.028	14.0	LOS B	0.1	0.8	0.55	0.71	0.55	50.0
Approach			20	5.0	20	5.0	0.028	10.3	LOS B	0.1	0.8	0.55	0.71	0.55	50.3
East: Homestead Drive (E)															
4	L2	All MCs	5	5.0	5	5.0	0.125	4.3	LOS A	0.6	4.2	0.12	0.40	0.12	54.0
5	T1	All MCs	642	5.0	642	5.0	0.406	4.4	LOS A	2.8	20.2	0.13	0.43	0.13	54.0
6	R2	All MCs	113	5.0	113	5.0	0.406	8.8	LOS A	2.8	20.2	0.13	0.44	0.13	53.0
6u	U	All MCs	1	5.0	1	5.0	0.406	10.9	LOS B	2.8	20.2	0.13	0.44	0.13	53.0
Approach			761	5.0	761	5.0	0.406	5.1	LOS A	2.8	20.2	0.13	0.43	0.13	53.9
North: Coachwood Drive (N)															
7	L2	All MCs	154	5.0	154	5.0	0.254	10.2	LOS B	1.2	8.7	0.66	0.74	0.66	51.3
8	T1	All MCs	1	5.0	1	5.0	0.254	8.2	LOS A	1.2	8.7	0.66	0.74	0.66	51.7
9	R2	All MCs	15	5.0	15	5.0	0.254	12.8	LOS B	1.2	8.7	0.66	0.74	0.66	50.8
9u	U	All MCs	1	5.0	1	5.0	0.254	14.9	LOS B	1.2	8.7	0.66	0.74	0.66	50.8
Approach			171	5.0	171	5.0	0.254	10.4	LOS B	1.2	8.7	0.66	0.74	0.66	51.3
West: Homestead Drive (W)															
10	L2	All MCs	26	5.0	26	5.0	0.157	5.3	LOS A	0.7	4.9	0.31	0.47	0.31	53.2
11	T1	All MCs	780	5.0	780	5.0	0.510	5.1	LOS A	3.3	24.4	0.35	0.45	0.35	53.5
12	R2	All MCs	1	5.0	1	5.0	0.510	9.5	LOS A	3.3	24.4	0.36	0.45	0.36	52.5
12u	U	All MCs	3	5.0	3	5.0	0.510	11.5	LOS B	3.3	24.4	0.36	0.45	0.36	52.5
Approach			811	5.0	811	5.0	0.510	5.2	LOS A	3.3	24.4	0.35	0.45	0.35	53.5
All Vehicles			1762	5.0	1762	5.0	0.510	5.7	LOS A	3.3	24.4	0.29	0.47	0.29	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

MOVEMENT SUMMARY

Site: EX6 [BG2037 AM (Site Folder: BG2037)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	119	5.0	119	5.0	0.433	8.8	LOS A	3.1	22.9	0.81	0.76	0.84	49.1
3	R2	All MCs	213	5.0	213	5.0	0.433	13.6	LOS B	3.1	22.9	0.81	0.76	0.84	48.7
Approach			332	5.0	332	5.0	0.433	11.9	LOS B	3.1	22.9	0.81	0.76	0.84	48.8
East: Homestead Drive (E)															
4	L2	All MCs	197	5.0	197	5.0	0.598	4.8	LOS A	6.4	46.6	0.50	0.45	0.50	52.6
5	T1	All MCs	607	5.0	607	5.0	0.598	5.0	LOS A	6.4	46.6	0.50	0.45	0.50	53.0
6u	U	All MCs	1	5.0	1	5.0	0.598	11.7	LOS B	6.4	46.6	0.50	0.45	0.50	52.1
Approach			805	5.0	805	5.0	0.598	4.9	LOS A	6.4	46.6	0.50	0.45	0.50	52.9
West: Homestead Drive (W)															
11	T1	All MCs	736	5.0	736	5.0	0.725	7.2	LOS A	9.1	66.8	0.81	0.62	0.86	51.3
12	R2	All MCs	97	5.0	97	5.0	0.725	11.8	LOS B	9.1	66.8	0.81	0.62	0.86	50.4
12u	U	All MCs	1	5.0	1	5.0	0.725	13.9	LOS B	9.1	66.8	0.81	0.62	0.86	50.4
Approach			834	5.0	834	5.0	0.725	7.7	LOS A	9.1	66.8	0.81	0.62	0.86	51.2
All Vehicles			1971	5.0	1971	5.0	0.725	7.3	LOS A	9.1	66.8	0.68	0.58	0.71	51.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: EX7 [BG2037 PM (Site Folder: BG2037)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	6	5.0	6	5.0	0.023	11.9	LOS B	0.1	0.7	0.67	0.75	0.67	49.2
2	T1	All MCs	1	5.0	1	5.0	0.023	9.7	LOS A	0.1	0.7	0.67	0.75	0.67	49.6
3	R2	All MCs	4	5.0	4	5.0	0.023	14.3	LOS B	0.1	0.7	0.67	0.75	0.67	48.7
3u	U	All MCs	1	5.0	1	5.0	0.023	16.4	LOS B	0.1	0.7	0.67	0.75	0.67	48.7
Approach			13	5.0	13	5.0	0.023	12.9	LOS B	0.1	0.7	0.67	0.75	0.67	49.0
East: Homestead Drive (E)															
4	L2	All MCs	13	5.0	13	5.0	0.186	4.3	LOS A	0.9	6.6	0.12	0.40	0.12	54.0
5	T1	All MCs	941	5.0	941	5.0	0.603	4.7	LOS A	5.6	40.7	0.16	0.44	0.16	53.8
6	R2	All MCs	206	5.0	206	5.0	0.603	8.8	LOS A	5.6	40.7	0.17	0.45	0.17	52.7
6u	U	All MCs	1	5.0	1	5.0	0.603	10.9	LOS B	5.6	40.7	0.17	0.45	0.17	52.7
Approach			1161	5.0	1161	5.0	0.603	5.4	LOS A	5.6	40.7	0.16	0.44	0.16	53.6
North: Coachwood Drive (N)															
7	L2	All MCs	117	5.0	117	5.0	0.196	9.6	LOS A	0.9	6.6	0.65	0.73	0.65	51.6
8	T1	All MCs	3	5.0	3	5.0	0.196	7.9	LOS A	0.9	6.6	0.65	0.73	0.65	52.0
9	R2	All MCs	9	5.0	9	5.0	0.196	12.5	LOS B	0.9	6.6	0.65	0.73	0.65	51.0
9u	U	All MCs	1	5.0	1	5.0	0.196	14.6	LOS B	0.9	6.6	0.65	0.73	0.65	51.0
Approach			131	5.0	131	5.0	0.196	9.8	LOS A	0.9	6.6	0.65	0.73	0.65	51.5
West: Homestead Drive (W)															
10	L2	All MCs	17	5.0	17	5.0	0.167	6.0	LOS A	0.7	5.2	0.40	0.52	0.40	52.8
11	T1	All MCs	766	5.0	766	5.0	0.543	5.8	LOS A	3.7	26.8	0.48	0.51	0.48	52.9
12	R2	All MCs	4	5.0	4	5.0	0.543	10.1	LOS B	3.7	26.8	0.49	0.51	0.49	51.9
12u	U	All MCs	1	5.0	1	5.0	0.543	12.1	LOS B	3.7	26.8	0.49	0.51	0.49	51.9
Approach			788	5.0	788	5.0	0.543	5.8	LOS A	3.7	26.8	0.48	0.51	0.48	52.9
All Vehicles			2093	5.0	2093	5.0	0.603	5.9	LOS A	5.6	40.7	0.31	0.49	0.31	53.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

MOVEMENT SUMMARY

Site: EX8 [BG2037 PM (Site Folder: BG2037)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Existing Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	136	5.0	136	5.0	0.916	50.6	LOS E	16.6	121.3	1.00	1.51	2.42	31.7
3	R2	All MCs	247	5.0	247	5.0	0.916	55.4	LOS E	16.6	121.3	1.00	1.51	2.42	31.5
Approach			383	5.0	383	5.0	0.916	53.7	LOS E	16.6	121.3	1.00	1.51	2.42	31.6
East: Homestead Drive (E)															
4	L2	All MCs	366	5.0	366	5.0	0.978	14.5	LOS B	40.3	294.2	1.00	1.01	1.24	47.3
5	T1	All MCs	921	5.0	921	5.0	0.978	14.7	LOS B	40.3	294.2	1.00	1.01	1.24	47.6
6u	U	All MCs	1	5.0	1	5.0	0.978	21.4	LOS C	40.3	294.2	1.00	1.01	1.24	46.9
Approach			1288	5.0	1288	5.0	0.978	14.6	LOS B	40.3	294.2	1.00	1.01	1.24	47.6
West: Homestead Drive (W)															
11	T1	All MCs	661	5.0	661	5.0	0.727	8.0	LOS A	9.6	69.7	0.86	0.68	0.95	50.9
12	R2	All MCs	122	5.0	122	5.0	0.727	12.6	LOS B	9.6	69.7	0.86	0.68	0.95	50.1
12u	U	All MCs	4	5.0	4	5.0	0.727	14.7	LOS B	9.6	69.7	0.86	0.68	0.95	50.1
Approach			787	5.0	787	5.0	0.727	8.7	LOS A	9.6	69.7	0.86	0.68	0.95	50.8
All Vehicles			2459	5.0	2459	5.0	0.978	18.8	LOS B	40.3	294.2	0.96	0.98	1.33	44.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: PR1 [BG2027 + DEV AM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	6	5.0	6	5.0	0.020	7.4	LOS A	0.1	0.6	0.50	0.67	0.50	50.9
2	T1	All MCs	1	5.0	1	5.0	0.020	6.6	LOS A	0.1	0.6	0.50	0.67	0.50	51.3
3	R2	All MCs	7	5.0	7	5.0	0.020	11.3	LOS B	0.1	0.6	0.50	0.67	0.50	50.4
3u	U	All MCs	1	5.0	1	5.0	0.020	13.3	LOS B	0.1	0.6	0.50	0.67	0.50	50.4
Approach			16	5.0	16	5.0	0.020	9.5	LOS A	0.1	0.6	0.50	0.67	0.50	50.7
East: Homestead Drive (E)															
4	L2	All MCs	4	5.0	4	5.0	0.102	4.3	LOS A	0.5	3.3	0.11	0.40	0.11	54.1
5	T1	All MCs	521	5.0	521	5.0	0.331	4.3	LOS A	2.0	14.6	0.11	0.44	0.11	54.1
6	R2	All MCs	92	5.0	92	5.0	0.331	8.8	LOS A	2.0	14.6	0.11	0.45	0.11	53.0
6u	U	All MCs	4	5.0	4	5.0	0.331	10.9	LOS B	2.0	14.6	0.11	0.45	0.11	53.0
Approach			621	5.0	621	5.0	0.331	5.0	LOS A	2.0	14.6	0.11	0.44	0.11	53.9
North: Coachwood Drive (N)															
7	L2	All MCs	124	5.0	124	5.0	0.185	8.5	LOS A	0.8	5.9	0.58	0.69	0.58	52.0
8	T1	All MCs	1	5.0	1	5.0	0.185	7.2	LOS A	0.8	5.9	0.58	0.69	0.58	52.4
9	R2	All MCs	13	5.0	13	5.0	0.185	11.8	LOS B	0.8	5.9	0.58	0.69	0.58	51.5
9u	U	All MCs	1	5.0	1	5.0	0.185	13.9	LOS B	0.8	5.9	0.58	0.69	0.58	51.5
Approach			139	5.0	139	5.0	0.185	8.8	LOS A	0.8	5.9	0.58	0.69	0.58	51.9
West: Homestead Drive (W)															
10	L2	All MCs	21	5.0	21	5.0	0.125	5.1	LOS A	0.5	3.8	0.27	0.46	0.27	53.3
11	T1	All MCs	633	5.0	633	5.0	0.408	4.9	LOS A	2.3	16.9	0.29	0.43	0.29	53.8
12	R2	All MCs	1	5.0	1	5.0	0.408	9.3	LOS A	2.3	16.9	0.29	0.43	0.29	52.8
12u	U	All MCs	2	5.0	2	5.0	0.408	11.3	LOS B	2.3	16.9	0.29	0.43	0.29	52.8
Approach			657	5.0	657	5.0	0.408	4.9	LOS A	2.3	16.9	0.29	0.43	0.29	53.8
All Vehicles			1433	5.0	1433	5.0	0.408	5.4	LOS A	2.3	16.9	0.24	0.46	0.24	53.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: PR2 [BG2027 + DEV AM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Site Access
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Homestead Drive (E)															
5	T1	All MCs	595	5.0	595	5.0	0.315	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			595	5.0	595	5.0	0.315	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
North: Site Access (N)															
7	L2	All MCs	6	5.0	6	5.0	0.009	8.9	LOS A	0.0	0.2	0.55	0.67	0.55	50.3
Approach			6	5.0	6	5.0	0.009	8.9	LOS A	0.0	0.2	0.55	0.67	0.55	50.3
West: Homestead Drive (W)															
10	L2	All MCs	6	5.0	6	5.0	0.361	5.7	LOS A	0.0	0.0	0.00	0.01	0.00	57.0
11	T1	All MCs	675	5.0	675	5.0	0.361	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Approach			681	5.0	681	5.0	0.361	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.7
All Vehicles			1282	5.0	1282	5.0	0.361	0.2	NA	0.0	0.2	0.00	0.01	0.00	59.7

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.

MOVEMENT SUMMARY

Site: PR3 [BG2027 + DEV AM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	97	5.0	97	5.0	0.309	7.2	LOS A	1.9	14.2	0.68	0.70	0.68	50.2
3	R2	All MCs	172	5.0	172	5.0	0.309	12.1	LOS B	1.9	14.2	0.68	0.70	0.68	49.7
Approach			268	5.0	268	5.0	0.309	10.3	LOS B	1.9	14.2	0.68	0.70	0.68	49.9
East: Homestead Drive (E)															
4	L2	All MCs	159	5.0	159	5.0	0.477	4.5	LOS A	4.1	30.0	0.38	0.43	0.38	53.1
5	T1	All MCs	494	5.0	494	5.0	0.477	4.7	LOS A	4.1	30.0	0.38	0.43	0.38	53.5
6u	U	All MCs	1	5.0	1	5.0	0.477	11.4	LOS B	4.1	30.0	0.38	0.43	0.38	52.6
Approach			654	5.0	654	5.0	0.477	4.7	LOS A	4.1	30.0	0.38	0.43	0.38	53.4
West: Homestead Drive (W)															
11	T1	All MCs	598	5.0	598	5.0	0.565	5.5	LOS A	5.1	37.5	0.59	0.52	0.59	52.2
12	R2	All MCs	80	5.0	80	5.0	0.565	10.2	LOS B	5.1	37.5	0.59	0.52	0.59	51.3
12u	U	All MCs	4	5.0	4	5.0	0.565	12.2	LOS B	5.1	37.5	0.59	0.52	0.59	51.3
Approach			682	5.0	682	5.0	0.565	6.1	LOS A	5.1	37.5	0.59	0.52	0.59	52.1
All Vehicles			1604	5.0	1604	5.0	0.565	6.2	LOS A	5.1	37.5	0.52	0.51	0.52	52.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: PR4 [BG2027 + DEV PM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	5	5.0	5	5.0	0.016	9.6	LOS A	0.1	0.5	0.59	0.70	0.59	50.3
2	T1	All MCs	1	5.0	1	5.0	0.016	8.1	LOS A	0.1	0.5	0.59	0.70	0.59	50.6
3	R2	All MCs	3	5.0	3	5.0	0.016	12.8	LOS B	0.1	0.5	0.59	0.70	0.59	49.8
3u	U	All MCs	1	5.0	1	5.0	0.016	14.8	LOS B	0.1	0.5	0.59	0.70	0.59	49.8
Approach			11	5.0	11	5.0	0.016	10.9	LOS B	0.1	0.5	0.59	0.70	0.59	50.1
East: Homestead Drive (E)															
4	L2	All MCs	9	5.0	9	5.0	0.150	4.3	LOS A	0.7	5.0	0.10	0.40	0.10	54.1
5	T1	All MCs	762	5.0	762	5.0	0.487	4.5	LOS A	3.6	26.1	0.11	0.44	0.11	54.0
6	R2	All MCs	167	5.0	167	5.0	0.487	8.8	LOS A	3.6	26.1	0.12	0.45	0.12	52.9
6u	U	All MCs	4	5.0	4	5.0	0.487	10.8	LOS B	3.6	26.1	0.12	0.45	0.12	52.9
Approach			943	5.0	943	5.0	0.487	5.3	LOS A	3.6	26.1	0.11	0.45	0.11	53.8
North: Coachwood Drive (N)															
7	L2	All MCs	94	5.0	94	5.0	0.139	8.2	LOS A	0.6	4.4	0.57	0.68	0.57	52.2
8	T1	All MCs	2	5.0	2	5.0	0.139	7.0	LOS A	0.6	4.4	0.57	0.68	0.57	52.6
9	R2	All MCs	7	5.0	7	5.0	0.139	11.6	LOS B	0.6	4.4	0.57	0.68	0.57	51.7
9u	U	All MCs	1	5.0	1	5.0	0.139	13.7	LOS B	0.6	4.4	0.57	0.68	0.57	51.7
Approach			104	5.0	104	5.0	0.139	8.4	LOS A	0.6	4.4	0.57	0.68	0.57	52.2
West: Homestead Drive (W)															
10	L2	All MCs	14	5.0	14	5.0	0.131	5.7	LOS A	0.5	4.0	0.36	0.49	0.36	53.0
11	T1	All MCs	620	5.0	620	5.0	0.427	5.3	LOS A	2.5	18.1	0.38	0.47	0.38	53.3
12	R2	All MCs	3	5.0	3	5.0	0.427	9.7	LOS A	2.5	18.1	0.39	0.47	0.39	52.4
12u	U	All MCs	1	5.0	1	5.0	0.427	11.7	LOS B	2.5	18.1	0.39	0.47	0.39	52.4
Approach			638	5.0	638	5.0	0.427	5.3	LOS A	2.5	18.1	0.38	0.47	0.38	53.3
All Vehicles			1696	5.0	1696	5.0	0.487	5.5	LOS A	3.6	26.1	0.25	0.47	0.25	53.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

MOVEMENT SUMMARY

Site: PR4 [BG2027 + DEV PM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Site Access
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Homestead Drive (E)															
5	T1	All MCs	862	5.0	862	5.0	0.456	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			862	5.0	862	5.0	0.456	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.7
North: Site Access (N)															
7	L2	All MCs	4	5.0	4	5.0	0.005	8.6	LOS A	0.0	0.1	0.54	0.64	0.54	50.5
Approach			4	5.0	4	5.0	0.005	8.6	LOS A	0.0	0.1	0.54	0.64	0.54	50.5
West: Homestead Drive (W)															
10	L2	All MCs	4	5.0	4	5.0	0.339	5.7	LOS A	0.0	0.0	0.00	0.00	0.00	57.0
11	T1	All MCs	636	5.0	636	5.0	0.339	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			640	5.0	640	5.0	0.339	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vehicles			1506	5.0	1506	5.0	0.456	0.2	NA	0.0	0.1	0.00	0.00	0.00	59.7

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.

MOVEMENT SUMMARY

Site: PR6 [BG2027 + DEV PM (Site Folder: BG2027 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	111	5.0	111	5.0	0.499	11.8	LOS B	4.2	30.9	0.92	0.85	1.07	47.2
3	R2	All MCs	200	5.0	200	5.0	0.499	16.6	LOS B	4.2	30.9	0.92	0.85	1.07	46.8
Approach			311	5.0	311	5.0	0.499	14.9	LOS B	4.2	30.9	0.92	0.85	1.07	47.0
East: Homestead Drive (E)															
4	L2	All MCs	296	5.0	296	5.0	0.769	5.3	LOS A	11.0	80.4	0.69	0.49	0.69	51.9
5	T1	All MCs	746	5.0	746	5.0	0.769	5.4	LOS A	11.0	80.4	0.69	0.49	0.69	52.3
6u	U	All MCs	1	5.0	1	5.0	0.769	12.1	LOS B	11.0	80.4	0.69	0.49	0.69	51.4
Approach			1043	5.0	1043	5.0	0.769	5.4	LOS A	11.0	80.4	0.69	0.49	0.69	52.2
West: Homestead Drive (W)															
11	T1	All MCs	536	5.0	536	5.0	0.560	5.7	LOS A	5.1	37.6	0.65	0.55	0.65	51.9
12	R2	All MCs	99	5.0	99	5.0	0.560	10.4	LOS B	5.1	37.6	0.65	0.55	0.65	51.0
12u	U	All MCs	5	5.0	5	5.0	0.560	12.4	LOS B	5.1	37.6	0.65	0.55	0.65	51.0
Approach			640	5.0	640	5.0	0.560	6.5	LOS A	5.1	37.6	0.65	0.55	0.65	51.7
All Vehicles			1994	5.0	1994	5.0	0.769	7.2	LOS A	11.0	80.4	0.71	0.57	0.74	51.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: PR7 [BG2037 + DEV AM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	8	5.0	8	5.0	0.028	8.5	LOS A	0.1	0.8	0.55	0.71	0.55	50.5
2	T1	All MCs	1	5.0	1	5.0	0.028	7.3	LOS A	0.1	0.8	0.55	0.71	0.55	50.9
3	R2	All MCs	9	5.0	9	5.0	0.028	12.0	LOS B	0.1	0.8	0.55	0.71	0.55	50.0
3u	U	All MCs	1	5.0	1	5.0	0.028	14.0	LOS B	0.1	0.8	0.55	0.71	0.55	50.0
Approach			20	5.0	20	5.0	0.028	10.4	LOS B	0.1	0.8	0.55	0.71	0.55	50.2
East: Homestead Drive (E)															
4	L2	All MCs	5	5.0	5	5.0	0.126	4.3	LOS A	0.6	4.2	0.12	0.40	0.12	54.0
5	T1	All MCs	644	5.0	644	5.0	0.409	4.4	LOS A	2.8	20.4	0.13	0.44	0.13	54.0
6	R2	All MCs	113	5.0	113	5.0	0.409	8.8	LOS A	2.8	20.4	0.13	0.44	0.13	52.9
6u	U	All MCs	5	5.0	5	5.0	0.409	10.9	LOS B	2.8	20.4	0.13	0.44	0.13	52.9
Approach			767	5.0	767	5.0	0.409	5.1	LOS A	2.8	20.4	0.13	0.44	0.13	53.8
North: Coachwood Drive (N)															
7	L2	All MCs	154	5.0	154	5.0	0.255	10.3	LOS B	1.2	8.8	0.66	0.74	0.66	51.3
8	T1	All MCs	1	5.0	1	5.0	0.255	8.2	LOS A	1.2	8.8	0.66	0.74	0.66	51.6
9	R2	All MCs	15	5.0	15	5.0	0.255	12.9	LOS B	1.2	8.8	0.66	0.74	0.66	50.7
9u	U	All MCs	1	5.0	1	5.0	0.255	14.9	LOS B	1.2	8.8	0.66	0.74	0.66	50.7
Approach			171	5.0	171	5.0	0.255	10.5	LOS B	1.2	8.8	0.66	0.74	0.66	51.2
West: Homestead Drive (W)															
10	L2	All MCs	26	5.0	26	5.0	0.158	5.3	LOS A	0.7	4.9	0.31	0.47	0.31	53.2
11	T1	All MCs	782	5.0	782	5.0	0.514	5.2	LOS A	3.4	24.7	0.36	0.45	0.36	53.4
12	R2	All MCs	1	5.0	1	5.0	0.514	9.5	LOS A	3.4	24.7	0.37	0.45	0.37	52.5
12u	U	All MCs	3	5.0	3	5.0	0.514	11.6	LOS B	3.4	24.7	0.37	0.45	0.37	52.5
Approach			813	5.0	813	5.0	0.514	5.2	LOS A	3.4	24.7	0.36	0.45	0.36	53.4
All Vehicles			1771	5.0	1771	5.0	0.514	5.7	LOS A	3.4	24.7	0.29	0.48	0.29	53.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\BradleyFuller\Modus Engineering\Projects 2025 - 2026 - Documents\Projects 2025 - 2026\TA\QLD\MOD25068QLD - 39-45 Homestead Drive, Flagstone\3 ANALYSIS\MOD25068QLD - 39-45 Homestead Drive, Flagstone 2.0.sip9

MOVEMENT SUMMARY

Site: PR8 [BG2037 + DEV AM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Site Access
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Homestead Drive (E)															
5	T1	All MCs	735	5.0	735	5.0	0.389	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			735	5.0	735	5.0	0.389	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
North: Site Access (N)															
7	L2	All MCs	6	5.0	6	5.0	0.012	10.7	LOS B	0.0	0.3	0.65	0.75	0.65	49.1
Approach			6	5.0	6	5.0	0.012	10.7	LOS B	0.0	0.3	0.65	0.75	0.65	49.1
West: Homestead Drive (W)															
10	L2	All MCs	6	5.0	6	5.0	0.446	5.7	LOS A	0.0	0.0	0.00	0.00	0.00	56.9
11	T1	All MCs	835	5.0	835	5.0	0.446	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			841	5.0	841	5.0	0.446	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.6
All Vehicles			1582	5.0	1582	5.0	0.446	0.2	NA	0.0	0.3	0.00	0.01	0.00	59.6

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.

MOVEMENT SUMMARY

Site: PR9 [BG2037 + DEV AM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	120	5.0	120	5.0	0.438	8.9	LOS A	3.2	23.5	0.81	0.76	0.85	49.1
3	R2	All MCs	213	5.0	213	5.0	0.438	13.8	LOS B	3.2	23.5	0.81	0.76	0.85	48.6
Approach			333	5.0	333	5.0	0.438	12.0	LOS B	3.2	23.5	0.81	0.76	0.85	48.7
East: Homestead Drive (E)															
4	L2	All MCs	197	5.0	197	5.0	0.605	4.8	LOS A	6.5	47.4	0.52	0.46	0.52	52.5
5	T1	All MCs	611	5.0	611	5.0	0.605	5.0	LOS A	6.5	47.4	0.52	0.46	0.52	52.9
6u	U	All MCs	1	5.0	1	5.0	0.605	11.7	LOS B	6.5	47.4	0.52	0.46	0.52	52.0
Approach			808	5.0	808	5.0	0.605	5.0	LOS A	6.5	47.4	0.52	0.46	0.52	52.8
West: Homestead Drive (W)															
11	T1	All MCs	739	5.0	739	5.0	0.731	7.3	LOS A	9.4	68.7	0.81	0.63	0.87	51.2
12	R2	All MCs	98	5.0	98	5.0	0.731	11.9	LOS B	9.4	68.7	0.81	0.63	0.87	50.4
12u	U	All MCs	4	5.0	4	5.0	0.731	14.0	LOS B	9.4	68.7	0.81	0.63	0.87	50.4
Approach			841	5.0	841	5.0	0.731	7.8	LOS A	9.4	68.7	0.81	0.63	0.87	51.1
All Vehicles			1982	5.0	1982	5.0	0.731	7.4	LOS A	9.4	68.7	0.69	0.58	0.72	51.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: PR10 [BG2037 + DEV PM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Coachwood Drive / Blueberry Ash Court
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Blueberry Ash Court (S)															
1	L2	All MCs	6	5.0	6	5.0	0.023	12.0	LOS B	0.1	0.7	0.67	0.75	0.67	49.2
2	T1	All MCs	1	5.0	1	5.0	0.023	9.7	LOS A	0.1	0.7	0.67	0.75	0.67	49.5
3	R2	All MCs	4	5.0	4	5.0	0.023	14.4	LOS B	0.1	0.7	0.67	0.75	0.67	48.7
3u	U	All MCs	1	5.0	1	5.0	0.023	16.4	LOS B	0.1	0.7	0.67	0.75	0.67	48.7
Approach			13	5.0	13	5.0	0.023	13.0	LOS B	0.1	0.7	0.67	0.75	0.67	49.0
East: Homestead Drive (E)															
4	L2	All MCs	13	5.0	13	5.0	0.187	4.3	LOS A	0.9	6.6	0.12	0.40	0.12	54.0
5	T1	All MCs	943	5.0	943	5.0	0.606	4.7	LOS A	5.6	41.2	0.16	0.44	0.16	53.8
6	R2	All MCs	207	5.0	207	5.0	0.606	8.8	LOS A	5.6	41.2	0.17	0.45	0.17	52.7
6u	U	All MCs	4	5.0	4	5.0	0.606	10.9	LOS B	5.6	41.2	0.17	0.45	0.17	52.7
Approach			1167	5.0	1167	5.0	0.606	5.4	LOS A	5.6	41.2	0.16	0.44	0.16	53.6
North: Coachwood Drive (N)															
7	L2	All MCs	117	5.0	117	5.0	0.197	9.7	LOS A	0.9	6.7	0.65	0.73	0.65	51.6
8	T1	All MCs	3	5.0	3	5.0	0.197	7.9	LOS A	0.9	6.7	0.65	0.73	0.65	51.9
9	R2	All MCs	9	5.0	9	5.0	0.197	12.5	LOS B	0.9	6.7	0.65	0.73	0.65	51.0
9u	U	All MCs	1	5.0	1	5.0	0.197	14.6	LOS B	0.9	6.7	0.65	0.73	0.65	51.0
Approach			131	5.0	131	5.0	0.197	9.9	LOS A	0.9	6.7	0.65	0.73	0.65	51.5
West: Homestead Drive (W)															
10	L2	All MCs	17	5.0	17	5.0	0.168	6.1	LOS A	0.7	5.2	0.41	0.52	0.41	52.7
11	T1	All MCs	767	5.0	767	5.0	0.546	5.8	LOS A	3.7	27.0	0.49	0.51	0.49	52.9
12	R2	All MCs	4	5.0	4	5.0	0.546	10.1	LOS B	3.7	27.0	0.50	0.51	0.50	51.9
12u	U	All MCs	1	5.0	1	5.0	0.546	12.2	LOS B	3.7	27.0	0.50	0.51	0.50	51.9
Approach			789	5.0	789	5.0	0.546	5.8	LOS A	3.7	27.0	0.48	0.51	0.48	52.9
All Vehicles			2100	5.0	2100	5.0	0.606	5.9	LOS A	5.6	41.2	0.31	0.49	0.31	53.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: PR11 [BG2037 + DEV PM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Site Access
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Homestead Drive (E)															
5	T1	All MCs	1066	5.0	1066	5.0	0.565	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
Approach			1066	5.0	1066	5.0	0.565	0.3	NA	0.0	0.0	0.00	0.00	0.00	59.5
North: Site Access (N)															
7	L2	All MCs	4	5.0	4	5.0	0.007	10.1	LOS B	0.0	0.2	0.62	0.71	0.62	49.5
Approach			4	5.0	4	5.0	0.007	10.1	LOS B	0.0	0.2	0.62	0.71	0.62	49.5
West: Homestead Drive (W)															
10	L2	All MCs	4	5.0	4	5.0	0.419	5.7	LOS A	0.0	0.0	0.00	0.00	0.00	57.0
11	T1	All MCs	786	5.0	786	5.0	0.419	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			791	5.0	791	5.0	0.419	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vehicles			1861	5.0	1861	5.0	0.565	0.3	NA	0.0	0.2	0.00	0.00	0.00	59.5

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.

MOVEMENT SUMMARY

Site: PR12 [BG2037 + DEV PM (Site Folder: BG2037 + DEV)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Homestead Drive / Bushman Drive
AM Peak: 8:00AM - 9:00AM
PM Peak: 4:15PM - 5:15PM
Site Category: Proposed Conditions
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	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	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bushman Drive (S)															
1	L2	All MCs	136	5.0	136	5.0	0.921	52.4	LOS E	17.1	124.5	1.00	1.53	2.47	31.2
3	R2	All MCs	247	5.0	247	5.0	0.921	57.2	LOS E	17.1	124.5	1.00	1.53	2.47	31.0
Approach			383	5.0	383	5.0	0.921	55.5	LOS E	17.1	124.5	1.00	1.53	2.47	31.1
East: Homestead Drive (E)															
4	L2	All MCs	366	5.0	366	5.0	0.983	16.1	LOS B	42.6	311.3	1.00	1.06	1.29	46.4
5	T1	All MCs	923	5.0	923	5.0	0.983	16.3	LOS B	42.6	311.3	1.00	1.06	1.29	46.7
6u	U	All MCs	1	5.0	1	5.0	0.983	23.0	LOS C	42.6	311.3	1.00	1.06	1.29	45.9
Approach			1291	5.0	1291	5.0	0.983	16.2	LOS B	42.6	311.3	1.00	1.06	1.29	46.6
West: Homestead Drive (W)															
11	T1	All MCs	662	5.0	662	5.0	0.730	8.0	LOS A	9.7	70.5	0.87	0.68	0.96	50.9
12	R2	All MCs	122	5.0	122	5.0	0.730	12.7	LOS B	9.7	70.5	0.87	0.68	0.96	50.0
12u	U	All MCs	6	5.0	6	5.0	0.730	14.7	LOS B	9.7	70.5	0.87	0.68	0.96	50.0
Approach			791	5.0	791	5.0	0.730	8.8	LOS A	9.7	70.5	0.87	0.68	0.96	50.7
All Vehicles			2464	5.0	2464	5.0	0.983	20.0	LOS B	42.6	311.3	0.96	1.01	1.37	44.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.