Our Ref: 44062-001-01
Your Ref: MCU25/0075

29 April 2026

Chief Executive Officer
Townsville City Council
PO Box 1268
Townsville QLD 4810

Attention: Development Assessment – Mrs. Jayne Carter

Dear Jayne,

RESPONSE TO INFORMATION REQUEST
DEVELOPMENT APPLICATION FOR MATERIAL CHANGE OF USE
FOR MULTIPLE DWELLING (81 x DWELLING UNITS)
344-346 ROSS RIVER ROAD, CRANBROOK

Brazier Motti act on behalf of the applicant, Ross River Road Pty Ltd, with respect to the abovementioned development proposal, and refer to the Information Request (IR) issued by Townsville City Council ('the Council') on the 24th November 2025. The information and supporting documentation herein represent the applicant's full response to the IR.

Supporting information

This information request response has addressed the five (5) request items and is supported by the following additional information:

- **Appendix A:** Amended architectural design plans prepared by Counterpoint; and
- **Appendix B:** Traffic Engineering Response prepared by Premise dated 29 April 2026.

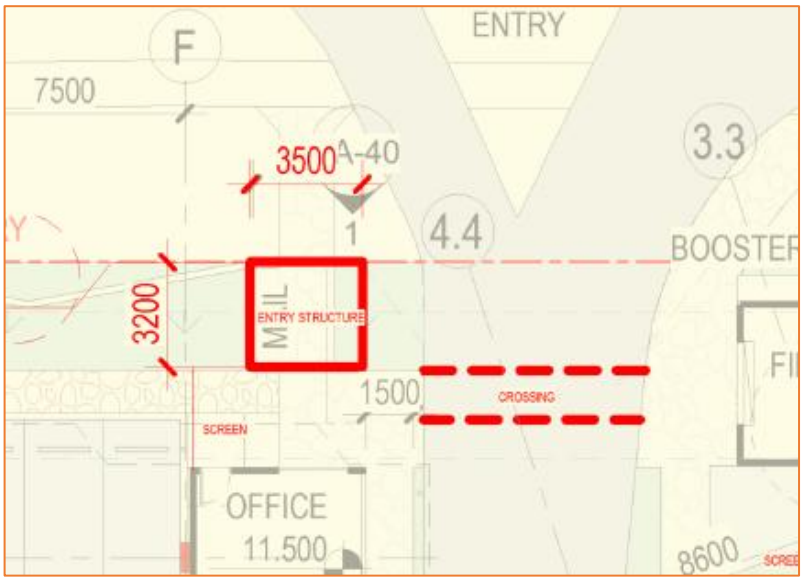
Request item 1

The applicant is requested to provide amended plans incorporating the following design changes to improve the interface and engagement with the Ross River Road frontage:
• Clear pedestrian pathway access including a structure or gateway from Ross River Road that is separate from the driveway, and connects to an internal pedestrian pathway and communal space;
• Consideration of size of the private open space areas and demonstrate that each unit is provided with sufficient area to meet the resident's needs; and
• Redesign the ground floor elevation to provide built form elements to activate the street frontage and conceal the car parking on ground level from public view.

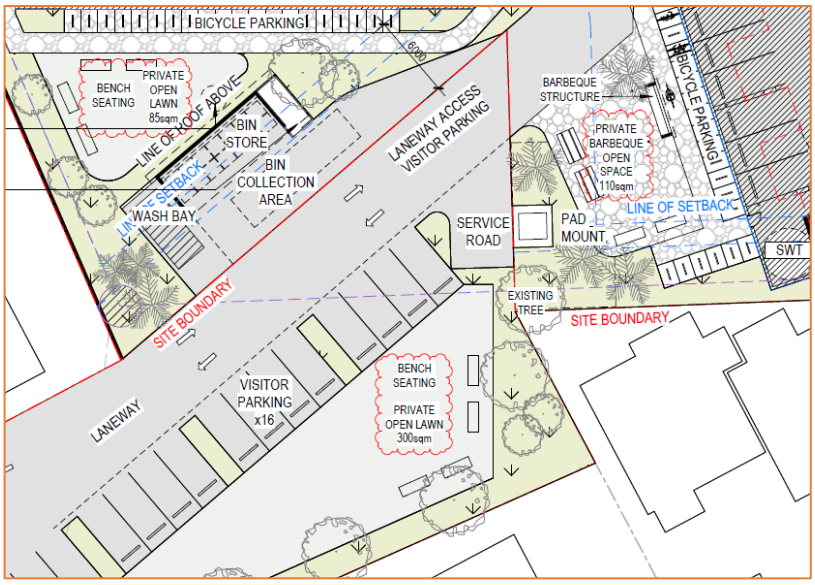
Response to RFI Item 1

The development concepts have been amended as per Council's request items. The updated architectural plans are included in ***Appendix A***.

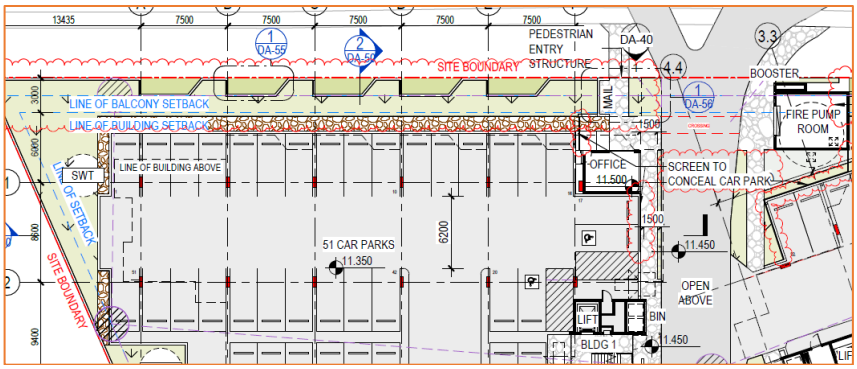
- A clear entry structure is proposed, along with a pedestrian crossing – refer diagram below and ***Appendix A***.



- The three areas to the rear of the site are be designated open space areas. It is proposed that these areas will be embellished with trees and benches and a barbeque with associated structures (e.g. bench seating). Refer to diagram below and ***Appendix A***. It is the applicants preferred option to provide barbeque and associated structures as opposed to loud activities such as basketball courts, skateboarding, etc. as mentioned in request item 2.



- It is proposed to activate the street frontage through the form of boundary fence line articulation and materiality. Further, screening to the car park through the vehicle entry is proposed to further conceal it from the street. Refer to below and ***Appendix A***.



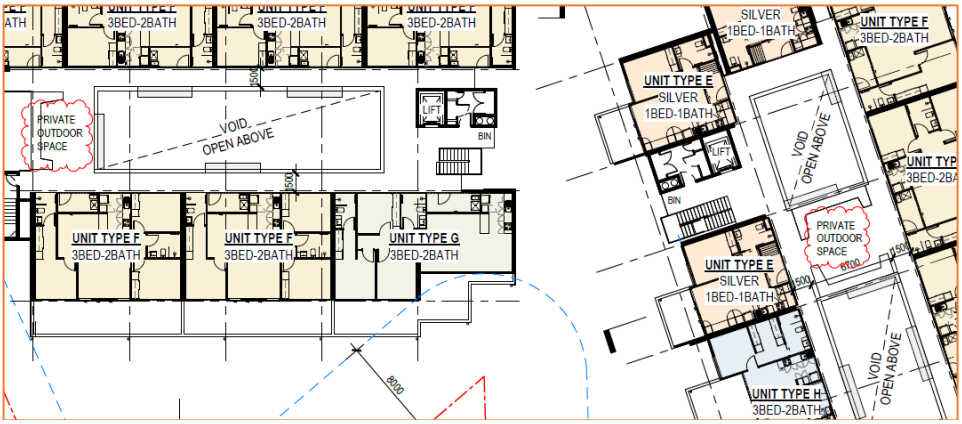
Request item 2

The applicant is requested to provide amended plans demonstrating provision of communal open space to service the proposed development, inclusive of appropriate facilities/embellishments to create flexible, usable spaces for residents.

Response to RFI Item 2

The development concepts have been amended as per Council's request item. The updated architectural plans are included in ***Appendix A***.

Introduction of communal spaces on ground level has been demonstrated as a response to request item 1. Further, it is proposed that seating/gathering spaces next to the void for every 2nd level are provided. Refer to ***Appendix A***.

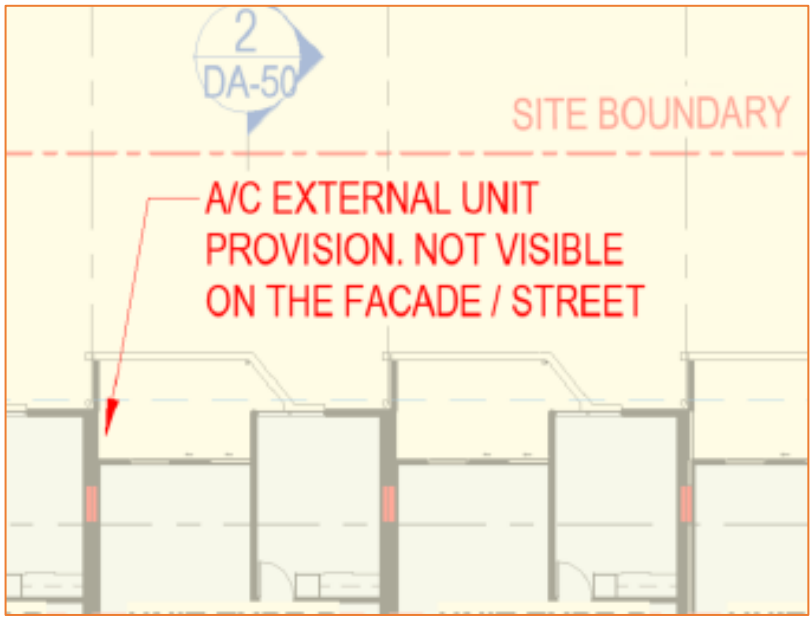


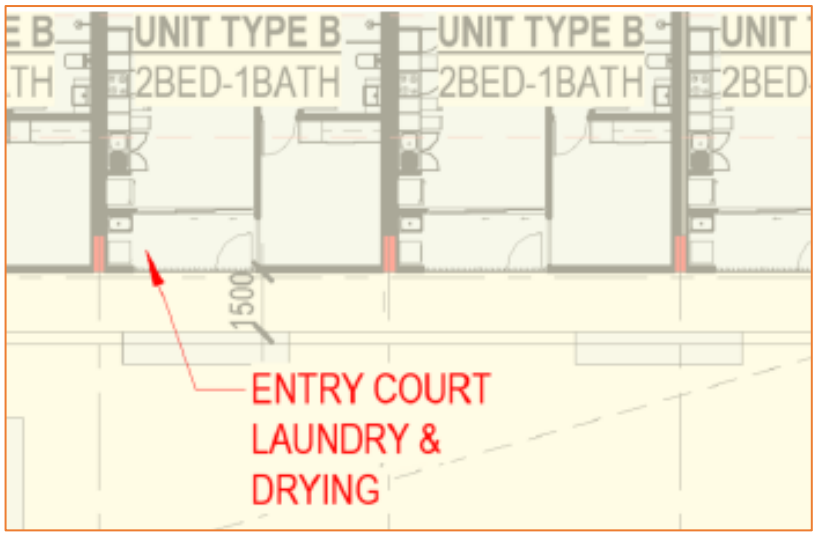
Request item 4

The applicant is requested to demonstrate the location of any utilities such as gas, water tanks or air-conditioning units for each dwelling unit, ensuring these are located outside of proposed private open space. The applicant is further requested to confirm if external clothes drying facilities are proposed and, if so, similarly demonstrate their location.

Response to RFI Item 4

Air-conditioning units are to be located on the balcony, not visible from the street. Further, clothes drying facilities are located on the unit entry court not visible from public viewpoints. See diagrams below and ***Appendix A***.





Request item 5

The applicant is requested to provide amended plans which clearly show the proposed building dimensions, setbacks, and areas of encroachments to include:

- *Elevations which include dimensions of the overall height of the proposed buildings;*
- *Dimensions of the balconies for each unit type including the area per square meter;*
- *Dimensions of setbacks from front, side and rear boundaries to the outermost projection of the building.*
- *An encroachment plan which highlights all of the parts of the building which are located within the setbacks prescribed within Table 6.2.2.3(b)-Building setbacks Medium density residential zone*

Response to RFI Item 5

The updated architectural drawings included in ***Appendix A*** include the requested information. It is noted that the balconies have been sized to a minimum 2.4m per the affordable Housing Guidelines. The 2 Bed unit balconies have typically approx. 11m^2 balconies, however, combined with the entry court amenity, they meet the 16m^2 minimum as set out in the City Plan. This split arrangement allows for more usable outdoor space for those units.

Request item 6

The proposed exit-only onto Albert Street is considered to pose safety risks to pedestrians given the highly constrained sight lines caused by the existing block wall along the eastern access of the boundary, even with mitigation measures in place such as speed humps, convex mirrors or signage. The applicant is requested to consider alternative measures to improve safety at this location, such as converting the access to entry-only.

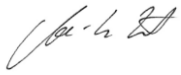
Response to RFI Item 6

Please refer to ***Appendix B***.

Proceeding

We trust the above response provides Council sufficient information to satisfactorily proceed with the assessment of the application. In the meantime, the applicant will proceed with public notification of the development. We welcome the opportunity to work through any queries Council may have in order to expedite the assessment.

Yours faithfully



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ANNE ZAREH
Associate/Senior Planner
Brazier Motti Pty Ltd

APPENDIX A

Amended architectural design plans prepared by Counterpoint

COUNTERPOINT

ROSS RIVER ROAD RESIDENTIAL

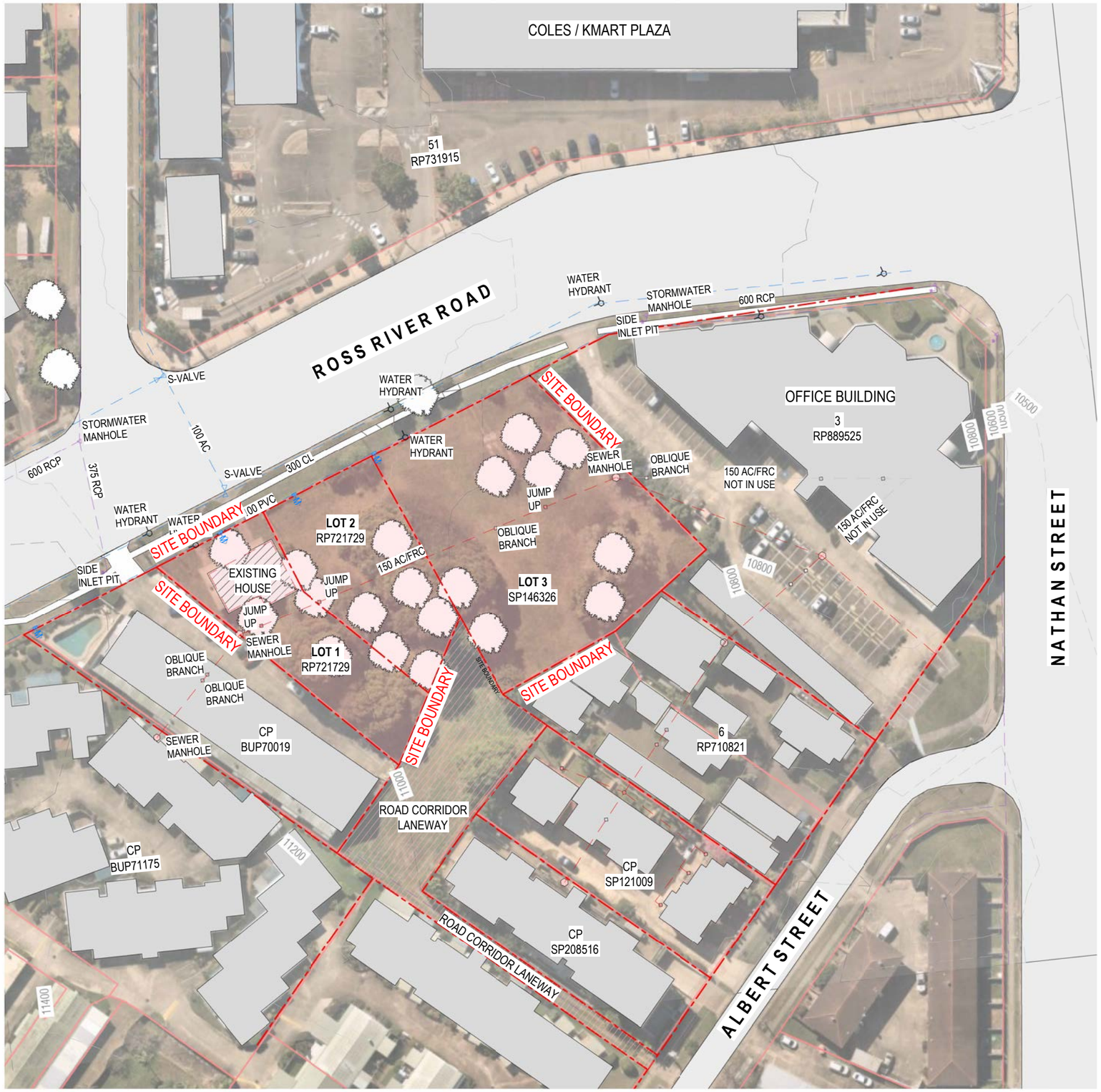
344/346 & 350 ROSS RIVER RD
CRANBROOK, QLD, 4814

VIEW FROM ROSS RIVER ROAD

DRAWING LIST		
SHEET NUMBER	SHEET NAME	REVISION
DA-00	COVER SHEET	P9
DA-10	EXISTING SITE PLAN	P9
DA-11	DEMOLITION SITE PLAN	P9
DA-15	PROPOSED SITE PLAN	P9
DA-20	PROPOSED FLOOR PLAN - GROUND	P9
DA-21	PROPOSED FLOOR PLAN -LEVEL 1	P9
DA-22	PROPOSED FLOOR PLAN - LEVEL 2	P9
DA-23	PROPOSED FLOOR PLAN - LEVEL 3	P9
DA-24	PROPOSED FLOOR PLAN - LEVEL 4	P9
DA-25	PROPOSED ROOF PLAN	P9
DA-30	EXTERNAL WORKS - PART A	P9

DRAWING LIST		
SHEET NUMBER	SHEET NAME	REVISION
DA-31	EXTERNAL WORKS - PART B	P9
DA-32	EXTERNAL WORKS - PART C	P9
DA-40	SITE ELEVATIONS - SHEET 01	P9
DA-41	SITE ELEVATIONS - SHEET 02	P9
DA-45	BUILDING ELEVATIONS - SHEET 01	P9
DA-46	BUILDING ELEVATIONS - SHEET 02	P9
DA-47	BUILDING ELEVATIONS - SHEET 03	P9
DA-50	SECTION - SHEET 01	P9
DA-51	SECTION - SHEET 02	P9
DA-55	STREET ACTIVATION 01	P9
DA-56	STREET ACTIVATION 02	P9

DRAWING LIST		
SHEET NUMBER	SHEET NAME	REVISION
DA-60	PERSPECTIVE - SHEET 01	P9
DA-61	PERSPECTIVE - SHEET 02	P9
DA-62	PERSPECTIVE - SHEET 03	P9
DA-63	PERSPECTIVE - SHEET 04	P9
DA-64	MATERIALITY	P9
DA-65	SETBACK DIAGRAM - LEVEL 1	P9
DA-66	SETBACK DIAGRAM - LEVEL 2	P9
DA-67	SETBACK DIAGRAM - LEVEL 3	P9
DA-68	SETBACK DIAGRAM - LEVEL 4	P9



1 **EXISTING SITE PLAN**
DA-40 SCALE 1 : 1000

NOTE:
LOCATION OF LEVELS, BOUNDARIES, SERVICES TO BE CONFIRMED BY SURVEYOR

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**EXISTING SITE PLAN**	**25869**	**02.12.25**	**DA-10**	**P9**

N

COUNTERPOINT

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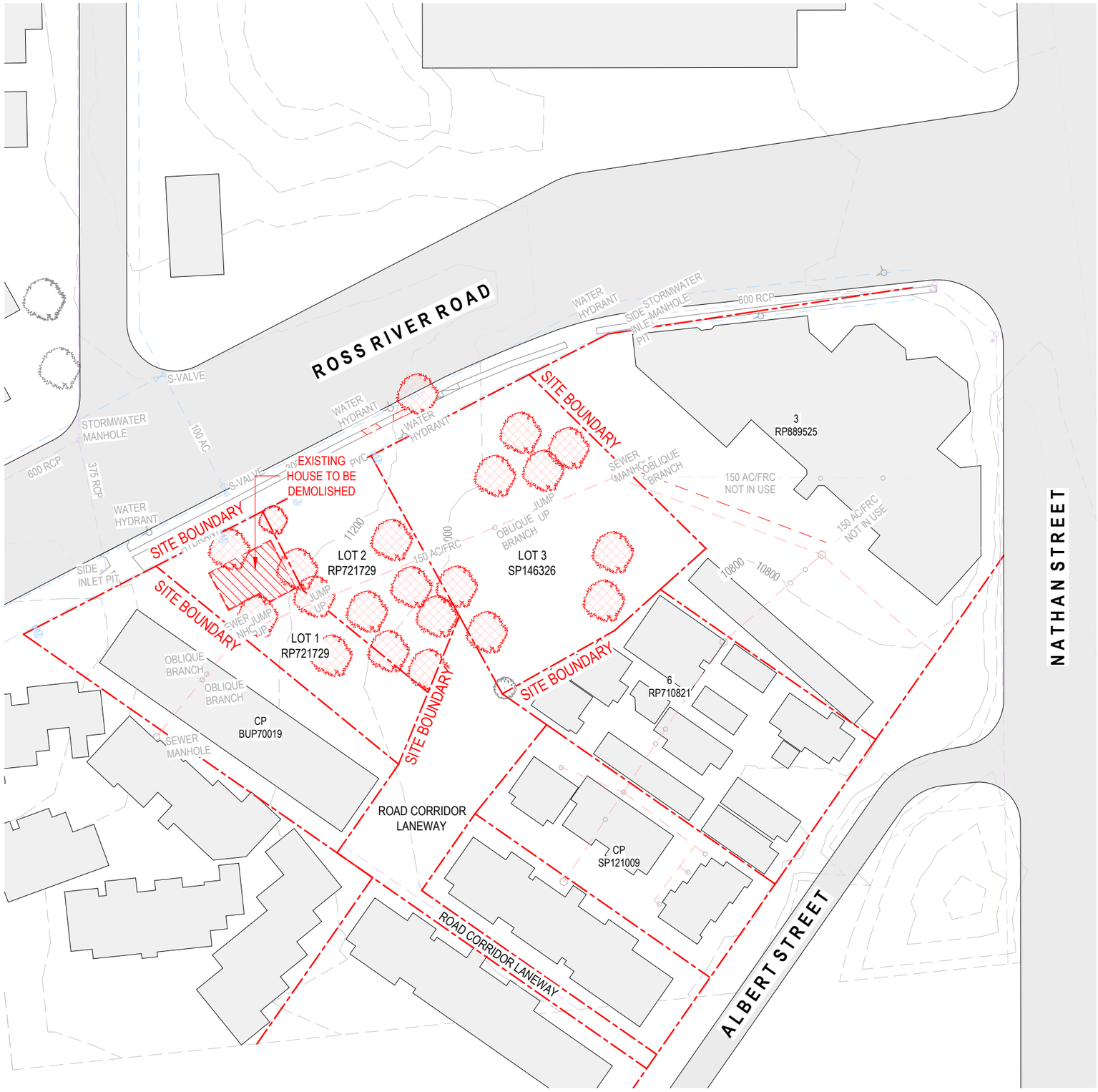

TO BE DEMOLISHED

1 EXISTING/DEMO SITE PLAN
DA-40 SCALE 1 : 1000

NOTE:
LOCATION OF LEVELS, BOUNDARIES, SERVICES AND EXISTING BUILDING TO BE CONFIRMED BY SURVEYOR

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**DEMOLITION SITE PLAN**	**25869**	**02.12.25**	**DA-11**	**P9**

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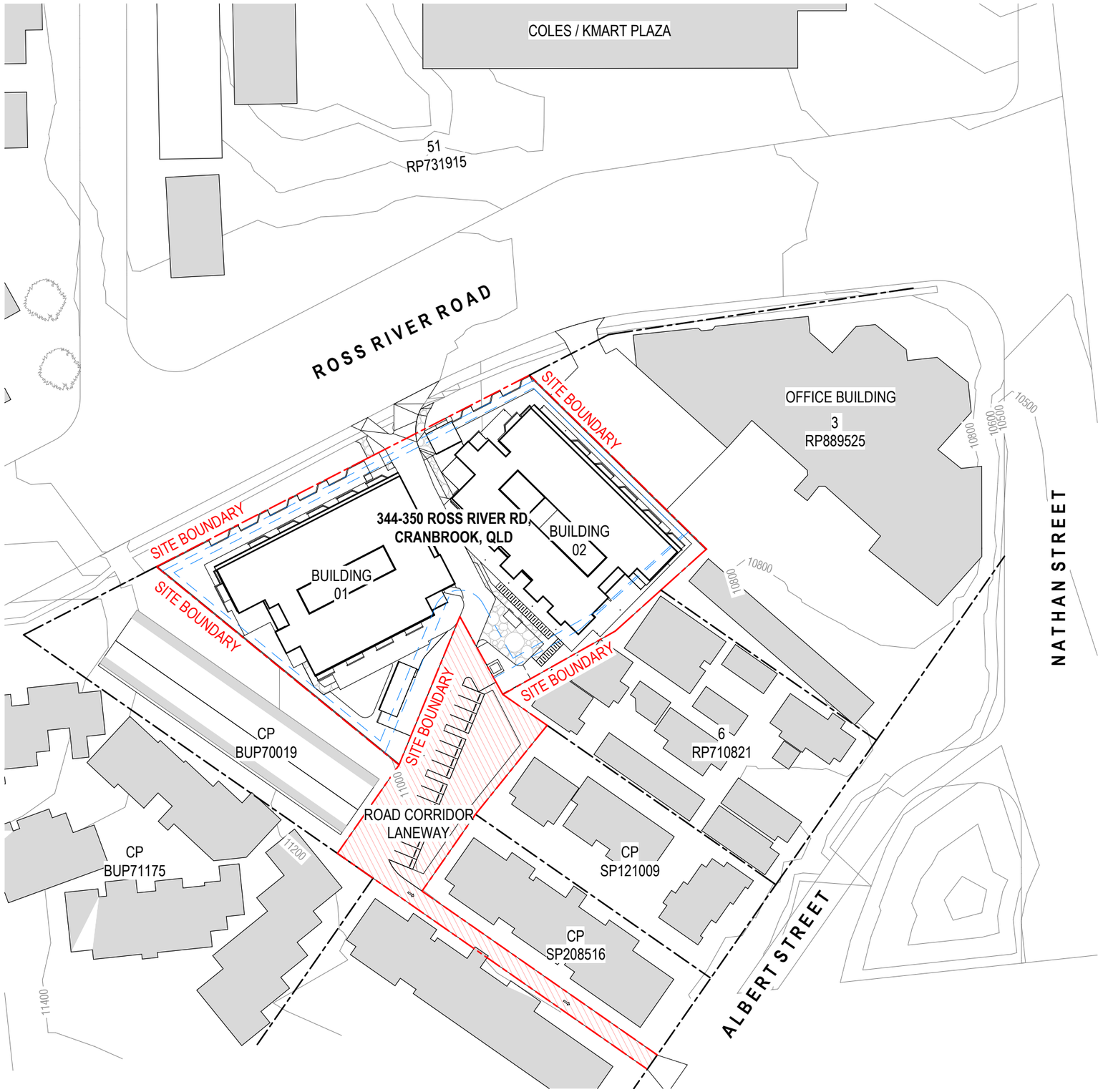

BUILDING CLASS 2
TYPE A CONSTRUCTION

1 **PROPOSED SITE PLAN**
DA-40 SCALE 1 : 1000

NOTE:
LOCATION OF LEVELS, BOUNDARIES, SERVICES TO BE CONFIRMED BY SURVEYOR

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED SITE PLAN**	**25869**	**02.12.25**	**DA-15**	**P9**

N

COUNTERPOINT

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ROSS RIVER ROAD

ENTRY

SCALE BAR 1:300

KEYNOTE LEGEND	
SWT	STORMWATER DETENTION TANK

PEDESTRIAN ENTRY STRUCTURE

SITE BOUNDARY

LINE OF BALCONY SETBACK

LINE OF BUILDING SETBACK

LINE OF SETBACK

LINE OF BUILDING ABOVE

SWT

OFFICE 11.500

SCREEN TO CONCEAL CAR PARK

51 CAR PARKS 11.350

OPEN ABOVE

LIFT

BIN

BLDG 1 11.450

BOOSTER

FIRE PUMP ROOM

50K LITRE FIRE TANK

MAIL

CROSSING

BLDG 2

60 CAR PARKS (3 TANDEM) 11.350

TANDEM

BICYCLE PARKING

LANEWAY ACCESS VISITOR PARKING

BIN STORE

BIN COLLECTION AREA

WASH BAY

SERVICE ROAD

PAD MOUNT

CP BUP70019

ABOVE GROUND 1500 LITRE OIL WATER SEPARATOR

BELOW GROUND PRECAST TRADEWASTE HOLDING TANK WITH 600 X 600 ACCESS

CAR PARK SUMMARY
USER CLASS 1A
126 CAR PARKS
110 RESIDENCE
16 VISITORS (OFF SITE)

DEPARTMENT OF HOUSING
1 COVERED / DWELLING
TOTAL
24

1 PROPOSED GROUND PLAN
DA-40 SCALE 1 : 300

PROJECT **ROSS RIVER ROAD RESIDENTIAL** **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	CLIENT DETAILS **HURST CONSTRUCTIONS**	TITLE **PROPOSED FLOOR PLAN - GROUND**	PROJECT NO. **25869**	DATE **02.12.25**	DRAWING No. **DA-20**	ISSUE **P9**	N

COUNTERPOINT

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SCALE BAR 1:300

0 5 10 20

PEDESTRIAN ENTRY STRUCTURE BELOW

SITE BOUNDARY

LINE OF BALCONY SETBACK

LINE OF BUILDING SETBACK

LINE OF SETBACK

LINE OF VEHICULAR ACCESS BELOW

CONNECTION FOR DISCUSSION

GARDEN

UNIT TYPE A 3BED-2BATH

UNIT TYPE B 2BED-1BATH

UNIT TYPE C PLATINUM 2BED-1BATH

UNIT TYPE D GOLD 1BED-1BATH

UNIT TYPE E SILVER 1BED-1BATH

LIFT

STAIRS

BIN CHUTE

CP BUP70019

APARTMENT YIELD	DEPARTMENT OF HOUSING
LEVELS 1-3	**LEVELS 1-3**
6 X 1 BED	3 X 1 BED GOLD
13 X 2 BED	3 X 1 BED SILVER
2 X 3 BED	1 X 2 BED PLATINUM
TOP LEVEL	
3 X 1 BED	**TOP LEVEL**
12 X 3 BED	3 X 1 BED SILVER
TOTAL	24 UNITS
81 UNITS	

1 PROPOSED LEVEL 1

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED FLOOR PLAN -LEVEL 1**	**25869**	**02.12.25**	**DA-21**	**P9**

COUNTERPOINT

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APARTMENT YIELD	DEPARTMENT OF HOUSING
LEVELS 1-3	**LEVELS 1-3**
6 X 1 BED	3 X 1 BED GOLD
13 X 2 BED	3 X 1 BED SILVER
2 X 3 BED	1 X 2 BED PLATINUM
TOP LEVEL	
3 X 1 BED	**TOP LEVEL**
12 X 3 BED	3 X 1 BED SILVER
TOTAL	24 UNITS
81 UNITS	

1 PROPOSED LEVEL 2

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED FLOOR PLAN - LEVEL 2**	**25869**	**02.12.25**	**DA-22**	**P9**

COUNTERPOINT

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APARTMENT YIELD	DEPARTMENT OF HOUSING
LEVELS 1-3	**LEVELS 1-3**
6 X 1 BED	3 X 1 BED GOLD
13 X 2 BED	3 X 1 BED SILVER
2 X 3 BED	1 X 2 BED PLATINUM
TOP LEVEL	
3 X 1 BED	**TOP LEVEL**
12 X 3 BED	3 X 1 BED SILVER
TOTAL	24 UNITS
81 UNITS	

1 PROPOSED LEVEL 3

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED FLOOR PLAN - LEVEL 3**	**25869**	**02.12.25**	**DA-23**	**P9**

COUNTERPOINT

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SCALE BAR 1:300

0 5 10 20

SITE BOUNDARY
LINE OF BALCONY SETBACK
LINE OF BUILDING SETBACK
LINE OF SETBACK
SITE BOUNDARY

UNIT TYPE F 3BED-2BATH
UNIT TYPE G 3BED-2BATH
UNIT TYPE E SILVER 1BED-1BATH
UNIT TYPE H 3BED-2BATH
PRIVATE OUTDOOR SPACE
VOID OPEN ABOVE
LIFT
BIN

APARTMENT YIELD	DEPARTMENT OF HOUSING
LEVELS 1-3	**LEVELS 1-3**
6 X 1 BED	3 X 1 BED GOLD
13 X 2 BED	3 X 1 BED SILVER
2 X 3 BED	1 X 2 BED PLATINUM
TOP LEVEL	
3 X 1 BED	**TOP LEVEL**
12 X 3 BED	3 X 1 BED SILVER
TOTAL	24 UNITS
81 UNITS	

1 LEVEL 4
DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED FLOOR PLAN - LEVEL 4**	**25869**	**02.12.25**	**DA-24**	**P9**

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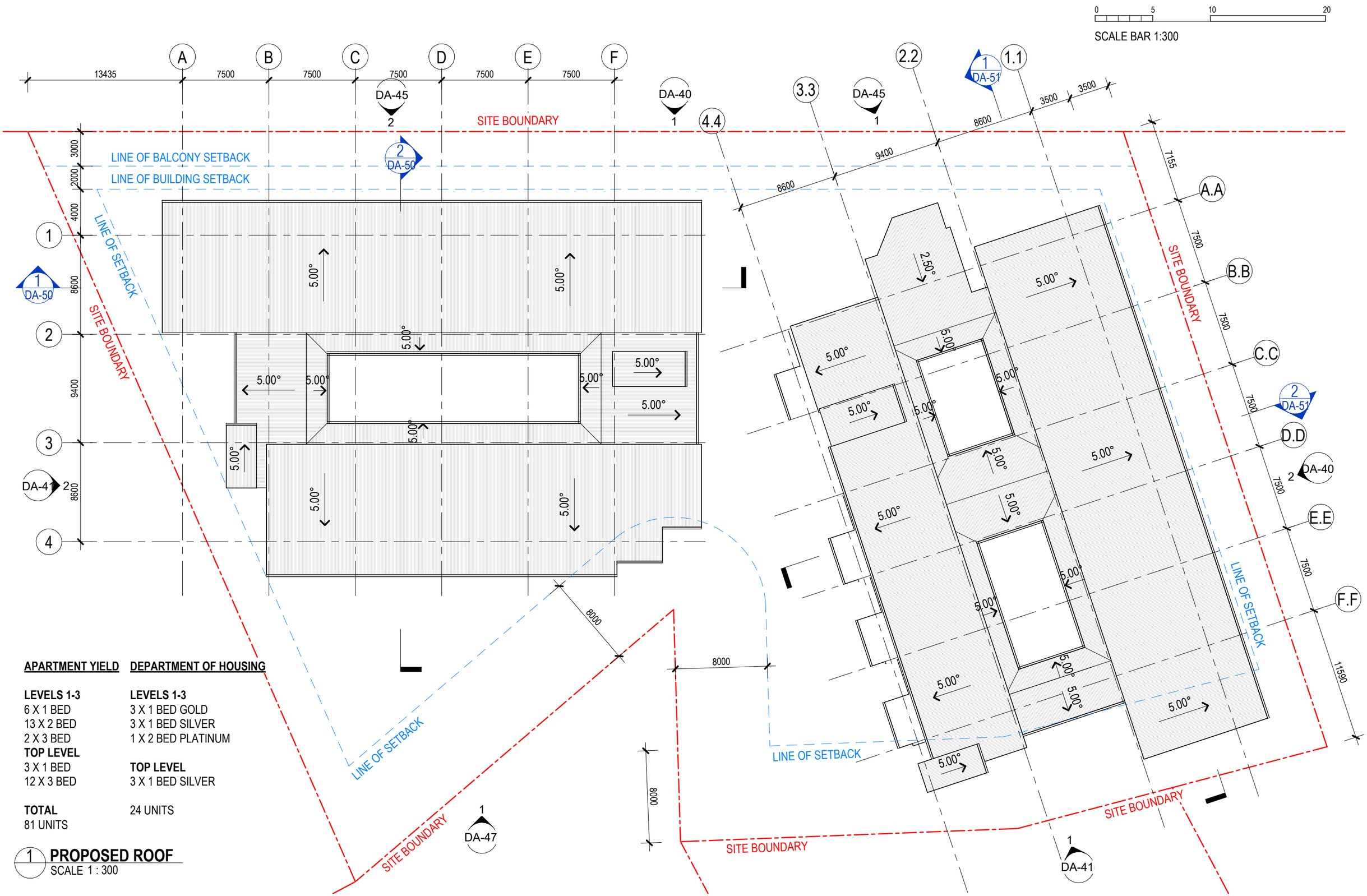

APARTMENT YIELD

LEVELS 1-3
6 X 1 BED
13 X 2 BED
2 X 3 BED
TOP LEVEL
3 X 1 BED
12 X 3 BED

TOTAL
81 UNITS

DEPARTMENT OF HOUSING

LEVELS 1-3
3 X 1 BED GOLD
3 X 1 BED SILVER
1 X 2 BED PLATINUM

TOP LEVEL
3 X 1 BED SILVER

24 UNITS

1 PROPOSED ROOF
SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PROPOSED ROOF PLAN**	**25869**	**02.12.25**	**DA-25**	**P9**

COUNTERPOINT

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ROSS RIVER ROAD

SCALE BAR 1:300 (0, 5, 10, 20)

KEYNOTE LEGEND	
SWT	STORMWATER DETENTION TANK

NEW FRONT FENCE
SITE BOUNDARY
EXISTING PATH
NEW FRONT FENCE
200
3000
2665
LINE OF BALCONY SETBACK
LINE OF BUILDING SETBACK
MAIL
STEP RAMP
BOOSTER FIRE PUMP ROOM
LAWN
SWT
LINE OF SETBACK
SITE BOUNDARY
BUILDING 01
LIFT
BIN CHUTE
STAIRS
SWT
LIFT
BIN CHUTE
STAIRS
11.450
BUILDING 02
SITE BOUNDARY
LINE OF SETBACK
BICYCLE PARKING
CP BUP70019
BENCH SEATING
PRIVATE OPEN LAWN 85sqm
6000
LANEWAY ACCESS VISITOR PARKING
BARBEQUE STRUCTURE
PRIVATE BARBEQUE OPEN SPACE 110sqm
BIN STORE
BIN COLLECTION AREA
LINE OF SETBACK
SERVICE ROAD
PAD MOUNT
LINE OF SETBACK
SWT
1500
SITE BOUNDARY
SITE BOUNDARY
EXISTING TREE
SITE BOUNDARY
VISITOR PARKING

BELOW GROUND PRECAST TRADEWASTE HOLDING TANK WITH 600 X 600 ACCESS

LAWN
GARDEN
CONCRETE/PAVERS
GRAVEL

ABOVE GROUND 1500 LITRE OIL WATER SEPARATOR

1 EXTERNAL WORKS - PART A

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**EXTERNAL WORKS - PART A**	**25869**	**02.12.25**	**DA-30**	**P9**

N

COUNTERPOINT

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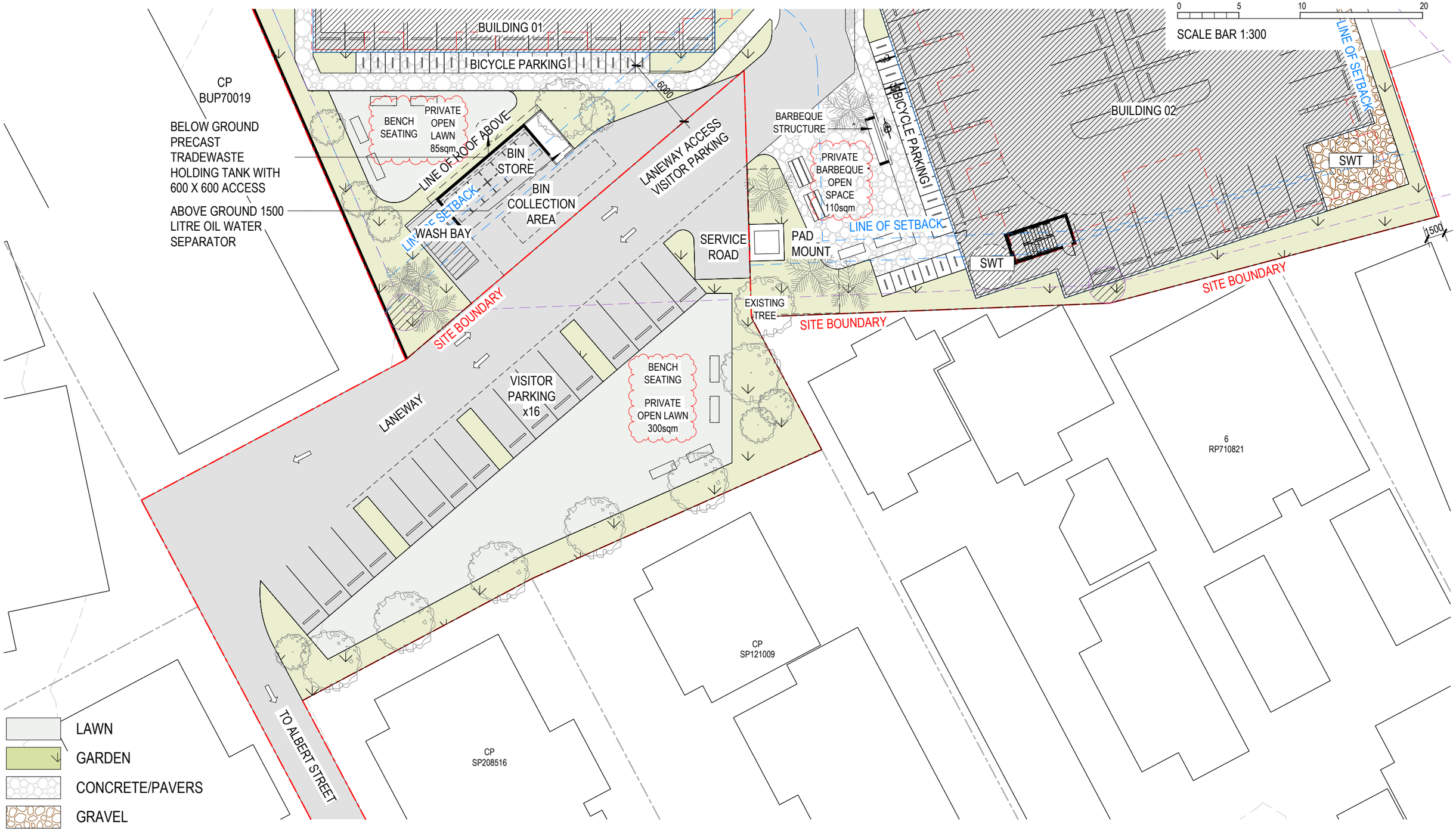

1 EXTERNAL WORKS - PART B

DA-40 SCALE 1 : 300

CP SP121009

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**EXTERNAL WORKS - PART B**	**25869**	**02.12.25**	**DA-31**	**P9**

COUNTERPOINT

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1 EXTERNAL WORKS - PART C

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**EXTERNAL WORKS - PART C**	**25869**	**02.12.25**	**DA-32**	**P9**

COUNTERPOINT

4/12/2025 4:35:59 PM

1 DA-20 **SITE ELEVATION 01 - NORTH**
SCALE 1 : 500

2 DA-20 **SITE ELEVATION 02 - EAST**
SCALE 1 : 500

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SITE ELEVATIONS - SHEET 01**	**25869**	**02.12.25**	**DA-40**	**P9**

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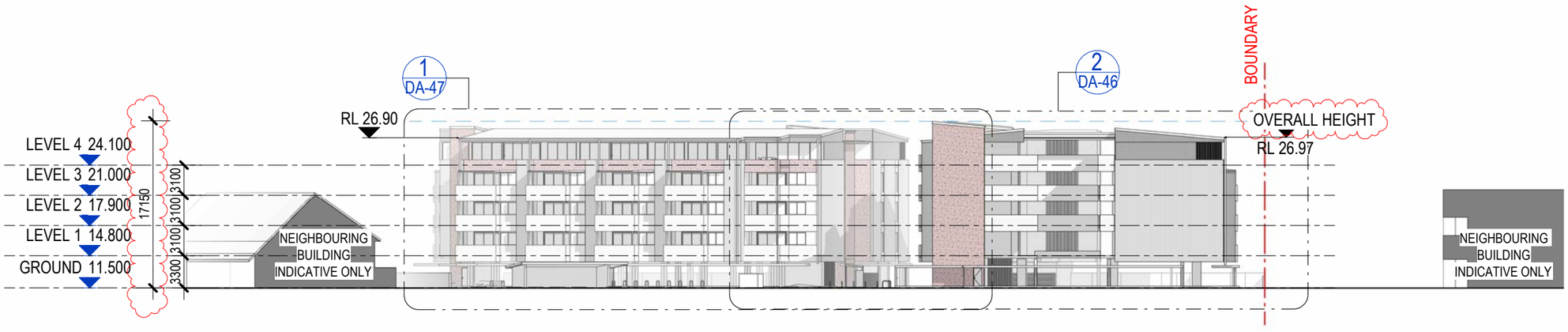

1 DA-20 **SITE ELEVATION 03 - SOUTH**
SCALE 1 : 500

2 DA-20 **SITE ELEVATION 04 - WEST**
SCALE 1 : 500

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SITE ELEVATIONS - SHEET 02**	**25869**	**02.12.25**	**DA-41**	**P9**

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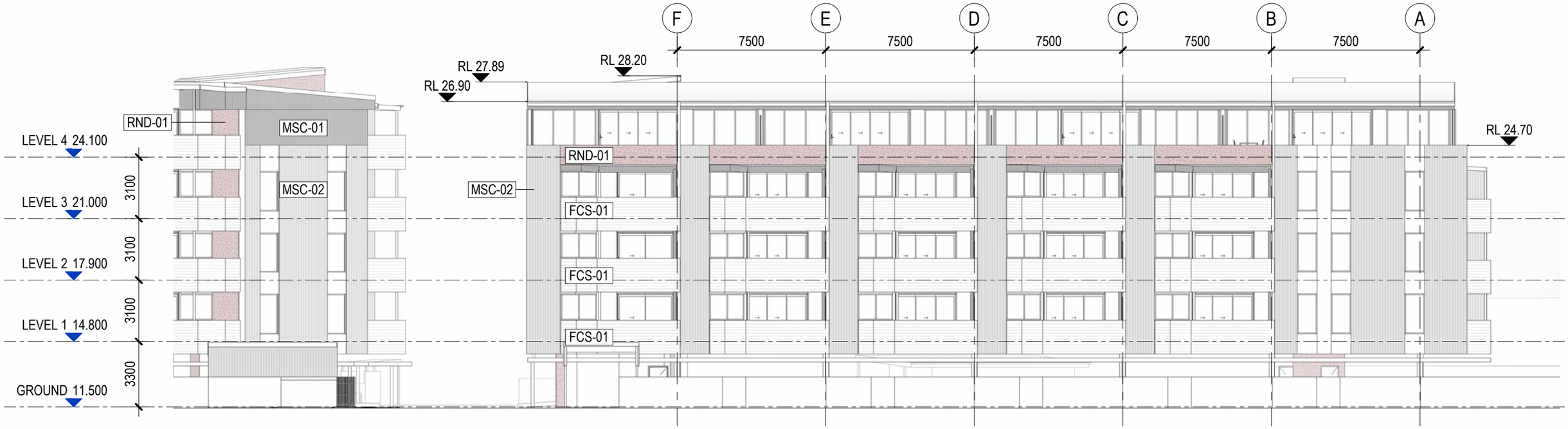
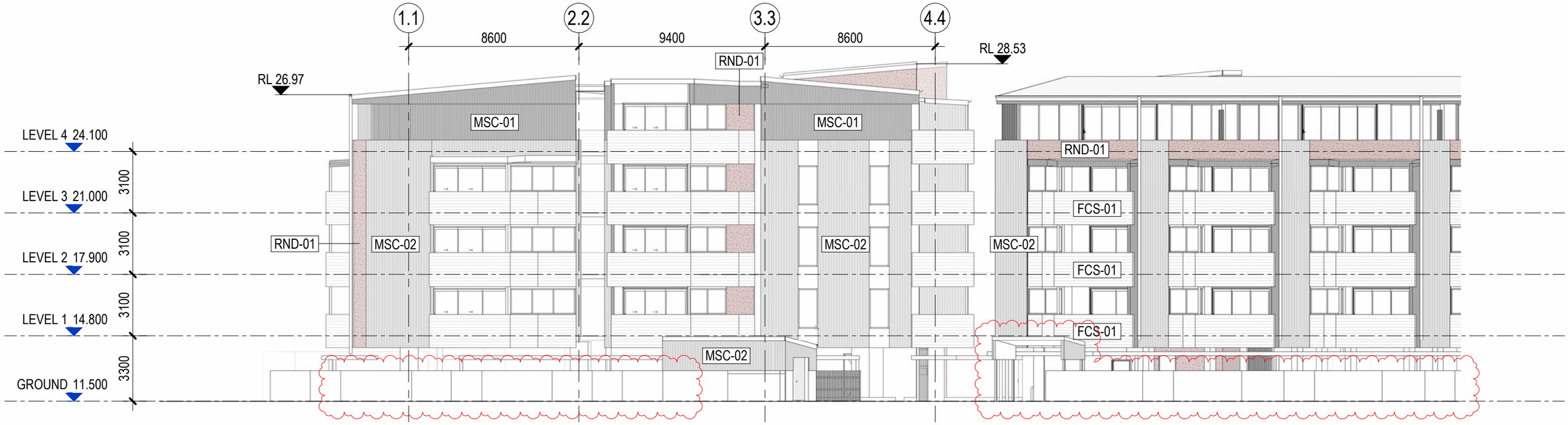


2 **BUILDING 01 - NORTH ELEVATION**
DA-25 SCALE 1 : 200



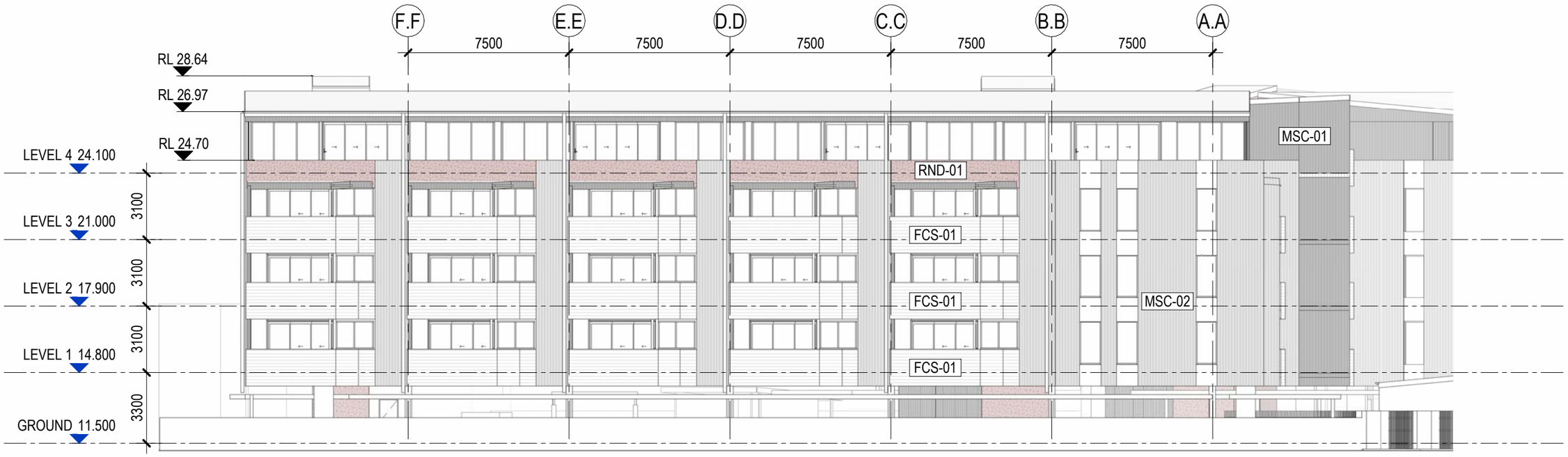
1 **BUILDING 02 - NORTH ELEVATION**
DA-25 SCALE 1 : 200

NOTE:
REFER TO MATERIALITY SHEET FOR DETAILS

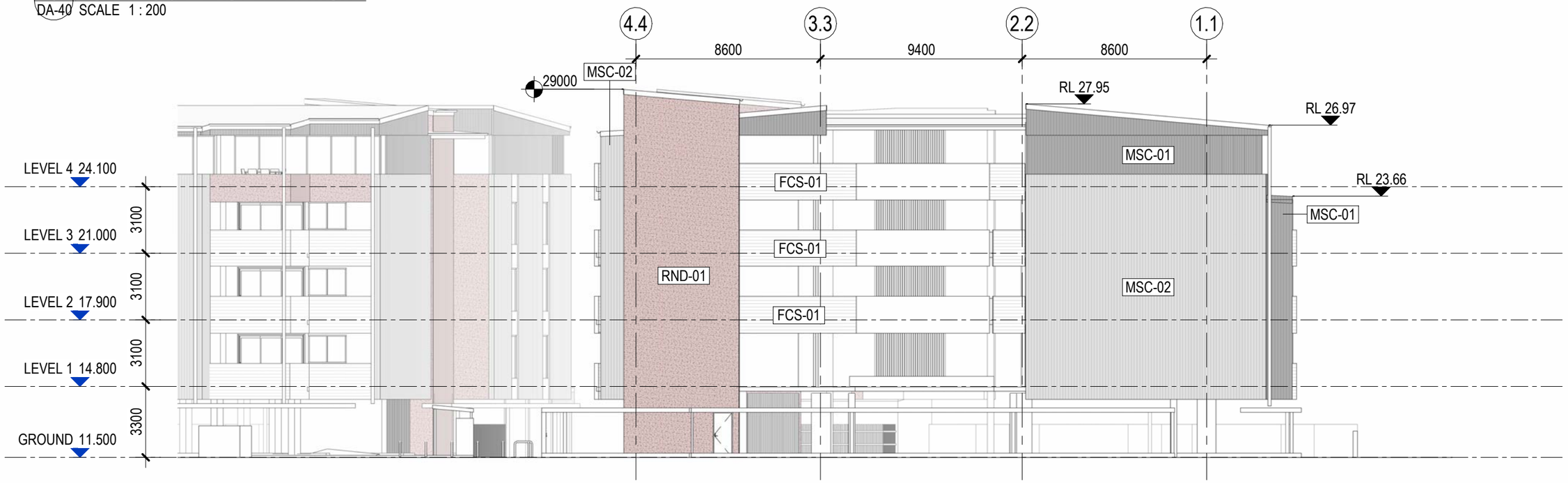
PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**BUILDING ELEVATIONS - SHEET 01**	**25869**	**02.12.25**	**DA-45**	**P9**

COUNTERPOINT

4/12/2025 4:36:57 PM



1 **BUILDING 02 - EAST ELEVATION**
DA-40 SCALE 1 : 200



2 **BUILDING O2 - SOUTH ELEVATION**
DA-41 SCALE 1 : 200

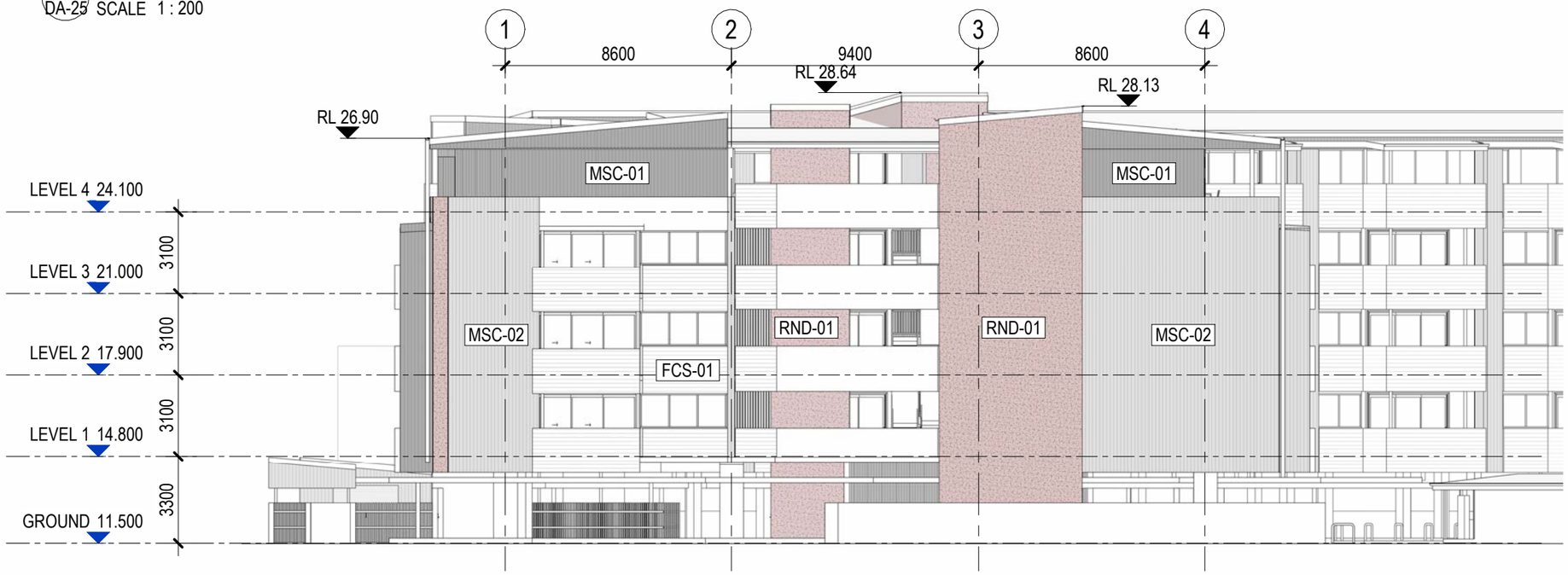
PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**BUILDING ELEVATIONS - SHEET 02**	**25869**	**02.12.25**	**DA-46**	**P9**

COUNTERPOINT

4/12/2025 4:37:14 PM

1 BUILDING 01 - SOUTH ELEVATION

DA-25 SCALE 1 : 200



2 BUILDING 01 - WEST ELEVATION

DA-41 SCALE 1 : 200

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**BUILDING ELEVATIONS - SHEET 03**	**25869**	**02.12.25**	**DA-47**	**P9**

COUNTERPOINT

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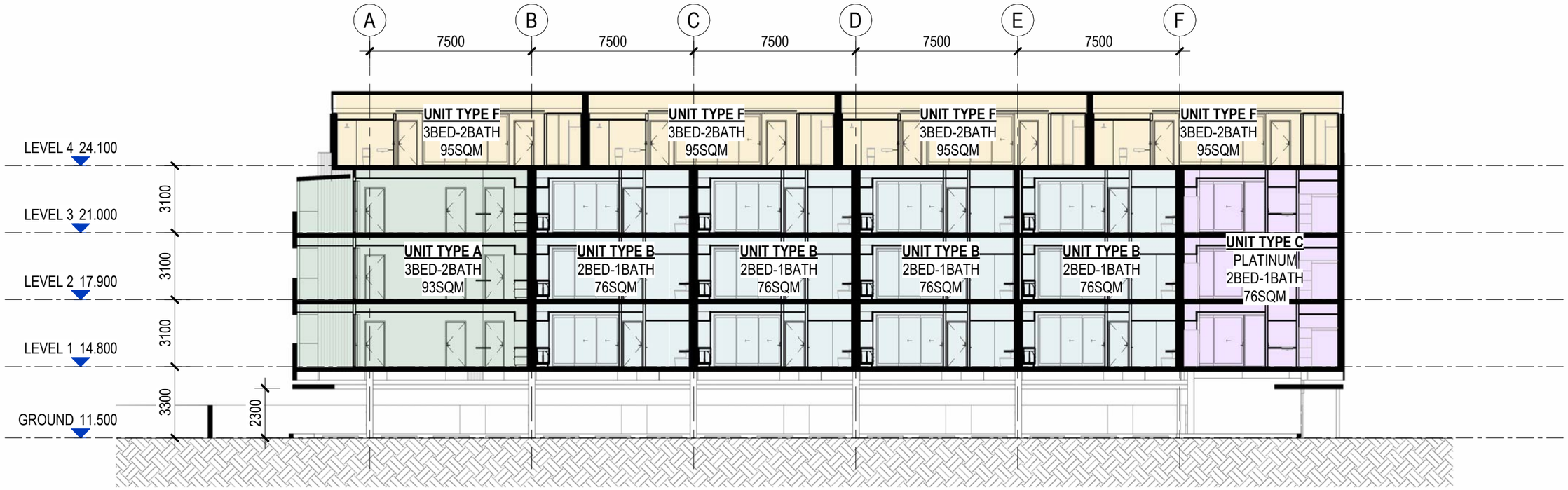
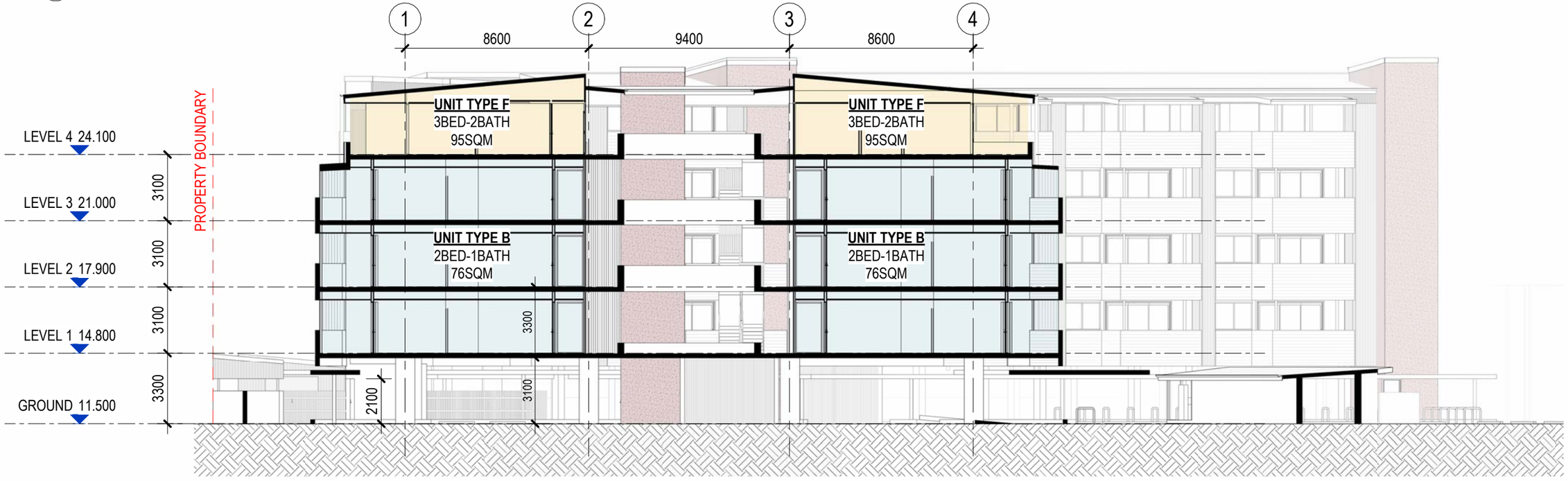


1 **BUILDING 01 - SECTION 01**
DA-20 SCALE 1 : 200

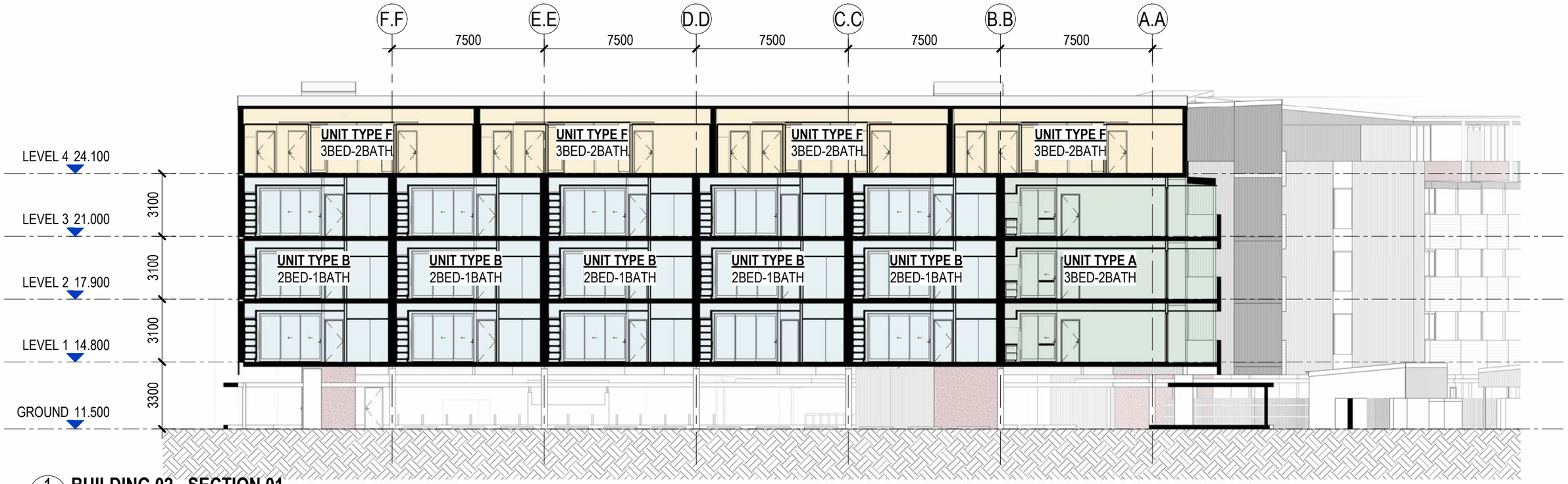


2 **BUILDING 01 - SECTION 02**
DA-20 SCALE 1 : 200

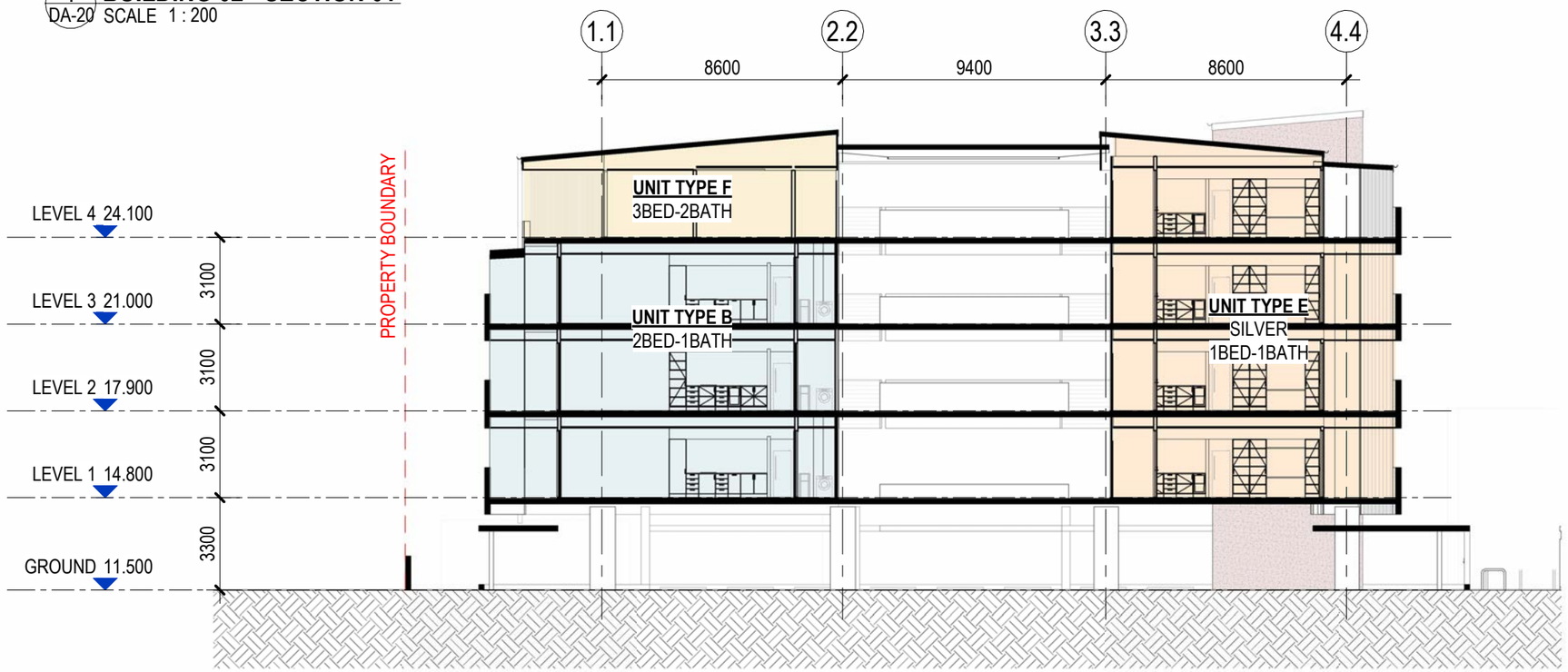
PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SECTION - SHEET 01**	**25869**	**02.12.25**	**DA-50**	**P9**

COUNTERPOINT

4/12/2025 5:03:10 PM



1 **BUILDING 02 - SECTION 01**
DA-20 SCALE 1 : 200

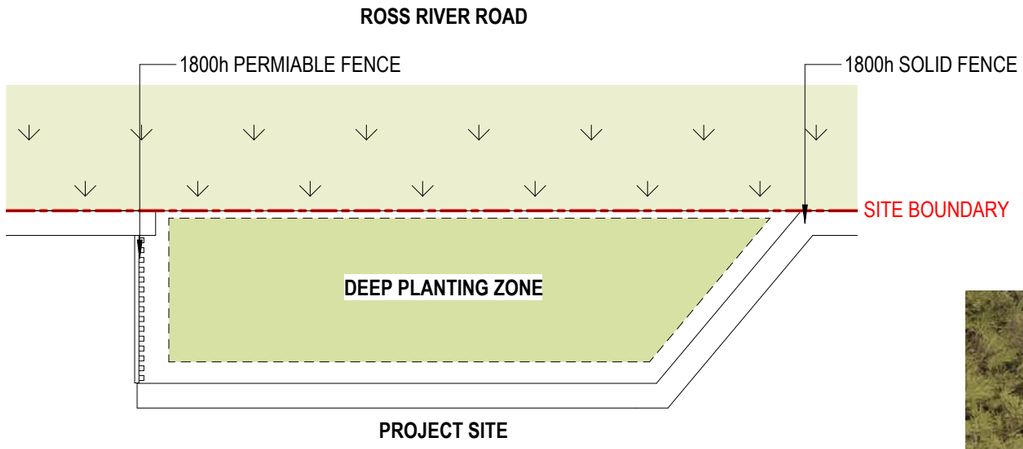


2 **BUILDING 02 - SECTION 02**
DA-20 SCALE 1 : 200

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SECTION - SHEET 02**	**25869**	**02.12.25**	**DA-51**	**P9**

COUNTERPOINT

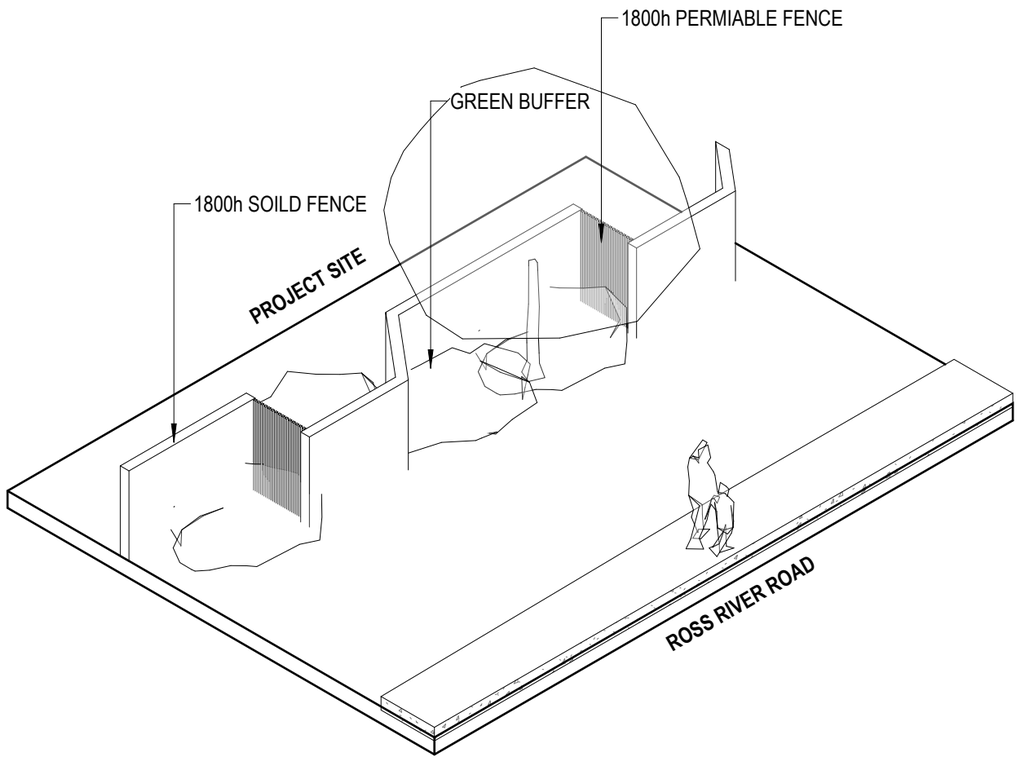
4/12/2025 5:03:57 PM



1 BOUNDARY FENCE PLAN
DA-20 SCALE 1 : 50

ARTICULATED FENCE LINE WITH VARYING MATERIAL RHYTHM PROVIDING VISUAL ACTIVATION WHILE CONCEALING THE CARPARK BEYOND.

PROPOSED FENCE LINE TO PROVIDE ALLOWANCE FOR DEEPER, MORE MEANINGFUL PLANTING TO FURTHER ACTIVATE THE BOUNDARY

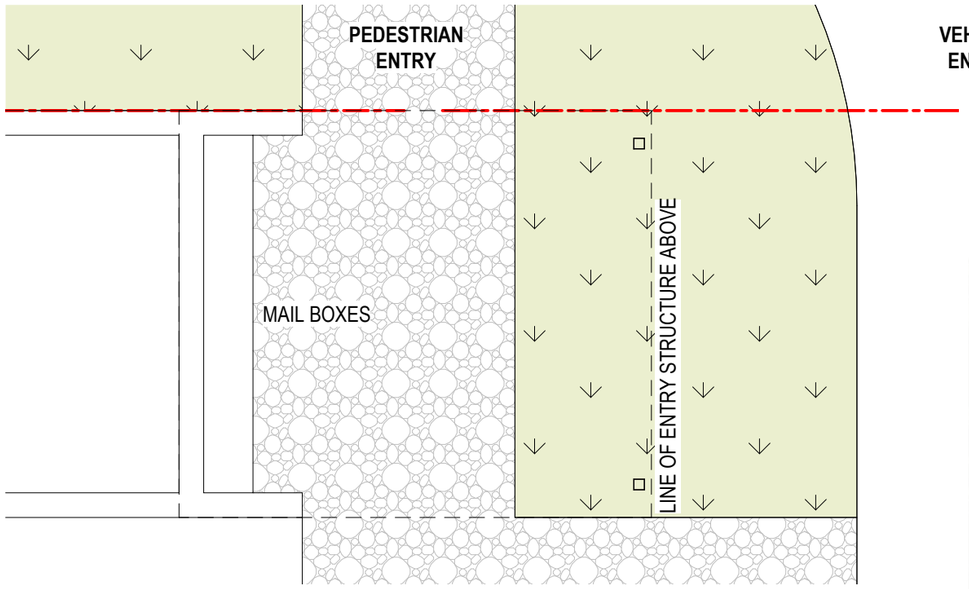


2 BOUNDARY FENCE 3D
SCALE

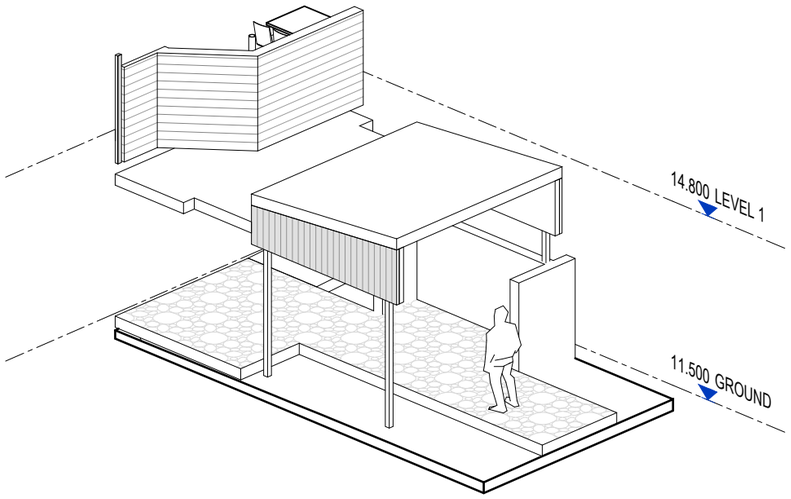
PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**STREET ACTIVATION 01**	**25869**	**02.12.25**	**DA-55**	**P9**

COUNTERPOINT

4/12/2025 4:38:10 PM



1 **ENTRY STRUCTURE PLAN**
DA-20 SCALE 1 : 50



2 **ENTRY STRUCTURE 3D**
SCALE

ENTRY STRUCTURE TO PROVIDE
CLEAR PEDESTRIAN ENTRY

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**STREET ACTIVATION 02**	**25869**	**02.12.25**	**DA-56**	**P9**

COUNTERPOINT

4/12/2025 4:38:14 PM

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PERSPECTIVE - SHEET 01**	**25869**	**02.12.25**	**DA-60**	**P9**

COUNTERPOINT

4/12/2025 4:38:15 PM

PROJECT
ROSS RIVER ROAD RESIDENTIAL
344/346 & 350 ROSS RIVER RD
CRANBROOK, QLD, 4814

CLIENT DETAILS
HURST CONSTRUCTIONS

TITLE
PERSPECTIVE - SHEET 02

PROJECT NO.
25869

DATE
02.12.25

DRAWING No.
DA-61

ISSUE
P9

COUNTERPOINT

4/12/2025 4:38:16 PM

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PERSPECTIVE - SHEET 03**	**25869**	**02.12.25**	**DA-62**	**P9**

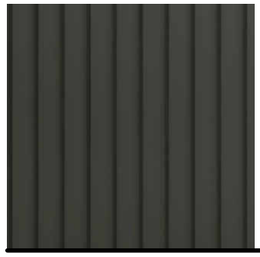
COUNTERPOINT

4/12/2025 4:38:17 PM

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**PERSPECTIVE - SHEET 04**	**25869**	**02.12.25**	**DA-63**	**P9**

COUNTERPOINT

4/12/2025 4:38:18 PM



MSC-01
PROFILE METAL CLADDING WITH VERTICAL PATTERN.
COLORBOND COLOUR 01

MSC-02
PROFILE METAL CLADDING WITH VERTICAL PATTERN.
COLORBOND COLOUR 02

FCS-01
PAINTED FIBRE CEMENT CLADDING WITH HORIZONTAL PATTERN

SFT-01
PRE-FINISHED FIBRE CEMENT SOFFIT

RND-01
PAINTED RENDER FINISH TO UPPER LEVEL BALCONIES AND FACADE TO BOTH BUILDINGS

TROPICAL COLOUR PALETTE APPLIED TO BALCONY SOFFITS AND WALLS. COLOURS ALTERNATE BETWEEN UNITS TO CREATE VARIATION WHILE MAINTAINING A CONSISTENT PATTERN ACROSS BOTH BUILDINGS (REFER TO PERSPECTIVE VIEWS)

NOTE:
REFER TO ELEVATIONS FOR FINISHES LOCATIONS

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**MATERIALITY**	**25869**	**02.12.25**	**DA-64**	**P9**

COUNTERPOINT

4/12/2025 4:38:19 PM

1 **SETBACK DIAGRAM - LEVEL 1**
DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SETBACK DIAGRAM - LEVEL 1**	**25869**	**02.12.25**	**DA-65**	**P9**

COUNTERPOINT

4/12/2025 4:54:00 PM

1 SETBACK DIAGRAM - LEVEL 2

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SETBACK DIAGRAM - LEVEL 2**	**25869**	**02.12.25**	**DA-66**	**P9**

COUNTERPOINT

4/12/2025 5:07:34 PM

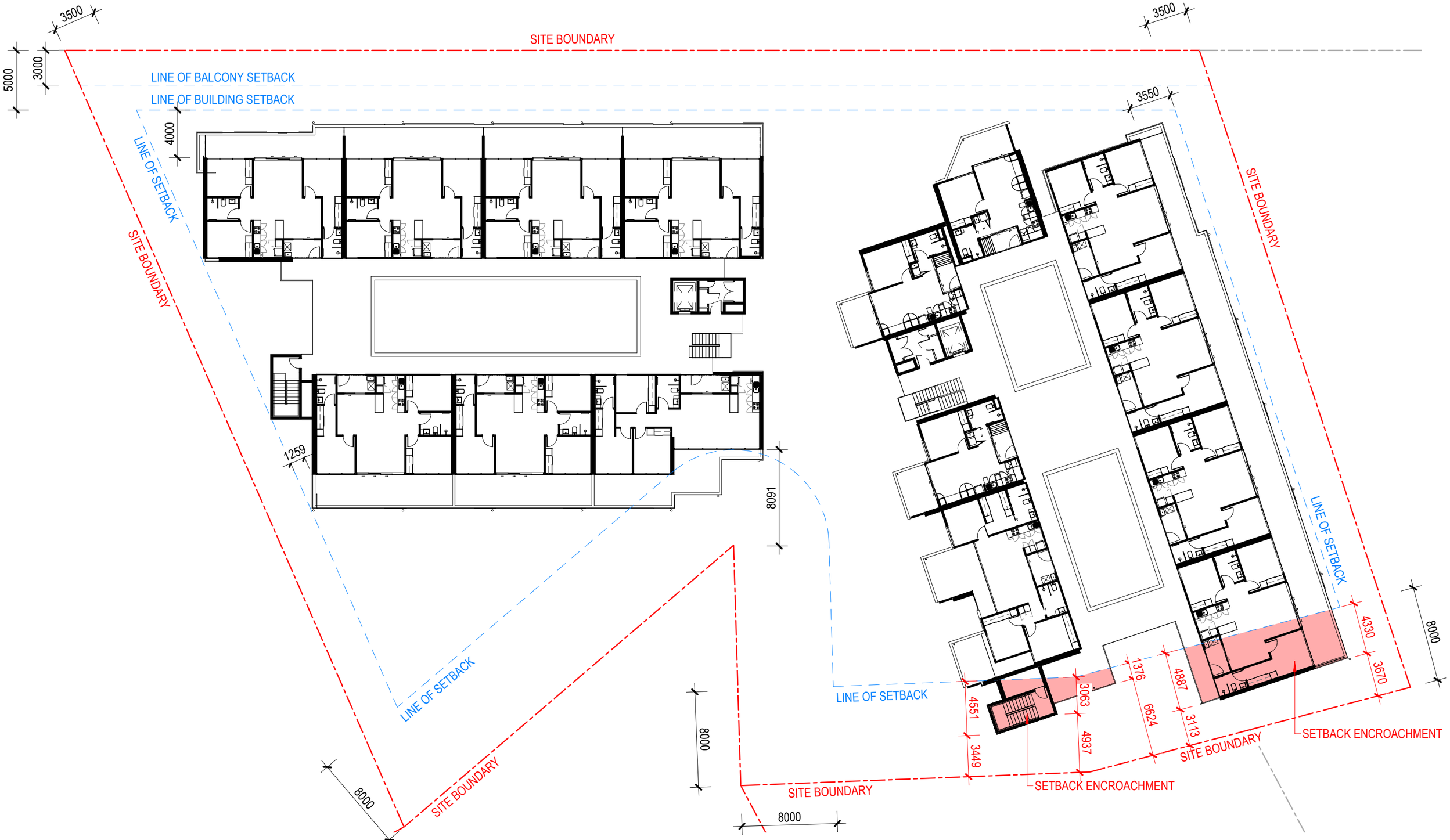
1 SETBACK DIAGRAM - LEVEL 3

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SETBACK DIAGRAM - LEVEL 3**	**25869**	**02.12.25**	**DA-67**	**P9**

COUNTERPOINT

4/12/2025 5:06:37 PM



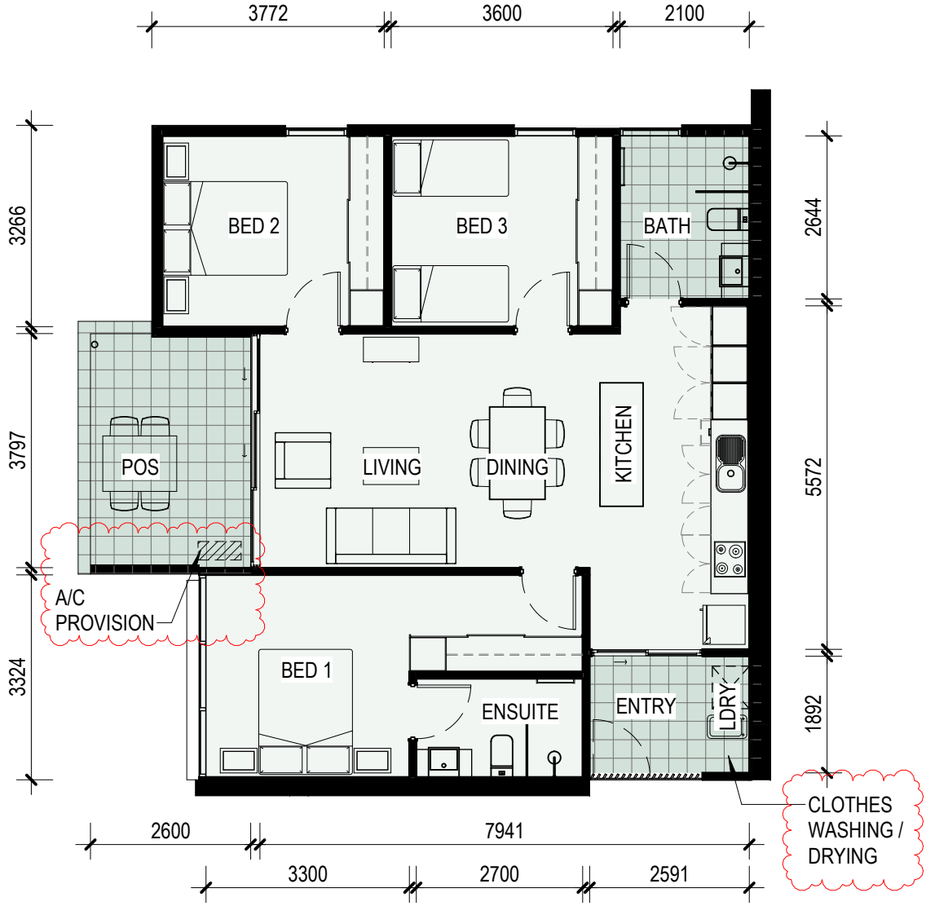
1 SETBACK DIAGRAM - LEVEL 4

DA-40 SCALE 1 : 300

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**SETBACK DIAGRAM - LEVEL 4**	**25869**	**02.12.25**	**DA-68**	**P9**

COUNTERPOINT

4/12/2025 5:06:42 PM

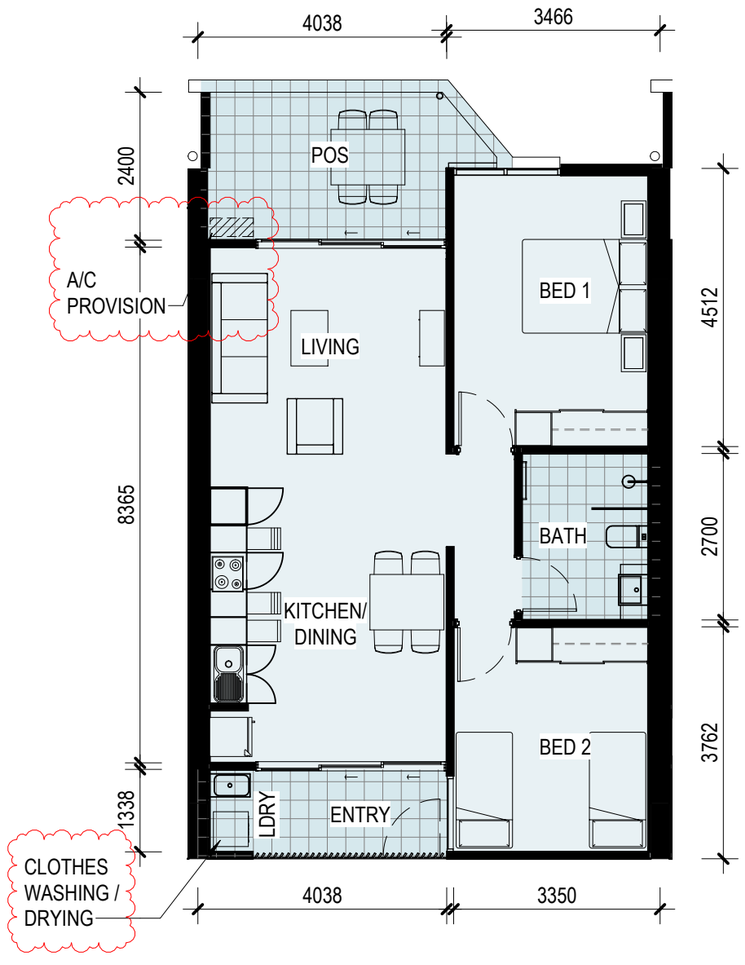


1 UNIT TYPE A
DA-40 SCALE 1 : 100

3 BEDROOMS - 2 BATHROOMS

AREAS (GFA)

INTERNAL :	**91.1sqm**
PRIVATE OPEN SPACE :	11 sqm
EXTERNAL ENTRY:	5.2 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**16.2 sqm**



2 UNIT TYPE B
DA-40 SCALE 1 : 100

2 BEDROOMS - 1 BATHROOM

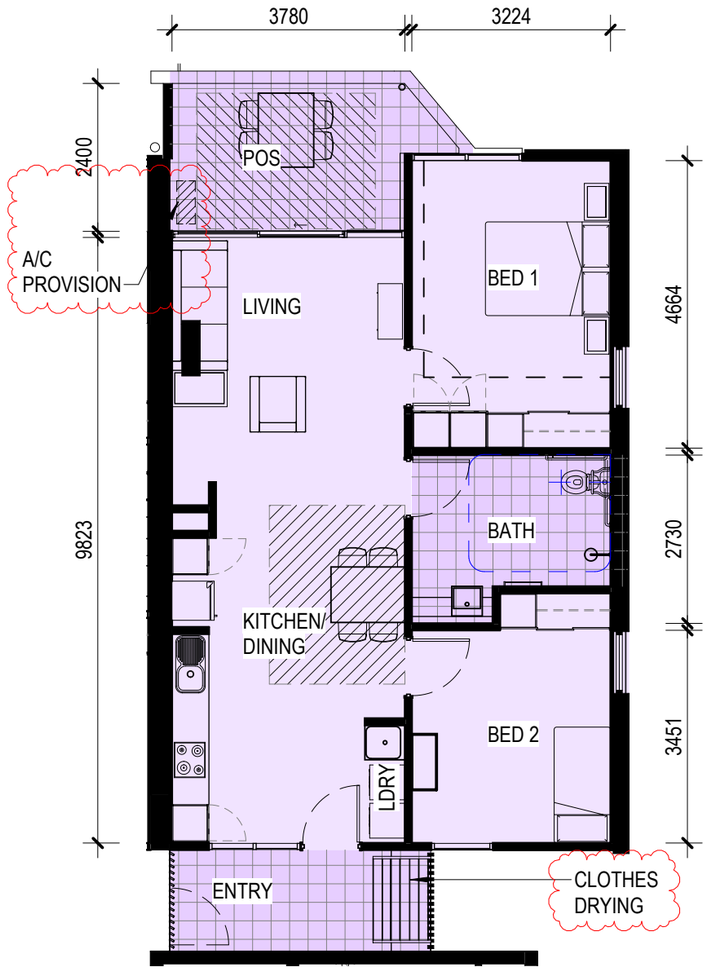
AREAS (GFA)

INTERNAL:	**73.4sqm**
PRIVATE OPEN SPACE:	11sqm
EXTERNAL ENTRY:	5.8sqm
TOTAL PRIVATE EXTERNAL SPACE:	**16.8sqm**

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**DETAIL UNIT TYPE - SHEET 01**	**25869**	**02.12.25**	**DA-70**	**P9**

COUNTERPOINT

4/12/2025 4:38:43 PM

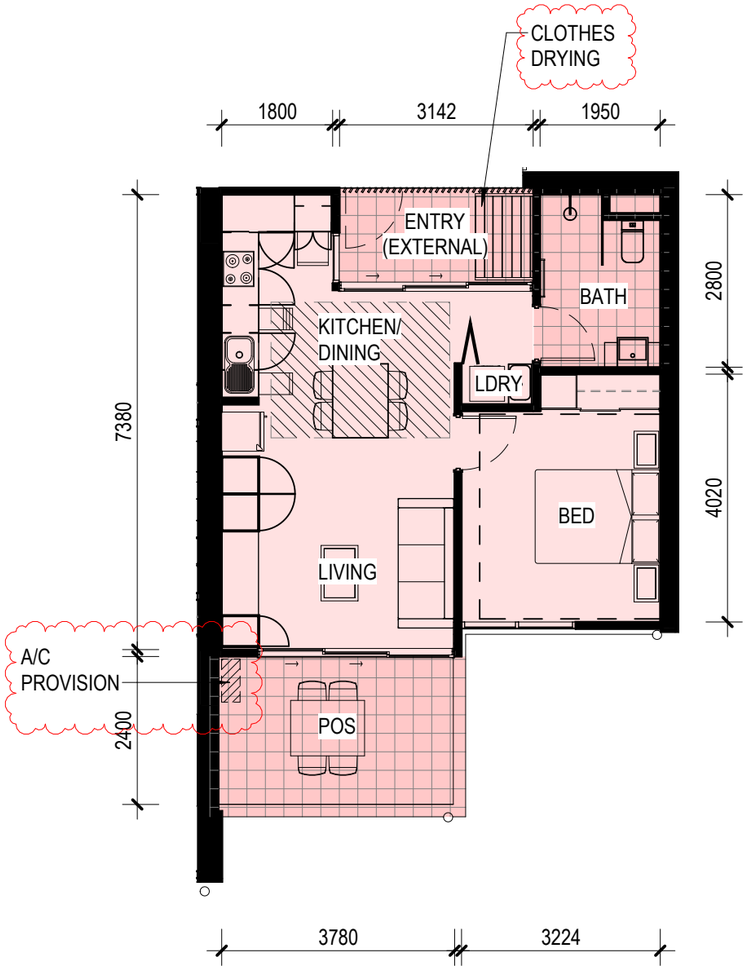


1 UNIT TYPE C
DA-40 SCALE 1 : 100

2 BEDROOMS - 1 BATHROOM (PLATINUM)

AREAS (GFA)

INTERNAL :	**81.3 sqm**
PRIVATE OPEN SPACE:	10.7 sqm
EXTERNAL ENTRY:	7 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**17.7 sqm**



2 UNIT TYPE D
DA-40 SCALE 1 : 100

1 BEDROOM - 1 BATHROOM (GOLD)

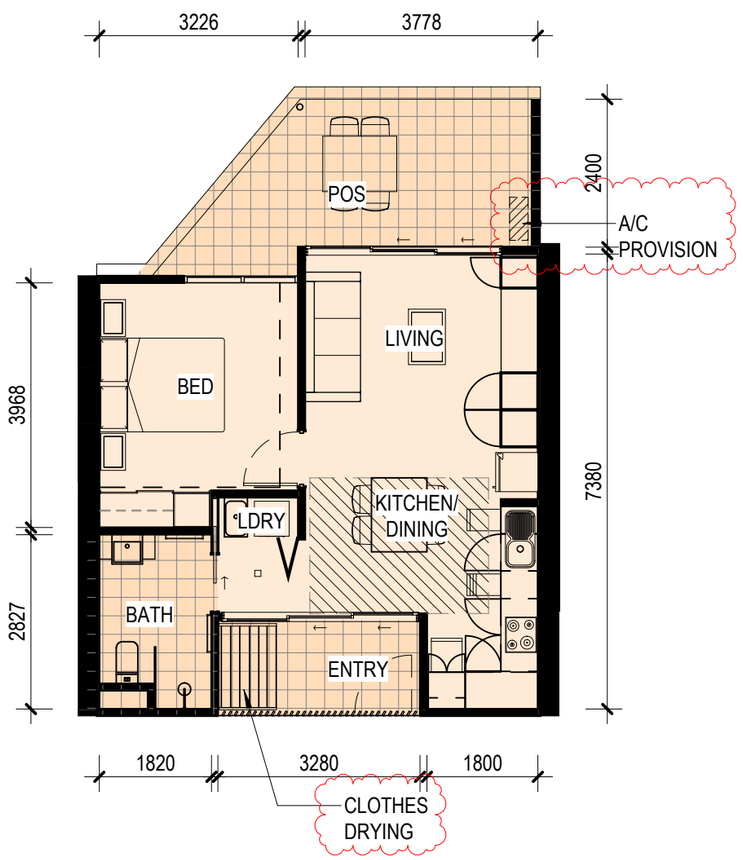
AREAS (GFA)

INTERNAL:	**50 sqm**
PRIVATE OPEN SPACE:	10.8sqm
EXTERNAL ENTRY:	4.8sqm
TOTAL PRIVATE EXTERNAL SPACE:	**15.6 sqm**

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**DETAIL UNIT TYPE - SHEET 02**	**25869**	**02.12.25**	**DA-71**	**P9**

COUNTERPOINT

4/12/2025 4:38:45 PM



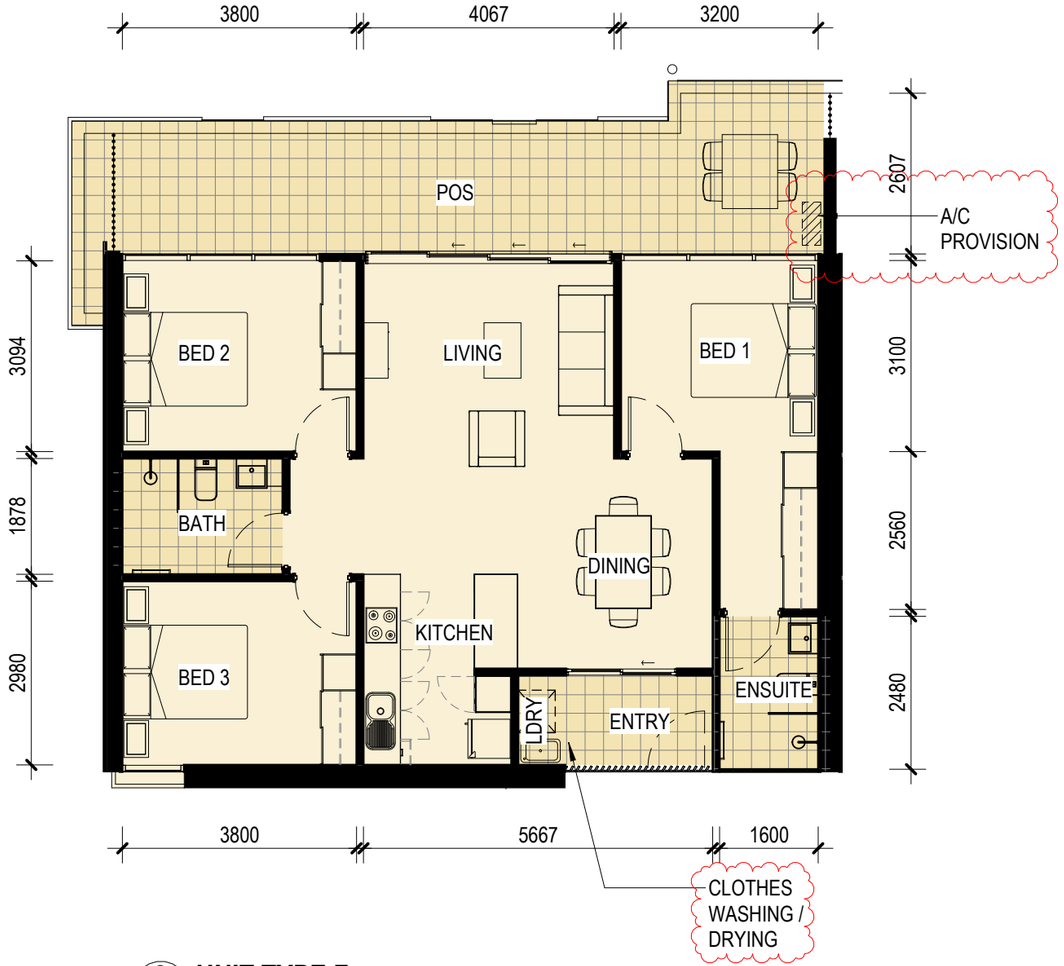
1 UNIT TYPE E

DA-40 SCALE 1 : 100

1 BEDROOM - 1 BATHROOM (SILVER)

AREAS (GFA)

INTERNAL :	**50 sqm**
PRIVATE OPEN SPACE:	14 sqm
EXTERNAL ENTRY:	5 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**19 sqm**



2 UNIT TYPE F

DA-40 SCALE 1 : 100

3 BEDROOMS - 2 BATHROOMS

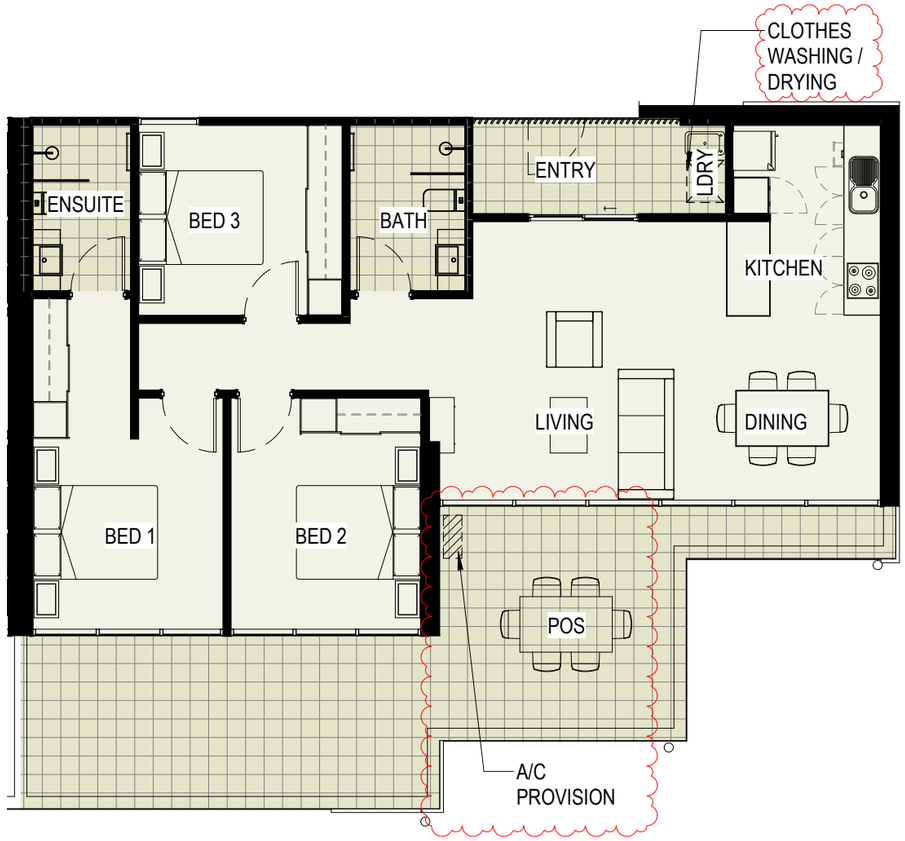
AREAS (GFA)

INTERNAL:	**95 sqm**
PRIVATE OPEN SPACE:	29 sqm
EXTERNAL ENTRY:	4.5 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**33.5 sqm**

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**DETAIL UNIT TYPE - SHEET 03**	**25869**	**02.12.25**	**DA-72**	**P9**

COUNTERPOINT

4/12/2025 4:38:46 PM

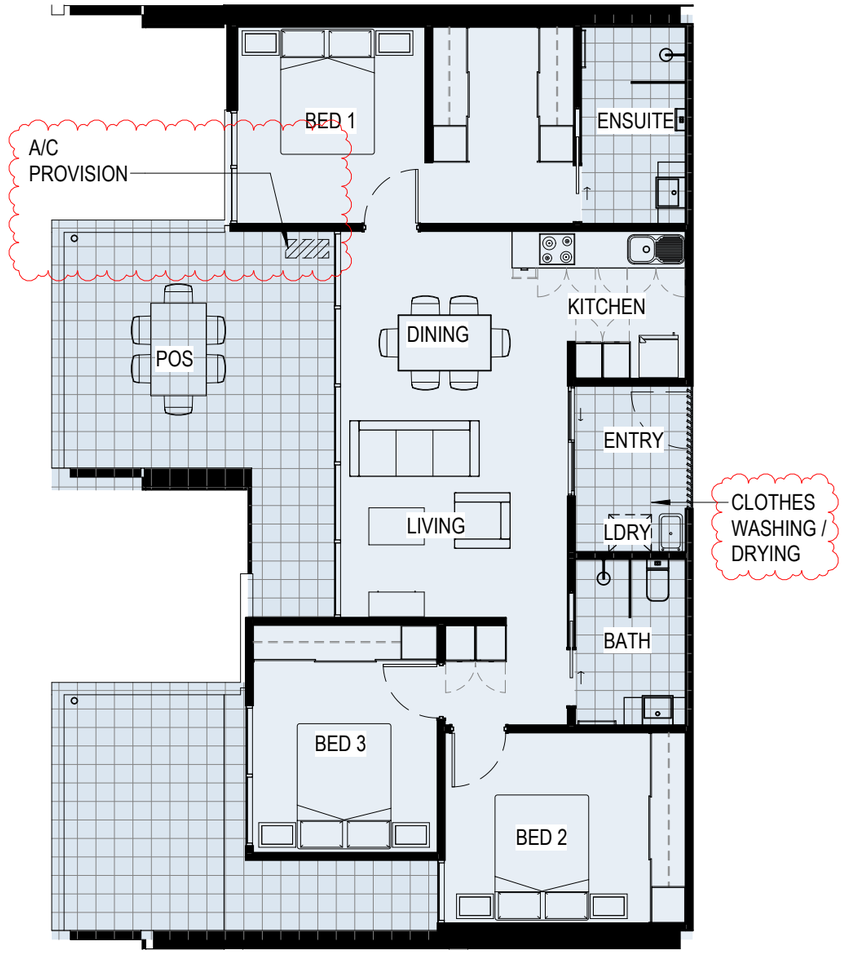


1 UNIT TYPE G
DA-40 SCALE 1 : 100

3 BEDROOMS - 2 BATHROOMS

AREAS (GFA)

INTERNAL :	**96.6 sqm**
PRIVATE OPEN SPACE:	37 sqm
EXTERNAL ENTRY:	6.4 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**43.4 sqm**



2 UNIT TYPE H
DA-40 SCALE 1 : 100

3 BEDROOMS - 2 BATHROOMS

AREAS (GFA)

INTERNAL:	**91 sqm**
PRIVATE OPEN SPACE:	40 sqm
EXTERNAL ENTRY:	5 sqm
TOTAL PRIVATE EXTERNAL SPACE:	**45 sqm**

PROJECT	CLIENT DETAILS	TITLE	PROJECT NO.	DATE	DRAWING No.	ISSUE
ROSS RIVER ROAD RESIDENTIAL **344/346 & 350 ROSS RIVER RD** **CRANBROOK, QLD, 4814**	**HURST CONSTRUCTIONS**	**DETAIL UNIT TYPE - SHEET 04**	**25869**	**02.12.25**	**DA-73**	**P9**

COUNTERPOINT

4/12/2025 4:38:48 PM

APPENDIX B

Traffic Engineering Response prepared by Premise dated 29 April 2026

Premise Australia Pty Ltd
89 111 017 906
Level 1A, 121-133 Sturt Street, Townsville, QLD, 4810, Australia
(07) 4772 0666
townsville@premise.com.au
Premise.com.au

Our Ref: P003620-L01-BIJ

29/04/2026

Anne Zareh
Ross River Road Pty Ltd
C/-Brazier Motti
595 Flinders Street
TOWNSVILLE QLD 4810

Email Anne.Zareh@braziermotti.com.au

Dear Anne

344-350 ROSS RIVER ROAD INFORMATION REQUESTS – RESPONSE TO TRANSPORT AND ACCESS ITEMS

Introduction

On 27 October 2025, Brazier Motti submitted a development application (DA) on behalf of Ross River Road Pty Ltd seeking a development permit (DP) for a Material Change of Use (MCU) permitting a multiple dwelling (81 x dwelling units) at 344-350 Ross River Road, Cranbrook. The DA has the following references:

- Council: MCU25/0075
- SARA: 2511-49198 SRA
- Applicant: 44062-001-01

The basis of the DA was that Ross River Road Residential access would comprise left-in-left-out (LILO) access on the subject site's northern, Ross River Road, frontage and egress to Albert Street via a 4m-wide unnamed laneway on the subject site's southern frontage.

In November 2025, Townsville City Council (TCC) and the State Assessment and Referral Agency (SARA) issued information requests (IRs) in association with the DA. This letter responds to the transport and access items raised in both IRs being:

- TCC Request Item 6 – Albert Street Access
- SARA Request Item 1:
    a. Net Delay Assessment
    b. SIDRA Layouts
    c. Proposed Access Arrangement
    d. Driveway Interaction with Acheron Street Intersection Functional Area

References

The response is prepared with reference to:

- "Ross River Road Residential: Traffic Impact Assessment" (P003620-R01revA) dated 13 October 2025 by Premise Australia Pty Ltd (Premise) for Hurst Constructions Queensland Pty Ltd (Hurst).
- "Options Analysis: 344-350 Ross River Road Access" (P003620-R03rev0.1) dated 16 March 2026 by Premise for Hurst.
- Memo Re: Net Delay Assessment (P003620-N07) dated 14 April 2026 by Premise for Hurst.
- Email RE: MCU25/0075 | Letter – Information Request | 344-346 Ross River Road Aitkenvale dated 18 March 2026 from jayne.carter@townsville.qld.gov.au to anne.zareh@braziermotti.com.au.
- Email RE: 2511-49198 SRA – 344-346 Ross River Road, Cranbrook dated 26 March 2026 from Bronwyn.Bignoux@dsdip.qld.gov.au to anne.zareh@braziermotti.com.au.
- A TEAMS meeting of 23 April 2026 to discuss the above documents which was attended by:
    - TCC
        - Jayne Carter
        - Michael Kaye
        - Dale Armbrust
        - Cassie James
    - SARA
        - Bronwyn Bignoux
    - Department of Transport and Main Roads (TMR)
        - Linda Henning
        - Andrew Green
    - Ross River Road Pty Ltd
        - Jarrod Hurst
    - Brazier Motti
        - Anne Zareh
    - Premise
        - Bradley Jones

Recommendations

Based on discussions at the meeting of 23 April 2026, the access arrangement proposed in the original DA should be amended to:

- Include Albert Street path realignment as shown in Appendix A to achieve desirable sight lines for general use paths with even terrain;
- Prevent the egress movement onto Ross River Road and include the Ross River Road access arrangement shown in Appendix B.

Under the revised arrangement, all vehicles will enter the development via Ross River Road, with all exiting traffic directed to Albert Street via the unnamed laneway.

Appendix C shows the peak hour development traffic with all traffic exiting to Albert Street via the unnamed laneway.

Appendix D shows the impact of development peak hour traffic as a percentage of existing peak hour traffic. Based on this analysis it is concluded that the impact of development traffic on state-controlled road intersections (and accesses):

- Will be significant (>5%) at:
  - The proposed Ross River Road entry;
  - The Nathan Street / Albert Street LILO intersection.
- May be significant (impact not quantified due to lack of existing traffic data) at:
  - Ross River Road / Hatchett Street T-intersection (right in movement); and
  - Nathan Street / Bergin Street signalised Y-intersection (right out movement).
- Will not be significant (<5%) at all other state-controlled road intersections.

Appendix E shows estimated "with development" peak hour traffic which is the sum of existing peak hour traffic and development peak hour traffic.

These amendments to proposed access arrangements do not require amendment of architects' plans for the development and could be enforced using reasonable and relevant conditions of approval for the current DA.

Response to Traffic and Transport Items

TCC Request Item 6 – Albert Street Access

Table 1 documents a driveway risk assessment prepared for the Albert Street exit which is proposed to operate via the unnamed laneway as an exit-only movement, and the only exit from the development. The assessment has been undertaken in accordance with the Department of Transport and Main Roads (TMR) 2021 guideline *Treatment Options to Improve Safety of Pedestrians, Bicycle Riders and Other Path Users at Driveways*. The purpose of the assessment is to identify potential risks to path users and confirm appropriate treatments to ensure safe egress from the site.

Enclosed in Appendix A is a concept sketch showing possible realignment of the Albert Street path to achieve desirable Adequate Warning sight lines for general use paths with even terrain (W=1).

Tolerable vehicle speeds (S=2) on the driveway would be achieved by installing a road hump across the approach in accordance with Section 6.2 of TMR's 2021 guideline.

Serving 81 residences and having a peak exiting volume of 32 vehicles per hour, vehicle volumes result in high exposure (EV = 3)

Path user exposure factor is based on path user volumes and types of users. The path user exposure factor for the Albert Street exit is considered high (EP = 3) due to the path directly servicing a retirement village, where higher levels of pedestrian activity and potentially more vulnerable users can be expected. However, the path located on Albert Street's northern verge which crosses the development exit does not function as a school access route, as the path terminates 70m west of the development exit at the adjacent retirement village driveway. The path would need to be extended 150m to connect to an Ignatius Park College, however, the northern verge of Albert Street is constrained by indented, angle parking which reduces the residual verge width to just 1.7m. Pedestrian and cyclist movements between Nathan Street and Ignatius Park College are accommodated on Ross River Road, a principal cycle route, and a footpath which functions as a primary walking route on the southern side of Albert Street, opposite the development exit.

To maximise driver compliance the realigned path should be of a different colour / texture / material to the driveway and continue across the driveway to provide a visual cue that reinforces path priority (EC = 2).

Table 1 - Driveway Risk Assessment for Exit to Albert Street Only

	Attribute	Comments	Score	Description
Geometric Assessment	Adequate Warning **(W)**	> Path users travelling at comfortable speed (15km/h) > Vehicle do not need to come to a complete stop before crossing the path.	1	Desirable
	Vehicle Speed **(S)**	> Clearly defined ramp with appropriate vertical deflection combined with minimum width driveway. > Vehicle speeds 5-10km/h > Speed control devices (road humps or platforms) close to the path	2	Tolerable
	Geometric Assessment Result (G = W + S)		**3**	**Desirable**
Exposure Assessment	Exposure Factor – Vehicle **(EV)**	> 32 peak hour trips (Figure 1, AM Peak)	3	High Exposure
	Exposure Factor - Path Users **(EP)**	> Path services retirement village	3	High Exposure
	Exposure Factor - Driver Compliance **(EC)**	> Medium treatment for speed control (road hump). > Visual cue provided to reinforce path priority	2	Tolerable
	Exposure Assessment Result (E = EV + EP + EC)		**8**	**High**
Outcome Risk Assessment	Existing treatments appropriate			**Low**

Table 2 reproduced from the TMR 2021 guideline *Treatment Options to Improve Safety of Pedestrians, Bicycle Riders and Other Path Users at Driveways* is the risk matrix use for driveway risk assessments. Note that compliance with the adequate warning and vehicle speed criteria described the exit to Albert Street has a geometric assessment score in the desirable range (G=W+S=1+2=3) and the risk level is low regardless of exposure score.

Table 2 – Risk Levels for Driveway Risk Assessment (TMR, 2021)

<table>
<tr><td></td><td></td><td colspan="4">Geometric assessment score (G = W + S)</td></tr>
<tr><td rowspan="6">Exposure score (E = EV + EP + EC)</td><td>Exposure scores</td><td>Desirable
Range 2–3</td><td>Tolerable
Range 4–5</td><td>Deficient
Range 5–7</td><td>Highly deficient
Range 7–8</td></tr>
<tr><td>Low exposure
3–4</td><td colspan="2">Existing treatments appropriate</td><td colspan="2">Consider low-cost treatment options</td></tr>
<tr><td>Moderate exposure
5–7</td><td rowspan="3">Low risk
Existing treatments appropriate</td><td>Consider low-cost treatment options</td><td>Recommend supplementary treatments or redesign to address issue</td><td rowspan="3">Require supplementary treatments or redesign to address issue</td></tr>
<tr><td>High exposure
8–10</td><td colspan="2">Recommend supplementary treatments or redesign to address issue</td></tr>
<tr><td>Very high exposure
11–12</td><td>Recommend supplementary treatments or redesign to address issue</td><td>Require supplementary treatments or redesign to address issue</td></tr>
</table>

SARA Request Item 1(a) Net Delay Assessment

Appendix F contains a net delay assessment for the Nathan Street / Albert Street intersection which compares delays calculated using SIDRA Intersection software for base case traffic observed on Tuesday 3 February 2026 and with development traffic shown in Appendix E. The net delay assessment concludes that the sum of intersection delays on base traffic increases by 2.9% on aggregate which is not a significant increase. This result is consistent with the conclusions of P003620-N07 that:

- The proposed development has a small traffic generation relative to existing traffic on the state-controlled road network such that, the increase in base traffic as a result of development traffic will not be significant (<5%) except where development traffic enters or exits the state-controlled road network.
- When totalled over all movements and design peak hours, the net increase in delays to base traffic as a result of development traffic will be <5%.
- The net delay impact of the proposed development is acceptable, and no works are required to mitigate delay impacts.

SARA Request Item 1(b) SIDRA Layouts

SIDRA layouts of the assessed intersections were updated to ensure they match existing conditions (and future road network planning by TMR) as described in Annexure 11.12 of P003620-R03rev0.1. Updated SIDRA layouts were utilised for the intersection analysis contained in "P003620-R03-SIDRA10.sipx" and net delay assessments documented in P003620-N07 and Appendix F.

SARA Request Item 1(c) Proposed Access Arrangement

Enclosed in Appendix B are concept sketches showing the proposed Ross River Road access including the following features:

- The previously proposed exit to Ross River Road has been removed from the proposed Ross River Road access arrangement.
- Entry from Ross River Road provides an auxiliary left turn treatment with a short turn slot (AUL(s) in accordance with the turn warrant assessment documented in Section 5.3.1 of P003620-R01revA.
- The on-road bicycle lane is designed in accordance with TMR's approved as official traffic sign W6-Q05_2 Retrofit Bicycle Lane in a Left Turn Lane "Unsignalised Intersection". This is the same treatment as proposed by TMR in future road network planning for entry to 340 Ross River Road.
- The entry driveway will be constructed with vertical deflection that slows approaching drivers in accordance with Section 6.14 of TMR's 2021 guideline.

HURA018-SK6-B shows the proposed Ross River Rod access in the context of the existing Ross River Road geometry. To preserve the function of the existing on-road bicycle lane, the AUL(s) is designed in accordance with TMR's approved as official traffic sign W6-Q05_2 Retrofit Bicycle Lane in a Left Turn Lane "Unsignalised Intersection". With minor realignment of kerb and channel the turn lane width is 3.0m between the existing Ross River Road edge line and the realigned lip of kerb.

HURA018-SK8-A shows the proposed Ross River Road access in the context of TMR planning for a westbound merge point (from three into two lanes) at the site's frontage. The planned merge increases the shoulder width available for the on-road bicycle lane and AUL(s) which may allow the W6-Q05_2 treatment to be removed.

SARA Request Item 1(d) Driveway Interaction with Acheron Street Intersection Functional Area

To prevent the egress movement onto Ross River Road from making an unsafe movement into Acheron Avenue the previously proposed exit to Ross River Road has been removed from the proposed Ross River Road access arrangement shown by the concept sketch enclosed in Appendix B. This results in the only exit from the development being via the unnamed laneway connecting to Albert Street.

With the only exit from the development being via the unnamed laneway connecting to Albert Street the volume of traffic exiting to Albert Street will increase from 26vph to 32vph in the AM peak hour and from 10vph to 12vph in the PM peak hour. This slight increase in traffic does not change the conclusions of:

- Road safety impact assessments documented in Section 5.2 of P003620-R01revA and P003620-R03rev0.1.
- The turn warrant assessment documented in Section 5.3 of P003620-R01revA.
- Intersection analysis contained in "P003620-R03-SIDRA10.sipx" and Appendix F.
- Sight distance assessments documented in Section 5.3.4 of P003620-R01revA and Annexure 11.10 of P003620-R03rev0.1.
- Frontage assessments contained in Section 5.3.5.1 of P003620-R01revA and the above response to TCC Request Item 6 – Albert Street Access.
- The net delay assessment documented in P003620-N07 and Appendix F.

Conclusion

The development application MCU25/0075 / 2511-49198 SRA should be approved subject to conditions which include:

- Albert Street path realignment to achieve desirable sight lines for general use paths with even terrain; and
- Prevent egress movements onto Ross River Road.

BRADLEY JONES RPEQ
PRINCIPAL TRAFFIC ENGINEER

Enc.

Appendix A Albert Street Path Realignment

Appendix B Ross River Road Access

Appendix C Peak Hour traffic with Exit to Albert Street Only

Appendix D Impact Assessment Area

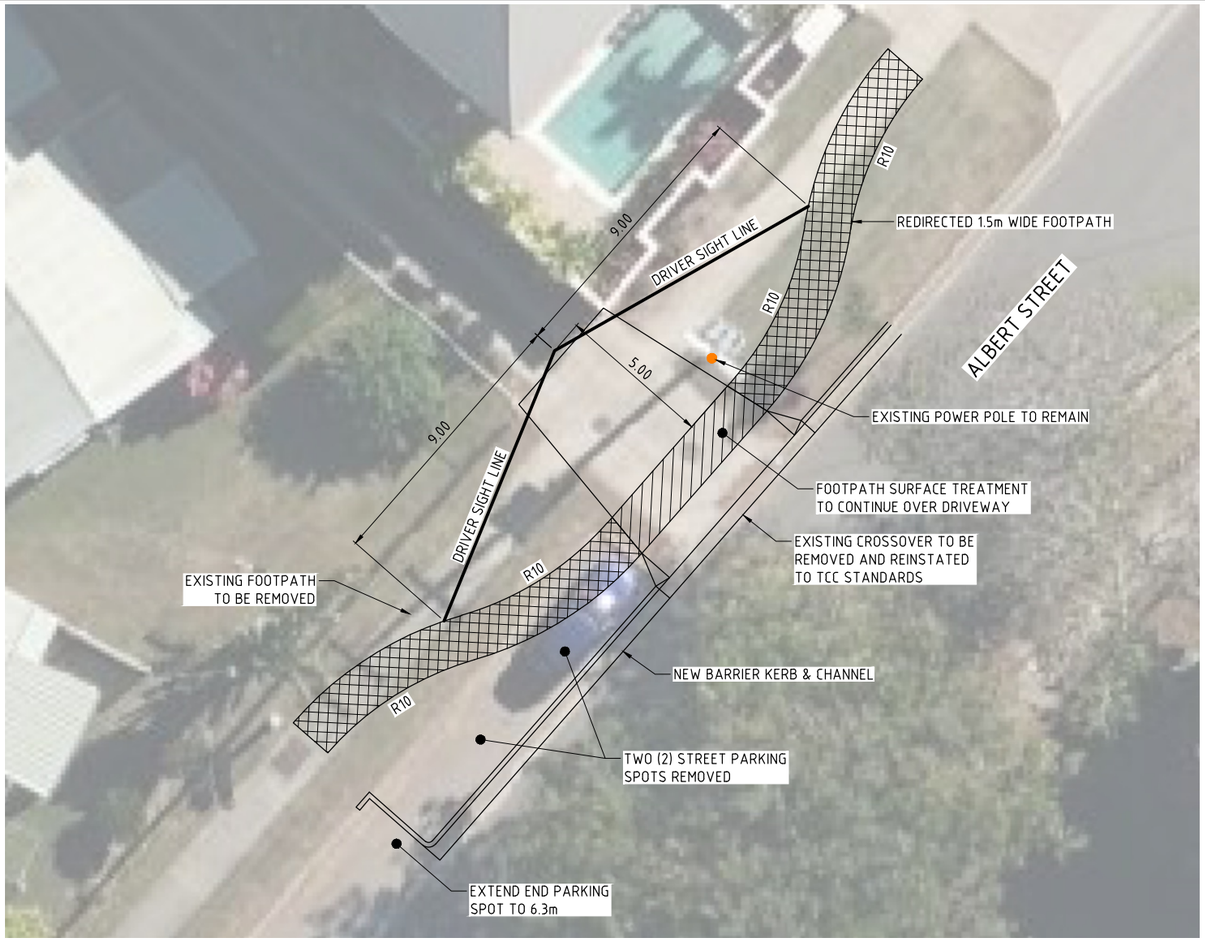
Appendix E "With Development" Peak Hour Traffic

Appendix F Net Delay Assessment

APPENDIX A

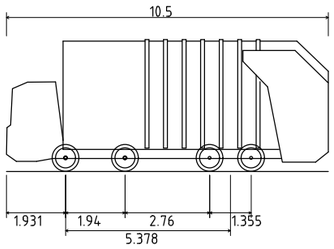
ALBERT STREET PATH REALIGNMENT

HURA018-SK7-B



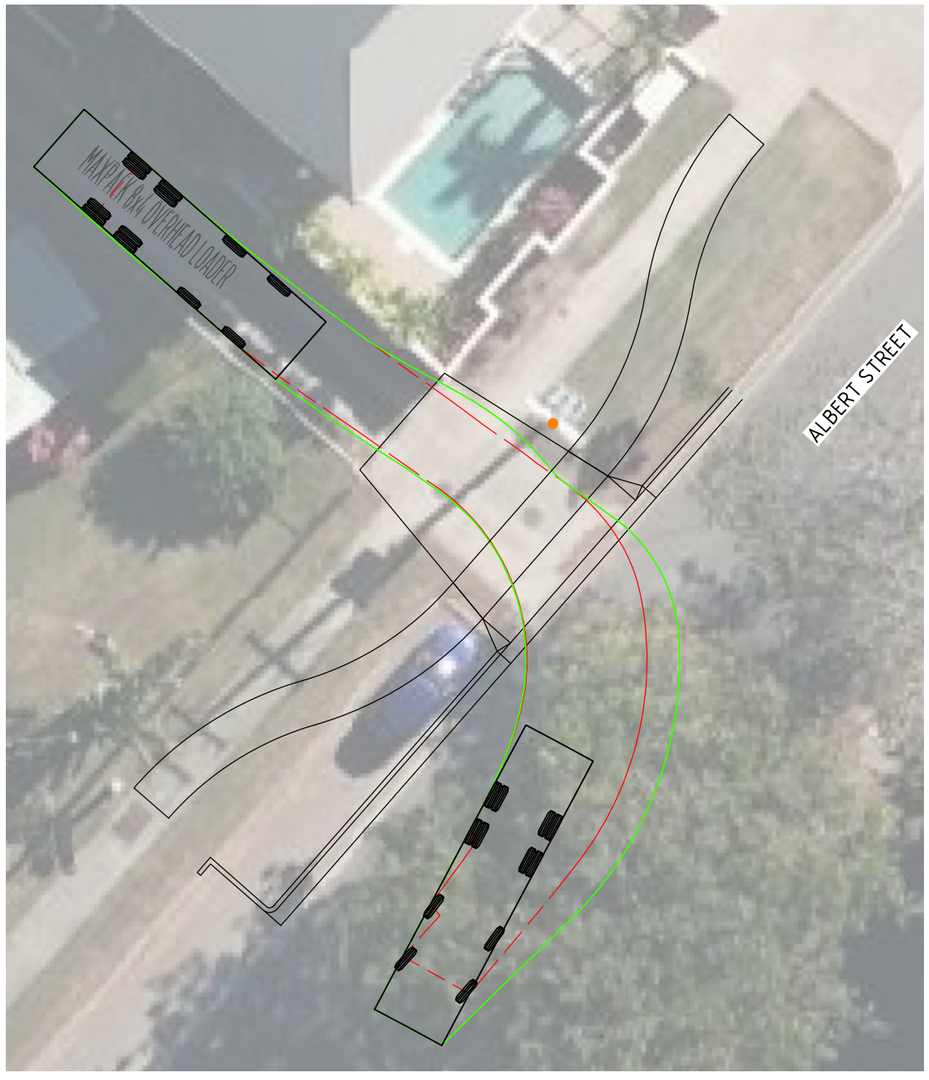
PROPOSED LAYOUT & SIGHT LINES

SCALE 1:100 AT A1



MAXPACK 8x4 OVERHEAD LOADER

OVERALL LENGTH	10.500m
OVERALL WIDTH	2.490m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.302m
TRACK WIDTH	2.490m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	10.800m



VEHICLE TURNPATH

SCALE 1:100 AT A1

-2 0 2 4

SCALE OF METRES 1:100 AT A1
& 1:200 AT A3

REVISION		APP'D	DATE
B	TURNPATH REVISED	DJH	29/04/26
A	ORIGINAL ISSUE	DJH	28/04/26

CONCEPT

JAS-ANZ

WWW.JAS-ANZ.ORG/REGISTER

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PO Box 1498, Aitkenvale QLD 4814
Tel: (07) 4721 5800
townsville@lcjengineers.com.au
www.lcjengineers.com.au

DRAWN	DESIGNED
SLT	SLT
APPROVED	DATE
RPEQ:	

CLIENT
HURST CONSTRUCTIONS

PROJECT
ROSS RIVER RESIDENTIAL

344-350 ROSS RIVER RD
AITKENVALE

DRAWING
ALBERT STREET
PROPOSED ACCESS

NUMBER	SHEET NO.	REVISION
HURA018	SK7	B

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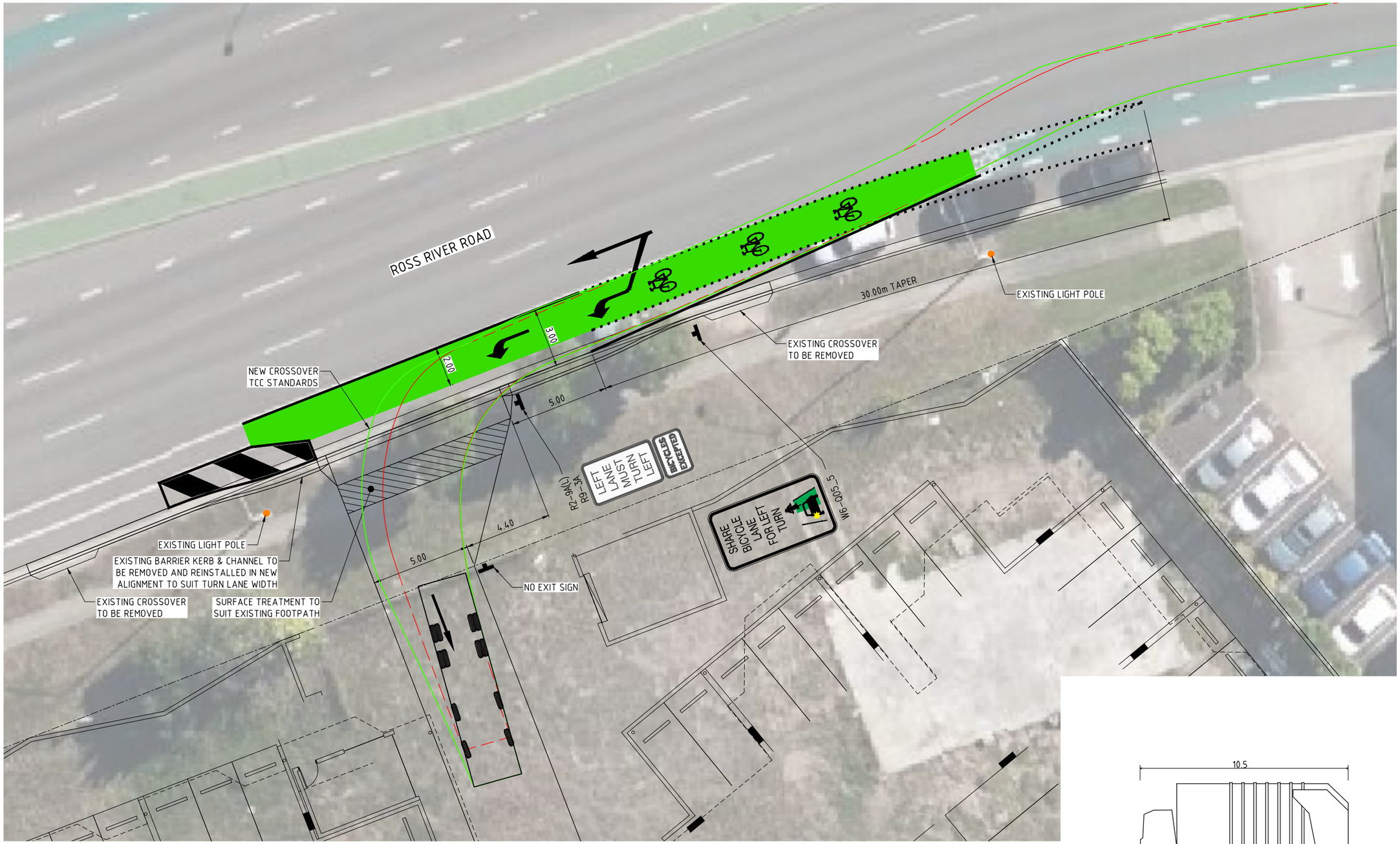
APPENDIX B

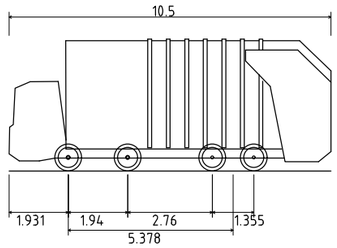
ROSS RIVER ROAD ACCESS

HURA018-SK6-B & HURA018-SK8-A



PROPOSED LAYOUT & VEHICLE TURNPATH

SCALE 1:100 AT A1



MAXPACK 8x4 OVERHEAD LOADER

OVERALL LENGTH	10.500m
OVERALL WIDTH	2.490m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.302m
TRACK WIDTH	2.490m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	10.800m

-2 0 2 4

SCALE OF METRES 1:100 AT A1 & 1:200 AT A3

B	KERB ALIGNMENT REVISED	DJH	29/04/26
A	ORIGINAL ISSUE	DJH	28/04/26
REVISION		APP'D	DATE

CONCEPT

JAS-ANZ

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LCJ Engineers Pty Ltd
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PO Box 1498, Aitkenvale QLD 4814
Tel: (07) 4721 5800
townsville@lcjengineers.com.au
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DRAWN	DESIGNED
SLT	SLT
APPROVED	DATE
RPEQ:	

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HURST CONSTRUCTIONS

PROJECT
ROSS RIVER RESIDENTIAL

344-350 ROSS RIVER RD
AITKENVALE

DRAWING
ROSS RIVER ROAD
PROPOSED ACCESS

NUMBER	SHEET NO.	REVISION
HURA018	SK6	B

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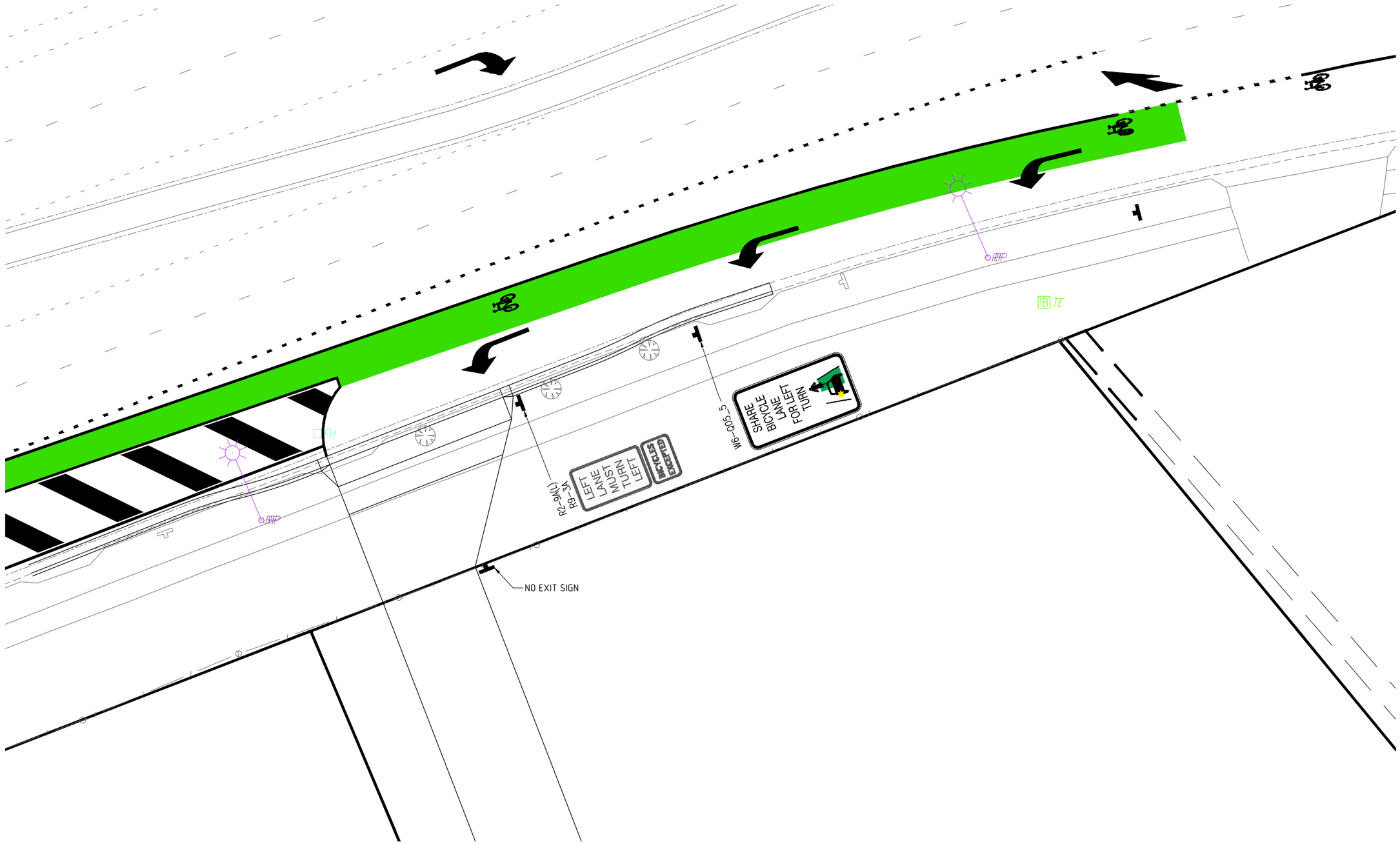

PROPOSED ULTIMATE ACCESS LAYOUT

SCALE 1:100 AT A1

-2 0 2 4

SCALE OF METRES 1:100 AT A1
& 1:200 AT A3

A	ORIGINAL ISSUE	DJH	29/04/26
REVISION		APP'D	DATE

CONCEPT

JAS-ANZ

QSERC ISO 9001

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www.lcjengineers.com.au

DRAWN	DESIGNED
SLT	SLT
APPROVED	DATE
RPEQ:	

CLIENT
HURST CONSTRUCTIONS

PROJECT
ROSS RIVER RESIDENTIAL

344-350 ROSS RIVER RD
AITKENVALE

DRAWING
ROSS RIVER ROAD
ULTIMATE ACCESS

NUMBER	SHEET NO.	REVISION
HURA018	SK8	A

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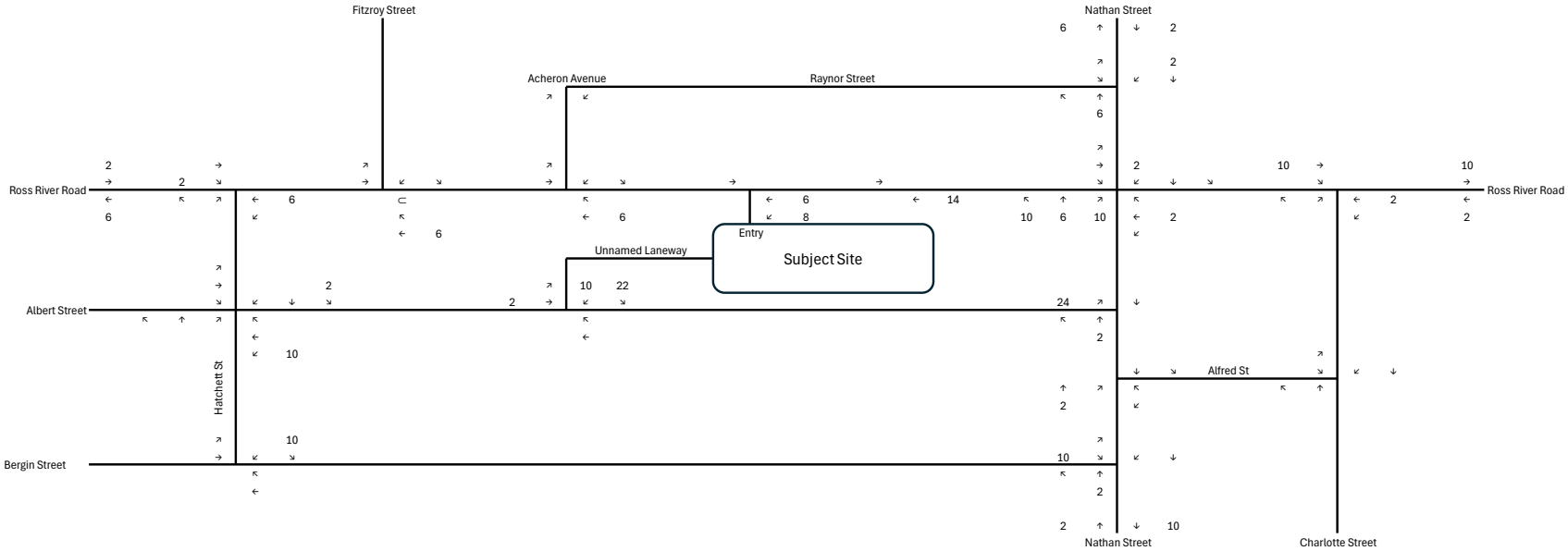
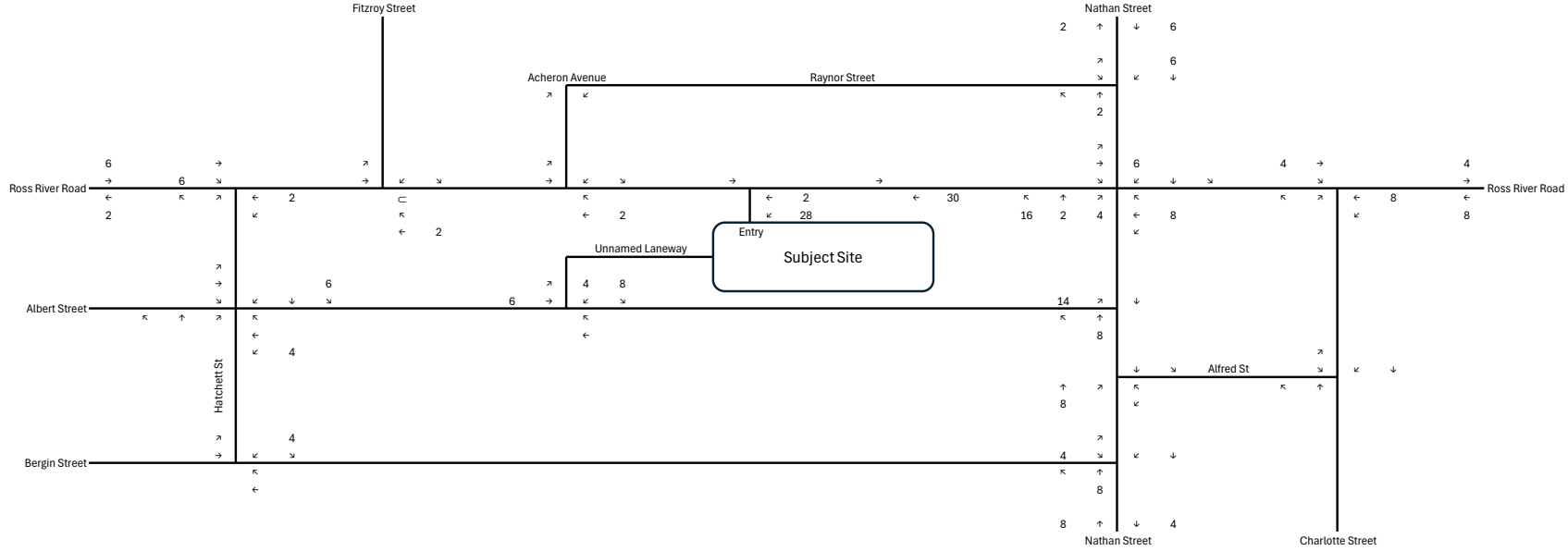
APPENDIX C

PEAK HOUR TRAFFIC WITH EXIT TO ALBERT STREET ONLY



AM PEAK HOUR

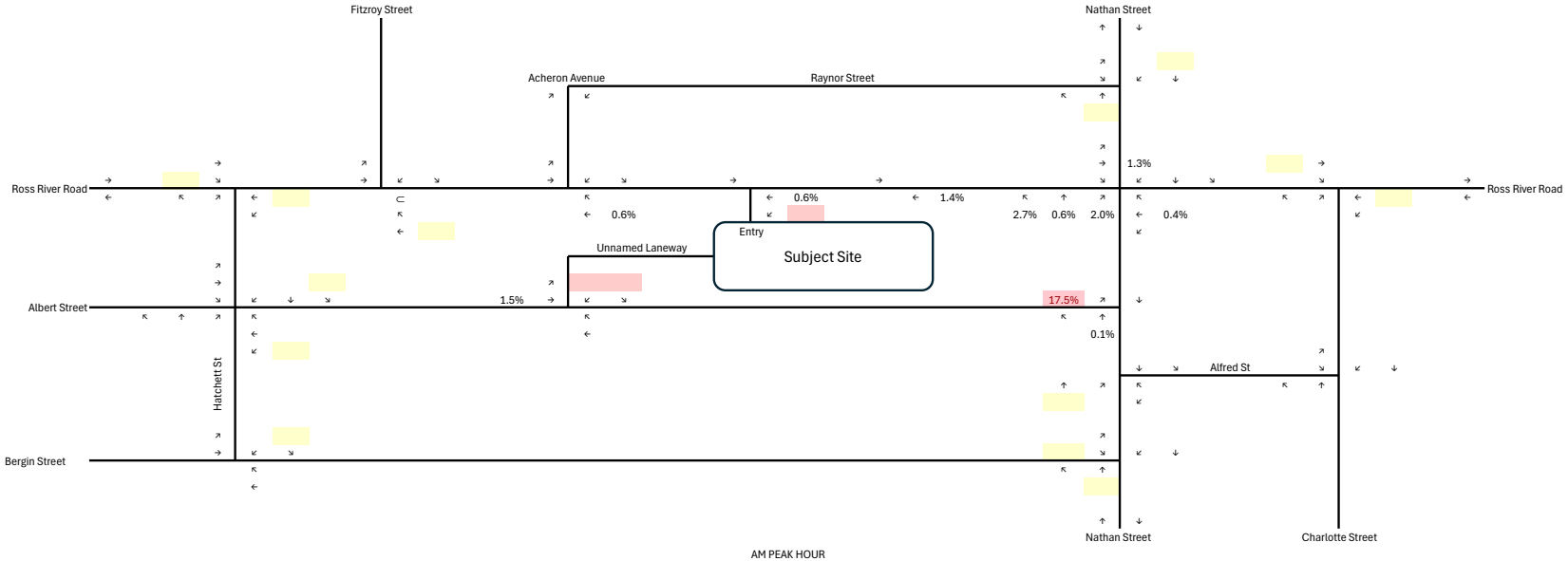


PM PEAK HOUR

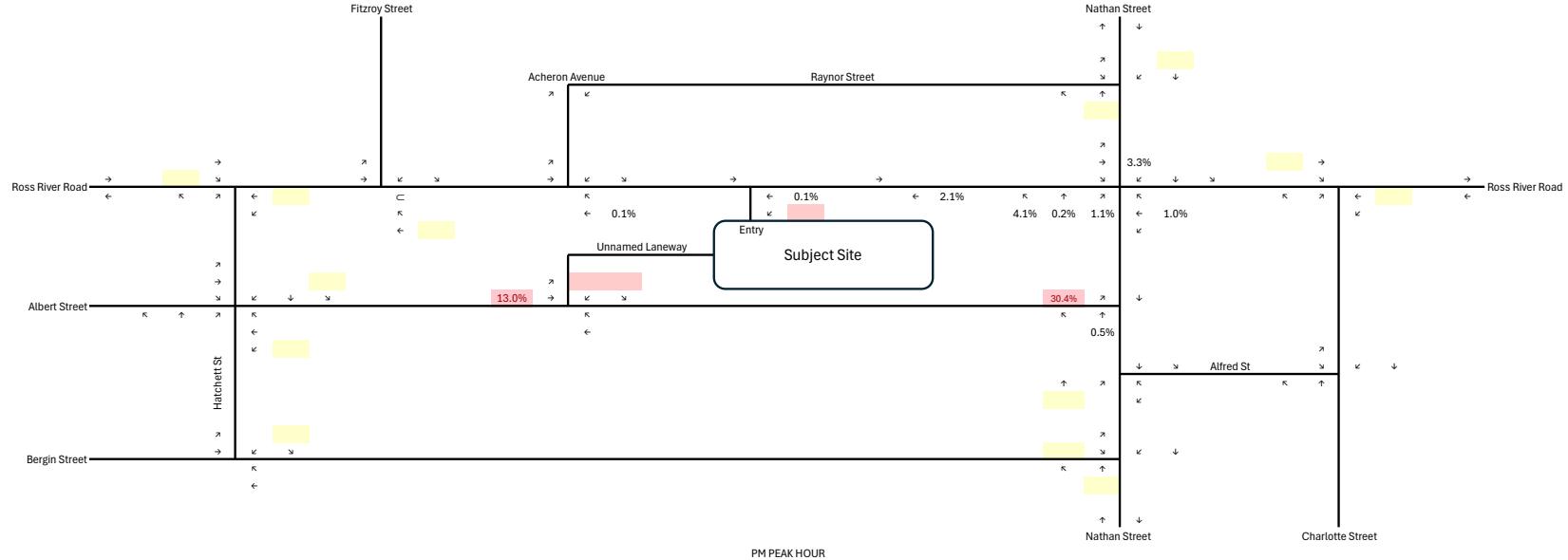
APPENDIX D

IMPACT ASSESSMENT AREA

Development Peak Hour Traffic / Existing Peak hour Traffic



AM PEAK HOUR



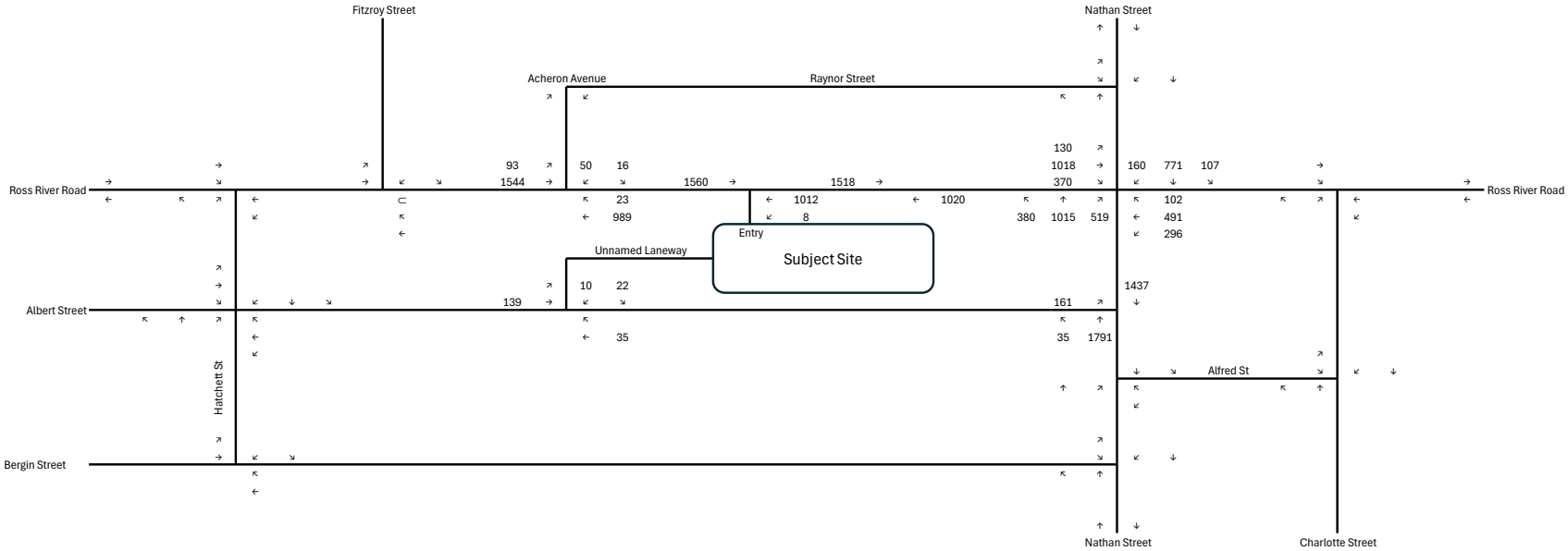
PM PEAK HOUR

Movement significantly (>5%) impacted by development
Movement not significantly (<5%) impacted by development
Movement impacted by development but lack of existing traffic data prevents assessment of significance

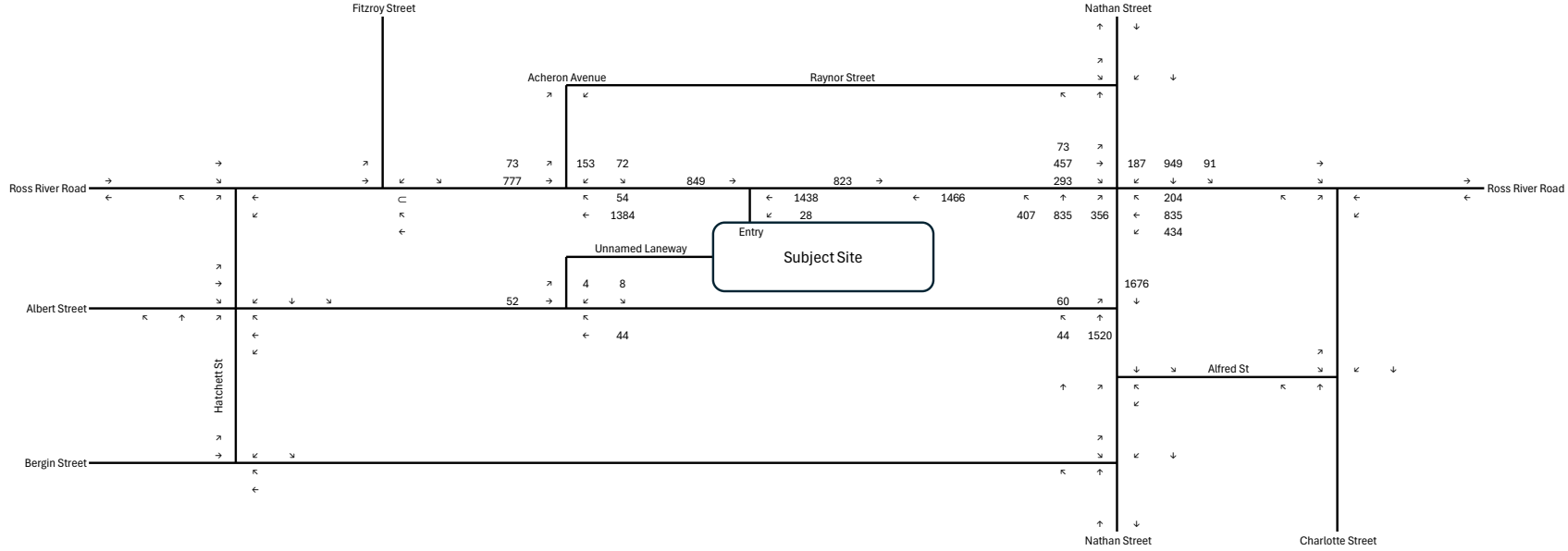
APPENDIX E

"WITH DEVELOPMENT" PEAK HOUR TRAFFIC

Existing Peak Hour Traffic + Development Peak Hour Traffic



AM PEAK HOUR



PM PEAK HOUR

APPENDIX F

NET DELAY ASSESSMENT

Nathan St / Albert Street

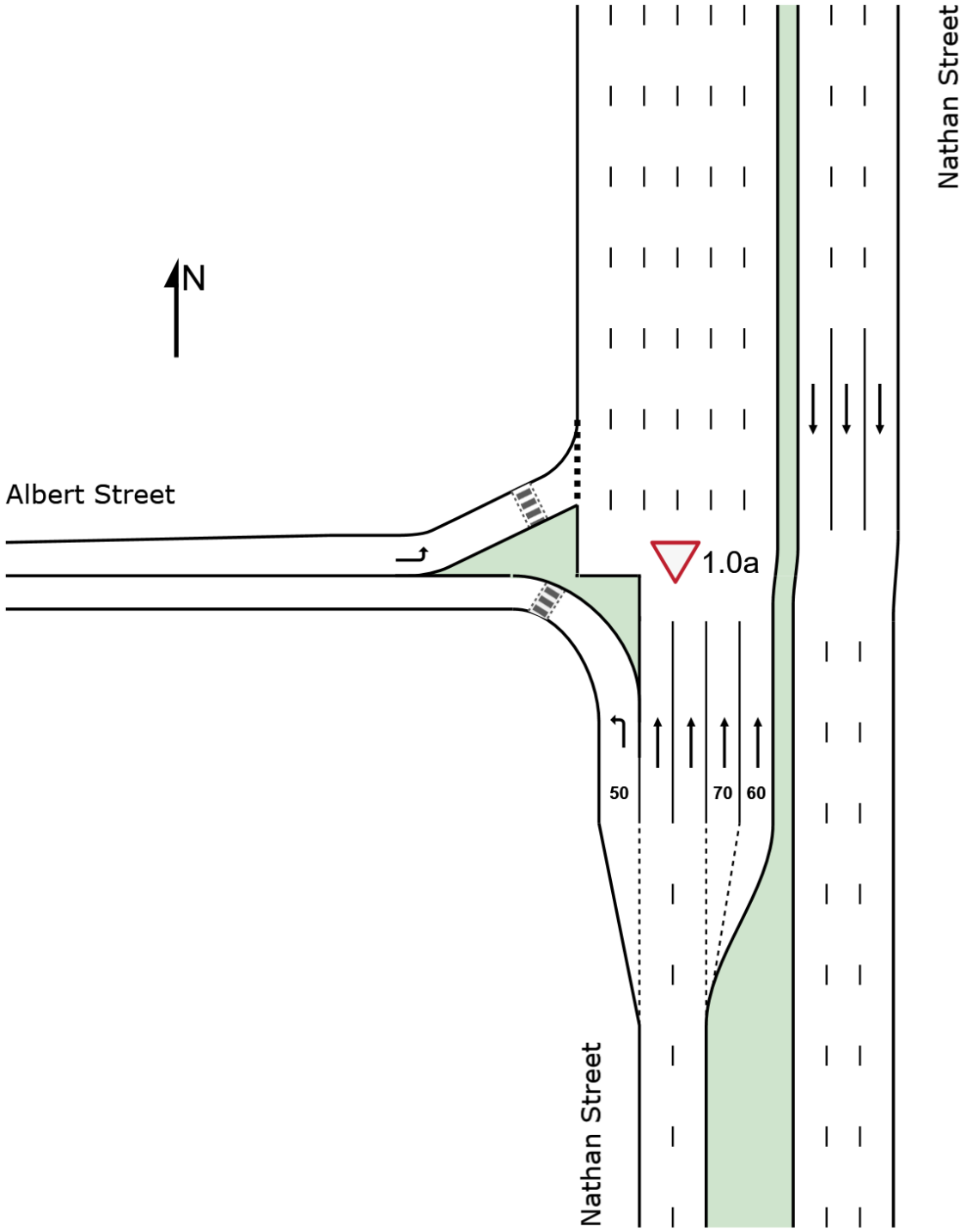
Movement	Without Development							With Development					
	Demand Volume, V		Average Delay, D		Total Delay, BC (= VxD)			Average Delay, D'		Total Delay, WD (=VxD')			Delay Impact
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM + PM	AM Peak	PM Peak	AM Peak	PM Peak	AM + PM	ID(=WD-BC)
South: Nathan Street													
Left	37	46	5.5	5.5	203.5	253	456.5	5.5	5.5	203.5	253	456.5	0
Through	1883	1592	0	0	0	0	0	0	0	0	0	0	0
North: Nathan Street													
Through	1543	1696	0	0	0	0	0	0	0	0	0	0	0
West: Albert Street													
Left	144	48	12.1	9.8	1742.4	470.4	2212.8	12.6	9.9	1814.4	475.2	2289.6	76.8
Total	**3607**	**3382**			**1945.9**	**723.4**	**2669.3**			**2017.9**	**728.2**	**2746.1**	76.8
										103.7%	100.7%	102.9%	✓ 2.9%

SITE LAYOUT

Site: [1.0a] 1.0a Nathan/Albert (AM-base)

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.0a | AM existing

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



MOVEMENT SUMMARY

Site: [1.0a] 1.0a Nathan/Albert (AM-base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.0a | AM existing

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. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Nathan Street															
1	L2	All MCs	37	0.0	37	0.0	0.024	5.5	LOS A	0.1	0.6	0.00	0.53	0.00	39.2
2	T1	All MCs	1883	2.6	1883	2.6	0.522	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1920	2.6	1920	2.6	0.522	0.1	NA	0.1	0.6	0.00	0.01	0.00	59.0
North: Nathan Street															
8	T1	All MCs	1543	4.6	1543	4.6	0.272	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			1543	4.6	1543	4.6	0.272	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
West: Albert Street															
10	L2	All MCs	144	0.0	144	0.0	0.278	12.1	LOS B	1.1	7.6	0.68	0.89	0.79	29.3
Approach			144	0.0	144	0.0	0.278	12.1	LOS B	1.1	7.6	0.68	0.89	0.79	29.3
All Vehicles			3607	3.3	3607	3.3	0.522	0.6	NA	1.1	7.6	0.03	0.04	0.03	56.7

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.

Organisation: PREMISE GROUP SERVICES PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 28 April 2026 9:33:23 PM
Project: C:\12dS\data\12dSynergy\P003620 Affordable Multiple Dwelling_19490\14. Engineering - Traffic\02. SIDRA\P003620-R03-SIDRA10.sipx

LANE SUMMARY

Site: [1.0a] 1.0a Nathan/Albert (AM-base)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.0a | AM existing

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Nathan Street															
Lane 1	37	0.0	37	0.0	1540	0.024	100	5.5	LOS A	0.1	0.6	Short	50	0.0	NA
Lane 2	1002	2.6	1002	2.6	1917	0.522	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 3	361	2.6	361	2.6	1917	0.188	36[7]	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 4	240	2.6	240	2.6	1917	0.125	24[7]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 5	280	2.6	280	2.6	1917	0.146	28[7]	0.0	LOS A	0.0	0.0	Short	60	0.0	NA
Approach	1920	2.6	1920	2.6		0.522		0.1	NA	0.1	0.6				
North: Nathan Street															
Lane 1	514	4.6	514	4.6	1894	0.272	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 2	514	4.6	514	4.6	1894	0.272	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 3	514	4.6	514	4.6	1894	0.272	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Approach	1543	4.6	1543	4.6		0.272		0.0	NA	0.0	0.0				
West: Albert Street															
Lane 1	144	0.0	144	0.0	519	0.278	100	12.1	LOS B	1.1	7.6	Full	110	0.0	0.0
Approach	144	0.0	144	0.0		0.278		12.1	LOS B	1.1	7.6				
All Vehicles	3607	3.3	3607	3.3		0.522		0.6	NA	1.1	7.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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.

7 Lane under-utilisation specified by the user

Approach Lane Flows (veh/h)

South: Nathan Street

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	37	-	37	0.0	1540	0.024	100	0.0	2
Lane 2	-	1002	1002	2.6	1917	0.522	100	NA	NA
Lane 3	-	361	361	2.6	1917	0.188	36[7]	NA	NA
Lane 4	-	240	240	2.6	1917	0.125	24[7]	0.0	3

Lane 5	-	280	280	2.6	1917	0.146	28[7]	0.0	4
Approach	37	1883	1920	2.6		0.522			
North: Nathan Street									
Mov. From N To Exit:	T1 S	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	514	514	4.6		1894	0.272	100	NA	NA
Lane 2	514	514	4.6		1894	0.272	100	NA	NA
Lane 3	514	514	4.6		1894	0.272	100	NA	NA
Approach	1543	1543	4.6			0.272			
West: Albert Street									
Mov. From W To Exit:	L2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	144	144	0.0		519	0.278	100	NA	NA
Approach	144	144	0.0			0.278			
	Total	%HV	Deg.Satn (v/c)						
All Vehicles	3607	3.3	0.522						

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

7 Lane under-utilisation specified by the user

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec	Merge [Veh	Queue Dist] m
There are no Exit Short Lanes for Merge Analysis at this Site.													

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
Lane 4	0.0	0.0	0.0	0.0
Lane 5	0.0	0.0	0.0	0.0
North: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Albert Street				
Lane 1	0.0	0.0	0.0	0.0

MOVEMENT SUMMARY

Site: [1.0p] 1.0p Nathan/Albert (PM-base)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.0p | PM existing

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. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Nathan Street															
1	L2	All MCs	46	0.0	46	0.0	0.030	5.5	LOS A	0.1	0.8	0.00	0.53	0.00	39.2
2	T1	All MCs	1592	1.9	1592	1.9	0.486	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			1638	1.8	1638	1.8	0.486	0.2	NA	0.1	0.8	0.00	0.01	0.00	58.7
North: Nathan Street															
8	T1	All MCs	1696	2.4	1696	2.4	0.294	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			1696	2.4	1696	2.4	0.294	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
West: Albert Street															
10	L2	All MCs	48	0.0	48	0.0	0.079	9.8	LOS A	0.3	1.9	0.56	0.78	0.56	32.0
Approach			48	0.0	48	0.0	0.079	9.8	LOS A	0.3	1.9	0.56	0.78	0.56	32.0
All Vehicles			3382	2.1	3382	2.1	0.486	0.2	NA	0.3	1.9	0.01	0.02	0.01	58.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\12dS\data\12dSynergy\P003620 Affordable Multiple Dwelling_19490\14. Engineering - Traffic\02. SIDRA\P003620-R03-SIDRA10.sipx

LANE SUMMARY

Site: [1.0p] 1.0p Nathan/Albert (PM-base)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.0p | PM existing

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Nathan Street															
Lane 1	46	0.0	46	0.0	1540	0.030	100	5.5	LOS A	0.1	0.8	Short	50	0.0	NA
Lane 2	936	1.9	936	1.9	1927	0.486	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 3	290	1.9	290	1.9	1927	0.151	31[7]	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 4	178	1.9	178	1.9	1927	0.092	19[7]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 5	187	1.9	187	1.9	1927	0.097	20[7]	0.0	LOS A	0.0	0.0	Short	60	0.0	NA
Approach	1638	1.8	1638	1.8		0.486		0.2	NA	0.1	0.8				
North: Nathan Street															
Lane 1	565	2.4	565	2.4	1921	0.294	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 2	565	2.4	565	2.4	1921	0.294	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 3	565	2.4	565	2.4	1921	0.294	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Approach	1696	2.4	1696	2.4		0.294		0.0	NA	0.0	0.0				
West: Albert Street															
Lane 1	48	0.0	48	0.0	612	0.079	100	9.8	LOS A	0.3	1.9	Full	110	0.0	0.0
Approach	48	0.0	48	0.0		0.079		9.8	LOS A	0.3	1.9				
All Vehicles	3382	2.1	3382	2.1		0.486		0.2	NA	0.3	1.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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.

7 Lane under-utilisation specified by the user

Approach Lane Flows (veh/h)

South: Nathan Street

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	46	-	46	0.0	1540	0.030	100	0.0	2
Lane 2	-	936	936	1.9	1927	0.486	100	NA	NA
Lane 3	-	290	290	1.9	1927	0.151	31[7]	NA	NA
Lane 4	-	178	178	1.9	1927	0.092	19[7]	0.0	3

Lane 5	-	187	187	1.9	1927	0.097	20[7]	0.0	4
Approach	46	1592	1638	1.8		0.486			

North: Nathan Street

Mov. From N To Exit:	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	565	565	2.4	1921	0.294	100	NA	NA
Lane 2	565	565	2.4	1921	0.294	100	NA	NA
Lane 3	565	565	2.4	1921	0.294	100	NA	NA
Approach	1696	1696	2.4		0.294			

West: Albert Street

Mov. From W To Exit:	L2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	48	48	0.0	612	0.079	100	NA	NA
Approach	48	48	0.0		0.079			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	3382	2.1	0.486

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

7 Lane under-utilisation specified by the user

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	Merge [Veh	Queue Dist] m

There are no Exit Short Lanes for Merge Analysis at this Site.

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
Lane 4	0.0	0.0	0.0	0.0
Lane 5	0.0	0.0	0.0	0.0
North: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Albert Street				
Lane 1	0.0	0.0	0.0	0.0

MOVEMENT SUMMARY

Site: [1.1a] 1.1a Nathan/Albert (AM-with development)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.2a | AM with exit to Albert Street only

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. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Nathan Street															
1	L2	All MCs	37	0.0	37	0.0	0.024	5.5	LOS A	0.1	0.6	0.00	0.53	0.00	39.2
2	T1	All MCs	1885	2.6	1885	2.6	0.523	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1922	2.6	1922	2.6	0.523	0.1	NA	0.1	0.6	0.00	0.01	0.00	59.0
North: Nathan Street															
8	T1	All MCs	1513	4.6	1513	4.6	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			1513	4.6	1513	4.6	0.266	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
West: Albert Street															
10	L2	All MCs	169	0.0	169	0.0	0.327	12.6	LOS B	1.4	9.5	0.70	0.91	0.86	28.9
Approach			169	0.0	169	0.0	0.327	12.6	LOS B	1.4	9.5	0.70	0.91	0.86	28.9
All Vehicles			3604	3.3	3604	3.3	0.523	0.7	NA	1.4	9.5	0.03	0.05	0.04	56.1

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.

Organisation: PREMISE GROUP SERVICES PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 28 April 2026 9:33:27 PM
Project: C:\12dS\data\12dSynergy\P003620 Affordable Multiple Dwelling_19490\14. Engineering - Traffic\02. SIDRA\P003620-R03-SIDRA10.sipx

LANE SUMMARY

Site: [1.1a] 1.1a Nathan/Albert (AM-with development)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.2a | AM with exit to Albert Street only

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Nathan Street															
Lane 1	37	0.0	37	0.0	1540	0.024	100	5.5	LOS A	0.1	0.6	Short	50	0.0	NA
Lane 2	1003	2.6	1003	2.6	1917	0.523	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 3	361	2.6	361	2.6	1917	0.188	36[7]	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 4	241	2.6	241	2.6	1917	0.126	24[7]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 5	281	2.6	281	2.6	1917	0.146	28[7]	0.0	LOS A	0.0	0.0	Short	60	0.0	NA
Approach	1922	2.6	1922	2.6		0.523		0.1	NA	0.1	0.6				
North: Nathan Street															
Lane 1	504	4.6	504	4.6	1894	0.266	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 2	504	4.6	504	4.6	1894	0.266	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 3	504	4.6	504	4.6	1894	0.266	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Approach	1513	4.6	1513	4.6		0.266		0.0	NA	0.0	0.0				
West: Albert Street															
Lane 1	169	0.0	169	0.0	519	0.327	100	12.6	LOS B	1.4	9.5	Full	110	0.0	0.0
Approach	169	0.0	169	0.0		0.327		12.6	LOS B	1.4	9.5				
All Vehicles	3604	3.3	3604	3.3		0.523		0.7	NA	1.4	9.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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.

7 Lane under-utilisation specified by the user

Approach Lane Flows (veh/h)

South: Nathan Street

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	37	-	37	0.0	1540	0.024	100	0.0	2
Lane 2	-	1003	1003	2.6	1917	0.523	100	NA	NA
Lane 3	-	361	361	2.6	1917	0.188	36[7]	NA	NA
Lane 4	-	241	241	2.6	1917	0.126	24[7]	0.0	3

Lane 5	-	281	281	2.6	1917	0.146	28[7]	0.0	4
Approach	37	1885	1922	2.6		0.523			

North: Nathan Street

Mov. From N To Exit:	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	504	504	4.6	1894	0.266	100	NA	NA
Lane 2	504	504	4.6	1894	0.266	100	NA	NA
Lane 3	504	504	4.6	1894	0.266	100	NA	NA
Approach	1513	1513	4.6		0.266			

West: Albert Street

Mov. From W To Exit:	L2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	169	169	0.0	519	0.327	100	NA	NA
Approach	169	169	0.0		0.327			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	3604	3.3	0.523

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

7 Lane under-utilisation specified by the user

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	Merge [Veh	Queue Dist] m

There are no Exit Short Lanes for Merge Analysis at this Site.

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
Lane 4	0.0	0.0	0.0	0.0
Lane 5	0.0	0.0	0.0	0.0
North: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Albert Street				
Lane 1	0.0	0.0	0.0	0.0

MOVEMENT SUMMARY

Site: [1.1p] 1.1p Nathan/Albert (PM-with development)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.2p | PM with Albert Street exit only

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. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Nathan Street															
1	L2	All MCs	46	0.0	46	0.0	0.030	5.5	LOS A	0.1	0.8	0.00	0.53	0.00	39.2
2	T1	All MCs	1600	1.9	1600	1.9	0.488	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1646	1.8	1646	1.8	0.488	0.2	NA	0.1	0.8	0.00	0.01	0.00	58.7
North: Nathan Street															
8	T1	All MCs	1764	2.4	1764	2.4	0.306	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			1764	2.4	1764	2.4	0.306	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
West: Albert Street															
10	L2	All MCs	63	0.0	63	0.0	0.104	9.9	LOS A	0.4	2.5	0.57	0.80	0.57	31.9
Approach			63	0.0	63	0.0	0.104	9.9	LOS A	0.4	2.5	0.57	0.80	0.57	31.9
All Vehicles			3474	2.1	3474	2.1	0.488	0.3	NA	0.4	2.5	0.01	0.02	0.01	58.2

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.

Organisation: PREMISE GROUP SERVICES PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 28 April 2026 9:33:27 PM
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LANE SUMMARY

Site: [1.1p] 1.1p Nathan/Albert (PM-with development)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Nathan Street / Alfred Street
Existing left-in-left-out intersection
Site Category: Existing Design
Give-Way (Two-Way)
Site Scenario: 1.2p | PM with Albert Street exit only

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Nathan Street															
Lane 1	46	0.0	46	0.0	1540	0.030	100	5.5	LOS A	0.1	0.8	Short	50	0.0	NA
Lane 2	941	1.9	941	1.9	1927	0.488	100	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 3	292	1.9	292	1.9	1927	0.151	31[7]	0.0	LOS A	0.0	0.0	Full	90	0.0	0.0
Lane 4	179	1.9	179	1.9	1927	0.093	19[7]	0.0	LOS A	0.0	0.0	Short	70	0.0	NA
Lane 5	188	1.9	188	1.9	1927	0.098	20[7]	0.0	LOS A	0.0	0.0	Short	60	0.0	NA
Approach	1646	1.8	1646	1.8		0.488		0.2	NA	0.1	0.8				
North: Nathan Street															
Lane 1	588	2.4	588	2.4	1921	0.306	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 2	588	2.4	588	2.4	1921	0.306	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Lane 3	588	2.4	588	2.4	1921	0.306	100	0.0	LOS A	0.0	0.0	Full	95	0.0	0.0
Approach	1764	2.4	1764	2.4		0.306		0.0	NA	0.0	0.0				
West: Albert Street															
Lane 1	63	0.0	63	0.0	608	0.104	100	9.9	LOS A	0.4	2.5	Full	110	0.0	0.0
Approach	63	0.0	63	0.0		0.104		9.9	LOS A	0.4	2.5				
All Vehicles	3474	2.1	3474	2.1		0.488		0.3	NA	0.4	2.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
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.

7 Lane under-utilisation specified by the user

Approach Lane Flows (veh/h)

South: Nathan Street

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	46	-	46	0.0	1540	0.030	100	0.0	2
Lane 2	-	941	941	1.9	1927	0.488	100	NA	NA
Lane 3	-	292	292	1.9	1927	0.151	31[7]	NA	NA
Lane 4	-	179	179	1.9	1927	0.093	19[7]	0.0	3

Lane 5	-	188	188	1.9	1927	0.098	20[7]	0.0	4
Approach	46	1600	1646	1.8		0.488			

North: Nathan Street

Mov. From N To Exit:	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	588	588	2.4	1921	0.306	100	NA	NA
Lane 2	588	588	2.4	1921	0.306	100	NA	NA
Lane 3	588	588	2.4	1921	0.306	100	NA	NA
Approach	1764	1764	2.4		0.306			

West: Albert Street

Mov. From W To Exit:	L2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	63	63	0.0	608	0.104	100	NA	NA
Approach	63	63	0.0		0.104			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	3474	2.1	0.488

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

7 Lane under-utilisation specified by the user

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	Merge [Veh	Queue Dist] m

There are no Exit Short Lanes for Merge Analysis at this Site.

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
Lane 4	0.0	0.0	0.0	0.0
Lane 5	0.0	0.0	0.0	0.0
North: Nathan Street				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Albert Street				
Lane 1	0.0	0.0	0.0	0.0