

Prepared by:

DA: 2020/1388



Prepared for:

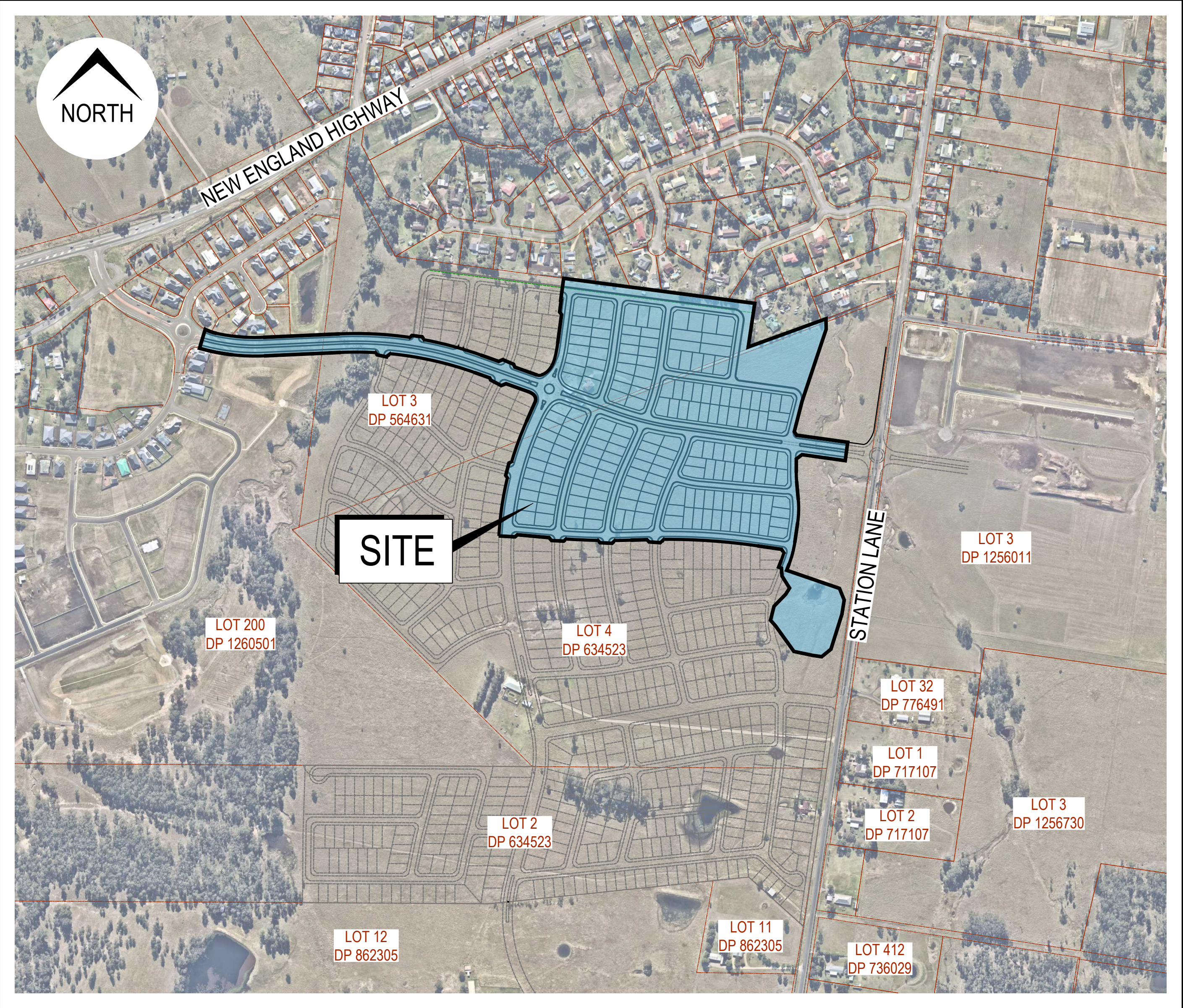


LGA:



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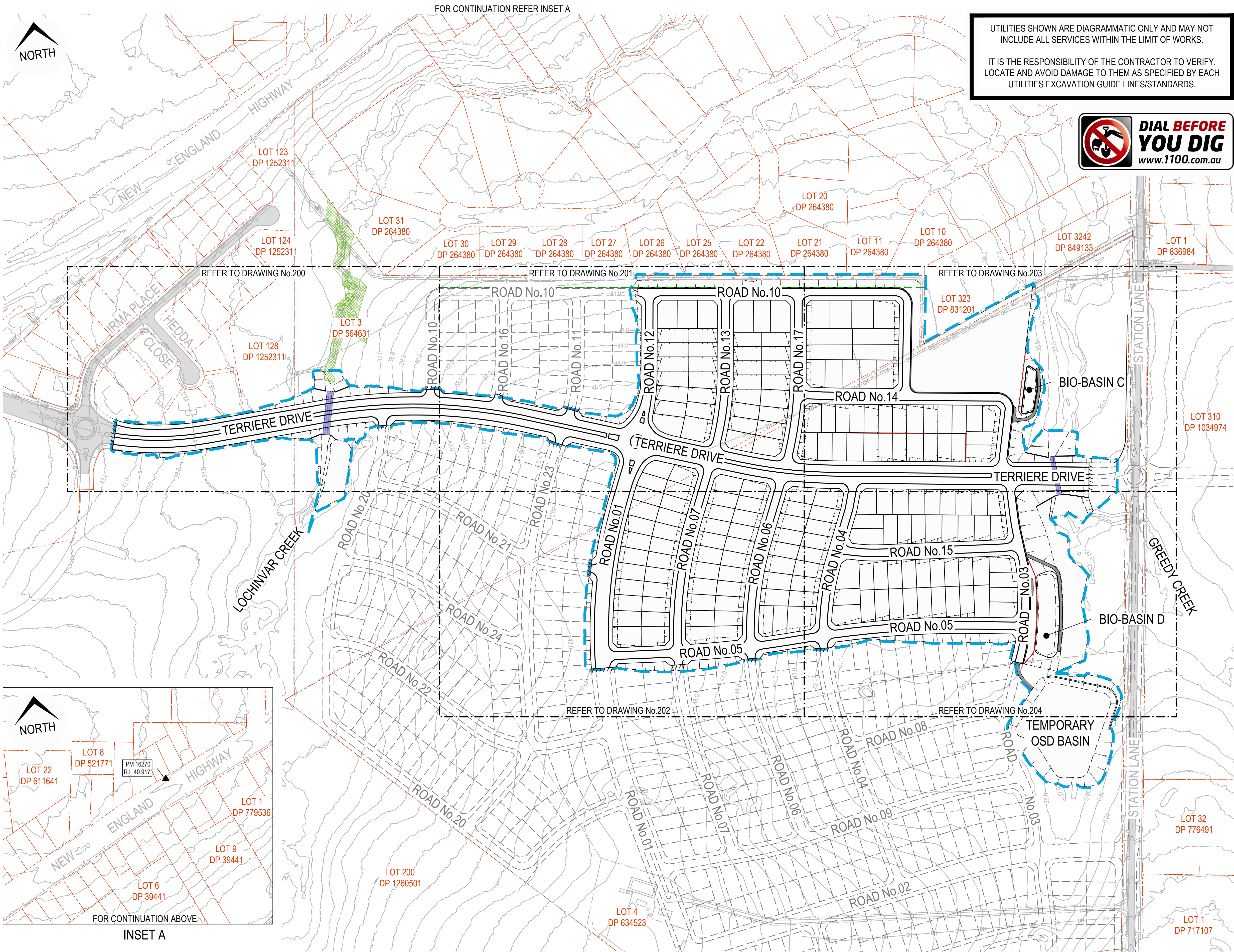


SITE / LOCATION (Image courtesy of Nearmap 13.06.2021)

LOT 3, D.P. 564631
LOT 2 & 4, D.P. 634523

STAGE 1, 51, 134 & 146 STATION LANE, LOCHINVAR ROAD & DRAINAGE DESIGN

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION



LEGEND			
UTILITY -	EXISTING	PROPOSED	FUTURE
	E G S W T NBN OF	E G S W T NBN OF	E G S W T NBN OF
CONTOUR LINE & LABEL	---	---	---
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
APPROXIMATE LIMIT OF WORKS OR STAGE	---	---	---
BUILDING / ENVELOPE	---	---	---
ROAD, NUMBER, CONTROL LINE, CHAINAGE & CHAINAGE MARK	ROAD #	ROAD #	ROAD #
COUNCIL STANDARD KERB & GUTTER	K&G	K&G	K&G
EDGE OF BITUMEN	EOB	EOB	EOB
INDICATIVE DRIVEWAY LOCATION WITH VEHICULAR CROSSING	---	---	---
COUNCIL STANDARD CONCRETE FOOTPATH & KERB RAMP	---	---	---
STORMWATER DRAINAGE PIPE AND STRUCTURE	---	---	---
STORMWATER DRAINAGE PIPE AND STUB	---	---	---
CULVERT CROSSING	---	---	---
TEMPORARY STORMWATER DRAINAGE PIPE	---	---	---
EASEMENT (REFER LEGEND)	(A) (B) (C)	(A) (B) (C)	(A) (B) (C)
SUBSOIL DRAIN	SS	SS	SS
DIVERSION SWALE	---	---	---
RETAINING WALL	---	---	---
BATTER	---	---	---
TREE - TO BE RETAINED OR TO BE REMOVED	---	---	---
VEGETATION - TO BE RETAINED OR TO BE REMOVED	---	---	---
EXISTING ROAD PAVEMENT	---	---	---
2ND ORDER STREAM VRZ	---	---	---
3RD ORDER STREAM VRZ	---	---	---
7.5m MIN. (VARIES) VEGETATED BUFFER ZONE	---	---	---

- ### GENERAL NOTES
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH MAITLAND CITY COUNCIL'S WORKS SPECIFICATION CIVIL (CURRENT EDITION) AND/OR AS DIRECTED BY THEIR REPRESENTATIVE.
 - THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST WHERE NECESSARY.
 - COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL.
 - DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS. CLARIFICATION OF DIMENSIONS SHALL BE SOUGHT FROM THE SUPERINTENDENT OR REFERRED TO THE DESIGNER.
 - ALL NEW WORK IS TO MAKE A SMOOTH JUNCTION WITH THE EXISTING CONDITIONS.
- SURVEY PROVIDED BY DE WITT CONSULTING: (DATED 21/01/2020)
COORDINATES: M.G.A GDA94
COORDINATES ORIGIN: P.M. 16270
DATUM: A.H.D.
LEVELS ORIGIN: R.L. 40.917

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C B A						PZ/AP CS MS						JM MP MP						09/07/2021 17/11/2020 04/11/2020						ISSUED FOR DEVELOPMENT APPLICATION ISSUED FOR DEVELOPMENT APPLICATION ISSUED FOR DEVELOPMENT APPLICATION						Revision Description					
Rev						Drawn						Design						Date						Revision						Description					
1						A						MS						04/11/2020						1						ISSUED FOR DEVELOPMENT APPLICATION					

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SCALE 1:4000 (A3)

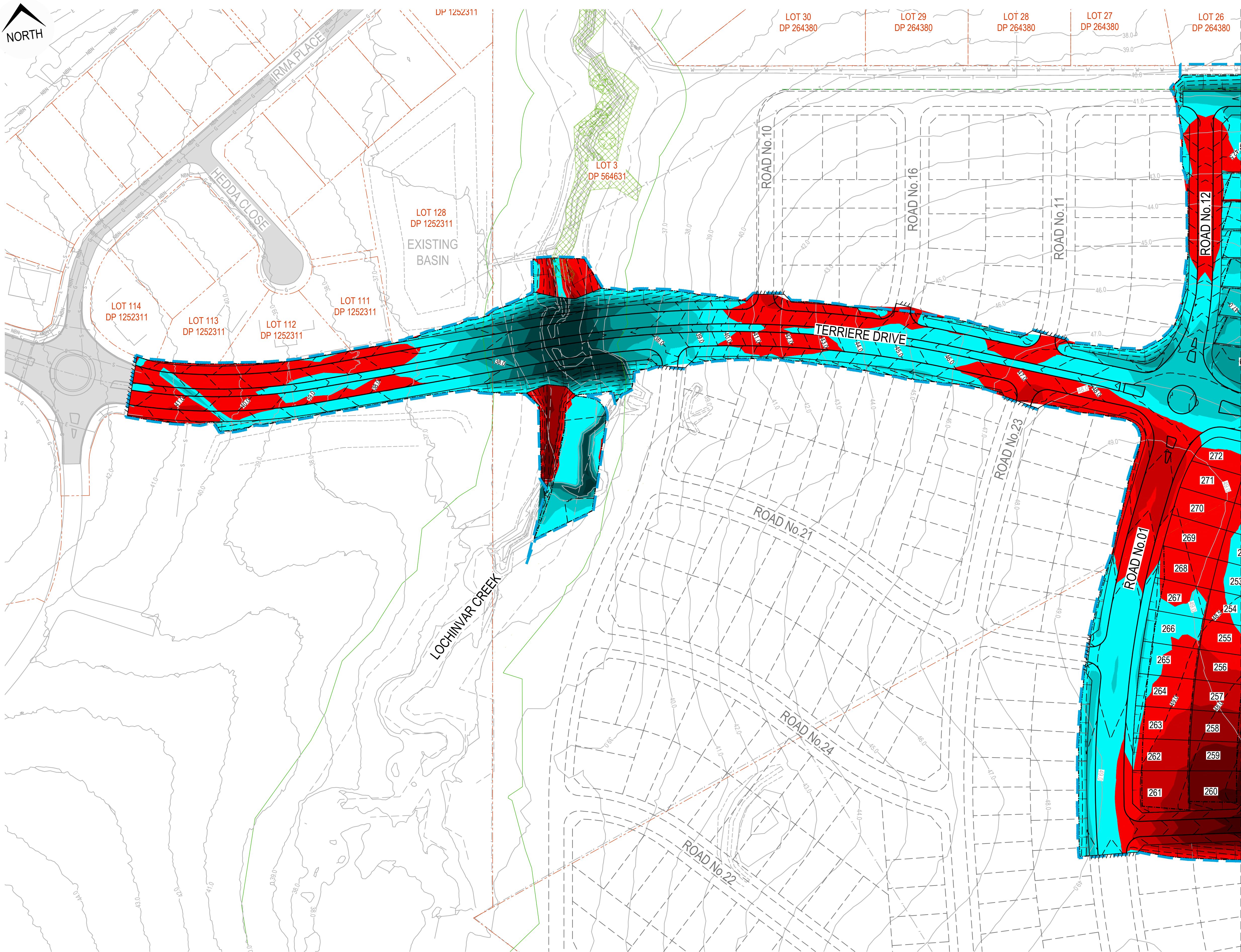
For:
The Bathla Group

By:
Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
**STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

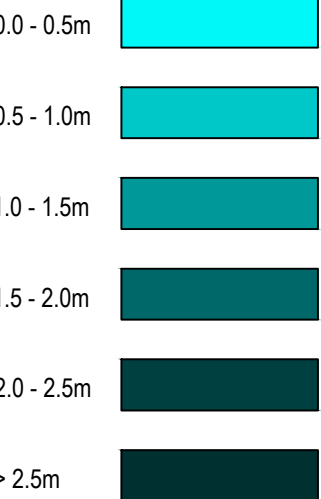
Title:
**GENERAL LAYOUT PLAN,
NOTES & LEGEND**

Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	001	C

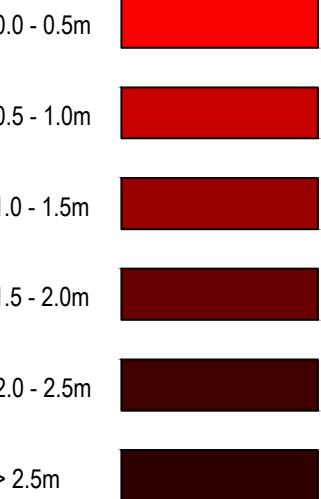


LEGEND

APPROXIMATE EXTENT OF FILL



APPROXIMATE EXTENT OF CUT



UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

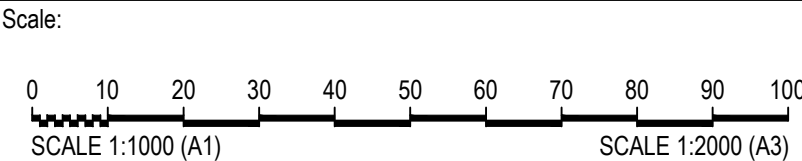


FOR CONTINUATION REFER TO DRAWING No.005

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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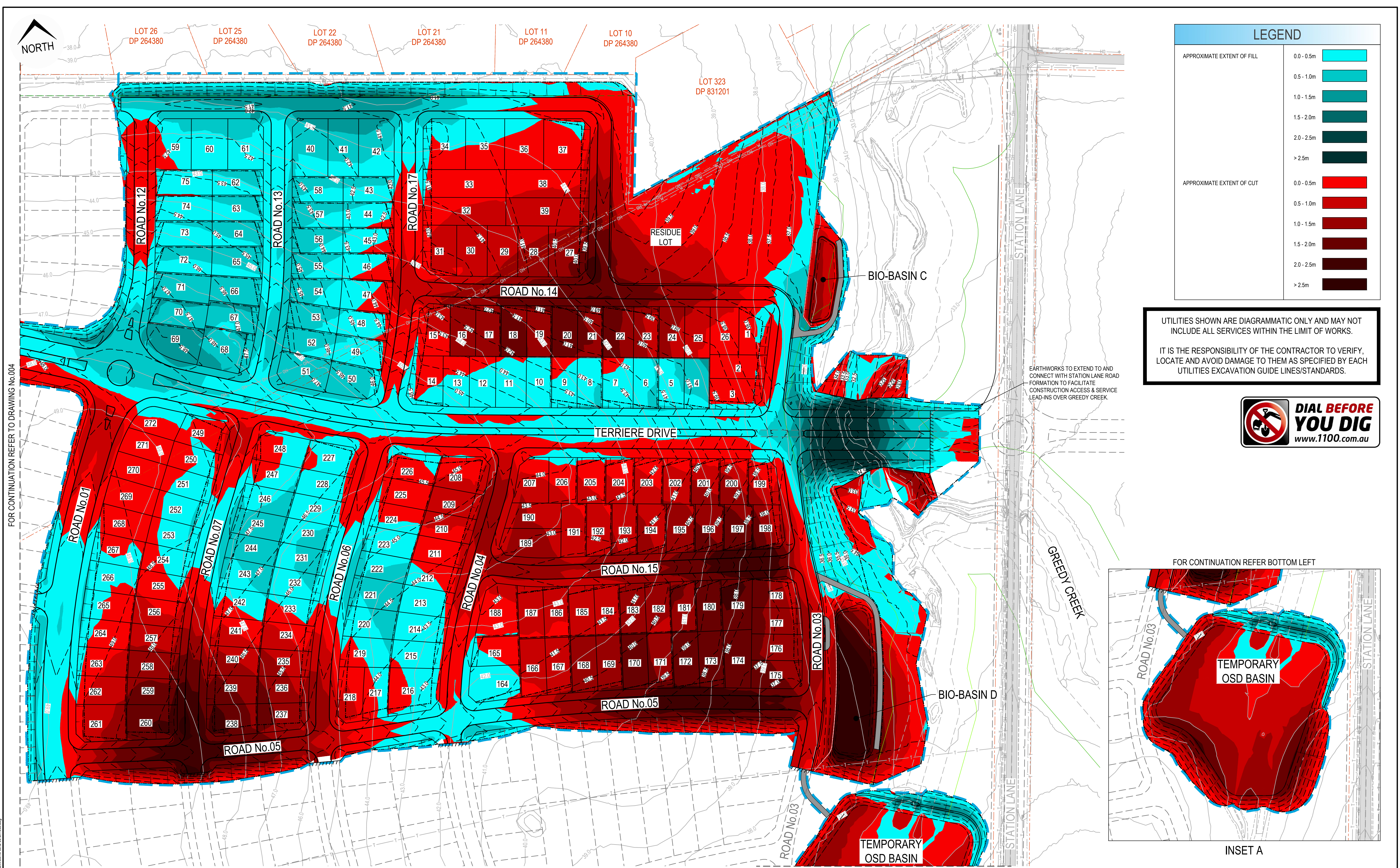


For: **Orion Consulting**
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By: **Orion Consulting**
SUSTAINABLE CORPORATION ISO 9001
JAS-ANZ REGISTERED

Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

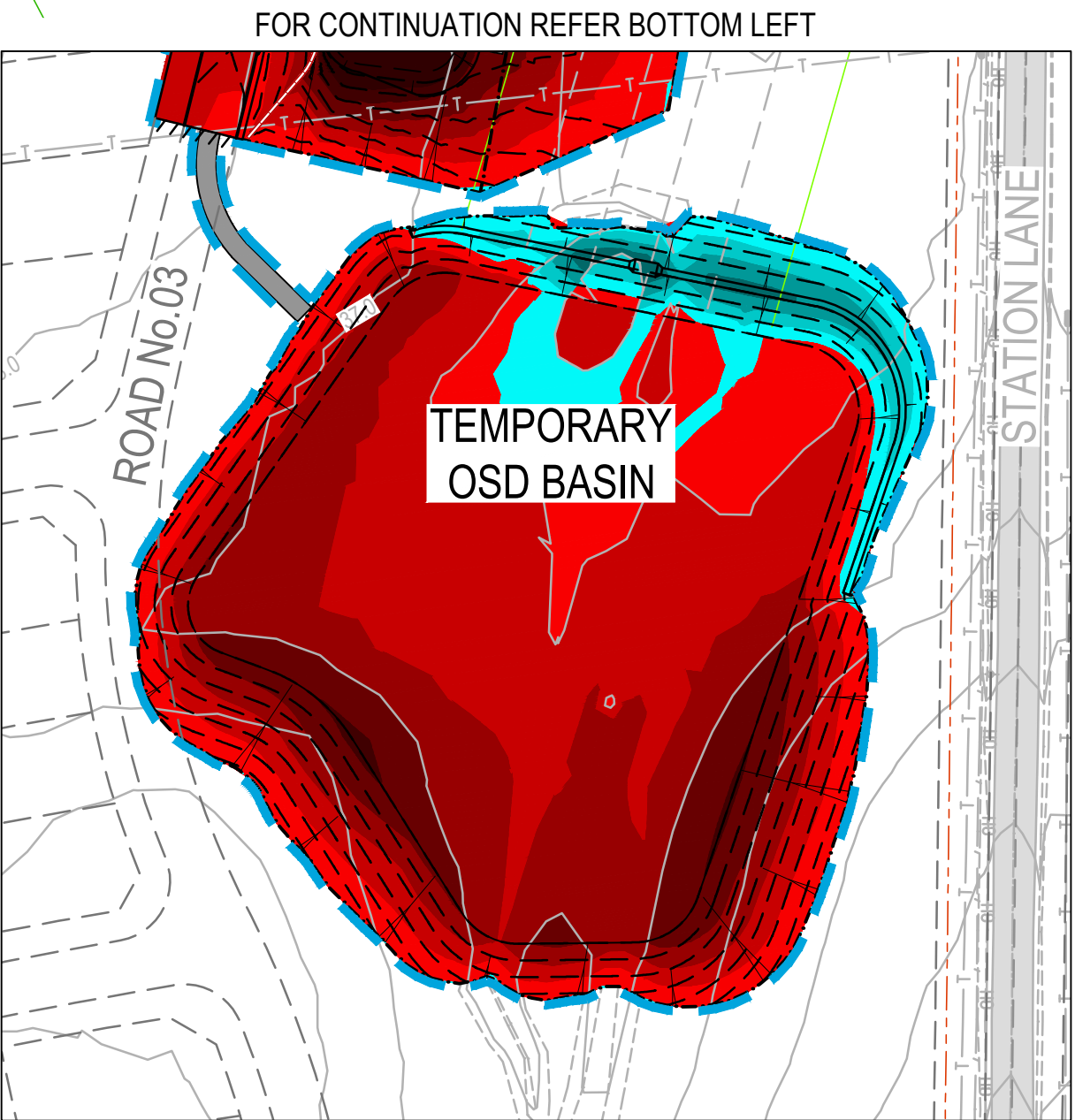
Title: SITE REGRADING PLAN SHEET 01 OF 02				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	004	C



LEGEND	
APPROXIMATE EXTENT OF FILL	0.0 - 0.5m
	0.5 - 1.0m
	1.0 - 1.5m
	1.5 - 2.0m
	2.0 - 2.5m
	> 2.5m
APPROXIMATE EXTENT OF CUT	0.0 - 0.5m
	0.5 - 1.0m
	1.0 - 1.5m
	1.5 - 2.0m
	2.0 - 2.5m
	> 2.5m

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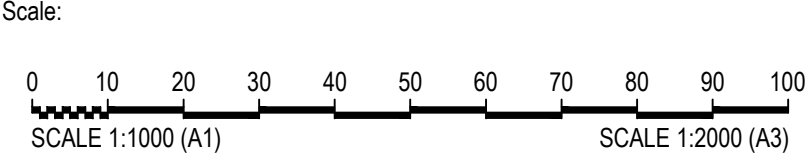
FOR CONTINUATION REFER TO DRAWING No.004

FOR CONTINUATION REFER INSET A

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: SITE REGRADING PLAN SHEET 02 OF 02				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 005	Revision C



LOT 29
DP 264380

LOT 28
DP 264380

LOT 27
DP 264380

LOT 26
DP 264380

LOT 25
DP 264380

LOT 22
DP 264380

LOT 21
DP 264380

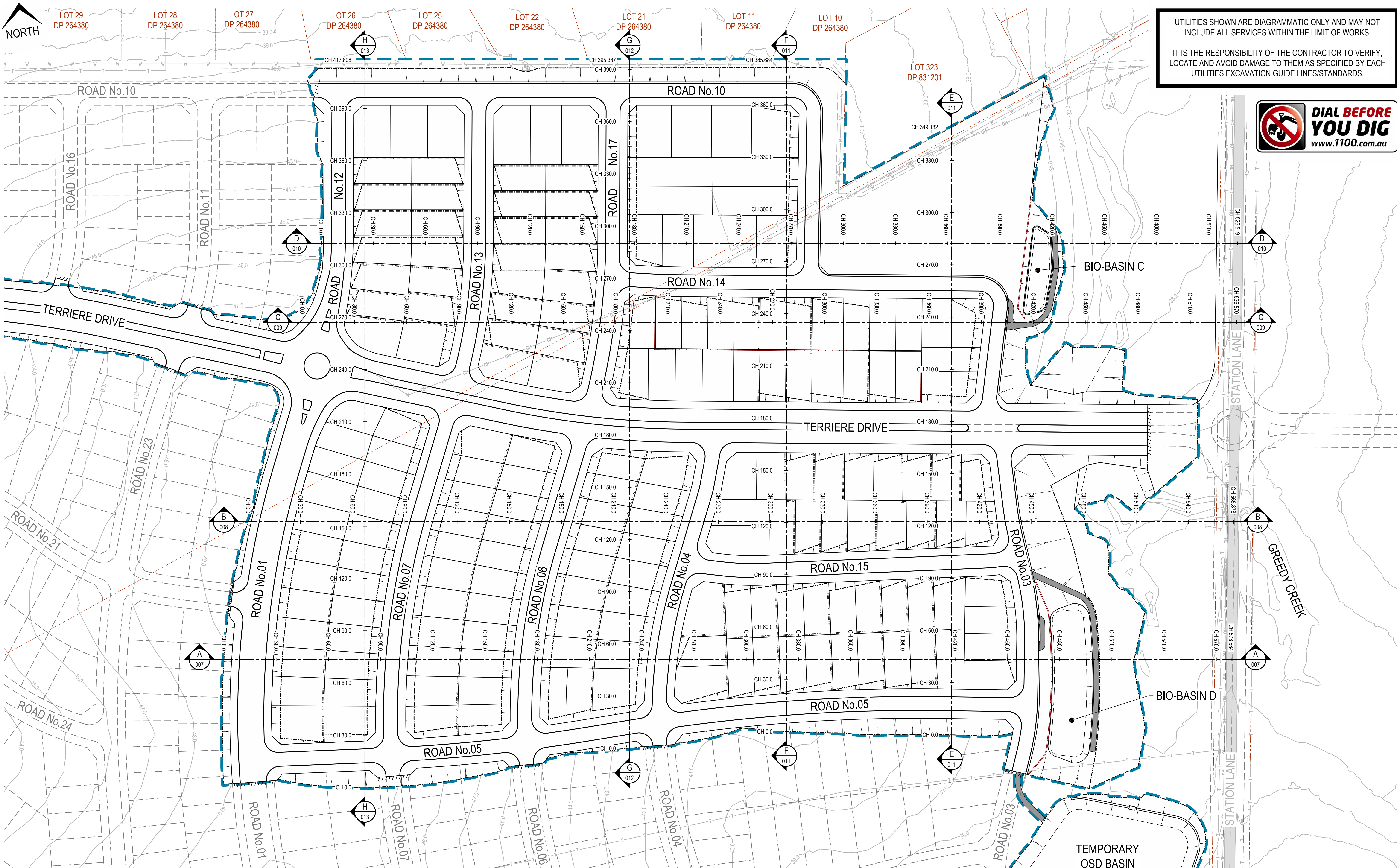
LOT 11
DP 264380

LOT 10
DP 264380

LOT 323
DP 831201

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UTILITIES EXCAVATION GUIDE LINES/STANDARDS.



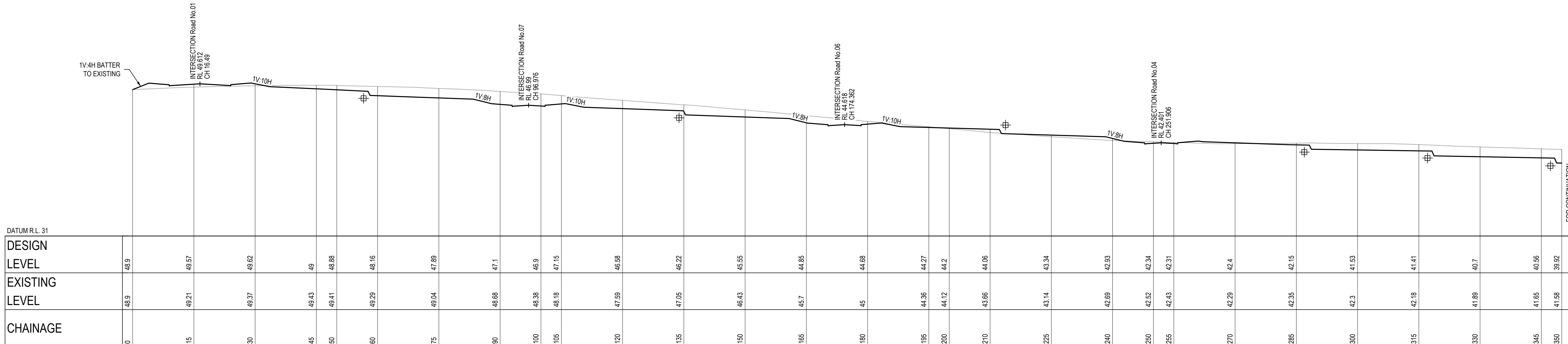
TEMPORARY
OSD BASIN

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C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION												
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION												
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION												
Rev	Drawn	Design	Appd.	Date	Revision Description												

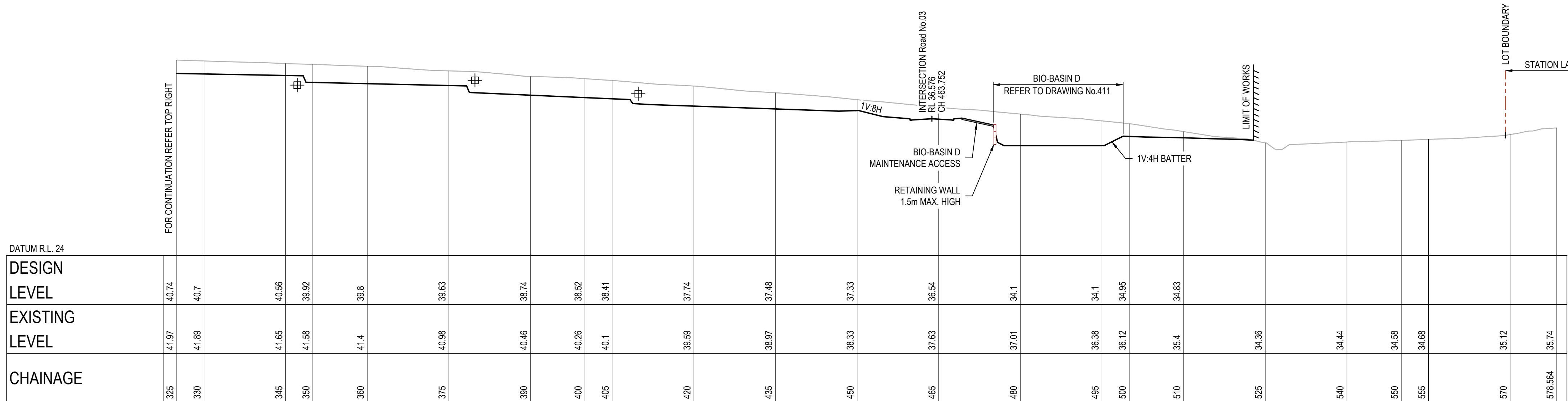
LEGEND

FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No.500	



SITE SECTION A
006

SCALE 1:500 (H)
SCALE 1:250 (V)



SITE SECTION A
006

SCALE 1:500 (H)
SCALE 1:250 (V)

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SITE REGRADING SECTIONS

SHEET 01 OF 07

Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	007	C

C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION	
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
Rev.	Drawn	Design	Appr'd	Date	Revision Description	

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Scale:

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SCALE 1:500 (A1) SCALE 1:1000 (A3)

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)



The **Bathla**
Group

By:  **Orion Consulting**

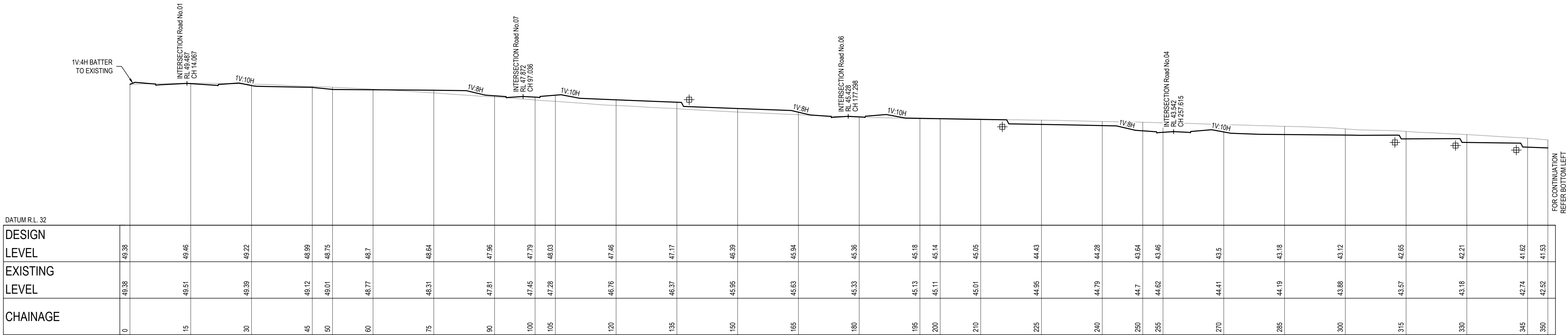
 WWW.JAS-ANZ.ORG/REGISTER

APM/C/ 604.060.981-PO Rev:2016 DAULI KHAMLIH C.NOW/2153 T/ (01) 8660.9035 E/orionconsulting.com.au

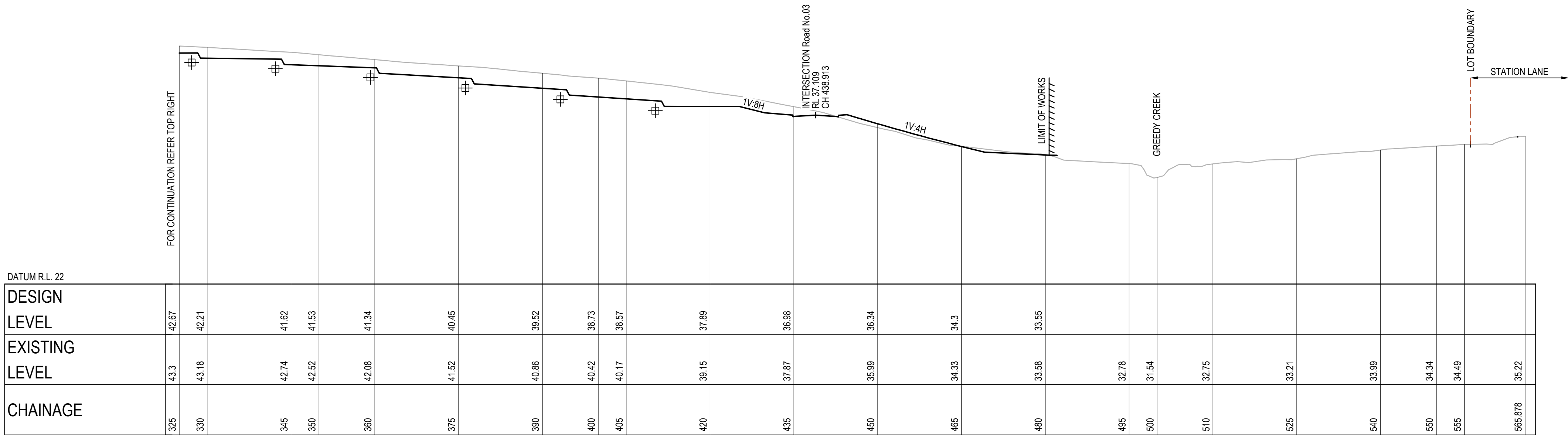
Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No.500	



SITE SECTION B 006
SCALE 1:500 (H)
SCALE 1:250 (V)

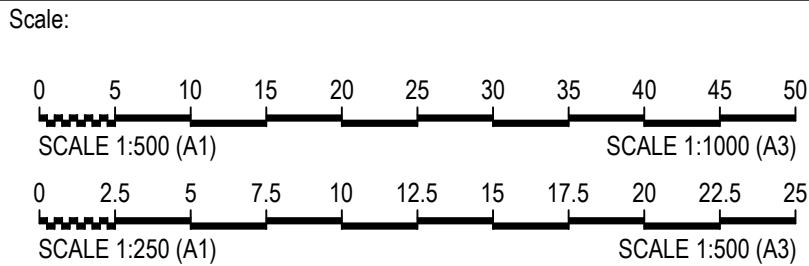


SITE SECTION B 006
SCALE 1:500 (H)
SCALE 1:250 (V)

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C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
Rev	Drawn	Design	Appd.	Date	Revision Description

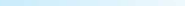
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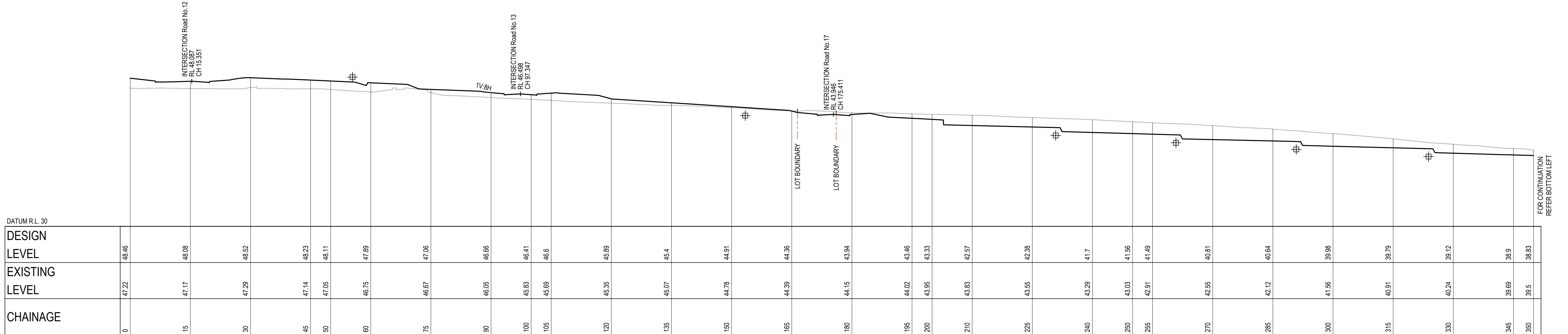


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Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

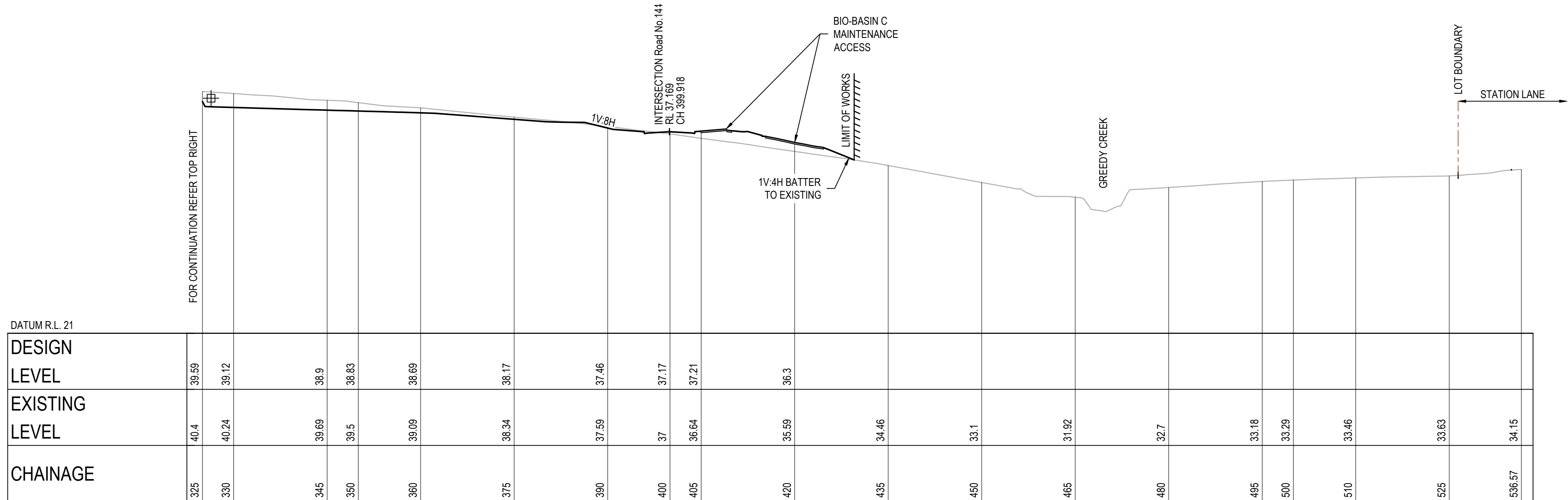
Title: SITE REGRADING SECTIONS SHEET 02 OF 07				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 008	Revision C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No. 500	



SITE SECTION C
006

SCALE 1:500 (H)
SCALE 1:250 (V)

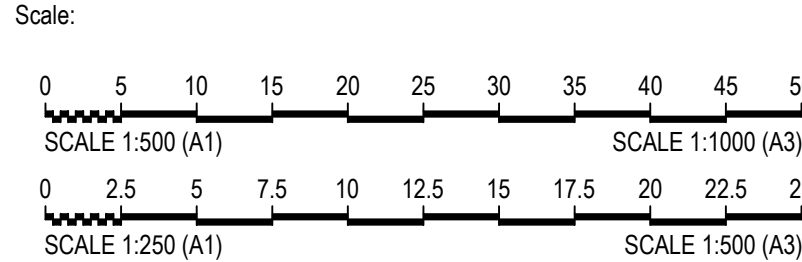


SITE SECTION C
006

SCALE 1:500 (H)
SCALE 1:250 (V)

Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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For:



The **Bathla**
Group

By:  **Orion Consulting**

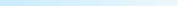
 

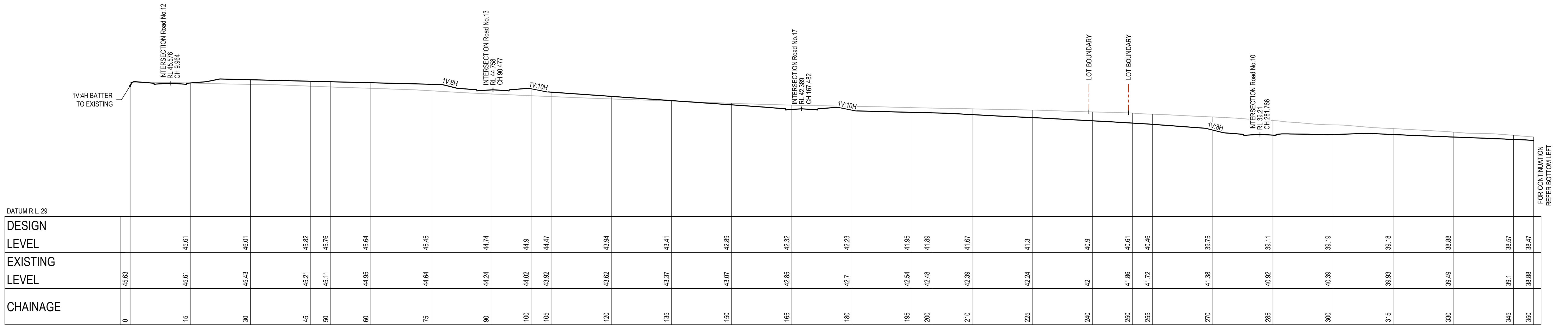
ABN: 62 604 069 981 PO Box: 7936, BAULKHAM HILLS NSW 2153 T: (02) 8660 0035 E: info@orionconsulting.com.au

Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: SITE REGRADING SECTIONS
SHEET 03 OF 07

Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	009	C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No. 500	



SITE SECTION D
006

SCALE 1:500 (H)
SCALE 1:250 (V)



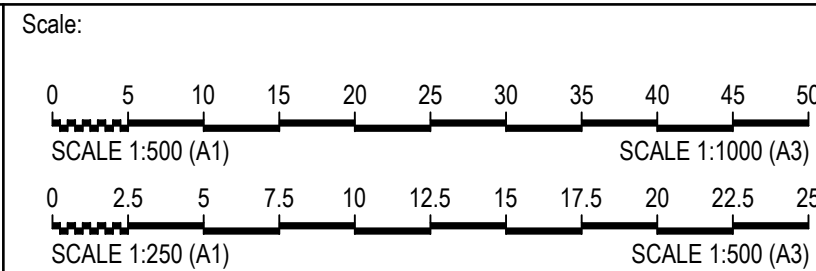
ISSUED FOR **DEVELOPMENT APPLICATION**
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Title:				
SITE REGRADING SECTIONS				
SHEET 04 OF 07				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	010	C

Flotted:---- File Name:C:\125\data\ORION-SYN01\03-DA Stage 1 DA_20359\DWGS\Xref\19-0042-03-DA-D-TITLEBLOCK.dwg

C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION	
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
Rev	Drawn	Design	Appd.	Date	Revision Description	

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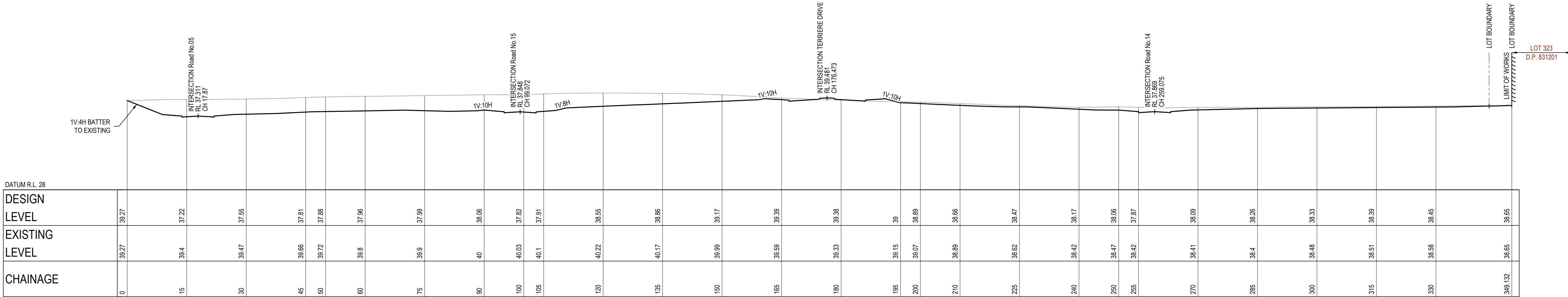
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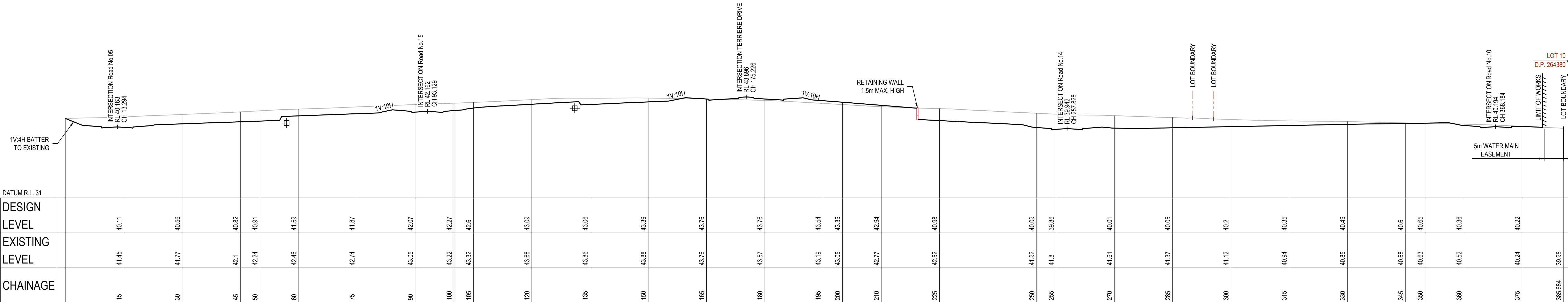
ABN: 62 604 068 981 PO Box: 7936, BAULKHAM HILLS NSW 2153 T: (02) 8660 0035 E: info@orionconsulting.com.au

Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No.500	



SITE SECTION E
SCALE 1:500 (H)
SCALE 1:250 (V)



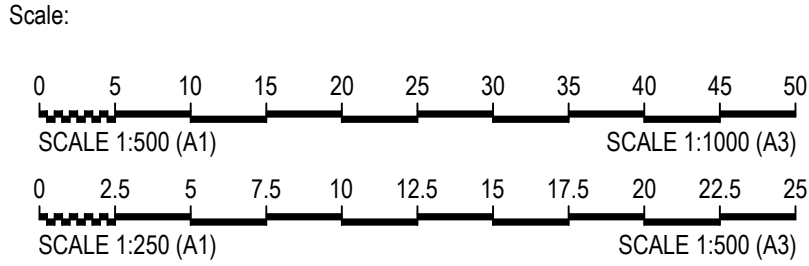
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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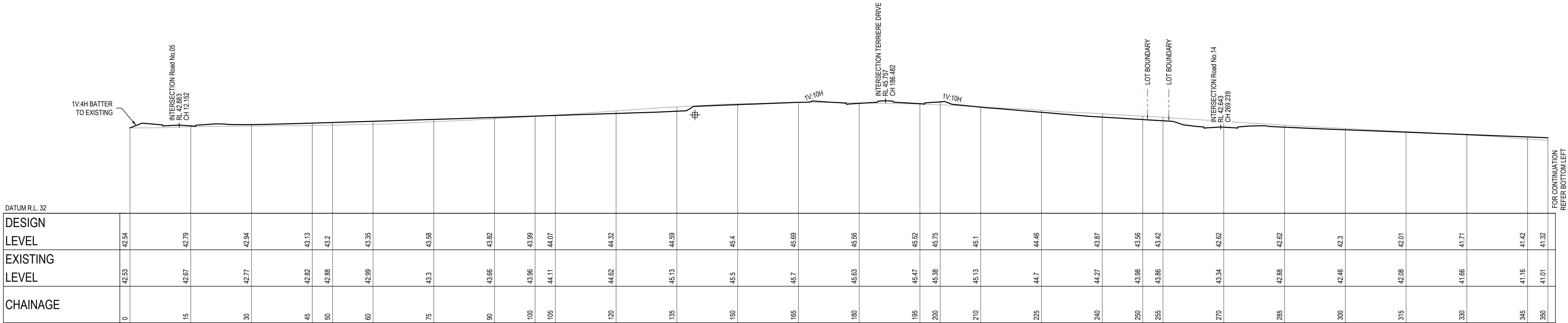
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ISO 9001
www.jas-anz.orionregister

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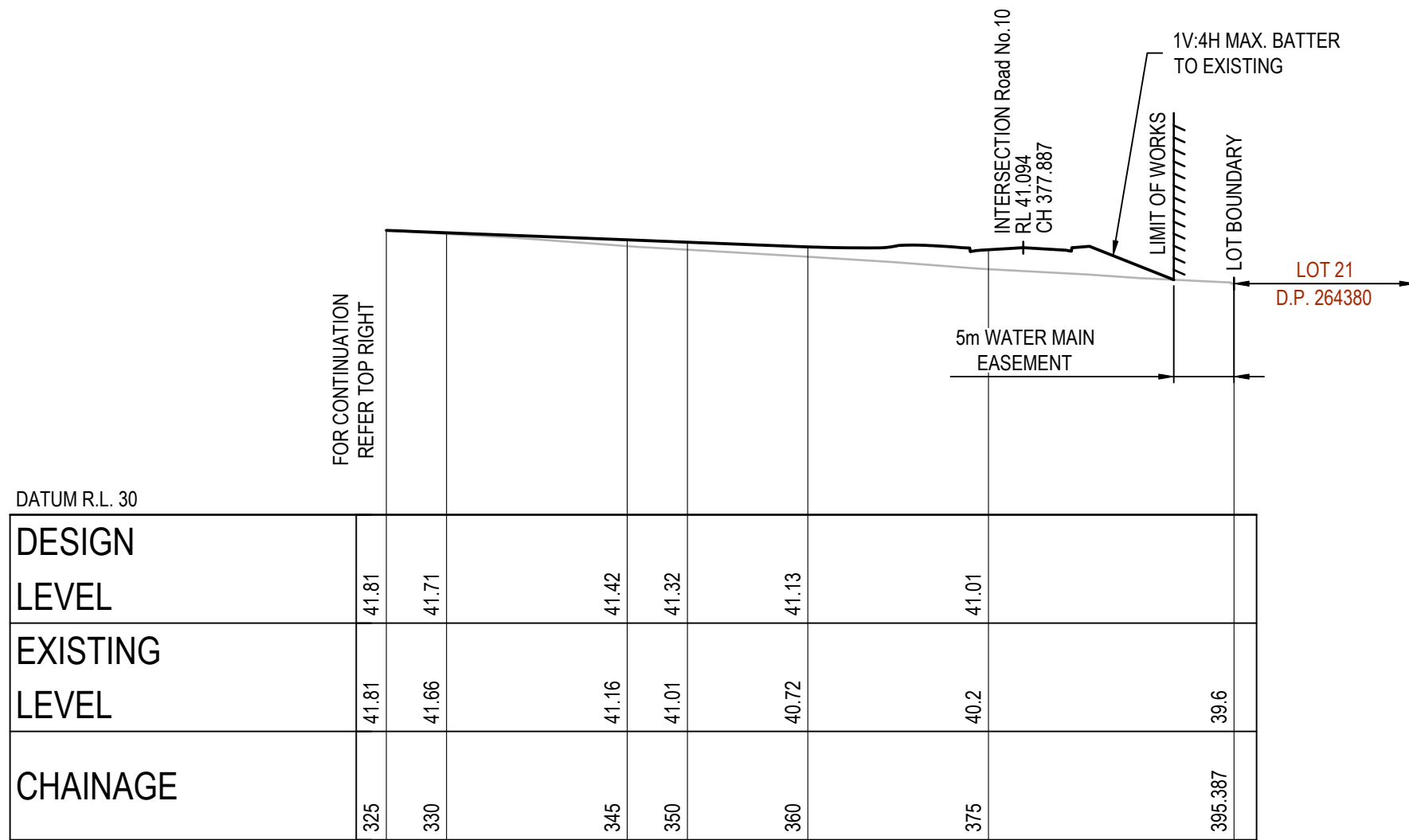
STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

SITE REGRADING SECTIONS SHEET 05 OF 07				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 011	Revision C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No.500	



SITE SECTION G
SCALE 1:500 (H)
SCALE 1:250 (V)

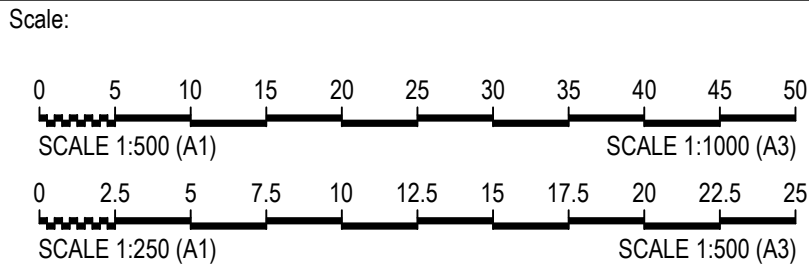


SITE SECTION G
SCALE 1:500 (H)
SCALE 1:250 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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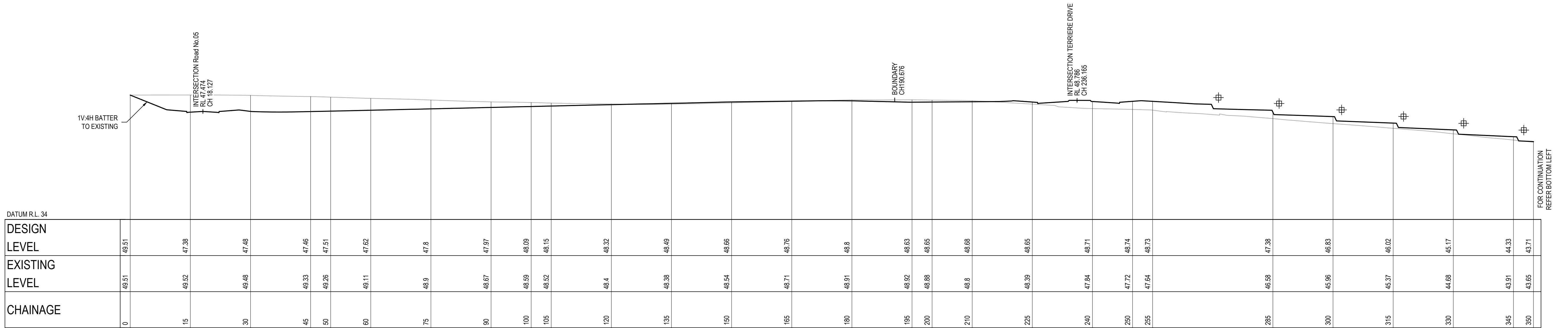
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Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: SITE REGRADING SECTIONS SHEET 06 OF 07				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 012	Revision C

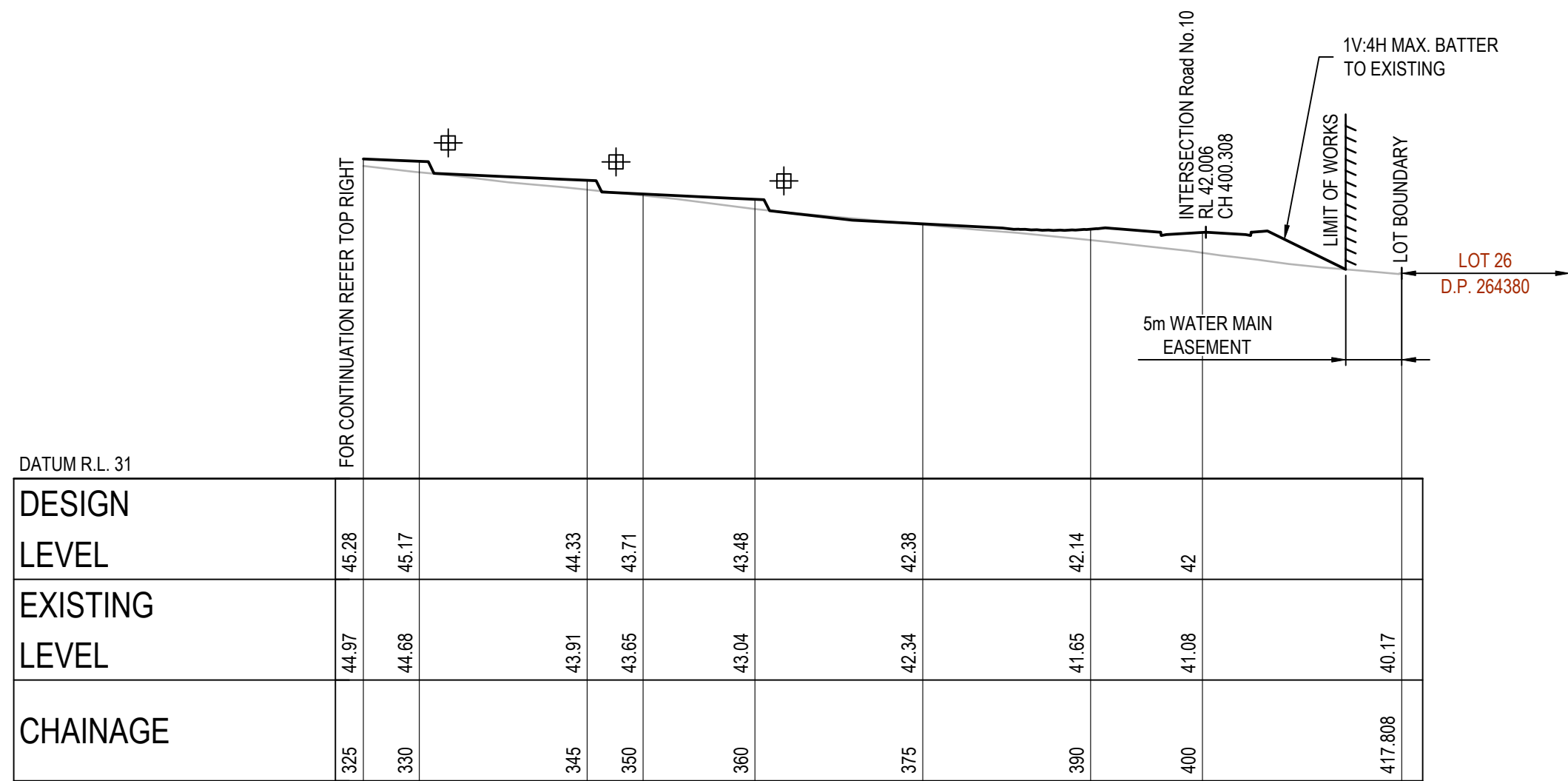
LEGEND

FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
EXISTING LOT BOUNDARY	
MAX 0.5m HIGH 1V:1H BATTER REFER TO DETAIL ON DWG No. 500	



SITE SECTION

SCALE 1:500 (H)
SCALE 1:250 (V)

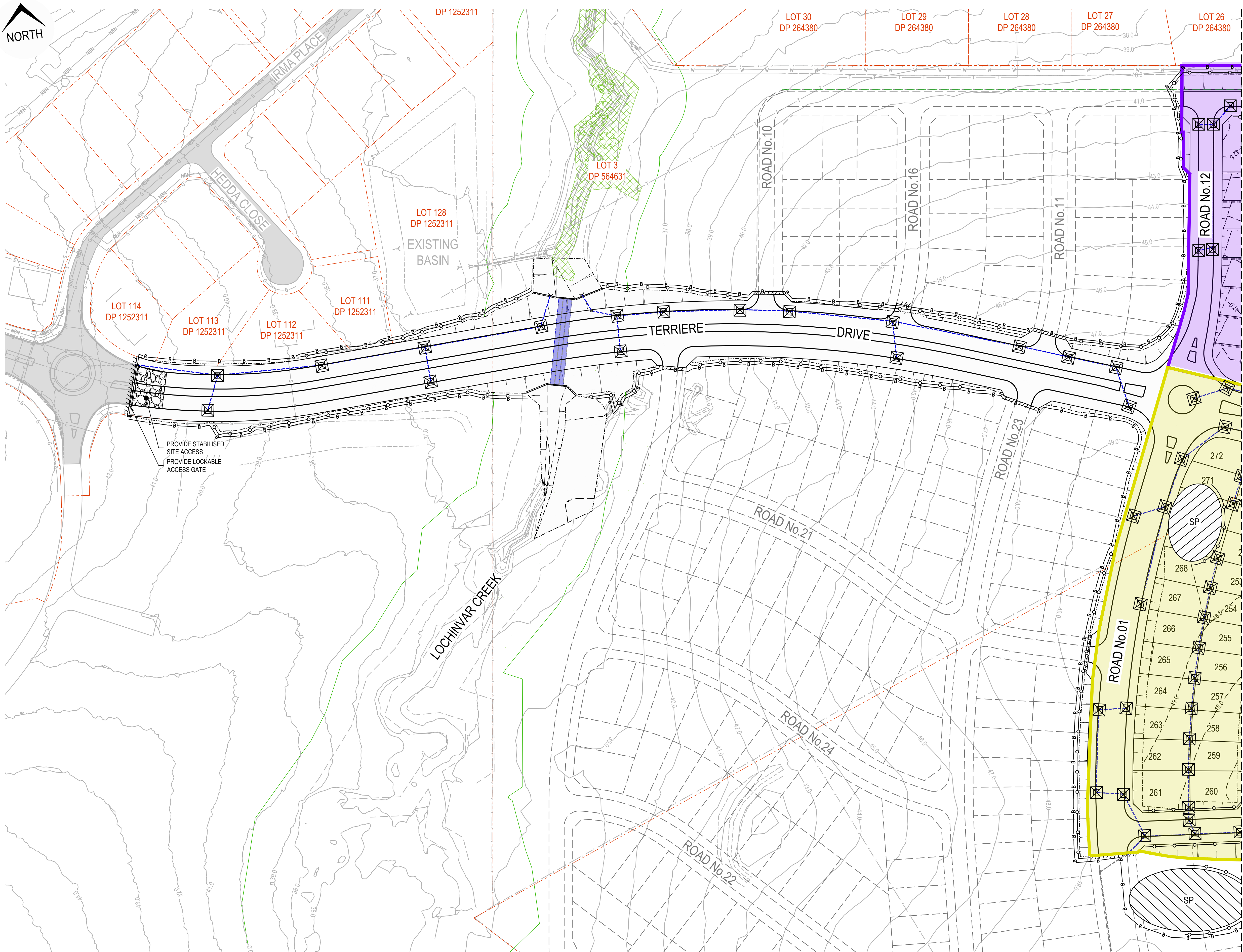


SITE SECTION

SCALE 1:500 (H)
SCALE 1:250 (V)

H
006

[illegible]



LEGEND

CONTOURS	
STABILISED SITE ACCESS	
POSSIBLE STOCKPILE LOCATION	
SITE SECURITY FENCE	
SEDIMENT FENCE	
CATCH DRAIN / DIVERSION SWALE	
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	
STRAW / HAY BALE FILTER	
DENOTES AREA DRAINING TOWARDS TEMPORARY SEDIMENT BASIN - CATCHMENT C	
DENOTES AREA DRAINING TOWARDS TEMPORARY SEDIMENT BASIN - CATCHMENT D	

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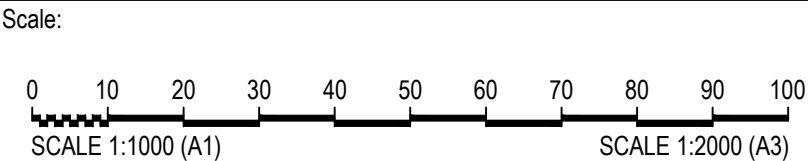


FOR CONTINUATION REFER TO DRAWING No. 101

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Rev	Drawn	Design	Appd.	Date	Revision Description
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B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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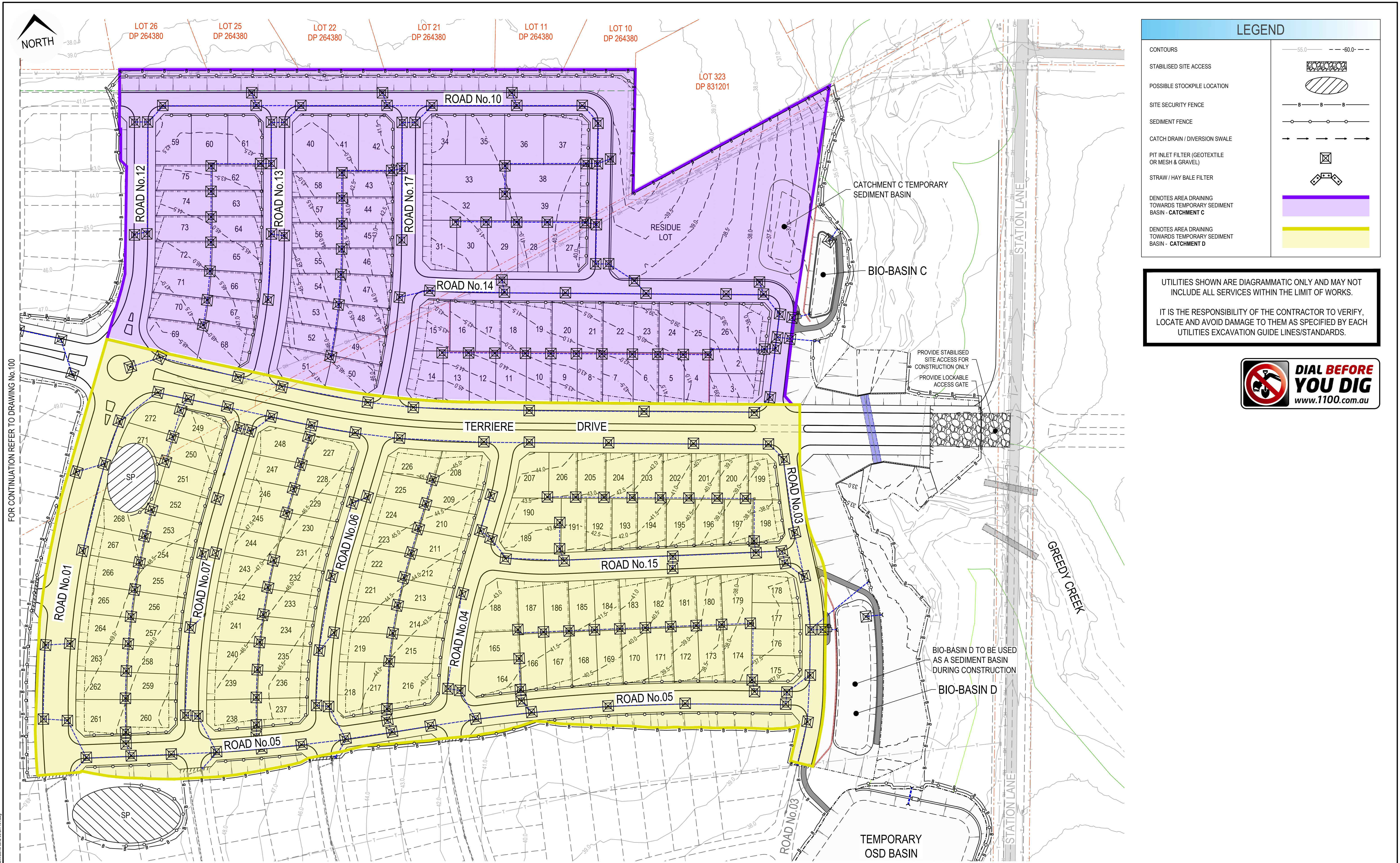


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For:

Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: SEDIMENT & EROSION CONTROL PLAN SHEET 01 OF 02				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	100	C

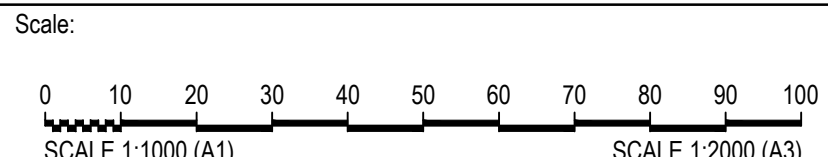


FOR CONTINUATION REFER TO DRAWING No.100

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
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By: **Orion Consulting**
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Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

Title: SEDIMENT & EROSION CONTROL PLAN SHEET 02 OF 02				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 101	Revision C

ISSUED FOR **DEVELOPMENT APPLICATION**
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1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "ENVIRONMENT PROTECTION AUTHORITY" AND "DEPT OF LAND AND WATER CONSERVATION". MEASURES OUTLINED IN THE SEDIMENT & EROSION CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
6. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
7. ALL DISTURBED AREAS SHALL BE REVEGETATED WITHIN 14 WORKING DAYS FROM THE CONCLUSION OF LAND SHAPING.
8. MINIMISE DUST BY WATERING WHEN REQUIRED.

9. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
10. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
11. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPAED TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATE.
12. ALL STOCKPILES TO BE (MAX) 2m HIGH AND PROTECTED WITH SILT FENCE.

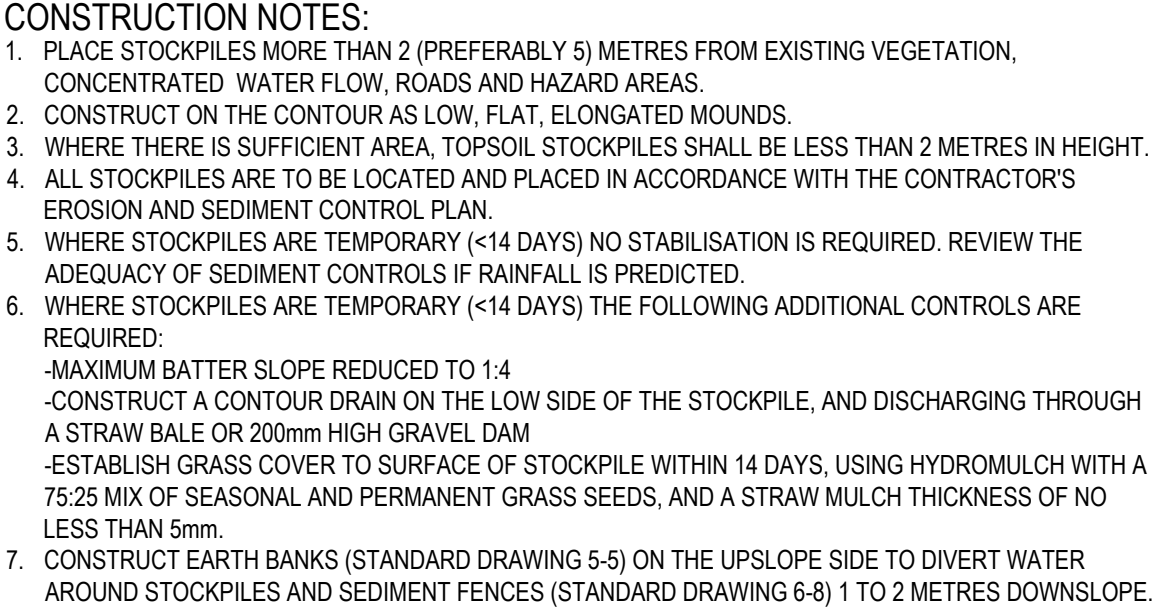
13. LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.
14. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES SET OUT IN "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION" - 4TH EDITION AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.
15. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.
16. MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS. WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.
17. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS, AND AFTER THE ROAD CENTRELINES HAVE BEEN PEGGED AHEAD OR PERMANENTLY MARKED, THE TREES MUST BE INSPECTED BY COUNCIL'S REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE TO IDENTIFY AND APPROPRIATELY MARK:-
 - a) THE TREES TO BE RETAINED.
 - b) ALL TREES TO BE LEFT UNDISTURBED AND TO BE CORDONED OFF.
18. NO TREES SHALL BE REMOVED WITHOUT COUNCIL'S CLEARANCE.
19. MANAGEMENT DEVICES TO REMAIN UNTIL THE END OF THE MAINTENANCE PERIOD.

20. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE BALE CENTRE LINE.
21. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m (3m MAX) CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

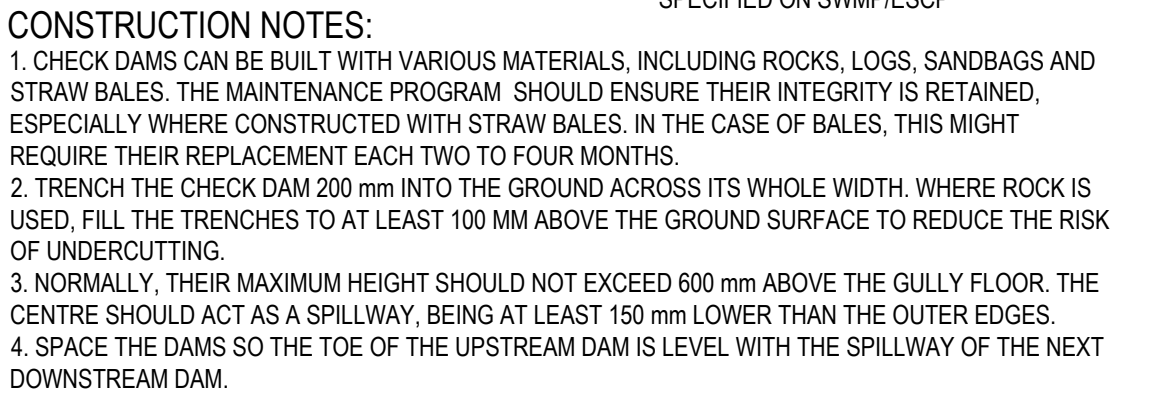
Site Name: 51, 134 & 146 Station Lane						
Site Location: Lochinvar, Maitland City Council						
Precinct/Stage: Stage 1						
Other Details: 19-0042						
Site area	Sub-catchment or Name of Structure					Notes
	C	D				
Total catchment area (ha)	7.17	9.5				
Deturbed catchment area (ha)	7.17	9.5				
Soil analysis (enter sediment type if known, or laboratory particle size data)						
Sediment Type (C, F or D) if known:	D	D				From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)						Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)						
% clay (fraction finer than 0.002 mm)						E.g. enter 10 for dispersion of 10%
Dispersion percentage						See Section 6.3.3(e). Auto-calculated
% of whole soil dispersible						Automatic calculation from above
Soil Texture Group	D	D				
Rainfall data						
Design rainfall depth (no of days)	5	5				See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	80	80				
x-day, y-percentile rainfall event (mm)	24.4	24.4				
Rainfall R-factor (if known)						Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	9	9				

Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)						
Storage (soil) zone design (no of months)	2	2	2	2	2	Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5	0.5				See Table F2, page F-4 in Appendix F

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).



SD 4-1

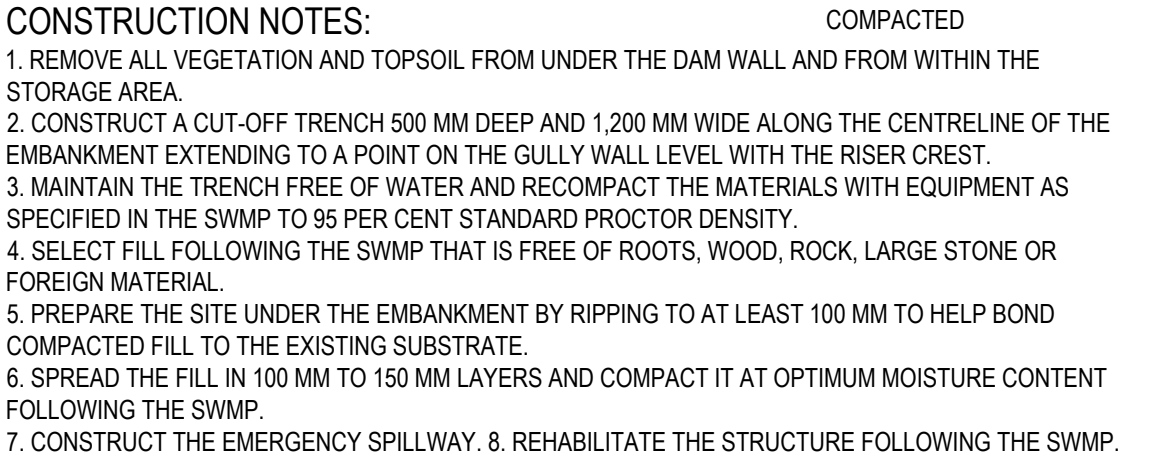


SD 5-4

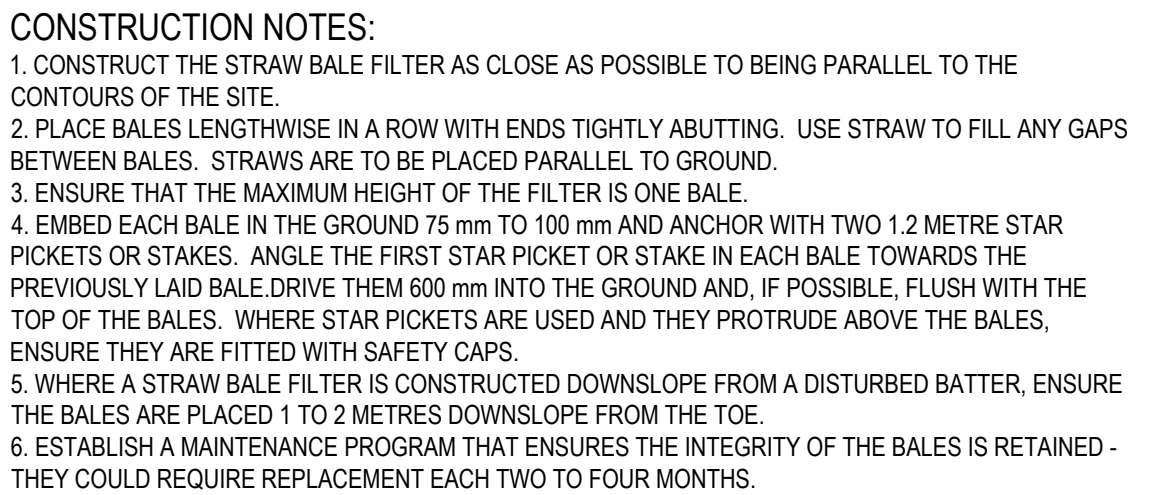


1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

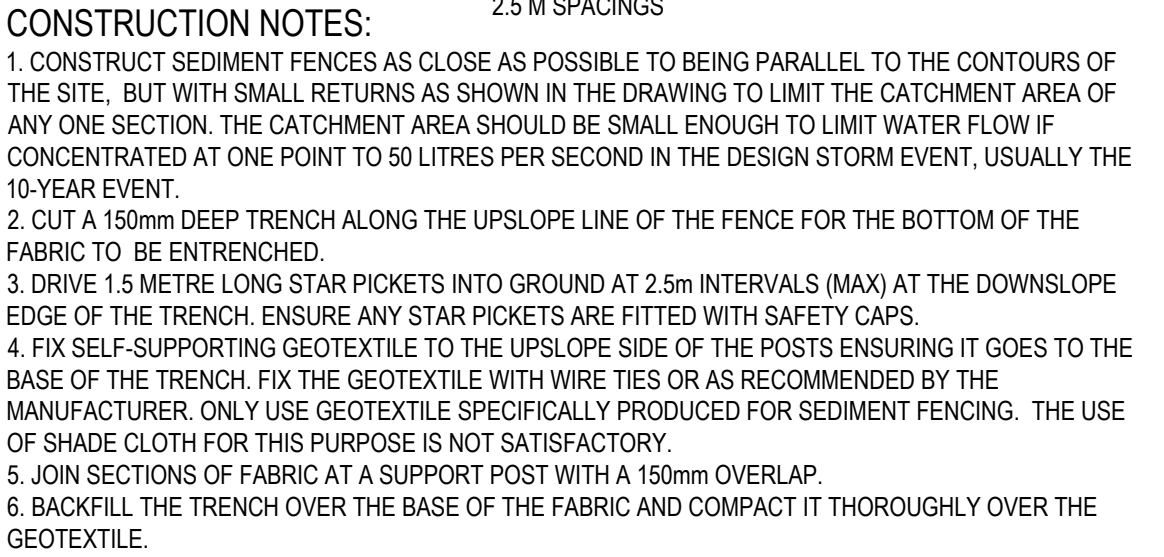
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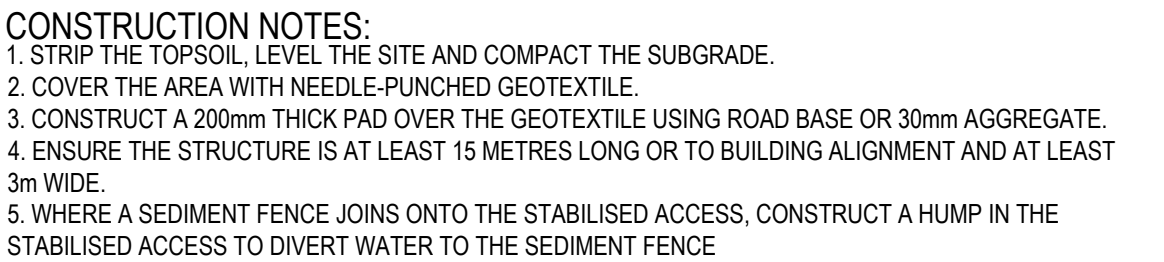
SD 6-4



SD 6-7



SD 6-8



SD 6-14



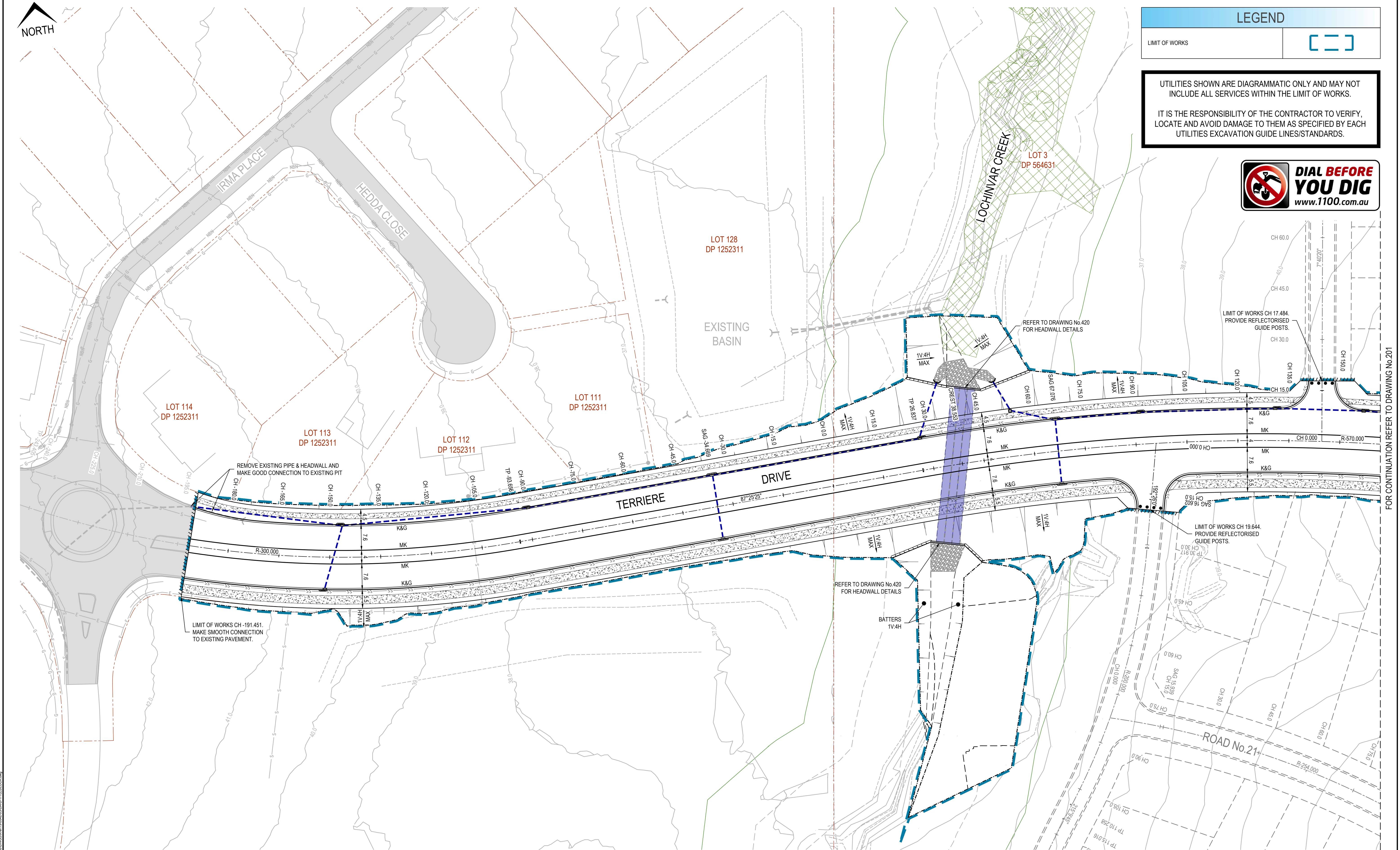
LEGEND

LIMIT OF WORKS



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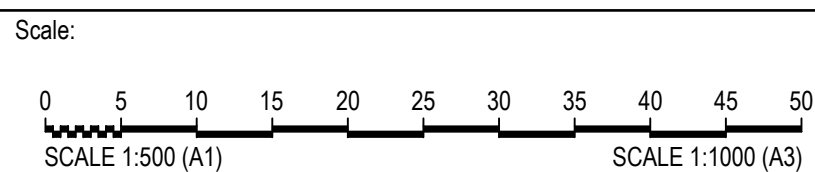
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B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
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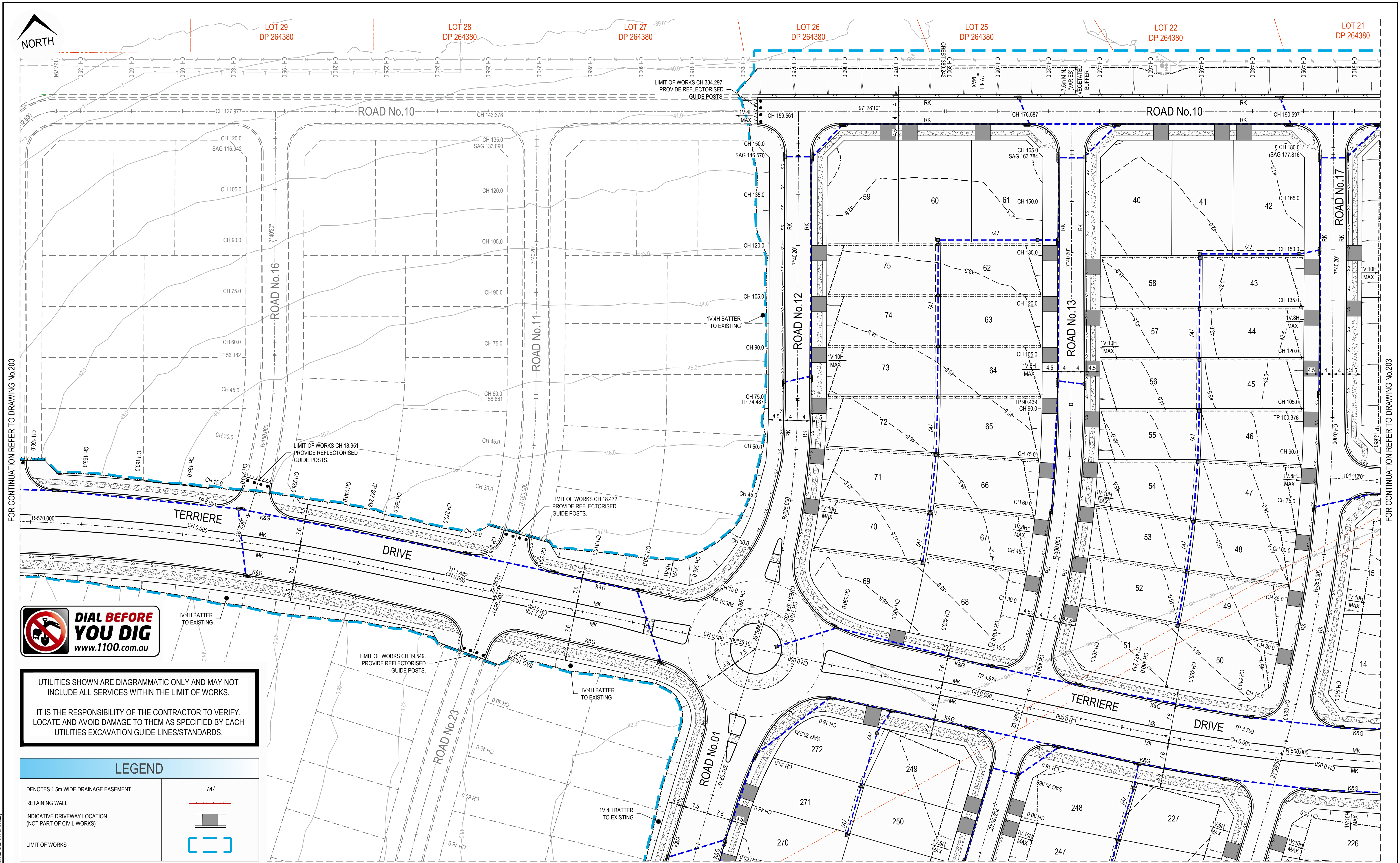
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Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

ENGINEERING PLAN SHEET 01 OF 05				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	200	C



FOR CONTINUATION REFER TO DRAWING No.201



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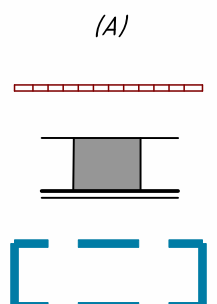
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DENOTES 1.5m WIDE DRAINAGE EASEMENT

RETAINING WALL

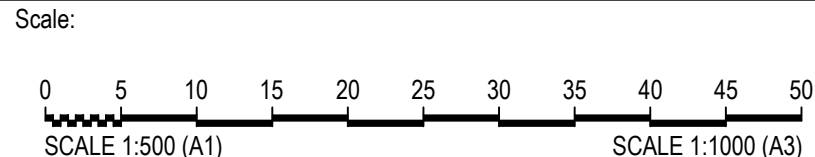
INDICATIVE DRIVEWAY LOCATION
(NOT PART OF CIVIL WORKS)

LIMIT OF WORKS



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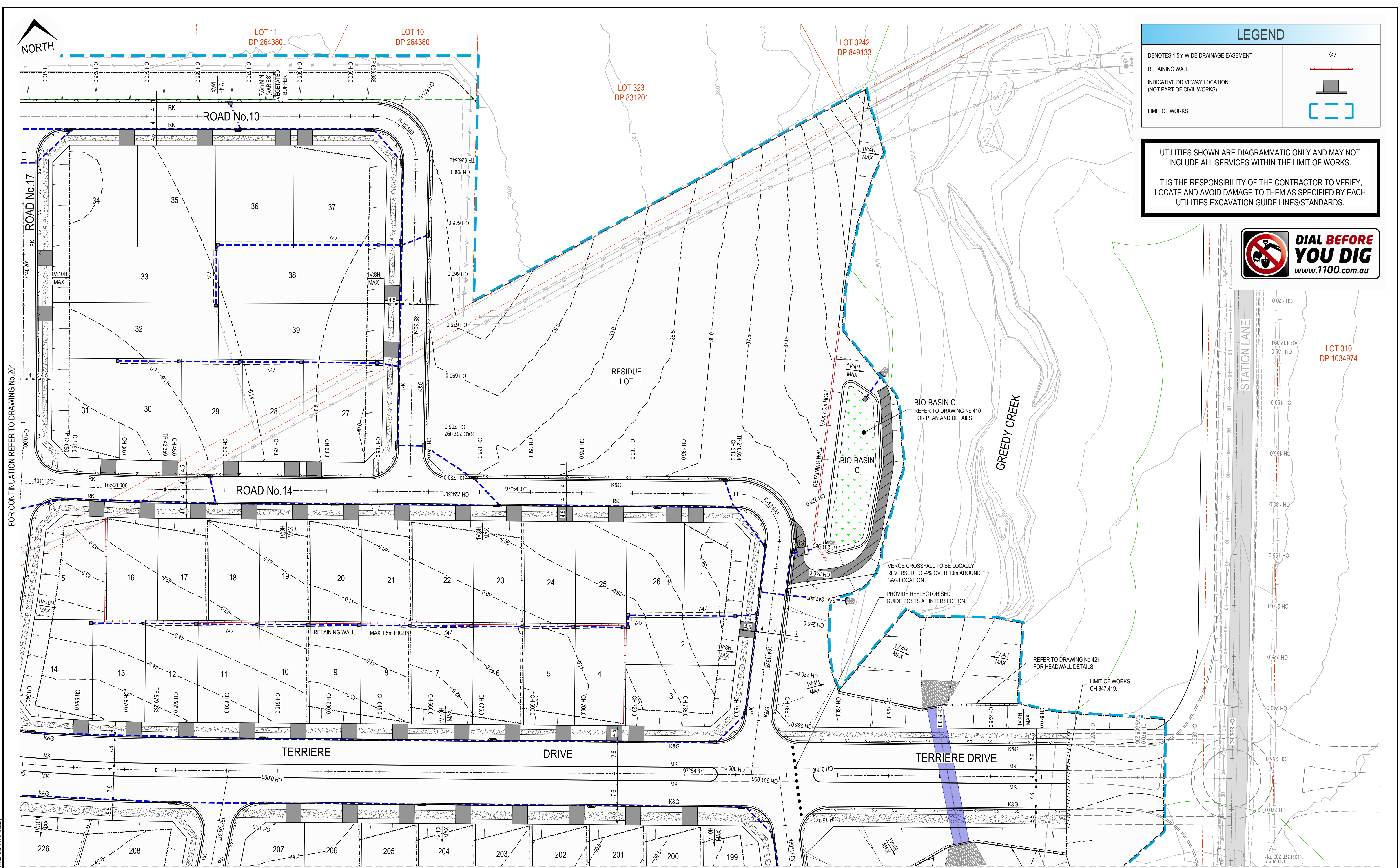
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Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

Title: **ENGINEERING PLAN
SHEET 03 OF 05**

Project No. 19-0042	Set No. 03	Milestone DA	Plan 202	Revision C
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LEGEND

DENOTES 1.5m WIDE DRAINAGE EASEMENT

RETAINING WALL

INDICATIVE DRIVEWAY LOCATION
(NOT PART OF CIVIL WORKS)

LIMIT OF WORKS

(A)

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FOR CONTINUATION REFER TO DRAWING No.204

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Scale:

SCALE 1:500 (A1)
SCALE 1:1000 (A3)

For:

The Bathla Group

By:

Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:

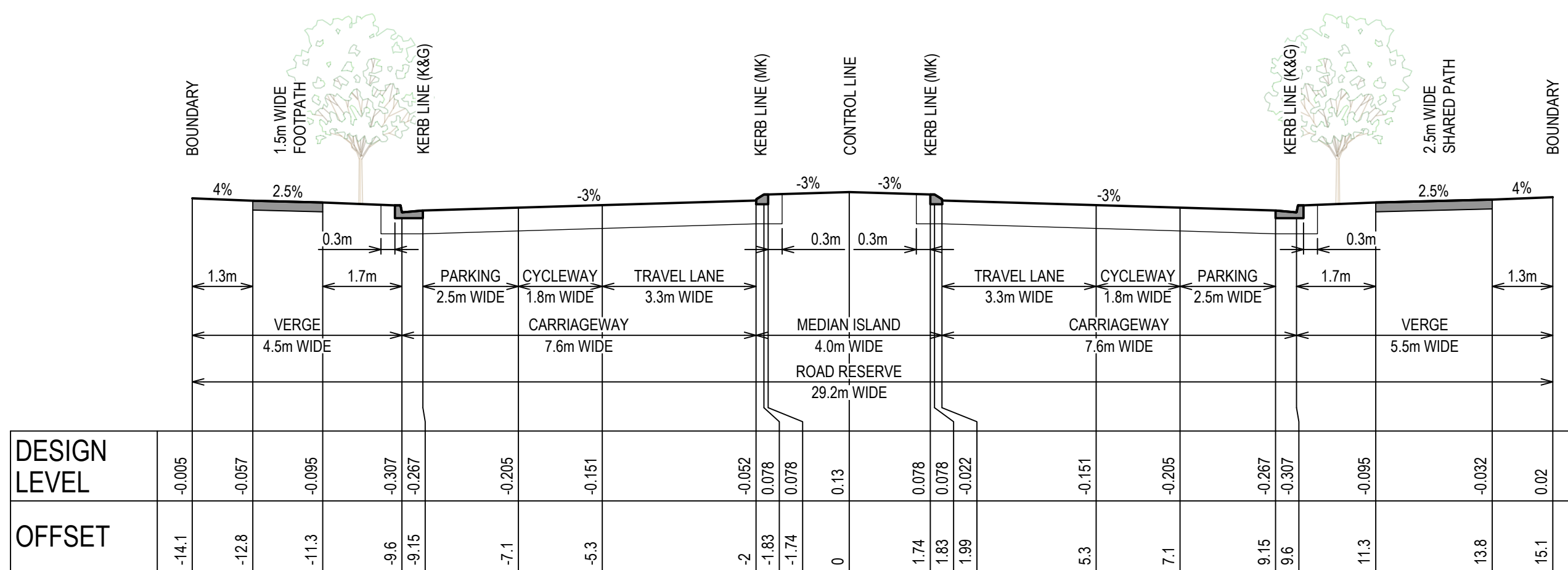
STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title:

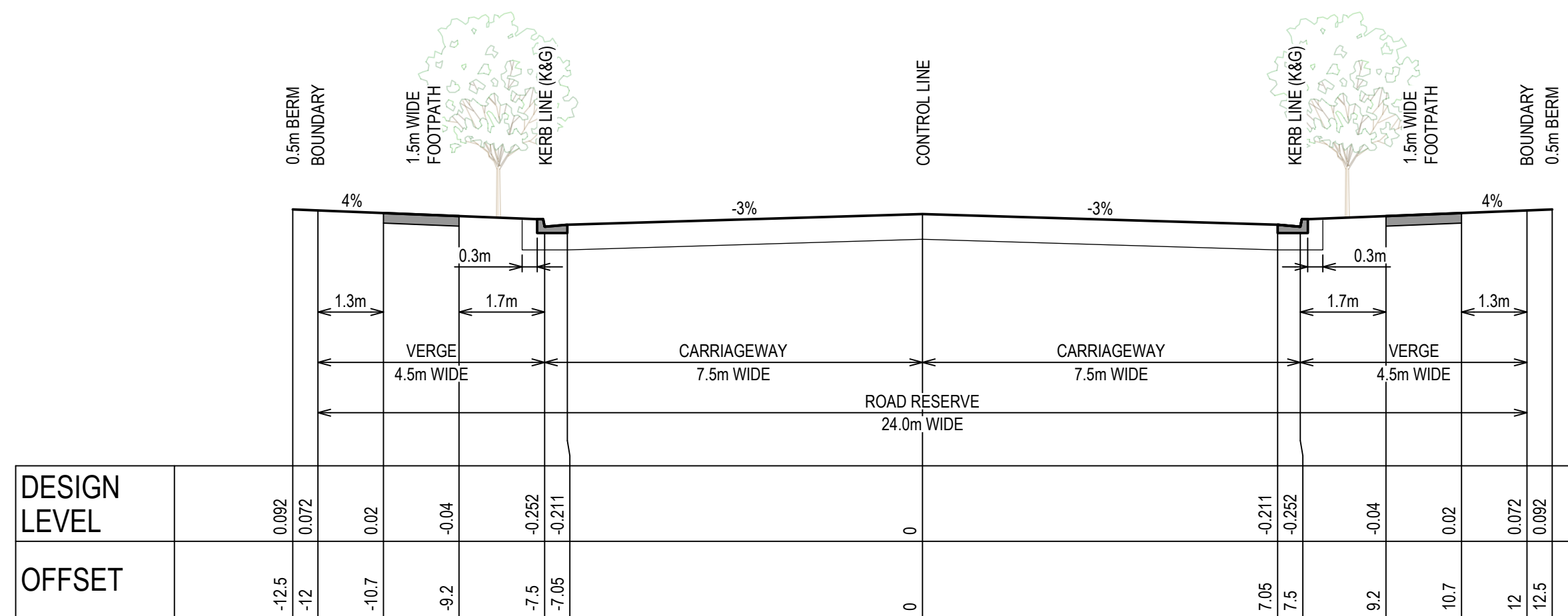
ENGINEERING PLAN
SHEET 04 OF 05

Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	203	C

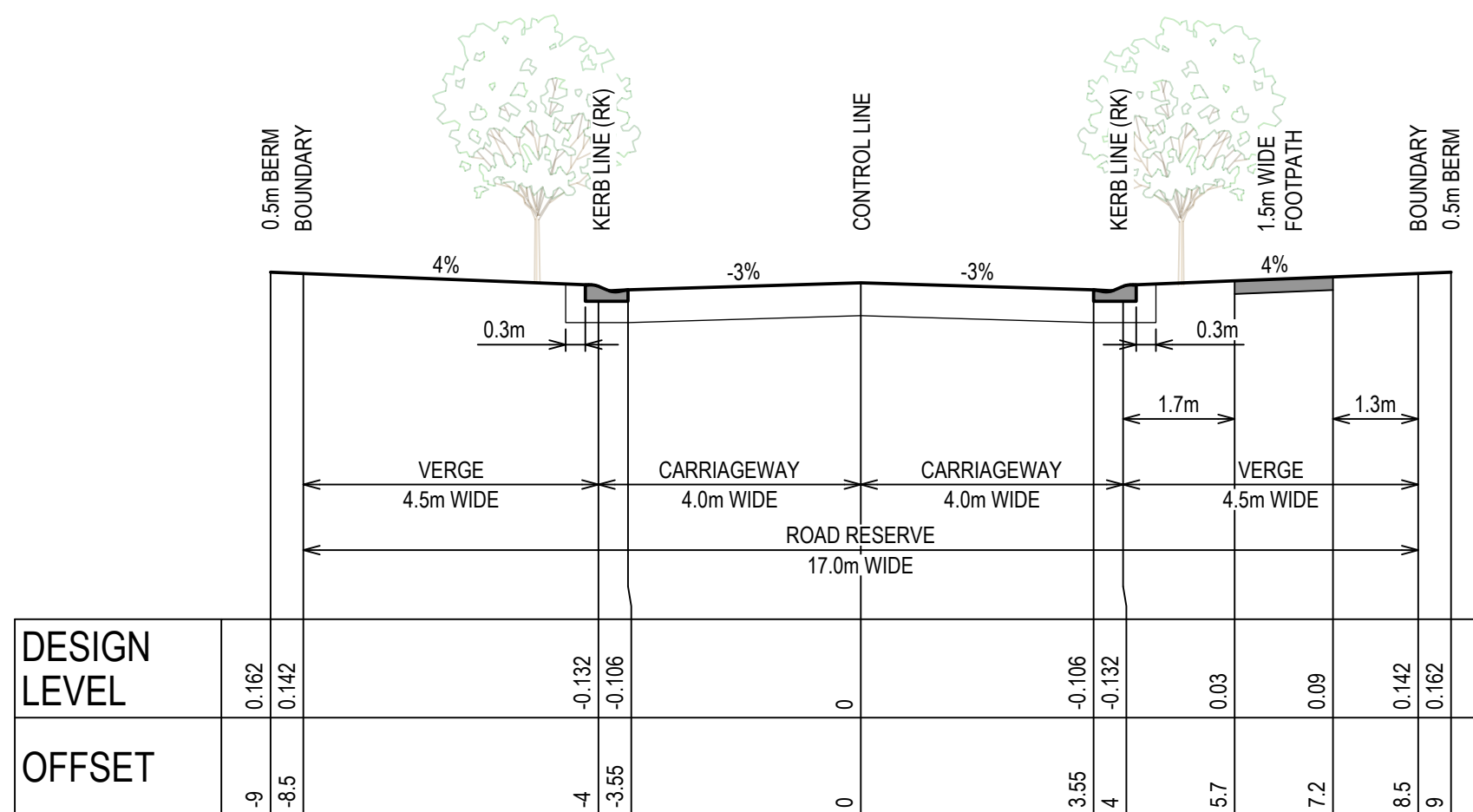
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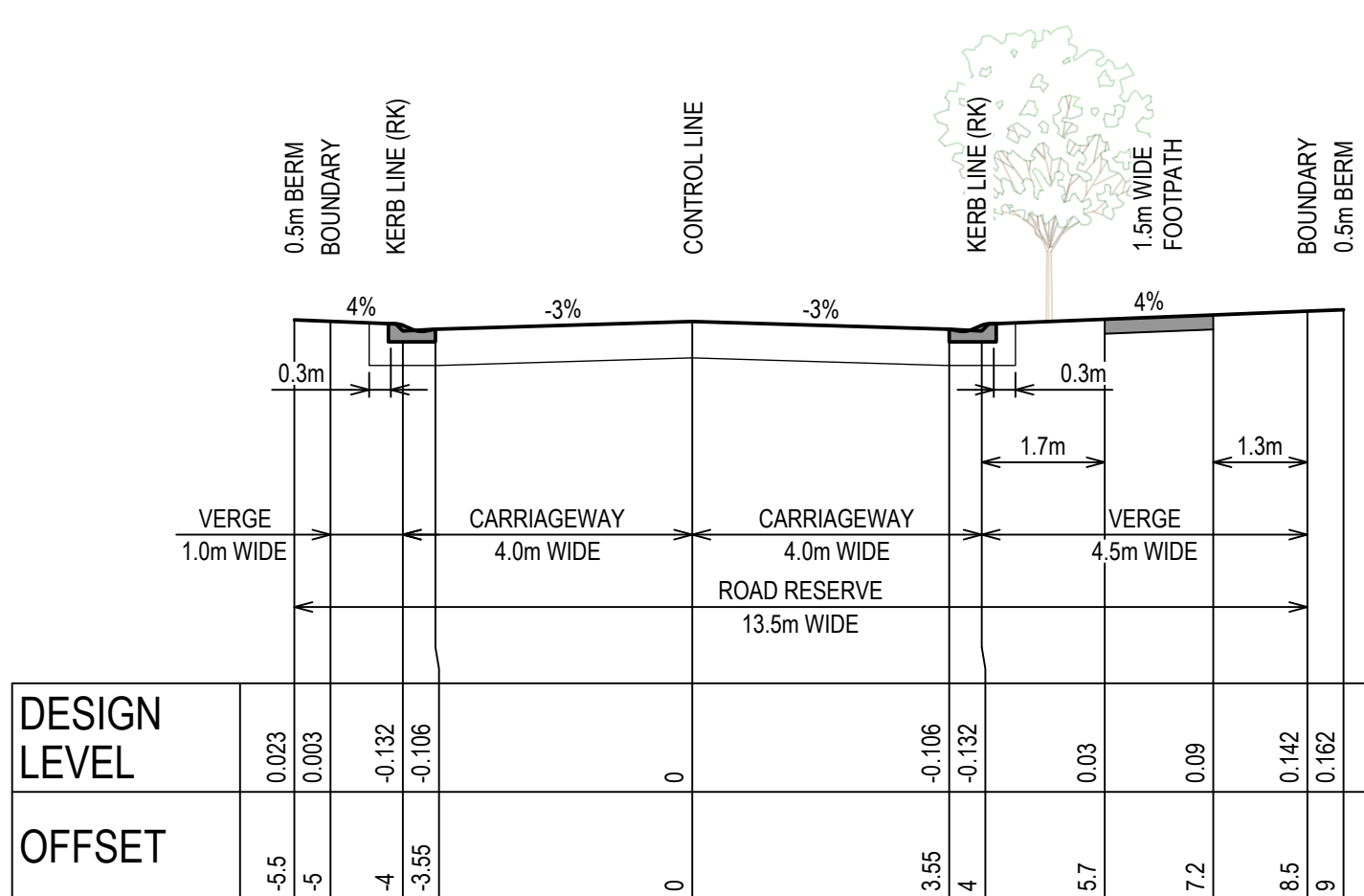
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(SUB ARTERIAL DIVIDED CARRIAGEWAY)
SCALE 1:100



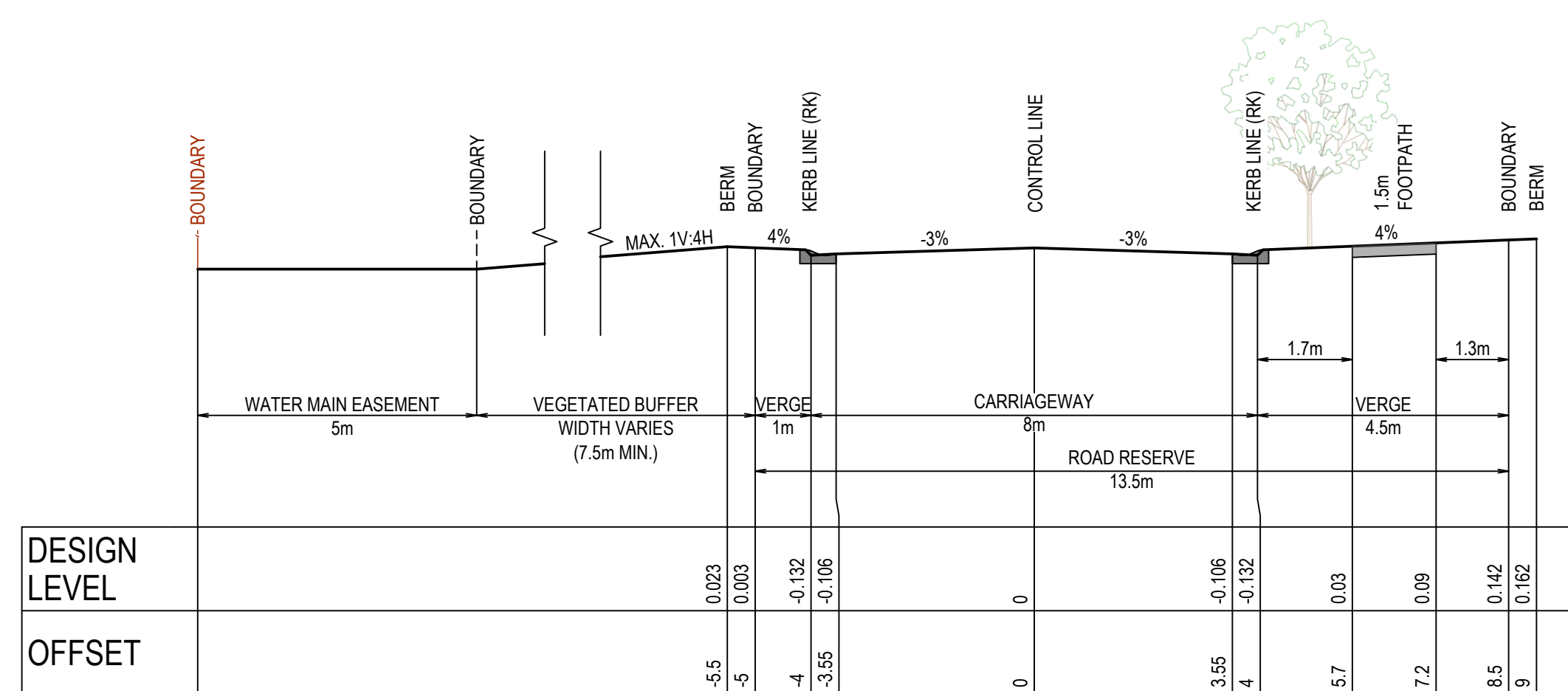
TYPICAL CROSS SECTION - ROAD No.01
(PRIMARY DISTRIBUTOR)
SCALE 1:100



TYPICAL CROSS SECTION - ROAD No.04, 05, 06, 07, 12, 13, 15 & 17
ROAD No.14 (CH 0.000 - CH 102.574)
(PRIMARY LOCAL)
SCALE 1:100



TYPICAL CROSS SECTION
ROAD No.03, ROAD No.10 (TP 606.686 - END) & ROAD No.14 (CH 126.576 - END)
(PRIMARY LOCAL - REDUCED VERGE)
SCALE 1:100



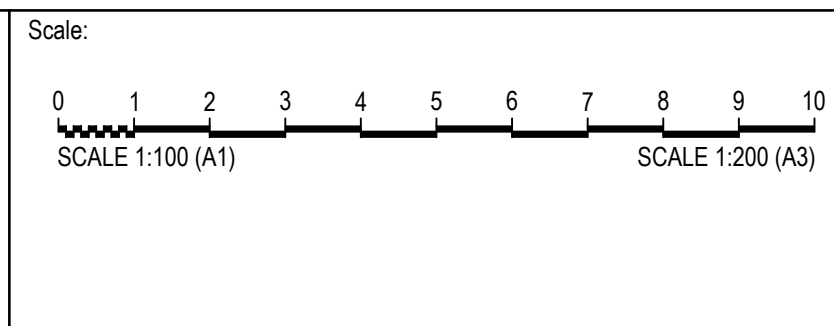
TYPICAL CROSS SECTION
ROAD No.10 (CH 334.297 - TP 606.686)
(PRIMARY LOCAL - MODIFIED REDUCED VERGE)
SCALE 1:100

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Project: File Name: C:\2025\Bathla\ONLINE\103124_Sheet_1.dwg, 2025/01/03 14:00:00, 103124_Sheet_1.dwg, 2025/01/03 14:00:00, 103124_Sheet_1.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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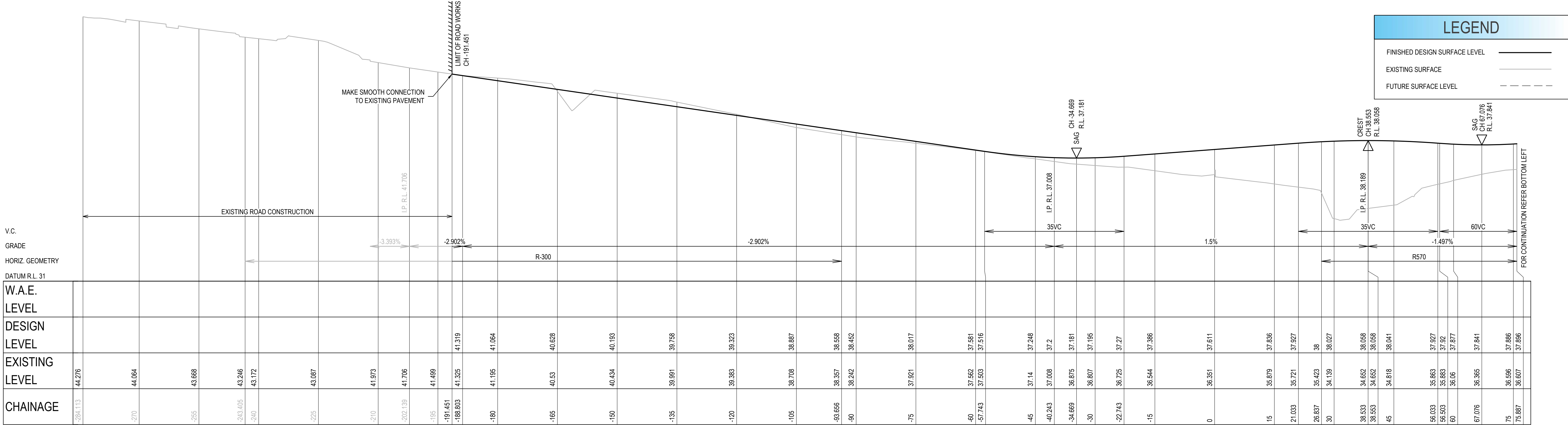
For: **The Bathla Group**

By: **Orion Consulting**
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

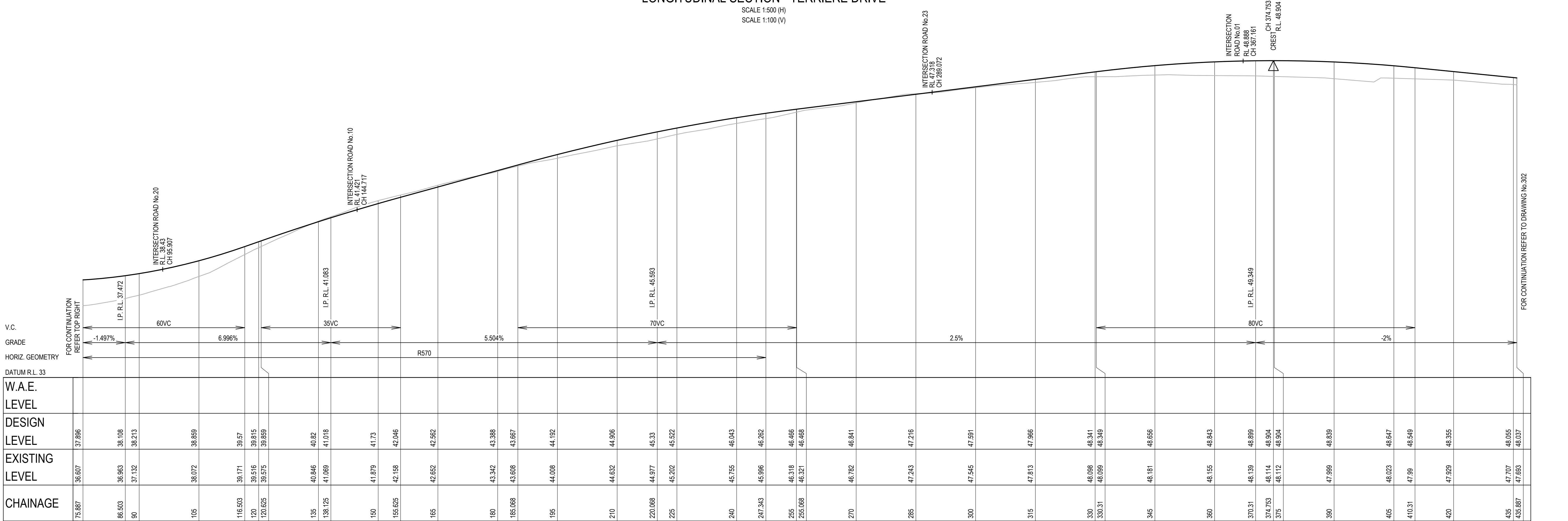
Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

TYPICAL ROAD CROSS SECTIONS & DETAILS				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	300	C

Project: File Name: C:\2025\0000\ORION\03\03A_Sheet_01.dwg, 2025/0000/03/03A_Sheet_01.dwg, 2025/0000/03/03A_Sheet_01.dwg



LONGITUDINAL SECTION - TERRIERE DRIVE
SCALE 1:500 (H)
SCALE 1:100 (V)

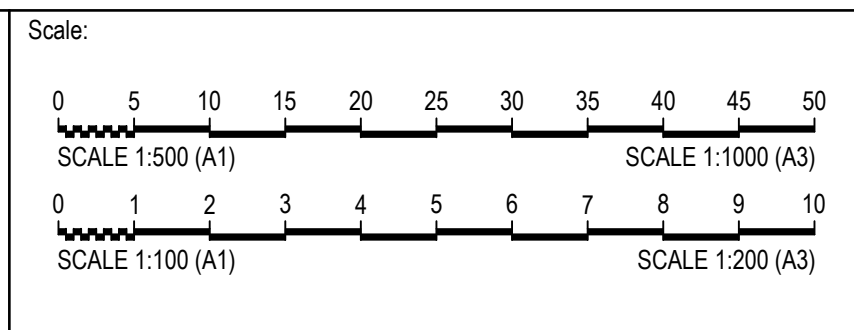


LONGITUDINAL SECTION - TERRIERE DRIVE (CONT.)
SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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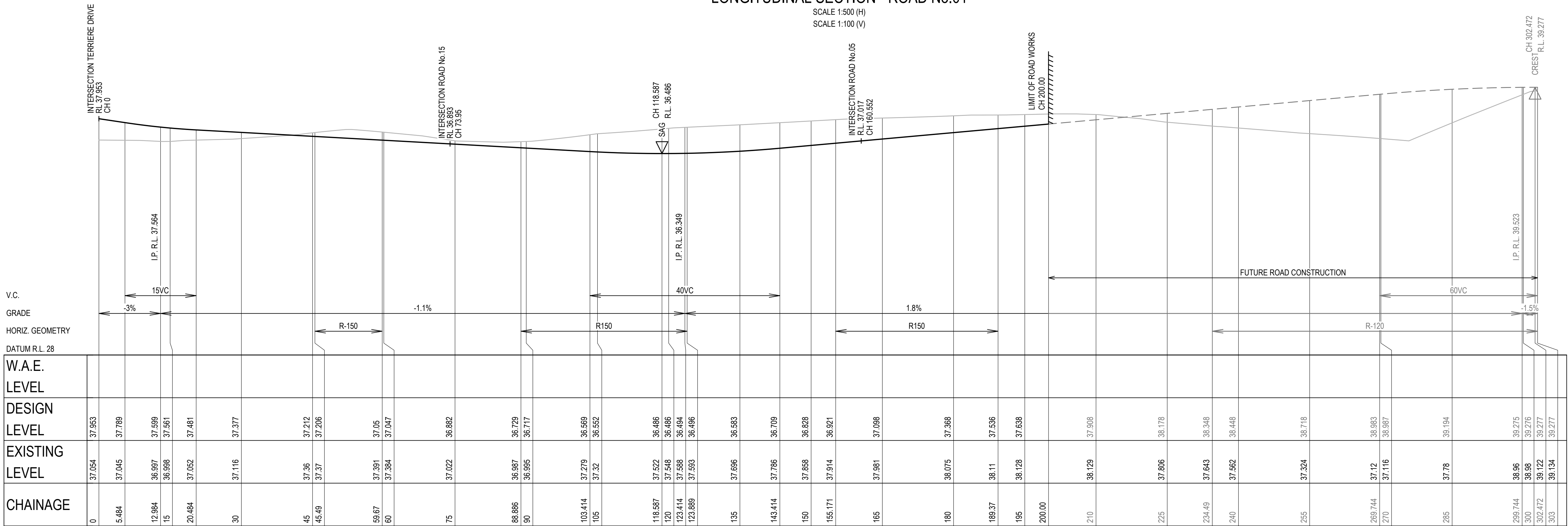
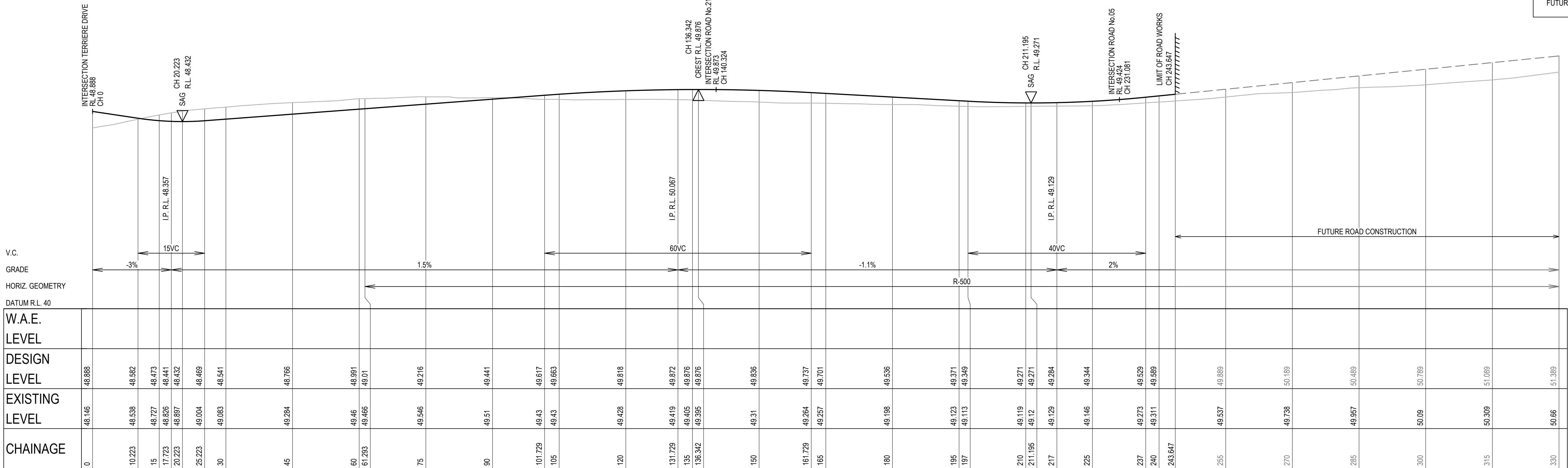


Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title:	Project No.	Set No.	Milestone	Plan	Revision
ROAD LONG SECTIONS SHEET 01 OF 09	19-0042	03	DA	301	C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
FUTURE SURFACE LEVEL	

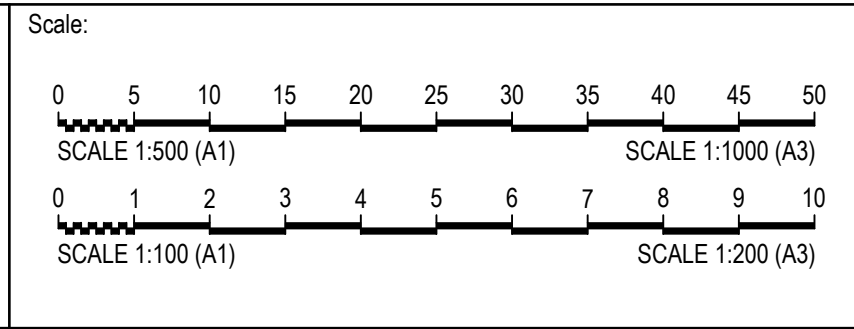


ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Project: File Name: C:\2025\0000\ORION\NSW\103124_Sheet_1.Dwg, 20/09/2025 09:03:42, 103124_Sheet_1.dwg

Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

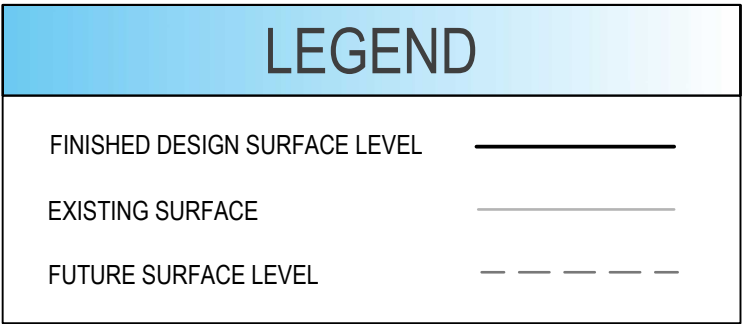
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Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: ROAD LONG SECTIONS SHEET 03 OF 09				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 303	Revision C



SCALE 1:500 (H)
SCALE 1:100 (V)

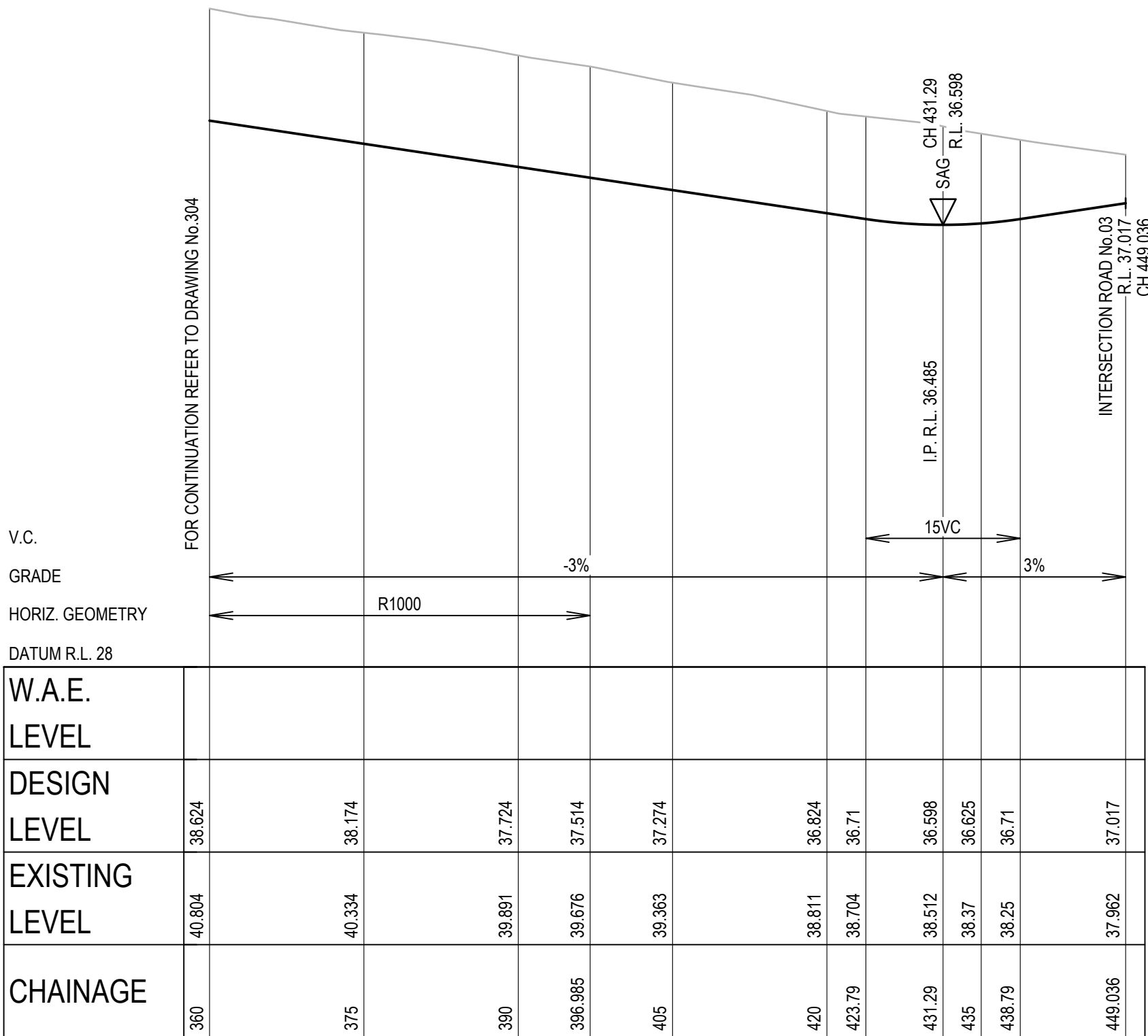
SCALE 1:500 (H)
SCALE 1:100 (V)

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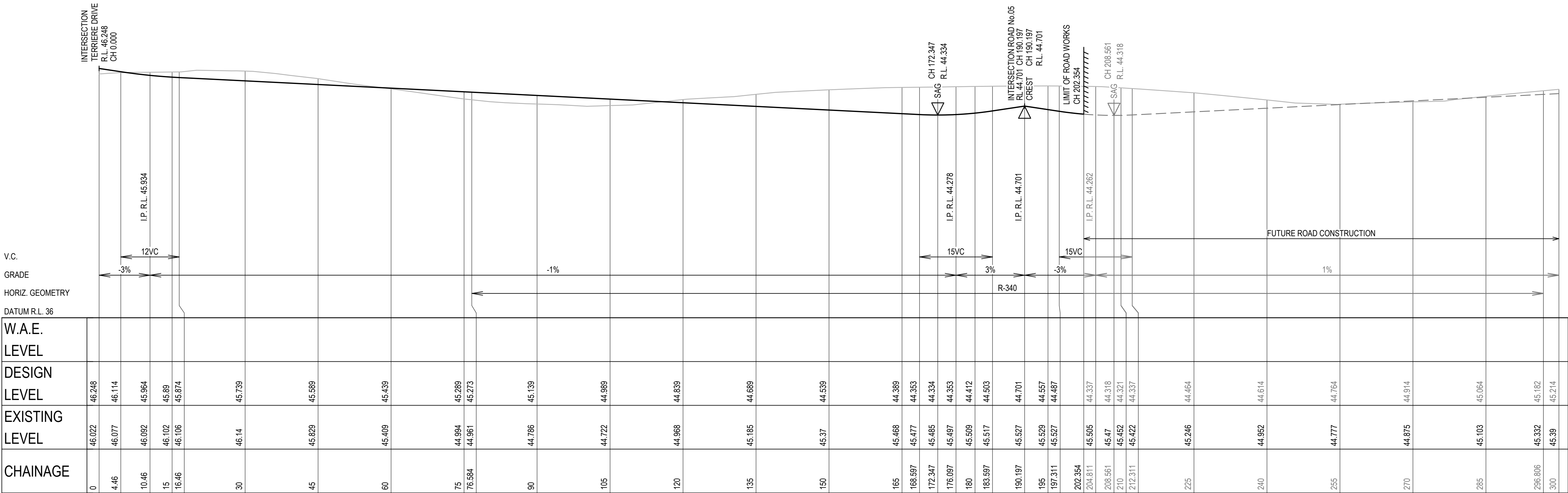
Title:				
ROAD LONG SECTIONS SHEET 04 OF 09				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	304	C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	—————
EXISTING SURFACE	—————
FUTURE SURFACE LEVEL	- - - - -



LONGITUDINAL SECTION - ROAD No.05 (CONT.)

SCALE 1:500 (H)
SCALE 1:100 (V)



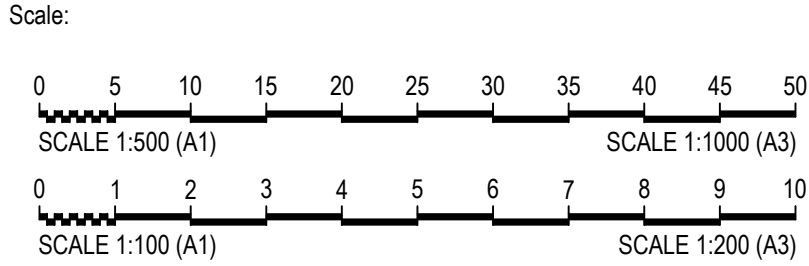
LONGITUDINAL SECTION - ROAD No.06

SCALE 1:500 (H)
SCALE 1:100 (V)

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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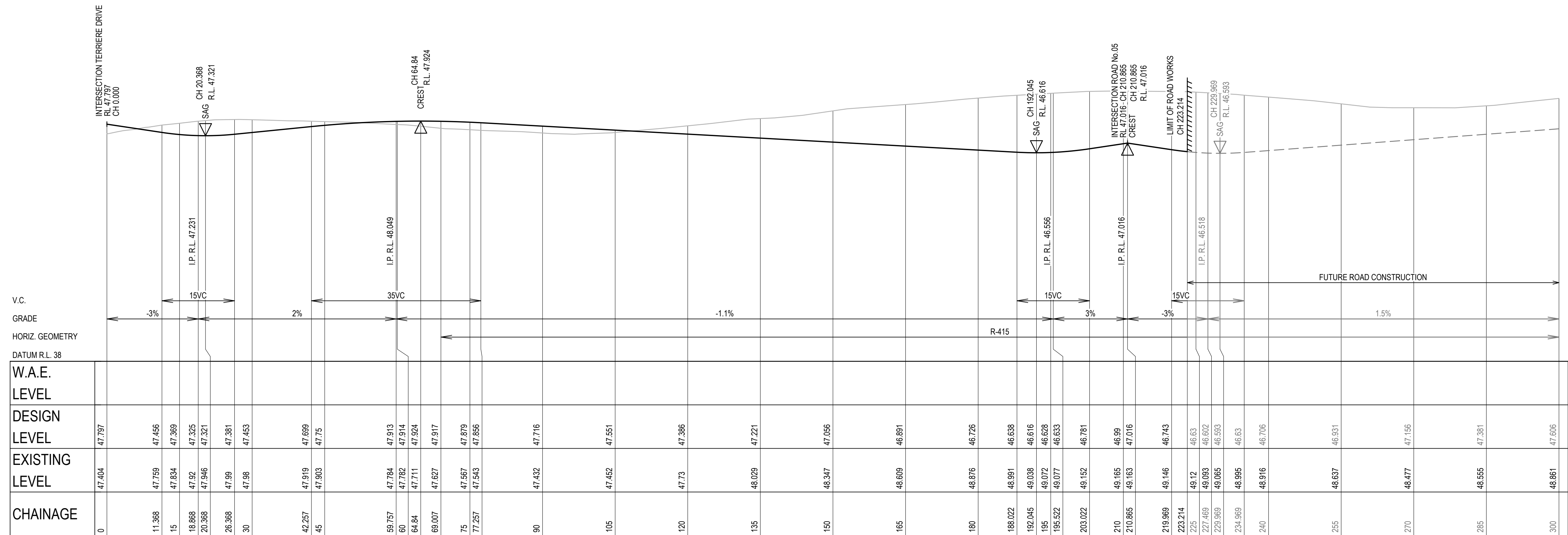
Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: ROAD LONG SECTIONS SHEET 05 OF 09				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 305	Revision C

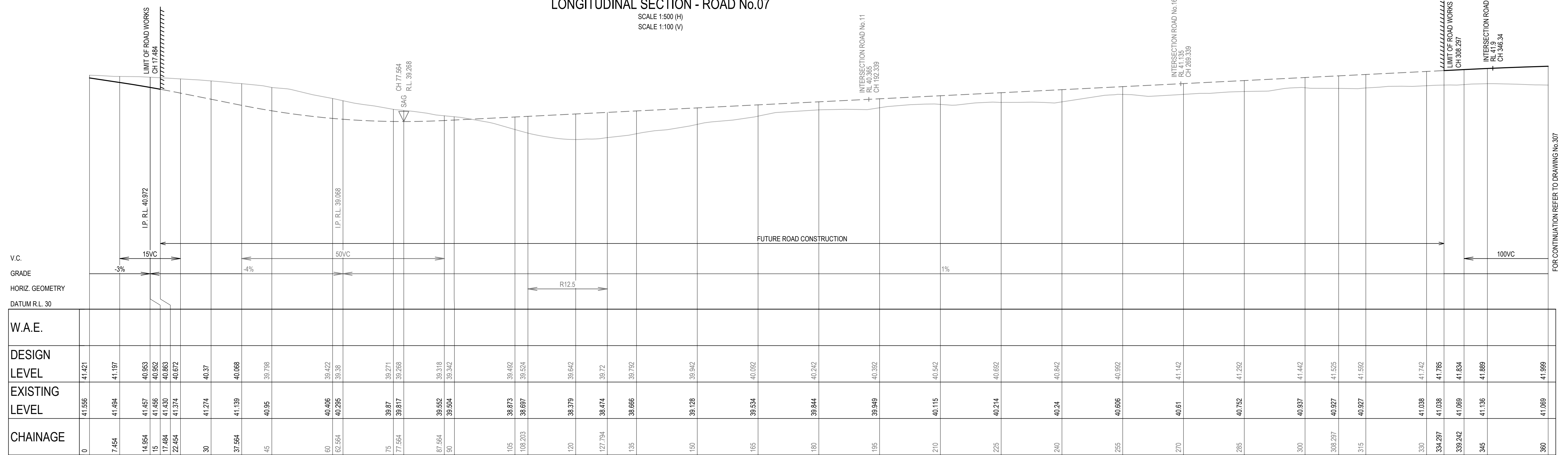
LEGEND

FINISHED DESIGN SURFACE LEVEL	
EXISTING SURFACE	
FUTURE SURFACE LEVEL	



LONGITUDINAL SECTION - ROAD No.07

SCALE 1:500 (H)
SCALE 1:100 (V)



LONGITUDINAL SECTION - ROAD No.10

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Title:				
ROAD LONG SECTIONS SHEET 06 OF 09				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	306	C

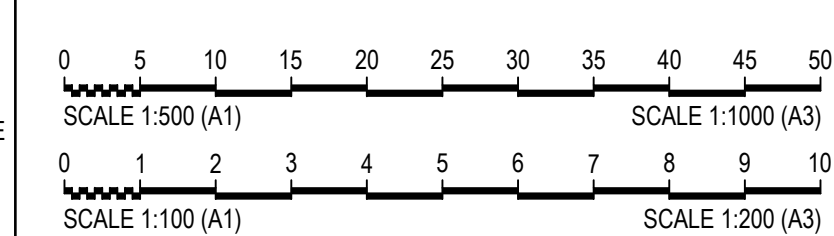
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
Rev	Drawn	Design	Appd.	Date	Revision Description

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Scale:



For:	
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By:



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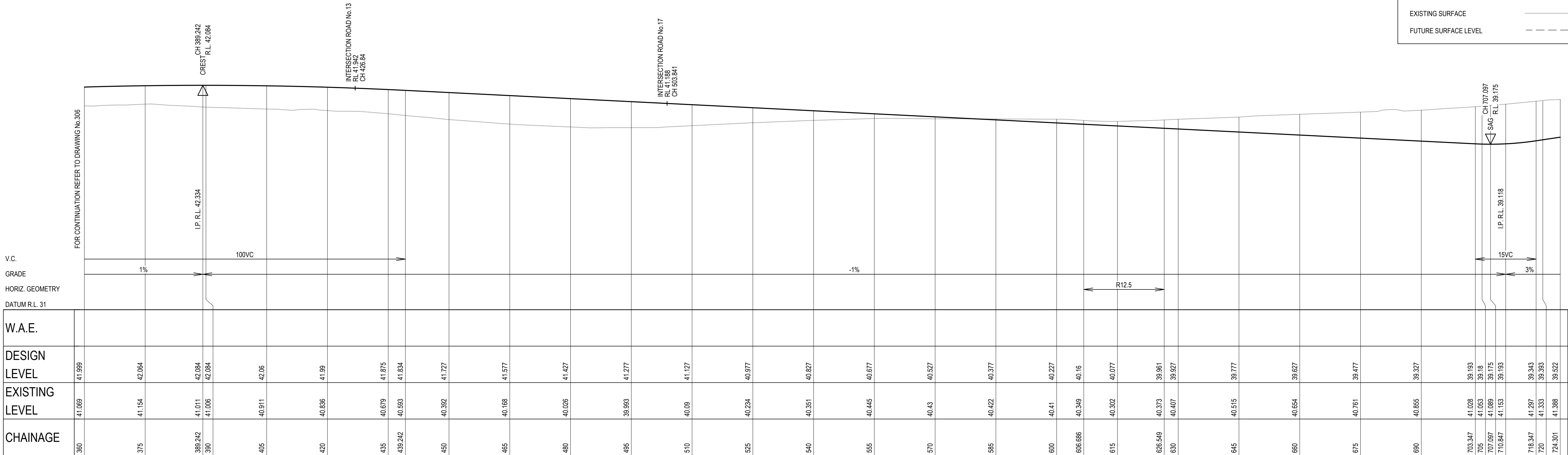


Project:	
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STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

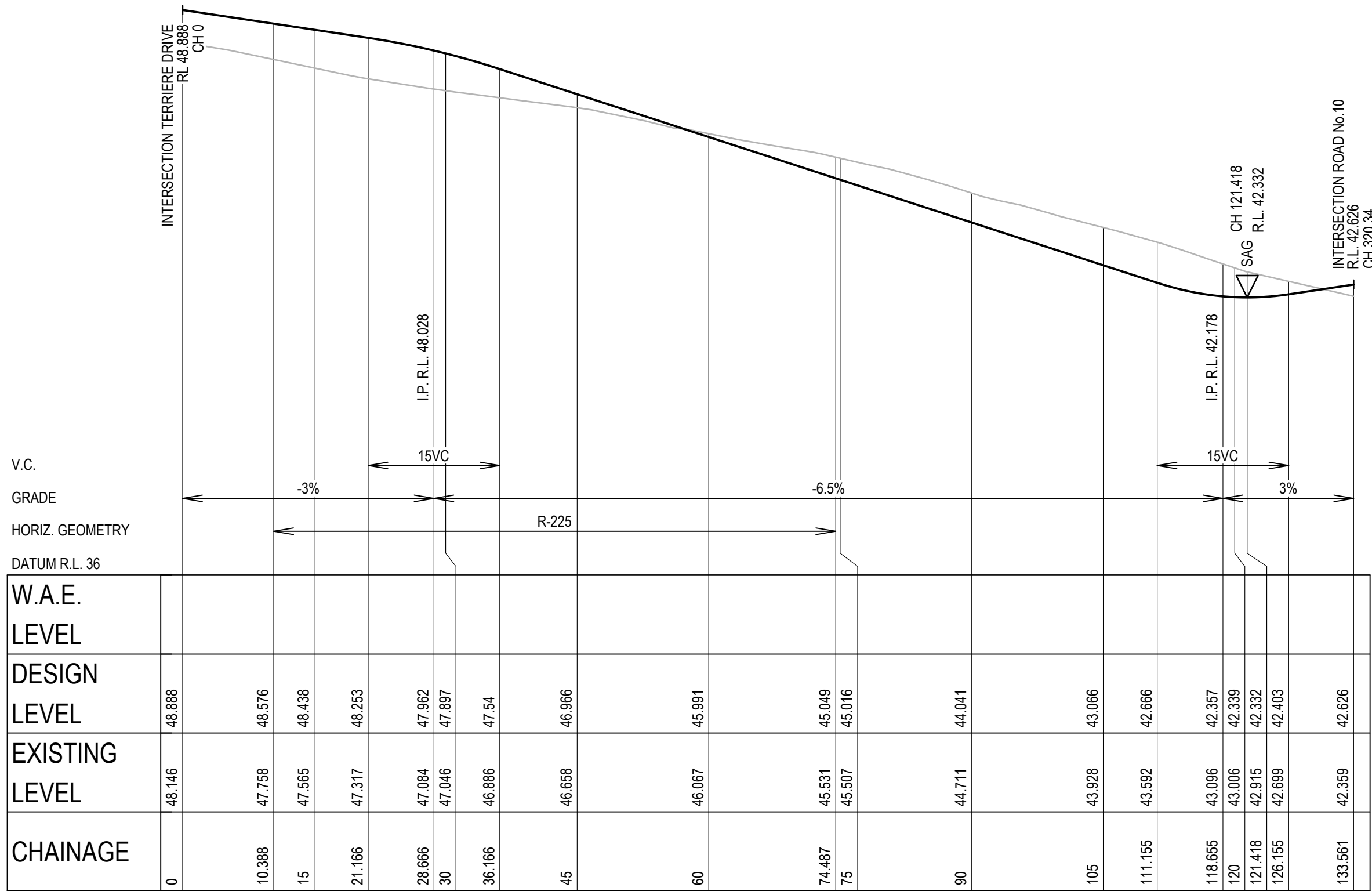
ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

LEGEND	
FINISHED DESIGN SURFACE LEVEL	—————
EXISTING SURFACE	—————
FUTURE SURFACE LEVEL	- - - - -



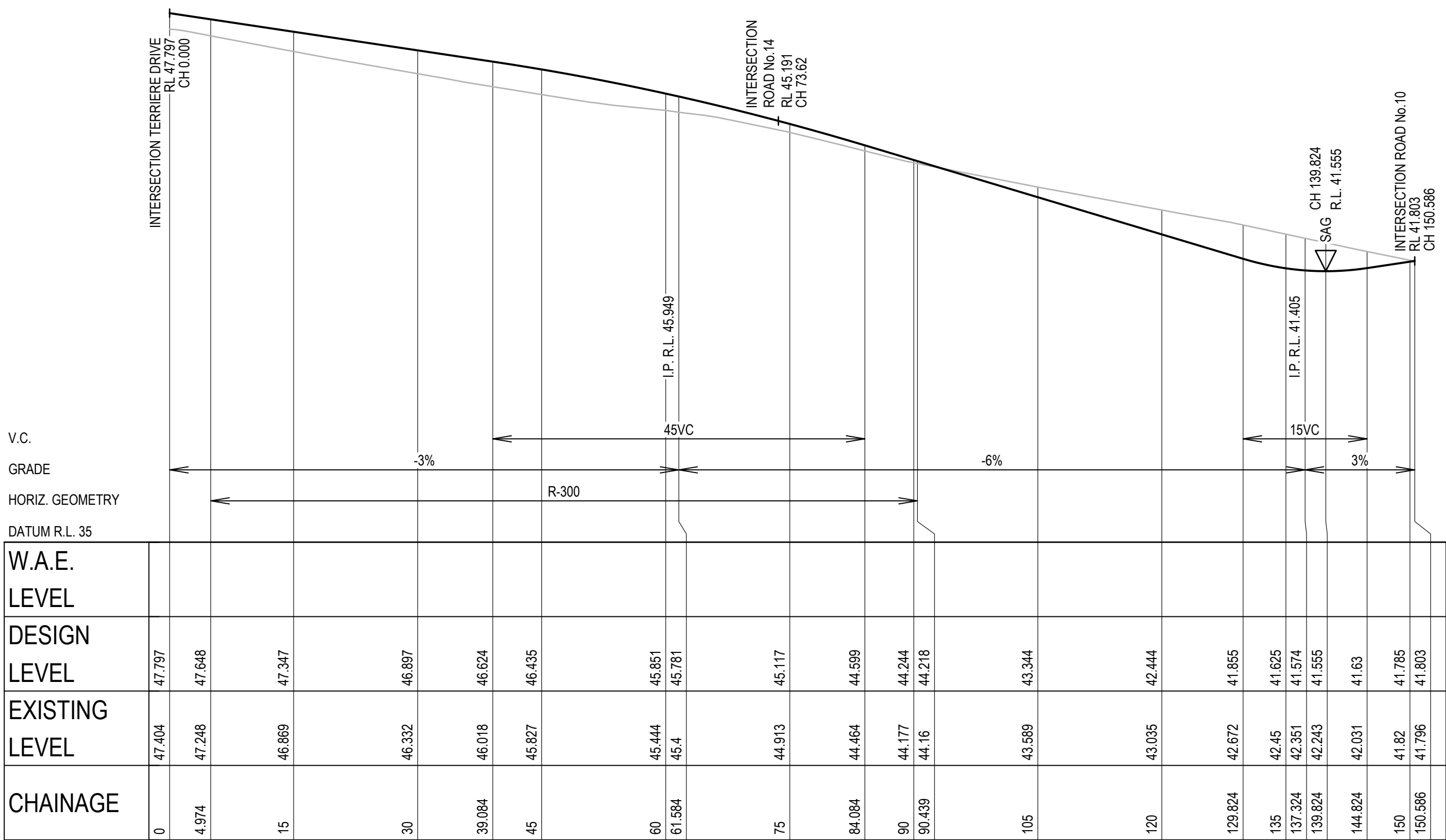
LONGITUDINAL SECTION - ROAD No.10 (CONT.)

SCALE 1:500 (H)
SCALE 1:100 (V)



LONGITUDINAL SECTION - ROAD No.12

SCALE 1:500 (H)
SCALE 1:100 (V)



LONGITUDINAL SECTION - ROAD No.13

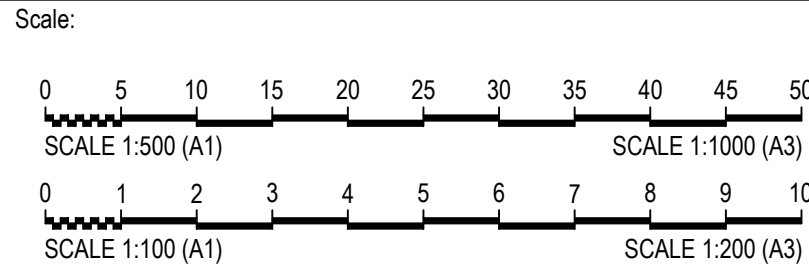
SCALE 1:500 (H)
SCALE 1:100 (V)

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Project: File Name: C:\2025\Bathla\ORION\NSW\10331A_Sheet_1.Dwg, 20/09/2025 09:58 AM, 19/09/2025 09:58 AM, 19/09/2025 09:58 AM, 19/09/2025 09:58 AM

Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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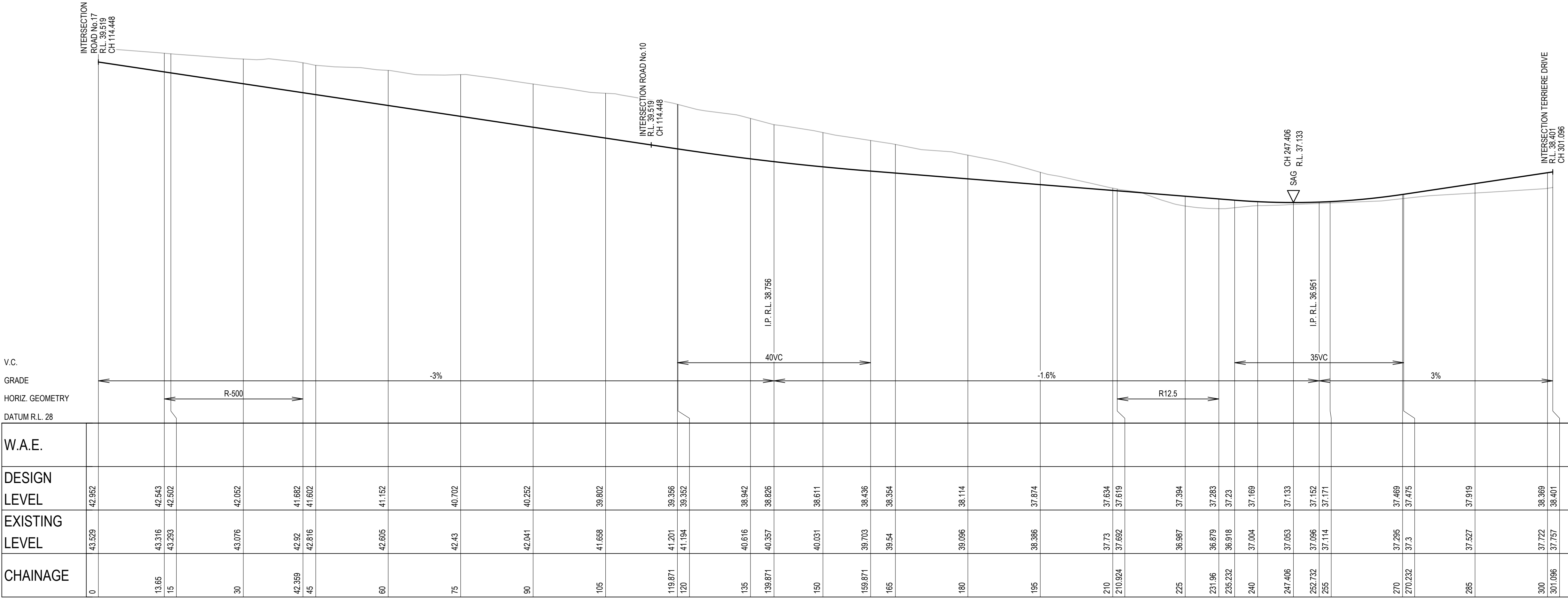
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

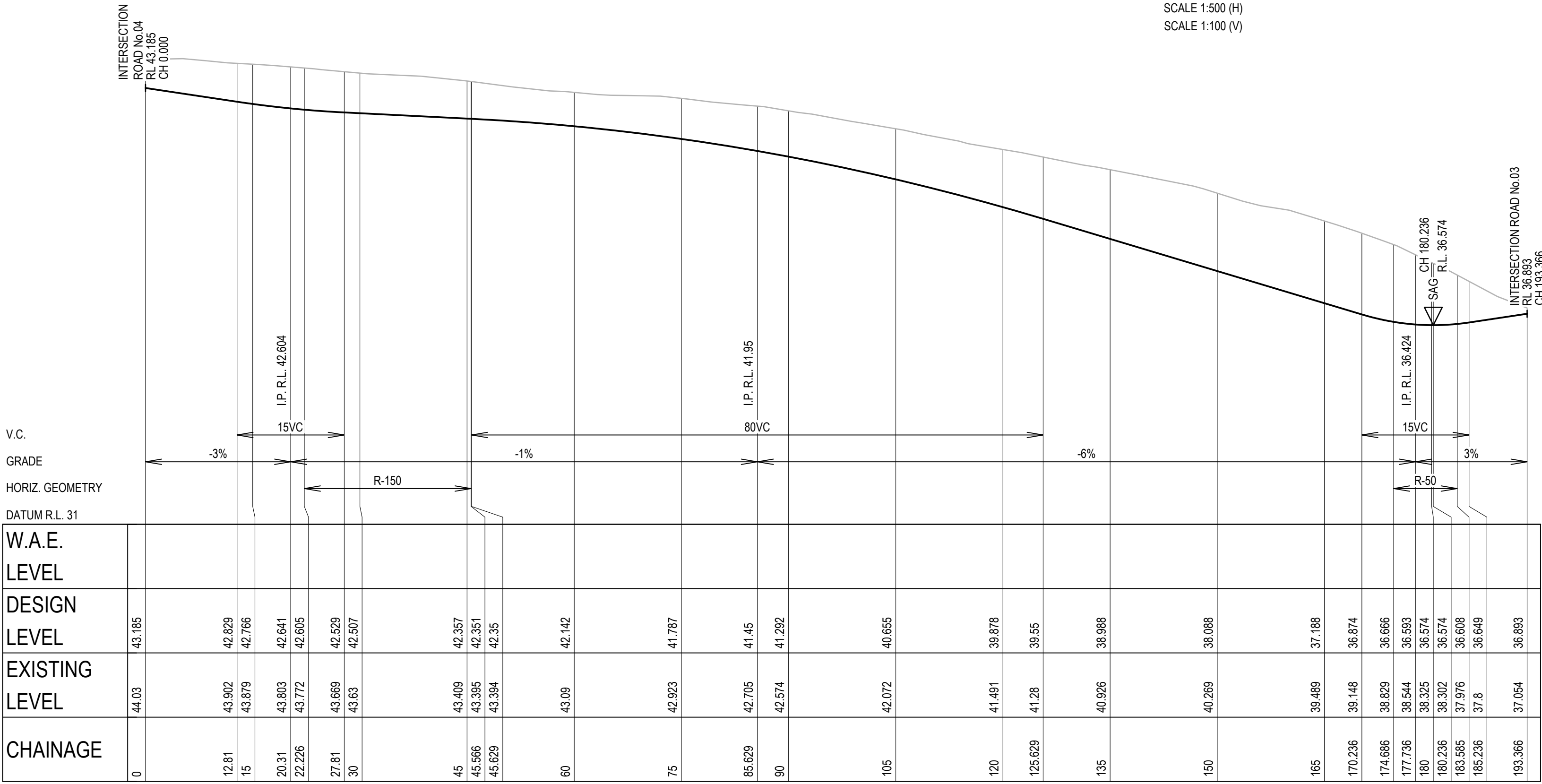
Title: ROAD LONG SECTIONS SHEET 07 OF 09				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 307	Revision C

LEGEND	
FINISHED DESIGN SURFACE LEVEL	—————
EXISTING SURFACE	—————
FUTURE SURFACE LEVEL	- - - - -



LONGITUDINAL SECTION - ROAD No.14

SCALE 1:500 (H)
SCALE 1:100 (V)



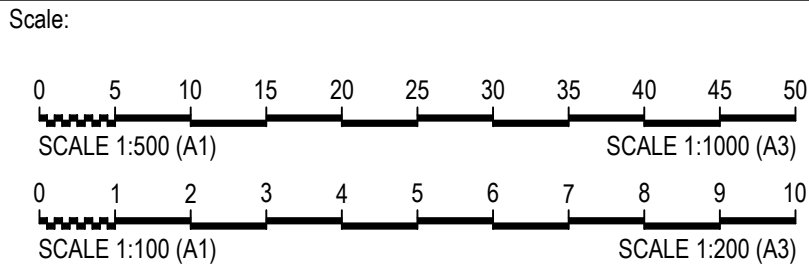
LONGITUDINAL SECTION - ROAD No.15

SCALE 1:500 (H)
SCALE 1:100 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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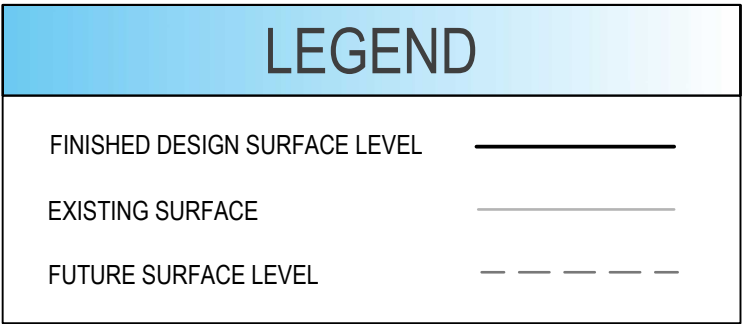
By:

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Project:

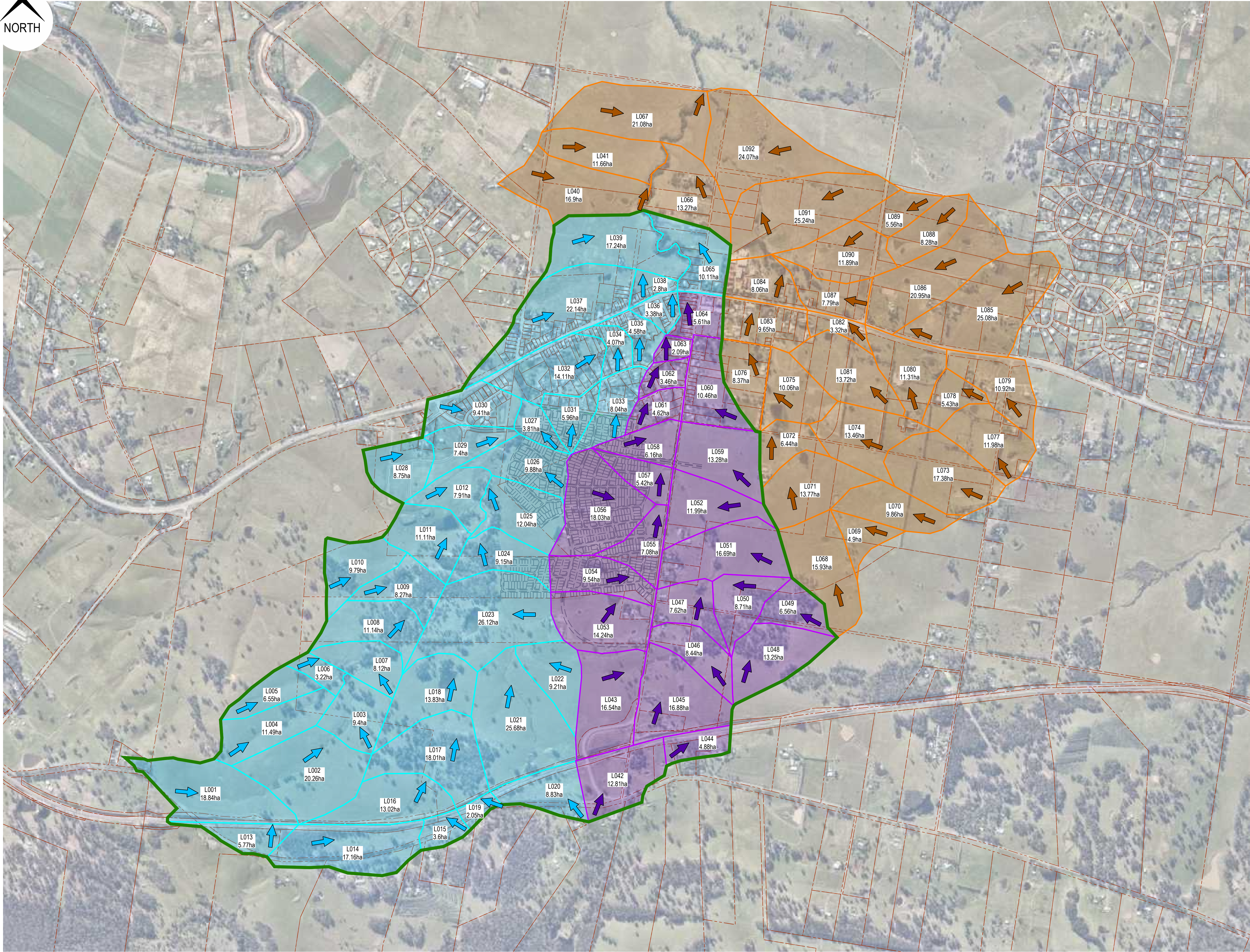
STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: ROAD LONG SECTIONS SHEET 08 OF 09				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 308	Revision C



SCALE 1:500 (H)
SCALE 1:100 (V)

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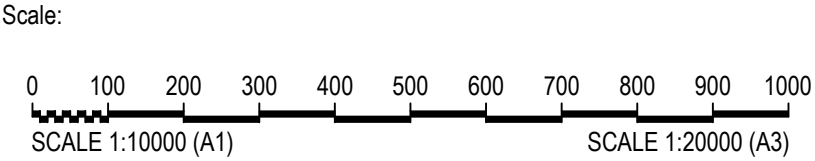


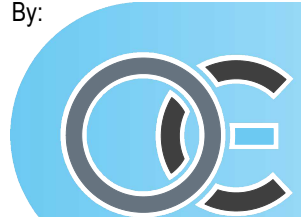
LEGEND	
CATCHMENT NAME, AREA & DIRECTION OF FALL	L000 0.0000 ha →
CONTOURS (EXISTING & DESIGN)	— 10.0 — — 20.0 —
LOCHINVAR CREEK CATCHMENT	→
GREEDY CREEK CATCHMENTS	→
EXTERNAL / DOWNSTREAM CATCHMENTS	→
TOTAL STUDY AREA	→

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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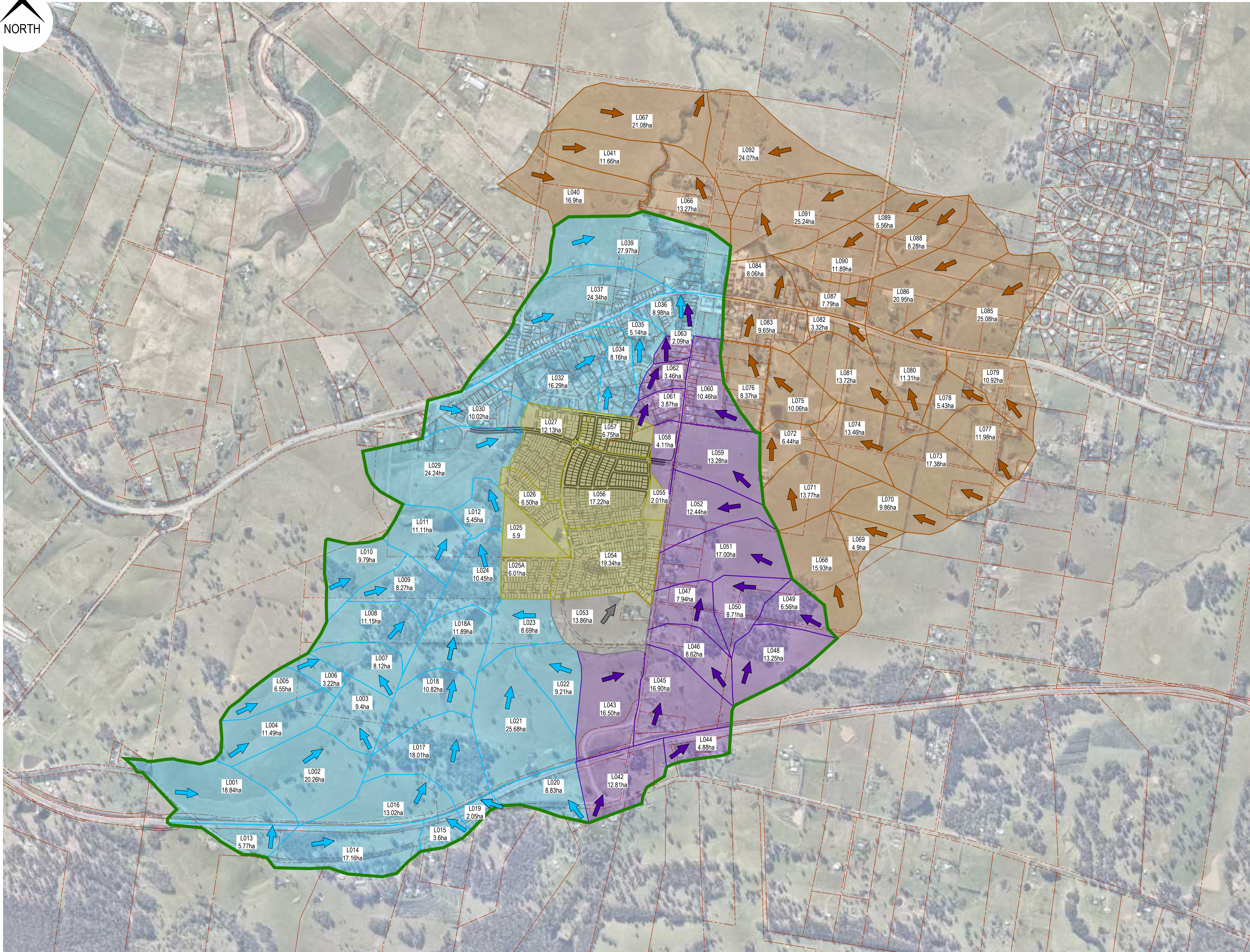


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Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

Title: EXISTING STORMWATER CATCHMENT PLAN				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 400	Revision C

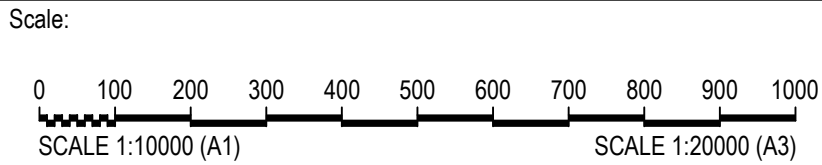


LEGEND	
CATCHMENT NAME, AREA & DIRECTION OF FALL	L000 0.0000 ha →
CONTOURS (EXISTING & DESIGN)	— 10.0 — — 20.0 —
LOCHINVAR CREEK CATCHMENT	→
DESIGN CATCHMENTS	→
GREEDY CREEK CATCHMENTS	→
EXTERNAL / DOWNSTREAM CATCHMENTS	→
TOTAL STUDY AREA	→

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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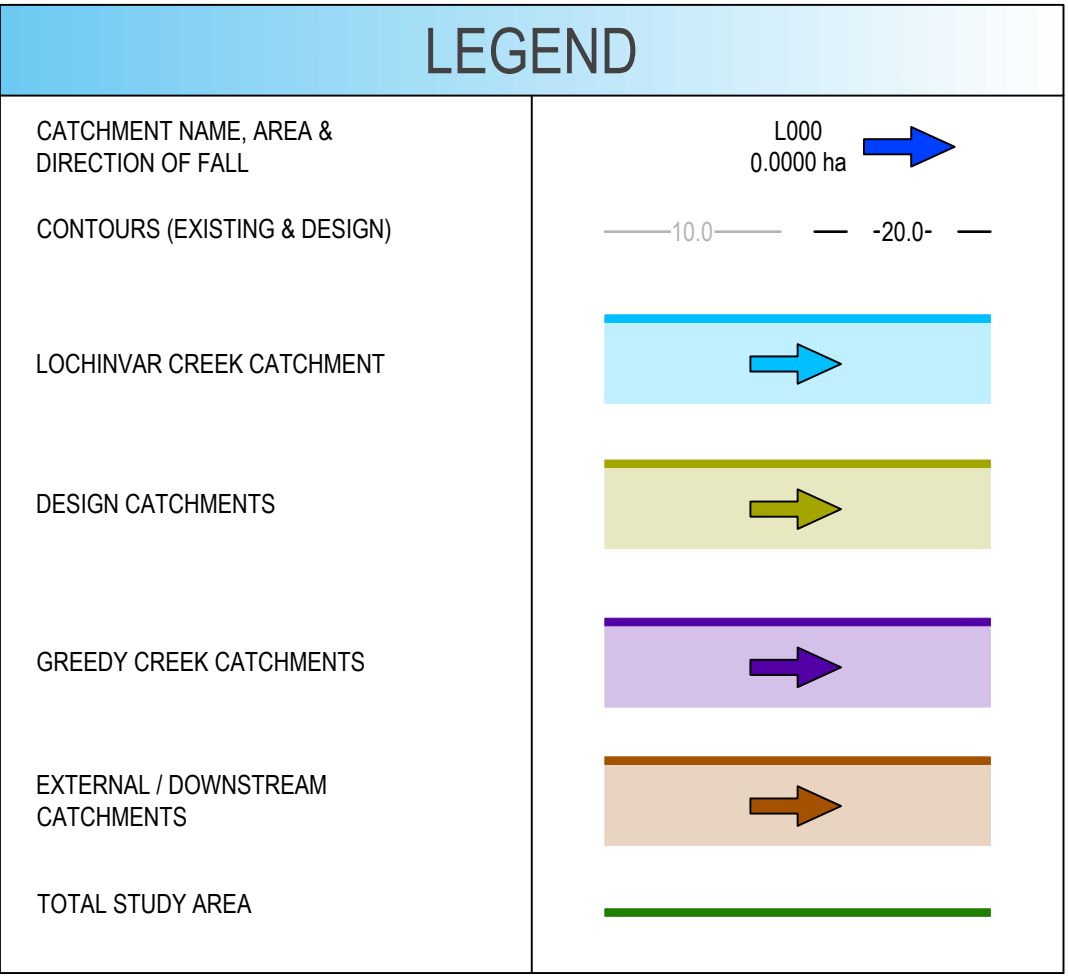
By:  **Orion Consulting**

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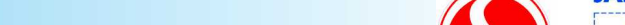
Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

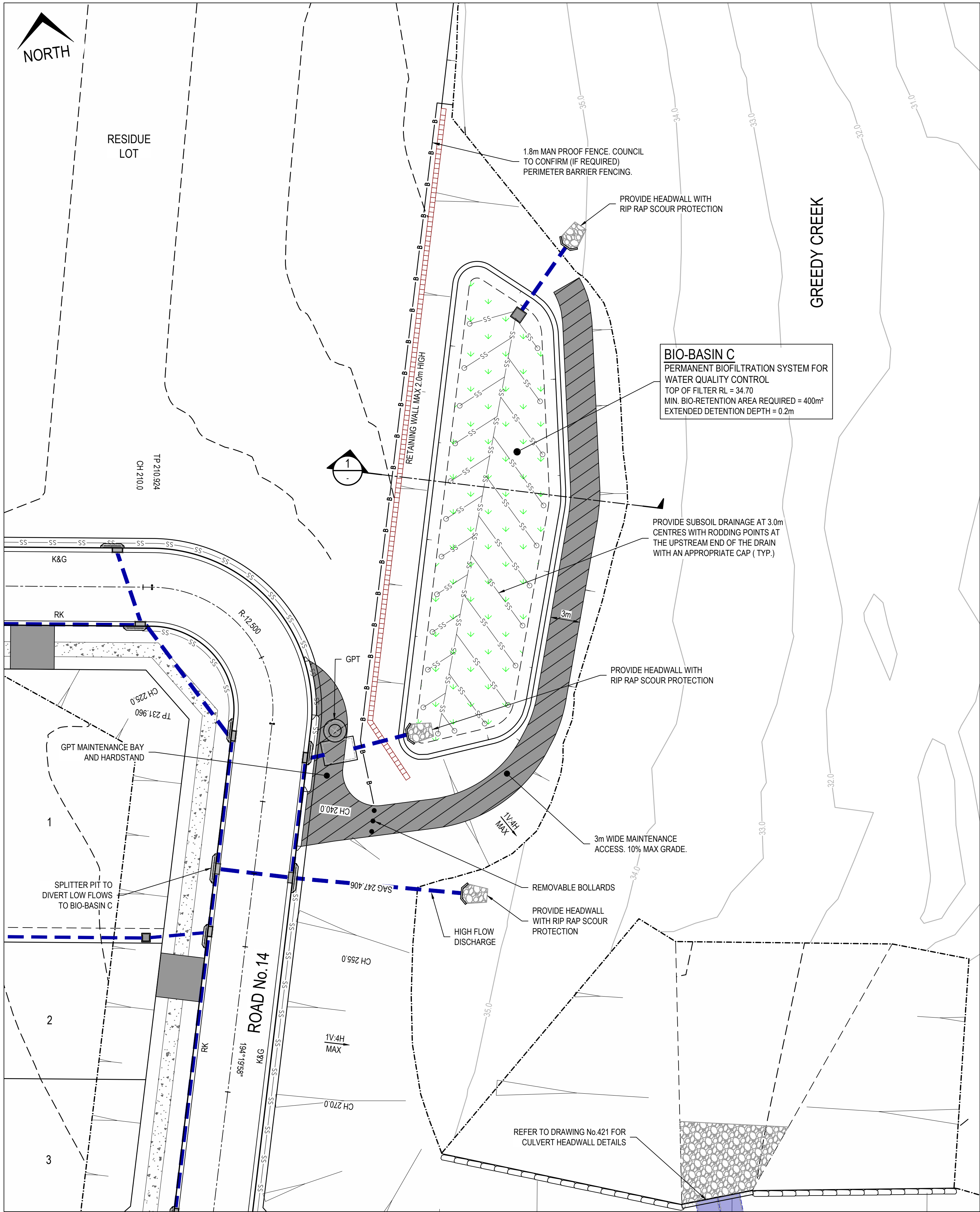
Title: POST DEVELOPMENT STORMWATER CATCHMENT PLAN				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 401	Revision C



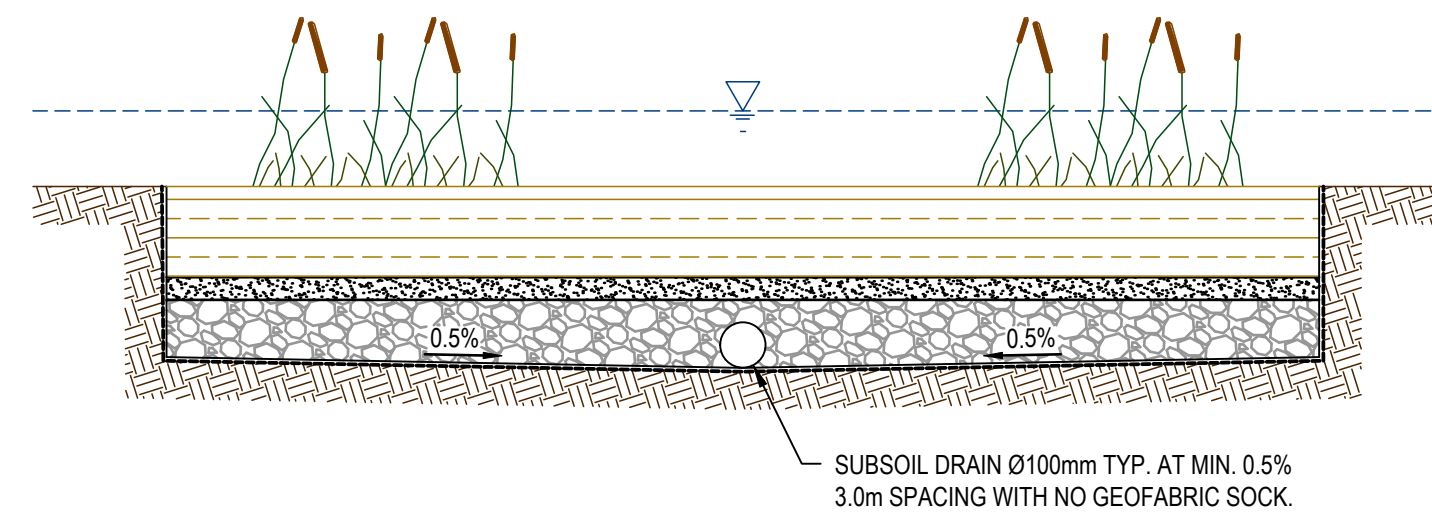
WBNM Pre - VS - Post Developed Flow Summary - STAGE 1 INTERIM OSD & CULVERT AFLUX CONTROL ONLY													
Event		Q _{PRE} L032 OUTLET	Q _{PRE} L052 OUTLET	Q _{PRE} L061 OUTLET	Q _{PRE} DS OUTLET	Q _{POST} L032 OUTLET	Q _{POST} L052 OUTLET	Q _{POST} L061 OUTLET	Q _{POST} DS OUTLET	QDIFF L032 OUTLET	QDIFF L052 OUTLET	QDIFF L061 OUTLET	QDIFF DS OUTLET
ARI	Duration (mins)	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s	cu.m/s
2	90	5.11	2.43	3.82	8.66	5.092	2.427	3.052	8.102	-0.02	0.00	-0.77	-0.55
2	120	5.97	2.74	4.30	10.26	5.944	2.74	3.636	9.67	-0.03	0.00	-0.66	-0.59
2	540	9.30	3.82	6.15	16.40	9.257	3.816	5.371	15.724	-0.04	0.00	-0.78	-0.68
5	90	9.41	4.32	6.80	15.95	9.369	4.316	5.586	14.946	-0.04	0.00	-1.22	-1.00
5	120	10.74	4.74	7.46	18.50	10.672	4.737	6.286	17.445	-0.07	0.00	-1.17	-1.06
5	540	14.19	5.68	9.21	25.12	14.111	5.675	8.09	24.06	-0.07	0.00	-1.12	-1.06
10	90	12.17	5.49	8.67	20.65	12.111	5.485	7.128	19.33	-0.06	0	-1.545	-1.323
10	120	13.80	5.95	9.45	23.74	13.722	5.952	7.914	22.37	-0.079	0	-1.531	-1.37
10	540	17.13	6.80	11.06	30.35	16.991	6.801	9.81	29.102	-0.134	0	-1.245	-1.252
20	90	16.04	7.11	11.27	27.28	15.942	7.107	9.298	25.498	-0.093	0	-1.972	-1.786
20	120	17.85	7.66	12.19	30.90	17.74	7.655	10.192	29.043	-0.113	0	-1.993	-1.861
20	540	21.01	8.29	13.49	37.29	20.782	8.293	12.412	35.961	-0.227	0	-1.08	-1.328
50	90	21.26	9.25	14.71	36.32	20.973	9.245	12.324	33.796	-0.286	0	-2.383	-2.526
50	120	23.31	9.83	15.68	40.59	22.99	9.832	13.376	38.19	-0.324	0	-2.308	-2.4
50	540	24.78	9.69	15.77	44.16	24.337	9.688	15.1	42.822	-0.438	0	-0.67	-1.336
100	90	25.57	11.02	17.53	43.80	24.857	11.015	14.923	40.526	-0.716	0	-2.607	-3.278
100	120	27.80	11.70	18.64	48.37	27.147	11.698	16.361	45.637	-0.653	0	-2.275	-2.736
100	540	28.67	11.18	18.21	51.14	28.05	11.183	17.676	49.506	-0.618	0	-0.531	-1.63

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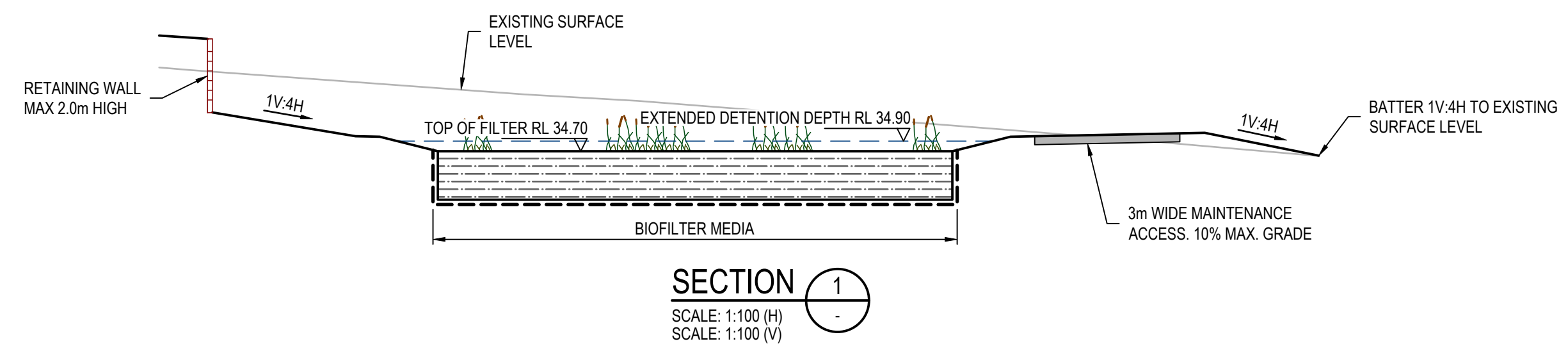
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C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION	C	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	C	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	Rev	Drawn	Design	Appd.	Date	Revision Description	Project No.	Set No.	Milestone	Plan	Revision																																									
A						B						E						19-0042						19-0042	03	DA	402	C																																									



BIO-BASIN C PLAN
SCALE 1:250



TYPICAL BIOFILTER MEDIA BED DETAIL
NOT TO SCALE

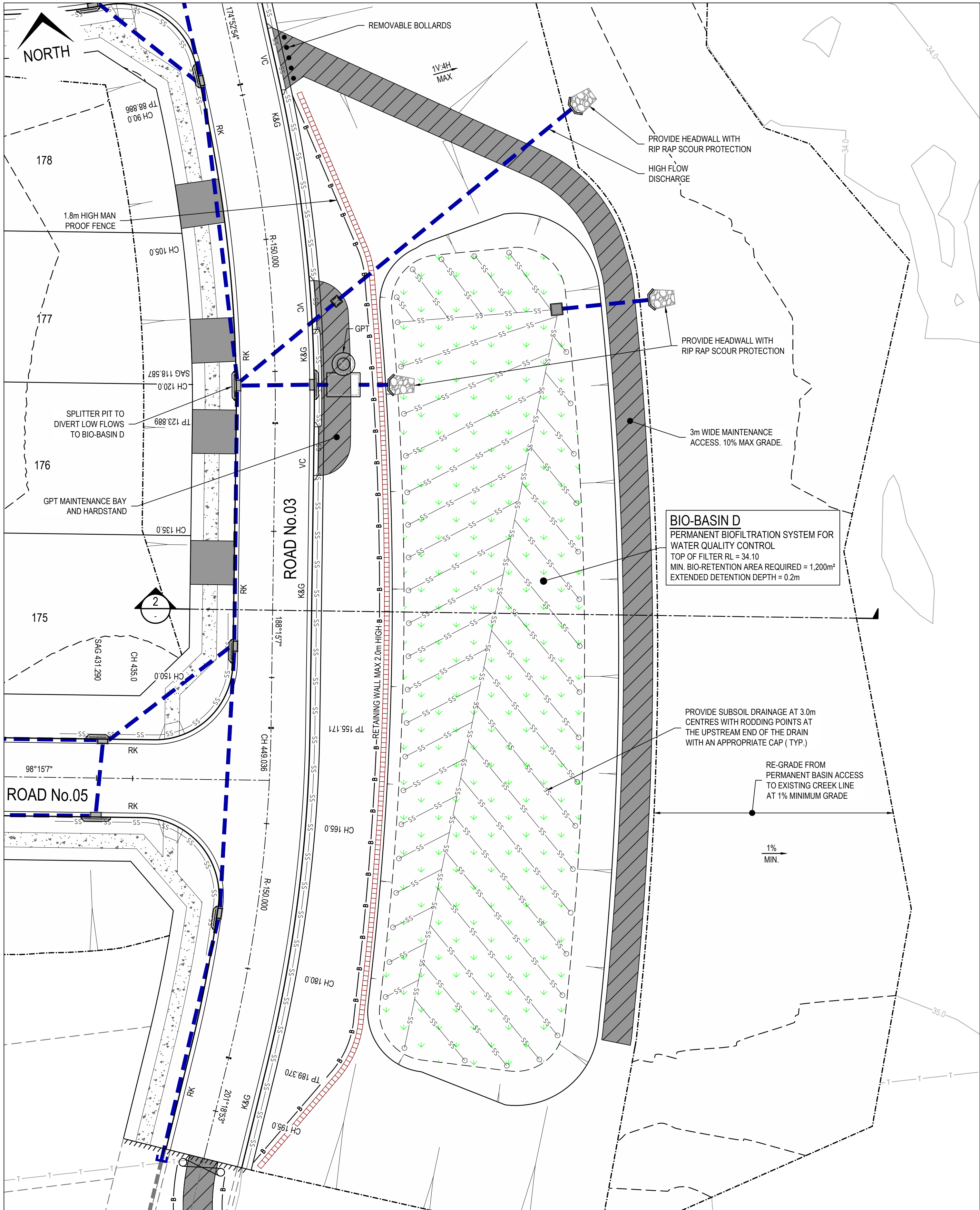


SECTION 1
SCALE: 1:100 (H)
SCALE: 1:100 (V)

LEGEND	
PROPOSED BIO-BASIN	
PROPOSED STORMWATER PIPE	
PROPOSED TEMPORARY STORMWATER PIPE	
PROPOSED DISCHARGE CONTROL PIT	
PROPOSED GPT	
PROPOSED 3m WIDE BASIN MAINTENANCE ACCESS	
PROPOSED 1.8m HIGH MAN PROOF FENCE	

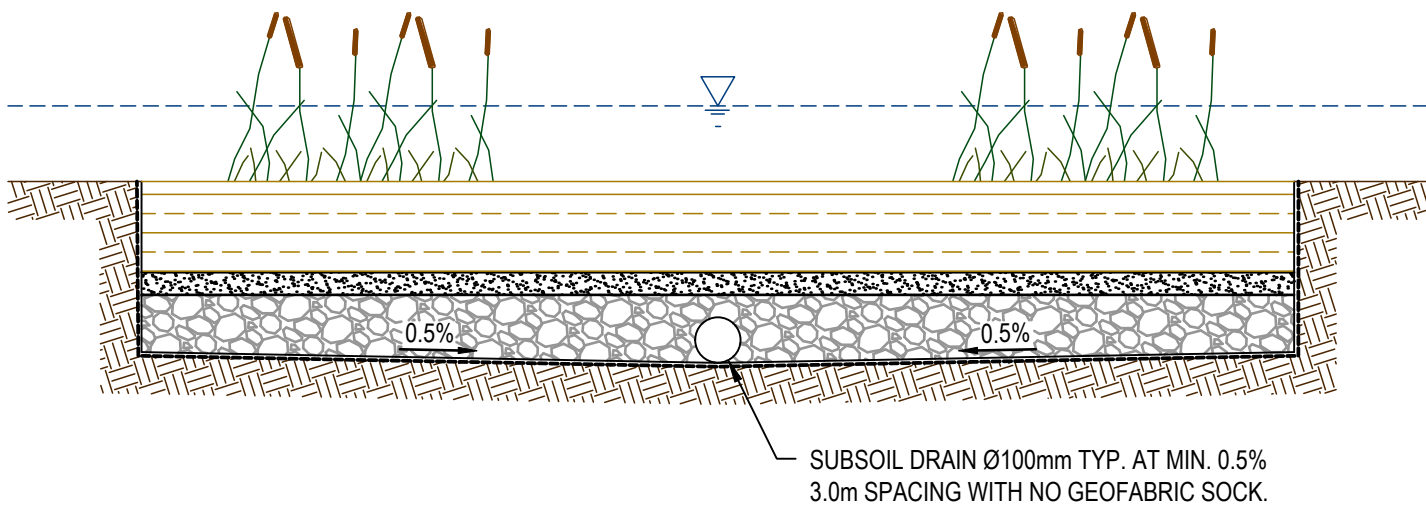
ISSUED FOR **DEVELOPMENT APPLICATION**
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						Disclaimer and Copyright: ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE. THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD	Scale: 02.557.51012.51517.52022.525 SCALE 1:250 (A1) 012345678910 SCALE 1:100 (A1) 02.557.51012.51517.52022.525 SCALE 1:500 (A3) 012345678910 SCALE 1:200 (A3)	For: The Bathla Group	By: SUSTAINABLE ISO 9001 JAS-ANZ REGISTERED ORION CONSULTING ENGINEERS PTY LTD ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au	Project: STAGE 1, 51, 134 & 146 STATION LANE, LOCHINVAR ROAD & DRAINAGE DESIGN	Title: BIOFILTRATION BASIN C PLAN, NOTES & DETAILS <table><tr><td>Project No</td><td>Set No.</td><td>Milestone</td><td>Plan</td><td>Revision</td></tr><tr><td>19-0042</td><td>03</td><td>DA</td><td>410</td><td>C</td></tr></table>					Project No	Set No.	Milestone	Plan	Revision	19-0042	03	DA	410	C
Project No	Set No.	Milestone	Plan	Revision																					
19-0042	03	DA	410	C																					

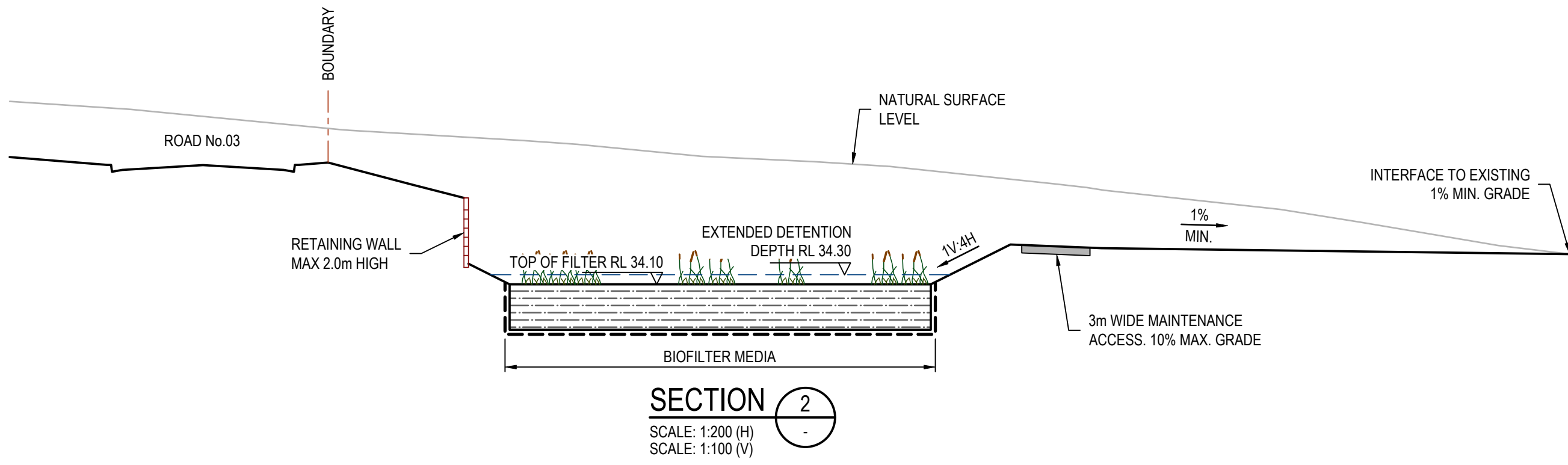


BIO-BASIN D PLAN
SCALE 1:250

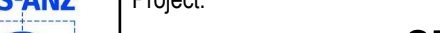
LEGEND	
PROPOSED BIO-BASIN	
PROPOSED STORMWATER PIPE	
PROPOSED TEMPORARY STORMWATER PIPE	
PROPOSED DISCHARGE CONTROL PIT	
PROPOSED GPT	
PROPOSED 3m WIDE BASIN MAINTENANCE ACCESS	
PROPOSED 1.8m HIGH MAN PROOF FENCE	

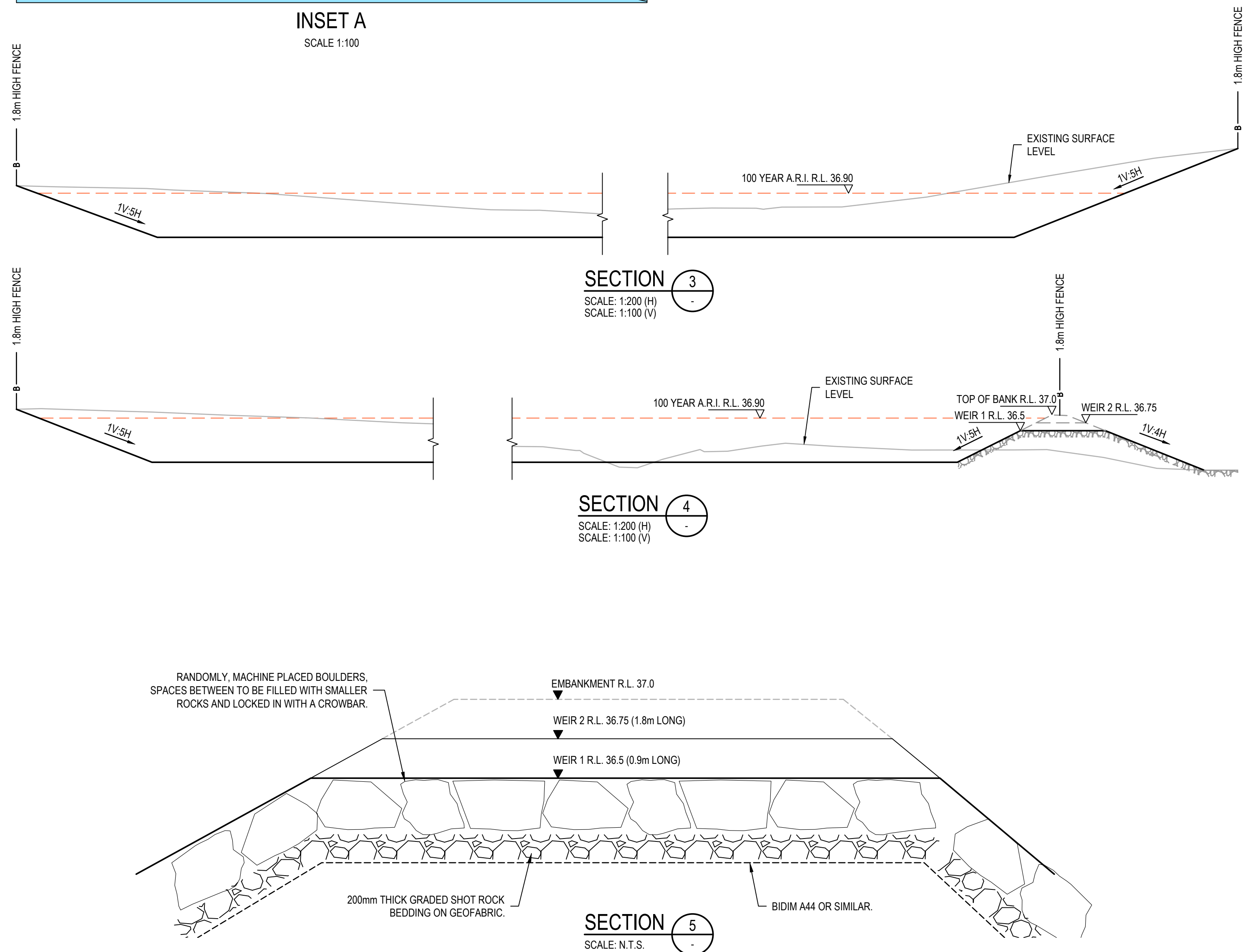
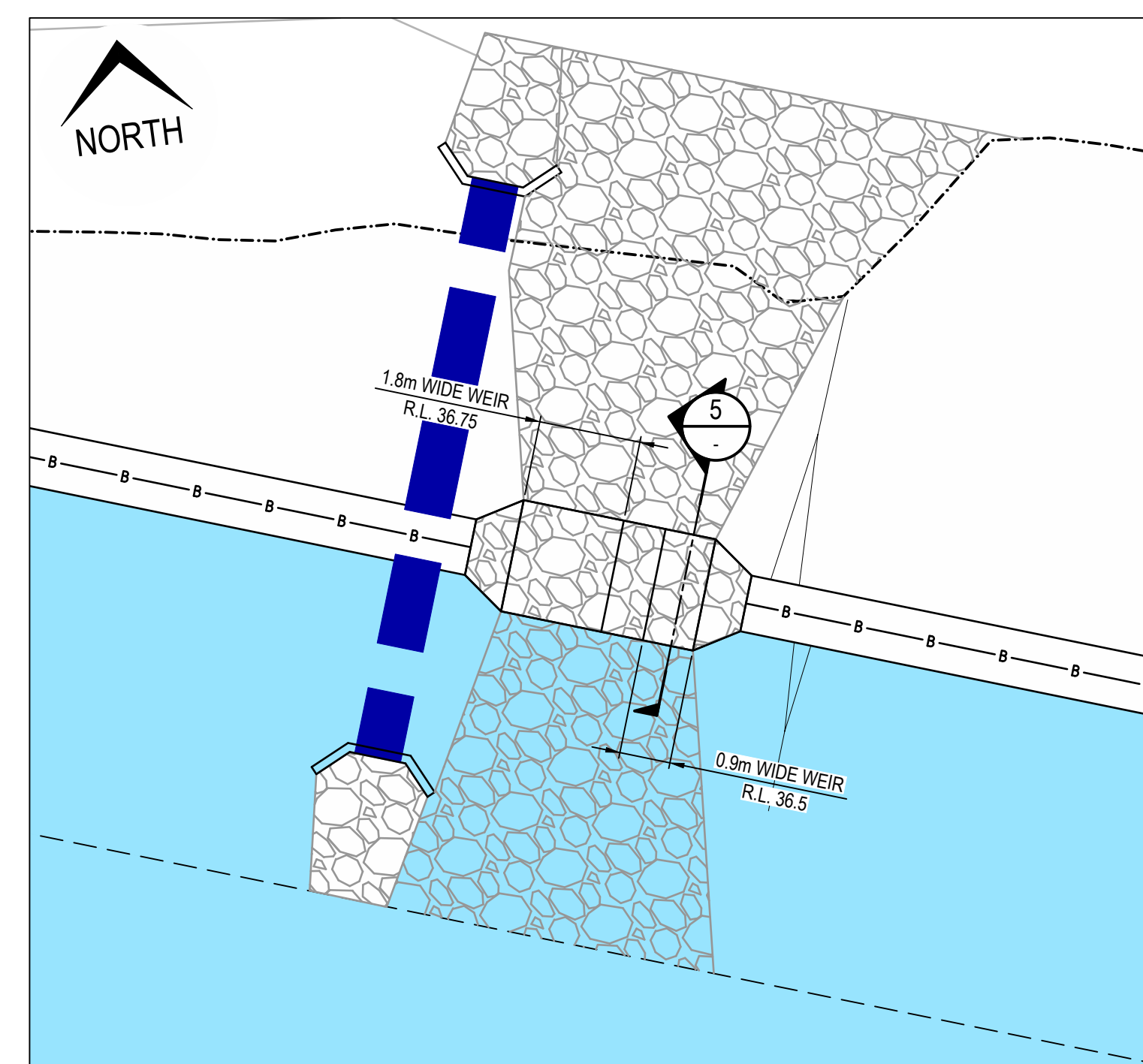
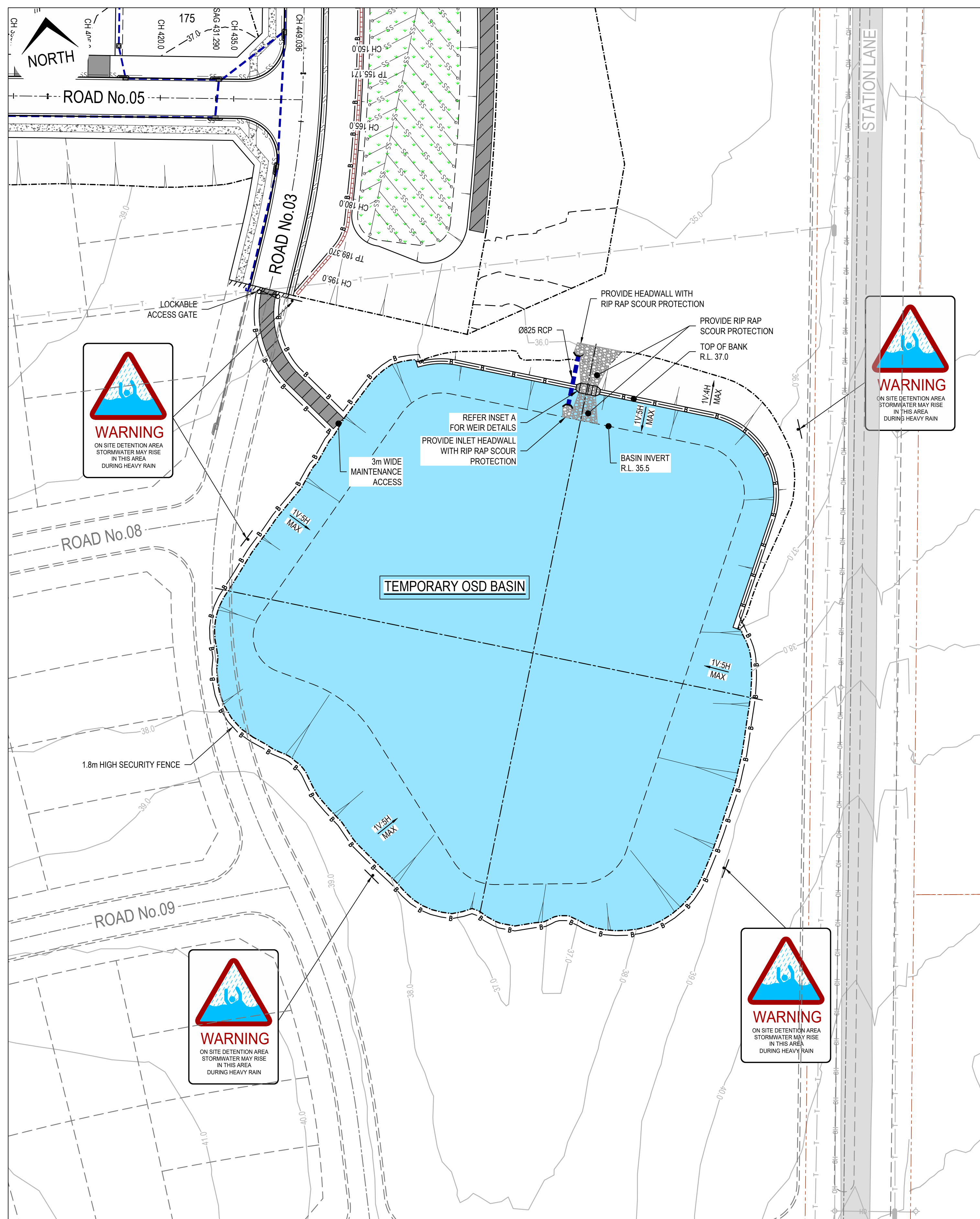


TYPICAL BIOFILTER MEDIA BED DETAIL
NOT TO SCALE

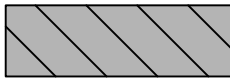


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C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION																																																											
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION																																																											
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION																																																											
Rev	Drawn	Design	Appd.	Date	Revision Description																																																											



LEGEND

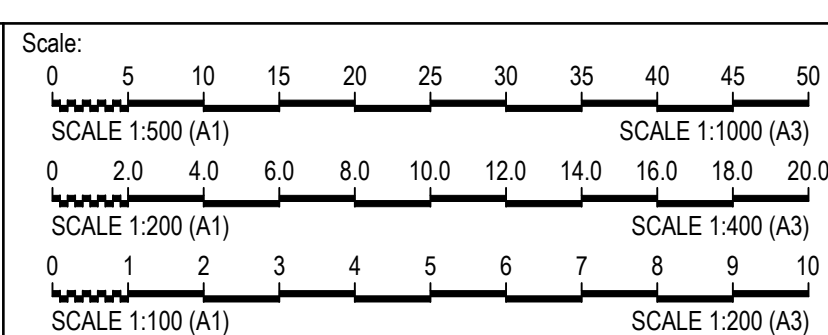
PROPOSED OSD	
PROPOSED STORMWATER PIPE	
PROPOSED 3m WIDE BASIN MAINTENANCE ACCESS	
PROPOSED 1.8m HIGH SECURITY FENCE WITH LOCKABLE ACCESS GATES	
STANDARD FLOODWAY WARNING SIGN AND MOUNTING BRACKET IN ACCORDANCE WITH COUNCIL STANDARD DRAWING.	

ISSUED FOR **DEVELOPMENT APPLICATION**
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Title:				
TEMPORARY OSD BASIN PLAN, NOTES & DETAILS				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	412	C

C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION	
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION	
Rev	Drawn	Design	Appd.	Date	Revision Description	

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For:  **The Bathla**
Group

By:  **Orion Consulting**

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:

STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title:				
TEMPORARY OSD BASIN PLAN, NOTES & DETAILS				
Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	412	C



LOT 29
DP 264380

LOT 28
DP 264380

LOT 27
DP 264380

LOT 26
DP 264380

LOT 25
DP 264380

LOT 22
DP 264380

LOT 21
DP 264380

ROAD No.10

ROAD No.10

ROAD No.16

ROAD No.11

ROAD No.12

ROAD No.13

ROAD No.17

TERRIERE

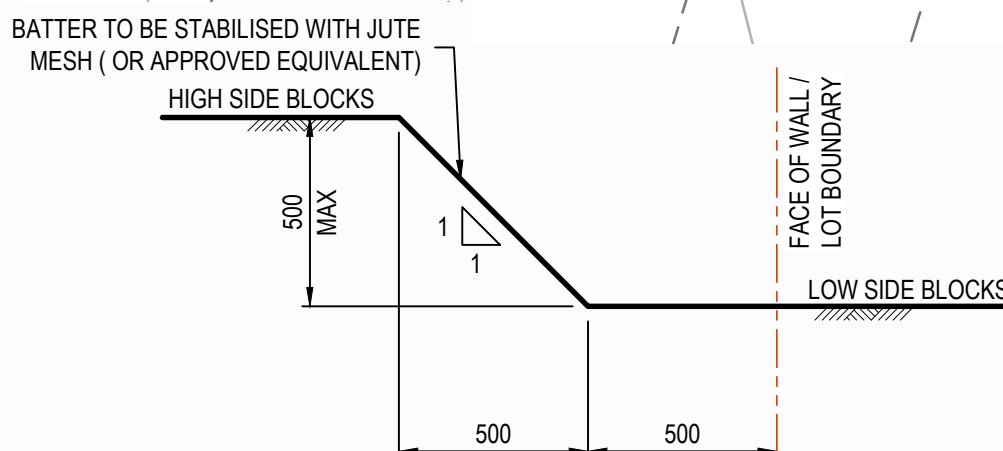
DRIVE

TERRIERE

DRIVE

ROAD No.23

ROAD No.01



TYPICAL SIDE BOUNDARY 1V:1H BATTER

SCALE 1:20

LEGEND

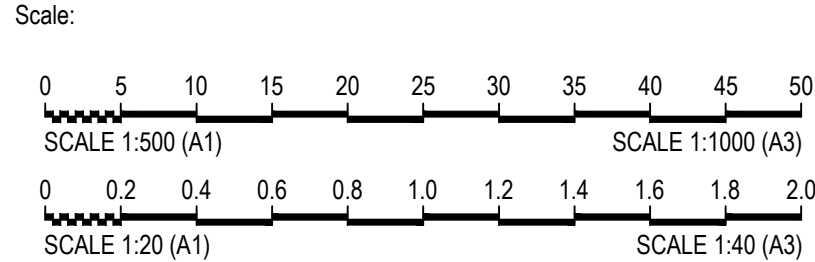
RETAINING WALL	
1V:5H BATTER (10m WIDE)	
1V:8H BATTER (5m WIDE)	
1V:10H BATTER (5m WIDE)	
STANDARD LOT BENCHING BATTER	
MAX HEIGHT 0.5m AT 1V:1H (TYP.)	
LOT BENCH MAX 0.5m (REFER TO DETAIL)	

FOR CONTINUATION REFER TO DRAWING No.501

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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CORPORATION
ISO 9001

JAS-ANZ
REGISTERED

Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

Title: RETAINING WALL & LOT BENCHING PLAN SHEET 01 OF 04				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 500	Revision C



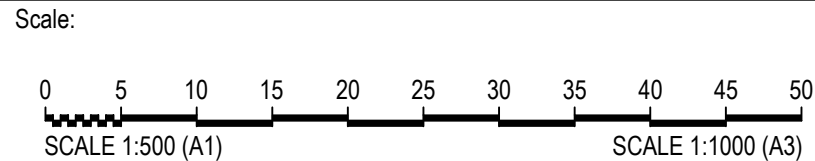
LEGEND

RETAINING WALL	
1V:5H BATTER (10m WIDE)	
1V:8H BATTER (5m WIDE)	
1V:10H BATTER (5m WIDE)	
STANDARD LOT BENCHING BATTER	
MAX HEIGHT 0.5m AT 1V:1H (TYP.)	
LOT BENCH MAX 0.5m (REFER TO DWG No.500)	

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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By:

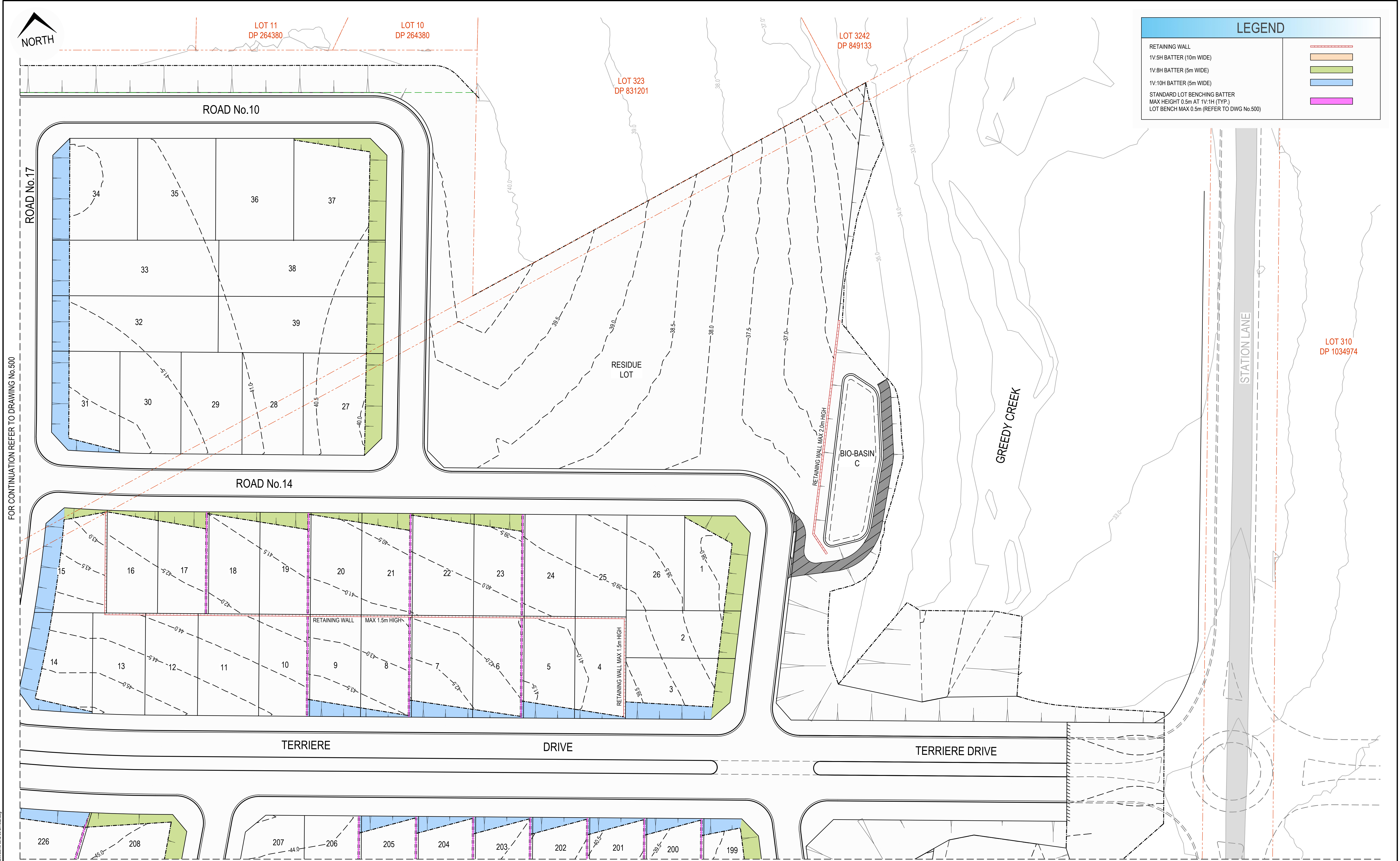
**Orion Consulting**

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Project: **STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN**

Title: RETAINING WALL & LOT BENCHING PLAN SHEET 02 OF 04				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 501	Revision C



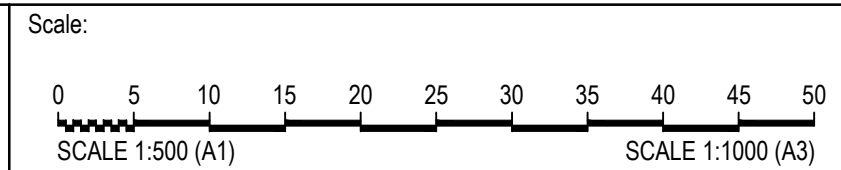
FOR CONTINUATION REFER TO DRAWING No.500

FOR CONTINUATION REFER TO DRAWING No.503

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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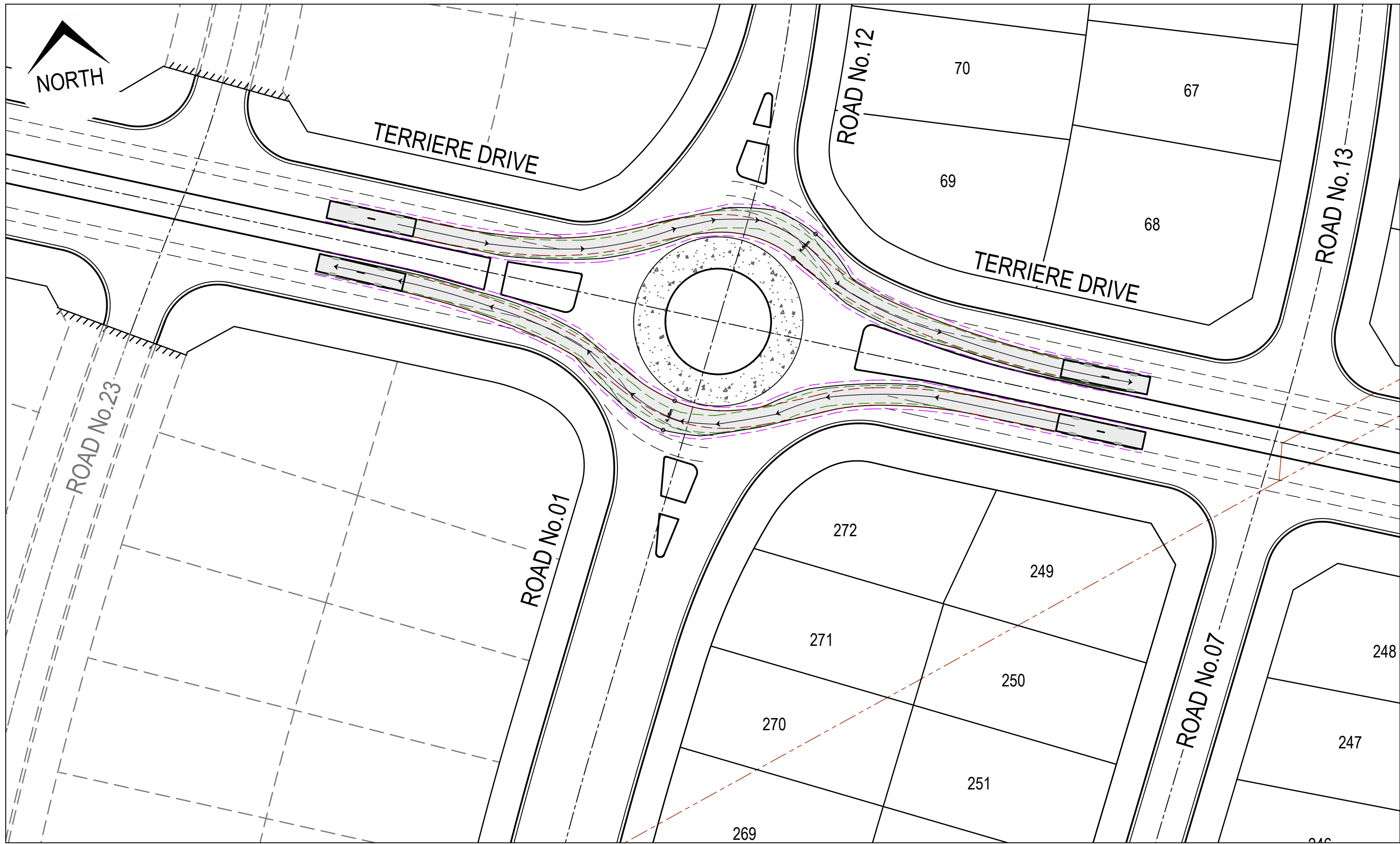
Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: RETAINING WALL & LOT BENCHING PLAN SHEET 03 OF 04				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 502	Revision C

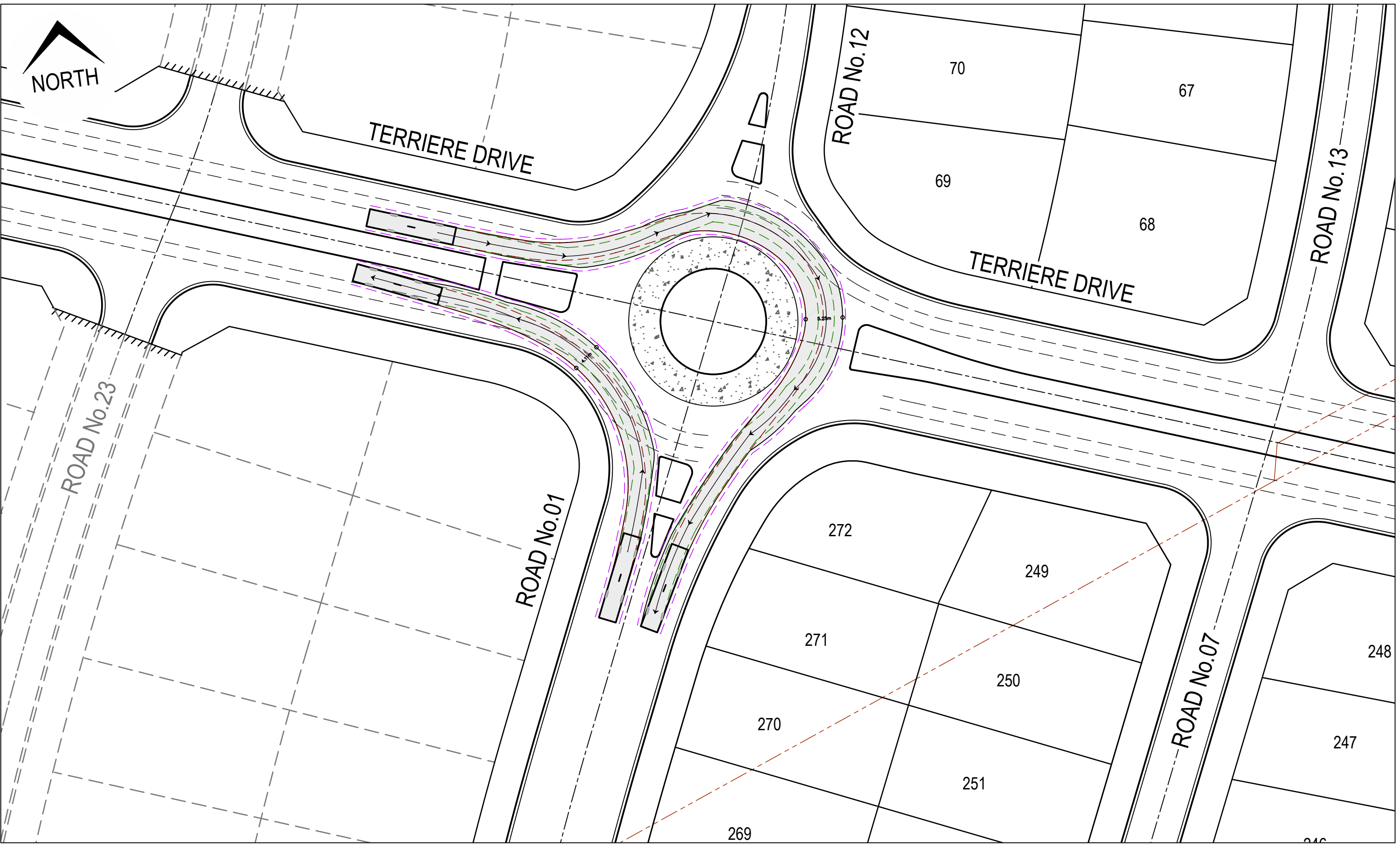


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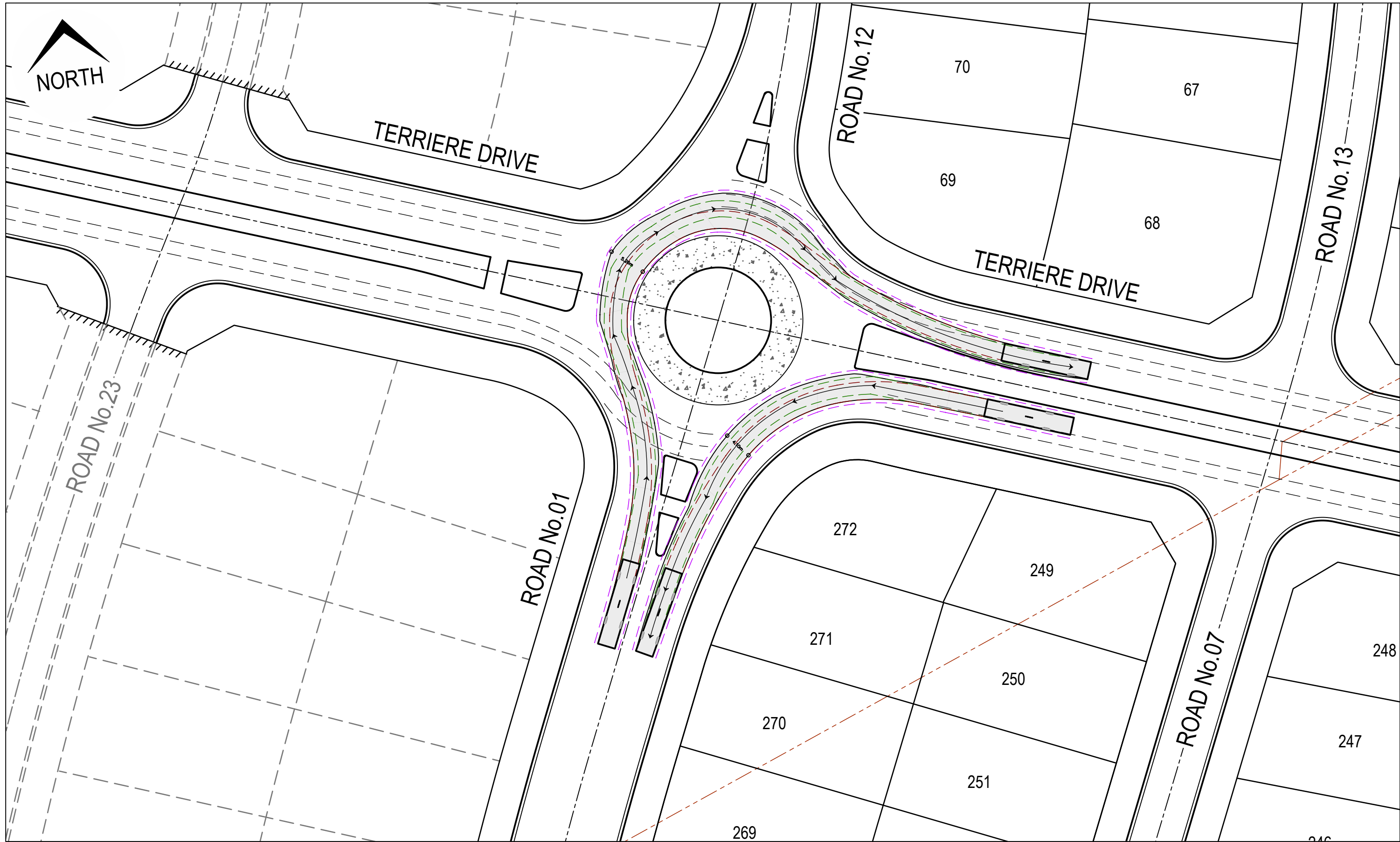
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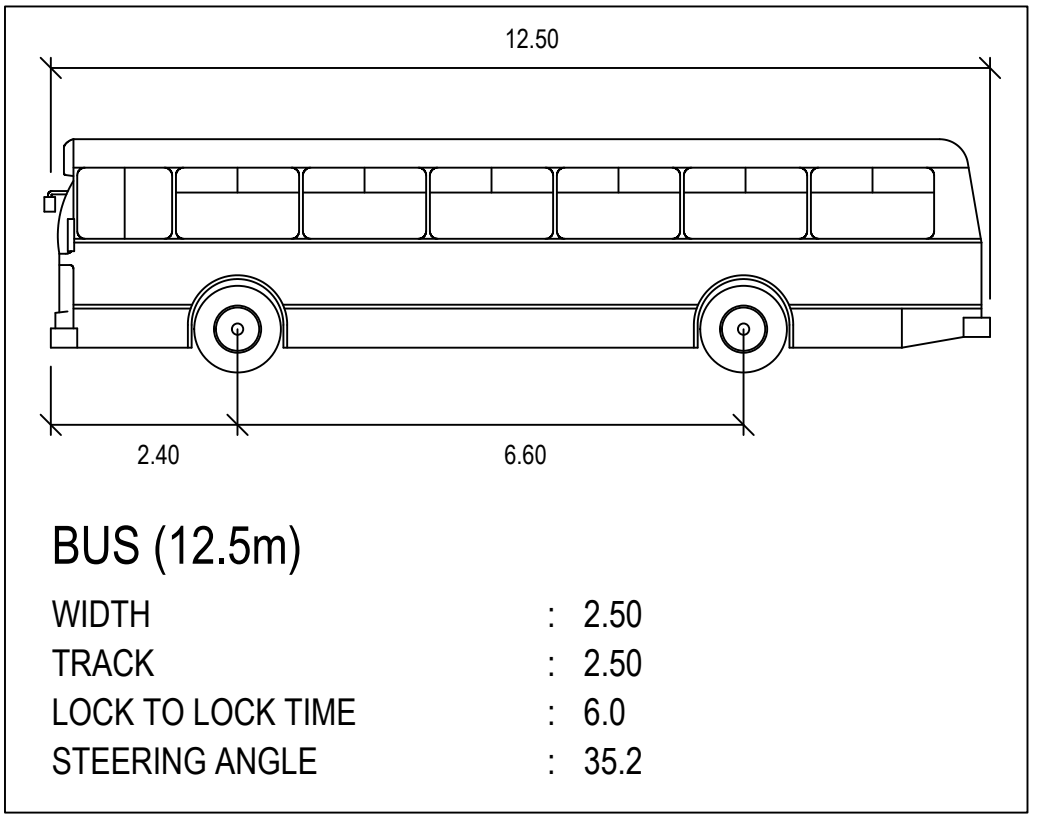
VEHICLE TURNPATH PLAN - TRUCK/BUS (12.5m)
SCALE 1:500



VEHICLE TURNPATH PLAN - TRUCK/BUS (12.5m)
SCALE 1:500



VEHICLE TURNPATH PLAN - TRUCK/BUS (12.5m)
SCALE 1:500

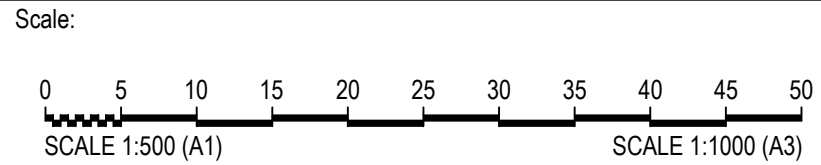


LEGEND	
DENOTES FRONT WHEEL TRACK	-----
DENOTES REAR WHEEL TRACK	-----
DENOTES VEHICLE BODY CLEARANCE	-----
DENOTES VEHICLE BODY	

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
B	CS	CS	MP	17/11/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	CS	MP	04/11/2020	ISSUED FOR DEVELOPMENT APPLICATION

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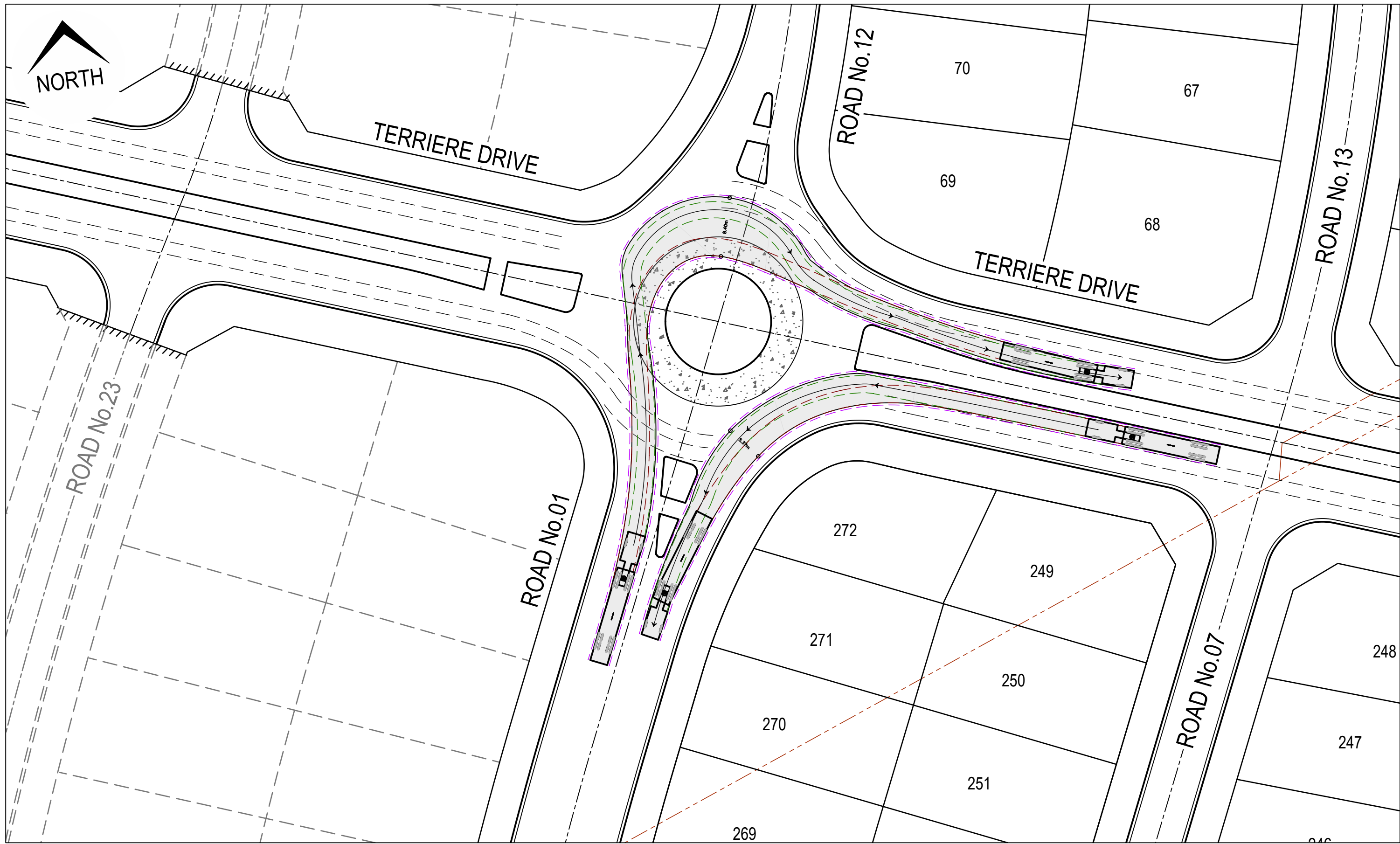


By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

For: JAS-ANZ
SUSTAINABLE CORPORATION
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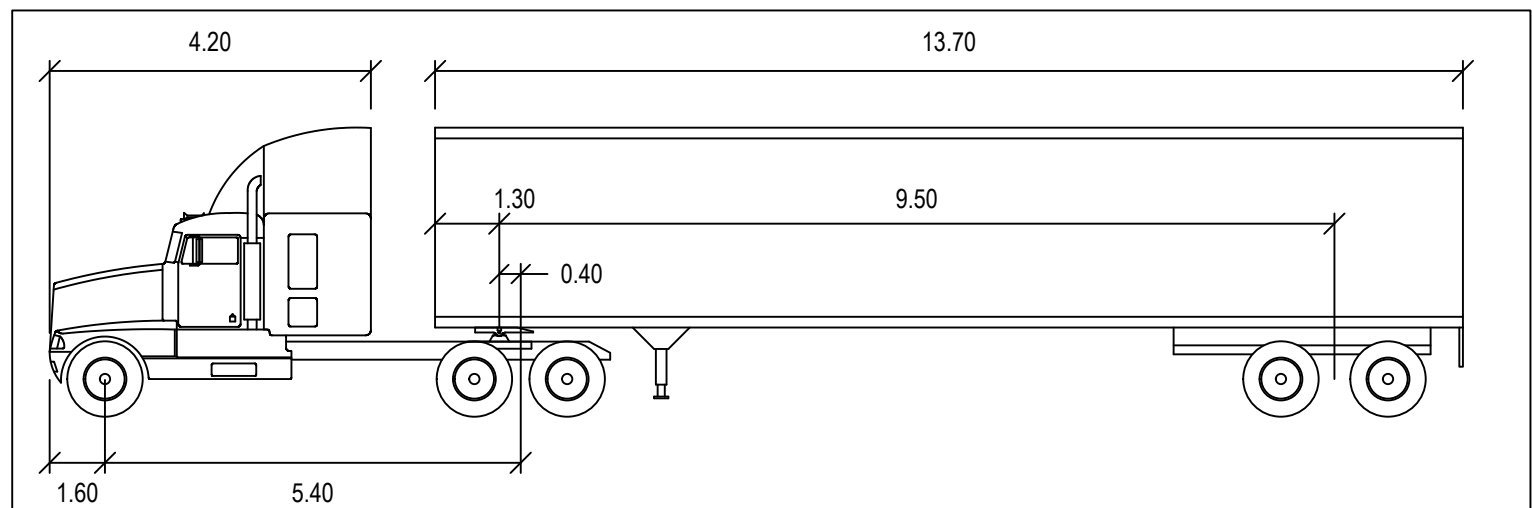
Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: ROUNDABOUT VEHICLE TURNING PATH PLAN SHEET 01 OF 02				
Project No. 19-0042	Set No. 03	Milestone DA	Plan 600	Revision C



VEHICLE TURNPATH PLAN - PRIME MOVER AND SEMI-TRAILER (19m)

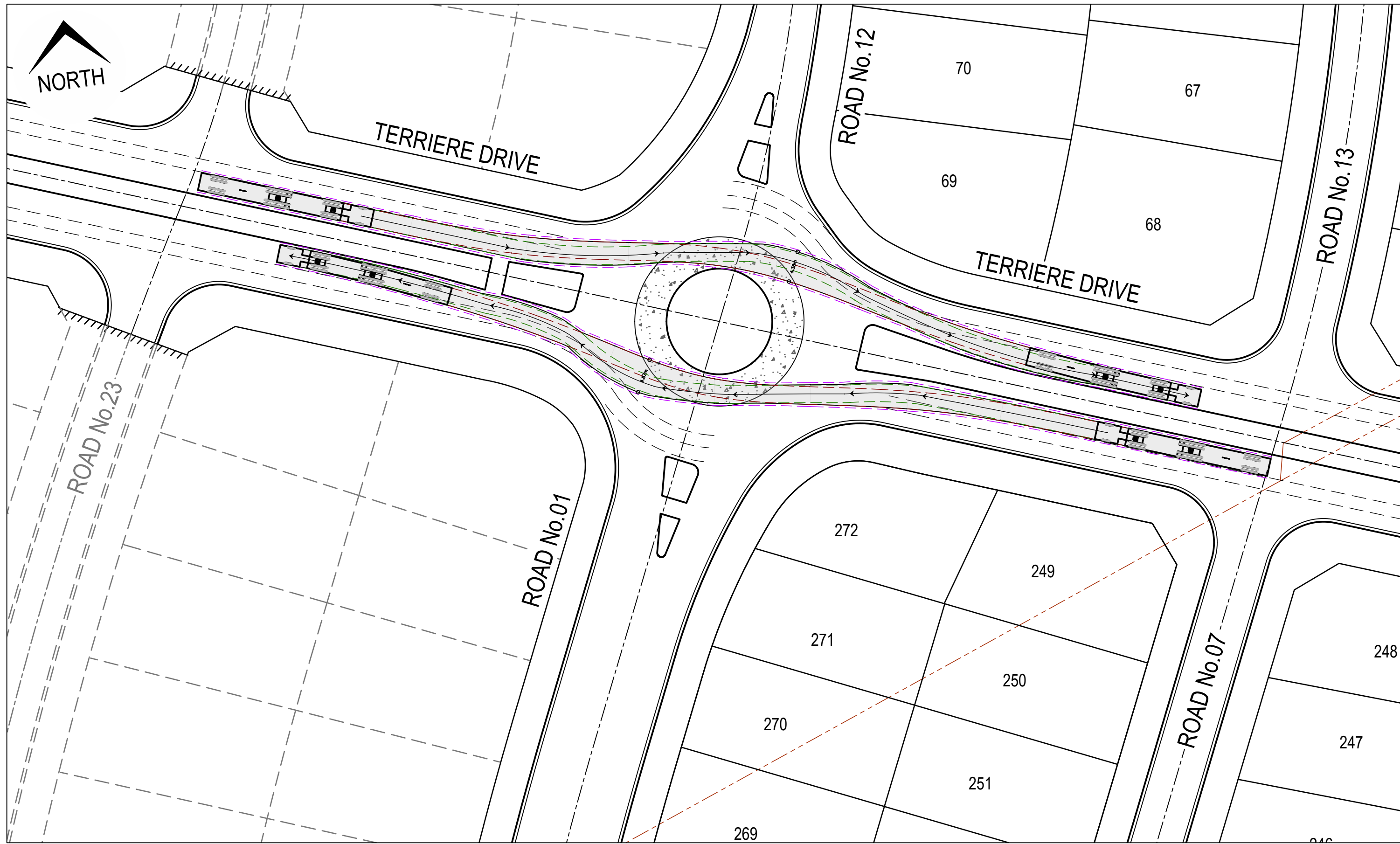
SCALE 1:500



SEMI TRAILER (19m)

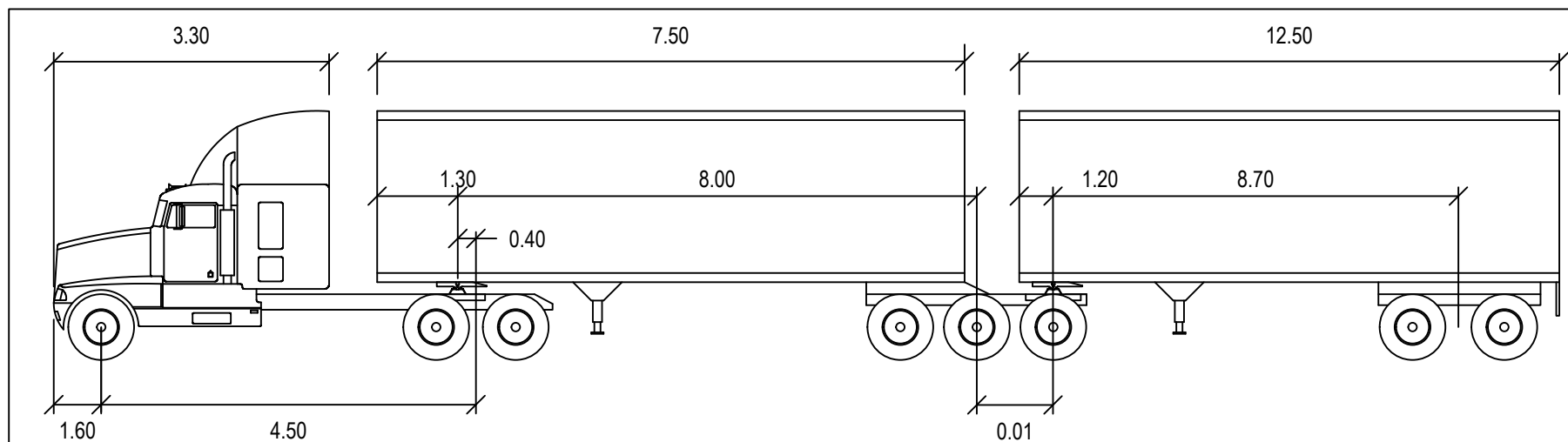
METERS

TRACTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 28.4
TRACTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		



VEHICLE TURNPATH PLAN - B-DOUBLE (25m)

SCALE 1:500



B-DOUBLE (25m)

METERS

TRACTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 23.5
TRACTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

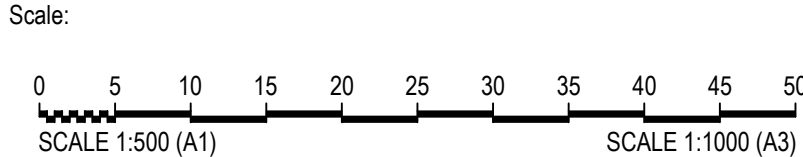
LEGEND

DENOTES FRONT WHEEL TRACK	---
DENOTES REAR WHEEL TRACK	---
DENOTES VEHICLE BODY CLEARANCE	---
DENOTES VEHICLE BODY	---

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	PZ/AP	CS/AP	JM	09/07/2021	ISSUED FOR DEVELOPMENT APPLICATION
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Project: STAGE 1,
51, 134 & 146 STATION LANE,
LOCHINVAR
ROAD & DRAINAGE DESIGN

Title: ROUNDABOUT VEHICLE
TURNING PATH PLAN
SHEET 02 OF 02

Project No.	Set No.	Milestone	Plan	Revision
19-0042	03	DA	601	C