

REDBANK, NORTH RICHMOND RIDGETOPS 1 PROPOSED CIVIL WORKS FOR SUBDIVISION WORKS CERTIFICATE (HAWKESBURY CITY COUNCIL - DA0498/18)



LOCALITY SKETCH

Survey By:
VINCE MORGAN SURVEYORS

REGISTERED SURVEYORS
1/77 UNION ROAD PENRITH NSW 2750
Ph. (02) 4721 5293

REF: NORTH RICHMOND - DETAIL SURVEY UPDATE 15 MARCH 2017 & 5th MAY 2017, 11 DEC 2019
LOT LAYOUT PLAN OF SUBDIVISION REF: 22a-REDBANK-PRO-DP1266750-PLAN-DRAFT-201203

WORK AS EXECUTED SHOWN IN RED
SIGNATURE.....*PR*.....
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
Date of Issue..... 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367
These plans/specifications form part of the certificate issued 11/05/2022

Plotted: 5 May 2022 11:00:15 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3000.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
COVER SHEET**

PROJECT No: **110185-12**
SHEET No: **CC3000**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3000 **A**

LEGEND			
DESCRIPTION	PROPOSED	EXISTING	FUTURE
EXTENT OF WORKS	■■■■■■■■		
KERB & GUTTER	KG	=====	-----
ROLL KERB		=====	-----
KERB ONLY		=====	-----
GUIDE POSTS	●●●●●●●●	○○○○○○○○○○	
CONTOURS	---46.0---	---47.0---	
CATCH DRAIN	→→→→→		
STORMWATER DRAINAGE LINE AND PIT	---		
GROSS POLLUTANT TRAP	GPT ●		
1:100YR ARI FLOW PATH	→		
TREES TO BE PROTECTED			
TREES TO BE REMOVED			
TRANSMISSION LINE POWER POLES			
ELECTRICITY, POWER POLE		—OE—OE—OE—OE—	
WATERMAIN		—W—W—W—W—	
CONCRETE PANELS RETAINING WALLS	=====	=====	
SANDSTONE RETAINING WALLS			
STREET NAME SIGN	↓ SP	↓ EX SP	
SEWER	—S—S—S—		

WORK AS EXECUTED SHOWN IN RED

SIGNATURE.....*PR*.....

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GENERAL NOTES

- ALL WORKS ARE TO BE IN ACCORDANCE WITH HAWKESBURY CITY COUNCIL'S DEVELOPMENT CONTROL PLAN 2009, APPENDIX E "CIVIL WORKS SPECIFICATIONS", PART I, II & III.
- EXISTING SURVEY MARKS SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
- THE CONTRACTOR MUST OBTAIN CURRENT DIAL BEFORE YOU DIG UTILITIES PLAN BY DIALING PH 1100, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION, AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.
- THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS, PROVIDED BY PRINCIPAL.
- THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
- FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE, ORGANIC MATTER AND OTHER DEBRIS. PLACING OF FILLING ON THE PREPARED AREAS SHALL NOT COMMENCE UNTIL THE APPROVAL TO DO SO HAS BEEN OBTAINED FROM THE COUNCIL.
- SITE FILL AREAS - THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- ALL SITE FILLING TO BE COMPACTED TO 98% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY IN ACCORDANCE WITH COUNCIL'S DEVELOPMENT CONTROL PLAN 2009, APPENDIX E "CIVIL WORKS SPECIFICATIONS" PART II
- ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS' REQUIREMENTS.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
- VEHICULAR CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER WHERE SHOWN.
- PRAM CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING.
- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
- DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.
- ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS.
- NO FILL MATERIAL IS TO BE IMPORTED TO THE SITE. EXISTING STOCKPILES AND MATERIAL WITHIN THE REDBANK SITE ARE TO BE USED FOR THE EARTHWORKS.

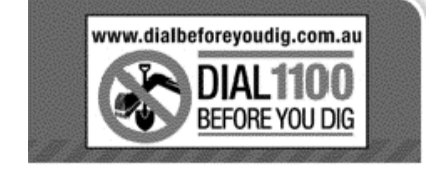
STORMWATER NOTES

- STORMWATER DESIGN CRITERIA:
AVERAGE RECURRENCE INTERVAL:
1:100 MAJOR SYSTEM
1:5 MINOR SYSTEM
- ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500.3.1 (1998) AND AS/NZS 3500.3.2 (1998).
- CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- GRATES AND COVERS SHALL CONFORM TO AS 3996.
- AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- ALL DRAINAGE LINES THROUGH LOTS SHALL BE CONTAINED WITHIN THE FOLLOWING EASEMENTS: -
a) 1.2m WIDE FOR PIPELINE < 225Ø TO BE CREATED, OR GREATER AS MARKED UP ON PLAN.
b) 2.5m WIDE FOR PIPELINE ≥ 300Ø TO BE CREATED
c) STREET DRAINS - REFER TO COUNCIL'S DESIGN GUIDELINES SUBDIVISION/ DEVELOPMENTS.
- DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND AND HAVE 3m OF SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS. FOR PIPELINES GREATER THAN 525Ø, SUBSOIL DRAIN SHALL BE PROVIDED ON BOTH SIDES OF THE TRENCH.
- ALL STORMWATER PIPES WITHIN ROADS TO BE REINFORCED CONCRETE PIPE (RRJ) CLASS 2 UNLESS OTHERWISE INDICATED.
- ALL INTERALLOTMENT DRAINAGE LINES SHALL BE LAID AT A MINIMUM GRADE OF 1% UNLESS OTHERWISE INDICATED.
- DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS.
- STEP IRONS REQUIRED WHERE THE PIT EXCEEDS 1200 IN DEPTH. REFER TO COUNCIL DRAWING SD41
- WHERE GRADES EXCEED 14.0%, BULKHEADS TO BE PROVIDED IN ACCORDANCE WITH SECTION 5.12 OF COUNCIL'S CIVIL WORKS SPECIFICATION PART 2 CONSTRUCTION.
- SUBSOIL DRAIN TO BE RUN BOTH SIDE OF ROAD WITH CAPPED FLUSH POINTS AND CONNECTED TO NEAREST STORMWATER PIT.
- ALL PIT GRATES TO HAVE LOCKING CLIP.
- ALL STORMWATER PIPES WITHIN THE ROAD RESERVE AND OPEN SPACE TO BE INSTALLED TO H33 STANDARD IN ACCORDANCE WITH AS3725 - DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES.
- BACKFILL OF ALL TRENCHES INCLUDING SEWER THAT IS WITHIN THE ZONE OF INFLUENCE OF THE PAVEMENT SHALL BE STABILISED SAND OR SUITABLE BACKFILL COMPACTED 98% STANDARD.

COMPACTION SPECIFICATION

- WITHIN FULL WIDTH OF ROAD CARRIAGEWAY PLUS 1.0m EITHER SIDE -
a) ALL SUBGRADE SHALL BE CARRIED UP IN HORIZONTAL LAYERS, OF NOT MORE THAN 300mm THICK LOOSE MEASUREMENT, IF REQUIRED, AND SHALL HAVE EACH LAYER COMPACTED TO A 100% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 "COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO".
b) ALL SUB-BASE COURSE SHALL BE PLACED AND COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 "COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO".
c) ALL BASE COURSE SHALL BE PLACED AND COMPACTED TO AT LEAST 98% MODIFIED DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS 1289 5.4.1-2007 "COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO".
d) ALL ROAD CROSSINGS TO BE PROVIDED IN EXISTING ROADS, THE TRENCHES SHALL BE BACKFILLED AND COMPACTED WITH A SAND/CEMENT BLEND 20:1 MIX TO SUBGRADE LEVEL, THEN DGB20 TO WITHIN 50MM OF THE ROAD SURFACE, OR IF REQUIRED TO A HIGHER SPECIFICATION BY A SPECIFIC UTILITY AUTHORITY, TO THAT SPECIFICATION AS INSTRUCTED BY THE PROJECT SUPERINTENDENT.
e) ALL TESTS TO BE TAKEN EVERY 50 METRE LENGTH OF PAVEMENT, TAKEN 1.0m FROM ALTERNATE SIDES OF PAVEMENT, BY A NATA REGISTERED LABORATORY.
f) THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP APPENDIX E CIVIL WORKS SPECIFICATION PART II - CONSTRUCTION SPECIFICATION.
g) ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.
h) ANY FILL MATERIAL SHALL COMPRISE UNCONTAMINATED VIRGIN EXCAVATED NATURAL MATERIAL (VENM) OR EXCAVATED NATURAL MATERIAL (ENM).
- WITHIN FULL WIDTH OF ROAD FOOTPATH / VERGE EXCLUDING 1.0m BESIDE ROAD CARRIAGEWAY EITHER SIDE -
a) ALL FILL SHALL BE CARRIED OUT IN HORIZONTAL LAYERS, EXTENDING THE FULL WIDTH OF THE AREA BEING FILLED, OF NOT MORE THAN 300mm CONSOLIDATED THICKNESS. EACH LAYER SHALL BE COMPACTED TO AT LEAST 98% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS1289 5.4.1-2007 "COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO".
b) ALL TESTS TO BE TAKEN EVERY 50 METRE LENGTH OF ROAD FOOTPATH / VERGE ON CENTRELINE, BY A NATA REGISTERED LABORATORY.
c) ALL TRENCHES TO BE BACKFILLED TO HAVE EQUAL COMPACTION (+2%/-0% VRAIATION) AS THE SURROUNDING ROAD FOOTPATH / VERGE.
d) ALL TRENCH TESTS TO BE TAKEN IN EACH 300mm LAYER AND EVERY 50 METRES OF TRENCH, BY A NATA REGISTERED LABORATORY.
e) THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP APPENDIX E CIVIL WORKS SPECIFICATION PART II - CONSTRUCTION SPECIFICATION.
f) ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.
g) ANY FILL MATERIAL SHALL COMPRISE UNCONTAMINATED VIRGIN EXCAVATED NATURAL MATERIAL (VENM) OR EXCAVATED NATURAL MATERIAL (ENM).
- WITHIN LOTS -
a) ALL FILL SHALL BE CARRIED OUT IN HORIZONTAL LAYERS, EXTENDING THE FULL WIDTH OF THE AREA BEING FILLED, OF NOT MORE THAN 300mm CONSOLIDATED THICKNESS. EACH LAYER SHALL BE COMPACTED TO A DENSITY OF AT LEAST 98% STANDARD DRY DENSITY RATIO DETERMINED IN ACCORDANCE WITH AS1289 5.4.1-2007 "COMPACTION CONTROL TEST - DRY DENSITY RATIO, MOISTURE VARIATION AND MOISTURE RATIO".
b) THE DEPTHS OF FILL AND THE COMPACTION THEREOF ARE TO BE VERIFIED BY THE SUBMISSION OF COMPACTION CERTIFICATES AND A PLAN SHOWING CONTOURED DEPTHS OF FILL IN RELATION TO LOT BOUNDARIES.
c) ALL TESTS TO BE A MINIMUM OF TWO COMPACTION TESTS PER LOT PER LAYER ARE TO BE CARRIED OUT, BY A NATA REGISTERED LABORATORY.
d) ALL TRENCHES TO BE BACKFILLED TO HAVE EQUAL COMPACTION (+2%/-0% VARIATION) AS THE SURROUNDING LOTS.
e) ALL TRENCH TESTS TO BE TAKEN IN EACH 300mm LAYER AND EVERY 50 METRES OF TRENCH, BY A NATA REGISTERED LABORATORY.
f) THESE AND ALL OTHER REQUIREMENTS TO BE COMPLIED WITH, TO BE READ IN CONJUNCTION WITH HAWKESBURY CITY COUNCIL DCP APPENDIX E CIVIL WORKS SPECIFICATION PART II - CONSTRUCTION SPECIFICATION.
g) ANY ERRORS, OMISSIONS OR QUERIES TO BE SUBMITTED TO THE PROJECT SUPERINTENDENT FOR INSTRUCTION.
- EARTHWORKS AND SITE PREPARATION TO BE UNDERTAKEN IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GEOTECHNIQUE, REFERENCE 12261/31-AA DATED 4 DECEMBER 2020.
- TOPSOIL
ALL TOPOSIL ON THE SITE MUST COMPLY WITH THE FOLLOWING:
a) TOPSOIL SHALL ONLY BE STRIPPED FROM APPROVED AREAS AND SHALL BE STOCKPILED FOR RE-USE DURING SITE REHABILITATION AND LANDSCAPING.
b) ALL DISTURBED AREAS ARE TO BE STABILISED/REVEGETATED AS SOON AS PRACTICABLE AFTER THE COMPLETION OF FILLING WORKS. TOPSOIL SHALL BE USED IN DISTURBED AREAS AS FOLLOWS:
(i) A MINIMUM 300mm SURFACE LAYER OF TOPSOIL IN OPEN SPACE AREAS,
(ii) A MINIMUM 100mm SURFACE LAYER OF TOPSOIL ACROSS URBAN LOTS, AND
(iii) A MINIMUM 100mm SURFACE LAYER OF TOPSOIL ACROSS ROAD VERGES.
- BATTERS
WHERE THE MAXIMUM GRADE OF ANY FILL BATTER EXCEEDS A RATIO OF THREE HORIZONTAL TO ONE VERTICAL (3:1), RETAINING WALLS, STONE FLAGGING OR TERRACING SHALL BE CONSTRUCTED;

CIVIL PLAN INDEX		
PLAN NO.	PLAN NAME	REV
110185-12-CC3000	COVER SHEET	A
110185-12-CC3001	GENERAL NOTES, INDEX & LEGEND	D
110185-12-CC3002	GENERAL LAYOUT PLAN	A
110185-12-CC3003	ROAD SETOUT PLAN	A
-		
110185-12-CC3021	ENGINEERING PLAN SHEET 1	C
110185-12-CC3022	ENGINEERING PLAN SHEET 2	D
-		
110185-12-CC3101	ROAD LONGITUDINAL SECTIONS SHEET 1	A
110185-12-CC3102	ROAD LONGITUDINAL SECTIONS SHEET 2	B
110185-12-CC3103	ROAD LONGITUDINAL SECTIONS SHEET 3	A
-		
110185-12-CC3201	ROAD CROSS SECTIONS SHEET 1	B
110185-12-CC3202	ROAD CROSS SECTIONS SHEET 2	B
110185-12-CC3203	ROAD CROSS SECTIONS SHEET 3	B
-		
110185-12-CC3301	KERB RETURN PLAN SHEET 1	B
110185-12-CC3302	KERB RETURN PLAN SHEET 2	B
110185-12-CC3303	KERB RETURN PLAN SHEET 3	A
-		
110185-12-CC3400	CATCHMENT PLAN	A
110185-12-CC3401	PIT SCHEDULE AND HEADWALL 40/13 SCOUR PROTECTION	C
110185-12-CC3411	DRAINAGE CALCULATIONS SHEET 1	B
110185-12-CC3412	DRAINAGE CALCULATIONS SHEET 2	B
110185-12-CC3413	DRAINAGE CALCULATIONS SHEET 3	B
110185-12-CC3414	DRAINAGE CALCULATIONS SHEET 4	B
110185-12-CC3421	DRAINAGE LONGITUDINAL SECTIONS SHEET 1	B
110185-12-CC3422	DRAINAGE LONGITUDINAL SECTIONS SHEET 2	B
110185-12-CC3423	DRAINAGE LONGITUDINAL SECTIONS SHEET 3	B
110185-12-CC3424	DRAINAGE LONGITUDINAL SECTIONS SHEET 4	B
-		
110185-12-CC3501	RETAINING WALL PLAN SHEET 1	B
110185-12-CC3502	RETAINING WALL PLAN SHEET 2	C
110185-12-CC3503	RETAINING WALL DETAILS	B
110185-12-CC3511	RETAINING WALL LONGSECTIONS SHEET 1	C
110185-12-CC3512	RETAINING WALL LONGSECTIONS SHEET 2	C
110185-12-CC3513	RETAINING WALL LONGSECTIONS SHEET 3	C
110185-12-CC3514	RETAINING WALL LONGSECTIONS SHEET 4	C
110185-12-CC3515	RETAINING WALL LONGSECTIONS SHEET 5	C
110185-12-CC3516	RETAINING WALL LONGSECTIONS SHEET 6	C
110185-12-CC3517	RETAINING WALL LONGSECTIONS SHEET 7	B
-		
110185-12-CC3700	SOIL & WATER MANAGEMENT NOTES	A
110185-12-CC3701	SOIL & WATER MANAGEMENT PLAN	B
110185-12-CC3702	SOIL & WATER MANAGEMENT DETAILS	A
-		
110185-12-CC3800	SIGNAGE AND LINE MARKING PLAN	B
-		
110185-12-CC3900	SWEEP PATH PLAN SHEET 1	A
110185-12-CC3901	SWEEP PATH PLAN SHEET 2	A



NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS

Plotted: 5 May, 2022 12:03:52 PM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDCSOUTHERN HEIGHTS3-RTP\110185-12-CC3001.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE	
D	INDEX UPDATED	MP	JM	JB	MS	05/05/22
C	ADDED SCOUR PROTECTION - PRIVATE CERTIFIER COMMENTS	MP	EJ	JB	MS	14/04/22
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
GENERAL NOTES, INDEX & LEGEND**

PROJECT No: **110185-12**
SHEET No: **CC3001**

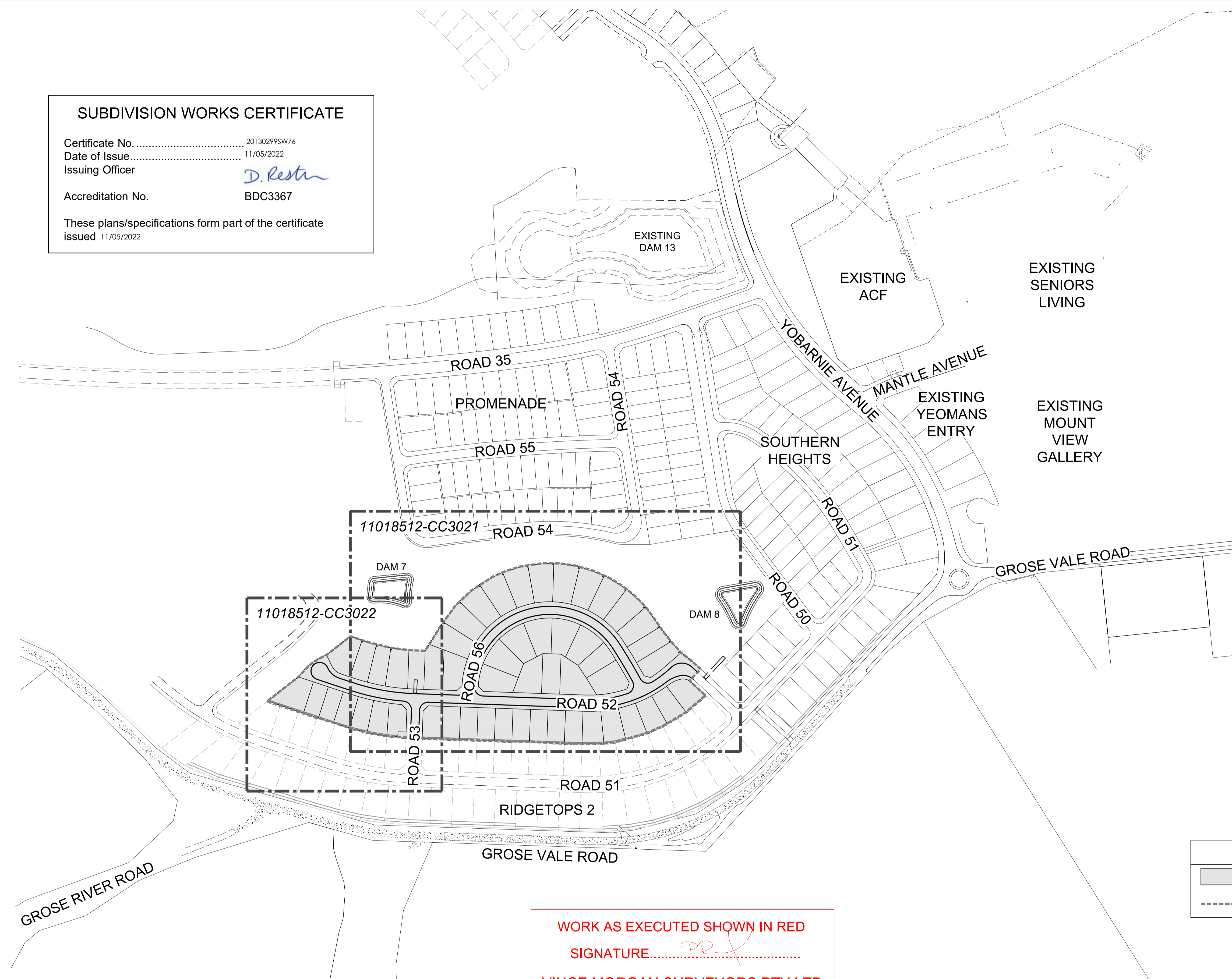
PLAN No: 110185-12-CC3001

AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	PLAN No: 110185-12-CC3001	D
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LEGEND

LIMIT OF WORKS

SITE BOUNDARY

WORK AS EXECUTED SHOWN IN RED

SIGNATURE..... *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

1:2000 (AT A1)
 1:4000 (AT A3)

METRES

Plotted: 5 May 2022 11:01:10 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3002.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21		
	AMENDMENT	DES	DRN	CKD	APR	DATE		

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CLIENT:

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REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 GENERAL LAYOUT PLAN

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN:

PROJECT No: **110185-12**
 SHEET No: **CC3002**

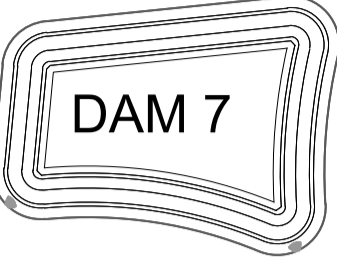
PLAN No: 110185-12-CC3002

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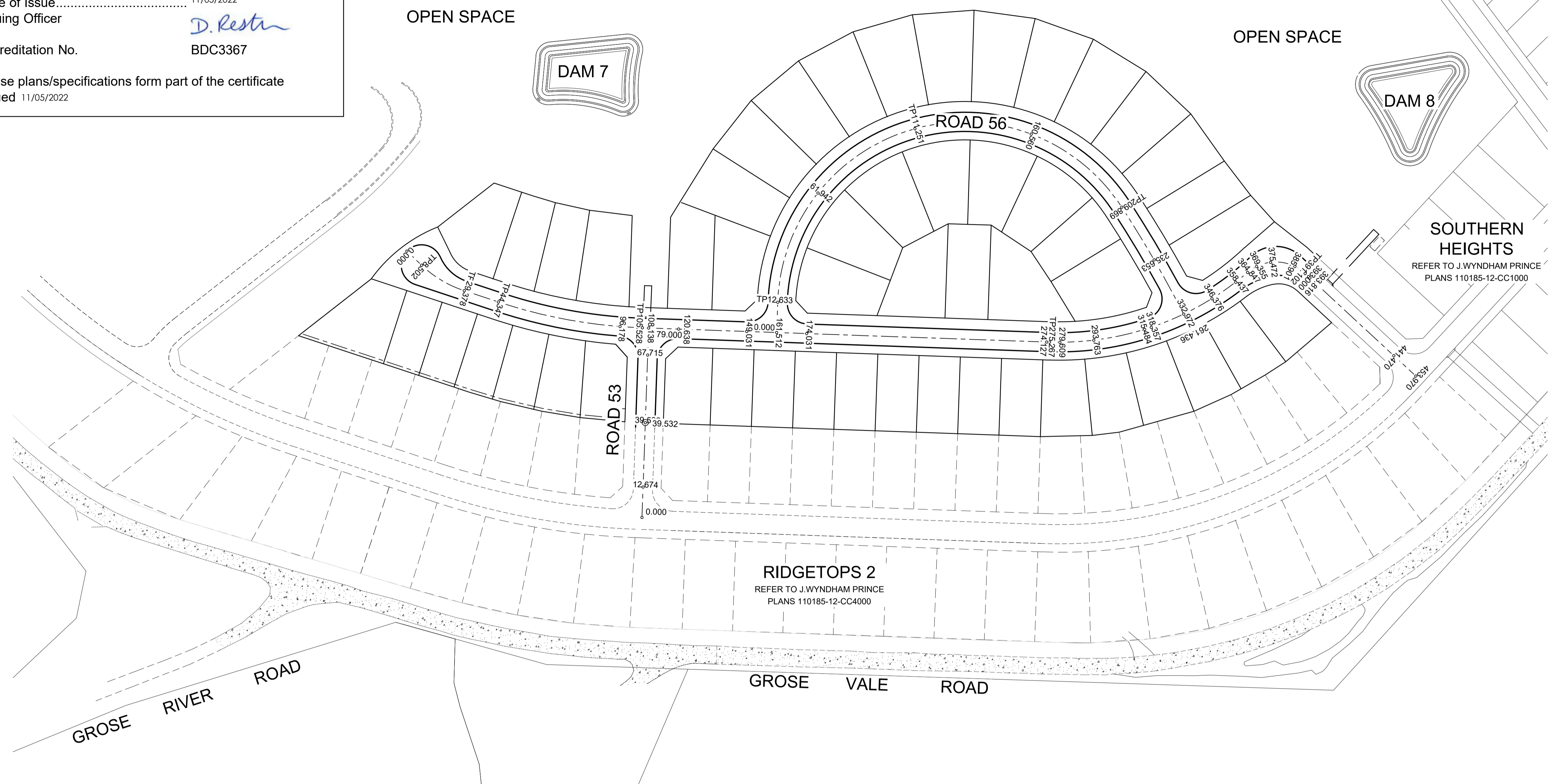
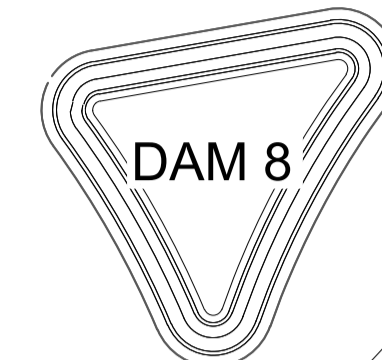
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OPEN SPACE



OPEN SPACE



SOUTHERN HEIGHTS
 REFER TO J.WYNDHAM PRINCE
 PLANS 110185-12-CC1000

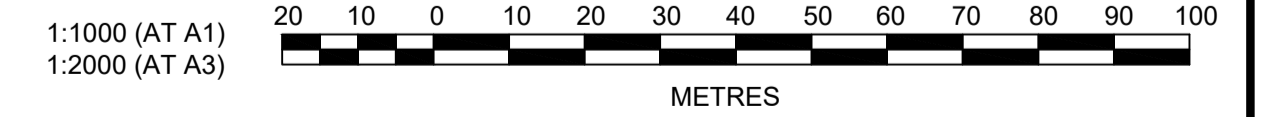
RIDGETOPS 2
 REFER TO J.WYNDHAM PRINCE
 PLANS 110185-12-CC4000

ROAD 52					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286299.45	6281145.64	133°40'40.93"		
8.5	286305.6	6281139.76	133°40'40.93"		
18.84	286313.2	6281132.51		-46.69	20.67
29.17	286323.17	6281129.21	108°19'12.68"		
44.35	286337.58	6281124.44	108°19'12.68"		
74.94	286366.82	6281114.76		-215	61.18
105.53	286397.6	6281113.67	92°00'57.16"		
275.27	286567.23	6281107.7	92°00'57.16"		
320.06	286614.2	6281106.05		-120	89.58
364.85	286649.79	6281136.73	49°14'40.82"		
377.97	286661.98	6281147.23		18	26.25
391.1	286673.78	6281136.3	132°48'55.65"		
453.97	286719.9	6281093.57	132°48'55.65"		

ROAD 56					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286453.55	6281111.7	2°06'14.86"		
12.63	286454.01	6281124.33	2°06'14.86"		
61.94	286456.11	6281181.42		78	98.62
111.25	286511.17	6281196.64	74°32'42.56"		
160.56	286566.24	6281211.87		78	98.62
209.87	286597.37	6281163.96	146°59'10.25"		
235.65	286611.43	6281142.32		500	51.57
261.44	286623.18	6281119.35	152°53'43.16"		

ROAD 53			
CHAINAGE	EASTING	NORTHING	BEARING
0	286397.39	6281033.63	2°00'57.16"
80	286400.21	6281113.58	2°00'57.16"

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*
 VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800



Plotted: 5 May, 2022 11:01:36 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3003.dwg

NO.	DESCRIPTION	MP	JM	RO	RO	12/07/21
A	ISSUED FOR CONSTRUCTION APPROVAL					
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
 PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:

STATUS:
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REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 ROAD SETOUT PLAN
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3003

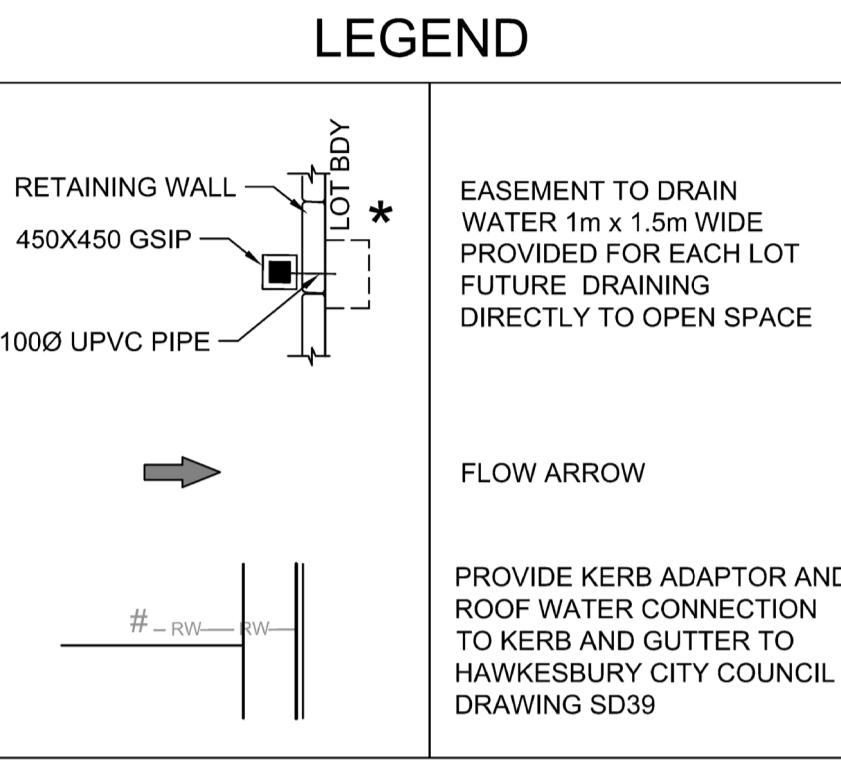
PROJECT No:
110185-12
 SHEET No:
CC3003
 A

EASEMENT NOTES

(A) EASEMENT FOR PADMOUNT STATION 2.75m x 5.5m AND VARIABLE.

(B) RESTRICTION ON THE USE OF LAND IN RELATION TO FIRE RATINGS OF BUILDINGS MEASURED 3m FROM THE SUBSTATION PLINTH.

(C) RESTRICTION ON THE USE OF LAND IN RELATION TO SWIMMING POOLS MEASURED 5m FROM THE SUBSTATION PLINTH.



NOTES:

1. BATTERS TO NATURAL SURFACE AT 1v:3h MAXIMUM

2. FOR EXISTING TREE REMOVALS & RETENTION REFER TO LANDSCAPE ARCHITECT PLANS

WARNING!

UNDERGROUND SERVICE CABLES IN VICINITY. EXERCISE EXTREME CAUTION DURING EXCAVATION. CONTACT 'DIAL BEFORE YOU DIG' PRIOR TO ANY CONSTRUCTION WORK

LAYBACK NOTES

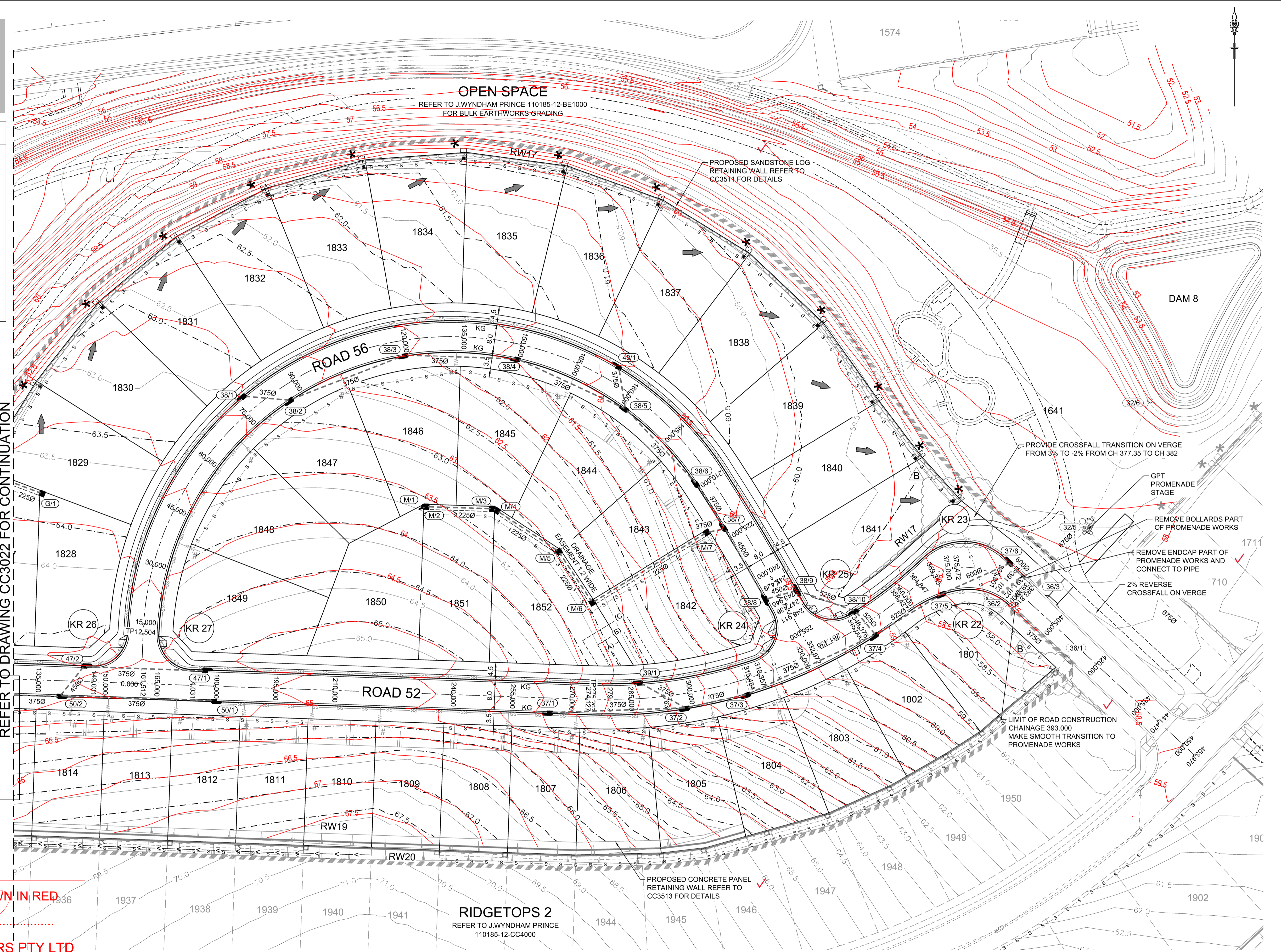
LAYBACKS IN KERB AND GUTTER FOR VEHICLE CROSSOVERS TO BE COMPLETED AT EACH LOT PRIOR TO SUBDIVISION WORKS PRACTICAL COMPLETION

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130295W76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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REFER TO DRAWING CC3022 FOR CONTINUATION

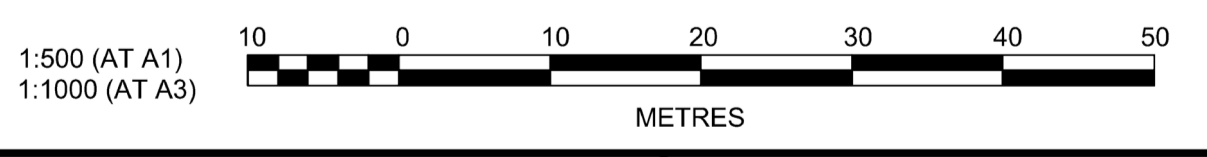


WORK AS EXECUTED SHOWN IN RED

SIGNATURE *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

RIDGETOPS 2
 REFER TO J.WYNDHAM PRINCE
 110185-12-CC4000



Plotted: 5 May 2022 12:05:13 PM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1\DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3021.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	JM	JB	MS	05/05/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 ENGINEERING PLAN
 SHEET 1**

PROJECT No: **110185-12**
 SHEET No: **CC3021**
 PLAN No: **110185-12-CC3021**

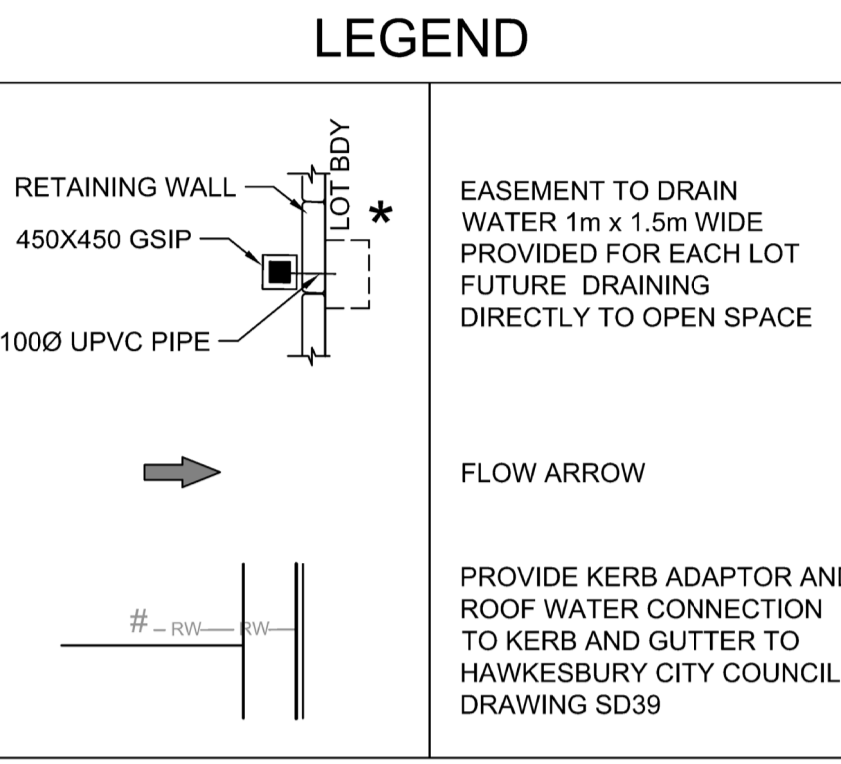
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3021 C

EASEMENT NOTES

(A) EASEMENT FOR PADMOUNT STATION 2.75m x 5.5m AND VARIABLE.

(B) RESTRICTION ON THE USE OF LAND IN RELATION TO FIRE RATINGS OF BUILDINGS MEASURED 3m FROM THE SUBSTATION PLINTH.

(C) RESTRICTION ON THE USE OF LAND IN RELATION TO SWIMMING POOLS MEASURED 5m FROM THE SUBSTATION PLINTH.



NOTES:

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WARNING!

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LAYBACK NOTES

LAYBACKS IN KERB AND GUTTER FOR VEHICLE CROSSOVERS TO BE COMPLETED AT EACH LOT PRIOR TO SUBDIVISION WORKS PRACTICAL COMPLETION

SUBDIVISION WORKS CERTIFICATE

Certificate No. 201302995W76

Date of Issue 11/05/2022

Issuing Officer *D. Resta*

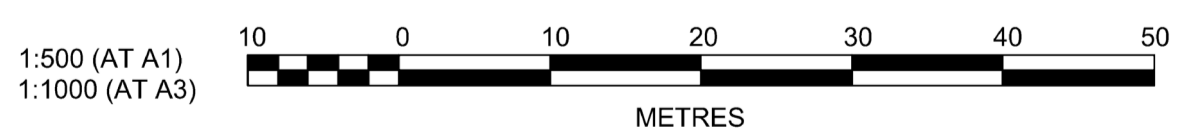
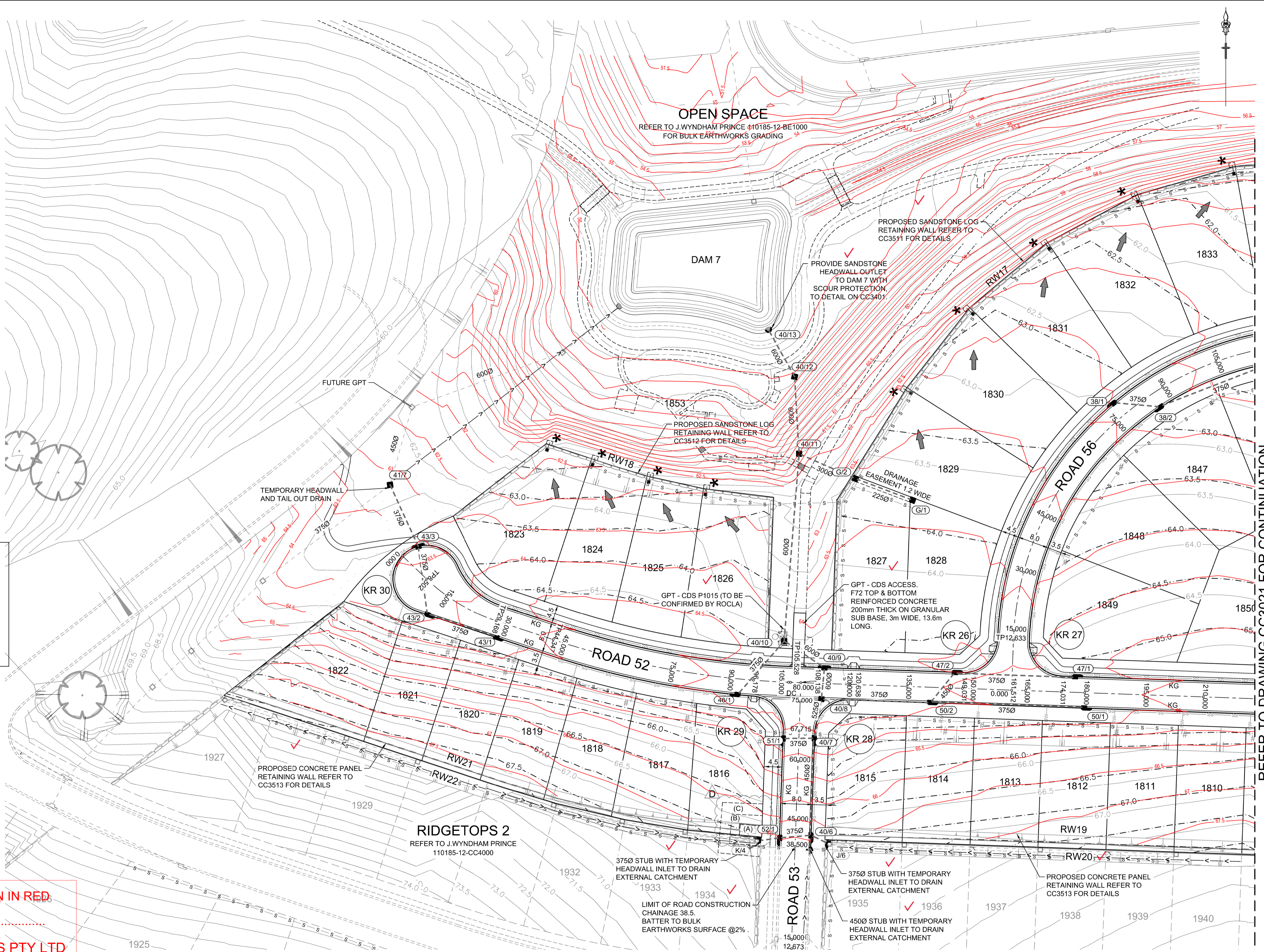
Accreditation No. BDC3367

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SIGNATURE..... *PR*

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DATE: 09/01/23 REF:16800



REFER TO DRAWING CC3021 FOR CONTINUATION

Plotted: 6 May, 2022 11:36:59 AM File Name: J:\110185 - Redbank, North Richmond Residential Precincts\12 - Stage 1 DA\CC3022\Southern Heights\3-RTP\110185-12-CC3022.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
D	MP	JM	JB	MS	05/05/22
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM			

J. WYNDHAM PRINCE
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CLIENT:

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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
ENGINEERING PLAN
SHEET 2

PROJECT No: **110185-12**
SHEET No: **CC3022**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3022

D

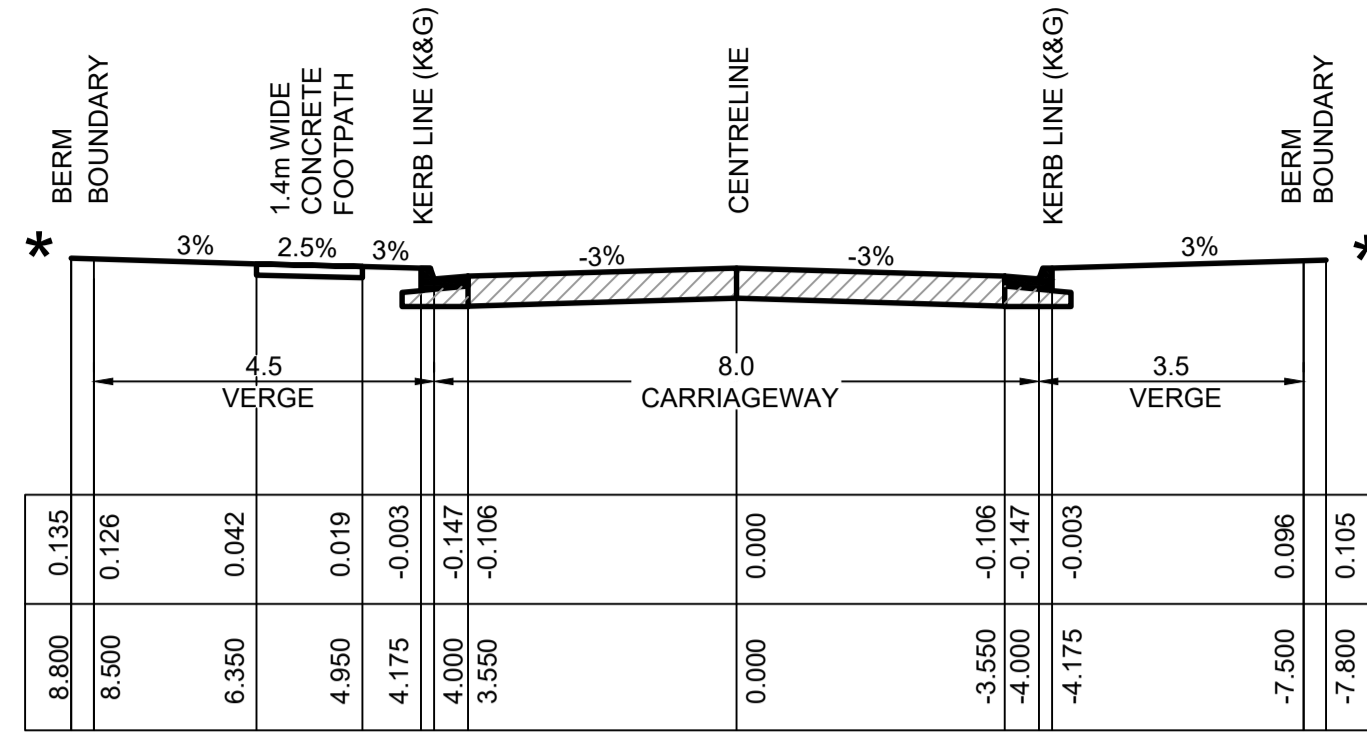
SUBDIVISION WORKS CERTIFICATE

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 Date of Issue 11/05/2022
 Issuing Officer *D. Restin*
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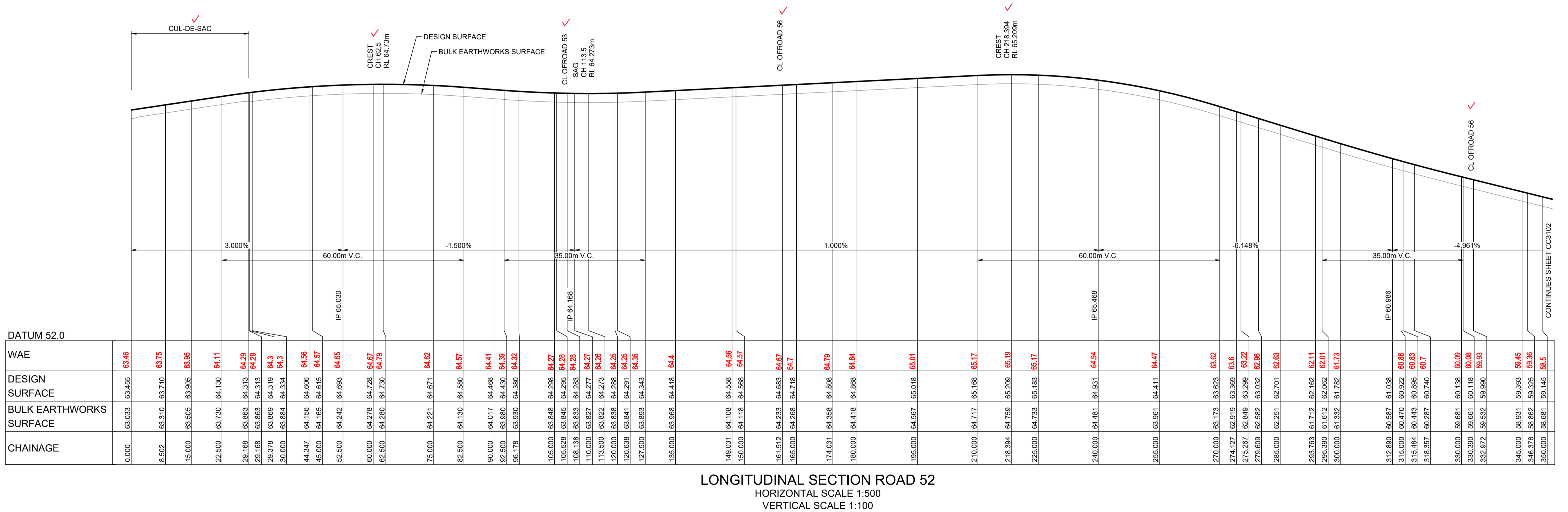
TYPICAL CROSS SECTION
 ROAD No.52, 53 & 56
 (16m ROAD RESERVE)
 SCALE 1:100 NATURAL

PAVEMENT NOTES

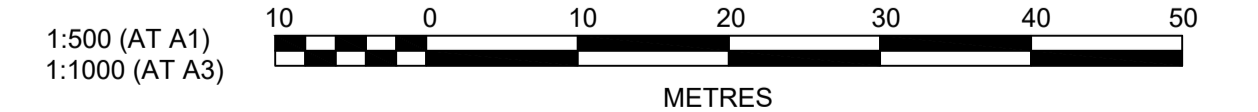
- (ROAD 52, 53, & 56)
 5x10' ESA (GEOTECHNICAL REPORT BY GEOTECHNIQUE, REF: 12261/31-AA-R1 DATED 4/12/2020)
 1. 50mm WEARING COURSE AC10
 2. ONE COAT HOT BITUMEN FLUSH SEAL
 3. 150mm DGB 20 BASE COURSE
 4. 200mm SUB-BASE COURSE

NOTE:
 SUBSOIL DRAINAGE TO BE PROVIDED UNDER KERBS ON BOTH SIDES OF THE ROAD EXCEPT WHERE STREET DRAINAGE IS PRESENT. REFER TO HCC STANDARD DRAWING No.SD3

* REFER TO ENGINEERING PLANS FOR SITE REGRADING



LONGITUDINAL SECTION ROAD 52
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



Plotted: 5 May, 2022 11:04:35 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CSOUTHERN HEIGHTS\3-RTP\110185-12-CC3101.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 ROAD LONGITUDINAL SECTIONS
 SHEET 1
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3101

PROJECT No:
110185-12
 SHEET No:
CC3101
 A

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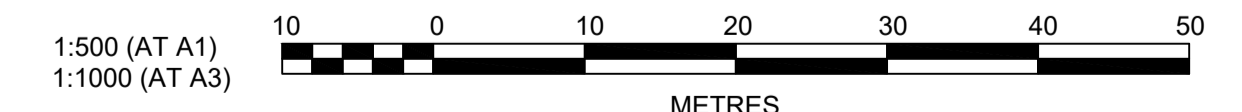
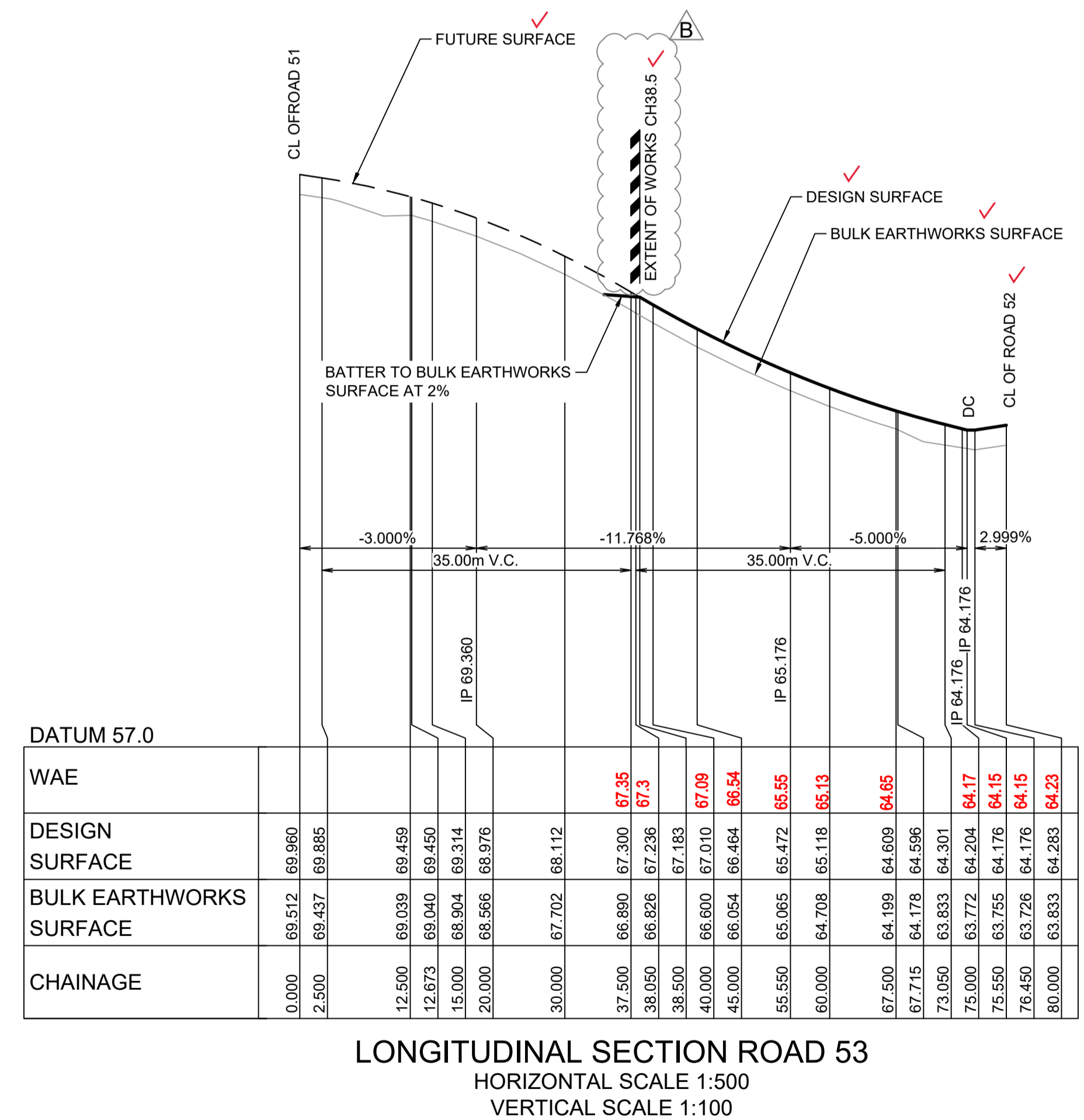
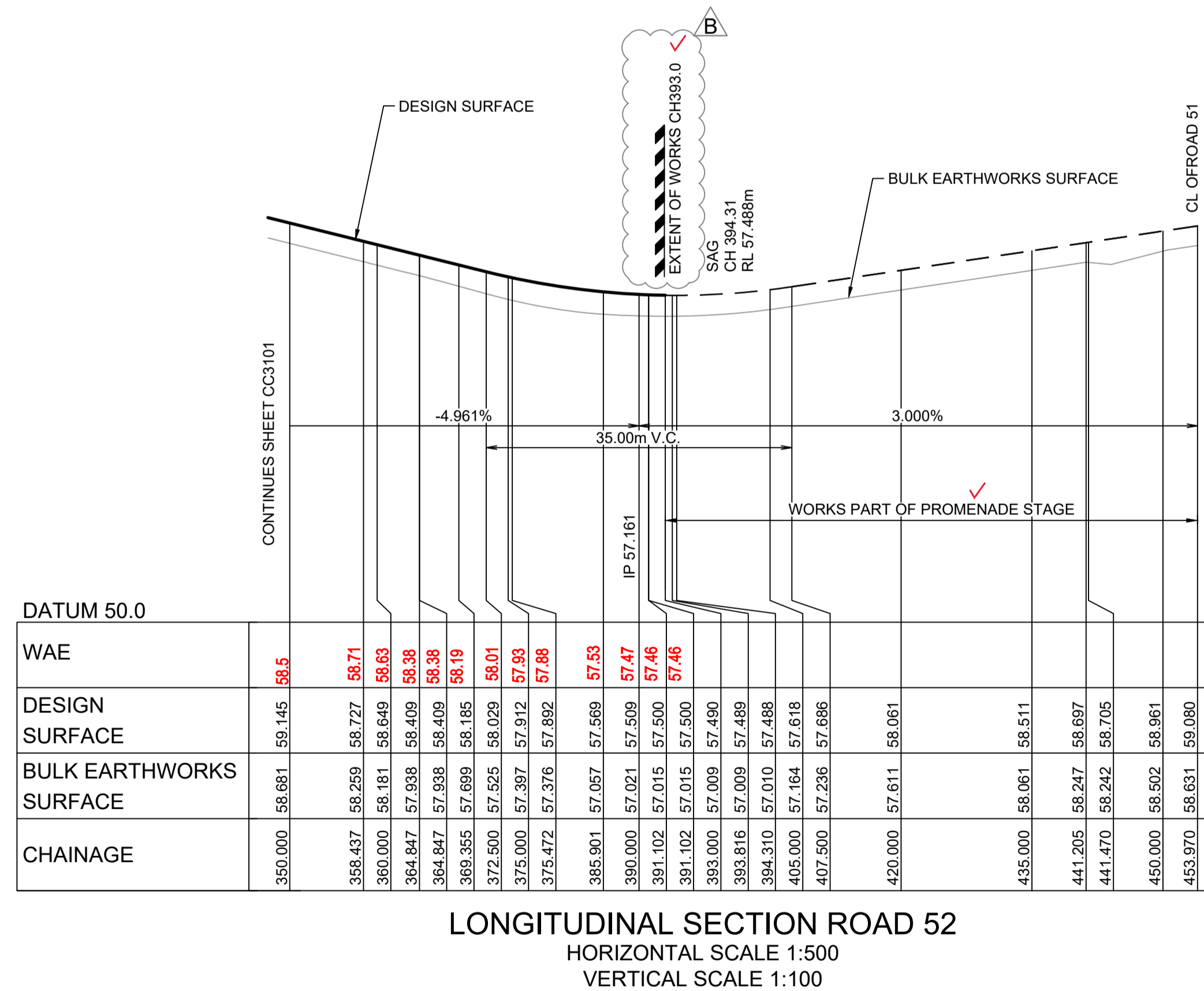
SIGNATURE.....*PR*.....

VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No.....20130299SW76
Date of Issue.....11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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Plotted: 5 May 2022 11:04:57 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS3-RTP\110185-12-CC3102.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE	
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21

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CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
ROAD LONGITUDINAL SECTIONS
SHEET 2**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3102

PROJECT No: **110185-12**
SHEET No: **CC3102**

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SIGNATURE.....*PR*.....

VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

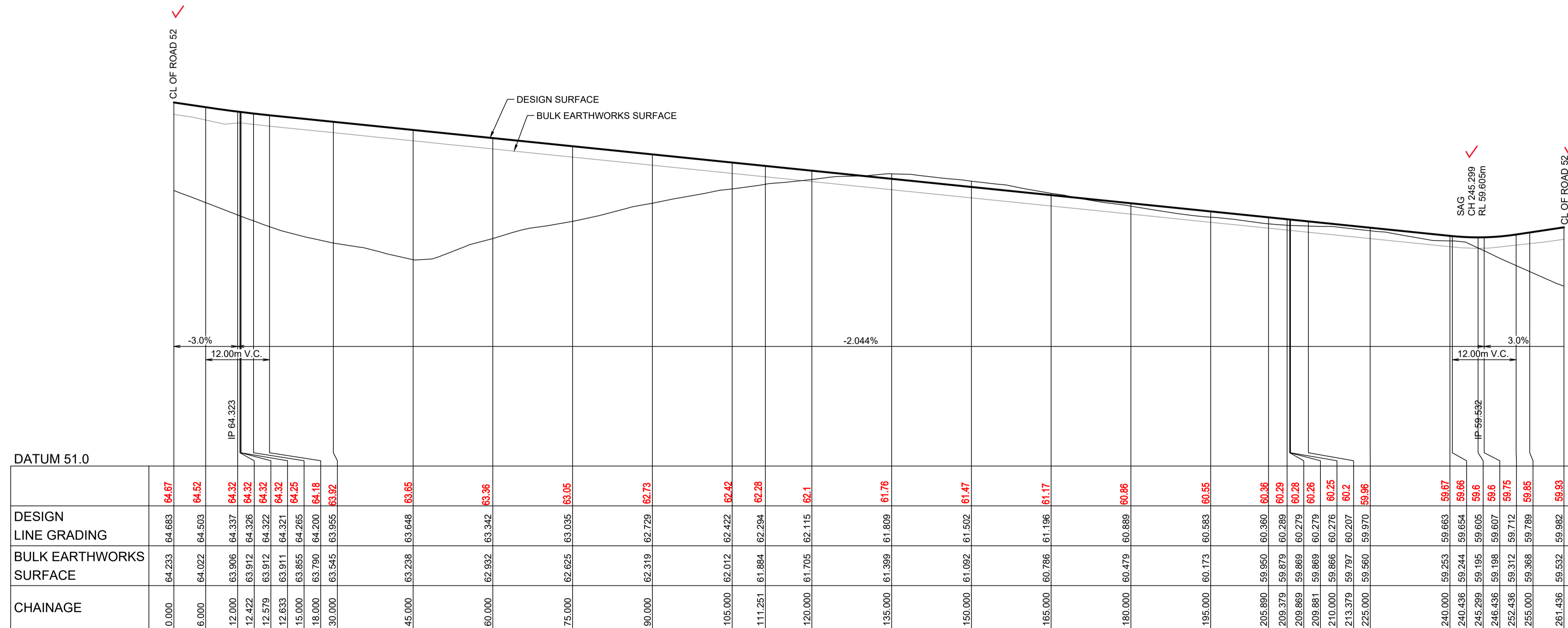
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Date of Issue 11/05/2022

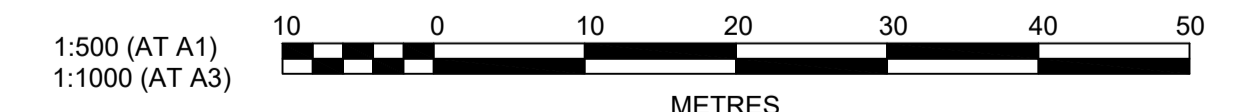
Issuing Officer *D. Restin*

Accreditation No. BDC3367

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LONGITUDINAL SECTION ROAD 56
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100



Plotfile: 5 May, 2022 11:05:22 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3103.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

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NORTH RICHMOND

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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
ROAD LONGITUDINAL SECTIONS
SHEET 3**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3103

PROJECT No: **110185-12**
SHEET No: **CC3103**

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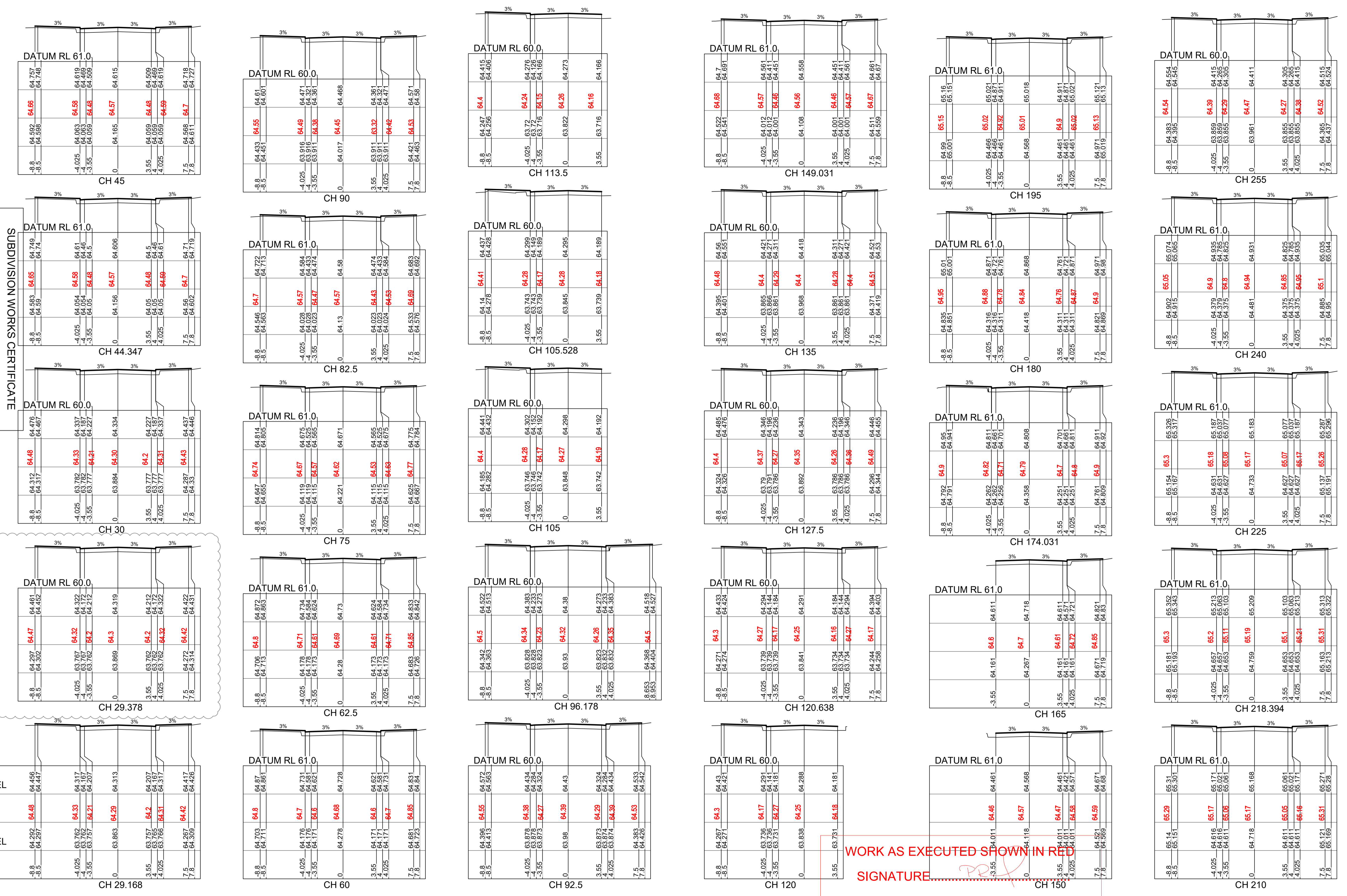
Accreditation No. BDC33367

Certificate No. 2013020959974

Date of Issue: 11/05/2022

Issuing Officer: *D. Reiter*

SUBDIVISION WORKS CERTIFICATE



DATUM RL 60.0	DESIGN SURFACE LEVEL	WAE	EXISTING SURFACE LEVEL	OFFSET
-8.8	64.456	64.48	64.292	-8.8
-8.5	64.447		64.297	-8.5
-4.025	64.317	64.33	63.762	-4.025
-4.0	64.172		63.767	-4.0
-3.55	64.207	64.21	63.757	-3.55
0	64.313	64.29	63.893	0
3.55	64.207	64.2	63.757	3.55
4.0	64.167		63.762	4.0
4.025	64.317	64.31	63.766	4.025
7.5	64.417	64.42	64.287	7.5
7.8	64.426		64.309	7.8

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SIGNATURE: *[Signature]*

ROAD 52

VINCE MORGAN SURVEYORS PTY LTD

DATE: 09/01/23 REF: 16800

1:200 (AT A1)

1:400 (AT A3)

0 2 4 8 12 16 20 METRES

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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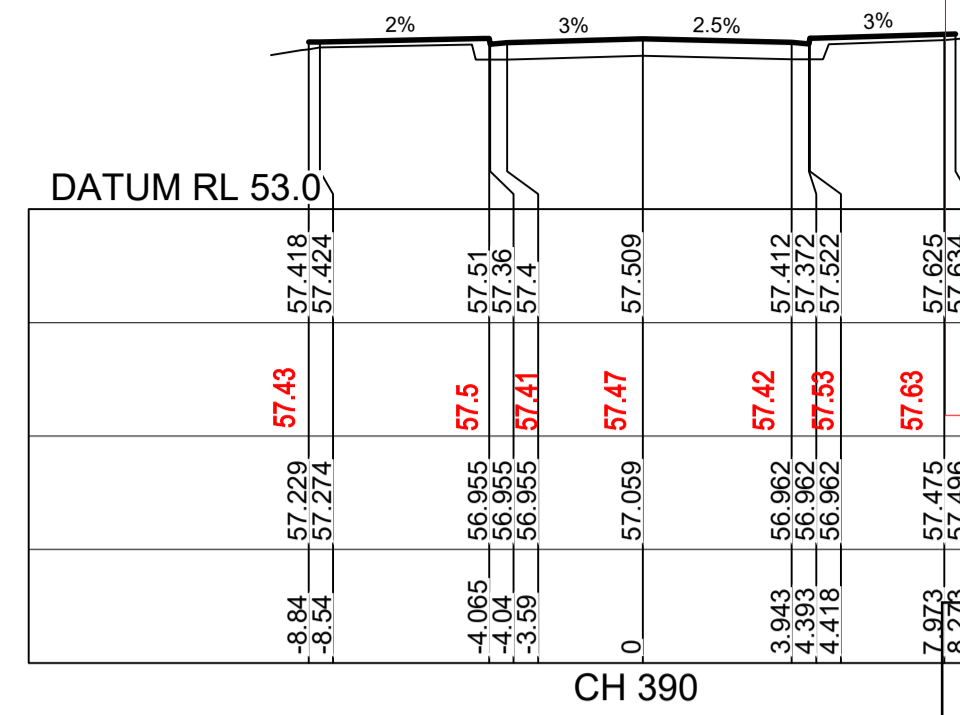
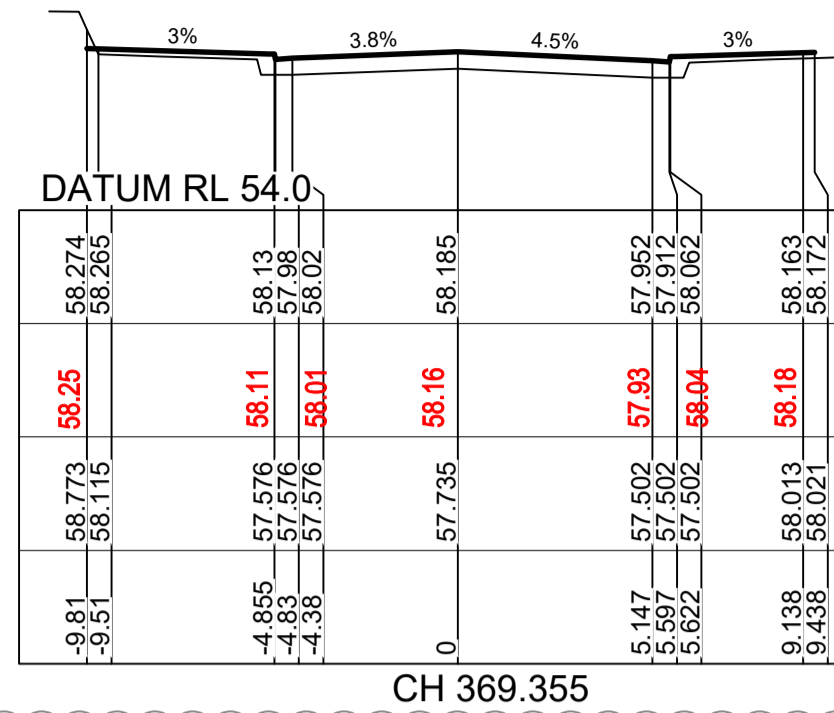
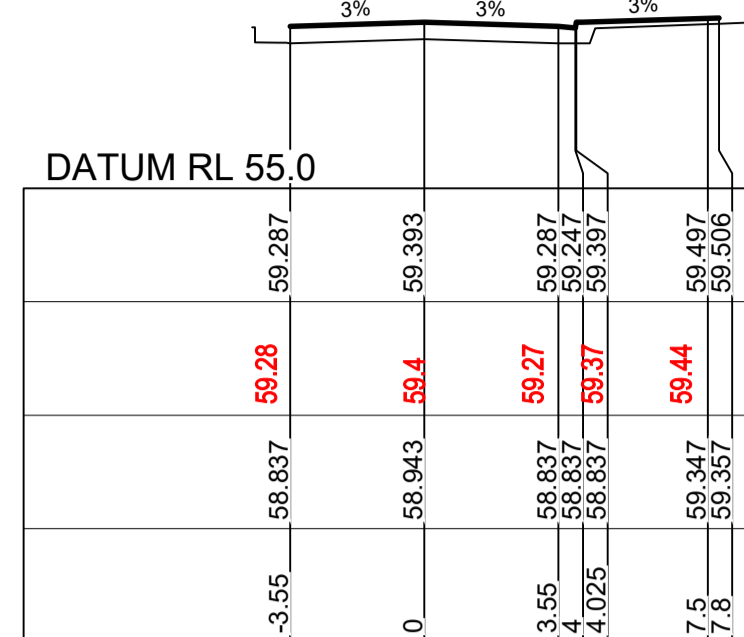
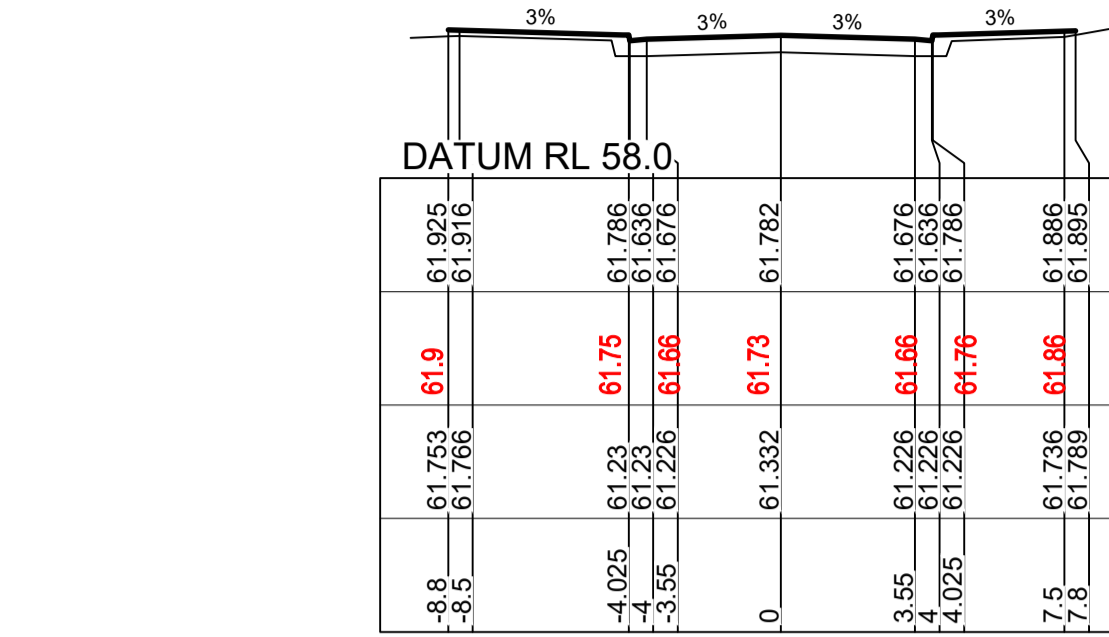
REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
ROAD CROSS SECTIONS
SHEET 1

PROJECT No: 110185-12
SHEET No: CC3201

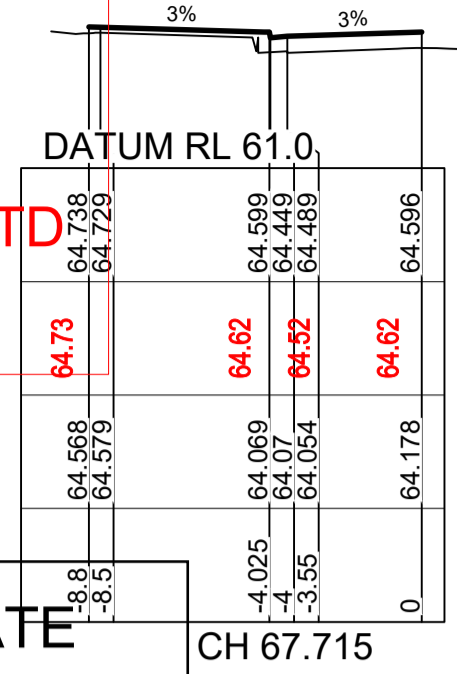
PLAN No: 110185-12-CC3201

AMENDMENT	DES	DRN	CKD	APR	DATE
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO
					18/02/22
					12/07/21

Plotfile: 5 May, 2022 11:06:01 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3202.dwg



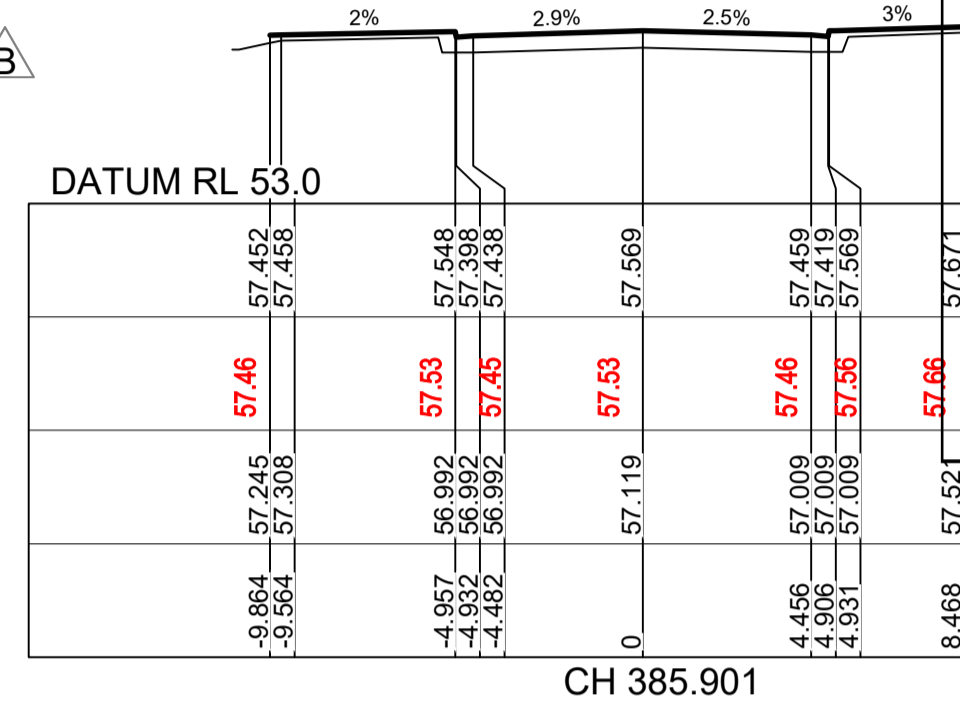
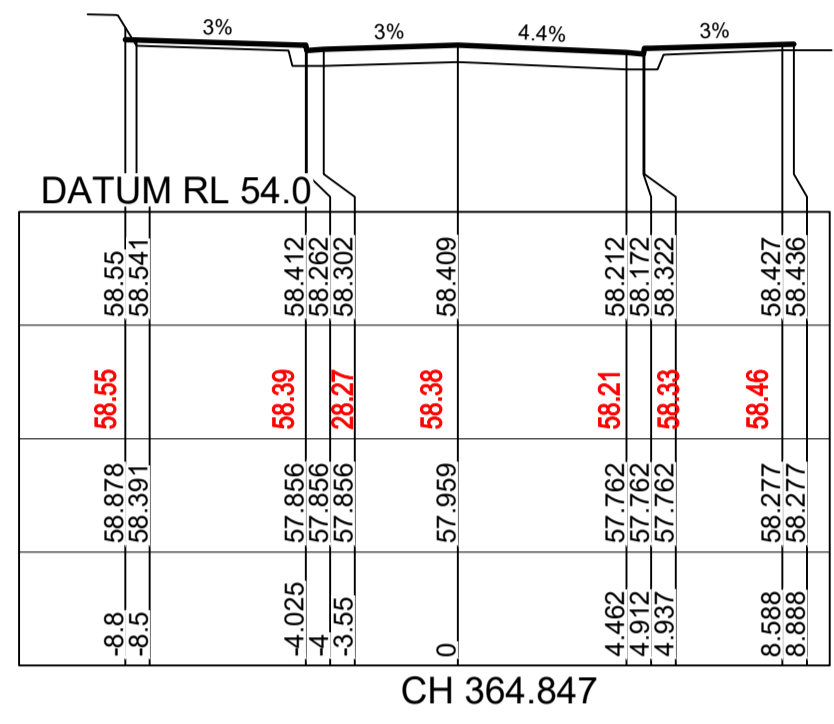
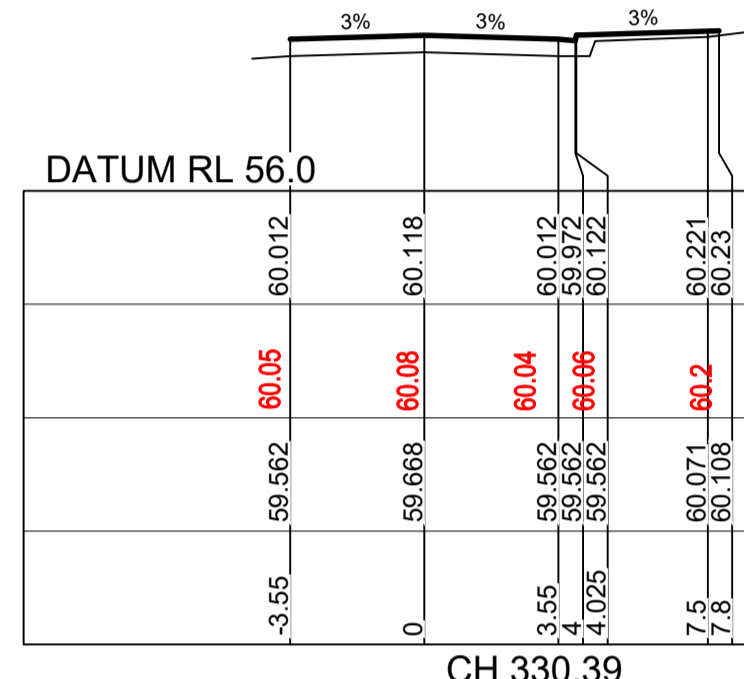
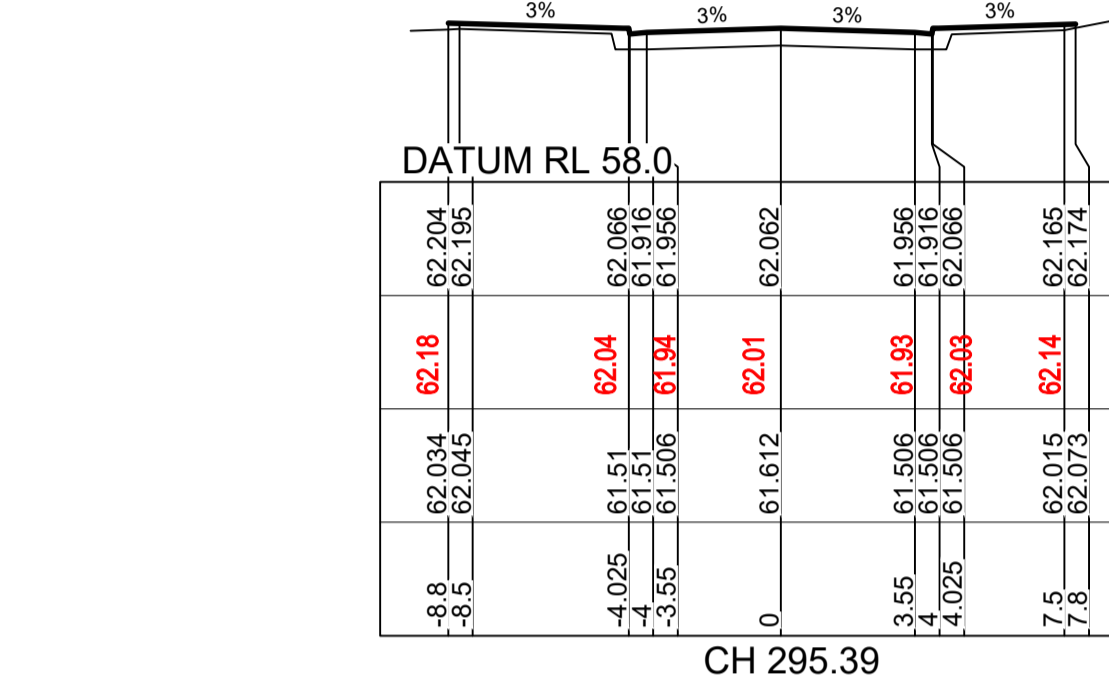
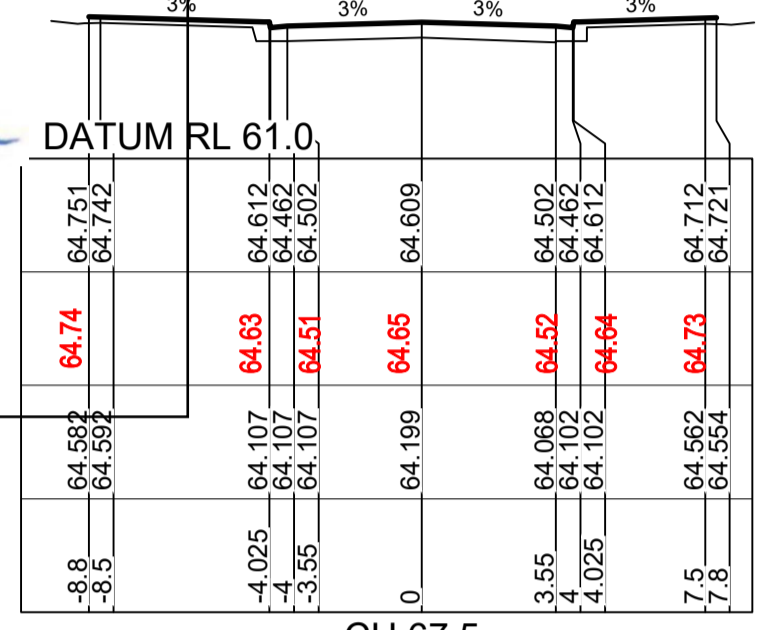
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SIGNATURE.....*PR*.....
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800



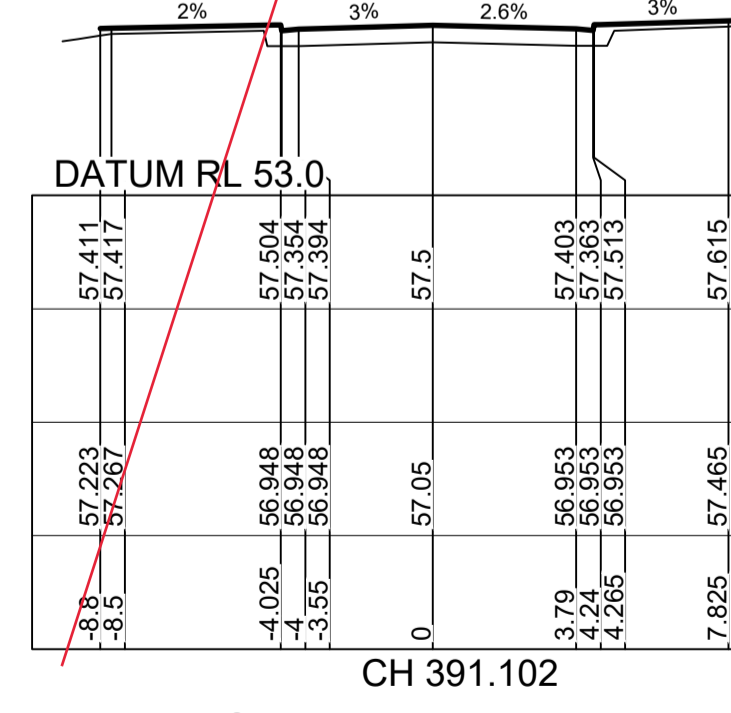
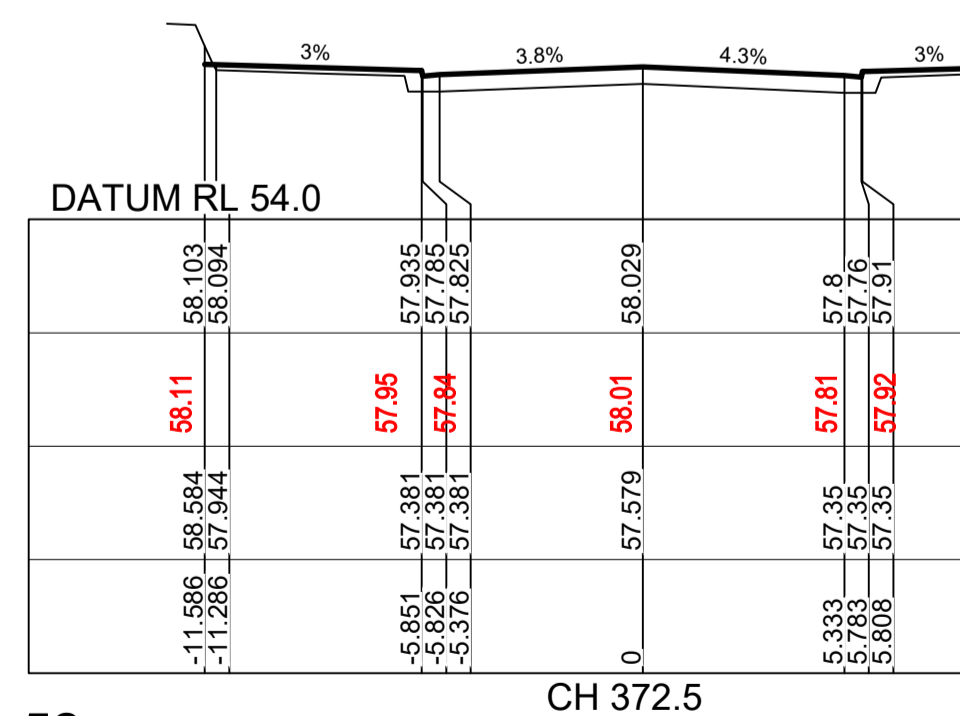
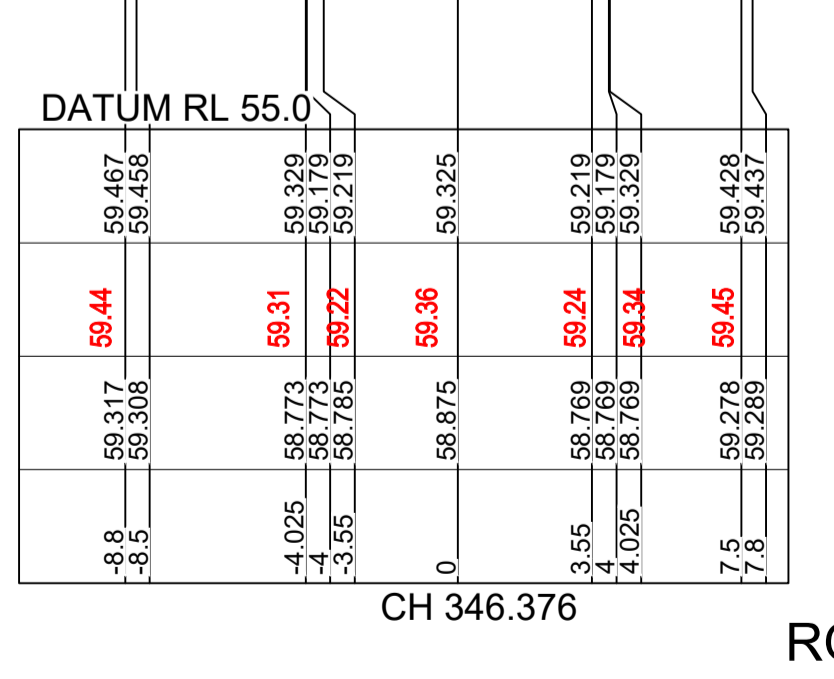
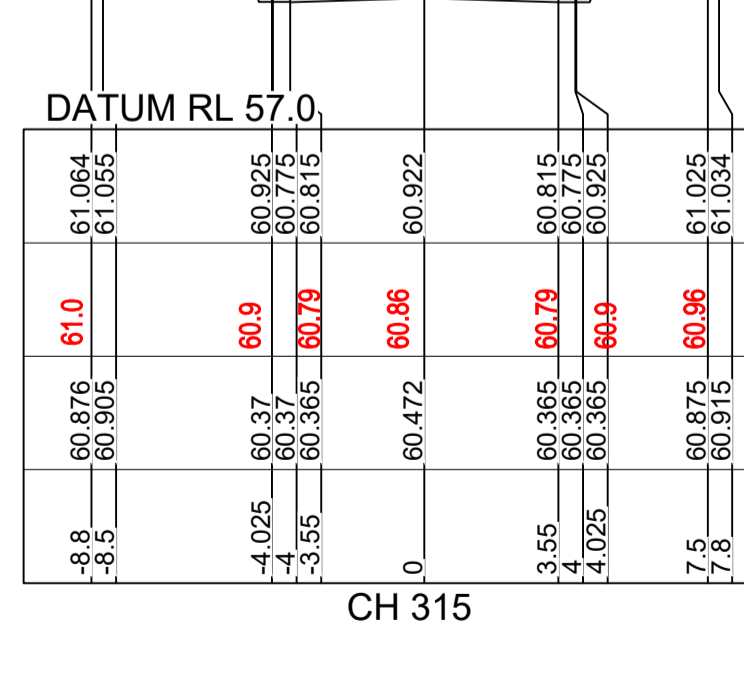
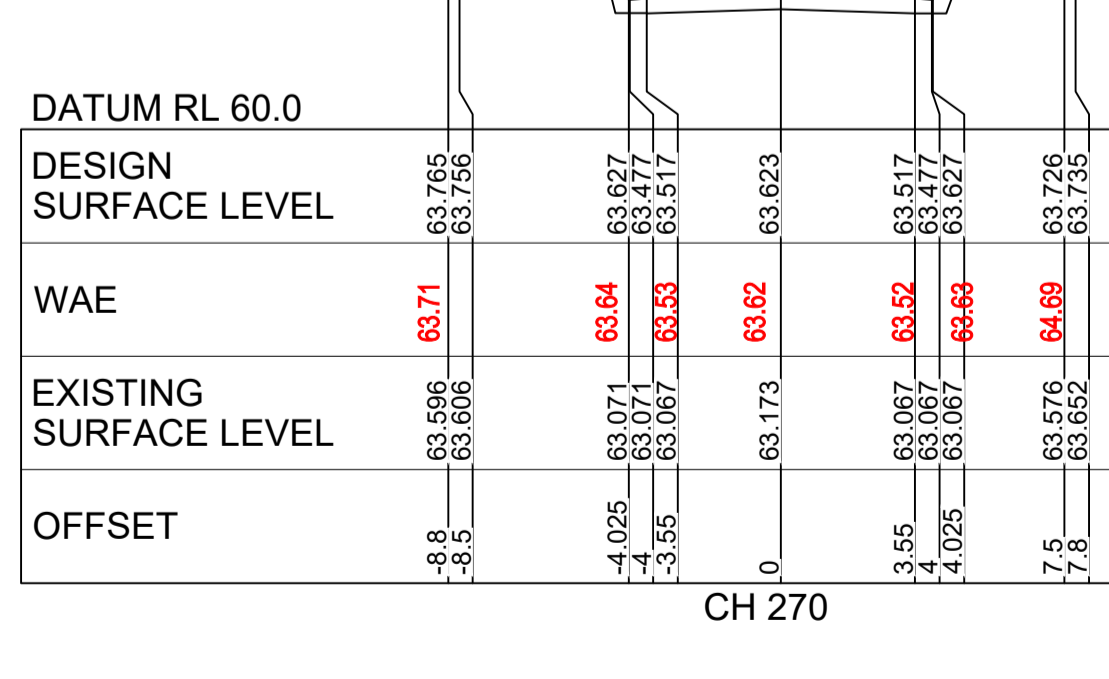
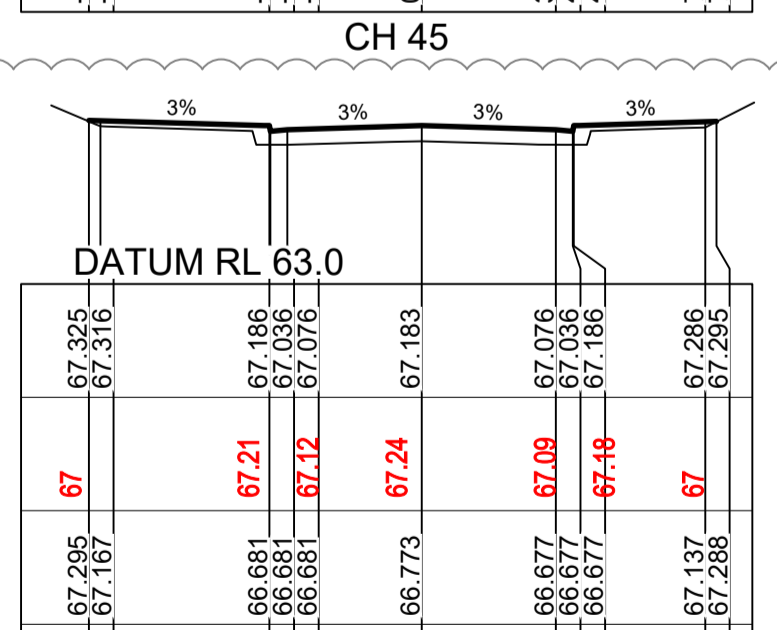
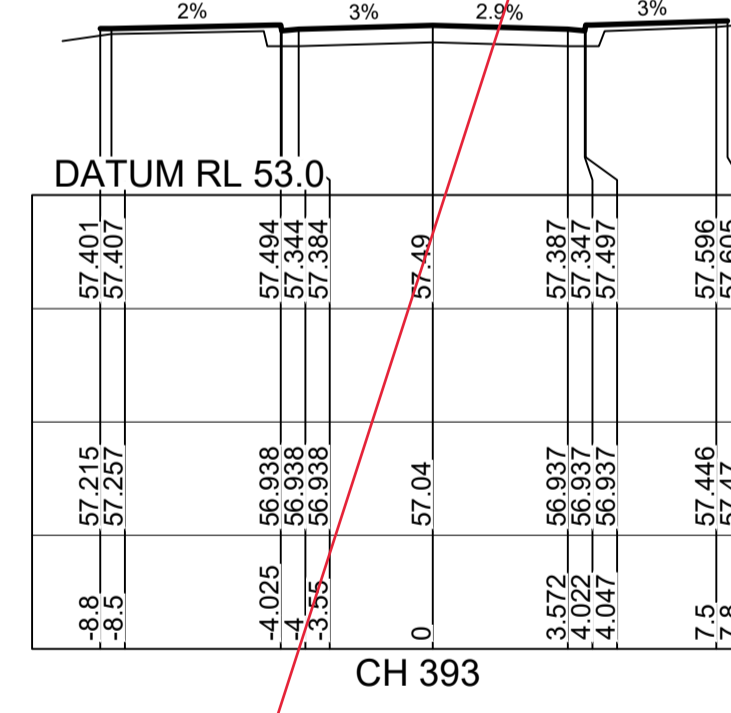
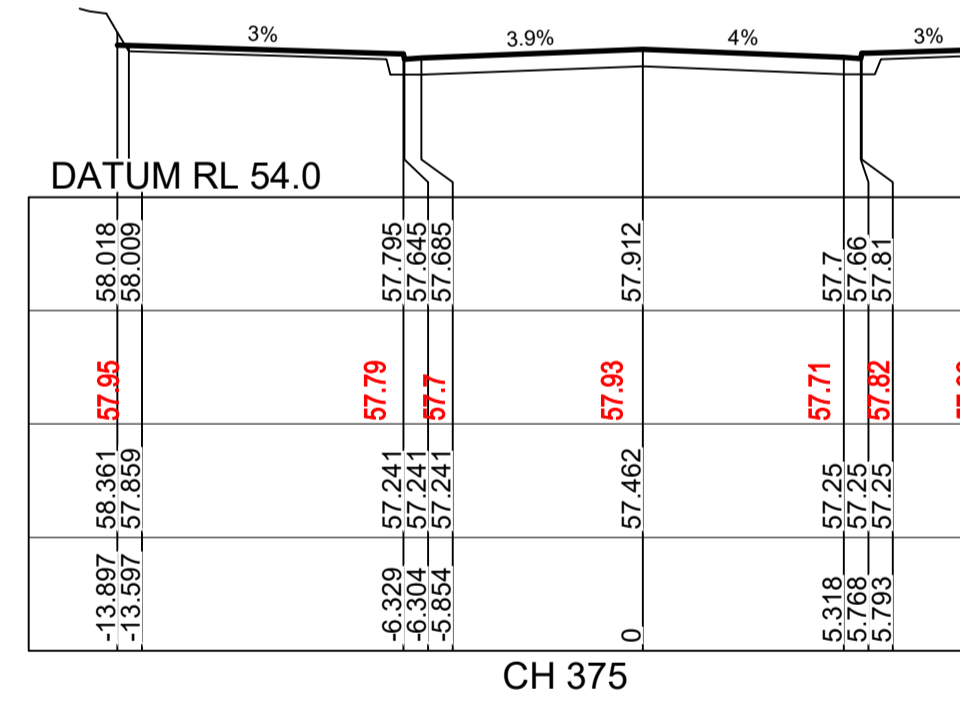
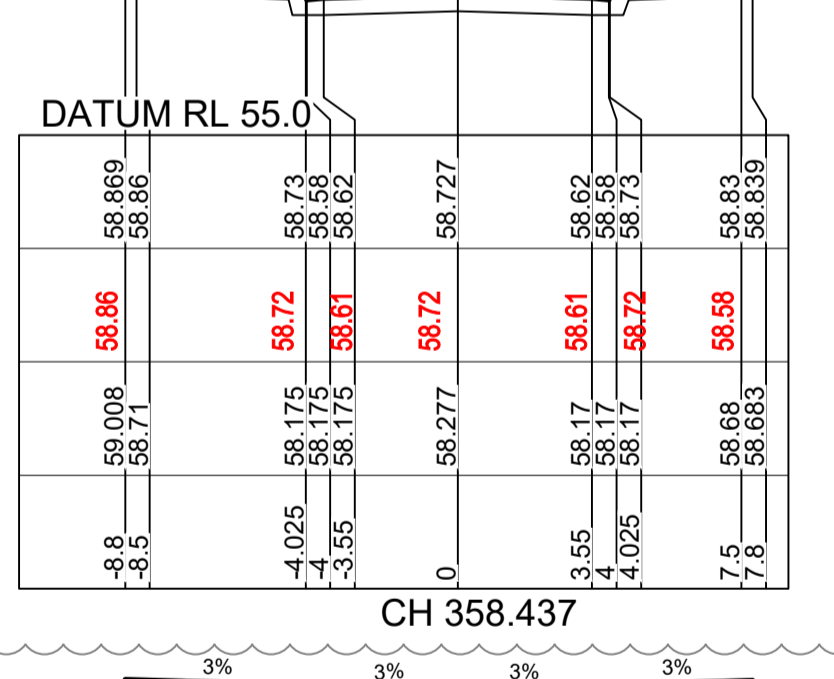
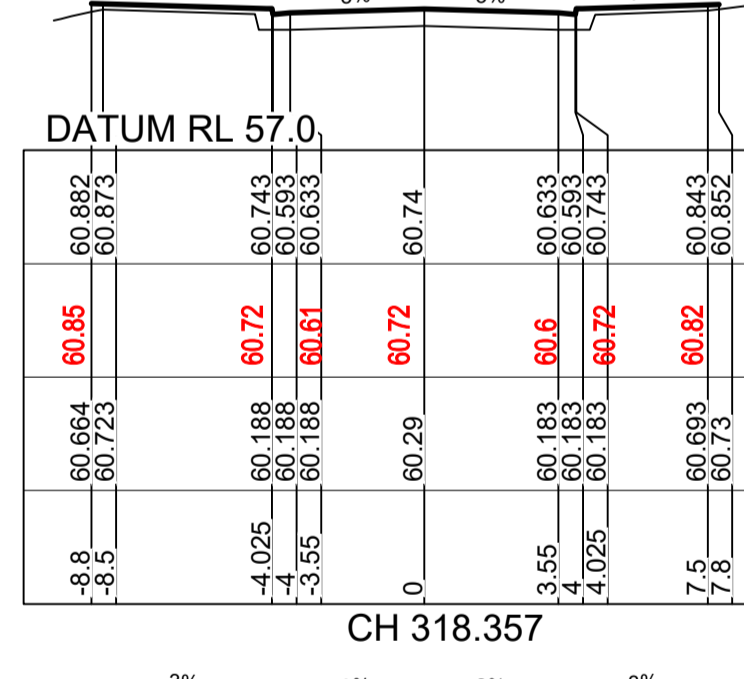
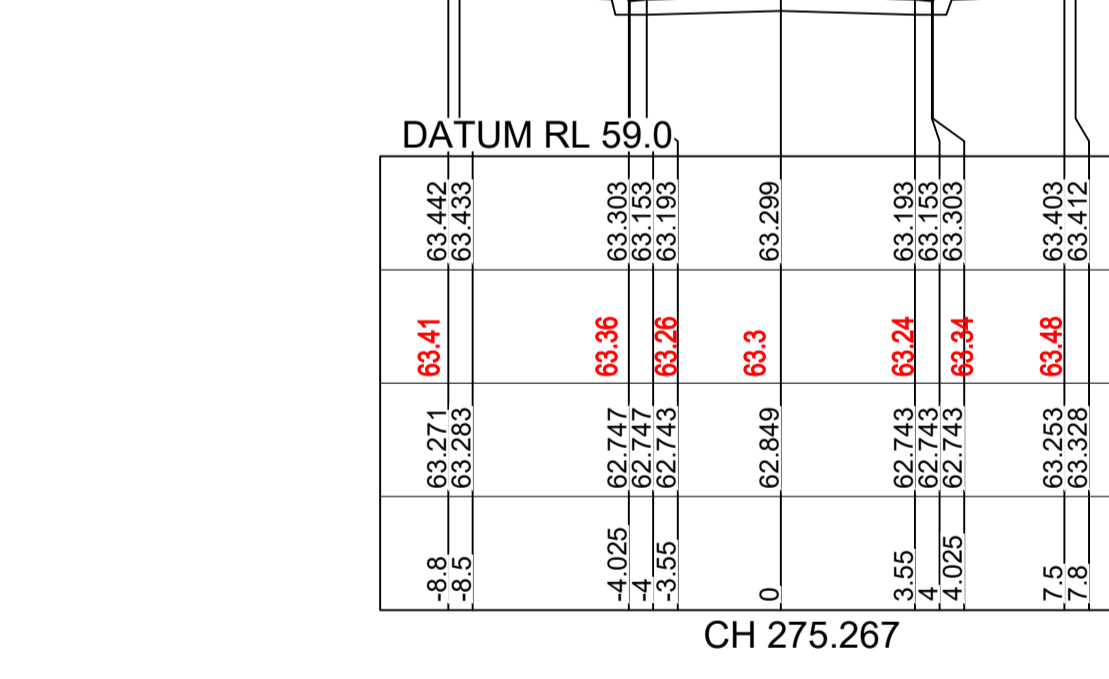
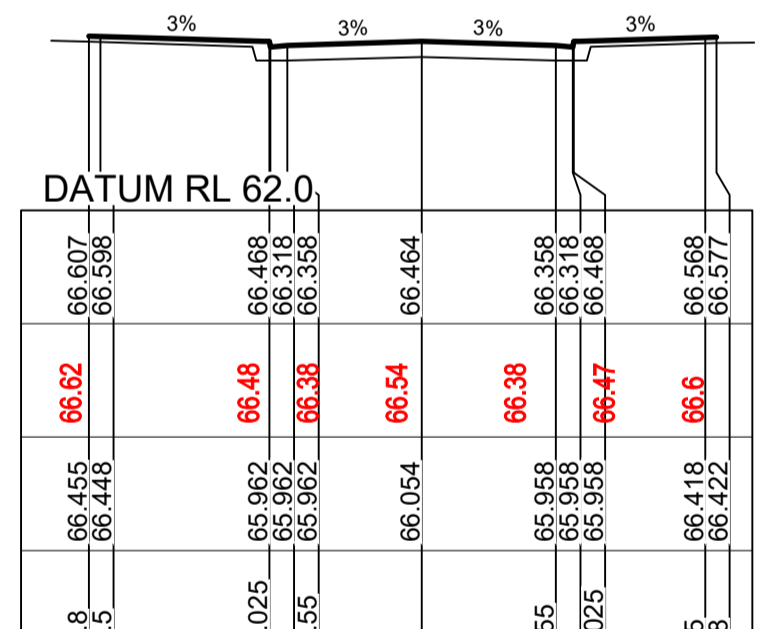
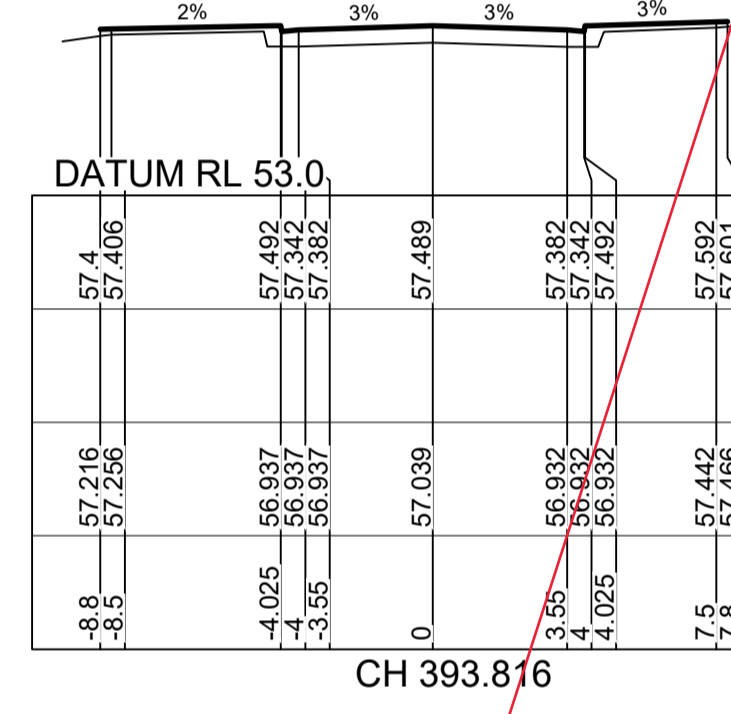
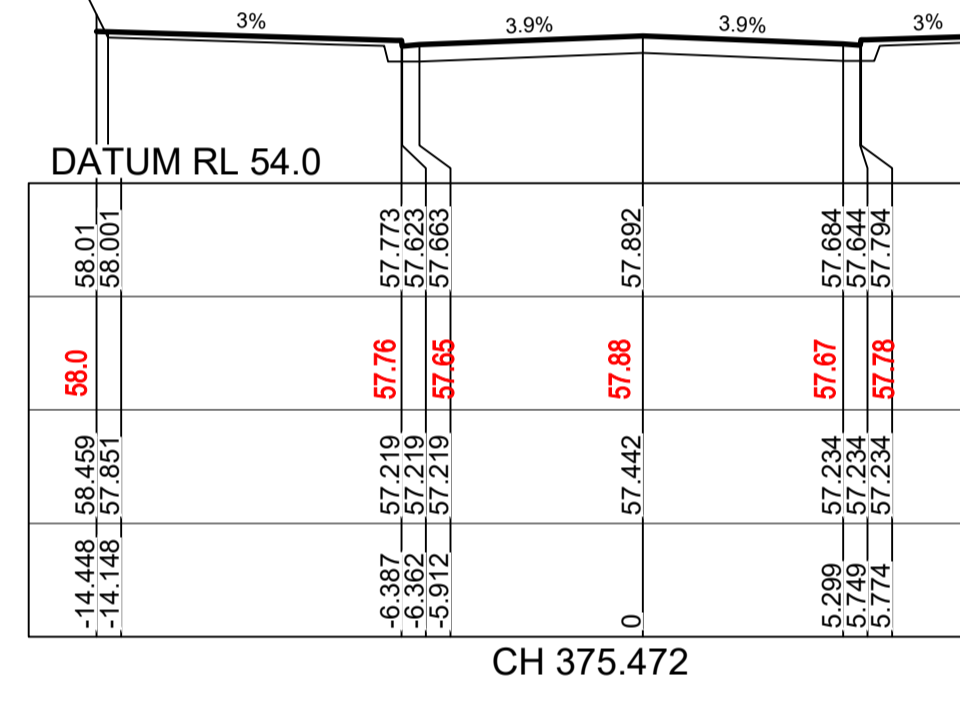
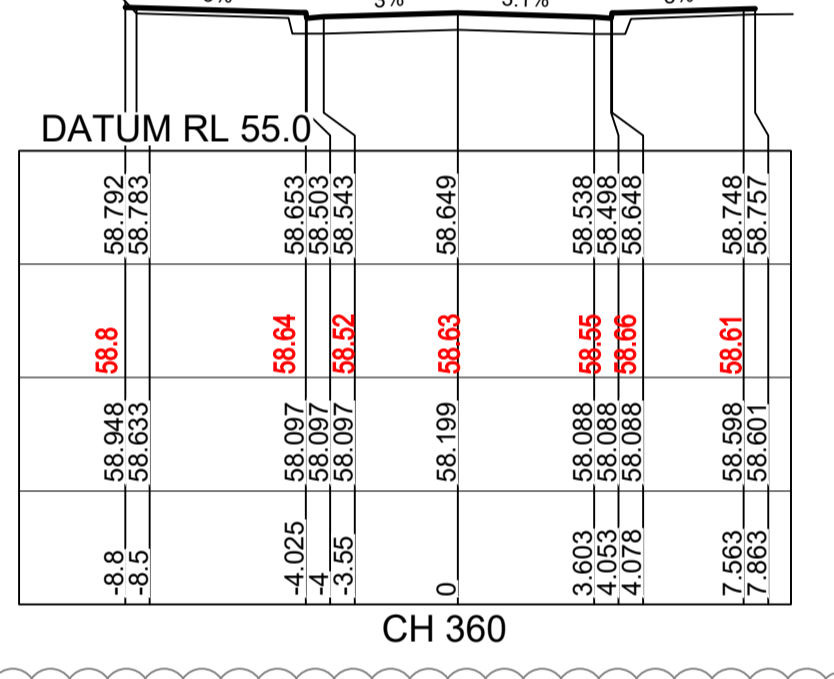
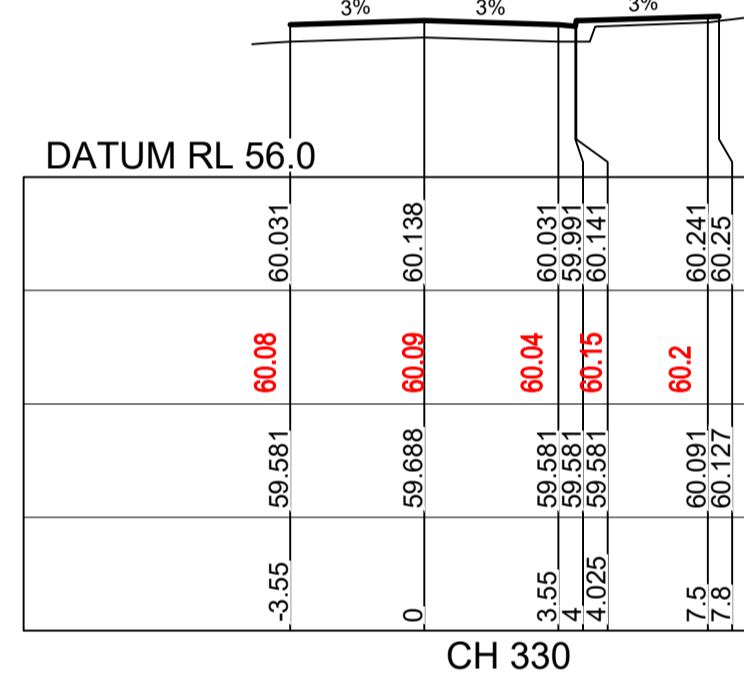
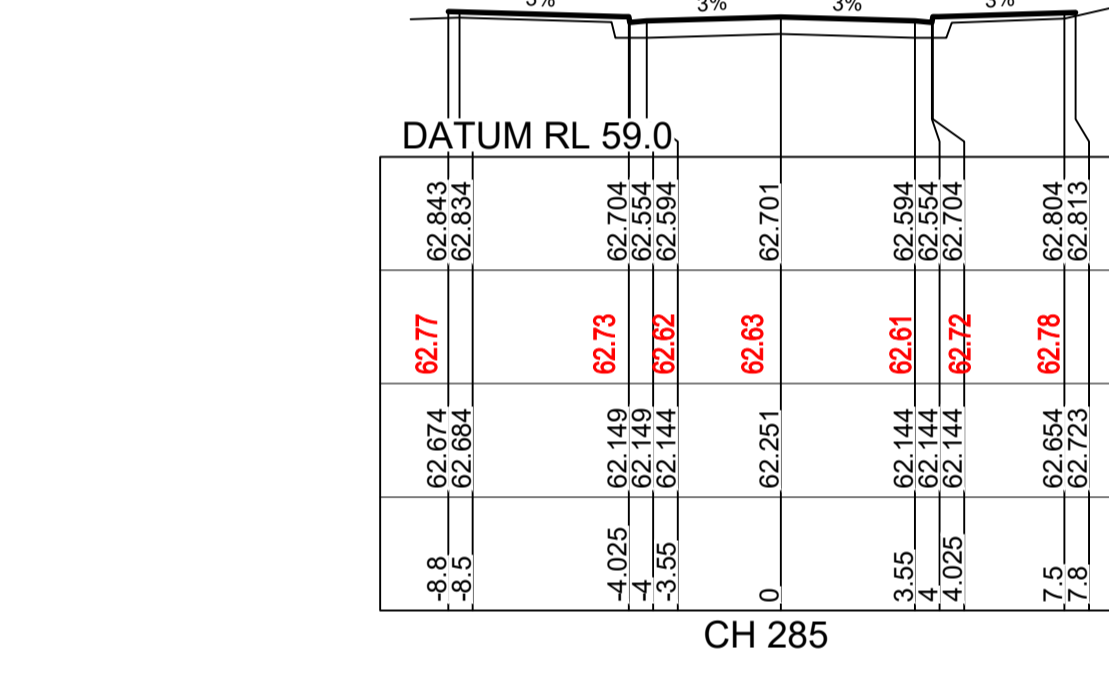
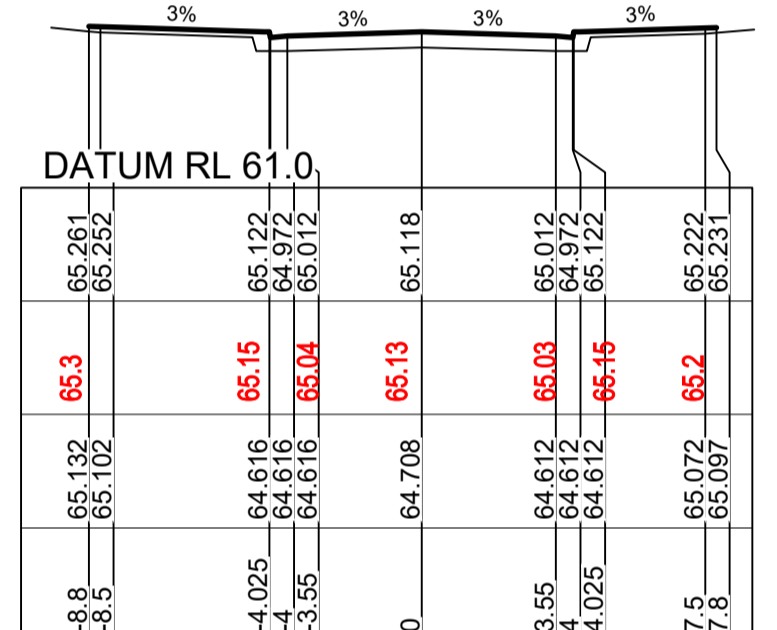
SUBDIVISION WORKS CERTIFICATE

Certificate No. 201302995W76
Date of Issue 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

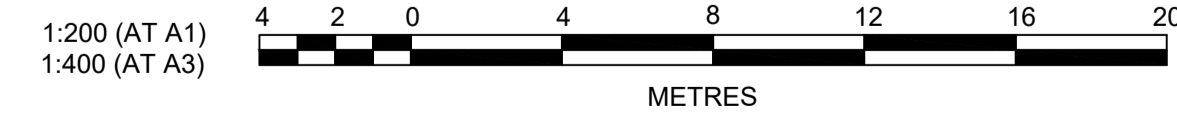
These plans/specifications form part of the certificate issued 11/05/2022



EXTENT OF WORKS



ROAD 52



ROAD 53

AMENDMENT	DES	DRN	CKD	APR	DATE	
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21

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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
ROAD CROSS SECTIONS
SHEET 2

PROJECT No: 110185-12
SHEET No: CC3202
PLAN No: 110185-12-CC3202

WORK AS EXECUTED SHOWN IN RED

SIGNATURE.....*PR*.....

VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

ROAD 55

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
Date of Issue..... 11/05/2022
Issuing Officer *D. Resta*

Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022

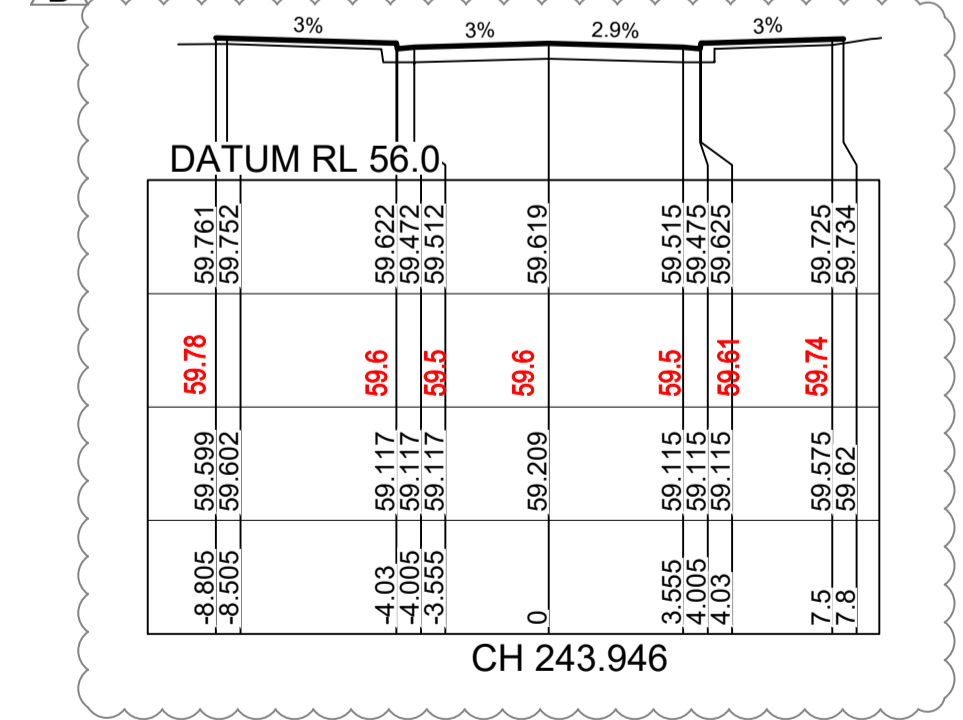
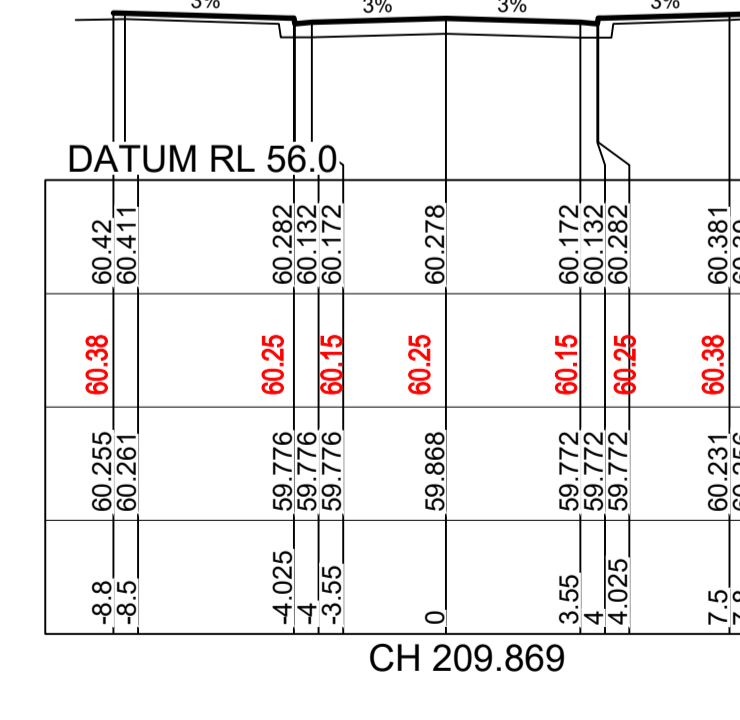
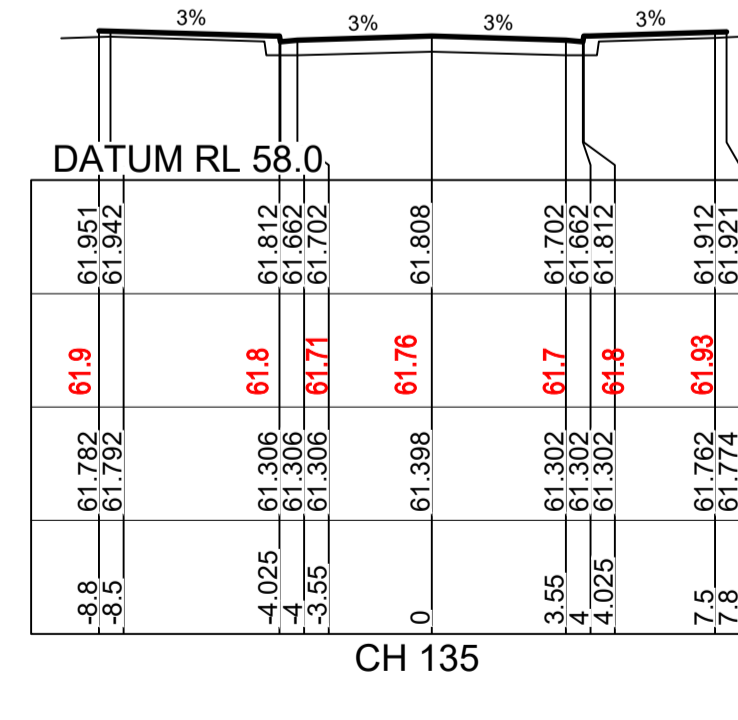
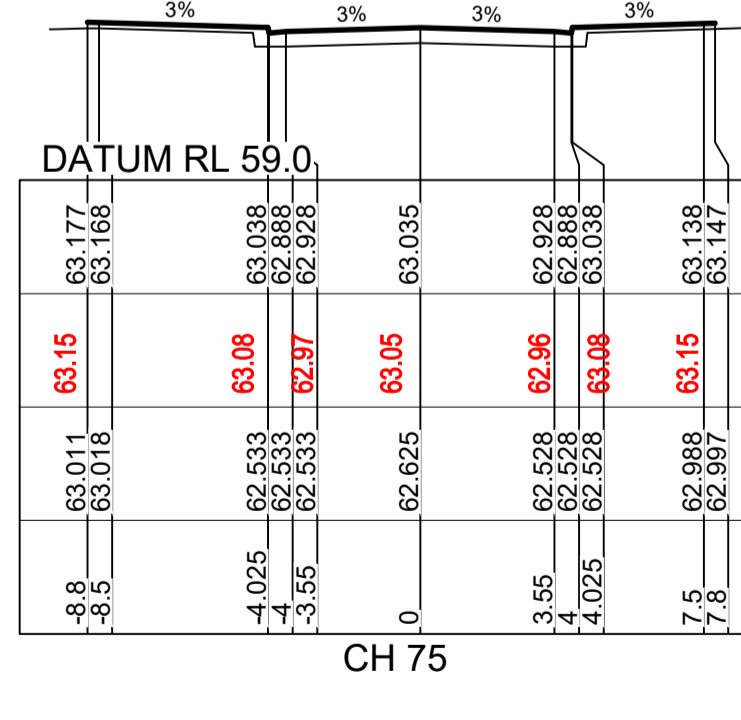
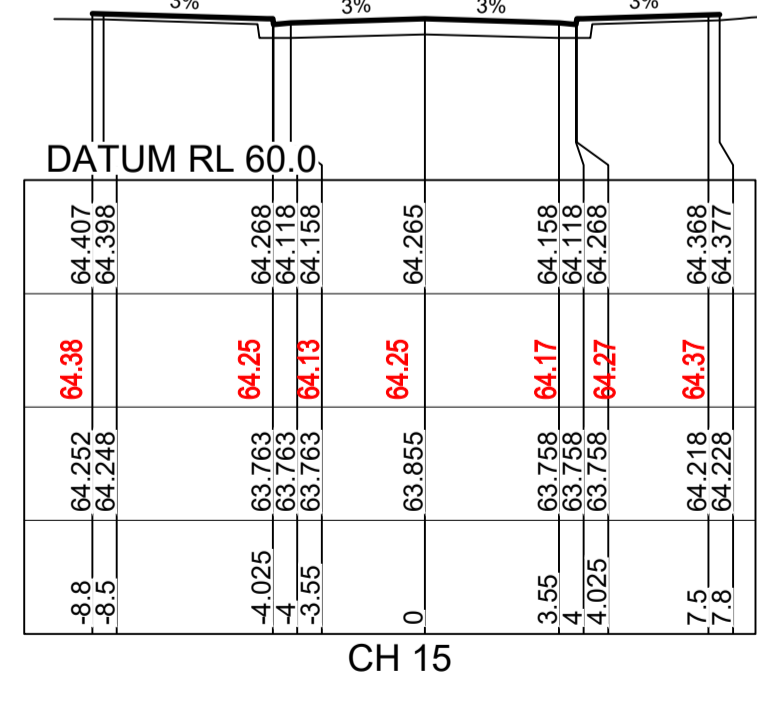
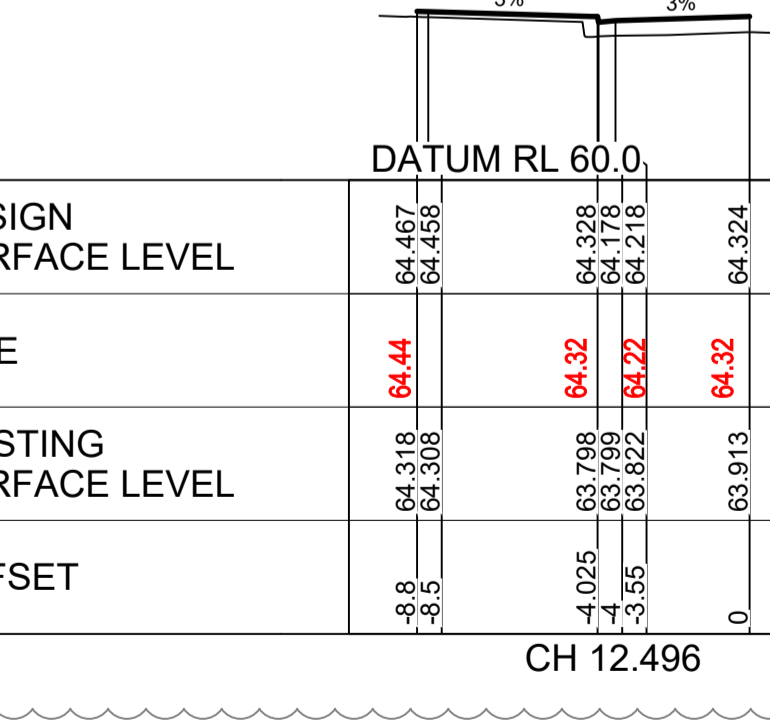
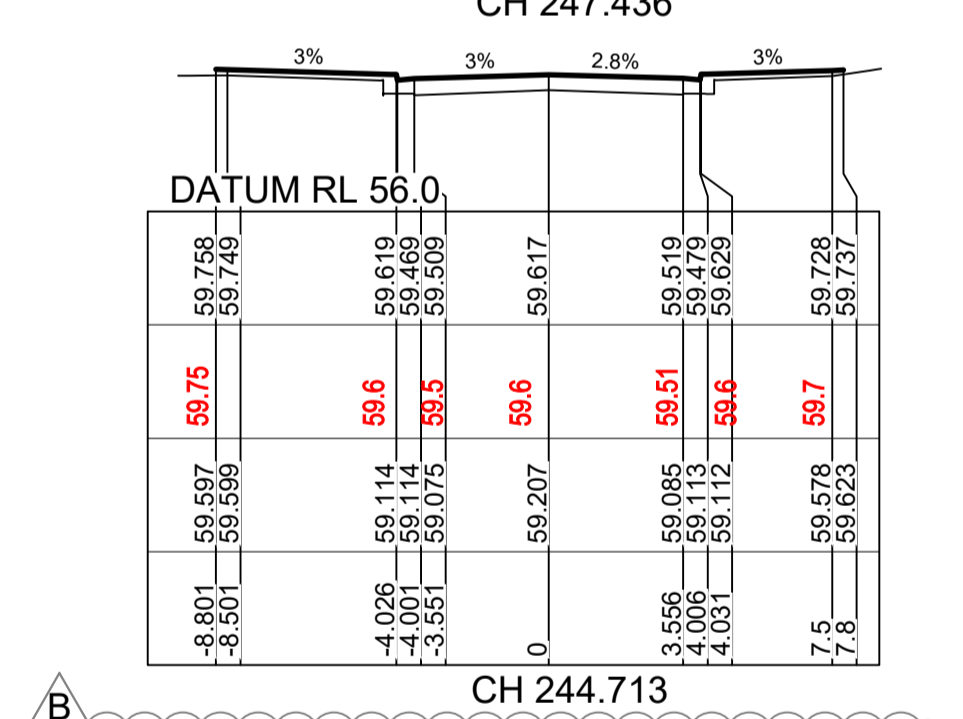
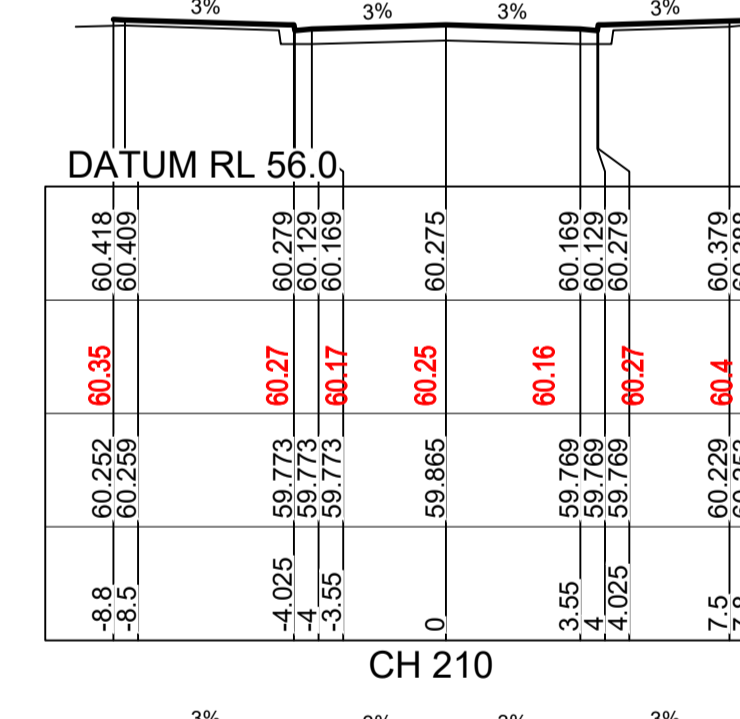
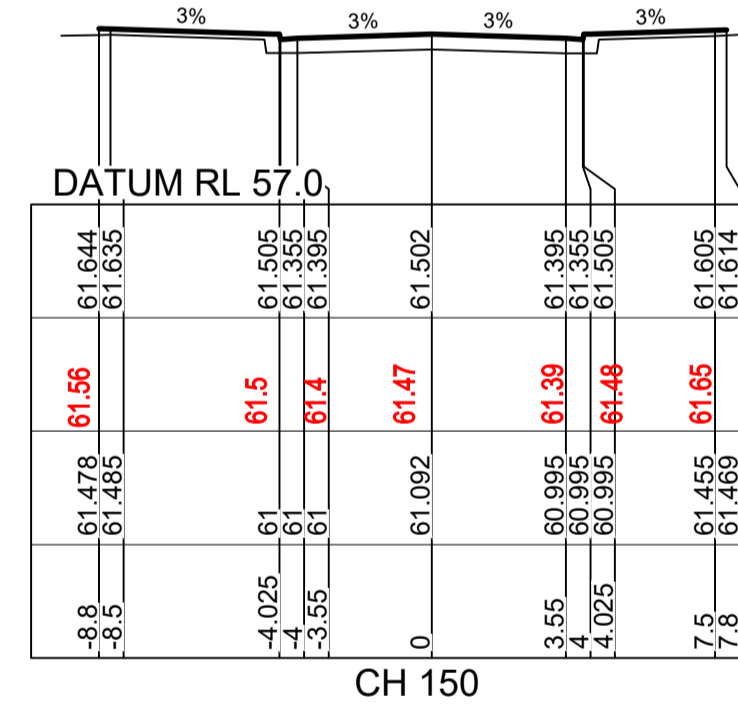
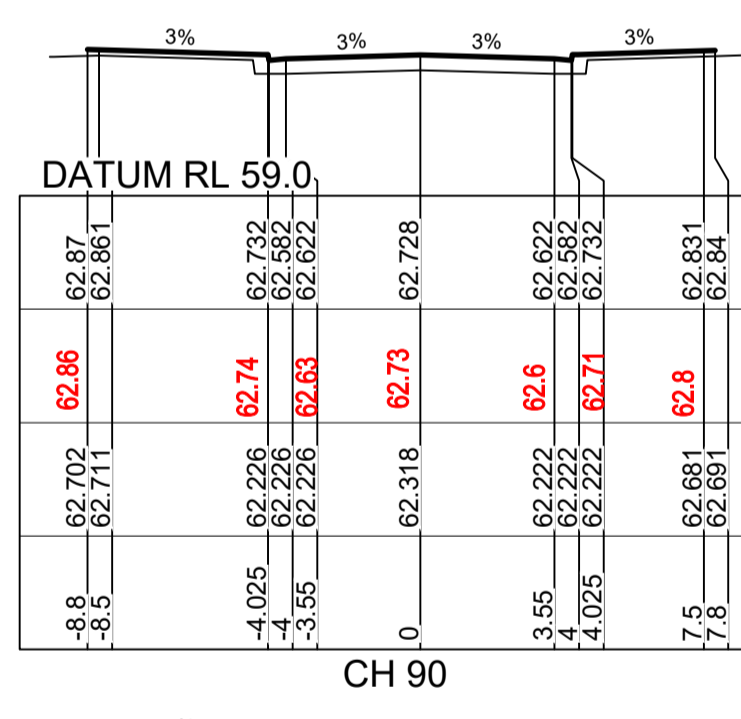
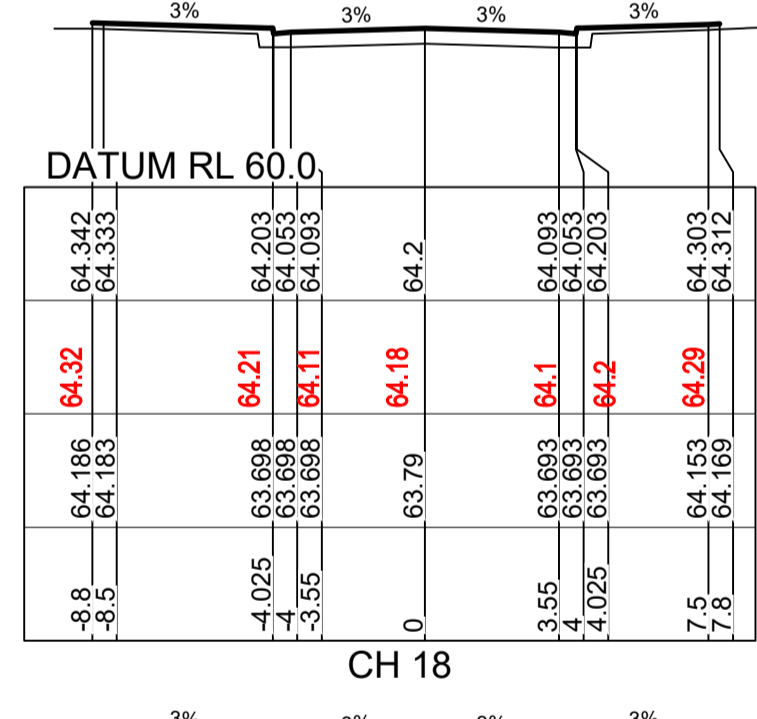
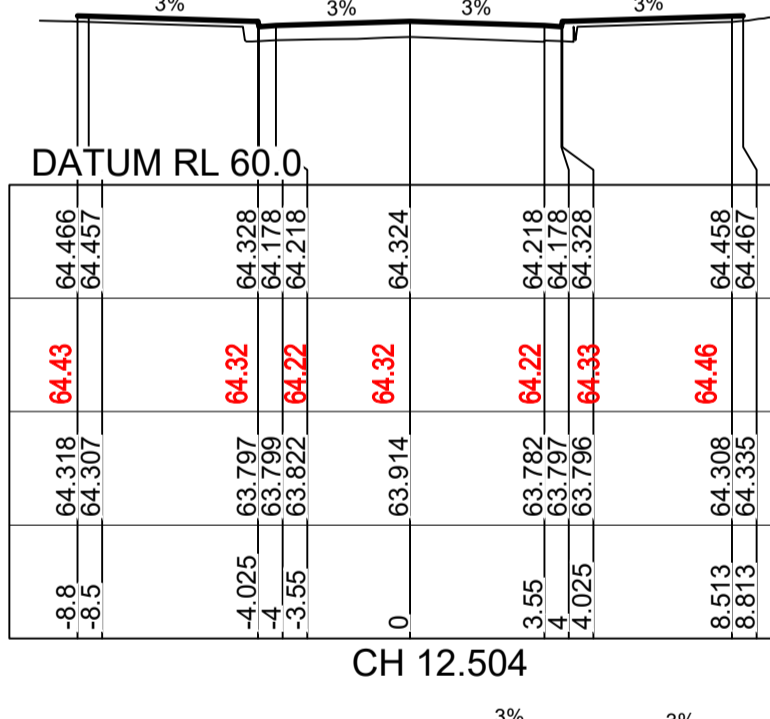
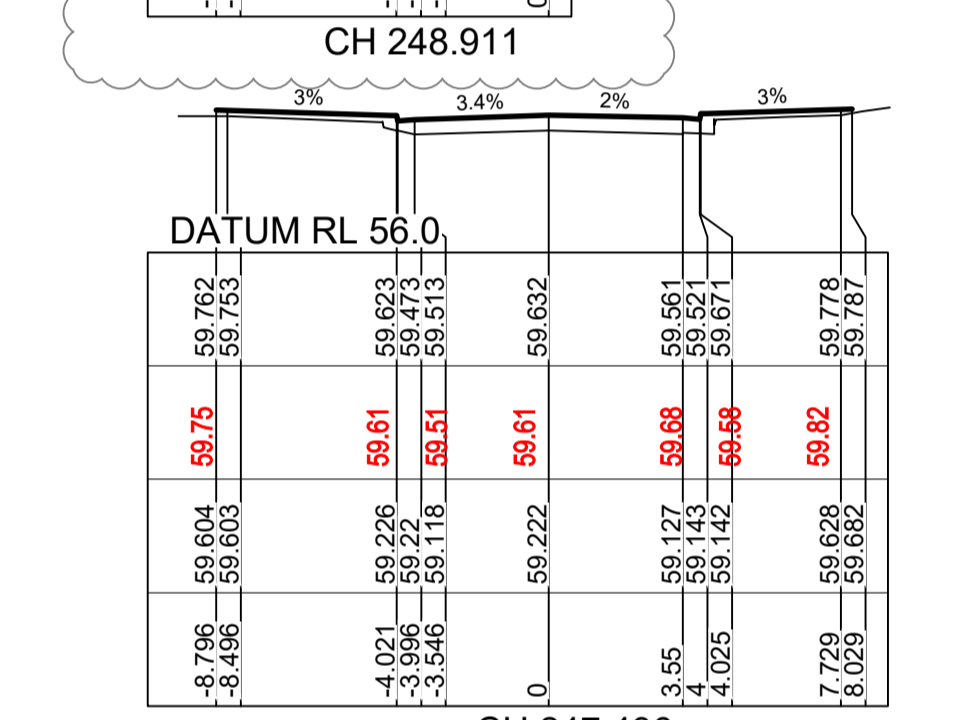
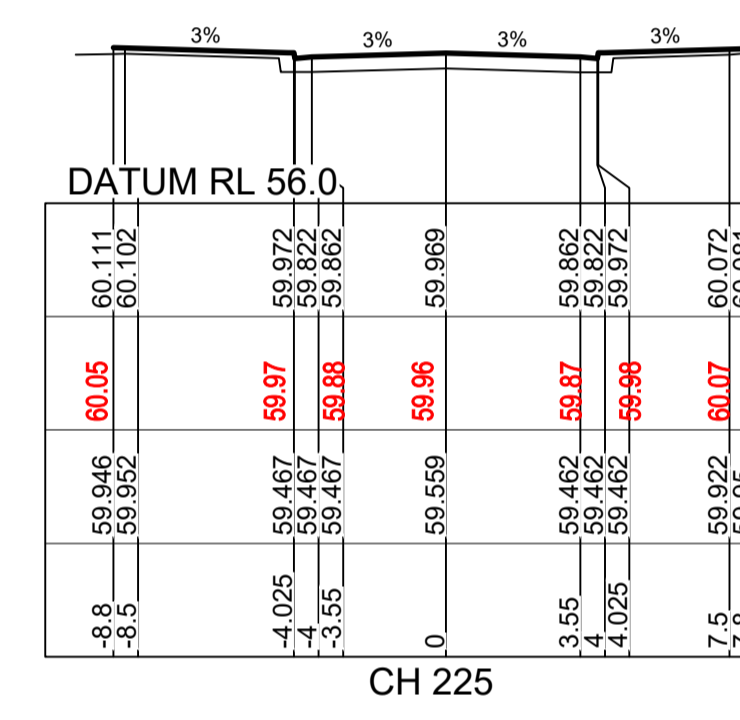
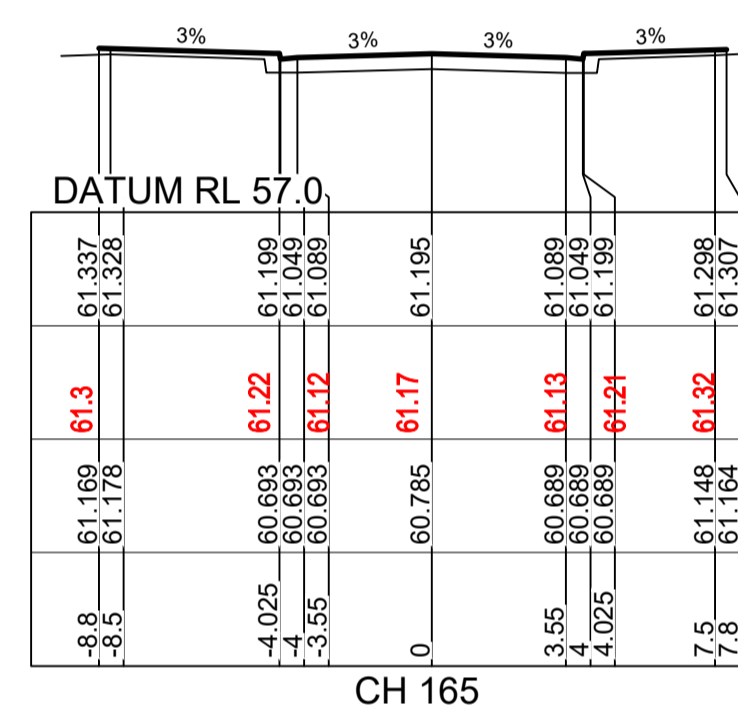
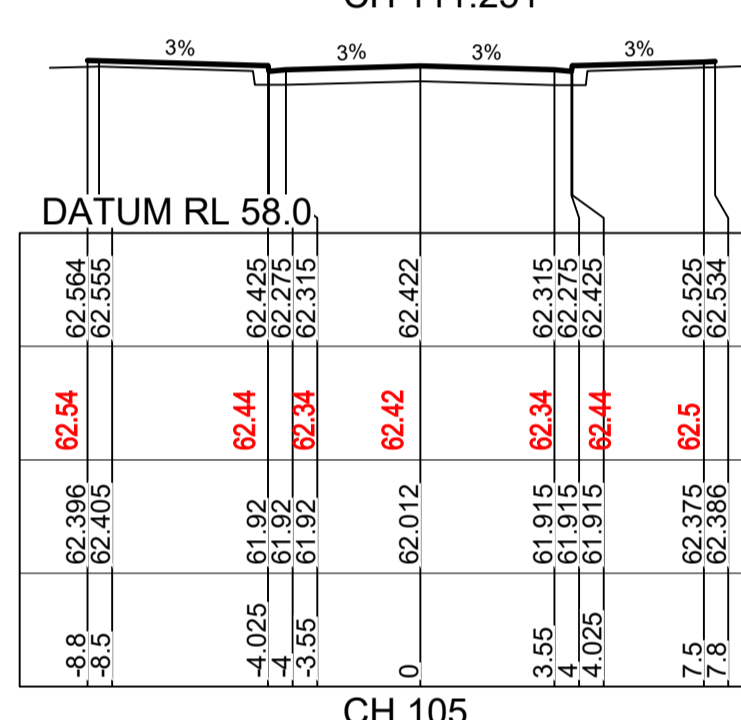
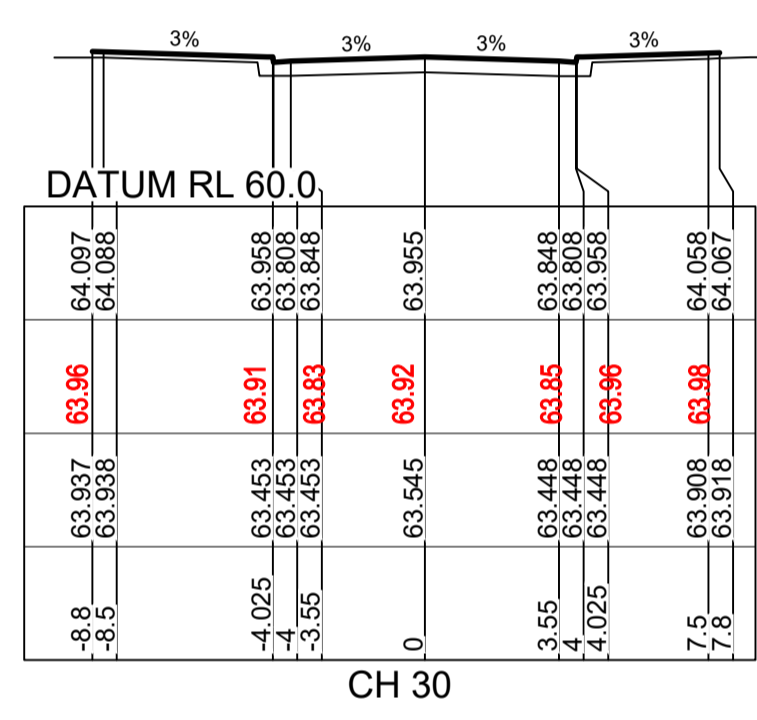
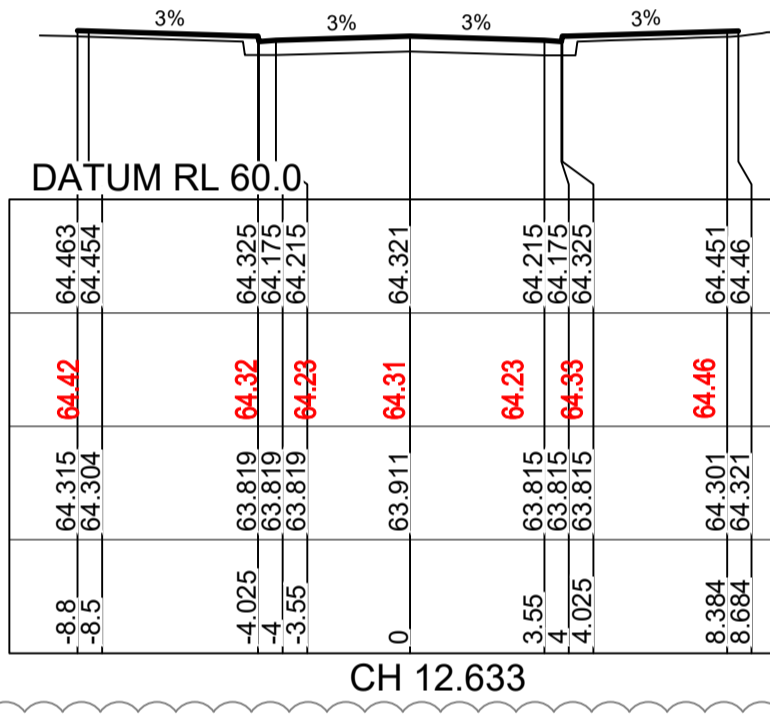
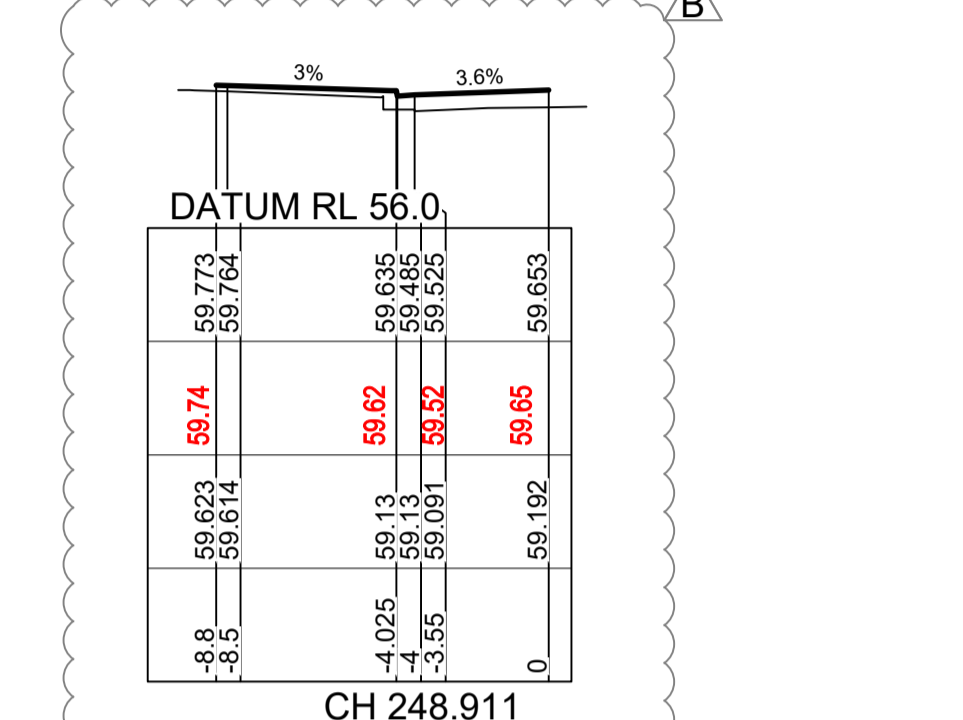
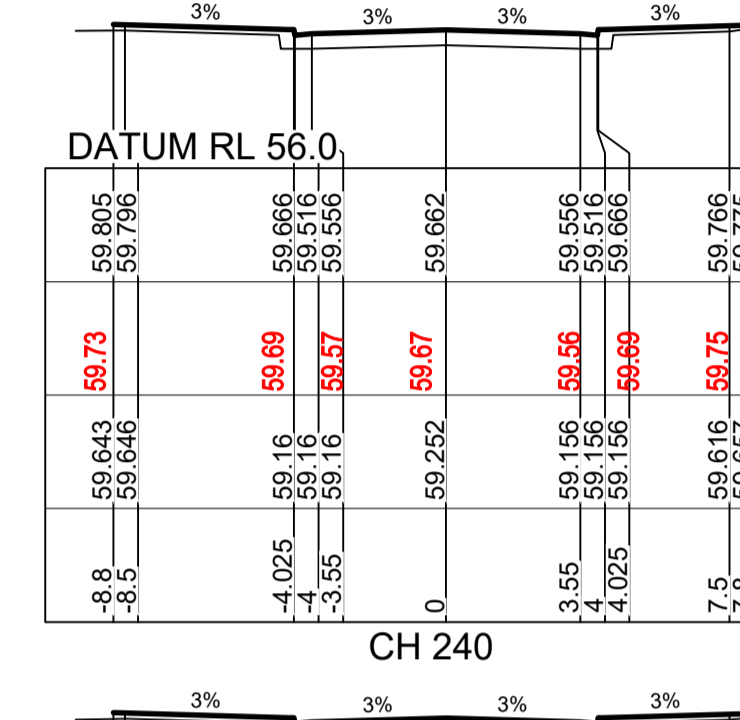
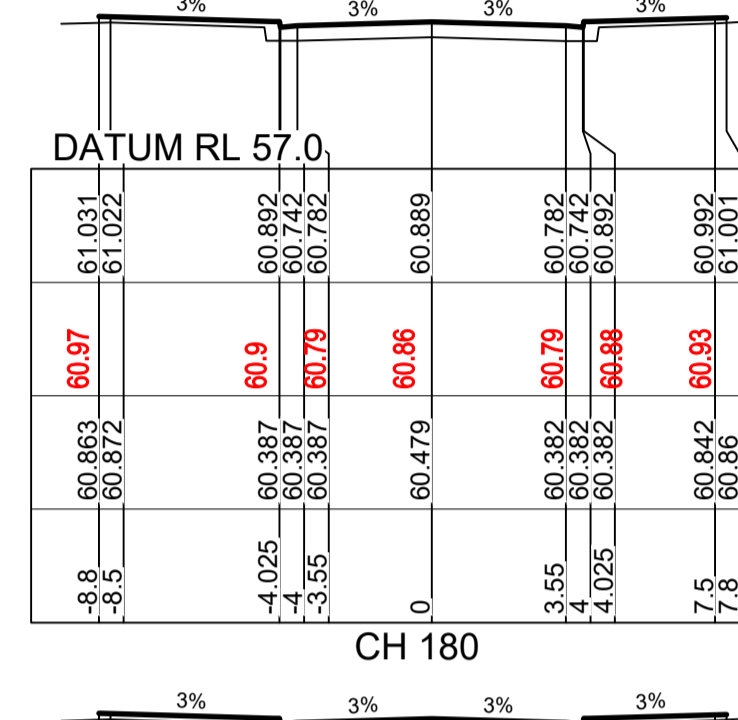
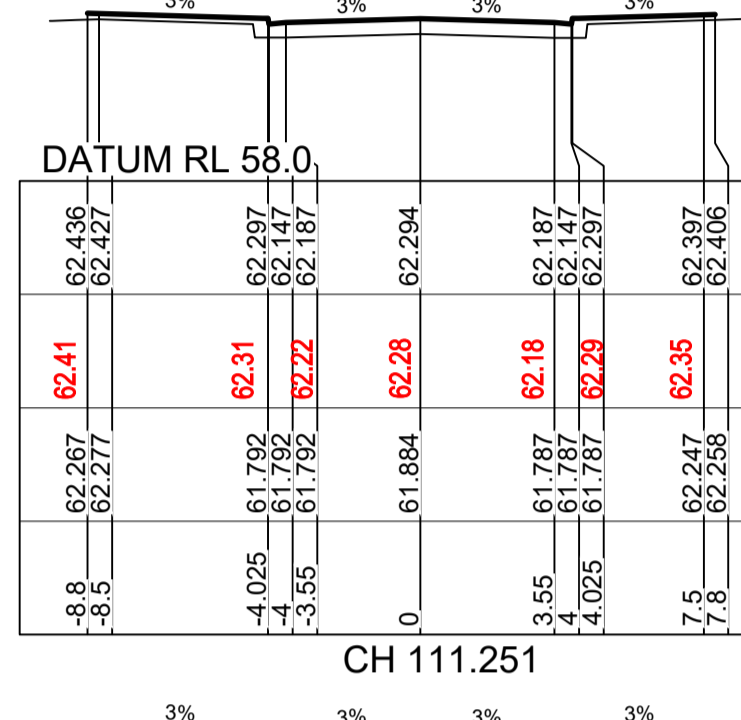
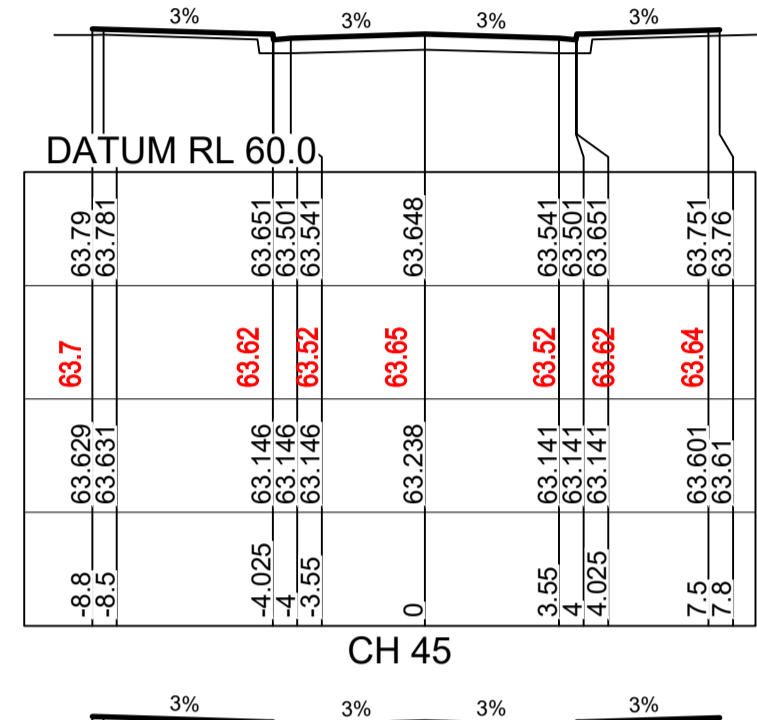
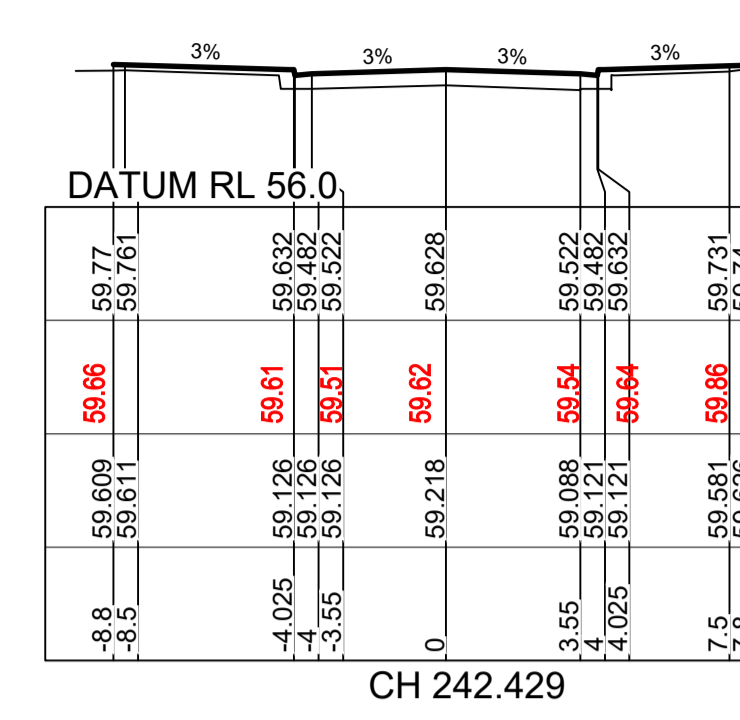
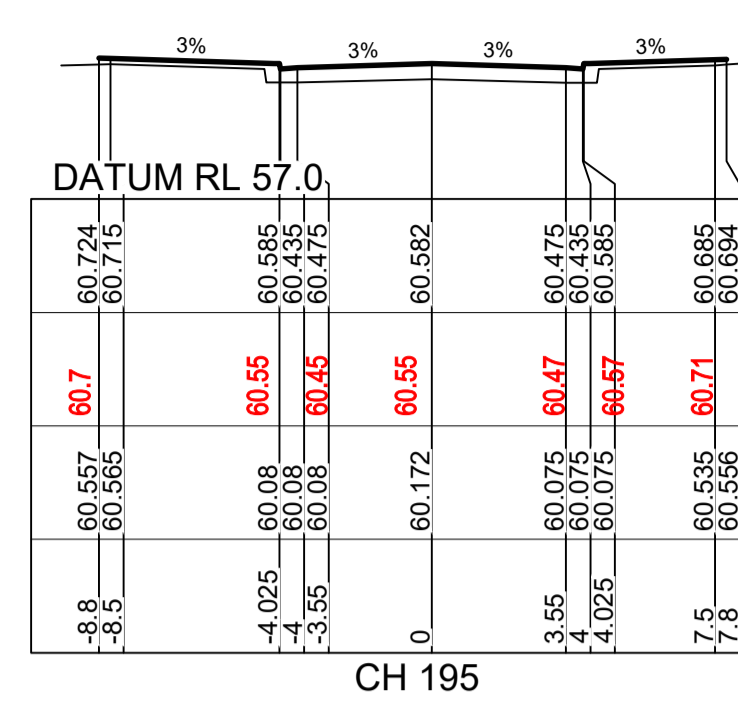
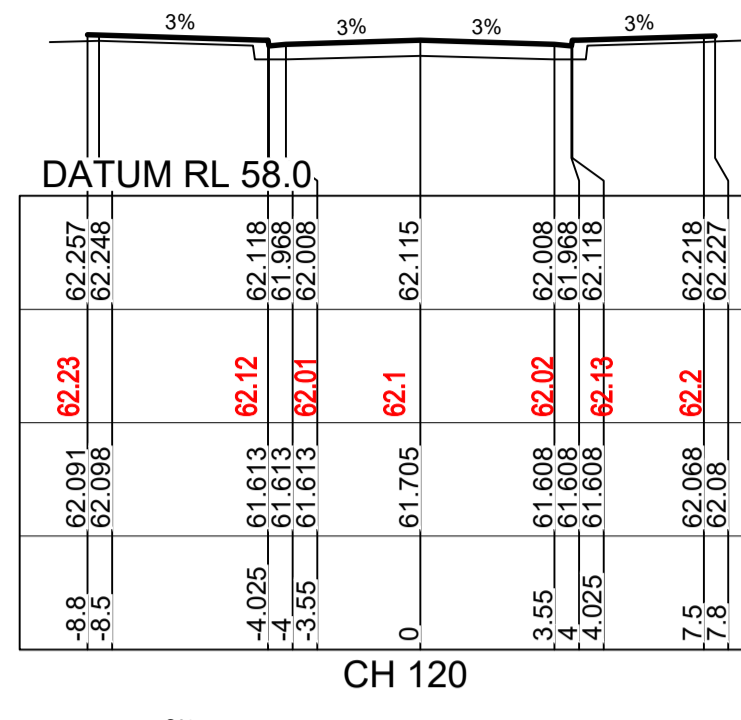
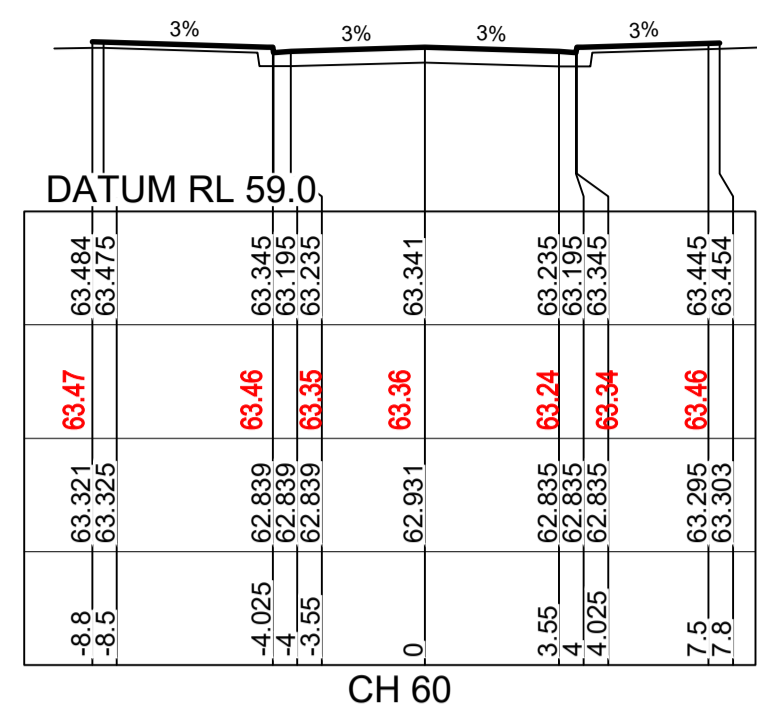
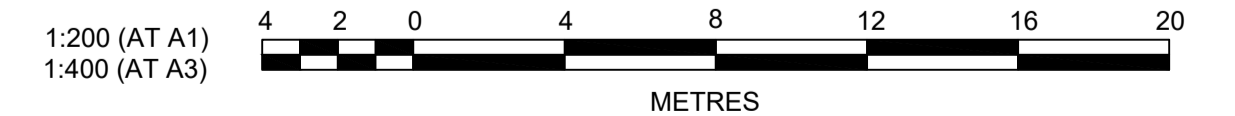


Table with 4 columns: DESIGN SURFACE LEVEL, WAE, EXISTING SURFACE LEVEL, OFFSET. Values are provided for CH 12.496.

ROAD 56

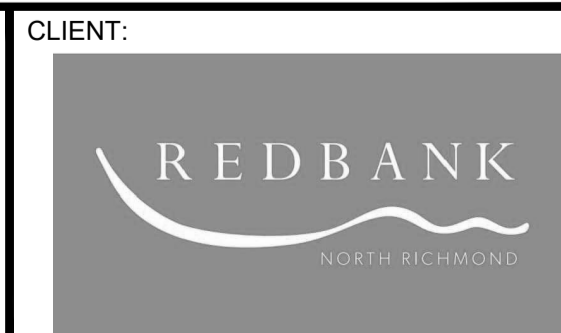


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Revision table with columns: No, Description, Date, By, Appr, Status. Includes entries for 'ISSUED FOR CONSTRUCTION APPROVAL' and 'AMENDMENT'.

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



ISSUE FOR CONSTRUCTION APPROVAL

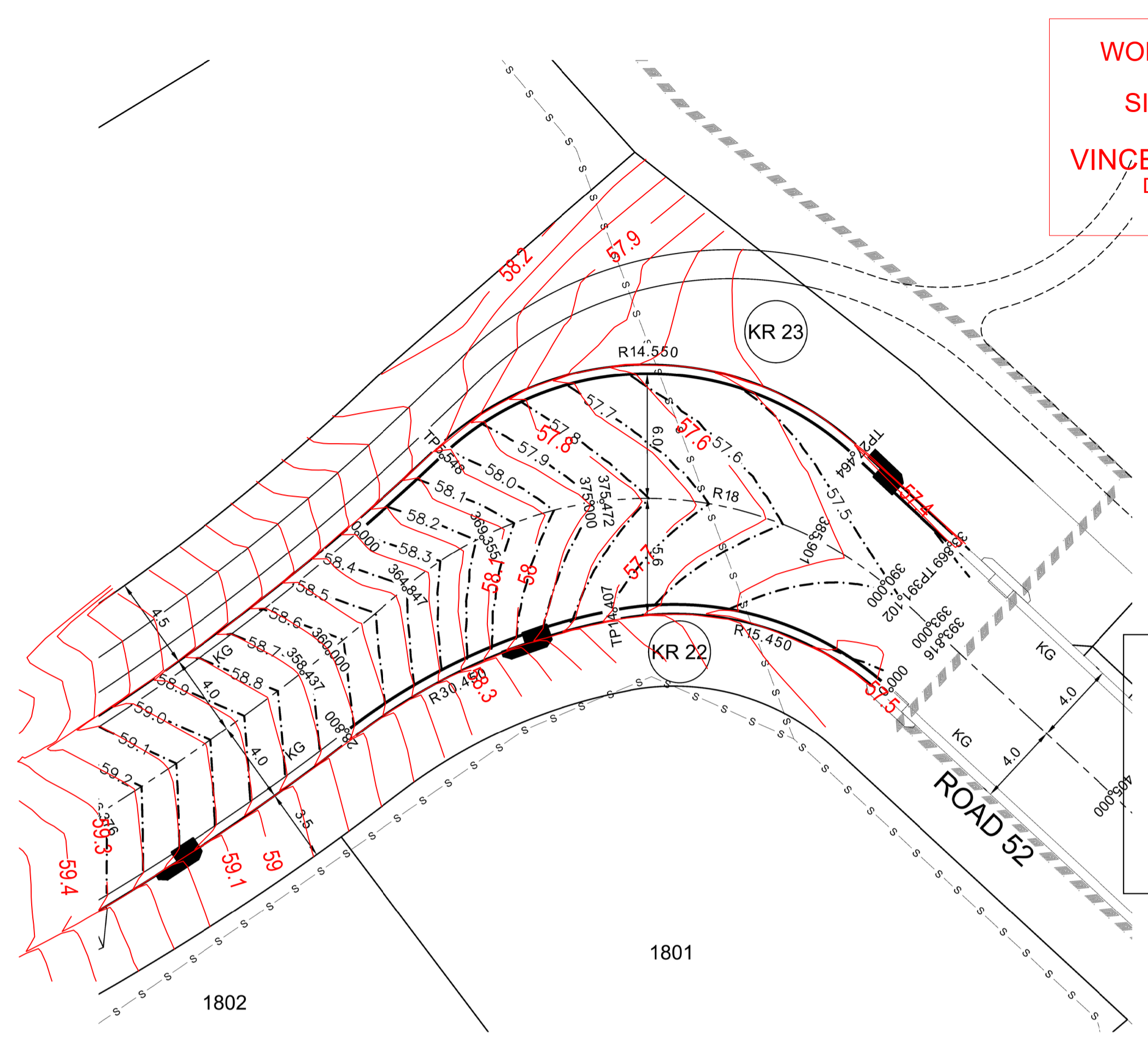
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC ROAD CROSS SECTIONS SHEET 3

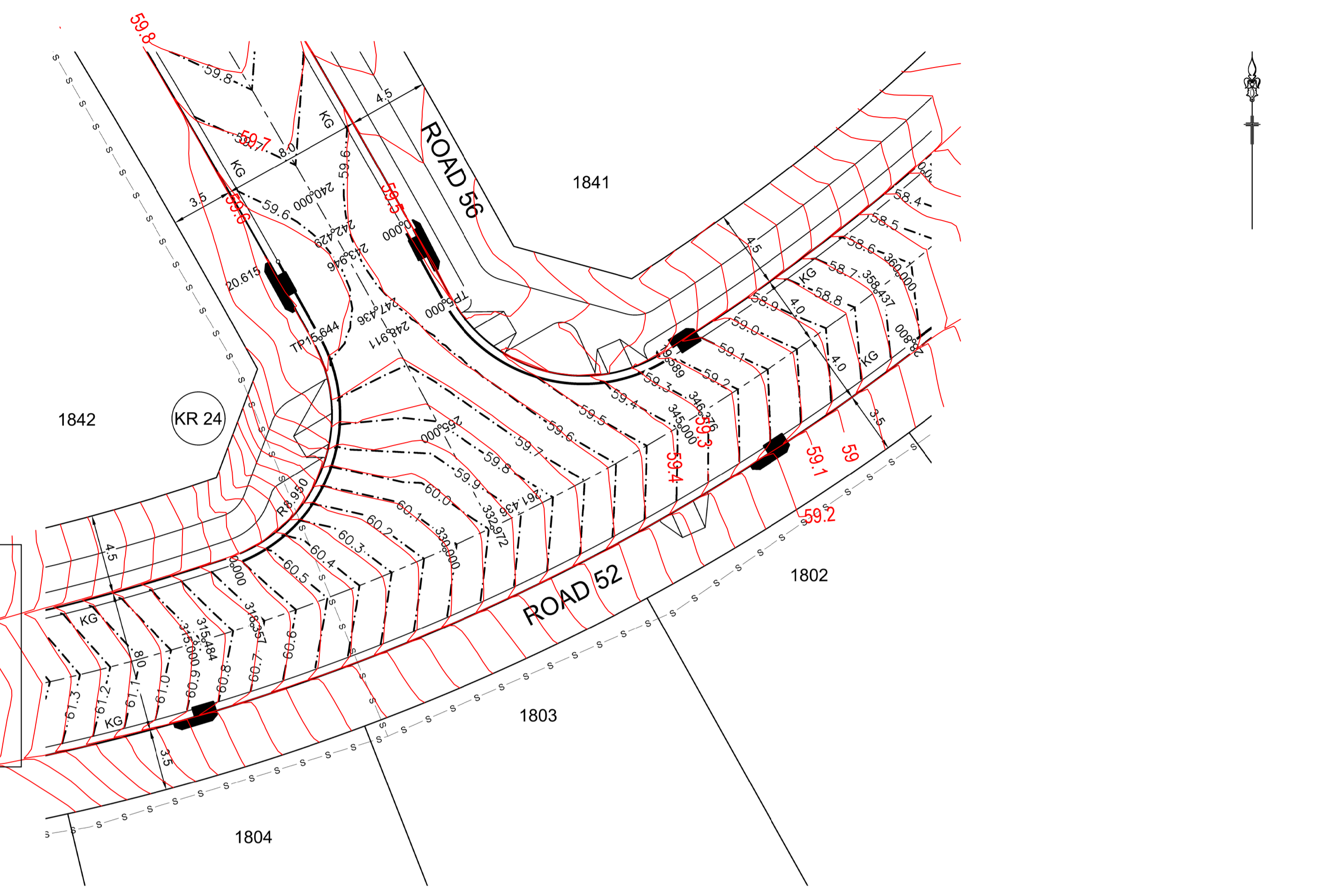
PROJECT No: 110185-12 SHEET No: CC3203

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3203

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE.....*PR*.....
 VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800



SUBDIVISION WORKS CERTIFICATE
 Certificate No. 20130299SW76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367
 These plans/specifications form part of the certificate issued 11/05/2022



DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER

ROAD 52

DESIGN GRADELINE	IP 57.382					IP 57.402	IP 57.610	IP 58.428
VERTICAL GEOMETRY	0.500%		2.000%		7.864%		4.820%	
DATUM 52.0	57.39	57.42	57.49	57.52	57.7	58.0	58.11	
DESIGN LIP GRADING	57.417	57.482	57.51	57.51	57.684	58.003	58.113	
ROAD CHAINAGE	0	4	8	14.407	19.407	20.8	24.8	
CHAINAGE	0	393.816	57.382	57.417	57.482	57.51	57.51	

ROAD 52

DESIGN GRADELINE	IP 58.011					IP 57.556	IP 58.011	IP 57.413	IP 57.394
VERTICAL GEOMETRY	-5.243%		-4.501%		-1.000%		-1.000%	-0.500%	
DATUM 52.0	58.29	58.28	58.02	57.8	57.62	57.6	57.51		
DESIGN LIP GRADING	58.273	58.273	58.02	57.786	57.781	57.78	57.416		
ROAD CHAINAGE	0	5.548	10.548	10.662	15	15.662	20.662		
CHAINAGE	0	364.847	58.302	58.302	58.02	57.438	57.46		

ROAD 52

DESIGN GRADELINE	IP 60.522					IP 59.621	IP 59.502	IP 59.522
VERTICAL GEOMETRY	-5.533%		-8.465%		-2.0%		1.0%	
DATUM 55.0	60.63	60.49	60.34	59.88	59.84	59.57	59.57	
DESIGN LIP GRADING	60.633	60.508	60.383	59.875	59.67	59.571	59.561	
ROAD CHAINAGE	0	318.357	60.633	60.508	60.383	59.875	59.67	
CHAINAGE	0	318.357	60.633	60.508	60.383	59.875	59.67	

ROAD 56

DESIGN GRADELINE	IP 59.512					IP 59.500	IP 59.565	IP 59.423
VERTICAL GEOMETRY	-0.488%		0.5%		1.0%		-2.149%	-5.110%
DATUM 54.0	59.51	59.51	59.54	59.54	59.445	59.47	59.47	
DESIGN LIP GRADING	59.512	59.508	59.509	59.509	59.533	59.533	59.423	
ROAD CHAINAGE	0	243.946	59.512	59.508	59.509	59.533	59.423	
CHAINAGE	0	243.946	59.512	59.508	59.509	59.533	59.423	

KR 22
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286673.36	6281131.85	312°48'55.65"	-15.45	14.41
7.2	286667.85	6281137.13			
14.41	286660.01	6281135.7	259°23'20.17"	-30.45	14.39
21.6	286652.8	6281134.35			
28.8	286647	6281129.86	232°18'19.10"		

KR 23
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

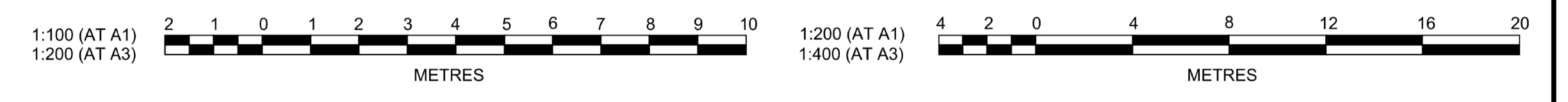
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286647.48	6281138.42	49°14'40.82"	-116.45	5.55
2.77	286649.58	6281141.23			
5.55	286651.59	6281143.14			
16.51	286661.49	6281152.52			
27.46	286671.49	6281143.25	132°48'55.65"		
33.87	286676.19	6281138.9	132°48'55.65"		

KR 24
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286608.52	6281117.23	71°26'31.50"	-8.95	15.64
7.82	286618.66	6281120.64			
15.64	286613.52	6281130.02			
20.62	286611.11	6281134.36	331°00'14.87"		

KR 25
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286616.05	6281136.51	151°13'56.83"	-8.95	14.59
7.2	286620.46	6281132.12			
12.29	286624.99	6281123.78			
19.59	286633.05	6281128.8	58°03'50.20"		



B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
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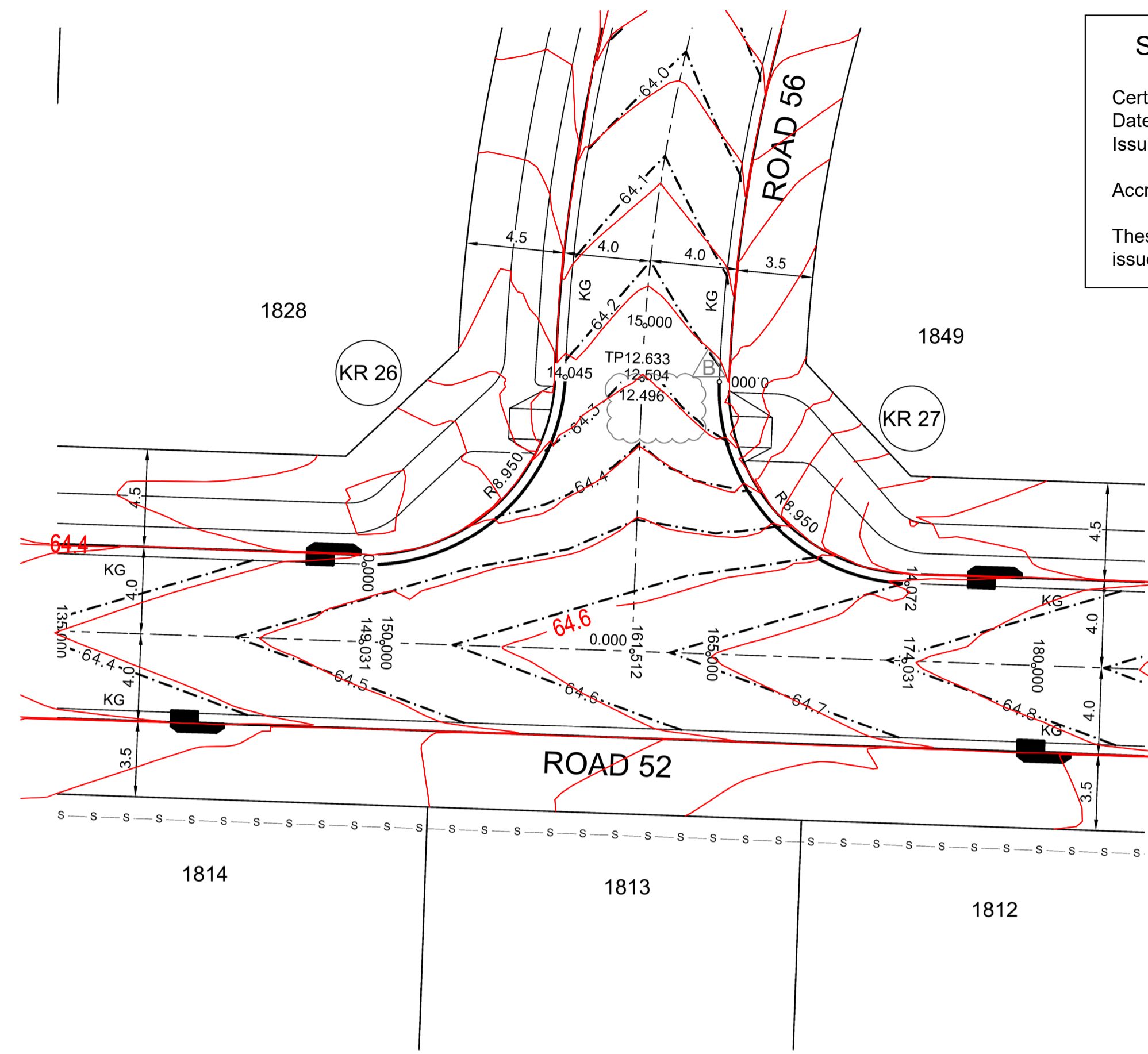


STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC
 KERB RETURN PLAN SHEET 1
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3301

PROJECT No: **110185-12**
 SHEET No: **CC3301**
 B

Plotted: 5 May 2022 11:07:47 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3302.dwg

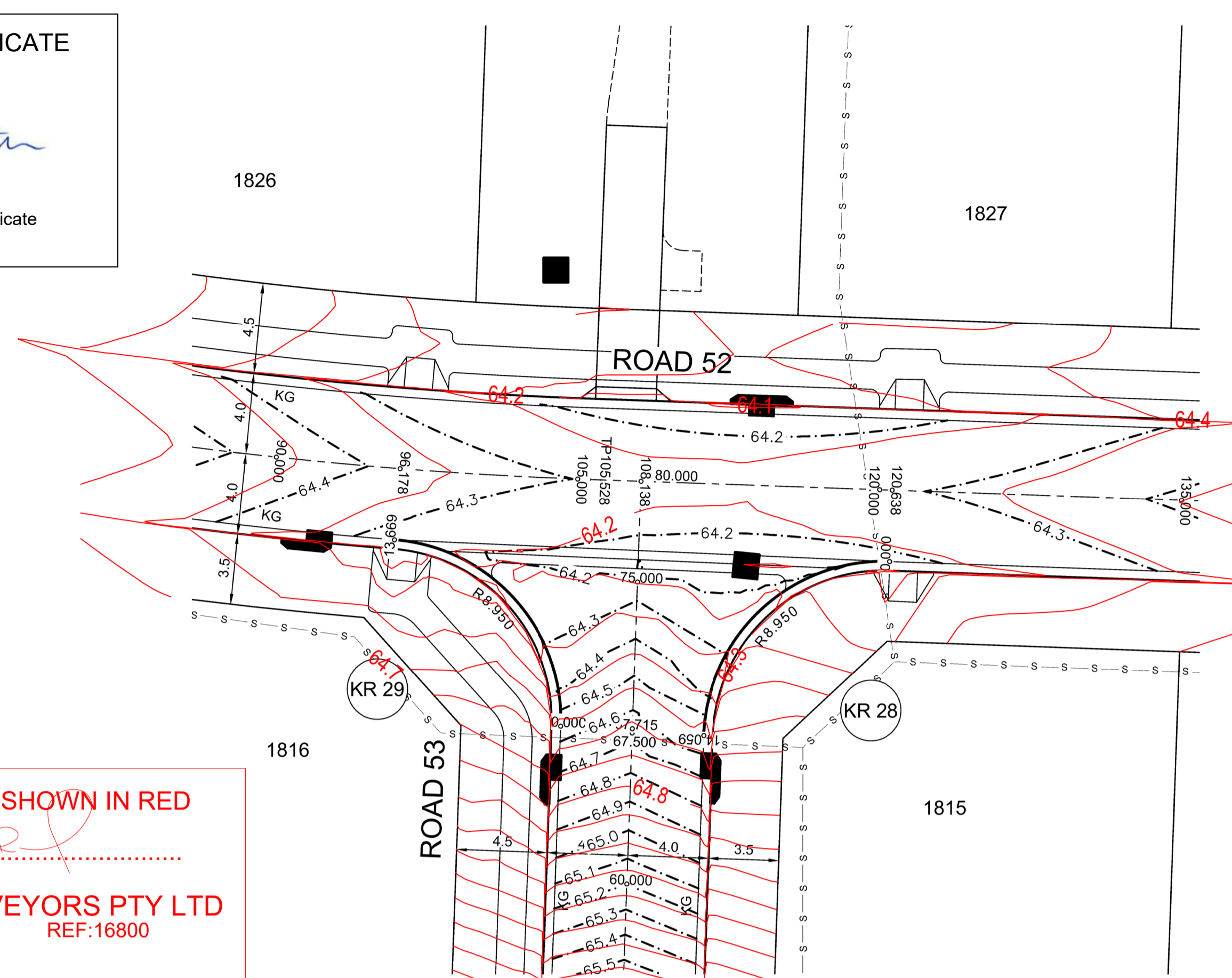


PLAN
SCALE 1:200

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022



PLAN
SCALE 1:200

WORK AS EXECUTED SHOWN IN RED

SIGNATURE..... *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER

ROAD 52		ROAD 56	
CREST CH 1.96 RL 64.461m			
DESIGN GRADELINE VERTICAL GEOMETRY		DESIGN GRADELINE VERTICAL GEOMETRY	
1.000%		-2.583%	
7.02m V.C.		7.02m V.C.	
DATUM 59.0	64.46	DATUM 59.0	64.23
DESIGN	64.461	DESIGN	64.31
LIP GRADING	64.455	LIP GRADING	64.306
ROAD CHAINAGE	64.396	ROAD CHAINAGE	64.218
CHAINAGE	64.377	CHAINAGE	64.23

KR 26
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286441.2	6281115.69	92°00'57.16"		
7.02	286450.13	6281115.38		-8.95	14.04
14.04	286450.46	6281124.31	2°06'14.86"		

ROAD 56		ROAD 52	
DESIGN GRADELINE VERTICAL GEOMETRY			
2.476%			
5.140%			
1.000%			
7.04m V.C.		7.04m V.C.	
DATUM 59.0	64.22	DATUM 59.0	64.7
DESIGN	64.217	DESIGN	64.686
LIP GRADING	64.328	LIP GRADING	64.63
ROAD CHAINAGE	64.485	ROAD CHAINAGE	64.701
CHAINAGE	64.5	CHAINAGE	64.701

KR 27
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286457.56	6281124.08	182°06'14.86"		
7.04	286457.23	6281115.13		-8.95	14.07
14.07	286466.19	6281114.81	92°00'57.16"		

ROAD 53		ROAD 52	
SAG CH 9.428 RL 64.248m			
DESIGN GRADELINE VERTICAL GEOMETRY			
-6.052%			
-0.727%			
1.188%			
6.83m V.C.		6.83m V.C.	
DATUM 59.0	64.5	DATUM 59.0	64.28
DESIGN	64.489	DESIGN	64.282
LIP GRADING	64.328	LIP GRADING	64.233
ROAD CHAINAGE	64.257	ROAD CHAINAGE	64.249
CHAINAGE	64.24	CHAINAGE	64.273

KR 29
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

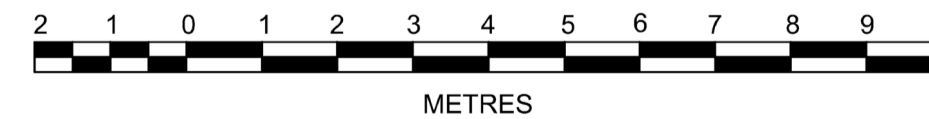
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286396.23	6281101.43	2°00'57.16"		
6.83	286396.53	6281109.99		-8.95	13.67
13.67	286387.99	6281110.67	274°30'26.92"		

ROAD 53		ROAD 52	
DESIGN GRADELINE VERTICAL GEOMETRY			
0.700%			
1.017%			
6.315%			
7.03m V.C.		7.03m V.C.	
DATUM 59.0	64.18	DATUM 59.0	64.51
DESIGN	64.184	DESIGN	64.209
LIP GRADING	64.211	LIP GRADING	64.280
ROAD CHAINAGE	64.244	ROAD CHAINAGE	64.327
CHAINAGE	64.324	CHAINAGE	64.502

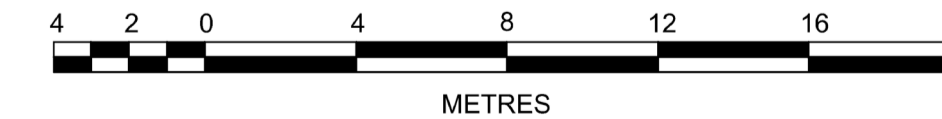
KR 28
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286412.58	6281109.59	272°00'57.16"		
7.03	286403.63	6281109.91		-8.95	14.06
14.06	286403.32	6281100.96	182°00'57.16"		

1:100 (AT A1)
1:200 (AT A3)



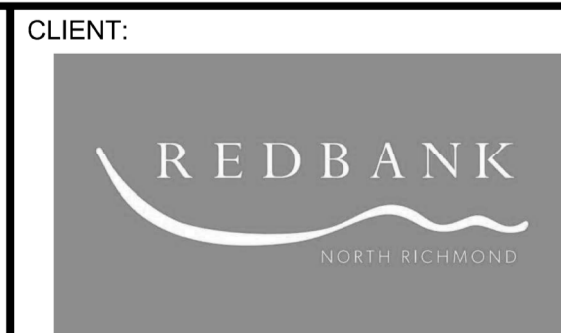
1:200 (AT A1)
1:400 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE	
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



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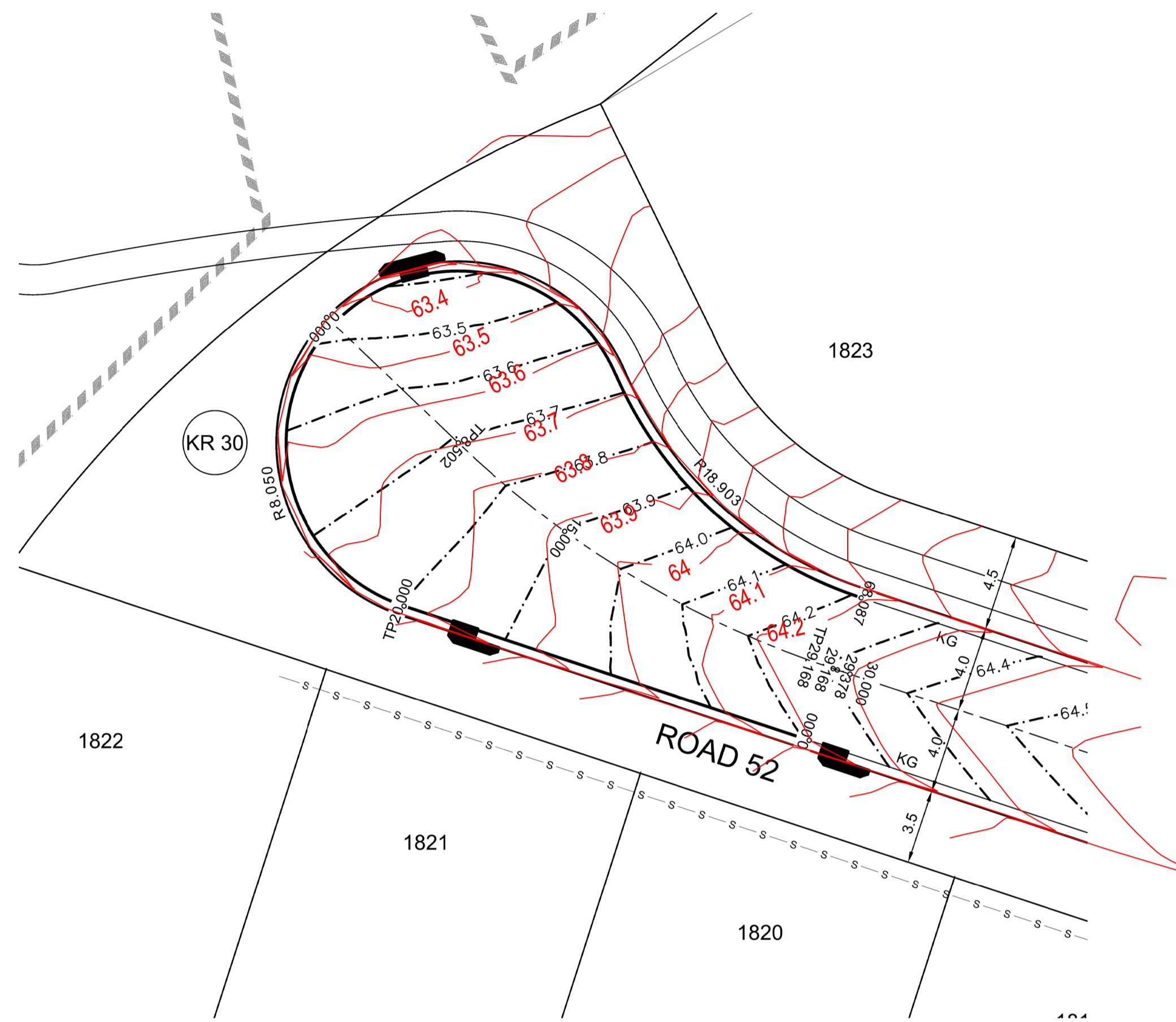
REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 KERB RETURN PLAN
 SHEET 2

PROJECT No:
110185-12
 SHEET No:
CC3302

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3302

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367
 These plans/specifications form part of the certificate issued 11/05/2022



PLAN
SCALE 1:200

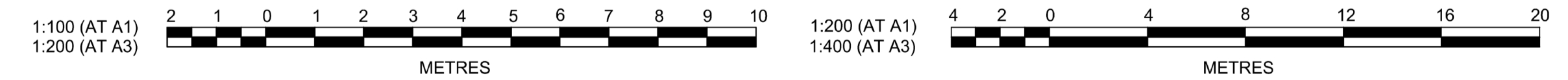
DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER

ROAD CHAINAGE	DESIGN LIP GRADING	DESIGN GRADELINE VERTICAL GEOMETRY
0	64.21	-2.312%
5	64.096	10.00m V.C.
10	63.996	
15	63.9	-1.912%
20	63.629	
25	63.615	6.00m V.C.
30	63.566	
35	63.494	
40	63.435	-2.564%
45	63.396	10.00m V.C.
50	63.42	
55	63.494	
60	63.89	3.738%
65	63.959	
70	64.064	
75	64.212	2.706%
80	64.2	

KR 30
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPRAL	A.LENGTH
0	286322.06	6281125.84	288°19'12.69"		
20	286303.07	6281132.12			
28.02	286291.25	6281136.04		8.05	16.05
36.05	286299.67	6281145.21	42°33'10.83"		
44.07	286308.09	6281154.38		8.05	16.05
52.1	286313	6281142.94			
60.09	286316.4	6281135.14		-18.9	15.99
68.09	286324.49	6281132.51	107°59'52.78"		

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800



Plotted: 5 May 2022 11:08:50 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3303.dwg

NO.	DESCRIPTION	MP	JM	RO	RO	DATE
A	ISSUED FOR CONSTRUCTION APPROVAL					12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
 PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

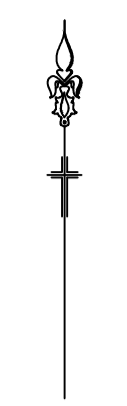
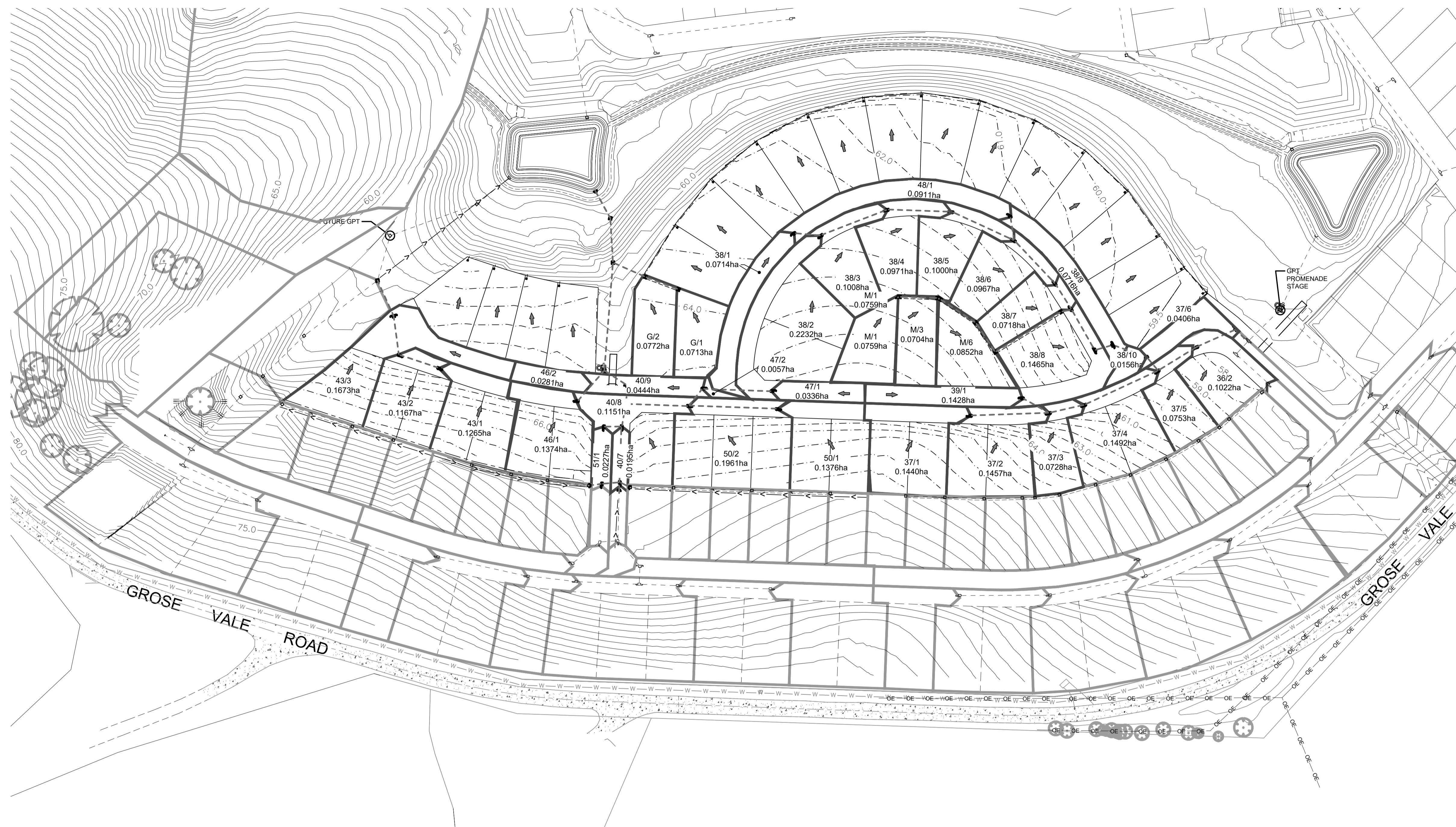
CLIENT:

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC
 KERB RETURN PLAN SHEET 3
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3303

PROJECT No: **110185-12**
 SHEET No: **CC3303**
 A

Plotted: 5 May 2022 11:10:05 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS3-RTP\110185-12-CC3400.dwg



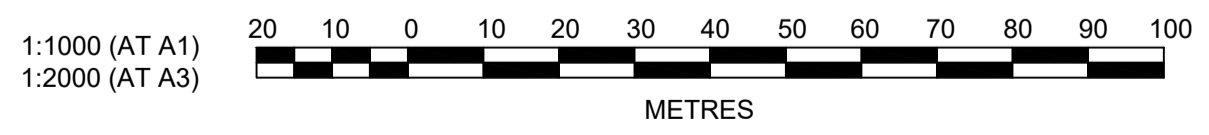
LEGEND	
CATCHMENT BOUNDARY	
EXISTING CATCHMENT BOUNDARY	
FLOW DIRECTION ARROW	
EXISTING CONTOURS	
DESIGN CONTOURS	
DRAINAGE LINE & PIT	
EXISTING DRAINAGE LINE & PIT	
FUTURE DRAINAGE LINE & PIT	

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE.....*PR*.....
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No.201302995W76
 Date of Issue.....11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022



NO.	DESCRIPTION	DES	JM	RO	RO	12/07/21
A	ISSUED FOR CONSTRUCTION APPROVAL AMENDMENT	MP	JM	RO	RO	12/07/21
		DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 CATCHMENT PLAN**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3400

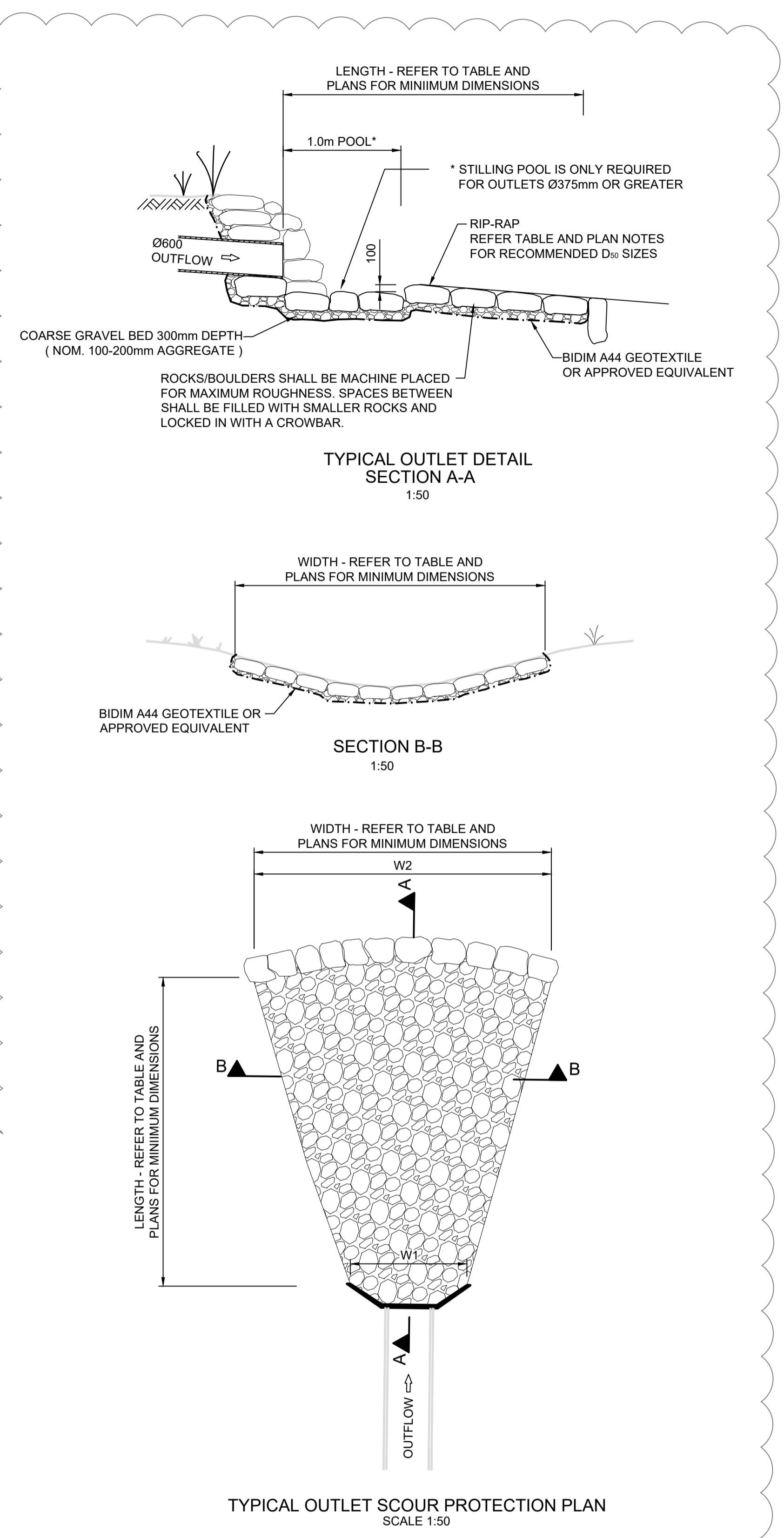
PROJECT No: **110185-12**
 SHEET No: **CC3400**
 A

HYDROLOGY NOTES:
STORMWATER SYSTEM DESIGNED USING 12D RATIONAL METHOD.

WORK AS EXECUTED SHOWN IN RED
SIGNATURE.....
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

NOTE:
WHERE GRADES EXCEED 15% BULKHEADS SHALL BE PROVIDED IN ACCORDANCE WITH HCC CIVIL WORKS SPECIFICATION.

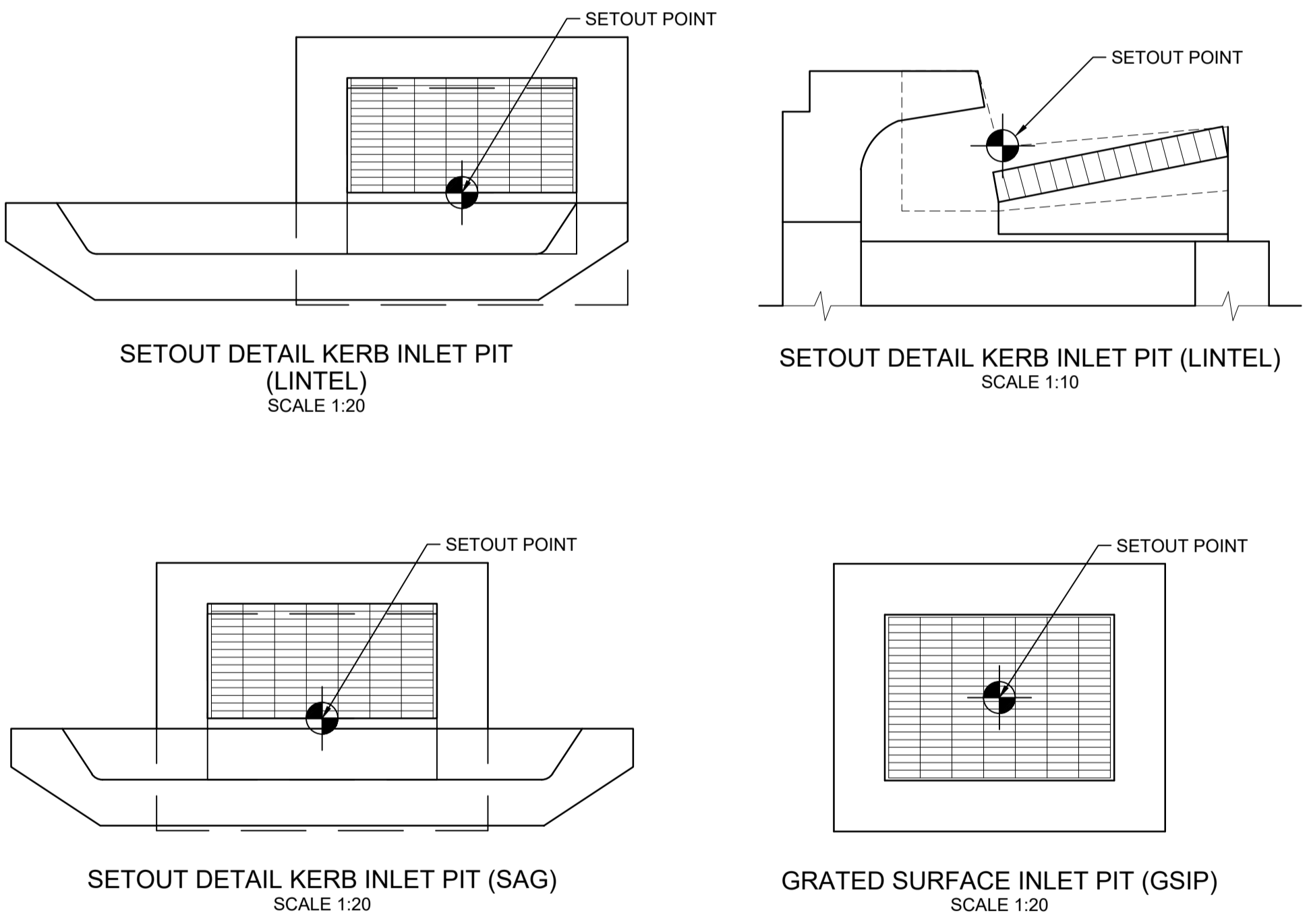
PIT SCHEDULE- RTP					
PIT NAME (-)	SURFACE FITTING TYPE AND SIZE	PIT EASTING (m)	PIT NORTHING (m)	PIT DEPTH (m)	COMMENTS
36/2	2.4 m lintel sag	286673.41	6281131.18	1.75	PIT PART OF PROMENADE
36/3	2.4 m lintel sag	286678.85	6281137.05	2.17	PIT PART OF PROMENADE
37/1	1.8 m lintel	286556.83	6281104.07	1.53	
37/2	1.8 m lintel	286591.53	6281105.26	1.46	
37/3	1.8 m lintel	286607.02	6281108.84	1.68	
37/4	1.8 m lintel	286639.33	6281123.86	1.87	
37/5	1.8 m lintel	286656.45	6281134.34	1.96	
37/6	1.8 m lintel	286673.22	6281142.25	1.98	
38/1	1.8 m lintel	286479.38	6281184.39	1.37	
38/2	1.8 m lintel	286491.37	6281183.34	1.42	
38/3	1.8 m lintel	286520.35	6281194.55	1.47	
38/4	1.8 m lintel	286548.62	6281193.56	1.42	
38/5	1.8 m lintel	286575.99	6281180.94	1.38	
38/6	1.8 m lintel	286593.92	6281161.93	1.46	
38/7	1.8 m lintel	286600.96	6281150.77	1.44	
38/8	2.4 m lintel sag	286611.36	6281132.98	1.45	
38/9	2.4 m lintel sag	286619.25	6281135.26	1.69	
38/10	1.8 m lintel	286634.14	6281130.02	1.6	
39/1	1.8 m lintel	286579.68	6281111.92	1.67	
40/5	1.8 m lintel	286401.92	6281048.48	1.76	TEMPORARY HEADWALL
40/6	1.8 m lintel	286402.85	6281074.93	1.97	
40/7	1.8 m lintel	286403.71	6281099.46	1.76	
40/8	GSIP 900x900 SAG	286405.43	6281109.39	2.06	
40/9	2.4 m lintel sag	286406.21	6281117.37	2.19	
40/10	GPT	286396.01	6281124.51	2.61	
40/11	JP SEALED 900 x 900	286399.77	6281171.46	2.32	
40/12	JP GRATED 900 x 900	286398.6	6281191.01	1.99	
40/13	H.W.	286392.27	6281202.46		OUTLET TO DAM 7
41/7	GSIP 900x900 SAG	286296.53	6281164.18	1.85	TEMPORARY HEADWALL
43/1	1.8 m lintel	286323.13	6281125.01	1.59	
43/2	1.8 m lintel	286305.78	6281130.75	1.54	
43/3	2.4 m lintel sag	286303.47	6281147.99	1.54	
46/1	1.8 m lintel	286384.22	6281110.54	1.46	
47/1	1.8 m lintel	286469.61	6281115.14	1.56	
47/2	1.8 m lintel	286439.19	6281116.21	1.59	
48/1	1.8 m lintel	286574.3	6281191.69	1.36	
50/1	1.8 m lintel	286471.89	6281107.06	1.58	
50/2	1.8 m lintel	286432.91	6281108.43	1.76	
51/1	1.8 m lintel	286395.71	6281099.4	1.41	
52/1	1.8 m lintel	286394.82	6281074.28	1.46	
G/1	IAD 450x450	286428.49	6281159.72	0.83	
G/2	IAD 900x900	286413.99	6281165.18	2.1	
J/6	IAD 900x900	286407.37	6281072.7	2.95	TEMPORARY HEADWALL
K/4	IAD 900x900	286389.19	6281073.48	2.83	TEMPORARY HEADWALL
M/1	SLOPE JUNCTION	286524.42	6281156.03	0.68	
M/2	IAD 450x450	286525.64	6281156.42	0.71	
M/3	IAD 600x900	286542.33	6281155.9	0.84	
M/4	JP SEALED 600 x 900	286543.51	6281155.38	0.9	
M/5	JP GRATED 600 x 900	286559.12	6281145.04	0.87	
M/6	IAD 600x900	286567.63	6281132.16	1.05	
M/7	IAD 900x900	286596.55	6281149.84	1.57	



SUBDIVISION WORKS CERTIFICATE

Certificate No. 201302995W76
Date of Issue 11/05/2022
Issuing Officer *D. Resta*
Accreditation No. BDC3367

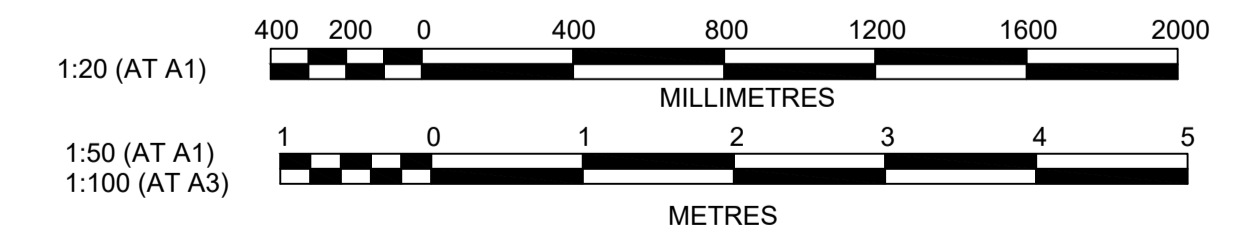
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NOTES

- DESIGN BASED ON FLOW VELOCITIES FROM 12D DRAINAGE OUTPUTS FOR 100 YEAR ARI STORM EVENT
- RIP-RAP SCOUR PROTECTION DIMENSIONS CALCULATED FROM "ROCK SIZING FOR PIPE OUTLETS - STORMWATER MANAGEMENT PRACTICES" BY CATCHMENTS AND CREEKS, VERSION 2 DATED NOVEMBER 2014
- ROCK HEADWALL ARRANGEMENT SHOWN ON PLANS, PRECAST CONCRETE OUTLET ARRANGEMENT CAN BE ADOPTED, HOWEVER RIP-RAP LENGTH SHALL COMMENCE AT THE END OF THE PRECAST CONCRETE APRON SLAB
- ALL RIP-RAP TO CONSIST OF ANGULAR DURABLE QUARRY ROCK PLACED OVER A LAYER OF ANGULAR COBBLES
- RIP-RAP IS TO BE PLACED BY HAND AND PACKED INTO PLACE WITH A CROW-BAR TO ENSURE UNIFORM FIT WITH MINIMUM VOIDS

Outlet	Culvert Diameter (mm)	No Off.	Velocity (m/s)	Design Velocity (m/s)	Mean Rock Size (d ₅₀ mm)	Apron Length L (mm)	Apron Width W ₁ (mm)	Apron Width W ₂ (mm)	Bed Thickness T (mm)
40/13	600	1	3	3	200	1800	1200	1320	360



Plotfile: 5 May, 2022 11:10:32 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3401.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC
PIT SCHEDULE AND HEADWALL 40/13 SCOUR PROTECTION

PROJECT No: **110185-12**
SHEET No: **CC3401**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: **110185-12-CC3401**

C

DESIGN STORM 1:5yr ARI HYDRAULIC RESULTS

PIPE NAME (-)	PIPE TYPE (-)	PIPE DIAMETER (mm)	PIPE LENGTH (m)	PIPE SLOPE (%)	PIPE AREA Af (sq.m)	FULL AREA TIME Tc (min)	FULL AREA INTENSITY I (mm/hr)	FULL AREA SUM CA (ha)	FULL AREA FLOW Qc (L/s)	PART-AREA TIME Tc (min)	PART-AREA INTENSITY I (mm/hr)	PART-AREA SUM CA (ha)	PART-AREA FLOW Qc (L/s)	DIRECT PIPE FLOW Qp (L/s)	PEAK FLOW Qrat (L/s)	NET BYPASS FLOW Qb (L/s)	PIPE FLOW Q (L/s)	FLOW CAP. Qcap (L/s)	Q/Qcap RATIO (-)	FULL PIPE VELOCITY (m/s)	NORM. DEPTH VELOCITY (m/s)	CRIT. DEPTH VELOCITY (m/s)	U/S PIT GRATE RL (m)	PIPE U/S IL (m)	PIPE D/S IL (m)	PIPE D/S DROP (m)	U/S PIT Ku (-)	U/S PIT Kw (-)	PIPE V'HEAD (m)	PIT LOSS (Ku.V/head) (m)	WSE LOSS (Kw.V/head) (m)	TOTAL PIPE LOSS (m)	U/S PIT HGL (m)	U/S PIPE HGL (m)	D/S PIPE HGL (m)	HGL GRADE (%)	MIN. COVER (m)	U/S FREEBOARD (m)	COMMENTS
36/1 to 36/2	RRJ2	375	19.14	2.37	0.11	10.89	96.7	0.546	146.7	5.61	125.8	0.47	162.7	0	162.7	0	162.7	292.7	0.56	1.47	2.72	1.74	57.717	56.1	55.646	0.051	2	0.11	0.22	0.22	0.14	57.346	57.125	56.985	0.73	1.16	0.37		
36/2 to 36/3	RRJ2	375	8	1.56	0.11	11	96.3	0.628	167.9	5.73	124.8	0.54	186.2	0	186.2	0	186.2	237.5	0.78	1.69	2.38	1.88	57.341	55.596	55.471	0.3	1.51	0.14	0.22	0.27	0.08	57.035	56.765	56.689	0.96	1.41	0.31		
36/3 to 32/5	RRJ2	675	19.51	1.35	0.36	11.62	93.9	2.266	591.2	6.46	119.9	1.99	661.5	0	661.5	0	661.5	1058.4	0.62	1.85	3.12	2.25	57.341	55.171	54.908	0.15	1.93	0.17	0.34	0.38	0.1	56.735	56.352	56.25	0.53	1.2	0.61		
37/1 to 37/2	RRJ2	375	34.72	5.66	0.11	10	100.1	0.115	32	5	130.8	0.1	35.6	0	35.6	-1.1	34.5	452	0.08	0.31	2.42	0.98	63.769	62.234	60.27	0.031	4.5	0	0.02	0.02	1.94	62.632	62.609	60.667	5.59	1.06	1.14		
37/2 to 37/3	RRJ2	375	15.9	6.65	0.11	10.24	99.2	0.278	76.7	5.24	128.8	0.24	85	0	85	-1.4	83.6	490.1	0.17	0.76	3.31	1.3	61.695	60.24	59.182	0.05	1.79	2.29	0.03	0.05	0.07	1.05	60.682	60.615	59.57	6.57	0.98	1.01	
37/3 to 37/4	RRJ2	375	35.63	5.05	0.11	10.32	98.9	0.336	92.4	5.32	128.2	0.29	102.4	0	102.4	0	102.4	427	0.24	0.93	3.18	1.4	60.814	59.132	57.333	0.151	1.43	1.67	0.04	0.06	0.07	1.37	59.58	59.507	58.135	3.85	1.22	1.23	
37/4 to 37/5	RRJ2	525	20.08	5.95	0.22	11.43	94.7	1.51	397	6.27	121	1.32	443.4	0	443.4	-1.7	441.7	1137.2	0.39	2.04	4.92	2.26	59.048	57.183	55.988	0.076	2.01	2.4	0.21	0.43	0.51	58.218	57.708	57.126	2.9	1.39	0.83		
37/5 to 37/6	RRJ2	600	18.54	2.5	0.28	11.5	94.4	1.57	411.7	6.33	120.6	1.37	459.9	0	459.9	0	459.9	1052.2	0.44	1.63	3.6	2.05	57.877	55.913	55.449	0.051	0.32	0.13	0.04	0.05	0.09	57.132	57.083	56.994	0.48	1.21	0.75		
37/6 to 36/3	RRJ2	600	7.66	2	0.28	11.58	94.1	1.602	418.8	6.42	120.2	1.4	467.8	0	467.8	0	467.8	941.1	0.5	1.65	3.32	2.06	57.379	55.399	55.246	0.075	1.92	2.14	0.14	0.27	0.3	0.04	57.026	56.726	56.689	0.49	1.33	0.35	
38/1 to 38/2	RRJ2	375	12.03	1.53	0.11	10	100.1	0.057	15.9	5	130.8	0.05	17.6	0	17.6	0	17.6	235	0.08	0.16	1.25	0.81	62.826	61.452	61.268	0.051	9.7	0	0.01	0.01	0.17	61.84	61.827	61.658	1.41	1	0.99		
38/2 to 38/3	RRJ2	375	31.07	2.15	0.11	10.16	99.5	0.236	65.1	5.16	129.5	0.2	72.3	0	72.3	-10.6	61.8	278.4	0.22	0.56	2.03	1.17	62.642	61.218	60.551	0.051	4.05	4.39	0.02	0.06	0.07	61.663	61.593	60.94	2.1	1.14	0.98		
38/3 to 38/4	RRJ2	375	28.29	1.84	0.11	10.42	98.5	0.316	86.5	5.42	127.4	0.27	95.8	0	95.8	-3.6	92.1	257.7	0.36	0.83	2.14	1.35	61.968	60.501	59.981	0.05	1.78	2.31	0.04	0.06	0.08	0.31	60.958	60.876	60.561	1.11	1.14	1.01	
38/4 to 38/5	RRJ2	375	30.15	1.86	0.11	10.64	97.7	0.394	106.9	5.48	126.9	0.34	118.1	0	118.1	-1.5	116.5	259.3	0.45	1.06	2.28	1.48	61.355	59.931	59.37	0.05	4.5	0.06	0.26	0.26	0.32	60.561	60.306	59.983	1.07	1.1	0.79		
38/5 to 38/6	RRJ2	375	26.13	2.29	0.11	10.86	96.8	0.547	147.1	5.7	125	0.47	164.8	0	164.8	-1.8	163	287.6	0.57	1.48	2.68	1.74	60.701	59.32	58.721	0.051	1.69	2	0.11	0.19	0.22	0.19	60.017	59.795	59.603	0.74	1.1	0.68	
38/6 to 38/7	RRJ2	375	13.2	1.67	0.11	11.02	96.2	0.624	166.8	5.86	123.7	0.54	186.2	0	186.2	-1.5	184.7	245.3	0.75	1.67	2.44	1.87	60.135	58.671	58.451	0.031	0.99	1.1	0.14	0.14	0.16	0.12	59.619	59.462	59.337	0.94	1.11	0.52	
38/7 to 38/8	RRJ2	450	20.6	1.69	0.16	11.11	95.9	0.867	230.9	5.95	122.9	0.75	257	0	257	-0.5	256.5	401.1	0.64	1.61	2.67	1.9	59.863	58.421	58.074	0.05	1.3	1.47	0.13	0.17	0.2	0.14	59.36	59.165	59.023	0.69	1.06	0.5	
38/8 to 38/9	RRJ2	450	8.21	2.12	0.16	11.24	95.4	0.984	260.7	6.08	122.1	0.86	290.3	0	290.3	-0.5	289.8	450.1	0.64	1.82	3.01	2.04	59.475	58.024	57.85	0.076	1.93	2.19	0.17	0.33	0.37	0.07	59.067	58.696	58.624	0.88	1.03	0.41	
38/9 to 38/10	RRJ2	525	15.79	1.46	0.22	11.28	95.2	1.041	275.4	6.12	121.8	0.91	306.8	0	306.8	-3.9	302.9	563.1	0.54	1.4	2.65	1.84	59.468	57.775	57.544	0.05	2.01	2.16	0.1	0.2	0.22	0.07	58.639	58.424	58.357	0.42	1.2	0.83	
38/10 to 37/4	RRJ2	525	8.06	2	0.22	11.38	94.8	1.054	277.6	6.22	121.3	0.92	309.1	0	309.1	0	309.1	659.1	0.47	1.43	3	1.86	59.098	57.494	57.333	0.151	1.79	2.09	0.1	0.19	0.22	0.04	58.388	58.17	58.135	0.44	1.09	0.71	
39/1 to 37/2	RRJ2	375	13.59	3	0.11	10	100.1	0.046	12.9	5	130.8	0.04	14.4	0	14.4	0	14.4	329.1	0.04	0.13	1.49	0.77	62.369	60.699	60.291	0.051	4.5	0	0	0	0.41	61.077	61.074	60.667	2.99	1.1	1.29		
40/4 to 40/5	RRJ2	450	15.07	1.78	0.16	10.73	97.3	0.92	248.7	5.53	126.4	0.79	276	0	276	0	276	411.7	0.67	1.74	2.77	1.98	69.643	67.875	67.607	0.201	1.92	2.19	0.15	0.3	0.34	0.12	68.671	68.334	68.214	0.8	1.29	0.97	
40/5 to 40/6	RRJ2	450	26.47	9.99	0.16	10.82	97	1.01	272.1	5.62	125.6	0.86	301.5	0	301.5	0	301.5	976.8	0.31	1.9	5.41	2.09	69.167	67.407	64.763	0.031	1.94	2.13	0.18	0.36	0.39	2.12	68.248	67.857	65.742	7.99	1.19	0.92	
40/6 to 40/7	RRJ2	450	24.54	7.59	0.16	10.9	96.7	1.503	403.8	5.59	126	1.28	447.5	0	447.5	0	447.5	851	0.53	2.81	5.42	2.86	66.703	64.733	62.871	0.075	1.38	1.57	0.4	0.56	0.64	1.31	65.818	65.183	63.876	5.32	1.18	0.88	
40/7 to 40/8	RRJ2	525	10.09	6.48	0.22	10.97	96.4	1.537	411.6	5.66	125.3	1.31	455.4	0	455.4	0	455.4	1186.3	0.38	2.1	5.12	2.3	64.556	62.796	62.143	0.075	0.77	0.86	0.23	0.17	0.19	0.1	63.896	63.703	63.607	0.95	1.21	0.66	
40/8 to 40/9	RRJ2	600	8.02	1.25	0.28	11.01	96.3	1.928	515.4	5.73	124.7	1.65	570.4	0	570.4	1.8	572.2	744	0.77	2.02	2.9	2.3	64.126	62.068	61.967	0.031	1.12	1.29	0.21	0.23	0.27	0.06	63.642	63.372	63.313	0.74	1.46	0.48	
40/9 to 40/10	RRJ2	600	12.52	1.38	0.28	11.06	96.1	1.987	530.3	5.78	124.4	1.7	586.5	0	586.5	1.8	588.3	782.9	0.75	2.08	3.04	2.34	64.126	61.937	61.764	0.05	1.88	2.09	0.22	0.42	0.46	0.1	63.36	62.897	62.8	0.78	1.71	0.77	
40/10 to 40/11	RRJ2	600	47.1	5.29	0.28	11.13	95.8	2.097	558.1	5.85	123.8	1.79	616.8	0	616.8	0	616.8	1531.3	0.4	2.18	5.12	2.41	64.325	61.714	59.22	0.301	2	0.24	0.49	0.49	2.52	62.8	62.314	59.784	5.37	1.4	1.53		
40/11 to 40/12	RRJ2	600	19.61	2.18	0.28	11.28	95.2	2.216	586.1	6.13	121.8	1.91	646.5	0	646.5	0	646.5	3077	0.21	2.29	8.61	2.49	61.241	58.92	54.727	0.05	0.99	1.18	0.27	0.26	0.31	3.8	59.834	59.52	55.721	19.37	1.25	1.41	
40/12 to 40/13	RRJ2	600	13.09	2.11	0.28	11.32	95.1	2.216	585.2	6.17	121.6	1.91	645.4	0	645.4	0	645.4	967.6	0.67	2.28	3.66	2.																	

Plotted: 5 May 2022 11:11:41 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DAC\DCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3413.dwg

DESIGN STORM 1:100yr ARI HYDROLOGIC RESULTS. Table with columns: PIT NAME, PIT TYPE, CATCHMENT AREA, IMPERVIOUS PERCENTAGE, RUNOFF C, IMPERVIOUS TIME Tc, IMPERVIOUS INTENSITY I, PERVIOUS TIME Tc, PERVIOUS INTENSITY I, FULL AREA TIME Tc, FULL AREA INTENSITY I, FULL AREA CATCHMENT FLOW Qc, PARTIAL AREA TIME Tc, PARTIAL AREA INTENSITY I, PARTIAL AREA CATCHMENT FLOW Qc, TOTAL CATCHMENT FLOW Qc, DIRECT FLOW Qd, APPROACH FLOW Qa, FLOODED DEPTH d, FLOODED WIDTH w, FLOODED (vx/d), ROAD GRADE (%), ROAD XFALL (%), CHOKE FACTOR (-), INLET FLOW Qg, BYPASS FLOW Qb, BYPASS PIT (-), COMMENTS.

WORK AS EXECUTED SHOWN IN RED
SIGNATURE..... PR
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE
Certificate No. 201302995W76
Date of Issue 11/05/2022
Issuing Officer D. Resta
Accreditation No. BDC3367
These plans/specifications form part of the certificate issued 11/05/2022

Table with 5 columns: REV, DESCRIPTION, DATE, DES, DRN, CKD, APR, DATE. Includes rows for 'ISSUED FOR CONSTRUCTION APPROVAL' and 'AMENDMENT'.

J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: REDBANK NORTH RICHMOND

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC DRAINAGE CALCULATIONS SHEET 3
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3413

PROJECT No: 110185-12
SHEET No: CC3413
B

WORK AS EXECUTED SHOWN IN RED

SIGNATURE.....*PPX*.....

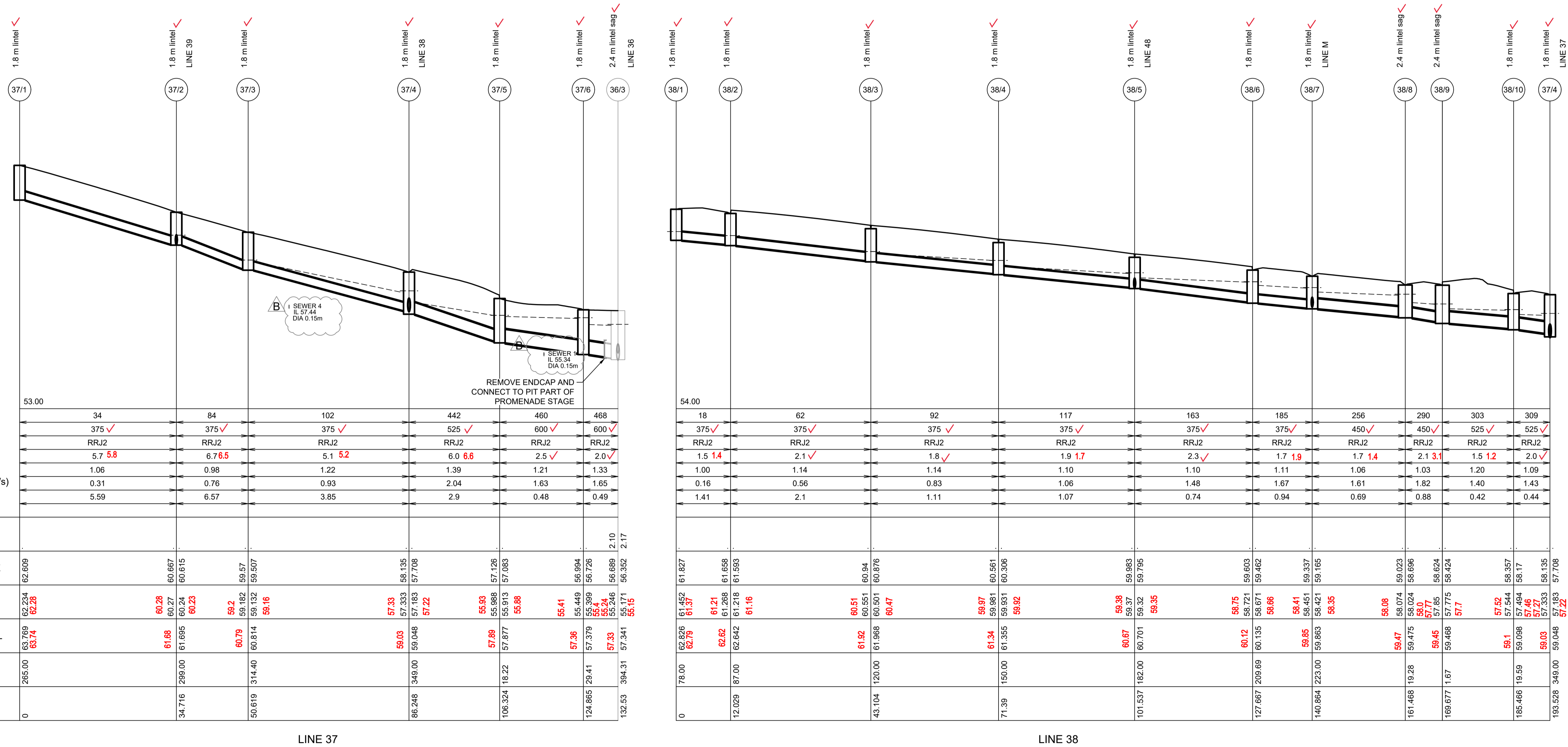
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
Date of Issue 11/05/2022
Issuing Officer *D. Restin*

Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022



WAE	37/1	37/2	37/3	37/4	37/5	37/6	36/3
DATUM (m)	53.00						
PEAK FLOW (L/s)	34	84		102	442	460	468
PIPE SIZE (mm)	375 ✓	375 ✓		375 ✓	525 ✓	600 ✓	600 ✓
PIPE CLASS	RRJ2	RRJ2		RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	5.7 5.8	6.7 6.5		5.1 5.2	6.0 6.6	2.5 ✓	2.0 ✓
PIPE COVER MINIMUM	1.06	0.98		1.22	1.39	1.21	1.33
FULL PIPE VELOCITY (m/s)	0.31	0.76		0.93	2.04	1.63	1.65
HGL GRADE (%)	5.59	6.57		3.85	2.9	0.48	0.49
HYDRAULIC GRADE LINE	62.609	60.667		58.135	57.083	56.994	56.726
INVERT LEVEL	62.234 62.28	60.27 60.23		57.33 57.22	55.988 55.88	55.449 55.4	55.399 55.24
DESIGN SURFACE LEVEL	63.769 63.74	61.68 61.68		59.03 59.048	57.89 57.877	57.36 57.379	57.33 57.341
ROAD CHAINAGE	265.00	299.00		349.00	394.00	438.00	482.00
PIPE CHAINAGE	0	34.716		86.248	106.324	124.865	132.53

WAE	38/1	38/2	38/3	38/4	38/5	38/6	38/7	38/8	38/9	38/10	37/4
DATUM (m)	54.00										
PEAK FLOW (L/s)	18	62		92	117	163	185	256	290	303	309
PIPE SIZE (mm)	375 ✓	375 ✓		375 ✓	375 ✓	375 ✓	375 ✓	450 ✓	450 ✓	525 ✓	525 ✓
PIPE CLASS	RRJ2	RRJ2		RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	1.5 1.4	2.1 ✓		1.8 ✓	1.9 1.7	2.3 ✓	1.7 1.9	1.7 1.4	2.1 3.1	1.5 1.2	2.0 ✓
PIPE COVER MINIMUM	1.00	1.14		1.10	1.14	1.10	1.11	1.06	1.03	1.20	1.09
FULL PIPE VELOCITY (m/s)	0.16	0.56		0.83	1.06	1.48	1.67	1.61	1.82	1.40	1.43
HGL GRADE (%)	1.41	2.1		1.11	1.07	0.74	0.94	0.69	0.88	0.42	0.44
HYDRAULIC GRADE LINE	61.827	61.452		61.268	60.983	60.701	60.501	60.223	60.023	59.726	59.424
INVERT LEVEL	61.452 61.37	61.21 61.21		61.218 61.16	60.51 60.47	59.97 59.97	59.37 59.35	58.75 58.66	58.41 58.41	58.08 58.08	57.62 57.62
DESIGN SURFACE LEVEL	62.826 62.78	62.62 62.62		62.642 62.642	61.92 61.92	61.54 61.54	61.355 61.355	60.67 60.67	60.12 60.12	59.85 59.85	59.03 59.03
ROAD CHAINAGE	76.00	87.00		120.00	150.00	182.00	209.69	223.00	239.00	255.00	271.00
PIPE CHAINAGE	0	12.029		43.104	71.39	101.537	127.667	140.864	161.468	185.466	193.528



Plotted: 5 May 2022 11:12:31 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3421.dwg

B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
DRAINAGE LONGITUDINAL SECTIONS
SHEET 1**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3421

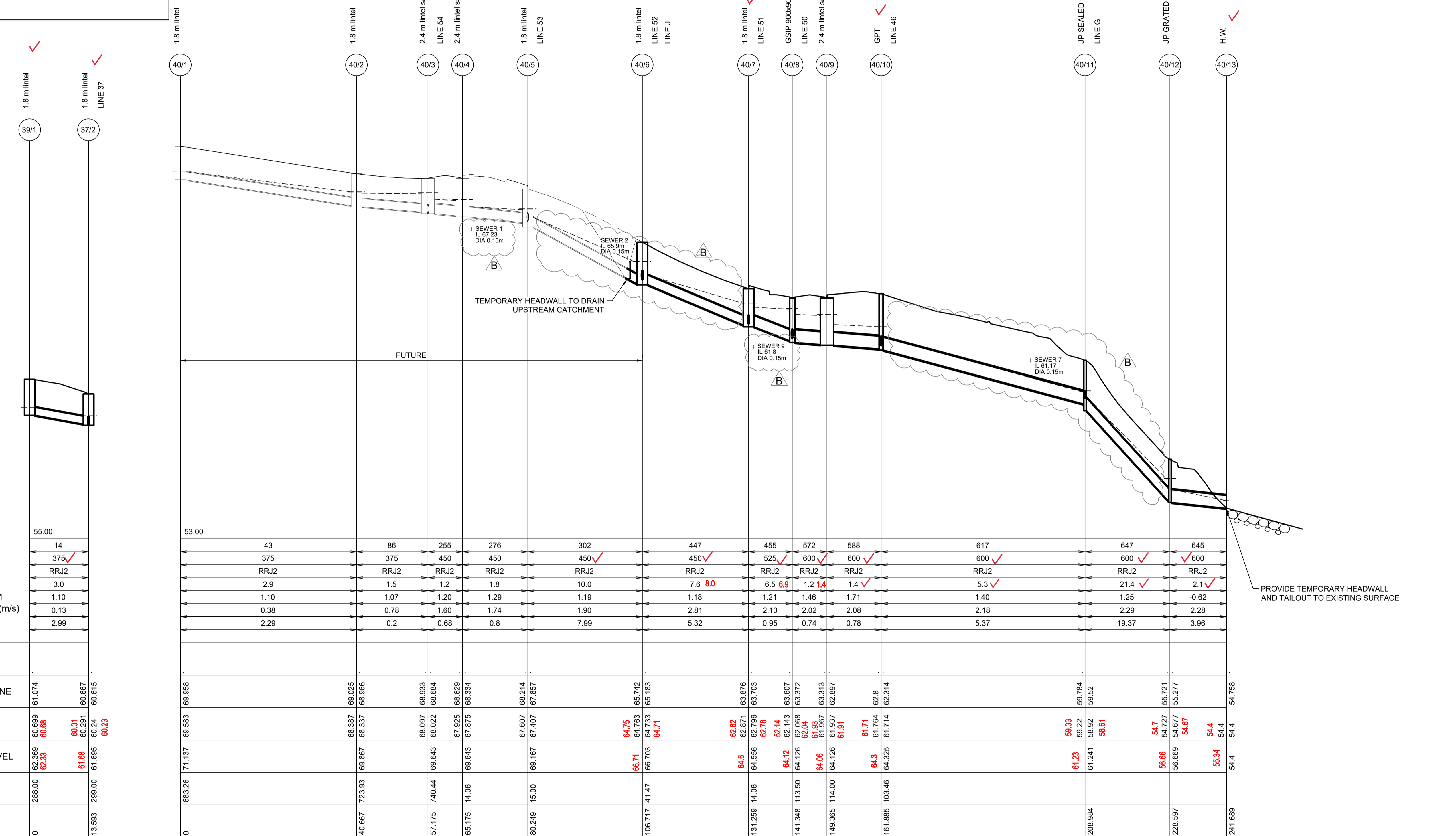
PROJECT No: **110185-12**
SHEET No: **CC3421**

SUBDIVISION WORKS CERTIFICATE

Certificate No.20130299SW76
 Date of Issue.....11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE.....*PR*
 VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

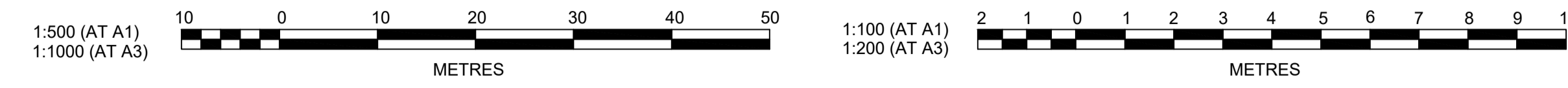


DATUM (m)	55.00
PEAK FLOW (L/s)	14
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	3.0
PIPE COVER MINIMUM	1.10
FULL PIPE VELOCITY (m/s)	0.13
HGL GRADE (%)	2.99

WAE	
HYDRAULIC GRADE LINE	61.074 60.667 60.615
INVERT LEVEL	60.699 60.688 60.31 60.291 60.24 60.23
DESIGN SURFACE LEVEL	62.369 62.33 61.68 61.695 61.695
ROAD CHAINAGE	288.00 723.93 299.00
PIPE CHAINAGE	0 13.593 299.00

PEAK FLOW (L/s)	43	86	255	276	302	447	455	572	588	617	647	645
PIPE SIZE (mm)	375	375	450	450	450 ✓	450 ✓	525 ✓	600 ✓	600 ✓	600 ✓	600 ✓	600 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	2.9	1.5	1.2	1.8	10.0	7.6 8.0	6.5 6.9	1.2 1.4	1.4 ✓	5.3 ✓	21.4 ✓	2.1 ✓
PIPE COVER MINIMUM	1.10	1.07	1.20	1.29	1.19	1.18	1.21	1.46	1.71	1.40	1.25	-0.62
FULL PIPE VELOCITY (m/s)	0.38	0.78	1.60	1.74	1.90	2.81	2.10	2.02	2.08	2.18	2.29	2.28
HGL GRADE (%)	2.29	0.2	0.68	0.8	7.99	5.32	0.95	0.74	0.78	5.37	19.37	3.96
HYDRAULIC GRADE LINE	61.074	60.667	60.615	60.615	60.615	60.615	60.615	60.615	60.615	60.615	60.615	60.615
INVERT LEVEL	60.699	60.688	60.31	60.291	60.24	60.23	60.699	60.688	60.31	60.291	60.24	60.23
DESIGN SURFACE LEVEL	62.369	62.33	61.68	61.695	61.695	61.695	62.369	62.33	61.68	61.695	61.695	61.695
ROAD CHAINAGE	288.00	723.93	299.00									
PIPE CHAINAGE	0	13.593	299.00									

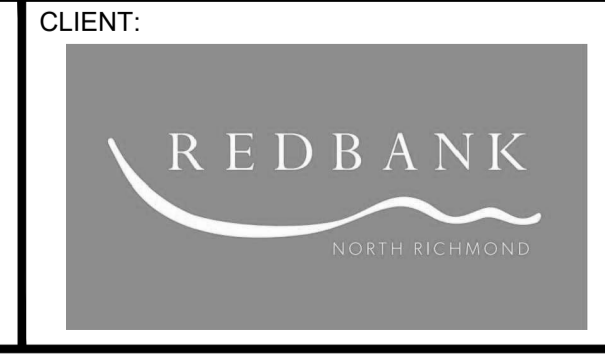
PROVIDE TEMPORARY HEADWALL AND TAILOUT TO EXISTING SURFACE



Plotfile: 5 May 2022 11:12:54 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3422.dwg

ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
AMENDMENT	DES	DRN	CKD	APR	DATE

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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 2**

PROJECT No: **110185-12**
 SHEET No: **CC3422**
 PLAN No: **110185-12-CC3422**

B

Plotted: 5 May 2022 11:13:15 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3423.dwg

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Certificate No. 201302995W76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367
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DATUM (m) 56.00
 PEAK FLOW (L/s) 30 57 100
 PIPE SIZE (mm) 375 ✓ 375 ✓ 375 ✓
 PIPE CLASS RRJ2 RRJ2 RRJ2
 PIPE GRADE (%) 1.5 ✓ 2.0 2.4 3.0 ✓
 PIPE COVER MINIMUM 1.10 1.08 1.24
 FULL PIPE VELOCITY (m/s) 0.27 0.52 0.90
 HGL GRADE (%) 0.02 0.09 0.28

WAE	43/1	43/2	43/3	41/7
HYDRAULIC GRADE LINE	63.27	63.265 63.24	63.224 63.169	63.12 62.558
INVERT LEVEL	62.609 62.56	62.28 62.335 62.285 62.22	61.89 61.937 61.887 61.81	61.32 61.348 61.28
DESIGN SURFACE LEVEL	64.198 64.15	63.79 63.821	63.27 63.432	63.1 63.12
ROAD CHAINAGE	0.00	18.284 17.00	35.678 40.68	53.422
PIPE CHAINAGE				

LINE 43

LINE 46

LINE 47

LINE 48

LINE 50

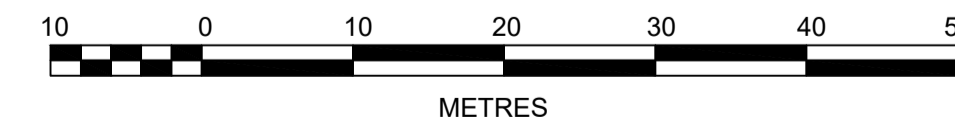
LINE 51

LINE 52

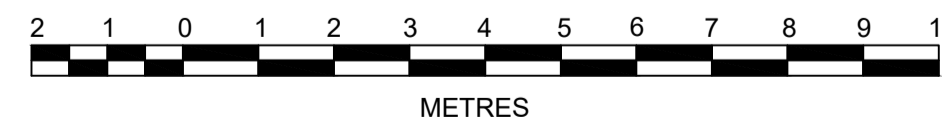
WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

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

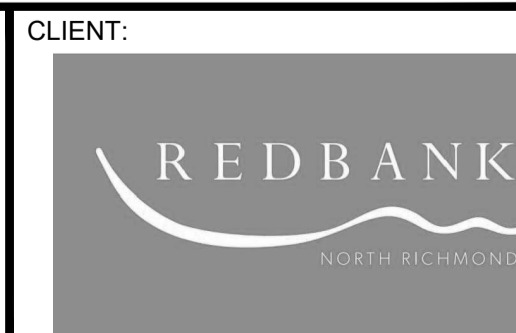


1:100 (AT A1)
1:200 (AT A3)



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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 3

PROJECT No: **110185-12**
 SHEET No: **CC3423**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3423

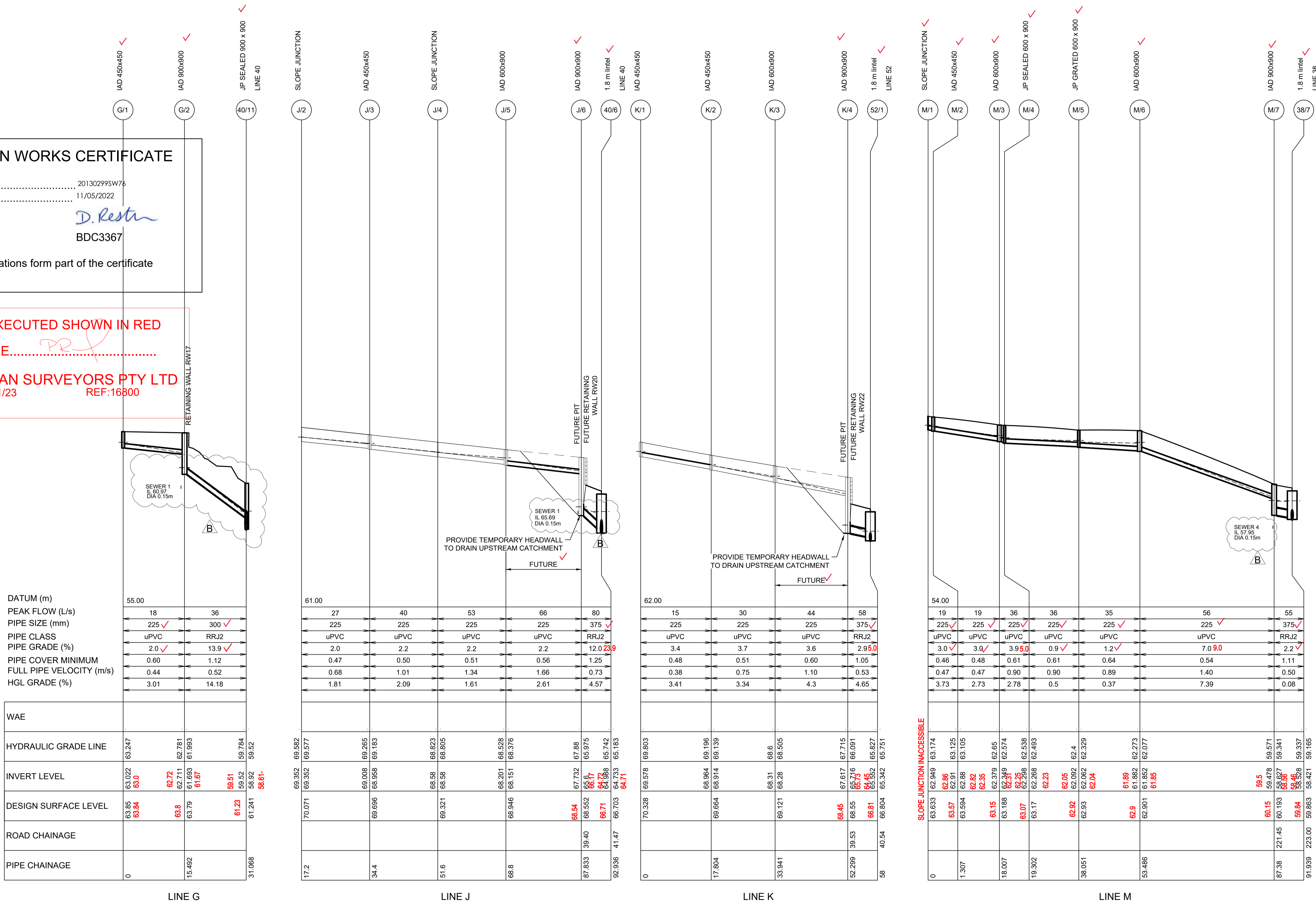
AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

B

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 Issuing Officer *D. Restu*
 Accreditation No. BDC3367
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WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

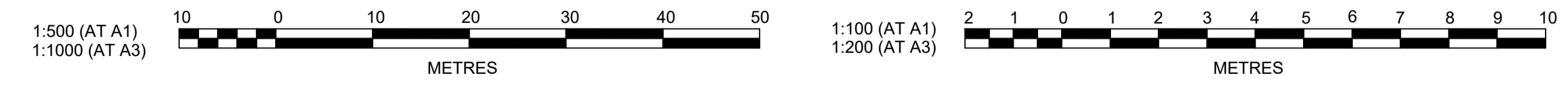


DATUM (m)		55.00
PEAK FLOW (L/s)	18	36
PIPE SIZE (mm)	225 ✓	300 ✓
PIPE CLASS	uPVC	RRJ2
PIPE GRADE (%)	2.0 ✓	13.9 ✓
PIPE COVER MINIMUM	0.60	1.12
FULL PIPE VELOCITY (m/s)	0.44	0.52
HGL GRADE (%)	3.01	14.18
WAE		
HYDRAULIC GRADE LINE	63.247	63.247
INVERT LEVEL	63.022	63.0
DESIGN SURFACE LEVEL	63.85	63.84
ROAD CHAINAGE	0	15.492
PIPE CHAINAGE	0	15.492

DATUM (m)		61.00
PEAK FLOW (L/s)	27	40
PIPE SIZE (mm)	225	225
PIPE CLASS	uPVC	uPVC
PIPE GRADE (%)	2.0	2.2
PIPE COVER MINIMUM	0.47	0.50
FULL PIPE VELOCITY (m/s)	0.68	1.01
HGL GRADE (%)	1.81	2.09
WAE		
HYDRAULIC GRADE LINE	69.577	69.577
INVERT LEVEL	69.352	69.352
DESIGN SURFACE LEVEL	70.071	70.071
ROAD CHAINAGE	17.2	34.4
PIPE CHAINAGE	17.2	34.4

DATUM (m)		62.00
PEAK FLOW (L/s)	15	30
PIPE SIZE (mm)	225	225
PIPE CLASS	uPVC	uPVC
PIPE GRADE (%)	3.4	3.7
PIPE COVER MINIMUM	0.48	0.51
FULL PIPE VELOCITY (m/s)	0.38	0.75
HGL GRADE (%)	3.41	3.34
WAE		
HYDRAULIC GRADE LINE	68.505	68.505
INVERT LEVEL	68.31	68.31
DESIGN SURFACE LEVEL	69.664	69.664
ROAD CHAINAGE	17.804	33.941
PIPE CHAINAGE	17.804	33.941

DATUM (m)		54.00
PEAK FLOW (L/s)	19	19
PIPE SIZE (mm)	225 ✓	225 ✓
PIPE CLASS	uPVC	uPVC
PIPE GRADE (%)	3.0 ✓	3.0 ✓
PIPE COVER MINIMUM	0.46	0.48
FULL PIPE VELOCITY (m/s)	0.47	0.47
HGL GRADE (%)	3.73	2.73
WAE		
HYDRAULIC GRADE LINE	62.329	62.329
INVERT LEVEL	62.062	62.062
DESIGN SURFACE LEVEL	63.633	63.633
ROAD CHAINAGE	1.307	18.007
PIPE CHAINAGE	1.307	18.007



B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 4**

PROJECT No: **110185-12**
 SHEET No: **CC3424**
 PLAN No: **110185-12-CC3424**

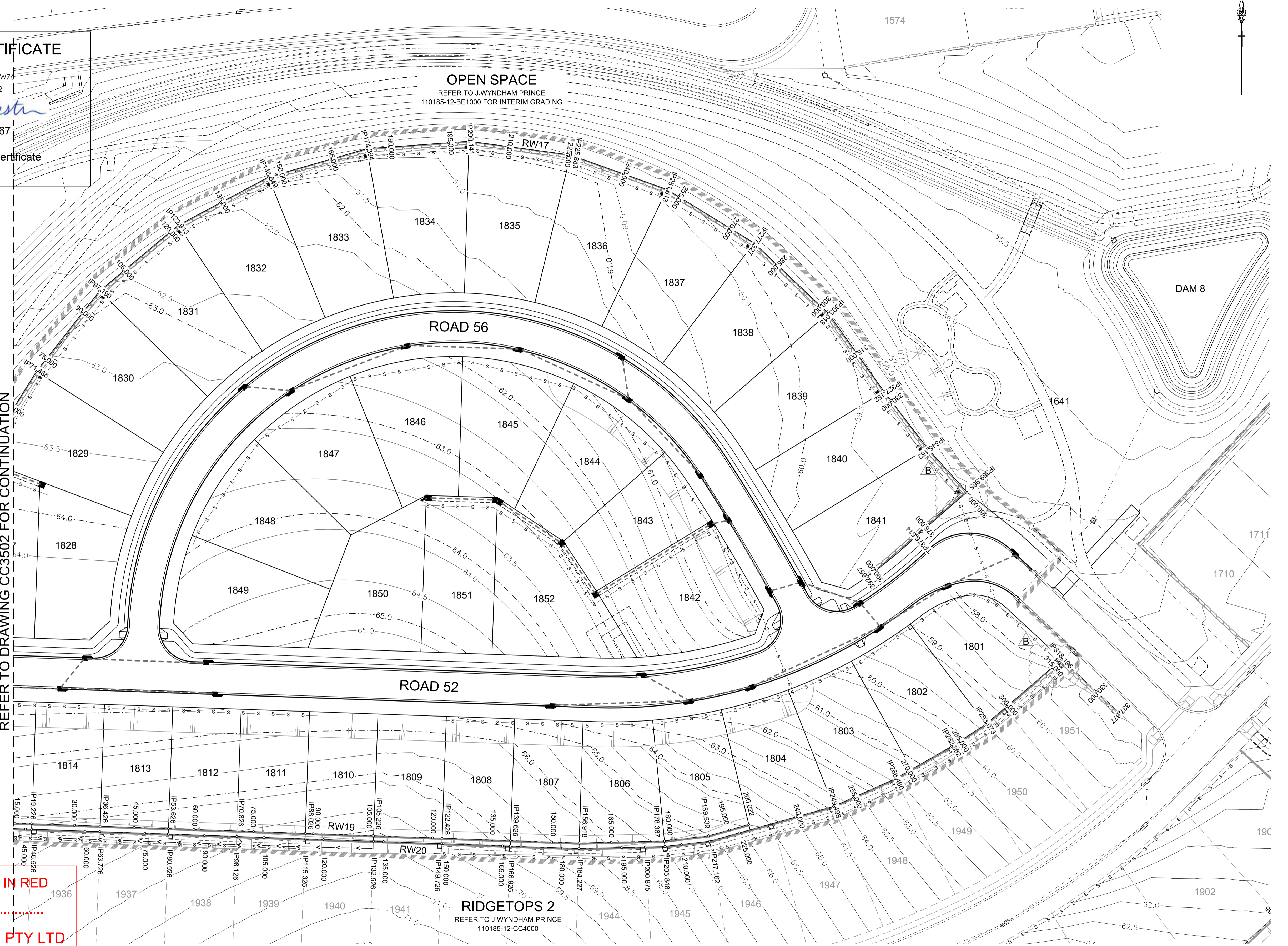
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW7
 Date of Issue 11/05/2022
 Issuing Officer *D. Resti*
 Accreditation No. BDC3367

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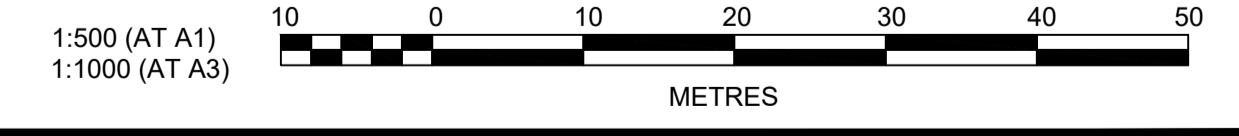
OPEN SPACE
 REFER TO J.WYNDHAM PRINCE
 110185-12-BE1000 FOR INTERIM GRADING

REFER TO DRAWING CC3502 FOR CONTINUATION



WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

RIDGETOPS 2
 REFER TO J.WYNDHAM PRINCE
 110185-12-CC4000



Plotted: 5 May, 2022 11:14:54 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3501.dwg

B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 RETAINING WALL PLAN
 SHEET 1**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3501

PROJECT No: **110185-12**
 SHEET No: **CC3501**

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SIGNATURE.....

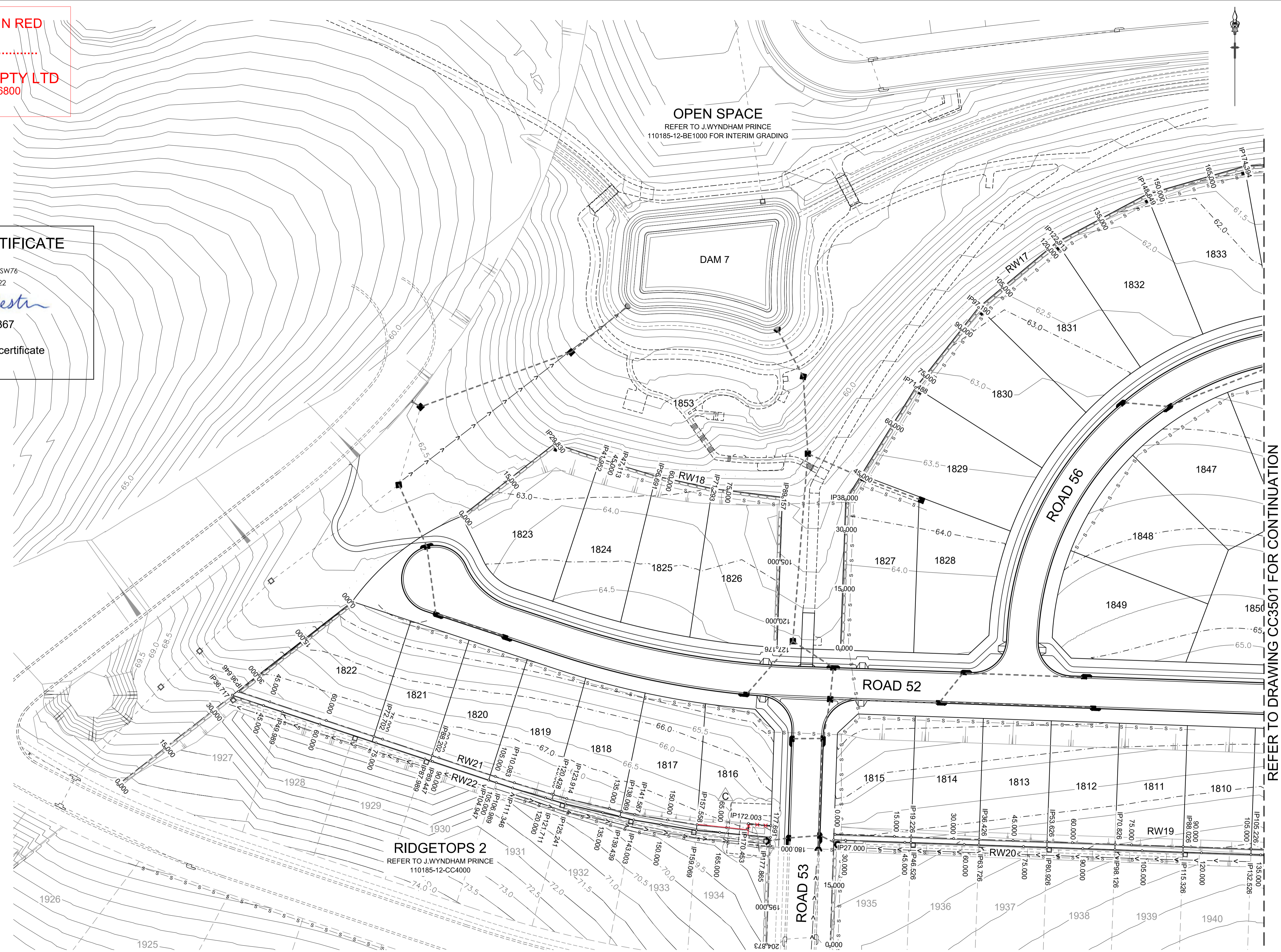
PR

VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
Date of Issue..... 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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REFER TO DRAWING CC3501 FOR CONTINUATION

1:500 (AT A1)
1:1000 (AT A3)
METRES

Plotted: 6 May, 2022 11:44:58 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3502.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	JM	JB	MS	05/05/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
RETAINING WALL PLAN
SHEET 2

PROJECT No: 110185-12
SHEET No: CC3502
PLAN No: 110185-12-CC3502

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: C

WORK AS EXECUTED SHOWN IN RED

SIGNATURE.....*PR*.....

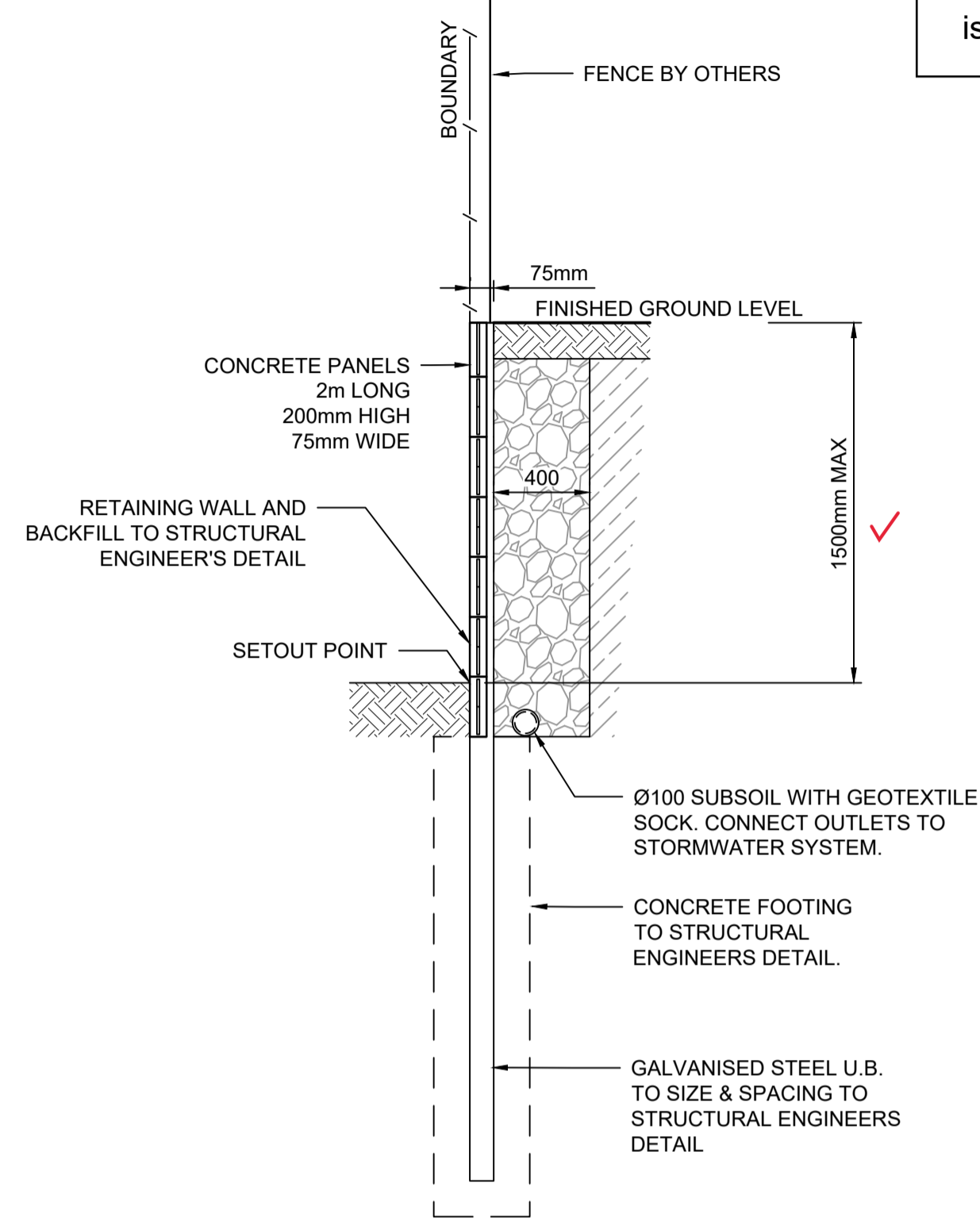
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No.20130299SW76
Date of Issue.....11/05/2022
Issuing Officer *D. Resta*
Accreditation No. BDC3367

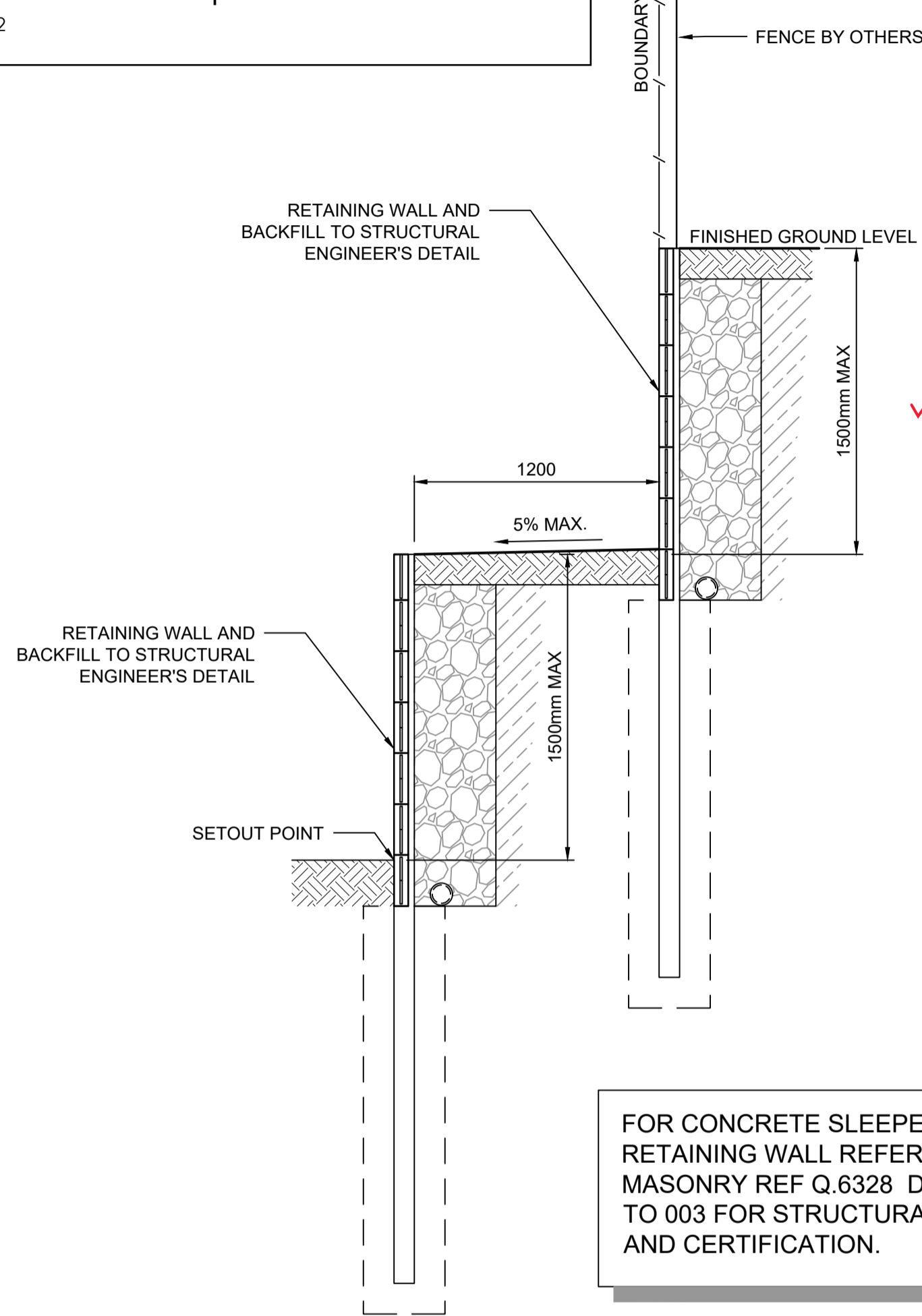
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* "NO FINES" TO BE LOWERED TO ACCOMMODATE STORMWATER IAD PITS, WITH PITS INSTALLED PRIOR OF PLACEMENT OF "NO FINES"



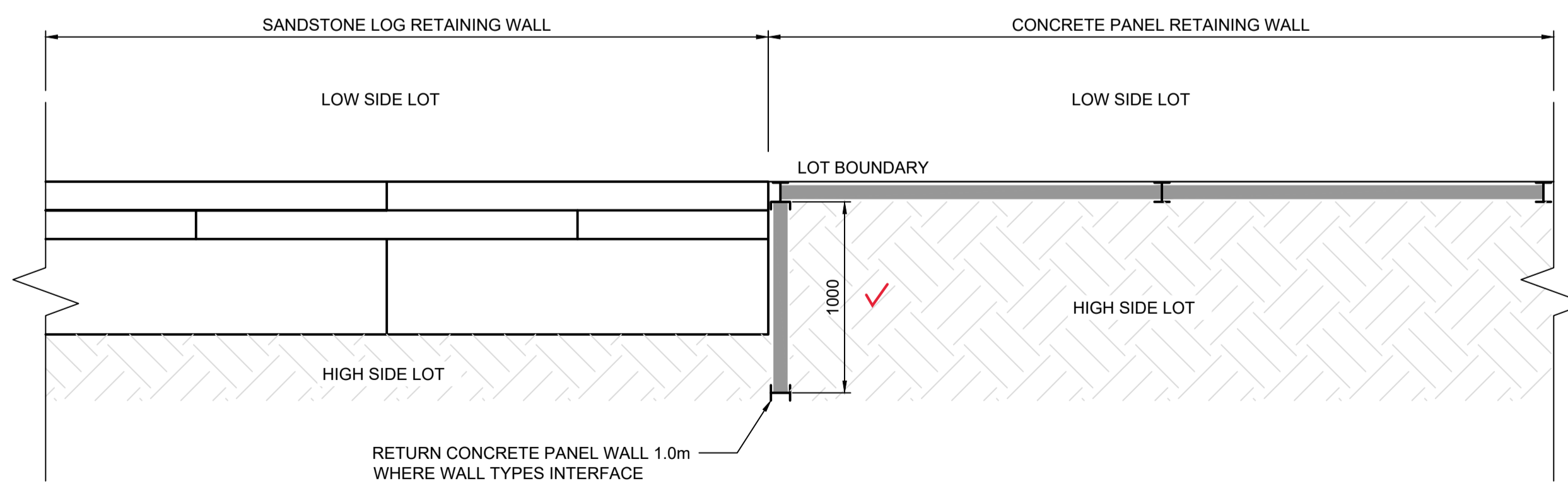
RETAINING WALL CONCRETE PANELS I-BEAM
STANDARD DETAIL
FOR RW 20 (PART)
SCALE 1:25

NOTE:
I BEAMS INCLUDE BRACKETS FOR FENCES TO BE INSTALLED

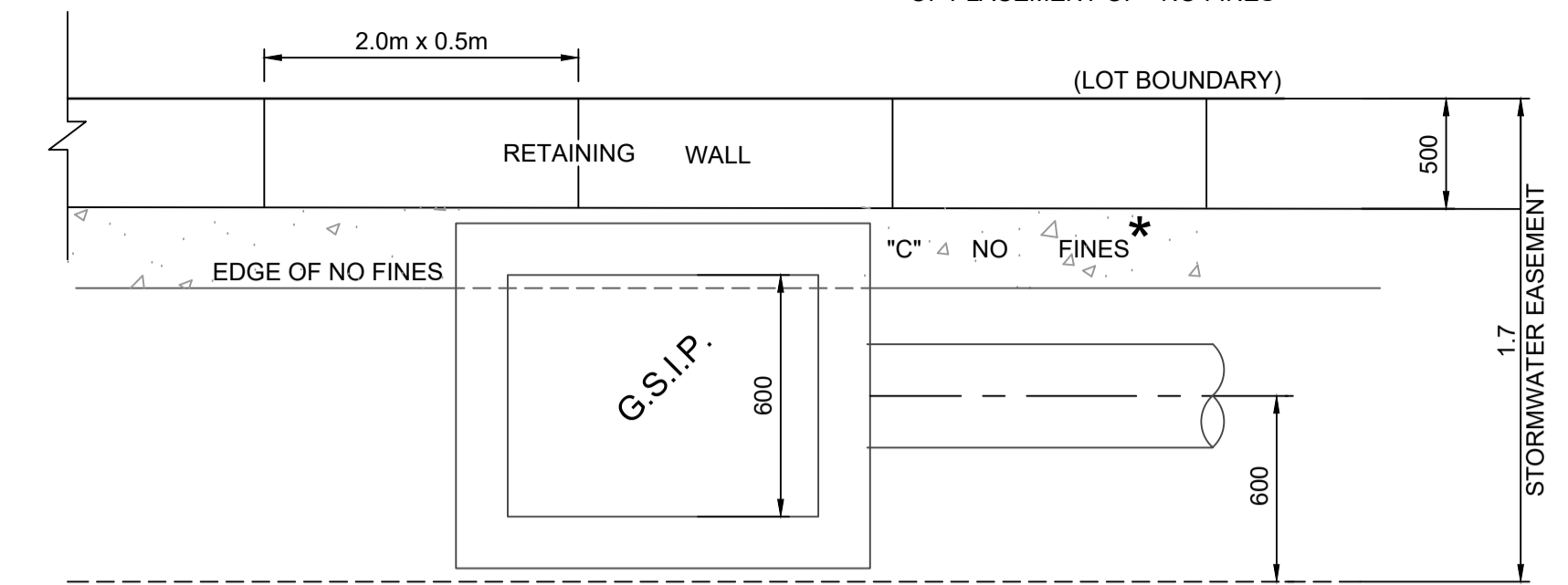


FOR CONCRETE SLEEPER RETAINING WALL REFER TO ADBRI MASONRY REF Q.6328 Dwg No. 001 TO 003 FOR STRUCTURAL DESIGN AND CERTIFICATION.

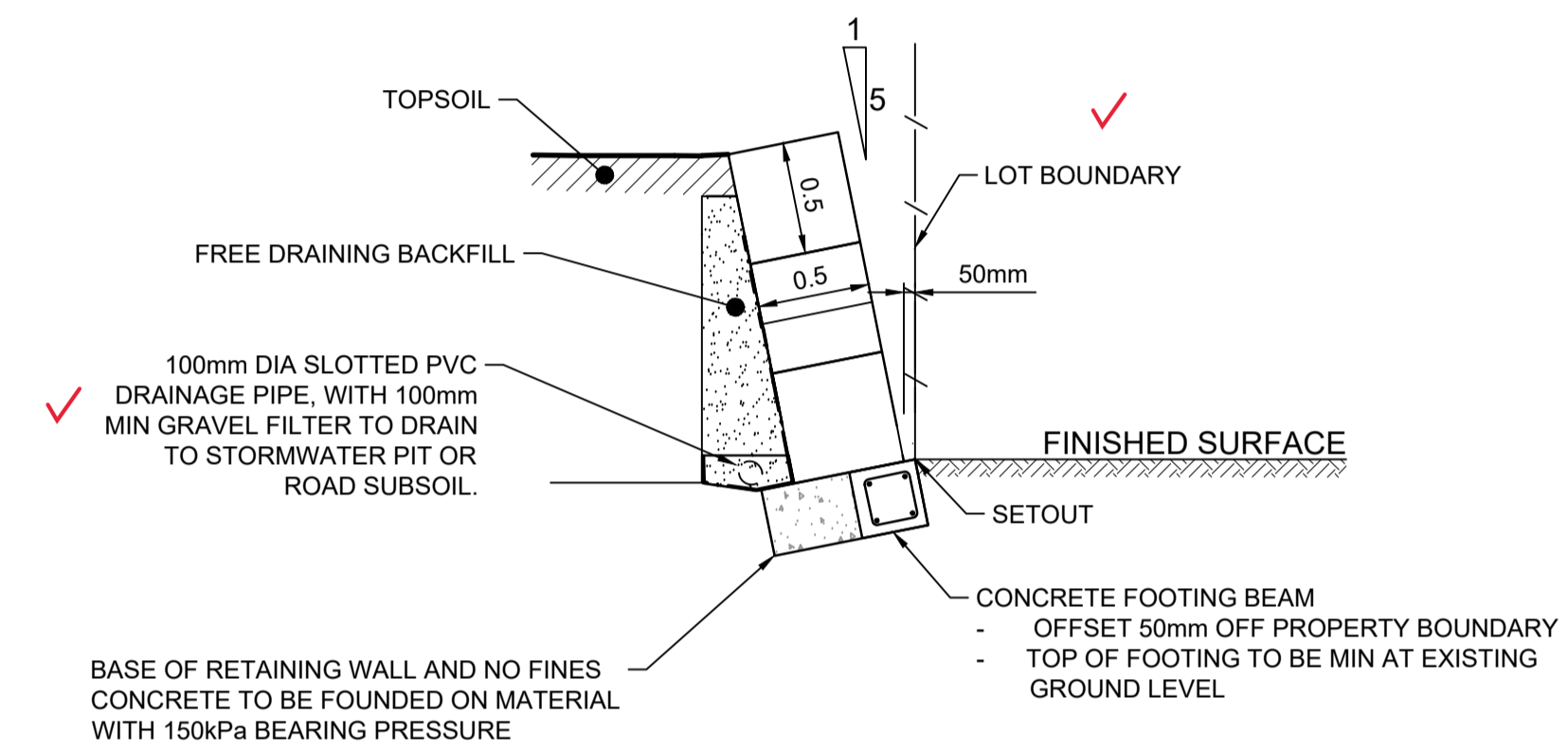
RETAINING WALL CONCRETE PANELS I-BEAM
STANDARD DETAIL
FOR TWO TIERED RETAINING WALLS
SCALE 1:25



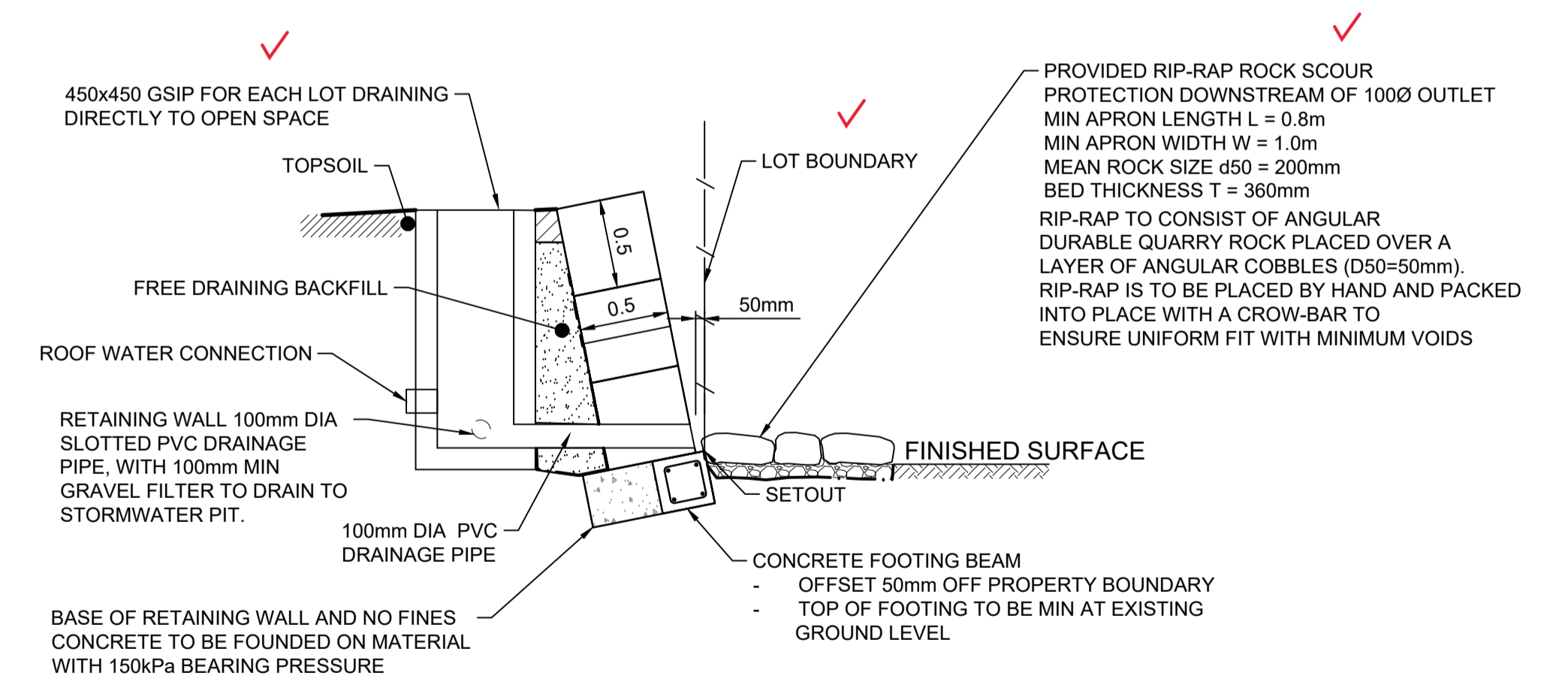
TYPICAL RETAINING WALL INTERFACING DETAIL
FOR SANDSTONE LOG & CONCRETE PANEL RETAINING WALLS
NTS



INTERALLOTMENT DRAINAGE EASEMENT WITH SANDSTONE LOGS RETAINING WALL ARRANGEMENT
N.T.S



SANDSTONE LOGS RETAINING WALL
STANDARD DETAIL
FOR RW 21 (PART)
3 (AND LESS) BLOCK ARRANGEMENT (1.5m MAX HEIGHT)
N.T.S



SANDSTONE LOGS RETAINING WALL
STANDARD DETAIL
FOR RW 17 & 18 (LOT DRAINAGE DIRECTLY TO OPEN SPACE)
N.T.S

1:25(AT A1)
1:50(AT A3)
500 0 500 1000 1500 2000 2500
MILLIMETRES

FOR SANDSTONE LOG RETAINING WALL REFER TO INHOUSE CONSULTING ENGINEERS REF 17770 Dwg No. S11 & S12 FOR STRUCTURAL DESIGN AND CERTIFICATION.

Plotted: 5 May 2022 11:16:31 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3503.dwg

B	PRIVATE CERTIFIER COMMENTS	MP	EJ	JB	MS	14/04/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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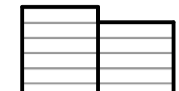
STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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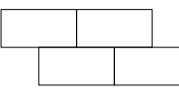
**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
RETAINING WALL DETAILS**

PROJECT No: **110185-12**
SHEET No: **CC3503**
PLAN No: 110185-12-CC3503

B

LEGEND

 CONCRETE PANELS I-BEAM RETAINING WALL

 SANDSTONE LOG RETAINING WALL

SUBDIVISION WORKS CERTIFICATE

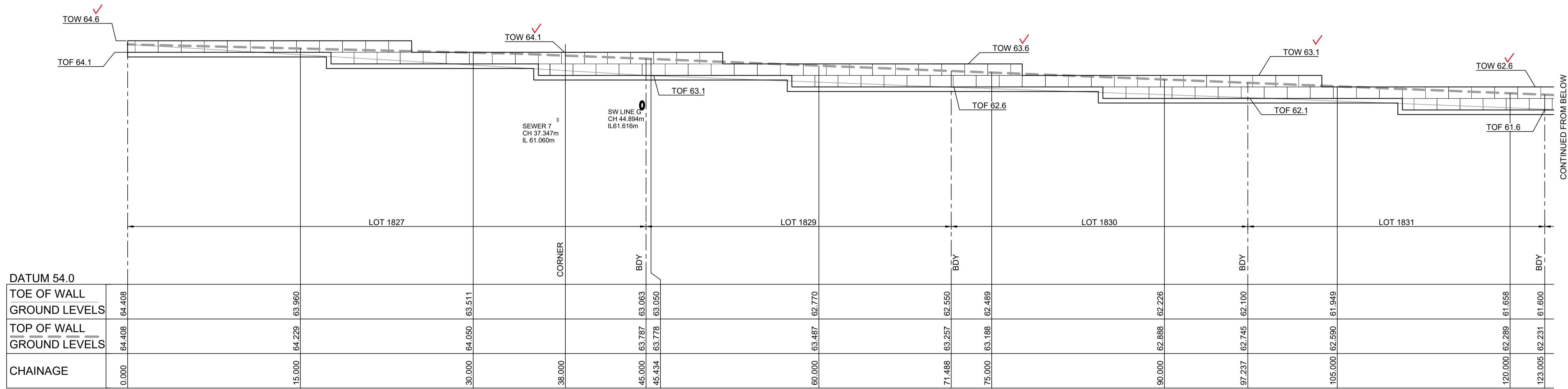
Certificate No. 201302995W76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

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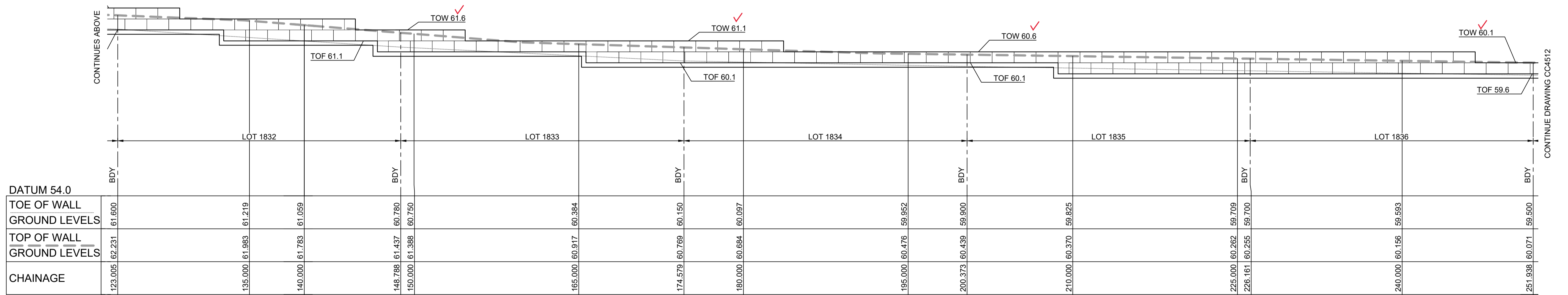
SIGNATURE..... *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF: 16800

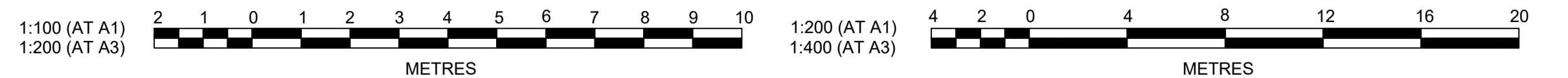


LONGITUDINAL SECTION RW 17
 HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100

NOTE: FOOTING LEVELS NOT ACCESSIBLE AT TIME OF SURVEY



LONGITUDINAL SECTION RW 17 (Cont)
 HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100

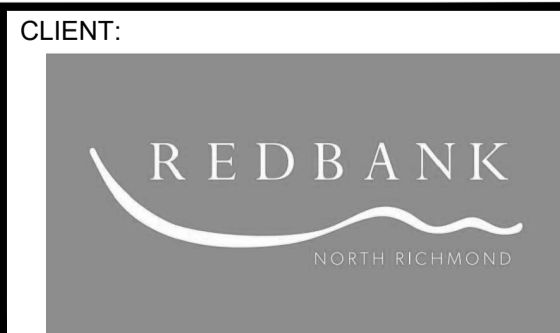


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AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 RETAINING WALL LONGSECTIONS
 SHEET 1**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3511

PROJECT No: **110185-12**
 SHEET No: **CC3511**

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
 Date of Issue 11/05/2022
 Issuing Officer *D. Resta*
 Accreditation No. BDC3367

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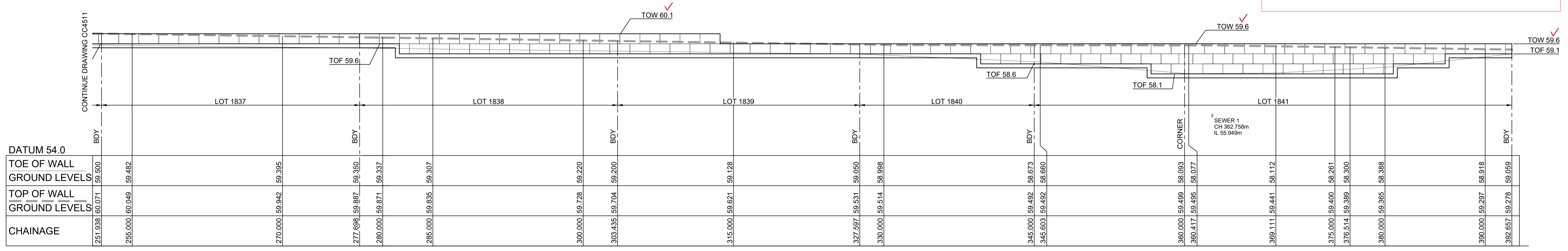
LEGEND

CONCRETE PANELS I-BEAM RETAINING WALL
 SANDSTONE LOG RETAINING WALL

RW 17					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286408	6281121.81	2°00'57.16"		
38	286409.34	6281159.79			
71.49	286427.04	6281188.22			
97.19	286442.93	6281208.42			
122.91	286462.65	6281224.93			
148.65	286485.37	6281237.02			
174.39	286510.11	6281244.16			
200.14	286535.79	6281246.04			
225.88	286561.3	6281242.59			
251.61	286585.53	6281233.94			
277.33	286607.45	6281220.5			
303.02	286626.11	6281202.84			
327.15	286640.11	6281183.18			
345.15	286651.06	6281169.9			
359.97	286660.97	6281157.88			
376.51	286648.48	6281147.01			
384.59	286642.64	6281141.43		111.6	16.14
392.66	286636.05	6281136.74	234°35'47.44"		

RW 18			
CHAINAGE	EASTING	NORTHING	BEARING
0	286312.28	6281155.65	52°00'58.81"
29.83	286335.79	6281174.01	
41.95	286347.3	6281170.2	
47.11	286352.2	6281168.58	
56.69	286361.37	6281165.83	
71.29	286375.62	6281162.65	
89.16	286393.35	6281160.45	
127.18	286392.02	6281122.46	182°00'57.16"

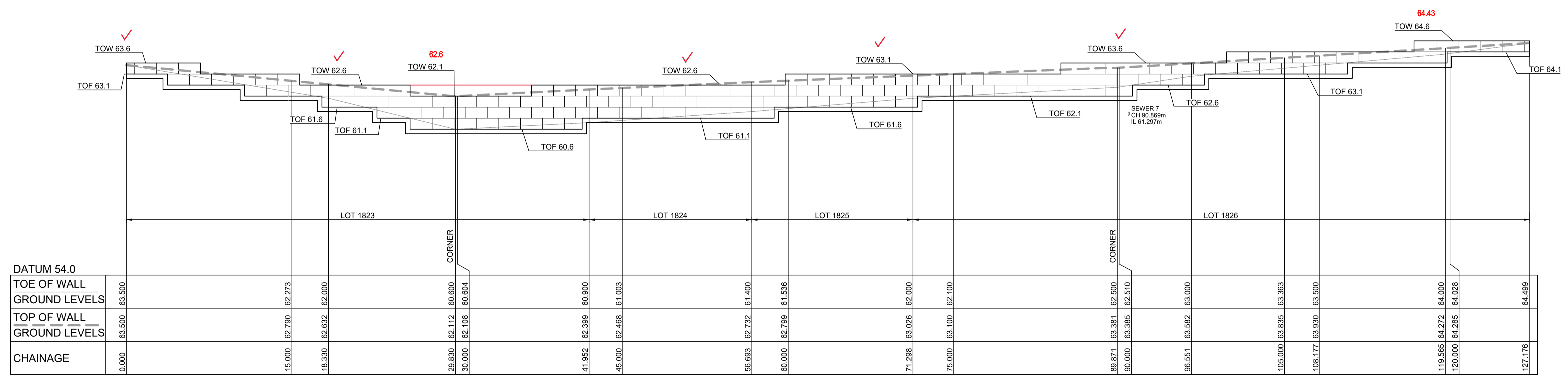
WORK AS EXECUTED SHOWN IN RED
 SIGNATURE..... *PR*
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800



LONGITUDINAL SECTION RW 17 (Cont)

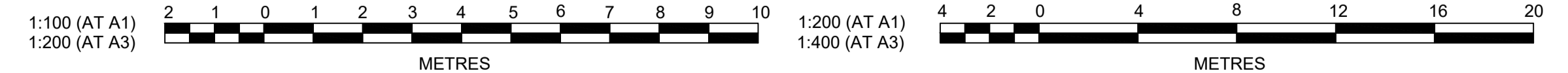
HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100

NOTE: FOOTING LEVELS NOT ACCESSIBLE AT TIME OF SURVEY



LONGITUDINAL SECTION RW 18

HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100



Plotted: 5 May 2022 11:17:35 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3512.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 RETAINING WALL LONGSECTIONS
 SHEET 2**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3512


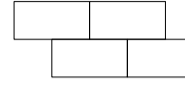
PROJECT No: **110185-12**
 SHEET No: **CC3512**

SUBDIVISION WORKS CERTIFICATE

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 Date of Issue 11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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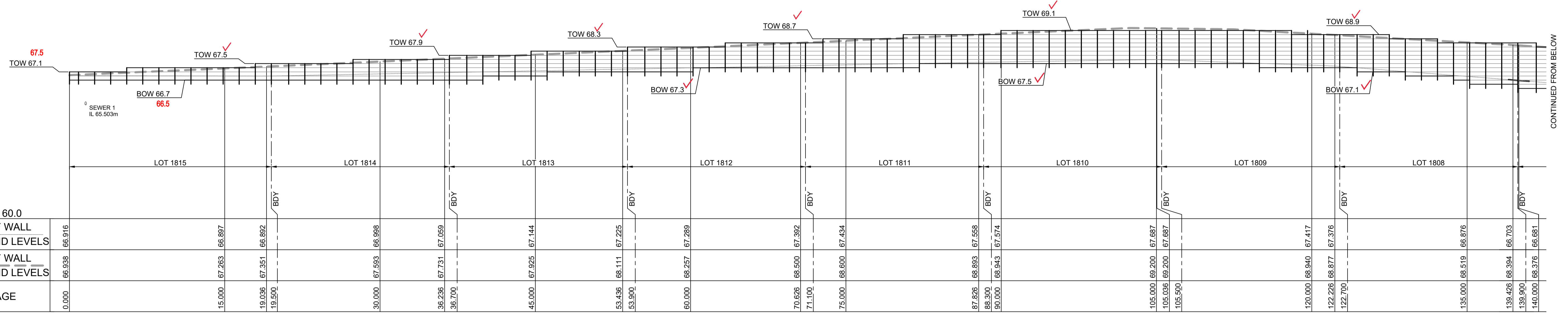
LEGEND

-  CONCRETE PANELS I-BEAM RETAINING WALL
-  SANDSTONE LOG RETAINING WALL

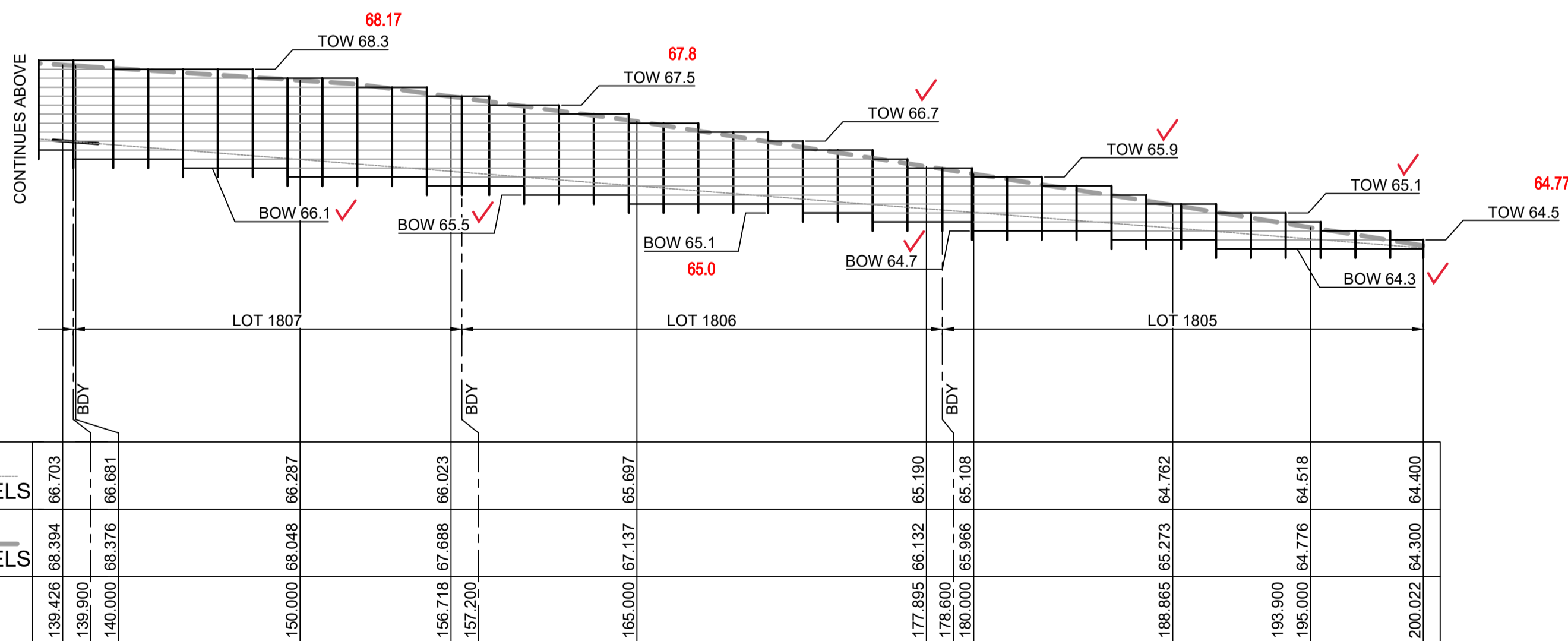
WORK AS EXECUTED SHOWN IN RED

SIGNATURE..... *PR*

VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

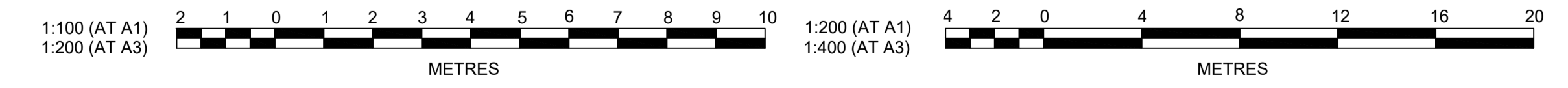


LONGITUDINAL SECTION RW 19
 HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100



LONGITUDINAL SECTION RW 19 (Cont)
 HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100

RW 19			
CHAINAGE	EASTING	NORTHING	BEARING
0	286406.66	6281075.23	92°00'57.16"
139.63	286546.2	6281070.32	
156.92	286563.48	6281069.71	
178.37	286584.93	6281070.22	
189.54	286596.02	6281071.53	
200.02	286606.12	6281074.36	74°19'31.09"



Plotfile: 5 May 2022 11:18:07 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3513.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**


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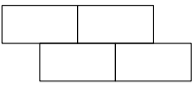
**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 RETAINING WALL LONGSECTIONS
 SHEET 3**

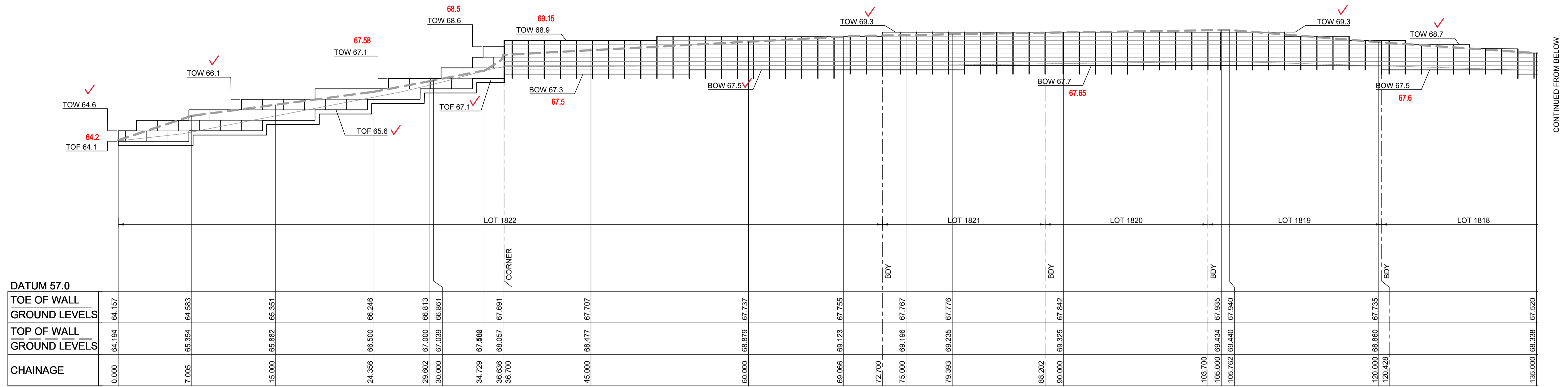
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3513

PROJECT No: **110185-12**
 SHEET No: **CC3513**

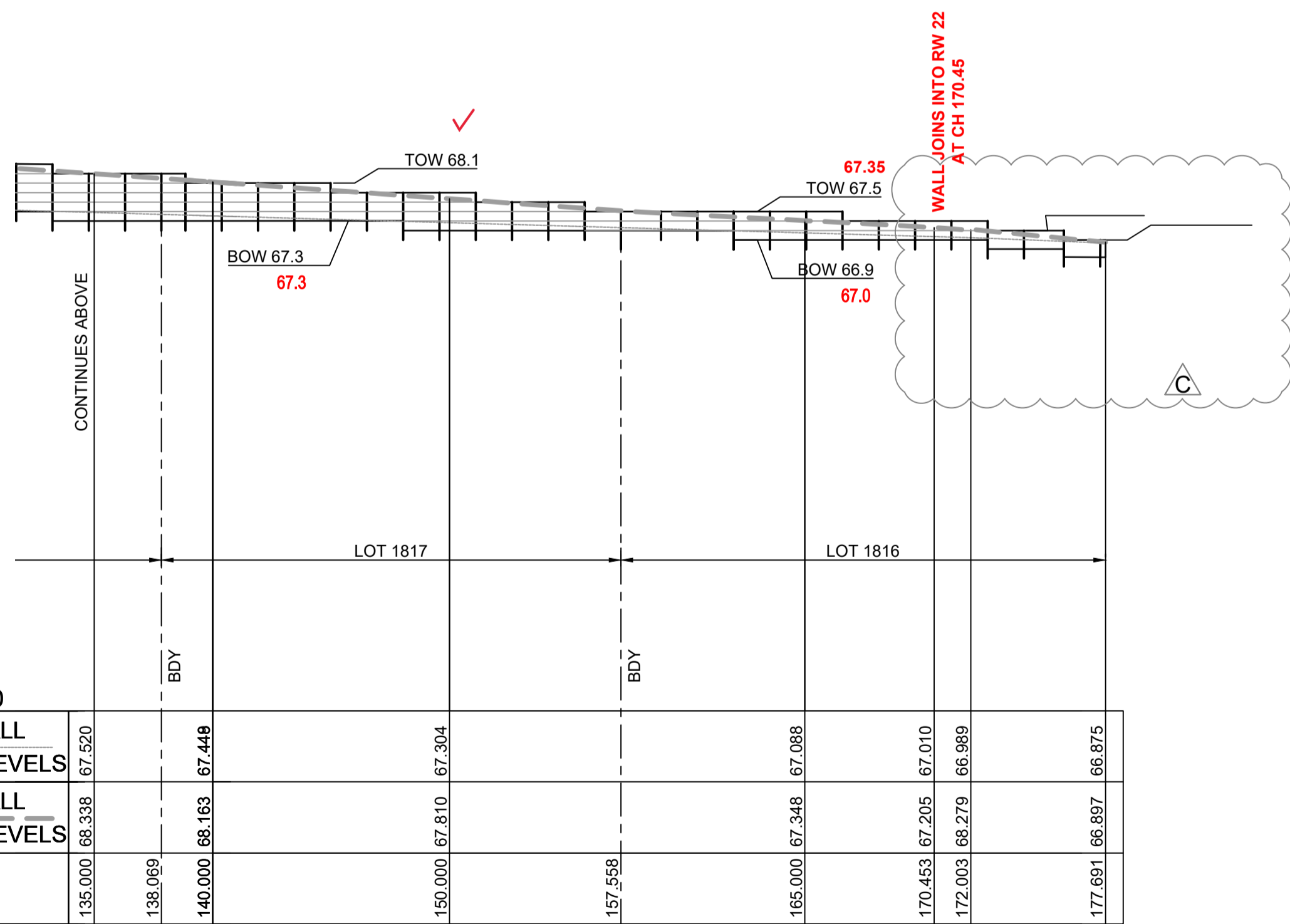
LEGEND

 CONCRETE PANELS I-BEAM RETAINING WALL

 SANDSTONE LOG RETAINING WALL



LONGITUDINAL SECTION RW 21
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



LONGITUDINAL SECTION RW 21 (CONT)
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RW 21

CHAINAGE	EASTING	NORTHING	BEARING
0	286284.76	6281133.91	232°00'58.81"
36.65	286255.87	6281111.36	
72.7	286290.1	6281100.02	
88.2	286304.82	6281095.15	
110.08	286325.59	6281089.27	
120.43	286335.49	6281085.29	
123.91	286338.83	6281084.28	
138.07	286352.61	6281081.05	
141.59	286356.04	6281080.25	
157.56	286371.8	6281077.65	
170.45	286384.63	6281076.42	
172	286384.78	6281077.97	
177.69	286390.44	6281077.42	95°27'32.67"

SUBDIVISION WORKS CERTIFICATE

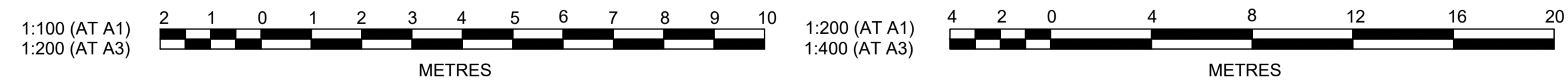
Certificate No. 20130299SW76
Date of Issue 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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SIGNATURE..... *V.M.*

VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800



Plotted: 6 May, 2022 11:51:48 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3514.dwg

C	RETAINING WALL UPDATED	MP	JM	JB	MS	05/05/22
B	PRIVATE CERTIFIER COMMENTS	MP	EJ	JB	MS	14/04/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

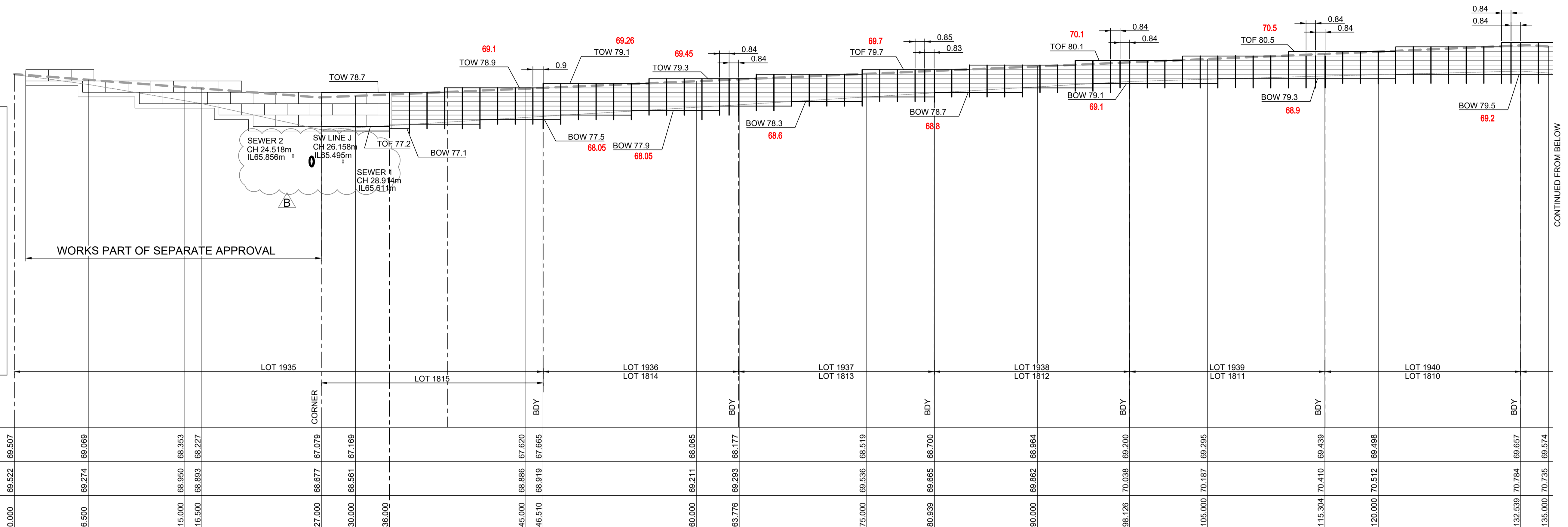
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**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
RETAINING WALL LONGSECTIONS
SHEET 4**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3514

PROJECT No: **110185-12**
SHEET No: **CC3514**

SUBDIVISION WORKS CERTIFICATE
 Certificate No. 2013029595W76
 Date of Issue 11/05/2022
 Issuing Officer D. Peck
 Accreditation No. BDC3367
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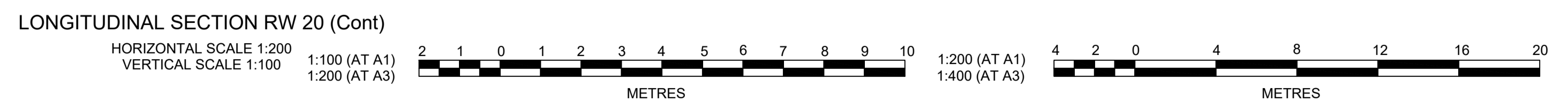
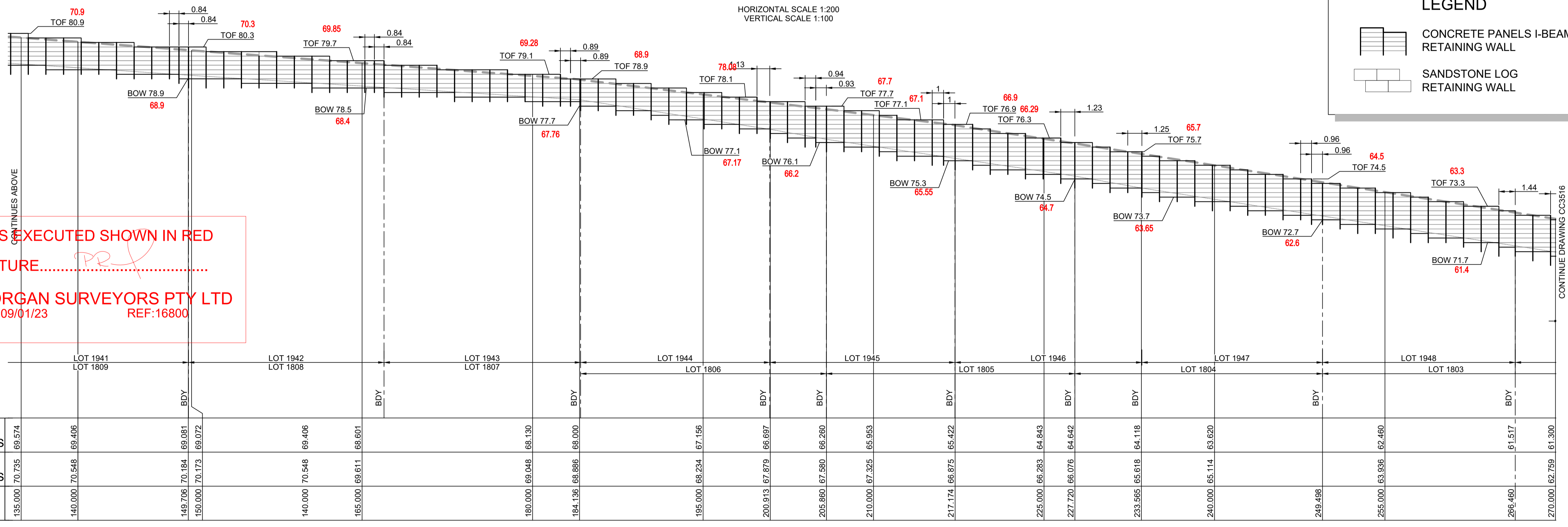


LONGITUDINAL SECTION RW 20
 HORIZONTAL SCALE 1:200
 VERTICAL SCALE 1:100

LEGEND

- CONCRETE PANELS I-BEAM RETAINING WALL
- SANDSTONE LOG RETAINING WALL

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE: *PR*
 VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800



Plotted: 5 May, 2022 11:19:05 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3515.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 RETAINING WALL LONGSECTIONS
 SHEET 5**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3515


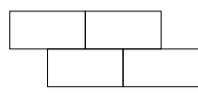
PROJECT No: **110185-12**
 SHEET No: **CC3515**

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DATE: 09/01/23 REF:16800

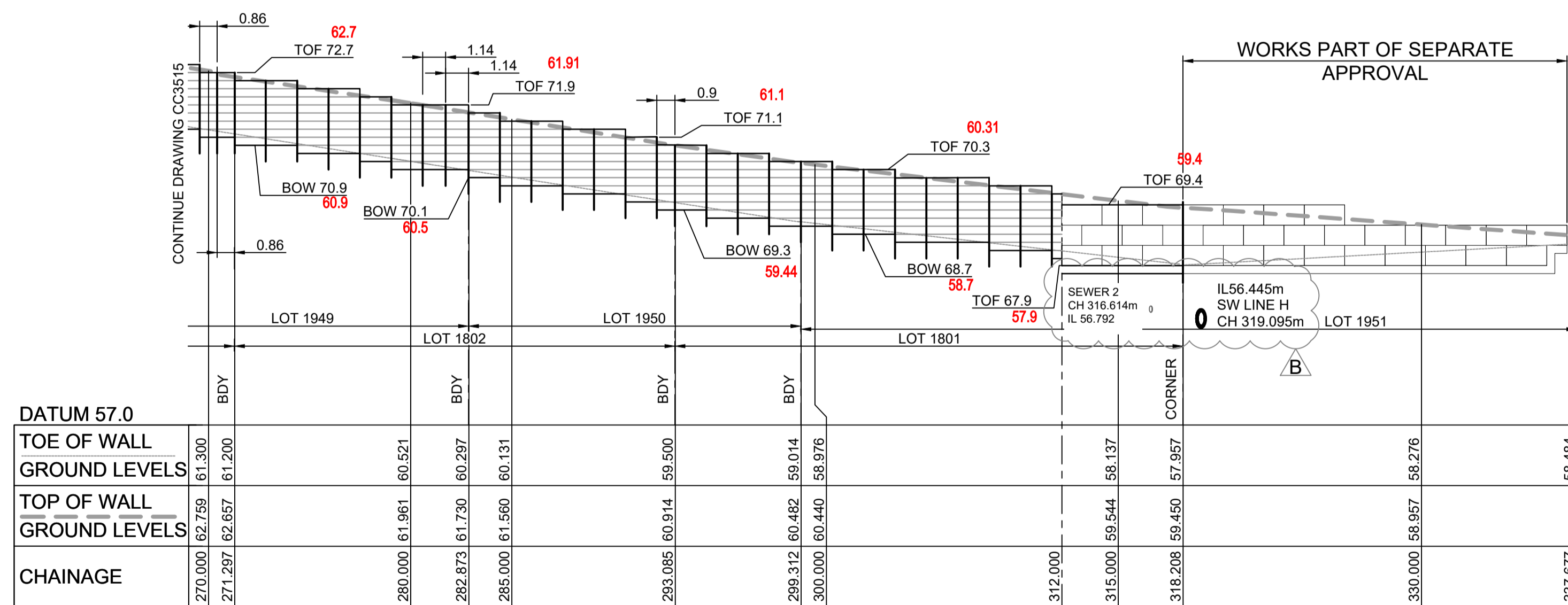
LEGEND

-  CONCRETE PANELS I-BEAM RETAINING WALL
-  SANDSTONE LOG RETAINING WALL

SUBDIVISION WORKS CERTIFICATE

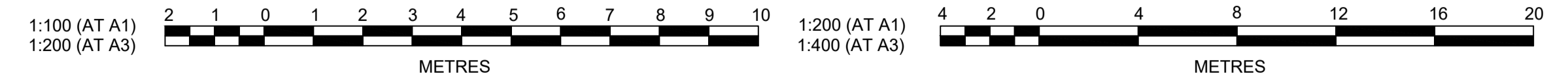
Certificate No. 20130299SW76
Date of Issue..... 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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LONGITUDINAL SECTION RW 20 (Cont)
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RW 20			
CHAINAGE	EASTING	NORTHING	BEARING
0	286405.36	6281046.86	2°00'57.16"
27	286406.31	6281073.84	
166.93	286546.15	6281068.92	
184.23	286563.44	6281068.31	
200.88	286580.09	6281068.71	
205.85	286585.06	6281068.83	
217.16	286596.29	6281070.15	
249.5	286627.43	6281078.89	
266.46	286642.91	6281085.82	
282.86	286657.13	6281093.99	
293.07	286665.71	6281099.53	
318.2	286684.8	6281115.86	
337.68	286699.09	6281102.62	132°48'55.65"



Plotted: 5 May 2022 11:19:37 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3516.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	EJ	JB	MS	14/04/22
B	MP	EJ	JB	MS	18/02/22
A	MP	JM	RO	RO	12/07/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
RETAINING WALL LONGSECTIONS
SHEET 6

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3516

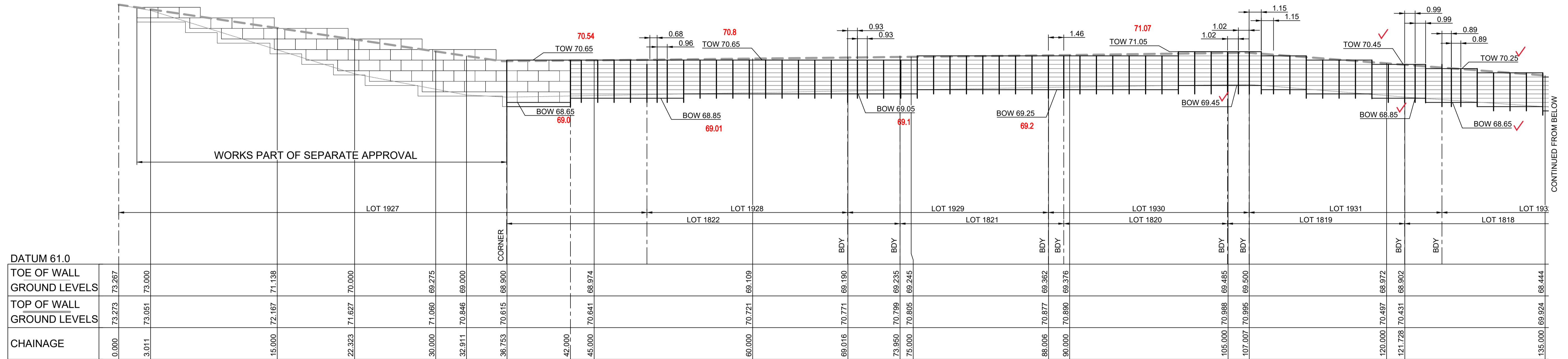
PROJECT No: **110185-12**
SHEET No: **CC3516**

C

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VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800



LONGITUDINAL SECTION RW 22
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

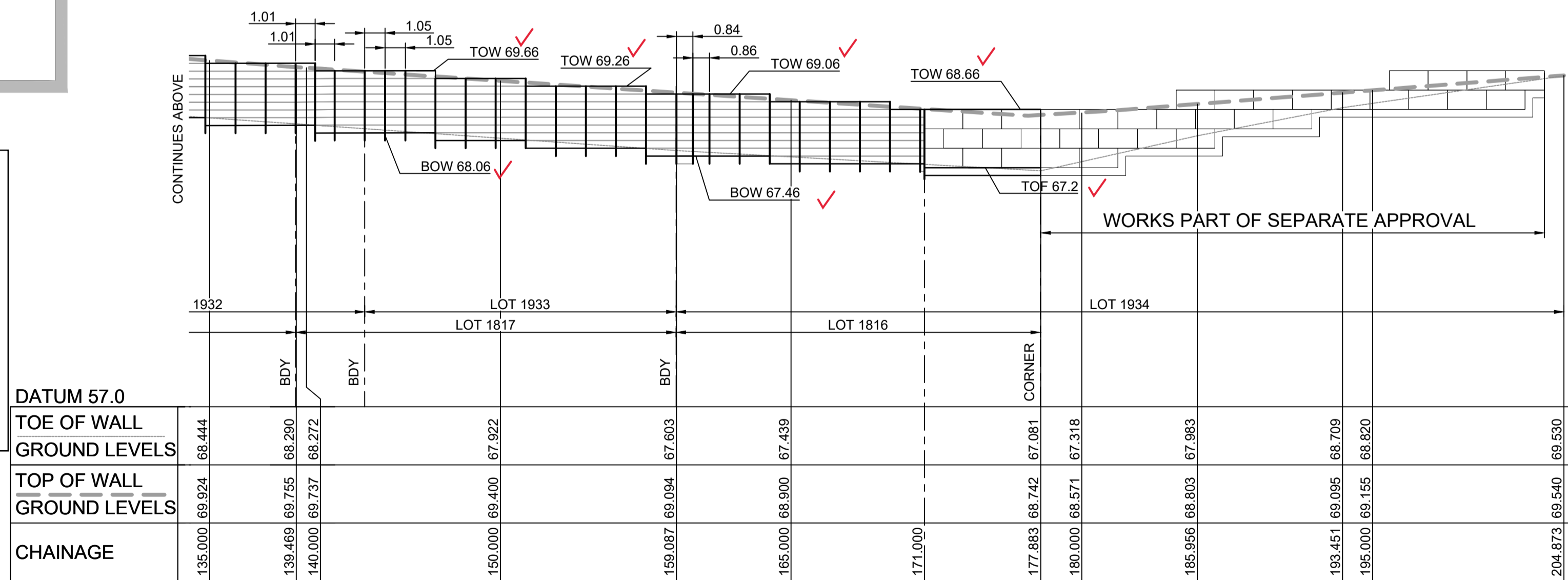
LEGEND

- CONCRETE PANELS I-BEAM RETAINING WALL
- SANDSTONE LOG RETAINING WALL

SUBDIVISION WORKS CERTIFICATE

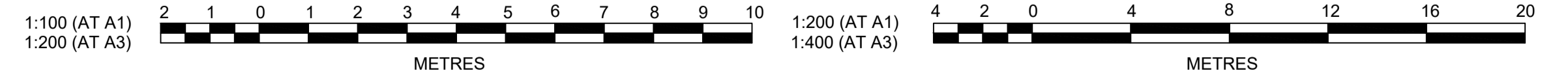
Certificate No. 20130299SW76
Date of Issue 11/05/2022
Issuing Officer *D. Resta*
Accreditation No. BDC3367

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LONGITUDINAL SECTION RW 22 (Cont)
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

RW 22			
CHAINAGE	EASTING	NORTHING	BEARING
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36.72	286254.32	6281110.4	
49.99	286266.92	6281106.23	
87.99	286302.99	6281094.28	
89.45	286304.38	6281093.82	
111.35	286325.17	6281086.94	
121.71	286335.09	6281083.95	
125.24	286338.47	6281082.93	
139.44	286352.29	6281079.69	
143	286355.76	6281078.88	
159.07	286371.62	6281076.26	
177.87	286390.33	6281074.47	
204.87	286389.38	6281047.48	182°00'57.16"

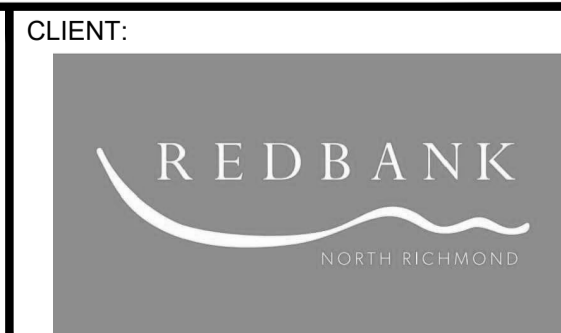


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NO.	DESCRIPTION	BY	DATE			
B	PRIVATE CERTIFIER COMMENTS	MP	EJ	JB	MS	14/04/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
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REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
RETAINING WALL LONGSECTIONS
SHEET 7

PROJECT No: **110185-12**
SHEET No: **CC3517**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3517

SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004".
- TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
- ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
- ALL TAIL-OUT DRAINS SHALL BE COUCH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
- 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.
- ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.
- 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.
- ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
- ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
- THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.
- CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" (THE BLUE BOOK).
- ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.
- THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

- NOTE:
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE A GROUND COVER MORE THAN 70%, USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.
- WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-
 - INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 6-8.
 - CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.
 - CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.
 - PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S) AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.
 - PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.
 - CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4
 - STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED
 - CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.
 - UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS.
 - GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
 - REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
 - CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE
 - EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-
 - 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m
 - 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m
 - 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m
 - 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m
 - 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m
 - 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m

SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

- PROTECTION FROM EROSION FORCES SHALL BE UNDERTAKEN ON ALL LANDS. GROUND COVER TO BE IN PLACE WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY ANY CONCENTRATED FLOWS.
- TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.
- WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO SCHEDULE WORKS SUCH THAT LAND DISTURBANCE ACTIVITIES ARE COMPLETED IN LESS THAN 6 MONTHS. REVEGETATION WORKS MUST BE CARRIED OUT AS STIPULATED IN THE RELEVANT COUNCIL GUIDELINES / SPECIFICATIONS SUCH THAT A SATISFACTORY GROUND COVER IS PROVIDED TO AT LEAST 60% OF THE DISTURBED AREA WITHIN 10 DAYS AND AT LEAST 70% OF THE DISTURBED AREA WITHIN A FURTHER 60 DAYS..
- SEDIMENT FENCES (SD) 6-8 SHALL:-
 - BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.
 - HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m. AND A STORAGE DEPTH OF AT LEAST 0.6m.
 - PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr Tc DISCHARGE.
- STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.
- DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.
- STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.
- THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-
 - BE CONSTRUCTED WHERE SHOWN ON THE PLANS.
 - BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)
 - HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.
- STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-
 - LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING
 - THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE
 - THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.
- SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.
- WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.
- ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

- SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
- 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.
- FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

- 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 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELINE.
- SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
- PROVIDE STRIP OF TURF (COUCH OR BUFFALO VARIETY) WITHIN THE ROAD VERGE + 1m WIDE AROUND ALL SURFACE INLET PITS

SITE INSPECTION AND MAINTENANCE:

- A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON AN INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER:-
 - AT LEAST WEEKLY
 - IMMEDIATELY BEFORE SITE CLOSURE
 - IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.

THE SELF AUDIT SHALL INCLUDE:-

 - RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED
 - RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'
 - RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE
 - RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
 - FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.
- IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-
 - 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION. TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.
 - ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHS

THE RESPONSIBLE PERSON SHALL ENSURE THAT:-

 - THIS PLAN IS BEING IMPLEMENTED CORRECTLY
 - REPAIRS ARE BEING UNDERTAKEN AS REQUIRED
 - ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.
- WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT
- PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED, ESPECIALLY THAT:-
 - NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.
 - AREAS OF EROSION ARE REPAIRED (e.g LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE
 - BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)
- SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.
- RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.
- EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.
- ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-
 - RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.
 - DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED
 - SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.
- ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECT TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.
- WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(S) SHALL BE:-
 - TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)
 - DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.
- LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

SUBDIVISION WORKS CERTIFICATE

Certificate No.20130299SW76
 Date of Issue 11/05/2022
 Issuing Officer *D. Reston*
 Accreditation No. BDC3367

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WORK AS EXECUTED SHOWN IN RED
 SIGNATURE.....*PR*.....
 VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

Plotted: 5 May, 2022 11:20:25 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3700.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21			
	AMENDMENT	DES	DRN	CKD	APR	DATE			

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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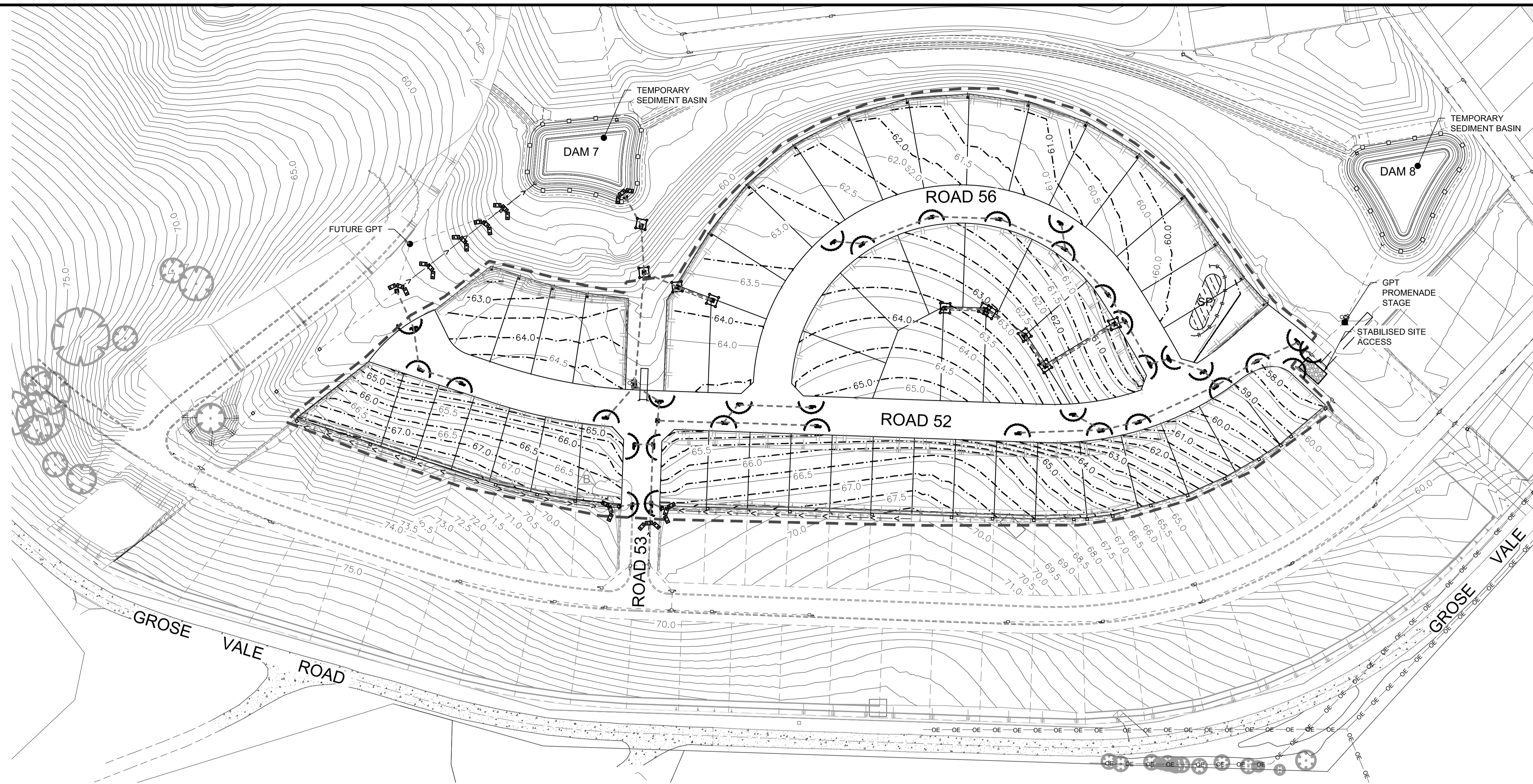
**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 SOIL & WATER MANAGEMENT NOTES**

PROJECT No: **110185-12**
 SHEET No: **CC3700**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: **110185-12-CC3700**

110185-12
CC3700
A

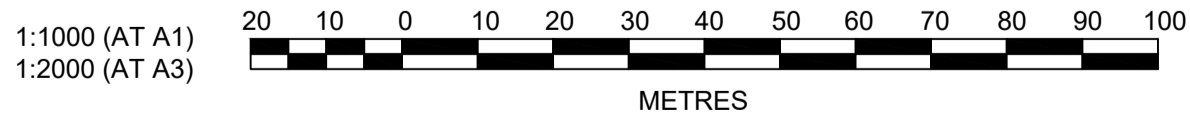
Plotted: 6 May, 2022 11:57:42 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3701.dwg



LEGEND	
	GEOTEXTILE INLET FILTER
	FILTER ROLLS
	SEDIMENT FENCE
	STRAW BALE BARRIER
	TREES TO BE RETAINED AND PROTECTED BY ATF TO PERIMETER AS PER LANDSCAPE DETAILS
	ATF FENCE
	PROTECTIVE FENCE TO SEDIMENT BASIN AND UNDISTURBED LAND
	STABILISED SITE ACCESS & WHEEL WASH BAY
	STOCKPILE

WORK AS EXECUTED SHOWN IN RED
 SIGNATURE.....*PR*.....
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

- NOTES:**
1. MAINTAIN ATF AS INSTALLED WITH BULK EARTHWORKS.
 2. MAINTAIN SEDIMENT FENCE.
 3. MAINTAIN SEDIMENT BASINS 7 & 8.
 4. MAINTAIN PROTECTIVE FENCING TO SEDIMENT BASINS AND AROUND THE TREES TO BE RETAINED.
 5. DAM 7 AND DAM 8 AND OPERATES AS SEDIMENT BASINS.



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
 Date of Issue..... 11/05/2022
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 11/05/2022

REV	DESCRIPTION	DES	DRN	CKD	APR	DATE
B	SUBSTATION RELOCATED TO LOT 1816	MP	JM	JB	MS	05/05/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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CLIENT:

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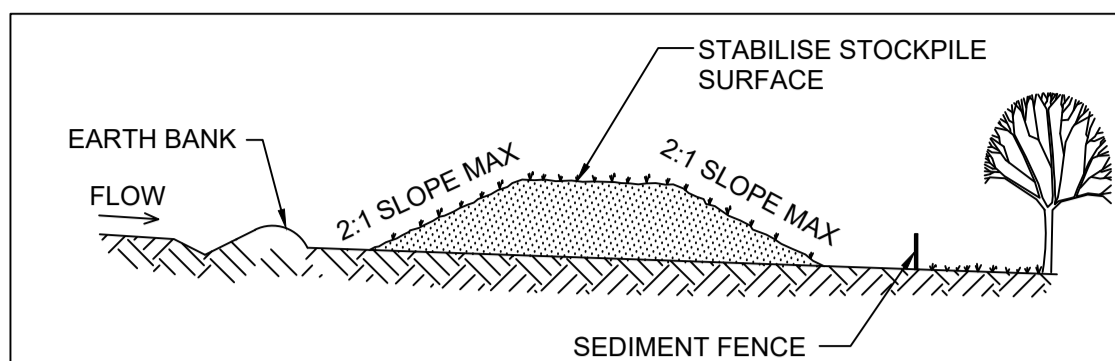
REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
 SOIL & WATER MANAGEMENT PLAN

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3701

PROJECT No: **110185-12**

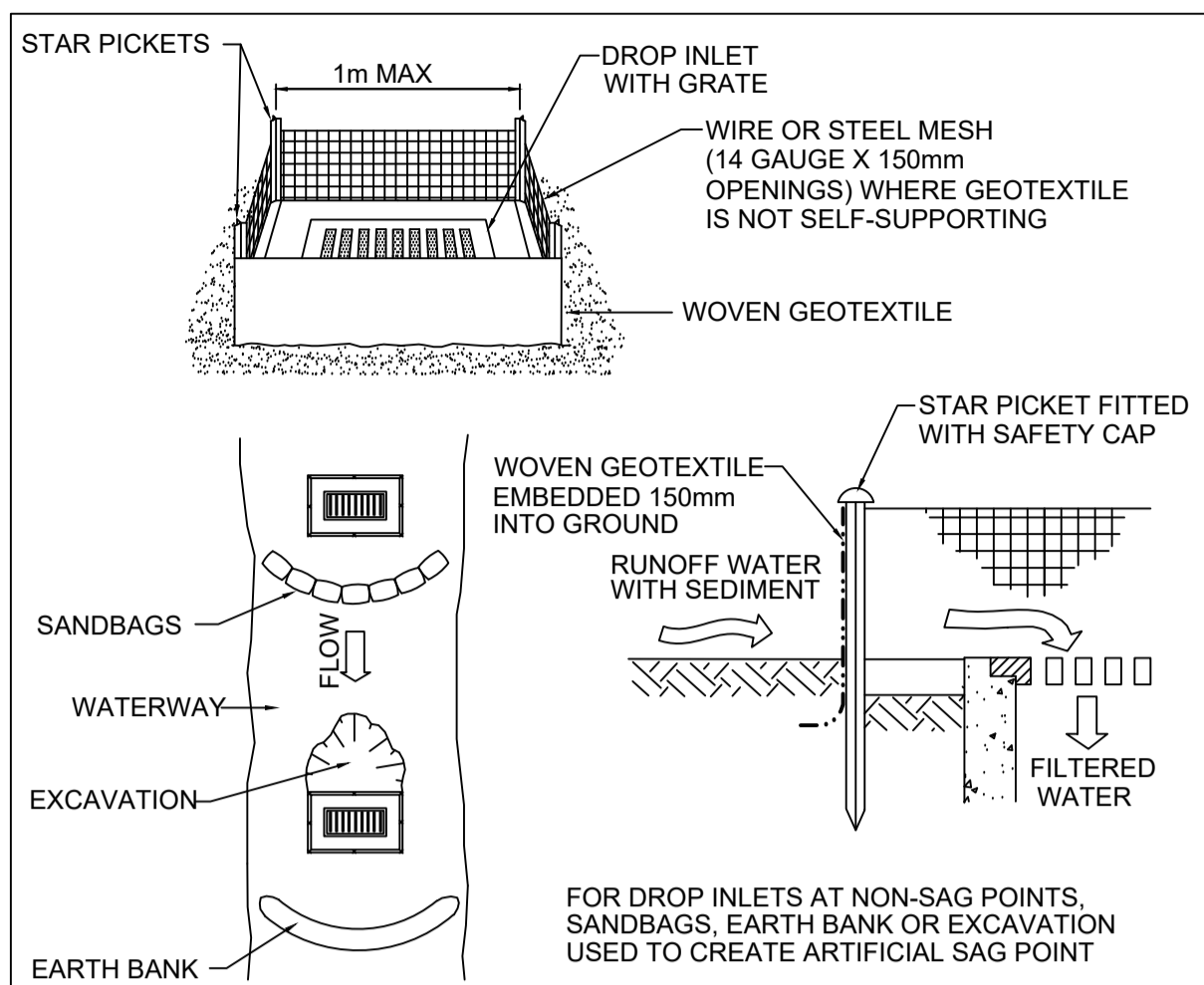
SHEET No: **CC3701**

B



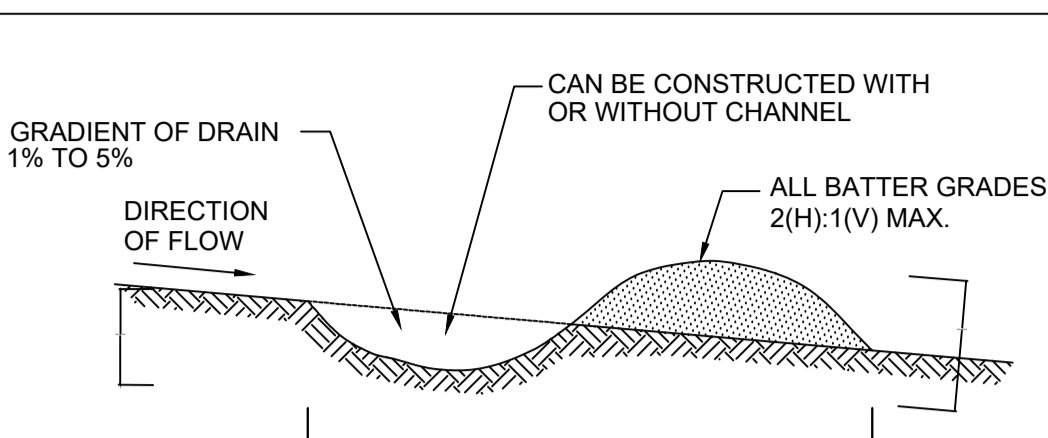
- CONSTRUCTION NOTES**
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW AND HAZARD AREAS.
 2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
 3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
 4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10 EQUALS 80% GROUND COVER.
 5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILE SD4-1
N.T.S.



- CONSTRUCTION NOTES**
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
 2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1m CENTRES.
 3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
 4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

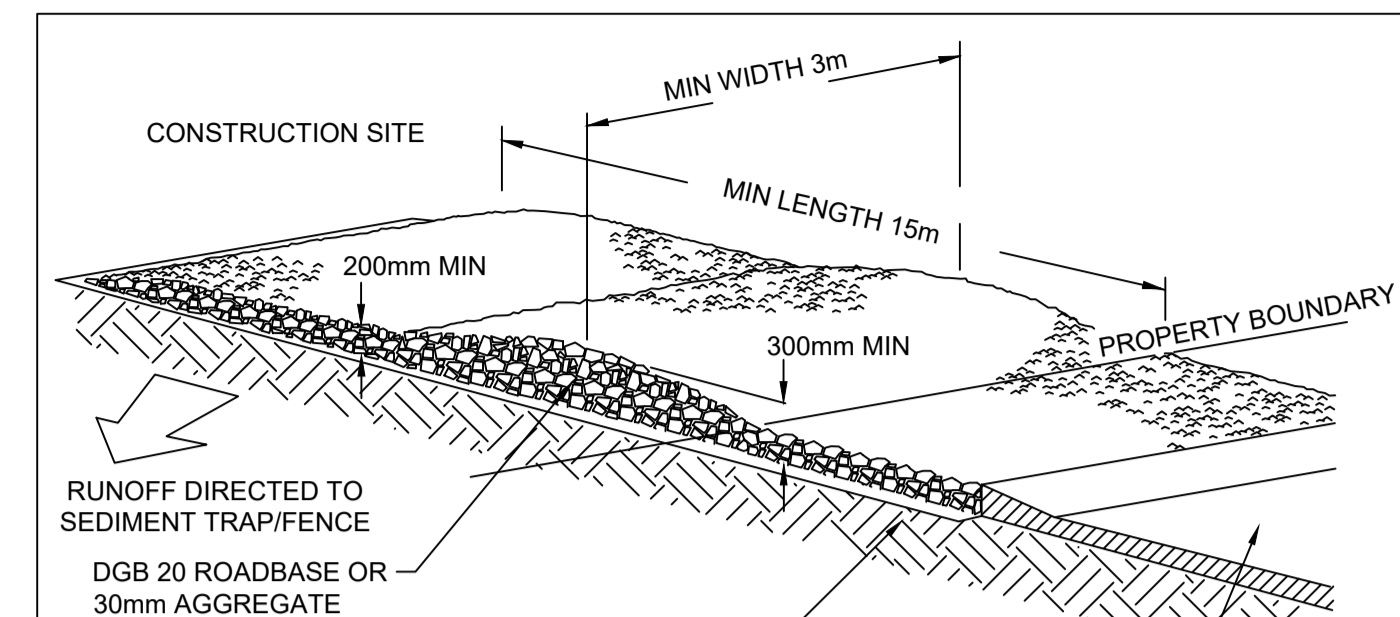
GEOTEXTILE INLET FILTER SD6-12
N.T.S.



NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

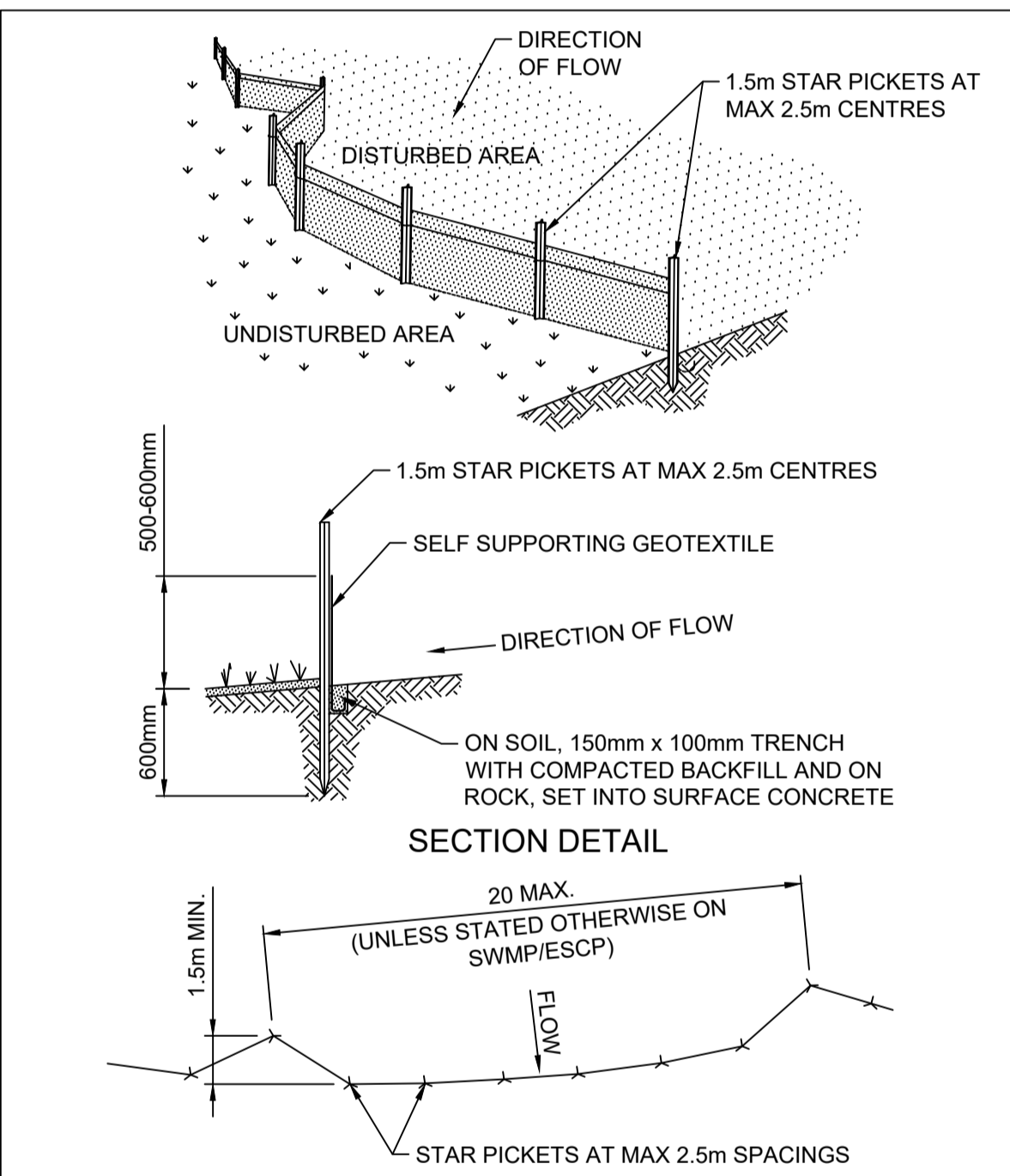
- CONSTRUCTION NOTES**
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
 2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
 3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
 4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
 5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION OR LINE WITH GEOFABRIC.

EARTH BANK (LOW FLOW) SD5-5
N.T.S.



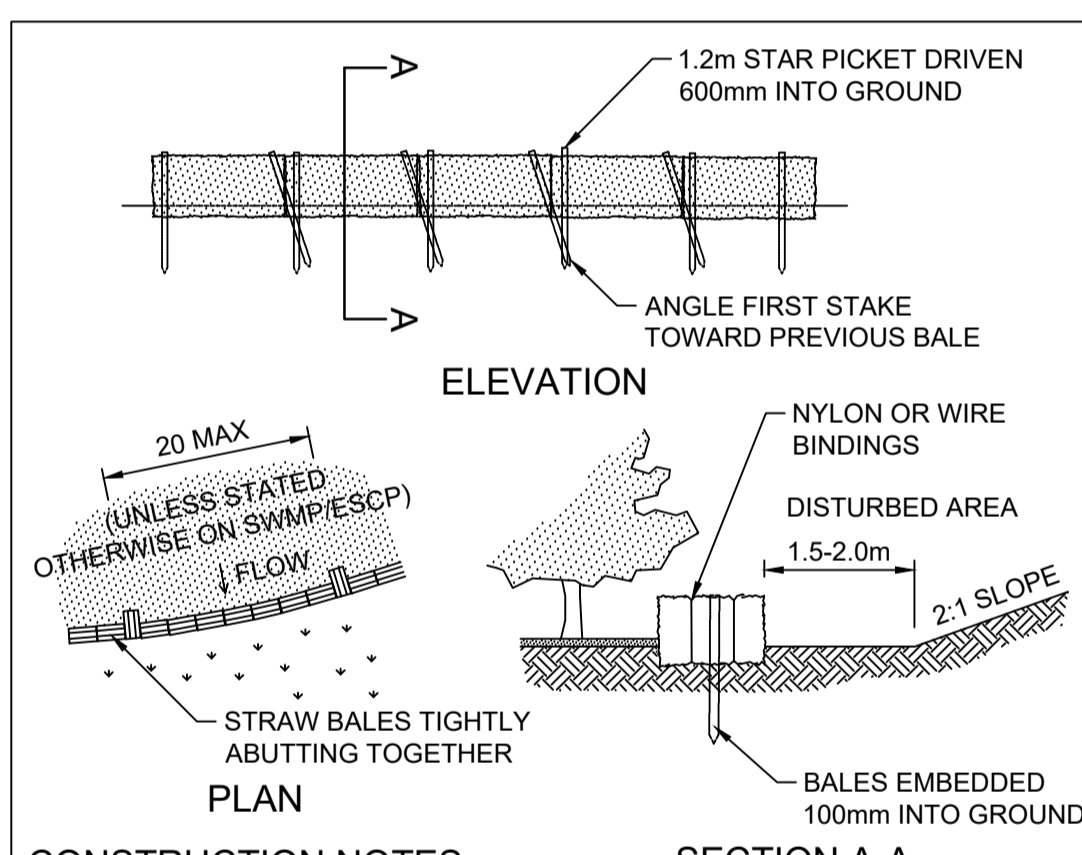
- CONSTRUCTION NOTES**
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
 2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
 3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
 4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE
 5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS SD6-14
N.T.S.



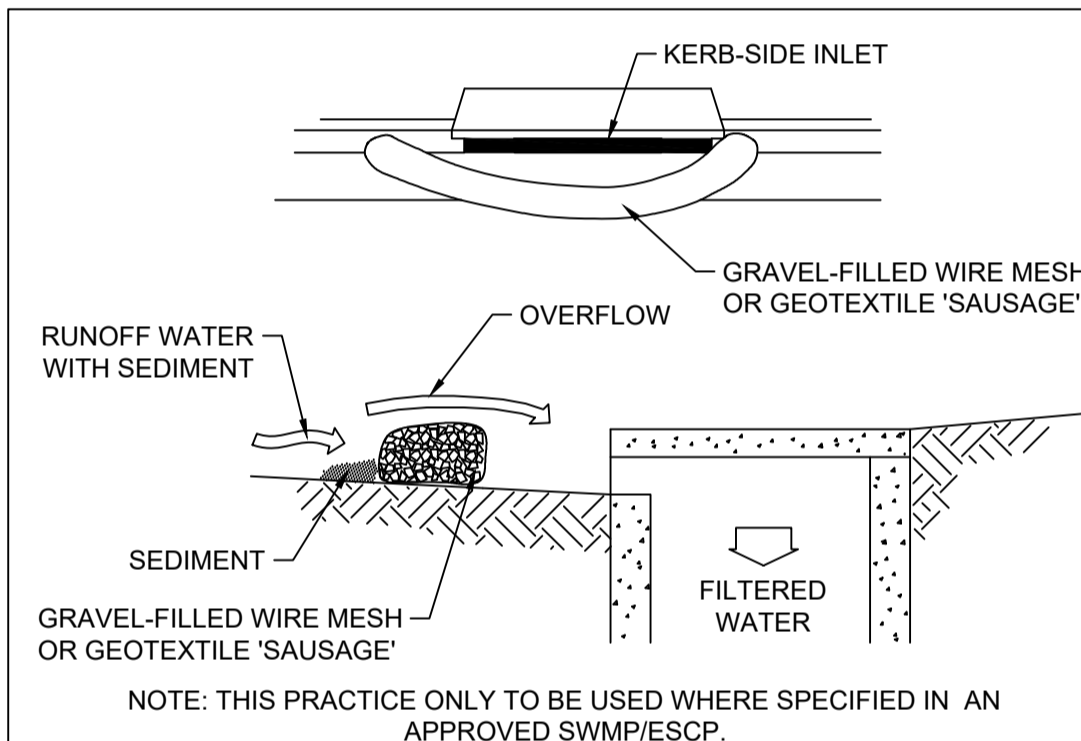
- CONSTRUCTION NOTES**
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
 2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
 6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE SD6-8
SCALE: N.T.S.



- CONSTRUCTION NOTES**
1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
 2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
 3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
 4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
 5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1m TO 2m DOWNSLOPE FROM THE TOE.
 6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

STRAW BALE FILTER SD6-7
SCALE N.T.S.



- CONSTRUCTION NOTES**
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
 2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm-50mm GRAVEL.
 3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
 4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
 5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BY-PASSING THE FILTER.
 6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH & GRAVEL INLET FILTER SD6-11
SCALE N.T.S.

WORK AS EXECUTED SHOWN IN RED
SIGNATURE.....
VINCE MORGAN SURVEYORS PTY LTD
DATE: 09/01/23 REF:16800

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW76
Date of Issue..... 11/05/2022
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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Plotted: 5 May, 2022 11:21:51 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3702.dwg

A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC
SOIL & WATER MANAGEMENT DETAILS

PROJECT No: **110185-12**
SHEET No: **CC3702**

PLAN No: 110185-12-CC3702

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: A

PAVEMENT MARKING SCHEDULE

CODE	USE	STYLE	COLOUR & TYPE
BB	Barrier line where sight is restricted in both directions or approach to median island		Reflectorised white type 'YY' pavement markers bi-directional reflective yellow
TB	Give way line (Used with Signs)		Reflectorised white
TB1	Give way line (Used on right side of side)		Reflectorised white

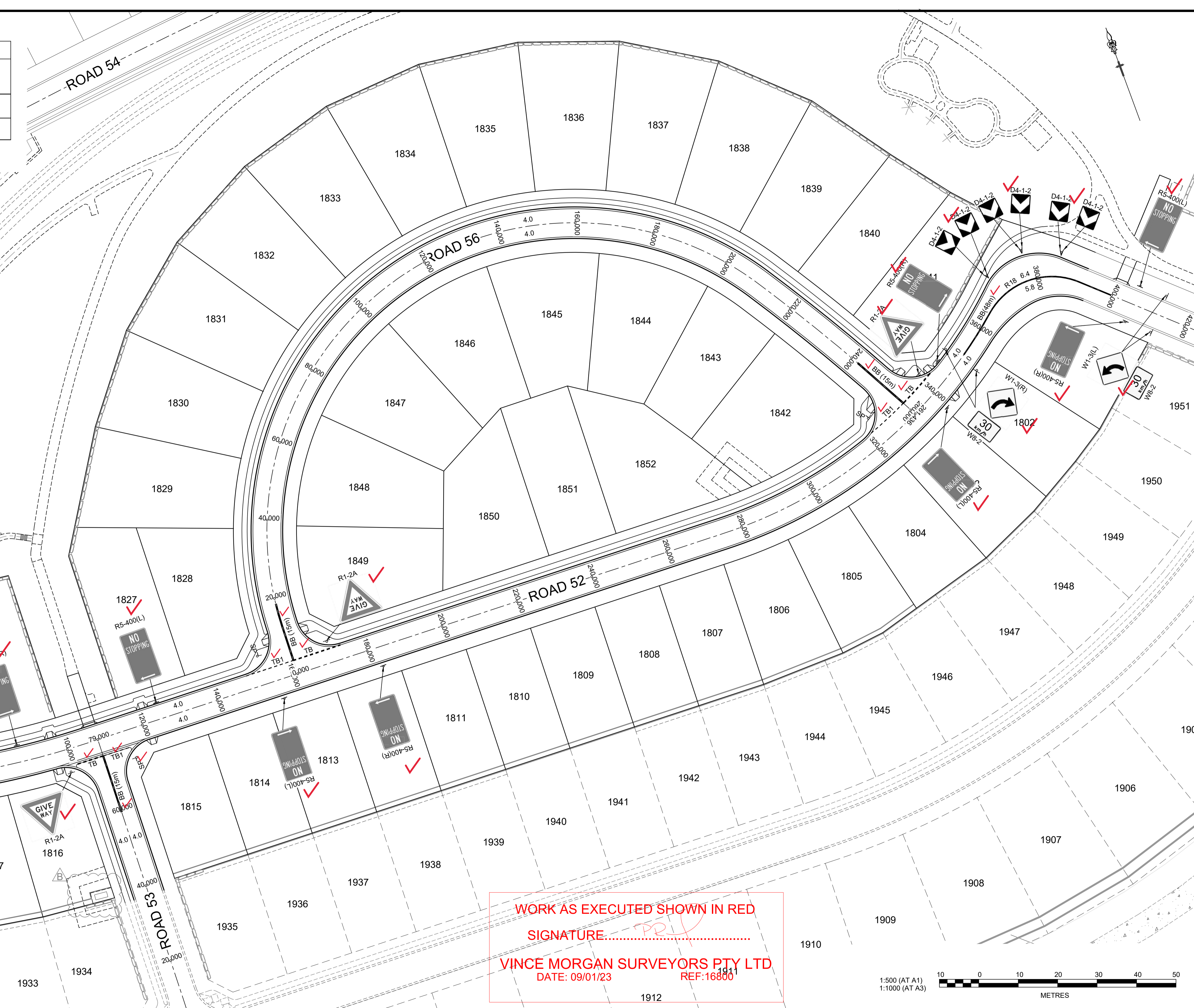
NOTES

- ALL PAVEMENT MARKINGS, CHEVRONS AND REFLECTORS ARE TO BE IN ACCORDANCE WITH AUSTRROADS GUIDE TO TRAFFIC MANAGEMENT PART 6 AND AUSTRALIAN STANDARDS, AS1742-9, AS1743 AND RMS DELINEATION MANUAL.
- ALL SIGNS TO BE IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD, AS 1743 - ROAD SIGNS AND COUNCIL'S SPECIFICATION UNLESS OTHERWISE SHOWN.
- ROAD SIGNS ARE SIZE 'B', UNLESS OTHERWISE SHOWN. LOCATE OUTSIDE OF CLEAR ZONES.
- ALL NEW PAVEMENT MARKINGS ARE TO BE INSTALLED IN WHITE, REFLECTIVE, THERMOPLASTIC PAINT.
- KERBSIDE LANE WIDTHS INCLUDE THE WIDTH OF THE GUTTER.
- RE-MARK EXISTING PAVEMENT MARKINGS AS DIRECTED BY THE COUNCIL'S ENGINEER.
- PAVEMENT MARKINGS THAT FORM NO PART OF THE FINAL WORKS ARE TO BE REMOVED BY SAND BLASTING OR OTHER METHOD AS APPROVED BY THE PROJECT MANAGER.
- ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE SHOWN.

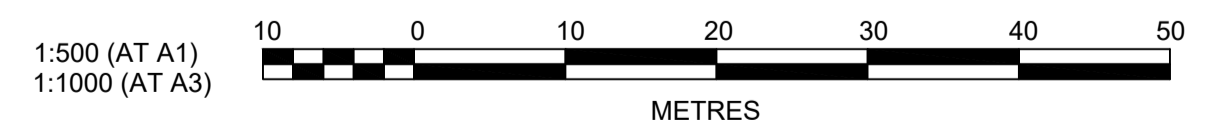
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Certificate No. 20130298/W/3
Date of Issue: 11/05/2022
Issuing Officer: *D. Reiter*
Accreditation No. BDC3367

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DATE: 09/01/23 REF: 16600



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DES	DRN	CKD	APR	DATE	
B	MP	JM	JB	MS	05/05/22
A	MP	JM	RO	RO	12/07/21
AMENDMENT					

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
NORTH RICHMOND

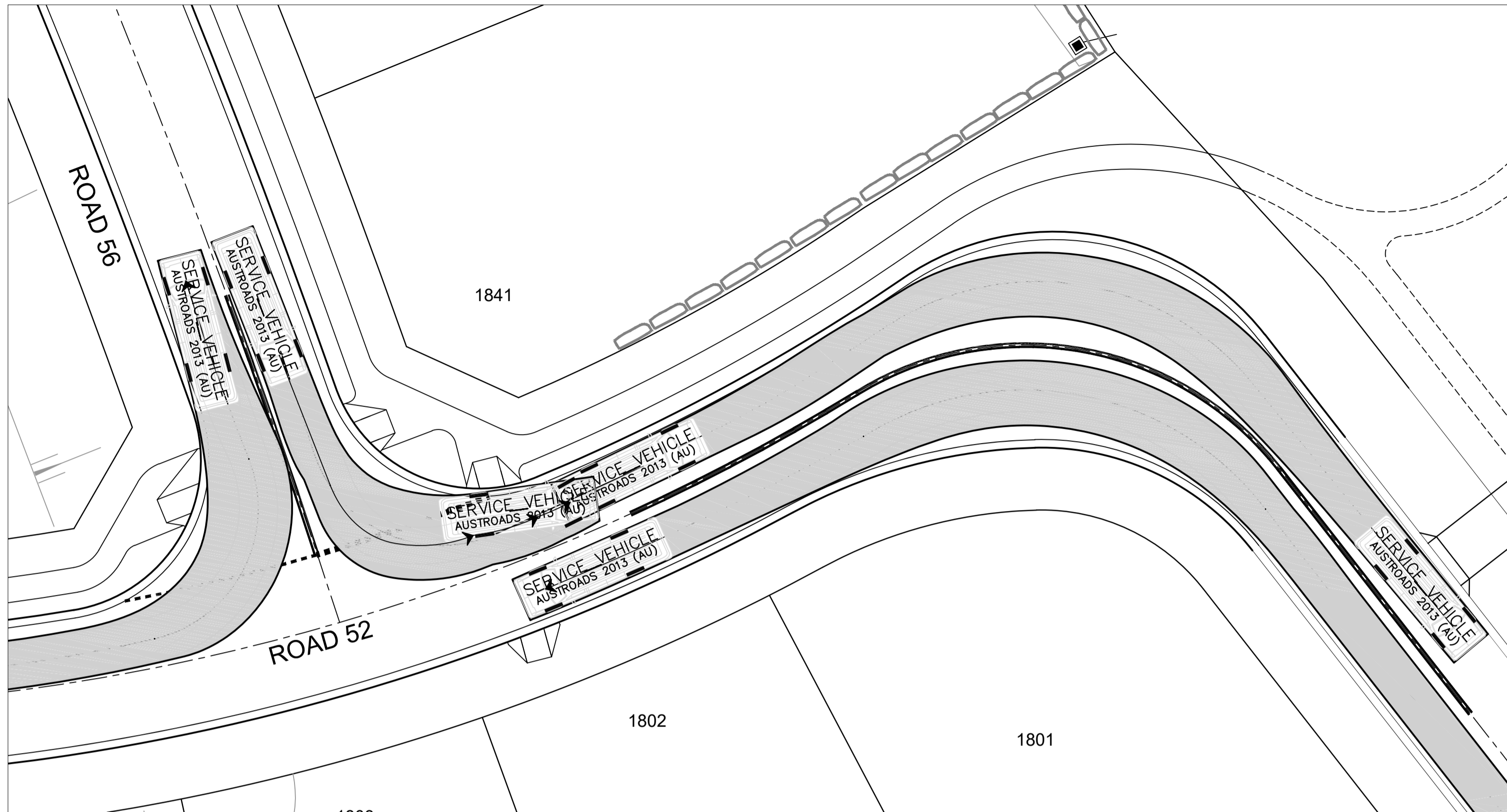
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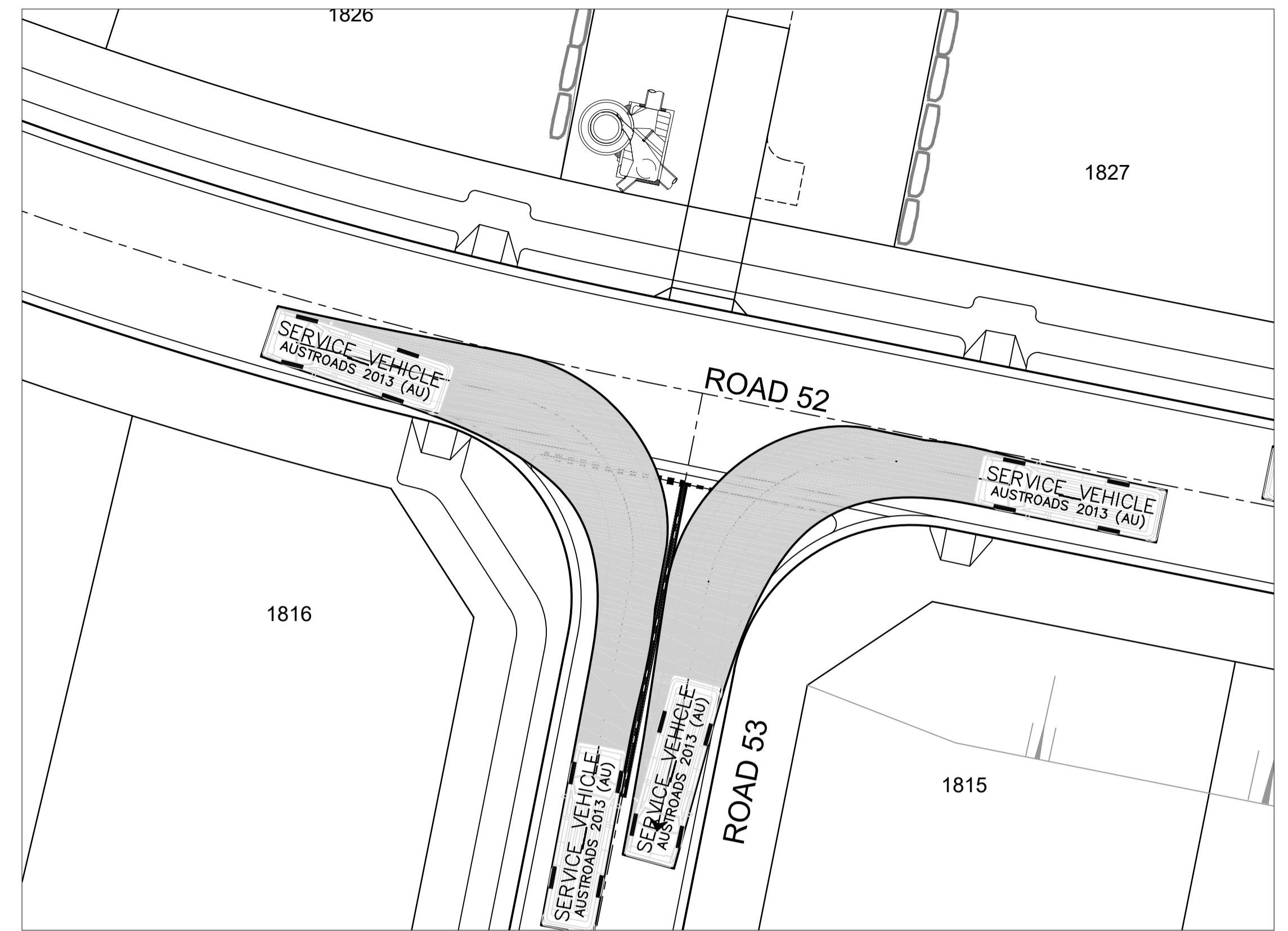
**REDBANK, NORTH RICHMOND
RIDGETOPS 1 - SWC
SIGNAGE AND LINE MARKING PLAN**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3800

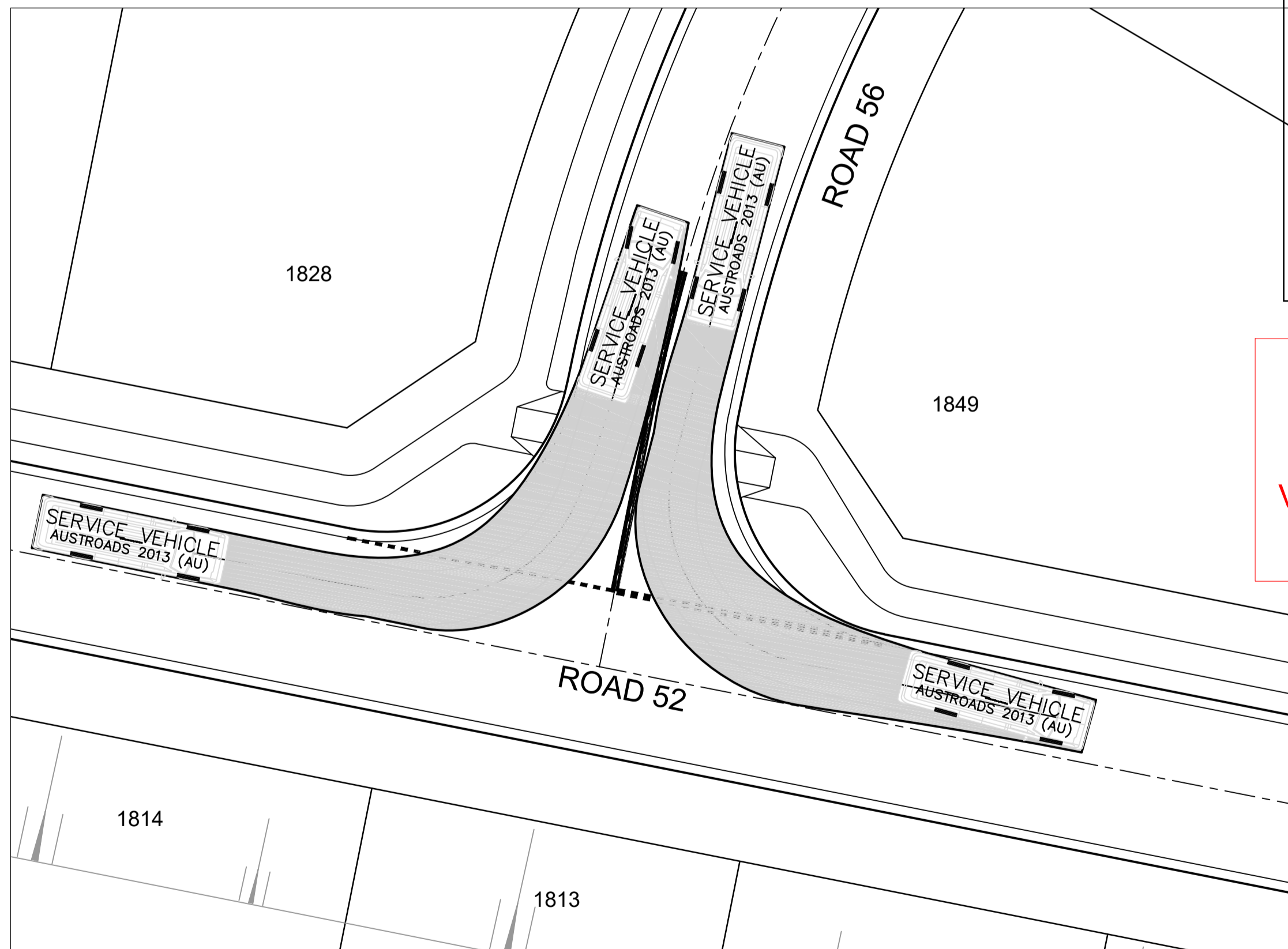
PROJECT No: **110185-12**
SHEET No: **CC3800**



PLAN
SCALE 1:200



PLAN
SCALE 1:200



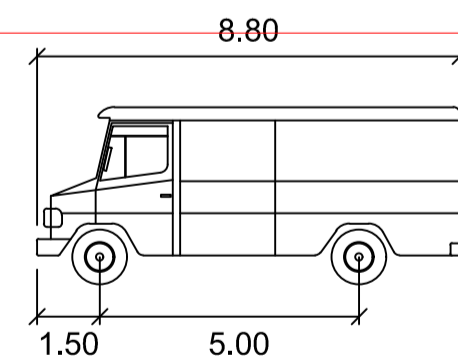
PLAN
SCALE 1:200

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Certificate No. 201302995W76
 Date of Issue 11/05/2022
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

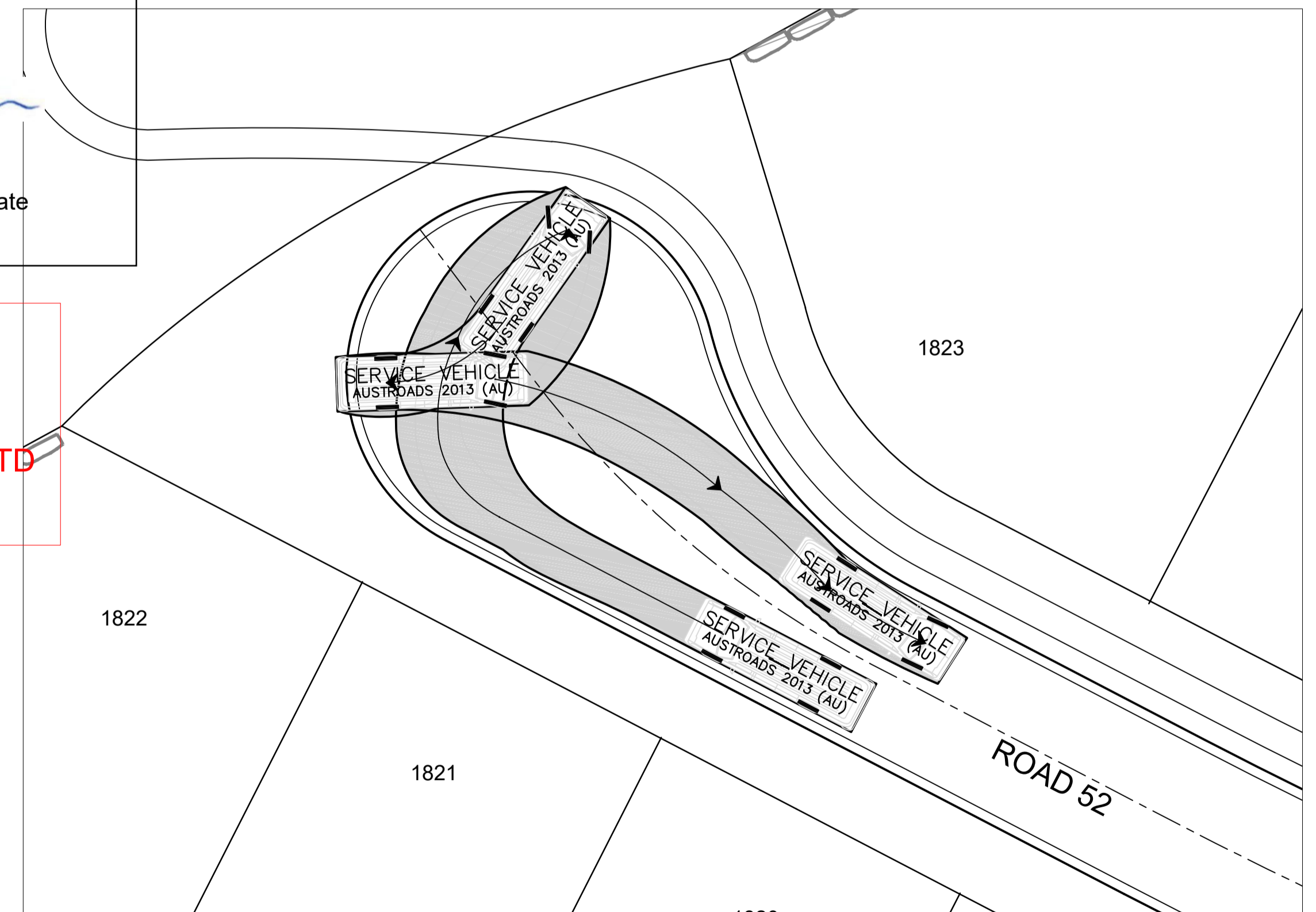
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 SIGNATURE..... *PR*
VINCE MORGAN SURVEYORS PTY LTD
 DATE: 09/01/23 REF:16800

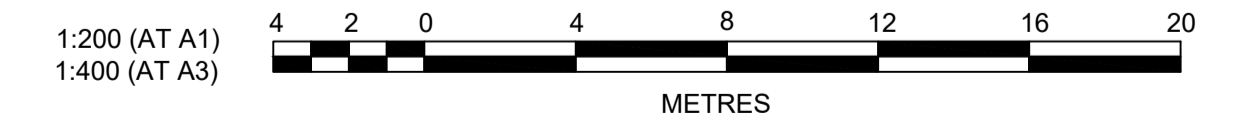


SERVICE VEHICLE

meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 38.7



PLAN
SCALE 1:200

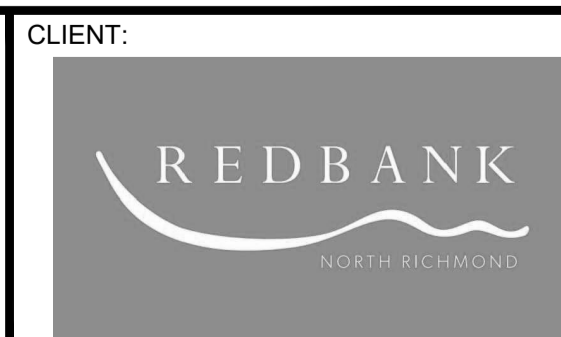


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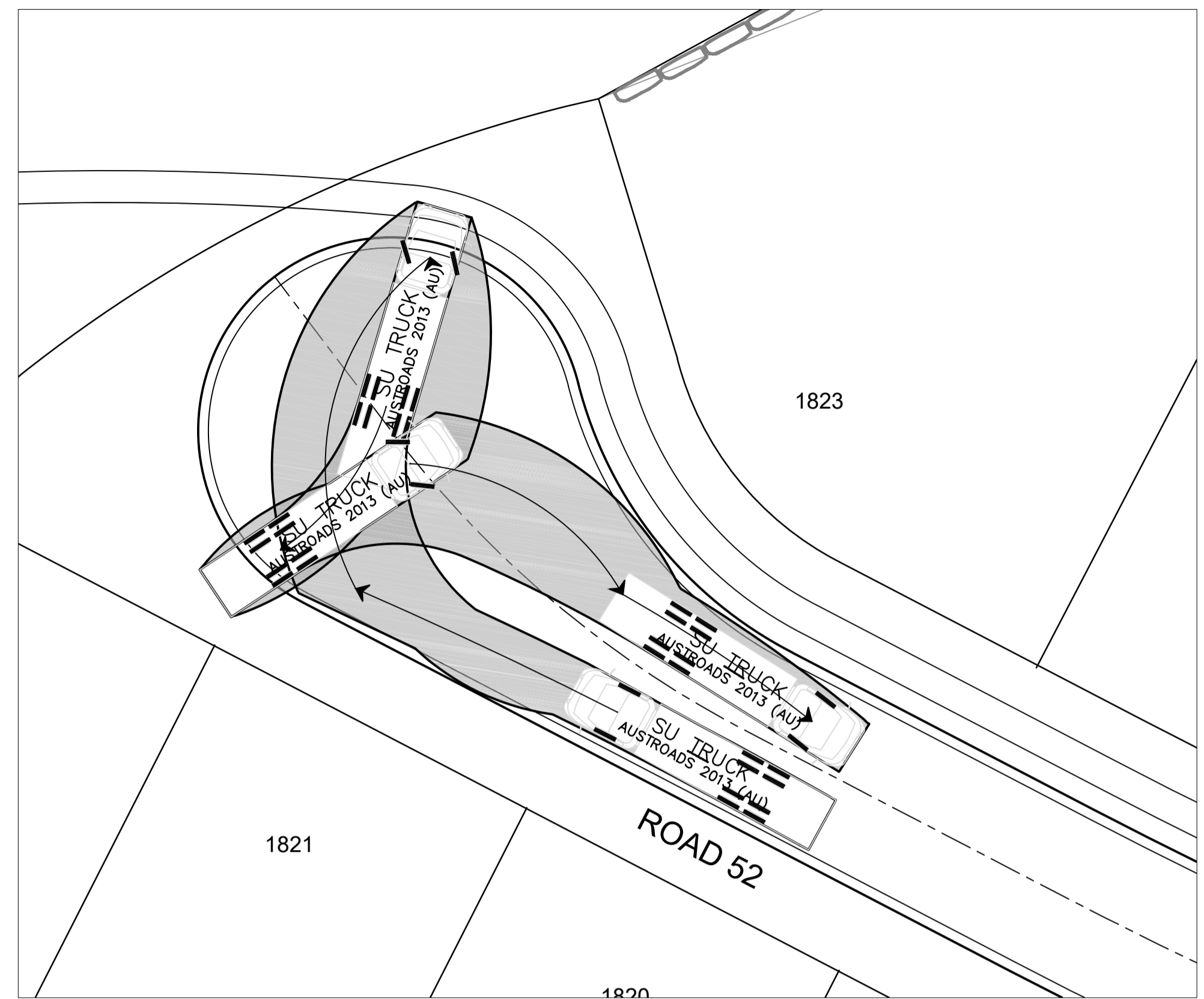
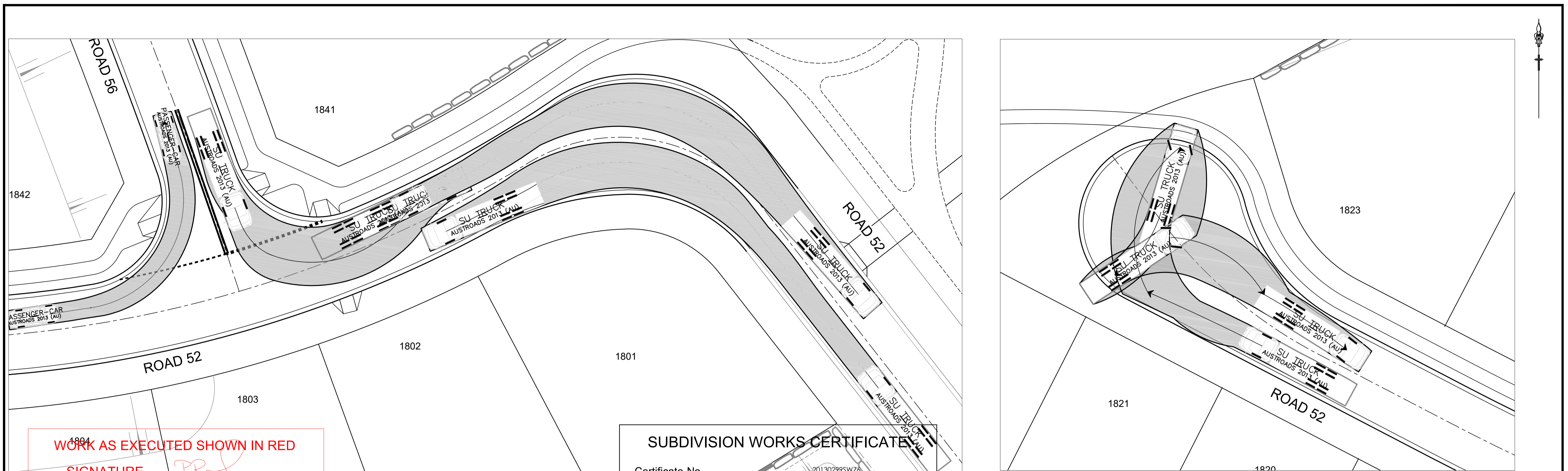
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**REDBANK, NORTH RICHMOND
 RIDGETOPS 1 - SWC
 SWEEP PATH PLAN
 SHEET 1**

PROJECT No:
110185-12
 SHEET No:
CC3900

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3900 A

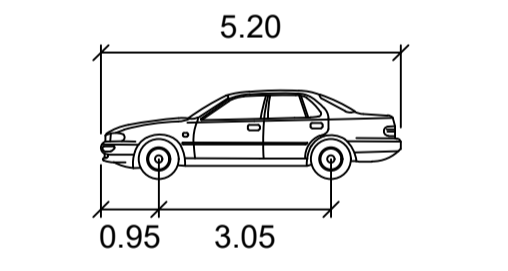
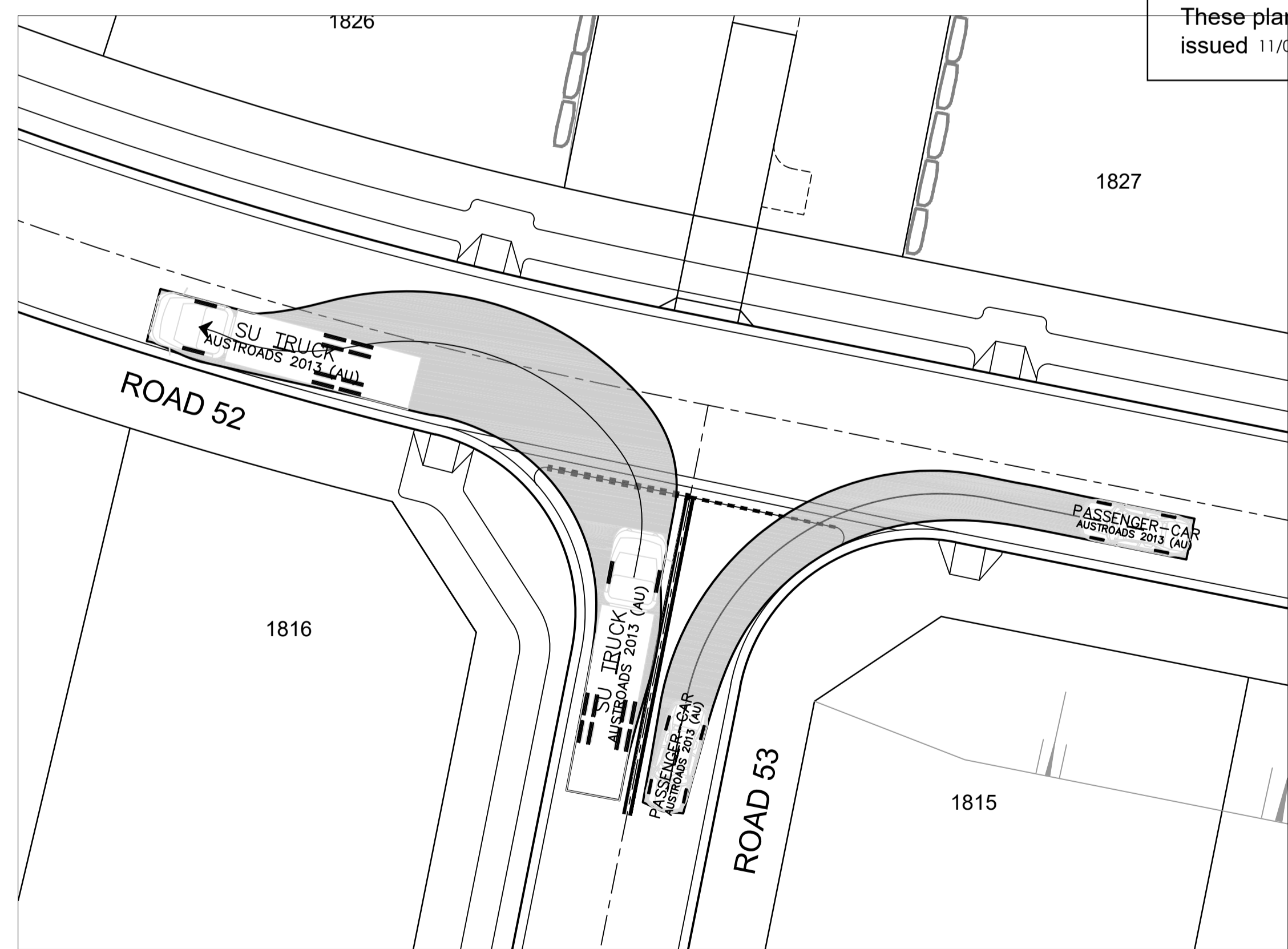


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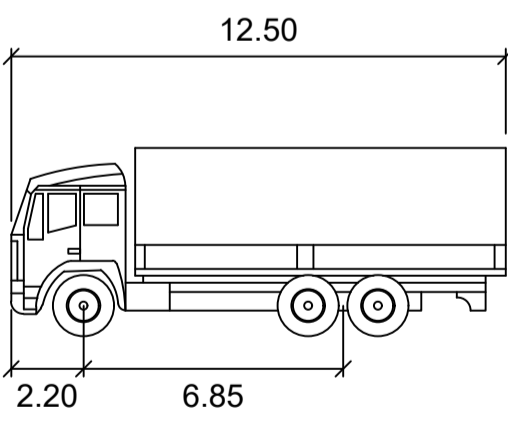
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PLAN
SCALE 1:200

PLAN
SCALE 1:200

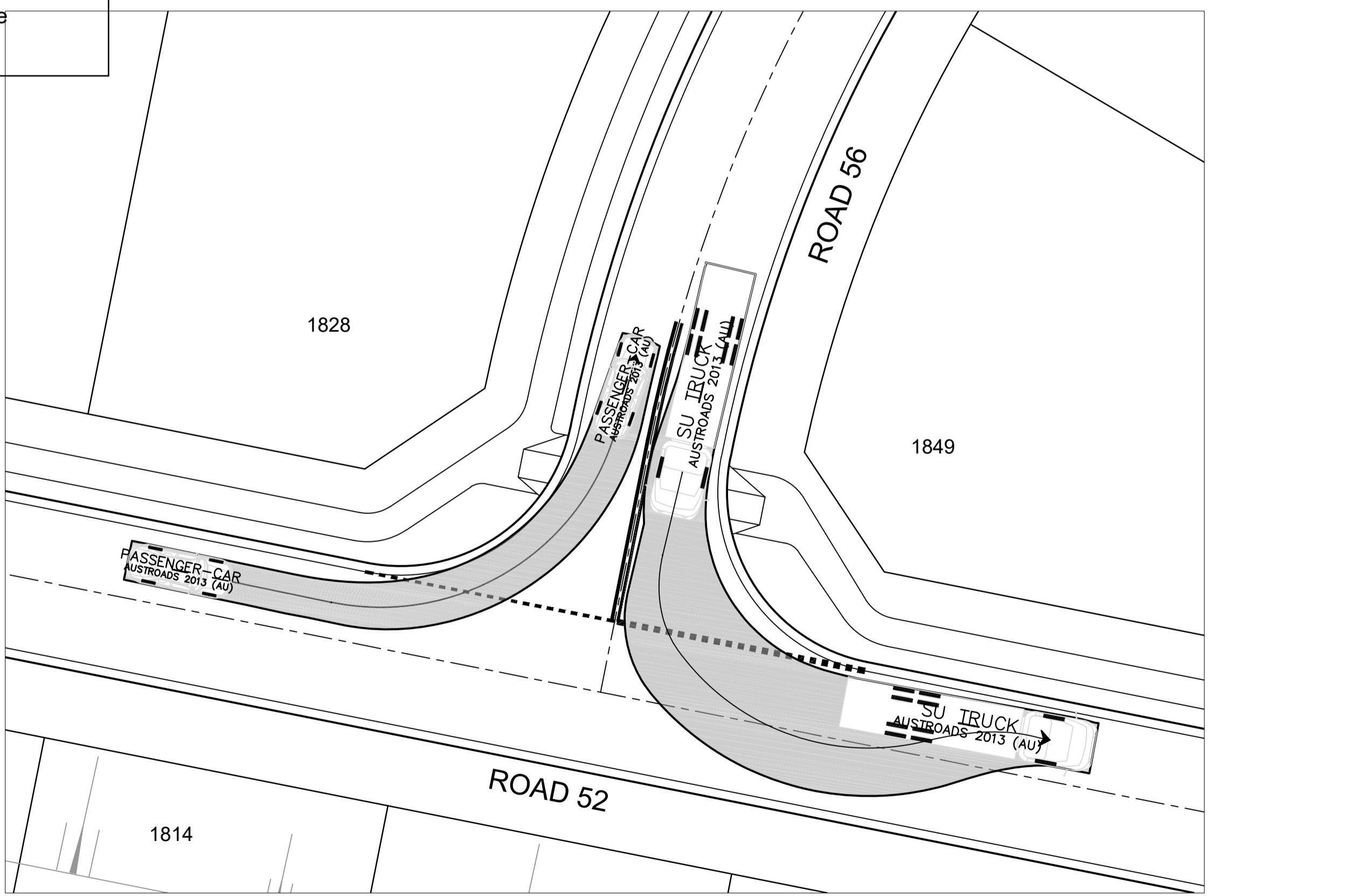


PASSENGER-CAR
 meters
 Width : 1.94
 Track : 1.84
 Lock to Lock Time : 6.0
 Steering Angle : 33.6



SU TRUCK
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

PLAN
SCALE 1:200



PLAN
SCALE 1:200

1:200 (AT A1)
1:400 (AT A3)
METRES

Plotted: 5 May 2022 11:23:07 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3901.dwg

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	AMENDMENT	DES	DRN	CKD	APR	DATE

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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:
REDBANK
 NORTH RICHMOND

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REDBANK, NORTH RICHMOND RIDGETOPS 1 - SWC
 SWEPT PATH PLAN SHEET 2
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3901

PROJECT No: **110185-12**
 SHEET No: **CC3901**
 A