

# 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



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  
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*.....

**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

**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 DANC\CCSOUTHERN 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**  
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  
GENERAL NOTES, INDEX & LEGEND

PROJECT No: 110185-12  
SHEET No: CC3001

PLAN No: 110185-12-CC3001

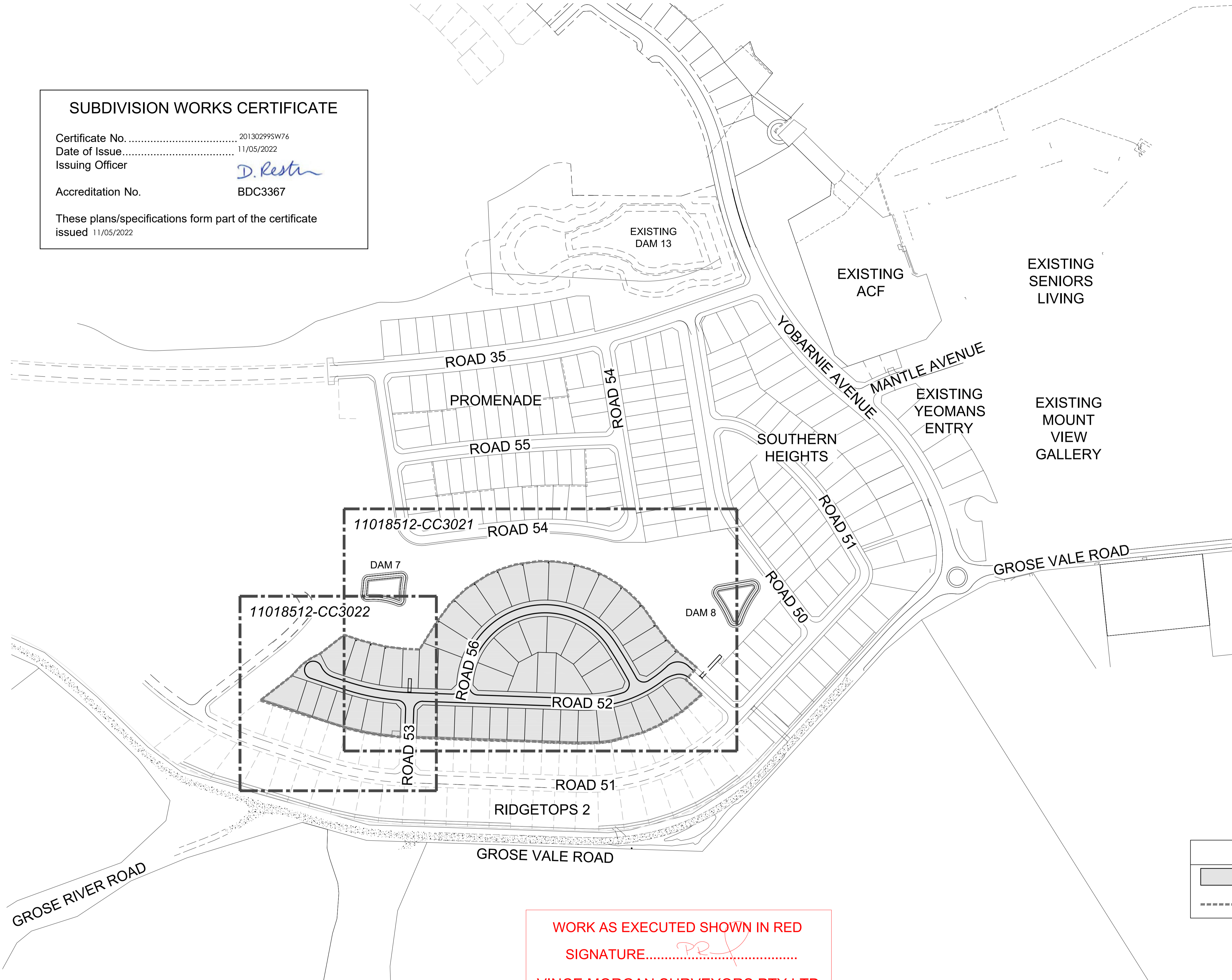
PROJECT No: 110185-12
SHEET No: CC3001
PLAN No: 110185-12-CC3001



**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



**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)

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			

**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  
 GENERAL LAYOUT PLAN

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3002

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

A





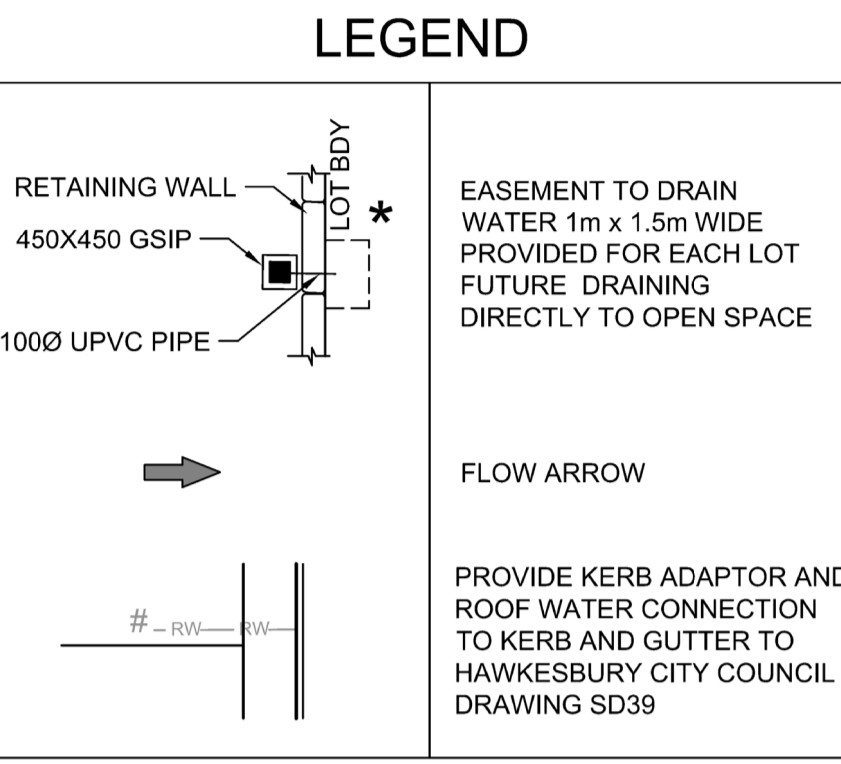


**EASEMENT NOTES**

(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**

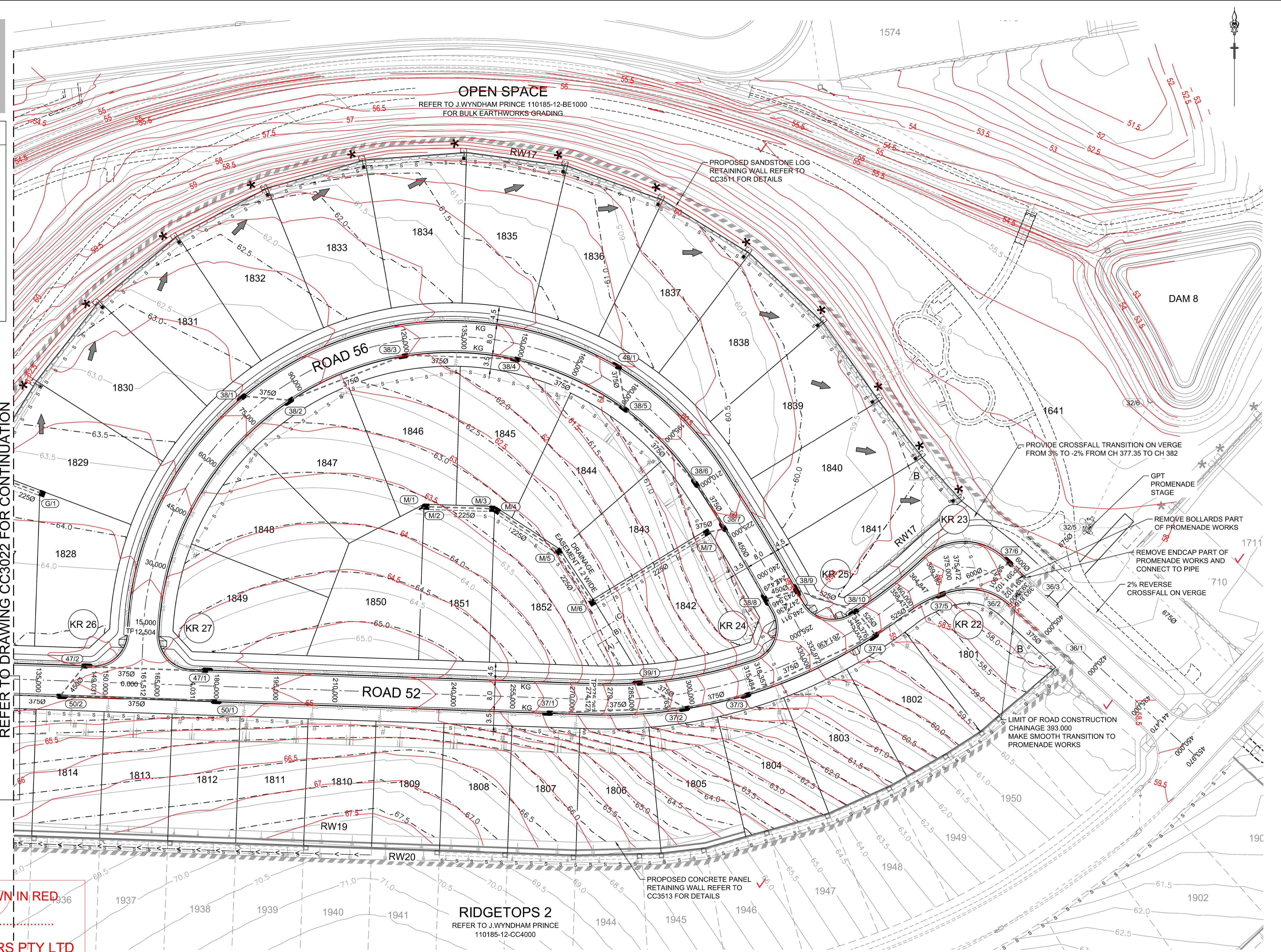
LAYBACKS IN KERB AND GUTTER FOR VEHICLE CROSSOVERS TO BE COMPLETED AT EACH LOT PRIOR TO SUBDIVISION WORKS PRACTICAL COMPLETION

**SUBDIVISION WORKS CERTIFICATE**

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

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

REFER TO DRAWING CC3022 FOR CONTINUATION

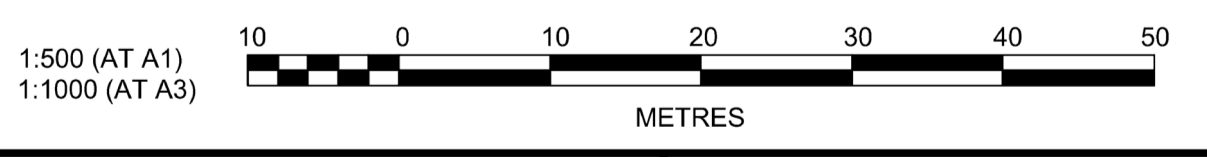


**WORK AS EXECUTED SHOWN IN RED**

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

C	SUBSTATION RELOCATED TO LOT 1816	MP	JM	JB	MS	05/05/22
B	ISSUED FOR CONSTRUCTION APPROVAL	MP	EJ	JB	MS	18/02/22
A	ISSUED FOR CONSTRUCTION APPROVAL	MP	JM	RO	RO	12/07/21
	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**  
 ENGINEERING PLAN  
 SHEET 1

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

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

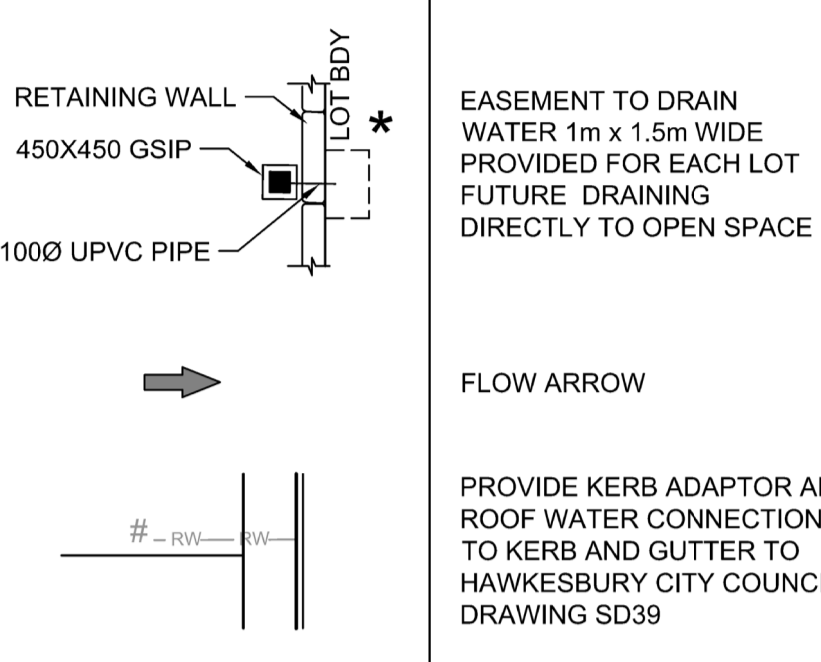
C



**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.

**LEGEND**



**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**

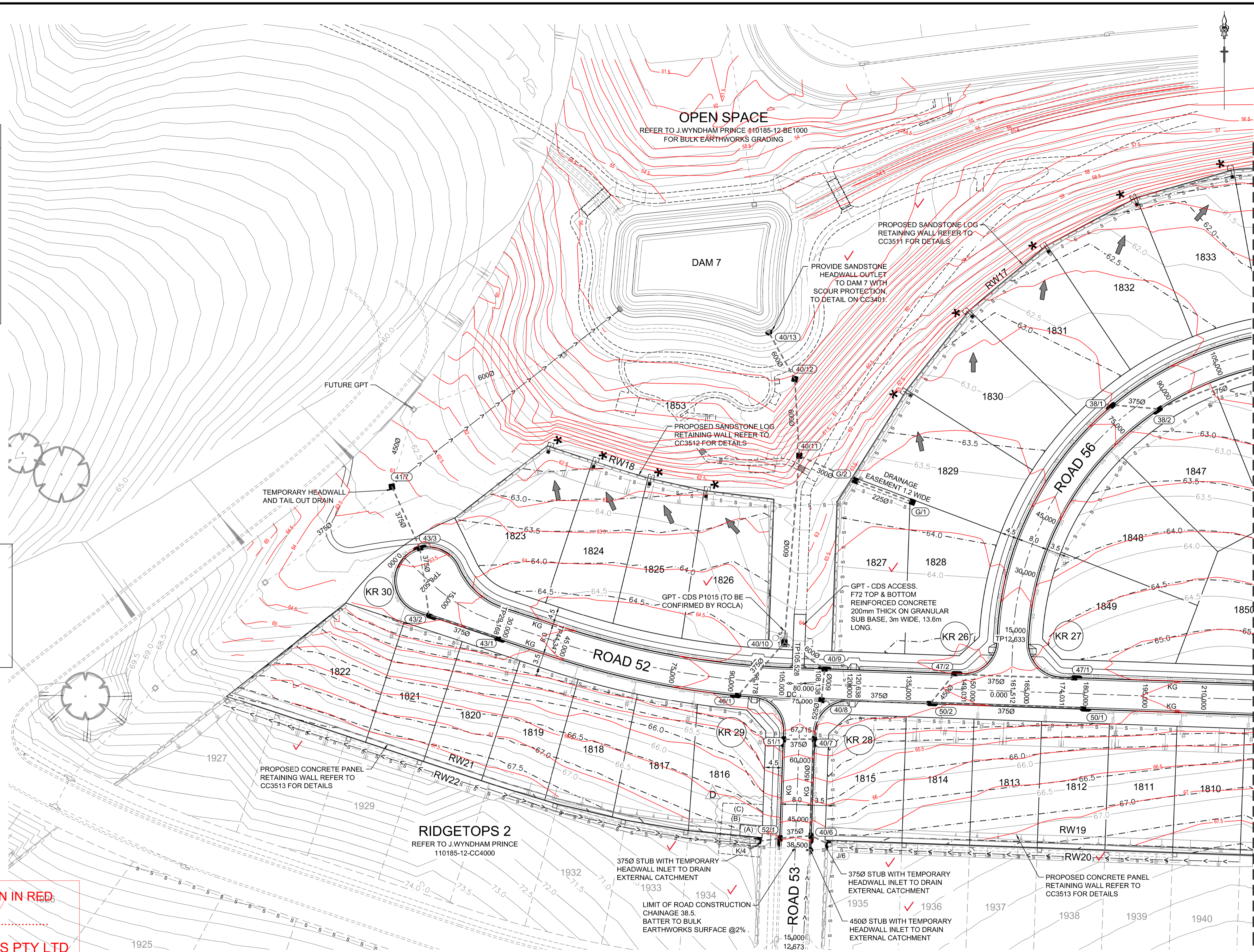
Certificate No. .... 201302995W76  
Date of Issue ..... 11/05/2022  
Issuing Officer ..... *D. Restu*  
Accreditation No. .... BDC3367

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

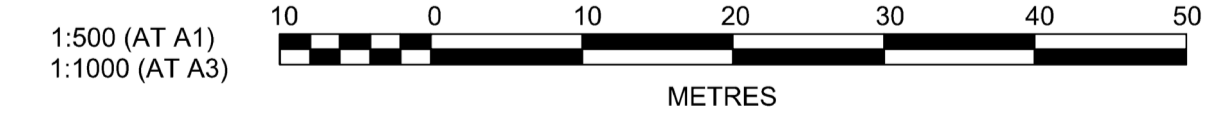
**WORK AS EXECUTED SHOWN IN RED.**

SIGNATURE..... *PR*

**VINCE MORGAN SURVEYORS PTY LTD**  
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**  
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**

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

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

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

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







WORK AS EXECUTED SHOWN IN RED

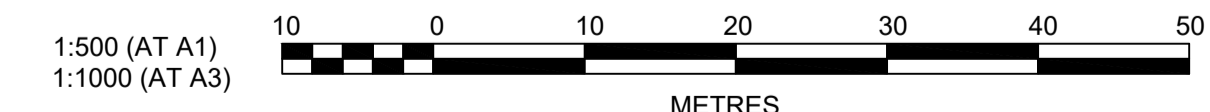
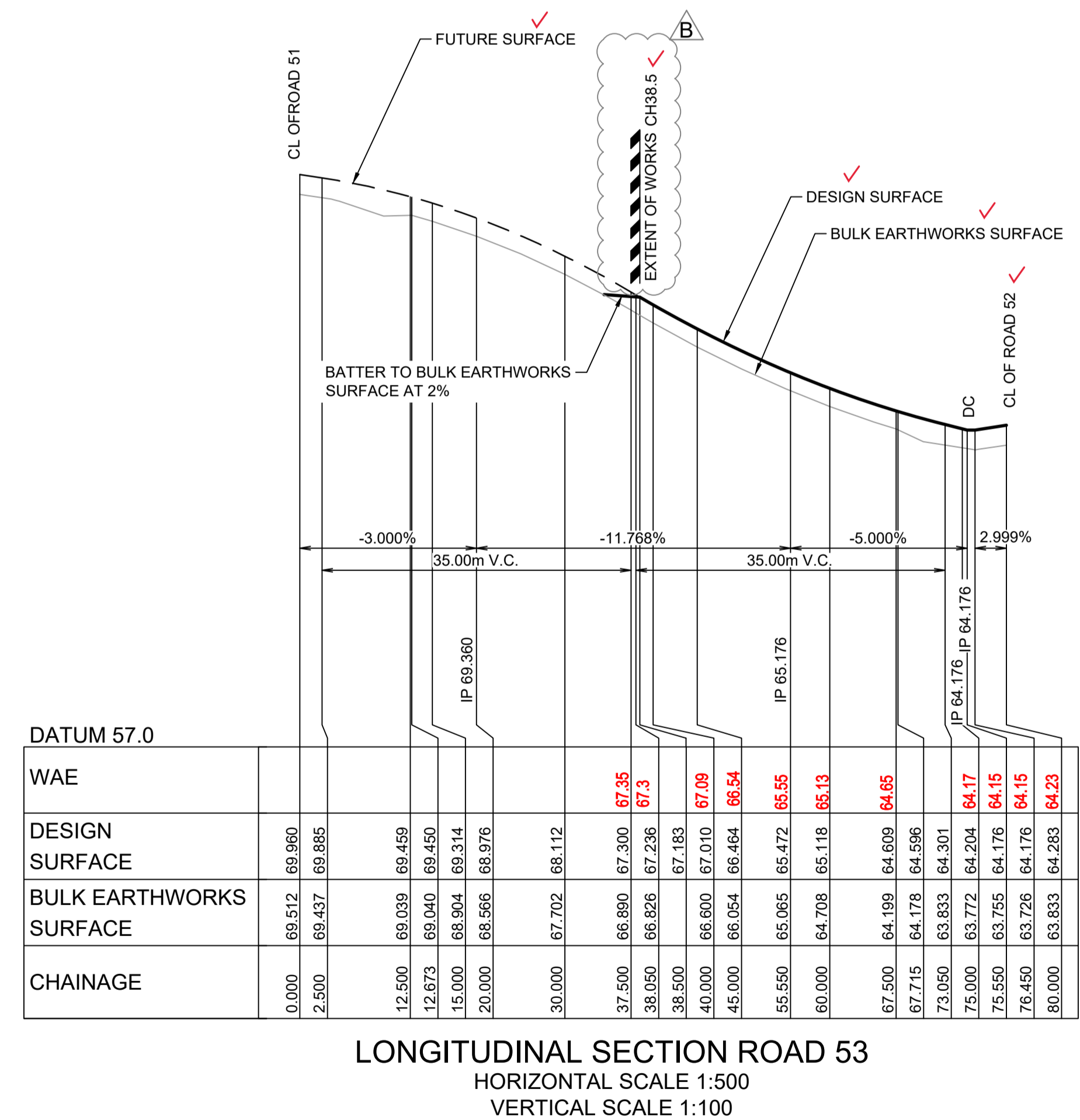
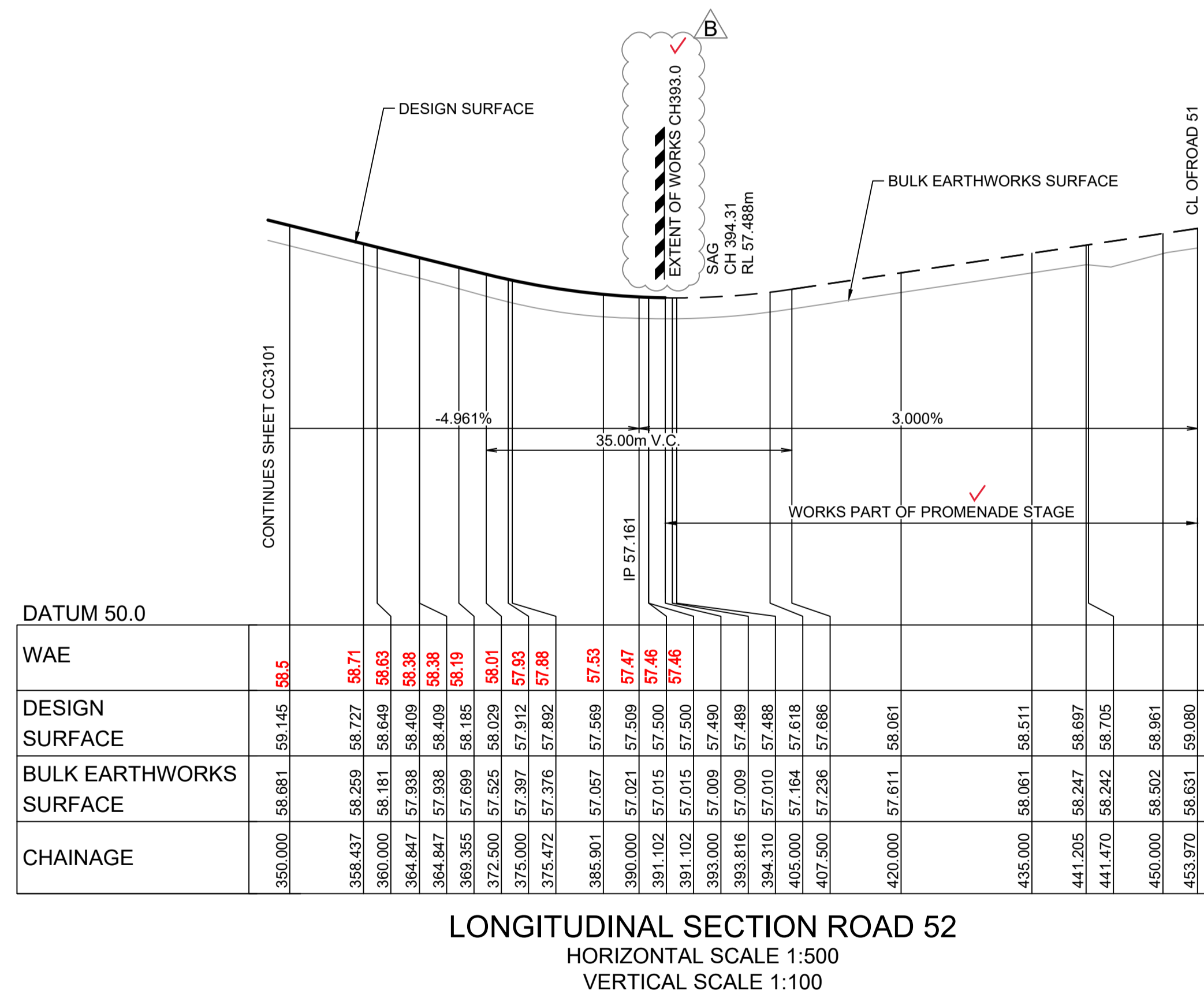
SIGNATURE.....*PR*.....

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 11:04:57 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-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

**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



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  
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**



WORK AS EXECUTED SHOWN IN RED

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

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

**SUBDIVISION WORKS CERTIFICATE**

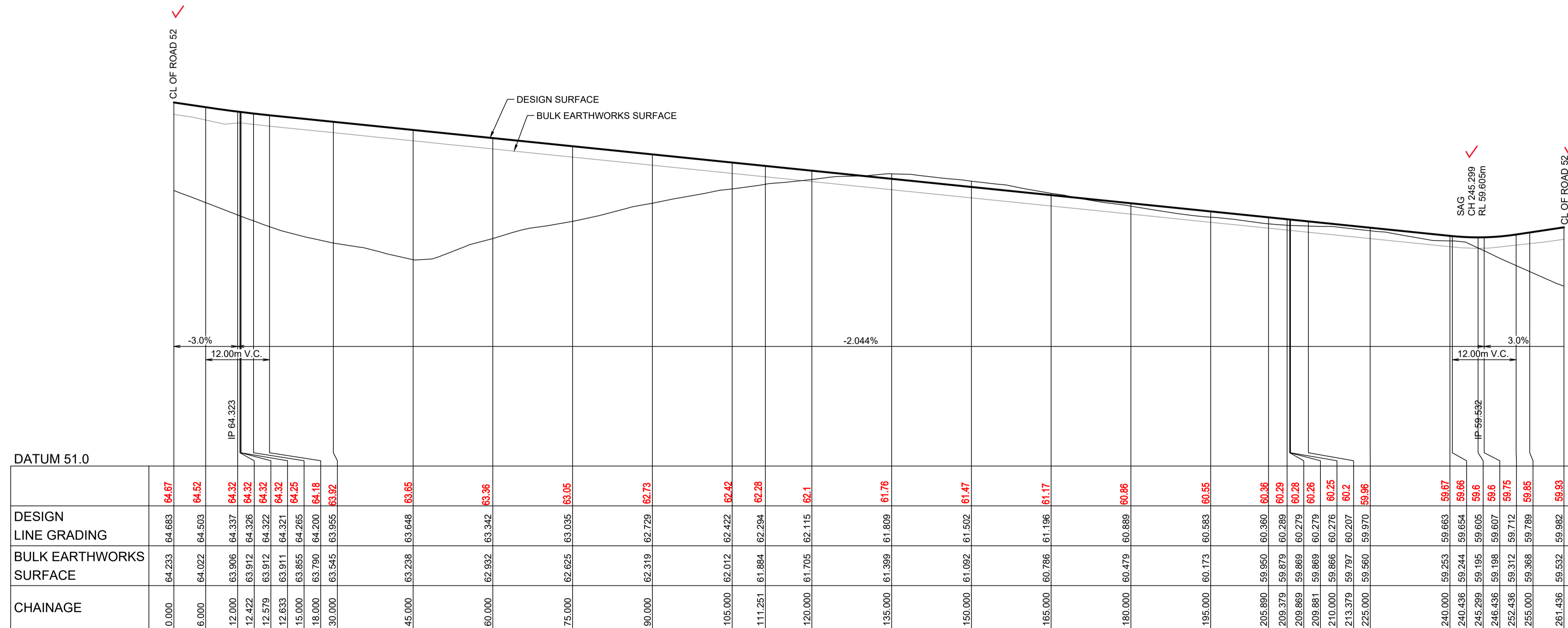
Certificate No. .... 20130299SW76

Date of Issue ..... 11/05/2022

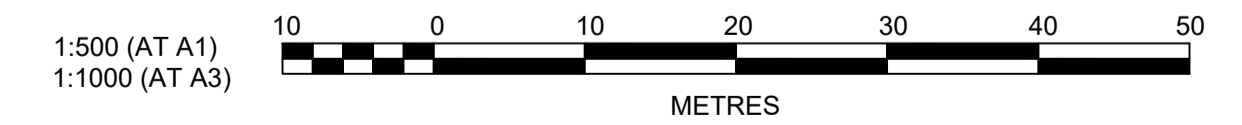
Issuing Officer *D. Restin*

Accreditation No. BDC3367

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



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

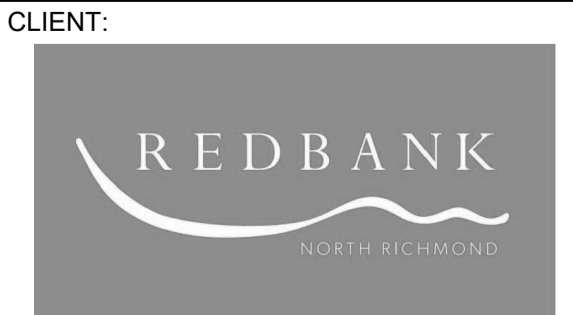


Plotfile: 5 May 2022 11:05:22 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3103.dwg

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

**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



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  
ROAD LONGITUDINAL SECTIONS  
SHEET 3

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

A



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

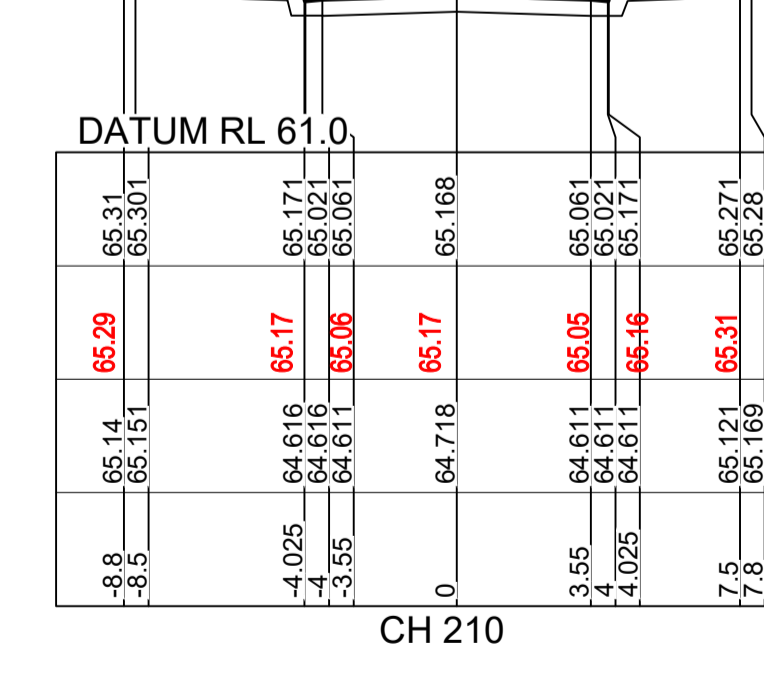
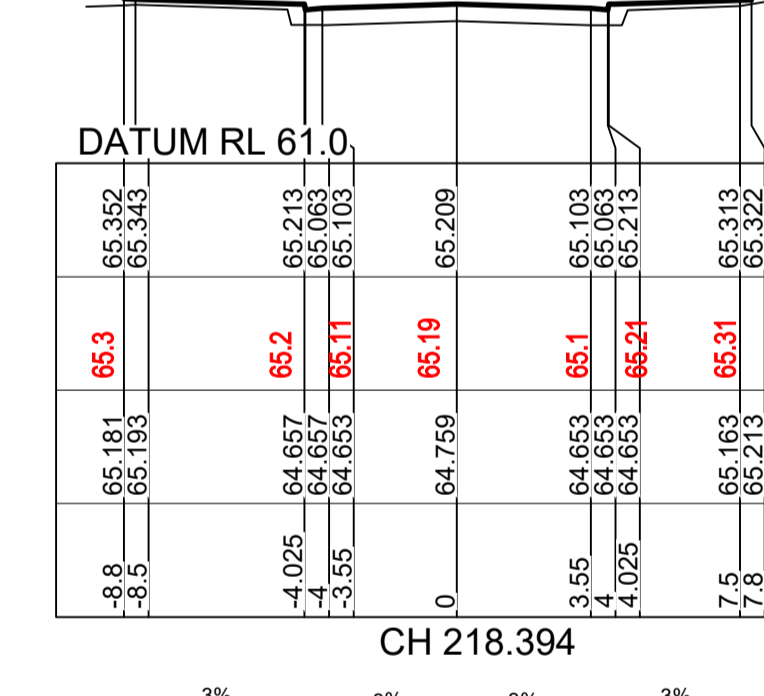
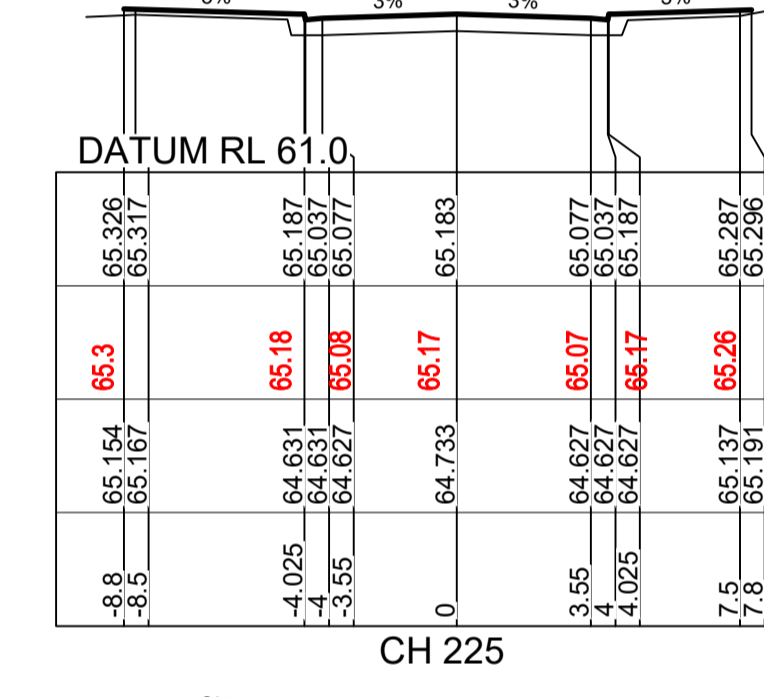
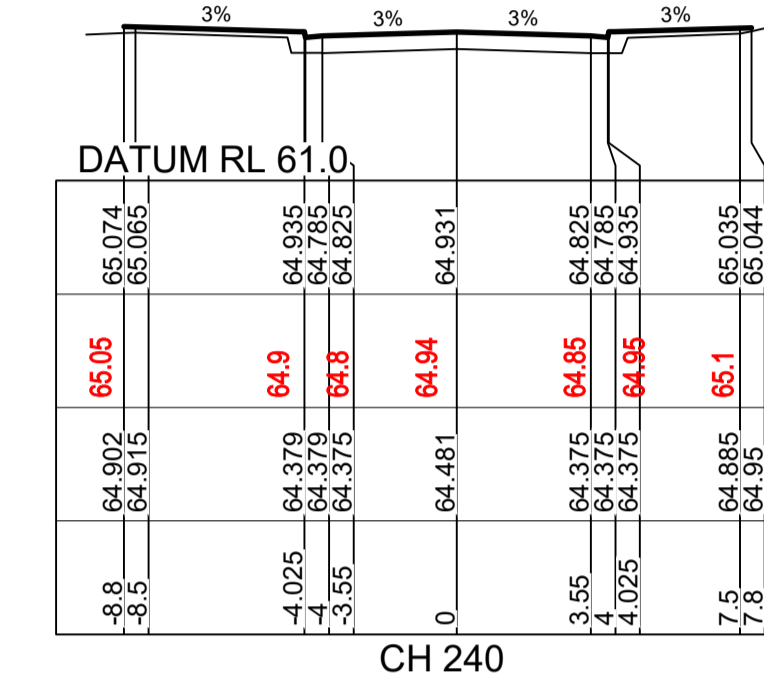
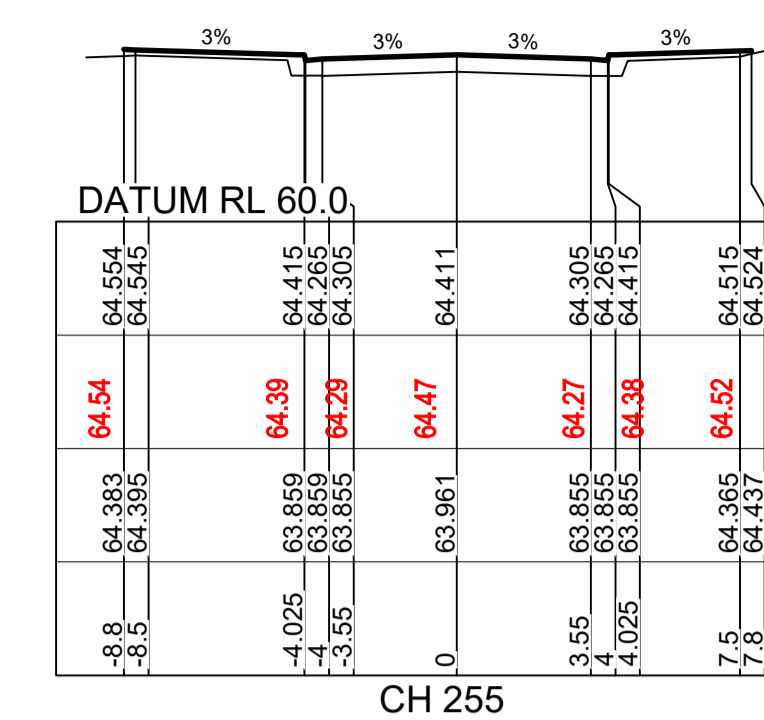
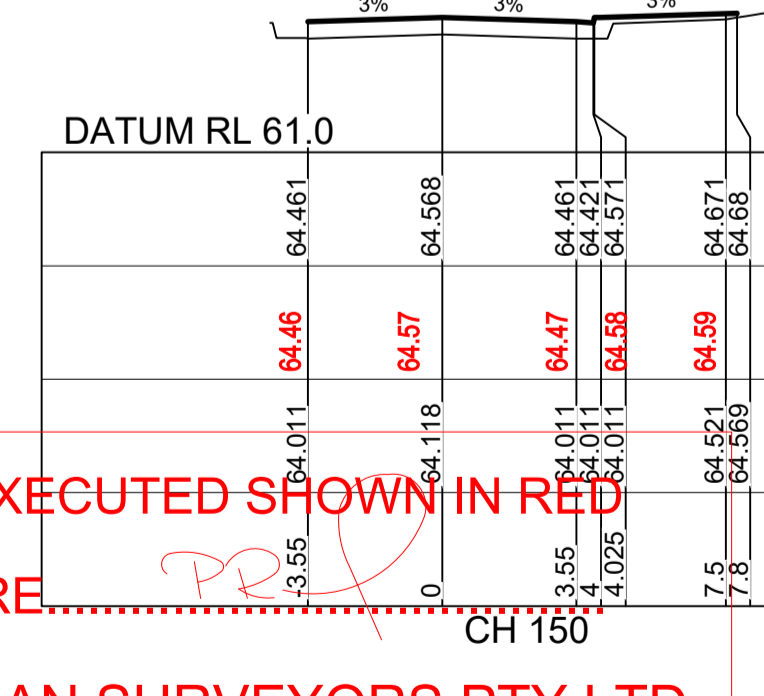
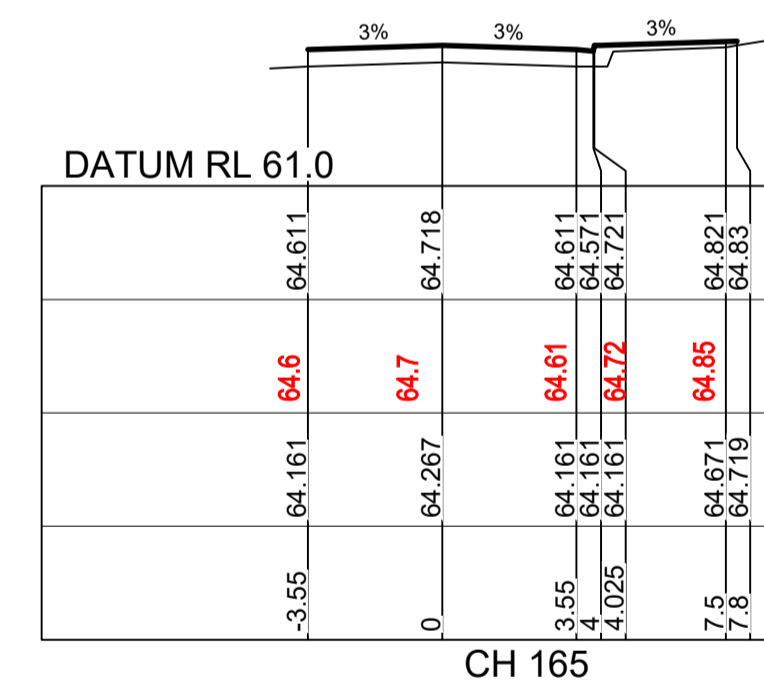
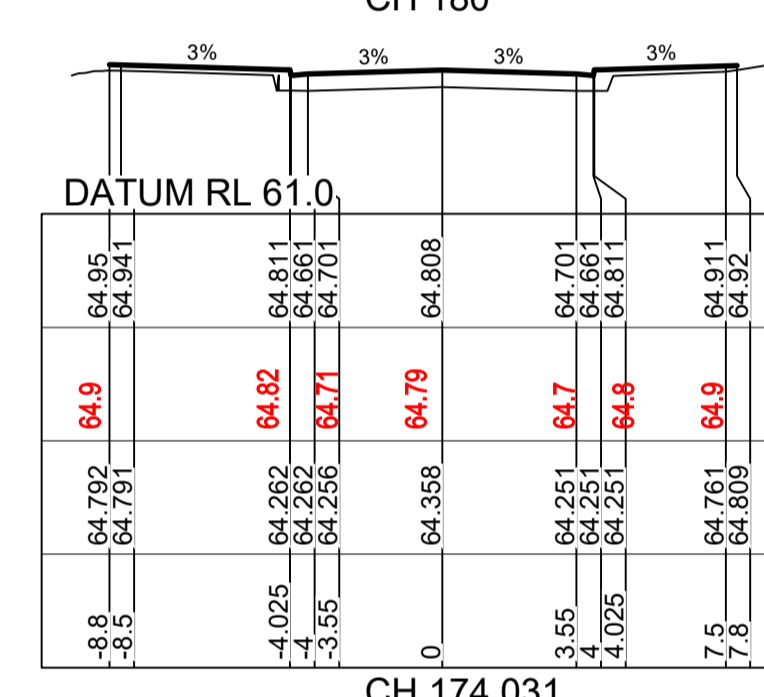
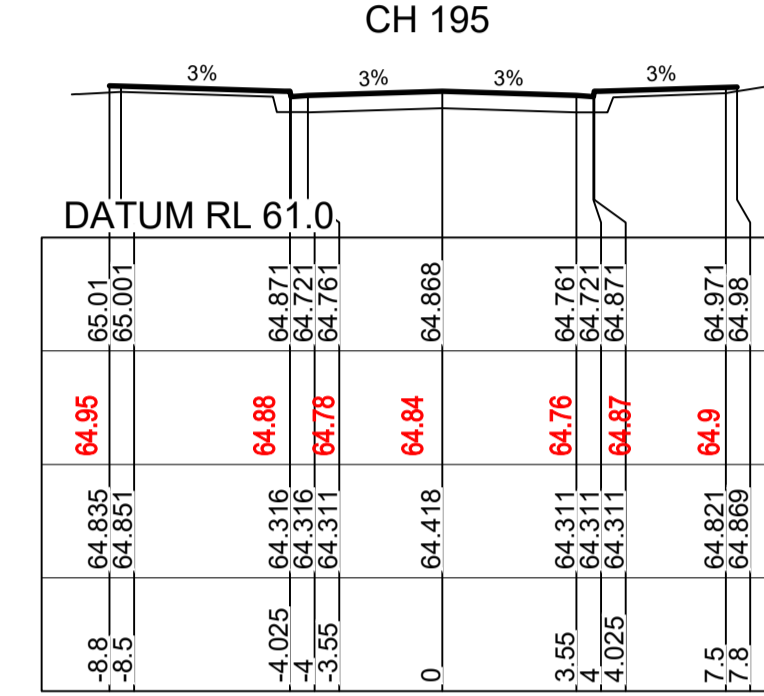
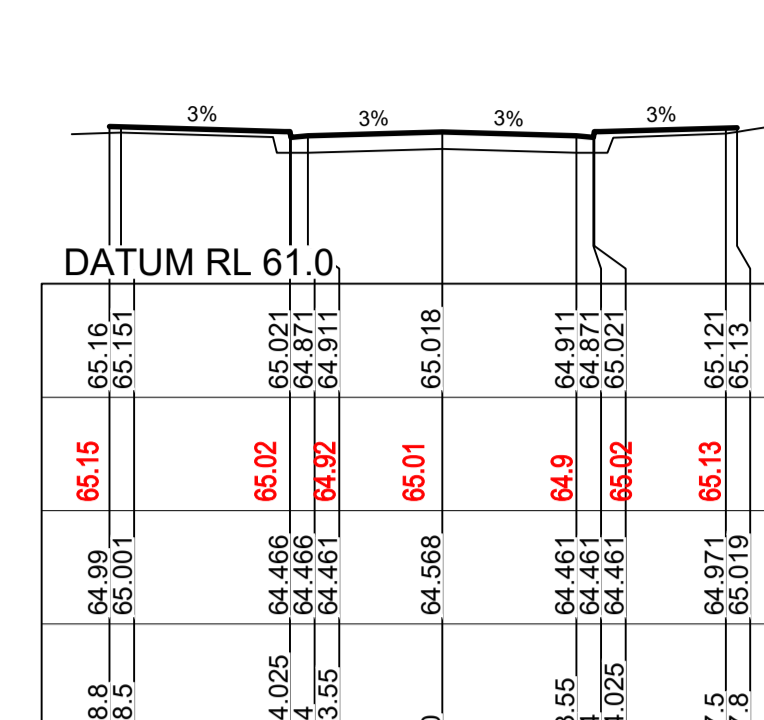
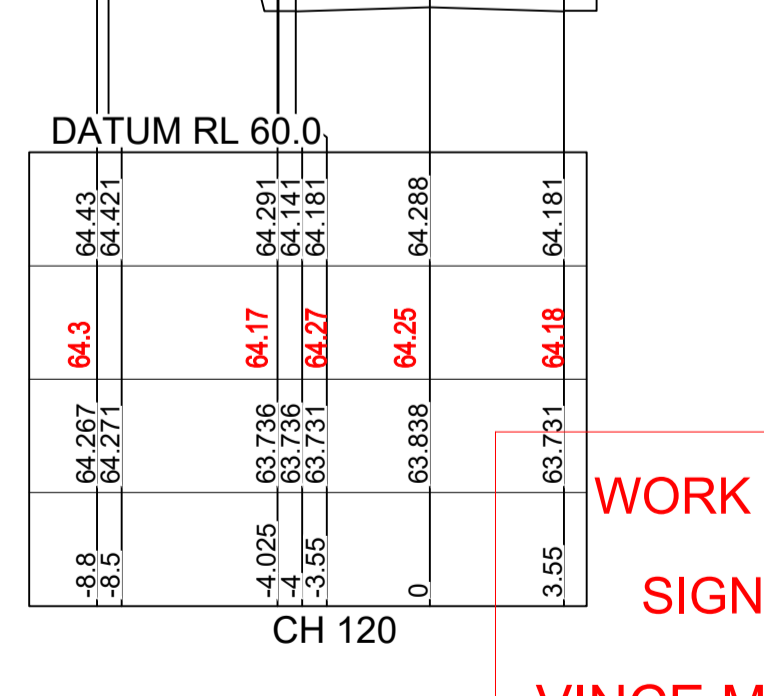
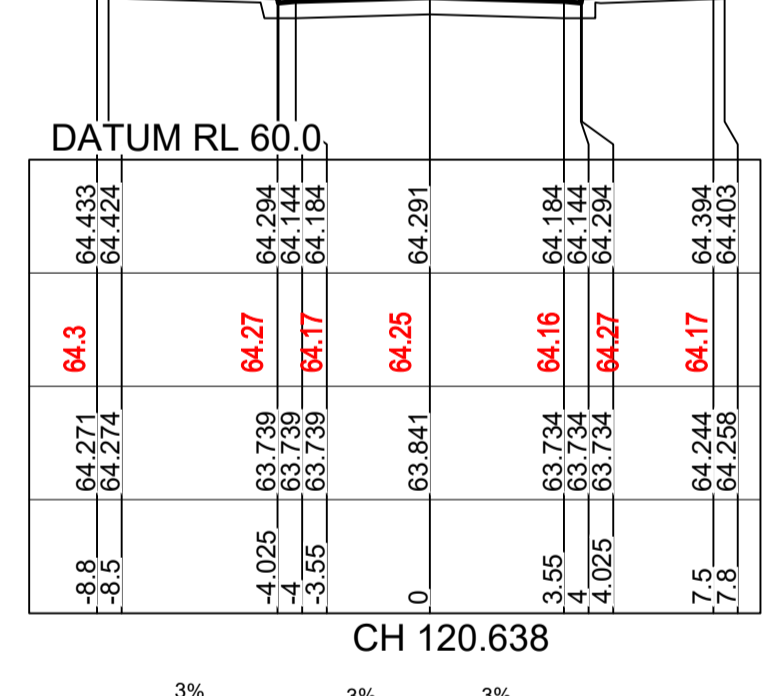
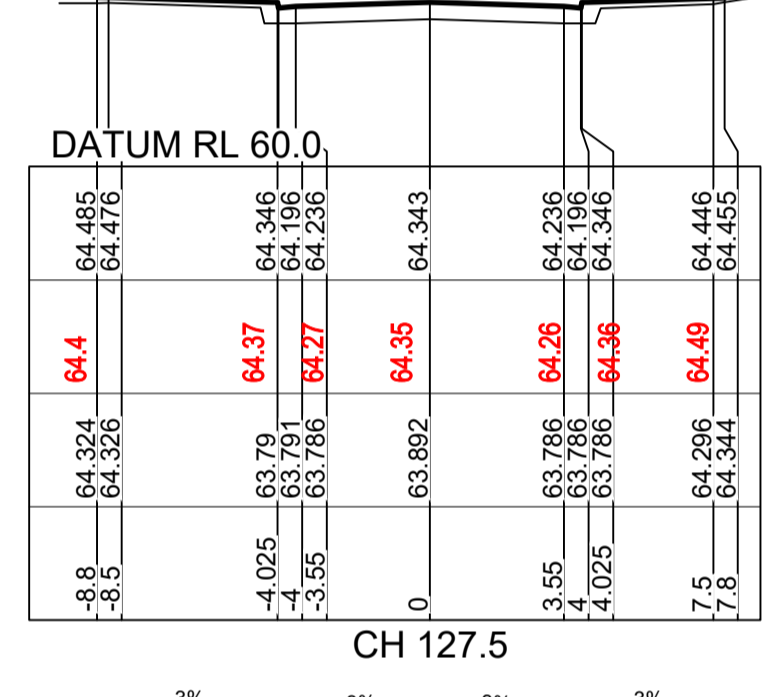
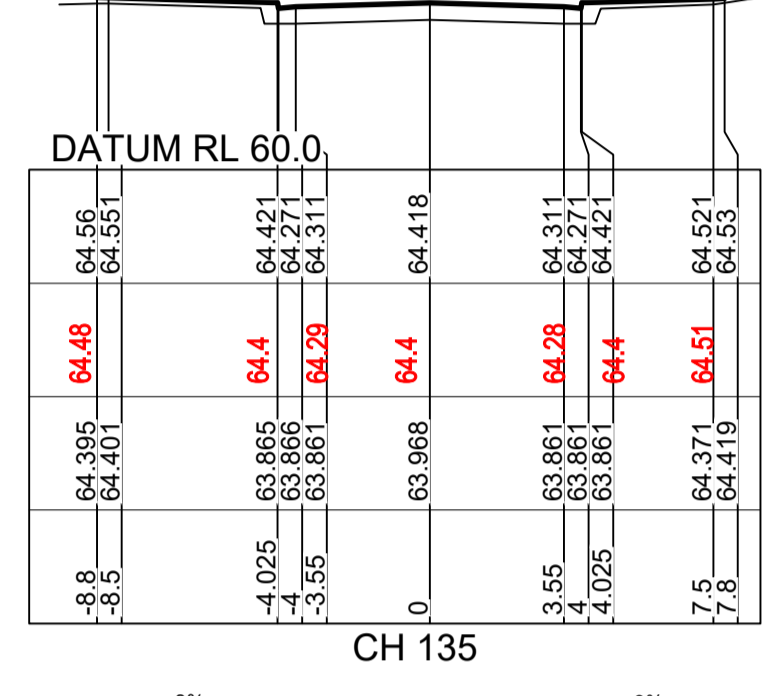
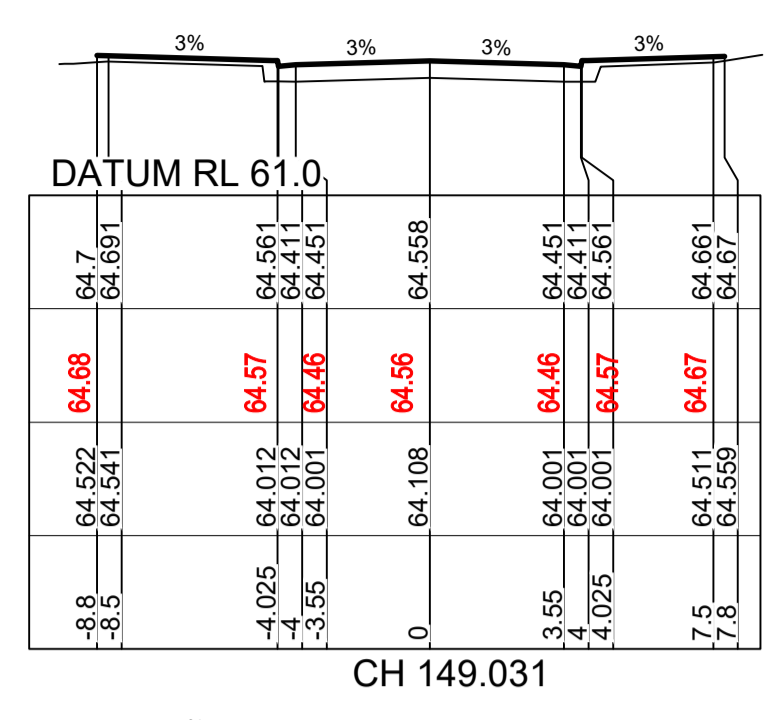
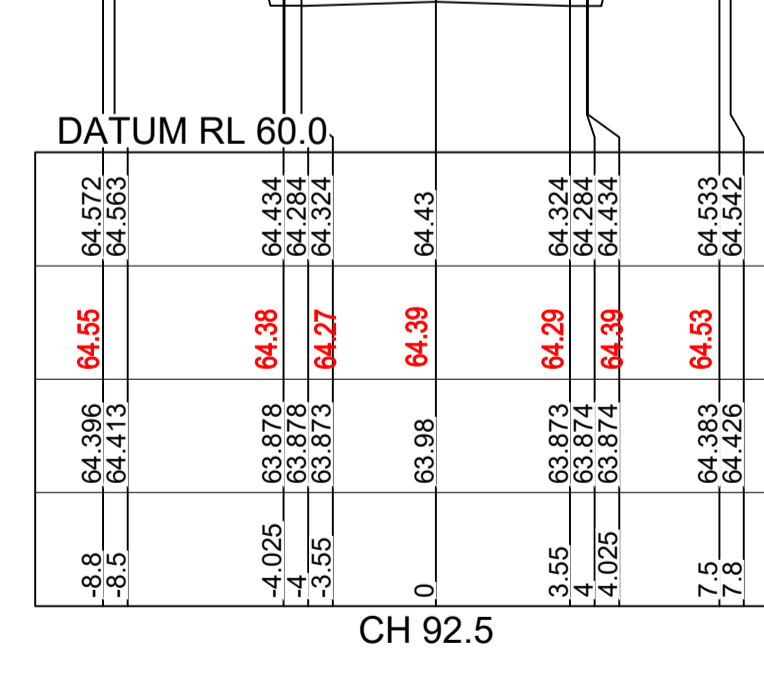
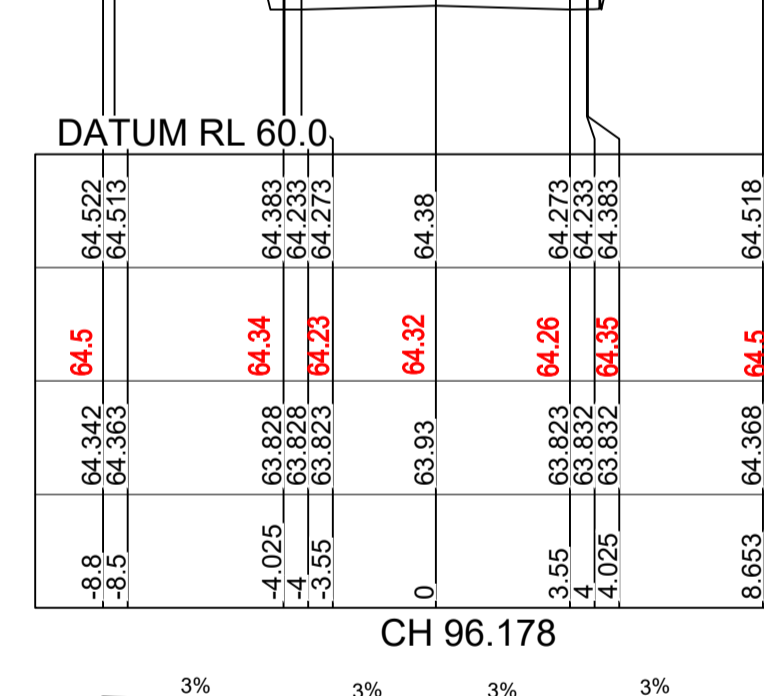
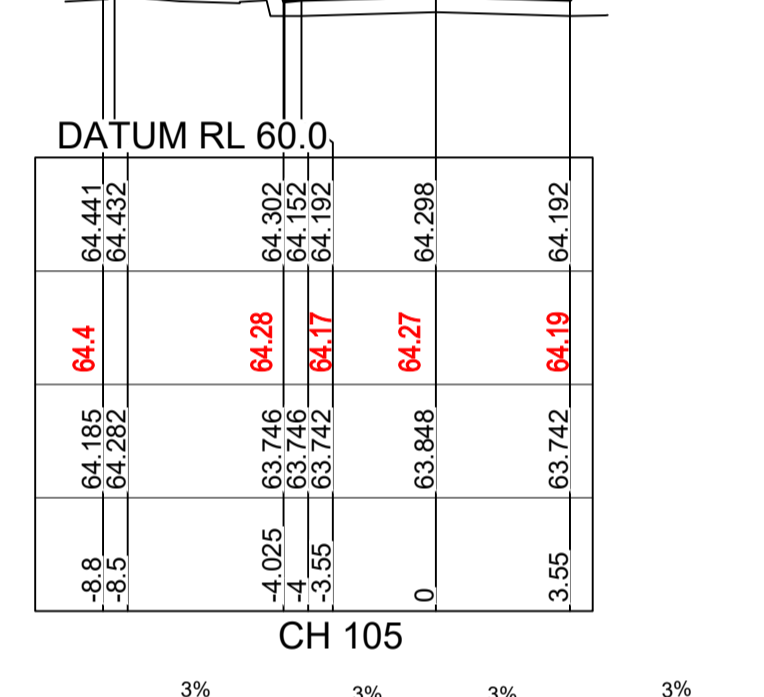
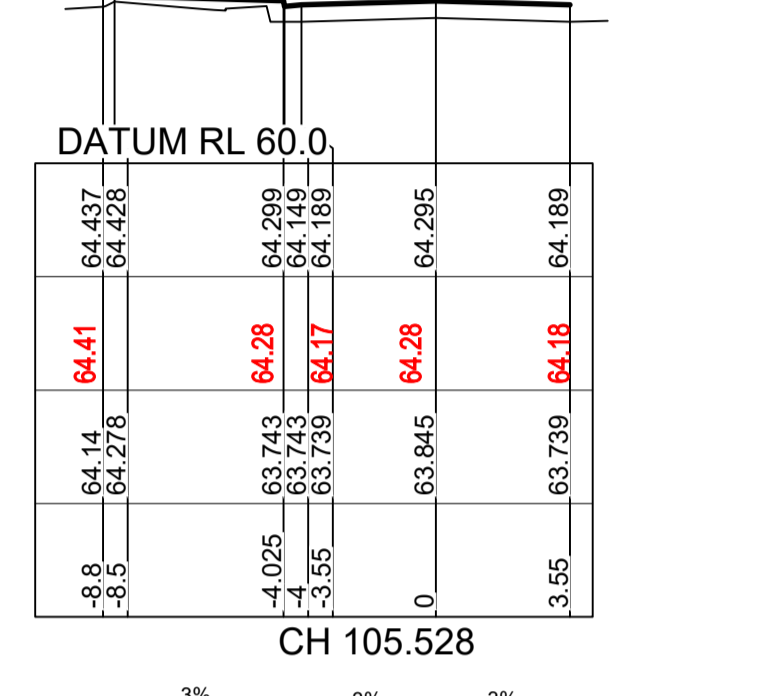
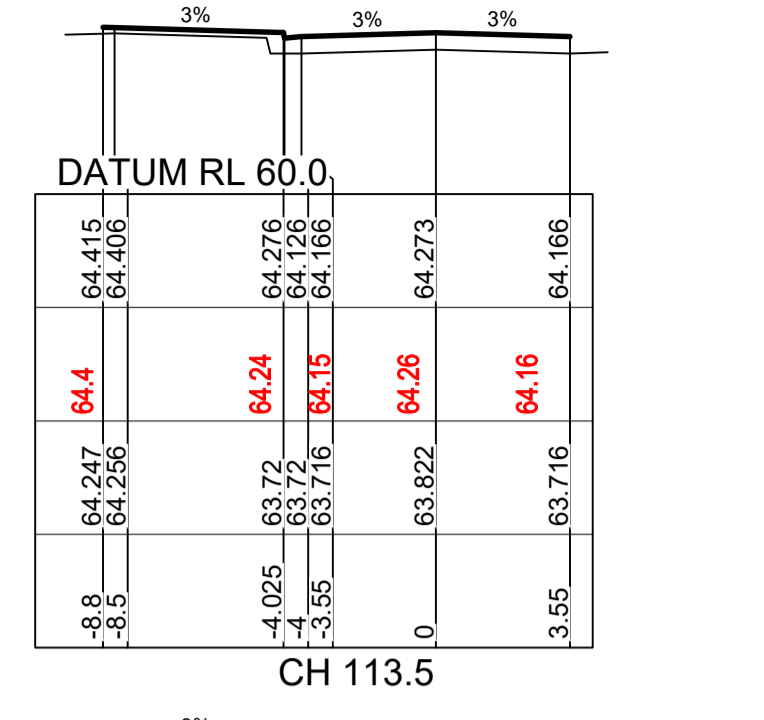
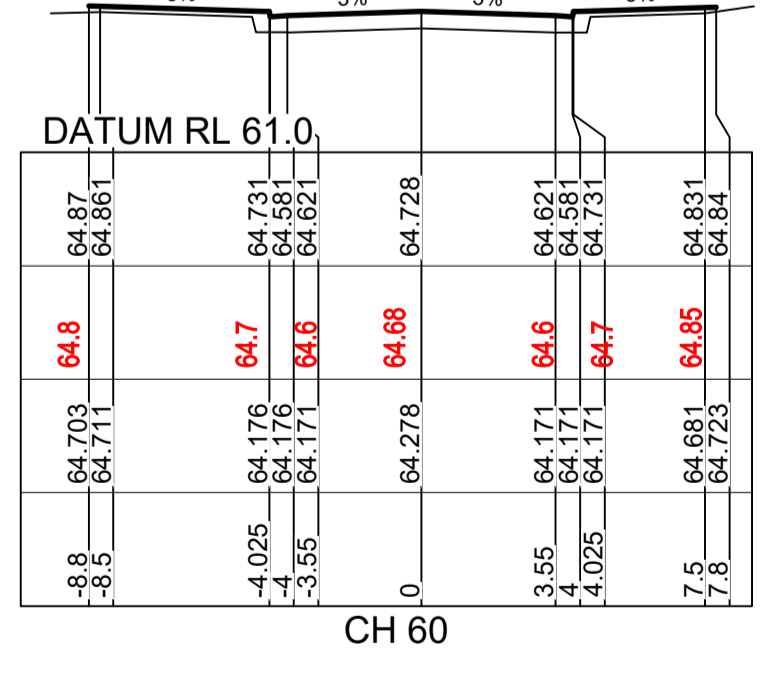
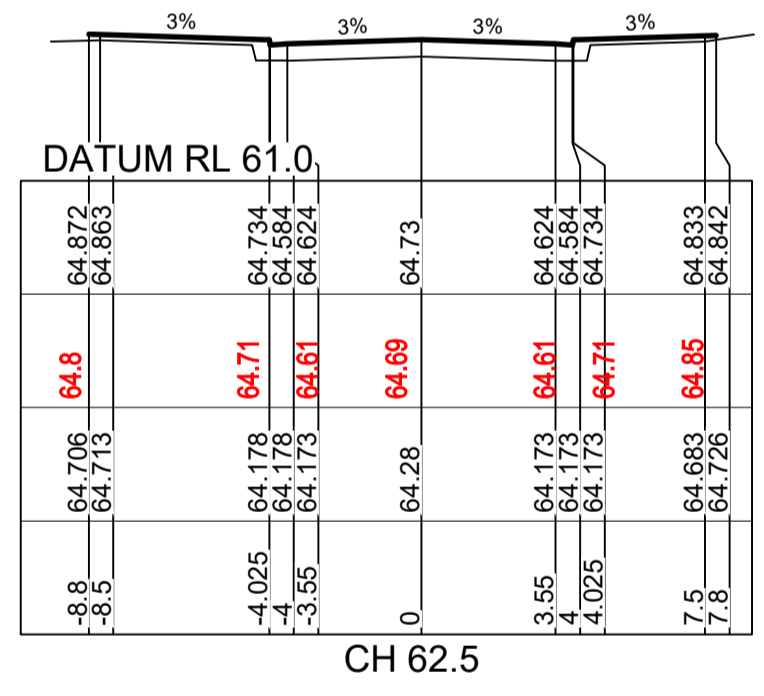
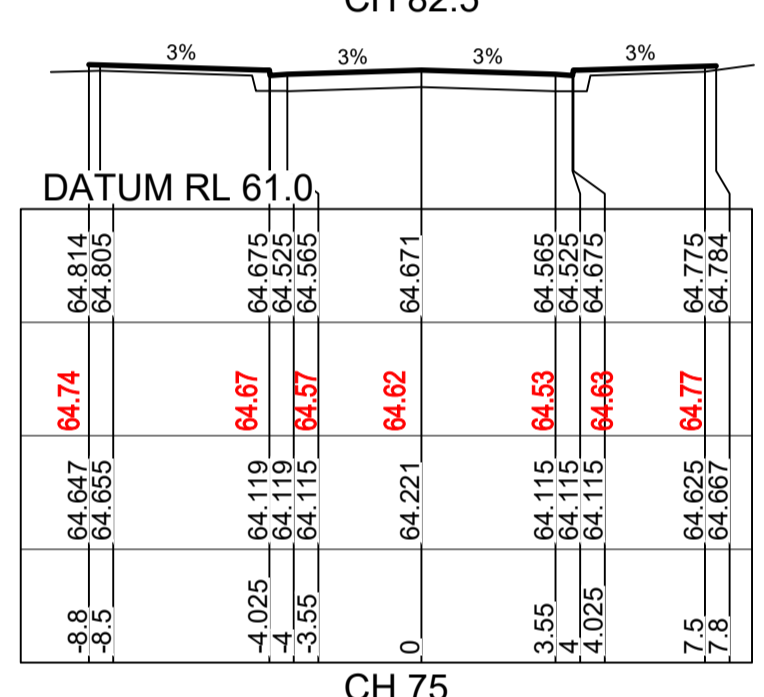
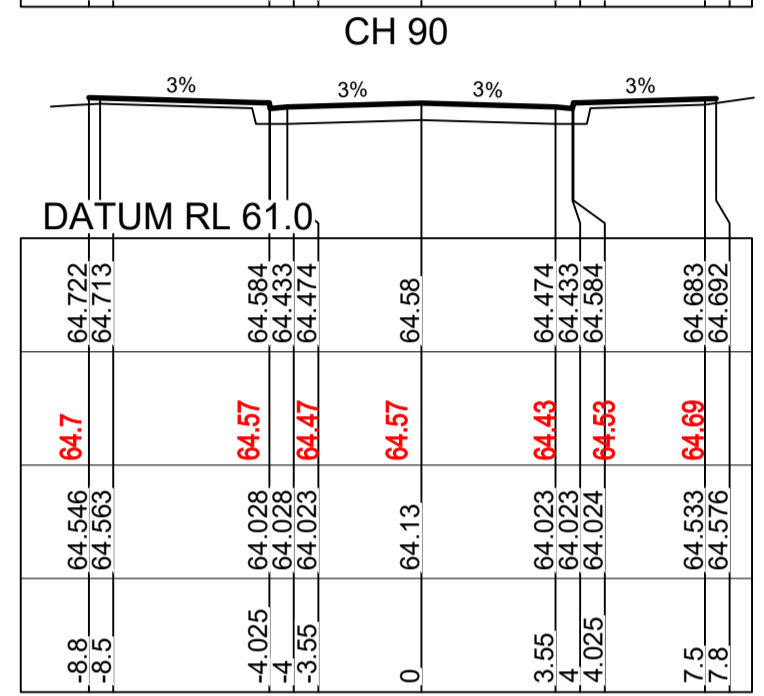
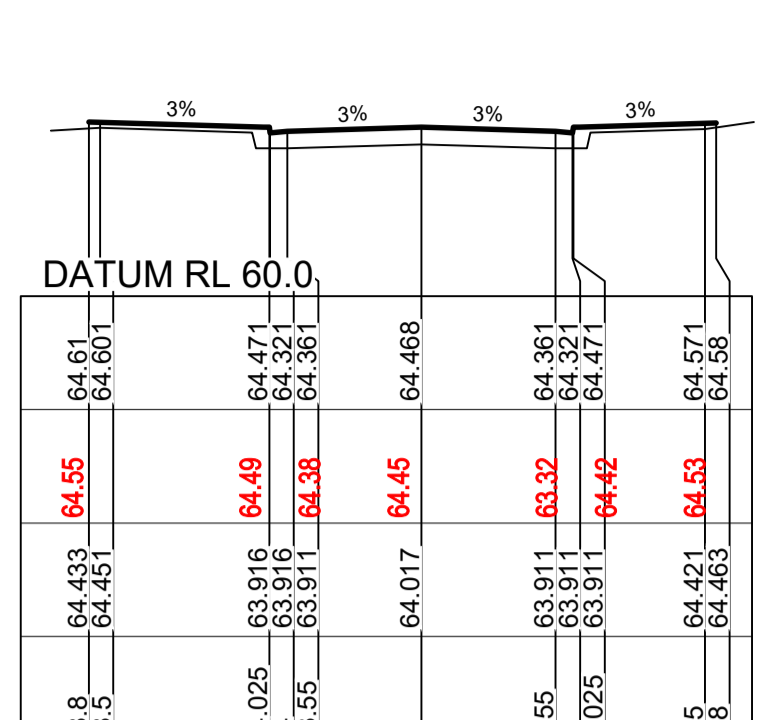
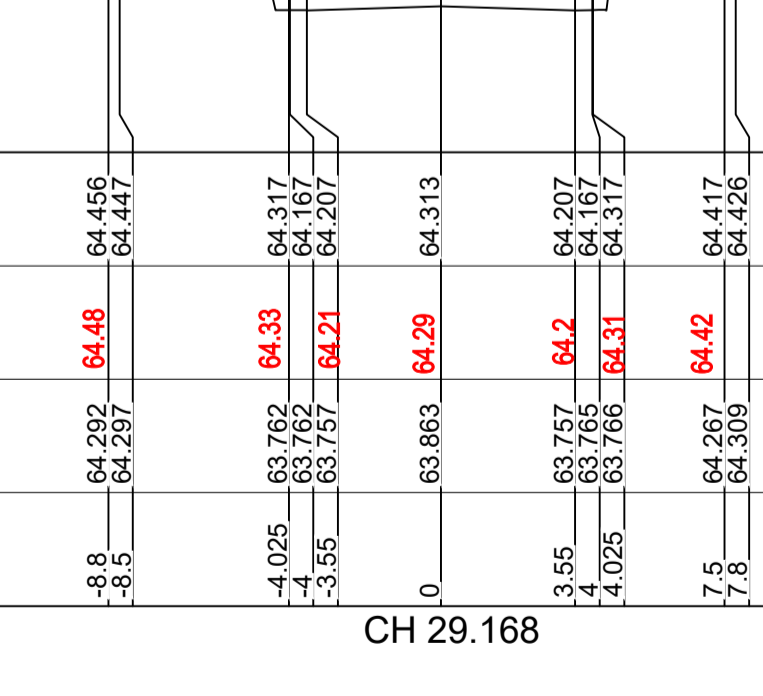
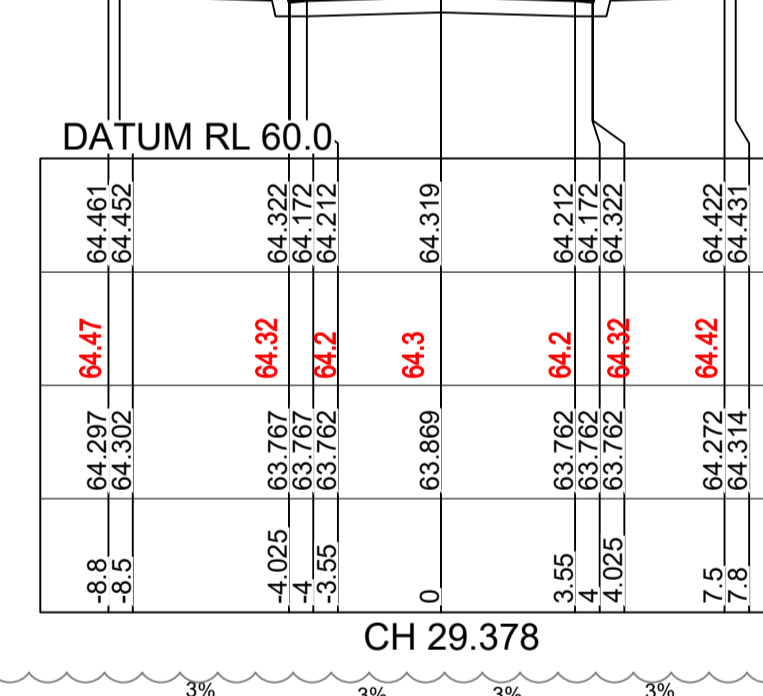
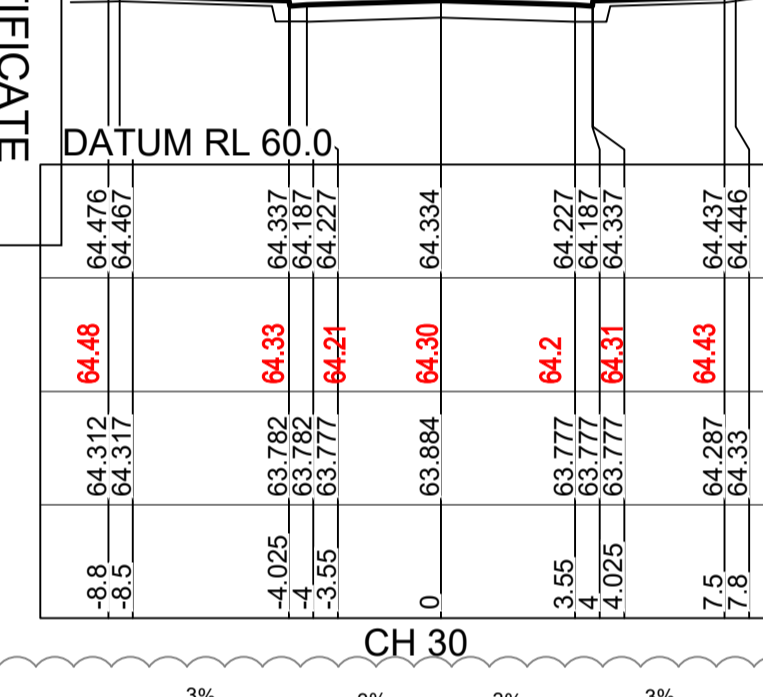
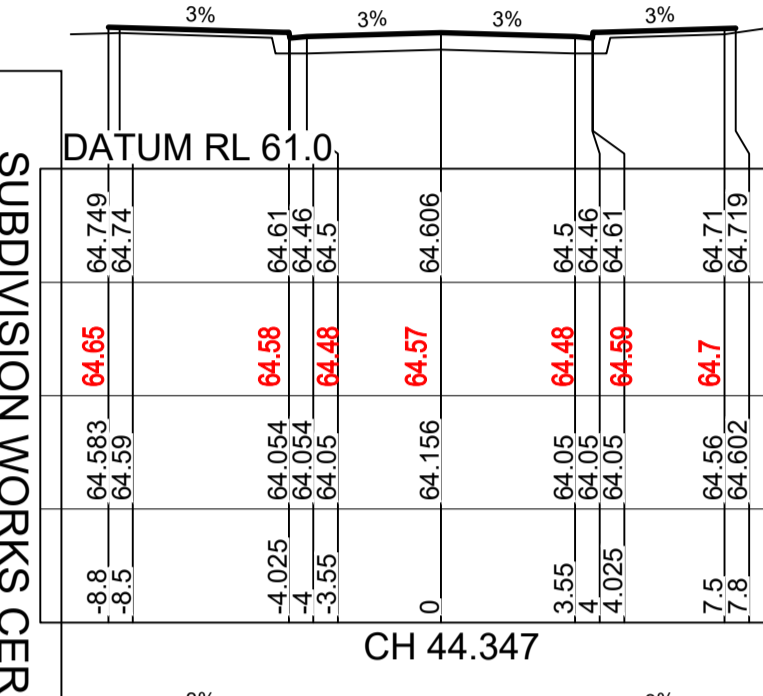
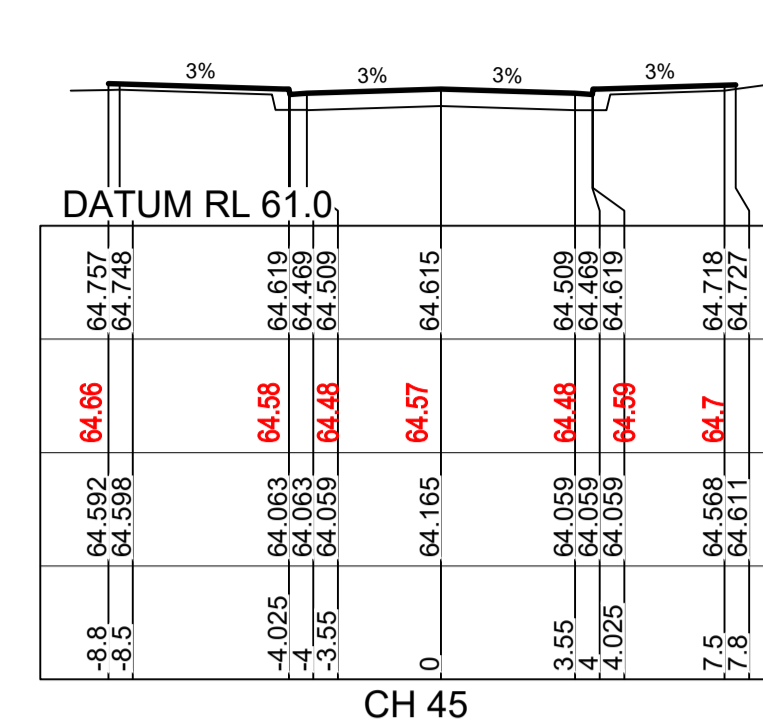
Accreditation No. BDC33367

Certificate No. 201302095974

Date of Issue: 11/05/2022

Issuing Officer: *D. Reiter*

SUBDIVISION WORKS CERTIFICATE



DESIGN SURFACE LEVEL	WAE	EXISTING SURFACE LEVEL	OFFSET
64.456	64.48	64.292	-8.8
64.447		64.297	-8.5
64.317	64.33	63.762	-4.025
64.167	64.21	63.767	-4.0
64.207		63.762	-4.0
64.313	64.29	63.757	-3.55
64.313		63.883	0
64.207	64.2	63.767	3.55
64.167	64.31	63.762	4.0
64.317		63.766	4.025
64.417	64.42	64.287	7.5
64.426		64.309	7.8

WORK AS EXECUTED SHOWN IN RED

SIGNATURE: *[Signature]*

VINCE MORGAN SURVEYORS PTY LTD

DATE: 09/01/23 REF: 16800

ROAD 52

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

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



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  
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











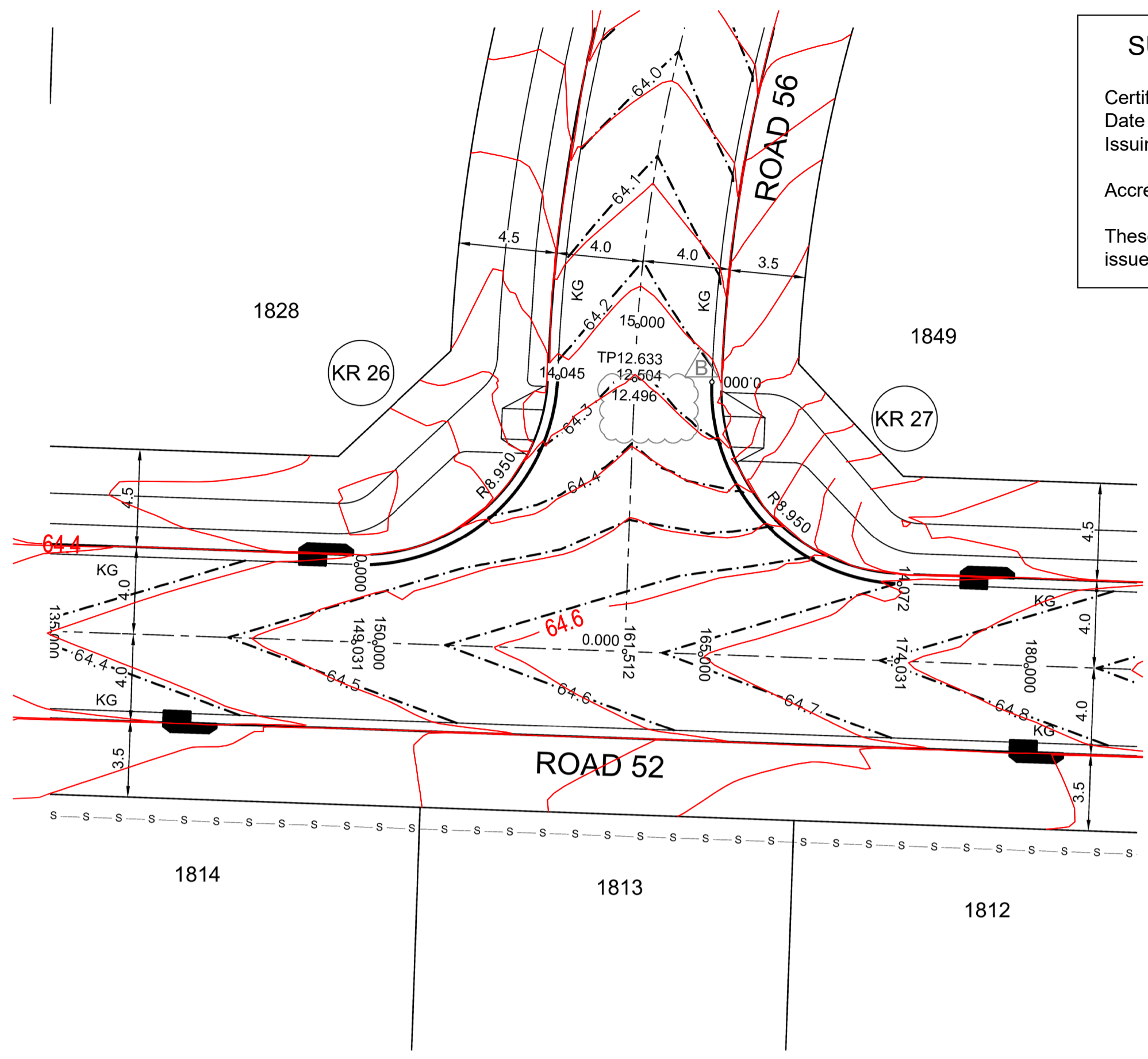




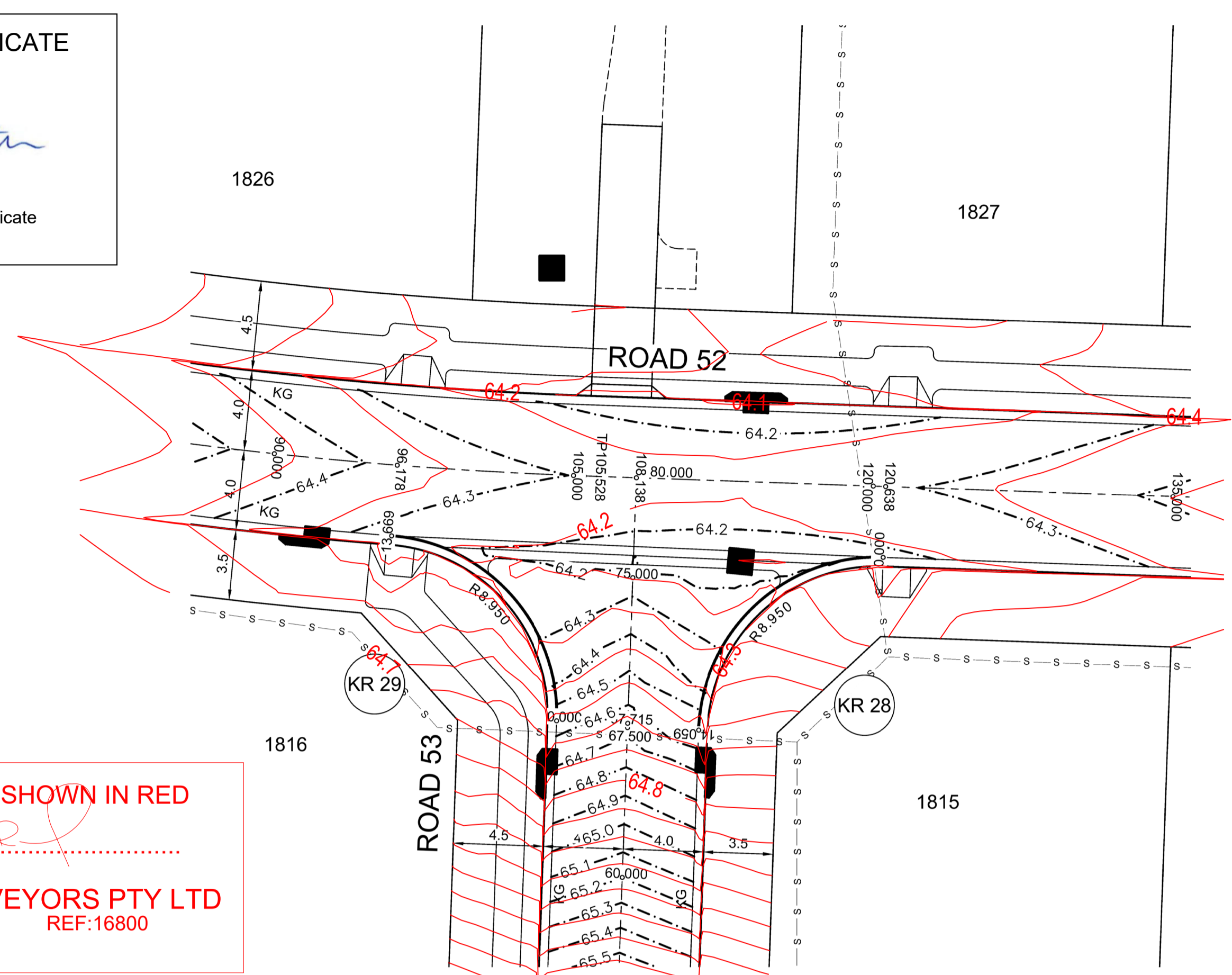
**SUBDIVISION WORKS CERTIFICATE**

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



**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	1.000%	-2.583%	-2.481%
VERTICAL GEOMETRY	7.02m V.C.	7.02m V.C.	
DATUM 59.0	64.46	64.31	64.23
DESIGN			
LIP GRADING	64.451	64.455	64.37
ROAD CHAINAGE	149.031	64.306	64.305
CHAINAGE	0	1.96	3.511
		7.022	10.534
			14.045
			12.496
			64.218

**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	2.476%	5.140%	1.000%
VERTICAL GEOMETRY	7.04m V.C.	7.04m V.C.	
DATUM 59.0	64.22	64.34	64.7
DESIGN			
LIP GRADING	64.217	64.328	64.45
ROAD CHAINAGE	12.504	64.304	64.686
CHAINAGE	0	3.518	7.036
		10.554	14.072
			174.031
			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	-6.052%	-0.727%	1.188%
VERTICAL GEOMETRY	6.83m V.C.	6.83m V.C.	
DATUM 59.0	64.5	64.24	64.28
DESIGN			
LIP GRADING	64.489	64.328	64.257
ROAD CHAINAGE	67.715	64.282	64.249
CHAINAGE	0	3.417	6.835
		10.252	13.669
			96.176
			64.273

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

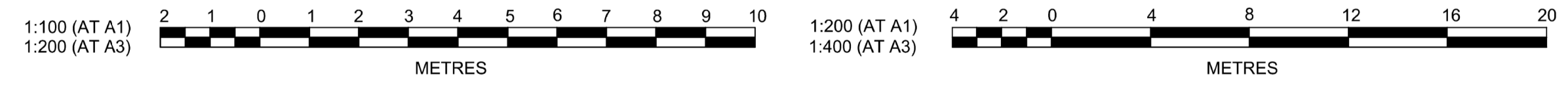
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286396.23	6281101.43	2°00'57.16"		
6.83	286396.53	6281109.99		-8.95	13.67
13.67	286387.99	6281110.67	274°30'26.92"		

ROAD 53 ROAD 52

DESIGN GRADELINE	0.700%	1.017%	6.315%
VERTICAL GEOMETRY	7.03m V.C.	7.03m V.C.	
DATUM 59.0	64.18	64.24	64.51
DESIGN			
LIP GRADING	64.184	64.211	64.327
ROAD CHAINAGE	120.638	64.209	64.280
CHAINAGE	0	3.515	7.029
		10.544	14.059
			67.500
			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"		



Plotted: 5 May 2022 11:07:47 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3302.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

**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**

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 2

PROJECT No: **110185-12**  
SHEET No: **CC3302**

PLAN No: **110185-12-CC3302**

PROJECT No: **110185-12**  
SHEET No: **CC3302**

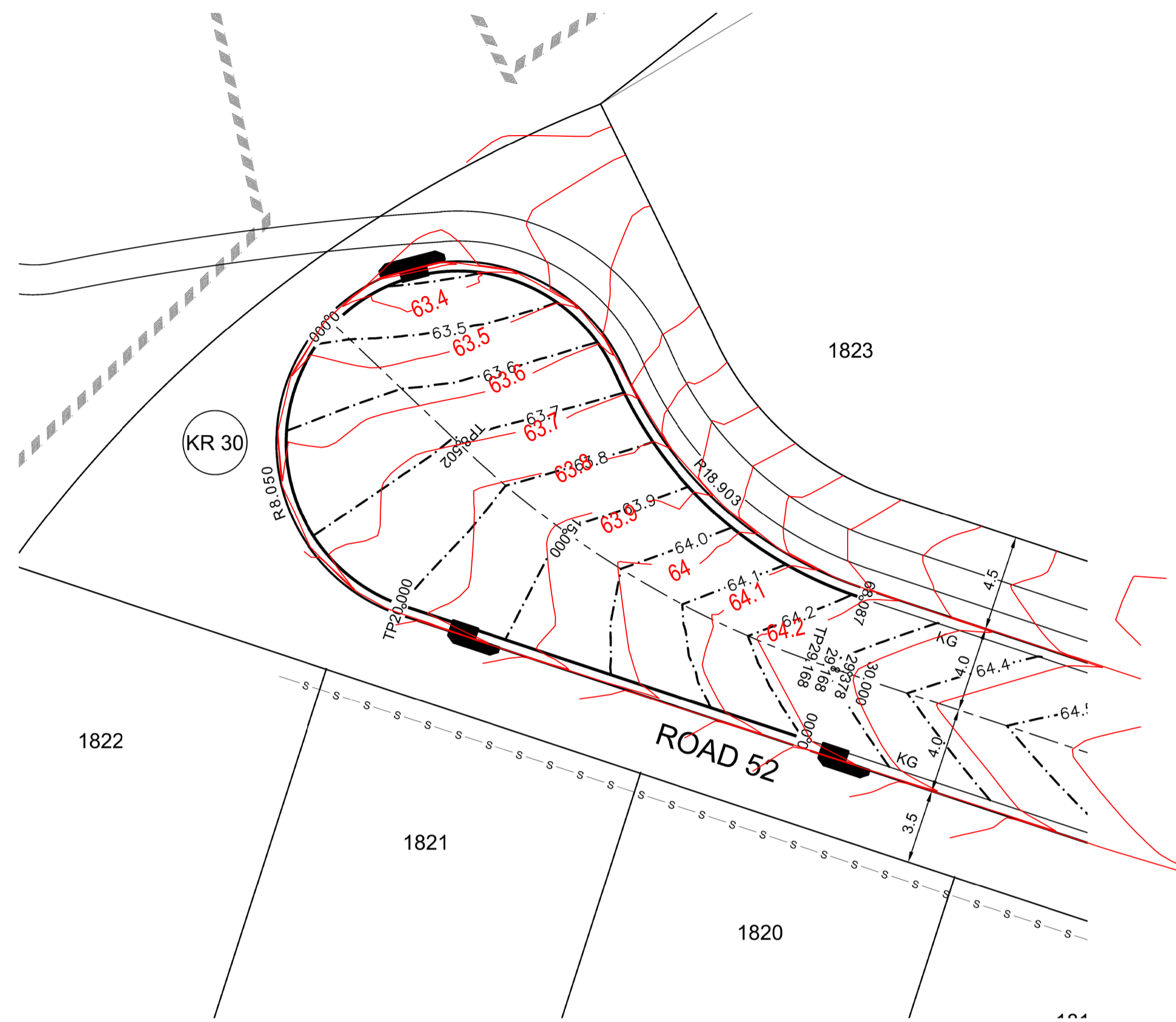
PROJECT No: **110185-12**  
SHEET No: **CC3302**

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



**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

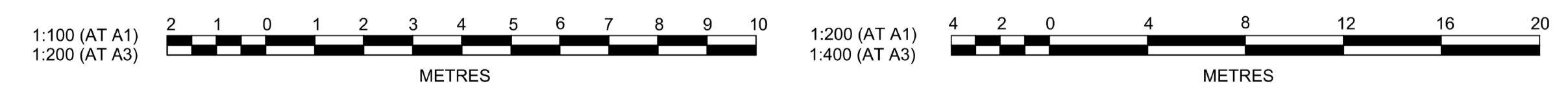
PLAN  
SCALE 1:200

ROAD CHAINAGE	DESIGN	LIP GRADING	ROAD CHAINAGE	DESIGN	LIP GRADING	ROAD CHAINAGE	DESIGN	LIP GRADING	ROAD CHAINAGE	DESIGN	LIP GRADING
0	64.21	64.207	29.168	64.096	64.096	5	64.096	64.096	10	63.996	63.996
10	63.85	63.85	15	63.9	63.9	20	63.629	63.629	25	63.571	63.571
30	63.41	63.41	35	63.435	63.435	40	63.396	63.396	45	63.42	63.42
45	63.5	63.494	50	63.88	63.88	55	63.959	63.959	60	64.064	64.064
60	64.2	64.212	65	64.212	64.212	70	64.212	64.212	75	64.212	64.212

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

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	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:

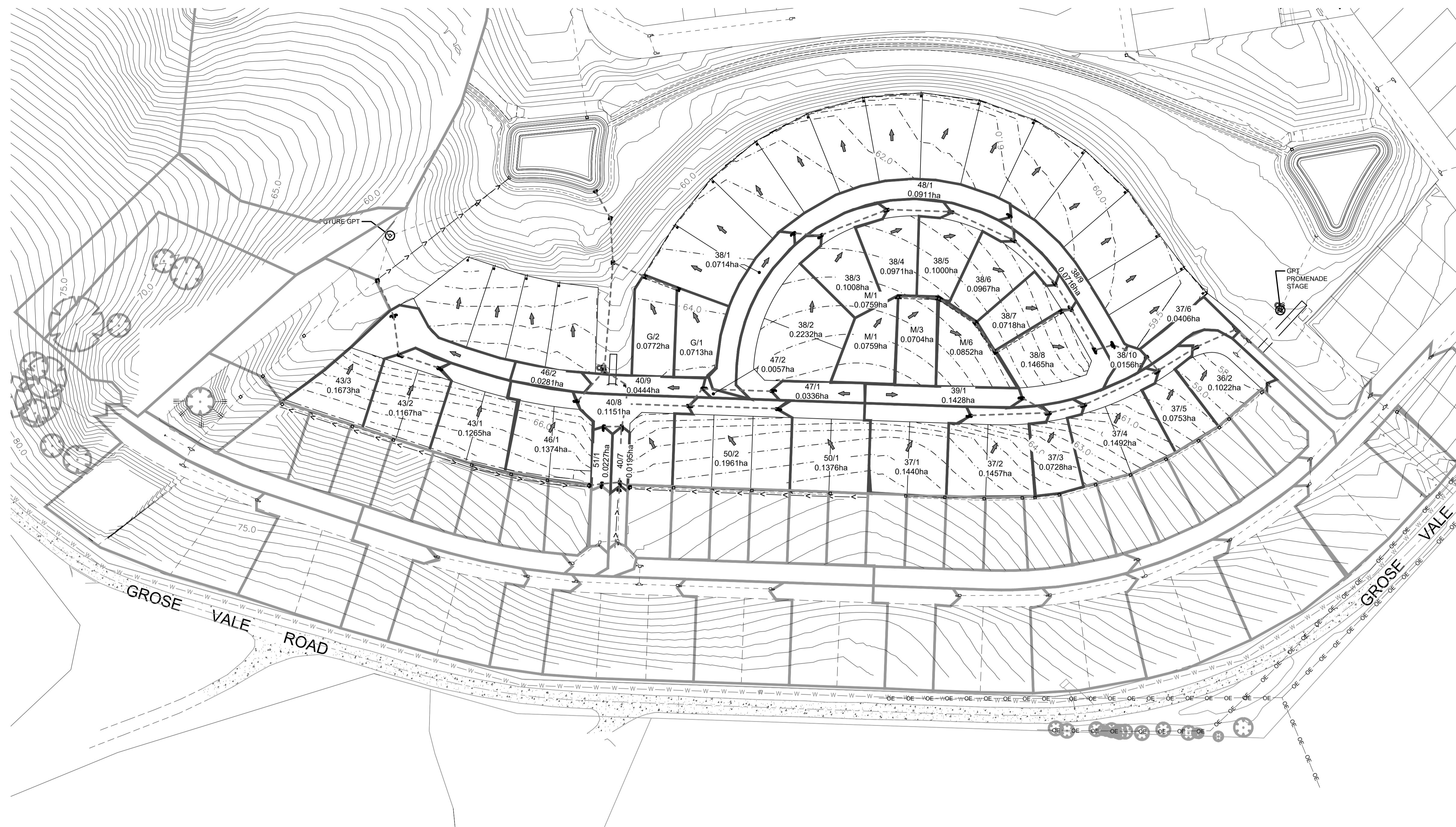
STATUS:  
**ISSUE FOR CONSTRUCTION APPROVAL**  
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND  
 RIDGETOPS 1 - SWC  
 KERB RETURN PLAN  
 SHEET 3

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



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



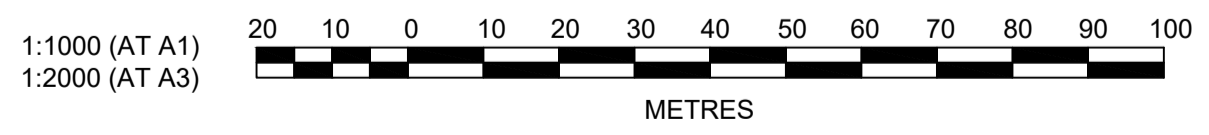
LEGEND	
CATCHMENT BOUNDARY	
EXISTING CATCHMENT BOUNDARY	
FLOW DIRECTION ARROW	
EXISTING CONTOURS	
DESIGN CONTOURS	
DRAINAGE LINE & PIT	
EXISTING DRAINAGE LINE & PIT	
FUTURE DRAINAGE LINE & PIT	

**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



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:

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**  
 CATCHMENT PLAN

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

PROJECT No: **110185-12**

SHEET No: **CC3400**

A

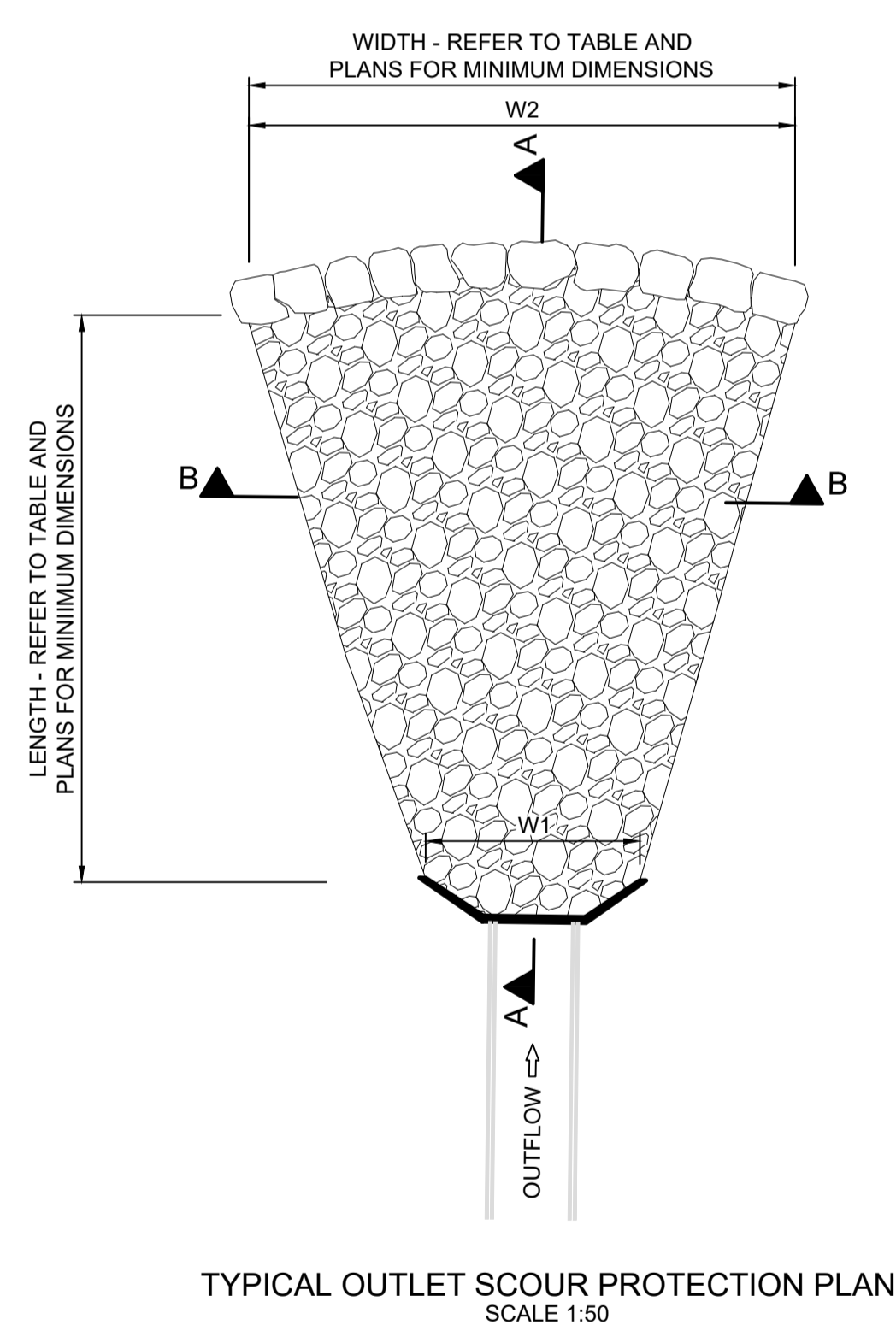
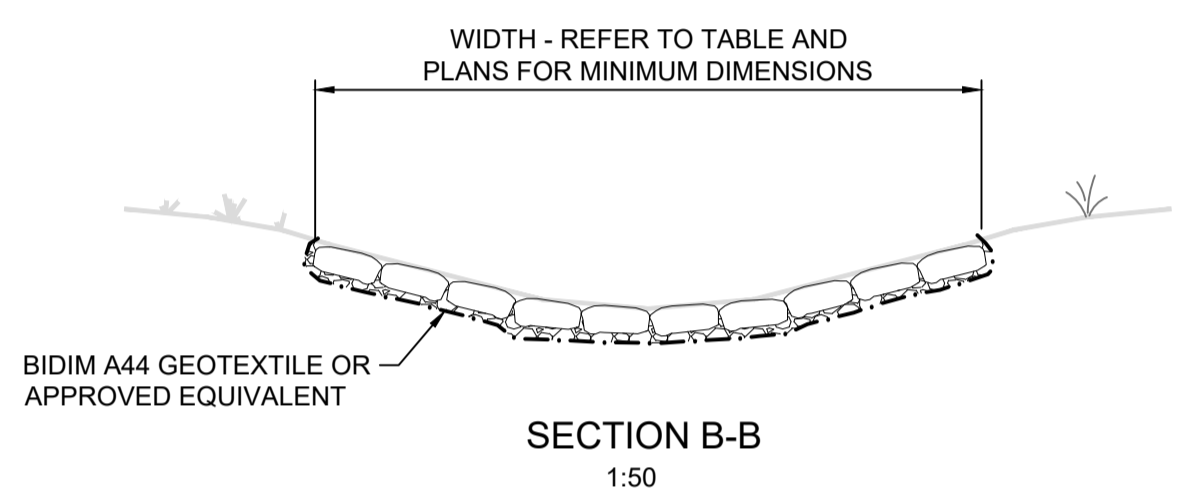
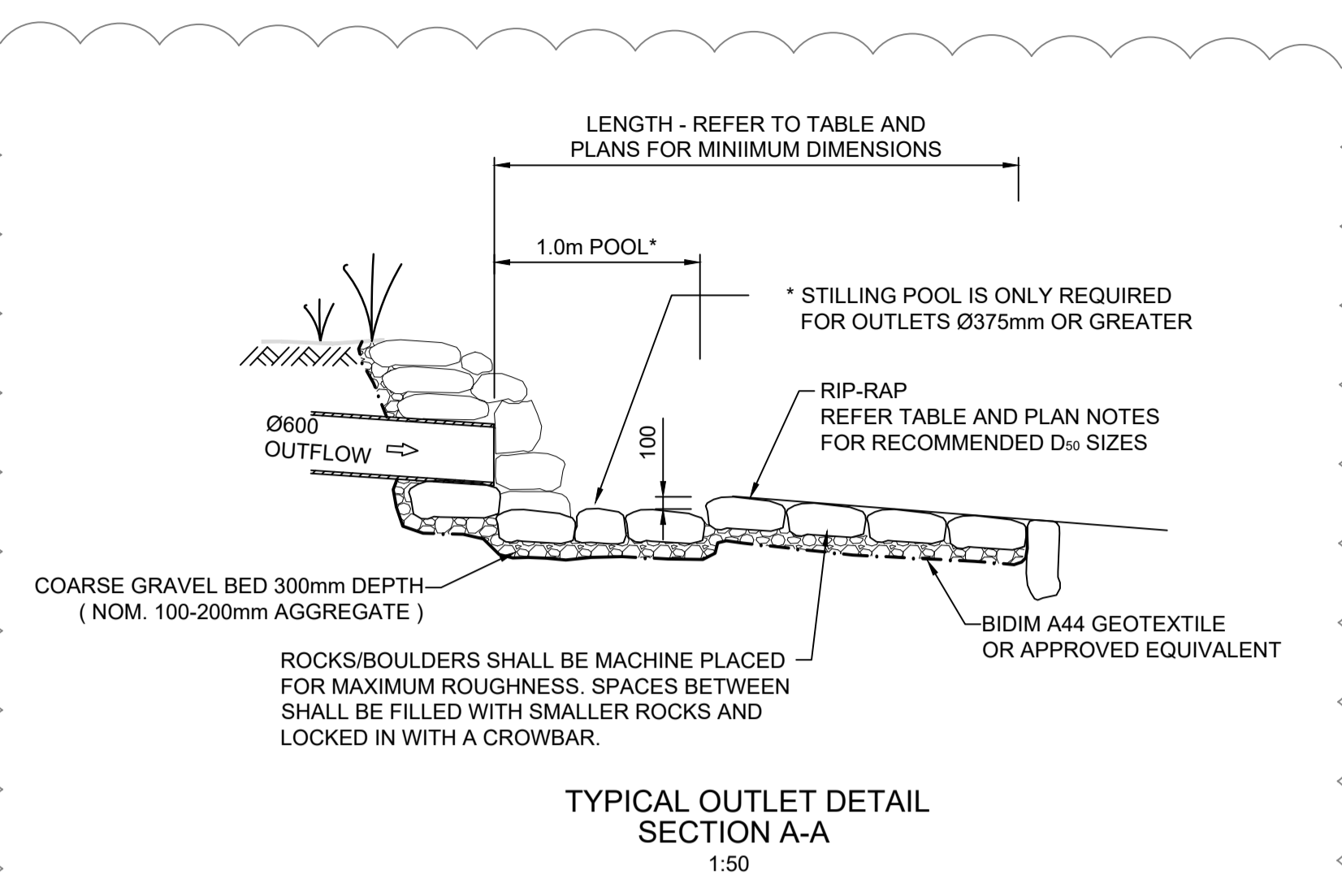


**HYDROLOGY NOTES:**  
STORMWATER SYSTEM DESIGNED USING 12D RATIONAL METHOD.

**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.

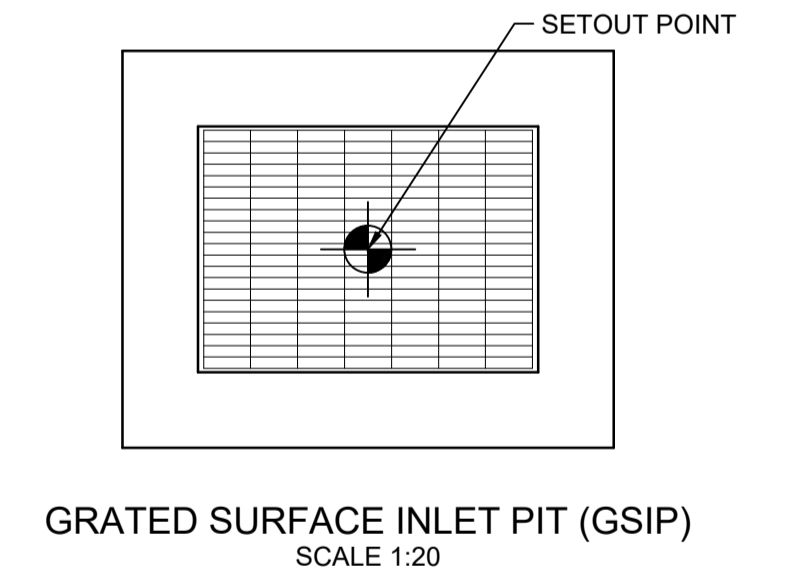
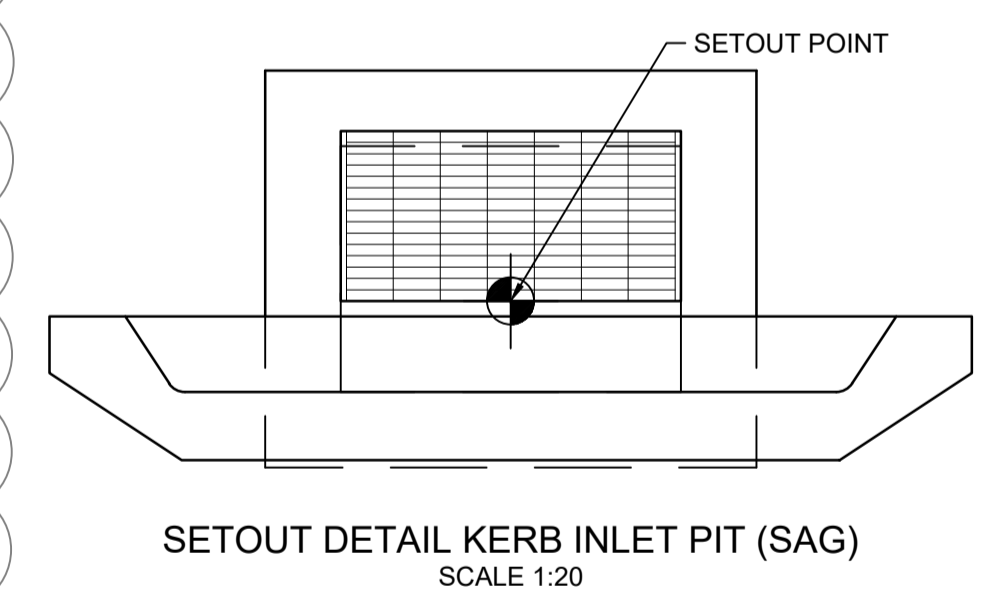
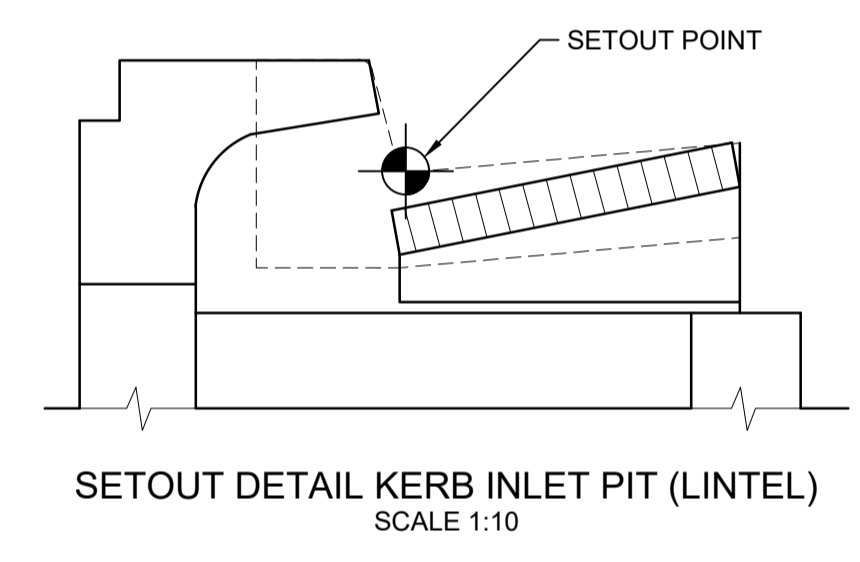
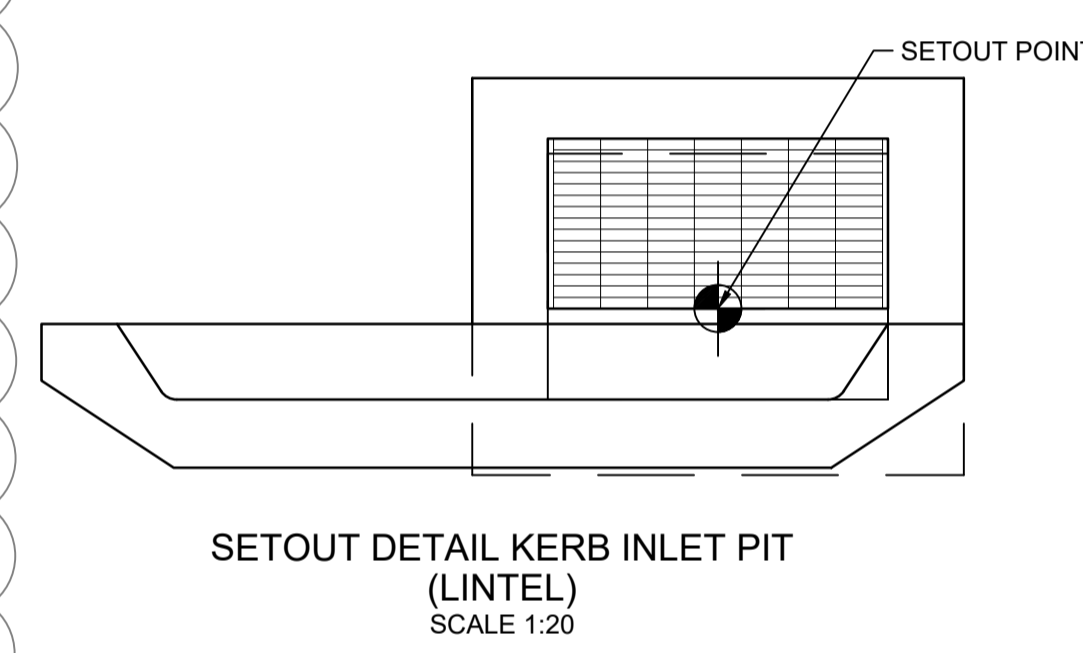
PIT SCHEDULE- RTP					
PIT NAME (-)	SURFACE FITTING TYPE AND SIZE	PIT EASTING (m)	PIT NORTHING (m)	PIT DEPTH (m)	COMMENTS
36/2	2.4 m lintel sag	286673.41	6281131.18	1.75	PIT PART OF PROMENADE
36/3	2.4 m lintel sag	286678.85	6281137.05	2.17	PIT PART OF PROMENADE
37/1	1.8 m lintel	286556.83	6281104.07	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

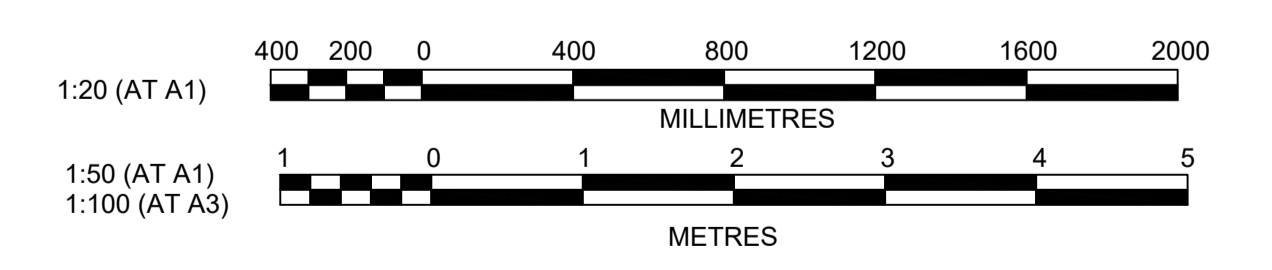
These plans/specifications form part of the certificate issued 11/05/2022



**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 <sub>50</sub> mm)	Apron Length L (mm)	Apron Width W <sub>1</sub> (mm)	Apron Width W <sub>2</sub> (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**

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

**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



**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

**DESIGN STORM 1:5yr ARI HYDROLOGIC RESULTS**

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (ha)	IMPERVIOUS PERCENTAGE (%)	RUNOFF C (-)	IMPERVIOUS TIME Tc (min)	IMPERVIOUS INTENSITY I (mm/hr)	PERVIOUS TIME Tc (min)	PERVIOUS INTENSITY I (mm/hr)	FULL AREA TIME Tc (min)	FULL AREA INTENSITY I (mm/hr)	FULL AREA CATCHMENT FLOW Qc (L/s)	PARTIAL AREA TIME Tc (min)	PARTIAL AREA INTENSITY I (mm/hr)	PARTIAL AREA CATCHMENT FLOW Qc (L/s)	TOTAL CATCHMENT FLOW Qc (L/s)	DIRECT FLOW Qd (L/s)	APPROACH FLOW Qa (L/s)	FLOODED DEPTH d (m)	FLOODED WIDTH w (m)	FLOODED (vx) (sq.m/s)	ROAD GRADE (%)	ROAD XFALL (%)	CHOKE FACTOR (-)	INLET FLOW Qb (L/s)	BYPASS FLOW Qb (L/s)	BYPASS PIT (-)	COMMENTS	
36/2	2.4 m lintel sag	0.102	70	0.8	5	130.8	10	100.1	10	100.1	23	5	130.8	25	25	0	25	0.04			0.6	2.6	1	25	0	36/3		
36/3	2.4 m lintel sag	0.044	70	0.8	5	130.8	10	100.1	10	100.1	10	5	130.8	11	11	0	11	0.02			0.3	3	1	11	0	37/6		
37/1	1.8 m lintel	0.144	70	0.8	5	130.8	10	100.1	10	100.1	32	5	130.8	36	36	0	36	0.06	1.23	0.08	5.4	3	1	34	1	37/2		
37/2	1.8 m lintel	0.146	70	0.8	5	130.8	10	100.1	10	100.1	32	5	130.8	36	36	0	37	0.06	1.39	0.08	5.9	3	1	36	1	37/3		
37/3	1.8 m lintel	0.073	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	19	0.05	0.82	0.06	5.4	3	1	19	0	37/4		
37/4	1.8 m lintel	0.149	70	0.8	5	130.8	10	100.1	10	100.1	33	5	130.8	37	37	0	37	0.07	1.25	0.08	4.8	3	1	35	2	37/5		
37/5	1.8 m lintel	0.075	70	0.8	5	130.8	10	100.1	10	100.1	17	5	130.8	19	19	0	20	0.05	0.71	0.07	8.1	3.2	1	20	0	36/2		
37/6	1.8 m lintel	0.041	70	0.8	5	130.8	10	100.1	10	100.1	9	5	130.8	10	10	0	10	0.06	1.01	0.03	0.9	3.3	1	10	0	LOST		
38/1	1.8 m lintel	0.071	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	18	0.06	1.07	0.04	1.9	3	1	18	0	48/1		
38/2	1.8 m lintel	0.223	70	0.8	5	130.8	10	100.1	10	100.1	50	5	130.8	55	55	0	55	0.08	1.94	0.08	2.2	3	1	45	11	38/3		
38/3	1.8 m lintel	0.101	70	0.8	5	130.8	10	100.1	10	100.1	22	5	130.8	25	25	0	35	0.07	1.55	0.06	2.2	3	1	32	4	38/4		
38/4	1.8 m lintel	0.097	70	0.8	5	130.8	10	100.1	10	100.1	22	5	130.8	24	24	0	28	0.07	1.44	0.05	2.2	3	1	26	2	38/5		
38/5	1.8 m lintel	0.1	70	0.8	5	130.8	10	100.1	10	100.1	22	5	130.8	25	25	0	26	0	0.15	0.34	2.2	3	1	25	1	38/6		
38/6	1.8 m lintel	0.097	70	0.8	5	130.8	10	100.1	10	100.1	21	5	130.8	24	24	0	25	0.07	1.32	0.05	2.2	3	1	24	1	38/7		
38/7	1.8 m lintel	0.072	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	19	0	0.15	0.25	2.1	3	1	19	0	38/8		
38/8	2.4 m lintel sag	0.146	70	0.8	5	130.8	10	100.1	10	100.1	33	5	130.8	36	36	0	36	0.05			0.7	3	1	36	0	38/9		
38/9	2.4 m lintel sag	0.072	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	18	0.03			0.4	3	1	14	4	38/10		
38/10	1.8 m lintel	0.016	70	0.8	5	130.8	10	100.1	10	100.1	3	5	130.8	4	4	0	8	0.04	0.39	0.04	5.1	7.8	1	8	0	37/6		
39/1	1.8 m lintel	0.058	70	0.8	5	130.8	10	100.1	10	100.1	13	5	130.8	14	14	0	14	0.05	0.68	0.05	6.4	2.9	1	14	0	38/10		
40/5	1.8 m lintel	0.015	70	0.8	5	130.8	10	100.1	10	100.1	3	5	130.8	4	4	0	4	0.03	0.3	0.02	5.8	3	1	4	0	40/6		
40/6	1.8 m lintel	0.018	70	0.8	5	130.8	10	100.1	10	100.1	4	5	130.8	5	5	0	5	0.03	0.3	0.03	10.9	3	1	5	0	40/7		
40/7	1.8 m lintel	0.019	70	0.8	5	130.8	10	100.1	10	100.1	4	5	130.8	5	5	0	5	0.03	0.35	0.03	7	3	1	5	0	40/8		
40/8	GSP 900x900 SAG	0.115	70	0.8	5	130.8	10	100.1	10	100.1	26	5	130.8	28	28	0	36	0.03			0.6	3	1	36	0	40/9		
40/9	2.4 m lintel sag	0.074	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	18	0.03			0.1	3	1	18	0	LOST		
40/10	GPT	0	0							0	0		0	0	0	0					0.8				0			
40/11	JP SEALED 900 x 900	0	0							0	0		0	0	0	0									0			
40/12	JP GRATED 900 x 900	0	0							0	0		0	0	0	0									0			
40/13	H.W.																											OUTLET TO DAM 7
41/7	GSP 900x900 SAG	0.179	20	0.8	5	130.8	10	100.1	10	100.1	40	5	130.8	31	40	0	40	-0.03					0	-100	140	41/9		
42/1	CAPPED STUB	2.284	70	0.8	5	130.8	10	100.1	10	100.1	508	5	130.8	564	564	0	564							564	0			
43/1	1.8 m lintel	0.126	70	0.8	5	130.8	10	100.1	10	100.1	28	5	130.8	31	31	0	31	0.07	1.42	0.06	2.3	3	1	30	1	43/2		
43/2	1.8 m lintel	0.117	70	0.8	5	130.8	10	100.1	10	100.1	26	5	130.8	29	29	0	30				1.9	2	1	28	2	43/3		
43/3	2.4 m lintel sag	0.167	70	0.8	5	130.8	10	100.1	10	100.1	37	5	130.8	41	41	0	43	0.05			1.2	4	1	43	0	LOST		
46/1	1.8 m lintel	0.137	70	0.8	5	130.8	10	100.1	10	100.1	31	5	130.8	34	34	0	34	0.08	1.64	0.06	1.5	3	1	32	2	40/8		
47/1	1.8 m lintel	0.034	70	0.8	5	130.8	10	100.1	10	100.1	7	5	130.8	8	8	0	8	0.05	0.88	0.02	1	3	1	8	0	47/2		
47/2	1.8 m lintel	0.006	70	0.8	5	130.8	10	100.1	10	100.1	1	5	130.8	1	1	0	1	0.03	0.3	0.01	1	3	1	1	0	40/9		
48/1	1.8 m lintel	0.091	90	0.8	5	130.8	10	100.1	10	100.1	20	5	130.8	25	25	0	25	0.07	1.32	0.05	1.9	3	1	25	1	38/9		
50/1	1.8 m lintel	0.138	70	0.8	5	130.8	10	100.1	10	100.1	31	5	130.8	34	34	0	34	0.08	1.79	0.05	1	3	1	32	2	50/2		
50/2	1.8 m lintel	0.196	70	0.8	5	130.8	10	100.1	10	100.1	44	5	130.8	48	48	0	50	0.09	2.12	0.06	1	3	1	44	6	40/8		
51/1	1.8 m lintel	0.023	70	0.8	5	130.8	10	100.1	10	100.1	5	5	130.8	6	6	0	6	0.03	0.36	0.03	7	3	1	6	0	40/8		
52/1	1.8 m lintel	0.023	70	0.8	5	130.8	10	100.1	10	100.1	5	5	130.8	6	6	0	6	0.03	0.32	0.03	11.6	3	1	6	0	51/1		
G/1	IAD 450x450	0.071	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	18	18	0	18							18	0			
G/2	IAD 900x900	0.077	70	0.8	5	130.8	10	100.1	10	100.1	17	5	130.8	19	19	0	19							19	0			
J/6	IAD 900x900	0.061	70	0.8	5	130.8	10	100.1	10	100.1	14	5	130.8	15	15	0	15				11.6			15	0			
K/4	IAD 900x900	0.061	70	0.8	5	130.8	10	100.1	10	100.1	13	5	130.8	15	15	0	15				11.6			15	0			
M/2	IAD 450x450	0	0							0	0		0	0	0	0								0	0			
M/3	IAD 600x900	0.07	70	0.8	5	130.8	10	100.1	10	100.1	16	5	130.8	17	17	0	17							17	0			
M/4	JP SEALED 600 x 900	0	0							0	0		0	0	0	0								0	0			
M/5	JP GRATED 600 x 900	0	0							0	0		0	0	0	0								0	0			
M/6	IAD 600x900	0.085	70	0.8	5	130.8	10	100.1	10	100.1	19	5	130.8	21	21	0	21							21	0			
M/7	IAD 900x900	0	0							0	0		0	0	0	0					2.1			0	0			

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

Plotfile: 5 May, 2022 11:10:56 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\2 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3411.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  
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



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  
 DRAINAGE CALCULATIONS  
 SHEET 1**

PROJECT No: **110185-12**  
 SHEET No: **CC3411**  
 PLAN No: **110185-12-CC3411**

B



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	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	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	60.12	59.619	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	2.138	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	2.49	56.669	54.677															



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

DESIGN STORM 1:100yr ARI HYDROLOGIC RESULTS

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (ha)	IMPERVIOUS PERCENTAGE (%)	RUNOFF C (-)	IMPERVIOUS TIME Tc (min)	IMPERVIOUS INTENSITY I (mm/hr)	PERVIOUS TIME Tc (min)	PERVIOUS INTENSITY I (mm/hr)	FULL AREA TIME Tc (min)	FULL AREA INTENSITY I (mm/hr)	FULL AREA CATCHMENT FLOW Qc (L/s)	PARTIAL AREA TIME Tc (min)	PARTIAL AREA INTENSITY I (mm/hr)	PARTIAL AREA CATCHMENT FLOW Qc (L/s)	TOTAL CATCHMENT FLOW Qc (L/s)	DIRECT FLOW Qd (L/s)	APPROACH FLOW Qa (L/s)	FLOODED DEPTH d (m)	FLOODED WIDTH w (m)	FLOODED (vx/d) (sq.m/s)	ROAD GRADE (%)	ROAD XFALL (%)	CHOKE FACTOR (-)	INLET FLOW Qg (L/s)	BYPASS FLOW Qb (L/s)	BYPASS PIT (-)	COMMENTS
36/2	2.4 m lintel sag	0.102	70	0.95	5	219.1	10	167.3	10	167.3	45	5	219.1	50	50	0	248	0.15			0.6	2.6	0	-65	313	36/3	
36/3	2.4 m lintel sag	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	22	22	0	335	0.04			0.3	3	0.5	17	317	37/6	
37/1	1.8 m lintel	0.144	70	0.95	5	219.1	10	167.3	10	167.3	64	5	219.1	71	71	0	71	0.08	1.7	0.11	5.4	3	0.8	48	23	37/2	
37/2	1.8 m lintel	0.146	70	0.95	5	219.1	10	167.3	10	167.3	64	5	219.1	72	72	0	95	0.08	2.13	0.12	5.9	3	0.8	59	36	37/3	
37/3	1.8 m lintel	0.073	70	0.95	5	219.1	10	167.3	10	167.3	32	5	219.1	36	36	0	72	0.08	1.62	0.12	5.4	3	0.8	48	24	37/4	
37/4	1.8 m lintel	0.149	70	0.95	5	219.1	10	167.3	10	167.3	66	5	219.1	73	73	0	97	0.09	1.93	0.13	4.8	3	0.8	59	38	37/5	
37/5	1.8 m lintel	0.075	70	0.95	5	219.1	10	167.3	10	167.3	33	5	219.1	37	37	0	75	0.08	1.35	0.13	8.1	3.2	0.8	51	24	36/2	
37/6	1.8 m lintel	0.041	70	0.95	5	219.1	10	167.3	10	167.3	18	5	219.1	20	20	0	599	0.15	3.8	0.37	0.9	3.3	0	-117	716	LOST	
38/1	1.8 m lintel	0.071	70	0.95	5	219.1	10	167.3	10	167.3	32	5	219.1	35	35	0	35	0.07	1.5	0.06	1.9	3	0.8	26	9	48/1	
38/2	1.8 m lintel	0.223	70	0.95	5	219.1	10	167.3	10	167.3	99	5	219.1	110	110	0	110	0.1	2.58	0.11	2.2	3	0.8	57	53	38/3	
38/3	1.8 m lintel	0.101	70	0.95	5	219.1	10	167.3	10	167.3	44	5	219.1	50	50	0	102	0.1	2.43	0.11	2.2	3	0.8	54	48	38/4	
38/4	1.8 m lintel	0.097	70	0.95	5	219.1	10	167.3	10	167.3	43	5	219.1	48	48	0	96	0.09	2.47	0.1	2.2	3	0.425	28	68	38/5	
38/5	1.8 m lintel	0.1	70	0.95	5	219.1	10	167.3	10	167.3	44	5	219.1	49	49	0	117	0	0.15	1.52	2.2	3	0.227	17	100	38/6	
38/6	1.8 m lintel	0.097	70	0.95	5	219.1	10	167.3	10	167.3	43	5	219.1	47	47	0	148	0.11	2.82	0.13	2.2	3	0	-14	161	38/7	
38/7	1.8 m lintel	0.072	70	0.95	5	219.1	10	167.3	10	167.3	32	5	219.1	35	35	0	196	0	0.15	2.59	2.1	3	0	-18	214	38/8	
38/8	2.4 m lintel sag	0.146	70	0.95	5	219.1	10	167.3	10	167.3	65	5	219.1	72	72	0	286	0.14			0.7	3	0	-72	358	38/9	
38/9	2.4 m lintel sag	0.072	70	0.95	5	219.1	10	167.3	10	167.3	32	5	219.1	35	35	0	412	0.03			0.4	3	0.5	7	405	38/10	
38/10	1.8 m lintel	0.016	70	0.95	5	219.1	10	167.3	10	167.3	7	5	219.1	8	8	0	419	0.15	2.94	0.34	5.1	7.8	0.8	157	261	37/6	
39/1	1.8 m lintel	0.058	70	0.95	5	219.1	10	167.3	10	167.3	26	5	219.1	29	29	0	29	0.06	1.08	0.07	6.4	2.9	0.8	22	6	38/10	
40/5	1.8 m lintel	0.015	70	0.95	5	219.1	10	167.3	10	167.3	6	5	219.1	7	7	0	249	0.12	2.62	0.23	5.8	3	0.8	113	136	40/6	
40/6	1.8 m lintel	0.018	70	0.95	5	219.1	10	167.3	10	167.3	8	5	219.1	9	9	0	145	0.09	2	0.19	10.9	3	0	-33	177	40/7	
40/7	1.8 m lintel	0.019	70	0.95	5	219.1	10	167.3	10	167.3	9	5	219.1	10	10	0	187	0.09	2.86	0.17	7	3	0	-107	294	40/8	
40/8	GSIP 900x900 SAG	0.115	70	0.95	5	219.1	10	167.3	10	167.3	51	5	219.1	57	57	0	484	0.15			0.6	3	0	-132	616	40/9	
40/9	2.4 m lintel sag	0.074	70	0.95	5	219.1	10	167.3	10	167.3	33	5	219.1	36	36	0	654	0.15			0.1	3	0.5	135	519	LOST	
40/10	GPT	0	0						0	0	0	0	0	0	0	0	0				0.8			0	0		
40/11	JP SEALED 900 x 900	0	0						0	0	0	0	0	0	0	0	0							0	0		
40/12	JP GRATED 900 x 900	0	0						0	0	0	0	0	0	0	0	0							0	0		
40/13	H.W.																										OUTLET TO DAM 7
41/7	GSIP 900x900 SAG	0.179	20	0.95	5	219.1	10	167.3	10	167.3	79	5	219.1	62	79	0	419	-0.03					0	-268	687	41/9	
43/1	1.8 m lintel	0.126	70	0.95	5	219.1	10	167.3	10	167.3	56	5	219.1	62	62	0	62	0.08	1.93	0.08	2.3	3	0.8	42	20	43/2	
43/2	1.8 m lintel	0.117	70	0.95	5	219.1	10	167.3	10	167.3	52	5	219.1	57	57	0	78				1.9	2	0.8	45	32	43/3	
43/3	2.4 m lintel sag	0.167	70	0.95	5	219.1	10	167.3	10	167.3	74	5	219.1	82	82	0	114	0.18			1.2	4	0.228	85	29	LOST	
46/1	1.8 m lintel	0.137	70	0.95	5	219.1	10	167.3	10	167.3	61	5	219.1	68	68	0	68	0.09	2.2	0.08	1.5	3	0.8	44	23	40/8	
47/1	1.8 m lintel	0.034	70	0.95	5	219.1	10	167.3	10	167.3	15	5	219.1	16	16	0	16	0.06	1.29	0.03	1	3	0.8	13	3	47/2	
47/2	1.8 m lintel	0.006	70	0.95	5	219.1	10	167.3	10	167.3	3	5	219.1	3	3	0	6	0.05	0.7	0.02	1	3	0.8	5	1	40/9	
48/1	1.8 m lintel	0.091	90	0.95	5	219.1	10	167.3	10	167.3	40	5	219.1	50	50	0	59	0.09	1.94	0.08	1.9	3	0.8	40	19	38/9	
50/1	1.8 m lintel	0.138	70	0.95	5	219.1	10	167.3	10	167.3	61	5	219.1	68	68	0	68	0.1	2.39	0.07	1	3	0.8	44	23	50/2	
50/2	1.8 m lintel	0.196	70	0.95	5	219.1	10	167.3	10	167.3	87	5	219.1	96	96	0	120	0.12	3.02	0.1	1	3	0.6	51	68	40/8	
51/1	1.8 m lintel	0.023	70	0.95	5	219.1	10	167.3	10	167.3	10	5	219.1	11	11	0	73	0.08	1.72	0.11	7	3	0.511	32	41	40/8	
52/1	1.8 m lintel	0.023	70	0.95	5	219.1	10	167.3	10	167.3	10	5	219.1	11	11	0	15	0.04	0.52	0.06	11.6	3	0	-46	61	51/1	
G/1	IAD 450x450	0.071	70	0.95	5	219.1	10	167.3	10	167.3	32	5	219.1	35	35	0	35							35	0		
G/2	IAD 900x900	0.077	70	0.95	5	219.1	10	167.3	10	167.3	34	5	219.1	38	38	0	38							38	0		
J/6	IAD 900x900	0.061	70	0.95	5	219.1	10	167.3	10	167.3	27	5	219.1	30	30	0	30				11.6			30	0		
K/4	IAD 900x900	0.061	70	0.95	5	219.1	10	167.3	10	167.3	27	5	219.1	30	30	0	30				11.6			30	0		
M/1	SLOPE JUNCTION	0.076	70	0.95	5	219.1	10	167.3	10	167.3	34	5	219.1	37	37	0	37							37	0		
M/2	IAD 450x450	0	0						0	0	0	0	0	0	0	0	0							0	0		
M/3	IAD 600x900	0.07	70	0.95	5	219.1	10	167.3	10	167.3	31	5	219.1	35	35	0	35							35	0		
M/4	JP SEALED 600 x 900	0	0						0	0	0	0	0	0	0	0	0							0	0		
M/5	JP GRATED 600 x 900	0	0						0	0	0	0	0	0	0	0	0							0	0		
M/6	IAD 600x900	0.085	70	0.95	5	219.1	10	167.3	10	167.3	38	5	219.1	42	42	0	42							42	0		
M/7	IAD 900x900	0	0						0	0	0	0	0	0	0	0	0				2.1			0	0		

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

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  
 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  
 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



DESIGN STORM 1:100yr 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 (-)	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 (-)	U/S PIT 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	10.75	162.5	0.649	292.8	5.52	211.8	0.55	325.3	0	325.3	-159.4	165.9	292.7	0.57	1.5	2.73	1.75	57.717	56.1	55.646	0.051	2	0.12	0.23	0.23	0.23	0.15	57.717	57.487	57.341	0.76	1.16	0	
36/2 to 36/3	RRJ2	375	8	1.56	0.11	10.87	161.8	0.746	335.1	5.64	210.1	0.64	372	0	372	-274.9	97.1	237.5	0.41	0.88	2.04	1.38	57.341	55.596	55.471	0.3	1.56	1.94	0.04	0.06	0.08	0.02	57.017	56.94	56.919	0.26	1.41	0.32	
36/3 to 32/5	RRJ2	675	19.51	1.35	0.36	11.53	157.5	2.69	1177.1	6.39	201.4	2.36	1317.6	0	1317.6	-701.2	616.4	1058.4	0.58	1.72	3.07	2.17	57.341	55.171	54.908	0.15	1.89	2.09	0.15	0.29	0.32	0.09	56.949	56.633	56.544	0.46	1.2	0.39	
37/1 to 37/2	RRJ2	375	34.72	5.66	0.11	10	167.3	0.137	63.6	5	219.1	0.12	70.8	0	70.8	-23.2	47.6	452	0.11	0.43	2.66	1.08	63.769	62.234	60.27	0.031	4.5	2.03	0.01	0.04	0.04	1.87	62.652	62.609	60.736	5.4	1.06	1.12	
37/2 to 37/3	RRJ2	375	15.9	6.65	0.11	10.22	165.9	0.33	152.3	5.22	216	0.28	169.1	0	169.1	-42.5	126.7	490.1	0.26	1.15	3.72	1.53	61.695	60.24	59.182	0.05	1.8	2.33	0.07	0.12	0.16	0.91	60.771	60.615	59.703	5.73	0.98	0.92	
37/3 to 37/4	RRJ2	375	35.63	5.05	0.11	10.29	165.5	0.4	183.7	5.29	215	0.34	203.8	0	203.8	-30.1	173.7	427	0.41	1.57	3.67	1.8	60.814	59.132	57.333	0.151	1.55	1.79	0.13	0.2	0.23	0.91	59.734	59.507	58.598	2.55	1.22	1.08	
37/4 to 37/5	RRJ2	525	20.08	5.95	0.22	11.35	158.7	1.793	790.1	6.21	203.1	1.56	882.8	0	882.8	-299.1	583.8	1137.2	0.51	2.7	5.29	2.78	59.048	57.183	55.988	0.076	1.77	1.92	0.37	0.66	0.71	0.31	58.656	57.943	57.628	1.57	1.39	0.39	
37/5 to 37/6	RRJ2	600	18.54	2.5	0.28	11.42	158.3	1.864	819.5	6.27	202.5	1.63	916	0	916	-285	631	1052.2	0.6	2.23	3.89	2.45	57.877	55.913	55.449	0.051	0.32	0.37	0.25	0.08	0.09	0.17	57.639	57.546	57.379	0.9	1.21	0.24	
37/6 to 36/3	RRJ2	600	7.66	2	0.28	11.5	157.8	1.903	833.8	6.35	201.8	1.66	931.8	0	931.8	-421.7	510.1	941.1	0.54	1.8	3.39	2.16	57.379	55.399	55.246	0.075	1.85	2.15	0.17	0.31	0.36	0.05	57.321	56.964	56.919	0.59	1.33	0.06	
38/1 to 38/2	RRJ2	375	12.03	1.53	0.11	10	167.3	0.068	31.5	5	219.1	0.06	35.1	0	35.1	-8.6	26.4	235	0.11	0.24	1.41	0.91	62.826	61.452	61.268	0.051	9.7	0	0.03	0.03	0.06	61.856	61.827	61.766	0.51	1	0.97		
38/2 to 38/3	RRJ2	375	31.07	2.15	0.11	10.14	166.4	0.28	129.4	5.14	217.1	0.24	144	0	144	-61.3	82.7	278.4	0.3	0.75	2.2	1.3	62.642	61.218	60.551	0.051	3.7	4.08	0.03	0.11	0.12	0.06	61.777	61.66	61.602	0.19	1.14	0.86	
38/3 to 38/4	RRJ2	375	28.29	1.84	0.11	10.38	164.9	0.376	172	5.24	215.8	0.32	190.7	0	190.7	-56.4	134.3	257.7	0.52	1.22	2.36	1.58	61.968	60.501	59.981	0.05	1.45	1.6	0.08	0.11	0.12	0.14	61.613	61.492	61.351	0.5	1.14	0.35	
38/4 to 38/5	RRJ2	375	30.15	1.86	0.11	10.58	163.6	0.468	212.6	5.44	213	0.4	235.4	0	235.4	-76.4	158.9	259.3	0.61	1.44	2.47	1.71	61.355	59.931	59.37	0.05	4.5	0.11	0.48	0.48	0.21	61.351	60.875	60.665	0.7	1.1	0		
38/5 to 38/6	RRJ2	375	26.13	2.29	0.11	10.78	162.3	0.649	292.8	5.64	210.1	0.56	328.7	0	328.7	-118.6	210	287.6	0.73	1.9	2.84	2.04	60.701	59.32	58.721	0.051	1.14	1.33	0.18	0.21	0.25	0.32	60.7	60.454	60.135	1.22	1.11	0	
38/6 to 38/7	RRJ2	375	13.2	1.67	0.11	10.94	161.3	0.741	332.2	5.79	208	0.64	371.7	0	371.7	-179.7	192	245.3	0.78	1.74	2.46	1.92	60.135	58.671	58.451	0.031	0.6	0.71	0.15	0.09	0.11	0.13	60.107	59.998	59.863	1.02	1.11	0.03	
38/7 to 38/8	RRJ2	450	20.6	1.69	0.16	11.02	160.8	1.029	459.7	5.88	206.7	0.89	512.9	0	512.9	-232.7	280.3	401.1	0.7	1.76	2.73	2	59.863	58.421	58.074	0.05	1.16	1.37	0.16	0.18	0.22	0.17	59.862	59.644	59.475	0.82	1.06	0	
38/8 to 38/9	RRJ2	450	8.21	2.12	0.16	11.15	160	1.168	519.2	6.01	205	1.02	578.4	0	578.4	-376.6	201.8	450.1	0.45	1.27	2.75	1.69	59.475	58.024	57.85	0.076	1.89	2.07	0.08	0.16	0.17	0.04	59.178	59.008	58.973	0.43	1.03	0.3	
38/9 to 38/10	RRJ2	525	15.79	1.46	0.22	11.2	159.6	1.236	548.3	6.06	204.6	1.08	611.2	0	611.2	-404.6	206.6	563.1	0.37	0.95	2.4	1.58	59.468	57.775	57.544	0.05	1.69	1.76	0.05	0.08	0.08	0.03	58.976	58.894	58.863	0.2	1.2	0.49	
38/10 to 37/4	RRJ2	525	8.06	2	0.22	11.31	158.9	1.251	552.5	6.17	203.5	1.09	615.5	0	615.5	-255	360.5	659.1	0.55	1.67	3.11	2	59.098	57.494	57.333	0.151	1.53	1.77	0.14	0.22	0.25	0.05	58.898	58.647	58.598	0.6	1.09	0.2	
39/1 to 37/2	RRJ2	375	13.59	3	0.11	10	167.3	0.055	25.7	5	219.1	0.05	28.6	0	28.6	-6.4	22.2	329.1	0.07	0.2	1.7	0.86	62.369	60.699	60.291	0.051	4.5	0	0.01	0.01	0.34	61.083	61.074	60.736	2.49	1.1	1.29		
40/4 to 40/5	RRJ2	450	15.07	1.78	0.16	10.66	163.1	1.092	495	5.49	212.2	0.93	550.1	0	550.1	-242	308.1	411.7	0.75	1.94	2.84	2.12	62.643	60.785	67.607	0.201	1.62	1.79	0.19	0.31	0.34	0.15	69.06	68.717	68.567	0.99	1.29	0.58	
40/5 to 40/6	RRJ2	450	26.47	9.99	0.16	10.75	162.6	1.199	541.6	5.58	210.9	1.03	601	0	601	-139.8	461.2	976.8	0.47	2.9	6.05	2.94	69.167	67.407	64.763	0.031	1.65	1.81	0.43	0.71	0.77	1.15	68.632	67.857	66.703	4.36	1.19	0.53	
40/6 to 40/7	RRJ2	450	24.54	7.59	0.16	10.82	162.1	1.785	803.9	5.54	211.6	1.52	892.9	0	892.9	-238.9	654	851	0.77	4.11	5.9	4.12	66.703	64.733	62.871	0.075	1.01	1.21	0.86	0.87	1.05	1.1	66.703	65.655	64.556	4.48	1.18	0	
40/7 to 40/8	RRJ2	525	10.09	6.48	0.22	10.89	161.6	1.825	819.6	5.61	210.6	1.55	909.1	0	909.1	-335.4	573.7	1186.3	0.48	2.65	5.43	2.74	64.556	62.796	62.143	0.075	0.65	0.77	0.36	0.23	0.28	0.15	64.556	64.279	64.126	1.51	1.21	0	
40/8 to 40/9	RRJ2	600	8.02	1.25	0.28	10.92	161.4	2.289	1026.6	5.68	209.6	1.96	1138.7	0	1138.7	-594.1	544.6	744	0.73	1.93	2.87	2.24	64.126	62.068	61.967	0.031	0.94	1.14	0.19	0.18	0.22	0.05	63.876	63.66	63.606	0.67	1.46	0.25	
40/9 to 40/10	RRJ2	600	12.52	1.38	0.28	10.97	161.1	2.359	1056.2	5.72	209	2.02	1170.7	0	1170.7	-495.9	674.9	782.9	0.86	2.39	3.11	2.56	64.126	61.937	61.764	0.05	1.78	1.93	0.29	0.52	0.56	0.13	63.65	63.09	62.961	1.03	1.71	0.48	
40/10 to 40/11	RRJ2	600	47.1	5.29	0.28	11.03	160.7	2.49	1111.6	5.79	208.1	2.13	1231.1	0	1231.1	-519	712.1	1531.3	0.47	2.52	5.32	2.67	64.325	61.714	59.22	0.301	2	0.32	0.65	0.65	2.38	62.961	62.314	59.937	5.05	1.4	1.36		
40/11 to 40/12	RRJ2	600	19.61	21.38	0.28	11.18	159.8	2.631	1167.7	5.9	206.5	2.25	1289.6	0	1289.6	-519	770.6	3077	0.25	2.73	9.05	2.84	61.241	58.92	54.727	0.05	1.1	1.27	0.38	0.42	0.48	3.65	60.003	59.52	55.866	18.63	1.25	1.24	
40/12 to 40/13	RRJ2	600	13.09	2.11	0.28	11.22	159.5	2.631	1166	6.05	204.6	2.26	1286.7	0	1286.7	-519	767.7	967.6	0.79	2.72	3.79	2.83	56.669	54.677	54.4	1.57	1.76	0.38	0.59	0.66	0.28	55.94	55.277	55	2.11	-0.62	0.73		
43/1 to 43/2	RRJ2	375	18.28	1.5	0.11	10	167.3	0.12	55.9	5	219.1	0.1	62.2	0	62.2	-20.3	41.8	232.7	0.18	0.38	1.6	1.04	64.197	62.609	62.335	0.05	4.5	0.01	0.03	0.03	0.01	63.552	63.519	63.511	0.05	1.1	0.64		
43/2 to 43/3	RRJ2	375	17.39	2	0.11	10.19	166.1	0.231	106.6	5.19	216.4	0.2	118.4	0	118.4	-32.2	86.2	268.7	0.32	0.78	2.17	1.32	63.821	62.285	61.937	0.05	1.79	1.86	0.03	0.06	0.06	0.04	63.513	63.455	63.419	0.21	1.08	0.31	
43/3 to 41/7	RRJ2	375	17.74	3.04	0.11	10.32	165.3	0.39	179	5.32	214.5	0.33																											



WORK AS EXECUTED SHOWN IN RED

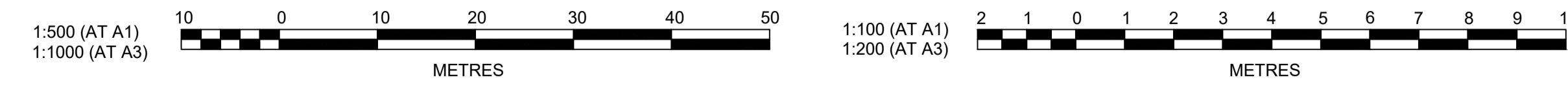
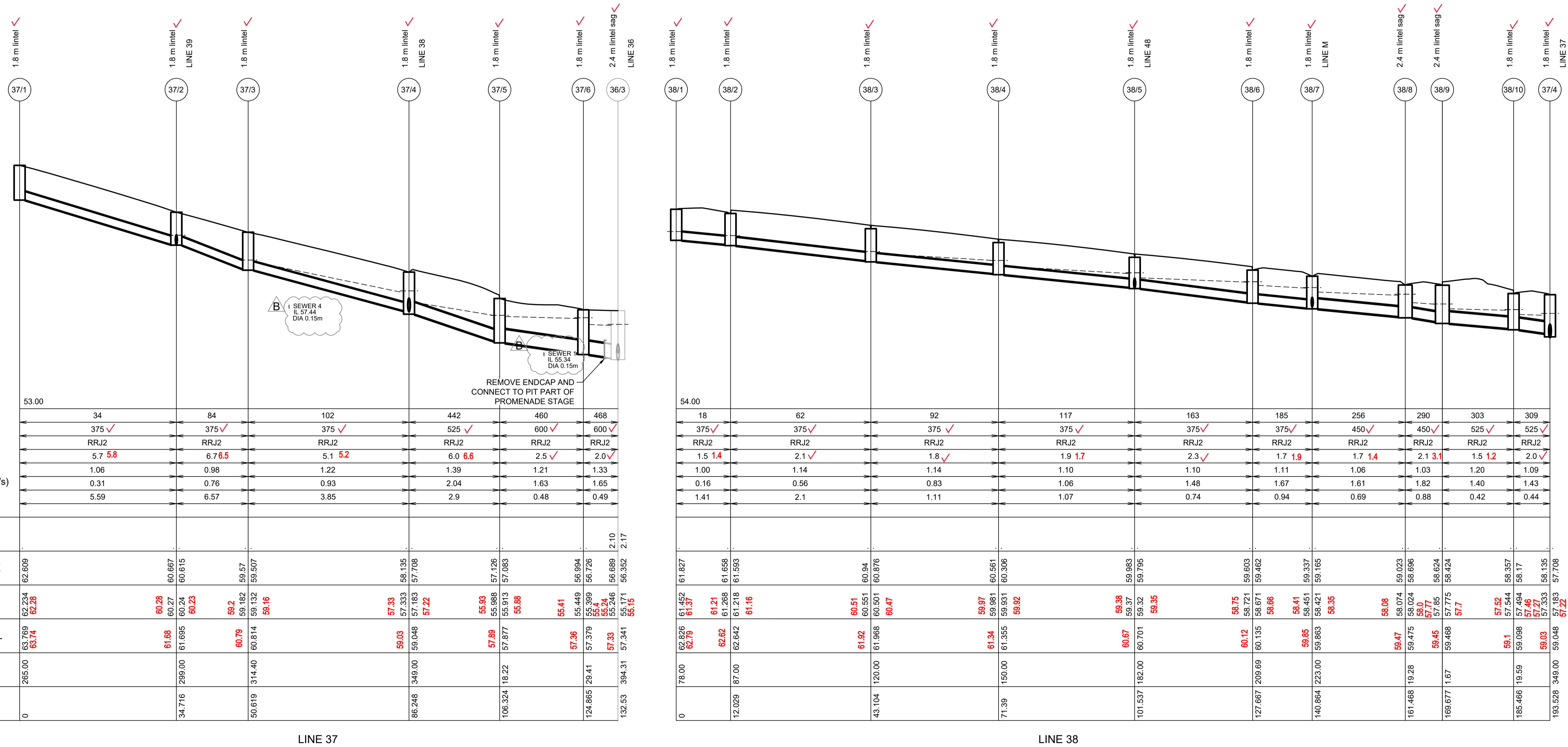
SIGNATURE.....*PPX*.....

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

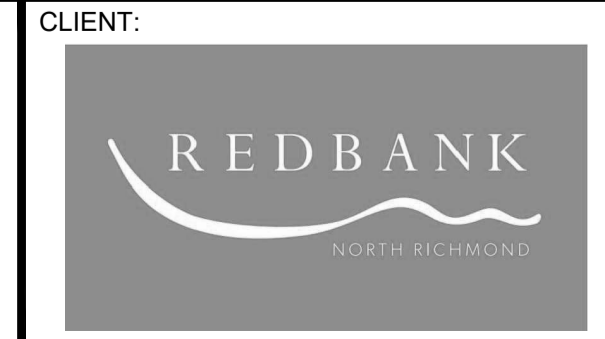


Plotted: 5 May 2022 11:12:31 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS3-RTP\110185-12-CC3421.dwg

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



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  
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**



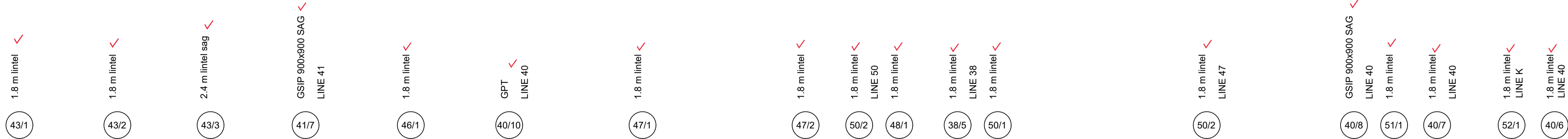




Plotted: 5 May 2022 11:13:15 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3423.dwg

### 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



DATUM (m)	56.00
PEAK FLOW (L/s)	30
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	1.5 ✓
PIPE COVER MINIMUM	1.10
FULL PIPE VELOCITY (m/s)	0.27
HGL GRADE (%)	0.02

WAE	43/1	43/2	43/3	41/7
HYDRAULIC GRADE LINE	63.27	63.265	63.24	63.12
INVERT LEVEL	62.609 <b>62.56</b>	62.28 62.335	62.285 <b>62.22</b>	61.88 61.937
DESIGN SURFACE LEVEL	64.198 <b>64.15</b>	63.79 63.821	63.27 63.432	63.1 63.12
ROAD CHAINAGE	0.00	18.284	35.678	53.422
PIPE CHAINAGE		17.00	40.68	

DATUM (m)	57.00
PEAK FLOW (L/s)	32
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	4.7 ✓
PIPE COVER MINIMUM	1.10
FULL PIPE VELOCITY (m/s)	0.29
HGL GRADE (%)	2.15

WAE	46/1	40/10
HYDRAULIC GRADE LINE	63.195	62.8
INVERT LEVEL	62.82 <b>62.79</b>	61.71 61.959
DESIGN SURFACE LEVEL	64.283 <b>64.22</b>	64.37 64.325
ROAD CHAINAGE	92.50	103.46
PIPE CHAINAGE		

DATUM (m)	57.00
PEAK FLOW (L/s)	8
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	1.0 ✓
PIPE COVER MINIMUM	1.14
FULL PIPE VELOCITY (m/s)	0.08
HGL GRADE (%)	0

WAE	47/1	47/2	50/2
HYDRAULIC GRADE LINE	63.705	63.704	63.703
INVERT LEVEL	63.132 <b>63.1</b>	62.8 62.828	62.61 62.597
DESIGN SURFACE LEVEL	64.695 <b>64.68</b>	64.36 64.391	64.29 64.331
ROAD CHAINAGE	177.45	147.00	141.00
PIPE CHAINAGE			

DATUM (m)	54.00
PEAK FLOW (L/s)	25
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	1.3 1.0
PIPE COVER MINIMUM	0.98
FULL PIPE VELOCITY (m/s)	0.22
HGL GRADE (%)	0.02

WAE	48/1	38/5	50/1
HYDRAULIC GRADE LINE	59.985	59.983	59.795
INVERT LEVEL	59.506 <b>59.49</b>	59.38 59.37	59.32 <b>59.35</b>
DESIGN SURFACE LEVEL	60.861 <b>60.83</b>	60.67 60.701	60.71 60.701
ROAD CHAINAGE	174.61	182.00	
PIPE CHAINAGE			

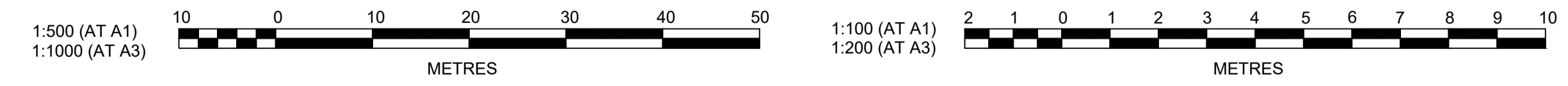
DATUM (m)	57.00
PEAK FLOW (L/s)	32
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	1.3 ✓
PIPE COVER MINIMUM	1.16
FULL PIPE VELOCITY (m/s)	0.29
HGL GRADE (%)	0.03

WAE	50/2	40/8	51/1	40/7
HYDRAULIC GRADE LINE	63.714	63.703	63.876	63.703
INVERT LEVEL	63.137 <b>63.1</b>	62.58 62.617	63.13 62.87	62.796 <b>62.78</b>
DESIGN SURFACE LEVEL	64.721 <b>64.72</b>	64.29 64.331	64.56 64.53	64.556 <b>64.71</b>
ROAD CHAINAGE	180.00	141.00	14.06	
PIPE CHAINAGE				

DATUM (m)	57.00
PEAK FLOW (L/s)	6
PIPE SIZE (mm)	375 ✓
PIPE CLASS	RRJ2
PIPE GRADE (%)	2.7 3.4
PIPE COVER MINIMUM	1.06
FULL PIPE VELOCITY (m/s)	0.05
HGL GRADE (%)	0

WAE	52/1	40/6
HYDRAULIC GRADE LINE	65.931	65.363
INVERT LEVEL	65.342 <b>65.23</b>	65.888 <b>65.922</b>
DESIGN SURFACE LEVEL	66.804 <b>66.81</b>	66.703 <b>64.71</b>
ROAD CHAINAGE	40.54	41.47
PIPE CHAINAGE		

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



NO.	DESCRIPTION	MP	EJ	JB	MS	DATE
B	ISSUED FOR CONSTRUCTION APPROVAL					18/02/22
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



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 DRAINAGE LONGITUDINAL SECTIONS SHEET 3**  
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3423

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







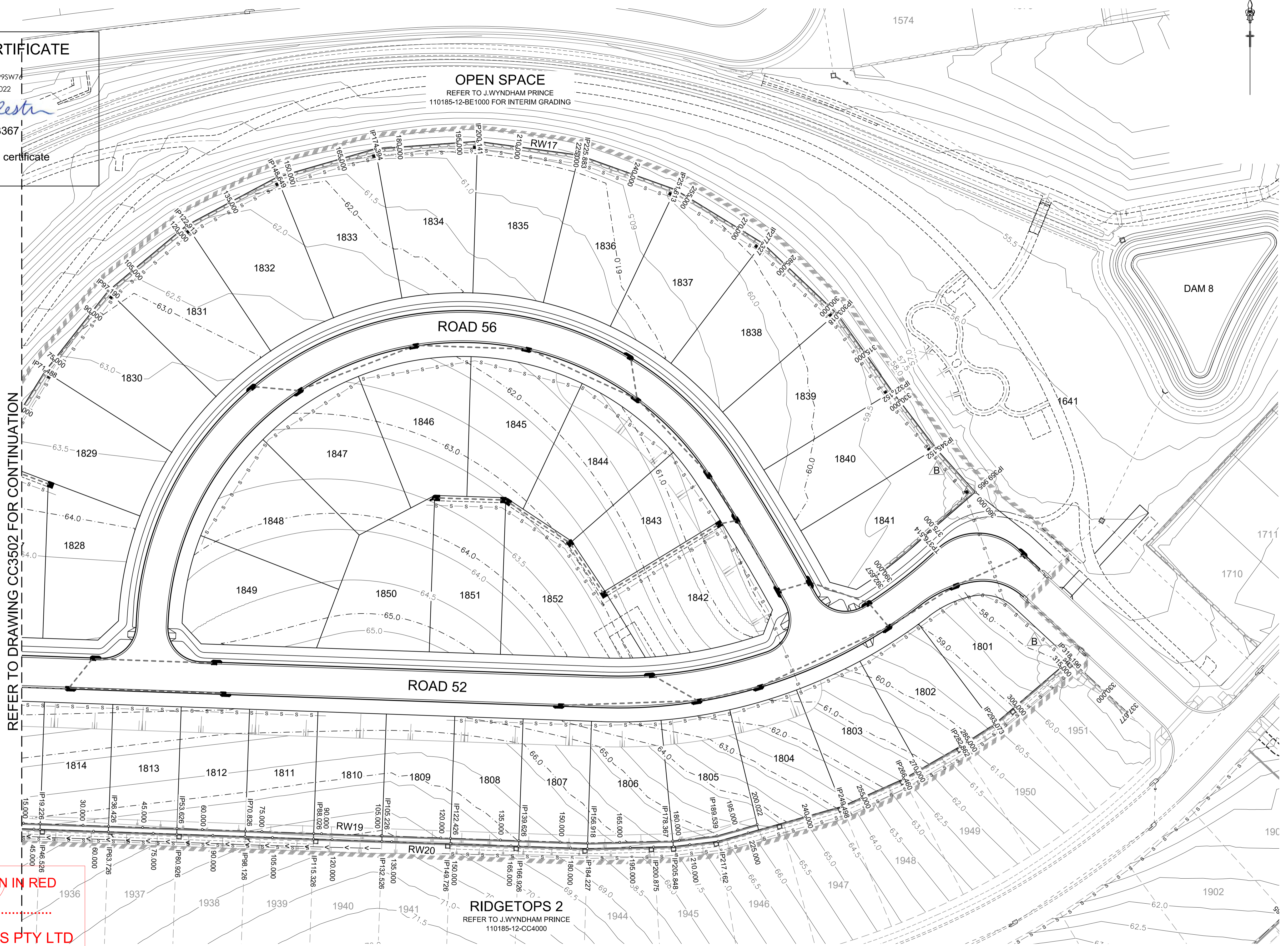
**SUBDIVISION WORKS CERTIFICATE**

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

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

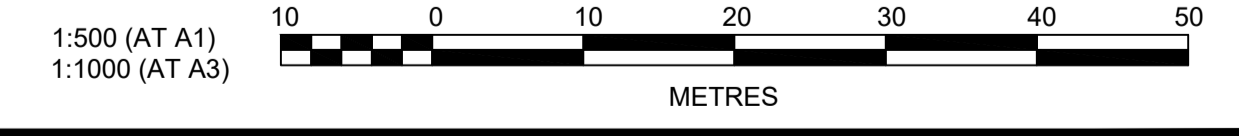
**OPEN SPACE**  
 REFER TO J.WYNDHAM PRINCE  
 110185-12-BE1000 FOR INTERIM GRADING

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



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  
 RETAINING WALL PLAN  
 SHEET 1**

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

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



WORK AS EXECUTED SHOWN IN RED

SIGNATURE.....

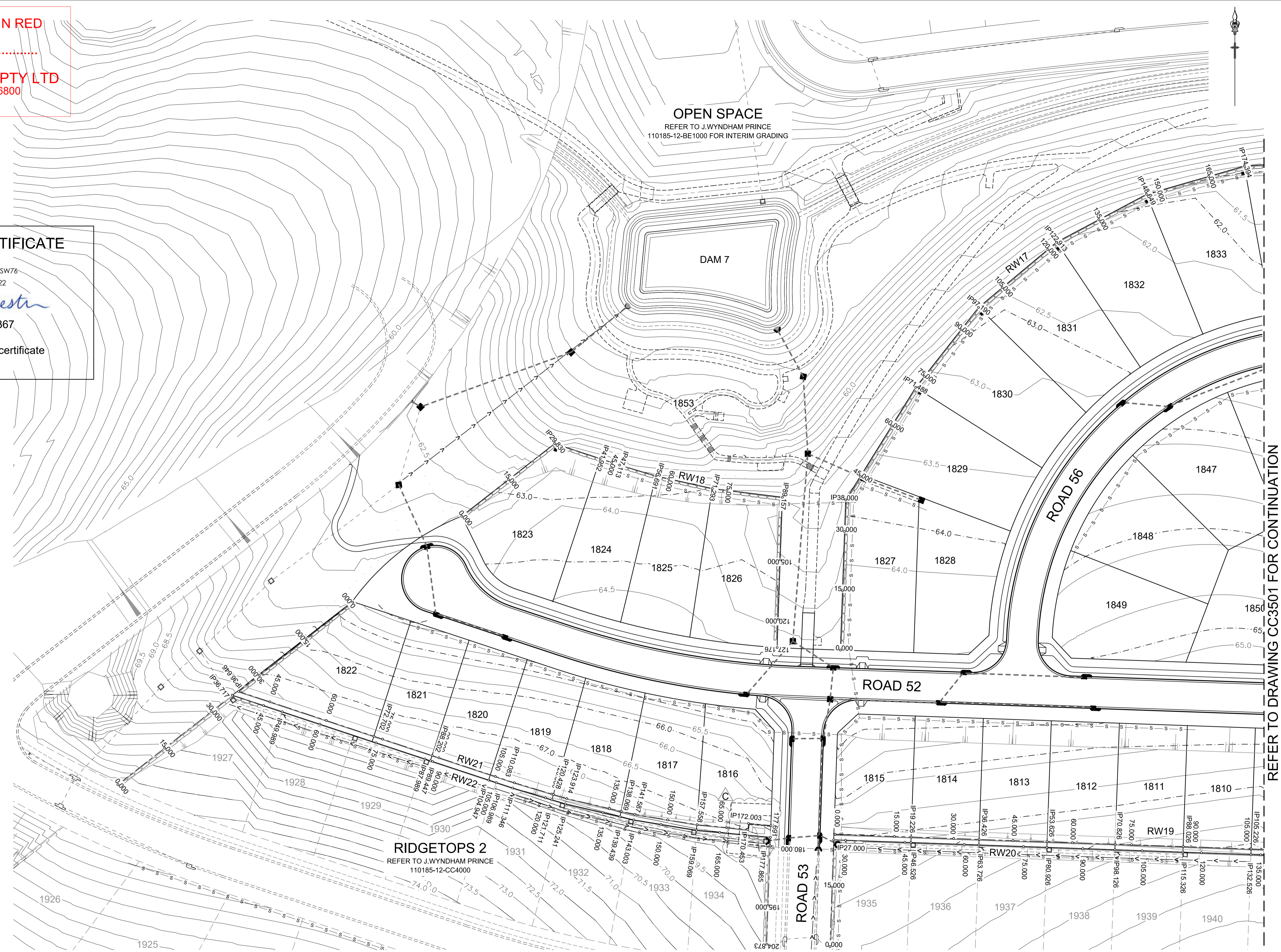
*PR*

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

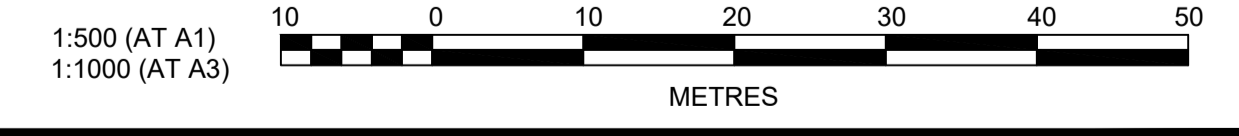
**SUBDIVISION WORKS CERTIFICATE**

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



REFER TO DRAWING CC3501 FOR CONTINUATION



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**  
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



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  
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: PLAN No: 110185-12-CC3502



WORK AS EXECUTED SHOWN IN RED

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

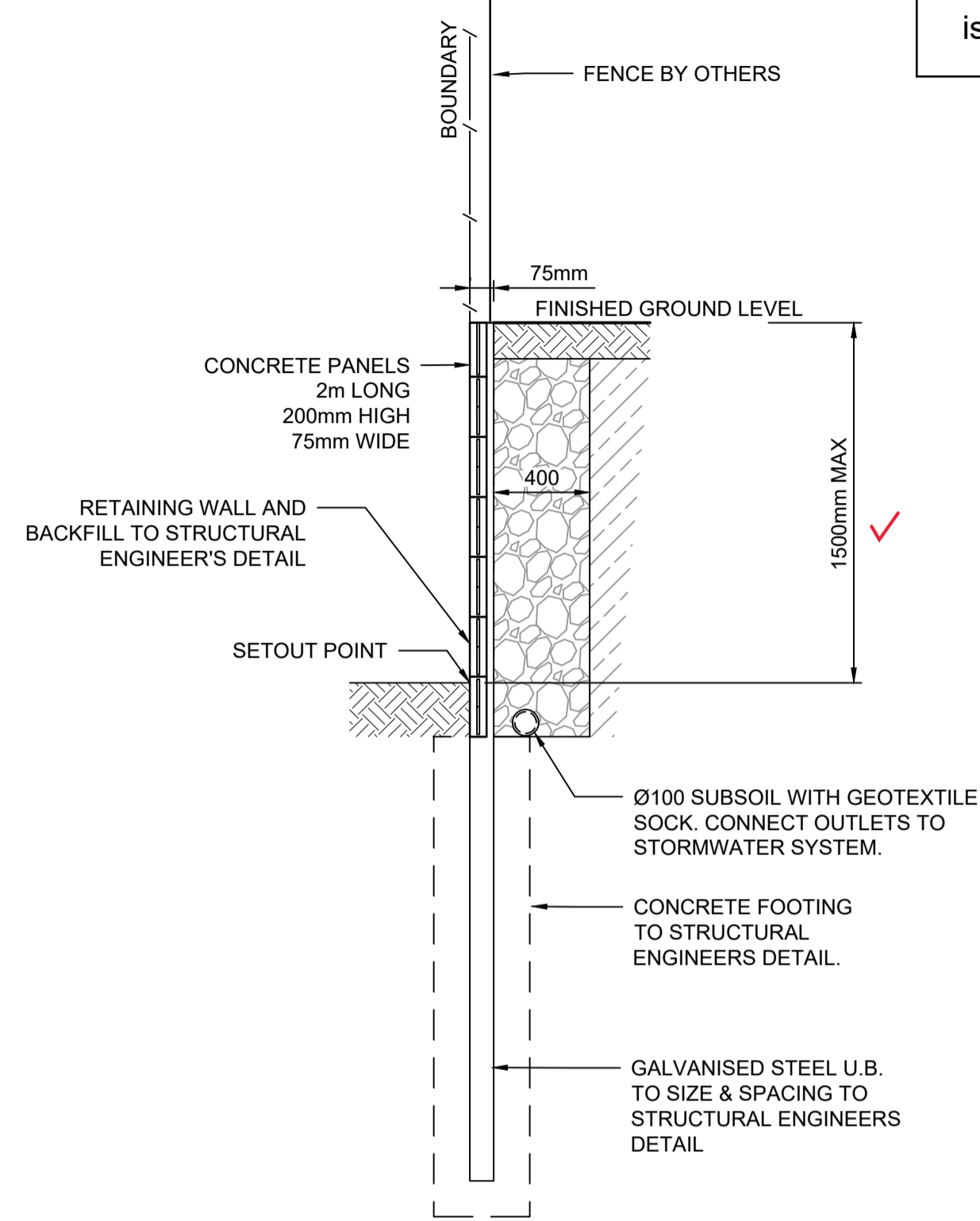
VINCE MORGAN SURVEYORS PTY LTD  
DATE: 09/01/23 REF:16800

### SUBDIVISION WORKS CERTIFICATE

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

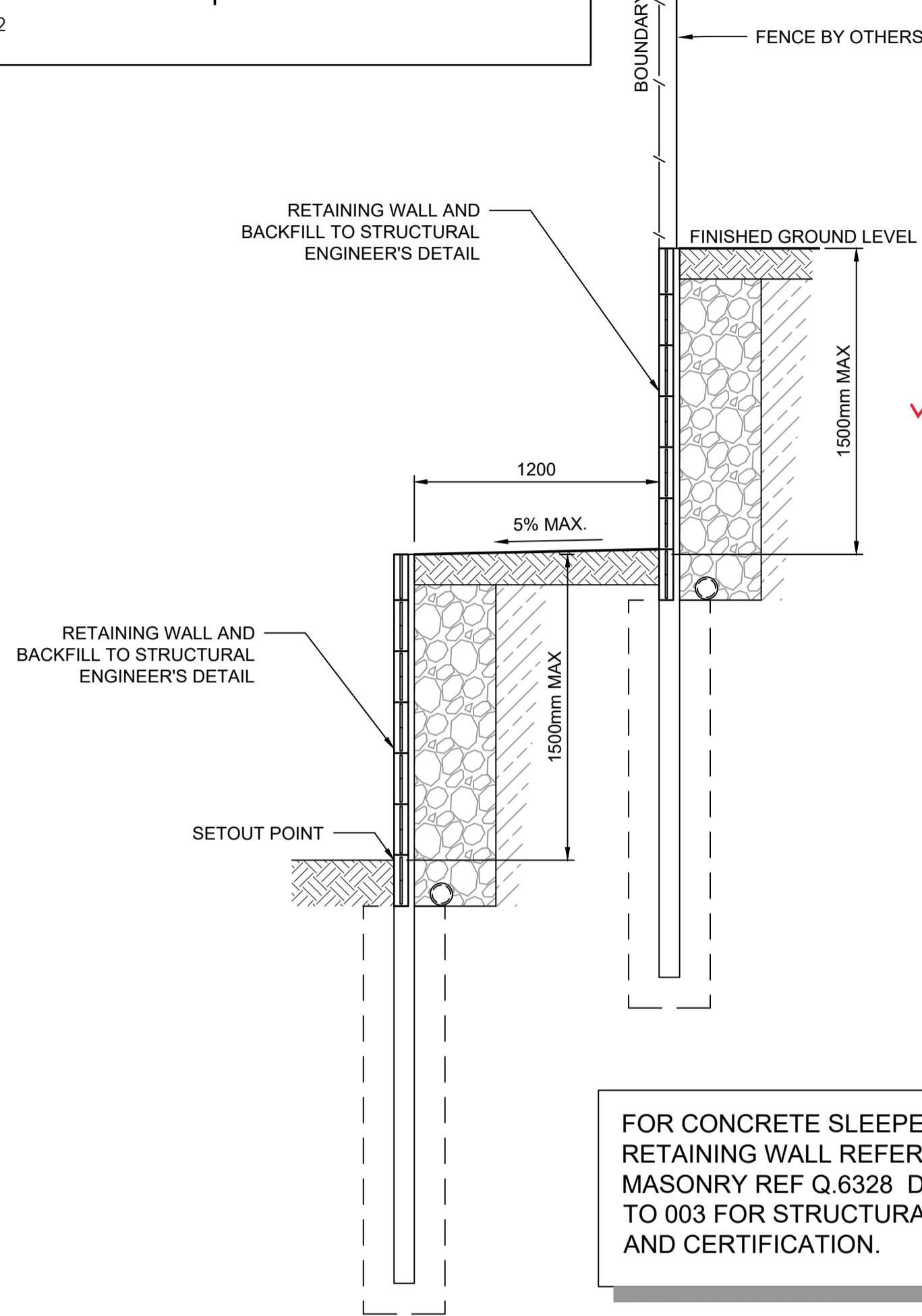
These plans/specifications form part of the certificate issued 11/05/2022

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



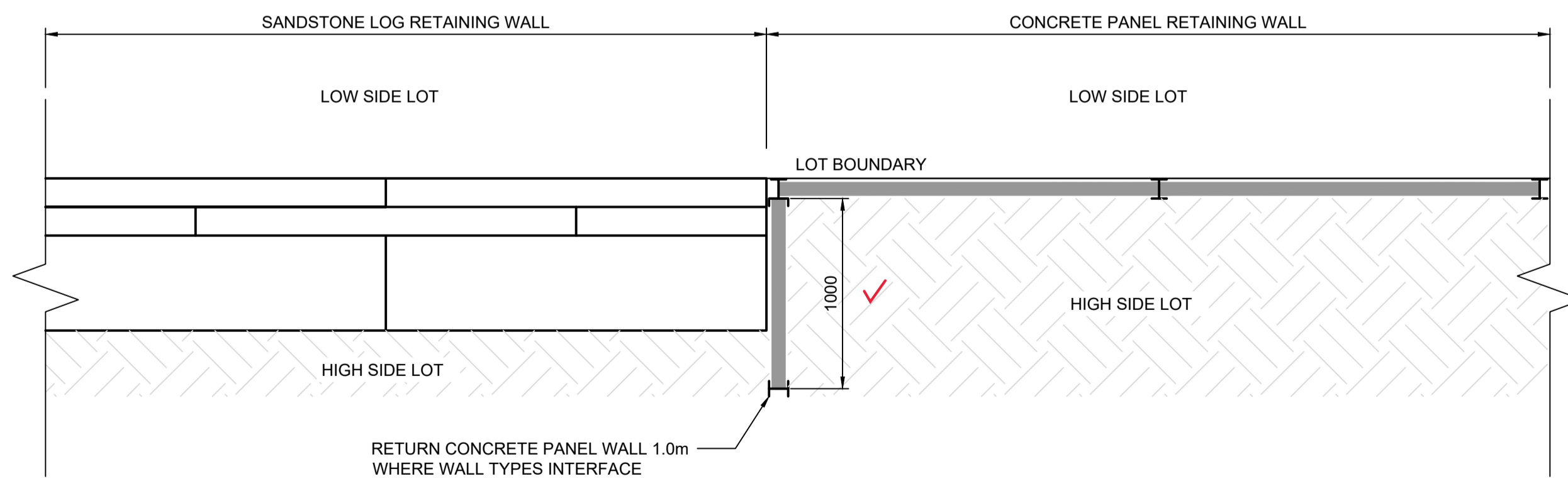
RETAINING WALL CONCRETE PANELS I-BEAM  
STANDARD DETAIL  
FOR RW 20 (PART)  
SCALE 1:25

NOTE:  
I BEAMS INCLUDE BRACKETS FOR FENCES TO BE INSTALLED

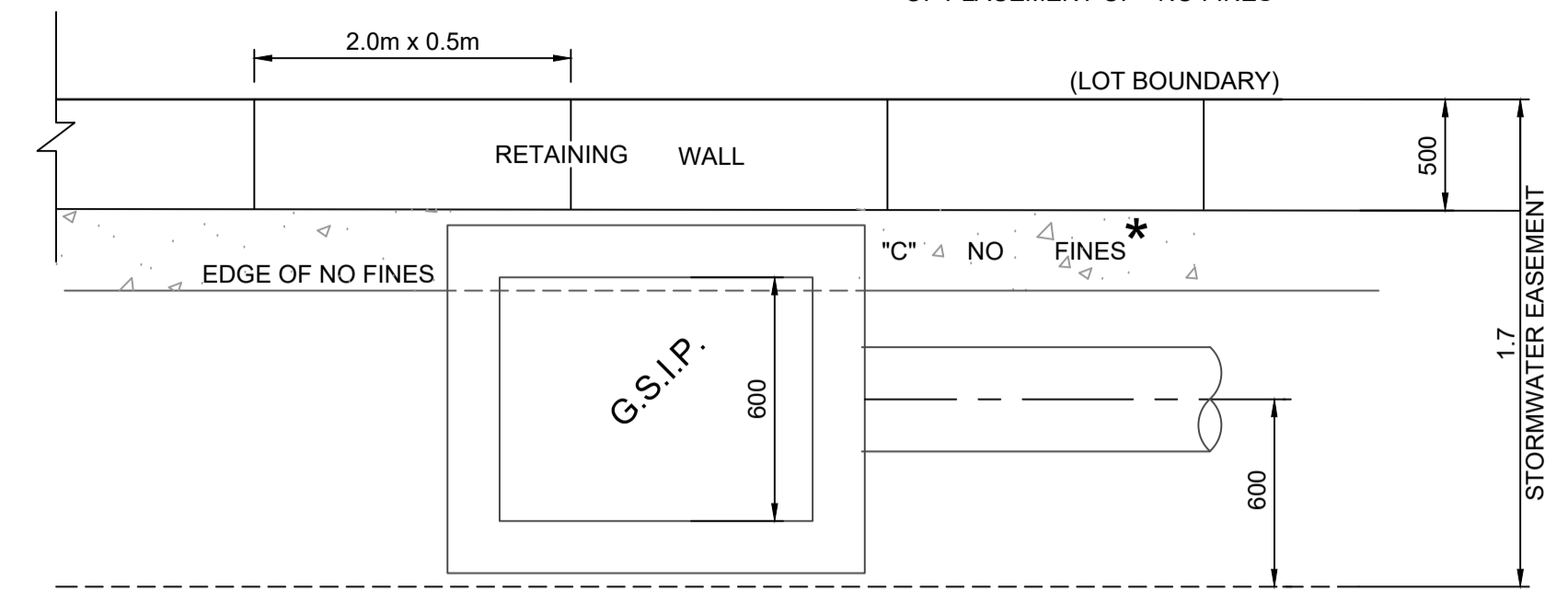


FOR CONCRETE SLEEPER RETAINING WALL REFER TO ADBRI MASONRY REF Q.6328 Dwg No. 001 TO 003 FOR STRUCTURAL DESIGN AND CERTIFICATION.

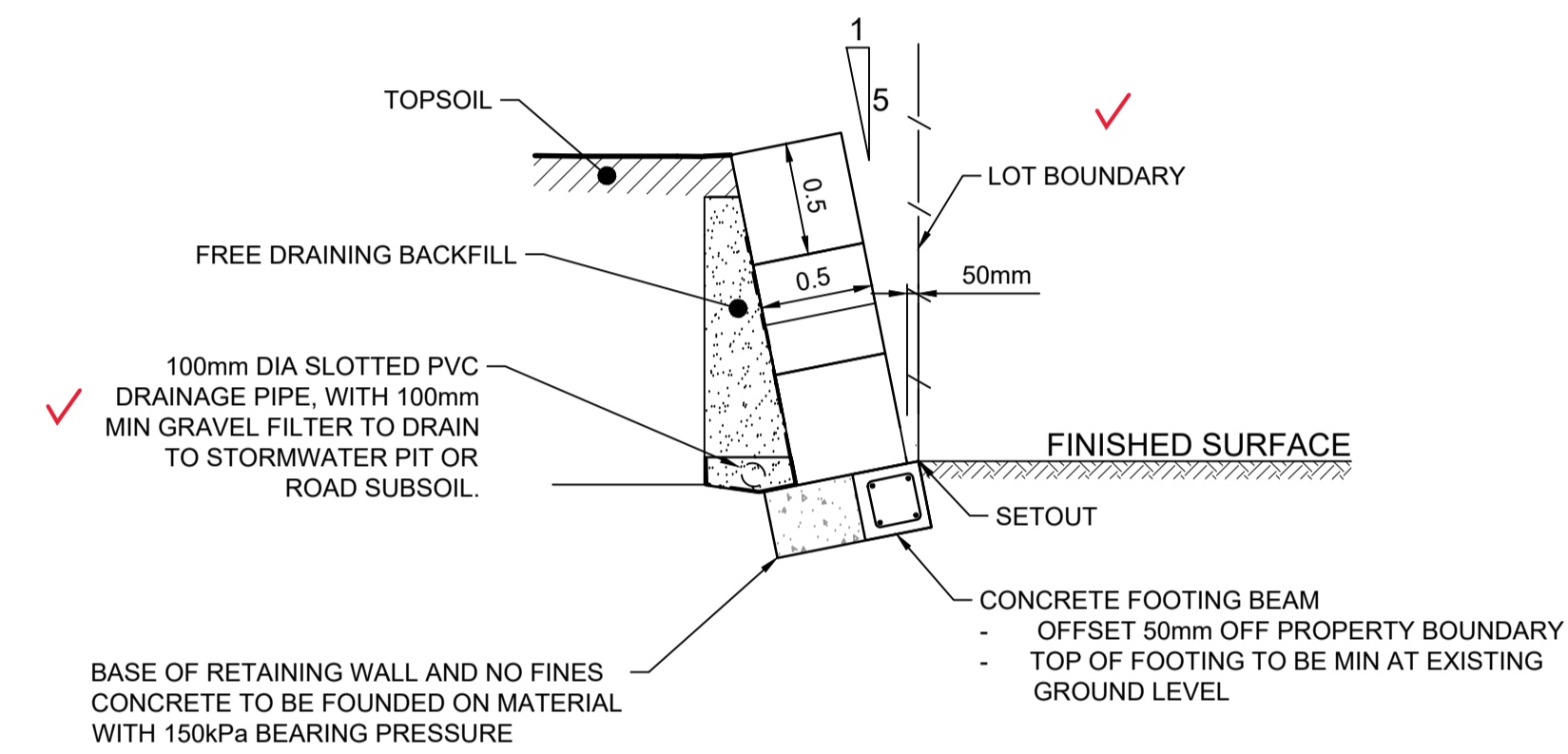
RETAINING WALL CONCRETE PANELS I-BEAM  
STANDARD DETAIL  
FOR TWO TIERED RETAINING WALLS  
SCALE 1:25



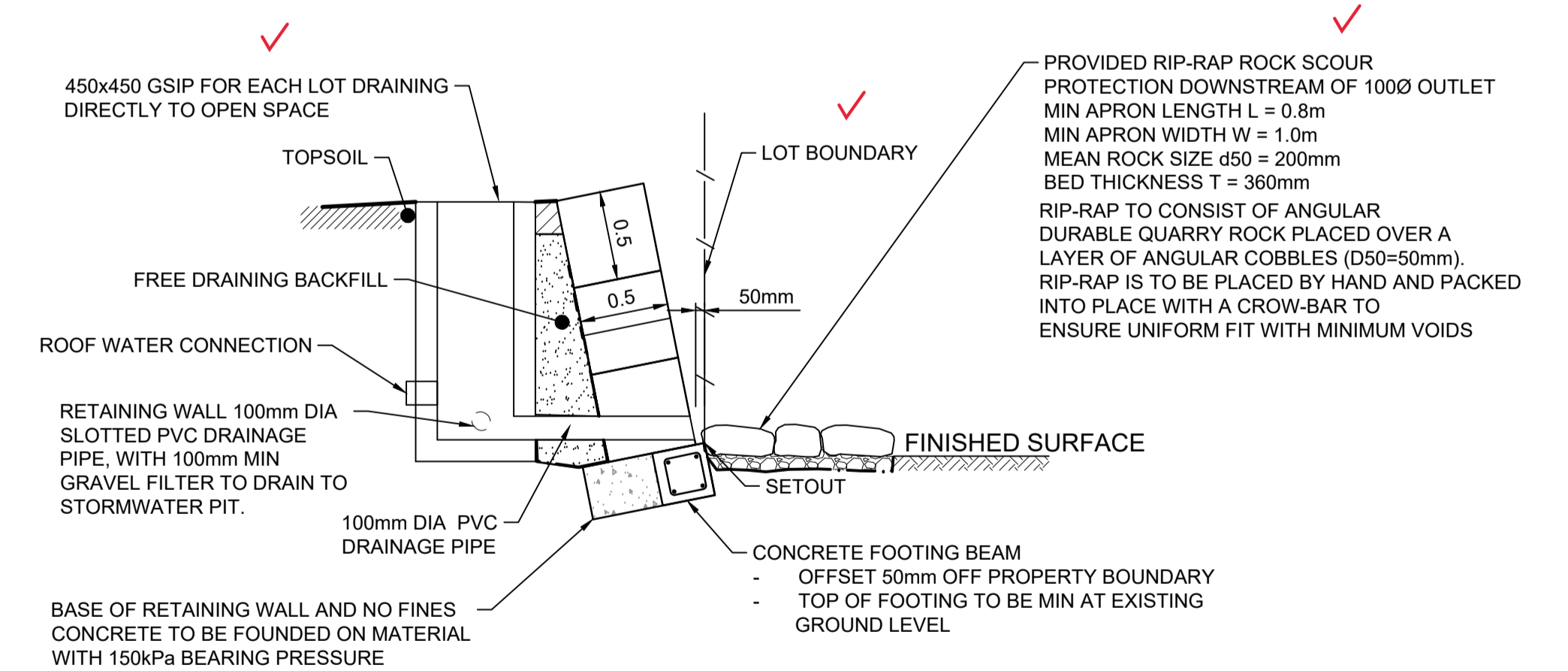
TYPICAL RETAINING WALL INTERFACING DETAIL  
FOR SANDSTONE LOG & CONCRETE PANEL RETAINING WALLS  
NTS



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

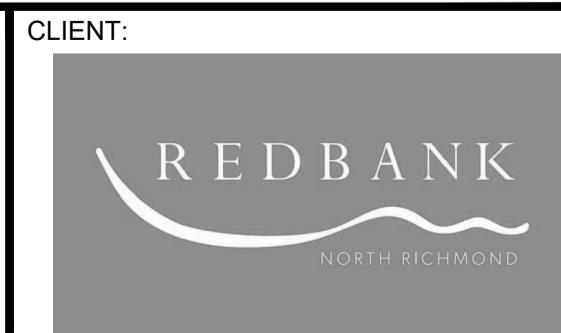
FOR SANDSTONE LOG RETAINING WALL REFER TO INHOUSE CONSULTING ENGINEERS REF 17770 Dwg No. S11 & S12 FOR STRUCTURAL DESIGN AND CERTIFICATION.

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

**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



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  
RETAINING WALL DETAILS**

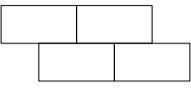
PROJECT No: **110185-12**  
SHEET No: **CC3503**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3503 B



**LEGEND**

 CONCRETE PANELS I-BEAM RETAINING WALL

 SANDSTONE LOG RETAINING WALL

**SUBDIVISION WORKS CERTIFICATE**

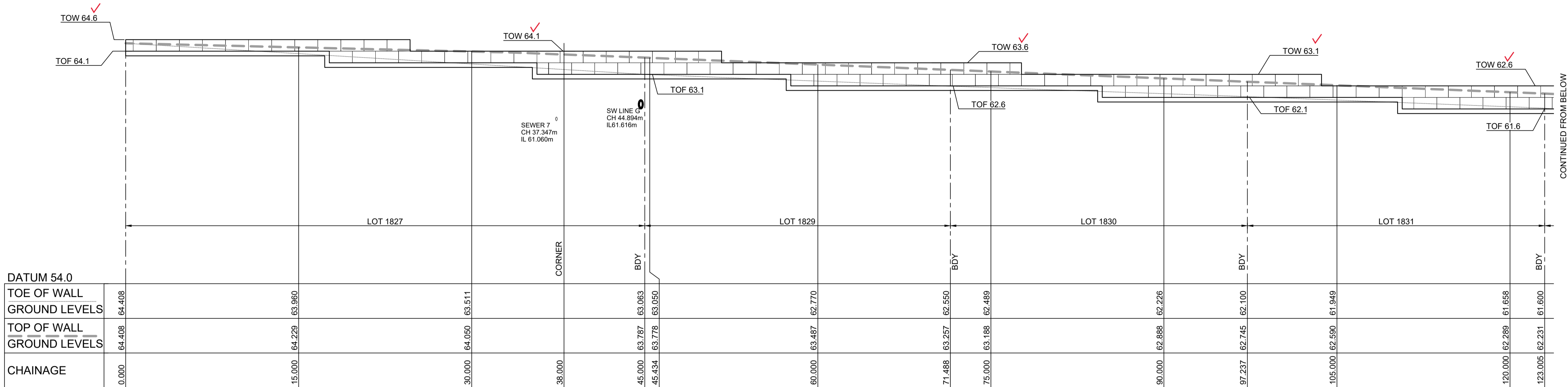
Certificate No. .... 201302995W76  
 Date of Issue ..... 11/05/2022  
 Issuing Officer *D. Resta*  
 Accreditation No. BDC3367

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

**WORK AS EXECUTED SHOWN IN RED**

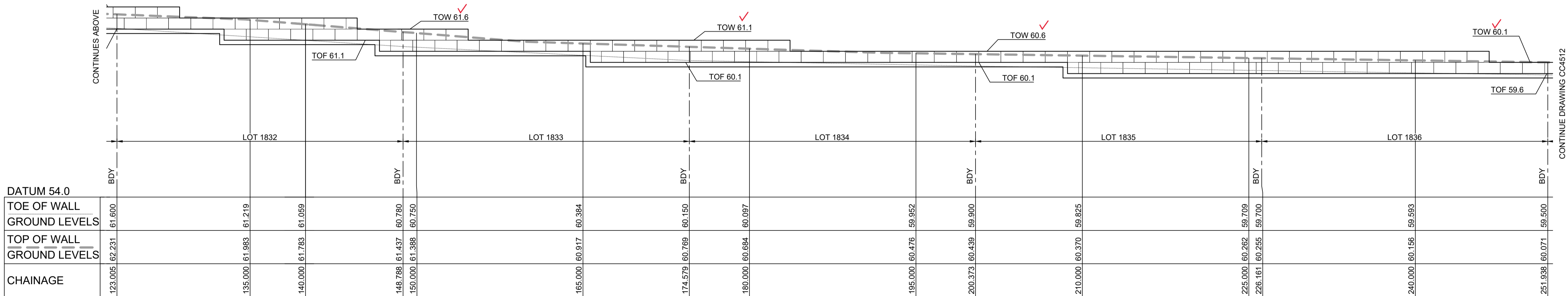
SIGNATURE..... *PR*

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

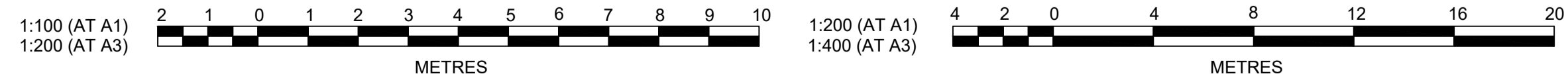


LONGITUDINAL SECTION RW 17  
 HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:100

**NOTE: FOOTING LEVELS NOT ACCESSIBLE AT TIME OF SURVEY**



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

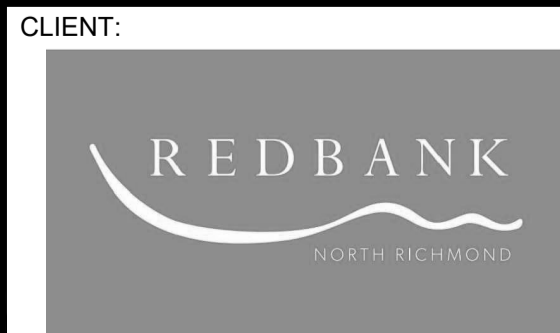


Plotted: 5 May 2022 11:17:01 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DAC\DC\SSOUTHERN HEIGHTS\3-RTP\110185-12-CC3511.dwg

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



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  
 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

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

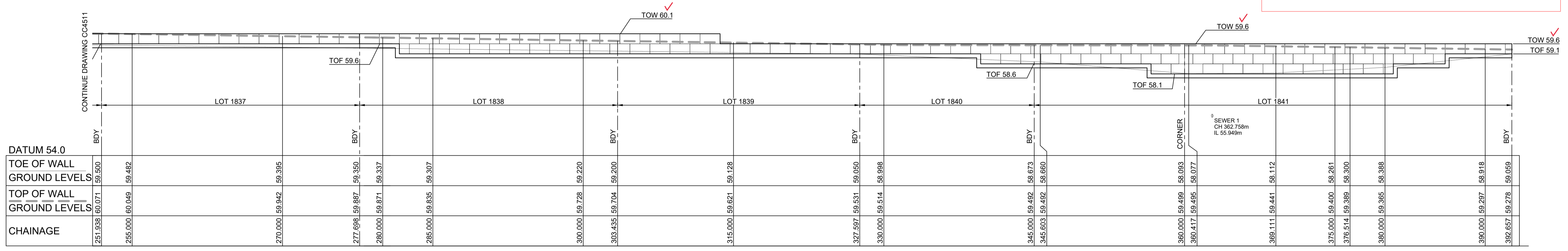
**LEGEND**

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"

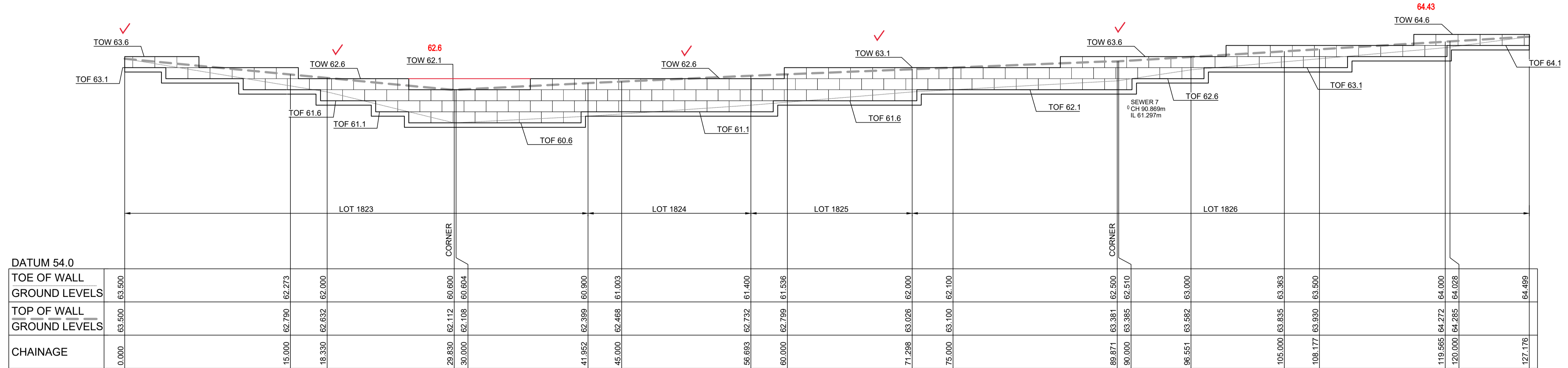
WORK AS EXECUTED SHOWN IN RED  
 SIGNATURE..... *PR*  
**VINCE MORGAN SURVEYORS PTY LTD**  
 DATE: 09/01/23 REF:16800



LONGITUDINAL SECTION RW 17 (Cont)

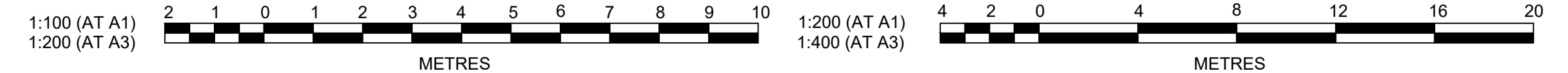
HORIZONTAL SCALE 1:200  
 VERTICAL SCALE 1:100

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\CD\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

**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**

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

**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**

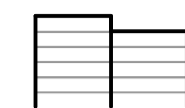
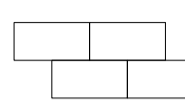


**SUBDIVISION WORKS CERTIFICATE**

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

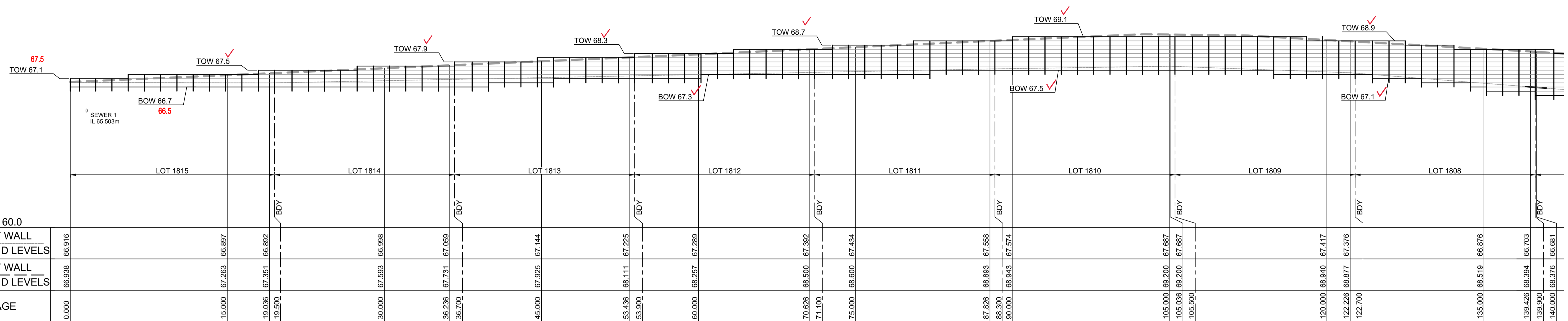
**LEGEND**

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

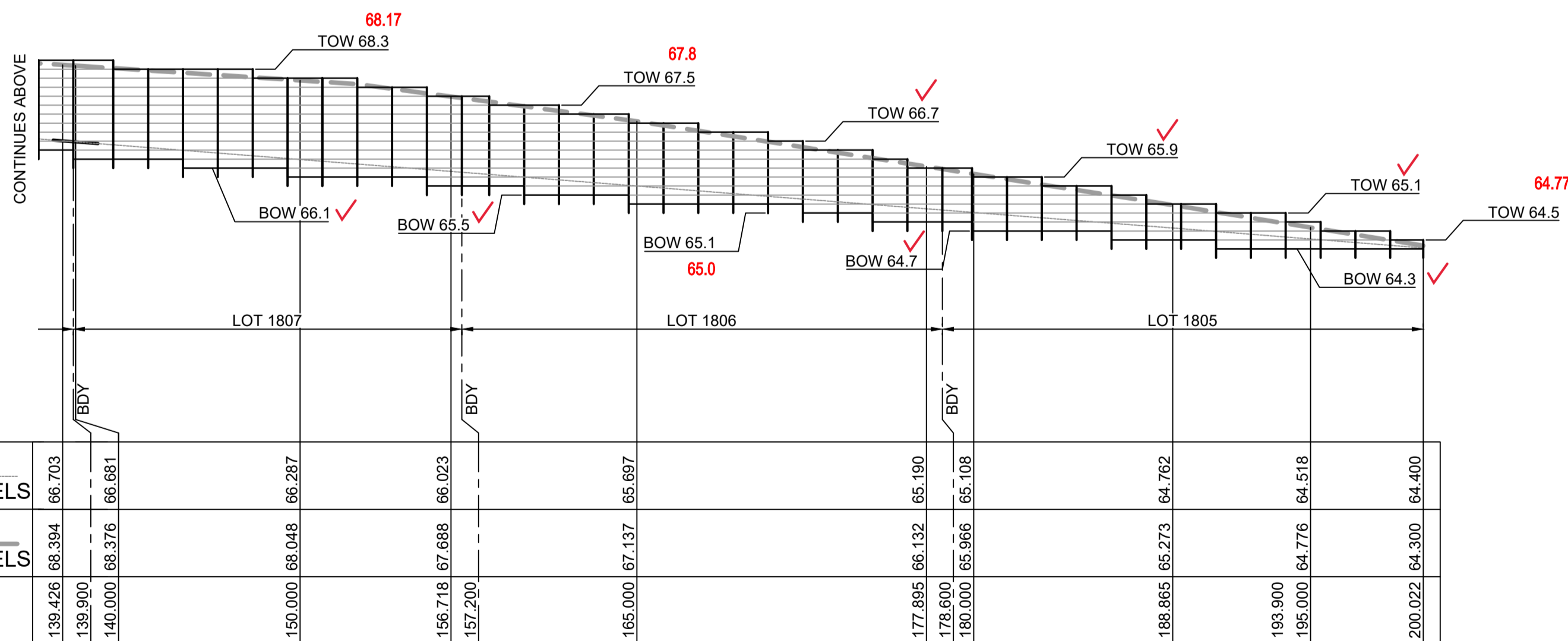
**WORK AS EXECUTED SHOWN IN RED**

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"

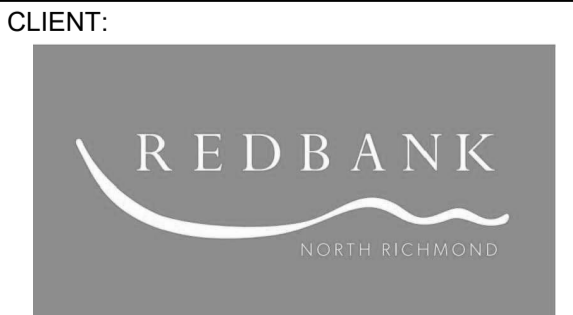


Plotted: 5 May 2022 11:18:07 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3513.dwg

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**  
 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



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  
 RETAINING WALL LONGSECTIONS  
 SHEET 3**

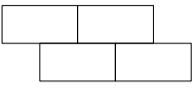
PROJECT No: **110185-12**  
 SHEET No: **CC3513**  
 PLAN No: **110185-12-CC3513**

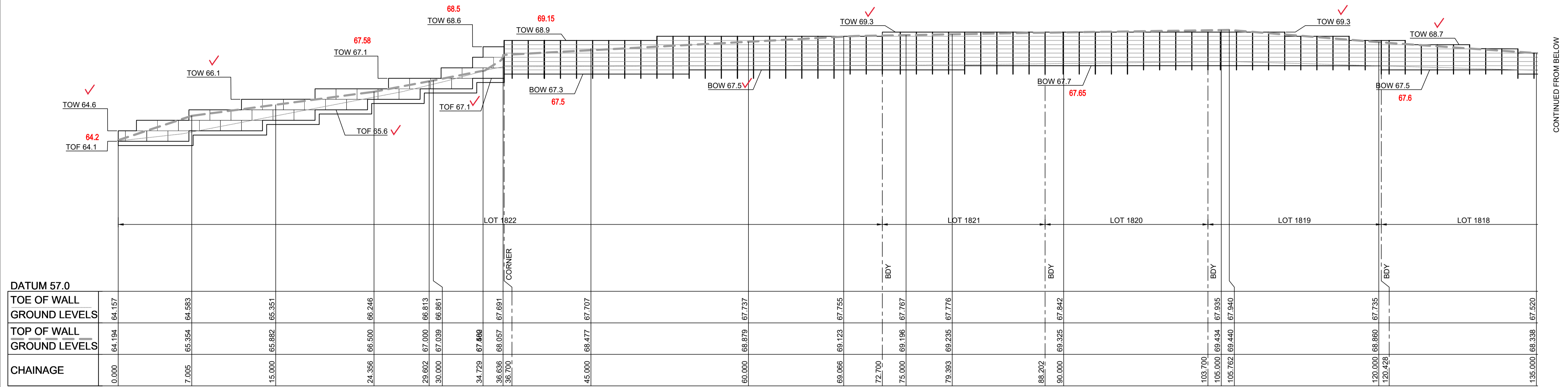
C



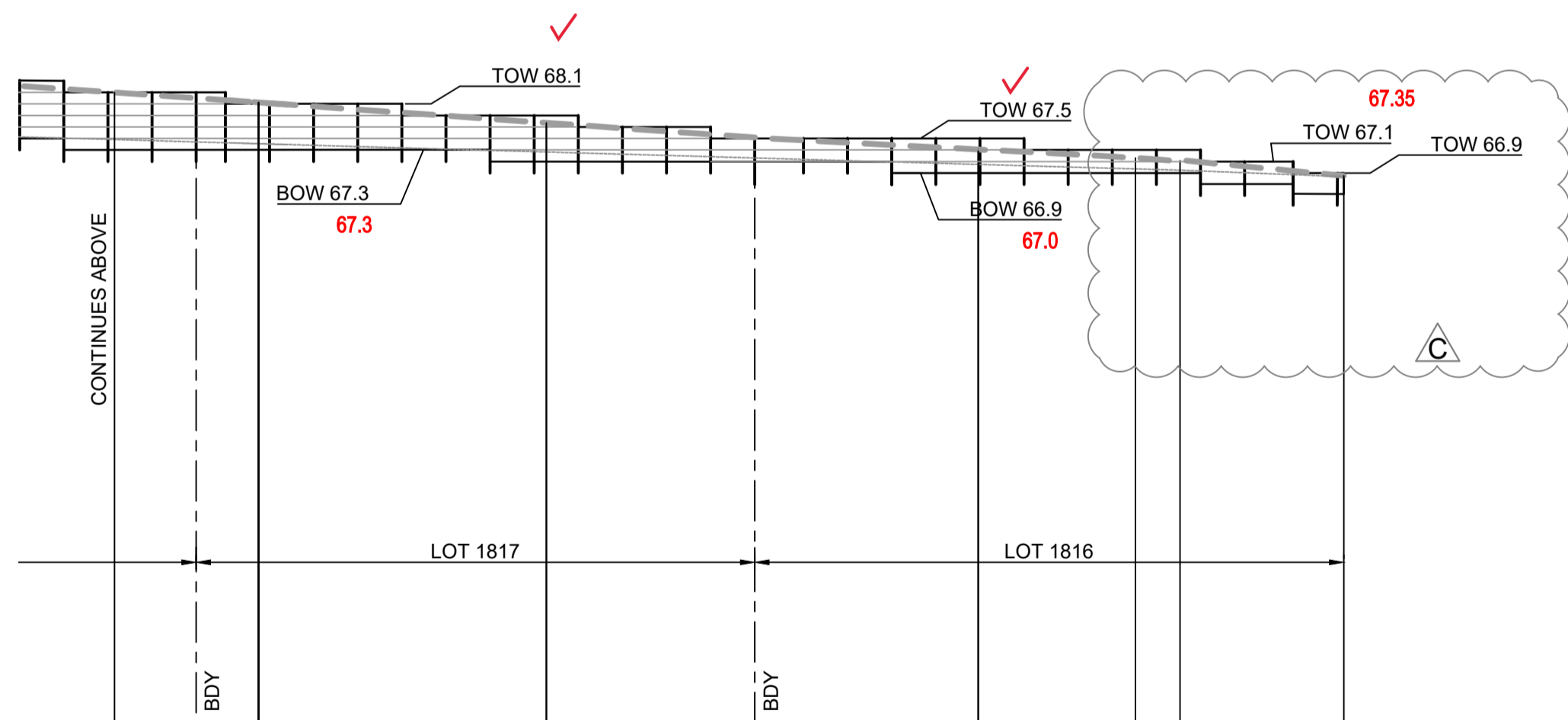
**LEGEND**

 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**

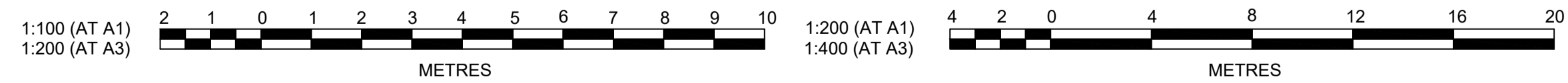
Certificate No. .... 20130299SW76  
Date of Issue ..... 11/05/2022  
Issuing Officer *D. Restin*  
Accreditation No. .... BDC3367

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

**WORK AS EXECUTED SHOWN IN RED**

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\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3514.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE	
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

**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



STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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

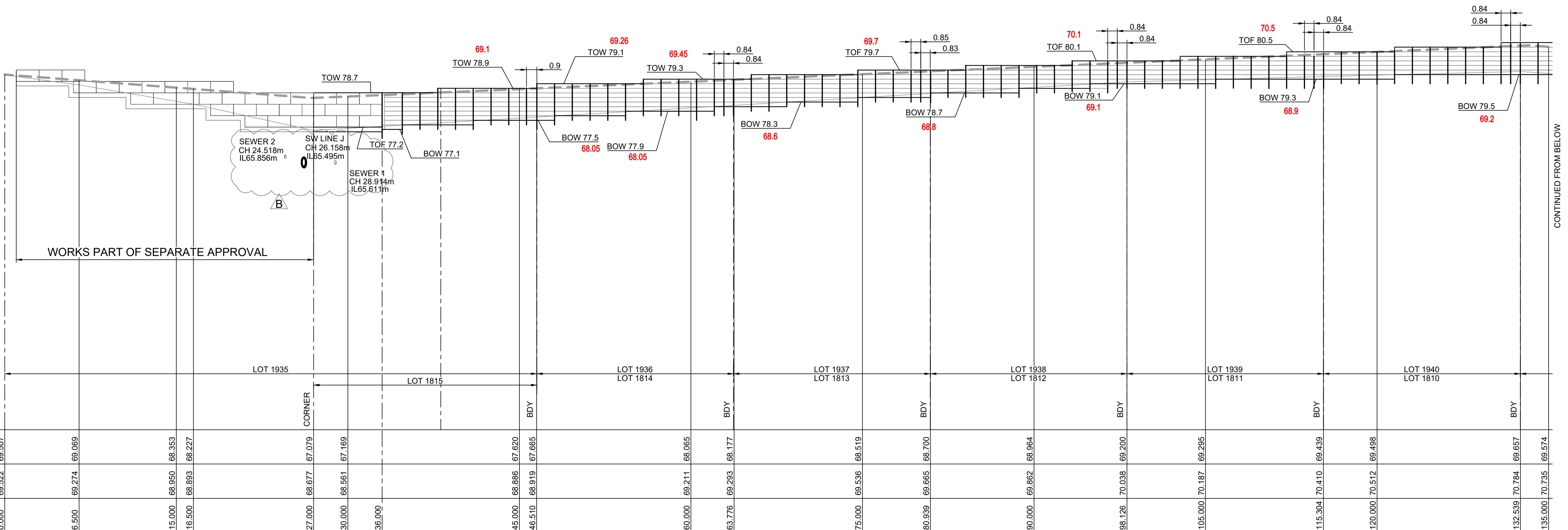
**REDBANK, NORTH RICHMOND  
RIDGETOPS 1 - SWC  
RETAINING WALL LONGSECTIONS  
SHEET 4**

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



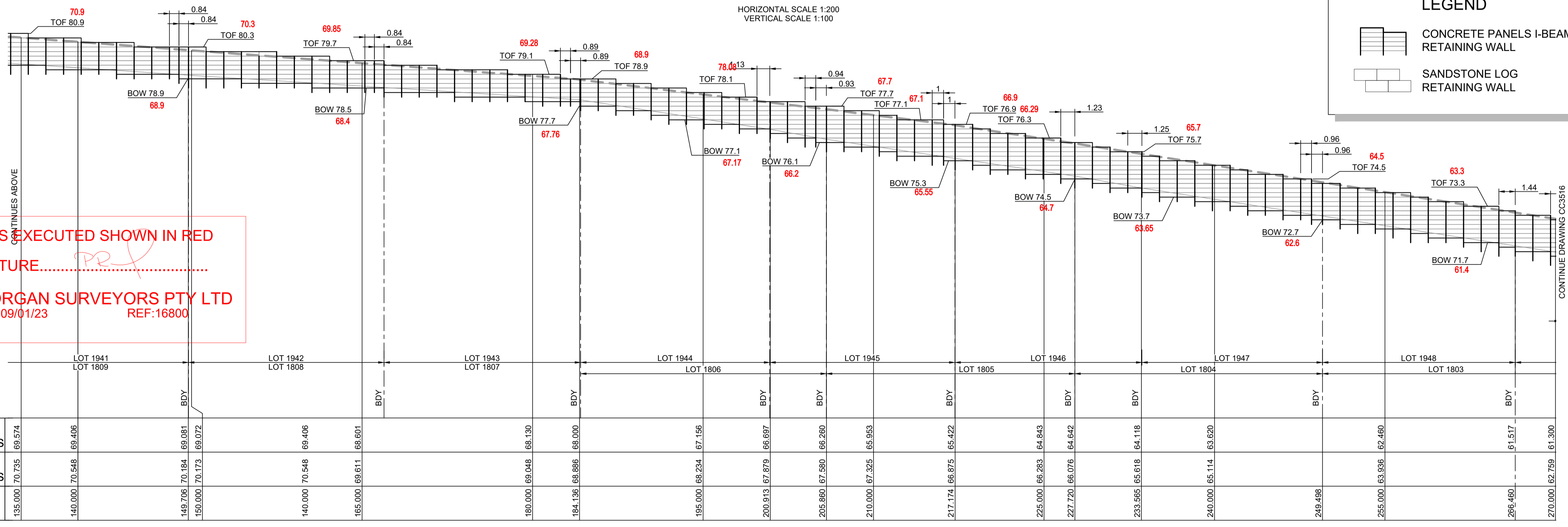
DATUM 54.0	
TOE OF WALL	69.507
GROUND LEVELS	69.522
TOP OF WALL	69.274
GROUND LEVELS	68.950
CHAINAGE	0.000

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

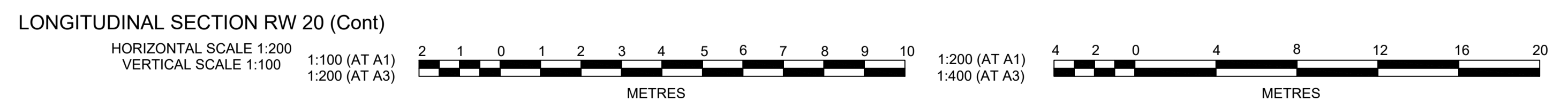
**LEGEND**

- 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



DATUM 57.0	
TOE OF WALL	69.574
GROUND LEVELS	70.735
TOP OF WALL	70.548
GROUND LEVELS	70.184
CHAINAGE	135.000



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



**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**  
 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**  
 C


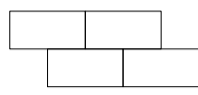


WORK AS EXECUTED SHOWN IN RED

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

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

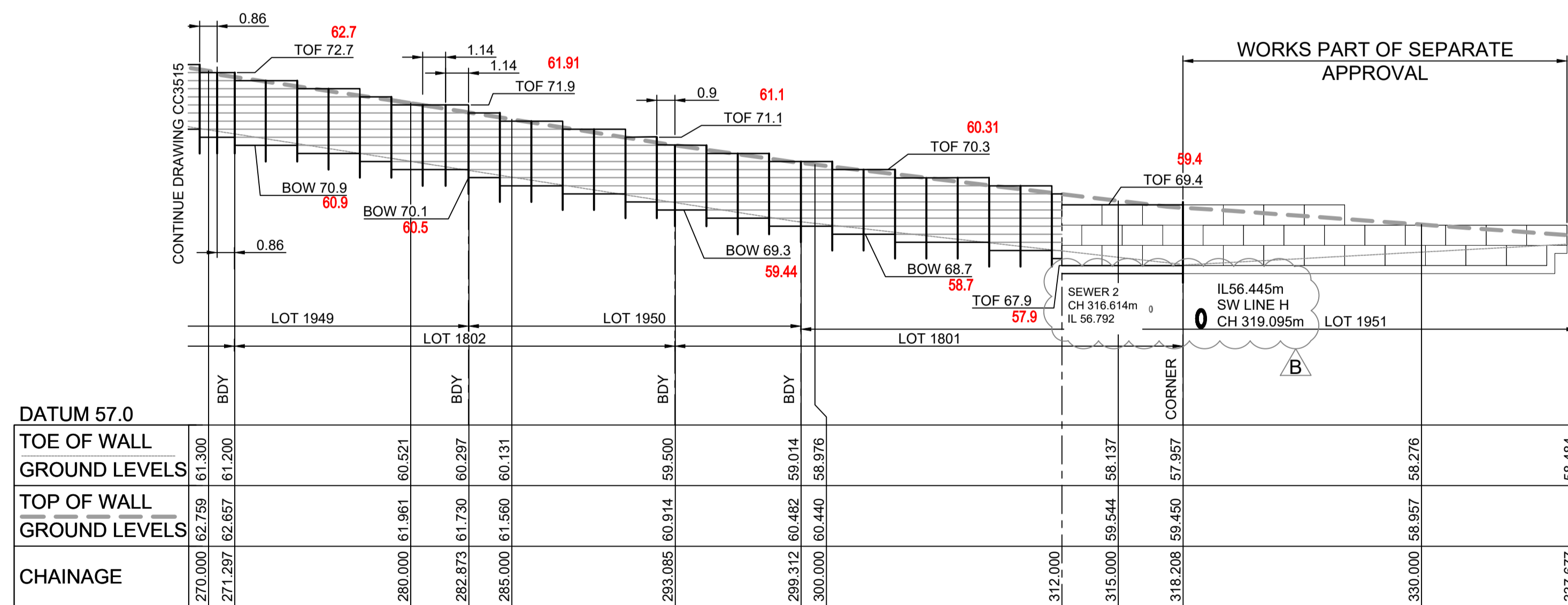
LEGEND

-  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

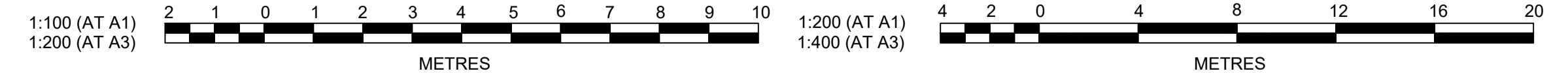
These plans/specifications form part of the certificate issued 11/05/2022



DATUM 57.0	
TOE OF WALL	61.300
GROUND LEVELS	61.200
TOP OF WALL	61.961
GROUND LEVELS	61.730
CHAINAGE	270.000
	271.297
	280.000
	282.873
	285.000
	293.085
	299.312
	300.000
	312.000
	315.000
	318.208
	330.000
	337.677

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"

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



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

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



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  
RETAINING WALL LONGSECTIONS  
SHEET 6

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

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



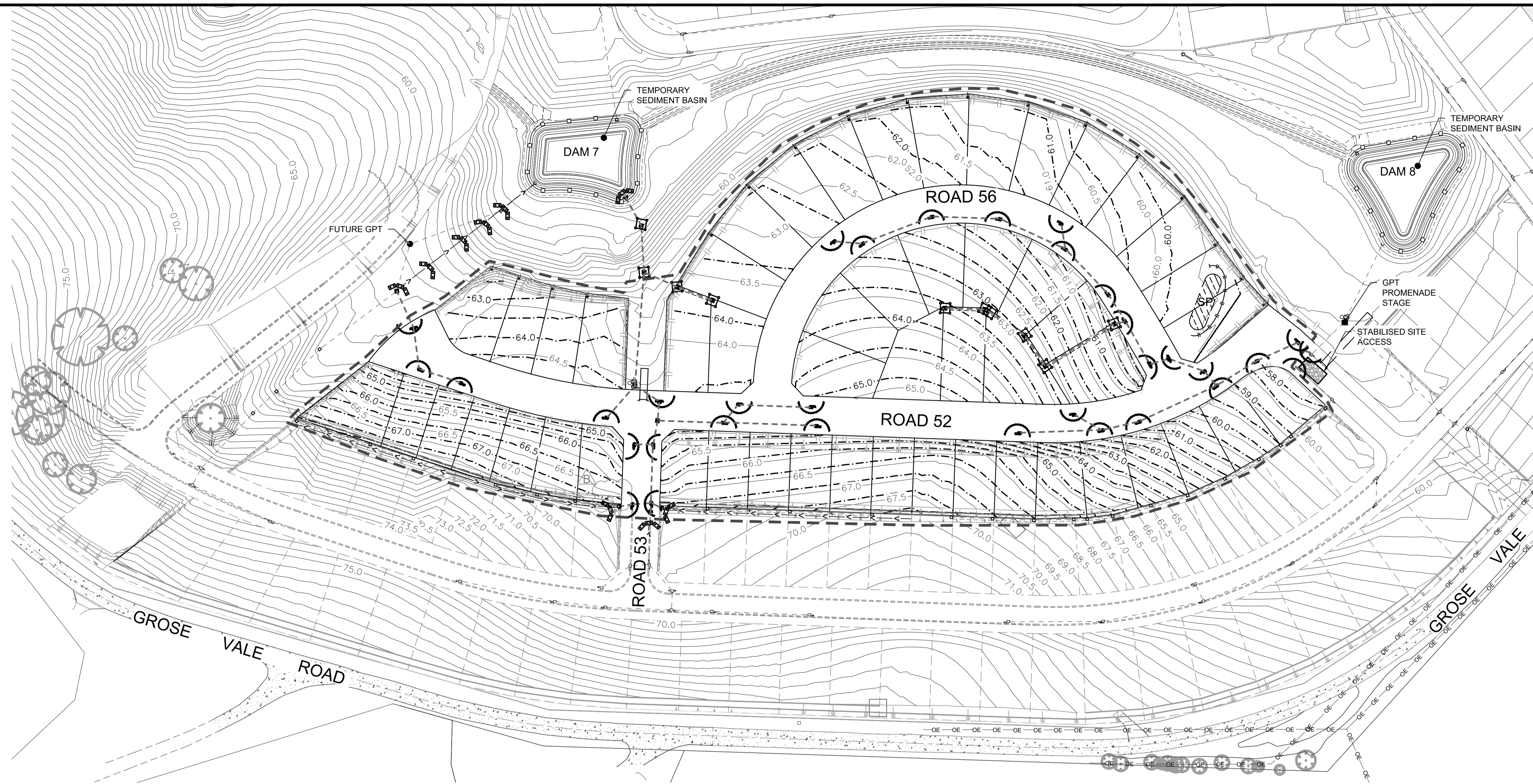








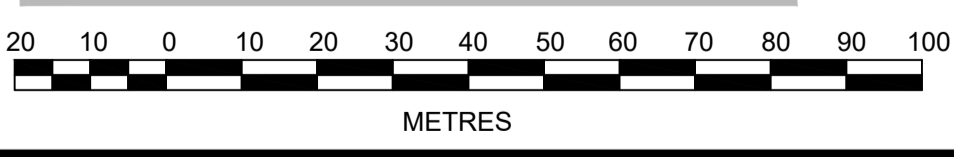
Plotted: 6 May, 2022 11:57:42 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3701.dwg



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

**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**  
 SOIL & WATER MANAGEMENT PLAN

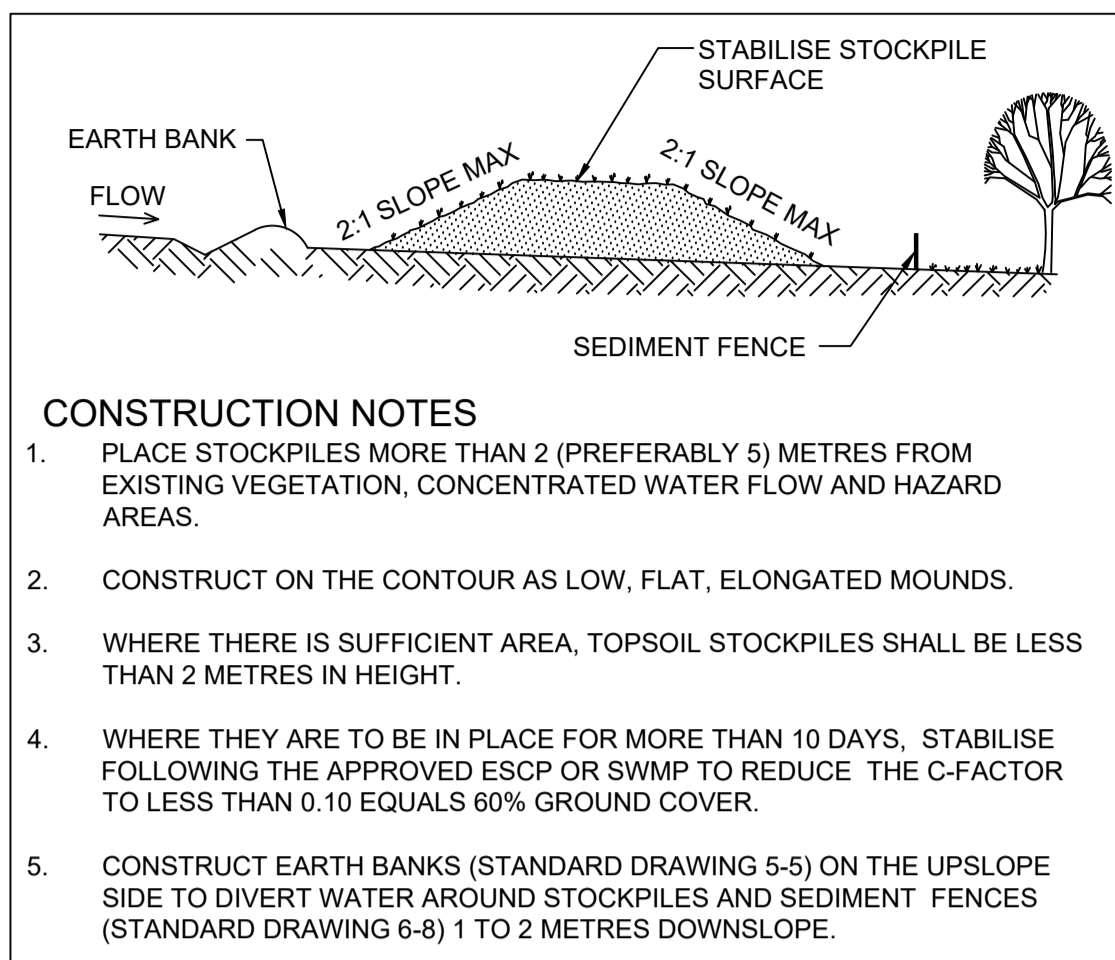
AZIMUTH: M.G.A.    DATUM: A.H.D.    ORIGIN:    PLAN No: 110185-12-CC3701

PROJECT No: **110185-12**

SHEET No: **CC3701**

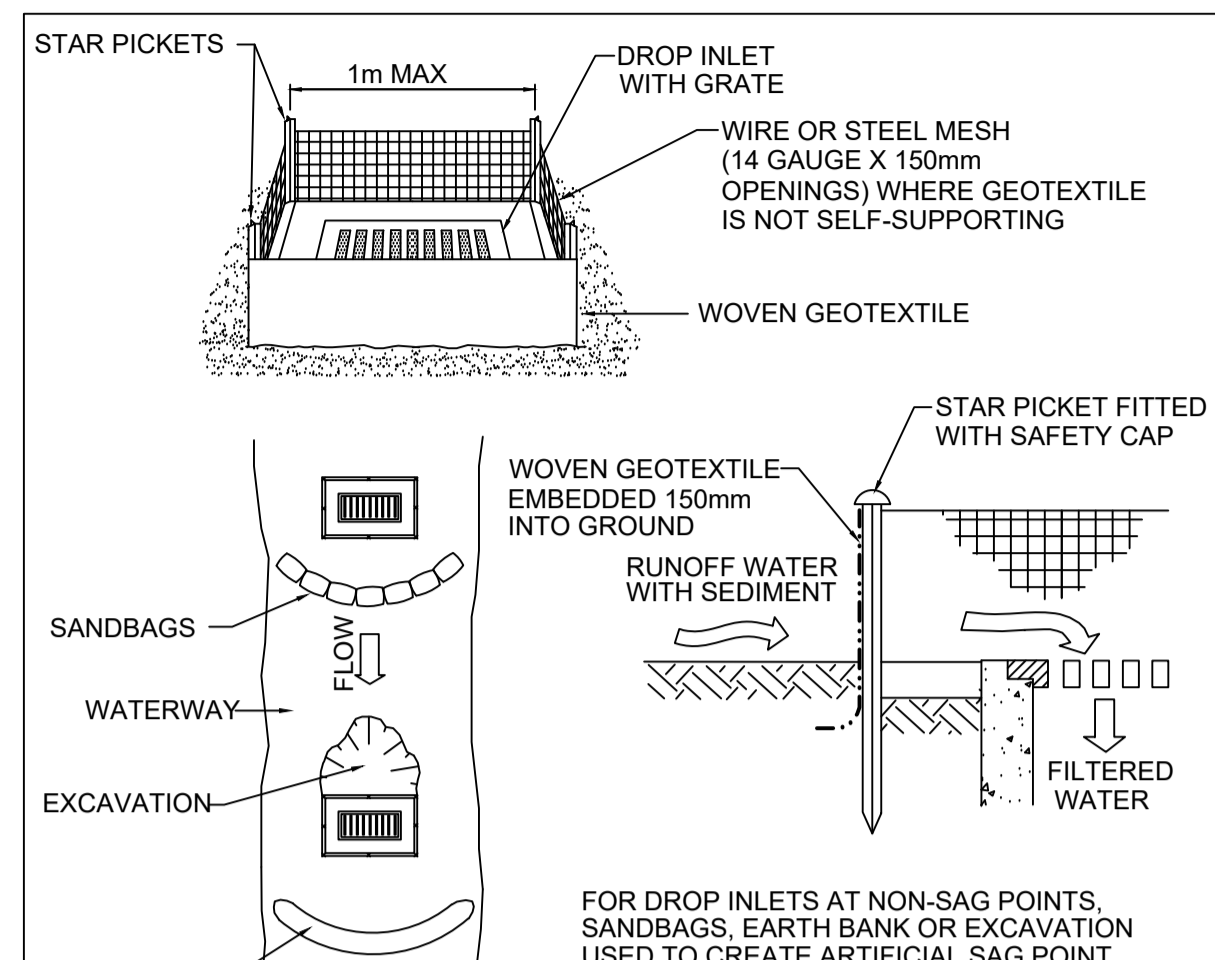
B





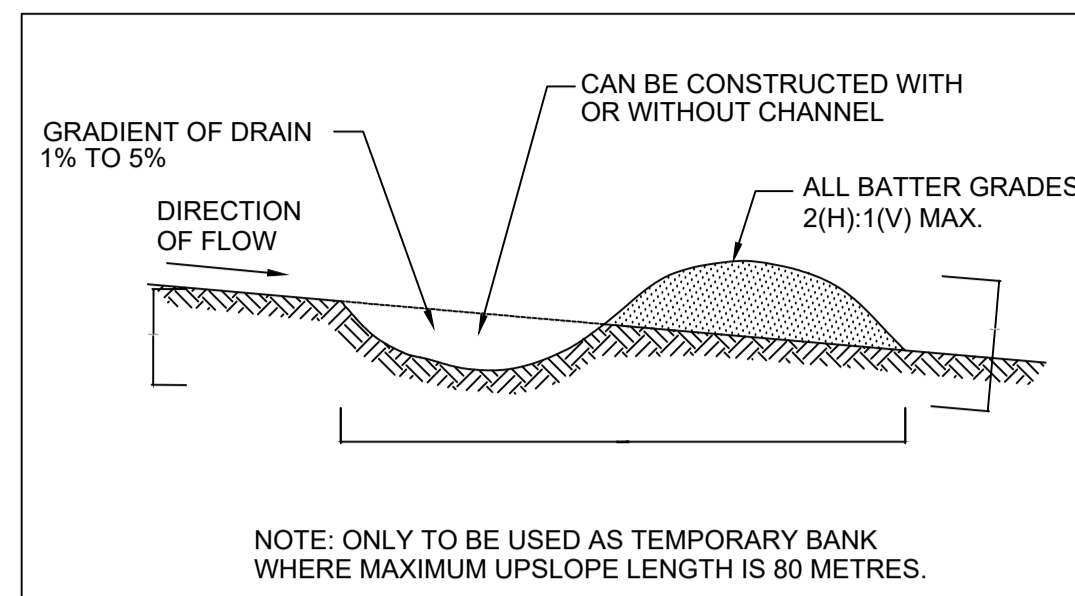
- CONSTRUCTION NOTES**
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW AND HAZARD AREAS.
  2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
  3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
  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.



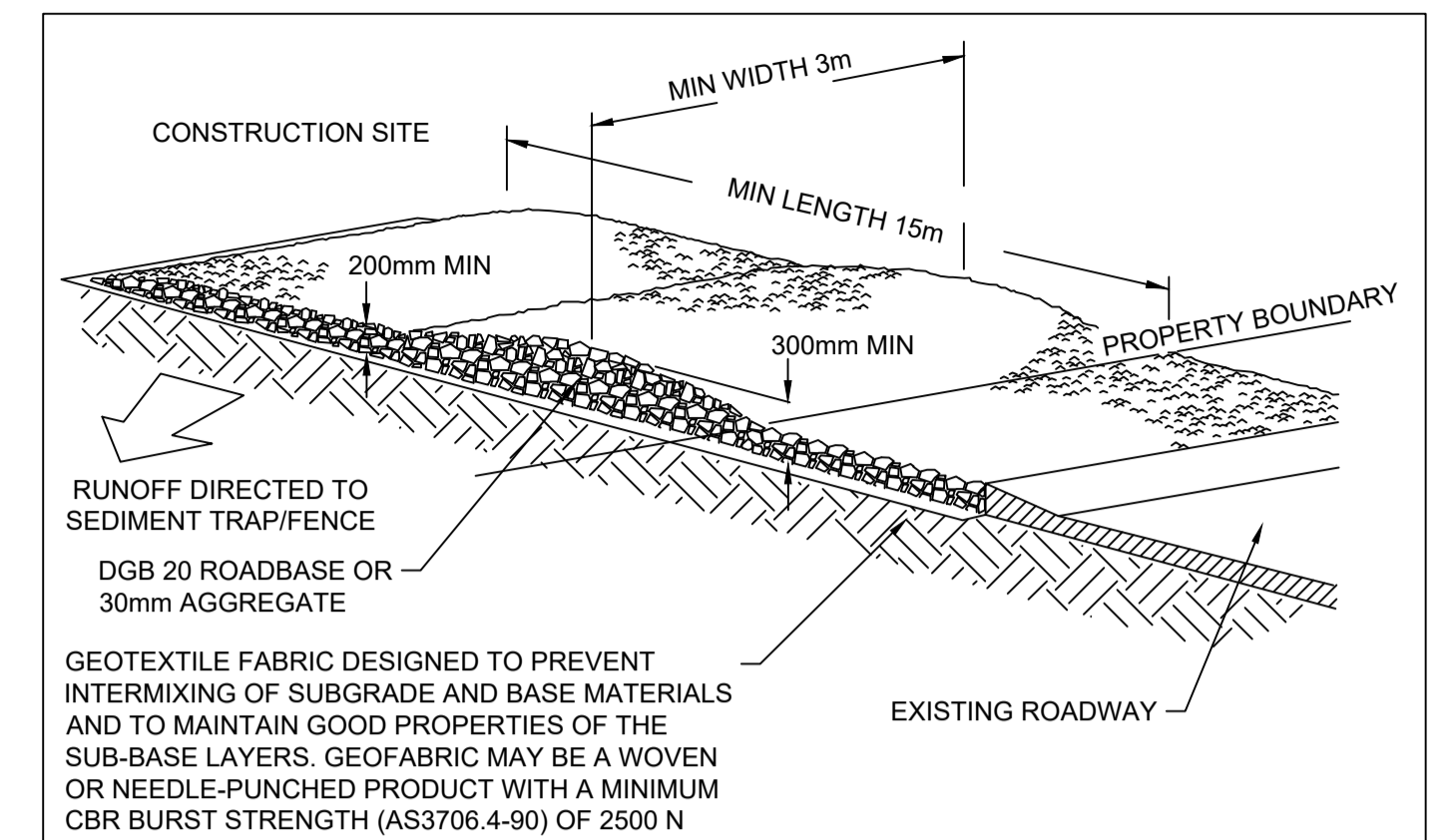
- CONSTRUCTION NOTES**
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
  2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1m CENTRES.
  3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE 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.



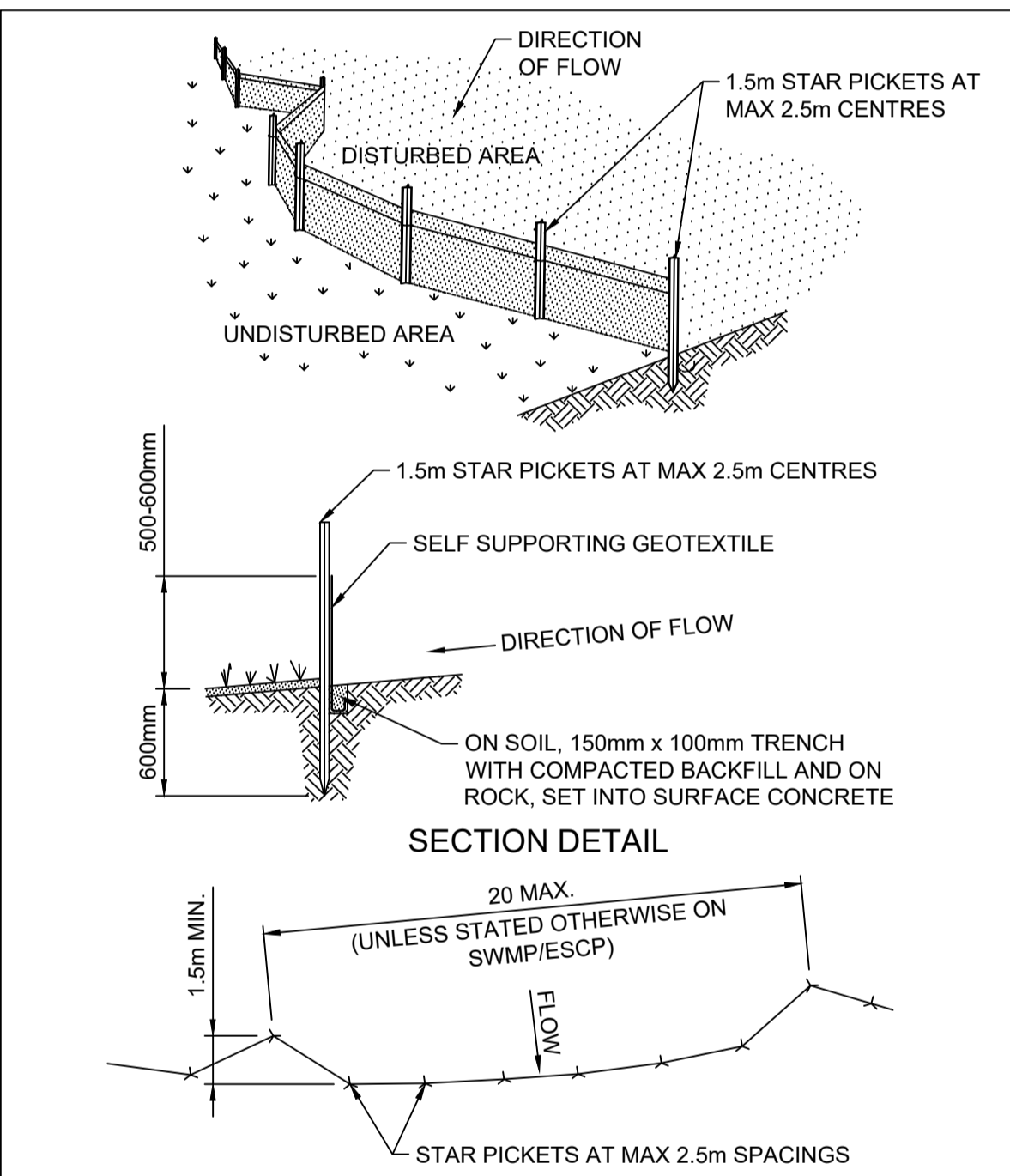
- CONSTRUCTION NOTES**
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
  2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
  3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
  4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC 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.



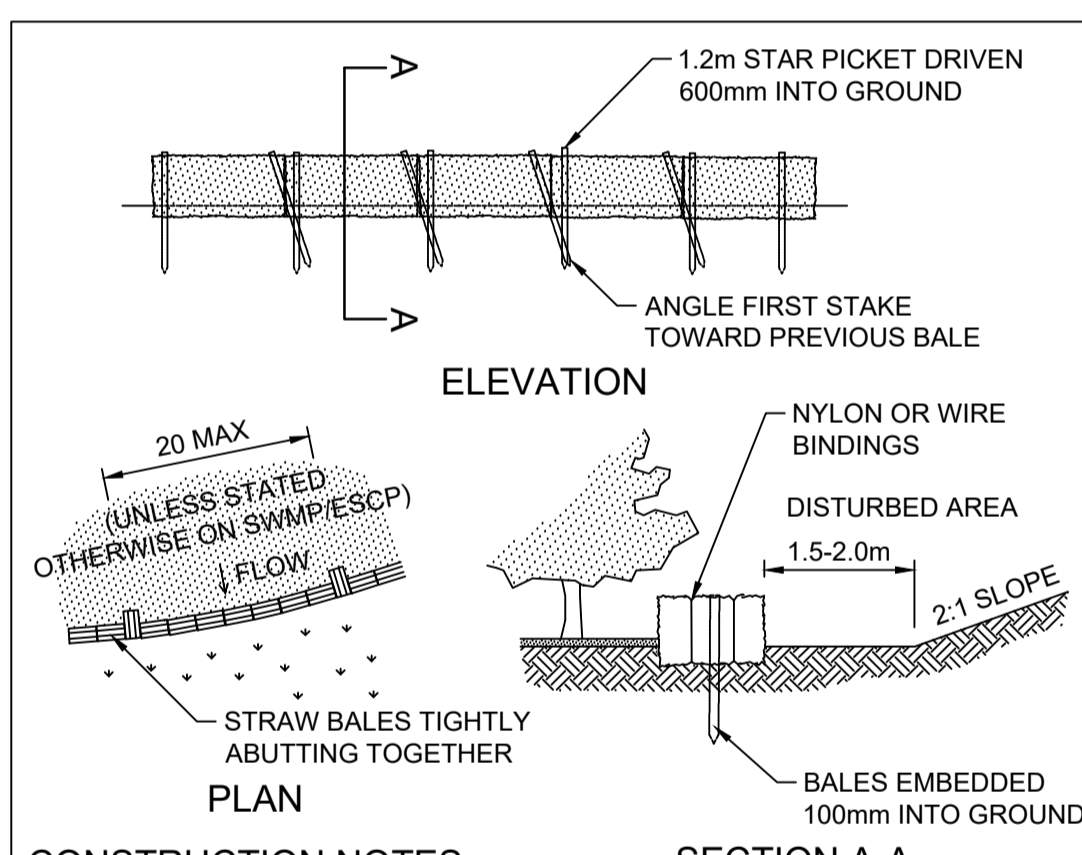
- CONSTRUCTION NOTES**
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
  2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
  3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
  4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND 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.



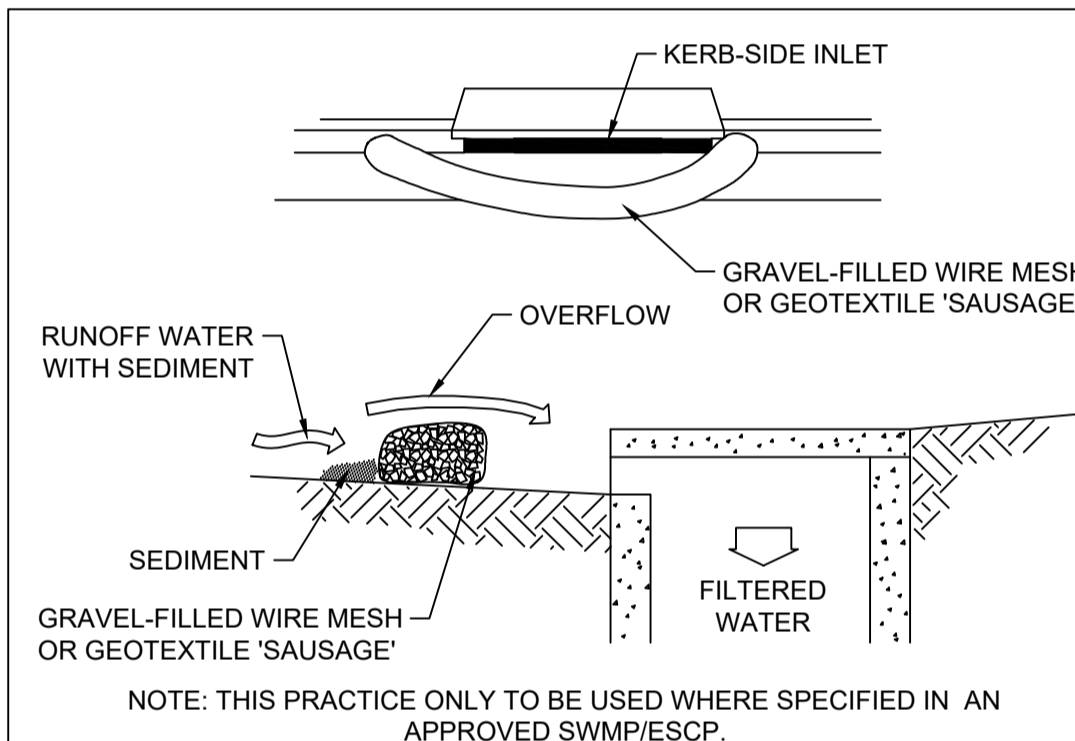
- CONSTRUCTION NOTES**
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT 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.....*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 11:21:51 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

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**

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

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

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

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3702

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

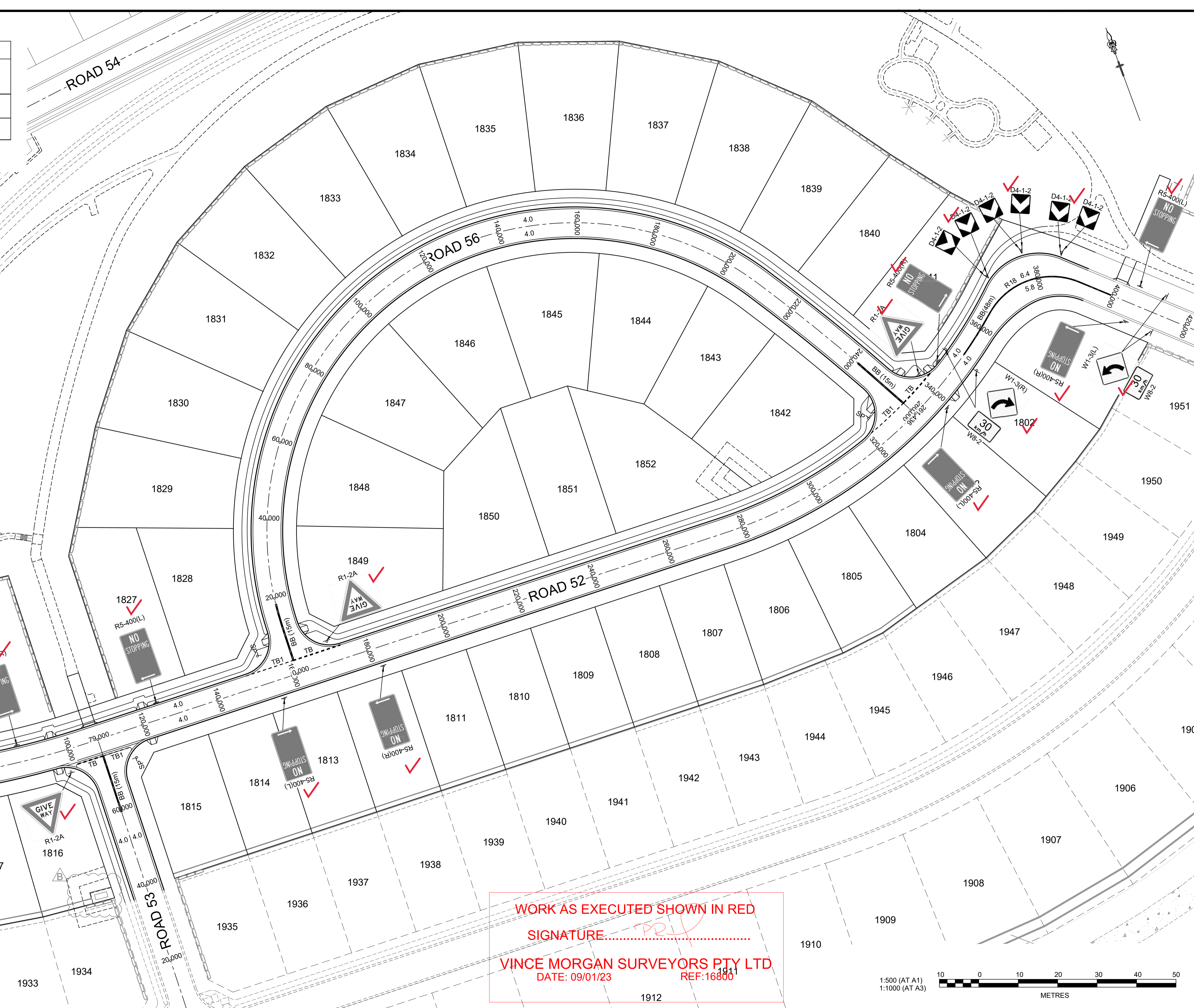
NOTES

- 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.

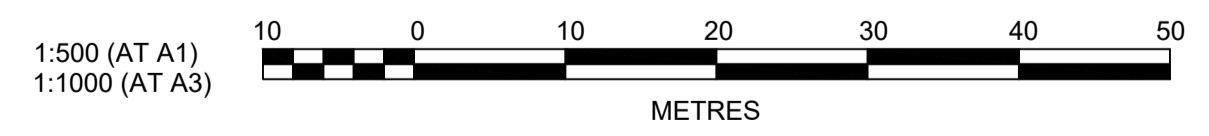
**SUBDIVISION WORKS CERTIFICATE**

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

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



WORK AS EXECUTED SHOWN IN RED  
SIGNATURE: *[Signature]*  
VINCE MORGAN SURVEYORS PTY LTD  
DATE: 09/01/23 REF: 16600



Plotted: 6 May, 2022 12:00:16 PM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CCSOUTHERN HEIGHTS\3-RTP\110185-12-CC3800.dwg

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

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**

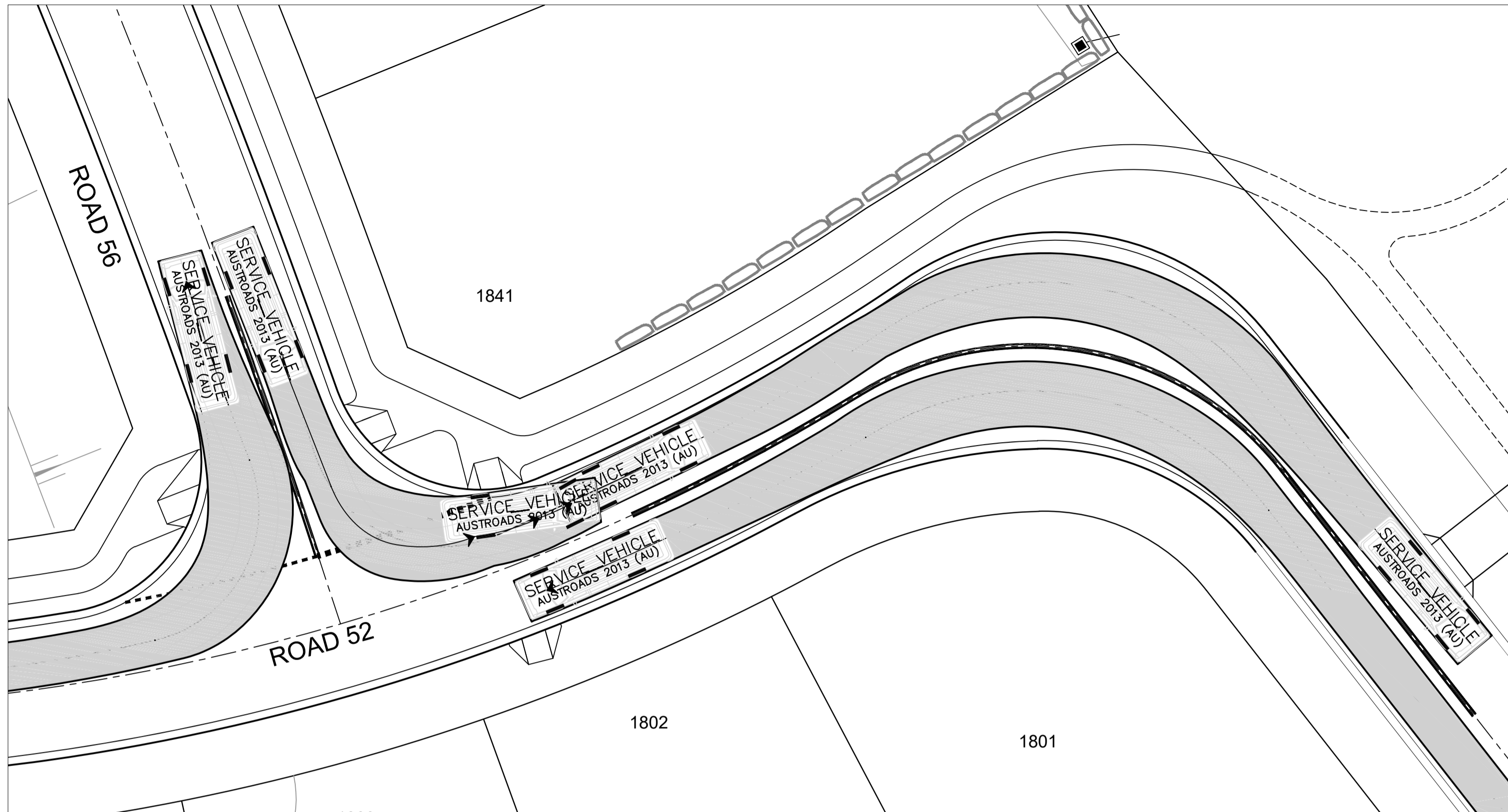
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

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

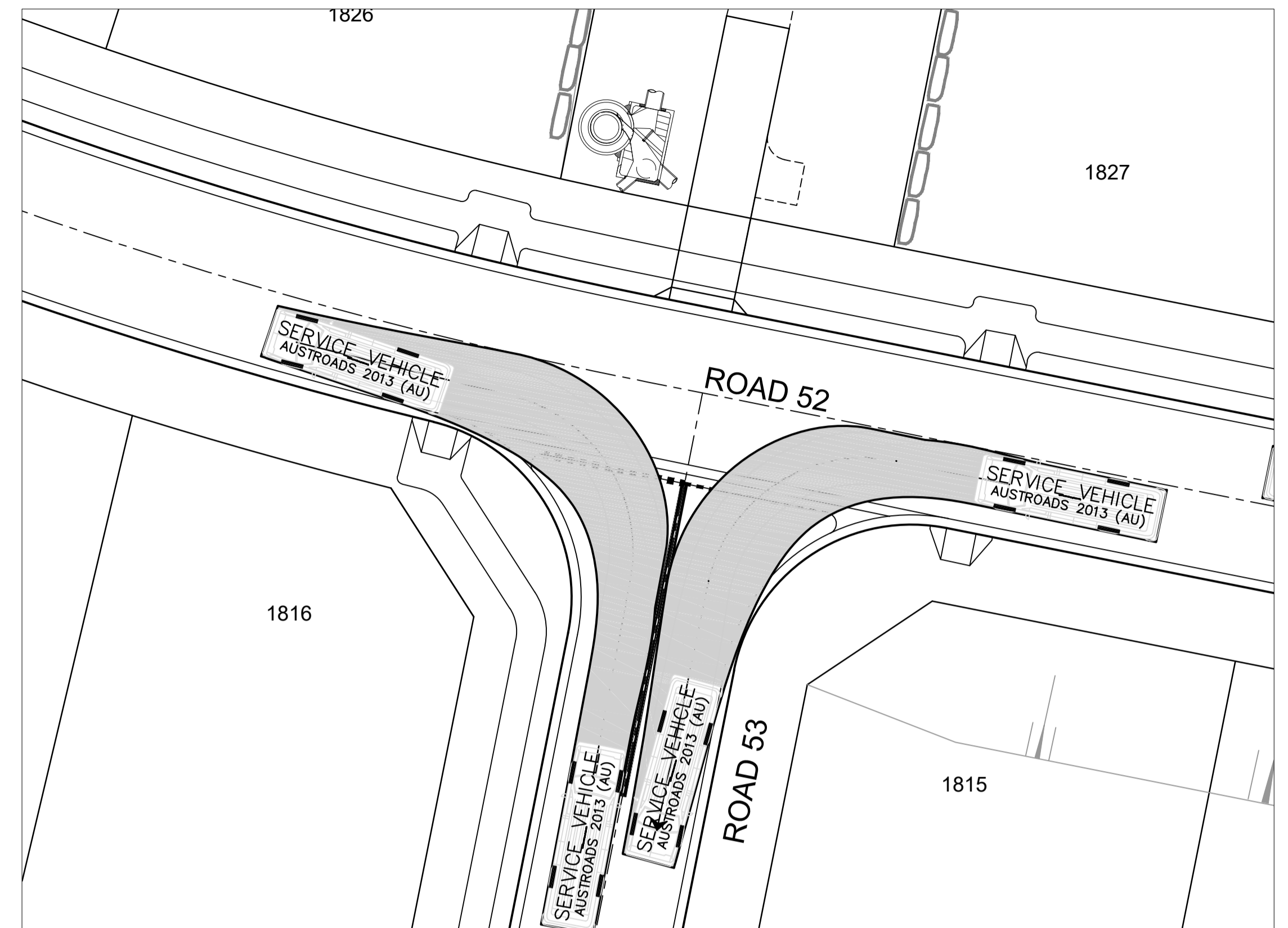
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC3800

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

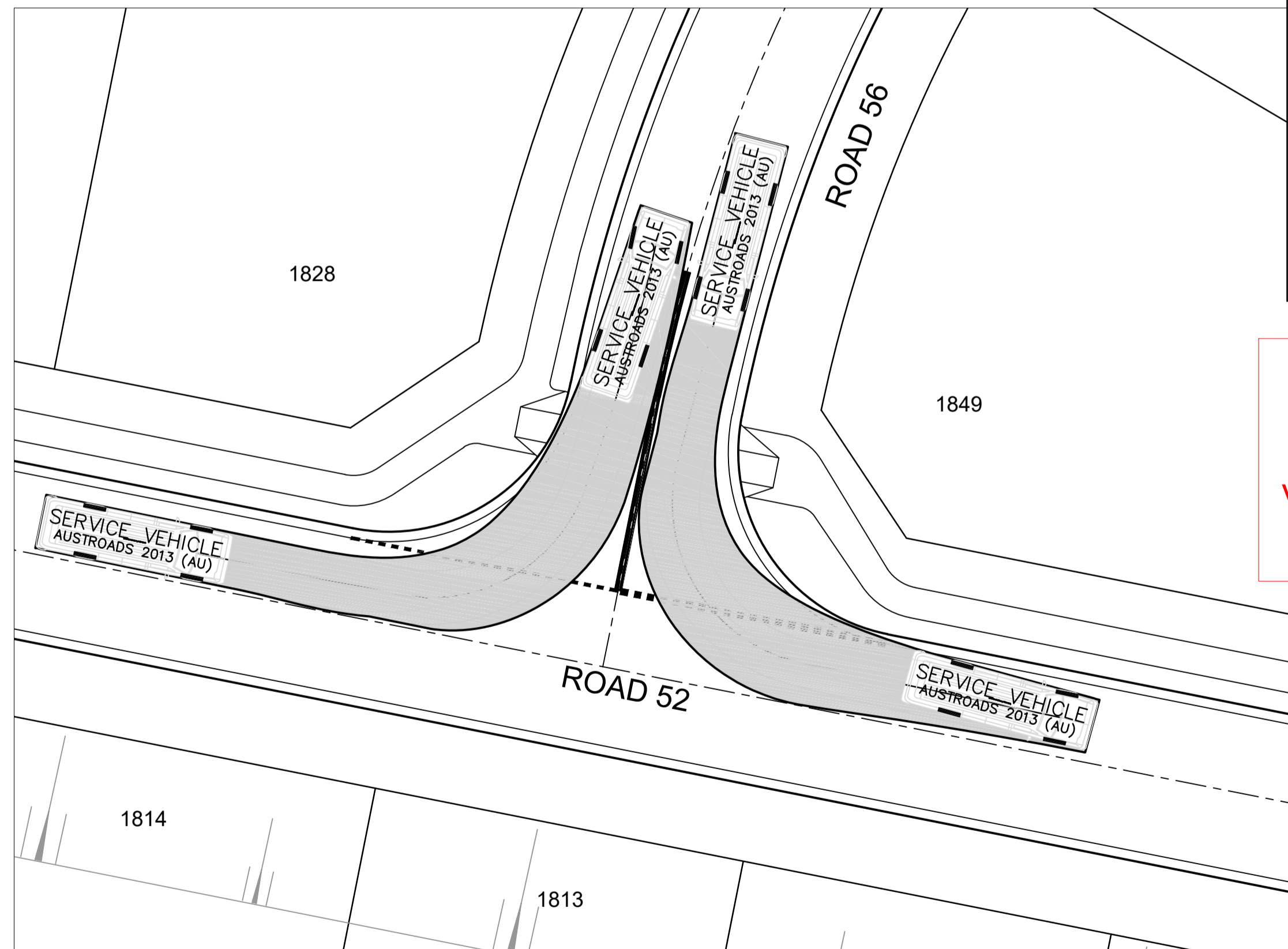




PLAN  
SCALE 1:200



PLAN  
SCALE 1:200



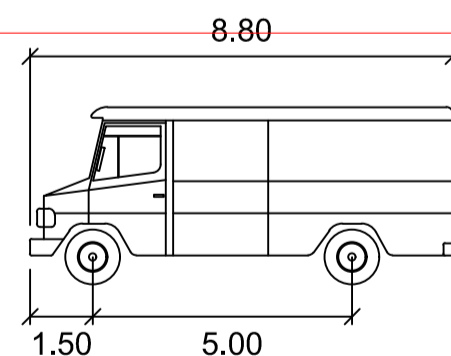
PLAN  
SCALE 1:200

**SUBDIVISION WORKS CERTIFICATE**

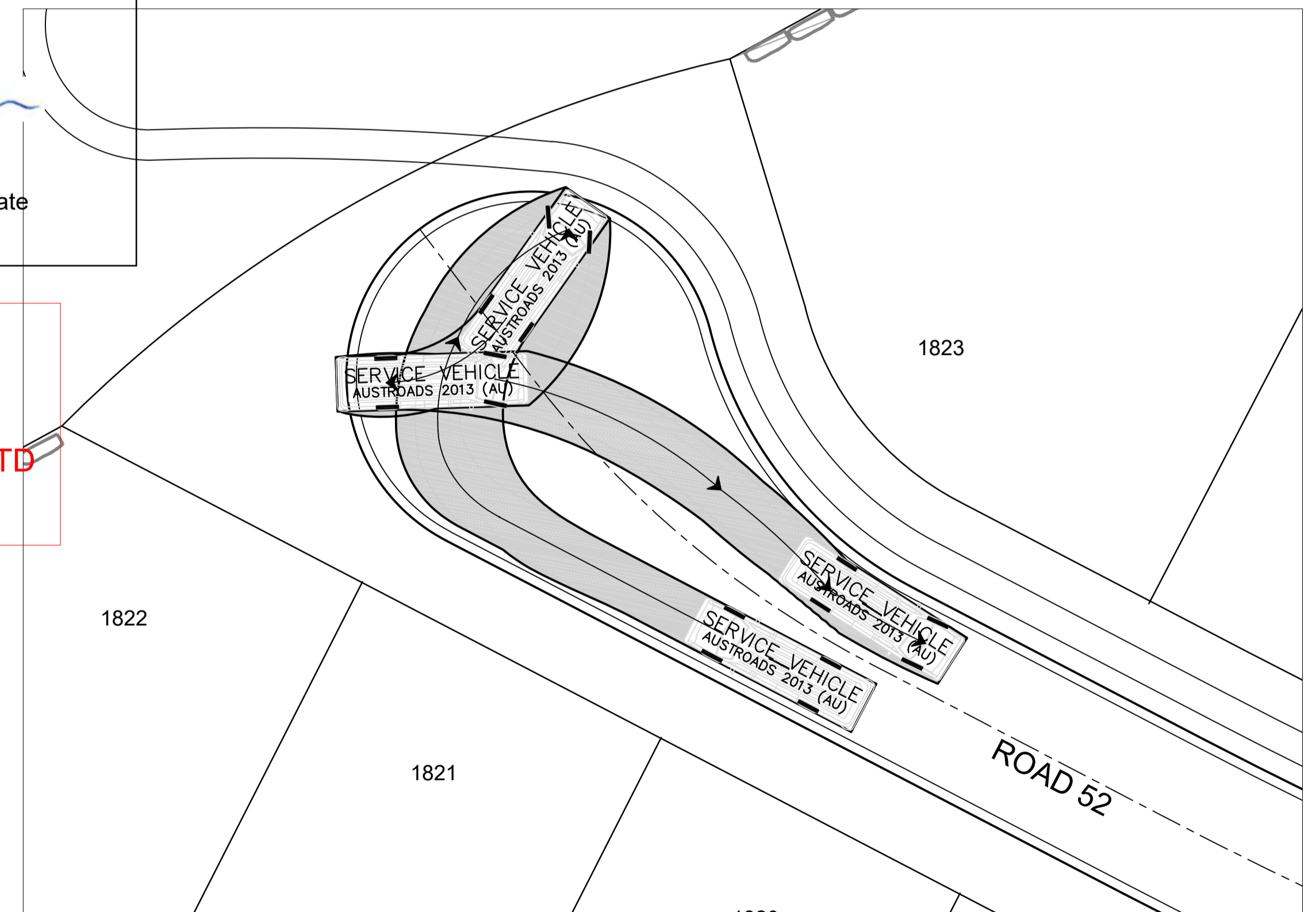
Certificate No. .... 201302995W76  
 Date of Issue ..... 11/05/2022  
 Issuing Officer ..... *D. Restar*  
 Accreditation No. .... BDC3367  
 These plans/specifications form part of the certificate issued 11/05/2022

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

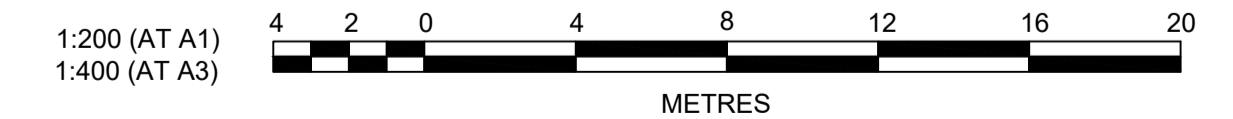
VINCE MORGAN SURVEYORS PTY LTD  
 DATE: 09/01/23 REF:16800



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



PLAN  
SCALE 1:200



Plotted: 5 May, 2022 11:22:42 AM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\3-RTP\110185-12-CC3900.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



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

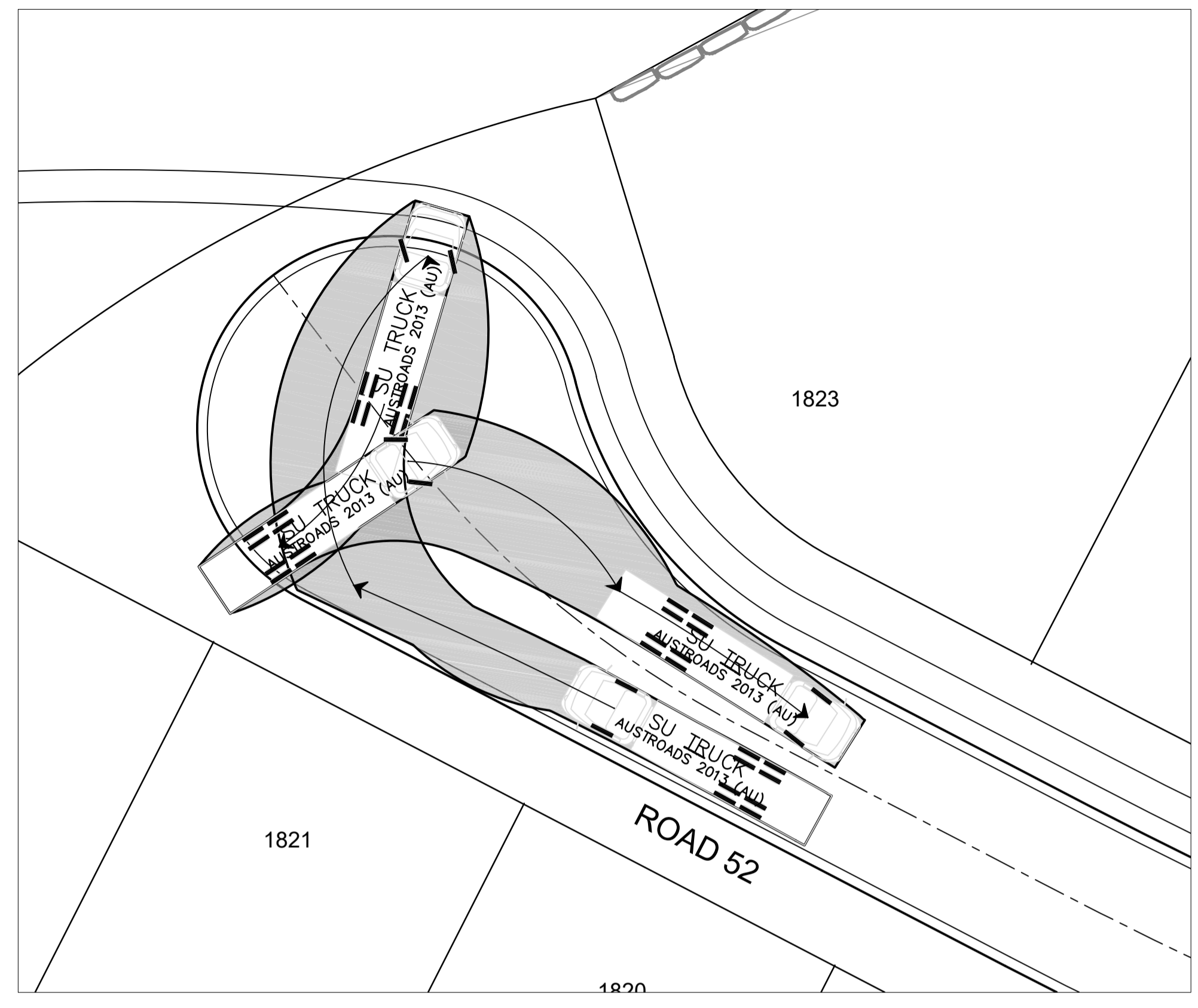
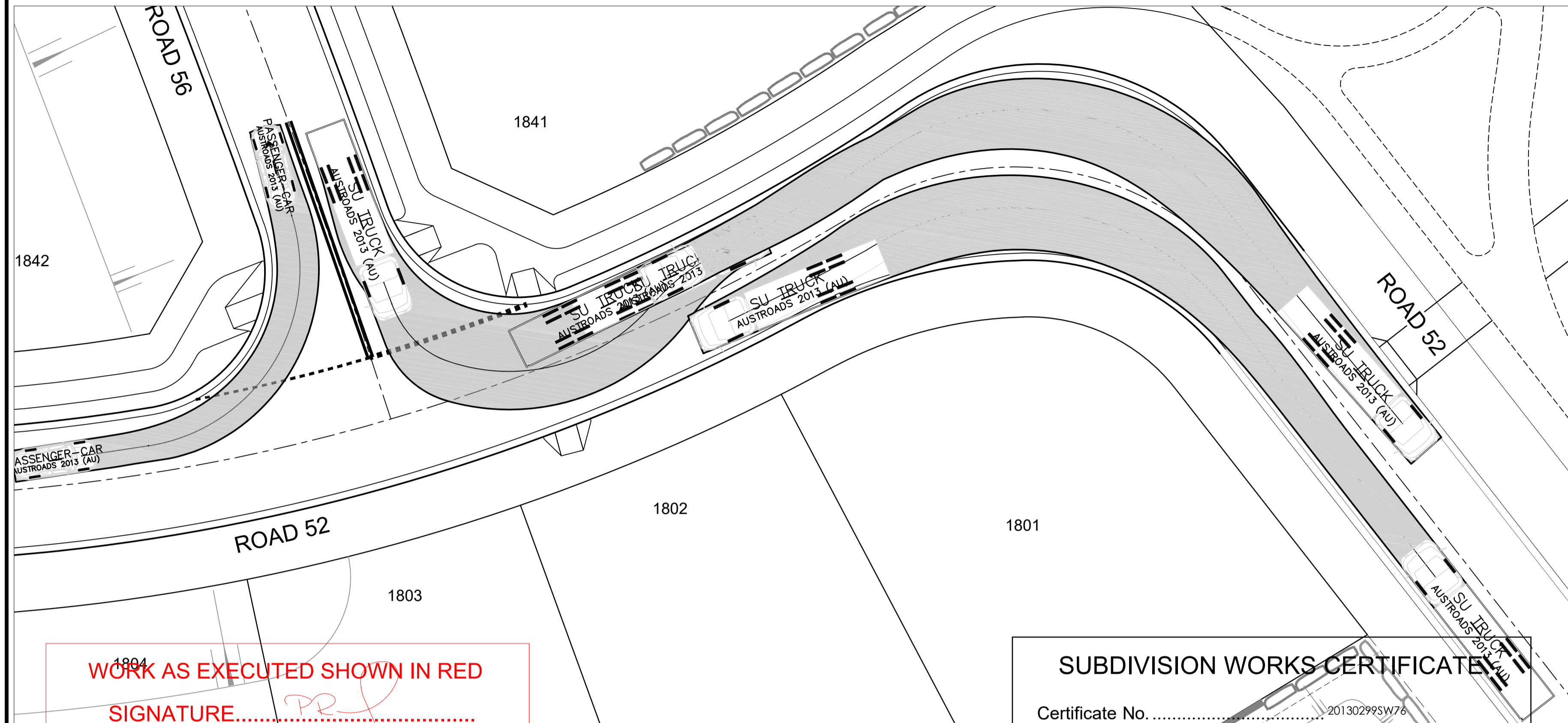
**REDBANK, NORTH RICHMOND  
 RIDGETOPS 1 - SWC  
 SWEEP PATH PLAN  
 SHEET 1**

PROJECT No:  
**110185-12**  
 SHEET No:  
**CC3900**

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



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

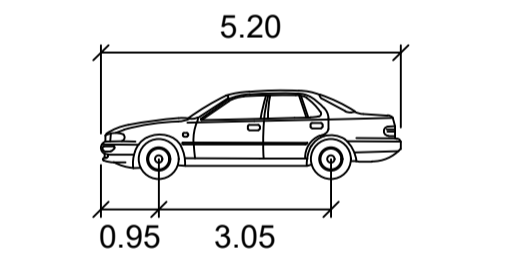
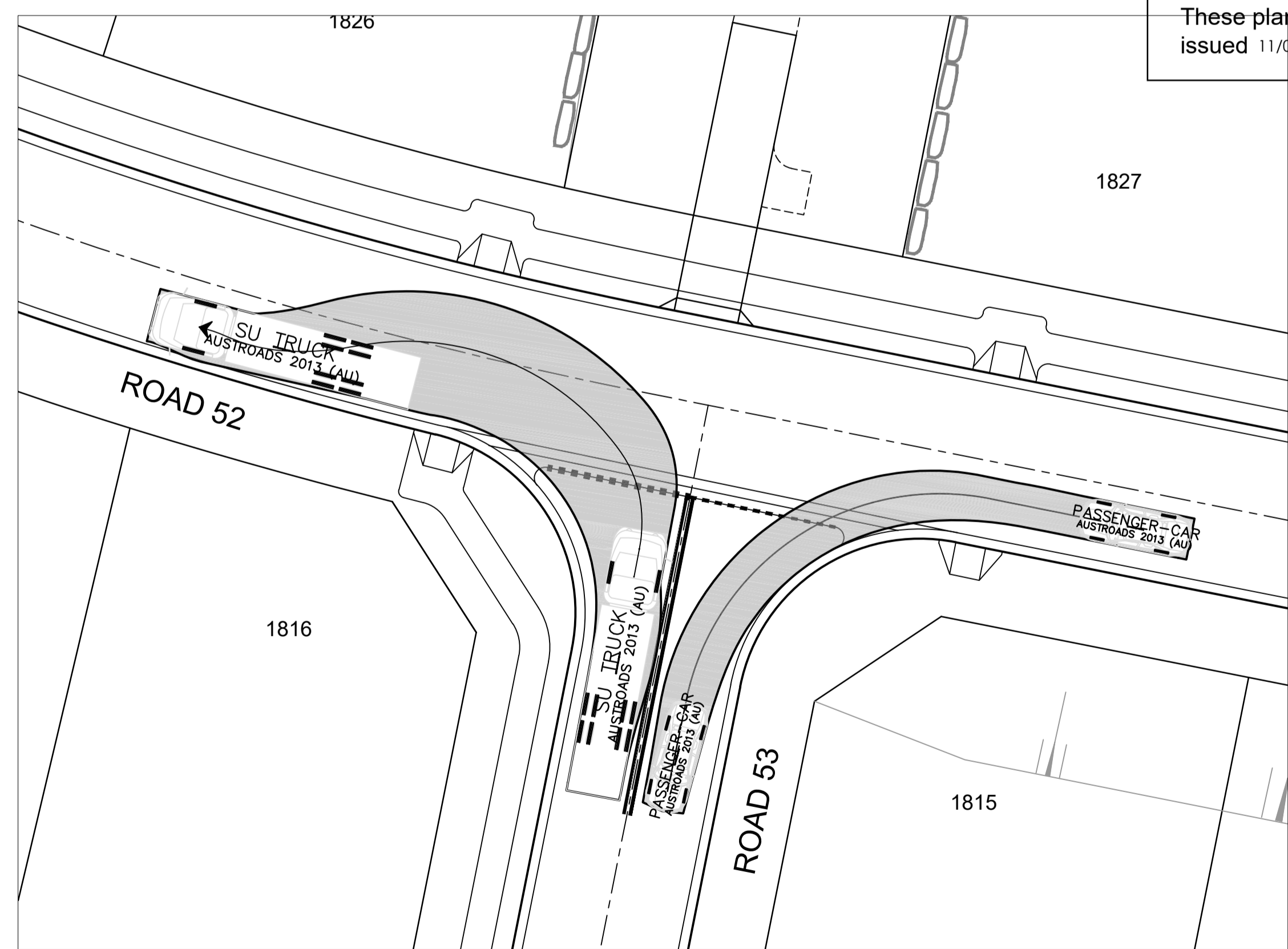


**WORK AS EXECUTED SHOWN IN RED**  
 SIGNATURE.....*PR*.....  
**VINCE MORGAN SURVEYORS PTY LTD**  
 DATE: 09/01/23 REF:16800

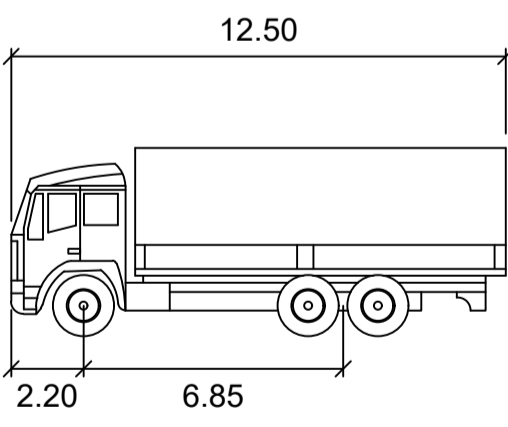
**SUBDIVISION WORKS CERTIFICATE**  
 Certificate No. .... 20130299SW76  
 Date of Issue ..... 11/05/2022  
 Issuing Officer ..... *D. Restin*  
 Accreditation No. .... BDC3367  
 These plans/specifications form part of the certificate issued 11/05/2022

PLAN  
SCALE 1:200

PLAN  
SCALE 1:200



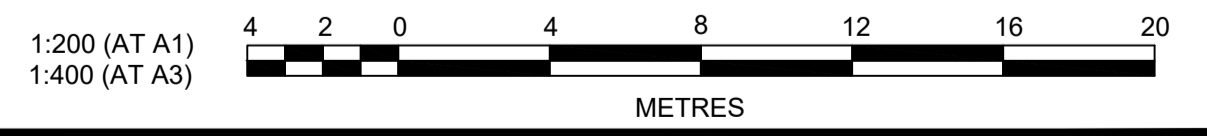
**PASSENGER-CAR**  
 meters  
 Width : 1.94  
 Track : 1.84  
 Lock to Lock Time : 6.0  
 Steering Angle : 33.6



**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



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



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**  
 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