

LOOK UP AND LIVE

OVERHEAD POWER LINES IN VICINITY OF WORKS.

ENSURE ALL POWER LINES ARE CLEARLY MARKED WITH ORANGE WEATHERPROOF TAPE OR RIBBON

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE NSW WORK COVER 'WORK NEAR OVERHEAD POWER LINES CODE OF PRACTICE 2006'

<http://www.workcover.nsw.gov.au/health-and-safety/industry-safety/electrical-and-power/power-lines/publications/work-near-overhead-power-lines-code-of-practice-2006>

Grandview Stage 3

Lot 1 DP933666 & Lot 24 DP1041700

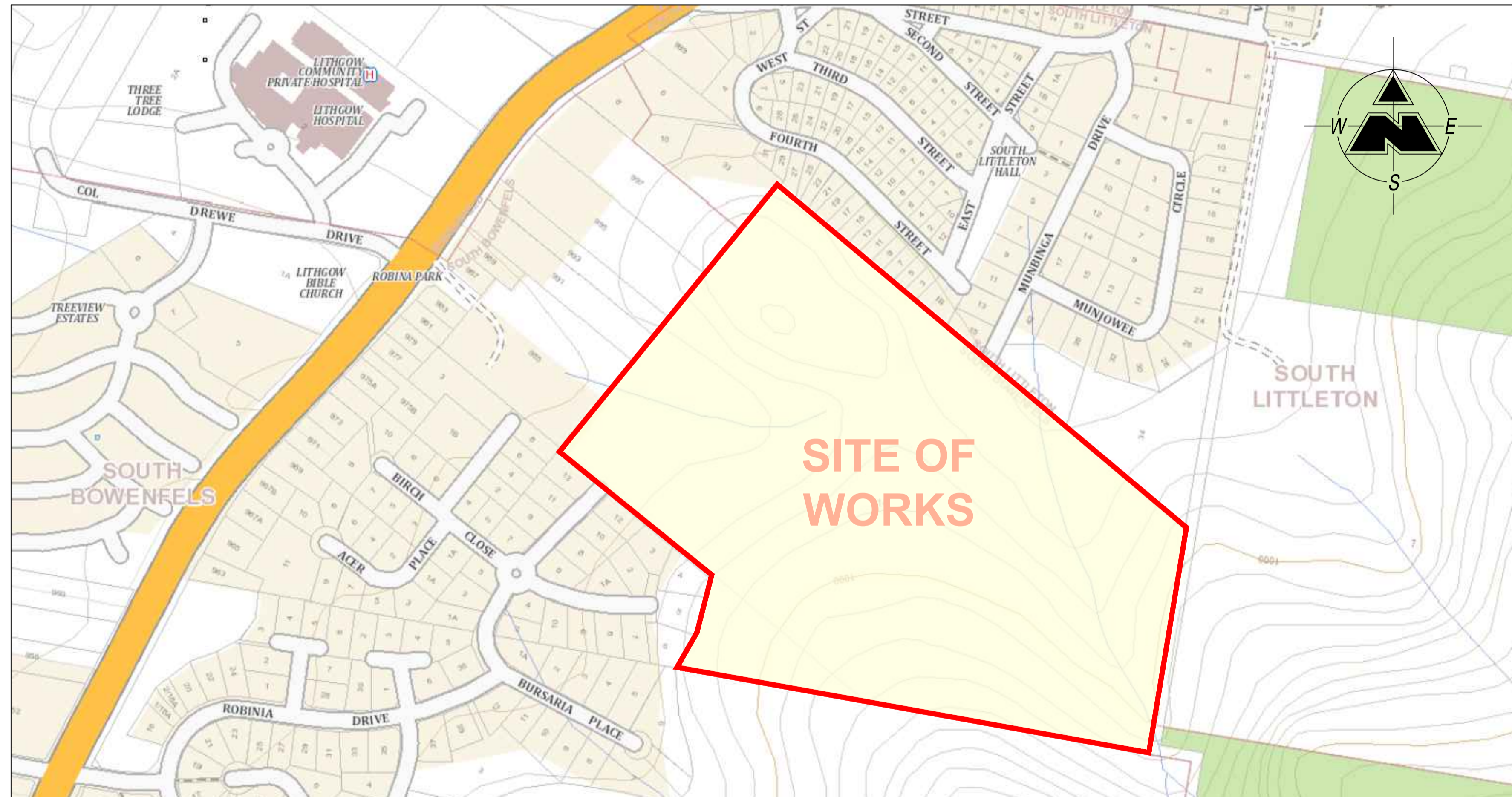
Claret Ash Avenue

South Bowenfels, NSW 2790

THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.



FOR
Ledger Enterprises Pty Ltd
Lithgow City Council
Development Consent Number: N/A



LOCALITY PLAN
N.T.S.

DRAWING INDEX

Dwg No.	Title
G01	COVER SHEET
G02	GENERAL ARRANGEMENT PLAN
R01	ROAD LAYOUT INDEX PLAN
R02	CLARET ASH AVENUE - PRELIMINARY PLAN
R03	CLARET ASH AVENUE - PRELIMINARY LONGITUDINAL SECTION
R04-R07	CLARET ASH AVENUE - PRELIMINARY CROSS SECTIONS
R08	ROADS 02 & 03 - PRELIMINARY PLAN & LONGITUDINAL SECTION
R09-R10	ROADS 02 & 03 - PRELIMINARY CROSS SECTIONS
R11	ROAD 04 - PRELIMINARY PLAN & LONGITUDINAL SECTION
R12-R13	ROAD 04 - PRELIMINARY CROSS SECTIONS
R14	ROAD 05 - PRELIMINARY PLAN & LONGITUDINAL SECTION
R15	ROAD 05 - PRELIMINARY CROSS SECTIONS
R16	MUNBINGA DRIVE - PRELIMINARY PLAN & LONGITUDINAL SECTION
R17	MUNBINGA DRIVE - PRELIMINARY CROSS SECTIONS
SW01	PRELIMINARY STORMWATER LAYOUT PLAN
SW02-SW06	PRELIMINARY STORMWATER DRAINAGE LONGITUDINAL SECTIONS
SS01	PRELIMINARY SEWER LAYOUT PLAN
SS02-SS07	PRELIMINARY SEWER LONGITUDINAL SECTIONS
W01	PRELIMINARY WATERMAIN LAYOUT PLAN

For DA Approval

Approved for Construction:

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 Scale (A1): AS SHOWN
 Date: July 2024 ...2020.0047-Civil-P4.dwg

Garth Dean
 B.E. GDSTT FIEAust CPEng NER
 APEC Engineer IntPE (Aus) RBP
 (VicNT)

Grandview Stage 3
 Lot 1 DP933666 & Lot 24 DP1041700
 Claret Ash Avenue
 South Bowenfels, NSW 2790

COVER SHEET

Ledger Enterprises Pty Ltd



170 RANKIN STREET,
 BATHURST, N.S.W. 2795
 Tel: (02) 63323343 Fax: (02) 63318210

Job No. 2020.0047

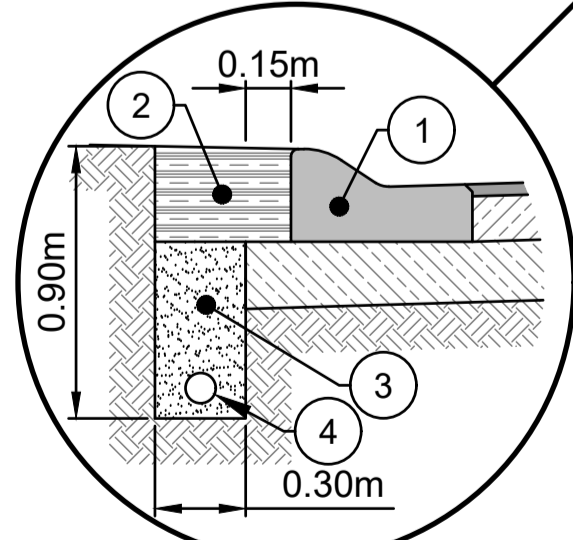
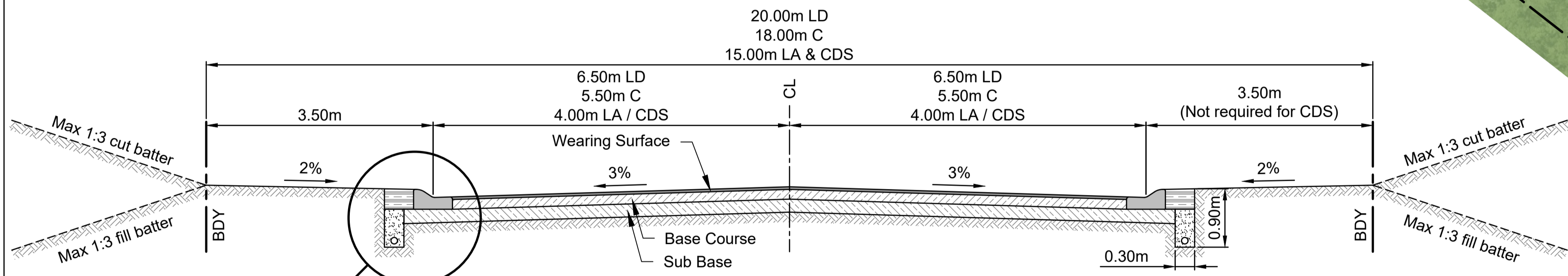
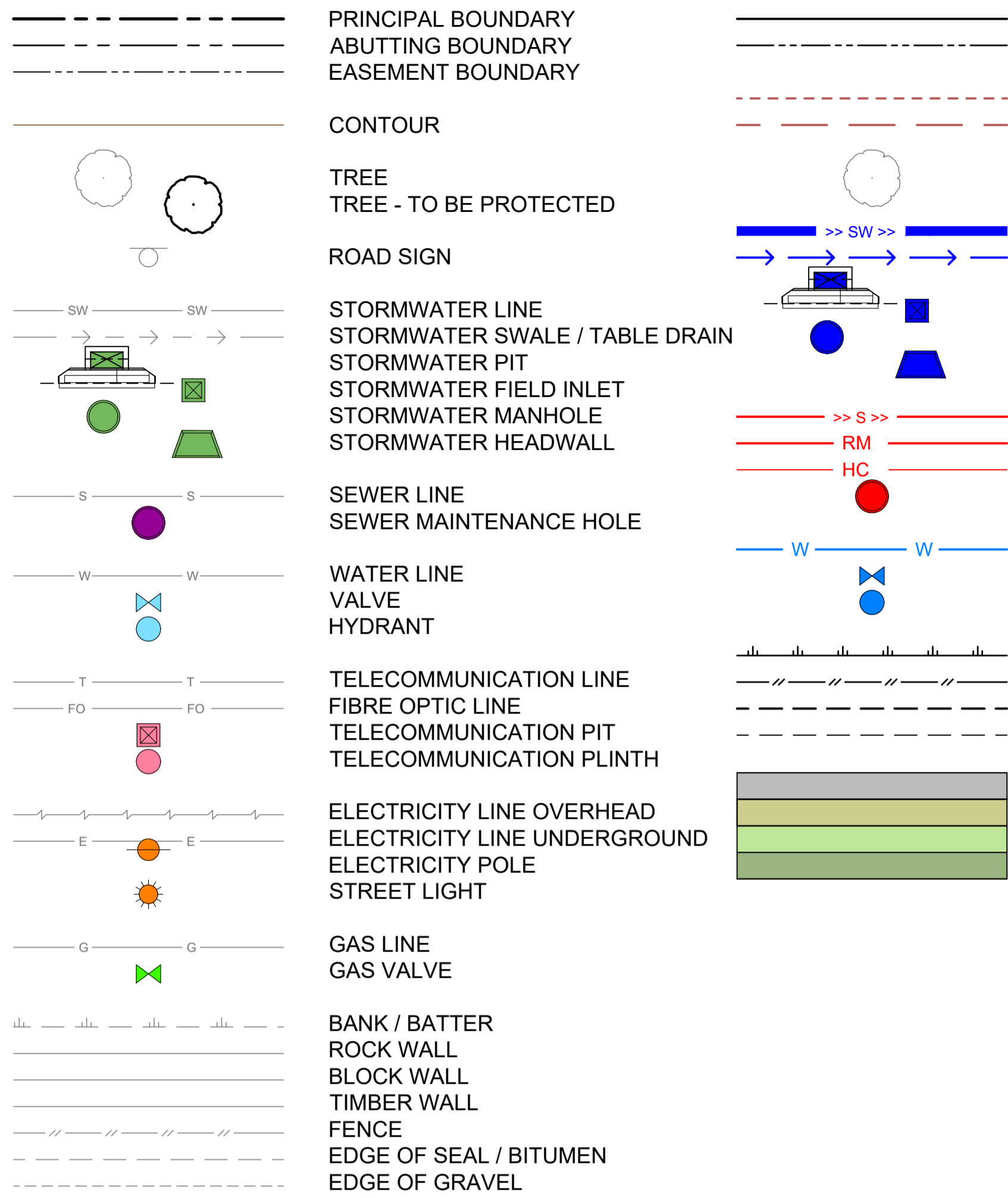
DWG. No. G01 Issue C

No. in set 33

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

LEGEND - EXISTING

LEGEND - PROPOSED



- 1 Semi Mountable Kerb & Gutter
- 2 Non-Porous Fill Material
- 3 Approved Sand Fill
- 4 Subsurface Drainage

- LEGEND**
 LD = Local Distributor
 C = Collector
 LA = Local Access
 CDS = Minor Cul-De-Sac

**LITHGOW CITY COUNCIL
 TYPICAL ROAD CROSS SECTION**
 Scale 1:50 (Collector Road)

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
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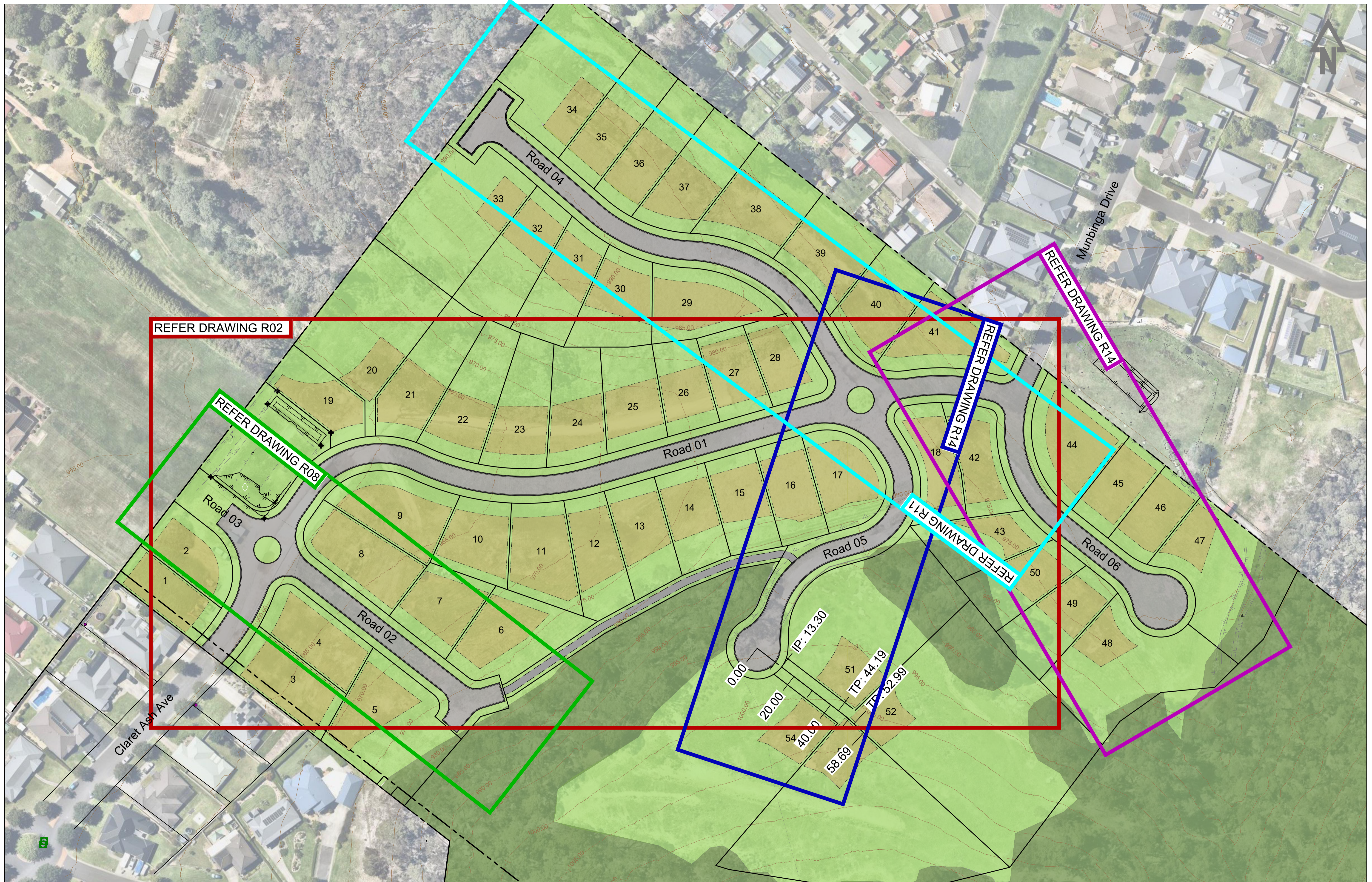
Approved for Construction:		This drawing and the information shown hereon is the property of Calare Civil Pty Limited and may not be used for any other purpose than that for which this drawing is supplied. Any other use, copying or reproduction of all or any part of this drawing is prohibited without the written consent of Calare Civil Pty Limited.	
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Scale (A1):	1:1250		
Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790	
GENERAL ARRANGEMENT PLAN	
Ledger Enterprises Pty Ltd	

CALARE CIVIL
 CONSULTING ENGINEERS

170 RANKIN STREET,
 BATHURST, N.S.W. 2795
 Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	G02
Issue	C
No. in set	33



REFER DRAWING R02

REFER DRAWING R08

REFER DRAWING R11

REFER DRAWING R14

REFER DRAWING R14

Claret Ash Ave

Munbinga Drive

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
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Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Date:	July 2024		

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790

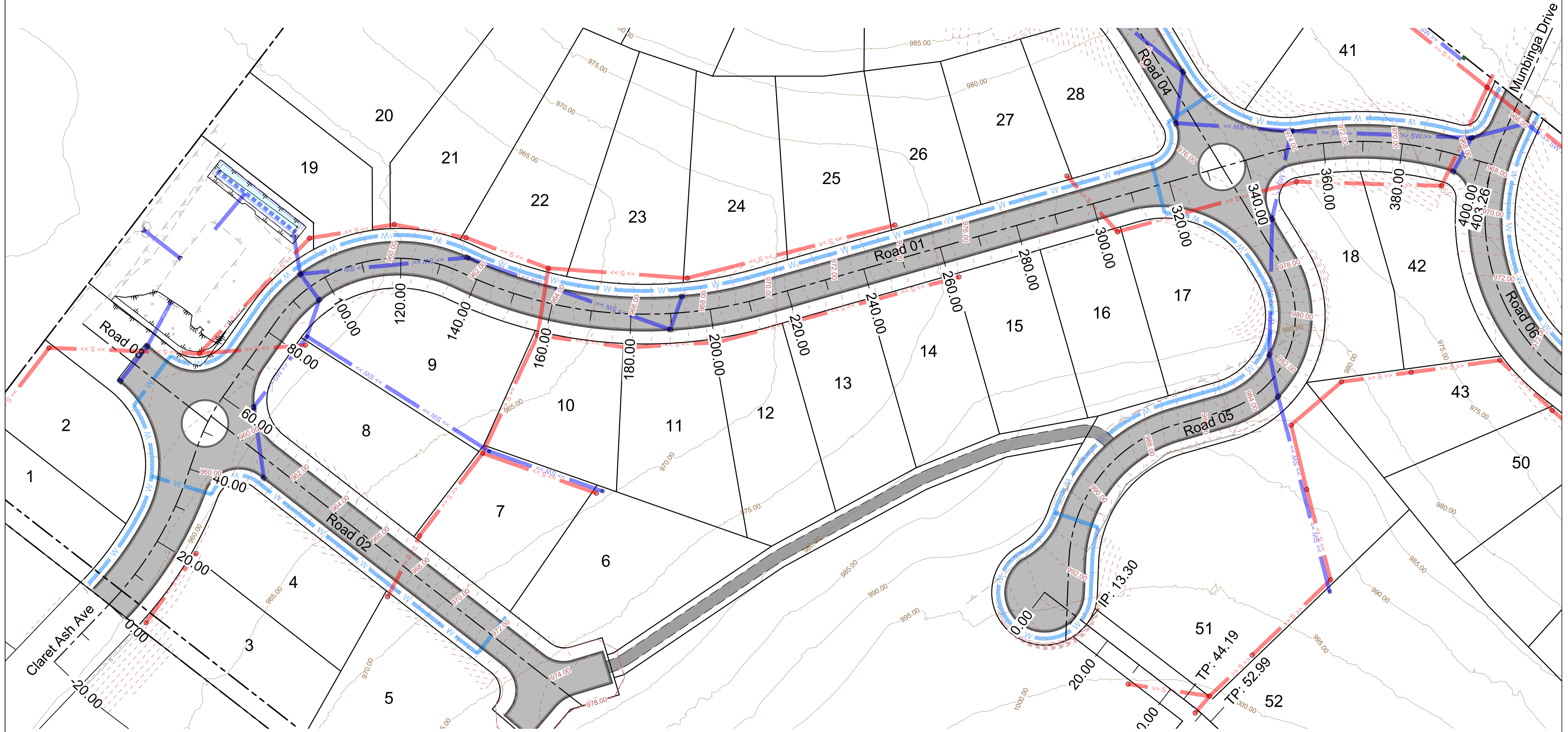
ROAD LAYOUT INDEX PLAN

Ledger Enterprises Pty Ltd

CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R01
Issue	C
No. in set	33



For DA Approval

Amend	Date	Description	By
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Approved for Construction:

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 (VicNT)

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Date:	July 2024		

Grandview Stage 3
 Lot 1 DP933666 & Lot 24 DP1041700
 Claret Ash Avenue
 South Bowenfels, NSW 2790

ROAD 01
 PRELIMINARY PLAN

Ledger Enterprises Pty Ltd

CALARE CIVIL
 CONSULTING ENGINEERS

170 RANKIN STREET,
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 Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R02
Issue	C
No. in set	33

SEE BELOW FOR CONTINUATION

EXISTING SURFACE	DESIGN SURFACE	CUT (-) FILL (+)	CHAINAGE	HORIZONTAL GEOMETRY
973.84	973.66	-0.177	354.871	L=48.302 R=88.000
973.04	972.86	-0.182	360.000	
970.26	969.80	-0.454	379.555	L=9.919 B=105.333
970.23	969.73	-0.498	380.000	
969.04	968.56	-0.480	389.555	
968.63	968.25	-0.383	393.337	
968.14	967.94	-0.201	399.555	
968.11	967.93	-0.185	400.000	
967.83	967.83	+0.000	403.256	

EXISTING SURFACE	DESIGN SURFACE	CUT (-) FILL (+)	CHAINAGE	HORIZONTAL GEOMETRY
959.99	959.94	-0.046	0.000	L=20.178 B=43°43'35"
959.99	959.94	-0.049	0.178	
959.87	959.97	+0.097	10.673	L=7.814 B=18°56'06"
959.64	959.95	+0.309	20.000	
959.28	959.78	+0.502	38.039	L=14.167 R=50.000
959.25	959.75	+0.502	40.000	
959.15	959.67	+0.518	45.852	L=23.301 B=35°10'11"
959.22	959.56	+0.342	52.839	
959.23	959.54	+0.315	54.362	L=52.549 R=37.500
959.21	959.46	+0.251	60.000	
959.21	959.46	+0.251	60.020	
959.00	959.16	+0.163	80.000	
959.02	959.11	+0.097	83.320	
958.82	958.99	+0.170	91.885	
958.76	958.96	+0.204	95.292	
958.76	959.01	+0.249	100.000	
958.72	959.14	+0.417	104.386	
959.92	959.97	+0.056	116.887	
960.21	960.26	+0.056	120.000	
961.89	961.75	+0.062	135.869	
962.04	962.14	+0.100	140.000	
963.98	964.01	+0.032	160.000	
964.38	964.38	+0.003	163.968	
965.66	965.77	+0.107	178.000	
965.87	965.98	+0.112	180.000	
967.20	967.32	+0.120	192.032	
968.13	968.25	+0.115	200.000	
969.60	969.81	+0.207	213.449	
970.30	970.57	+0.267	220.000	
972.65	972.89	+0.245	240.000	
975.16	975.21	+0.050	260.000	
976.22	976.20	-0.020	268.500	
977.12	976.96	-0.154	276.000	
977.48	977.28	-0.208	280.000	
977.67	977.50	-0.167	283.500	
977.76	977.73	-0.029	291.000	
977.76	977.73	-0.031	291.498	
977.66	977.55	-0.105	298.500	
977.63	977.48	-0.148	300.000	
977.04	976.48	-0.564	320.000	
976.51	975.79	-0.720	333.772	
976.48	975.73	-0.745	334.871	
976.07	975.40	-0.672	340.000	
975.49	974.96	-0.527	344.871	
975.47	974.95	-0.522	345.035	
973.84	973.66	-0.177	354.871	

LONGITUDINAL SECTION Claret Ash Avenue
SCALE 1:500 H 1:100 V

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
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Date:	July 2024		...2020.0047-Civil-P4.dwg
Garth Dean B.E. GDSTT FIEAust CPEng NER APEC Engineer IntPE (Aus) RBP (VicNT)			

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790	
ROAD 01 PRELIMINARY LONGITUDINAL SECTION	
Ledger Enterprises Pty Ltd	

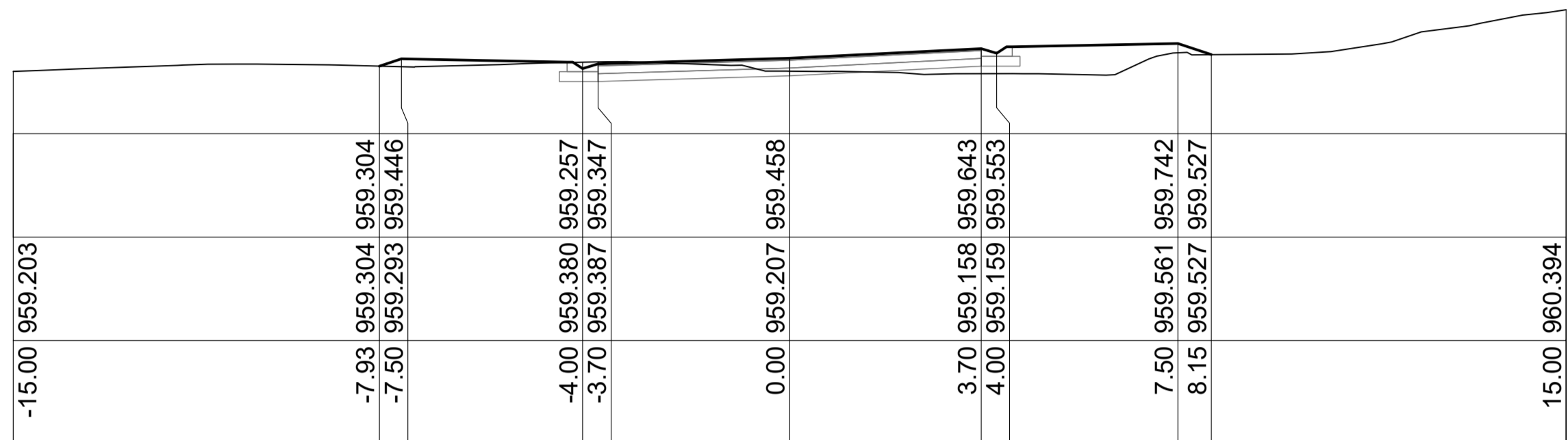
CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R03
Issue	C
No. in set	33

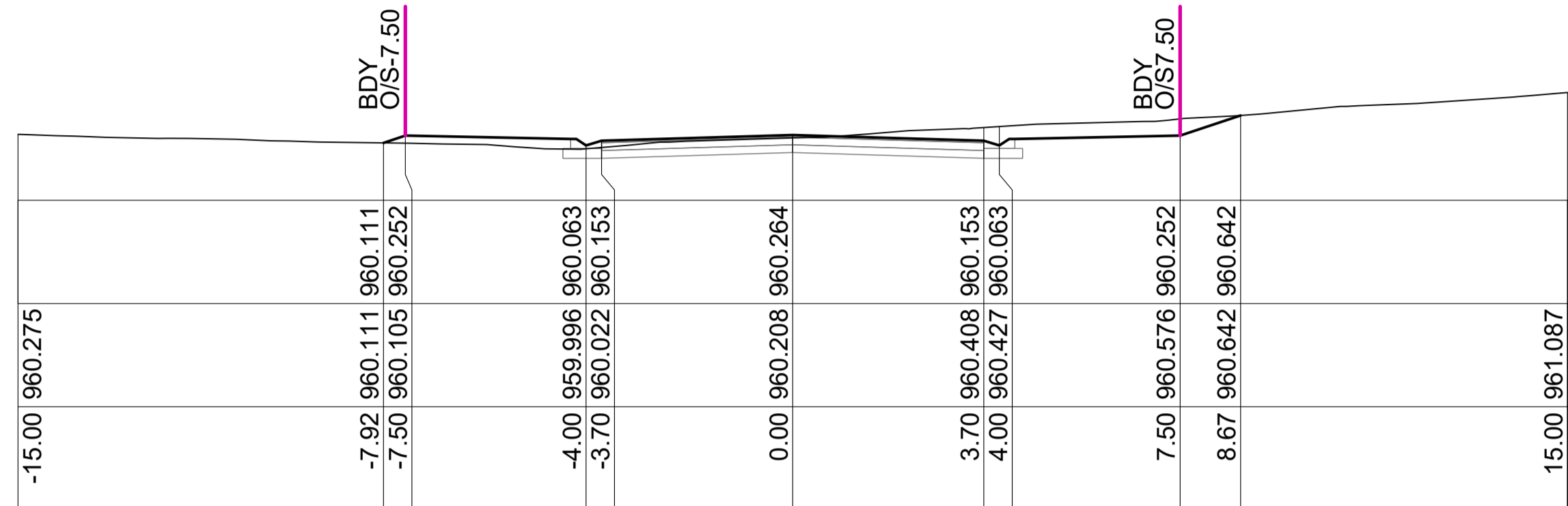
SEE ABOVE FOR CONTINUATION

Datum RL958m



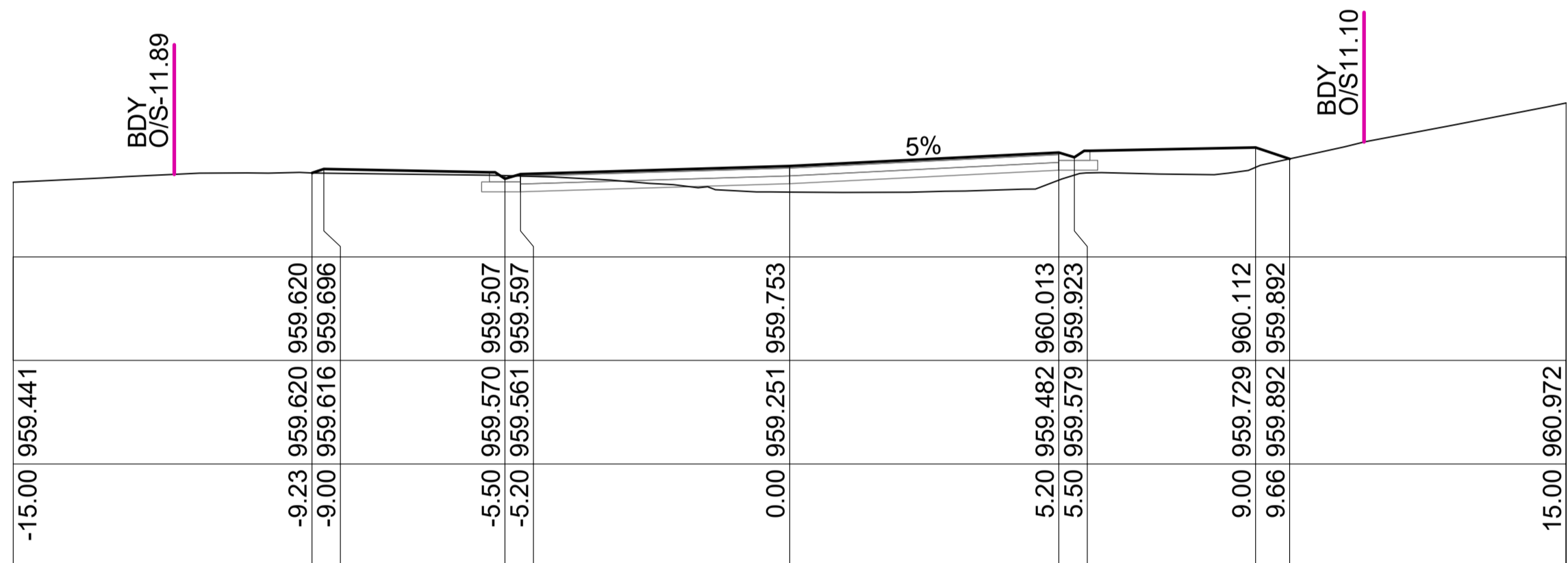
Ch 60.00 m

Datum RL959m



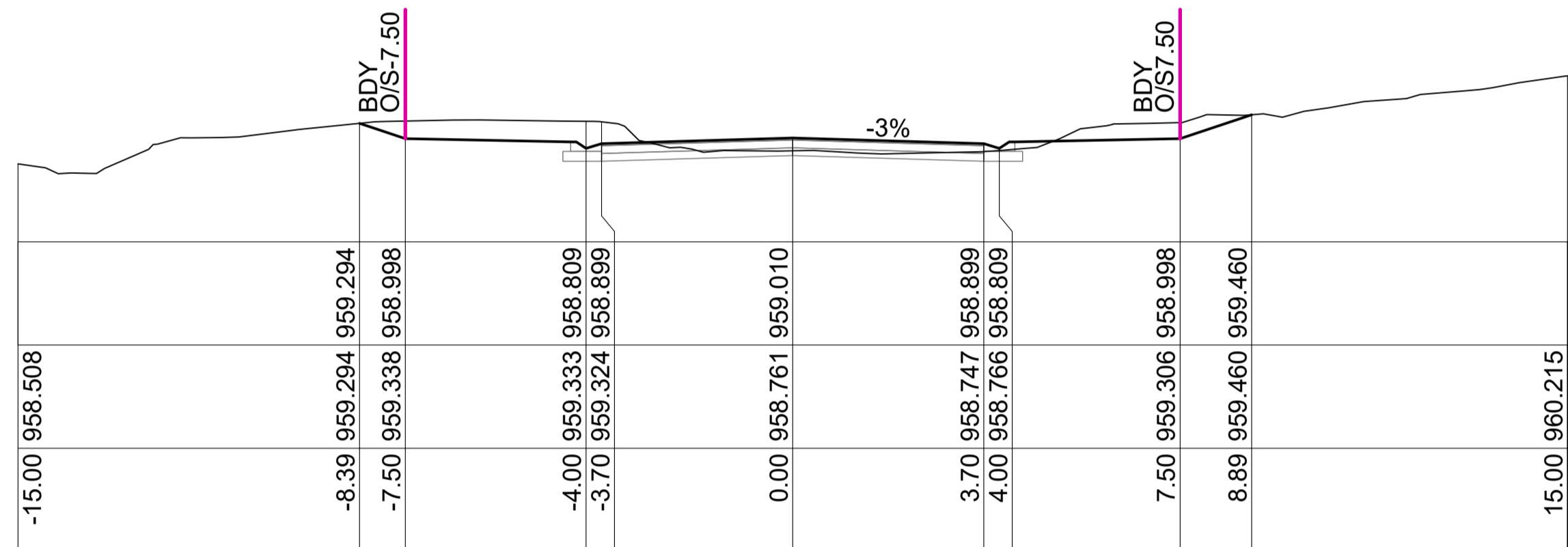
Ch 120.00 m

Datum RL958m



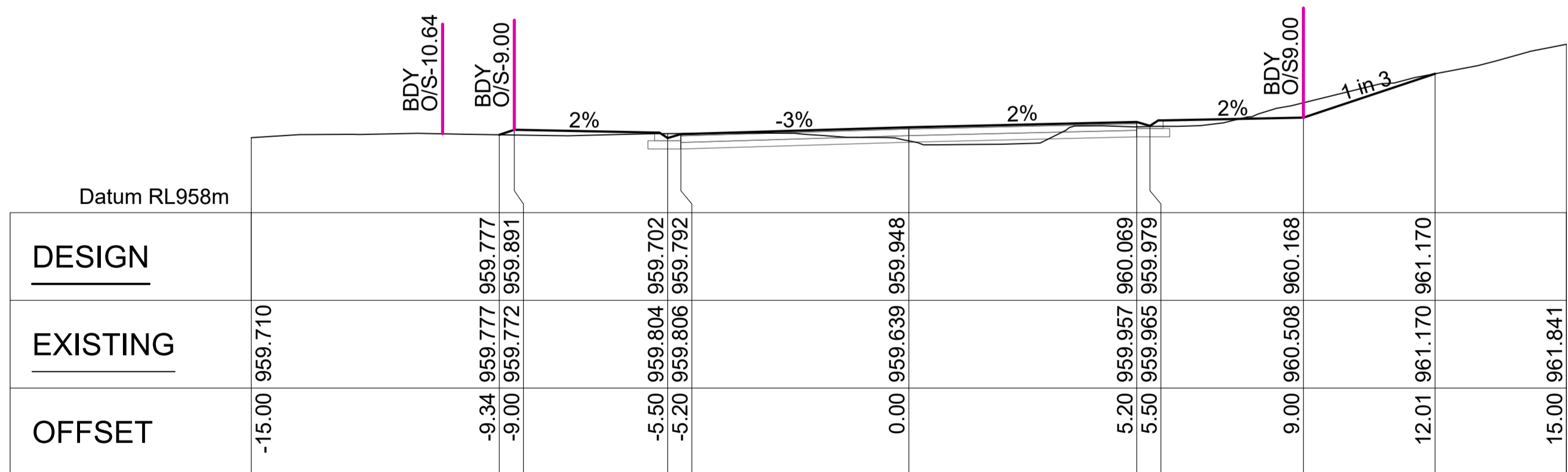
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Datum RL957m



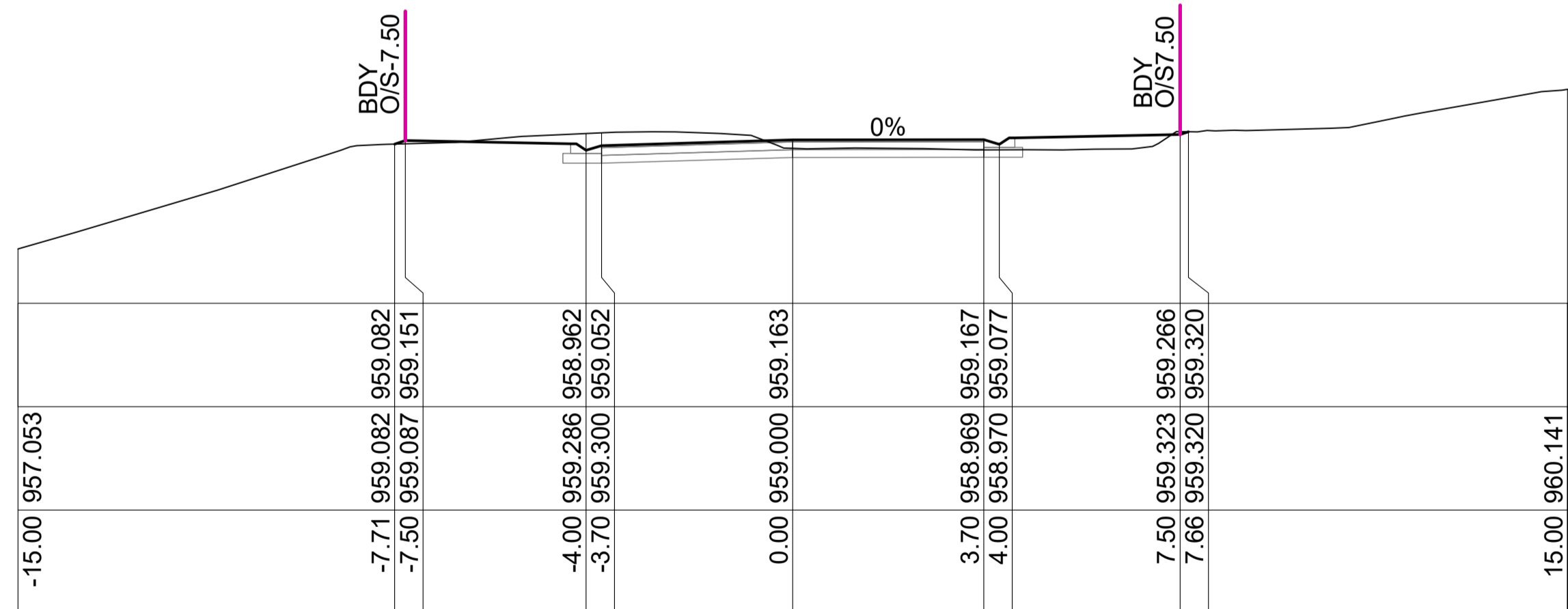
Ch 100.00 m

Datum RL958m



Scale 1:100
Ch 20.00 m

Datum RL956m



Ch 80.00 m

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
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A	26/07/24	Original Issue	GBL

Approved for Construction:

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APEC Engineer IntPE (Aus) RBP
(VicNT)

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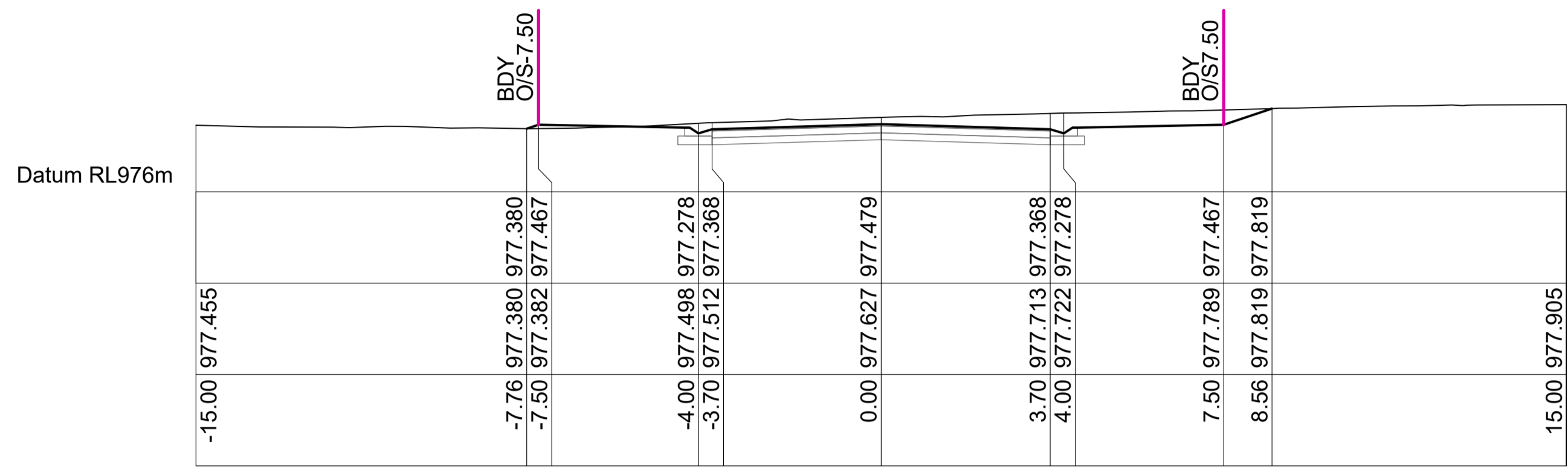
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Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 01
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

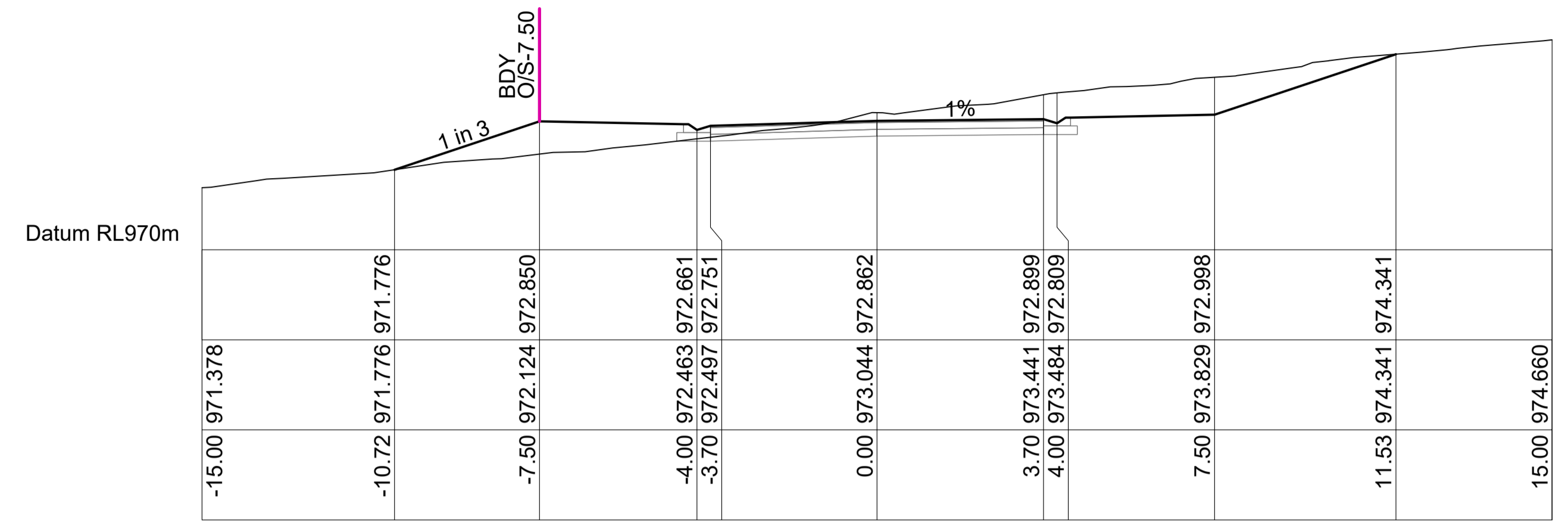


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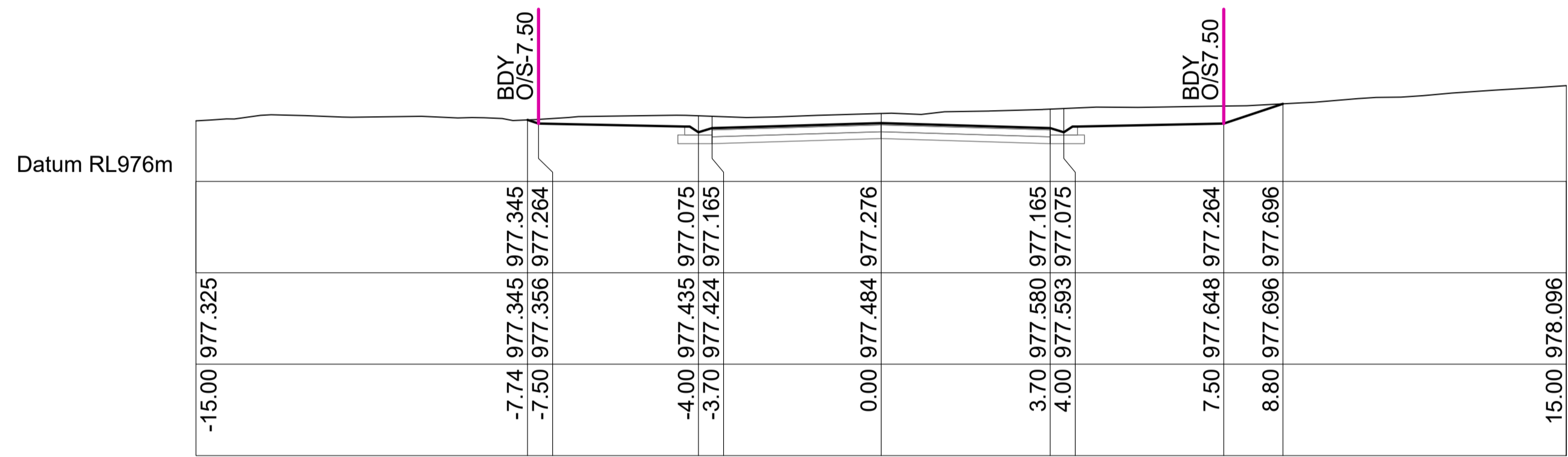
Job No.	2020.0047
DWG. No.	R04
Issue	C
No. in set	33



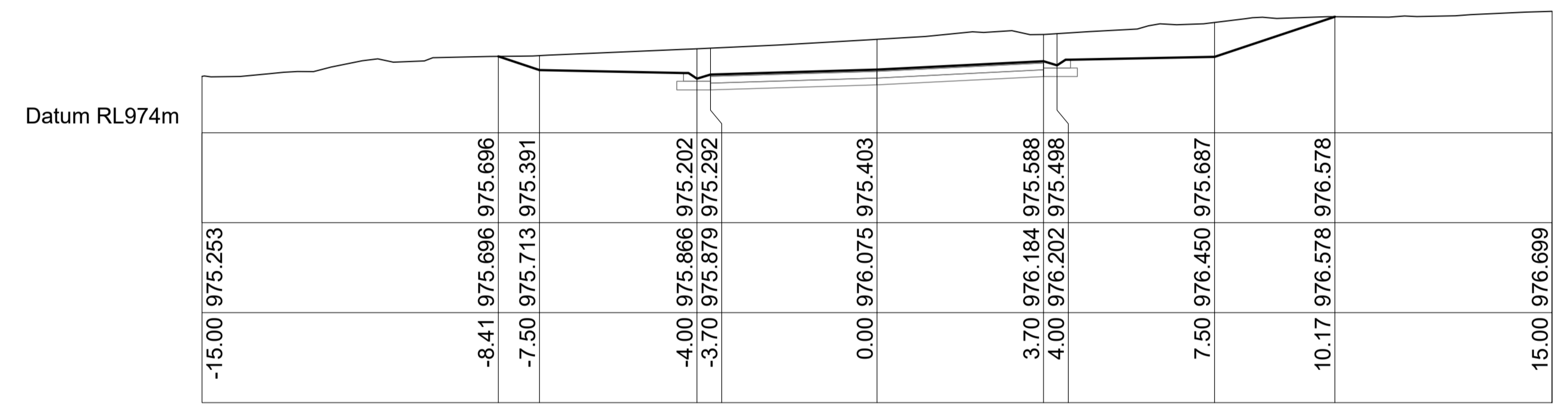
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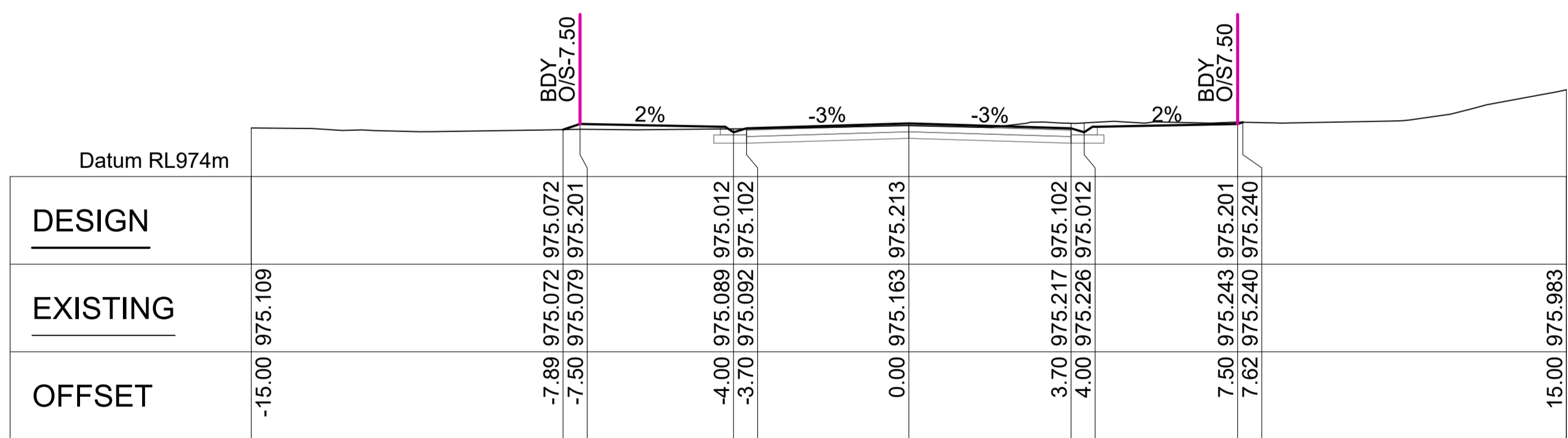
Ch 360.00 m



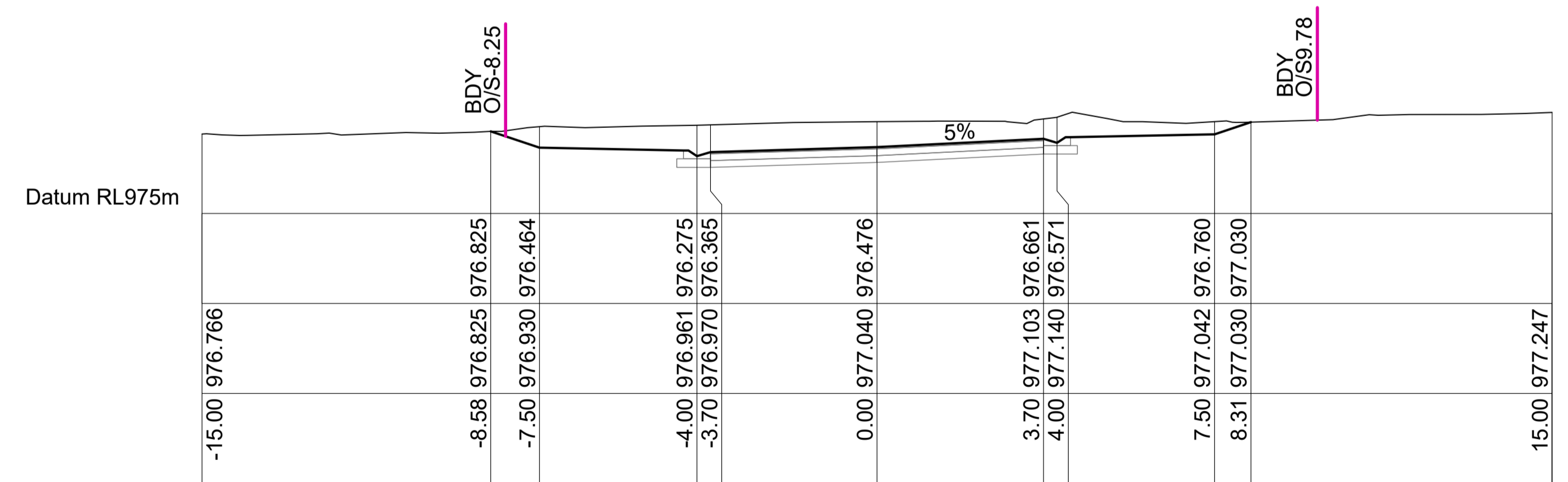
Ch 280.00 m



Ch 340.00 m



Scale 1:100
Ch 260.00 m



Ch 320.00 m

DESIGN	
EXISTING	
OFFSET	

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
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A	26/07/24	Original Issue	GBL

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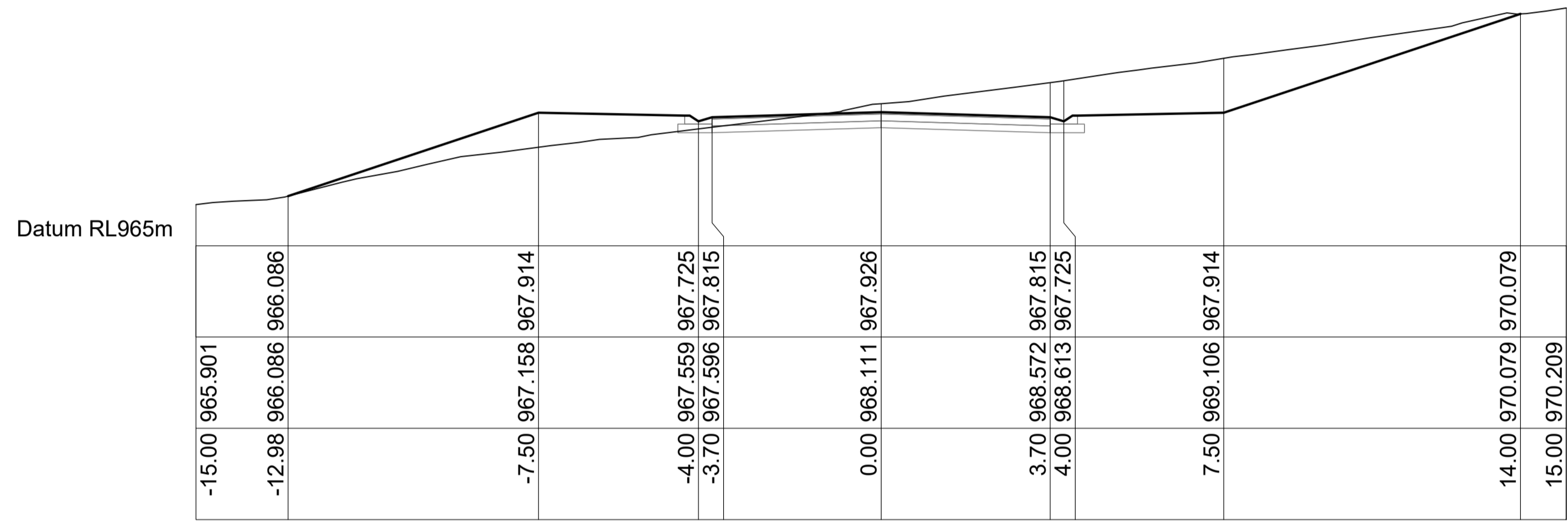
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

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Date: July 2024	

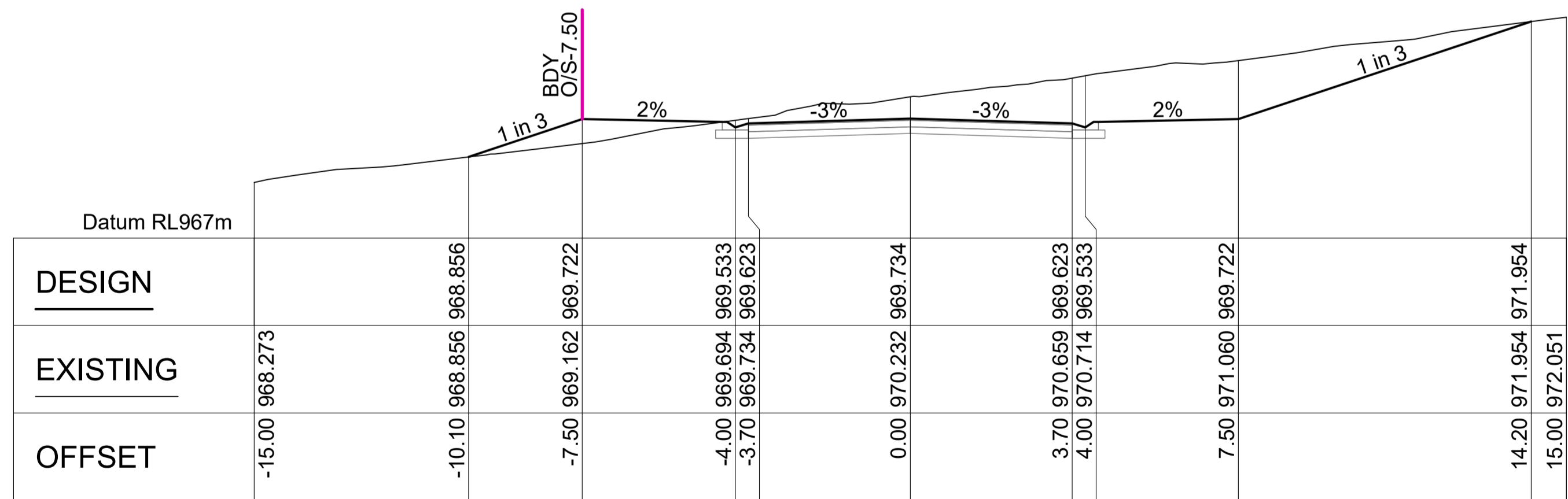
Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 01
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

CALARE CIVIL
CONSULTING ENGINEERS
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R06
Issue	C
No. in set	33



Ch 400.00 m



Scale 1:100
Ch 380.00 m

For DA Approval

Amend	Date	Description	By
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Approved for Construction:

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Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
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South Bowenfels, NSW 2790

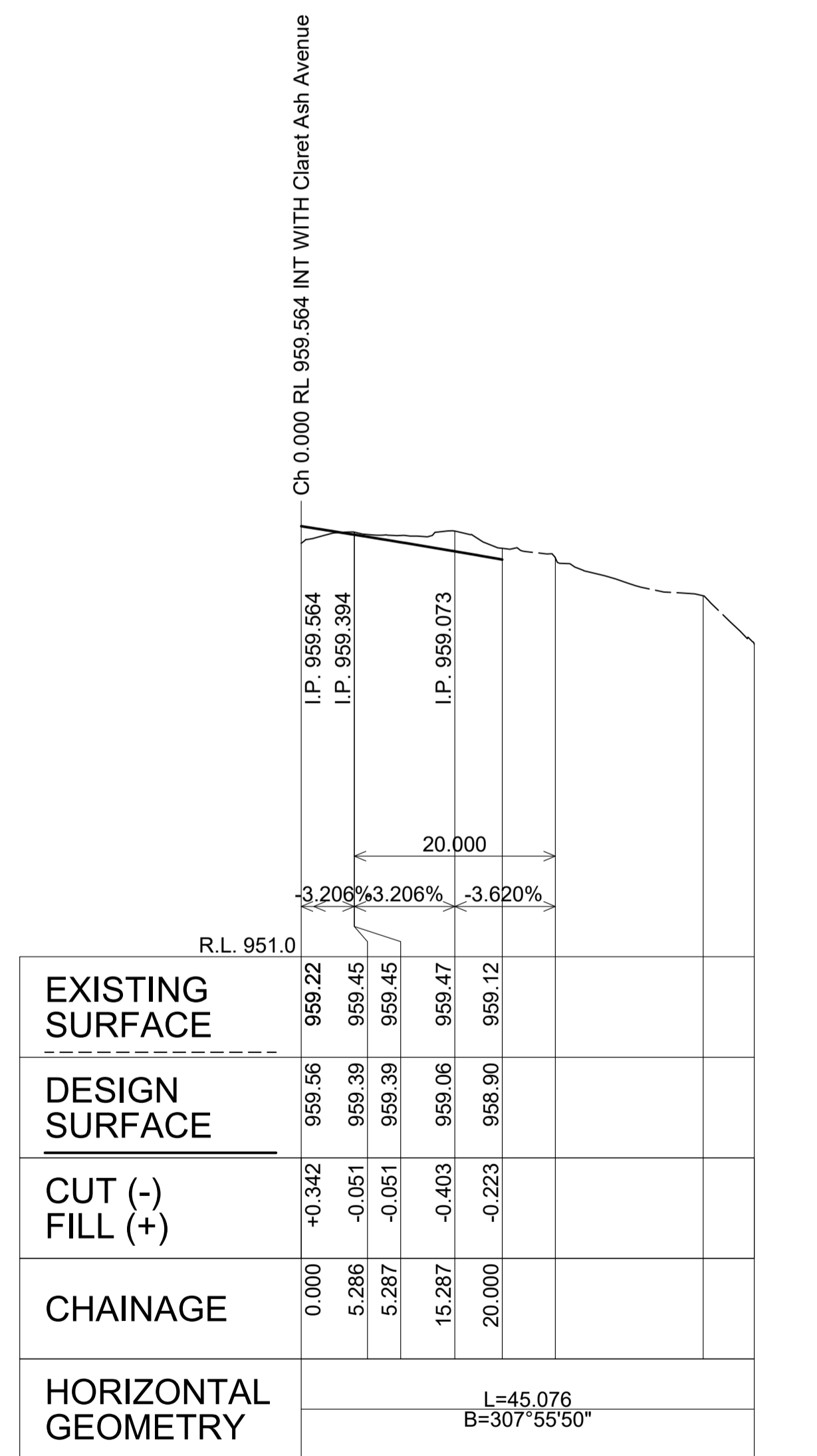
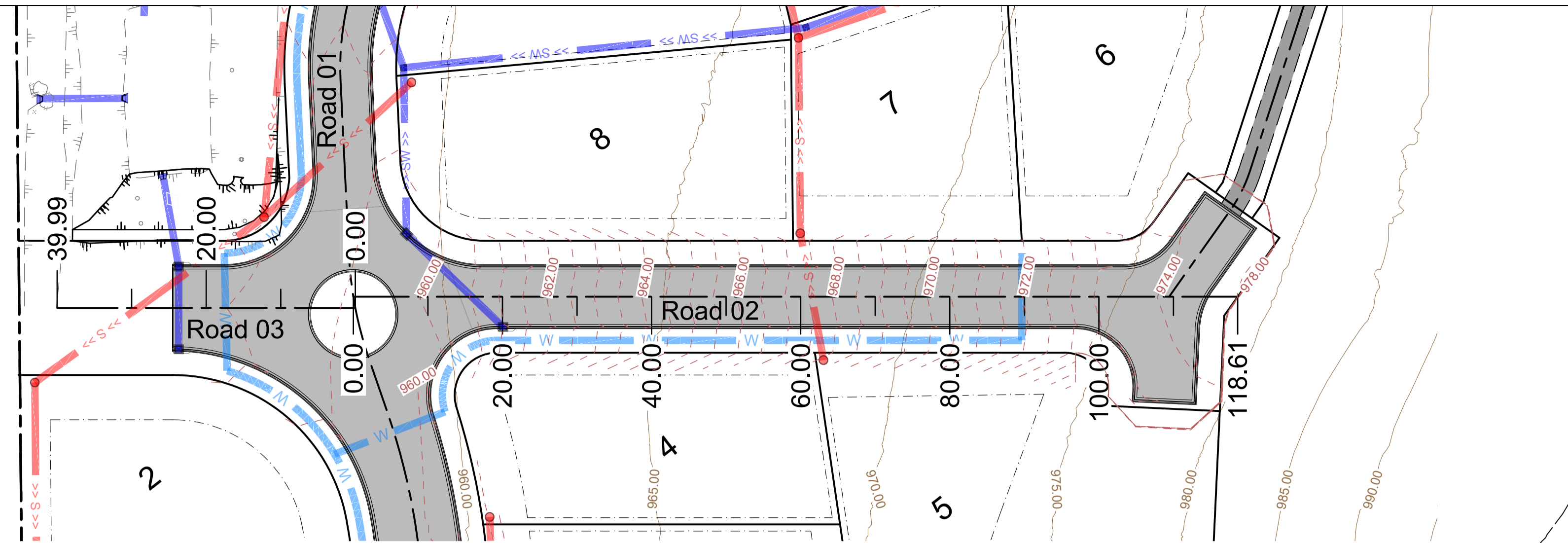
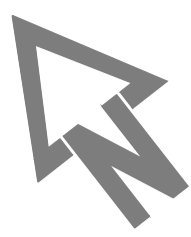
ROAD 01
PRELIMINARY CROSS SECTIONS

Ledger Enterprises Pty Ltd

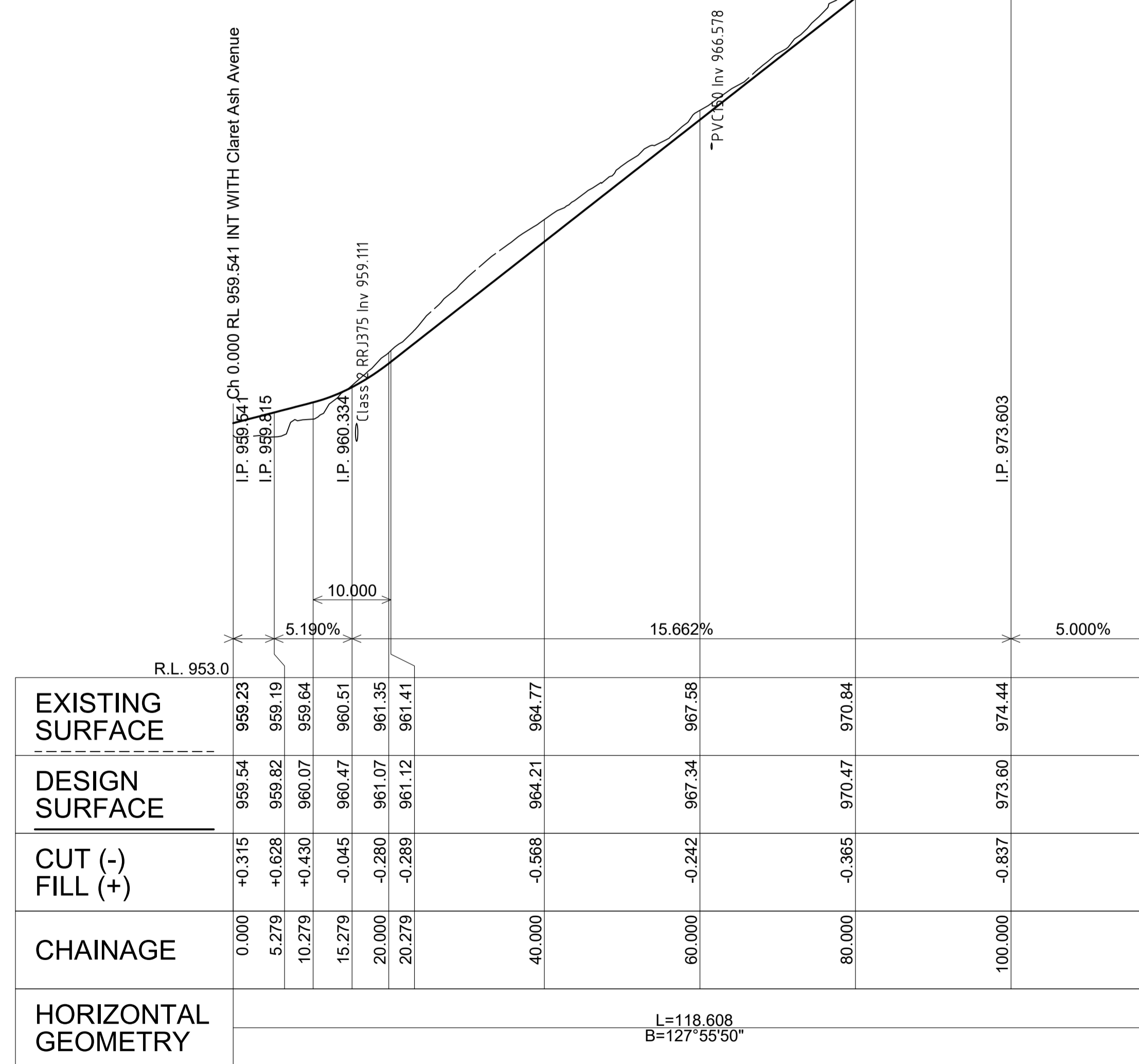


170 RANKIN STREET,
BATHURST, N.S.W. 2795
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Job No.	2020.0047
DWG. No.	R07
Issue	C
No. in set	33



LONGITUDINAL SECTION Road-03
SCALE 1:500 H 1:100 V



LONGITUDINAL SECTION Road-02
SCALE 1:500 H 1:100 V

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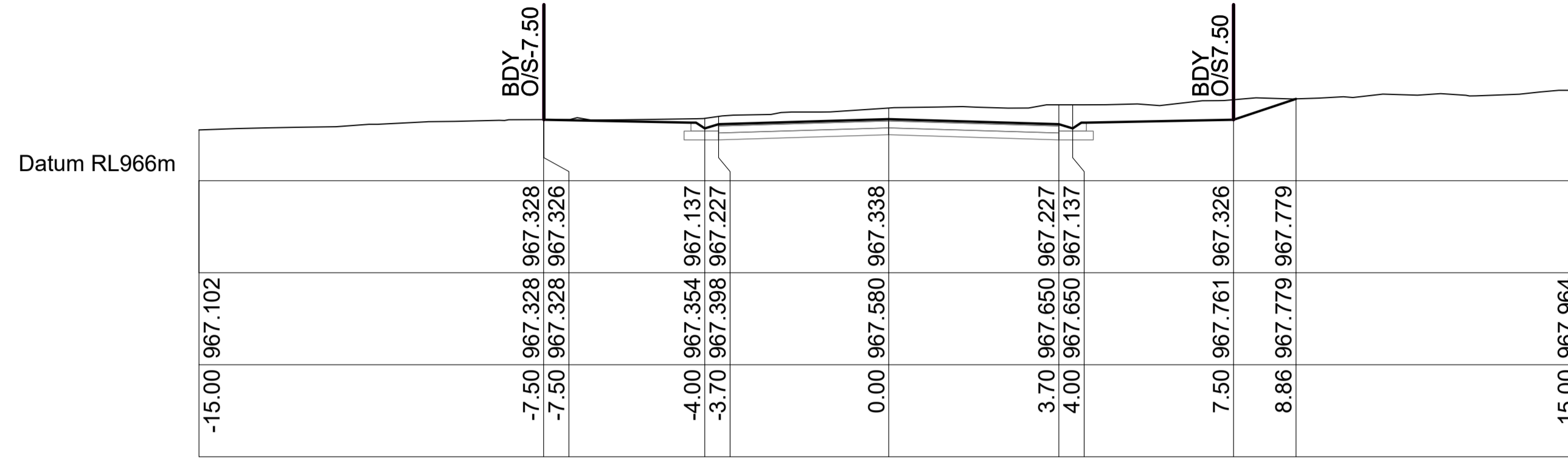
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Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROADS 02 & 03 - PRELIMINARY PLAN
& LONGITUDINAL SECTION
Ledger Enterprises Pty Ltd

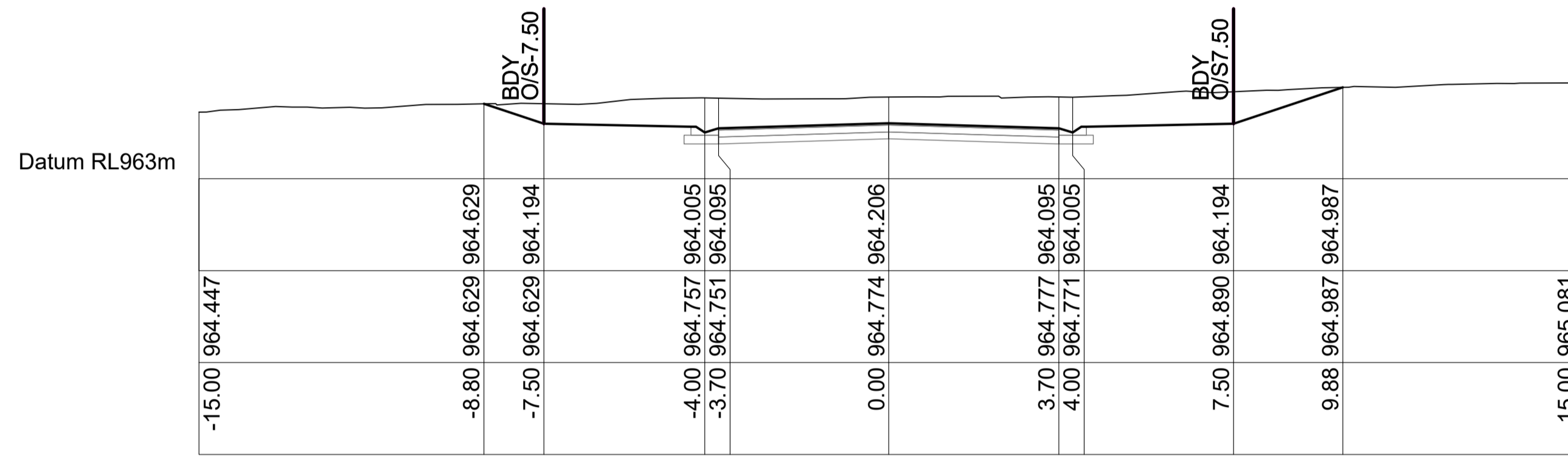


170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

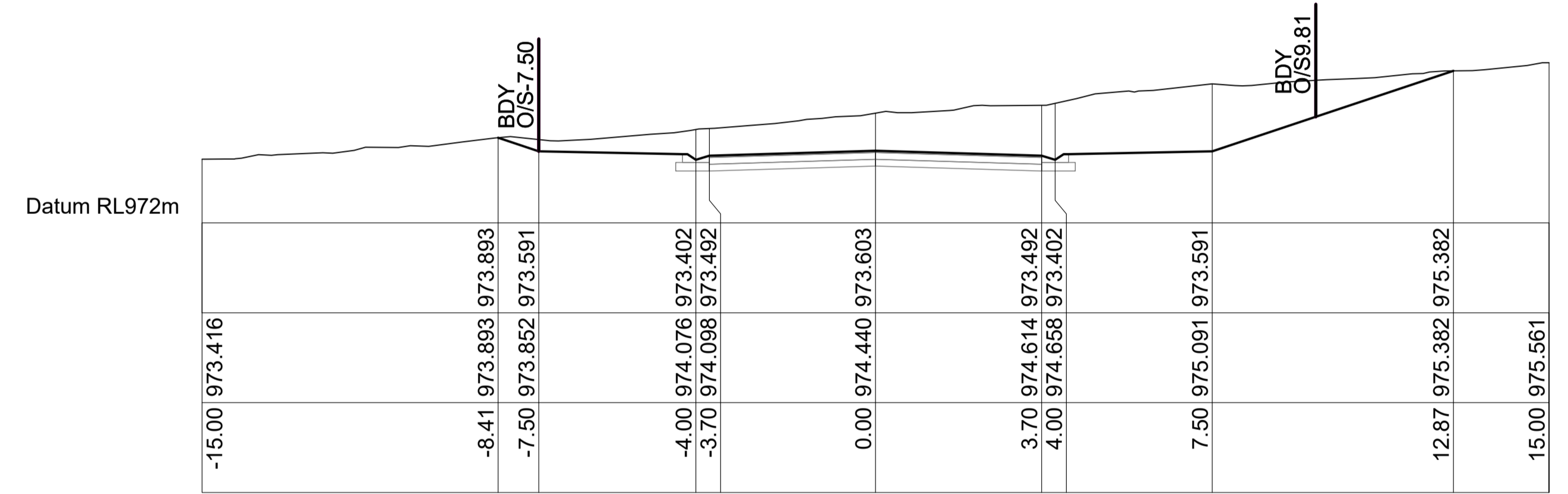
Job No.	2020.0047
DWG. No.	R08
Issue	C
No. in set	33



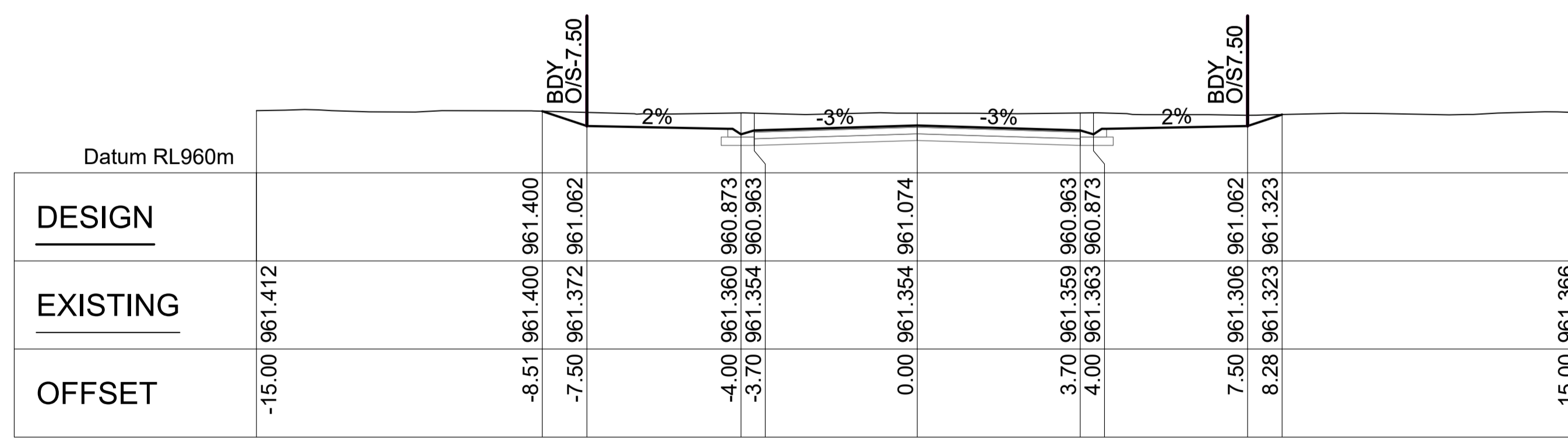
Ch 60.00 m



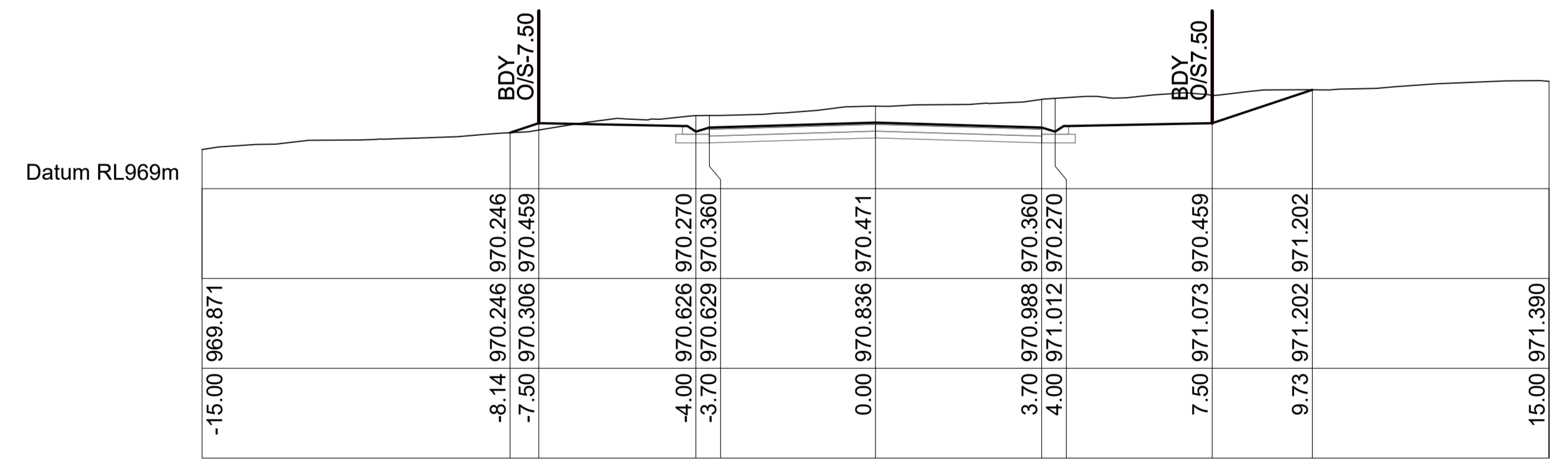
Ch 40.00 m



Ch 100.00 m



Scale 1:100
Ch 20.00 m



Ch 80.00 m

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

For DA Approval

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

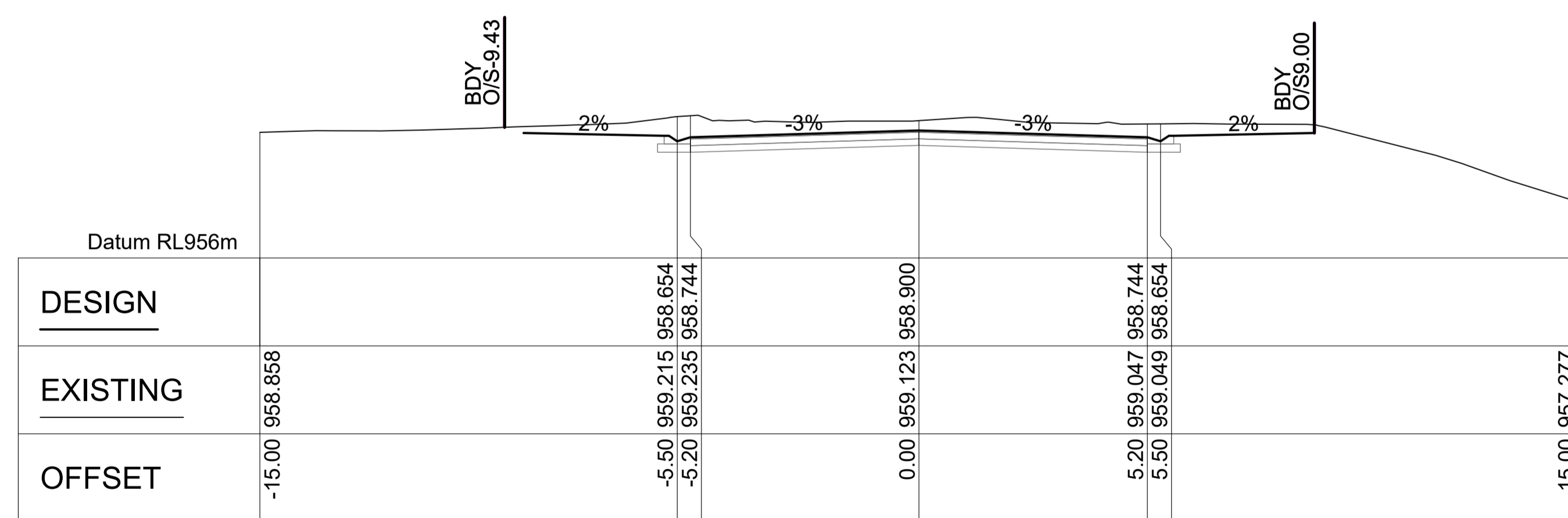
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Date:	July 2024

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 02
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

CALARE CIVIL
CONSULTING ENGINEERS
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R09
Issue	C
No. in set	33



Scale 1:100
Ch 20.00 m

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

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Designed: GBL	Plot Date: 27/08/2024 11:19:02
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Date: July 2024	

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790

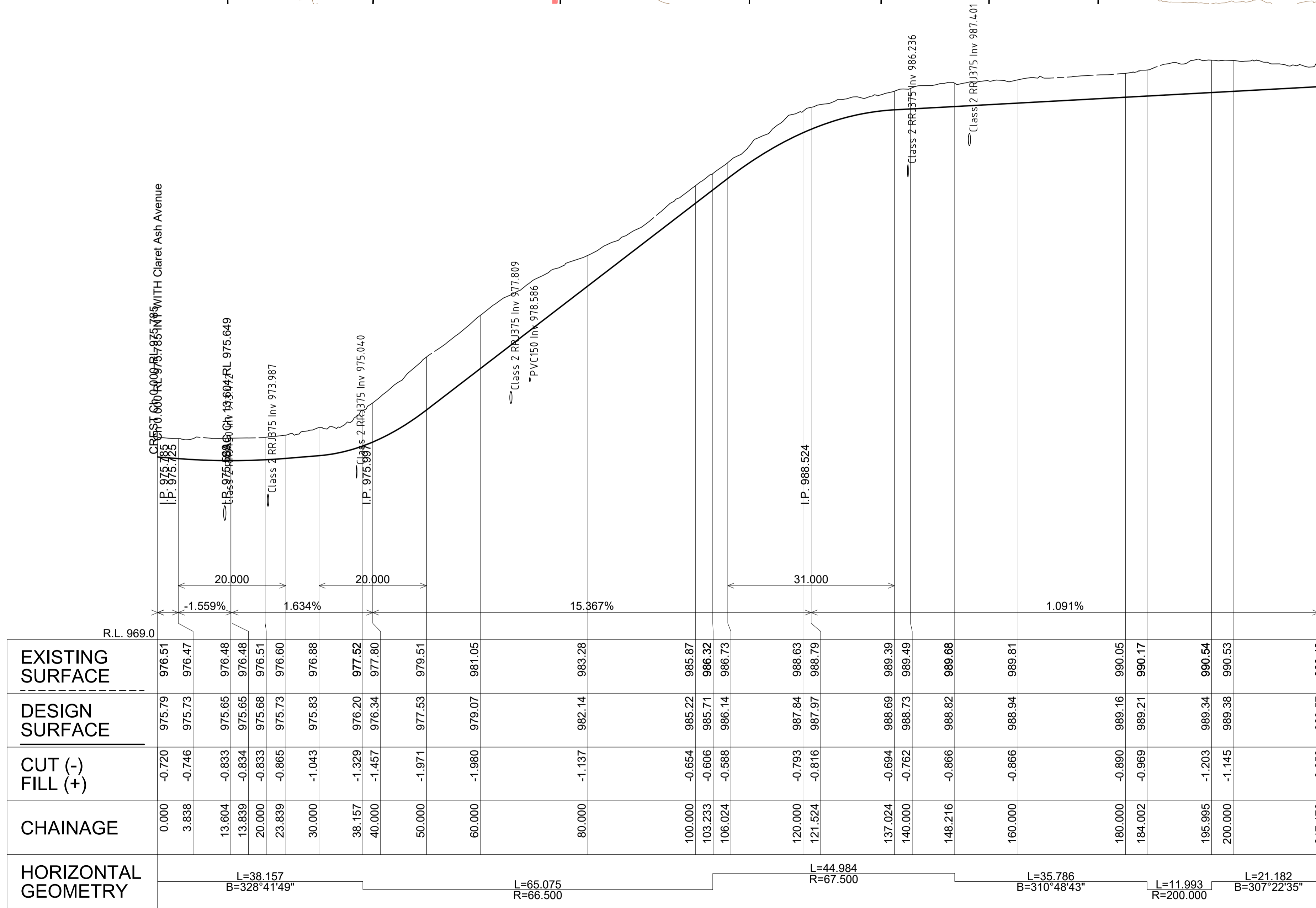
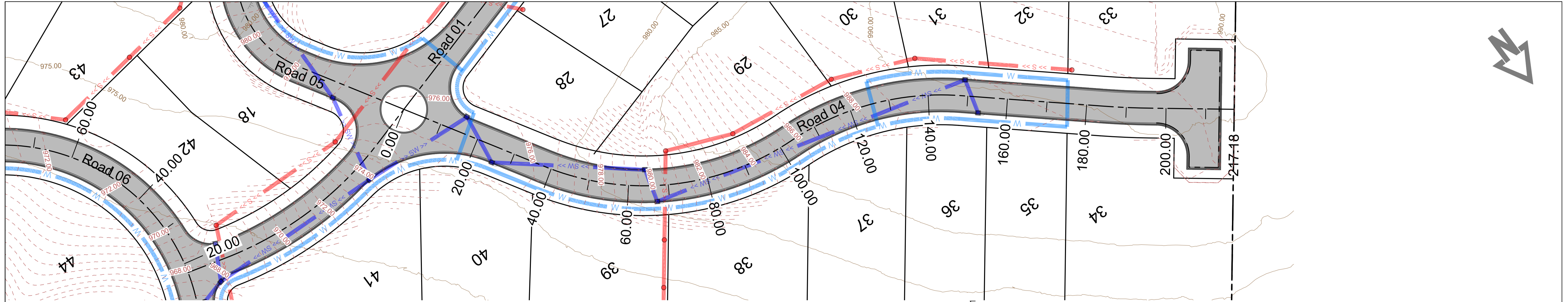
ROAD 03
PRELIMINARY CROSS SECTIONS

Ledger Enterprises Pty Ltd



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BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R10
Issue	C
No. in set	33



LONGITUDINAL SECTION Road-04
SCALE 1:500 H 1:100 V

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

For DA Approval

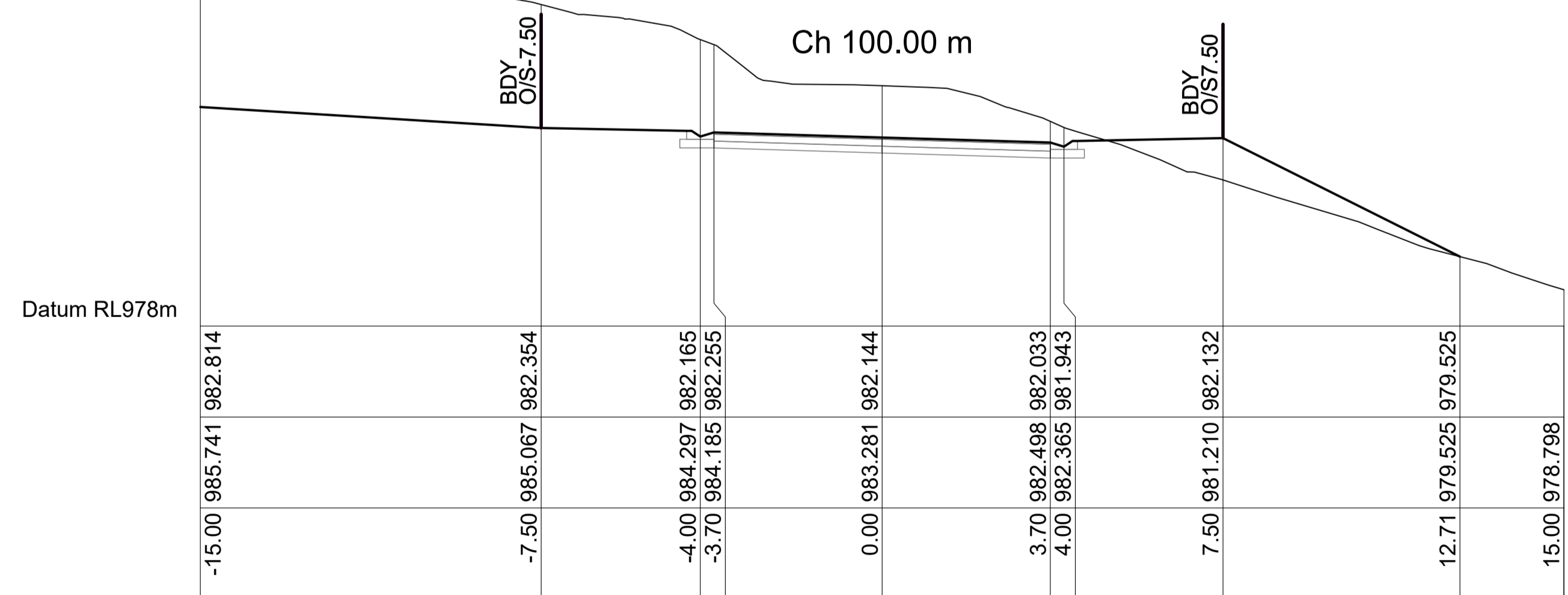
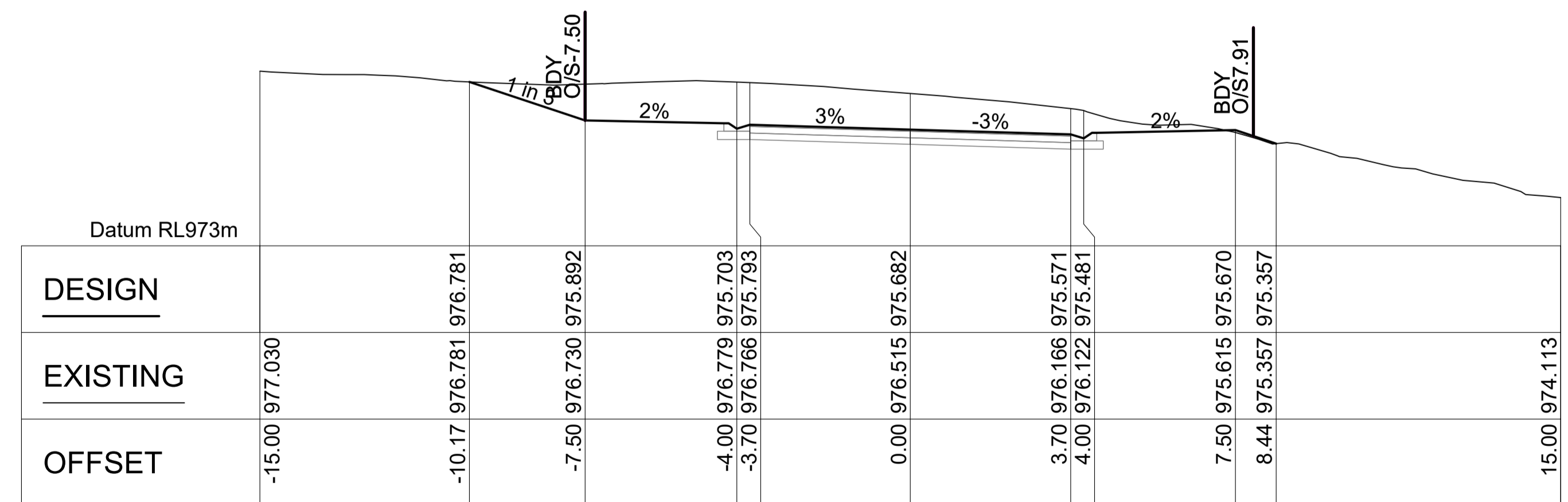
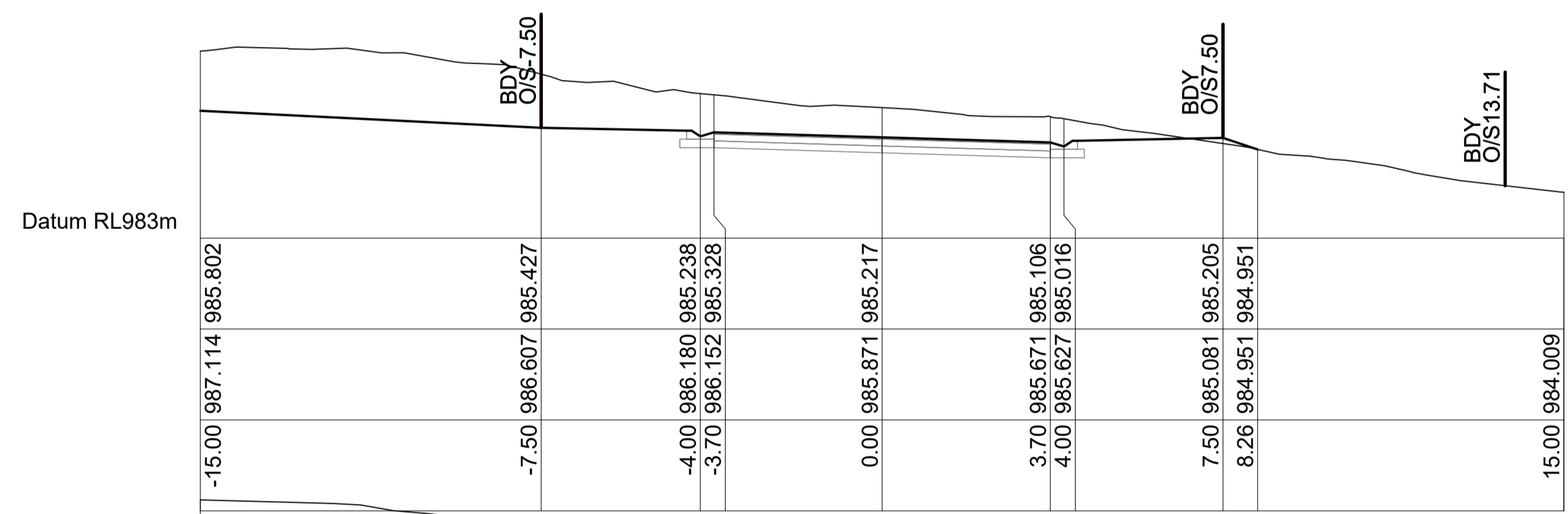
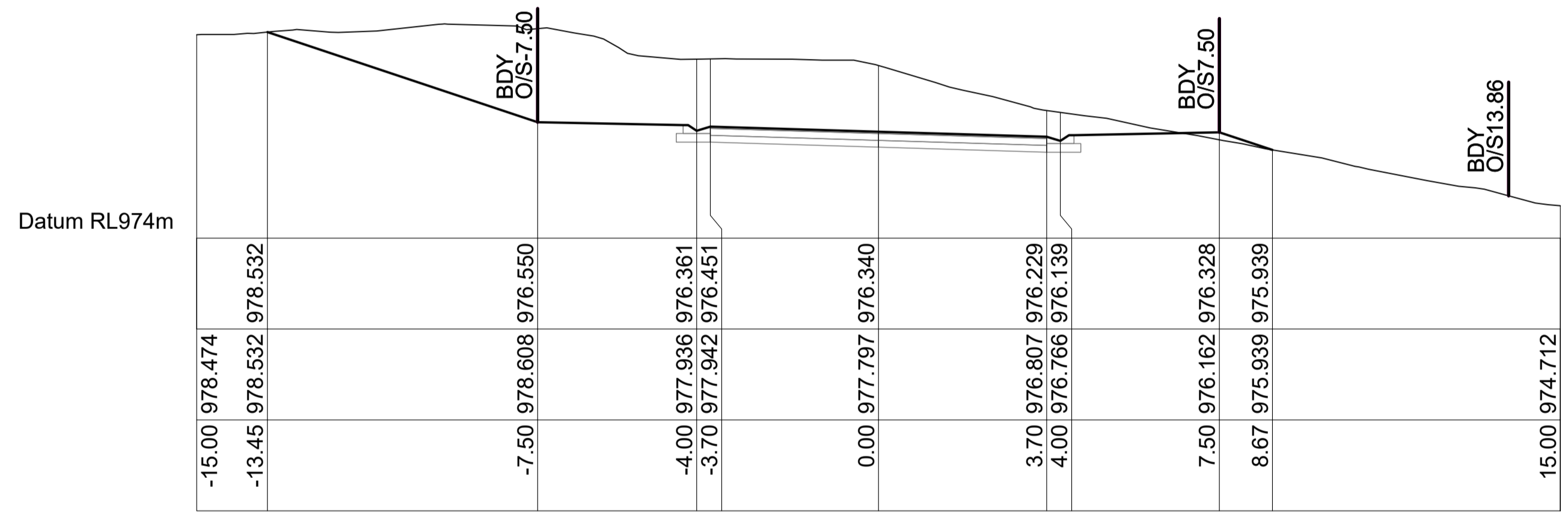
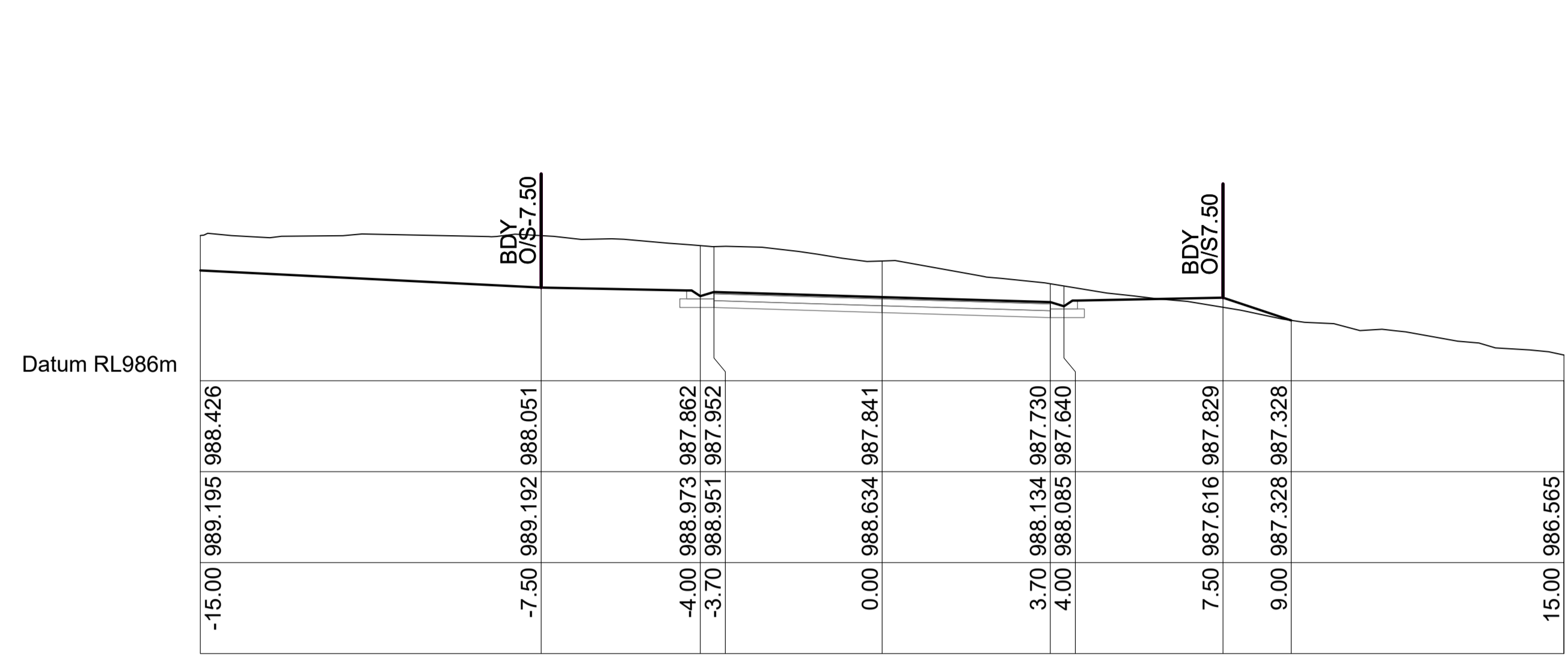
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Date:	July 2024	

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790	
ROAD 04 - PRELIMINARY PLAN & LONGITUDINAL SECTION	
Ledger Enterprises Pty Ltd	

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CONSULTING ENGINEERS

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Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R11
Issue	C
No. in set	33



Scale 1:100
Ch 20.00 m

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

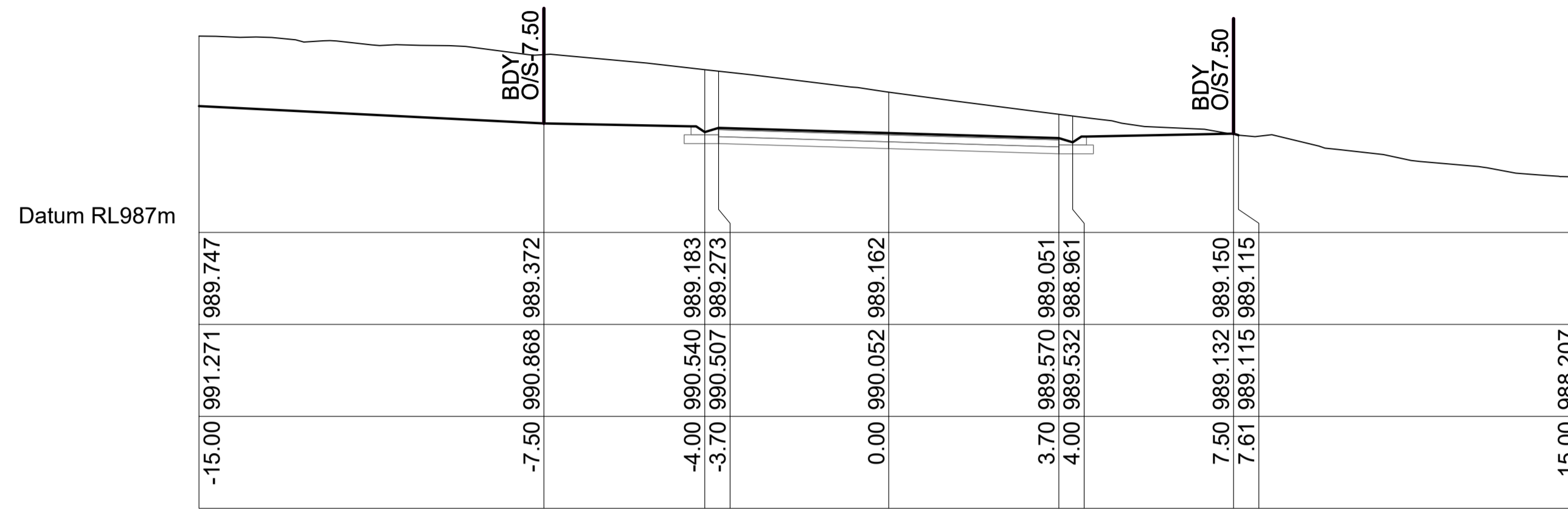
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Date:	July 2024		...2020.0047-Civil-P4.dwg

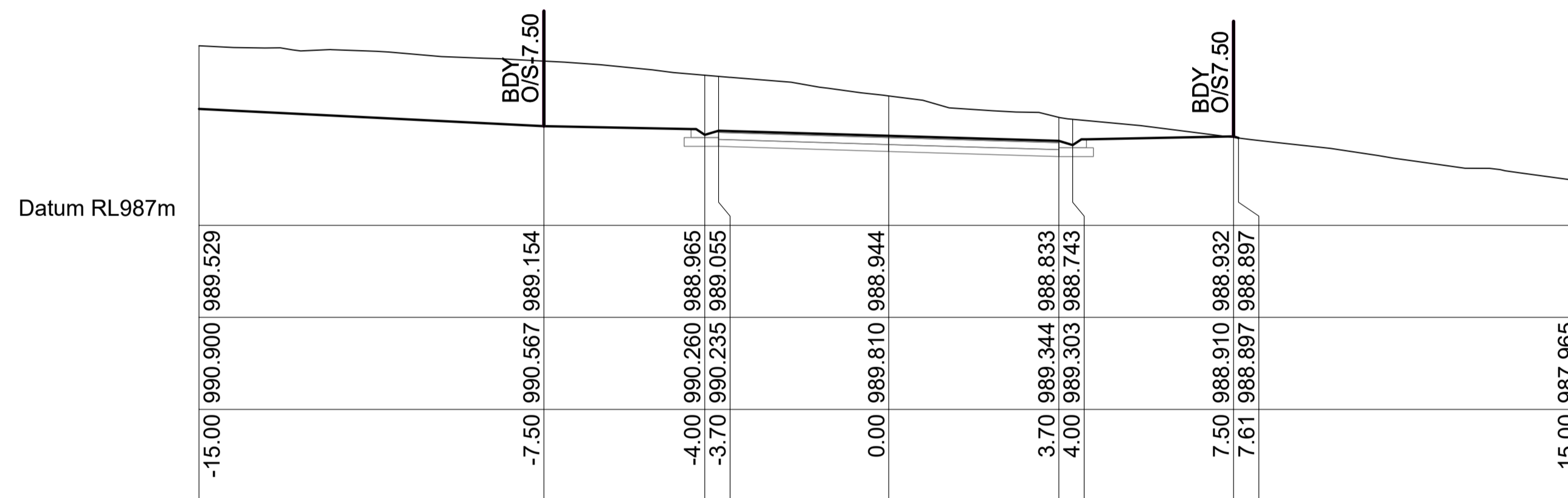
Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 04
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

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CONSULTING ENGINEERS
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

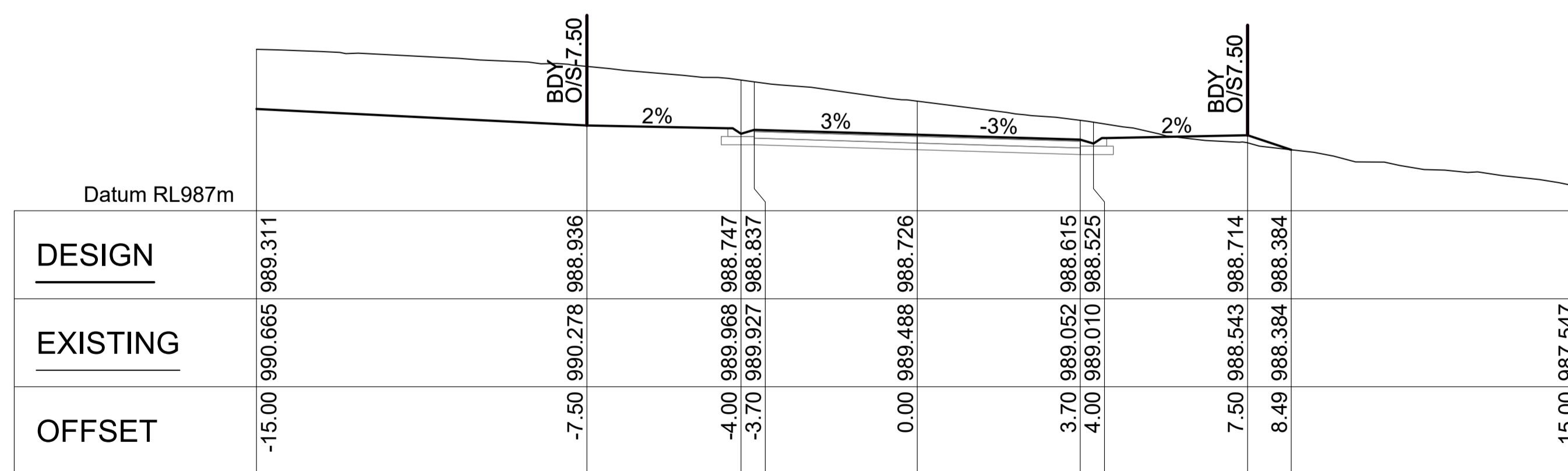
Job No.
2020.0047
DWG. No. **R12** Issue **C**
No. in set **33**



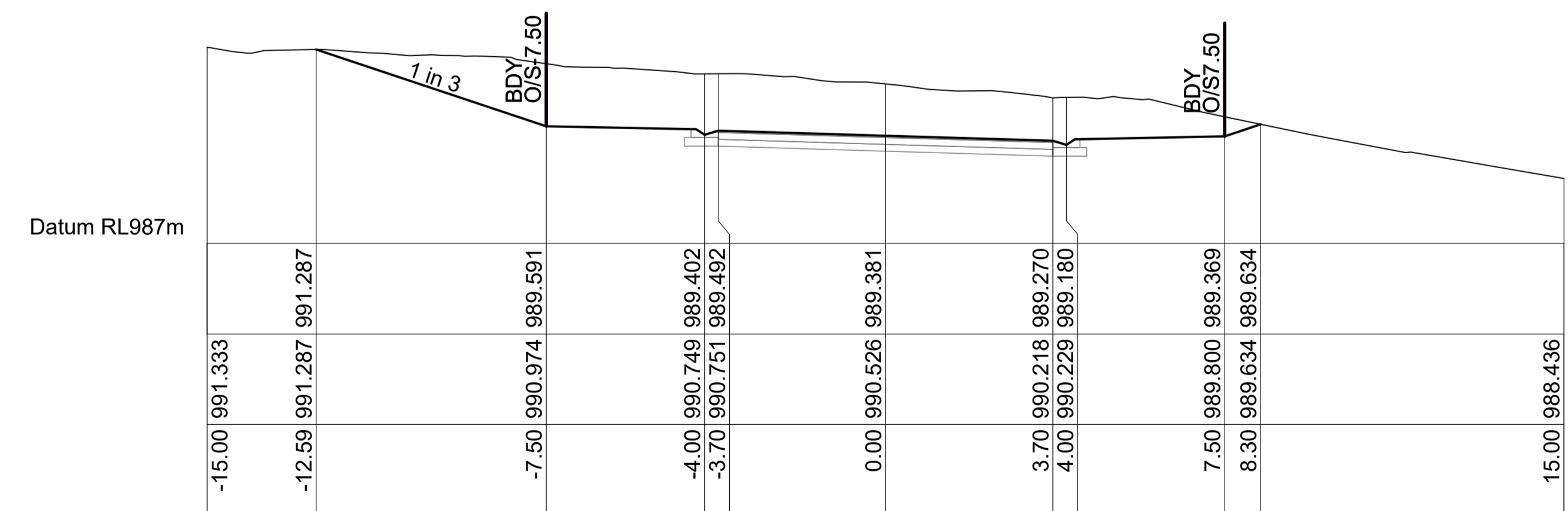
Ch 180.00 m



Ch 160.00 m



Scale 1:100
Ch 140.00 m



Ch 200.00 m

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

For DA Approval

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

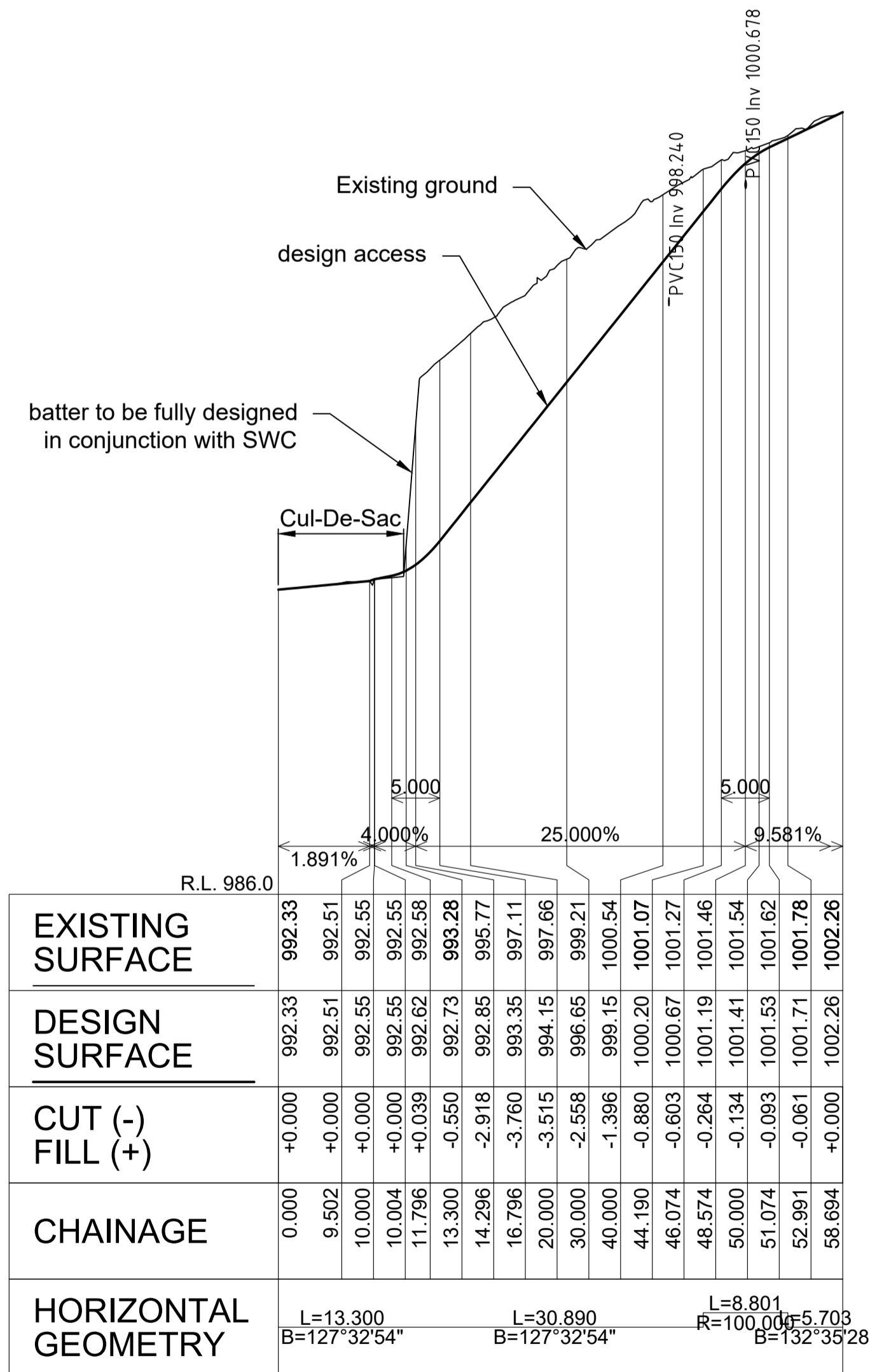
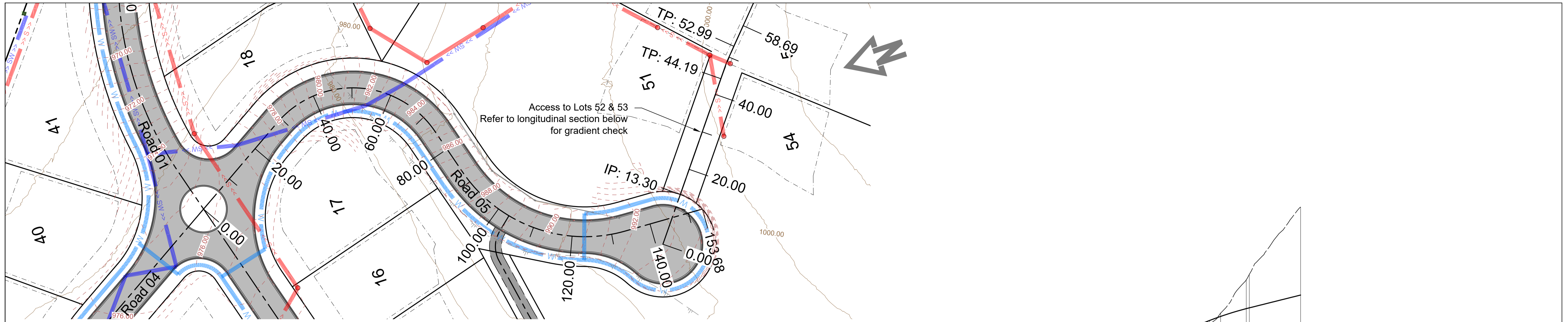
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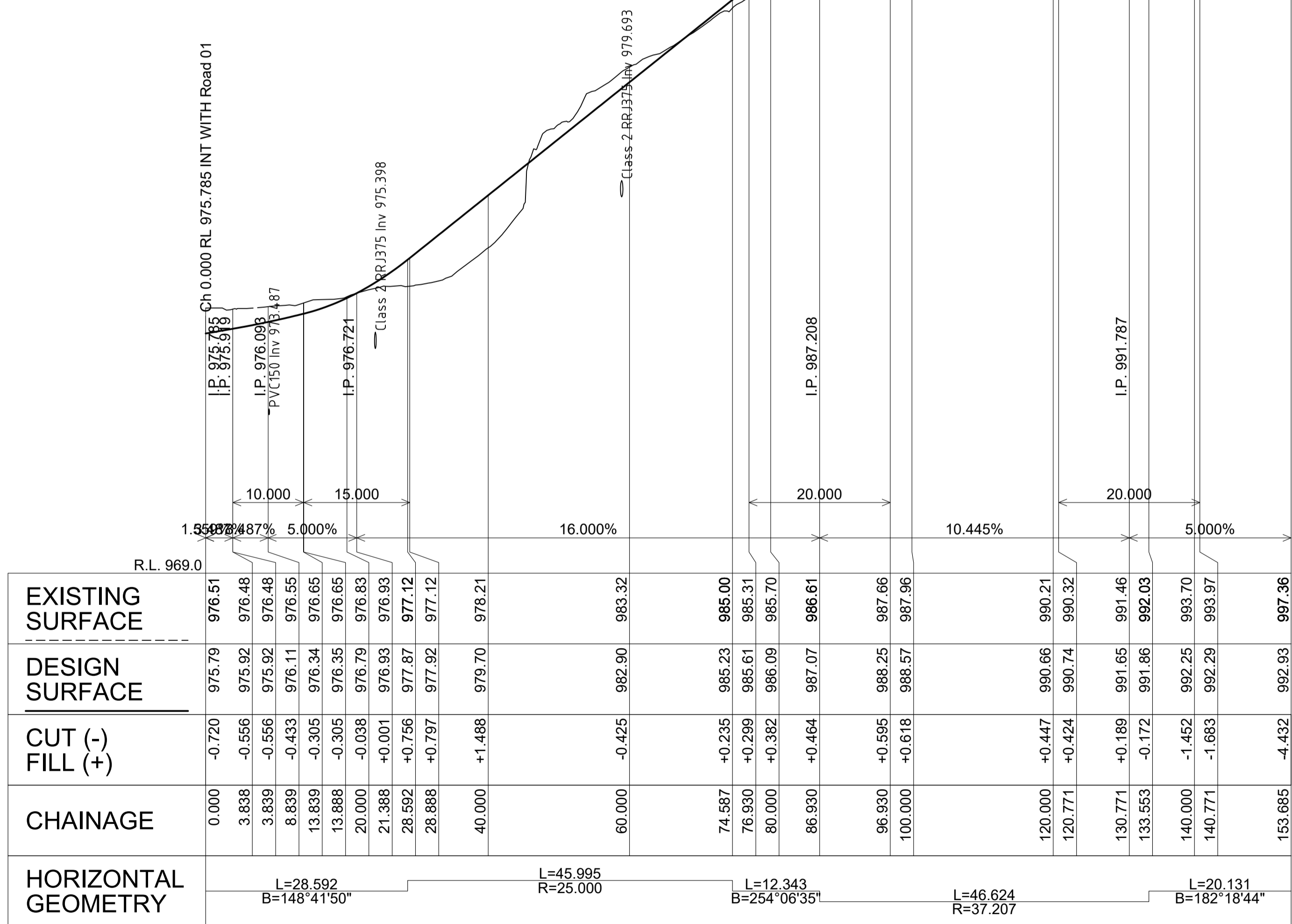
Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 04
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

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CONSULTING ENGINEERS
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Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R13
Issue	C
No. in set	33



LONGITUDINAL SECTION Access-52-53
SCALE 1:500 H 1:100 V



LONGITUDINAL SECTION Road-05
SCALE 1:500 H 1:100 V

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

For DA Approval

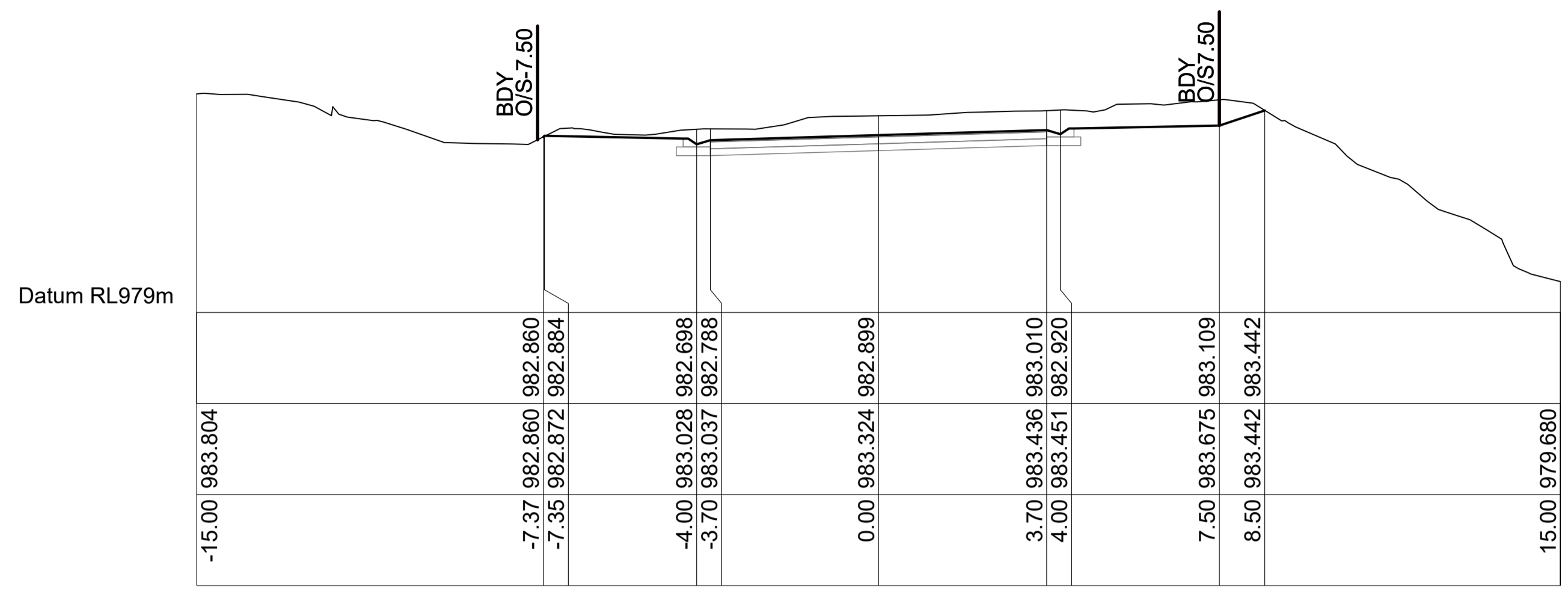
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Date:	July 2024		

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790	
ROAD 05 PRELIMINARY PLAN & LONG SECTION	
Ledger Enterprises Pty Ltd	

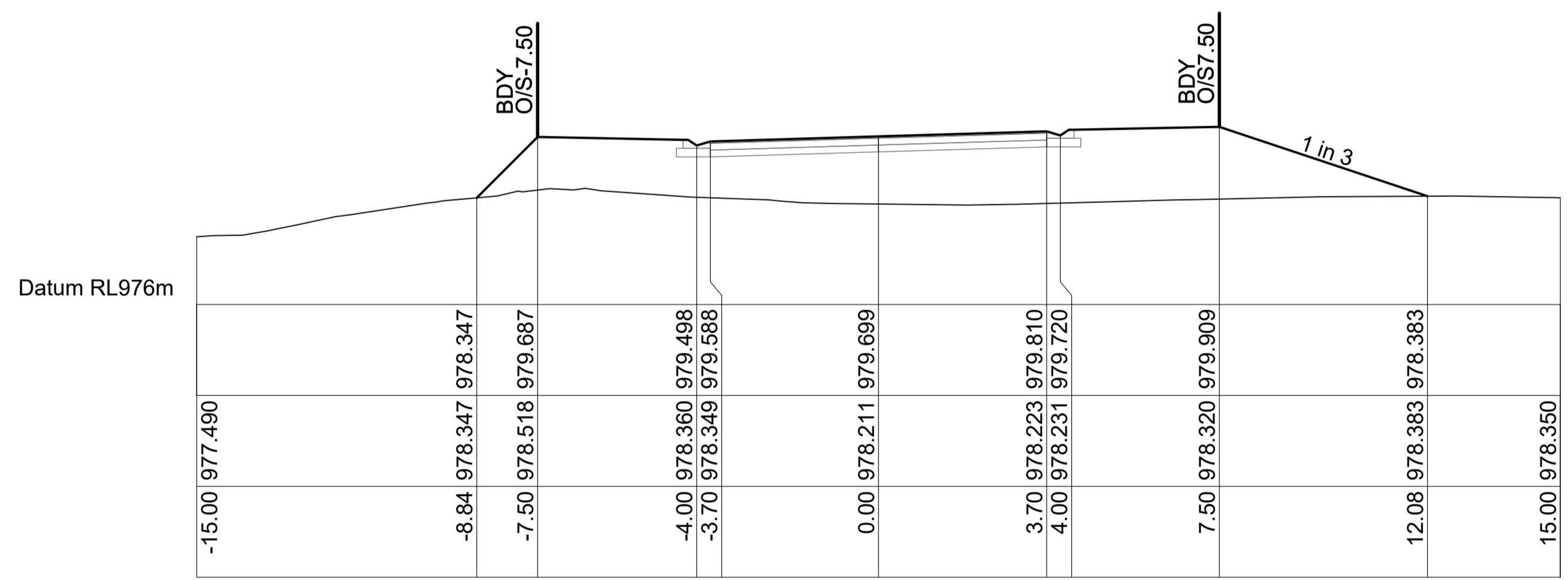
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CONSULTING ENGINEERS

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BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

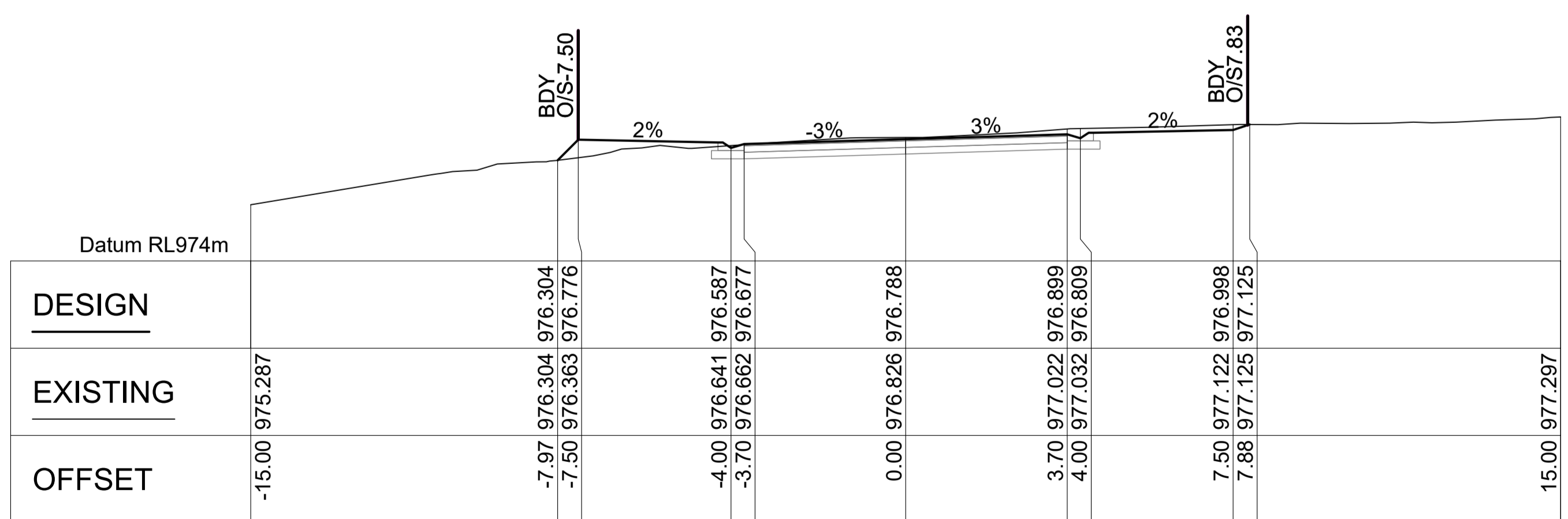
Job No.	2020.0047
DWG. No.	R14
Issue	C
No. in set	33



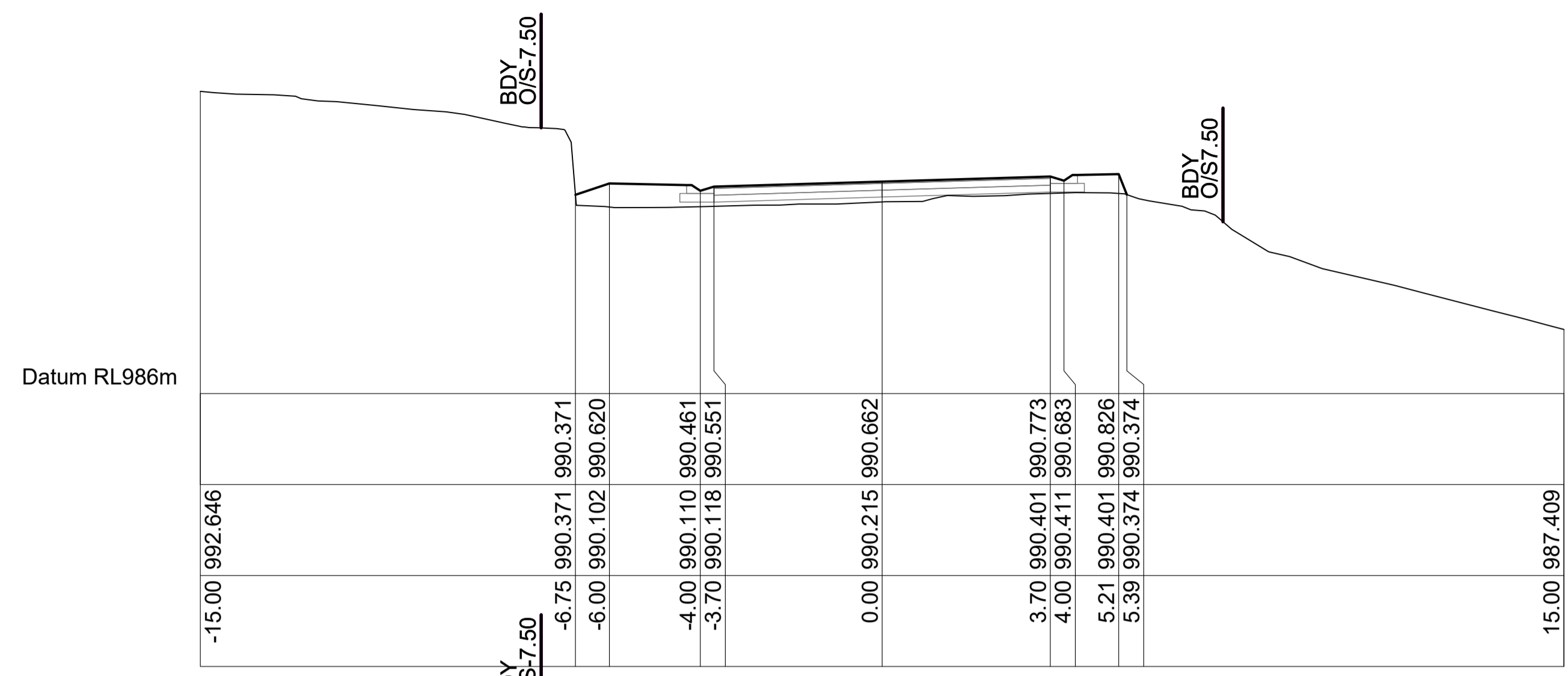
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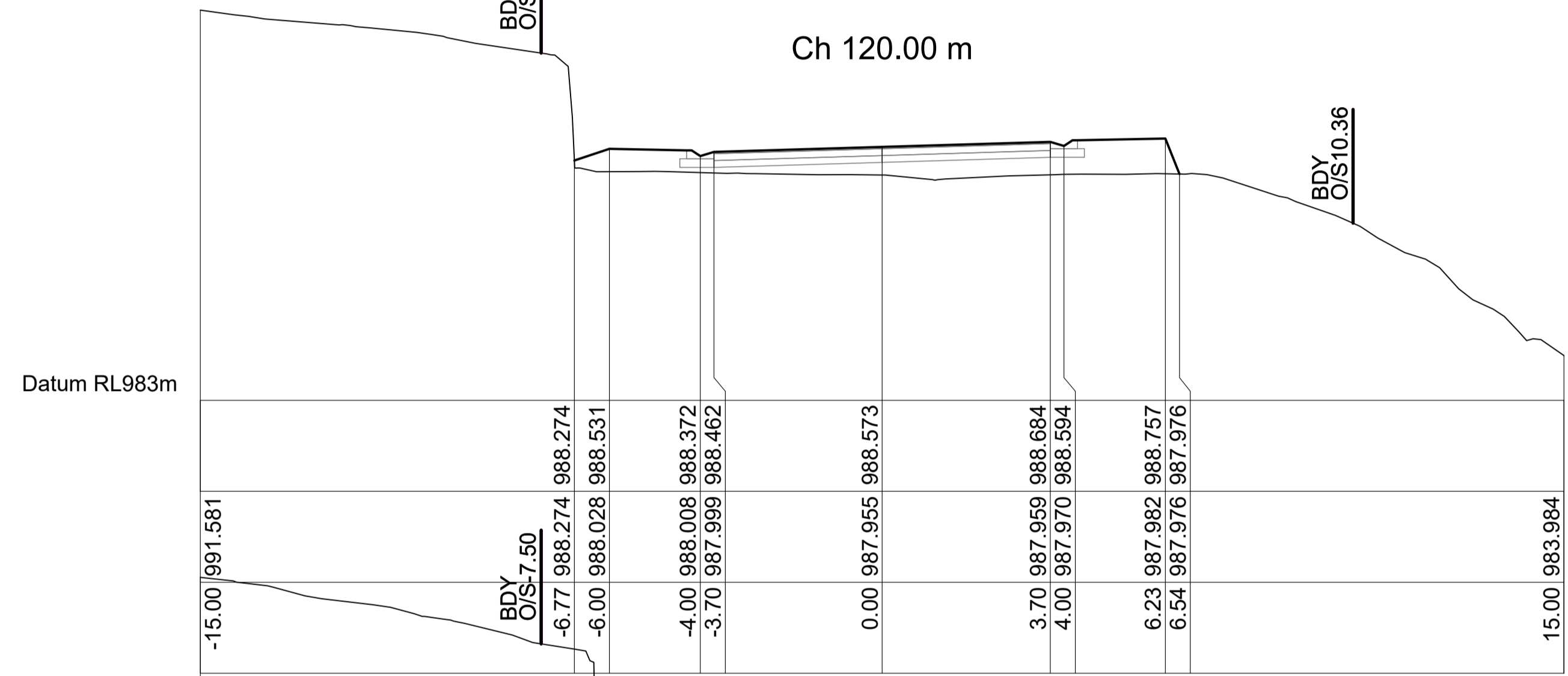
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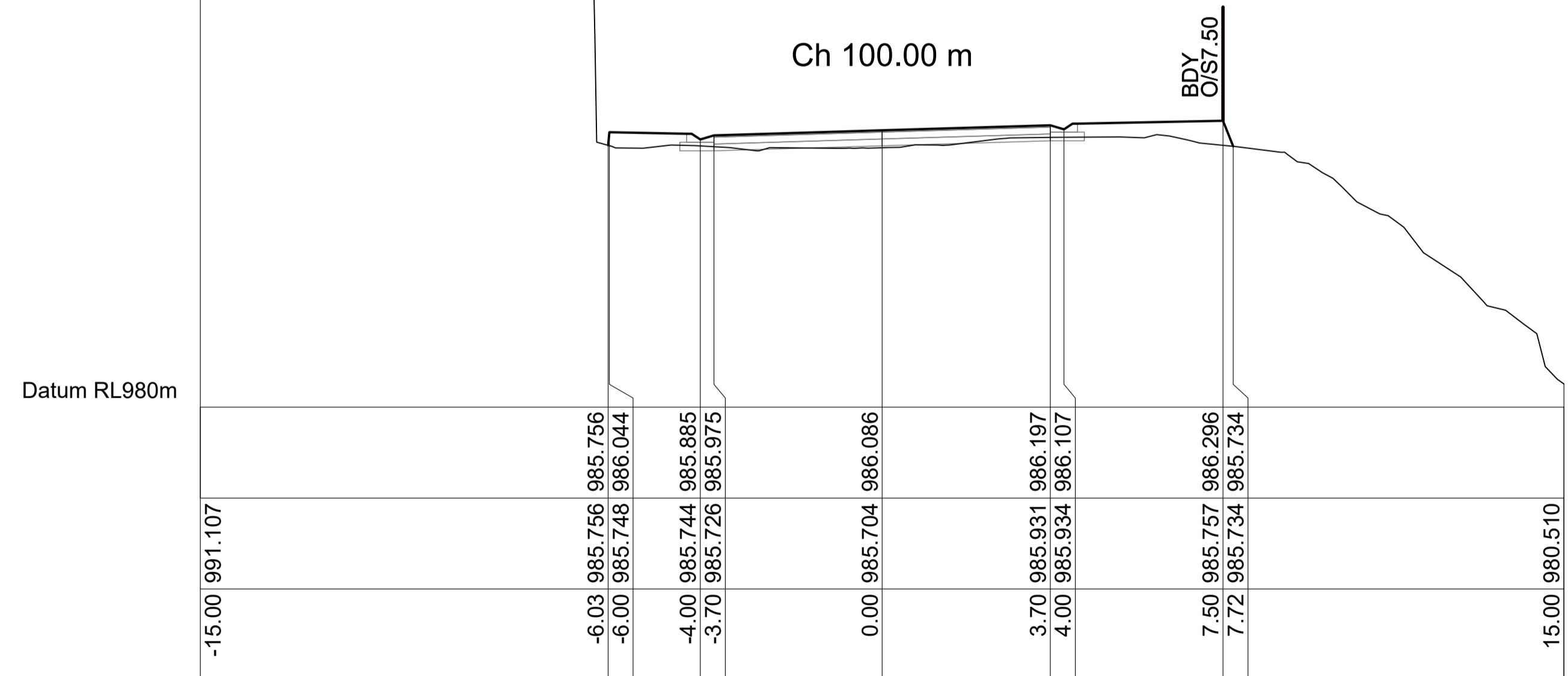
Scale 1:100
Ch 20.00 m



Ch 120.00 m



Ch 100.00 m



Ch 80.00 m

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

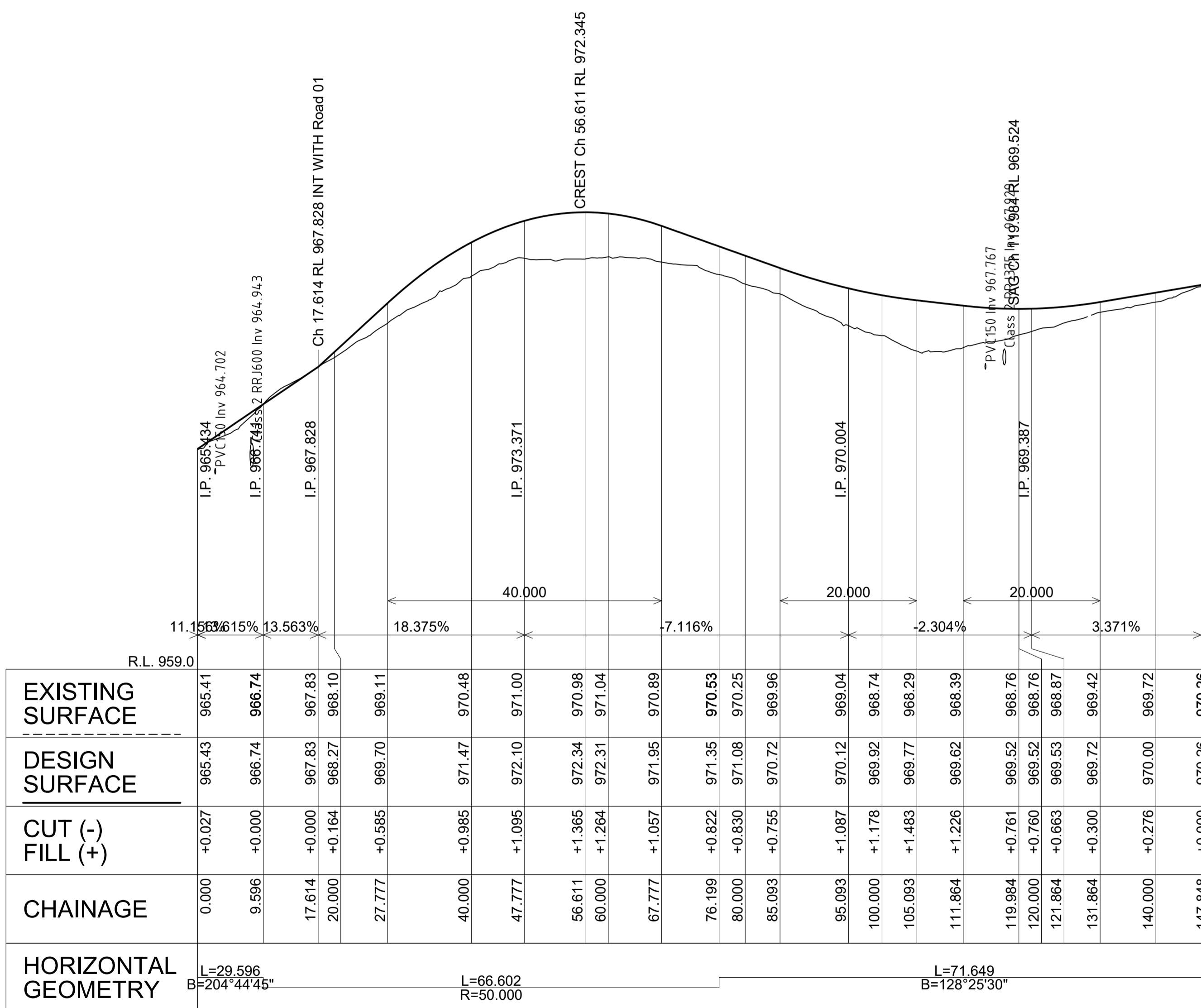
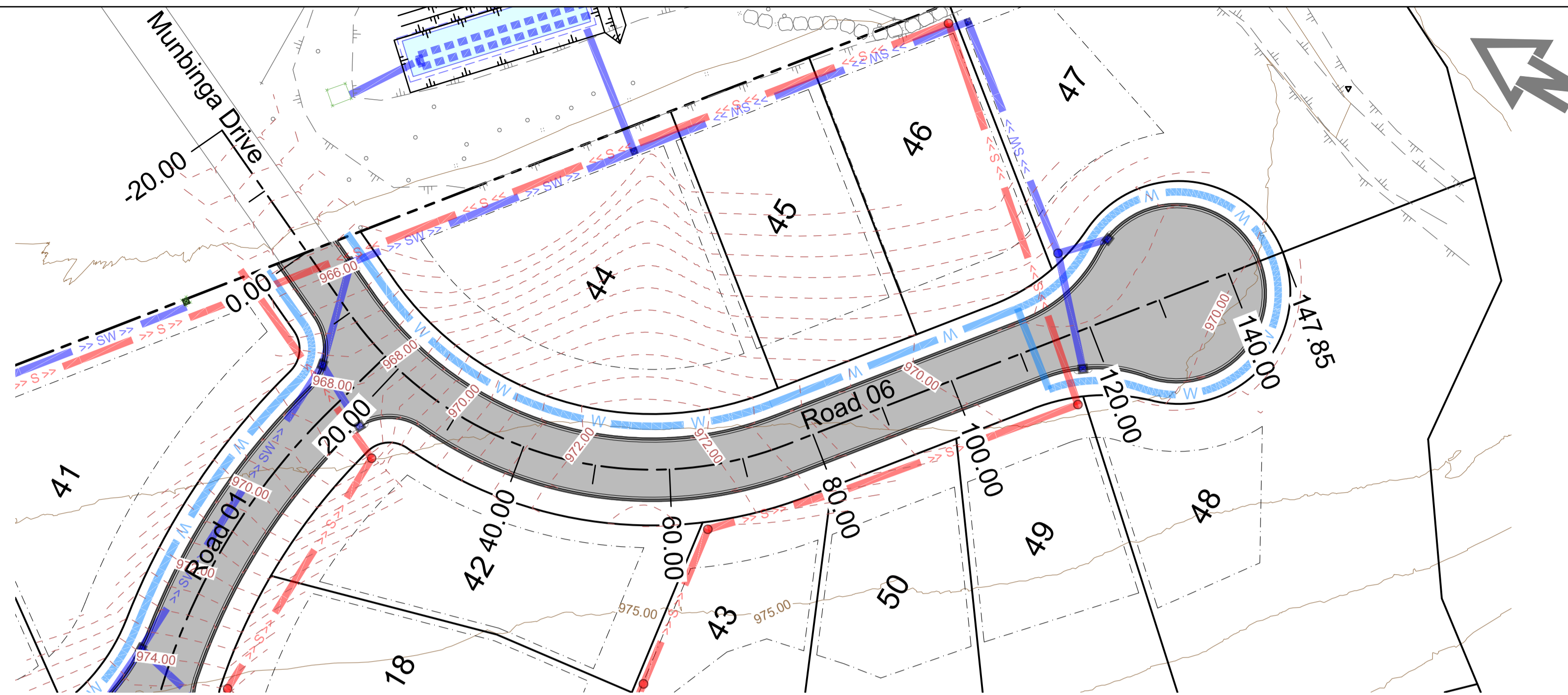
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Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
ROAD 05
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

CALARE CIVIL
CONSULTING ENGINEERS
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R15
Issue	C
No. in set	33



LONGITUDINAL SECTION Road 06
SCALE 1:500 H 1:100 V

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

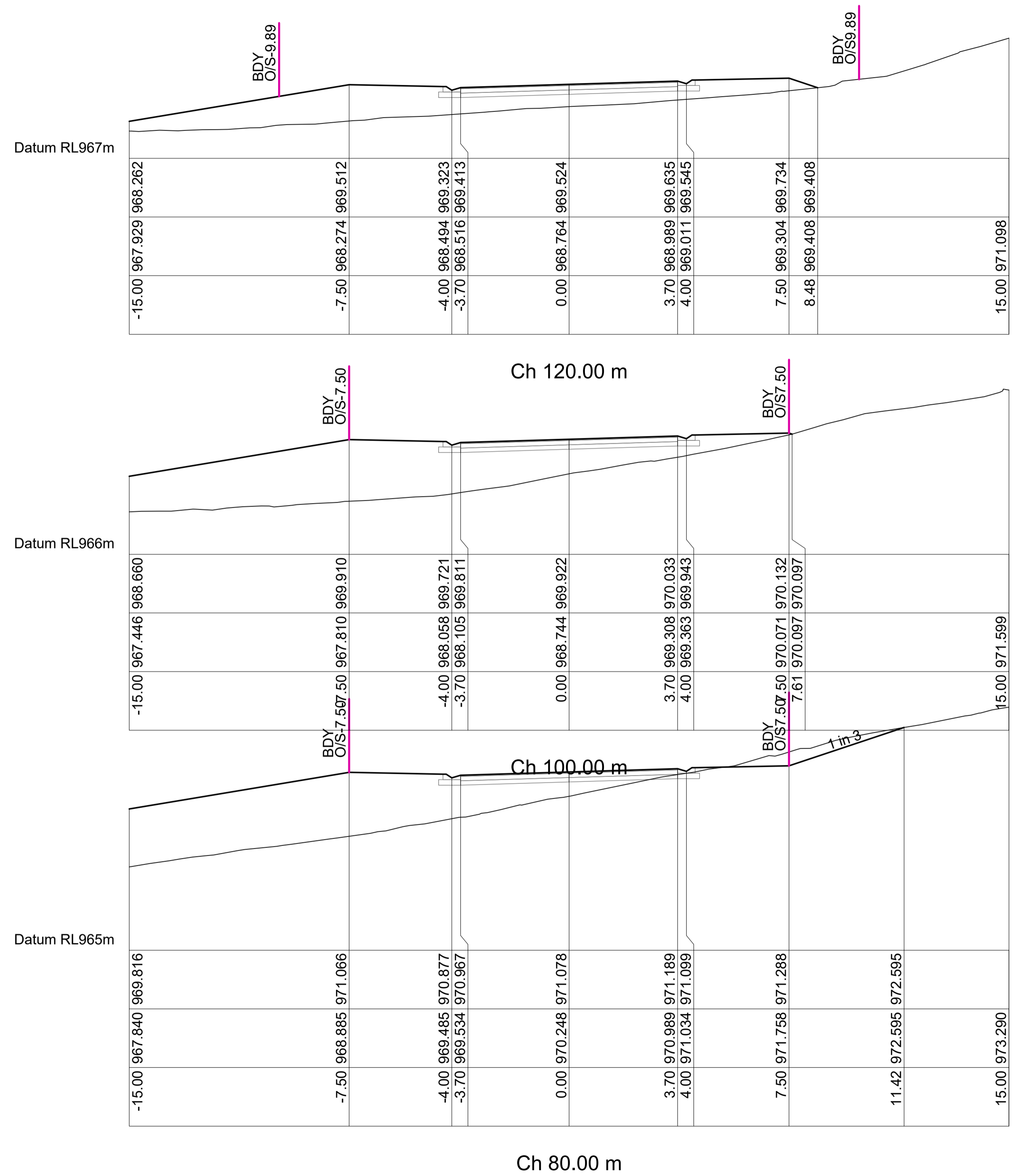
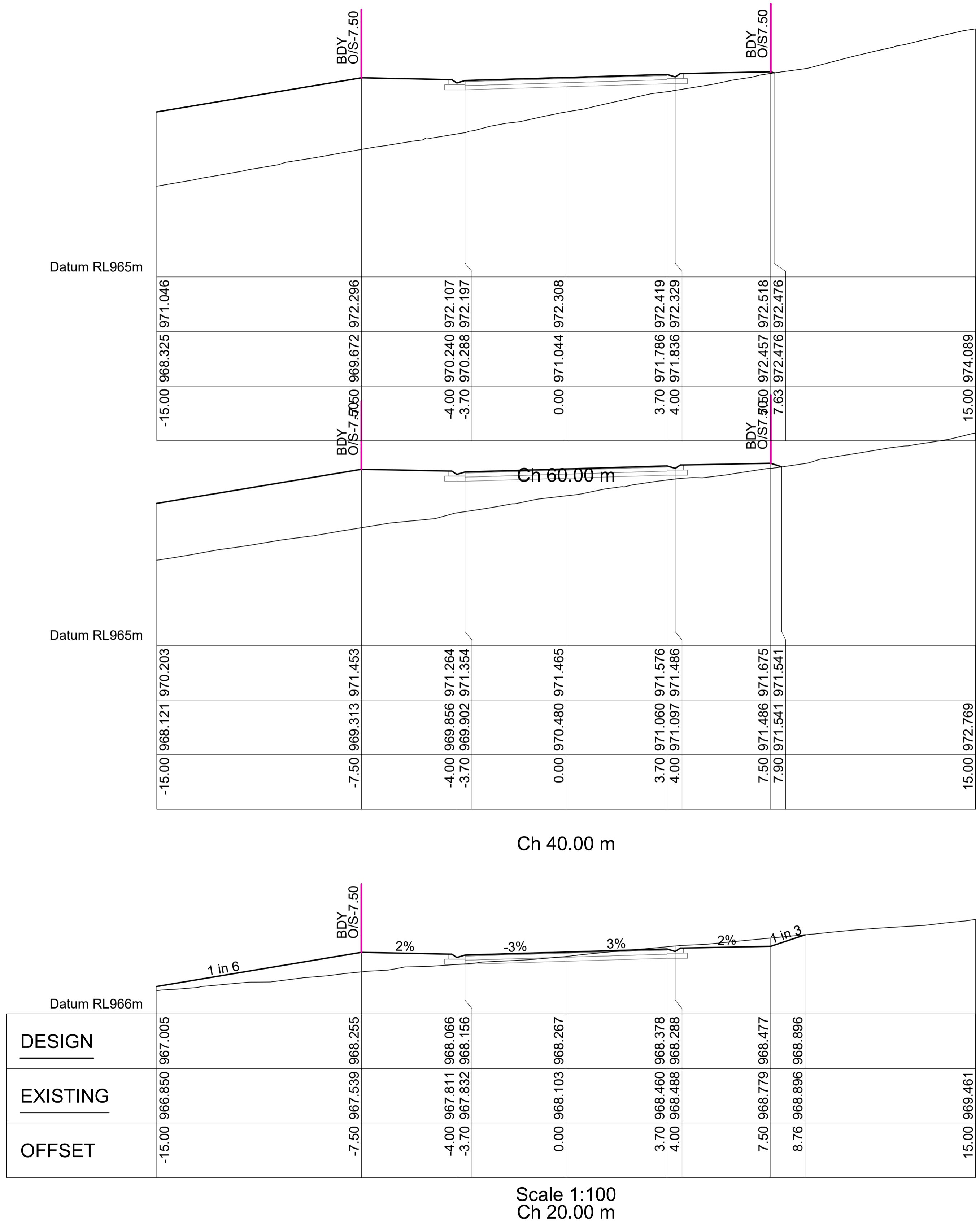
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Garth Dean B.E. GDSTT FIEAust CPEng NER APEC Engineer IntPE (Aus) RBP (VicNT)	Drawn: GBL Designed: GBL Checked: TM Scale (A1): 1:500h 1:100v Date: July 2024	Plot File: 2020.0047-Civil-P4.PDF Plot Date: 27/08/2024 11:19:18 File Name: ...\\2020.0047-Civil-P4.dwg

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790	ROAD 06 - PRELIMINARY PLAN & LONGITUDINAL SECTION
Ledger Enterprises Pty Ltd	

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CONSULTING ENGINEERS

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Job No. 2020.0047	DWG. No. R16	Issue C
No. in set 33		



Scale 1:100
Ch 20.00 m

Ch 80.00 m

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

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Date:	July 2024		

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
MUNBINGA DRIVE
PRELIMINARY CROSS SECTIONS
Ledger Enterprises Pty Ltd

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170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	R17
Issue	C
No. in set	33

LEGEND

- S — SEWER LINE
- SW — STORMWATER LINE
- W — WATER SUPPLY LINE

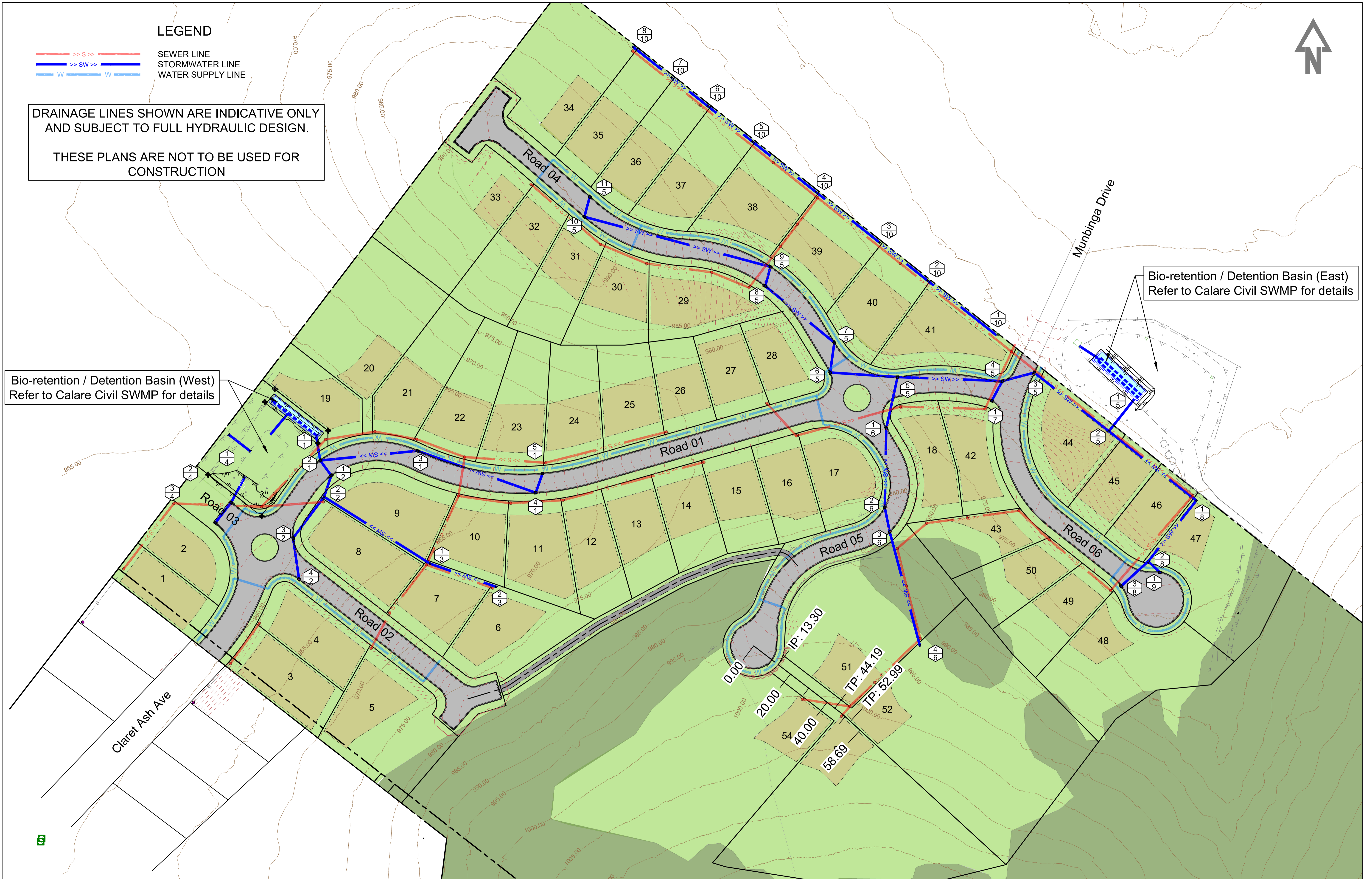
DRAINAGE LINES SHOWN ARE INDICATIVE ONLY
AND SUBJECT TO FULL HYDRAULIC DESIGN.

THESE PLANS ARE NOT TO BE USED FOR
CONSTRUCTION



Bio-retention / Detention Basin (West)
Refer to Calare Civil SWMP for details

Bio-retention / Detention Basin (East)
Refer to Calare Civil SWMP for details



Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

For DA Approval

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

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Date:	July 2024		...2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790

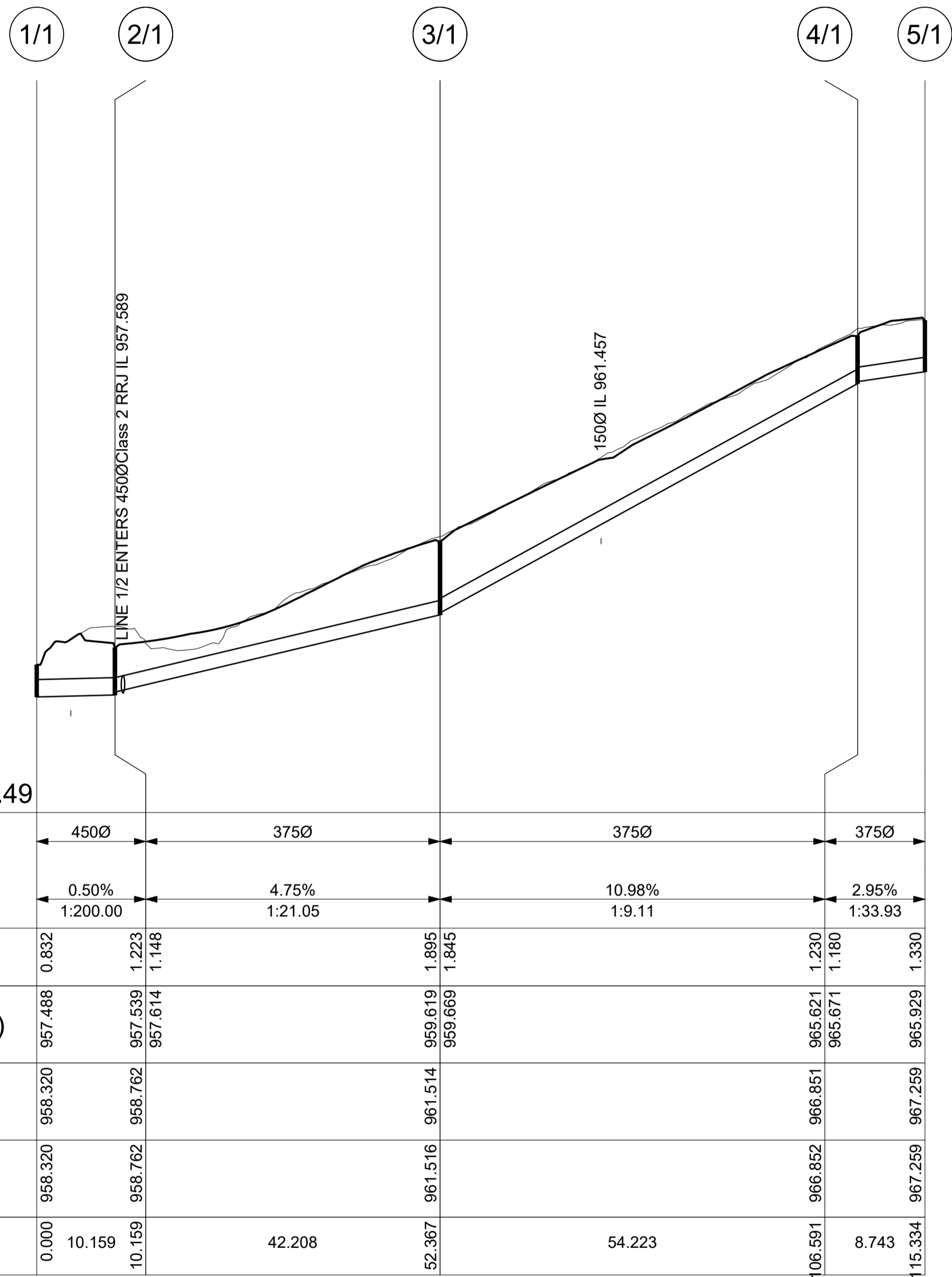
**PRELIMINARY STORMWATER
LAYOUT PLAN**

Ledger Enterprises Pty Ltd

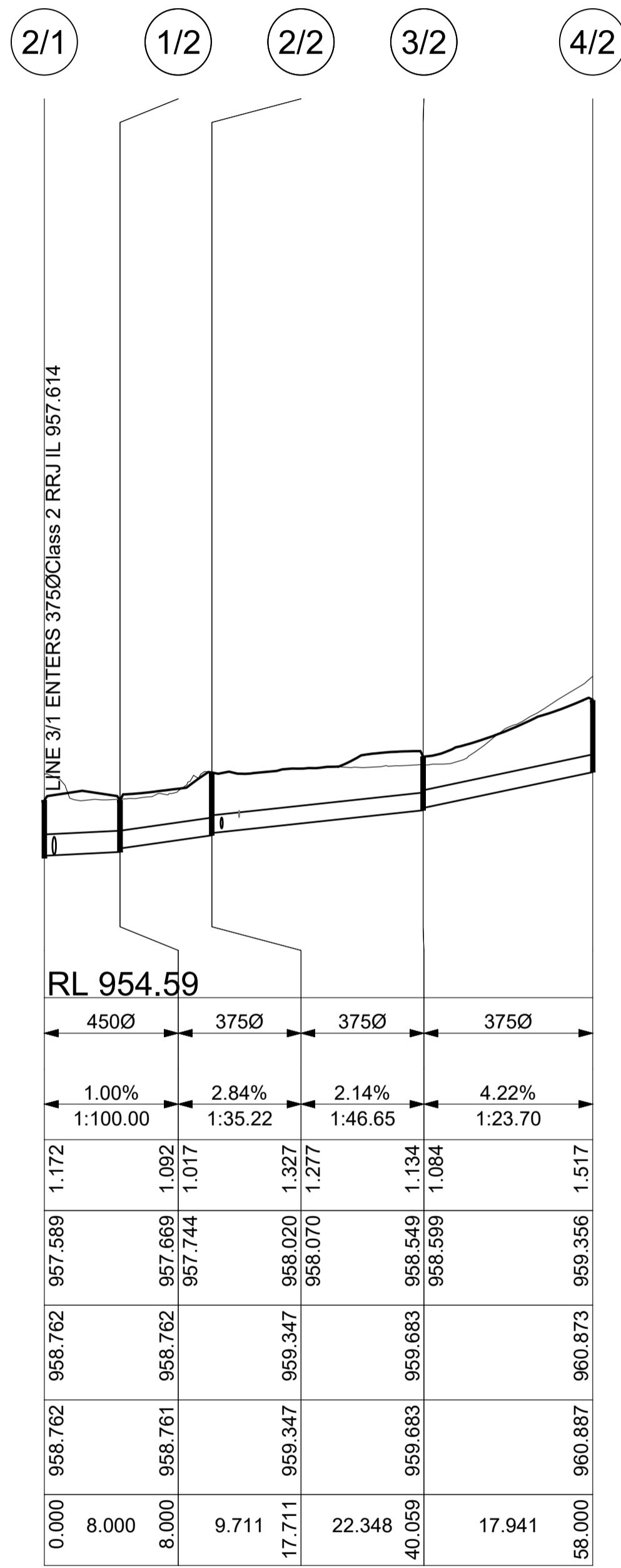
CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

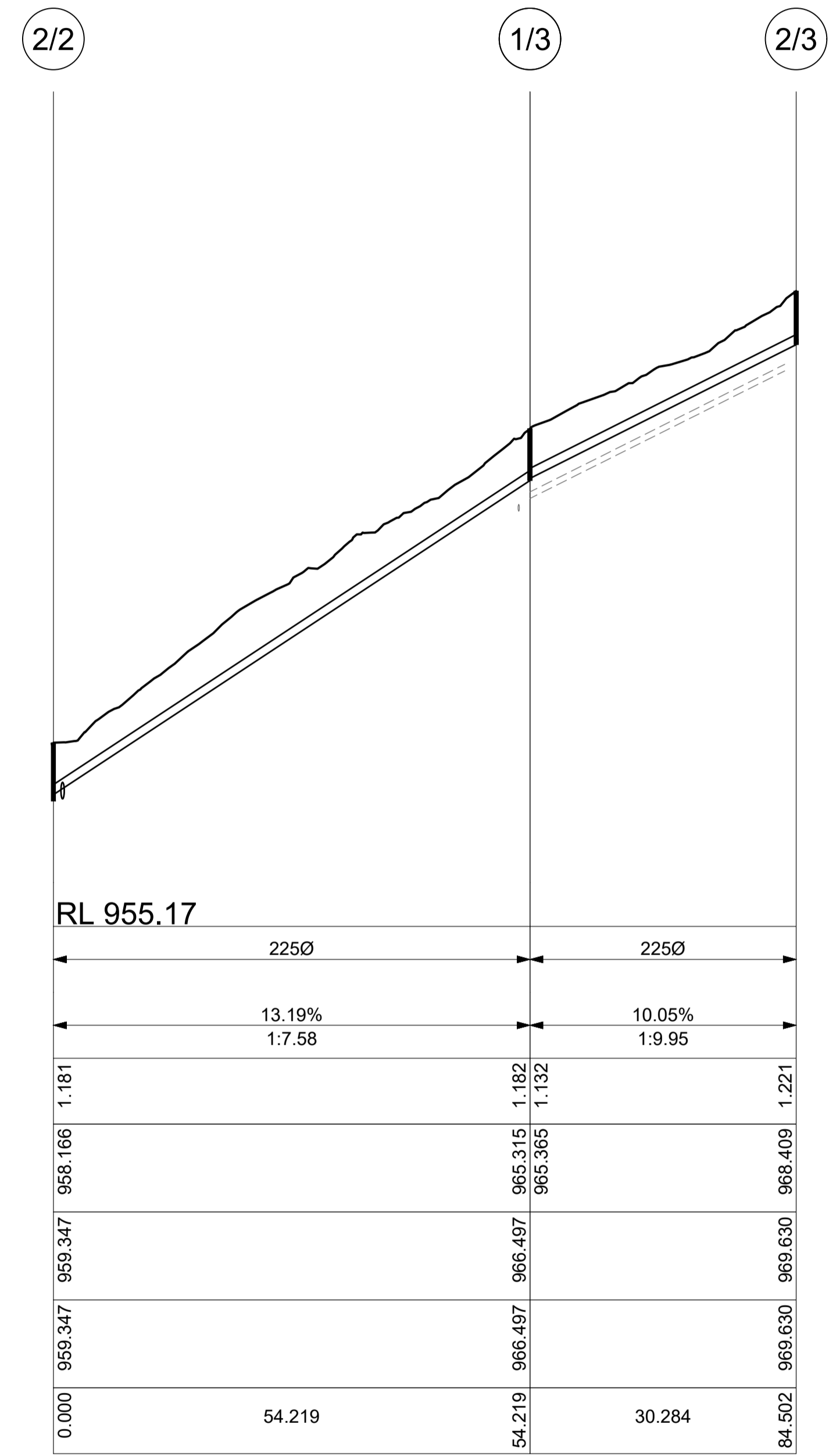
Job No.	2020.0047
DWG. No.	SW01
Issue	C
No. in set	33



Drainage Line 1
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



Drainage Line 2
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



Drainage Line 3
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

DRAINAGE LINES SHOWN ARE INDICATIVE ONLY
AND SUBJECT TO FULL HYDRAULIC DESIGN.

THESE PLANS ARE NOT TO BE USED FOR
CONSTRUCTION

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

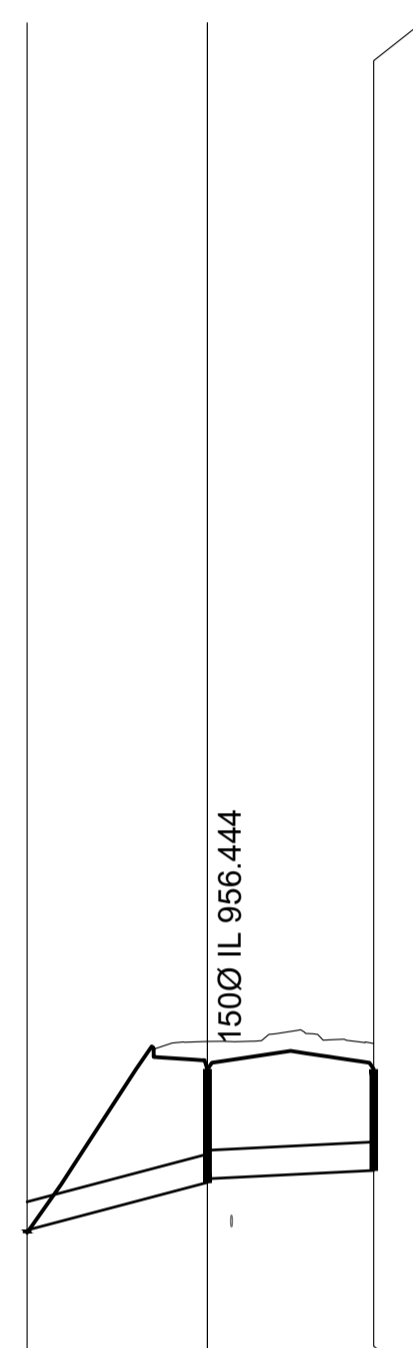
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Checked:	TM	File Name:
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Date:	July 2024	

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790
PRELIMINARY STORMWATER DRAINAGE LONGITUDINAL SECTIONS
Ledger Enterprises Pty Ltd

CALARE CIVIL CONSULTING ENGINEERS
170 RANKIN STREET, BATHURST, N.S.W. 2795 Tel: (02) 63323343 Fax: (02) 63318210

Job No. 2020.0047
DWG. No. SW02 Issue C
No. in set 33

1/4 2/4 3/4



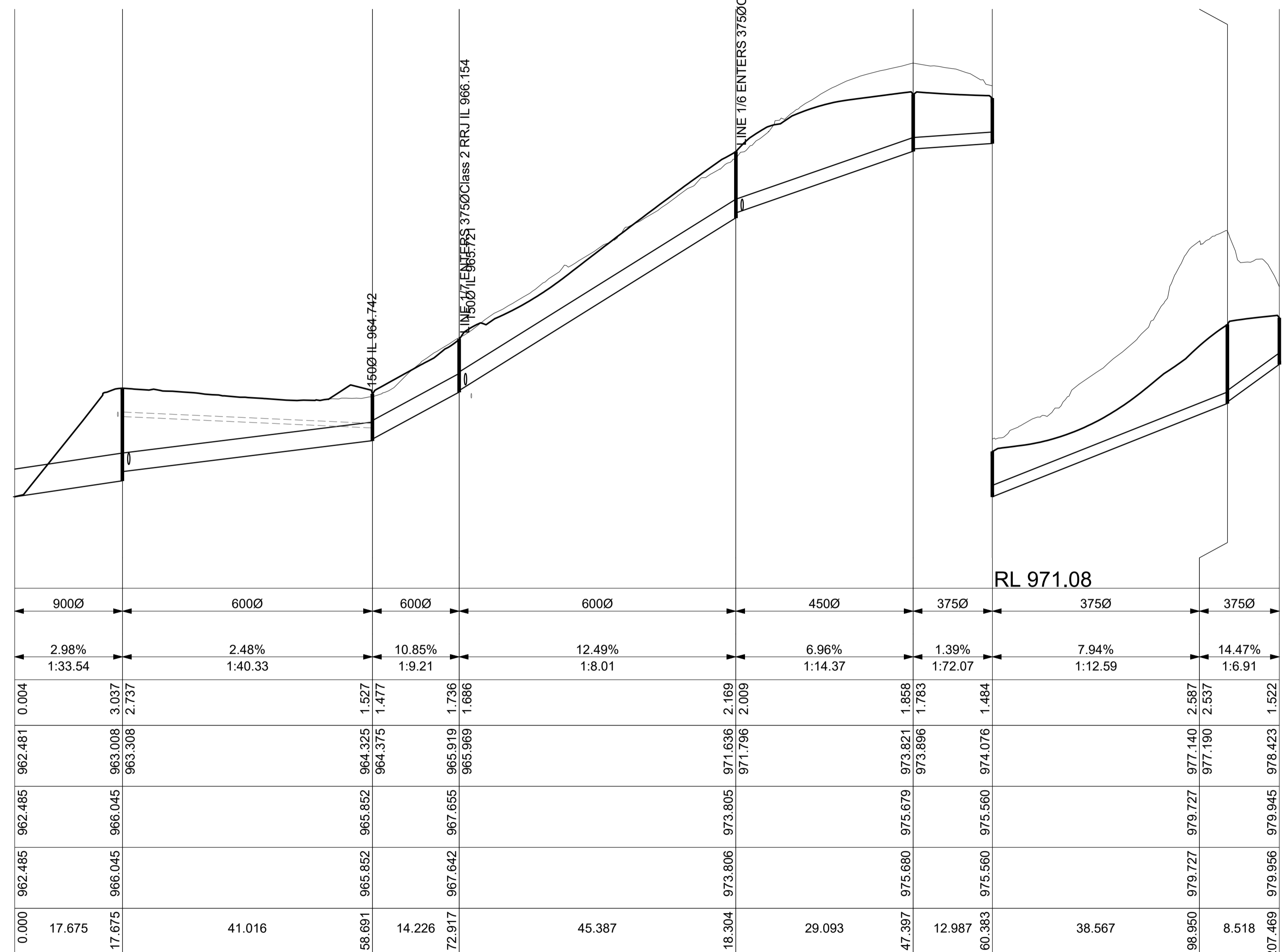
DATUM RL 953.37

DIAMETER (mm)	3750	3750
SLOPE/GRADE	5.28% 1:18.93	1.00% 1:100.00
DEPTH (m)	0.034	1.493
INVERT LEVEL (m)	956.400	957.080
TOP OF PIT LEVEL	956.366	958.523
FINAL SURFACE LEVEL	956.366	958.523
CHAINAGE	0.000	11.000

Drainage Line 4

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

1/5 2/5 3/5 4/5 5/5 6/5 7/5 8/5 9/5



RL 971.08

DIAMETER (mm)	9000	6000	6000	6000	4500	3750	3750	3750
SLOPE/GRADE	2.98% 1:33.54	2.48% 1:40.33	10.85% 1:9.21	12.49% 1:8.01	6.96% 1:14.37	1.39% 1:72.07	7.94% 1:12.59	14.47% 1:6.91
DEPTH (m)	0.004	3.037	1.527	1.736	1.858	1.484	2.587	1.522
INVERT LEVEL (m)	962.481	963.008	964.325	965.919	971.636	973.821	977.140	978.423
TOP OF PIT LEVEL	962.485	966.045	965.852	967.655	973.805	975.679	979.727	979.945
FINAL SURFACE LEVEL	962.485	966.045	965.852	967.642	973.806	975.680	979.727	979.956
CHAINAGE	0.000	17.675	41.016	58.691	72.917	118.304	147.397	207.469

Drainage Line 5

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

DRAINAGE LINES SHOWN ARE INDICATIVE ONLY
AND SUBJECT TO FULL HYDRAULIC DESIGN.

THESE PLANS ARE NOT TO BE USED FOR
CONSTRUCTION

For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(VicNT)

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Designed: GBL	Plot Date: 27/08/2024 11:19:30
Checked: TM	File Name:
Scale (A1): 1:500h 1:100v	...2020.0047-Civil-P4.dwg
Date: July 2024	

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790

**PRELIMINARY STORMWATER DRAINAGE
LONGITUDINAL SECTIONS**

Ledger Enterprises Pty Ltd

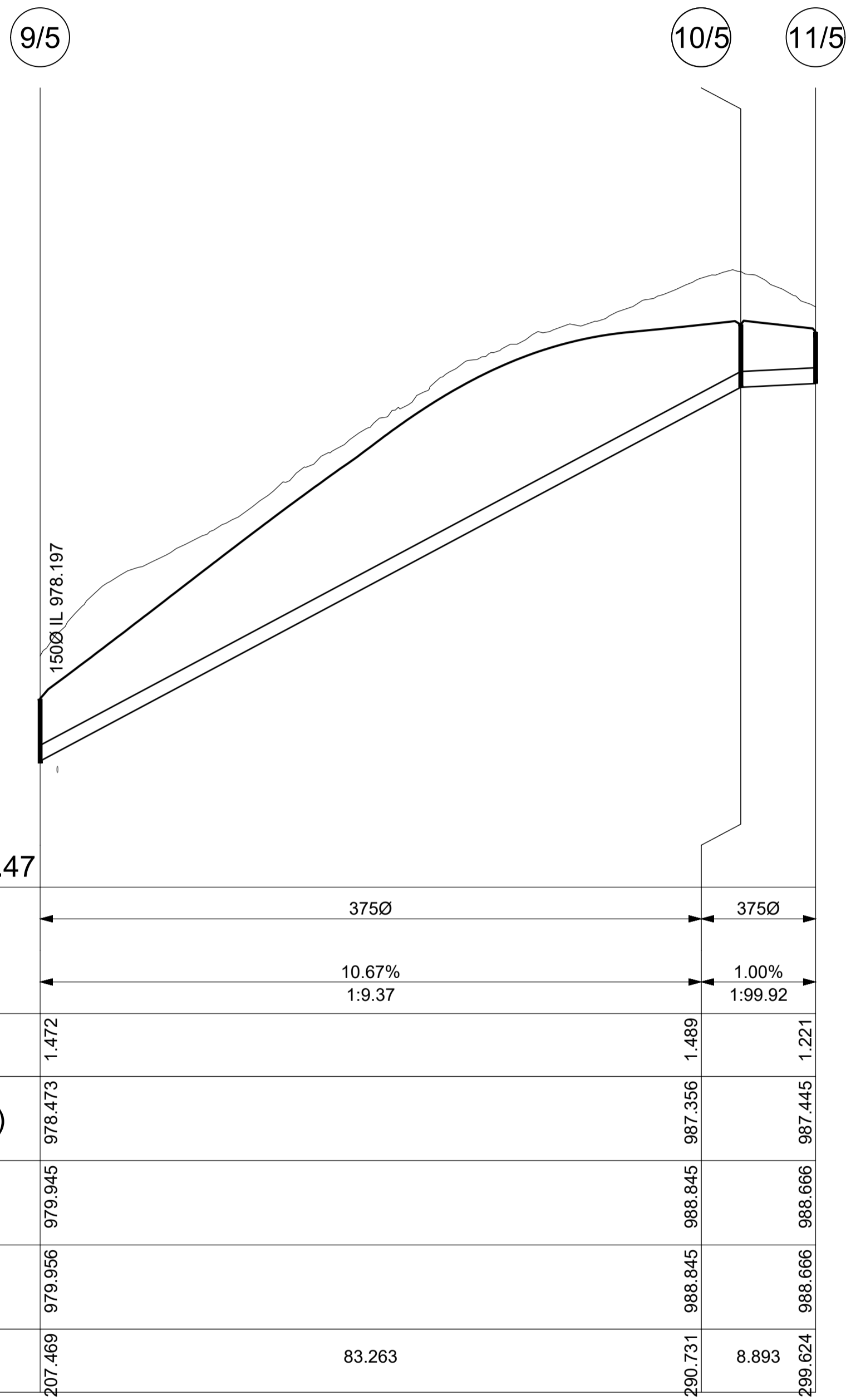
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Job No.
2020.0047

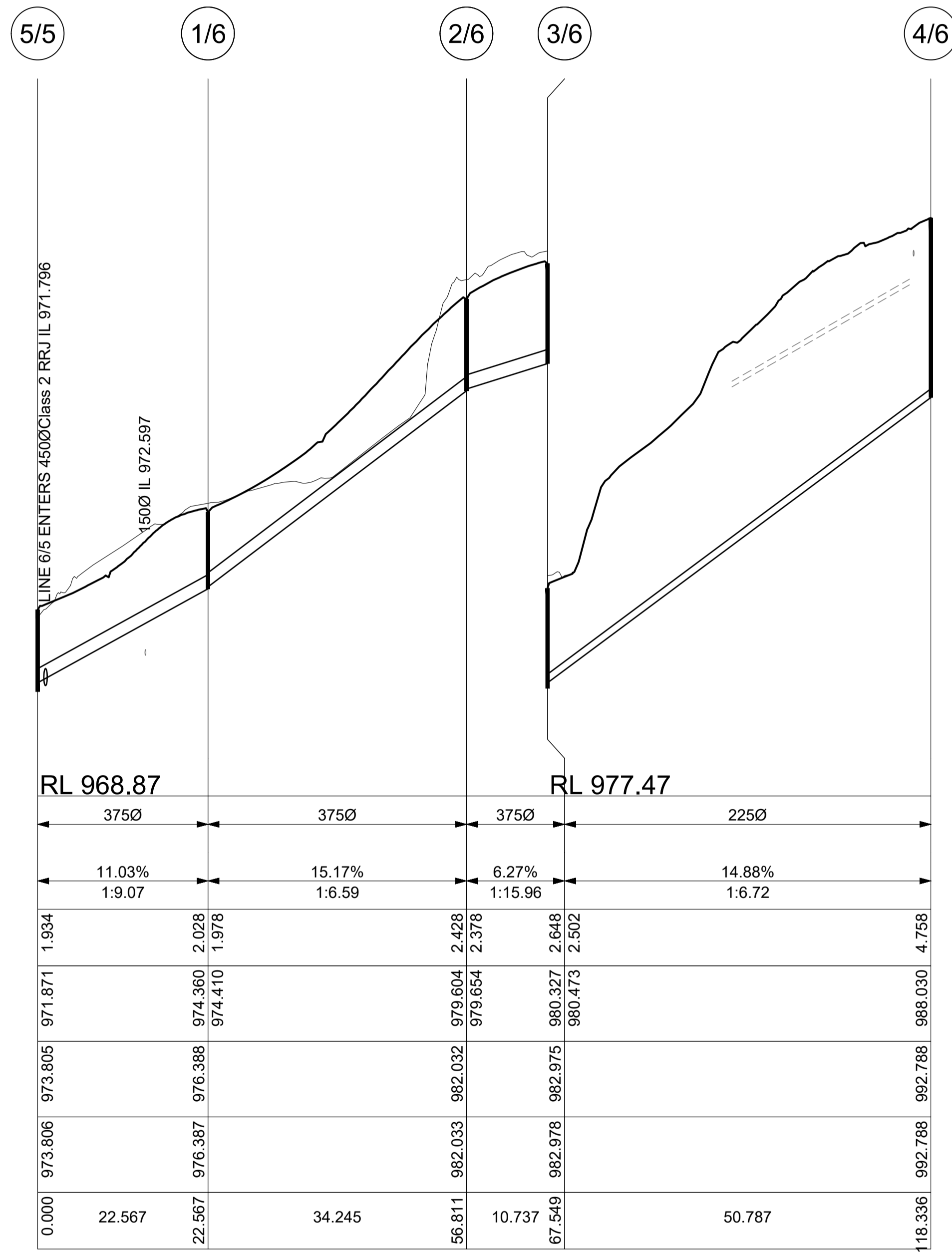
DWG. No. Issue
SW03 C

No. in set
33



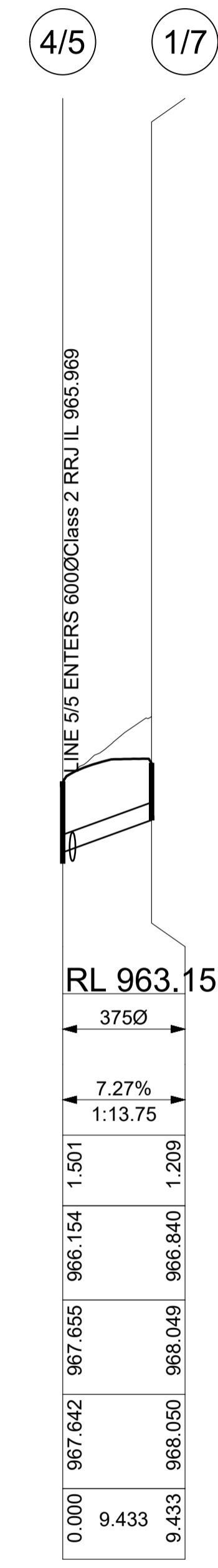
DATUM RL 975.47	
DIAMETER (mm)	375Ø
SLOPE/GRADE	10.67% 1:9.37
DEPTH (m)	1.472
INVERT LEVEL (m)	978.473
TOP OF PIT LEVEL	979.945
FINAL SURFACE LEVEL	979.966
CHAINAGE	207.469
	83.263
	290.731
	299.624

Drainage Line 5
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



RL 968.87	
RL 977.47	
DIAMETER (mm)	375Ø
SLOPE/GRADE	11.03% 1:9.07
DEPTH (m)	1.934
INVERT LEVEL (m)	971.871
TOP OF PIT LEVEL	973.805
FINAL SURFACE LEVEL	973.806
CHAINAGE	0.000
	22.567
	34.245
	56.811
	10.737
	50.787
	118.336

Drainage Line 6
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



RL 963.15	
DIAMETER (mm)	375Ø
SLOPE/GRADE	7.27% 1:13.75
DEPTH (m)	1.501
INVERT LEVEL (m)	966.154
TOP OF PIT LEVEL	967.655
FINAL SURFACE LEVEL	967.642
CHAINAGE	0.000
	9.433

Drainage Line 7
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

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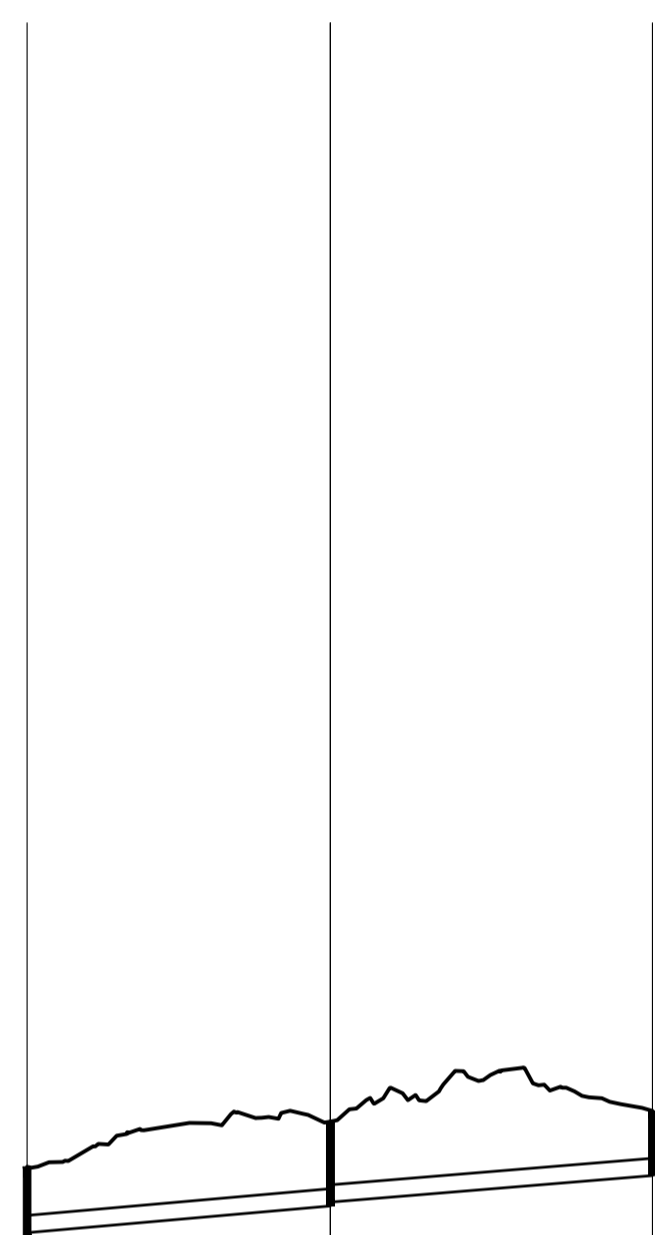
Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790
PRELIMINARY STORMWATER DRAINAGE LONGITUDINAL SECTIONS
Ledger Enterprises Pty Ltd

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Job No.	2020.0047
DWG. No.	SW04
Issue	C
No. in set	33

6/10 7/10 8/10



DATUM RL 970.09

DIAMETER (mm)	225Ø		225Ø	
SLOPE/GRADE	1.76% 1:56.80		1.66% 1:60.38	
DEPTH (m)	0.872	1.117	1.067	0.854
INVERT LEVEL (m)	973.091	973.444	973.494	973.847
TOP OF PIT LEVEL	973.963	974.561		974.701
FINAL SURFACE LEVEL	973.963	974.561		974.701
CHAINAGE	159.193	20.055	179.248	21.302
				200.550

Drainage Line 10

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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A	26/07/24	Original Issue	GBL

Approved for Construction:

Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
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Date:	July 2024		

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790
PRELIMINARY STORMWATER DRAINAGE LONGITUDINAL SECTIONS
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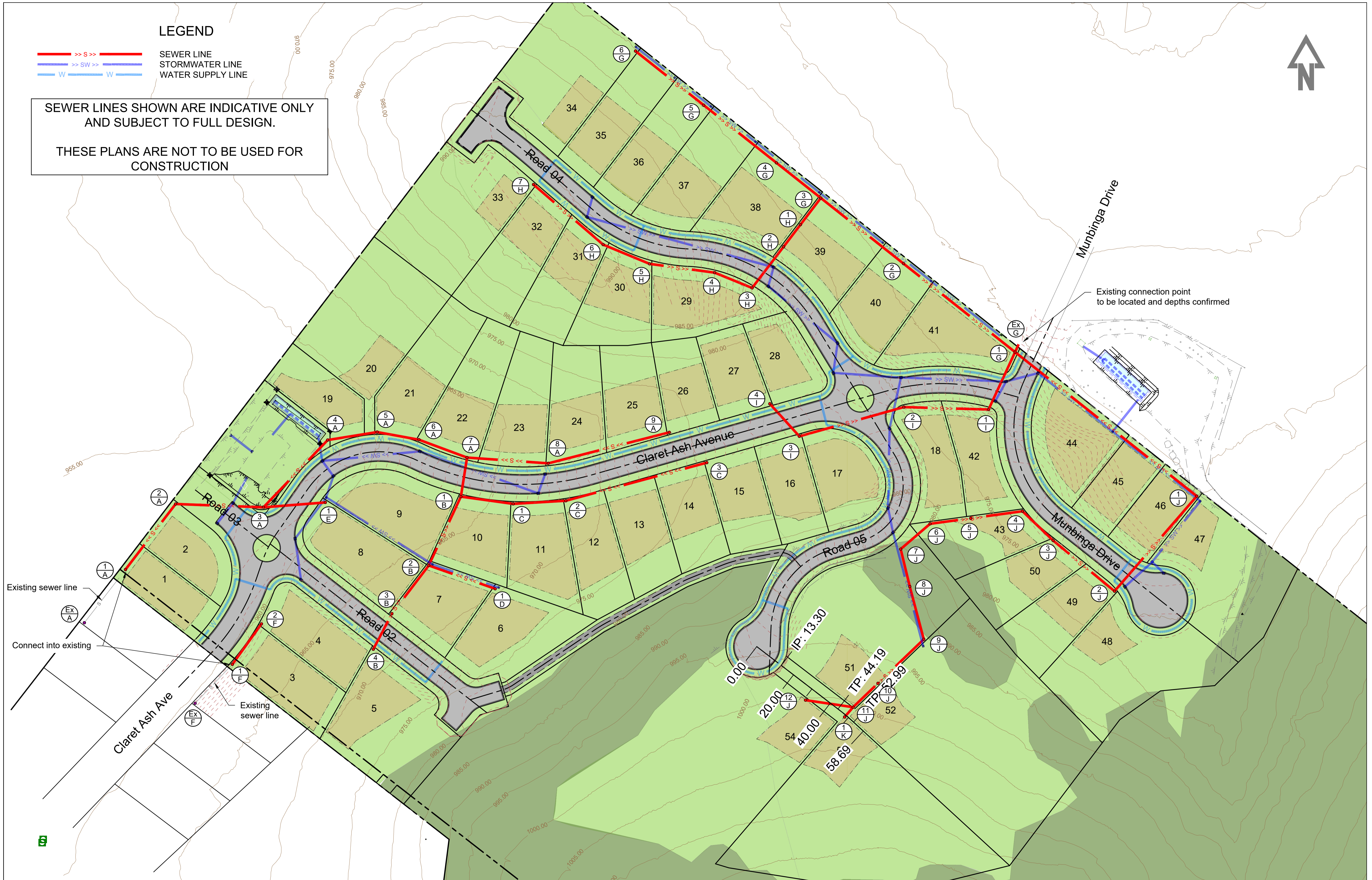
Job No.	2020.0047
DWG. No.	SW06
Issue	C
No. in set	33

LEGEND

- S — SEWER LINE
- SW — STORMWATER LINE
- W — WATER SUPPLY LINE

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Approved for Construction:

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Plot Date:	27/08/2024 11:19:42
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Plot File:	2020.0047-Civil-P4.dwg

Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790

PRELIMINARY SEWER LAYOUT PLAN

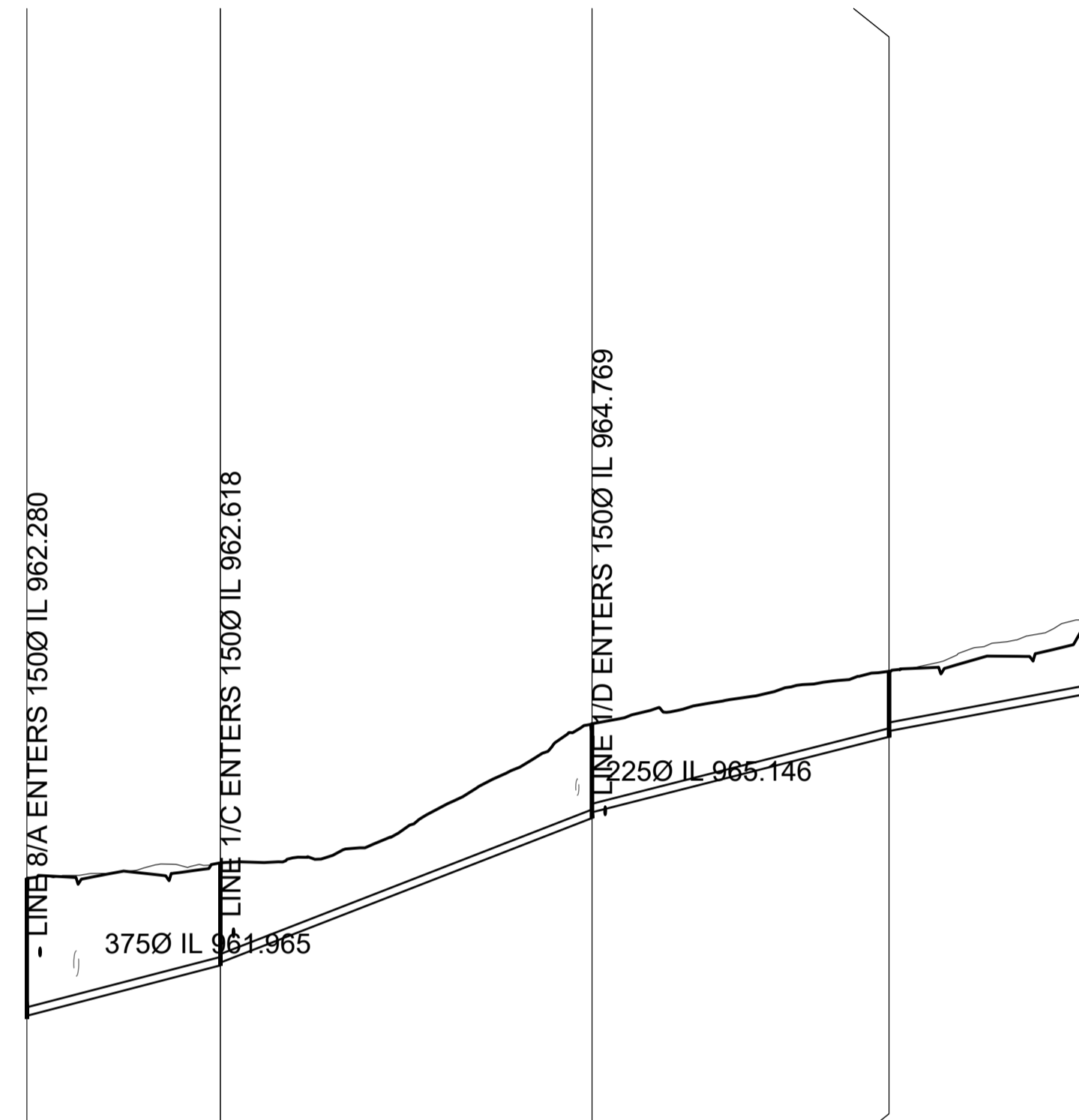
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Job No.	2020.0047
DWG. No.	SS01
Issue	C
No. in set	33

7/A 1/B 2/B 3/B 4/B

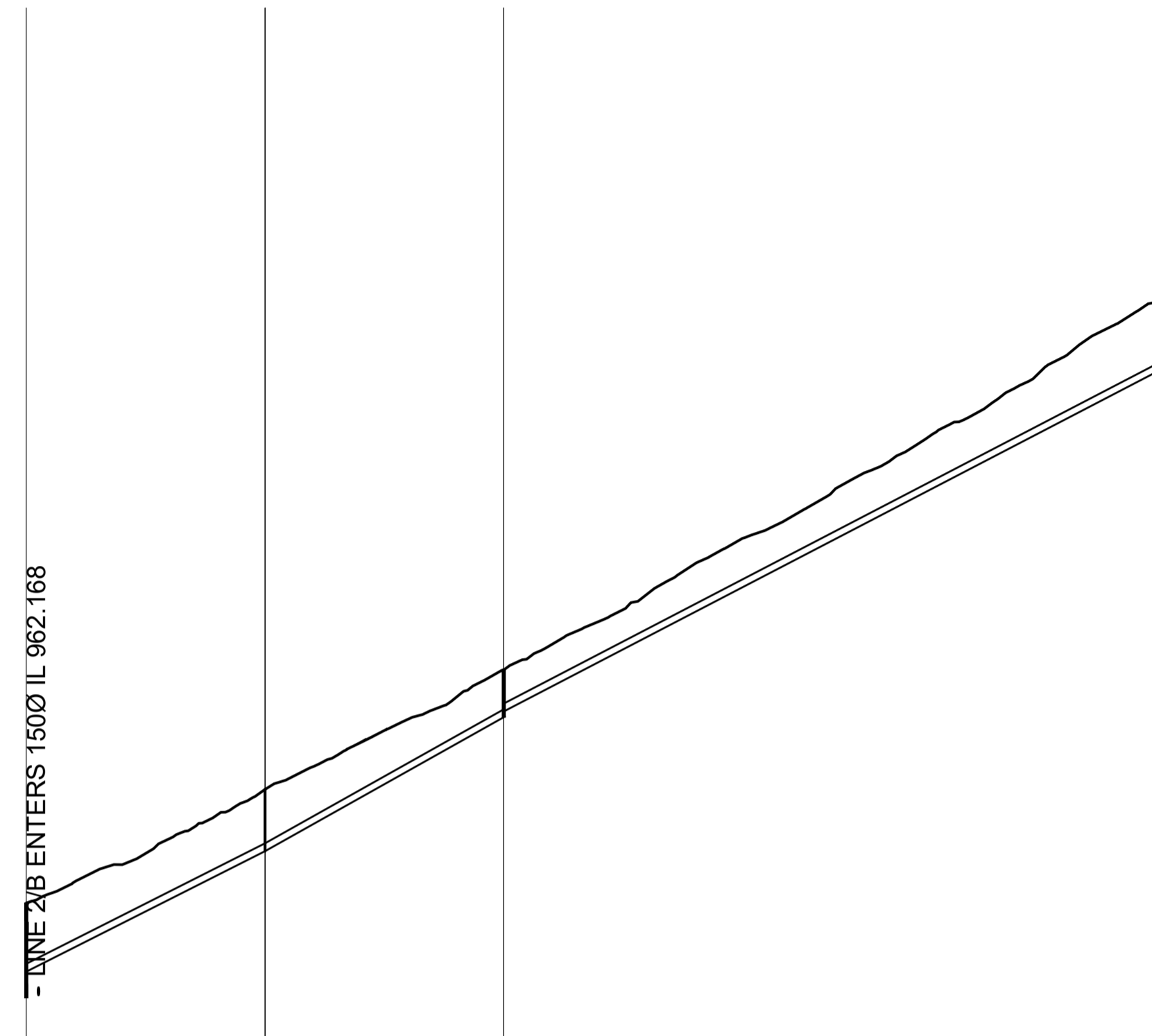


PIPE DETAILS
SLOPE/GRADE
DATUM RL 956.00

DEPTH TO INVERT	2.423	1.810 1.760	1.662 1.562	1.154 1.054	1.235
INVERT LEVEL	961.230	962.118 962.168	964.719 964.819	966.152 966.252	966.903
FINISHED SURFACE	963.653	963.928	966.381	967.306	968.138
EXISTING SURFACE	963.653	963.928	966.381	967.306	968.236
CHAINAGE	0.000	17.063	32.783	49.846	76.048
			26.202	17.280	93.328

Sewer Line B
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

1/B 1/C 2/C 3/C

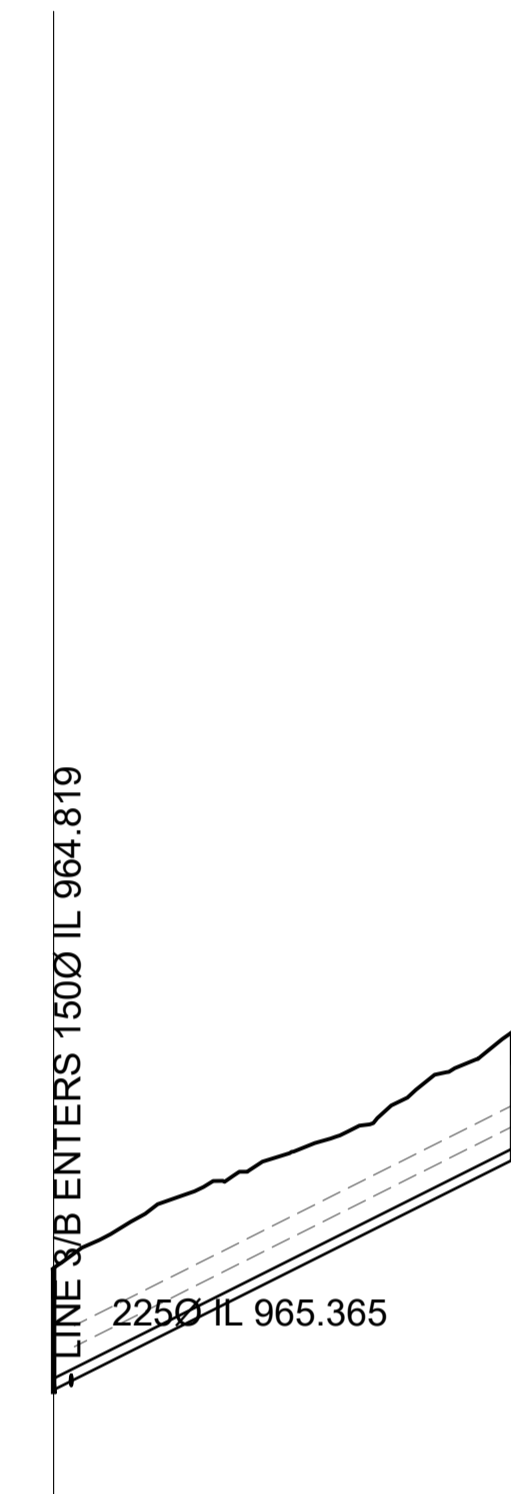


PIPE DETAILS
SLOPE/GRADE
DATUM RL 958.00

DEPTH TO INVERT	1.310	1.178	0.909 0.800	1.395
INVERT LEVEL	962.618	964.917	967.472 967.561	974.133
FINISHED SURFACE	963.928	966.095	968.381	975.528
EXISTING SURFACE	963.928	966.095	968.381	975.528
CHAINAGE	0.000	22.766	45.536	108.512
		22.769	62.977	

Sewer Line C
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

2/B 1/D



PIPE DETAILS
SLOPE/GRADE
DATUM RL 960.00

DEPTH TO INVERT	1.612	1.693
INVERT LEVEL	964.769	967.810
FINISHED SURFACE	966.381	969.503
EXISTING SURFACE	966.381	969.503
CHAINAGE	0.000	30.353

Sewer Line D
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Approved for Construction:

Garth Dean
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Date:	July 2024		

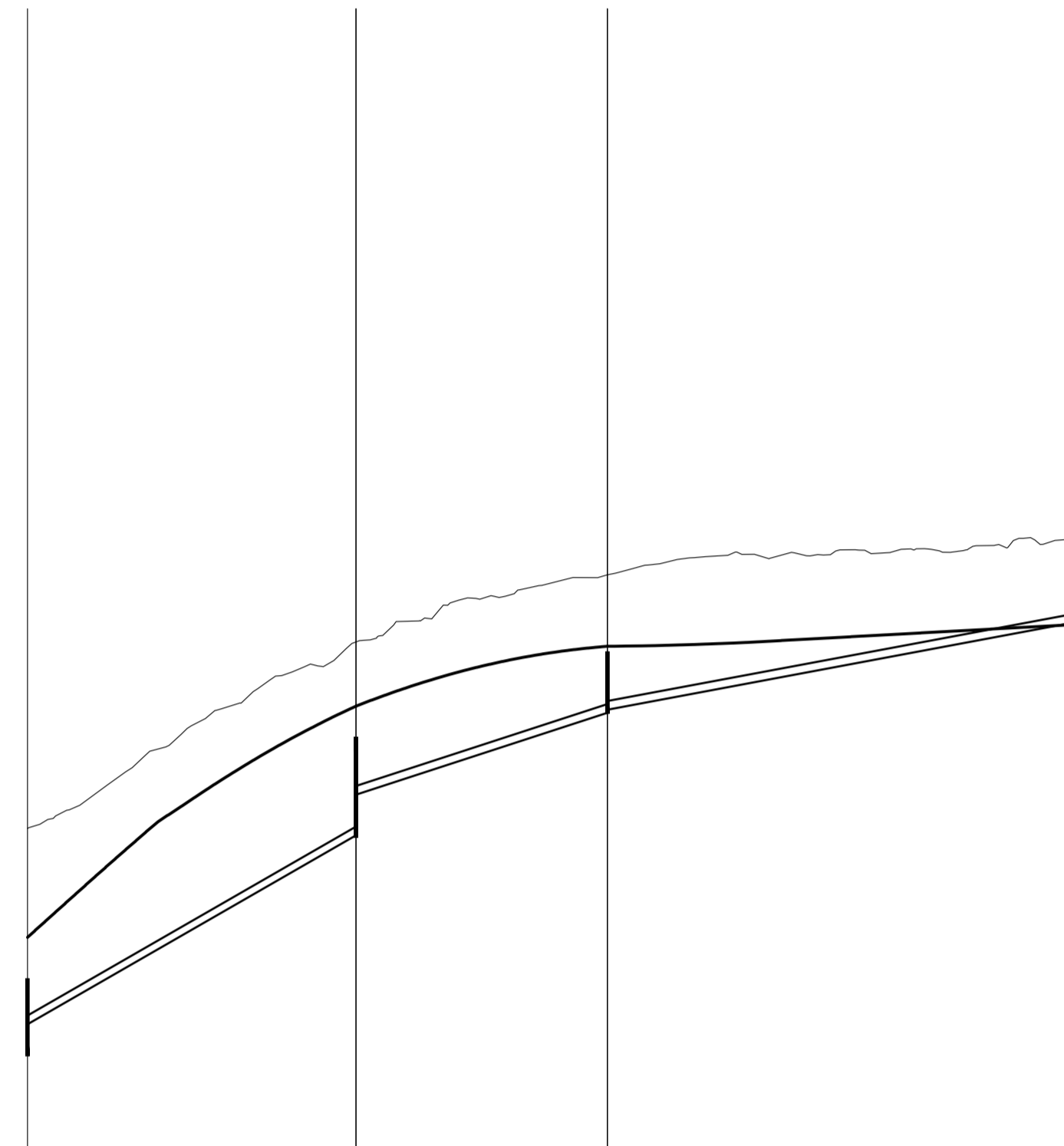
Grandview Stage 3
Lot 1 DP933666 & Lot 24 DP1041700
Claret Ash Avenue
South Bowenfels, NSW 2790
PRELIMINARY SEWER
LONGITUDINAL SECTIONS
Ledger Enterprises Pty Ltd

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Job No.	2020.0047
DWG. No.	SS03
Issue	C
No. in set	33

4/H 5/H 6/H 7/H



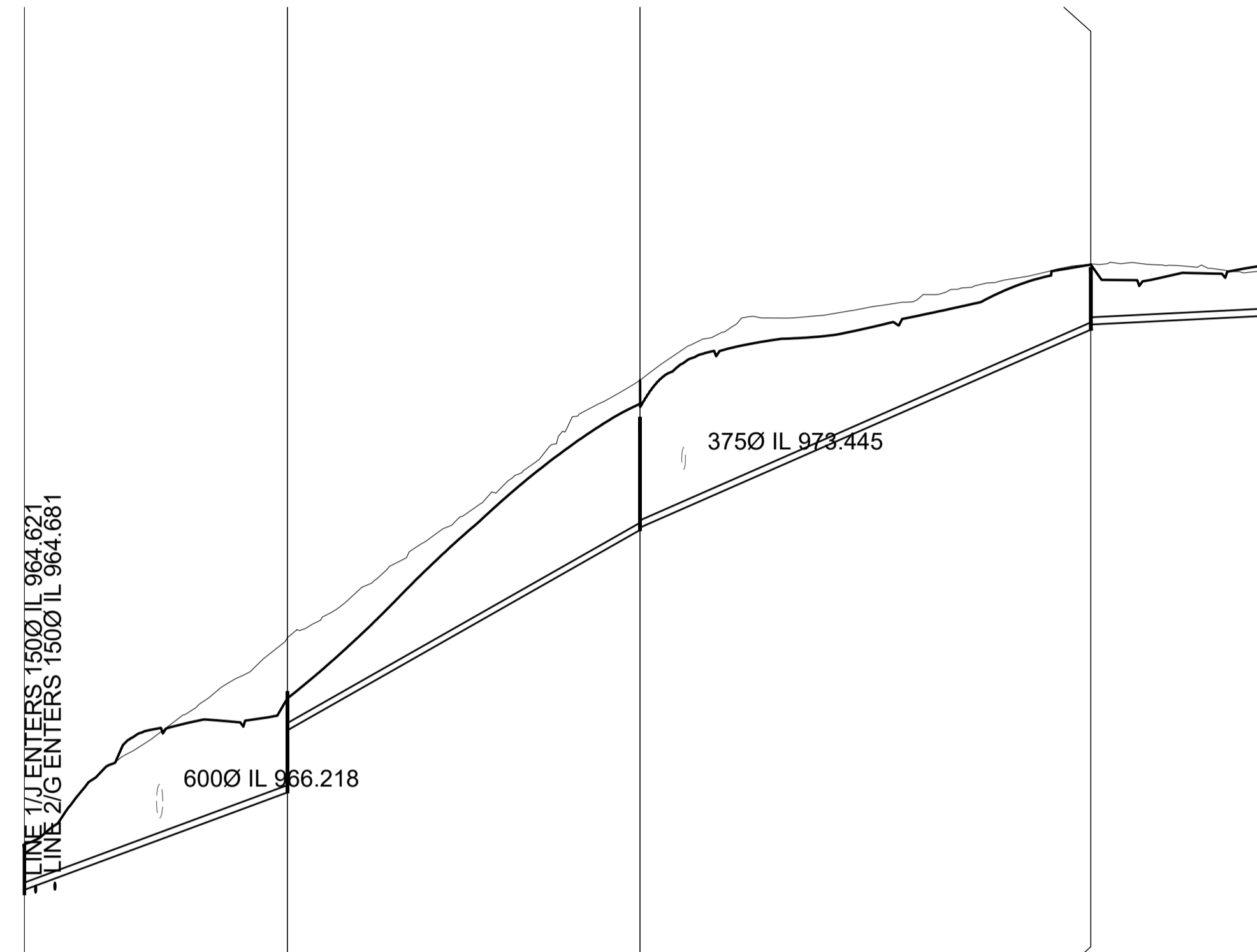
PIPE DETAILS
SLOPE/GRADE

DATUM RL 977.00

DEPTH TO INVERT	0.786	1.694 0.994	1.053 1.000	0.763
INVERT LEVEL	982.491	985.748 986.448	987.860 987.913	989.396
FINISHED SURFACE	983.988	987.975	989.007	989.375
EXISTING SURFACE	985.867	989.082	990.239	990.854
CHAINAGE	66.288	94.609	116.285	155.937
	28.321	21.675	39.652	

Sewer Line H
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

1/G 1/I 2/I 3/I 4/I



PIPE DETAILS
SLOPE/GRADE

DATUM RL 960.00

DEPTH TO INVERT	0.949	2.096 0.806	2.343 2.293	1.289 1.184	0.937
INVERT LEVEL	964.681	966.703 967.993	972.150 972.200	976.309 976.414	976.603
FINISHED SURFACE	965.630	968.656	974.768	977.658	977.540
EXISTING SURFACE	965.630	969.914	975.256	977.673	977.540
CHAINAGE	0.000	27.291	63.873	110.653	129.617
		36.583	46.780	18.963	

Sewer Line I
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Approved for Construction:

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APEC Engineer IntPE (Aus) RBP
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Date:	July 2024		

Grandview Stage 3
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PRELIMINARY SEWER
LONGITUDINAL SECTIONS

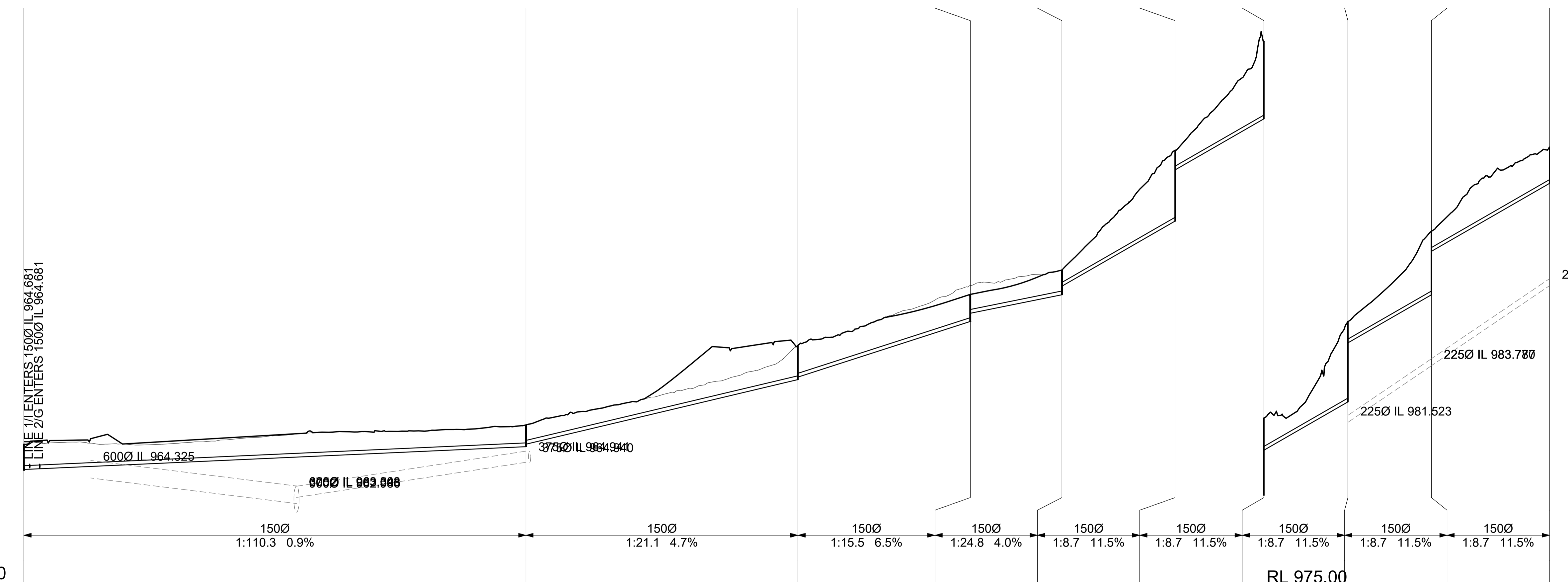
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Job No.	2020.0047
DWG. No.	SS05
Issue	C
No. in set	33

1/G 1/J 2/J 3/J 4/J 5/J 6/J 7/J 8/J 9/J



DEPTH TO INVERT	1.009	0.866 0.766	1.366 1.266	1.076 0.750	0.986 0.643	2.820 0.782	3.083 1.283	3.197 0.846	2.529 0.797	1.442								
INVERT LEVEL	964.621	965.528 965.628	968.202 968.302	970.518 970.844	971.580 971.923	974.516 976.554	978.589 980.389	982.313 984.664	986.578 988.310	991.014								
FINISHED SURFACE	965.630	966.394	969.568	971.594	972.566	977.336	981.672	985.510	989.107	992.457								
EXISTING SURFACE	965.630	966.394	969.568	971.594	972.566	977.336	981.672	985.510	989.107	992.457								
CHAINAGE	0.000	100.043	54.209	154.252	34.340	188.592	18.264	206.856	22.545	229.401	17.694	247.095	16.732	263.827	16.643	280.471	23.517	303.987

Sewer Line J
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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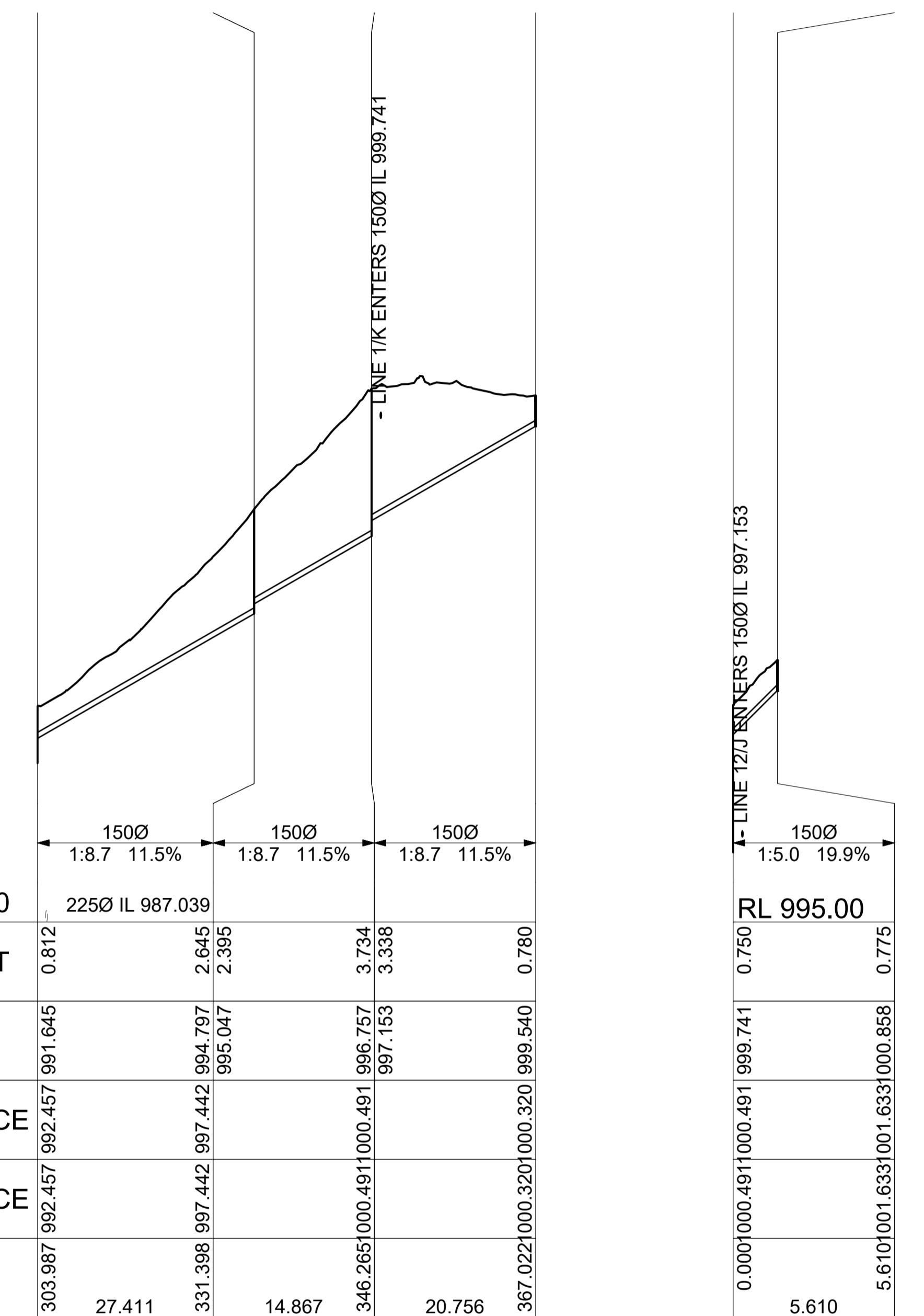
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Designed:	GBL	Plot Date: 27/08/2024 11:19:51
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Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790
PRELIMINARY SEWER LONGITUDINAL SECTIONS
Ledger Enterprises Pty Ltd

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Job No. 2020.0047
DWG. No. Issue SS06 C
No. in set 33

9/J 10/J 11/J 12/J 11/J 1/K



PIPE DETAILS
SLOPE/GRADE
DATUM RL 987.00

	150Ø	150Ø	150Ø	
	1:8.7	11.5%	1:8.7	11.5%
	225Ø IL 987.039			
DEPTH TO INVERT	0.812	2.645	3.734	0.780
INVERT LEVEL	991.645	994.797	996.757	999.540
FINISHED SURFACE	992.457	997.442	997.153	999.540
EXISTING SURFACE	992.457	997.442	997.153	999.540
CHAINAGE	303.987	331.398	346.265	367.022
	27.411	14.867	20.756	

PIPE DETAILS
SLOPE/GRADE
DATUM RL 995.00

	150Ø
	1:5.0
	19.9%
DEPTH TO INVERT	0.750
INVERT LEVEL	999.741
FINISHED SURFACE	999.741
EXISTING SURFACE	999.741
CHAINAGE	0.000
	5.610

Sewer Line J
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

Sewer Line K
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Garth Dean B.E. GDSTT FIEAust CPEng NER APEC Engineer IntPE (Aus) RBP (VicNT)	Drawn: GBL	Plot File: 2020.0047-Civil-P4.PDF
	Designed: GBL	Plot Date: 27/08/2024 11:19:53
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	Scale (A1): 1:500h 1:100v	...2020.0047-Civil-P4.dwg
	Date: July 2024	

Grandview Stage 3 Lot 1 DP933666 & Lot 24 DP1041700 Claret Ash Avenue South Bowenfels, NSW 2790
PRELIMINARY SEWER LONGITUDINAL SECTIONS
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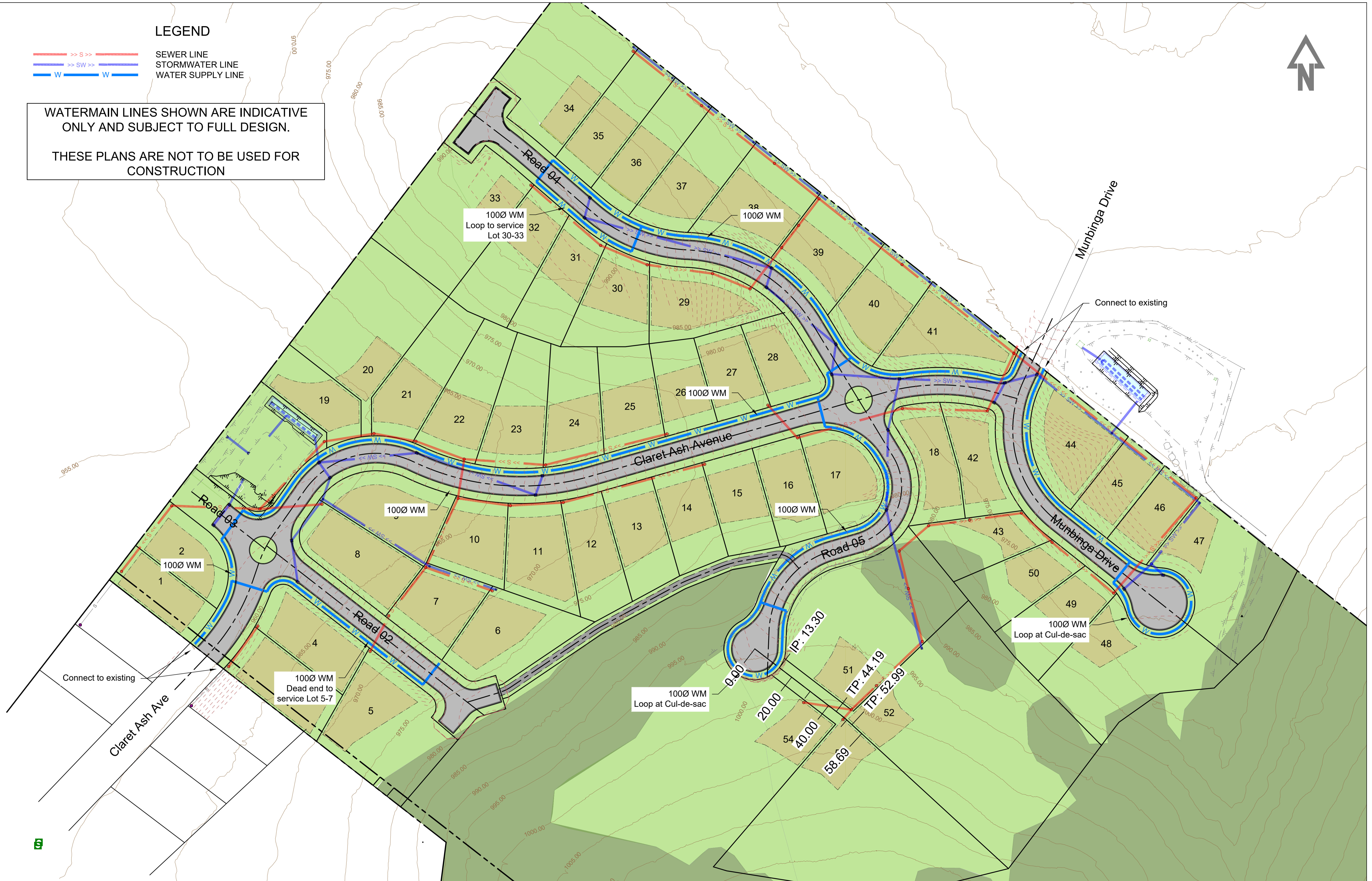
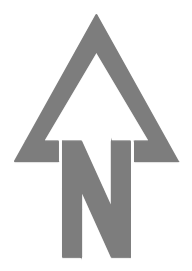
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.	2020.0047
DWG. No.	SS07
Issue	C
No. in set	33

LEGEND

- S — SEWER LINE
- SW — STORMWATER LINE
- W — WATER SUPPLY LINE

WATERMAIN LINES SHOWN ARE INDICATIVE ONLY AND SUBJECT TO FULL DESIGN.
THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION



For DA Approval

Amend	Date	Description	By
C	26/08/24	Bldg Envelopes altered to suit APZ	GBL
B	13/08/24	Minor alteration to Lot 51	GBL
A	26/07/24	Original Issue	GBL

Approved for Construction:		This drawing and the information shown hereon is the property of Calare Civil Pty Limited and may not be used for any other purpose than that for which this drawing is supplied. Any other use, copying or reproduction of all or any part of this drawing is prohibited without the written consent of Calare Civil Pty Limited.	
Drawn:	GBL	Plot File:	2020.0047-Civil-P4.PDF
Designed:	GBL	Plot Date:	27/08/2024 11:20:00
Checked:	TM	File Name:	
Scale (A1):	1:750	Date:	July 2024
Date:	July 2024	Plot File:	...2020.0047-Civil-P4.dwg

Grandview Stage 3
 Lot 1 DP933666 & Lot 24 DP1041700
 Claret Ash Avenue
 South Bowenfels, NSW 2790

PRELIMINARY WATERMAIN LAYOUT PLAN

Ledger Enterprises Pty Ltd

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Job No.	2020.0047
DWG. No.	W01
Issue	C
No. in set	33