

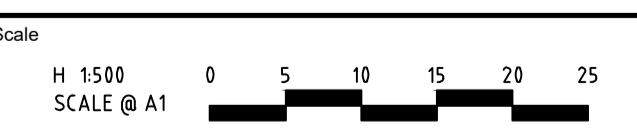
**APPROVED** CITY OF BALLARAT

By D. Hastings at 3:41 pm, Dec 22, 2021

**WARNING**  
 BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
 THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

file name: 309150CR200.dwg, layout: cems, cems, CD200, plotted by: Ashley Willis, file location: G:\309150CR200\309150CR200.dwg, plot date: 11/17/2021, 4:01 PM, Sheet: 2 of 17, Sheets

Rev	Amendments	Approved	Date
B	ADDED FOOTPATH ALONG GOLDFINCH RD	A.W	01/12/21
A	PRELIMINARY ISSUE	JD	14/09/21



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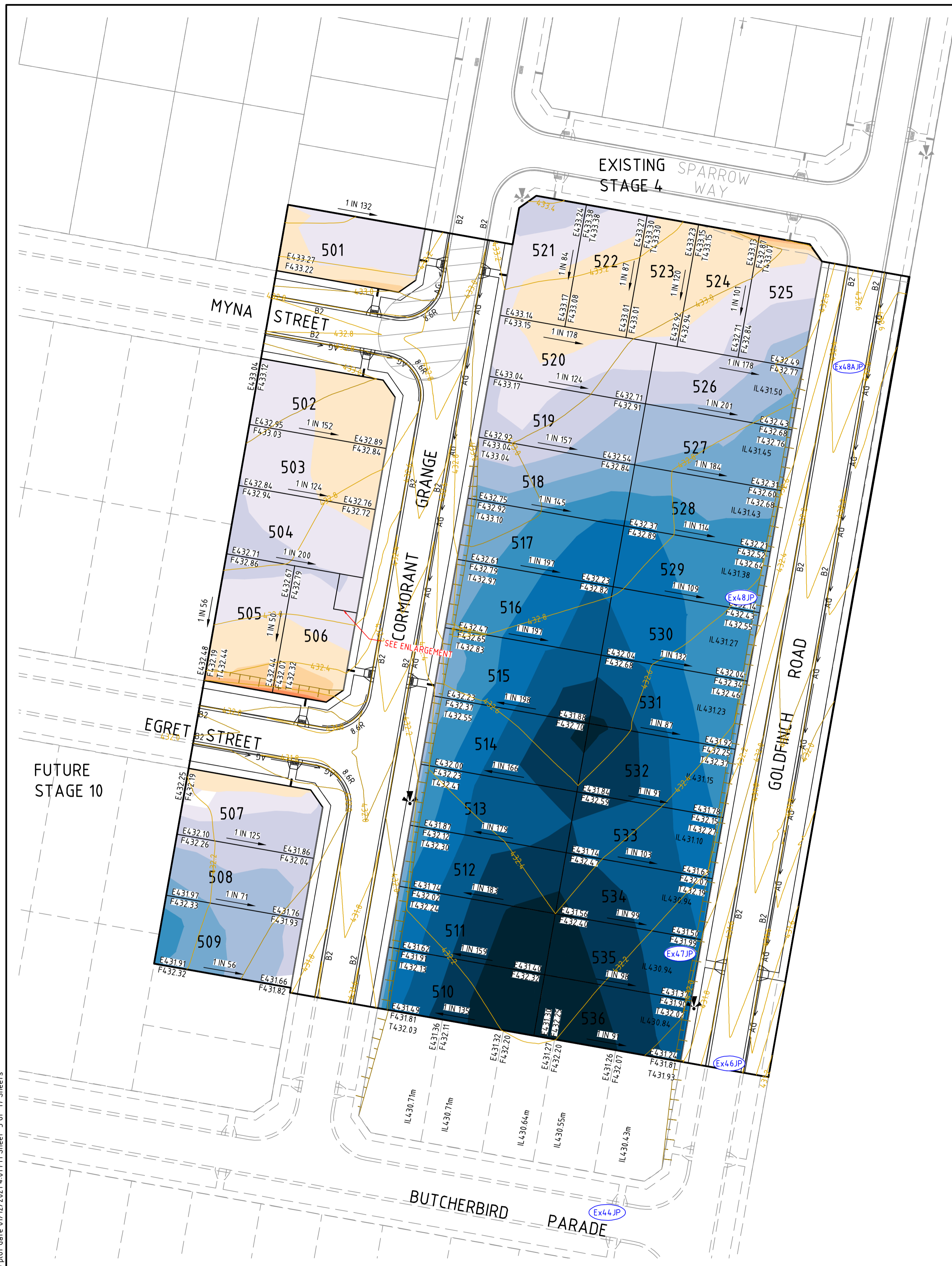
16 BRIDGE STREET BENDIGO  
 VICTORIA 3550 AUSTRALIA T 61 3 5448 2500  
 spiire.com.au ABN 55 050 029 635

Designed  
 S.WOOD  
 Authorised  
 J.DOHERTY

Checked  
 B.IBBS  
 Date

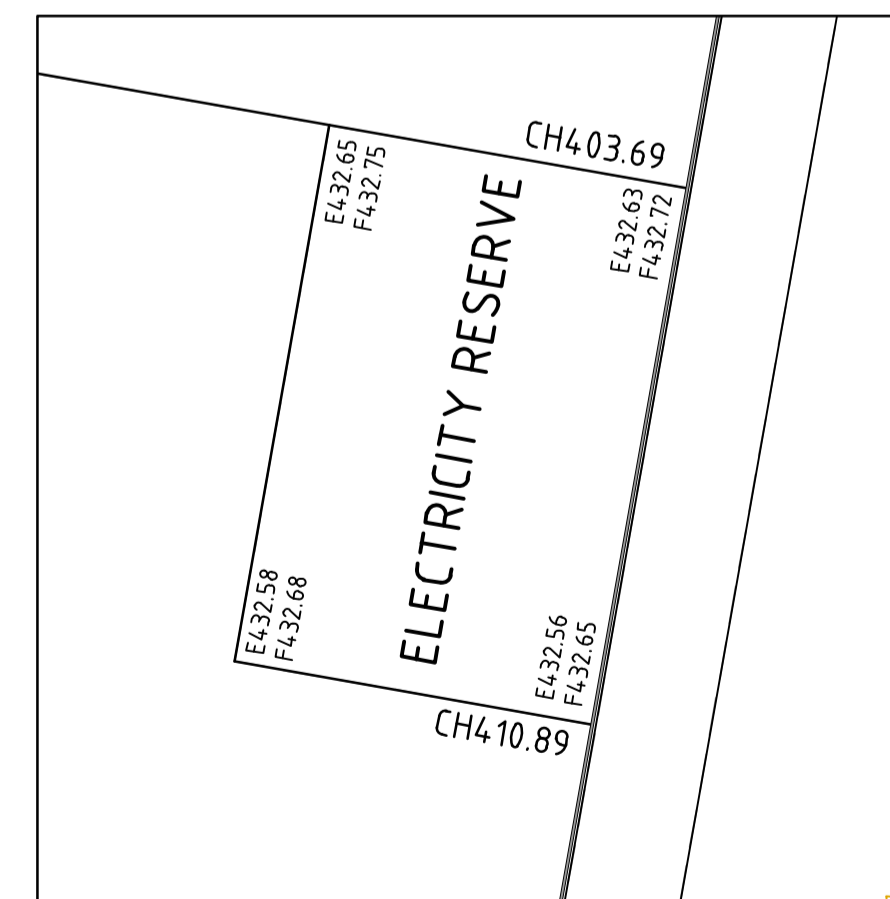
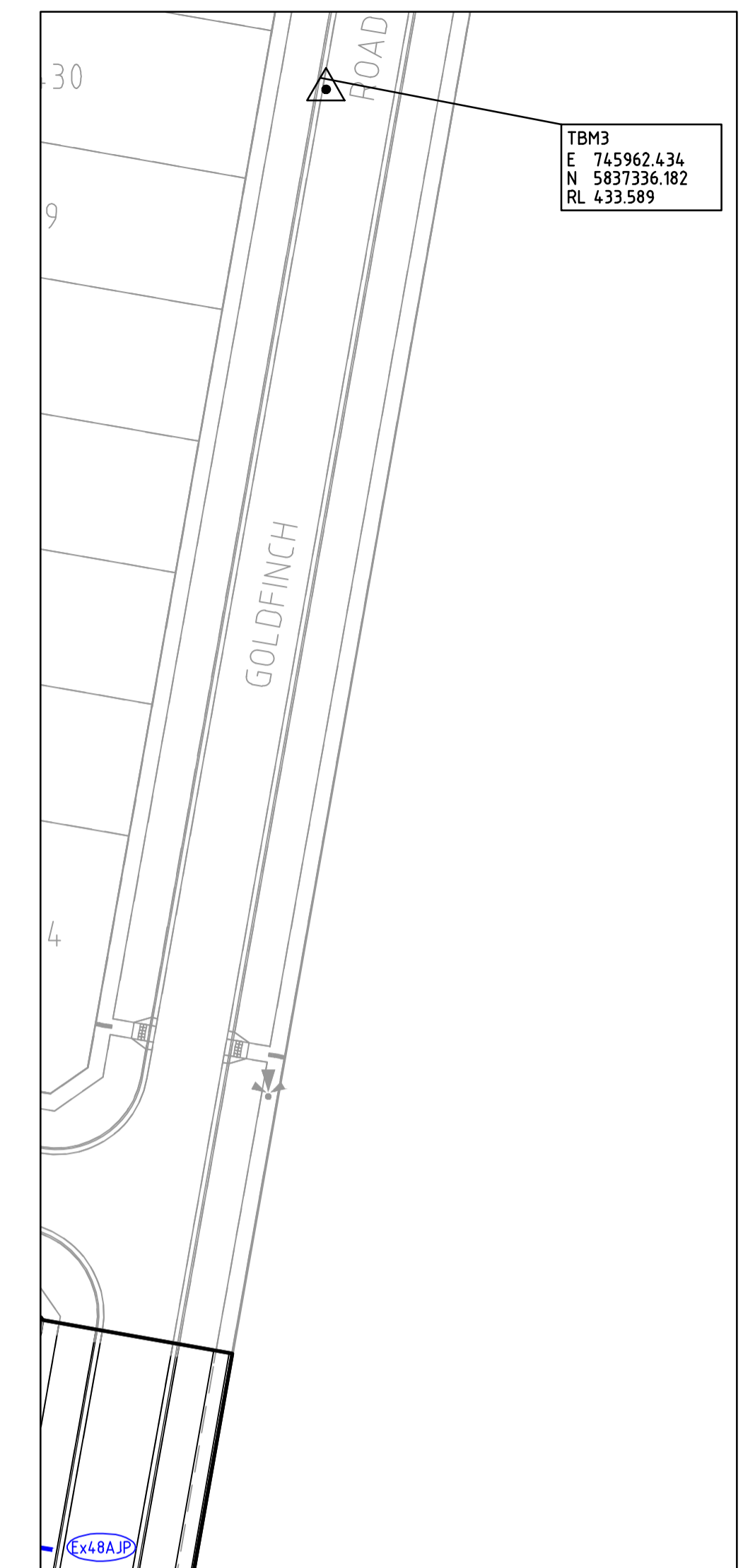
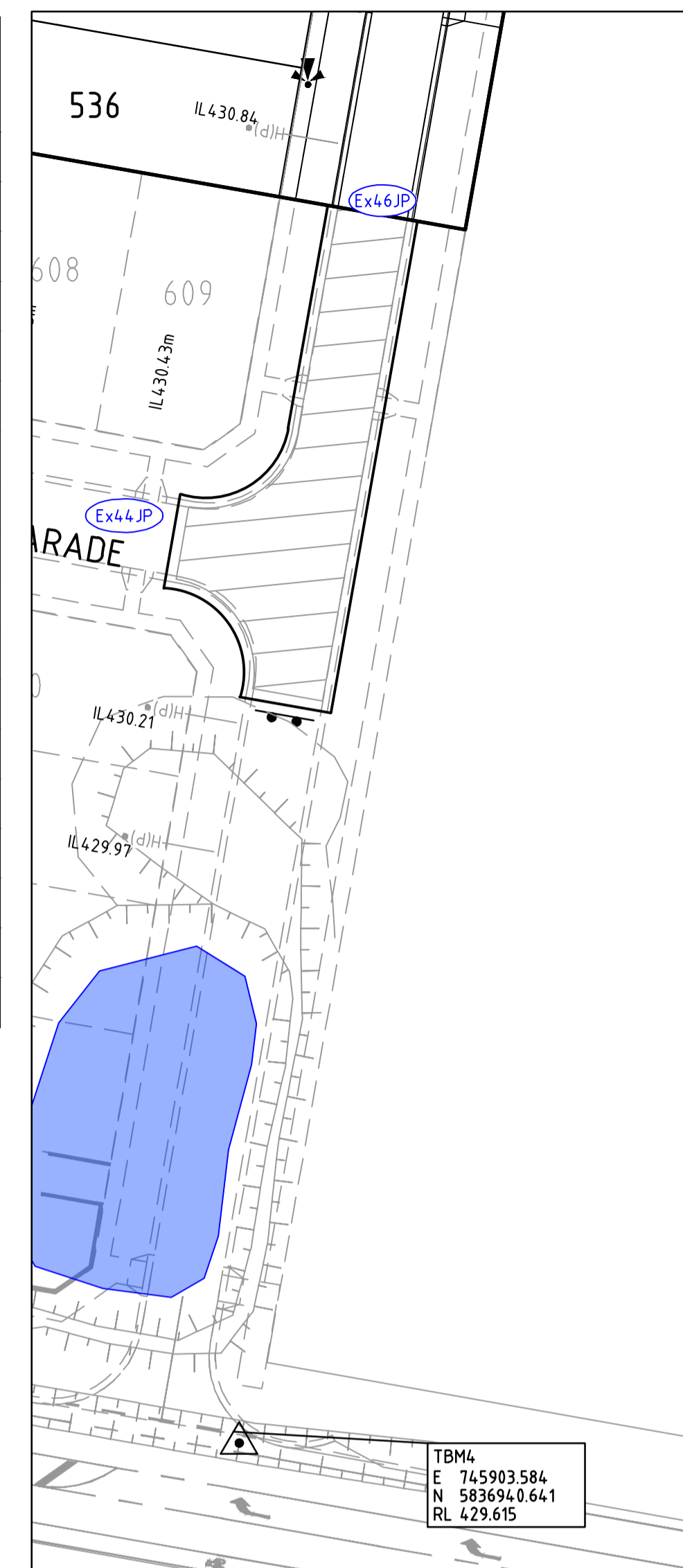
**CONROY'S GREEN  
 STAGE 5  
 ROAD AND DRAINAGE  
 ROAD LAYOUT PLANS - SHEET 1  
 CITY OF BALLARAT  
 SAN HUBERTO PROPERTIES P/L**

**PRELIMINARY** Drg No 309150CR200 Rev B



DEPTH RANGES (100mm)

FROM	TO	COLOUR
-	-0.80	Dark Red
-0.80	-0.70	Red
-0.70	-0.60	Red-Orange
-0.60	-0.50	Orange
-0.50	-0.40	Light Orange
-0.40	-0.30	Yellow-Orange
-0.30	-0.20	Yellow
-0.20	-0.10	Light Yellow
-0.10	0.00	Light Green
0.00	0.10	Light Blue
0.10	0.20	Blue
0.20	0.30	Dark Blue
0.30	0.40	Very Dark Blue
0.40	0.50	Black
0.50	0.60	Black
0.60	0.70	Black
0.70	0.80	Black
0.80	+	Black



**APPROVED CITY OF BALLARAT**  
By D. Hastings at 3:41 pm, Dec 22, 2021

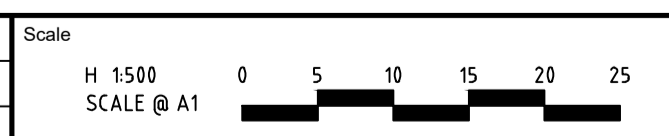
**WARNING**  
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TBM LOCATIONS

Point Number	Easting	Northing	RL	D
4	745903.584	583694.0641	429.615	STAR PICKET
3	745587.066	583745.818	430.531	STAR PICKET

file name: 309150CR201.dwg, layout: title, cadd: CD01, plotted by: Ashley Willis, file location: G:\309150\309150.dwg, plot date: 07/02/2021, 4:01 PM, Sheet: 3 of 17, Sheets

Rev	Description	Approved	Date
A	PRELIMINARY ISSUE	JD	14/09/21
	Amendments		



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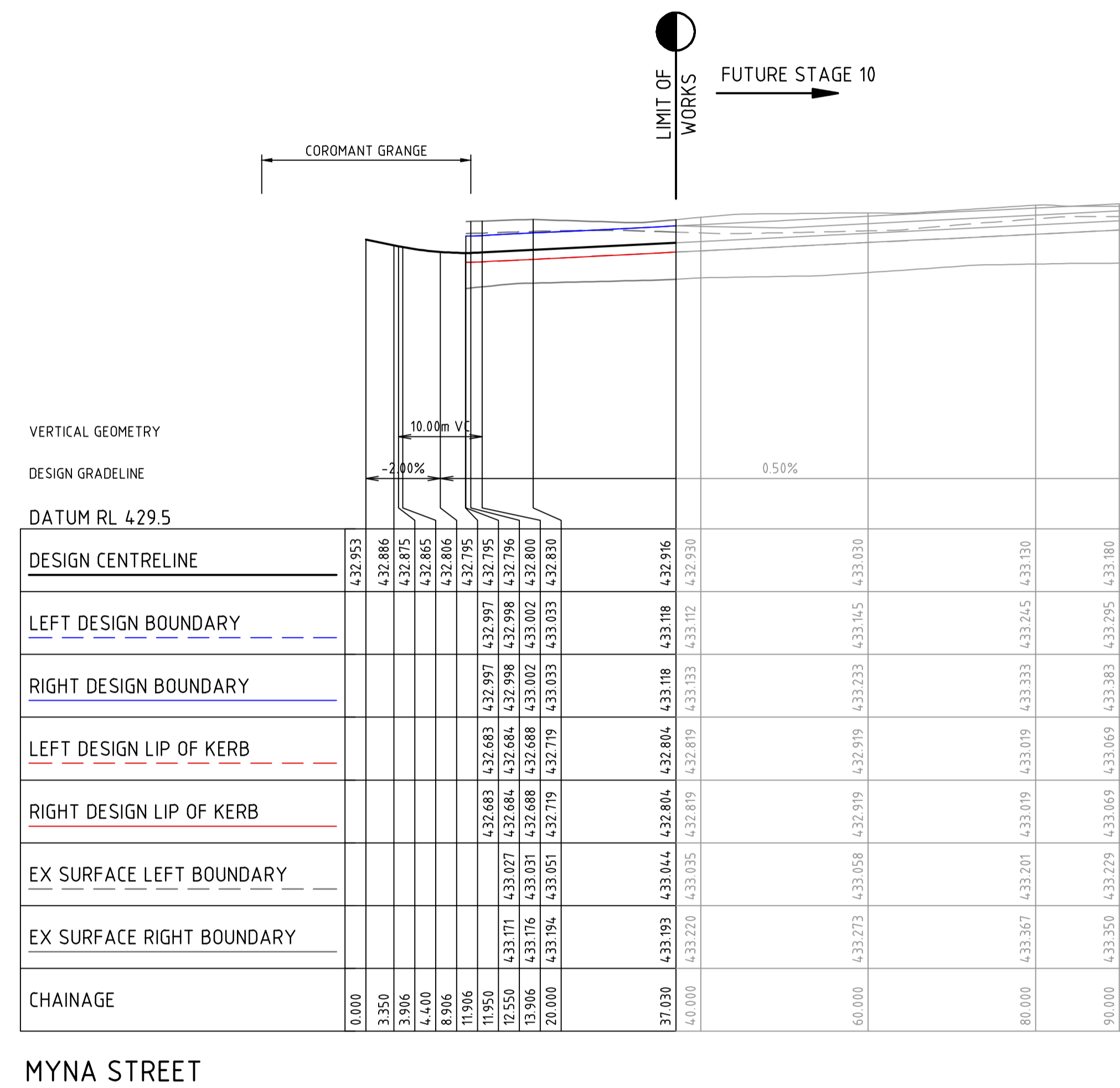
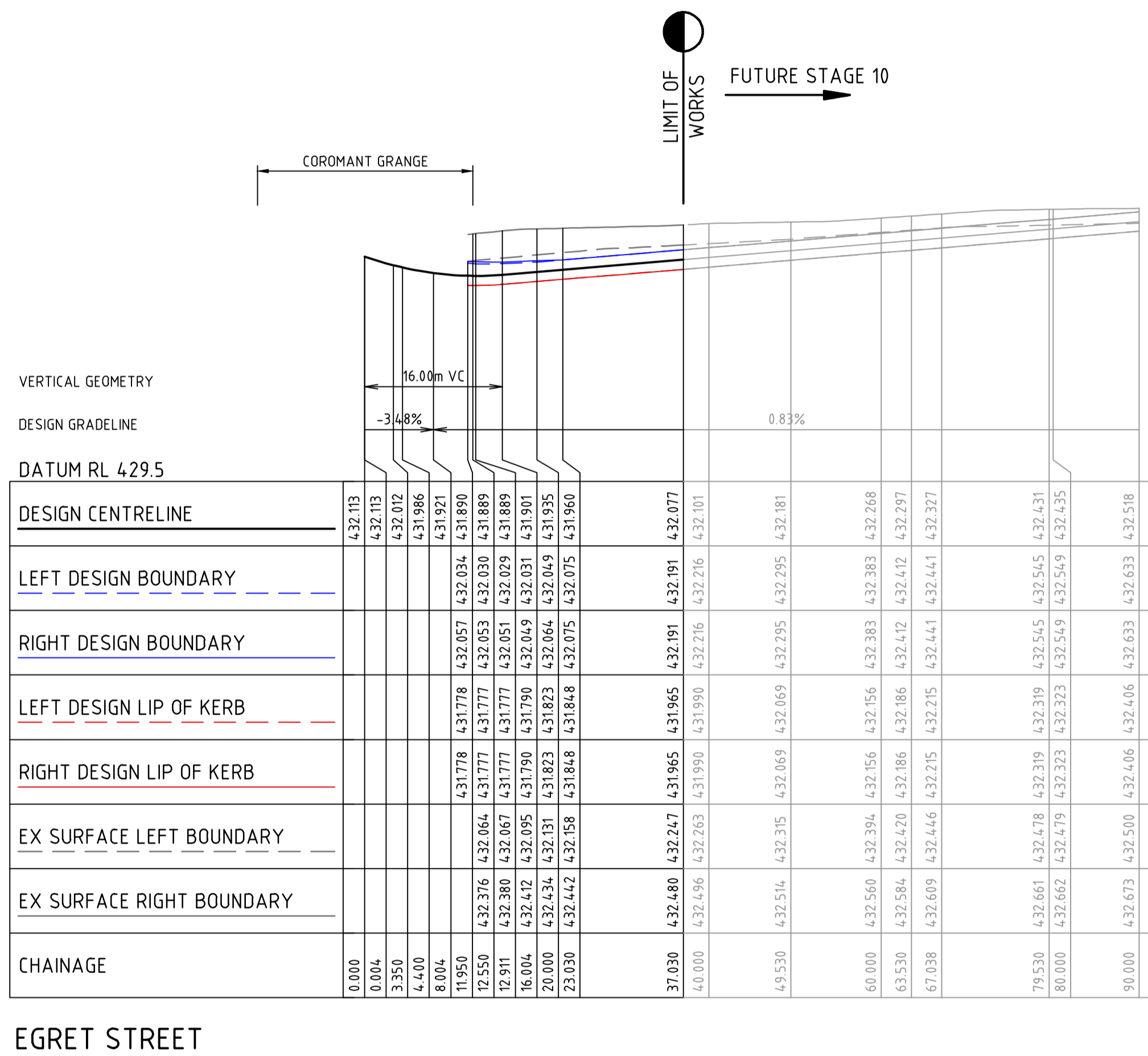
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Designed: S.WOOD  
Authorised: J.DOHERTY  
Checked: B.IBBS  
Date:

**CONROYS GREEN STAGE 5 ROAD AND DRAINAGE ROAD LAYOUT PLANS - SHEET 2**  
CITY OF BALLARAT  
SAN HUBERTO PROPERTIES P/L  
**PRELIMINARY** Drg No: 309150CR201 Rev: A

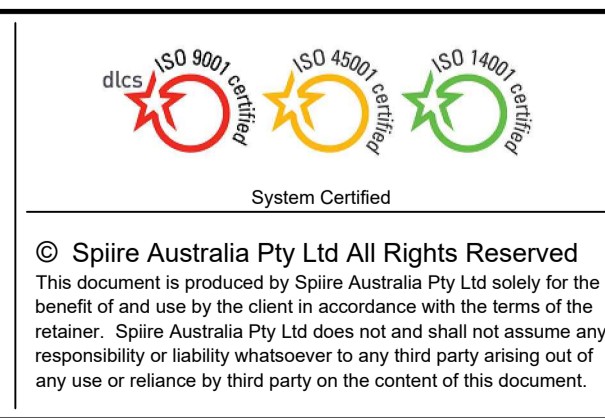
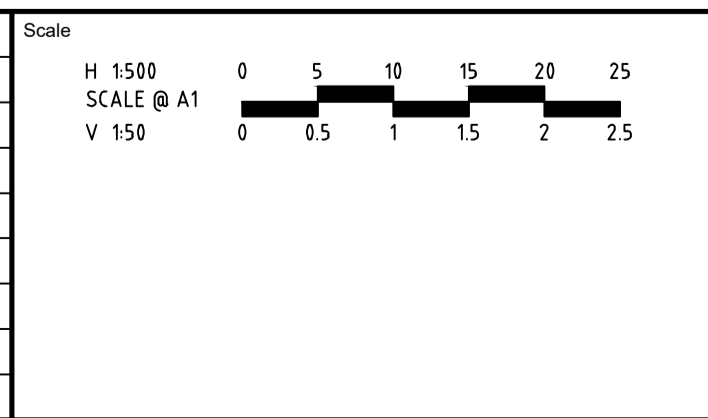






file name: 309150CR302.dwg, layout: crns\_C302, plotted by: Ashley Willis, file location: G:\309150\309150\DWG\309150\309150\309150.dwg, plot date: 11/12/2021, 4:01 PM, Sheet: 6 of 17, Sheets

Scale	H 1500	SCALE @ A1	V 150
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Authorised	J.DOHERTY	Date	
Rev	A PRELIMINARY ISSUE	JD	14/09/21
Rev	Amendments	Approved	Date



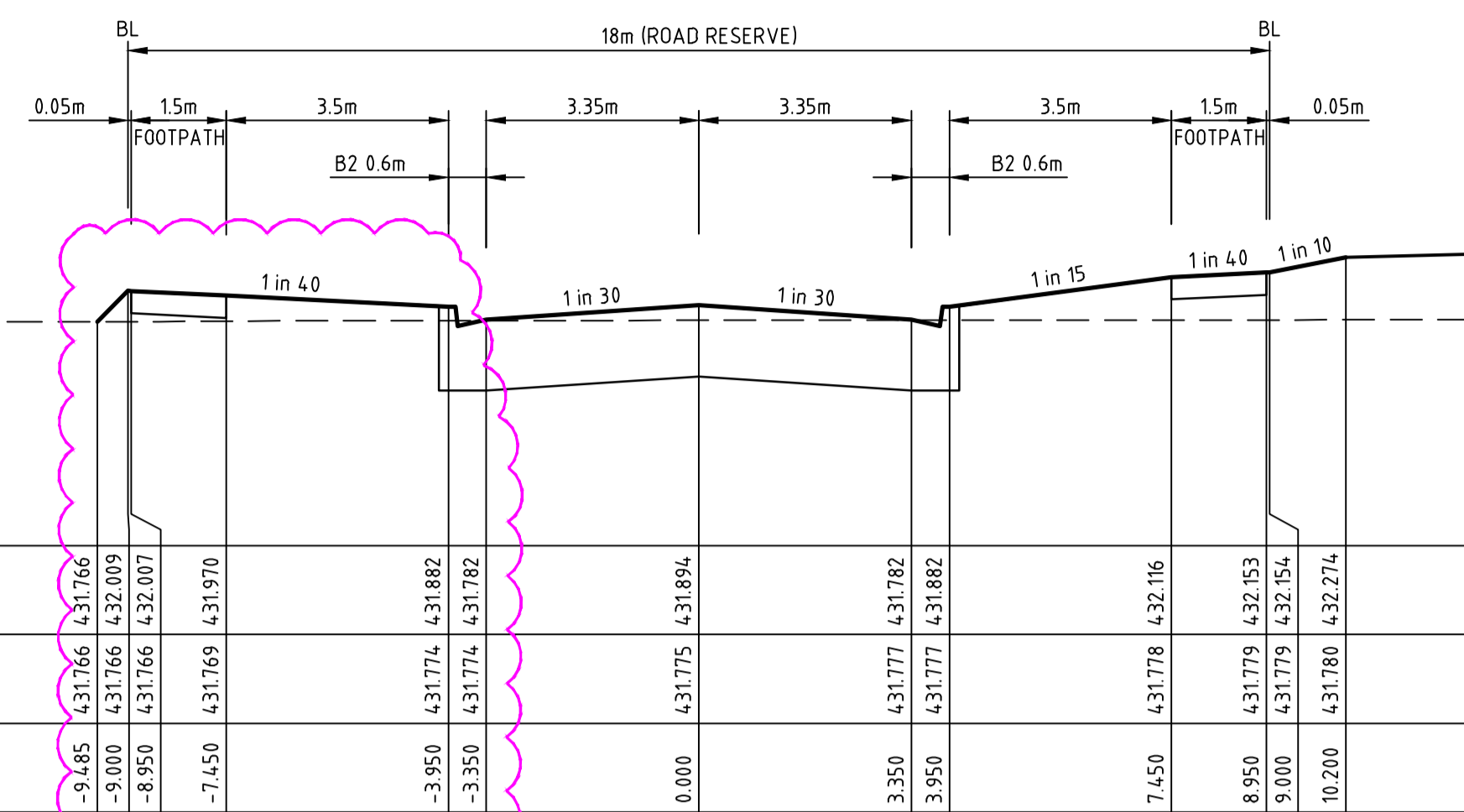
Designed	S.WOOD	Checked	B.IBBS
Authorised	J.DOHERTY	Date	

**CONROYS GREEN**  
**STAGE 5**  
**ROAD AND DRAINAGE**  
**ROAD LONG SECTIONS - SHEET 3**  
CITY OF BALLARAT  
SAN HUBERTO PROPERTIES P/L

**PRELIMINARY** Drg No **309150CR302** Rev **A**

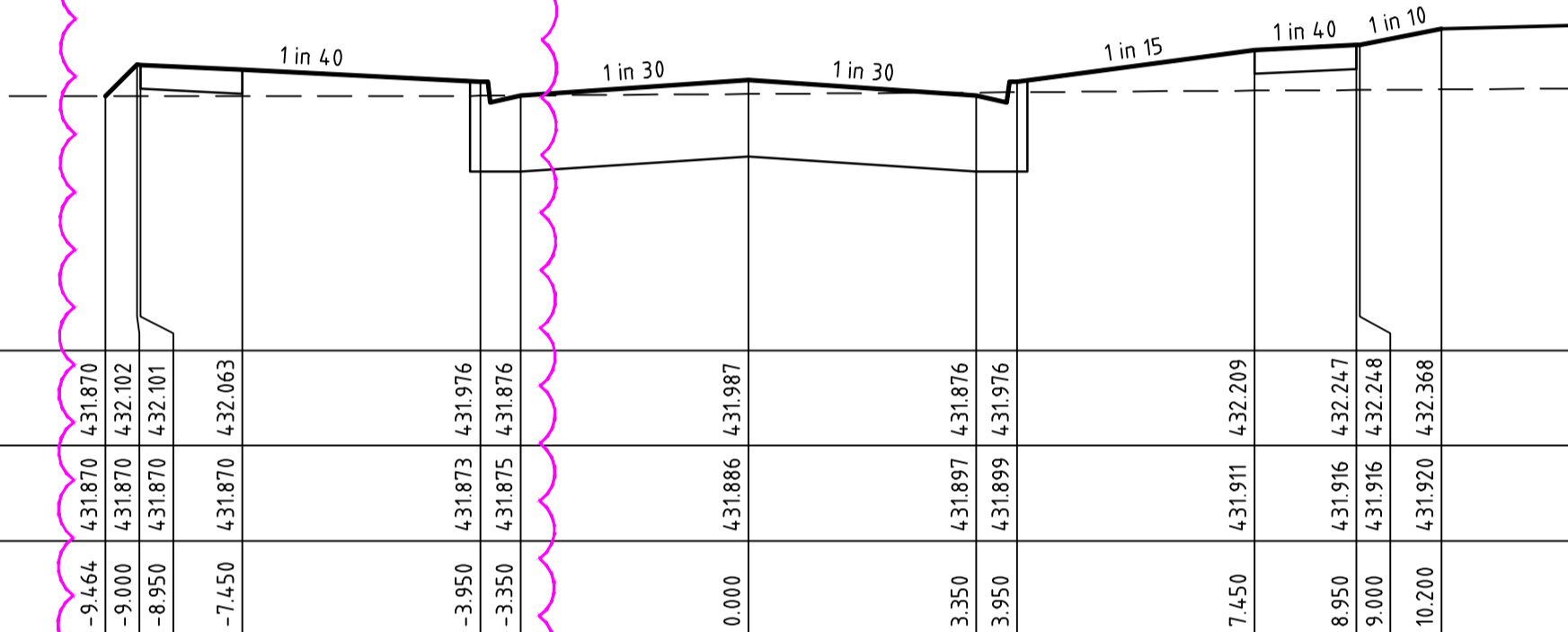


**FILLING NOTE**  
 ALL FILLING WITHIN ROAD RESERVES IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007 AND TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.



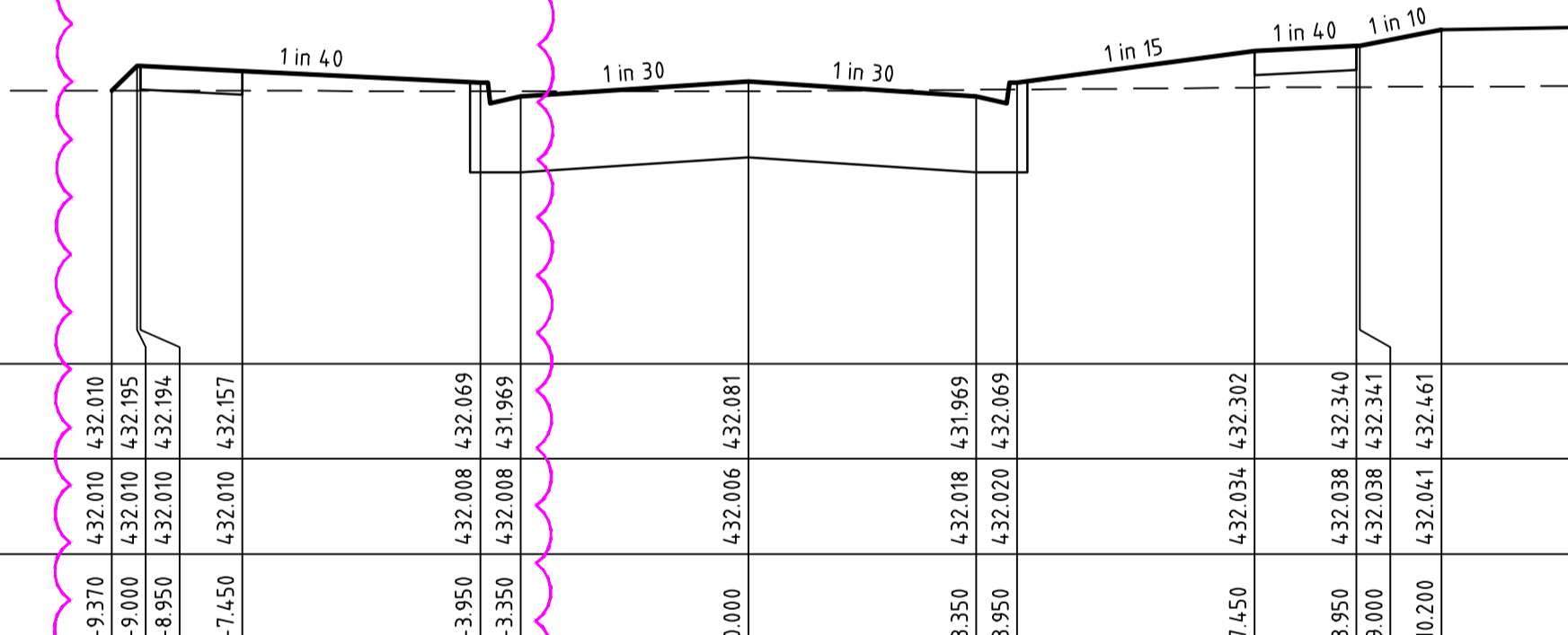
GOLDFINCH ROAD

CH 450.51



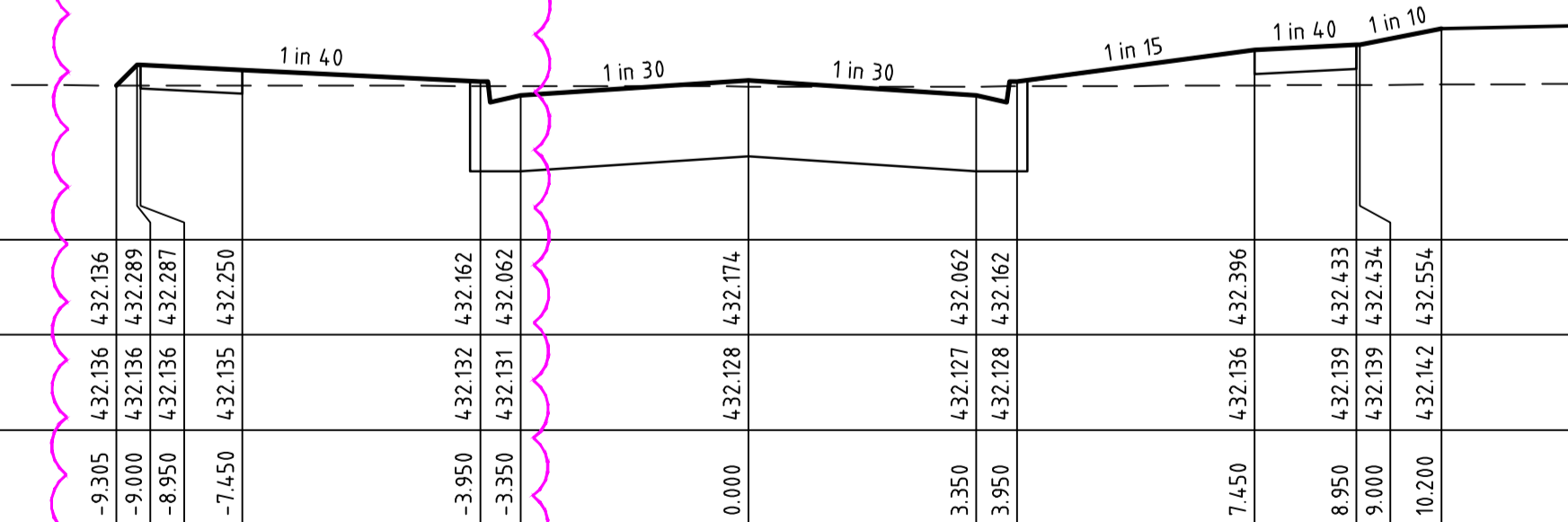
GOLDFINCH ROAD

CH 436.51



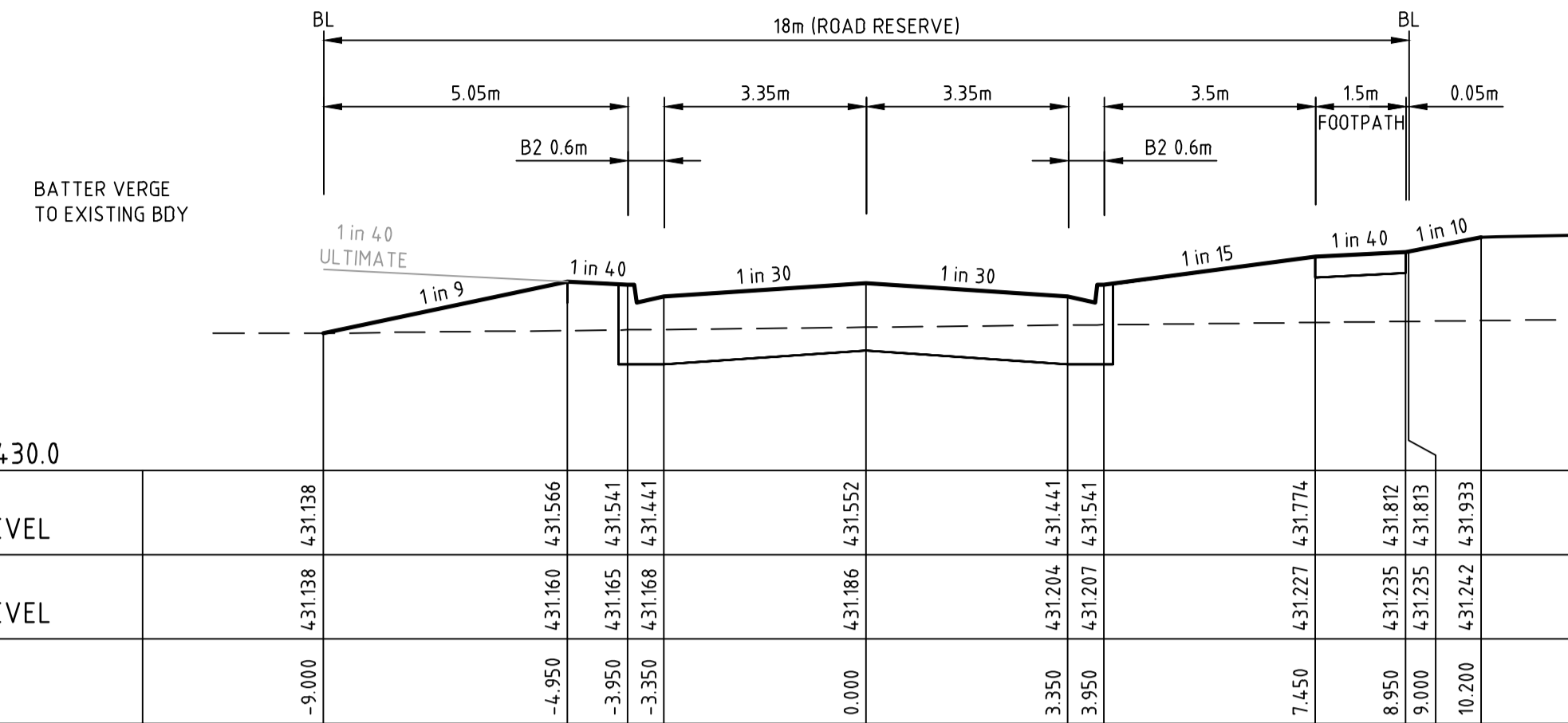
GOLDFINCH ROAD

CH 422.51



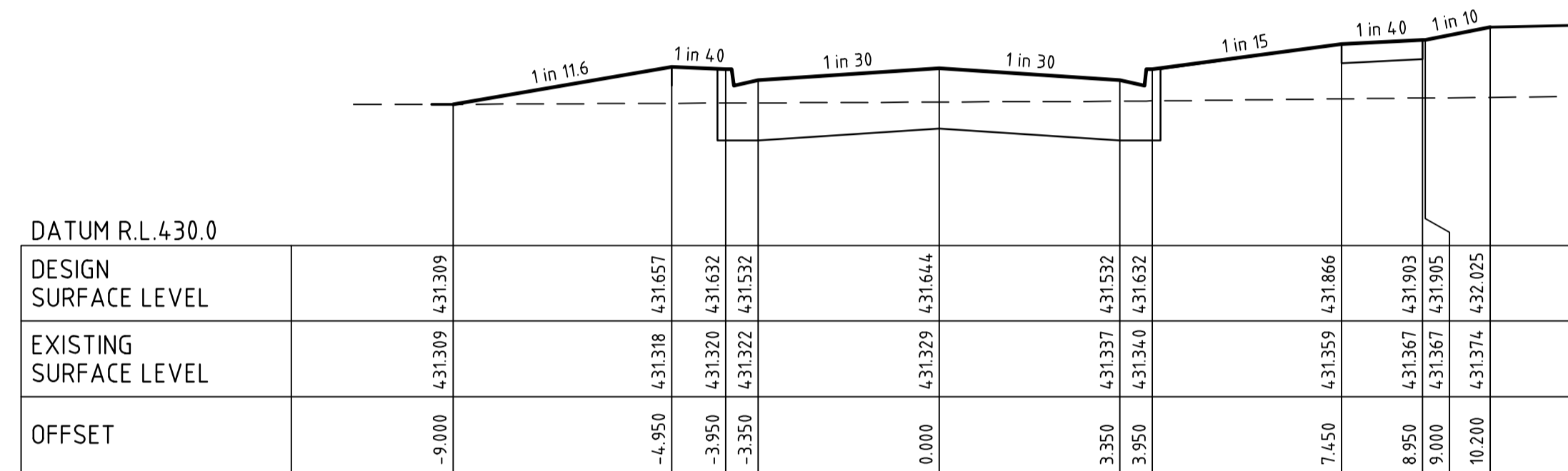
GOLDFINCH ROAD

CH 408.51



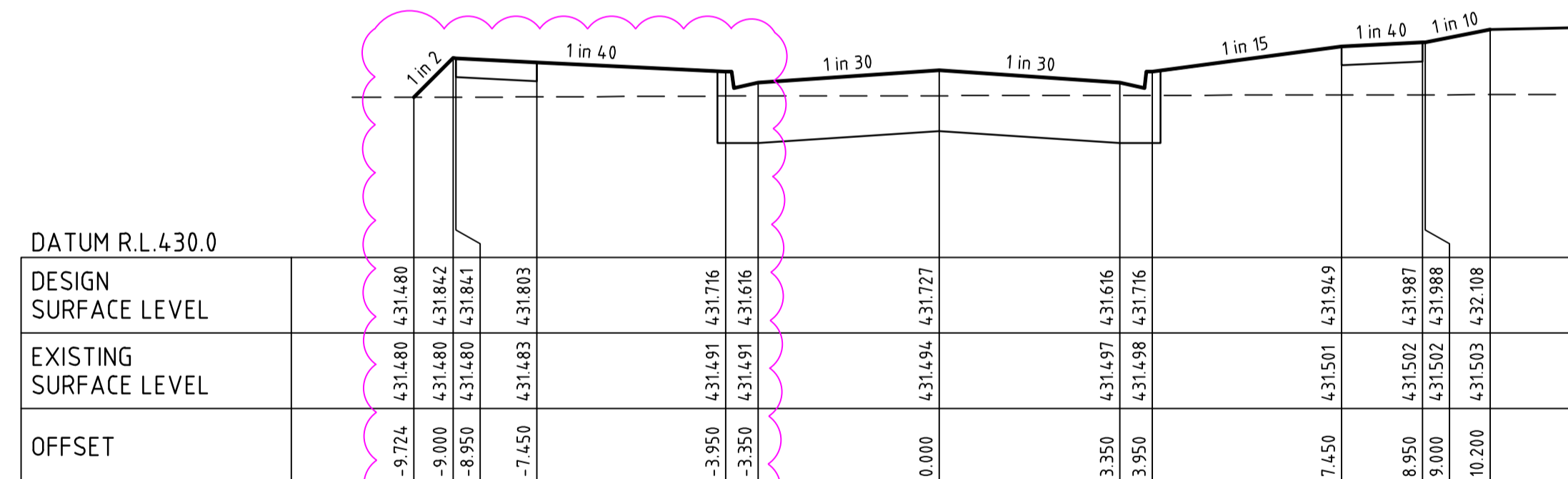
GOLDFINCH ROAD

CH 500.49



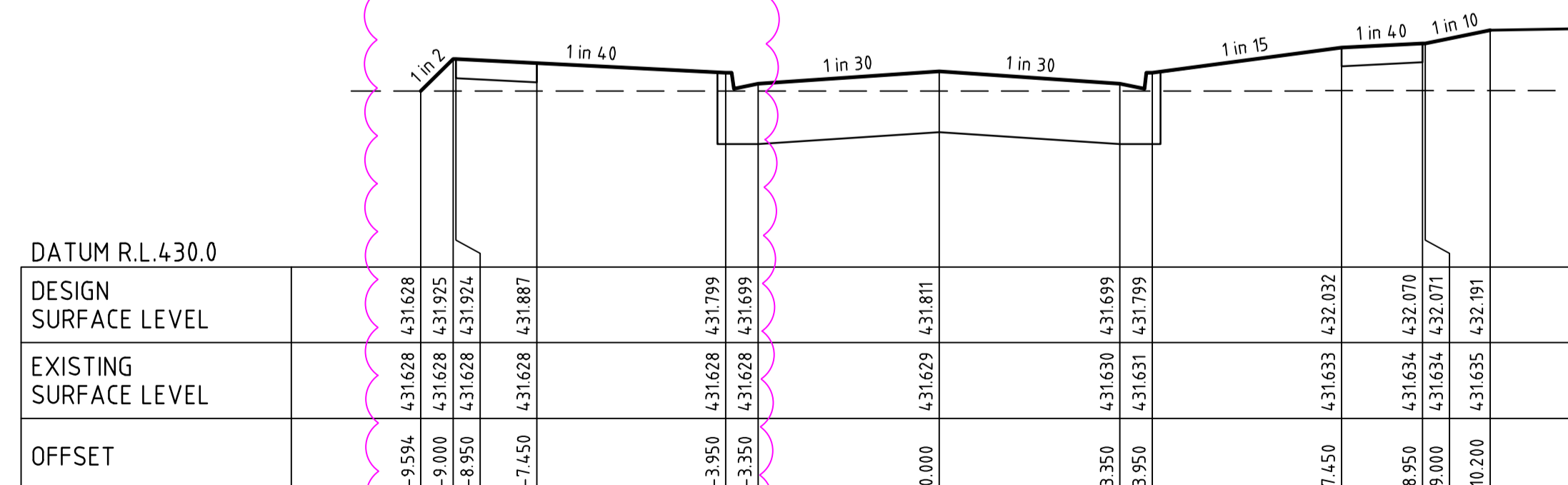
GOLDFINCH ROAD

CH 487.99



GOLDFINCH ROAD

CH 475.49



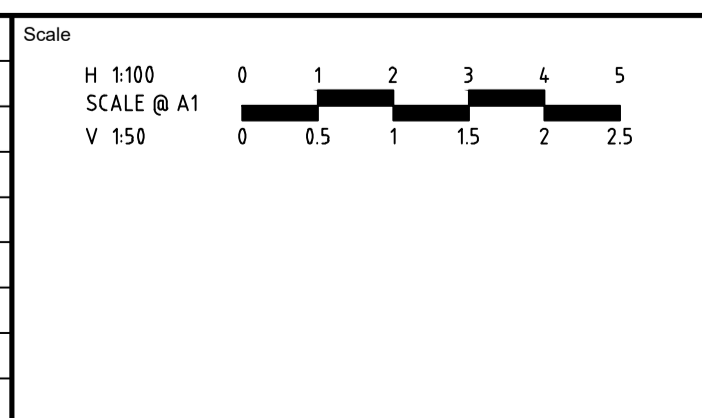
GOLDFINCH ROAD

CH 462.99

**APPROVED** CITY OF BALLARAT  
 By D. Hastings at 3:44 pm, Dec 22, 2021

file name: 309150CR401.dwg, layout: cems\_CD01, plotted by: Ashley Willis, file location: G:\309150\309150\CD01\A1.dwg, plot date: 01/12/2021, 4:02 PM, Sheet: 8 of 17 Sheets

Rev	Amendments	Approved	Date
B	ADDED FOOTPATH ALONG GOLDFINCH RD	A.W	01/12/21
A	PRELIMINARY ISSUE	JD	21/09/21



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Designed S.WOOD	Checked B.IBBS
Authorised J.DOHERTY	Date

**CONROYS GREEN**  
**STAGE 5**  
 ROAD AND DRAINAGE  
 ROAD CROSS SECTIONS - SHEET 2  
 CITY OF BALLARAT  
 SAN HUBERTO PROPERTIES P/L

**PRELIMINARY** Drg No 309150CR401 Rev B

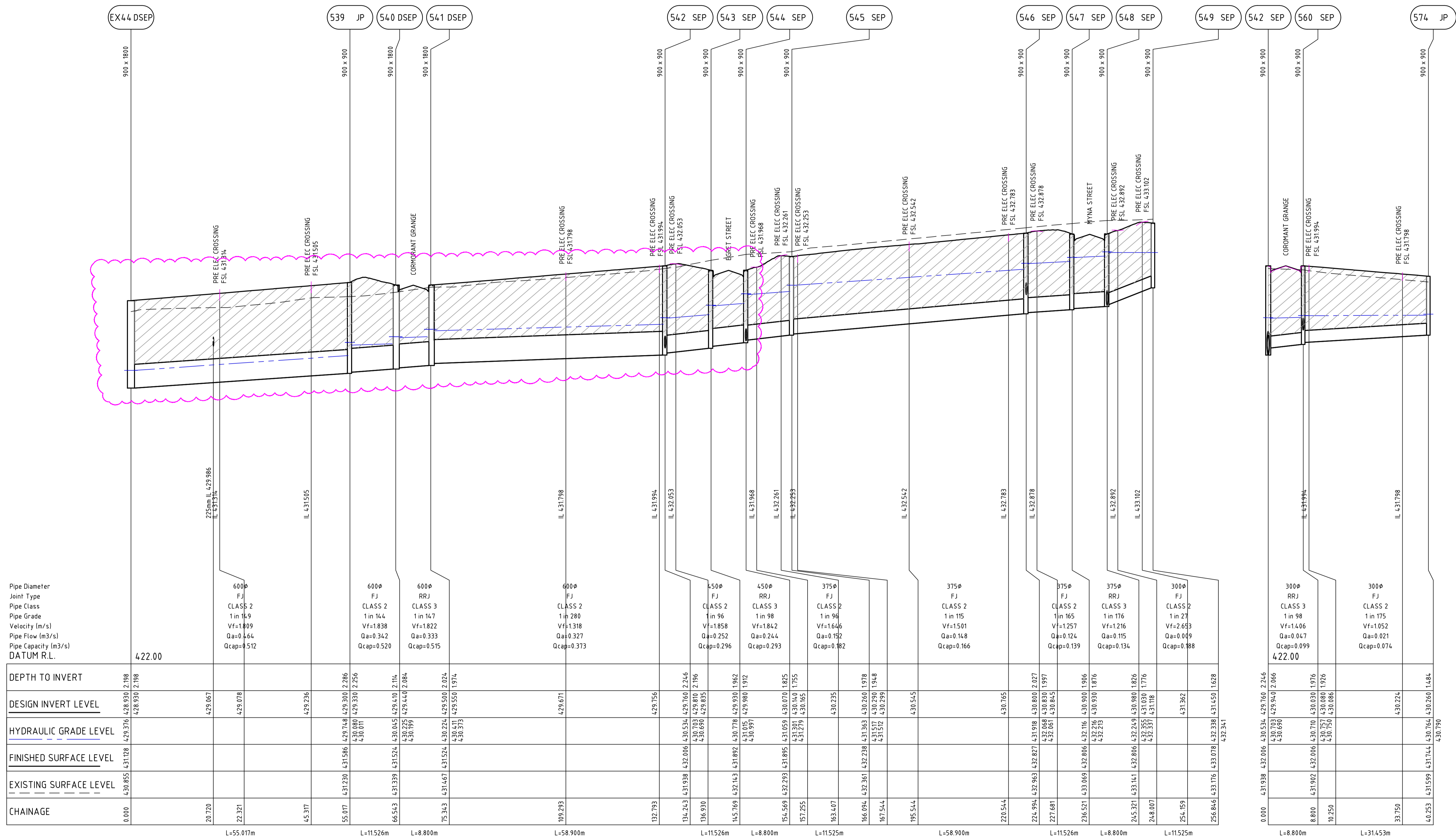












Pipe Diameter	600ø	600ø	600ø	600ø	450ø	450ø	375ø	375ø	375ø	375ø	300ø	300ø
Joint Type	FJ	FJ	RRJ	FJ	FJ	RRJ	FJ	FJ	RRJ	RRJ	FJ	FJ
Pipe Class	CLASS 2	CLASS 2	CLASS 3	CLASS 2	CLASS 2	CLASS 3	CLASS 2	CLASS 2	CLASS 3	CLASS 2	CLASS 3	CLASS 2
Pipe Grade	1 in 14.9	1 in 14.4	1 in 14.7	1 in 280	1 in 96	1 in 98	1 in 96	1 in 115	1 in 176	1 in 27	1 in 98	1 in 175
Velocity (m/s)	Vf=1.809	Vf=1.838	Vf=1.822	Vf=1.318	Vf=1.858	Vf=1.842	Vf=1.646	Vf=1.501	Vf=1.216	Vf=2.653	Vf=1.406	Vf=1.052
Pipe Flow (m <sup>3</sup> /s)	Qa=0.464	Qa=0.342	Qa=0.333	Qa=0.327	Qa=0.252	Qa=0.244	Qa=0.152	Qa=0.148	Qa=0.124	Qa=0.009	Qa=0.047	Qa=0.021
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.512	Qcap=0.520	Qcap=0.515	Qcap=0.373	Qcap=0.296	Qcap=0.293	Qcap=0.182	Qcap=0.166	Qcap=0.139	Qcap=0.134	Qcap=0.099	Qcap=0.074
DATUM R.L.	422.00										422.00	

DEPTH TO INVERT																																			
DESIGN INVERT LEVEL	428.930	429.167	429.078	429.236	429.671	429.756	429.605	429.605	429.800	429.800	429.940	429.940																							
HYDRAULIC GRADE LEVEL	429.376	429.376	429.376	429.376	429.376	429.376	429.376	429.376	429.376	429.376	429.376	429.376																							
FINISHED SURFACE LEVEL	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128																							
EXISTING SURFACE LEVEL	430.855	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128	431.128																							
CHAINAGE	0.000	20.720	22.321	45.317	55.017	66.543	75.343	109.293	132.793	134.243	136.930	145.769	154.569	157.255	163.407	166.094	167.544	195.544	220.544	224.994	227.681	236.521	245.321	248.007	254.159	256.846	430.03	430.03	8.800	10.250	33.750	40.253			
		L=55.017m		L=11.526m	L=8.800m		L=58.900m		L=11.526m	L=8.800m	L=11.525m		L=58.900m		L=11.526m	L=8.800m	L=11.525m		L=8.800m		L=31.453m														

file name: 309150CR600.dwg, layout: cr600, name: CR600, plotted by: Ashley Willis, file location: G:\309150\309150\DWG\309150\309150.dwg, plot date: 10/12/2021 4:02 PM, Sheet 13 of 17 Sheets

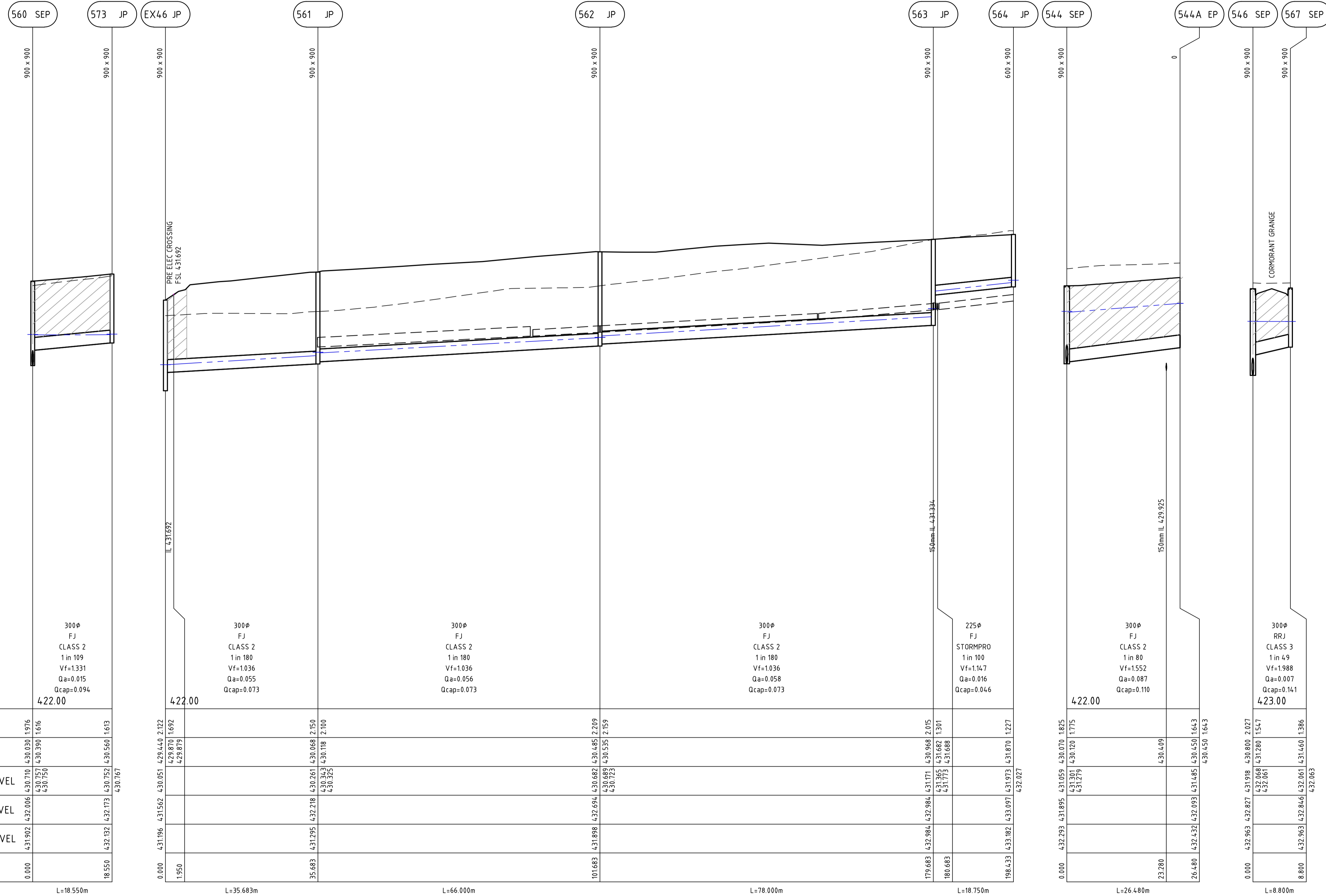
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Scale	0 5 10 15 20 25 0 0.5 1 1.5 2 2.5			
Rev	B	DRAINAGE AMENDED AS PER COUNCIL COMMENTS 25/11/21	A.W	01/12/21
Rev	A	PRELIMINARY ISSUE	JD	14/09/21
Rev		Amendments	Approved	Date

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Authorised	J.DOHERTY	Date	

**CONROYS GREEN**  
**STAGE 5**  
**ROAD AND DRAINAGE**  
**DRAINAGE LONG SECTIONS - SHEET 1**  
CITY OF BALLARAT  
SAN HUBERTO PROPERTIES P/L  
**PRELIMINARY** Drg No **309150CR600** Rev **B**



Pipe Diameter	300φ
Joint Type	FJ
Pipe Class	CLASS 2
Pipe Grade	1 in 109
Velocity (m/s)	Vf=1.331
Pipe Flow (m <sup>3</sup> /s)	Qa=0.015
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.094
DATUM R.L.	422.00

Pipe Diameter	300φ
Joint Type	FJ
Pipe Class	CLASS 2
Pipe Grade	1 in 180
Velocity (m/s)	Vf=1.036
Pipe Flow (m <sup>3</sup> /s)	Qa=0.055
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.073
DATUM R.L.	422.00

Pipe Diameter	300φ
Joint Type	FJ
Pipe Class	CLASS 2
Pipe Grade	1 in 180
Velocity (m/s)	Vf=1.036
Pipe Flow (m <sup>3</sup> /s)	Qa=0.056
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.073
DATUM R.L.	422.00

Pipe Diameter	300φ
Joint Type	FJ
Pipe Class	CLASS 2
Pipe Grade	1 in 180
Velocity (m/s)	Vf=1.036
Pipe Flow (m <sup>3</sup> /s)	Qa=0.058
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.073
DATUM R.L.	422.00

Pipe Diameter	225φ
Joint Type	FJ
Pipe Class	STORMPRO
Pipe Grade	1 in 100
Velocity (m/s)	Vf=1.147
Pipe Flow (m <sup>3</sup> /s)	Qa=0.016
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.046
DATUM R.L.	422.00

Pipe Diameter	300φ
Joint Type	FJ
Pipe Class	CLASS 2
Pipe Grade	1 in 80
Velocity (m/s)	Vf=1.552
Pipe Flow (m <sup>3</sup> /s)	Qa=0.087
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.110
DATUM R.L.	422.00

Pipe Diameter	300φ
Joint Type	RRJ
Pipe Class	CLASS 3
Pipe Grade	1 in 4.9
Velocity (m/s)	Vf=1.988
Pipe Flow (m <sup>3</sup> /s)	Qa=0.007
Pipe Capacity (m <sup>3</sup> /s)	Qcap=0.141
DATUM R.L.	423.00

DEPTH TO INVERT	18.550
DESIGN INVERT LEVEL	4.30.030 1.976
HYDRAULIC GRADE LEVEL	4.30.030 1.976
FINISHED SURFACE LEVEL	4.30.030 1.976
EXISTING SURFACE LEVEL	4.30.030 1.976
CHAINAGE	0.000

DEPTH TO INVERT	35.683
DESIGN INVERT LEVEL	4.30.261 4.30.068 2.150
HYDRAULIC GRADE LEVEL	4.30.261 4.30.068 2.150
FINISHED SURFACE LEVEL	4.30.261 4.30.068 2.150
EXISTING SURFACE LEVEL	4.30.261 4.30.068 2.150
CHAINAGE	35.683

DEPTH TO INVERT	101.683
DESIGN INVERT LEVEL	4.30.682 4.30.485 2.209
HYDRAULIC GRADE LEVEL	4.30.682 4.30.485 2.209
FINISHED SURFACE LEVEL	4.30.682 4.30.485 2.209
EXISTING SURFACE LEVEL	4.30.682 4.30.485 2.209
CHAINAGE	101.683

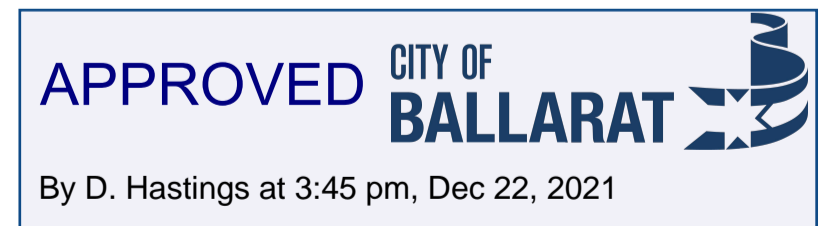
DEPTH TO INVERT	179.683
DESIGN INVERT LEVEL	4.31.171 4.30.469 2.015
HYDRAULIC GRADE LEVEL	4.31.171 4.30.469 2.015
FINISHED SURFACE LEVEL	4.31.171 4.30.469 2.015
EXISTING SURFACE LEVEL	4.31.171 4.30.469 2.015
CHAINAGE	179.683

DEPTH TO INVERT	198.433
DESIGN INVERT LEVEL	4.31.097 4.31.973 4.31.870 1.227
HYDRAULIC GRADE LEVEL	4.31.097 4.31.973 4.31.870 1.227
FINISHED SURFACE LEVEL	4.31.097 4.31.973 4.31.870 1.227
EXISTING SURFACE LEVEL	4.31.097 4.31.973 4.31.870 1.227
CHAINAGE	198.433

DEPTH TO INVERT	23.280
DESIGN INVERT LEVEL	4.30.409
HYDRAULIC GRADE LEVEL	4.30.409
FINISHED SURFACE LEVEL	4.30.409
EXISTING SURFACE LEVEL	4.30.409
CHAINAGE	23.280

DEPTH TO INVERT	26.480
DESIGN INVERT LEVEL	4.30.450 1.643
HYDRAULIC GRADE LEVEL	4.30.450 1.643
FINISHED SURFACE LEVEL	4.30.450 1.643
EXISTING SURFACE LEVEL	4.30.450 1.643
CHAINAGE	26.480

DEPTH TO INVERT	8.800
DESIGN INVERT LEVEL	4.31.660 1.386
HYDRAULIC GRADE LEVEL	4.31.660 1.386
FINISHED SURFACE LEVEL	4.31.660 1.386
EXISTING SURFACE LEVEL	4.31.660 1.386
CHAINAGE	8.800



file name: 309150CR601.dwg, layout: 309150CR601, plotted by: Ashley Willis, plot date: 01/12/21, 1:02 PM, sheet 14 of 17 sheets

Scale	H 1:500 SCALE @ A1 V 1:50
Scale	0 5 10 15 20 25 0 0.5 1 1.5 2 2.5
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Designed S.WOOD	Checked B.IBBS
Authorised J.DOHERTY	Date
B DRAINAGE AMENDED AS PER COUNCIL COMMENTS 25/11/21	A.W 01/12/21
A PRELIMINARY ISSUE	JD 21/09/21
Rev Amendments	Approved Date

**CONROYS GREEN**  
**STAGE 5**  
**ROAD AND DRAINAGE**  
**DRAINAGE LONG SECTIONS - SHEET 2**  
 CITY OF BALLARAT  
 SAN HUBERTO PROPERTIES P/L  
**PRELIMINARY** Drg No **309150CR601** Rev **B**







