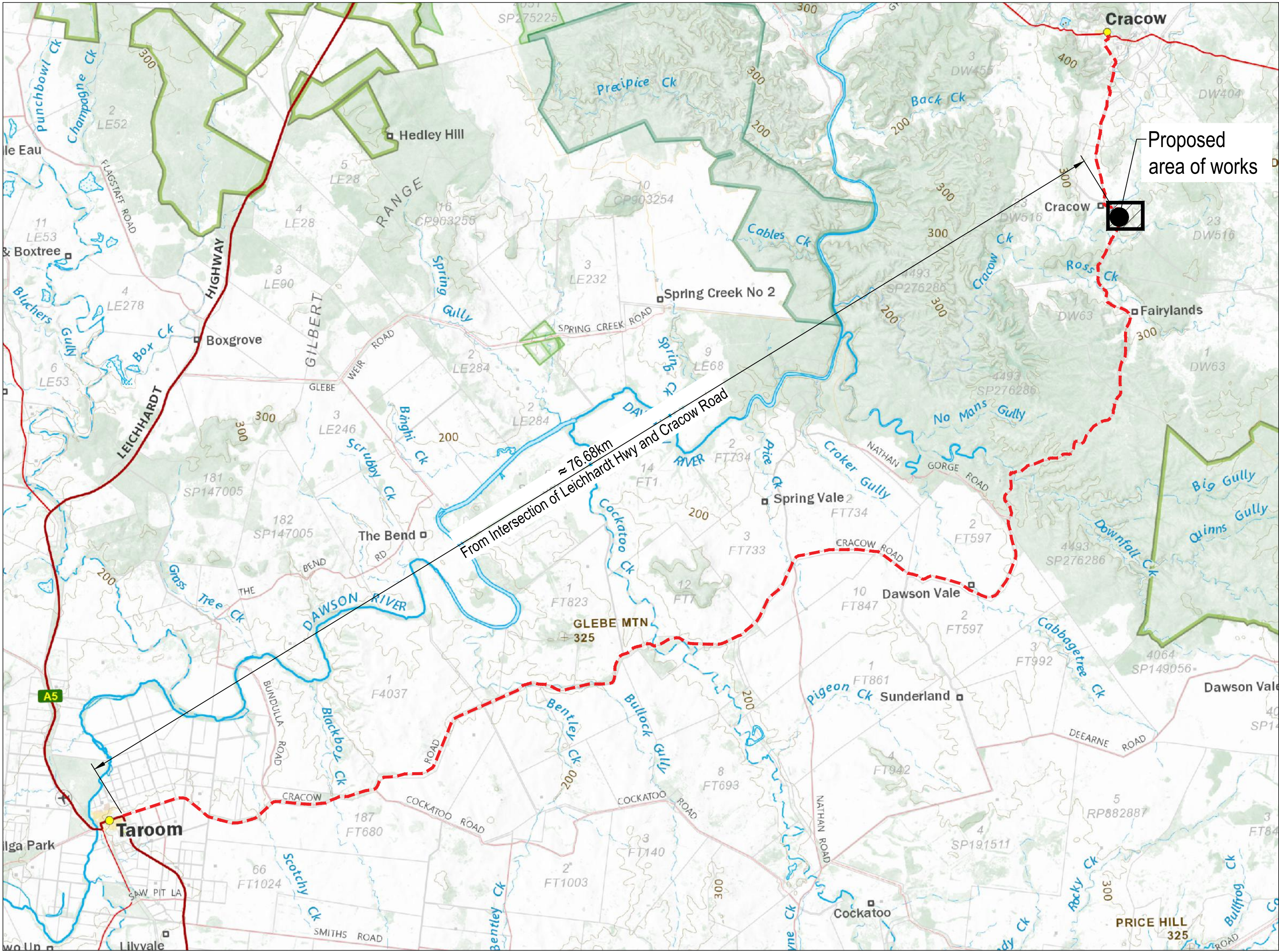


CRACOW ROAD, UNNAMED CREEK 2 FLOODWAY

ROAD AND FLOODWAY UPGRADE



LOCALITY PLAN
(Not to scale)




DRAWING INDEX

Drawing Number	Date	Drawing Description
001	Nov-23	Project Cover Sheet
002	Nov-23	General Notes
300	Nov-23	Survey Control and Services Plan
400	Nov-23	Roadworks and Setout Plan
500	Nov-23	Pavement Plan
600	Nov-23	Longitudinal Section
700	Nov-23	Typical Cross Sections
800	Nov-23	Annotated Cross Sections Sheet 1

DRAWING INDEX

Drawing Number	Date	Drawing Description
801	Nov-23	Annotated Cross Sections Sheet 2
802	Nov-23	Annotated Cross Sections Sheet 3
803	Nov-23	Annotated Cross Sections Sheet 4
1000	Nov-23	Supplementary Signs and Linemarking Details
1200	Nov-23	Floodway Details
1600	Nov-23	Limit of Clearing Plan
1700	Nov-23	Temporary Erosion and Sediment Control Sheet 1
1701	Nov-23	Temporary Erosion and Sediment Control Sheet 2

STANDARD DRAWINGS:
ROADWORKS
Dwg. Rev. Description
CMDG-R-081 E Sign Location and Installation Details
CMDG-R-094 B Floodway - Bed Level Crossing
DEPARTMENT OF TRANSPORT AND MAIN ROADS - STANDARD DRAWINGS:
ROAD FURNITURE
1170 D Flood Depth Indicators - Installation
GENERAL EARTHWORKS AND PROPERTY ACCESS
1178 E Diversion of Water from Roadway and Table Drains

					<div>Scales (sheet size A1)</div> <div><div>quality people client focused solution driven</div></div> <div><div>245 Mary Street, GYMPIE, QLD, 4570</div><div>ABN 73 617 924 437 Ph: 0477 322 555</div></div>	<div><div>Client</div><div><div>Banana SHIRE</div><div>SHIRE OF OPPORTUNITY</div></div><div><div>COPYRIGHT</div><div>The contents and information contained in this document are the copyright of CRC. This drawing may not be used, copied or reproduced in whole or part for any purpose other than the consent by which it is supplied by CRC.</div></div></div>					<div>Title</div> <div>CRACOW ROAD UPGRADE (Ch. 76680m - 76859m)</div> <div>SITE 9 - UN-NAMED CREEK 2 FLOODWAY</div> <div>PROJECT COVER SHEET</div>					<div>Job No.</div> <div>CRC00293</div>
											<div>Drawing No.</div> <div>001</div>					
						<div>ENGINEERING CERTIFICATION (RPEQ)</div>					<div>Revision</div> <div>A</div>					
						<div>Drawn</div> <div>B Doherty</div>	<div>ENG. AREA</div> <div>Civil</div>	<div>NAME</div> <div>T Penrose</div>	<div>SIGNATURE</div> <div></div>	<div>NO.</div> <div>24087</div>	<div>DATE</div> <div>06/11/23</div>	<div>Series No.</div> <div>1 of 16</div>				
						<div>Designed</div> <div>B Doherty</div>										
<div>A Issued for Construction</div>																
<div>20.01 Revisions/Descriptions</div>					<div>Drawn</div>	<div>Approved</div>	<div>Date</div>									

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SAFETY IN DESIGN NOTES:

1. Potential safety hazards identified by the Designer have been assessed for this project in accordance with Safe Design of Structures - Code of Practices by Safe Work Australia, 2012. Refer to the **Safety In Design Report** for the potential safety hazards.
2. Disclaimer: It must be acknowledged that new and/or different risks may become apparent during each project phase.The designer has ensured, so far as reasonably practicable, that the structure/municipal work is designed to minimise risk to the health and safety of persons involved in construction or use related activities. Further, in Appendix A - Safety in Design Risk Register of the **Safety In Design Report**, assumptions may have been made within the different project phases as to how the project and/or project elements will be constructed and maintained. This may differ from the end methods adopted.
3. Any person who undertakes alterations, variations or modifications to these design drawings, without consultation and approval from the original or subsequent designer, will assume the duties of a designer and will be held responsible for the safety in design for this project.
4. All works must comply with W.H. & S. Act, 2011.

GENERAL NOTES:

1. Works shall be undertaken generally in accordance with the relevant CMDG construction specifications except where specific DTMR specification requirements are detailed within these Project specific Drawings. The most current version shall be adopted, unless noted otherwise.
2. Works to be measured in accordance with project specific *Supplementary Specification for Measurement and Work Operations for Work Items*.
3. If any archaeological or cultural material is exposed on the work site all works shall cease. The D.E.H.P., Aboriginal Land Council and B.C.C. are to be notified.
4. All works are to comply with the requirements of the Environmental Protection Act, 1994.
5. Disposal/movement of material in areas of Red Imported Fire Ants are to comply with the D.A.F.F. regulations. Refer the Department's website: www.daff.qld.gov.au/fireants for the current information.
6. Prior to commencement of work a Risk Management Plan to minimise the chance of spreading Fire Ants is to be completed.
7. The positions shown on drawings for public utilities services are based on the B.Y.D.A. information supplied at time of design and are indicative only. Prior to construction the current Service Authority information is to be obtained from B.Y.D.A. (website: www.byda.com.au). The position and depth of each service is to be verified by the relevant Service Authority on site before the start of any construction.
8. Where these drawings make reference to the Administrator or Contract Administrator it shall mean the Superintendent managing the works.
9. Prior to commencement of work contact the Superintendent if any PSM's are in the vicinity of the work site.
10. Order of Precedence of Documents, Ambiguities or Discrepancies - The following order of precedence shall apply where there is any ambiguity, discrepancy or inconsistency between the design documents comprising the Contract, with the higher in the list having a higher priority:
 - a. These Project Specific Drawings
 - b. Technical Specifications
 - c. Standard DrawingsThe several documents forming the Contract are to be taken as mutually explanatory of one another. If either party discovers any ambiguity or discrepancy in any document prepared for the purpose of executing the Work Under the Contract, that party shall notify the Superintendent in writing of the ambiguity or discrepancy as soon as possible,
11. The Scheme Drawings listed on the Project Cover Sheet are to be read as a whole and not in isolation. Any isolated drawing separated from the control set will be considered voided and is not to be used.
12. All drawings are to be read in conjunction with the project's specification and all relevant Standard Drawings.
13. All drawings are to be read in conjunction with the Abbreviation Table shown.
14. Materials and workmanship - Where materials, material components, workmanship and procedures are not specifically described by the Contract, they shall be in accordance with the relevant Australian Standard. Where no Australian Standard is available, other specifications shall be used in the following order of priority:
 - a. manufacturer's recommendations, and
 - b. accepted industry standards.At a minimum materials and workmanship shall be the best of their respective kinds and fit for the purpose for which they are intended.
Any product trade names have been used to establish a quality requirement. Written approval to be obtained prior to using any substitutions.
15. Dimensions / Levels - All levels and setout points shall be confirmed on site by a registered surveyor prior to construction. The Contractor shall seek clarification from the Superintendent for any discrepancy prior to proceeding with works. Dimensions shall not be scaled from drawings.
16. Set Out of Individual Installations - The Contractor shall set out an installation as shown on the Drawings in sufficient detail to identify the location, length and levels of the proposed installation. Once the initial set out is complete the Superintendent will determine the design appropriateness of the set out with regard to the actual site conditions. The Superintendent may direct amendments to the set-out details. Payment for such amendments will be made at appropriate rates in the Schedule of Rates or, where such rates are not deemed by the Superintendent to be appropriate, as determined by the Superintendent. Installations to be set out in accordance with the above requirements include:
 - a. drainage pipes, culverts, slabs and structures
 - b. landscaping
 - c. traffic control
17. Existing Services - Locate service prior to commencing works. Services are shown on these drawings for information only. No responsibility is taken for the accuracy or completeness of the information supplied. Take care to protect services from damage, and report any hits or damage to the service authority immediately.

EROSION AND SEDIMENT CONTROL NOTES:

1. During construction all necessary precautions shall be taken to control erosion and downstream sedimentation. Monitor the prevailing weather conditions and protect any downstream construction and gully inlets.
2. All sediment control devices, sediment fences, check dams, straw bales, stone traps and entry/exit sediment traps are to be in accordance with the E&SC plans within these project drawings or amended as required by the Contractor's suitably qualified professional.

EARTHWORK NOTES:

1. All unsuitable material is to be stripped prior to placement of structural fill.
2. All unsuitable material is to be removed in accordance with the specification or as directed by the Superintendent.
3. All contaminated soil to be removed in accordance with the specification or as directed by the Superintendent.
4. Earthwork quantities include existing road pavement excavated where applicable.
5. Earthwork quantities include unsuitable and or contaminated material except where noted otherwise.
6. Earthwork quantities in cut are bank (nett) volumes and in fill are compacted volumes.
7. Class A1 or B material to comply with the requirements of TMR MRTS04, and specific requirements within these project drawings.



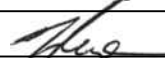
LINEMARKING NOTES:

1. All linemarking, signs and traffic devices shall comply with the M.U.T.C.D. - current edition.
2. Ensure that signage has clear sight distance, otherwise adjust location accordingly.
3. Superseded linemarking and signage to be removed.

SERVICE ADJUSTMENT NOTES:

1. Service Authority infrastructure adjustments are to be performed by contractors approved by the relevant service authority.



					Scales (sheet size A1)	 <p>quality people client focused solution driven</p>	<p>245 Mary Street, GYMPIE, QLD, 4570 ABN 73 617 924 437 Ph: 0477 322 555</p>	<div><div>Client</div><div><p>SHIRE OF OPPORTUNITY</p></div></div> <div>COPYRIGHT The contents and information contained in this document are the copyright of CRC. This drawing may not be used, copied or reproduced in whole or part for any purpose other than the consent by which it is supplied by CRC.</div>	Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY GENERAL NOTES					Job No.	CRC00293
									Drawing No.	002					
Drawn		ENGINEERING CERTIFICATION (RPEQ)							Revision	A					
B Doherty		ENG. AREA	NAME	SIGNATURE							NO.	DATE			
Designed		Civil	T Penrose						24087	06/11/23	Series No.	2 of 16			
B Doherty															
A	Issued for Construction														
20.01	Revisions/Descriptions				Drawn	Approved	Date	Dimensions shown in metres except where shown otherwise							



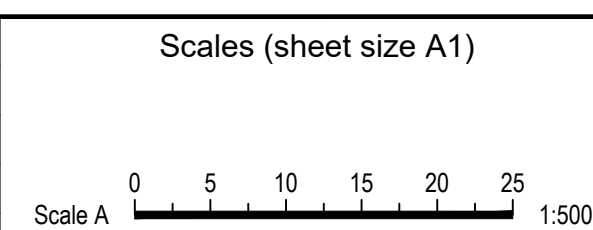
403 © - Survey Mark and Label

STATION	EASTING	NORTHING	LEVEL	REMARKS
10	228908.617	7190719.765	261.590	PISP
11	228877.422	7190804.321	257.800	PISP
12	228840.793	7190877.271	256.395	PISP
901	228905.368	7190684.874	262.380	PBMK
902	228889.074	7190794.259	259.050	PBMK
903	228841.414	7190886.632	256.720	PBMK

PSM	EASTING	NORTHING	LEVEL	LOCATION
PM32320	227987.370	7187505.508	283.945	PPMK \approx Ch. 73100m

BEWARE OF UNDERGROUND SERVICES
The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.

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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY SURVEY CONTROL AND SERVICES PLAN						Job No. CRC00293
						Drawing No. 300
Drawn B Doherty	ENGINEERING CERTIFICATION (RPEQ)					Revision A
	ENG. AREA Civil	NAME T Penrose	SIGNATURE 	NO. 24087	DATE 06/11/23	
Designed B Doherty						Series No. 3 of 16



Job No.	CRC00293
Drawing No.	400
Revision	A
Series No.	4 of 16



PLAN
Scale: 1:500

LEGEND

- New pavement to be constructed. Refer Pavement Type 1 Details.
- New pavement to be constructed. Refer Pavement Type 2 Details.
- New concrete floodway to be constructed. Refer Standard Drawing CMDG-R-094

PAVEMENT TYPE 1 DETAILS

- New pavement to be constructed
- 200mm Overlay, Full width,
- Imported Unsealed Pavement Material **
- Design Subgrade CBR 2 (soaked)
- 200mm Total thickness

PAVEMENT TYPE 2 DETAILS

- New pavement to be constructed
(Ch. 76728.500 - 76788.500m & Ch. 76812.500 - 76832.500m)
- 200mm Stabilised Base, Full Width,
- Imported Unsealed Pavement Material **
- Insitu stabilised, GB binder (Cement/Fly Ash)
- Target UCS value 1 - 2 MPa at 7 Days. Contractor to undertake additive testing to confirm percentage of stabilising agent by mass. A nominal 3% by mass used for estimating purposes only.
- Subgrade replacement in cut***
- Design Subgrade CBR 2 (soaked)
- 200mm Total thickness (Excluding Subgrade Replacement)

All works to be carried out in accordance with the relevant CMDG Construction Specifications.

PAVEMENT DESIGN
(Lower Order Roads Design Guide)

Design Period: 20 Years
Design Traffic: 5.1 x 10⁴ DESA
Design Subgrade CBR: 2 (Soaked)

150mm Subgrade replacement, Class A1 or B material per MRTS04. Minimum 4-day Soaked CBR 15. Maximum Swell 1.5%. CombiGrid Composite Geogrid (or approved equivalent) to underside of subgrade replacement, as directed by the Administrator.

UNSEALED PAVEMENT SPECIFICATION**
(Lower Order Roads Design Guide)

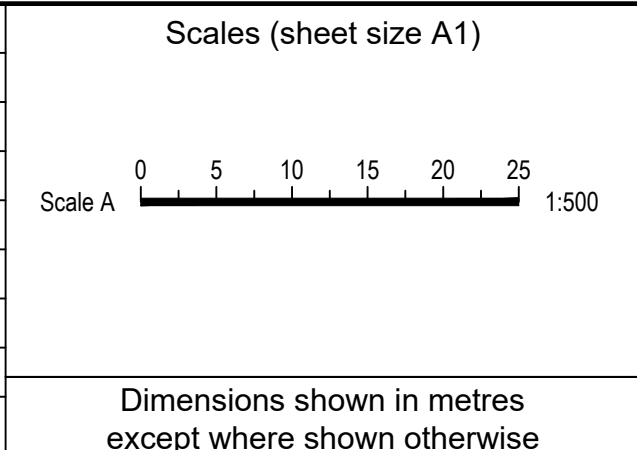
Imported Unsealed Pavement Material to satisfy the following specifications

Grading Coefficient (Gc): 16 - 34
Shrinkage Product (Sp): 100 - 240
WPI: < 1200
PI: > 7%
Passing 0.075mm Sieve: ≥ 15%

**WARNING!
BEWARE OF UNDERGROUND SERVICES**

The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.

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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY PAVEMENT PLAN					Job No.	CRC00293
Drawn B Doherty					Drawing No.	500
Designed B Doherty	ENGINEERING CERTIFICATION (RPEQ)					Revision A
	ENG. AREA Civil	NAME T Penrose	SIGNATURE 	NO. 24087	DATE 06/11/23	Series No. 5 of 16

BEWARE OF UNDERGROUND SERVICES

**BEFORE
YOU DIG**
www.byda.com.au



Horizontal Scale A
Vertical Scale B

SUPER ELEVATION					RHS 4%				RHS 2%			RHS 6%		LHS 0%
		LHS and RHS -4%			LHS -4%				LHS -2%			LHS -6%		

[illegible]

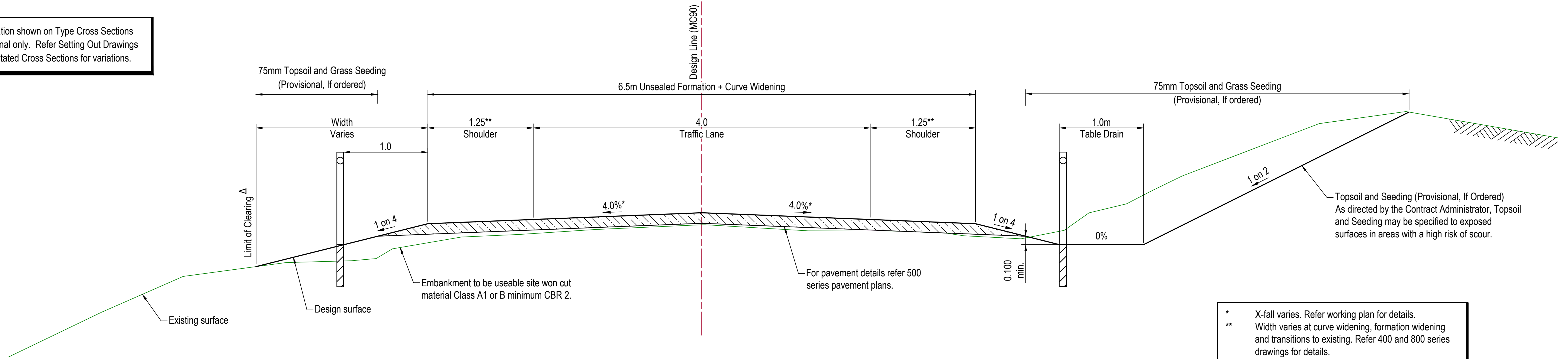
WARNING!

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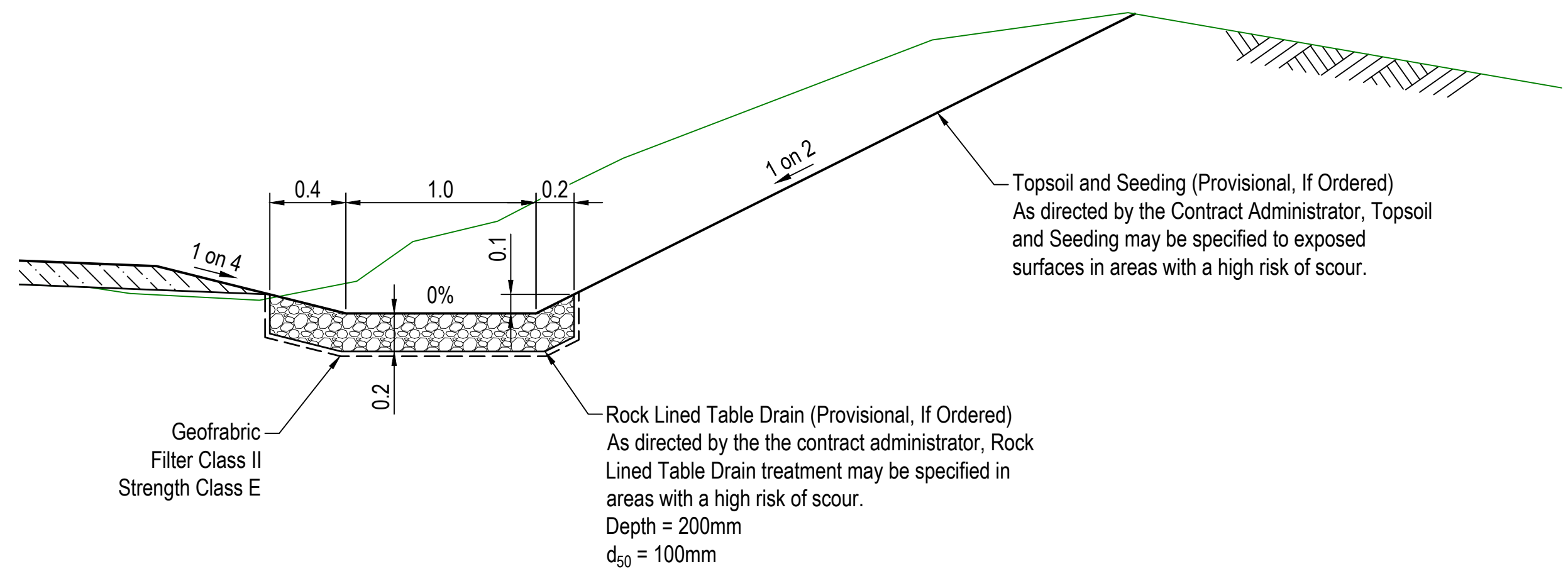
Information shown on Type Cross Sections is nominal only. Refer Setting Out Drawings & Annotated Cross Sections for variations.



- * X-fall varies. Refer working plan for details.
- ** Width varies at curve widening, formation widening and transitions to existing. Refer 400 and 800 series drawings for details.
- Δ Refer 1600 series plans for Limit of Clearing details.

TYPICAL CROSS SECTION A

Ch. START - END (MC90)
(Excluding Floodway)
Not To Scale



ROCK LINED TABLE DRAIN

Not to Scale

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Scales (sheet size A1)
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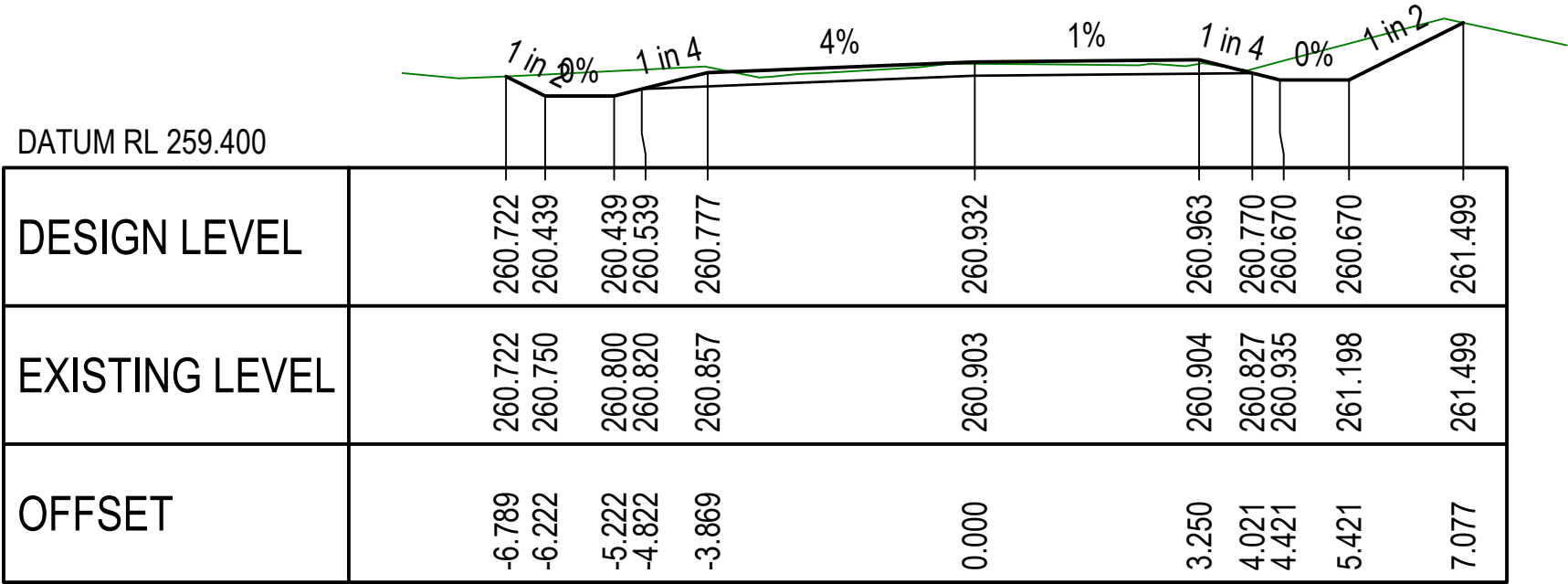


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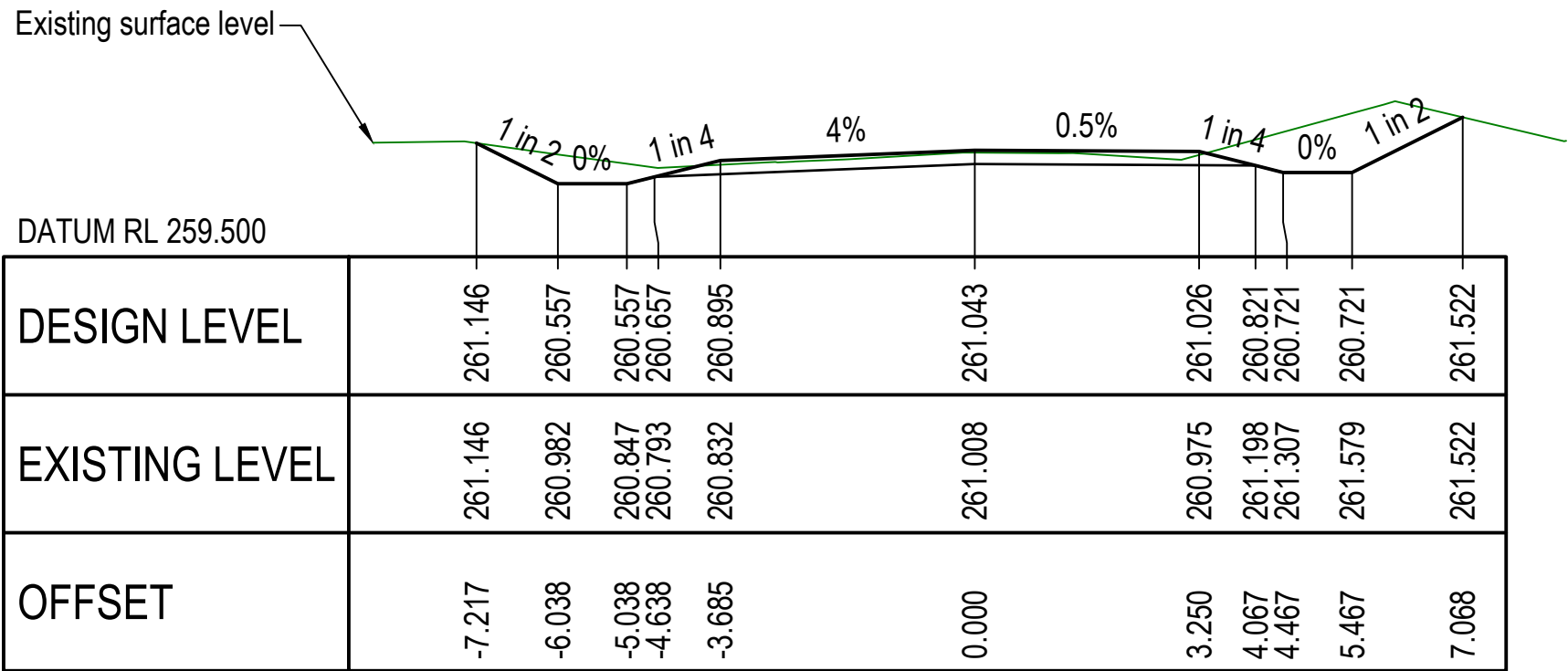
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Drawn B Doherty	ENGINEERING CERTIFICATION (RPEQ)					Revision A
	ENG. AREA	NAME	SIGNATURE	NO.	DATE	
Designed B Doherty	Civil	T Penrose		24087	06/11/23	Series No. 7 of 16

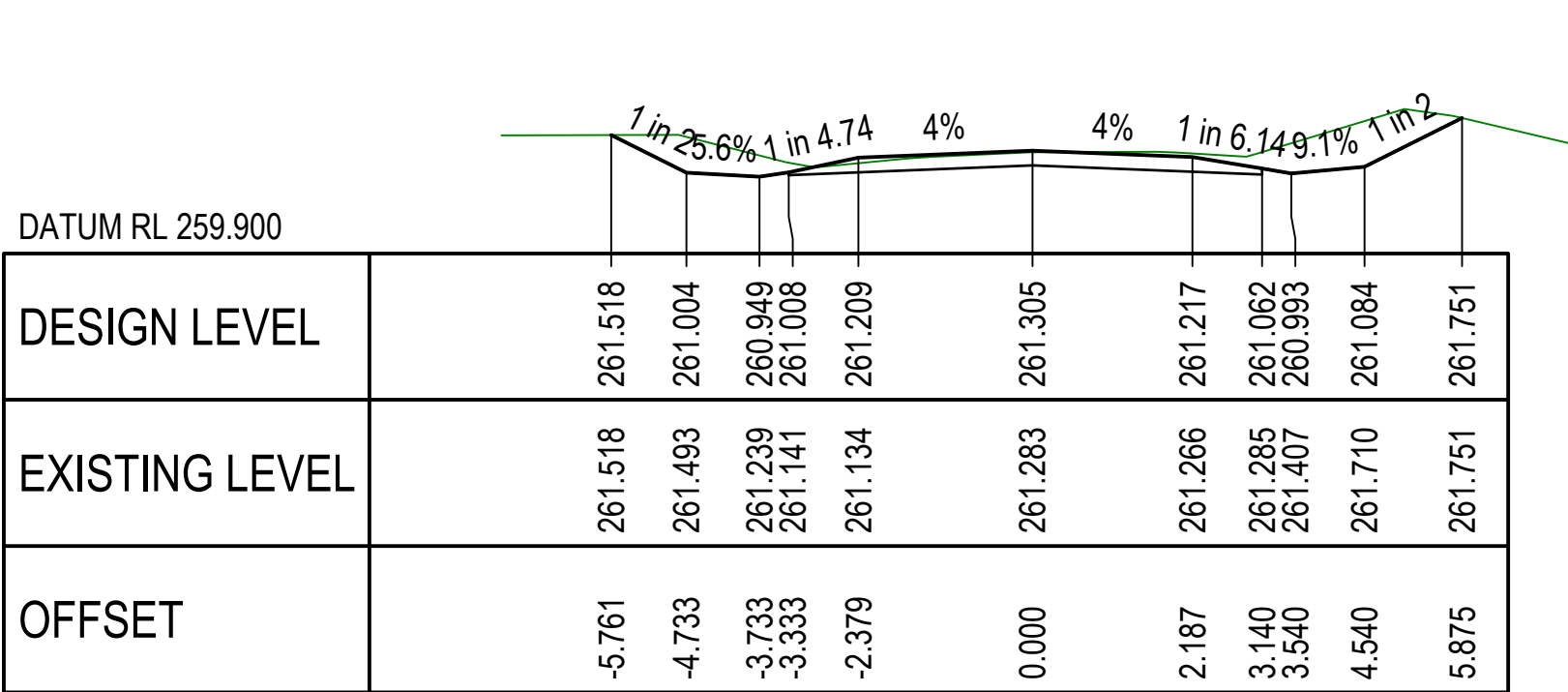
Job No.	CRC00293
Drawing No.	700
Revision	A
Series No.	7 of 16



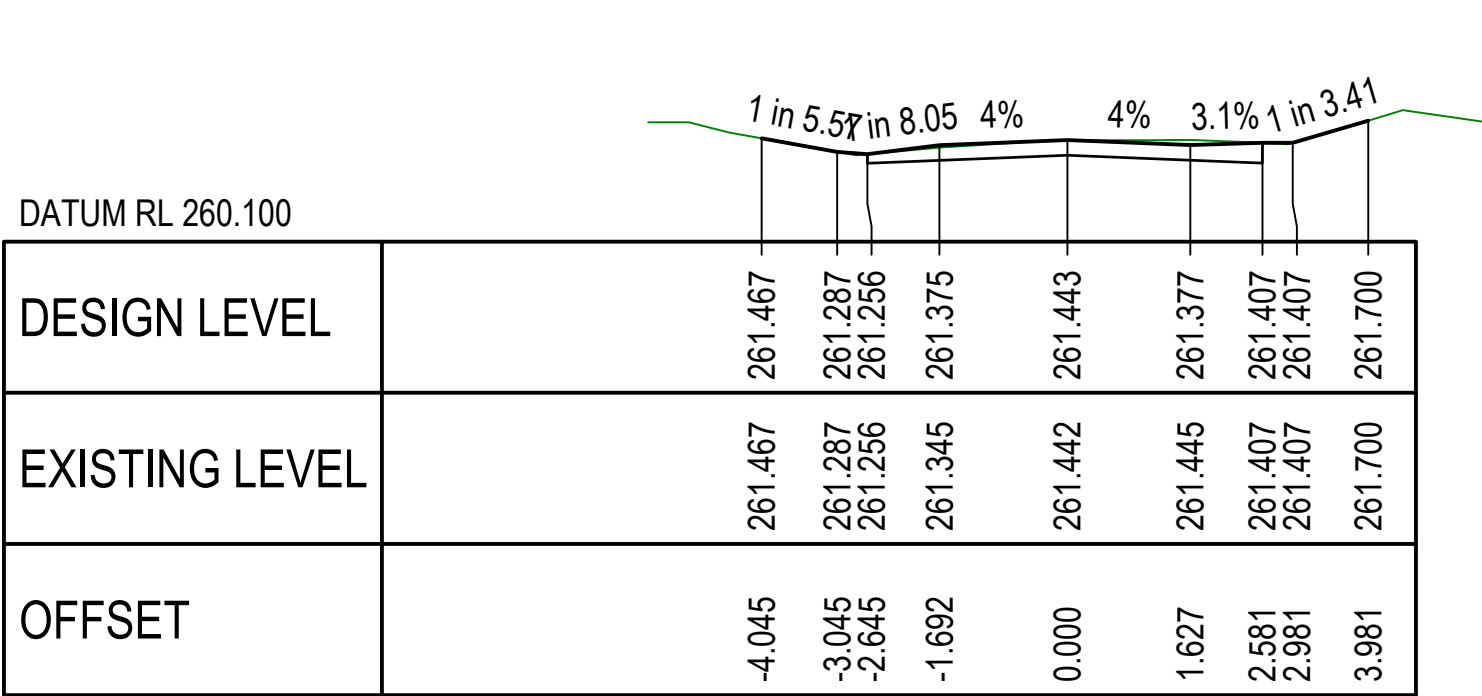
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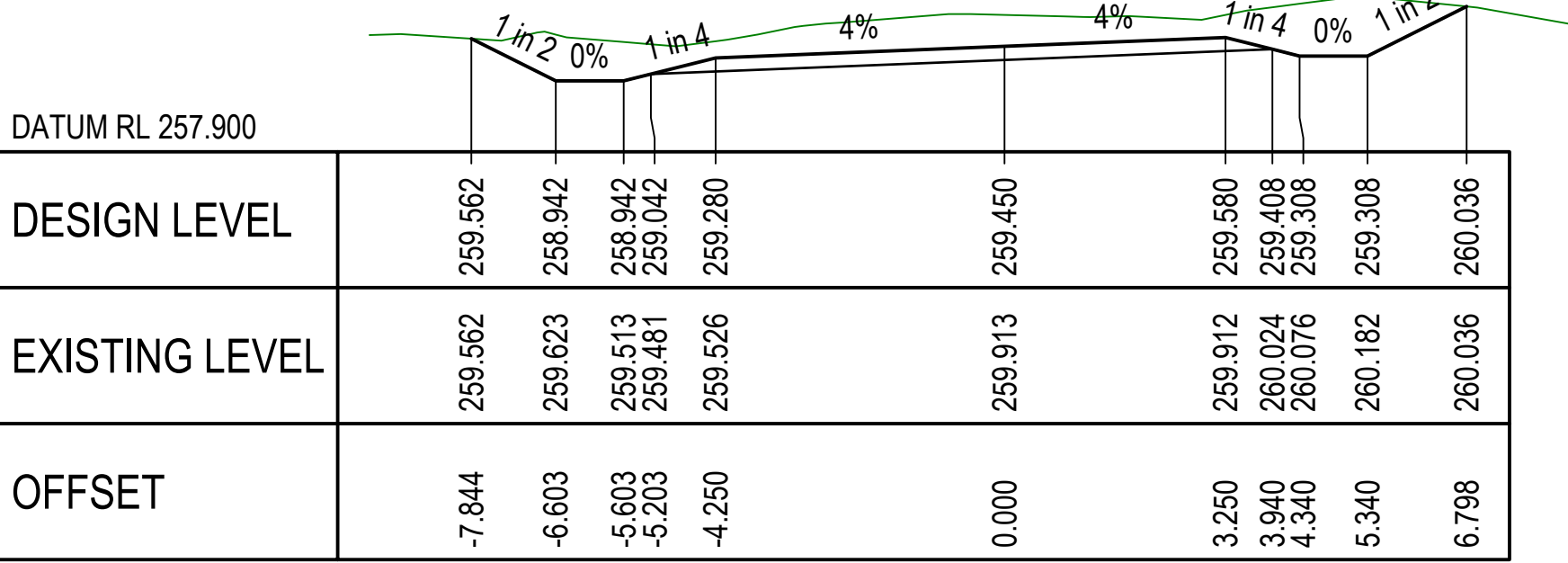
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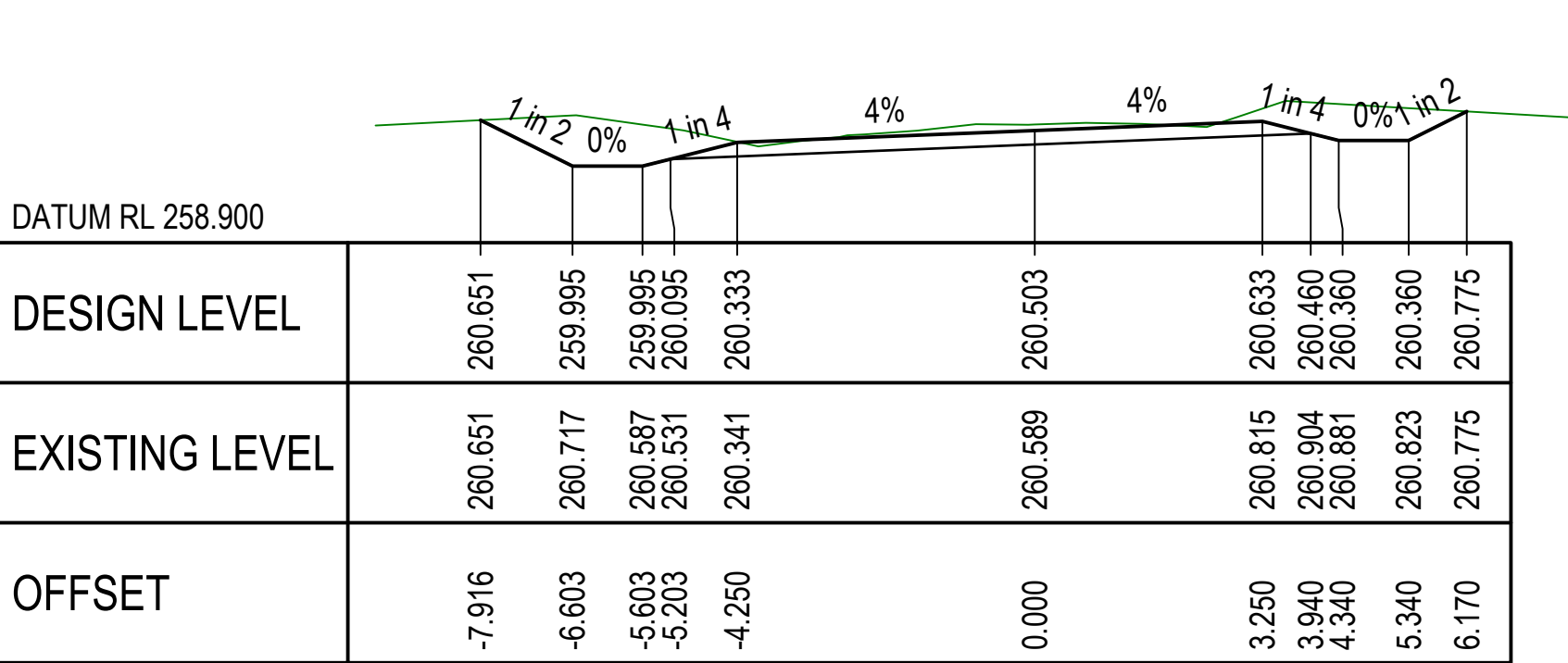
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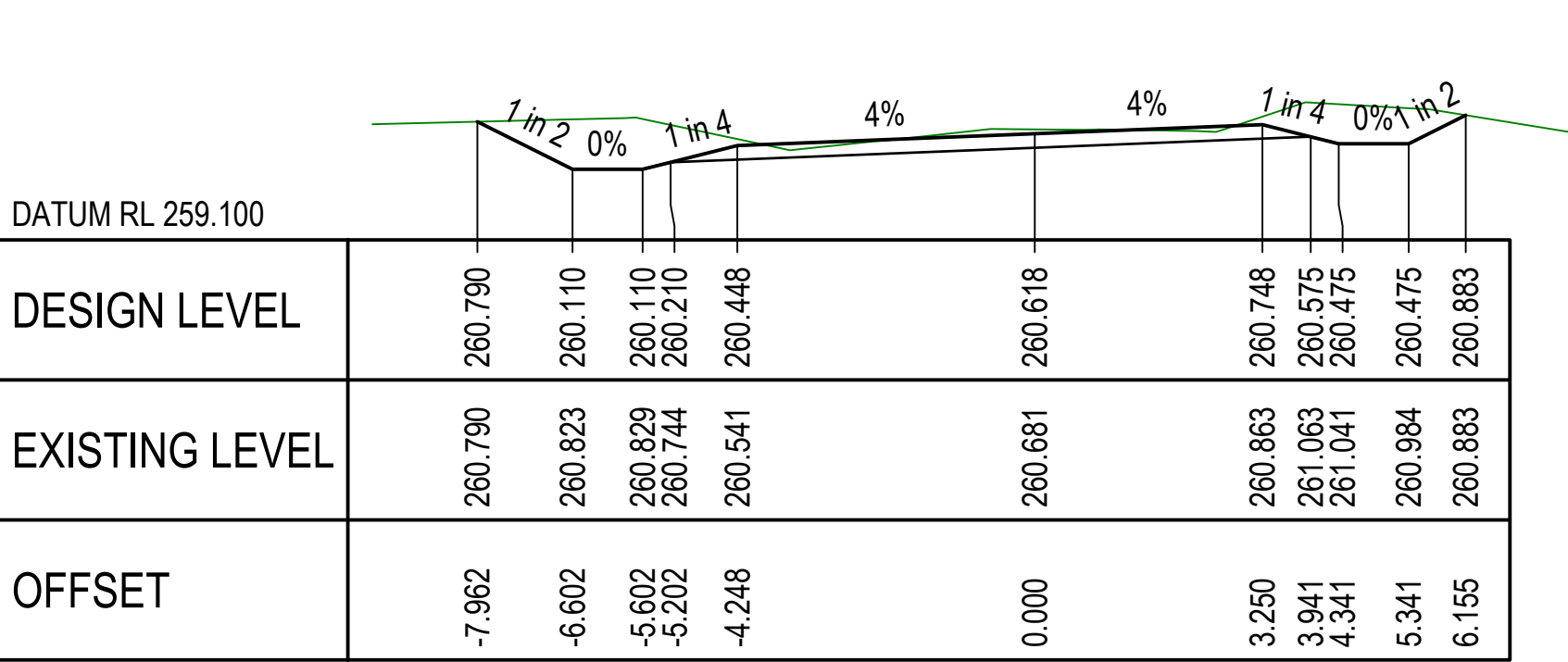
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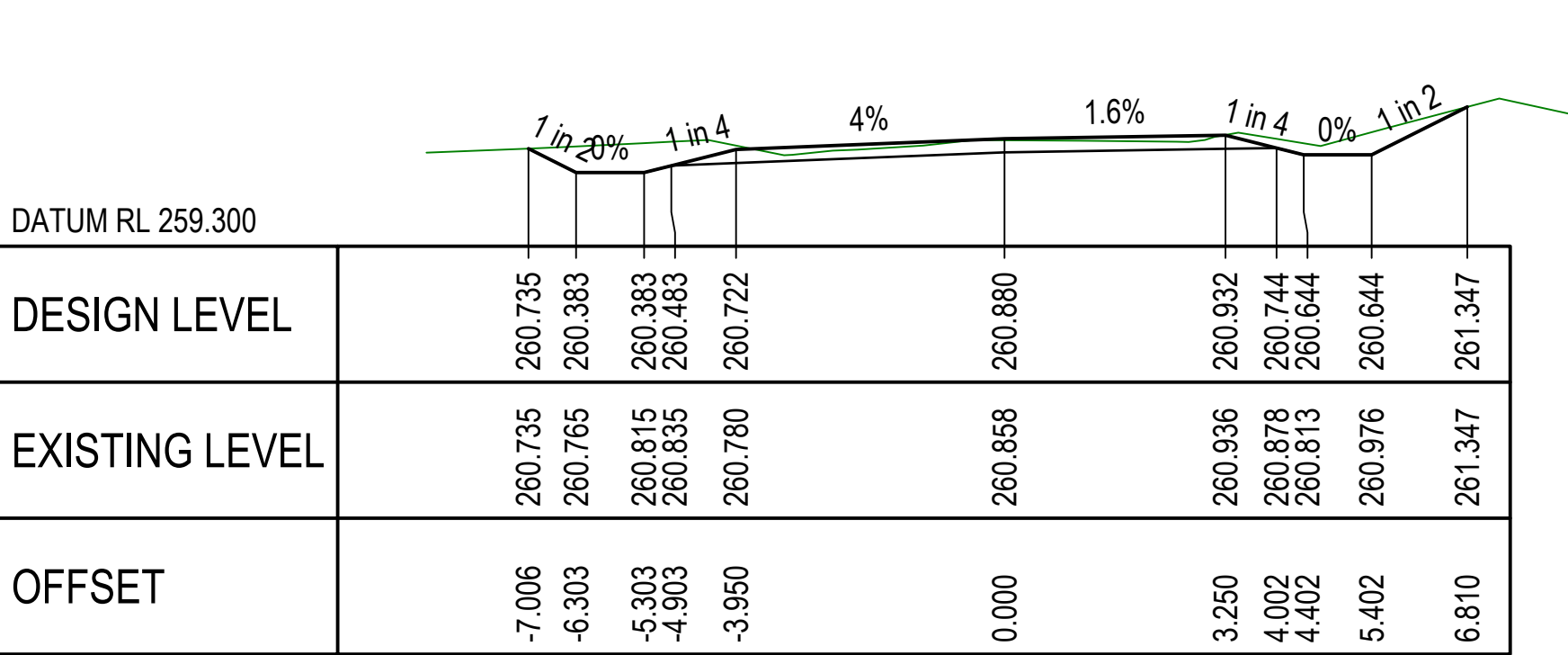
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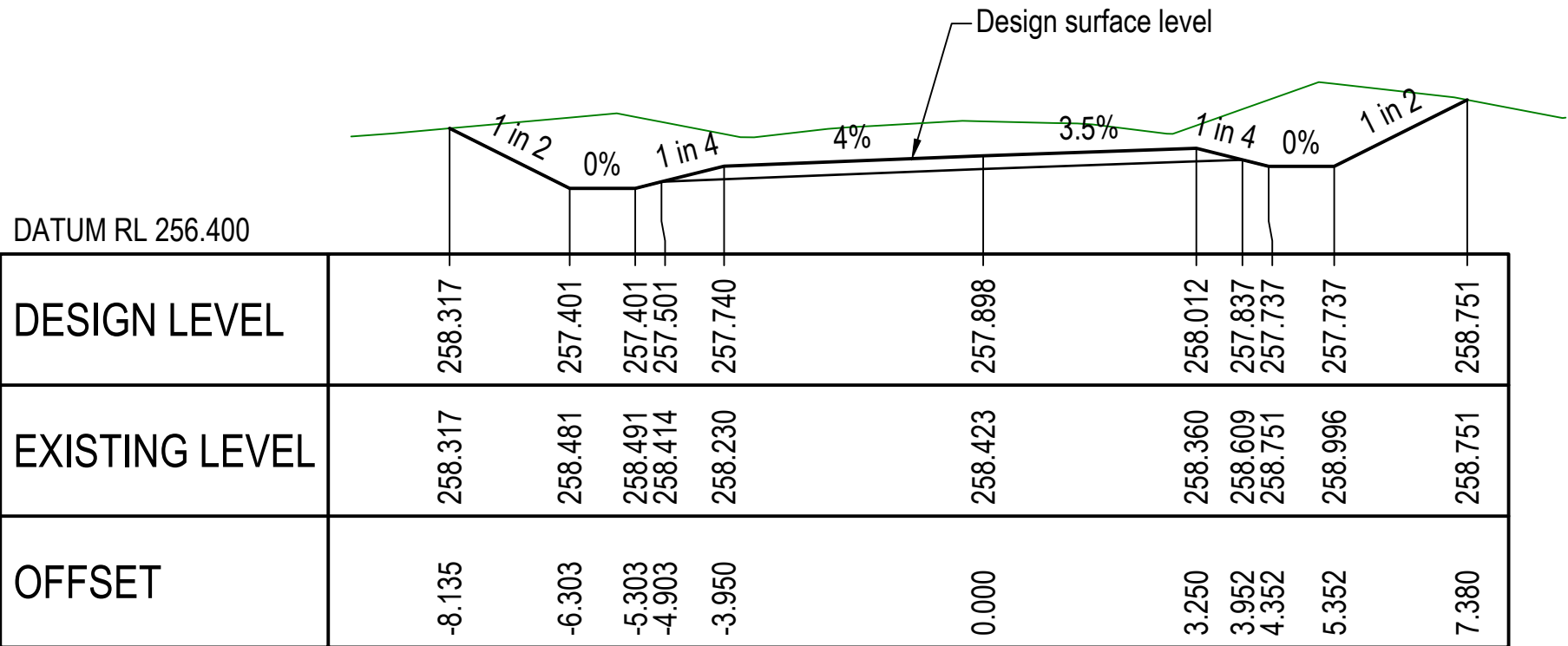
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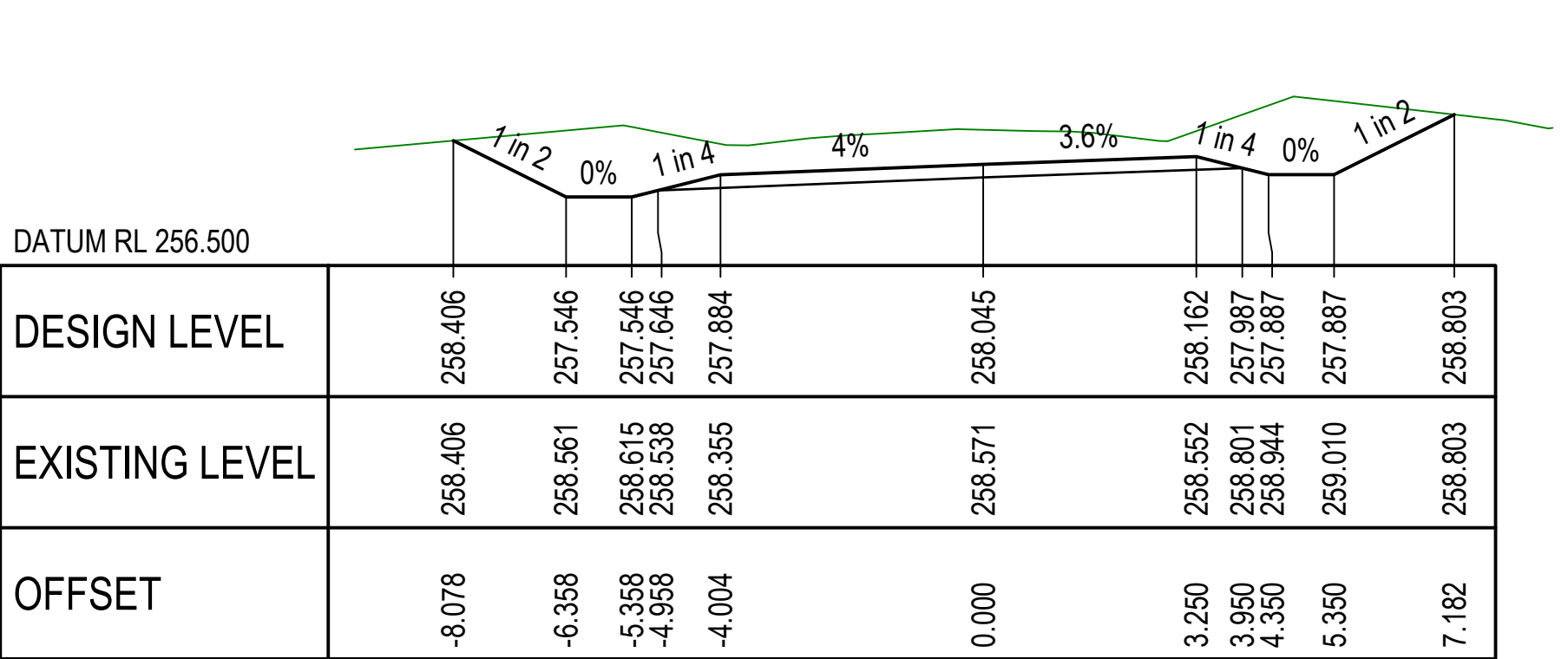
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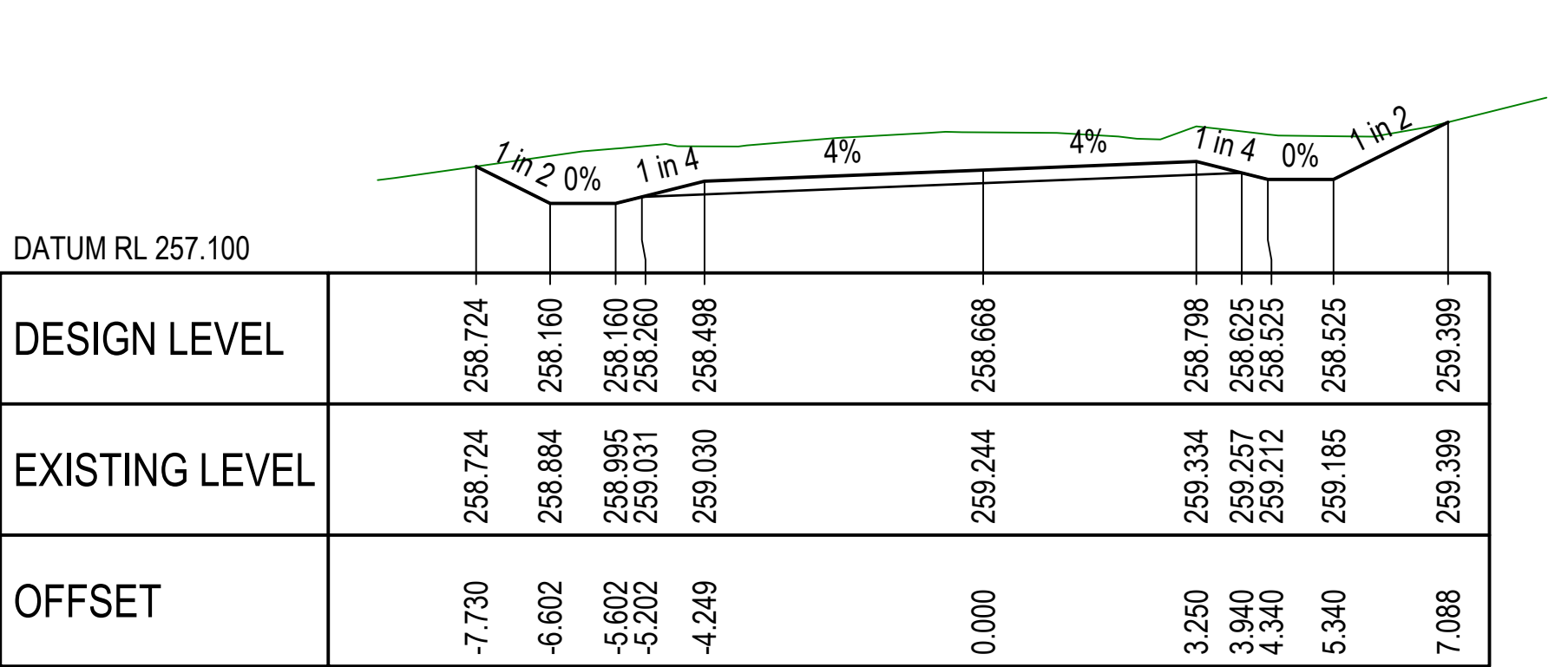
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CH. 76759.655



CH. 76758.024



CH. 76750.700

WARNING!

BEWARE OF UNDERGROUND SERVICES

The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.

CROSS SECTIONS

Scale A

A	Issued for Construction			

Scales (sheet size A1)

012345

Scale A

1:100

Dimensions shown in metres
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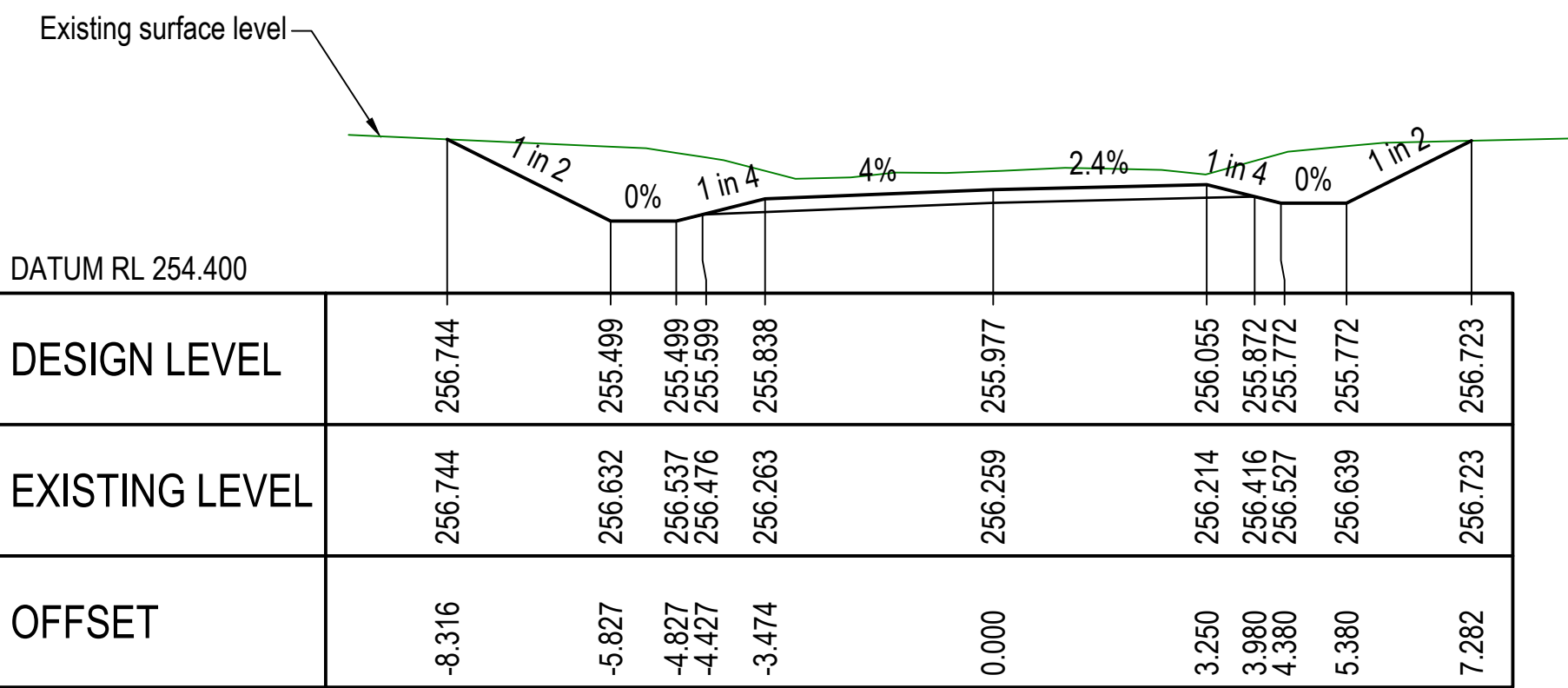
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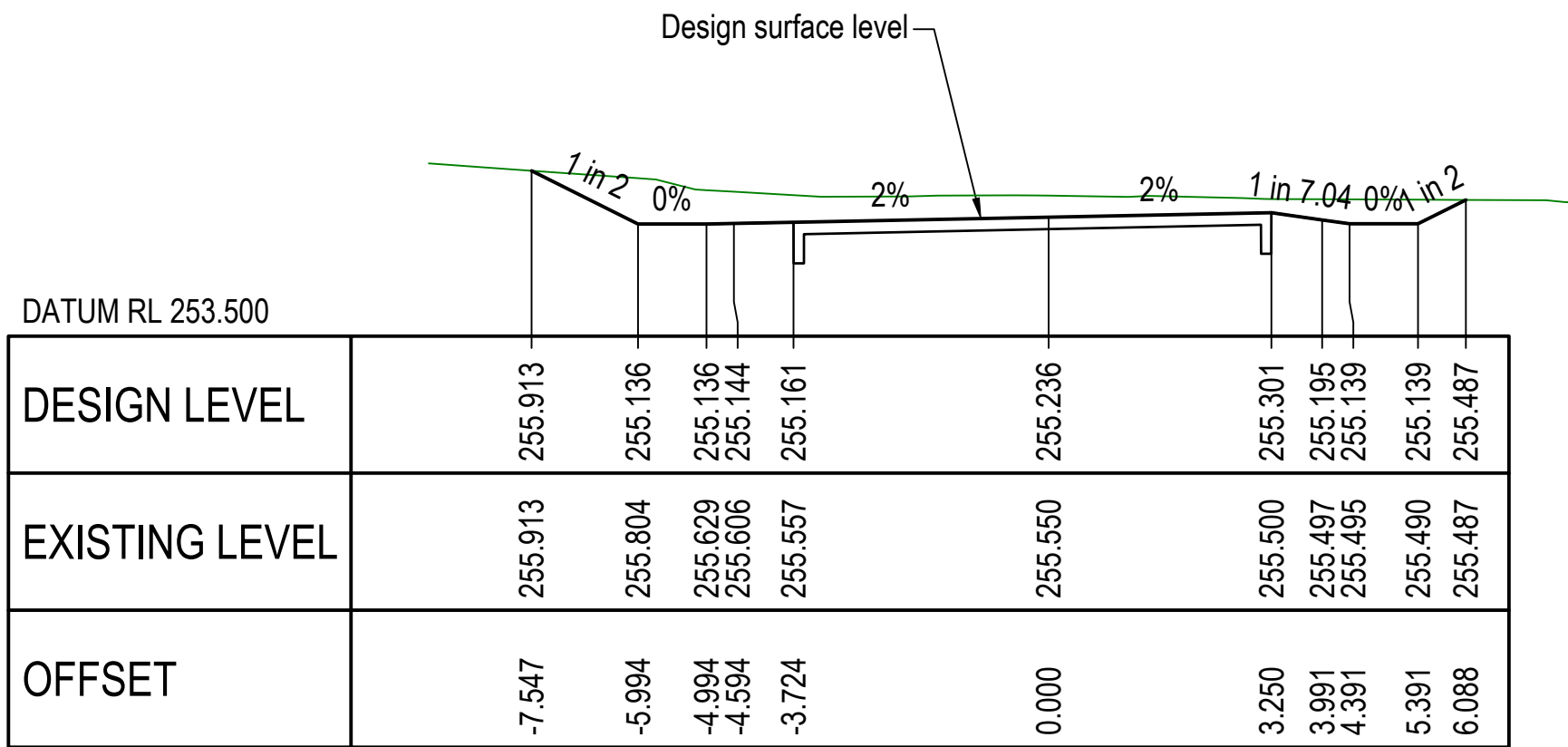
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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY ANNOTATED CROSS SECTIONS SHEET 1					Job No.	CRC00293
Drawn B Doherty					Drawing No.	800
Designed B Doherty					Revision	A
					Series No.	8 of 16

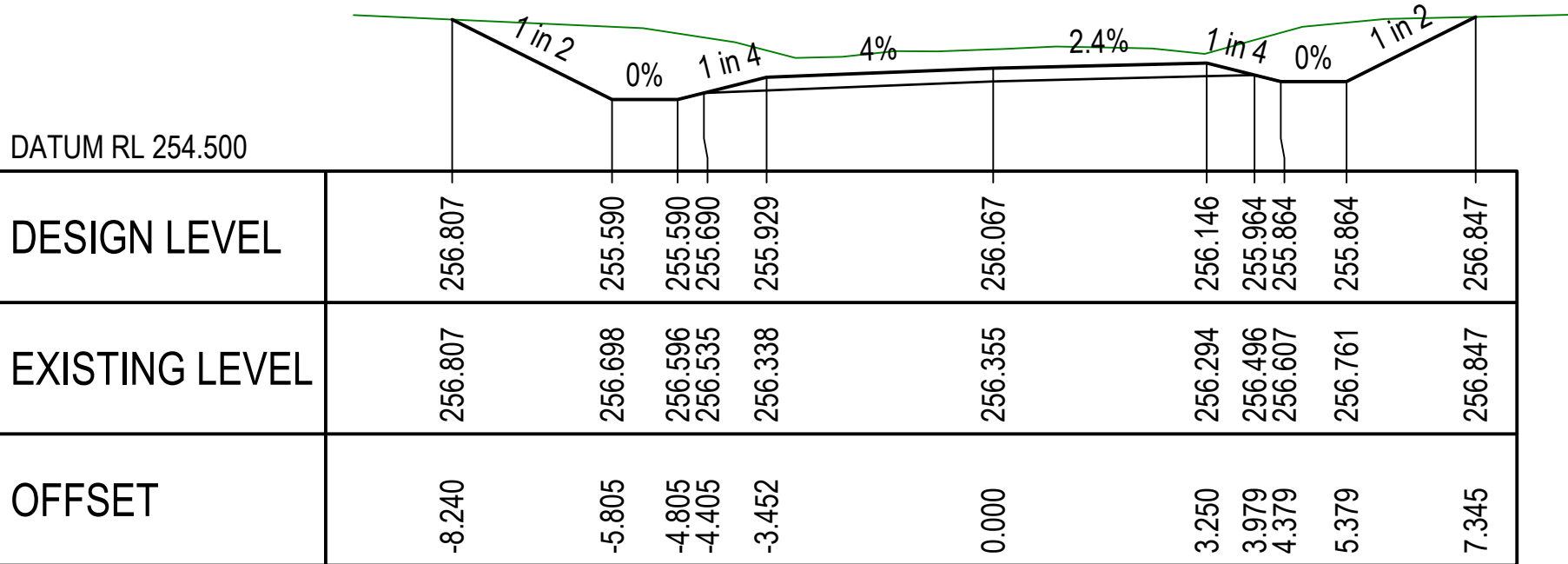
WARNING!
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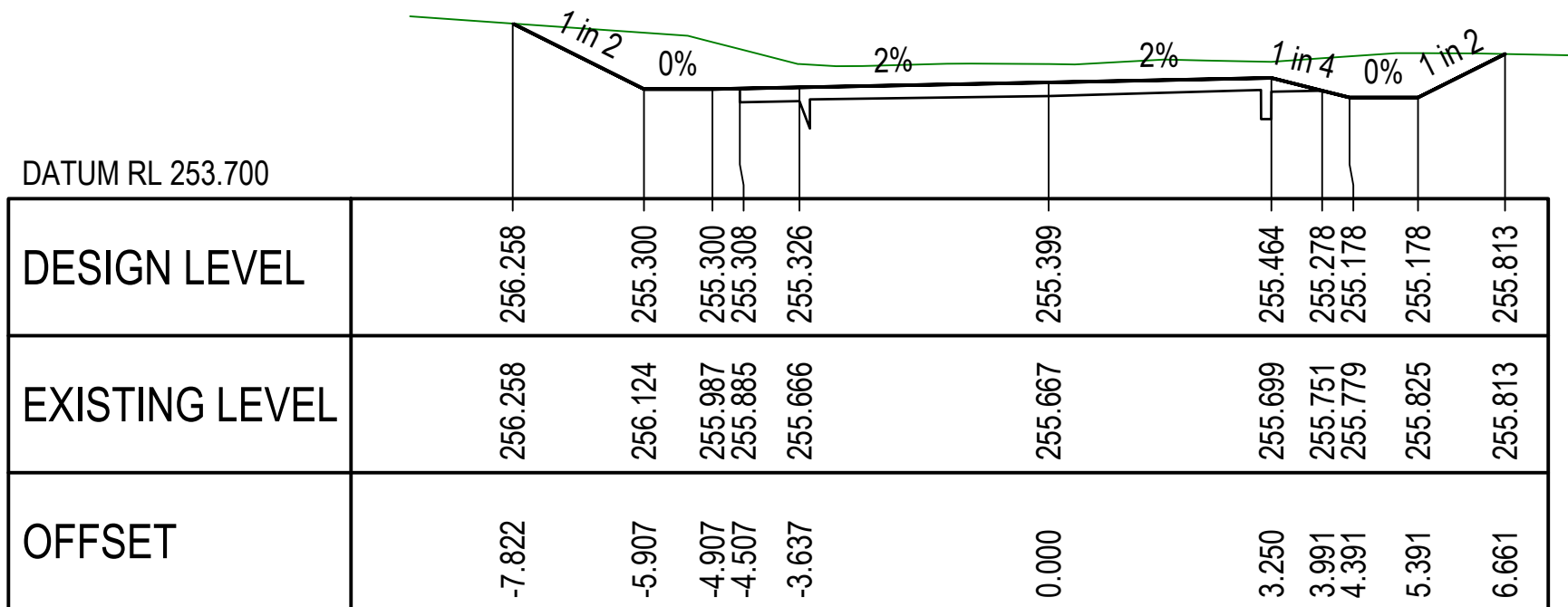
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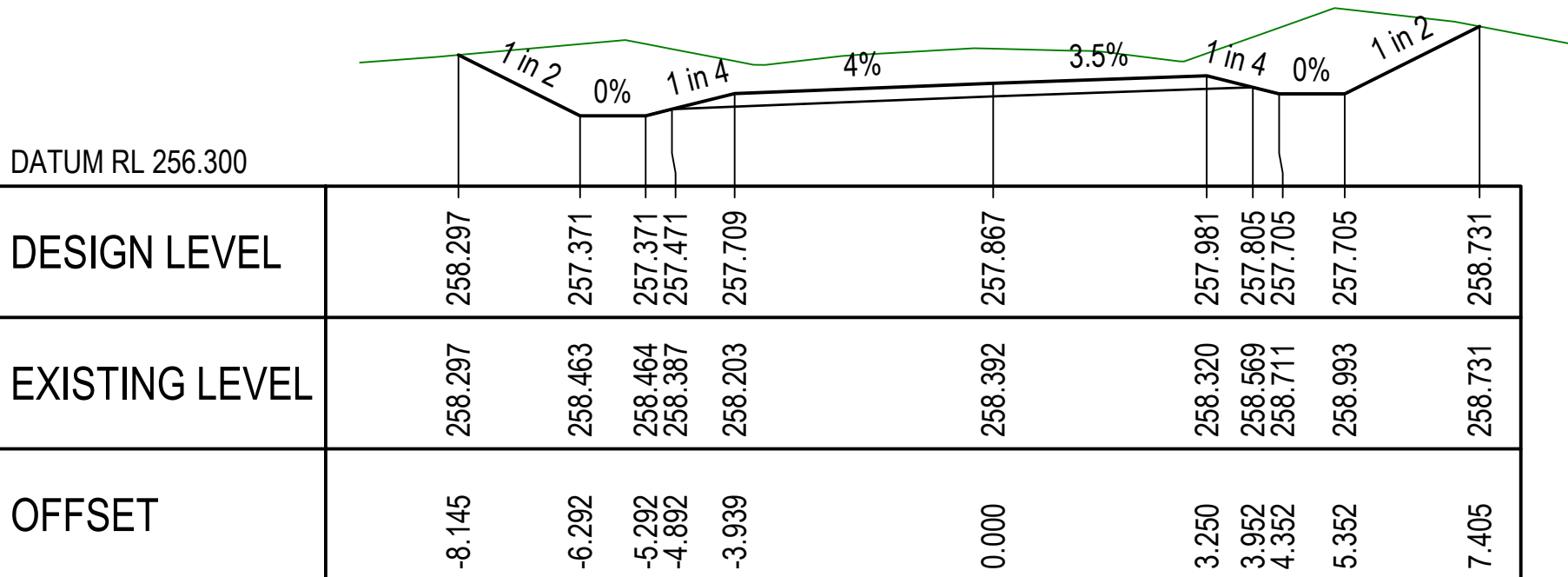
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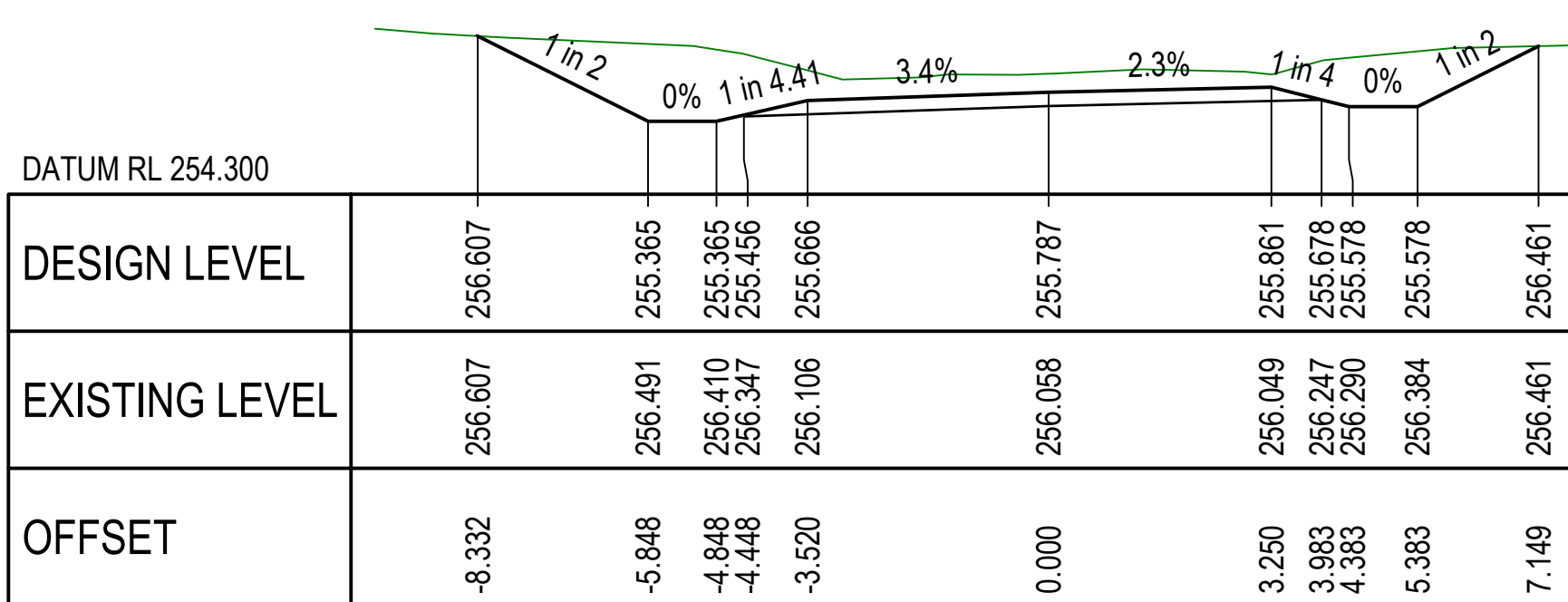
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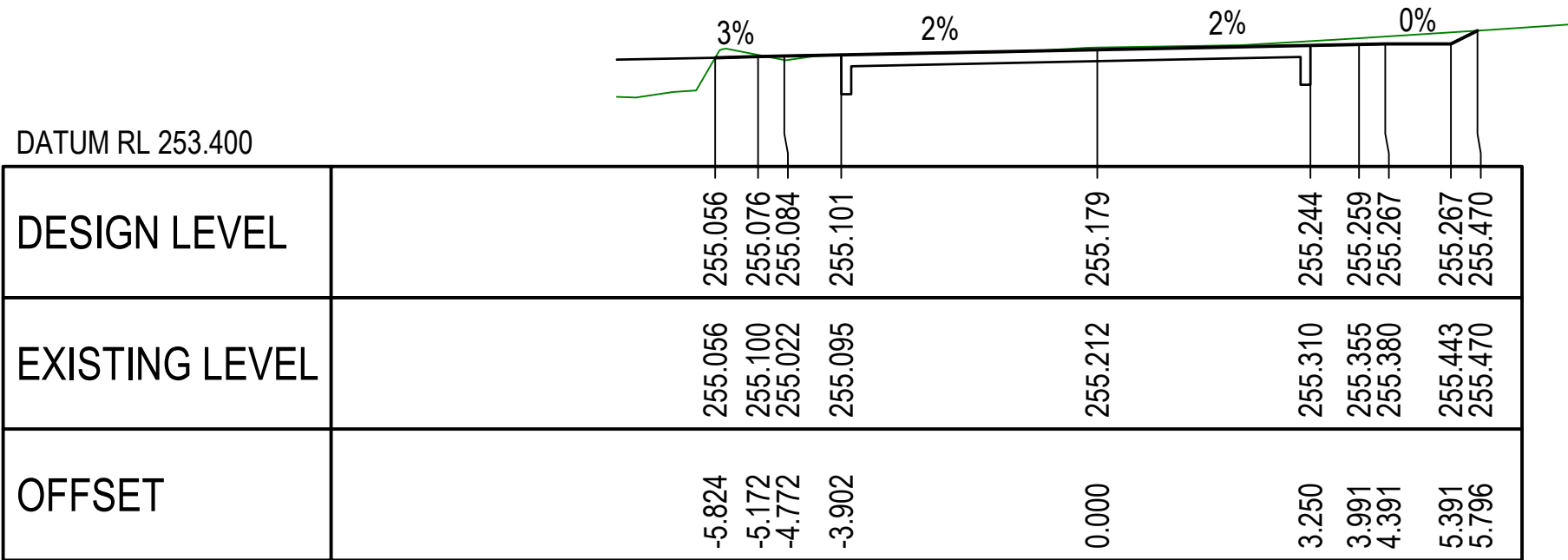
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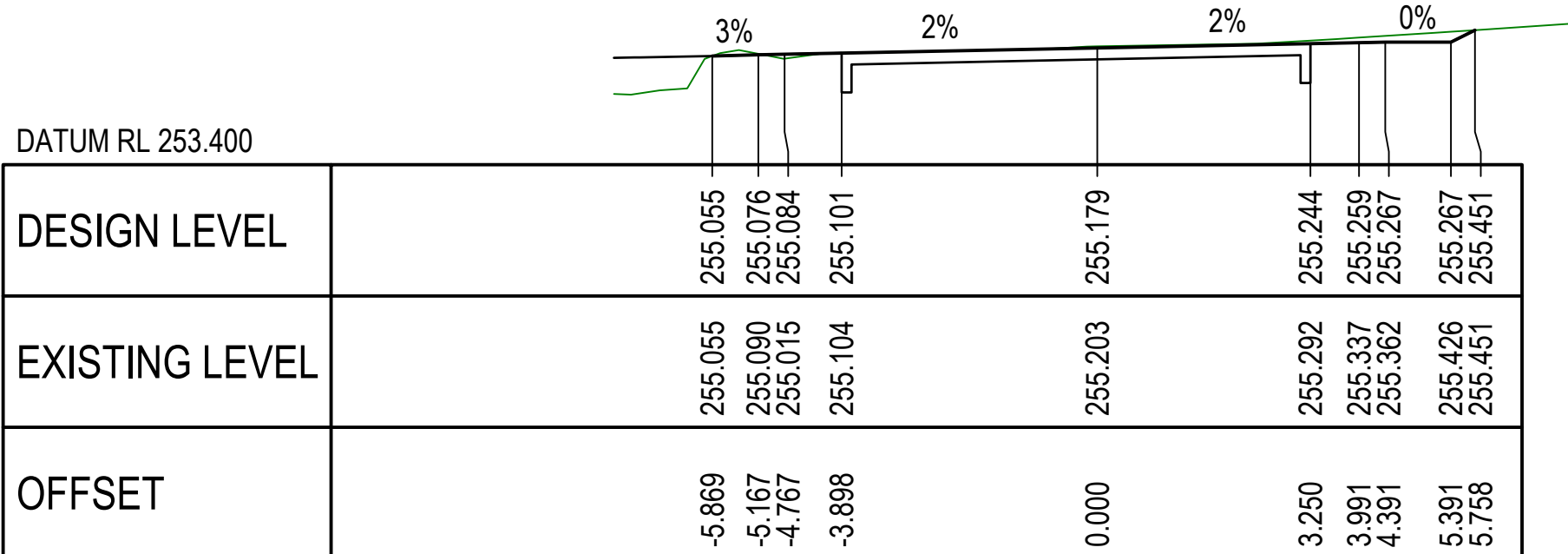
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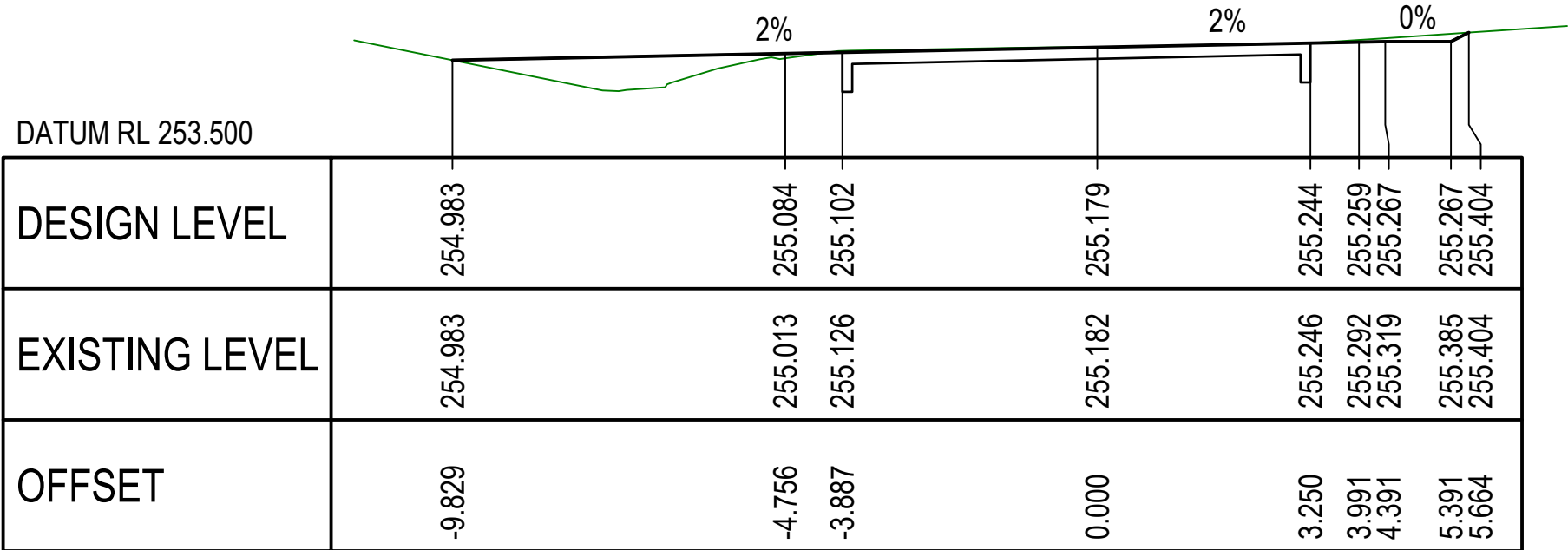
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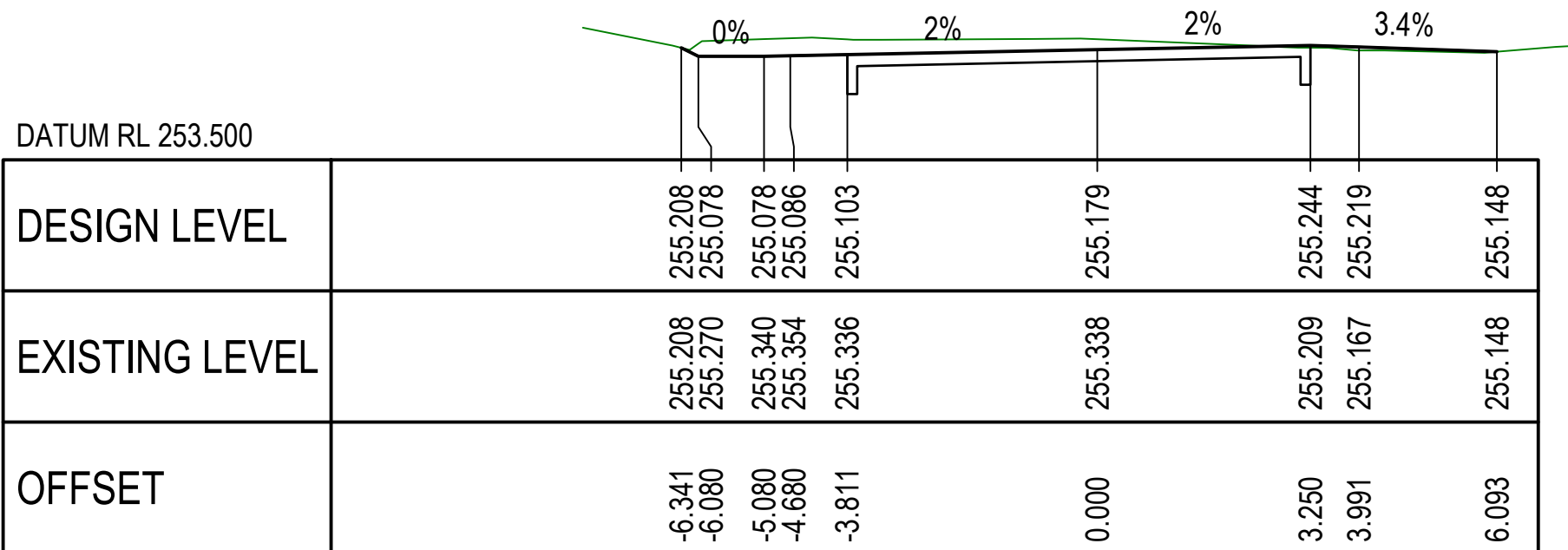
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CH. 76800.500



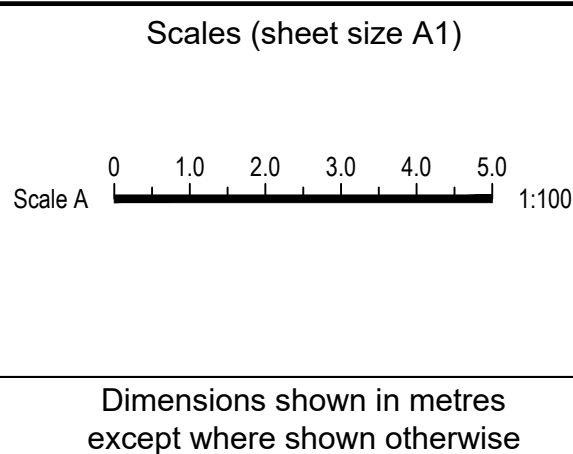
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CH. 76796.500

CROSS SECTIONS

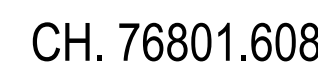
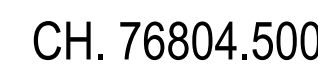
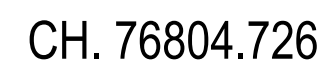
Scale A



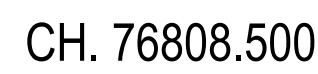
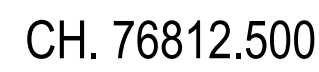
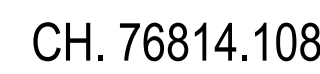
Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY ANNOTATED CROSS SECTIONS SHEET 2				Job No.	CRC00293
				Drawing No.	801
Drawn B Doherty	ENGINEERING CERTIFICATION (RPEQ)				Revision A
Designed B Doherty	ENG. AREA Civil	NAME T Penrose	SIGNATURE 	NO. 24087	DATE 06/11/23
				Series No.	9 of 16



Last Modified :- Nov 10, 2023 - 2:44pm



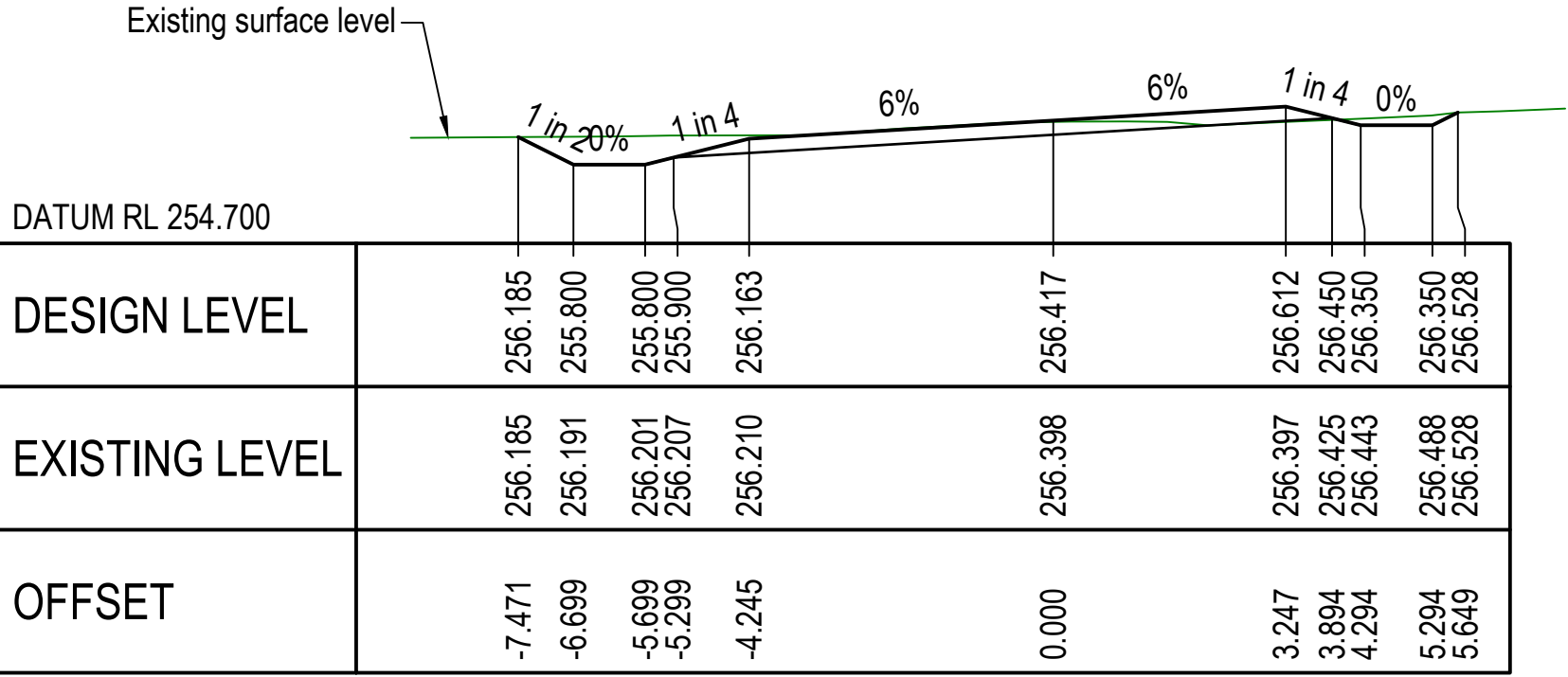
The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.



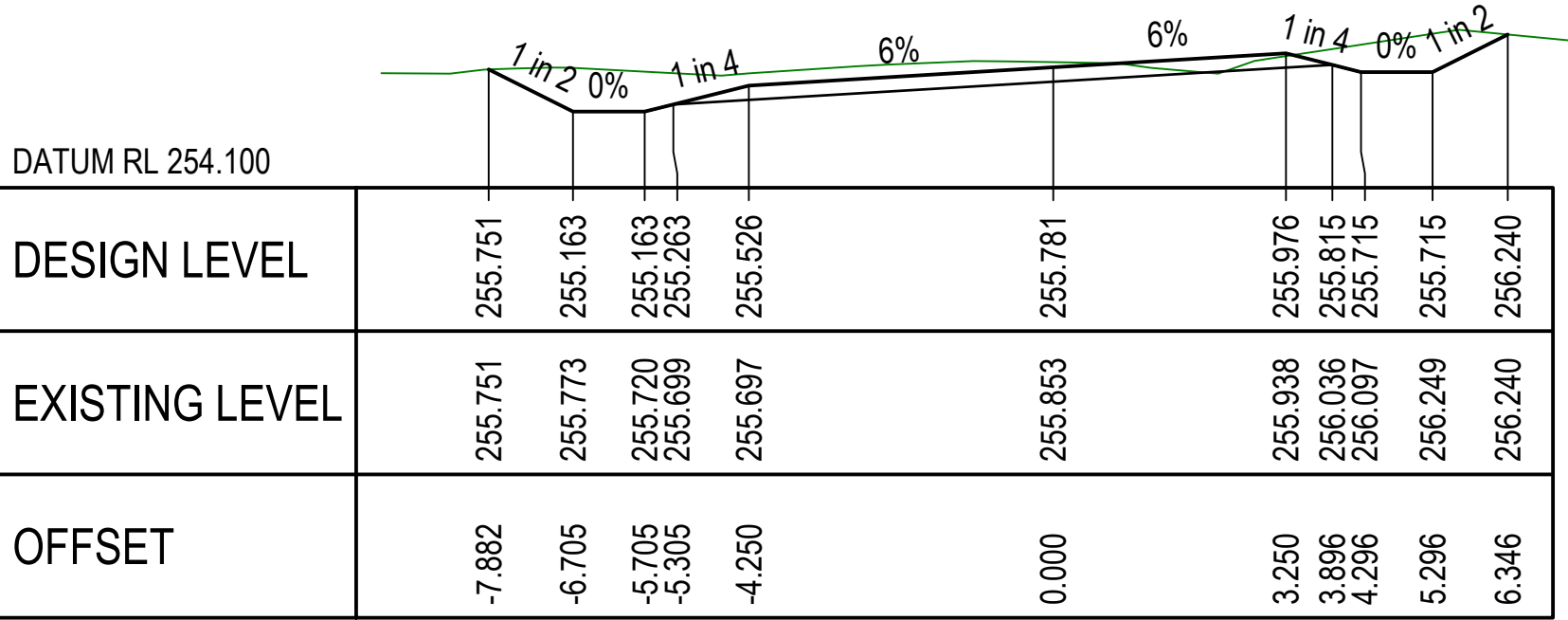
Scale A

					<p>Scales (sheet size A1)</p> <p>Scale A  1:100</p>		 <p>crc quality people client focused solution driven</p> <p>245 Mary Street, GYMPIE, QLD, 4550 ABN 73 617 924 437 Ph: 0477 322 555</p>		<p>Client</p>  <p>Banana SHIRE SHIRE OF OPPORTUNITY</p> <p><small>COPYRIGHT</small> The contents and information contained in this document are the copyright of CRC. This drawing may not be used, copied or reproduced in whole or part for any purpose other than the consent by which it is supplied by CRC.</p>		<p>Title</p> <p>CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY ANNOTATED CROSS SECTIONS SHEET 3</p>					<p>Job No.</p> <p>CRC00293</p>																				
														<p>Drawing No.</p> <p>802</p>																						
A Issued for Construction									<p>Drawn</p> <p>B Doherty</p>					<p>ENGINEERING CERTIFICATION (RPEQ)</p> <table><tr><th>ENG. AREA</th><th>NAME</th><th>SIGNATURE</th><th>NO.</th><th>DATE</th></tr><tr><td>Civil</td><td>T Penrose</td><td></td><td>24087</td><td>06/11/23</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>		ENG. AREA	NAME	SIGNATURE	NO.	DATE	Civil	T Penrose		24087	06/11/23											<p>Revision</p> <p>A</p>
ENG. AREA	NAME	SIGNATURE	NO.	DATE																																
Civil	T Penrose		24087	06/11/23																																
20.01 Revisions/Descriptions					Drawn		Approved		Date							<p>Series No.</p> <p>10 of 16</p>																				
Dimensions shown in metres except where shown otherwise																																				

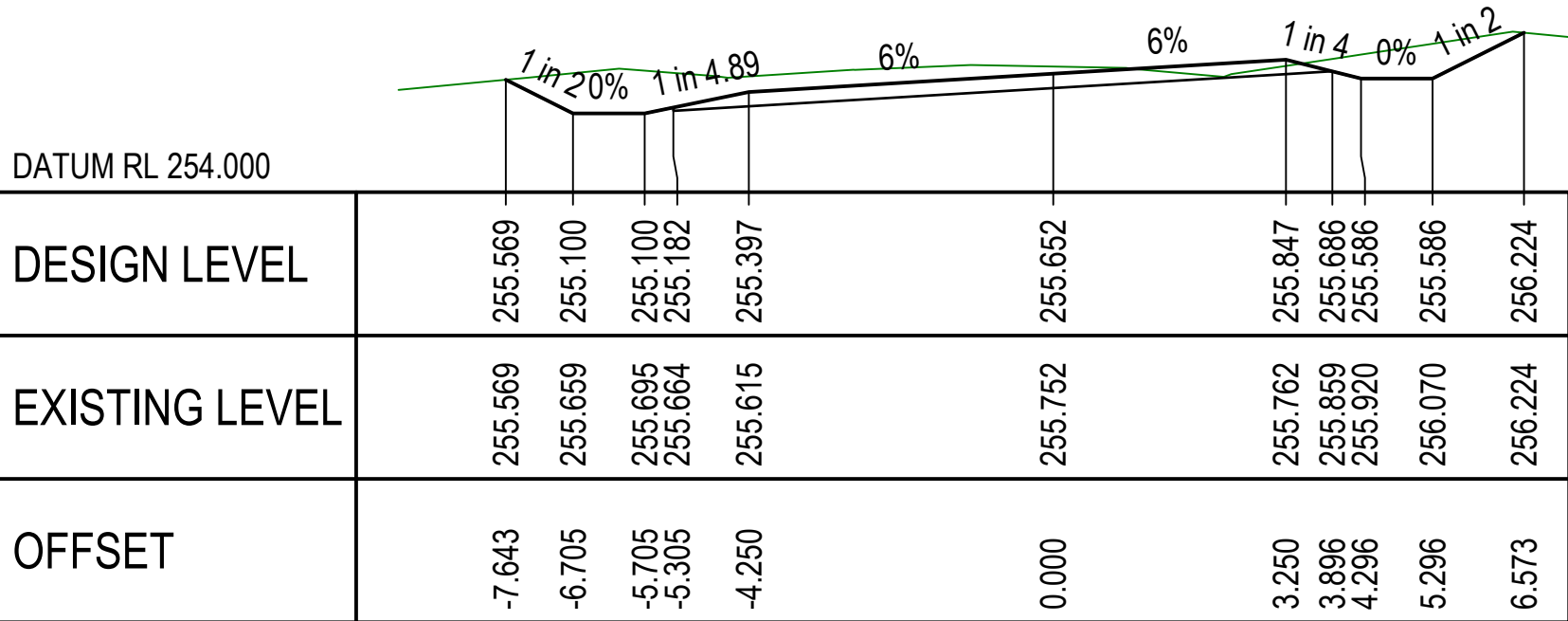
WARNING!
BEWARE OF UNDERGROUND SERVICES
The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.



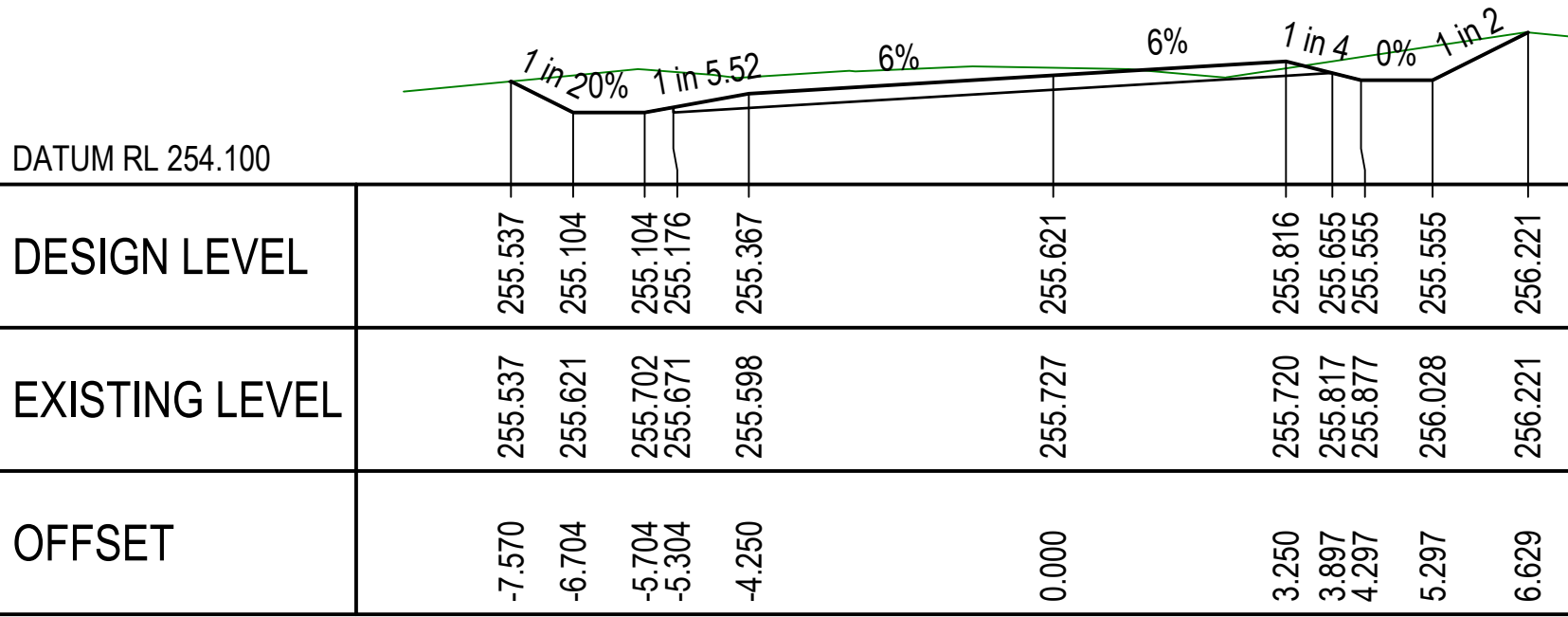
CH. 76839.900



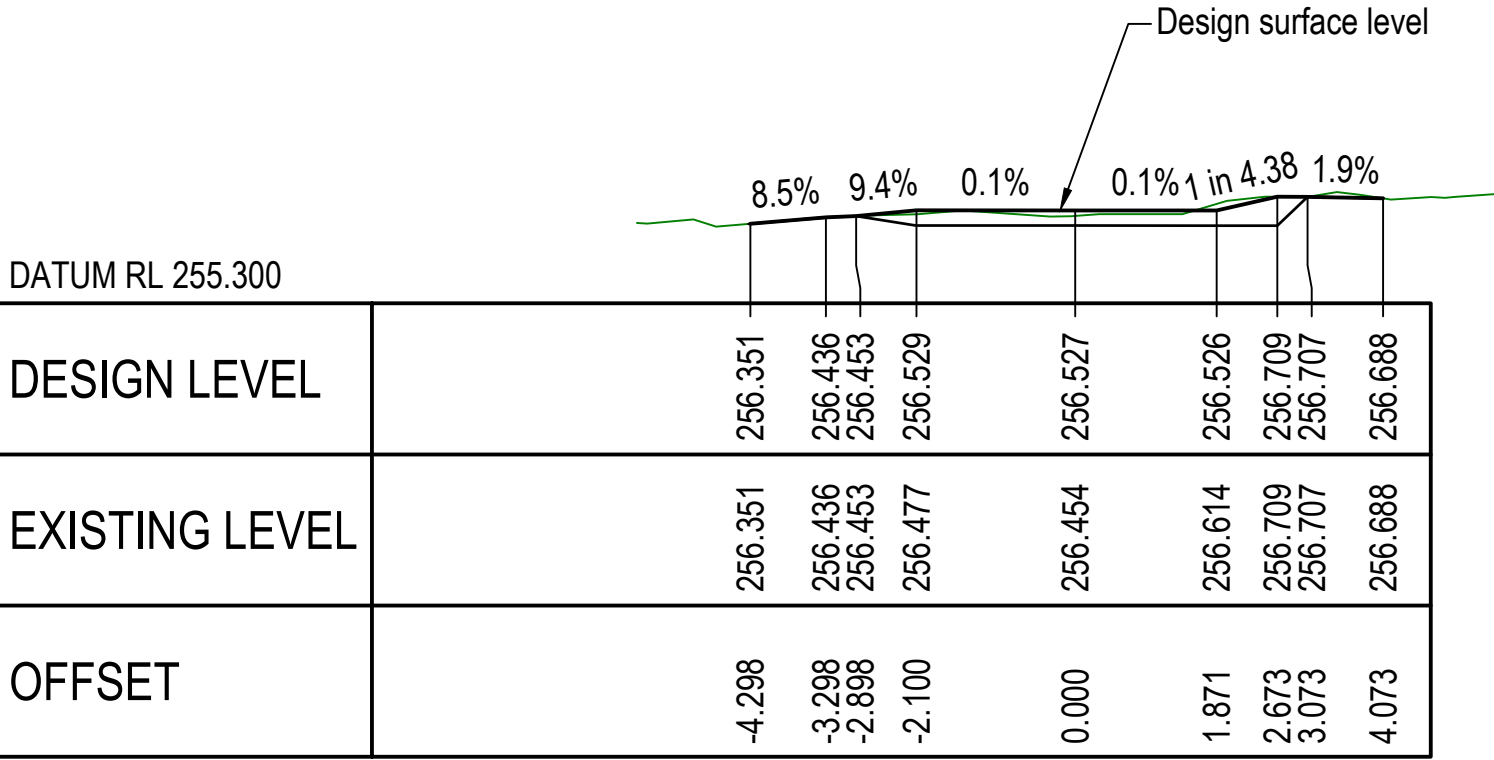
CH. 76820.000



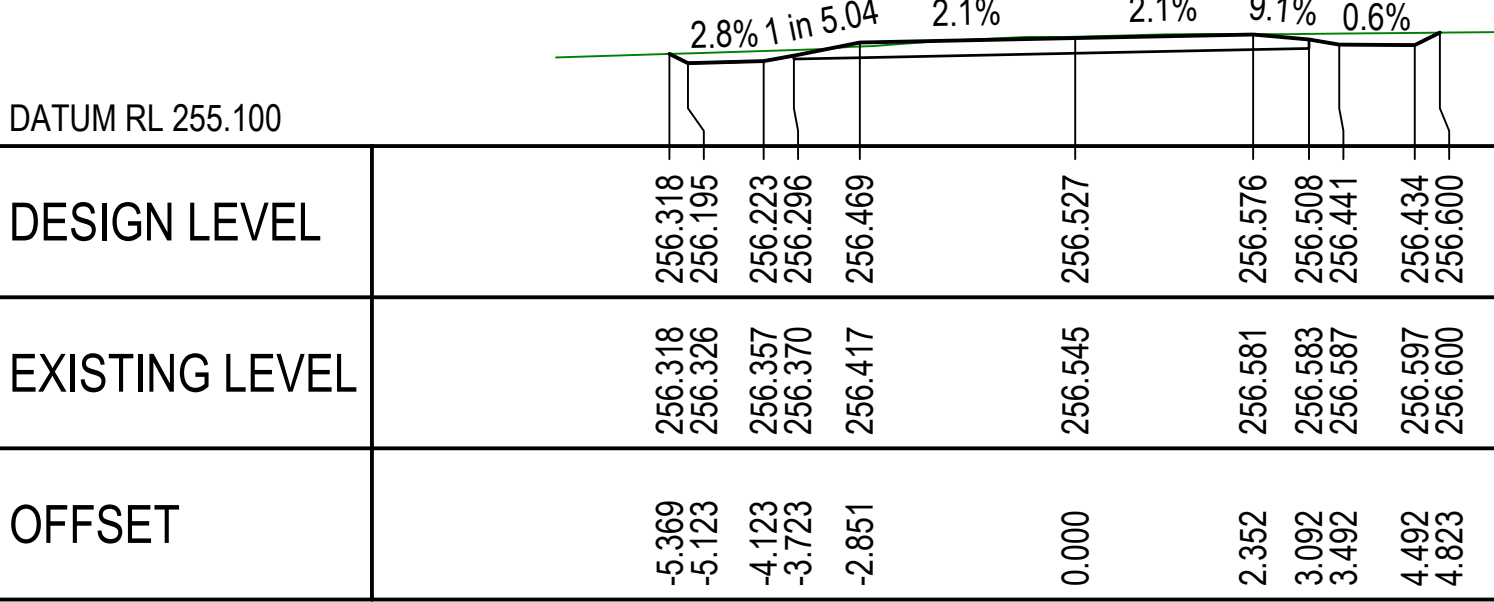
CH. 76817.318



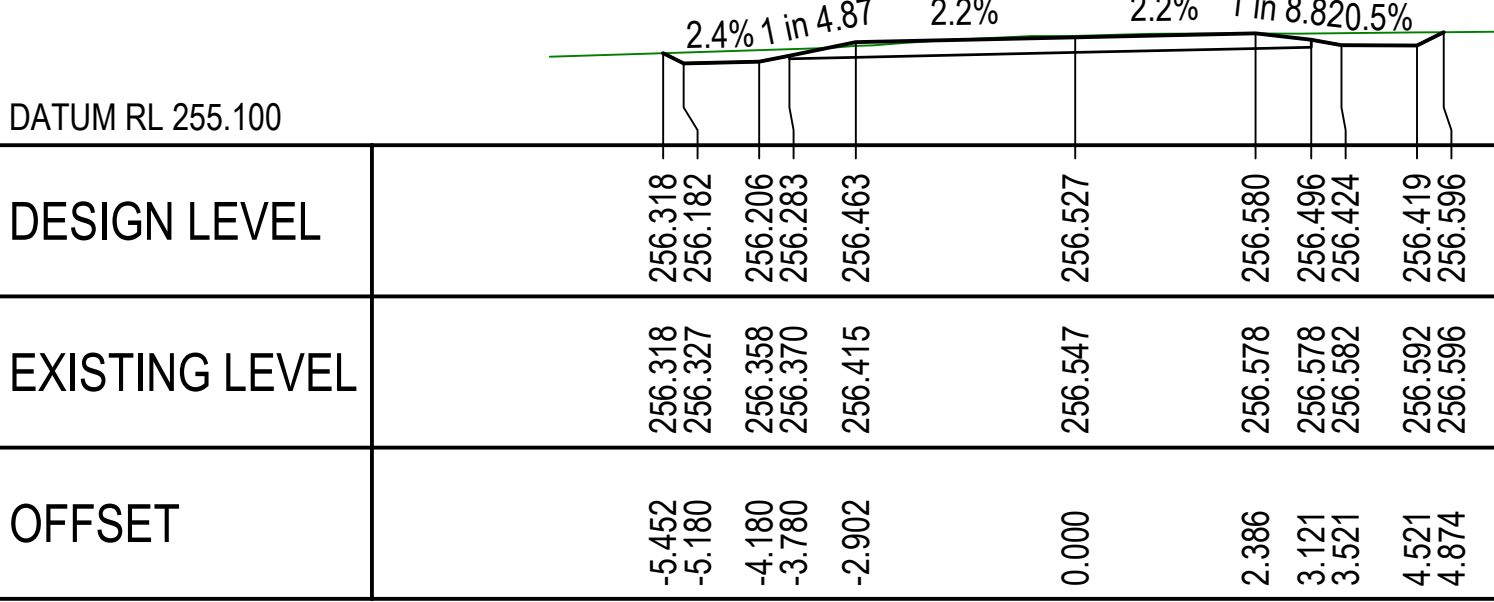
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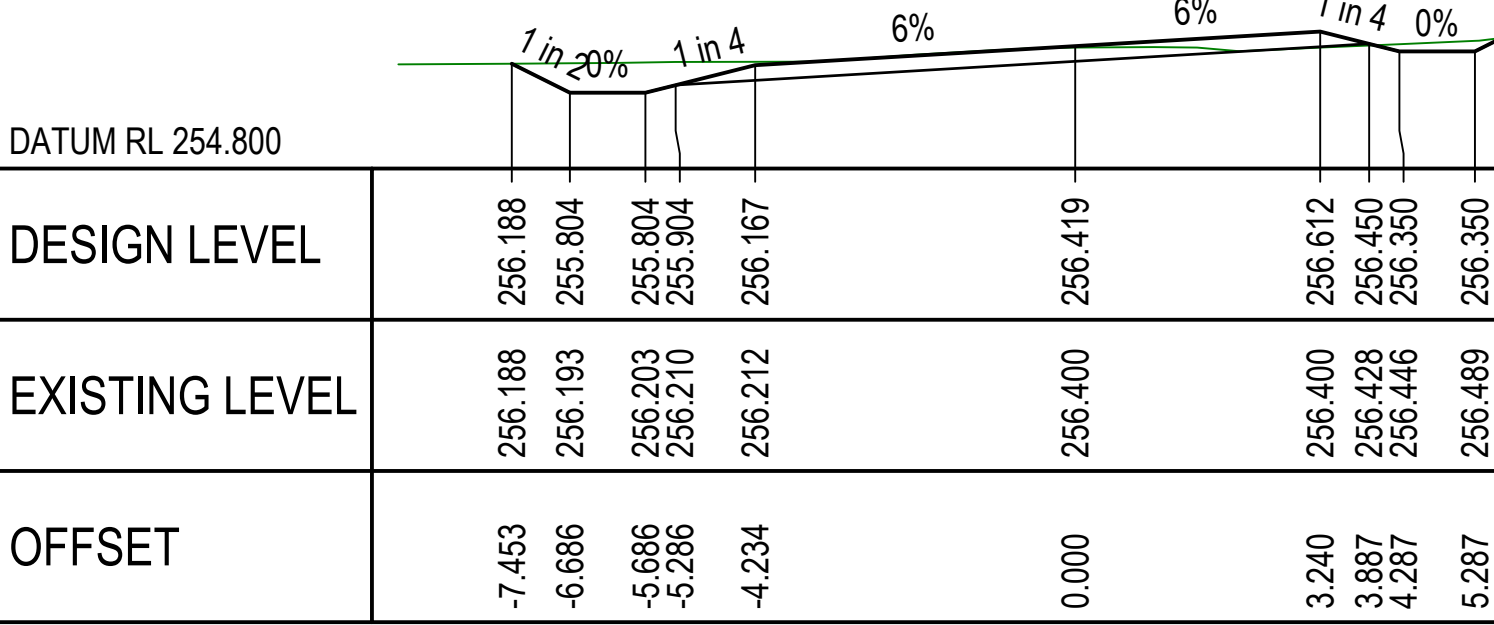
CH. 76859.000



CH. 76852.318



CH. 76851.856



CH. 76840.000

CROSS SECTIONS

Scale A

A	Issued for Construction			

Scales (sheet size A1)

012345

Scale A

1:100

Dimensions shown in metres
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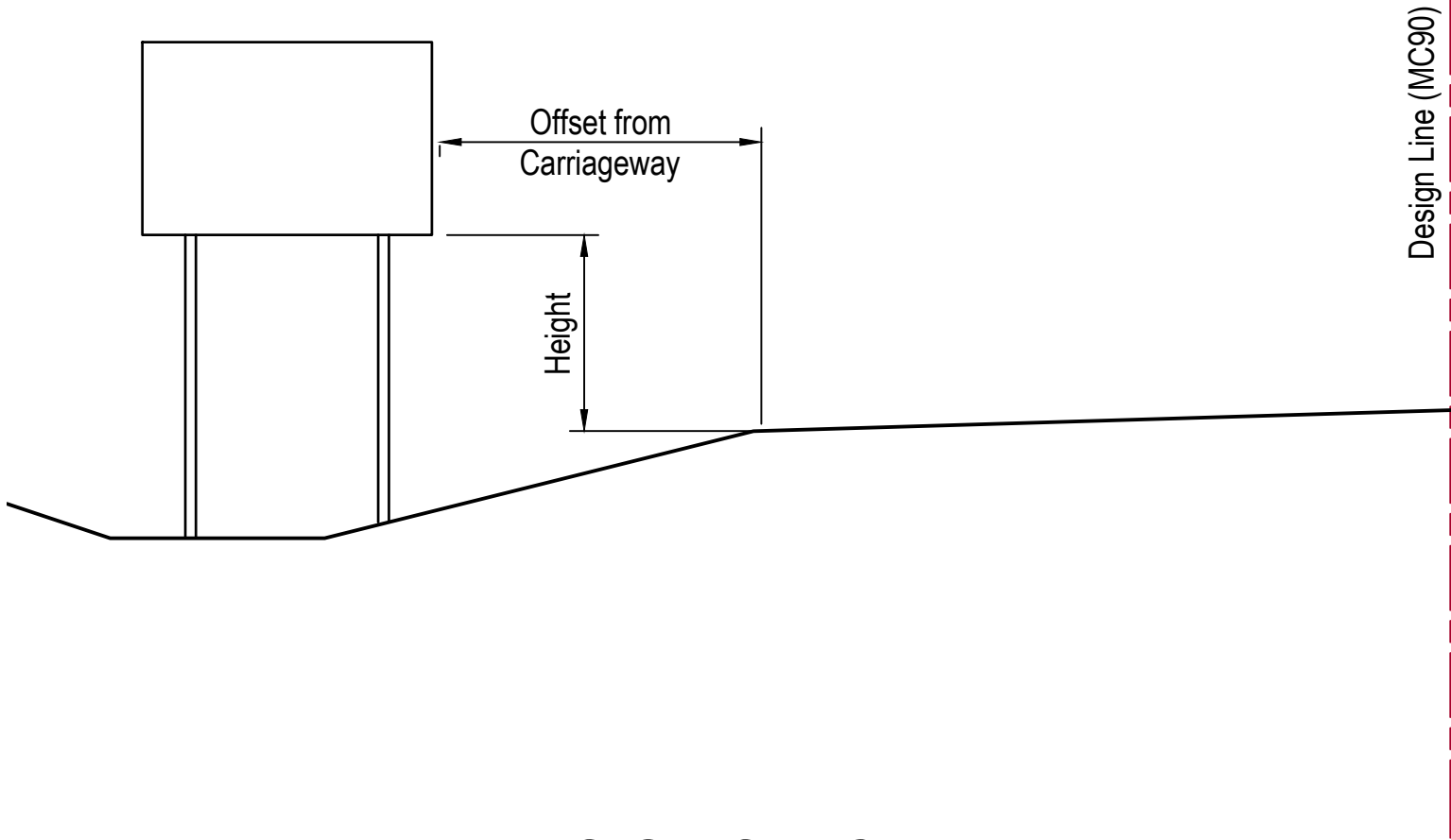
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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY ANNOTATED CROSS SECTIONS SHEET 4				Job No.	CRC00293
				Drawing No.	803
Drawn B Doherty	ENGINEERING CERTIFICATION (RPEQ)				Revision A
	ENG. AREA	NAME	SIGNATURE	NO. DATE	
Designed B Doherty	Civil	T Penrose		24087 06/11/23	Series No. 11 of 16



SIGN SCHEDULE

CHAINAGE (M)	POSITION	SIGN DESCRIPTION	SIGN TYPE	WORK DESCRIPTION	SIGN DETAILS					STIFFENER DETAILS				NEW SUPPORT DETAILS						NEW FOOTING DETAILS				
					WIDTH (mm)	HEIGHT (mm)	AREA (m²)	OFFSET FROM CARRIAGEWAY (mm)	HEIGHT ABOVE CARRIAGEWAY (mm)	TYPE	No.	SPACING (mm)	No. OF BRACKETS	TYPE	No.	SPACING (mm)	DIMENSION (mm) NB	MATERIAL	POST LENGTH 1 (mm)	POST LENGTH 2 (mm)	SLEEVE LENGTH (mm)	SLEEVE SIZE (mm)	DIA. (mm)	DEPTH (mm)
76630	LHS	Warning, floodways	W5-7-1B	Install New	750	750	0.56	2000	1500	1	0	0	0	CHS Steel	1	-	50	C350	3500 C.T.S	-	-	-	300	750
76630	LHS	Warning, "NEXT 400m"	W8-17-2_400B	Install New	750	500	0.375	Mount with W5-7-1B																
76710	LHS	Guide, "Road Subject to Flooding"	G9-21-1	Install New	2150	800	1.72	2000	1500	1	3	350	6	CHS Steel	2	1500	50	C350	3500 C.T.S	3500 C.T.S	-	-	300	300
76760	LHS	Warning, grid	W5-16B	Install New	750	750	0.56	2000	1500	1	0	0	0	CHS Steel	1	-	50	C350	3500 C.T.S	-	-	-	300	750
76760	LHS	Warning, "One lane"	W8-16B	Install New	750	500	0.375	Mount with W5-16B																
76797	LHS	Guide, Flood depth marker	G9-22-1A	Install New	Refer Details in DTMR Std Drg 1170 - Flood Depth Indicators - Installation																			
76801	RHS	Guide, Flood depth marker	G9-22-1A	Install New																				
76840	LHS	Regulatory, No Overtaking or Passing	R6-1A	Install New	750	750	0.56	2000	1500	1	0	0	0	CHS Steel	1	-	50	C350	3500 C.T.S	-	-	-	300	750
76858.8	LHS	Hazard, width marker	D4-3LA (L)	Install New	225	450	0.10	-	500	1	0	0	0	CHS Steel	1	-	50	C350	2000 C.T.S	-	-	-	300	750
76858.8	RHS	Hazard, width marker	D4-3LA (R)	Install New	225	450	0.10	-	500	1	0	0	0	CHS Steel	1	-	50	C350	2000 C.T.S	-	-	-	300	750
76861.6	RHS	Hazard, width marker	D4-3LA (L)	Install New	225	450	0.10	-	500	1	0	0	0	CHS Steel	1	-	50	C350	2000 C.T.S	-	-	-	300	750
76861.6	LHS	Hazard, width marker	D4-3LA (R)	Install New	225	450	0.10	-	500	1	0	0	0	CHS Steel	1	-	50	C350	2000 C.T.S	-	-	-	300	750



SIGN SETOUT

PAVEMENT MARKING TYPES

No.	TYPE	EXAMPLE	WIDTH	DESCRIPTION
LONGITUDINAL LINES				
C	Barrier Line (Single)		100mm	Continuous (on floodway)

A	Issued for Construction			

20.01	Revisions/Descriptions	Drawn	Approved	Date
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Scales (sheet size A1)	
Dimensions shown in metres except where shown otherwise	


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ABN 73 617 924 437 Ph: 0477 322 555

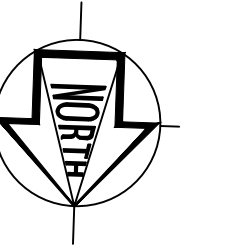
Client


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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY SUPPLEMENTARY SIGNS AND LINEMARKING DETAILS						Job No.	CRC00293
						Drawing No.	1000
Drawn B Doherty	ENGINEERING CERTIFICATION (RPEQ)					Revision	A
Designed B Doherty	ENG. AREA	NAME	SIGNATURE	NO.	DATE		
	Civil	T Penrose		24087	06/11/23	Series No.	12 of 16

**BEFORE
YOU DIG**
www.byda.com.au




 R.L.: Reduced Level AHD
 Rel: Height relative to lowest point on floodway

Scale: 1:100

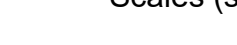
BEWARE OF UNDERGROUND SERVICES
The location of underground services has been compiled from engineering survey and interpolated from Dial Before You Dig as provided by the Service Authorities. No responsibility is taken for the accuracy of the interpolated information supplied. Ensure all services are accurately located prior to commencement of work.

Rock Size (m)	Rock Mass (kg)	Percentage of rock larger than.
0.55	250.0	0%
0.40	100.0	50%
0.20	10.0	90%




Chge 76788.500 - 70812.500 (MC90 - Floodway)
Not to Scale

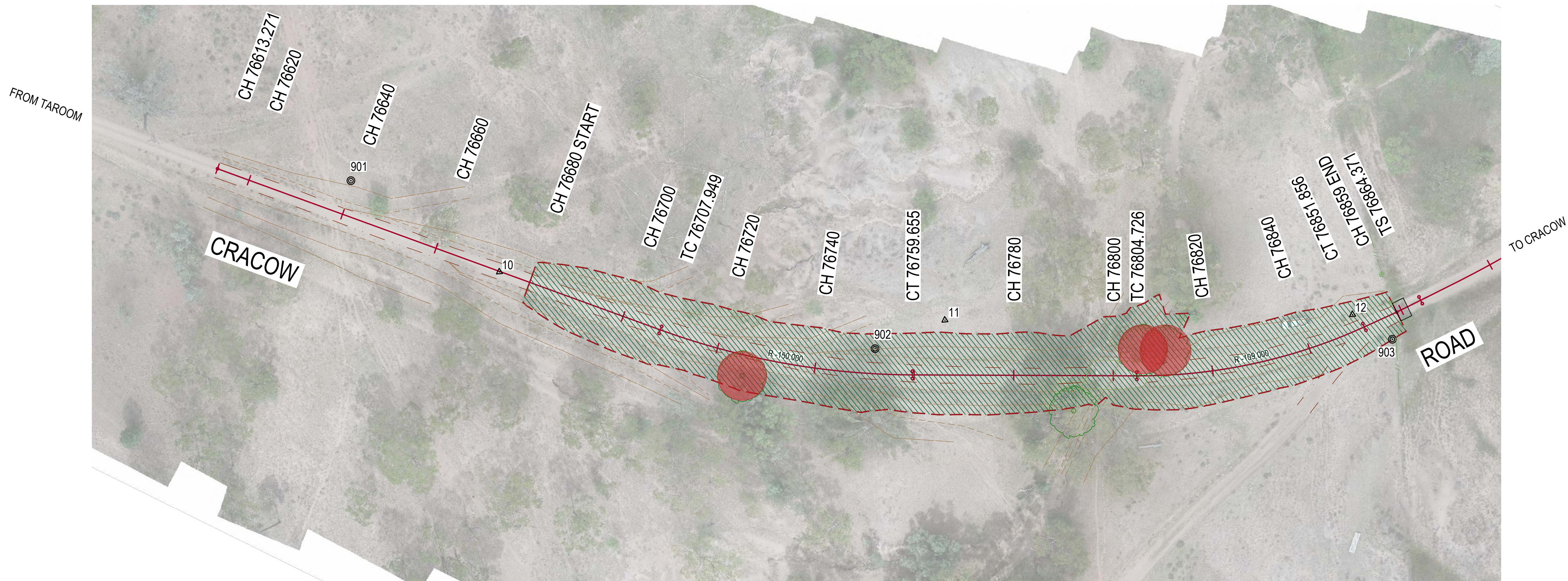
Scales (sheet size A1)

Scale A  1:100

Dimensions shown in metres
except where shown otherwise



Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY FLOODWAY DETAILS						Job No.	CRC00293
						Drawing No.	1200
Drawn		ENGINEERING CERTIFICATION (RPEQ)				Revision	A
B Doherty	ENG. AREA	NAME	SIGNATURE	NO.	DATE		
Designed	Civil	T Penrose		24087	06/11/23	Series No.	13 of 16
B Doherty							



PLAN
Scale: 1:500


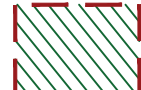
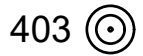
DESIGN LINE MC90

CHAINAGE	OFFSET LHS	OFFSET RHS
76680	4.245	4.180
76690	6.602	6.596
76700	7.561	7.271
76710	7.475	6.715
76720	8.189	6.438
76730	7.741	7.048
76740	8.189	7.037
76750	7.893	7.923
76760	8.399	7.622

DESIGN LINE MC90

CHAINAGE	OFFSET LHS	OFFSET RHS
76770	8.323	7.918
76780	8.569	7.659
76790	7.989	6.757
76800	9.829	5.886
76810	16.293	6.961
76820	8.133	6.598
76830	7.866	6.084
76840	7.749	5.960
76850	6.067	5.345

LEGEND

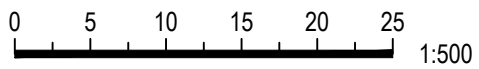
-  - Tree to be removed
-  - Limit of clearing
-  - Survey Mark and Label

XREFS - X_CRC_BSC_TITLE.dwg : X_SURVEY.dwg : X_CONTROL.dwg : X_DESIGN.dwg : X_HATCH.dwg : X_IMAGE.dwg


Last Modified :- Nov 10, 2023 - 2:44pm

A	Issued for Construction			
20.01	Revisions/Descriptions	Drawn	Approved	Date

Scales (sheet size A1)


Scale A  1:500

Dimensions shown in metres
except where shown otherwise




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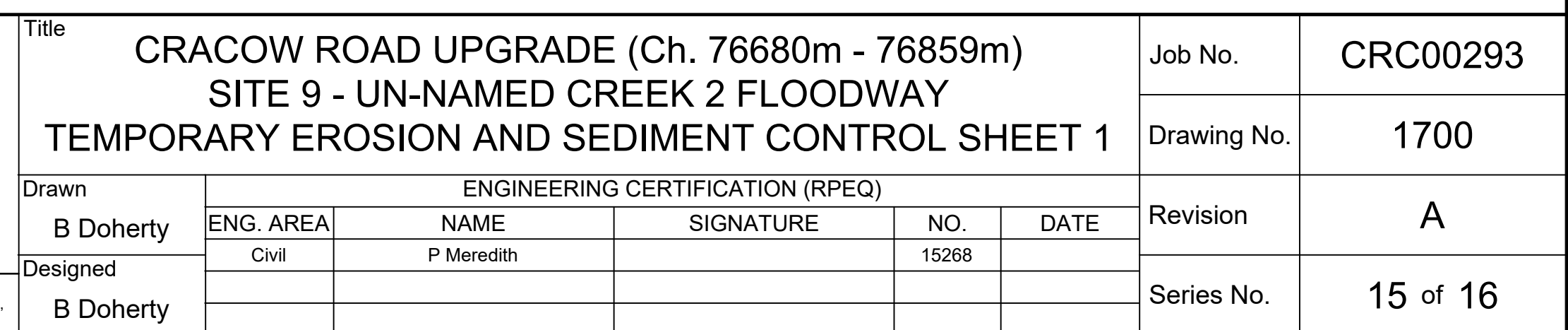
245 Mary Street, GYMPIE, QLD, 4570
ABN 73 617 924 437 Ph: 0477 322 555

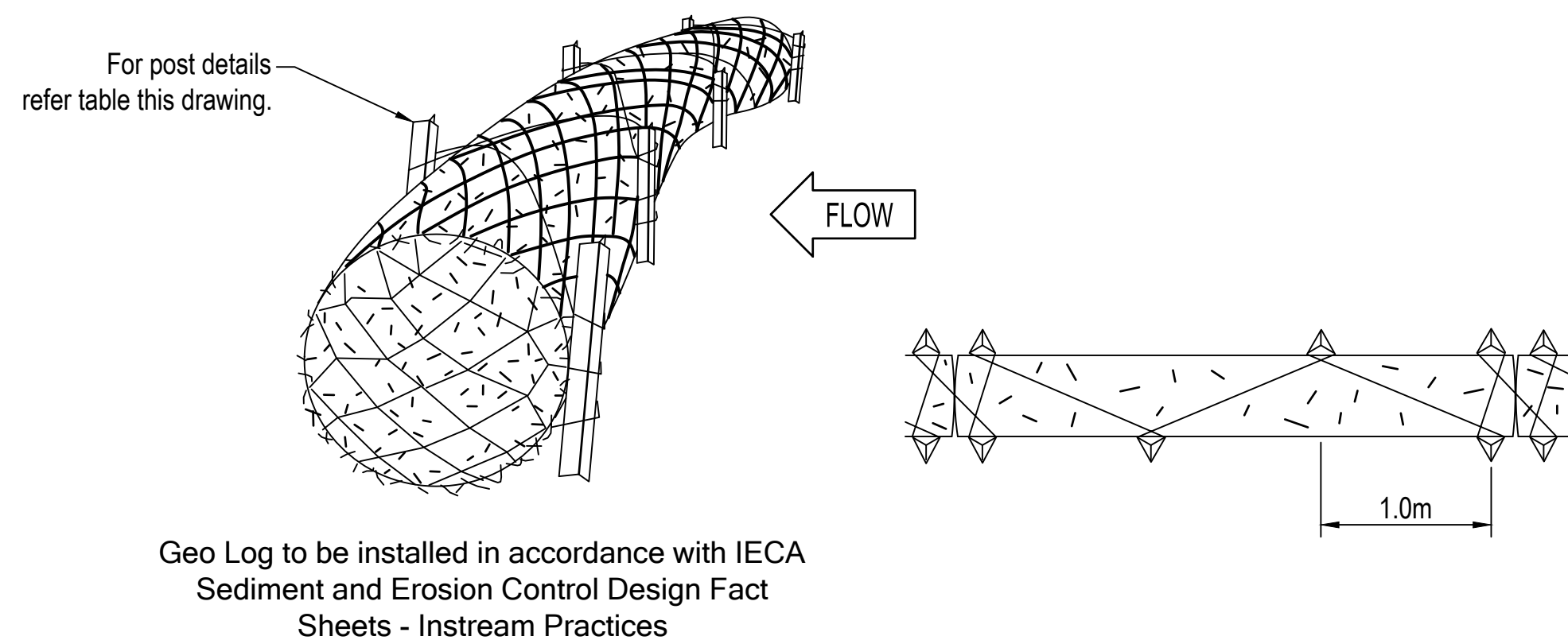


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Title CRACOW ROAD UPGRADE (Ch. 76680m - 76859m) SITE 9 - UN-NAMED CREEK 2 FLOODWAY LIMIT OF CLEARING PLAN						Job No.	CRC00293
						Drawing No.	1600
Drawn	ENGINEERING CERTIFICATION (RPEQ)					Revision	A
B Doherty	ENG. AREA	NAME	SIGNATURE	NO.	DATE		
Designed	Civil	T Penrose		24087	06/11/23	Series No.	14 of 16
B Doherty							





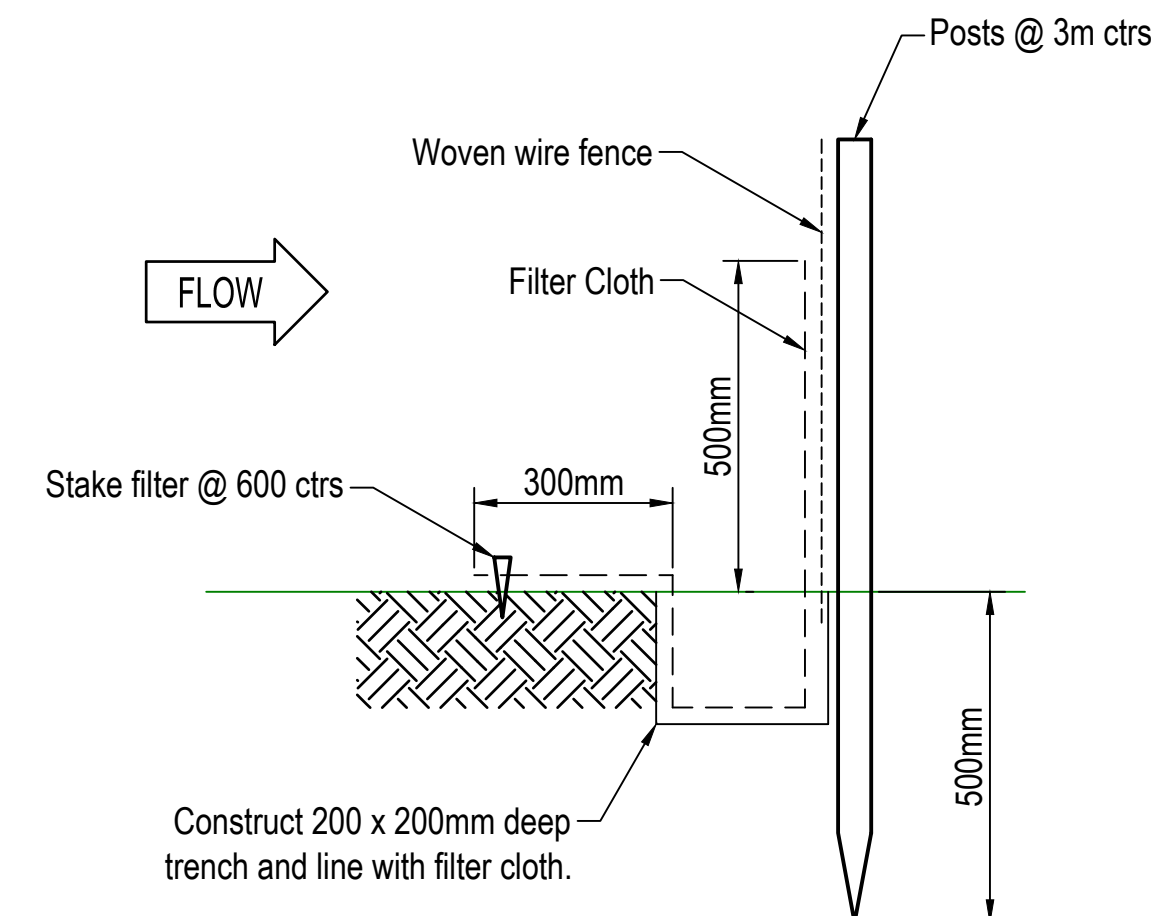
N.T.S

The diagram illustrates various types of stream diversions and structures. It includes a legend with the following items:

- Diversion Bank:** Represented by a solid blue line.
- Silt Fence:** Represented by a dashed red line with the label "(SF)".
- Geo Log:** Represented by a solid brown rectangle.
- Dirty Water Flow:** Represented by a red arrow pointing right.
- Clean Water Flow:** Represented by a blue arrow pointing right.
- Rock Check Dam:** Represented by a green rectangle with a cross inside, with the label "CHECK" to its left.
- End of line rock check dam (to act as rock filter dam):** Represented by a red rectangle with a cross inside, with the label "RFD" to its left.
- Existing Trees:** Represented by a green outline of a tree.

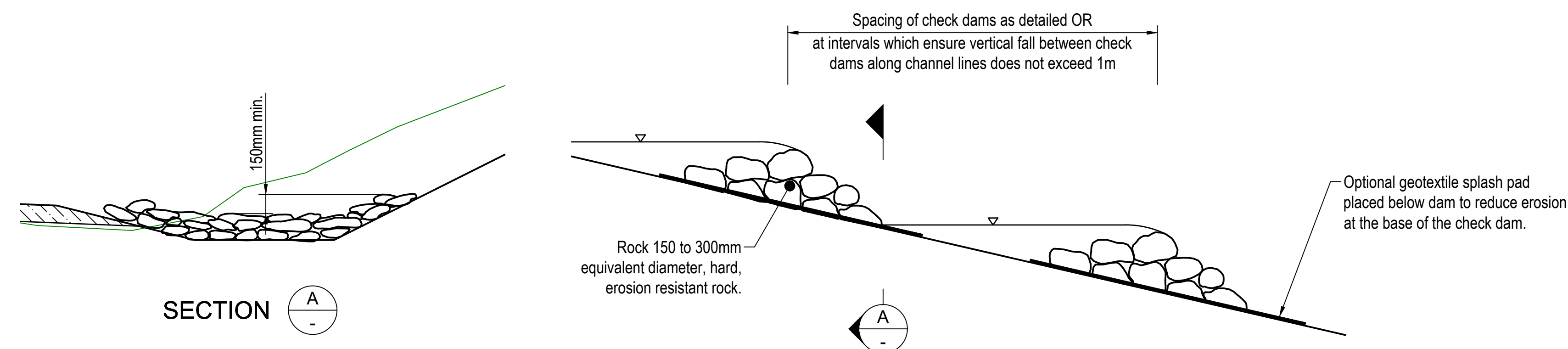
1. Design and construction of all sediment management devices is the contractors responsibility and shall be completed and effective prior to:
 - (i) Stripping of topsoil and grass.
 - (ii) Bulk earthworks to the site.
 - (iii) Service installations.
2. All sediment management devices are to remain in place until notice from the Contract Administrator
3. Both temporary and permanent sediment management devices shall be maintained at a suitable level/condition throughout construction. Sediment fences are to be cleaned out when capacity is reduced by 30%.
4. If erosion and sediment control devices have been found to be deficient or failed in service, due to unforeseen circumstances, corrective action is to be undertaken immediately which may include amendments/additions to the original approved erosion control plans. such additions or amendments are to be approved by the Contract Administrator.
5. All erosion and sediment control devices are to be inspected at least weekly, before and after rainfall events. Any damage or excess erosion/sediment is to be repaired/managed as required to maintain control devices.
6. Devices shown on the drawings shall not necessarily be limited to the locations shown.
Additional devices may be required as directed by Contract Administrator.
7. Rock check dams to be installed per detail this drawing in drainage channels with slopes greater than 2%. Spacing of check dams to be at every 1.0m vertical drop in drainage channel.
8. Contract Administrator to order installation of topsoil and grass seeding to disturbed areas.
9. The contractor shall ensure all turfed and/or seeded areas are regularly watered to ensure vegetation is maintained until there is 80% coverage.
10. Stockpiles shall be protected from erosion and sediment loss by:
 - The installation of diversion works on the upstream side.
 - The use of silt fences or other approved controls on the downstream side.
 - Compaction.
 - Re-vegetation if left exposed for longer than 30 days

MATERIAL	TYPE
Posts (either)	1.5kg/m (min) Steel Star Picket or 1500mm ² (min) Hardwood or 2500mm ² (min) Softwood
Fence	Woven wire 14 guauge 150mm max aperture Filter as specified
Filter Cloth	(terram 100, polyfelt ts500, Bidim u24 or equivalent)
Prefabricated Unit	Geofab, envirofence or approved equivalent

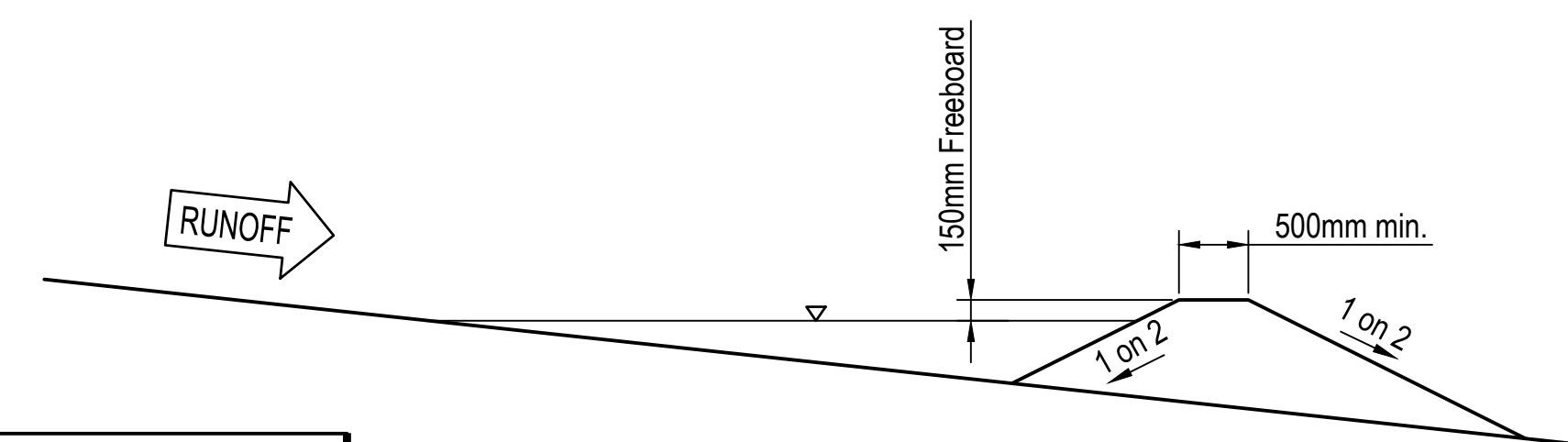


N.T.S

Woven fence to be fastened securely to fence posts with wire ties or staples. Filter cloth to be fastened securely to woven wire fence with tees spaced every 600mm at top of mid section. When two sections of filter cloth adjoin each other they shall be overlapped by 150mm and folded and material removed when bulging of fence occurs.

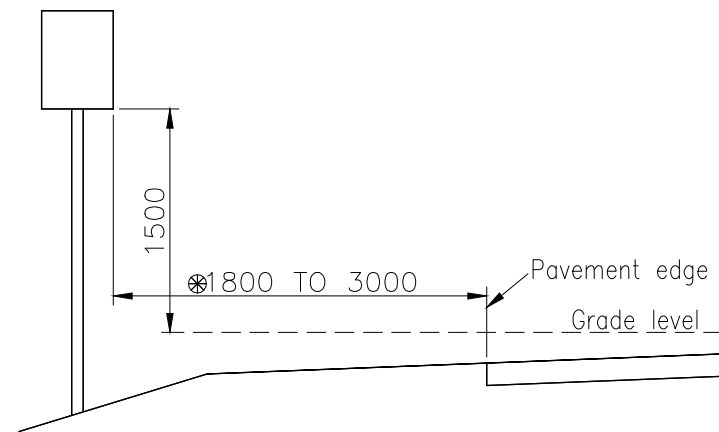


N.T.S

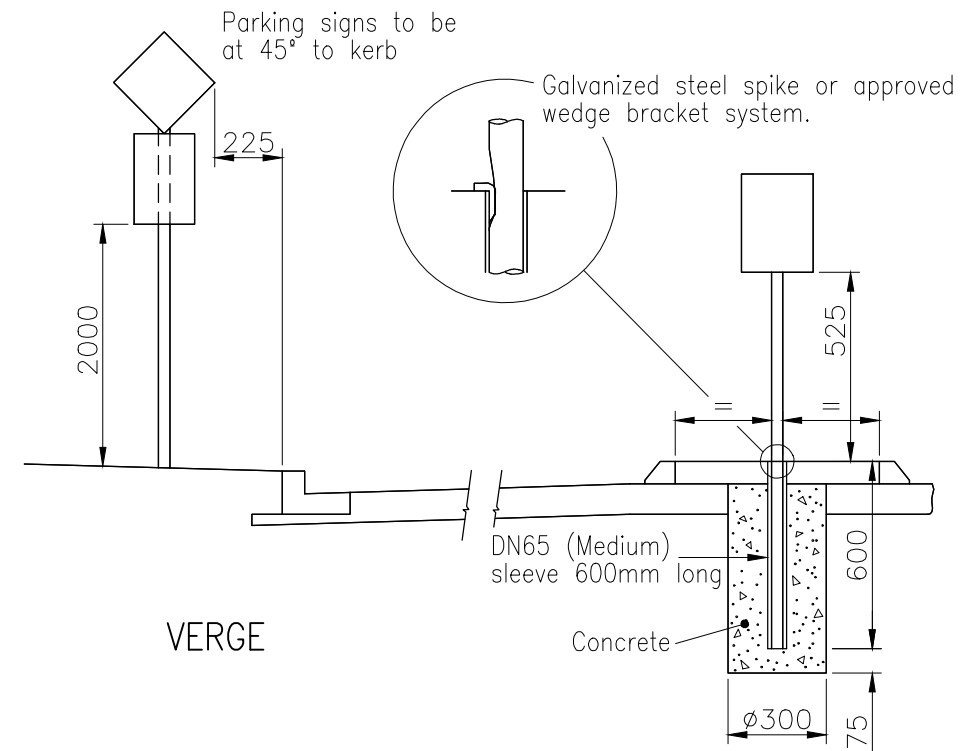


A minimum freeboard of 300mm is recommended for non-vegetated earth embankments.

N.T.S



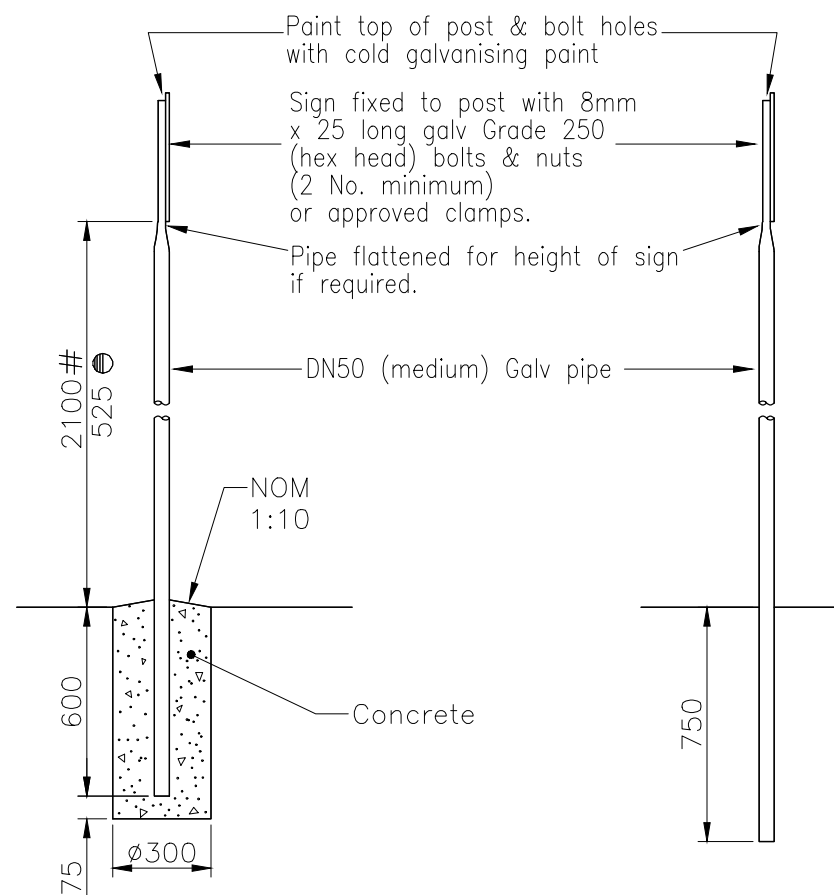
LOCATION OF SIGNS – RURAL ROADS



VERGE

MEDIAN

LOCATION OF SIGNS – STREETS



STREETS

RURAL ROADS

NOTES:

1. All signs to be reflectorised Class 1 to AS1743 unless noted otherwise.
2. Size & sign type has been included in the schedule and/or in the project drawings. Special standards are to be provided at large signs when indicated in the project drawings.
3. All signs are to be approved by the Superintendent prior to erection.
4. Where signs are to be erected in streets where footpaths are not constructed to permanent levels the Rural Roads type base shall be adopted.
5. Signs shall be out of aluminium or aluminium alloy not less than 2mm thick to AS 2848.
6. The DN65 sleeve and spike shall only be used on medians.
7. All pipes to be galvanised. Steel pipe to AS 1074. Galvanising to AS/NZS 4680.
8. Concrete N25 in accordance with AS 1379 and AS 3600.
9. Hexagonal head bolts to AS 1111.
Nuts to AS 1112.
Washers to AS 1237.
Galvanizing to AS 1214.
10. All dimensions in millimetres.
11. Sleeve to be provided as directed by Council

LEGEND

on footpaths

⊗ As directed by the Superintendent

⊙ on medians

APPLICABILITY TABLE

Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REVISIONS	DATE
E IRC ADDED	12/2016
D GRC AND LSC ADDED	09/2014
C MRC ADDED	04/2011
B NOTE 11 ADDED	07/2010
A POST AMALGAMATION REVIEW	01/2010

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The authors and sponsoring organisations shall have no liability or responsibility to the user or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused, directly or indirectly, by the adoption and use of these Standard Drawings including, but not limited to, any interruption of service, loss of business or anticipatory profits, of consequential damages resulting from the use of these Standard Drawings. Persons must not rely on these Standard Drawings as the equivalent of, or a substitute for, project-specific design and assessment by an appropriately qualified professional.

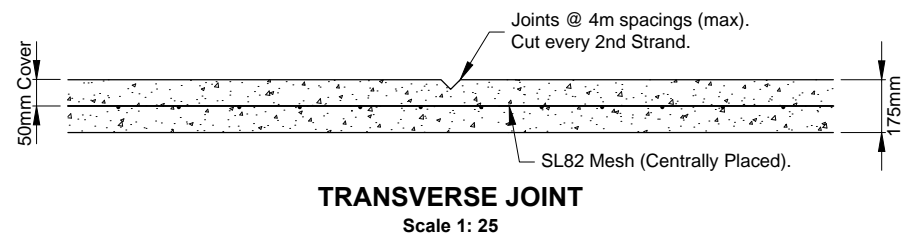
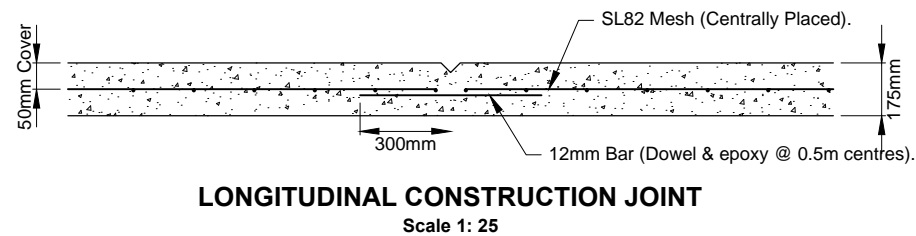
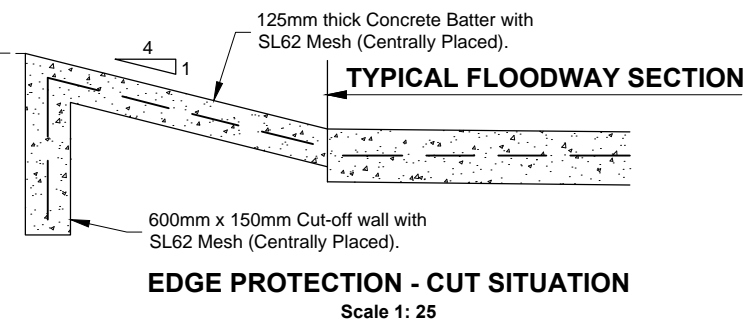
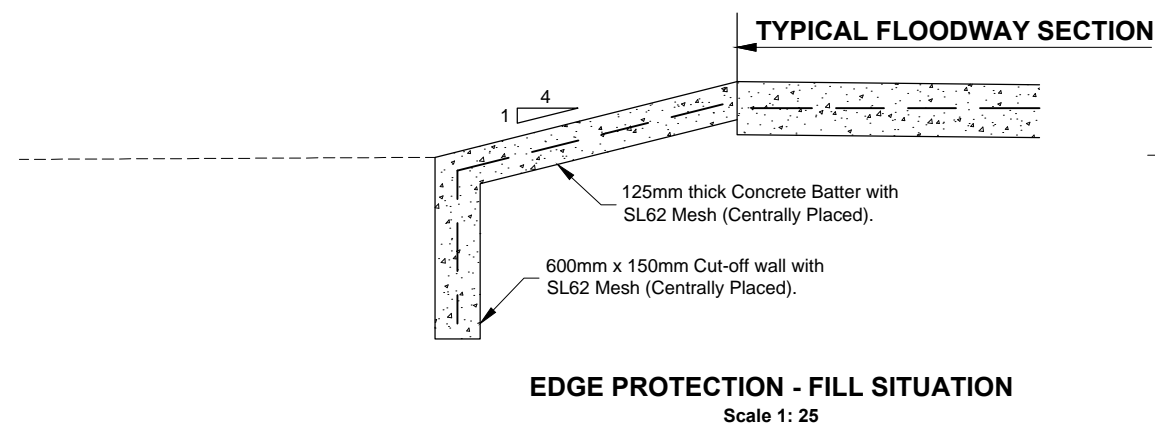
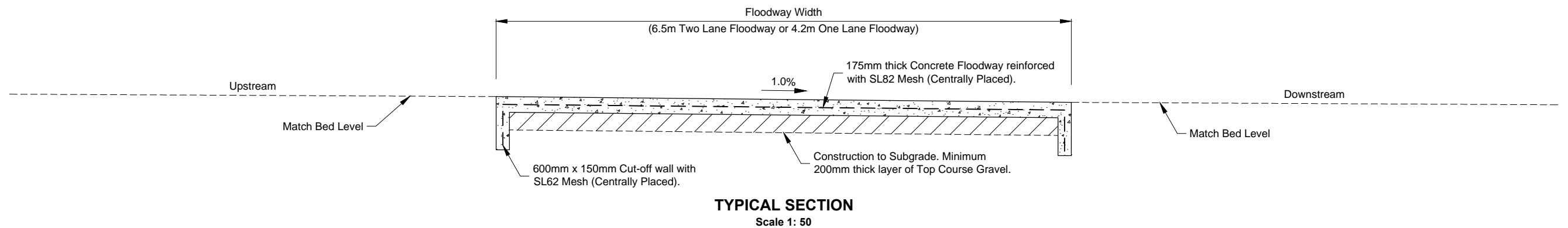
Capricorn Municipal Development Guidelines

Incorporating:

Banana Shire Council (BSC)
Central Highlands Regional Council (CHRC)
Gladstone Regional Council (GRC)
Isaac Regional Council (IRC)
Livingstone Shire Council (LSC)
Maranoa Regional Council (MRC)
Rockhampton Regional Council (RRC)

SIGN LOCATION AND INSTALLATION DETAILS

ROADS
STANDARD DRAWING
CMDG-R-081
REV. A B C D E



NOTES:

1. Provide Transverse joints at 4.0m spacings.
2. Provide longitudinal joints at centreline for two-lane floodway.
3. Provide longitudinal joints at shoulder where edge-protection is required.
4. Concrete strength to be 32 MPa.
5. Lap Reinforcement fabric 250mm.
6. Floodway signage to be installed in accordance with MUTCD (Part 2, Figure 4.27).
7. Delineation to be installed on floodway shoulder at maximum 5m centres and spaced evenly to suit floodway length. Delineation to be installed at centreline of two-lane floodway.
8. Floodway depth markers to be installed at lowest point on floodway aligned to downstream side.

WATERWAY BARRIER WORKS - COMPLIANCE NOTES:

1. Floodway site to be checked on Queensland Government Spatial Data Layer "Queensland Waterways for Waterway Barrier Works" to determine if assessable or self-assessable codes apply.
2. The lowest level of the floodway must be installed at the level of lowest point of the natural stream bed (Within the footprint of the crossing.)
3. There must be a height difference of at least 100mm from the lowest point of the crossing to the edges of the low flow section of the crossing.
4. The level of the remainder of the crossing must be no higher than the lowest point of the natural stream bed outside of the low flow channel.
5. Refer to *Code for self-assessable development, Minor waterway barrier works, Part 4: Bed level crossings* for more information and alternative treatments.

APPLICABILITY TABLE							
Council	BSC	CHRC	GRC	IRC	LSC	MRC	RRC
Applicable	Yes	Yes	Yes	No	Yes	Yes	Yes
Applicable DWG	CMDG-R-094A						

REVISIONS		DATE
B	IRC ADDED	12/2016
A	ORIGINAL ISSUE	04/2016

DISCLAIMER.

The authors and sponsoring organisations shall have no liability or responsibility to the user or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused, directly or indirectly, by the adoption and use of these Standard Drawings including, but not limited to, any interruption of service, loss of business or anticipatory profits, of consequential damages resulting from the use of these Standard Drawings. Persons must not rely on these Standard Drawings as the equivalent of, or a substitute for, project-specific design and assessment by an appropriately qualified professional.

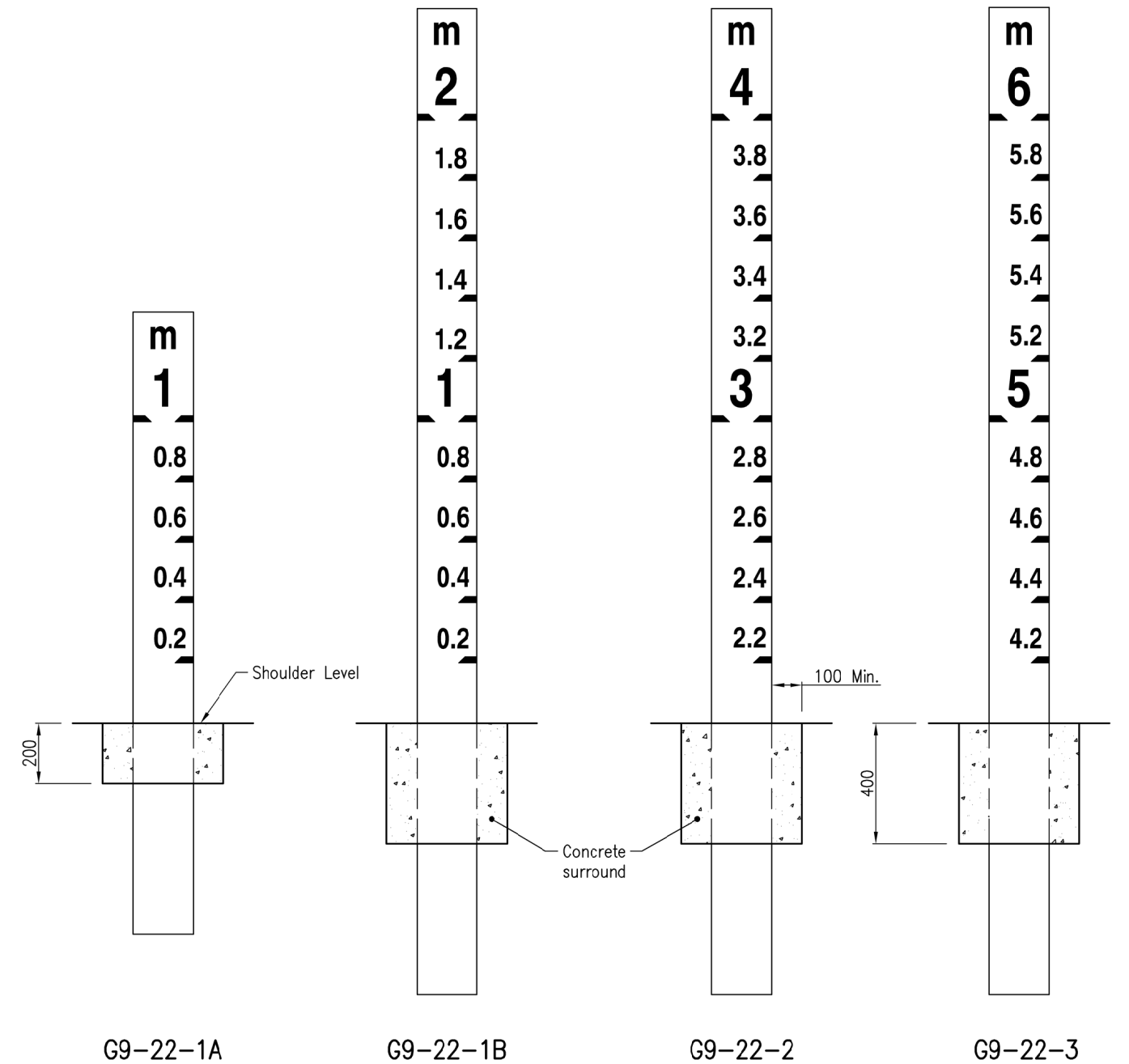
Capricorn Municipal Development Guidelines

Incorporating:

Banana Shire Council (BSC)	Livingstone Shire Council (LSC)
Central Highlands Regional Council (CHRC)	Maranoa Regional Council (MRC)
Gladstone Regional Council (GRC)	Rockhampton Regional Council (RRC)
Isaac Regional Council (IRC)	

FLOODWAY – BED LEVEL CROSSING

ROADS				
STANDARD DRAWING				
CMDG-R-094				
REV.	A	B		



NOTES:

FLOOD DEPTH INDICATORS:

1. To be located at the chainages specified or as directed by the Superintendent.
 2. Zero mark to be set at the lowest pavement level on the section of road subject to flooding.
 3. G9-22-2 and G9-22-3 indicators to be erected on progressively higher ground where flood depths are in excess of 1.5m or 3.5m respectively.
 4. To conform with the details as shown in the MUTCD.
- CONCRETE SURROUND:
5. To be class N20/20 and provide 100mm minimum cover all round.
 6. Dimensions are in millimetres unless shown otherwise.



ASSOCIATED DEPARTMENTAL DOCUMENTS:

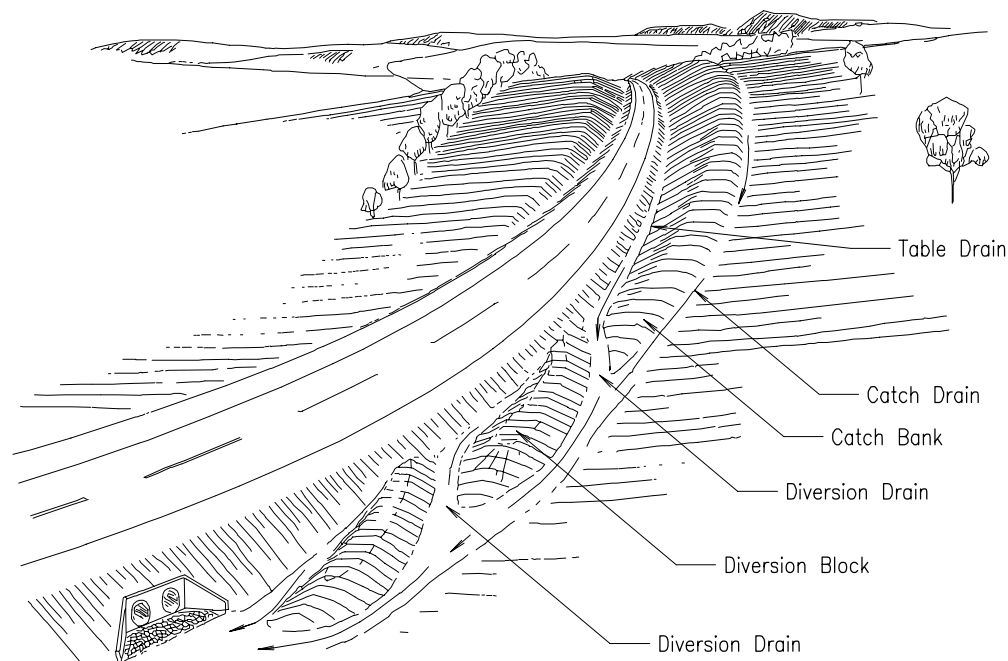
Standard Drawings
Specifications
Manual of Uniform Traffic Control Devices Part 2 (MUTCD)

REFERENCED DOCUMENTS:

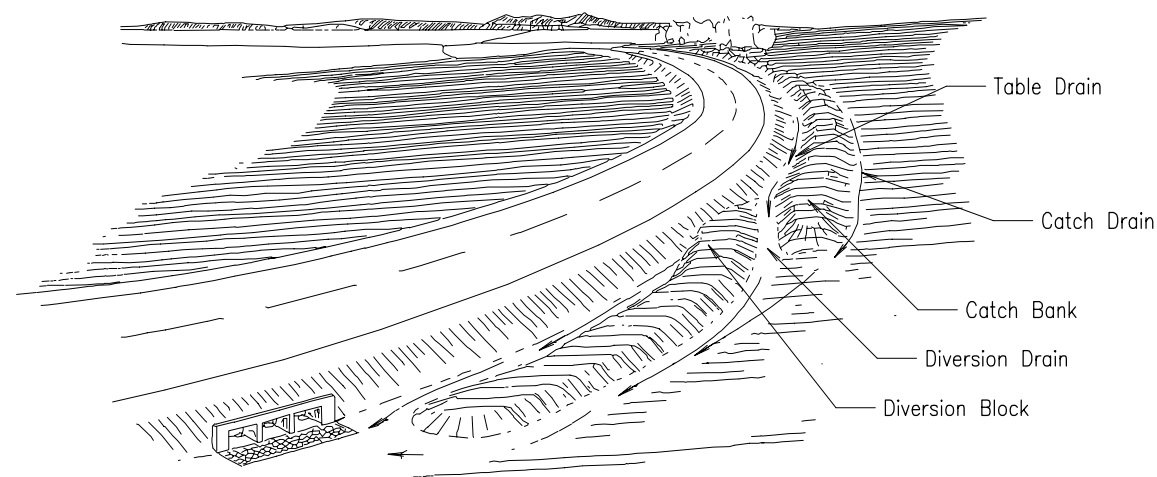
Departmental Specifications:
MRTS14 Road Furniture
MRTS70 Concrete

Australian Standards:
AS1743 Road Signs – Specifications

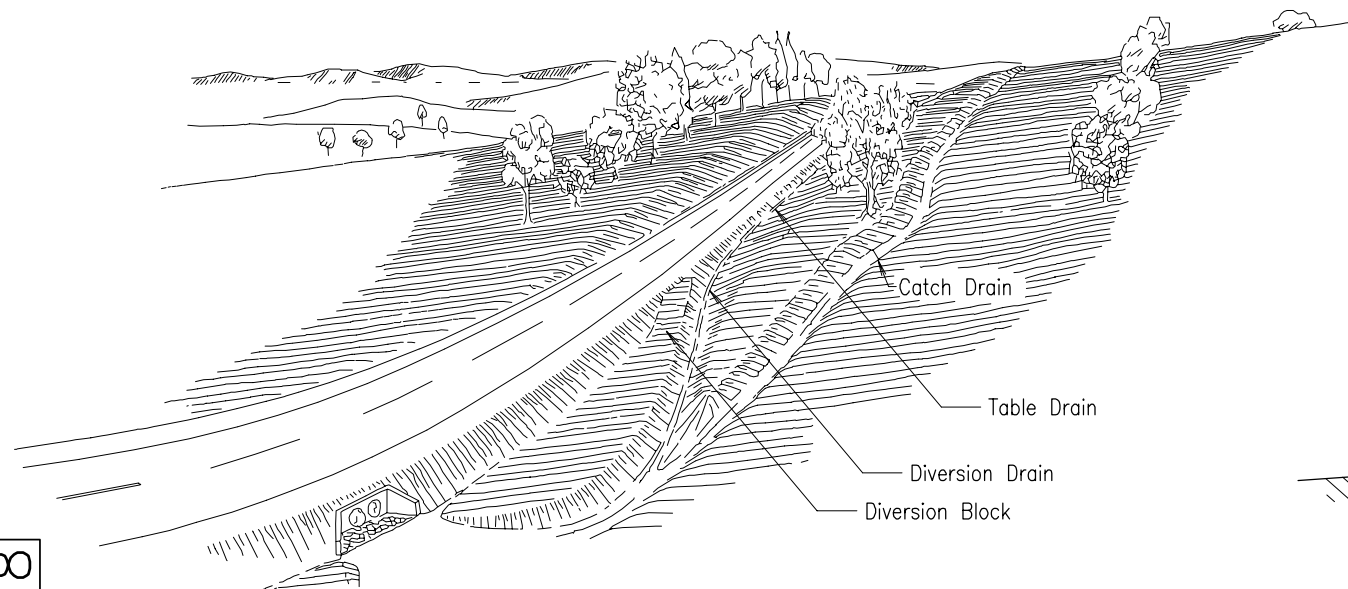
Department of Transport and Main Roads		 Queensland Government		 © The State of Queensland (Department of Transport and Main Roads) 2022 http://creativecommons.org/licenses/by/4.0/	
FLOOD DEPTH INDICATORS					
INSTALLATION		A3	Standard Drawing No		
		Not to Scale	1170		
		Date 11/2022			
A	B	C	D		



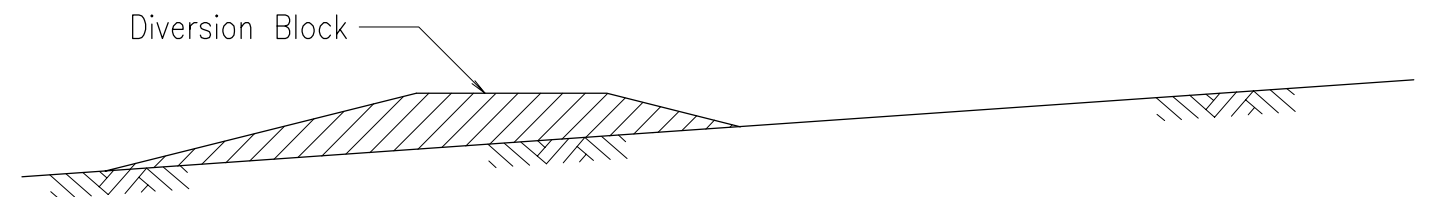
CATCH BANK ON
EARTHWORKS SECTIONS



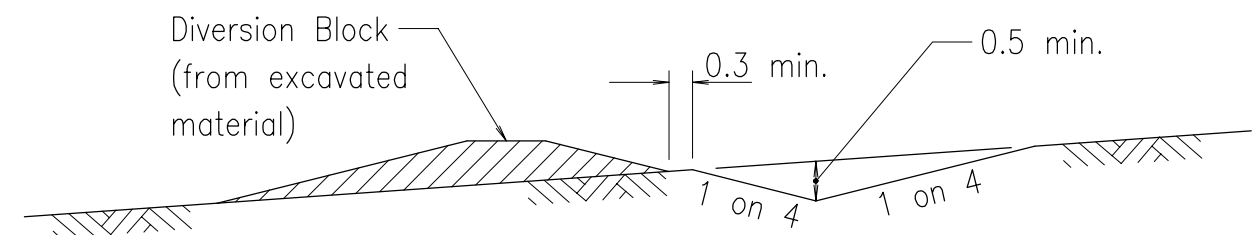
CATCH BANK ON
LOW FORMATION SECTIONS



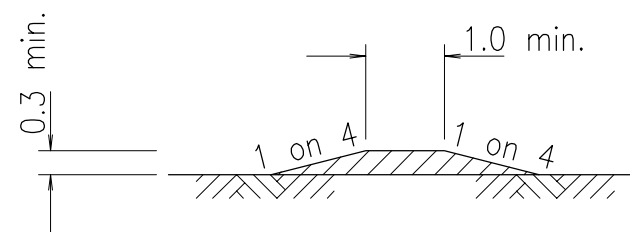
CATCH DRAINS ON
EARTHWORKS SECTIONS



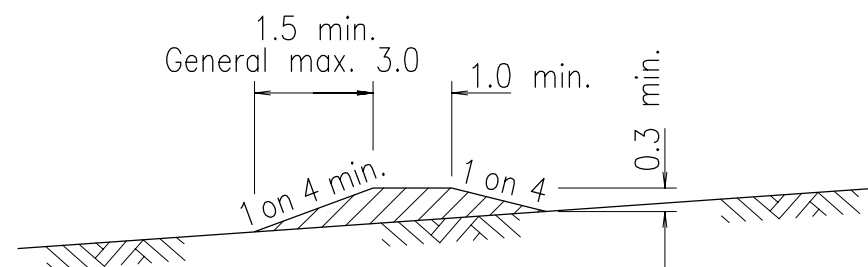
DIVERSION DRAIN IN ERODIBLE SOILS



DIVERSION DRAIN IN NON-ERODIBLE SOILS



DIVERSION BLOCK



CATCH BANK

NOTES:


1. DIVERSION DRAINS, unless shown otherwise in the scheme documents, shall be constructed at culverts and at intervals not exceeding 120m on grades up to 2%, 60m on grades 2% to 4%, 30m on grades 4% to 8% and 15m on grades over 8% (except in cuttings). They shall have a cross sectional area at least equal to the cross sectional area of the table drains carrying water to them.
2. ERODIBLE SOILS have sodic and/or dispersive characteristics. Soil testing is required prior to design.
3. DRAINAGE INTO PRIVATE PROPERTIES, with the cooperation of property owners, is to be discharged into contour banks and behind diversion banks to dams where possible.
4. DIMENSIONS are in metres unless shown otherwise.

ASSOCIATED DOCUMENTS:

Department of Main Roads Manual of Standard Drawings Roads
Department of Main Roads Manual of Standard Specifications Roads
Department of Main Roads Road Drainage Design Manual

REFERENCED DOCUMENTS:

Standard Drawings:
1045 Revegetation Treatment of Cut Batters
Standard Specifications:
General Earthworks

DIVERSION OF WATER		 Queensland Government Department of Main Roads	
DIVERSION OF WATER FROM ROADWAY AND TABLE DRAINS		Size A3	Drawing No
		Scales as shown	1178 Date 10/03
		A	B C D E