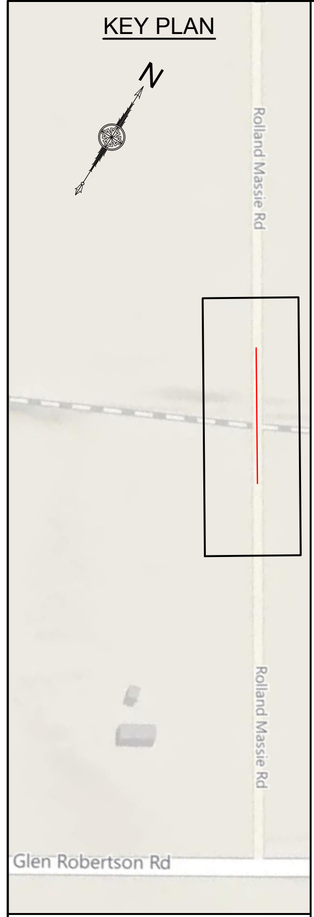
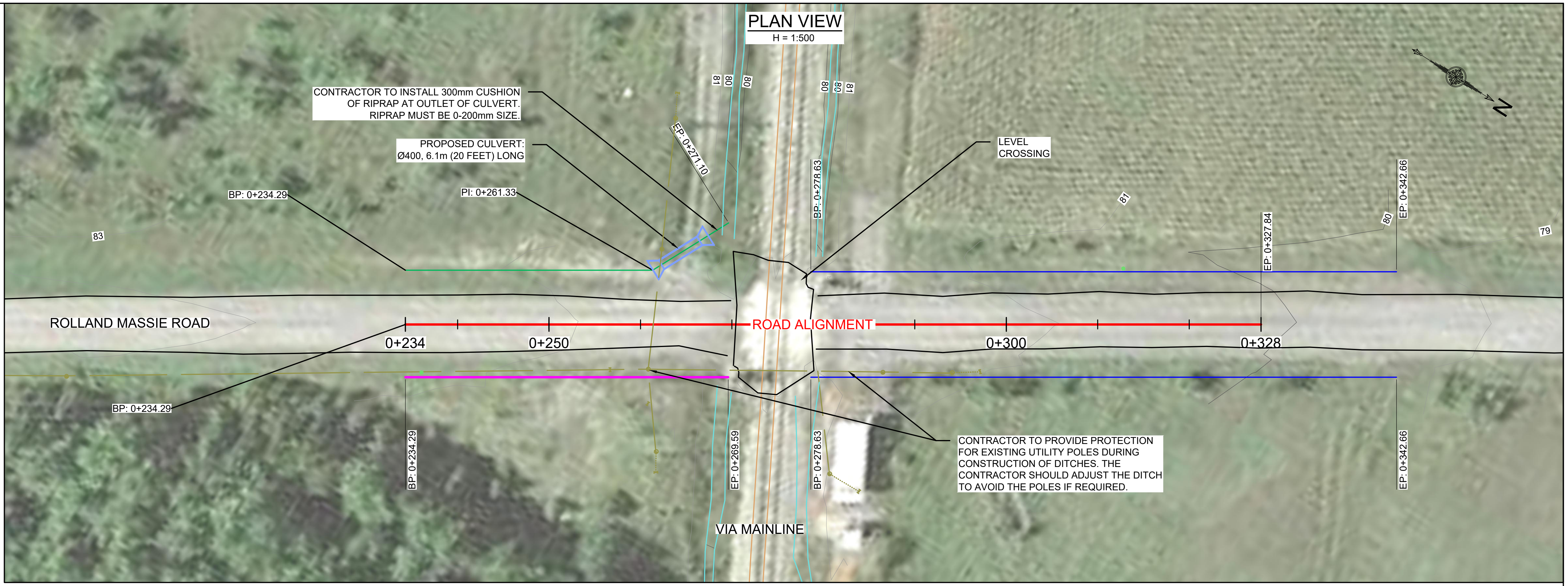
KEY PLAN



COORDINATE SYSTEM
CSRS.UTM-18N

PLAN VIEW

H = 1:500



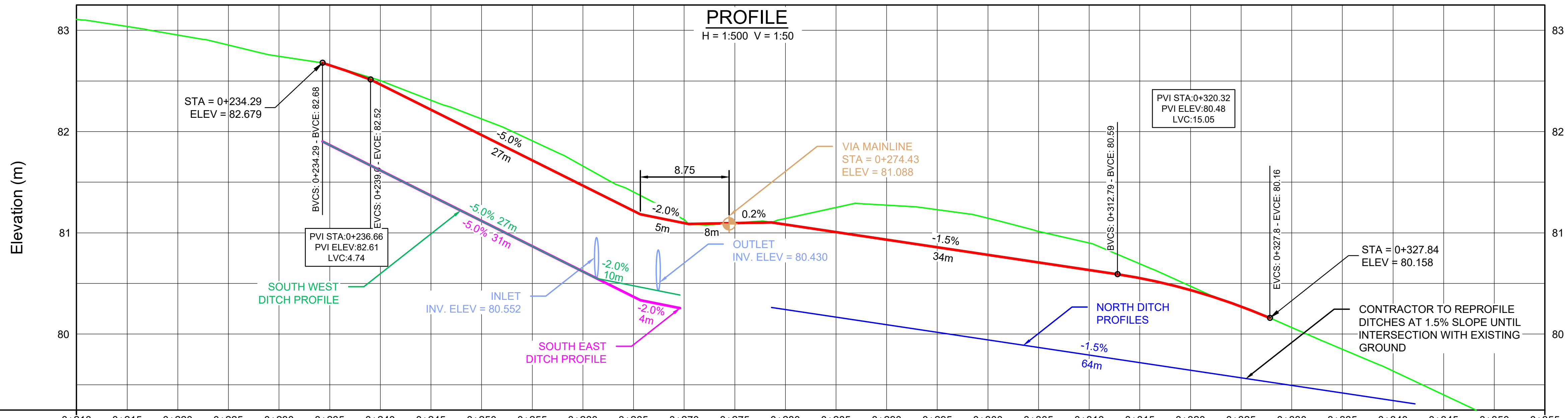
LEGEND

ROAD CENTRE - PLAN / TOP OF ROAD - PROFILE	
SW DITCH CENTRE - PLAN / BOTTOM OF DITCH - PROFILE	
SE DITCH CENTRE - PLAN / BOTTOM OF DITCH - PROFILE	
NORTH DITCH CENTRE - PLAN / BOTTOM OF DITCH - PROFILE	
EXISTING RAILWAY LINE	
EXISTING GROUND (PROFILE)	
ROAD	
MAJOR CONTOUR	
MINOR CONTOUR	
EXISTING RAILWAY DITCHES	
CULVERT	

ABBREV.	DESCRIPTION
BP	ALIGNMENT BEGINNING POINT
PI	POINT OF HORIZONTAL INFLECTION
PC	POINT OF TRANSITION TANGENT / CURVE
PT	POINT OF TRANSITION CURVE / TANGENT
BVCS	BEGINNING OF VERTICAL CURVE STATION
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION
EVCS	END OF VERTICAL CURVE STATION
EVCE	END OF VERTICAL CURVE ELEVATION
PVI STA	POINT OF VERTICAL INFLECTION STATION
PVI ELEV	POINT OF VERTICAL INFLECTION ELEVATION
LVC	LENGTH OF VERTICAL CURVE
EP	ALIGNMENT END POINT

PROFILE

H = 1:500 V = 1:50



CHAINAGE	0+210	0+215	0+220	0+225	0+230	0+235	0+240	0+245	0+250	0+255	0+260	0+265	0+270	0+275	0+280
TOP OF ROAD DESIGN LEVELS						82.66	82.47	82.22	81.97	81.72	81.47	81.22	81.10	81.10	81.08
BOTTOM OF DITCH DESIGN LEVELS						81.87	81.62	81.37	81.12	80.87	80.62	80.48			
BOTTOM OF DITCH DESIGN LEVELS						81.87	81.62	81.37	81.12	80.87	80.62	80.37			
BOTTOM OF DITCH DESIGN LEVELS															80.24
EXISTING SURFACE LEVELS	83.11	83.04	82.95	82.85	82.74	82.66	82.51	82.31	82.13	81.91	81.66	81.40	81.13	81.10	81.14

CHAINAGE	0+285	0+290	0+295	0+300	0+305	0+310	0+315	0+320	0+325	0+330	0+335	0+340	0+345	0+350	0+355
TOP OF ROAD DESIGN LEVELS	81.01	80.93	80.86	80.78	80.71	80.63	80.55	80.43	80.27						
BOTTOM OF DITCH DESIGN LEVELS															
BOTTOM OF DITCH DESIGN LEVELS															
BOTTOM OF DITCH DESIGN LEVELS	80.17	80.09	80.02	79.94	79.87	79.79	79.72	79.64	79.57	79.49	79.42	79.34			
EXISTING SURFACE LEVELS	81.25	81.27	81.23	81.15	81.01	80.90	80.69	80.47	80.27	80.06	79.85	79.64	79.40	79.16	78.89

REV.	DATE	DESCRIPTION	PREPARED BY	VERIFIED BY
C	22-09-2022	ISSUED FOR CONSTRUCTION	NICOLAS YEDYNAK (Eng.) OIQ #5091337	DAVID CHOU (P.Eng.) PEO #100517690
B	12-08-2022	DRAFT FOR COMMENTS	NICOLAS YEDYNAK (Eng.) OIQ #5091337	DAVID CHOU (P.Eng.) PEO #100517690
A	29-07-2022	DRAFT FOR COMMENTS	NICOLAS YEDYNAK (Eng.) OIQ #5091337	DAVID CHOU (P.Eng.) PEO #100517690

REVISION

North Glengarry Nord
Ontario's Celtic Heartland
Le centre celtique de l'Ontario

SYSTRA CANADA

PREPARED BY: NICOLAS YEDYNAK (Eng.) OIQ #5091337	DATE: 14-07-2022	PROJECT: DETAILED ENGINEERING FOR ROLLAND MASSIE ROAD MODIFICATIONS	
DRAWN BY: HANA SULAIMAN	DATE: 18-07-2022		
VERIFIED BY: DAVID CHOU (P.Eng.) PEO #100517690	DATE: 29-07-2022	ROAD ALIGNMENT PLAN AND PROFILE KP 0+234 TO KP 0+328	
APPROVED BY: MARIA-PIA LONGO (P.Eng.) PEO #100544824	DATE: 29-07-2022	FORMAT: A3	DWG Nº: 22012-IADP-0001 — REV.: C

HORIZONTAL GEOMETRY _ ROAD ALIGNMENT									
No.	Entity Type	Length (m)	Start Station	End Station	Start Easting	Start Northing	End Easting	End Northing	Radius (m)
1	Line	93.553	0+234.29	0+327.84	535336.836	5021138.858	535286.516	5021217.724	

VERTICAL GEOMETRY _ ROAD ALIGNMENT													
No.	Entity Type	Curve Type	Length (m)	Start Station	Start Elevation	End Station	End Elevation	Curve Radius	Grade In	Grade Out	A (Grade Change)	PVI Station	PVI Elevation
1	Symmetric Parabola	Crest	4.743	0+234.29	82.679	0+239.03	82.515	550.031	-3.01 %	-3.88 %	-0.86 %	0+236.66	82.607
2	Tangent		26.641	0+239.03	82.515	0+265.68	81.183		-5.00 %	-5.00 %			
3	Tangent		4.744	0+265.68	81.183	0+270.42	81.088		-2.00 %	-2.00 %			
4	Tangent		8.210	0+270.42	81.088	0+278.63	81.103		0.18 %	0.18 %			
5	Tangent		34.162	0+278.63	81.103	0+312.79	80.590		-1.50 %	-1.50 %			
6	Symmetric Parabola	Crest	15.052	0+312.79	80.590	0+327.84	80.158	550.031	-1.50 %	-4.24 %	-2.74 %	0+320.32	80.477

HORIZONTAL GEOMETRY _ SOUTH WEST DITCH ALIGNMENT									
No.	Entity Type	Length (m)	Start Station	End Station	Start Easting	Start Northing	End Easting	End Northing	Radius (m)
1	Line	27.041	0+234.29	0+261.33	535331.845	5021135.674	535317.300	5021158.470	
2	Line	9.767	0+261.33	0+271.10	535317.300	5021158.470	535308.490	5021162.686	

VERTICAL GEOMETRY _ SOUTH WEST DITCH ALIGNMENT								
No.	Entity Type	Length (m)	Start Station	Start Elevation	End Station	End Elevation	Grade In	Grade Out
1	Tangent	27.042	0+234.29	81.904	0+261.33	80.552	-5.00 %	-5.00 %
2	Tangent	9.767	0+261.33	80.552	0+271.10	80.356	-2.00 %	-2.00 %

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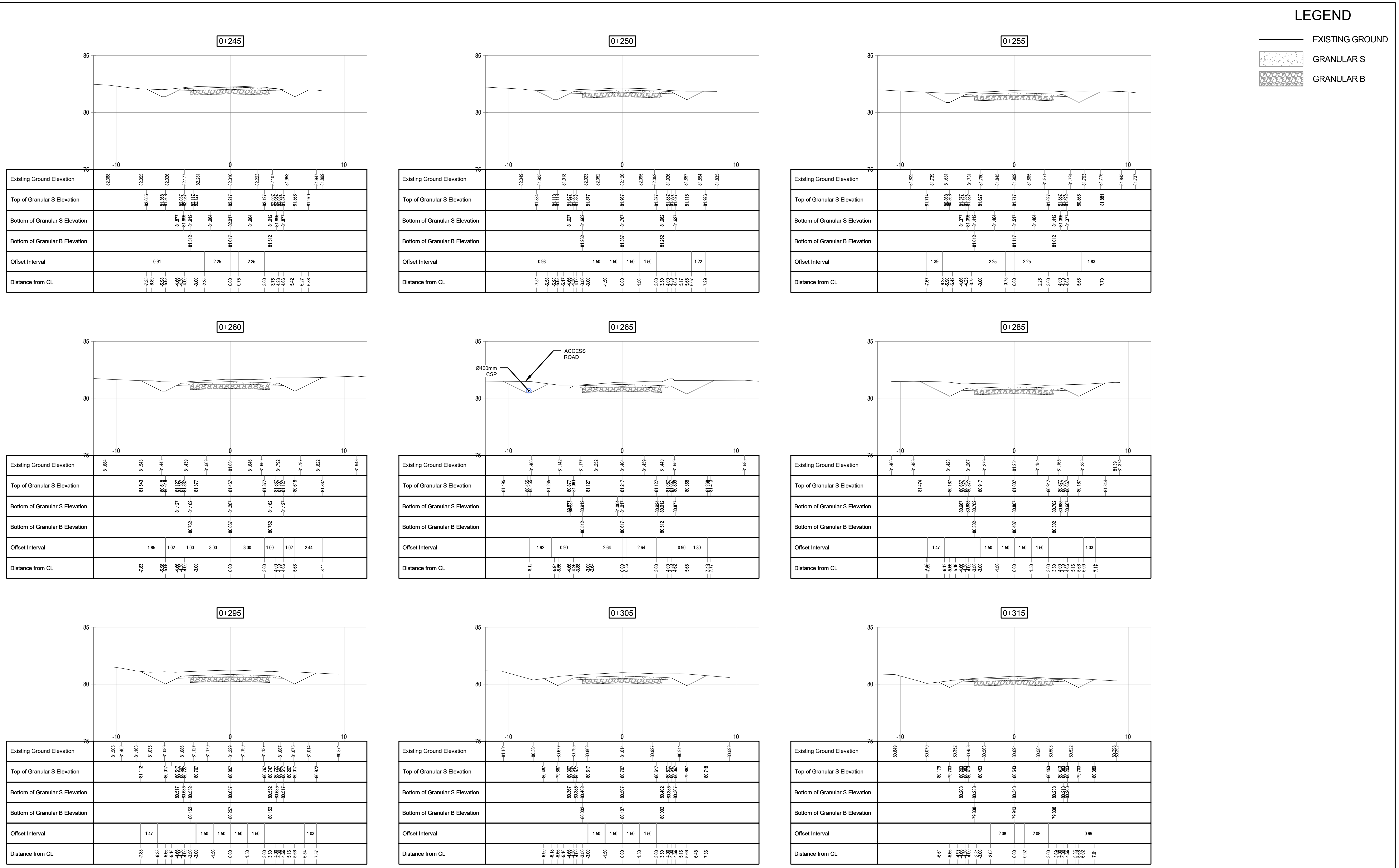
VERIFIED BY: DAVID CHOU (P.Eng.) PEO #100517690	DATE: 29-07-2022	GEOMETRY TABLES HORIZONTAL AND VERTICAL	
APPROVED BY: MARIA-PIA LONGO (P.Eng.) PEO #100544824	DATE: 29-07-2022	FORMAT A3	DWG N° 22012-IADI-0001 REV. C



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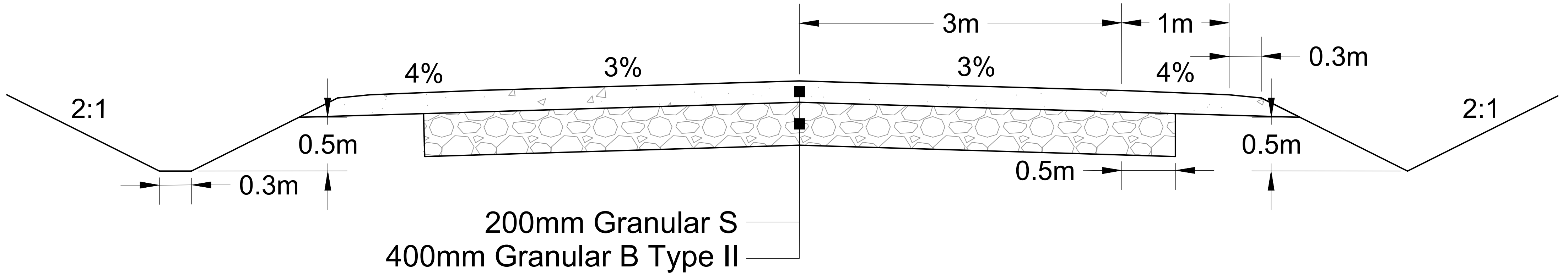
PROJECT:

DETAILED ENGINEERING FOR
ROLLAND MASSIE ROAD MODIFICATIONS

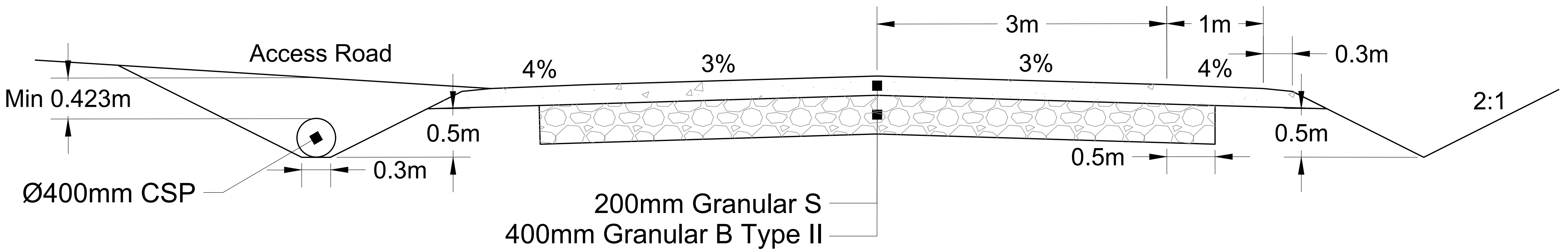
ROAD ALIGNMENT
CROSS SECTIONS
KP 0+245 TO KP 0+265, KP 0+285 TO KP 0+315

FORMAT	DWG N°	REV.
A3	22012-IADC-0001	C



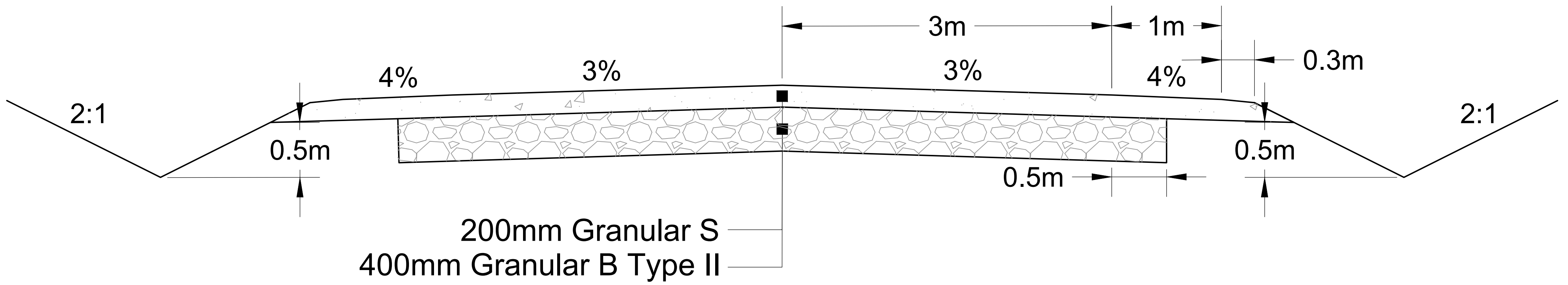
TYPICAL CROSS SECTION - KP 0+234.29 - KP 0+261.33

SCALE 1:50



TYPICAL CROSS SECTION - KP 0+261.33 - KP 0+269.58

SCALE 1:50



TYPICAL CROSS SECTION - KP 0+278.63 - KP 0+327.84

SCALE 1:50

LEGEND

GRANULAR S

GRANULAR B

REV.	DATE	DESCRIPTION	PREPARED BY	VERIFIED BY
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REVISION

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VERIFIED BY: DAVID CHOU (P.Eng.) PEO #100517690	DATE: 29-07-2022	ROAD ALIGNMENT TYPICAL CROSS SECTIONS	
APPROVED BY: MARIA-PIA LONGO (P.Eng.) PEO #100544824	DATE: 29-07-2022	FORMAT A3	DWG Nº 22012-IEDC-0001 REV. C