



DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY

UNDERBERG ASPHALT SURFACING ROADS PHASE 4

SALIGNA AVENUE: WARD 3

CONTRACT N⁰ PWBS-B023/22/23

BOOK OF DRAWINGS

Prepared for:

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Prepared by:

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NDWEDWE LOCAL MUNICIPALITY

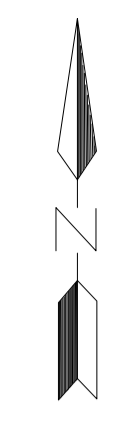
BOOK OF DRAWINGS – INDEX


CIVIL DRAWINGS	
DRAWING NUMBER	DRAWING DESCRIPTION
1. UA1214-01-001-LYT-T-00	General Road Layout Plan
2. UA1214-01-002-LYT-T-00	General Road Layout Plan: km 0+000 to km 0+120
3. UA1214-01-003-LYT-T-00	General Road Layout Plan: km 0+120 to km 0+240
4. UA1214-01-004-LYT-T-00	General Road Layout Plan: km 0+240 to km 0+292
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8. MIG SIGN BOARD	Mig Sign Board



**SALIGNA ASPHALT ROAD
LAYOUT PLAN**
Scale 1:500

ISSUED FOR TENDER ONLY



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 Westville,
 3629

DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:
**UPGRADING OF ROADS IN
 UNDERBERG TO
 ASPHALT ROADS**

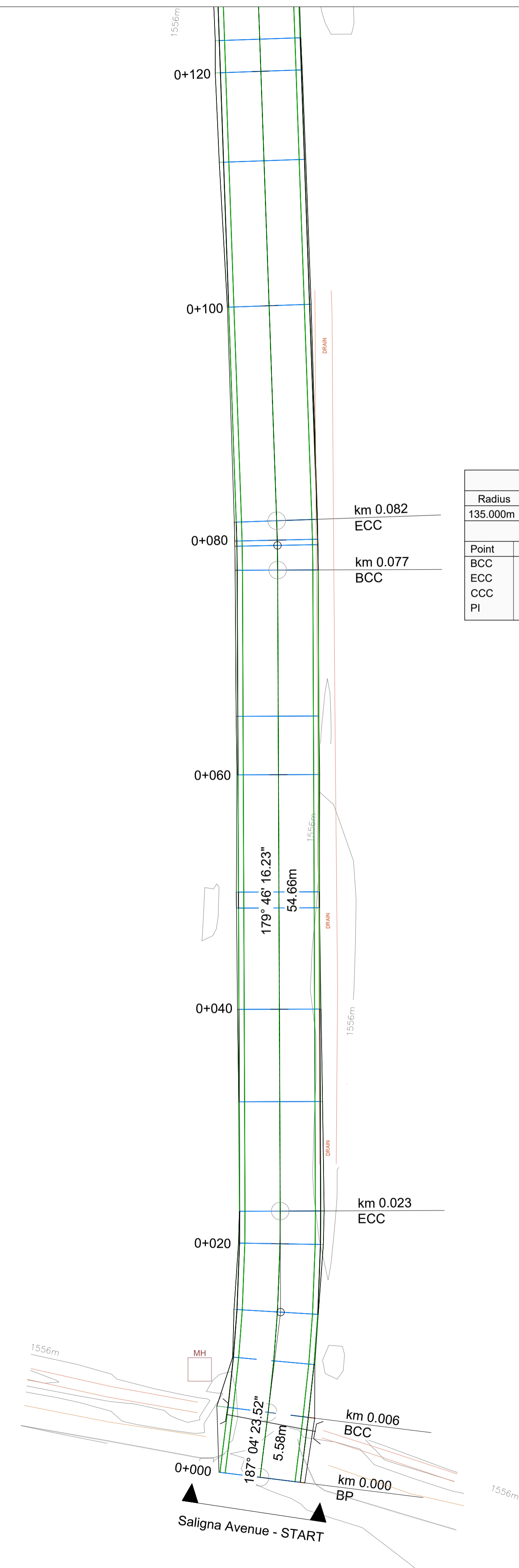
DRAWING TITLE:
**GENERAL ROAD
 LAYOUT PLAN:
 SALIGNA AVENUE**

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	AS SHOWN	

APPROVED - CLIENT
 SIGNATURE _____ DATE _____

PROJECT NUMBER	DRAWING NUMBER		
UA1214/01	UA1214-01-001-LYT-T-00		
STAGE	SHEET NO.	SHEET NO.	REVISION
DESIGN	A1	1 of 7	-

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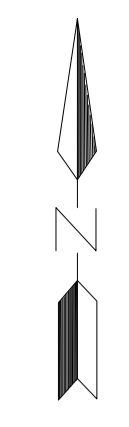


CURVE 02 DATA			
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Coordinates (m)			
Point	Y	X	
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ECC	-47709.725	3297193.956	
CCC	-47574.809	3297198.705	
PI	-47709.799	3297196.061	


CURVE 01 DATA			
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Coordinates (m)			
Point	Y	X	
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ECC	-47710.026	3297252.825	
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PI	-47710.060	3297261.439	

SALIGNA ASPHALT ROAD
CHAINAGE KM 0+00 TO KM 0+120
Scale 1:250

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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN
UNDERBERG TO
ASPHALT ROADS

DRAWING TITLE:

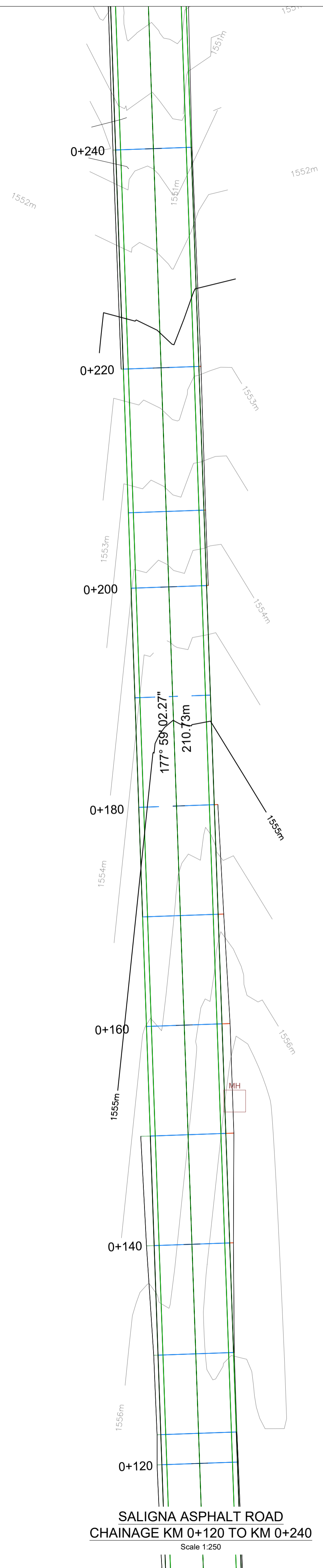
GENERAL ROAD
LAYOUT PLAN:
SALIGNA AVE - KM 0+000 TO KM 0+120

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	AS SHOWN	

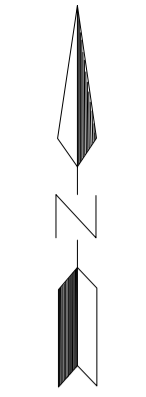
APPROVED - CLIENT

SIGNATURE _____ DATE _____

PROJECT NUMBER	DRAWING NUMBER		
UA1214/01	UA1214-01-002-LYT-T-00		
STAGE	SHEET SIZE	SHEET No.	REVISION
DESIGN	A1	2 of 7	-
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SALIGNA ASPHALT ROAD
CHAINAGE KM 0+120 TO KM 0+240
Scale 1:250



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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN
UNDERBERG TO
ASPHALT ROADS

DRAWING TITLE:

GENERAL ROAD
LAYOUT PLAN:

SALIGNA AVE - KM 0+120 TO KM 0+240

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	AS SHOWN	

APPROVED : CLIENT

SIGNATURE _____ DATE _____

PROJECT NUMBER	DRAWING NUMBER
UA1214/01	UA1214-01-003-LYT-T-00

STAGE	SHEET SIZE	SHEET No.	REVISION
DESIGN	A1	3 of 7	-

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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN
UNDERBERG TO
ASPHALT ROADS

DRAWING TITLE:

GENERAL ROAD
LAYOUT PLAN:
SALIGNA AVE - KM 0+240 TO KM 0+292

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	AS SHOWN	

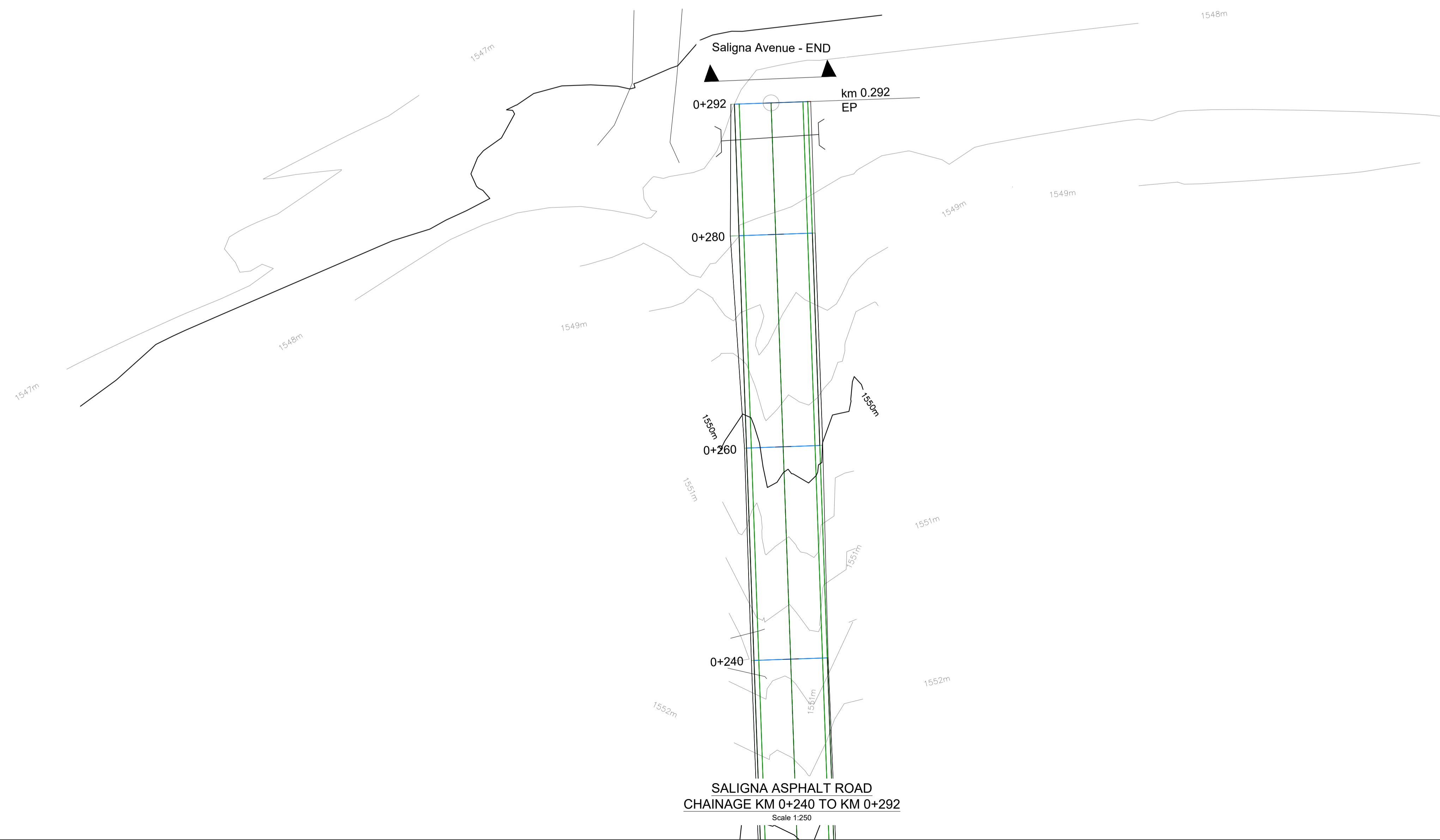
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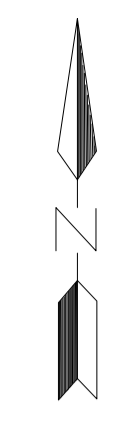
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UA1214/01	UA1214-01-004-LYT-T-00

STAGE	SHEET SIZE	SHEET No.	REVISION
DESIGN	A1	4 of 7	-


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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN UNDERBERG TO ASPHALT ROADS

DRAWING TITLE:

LONGSECTION

SALIGNA AVE - KM 0+000 TO KM 0+292

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	AS SHOWN	

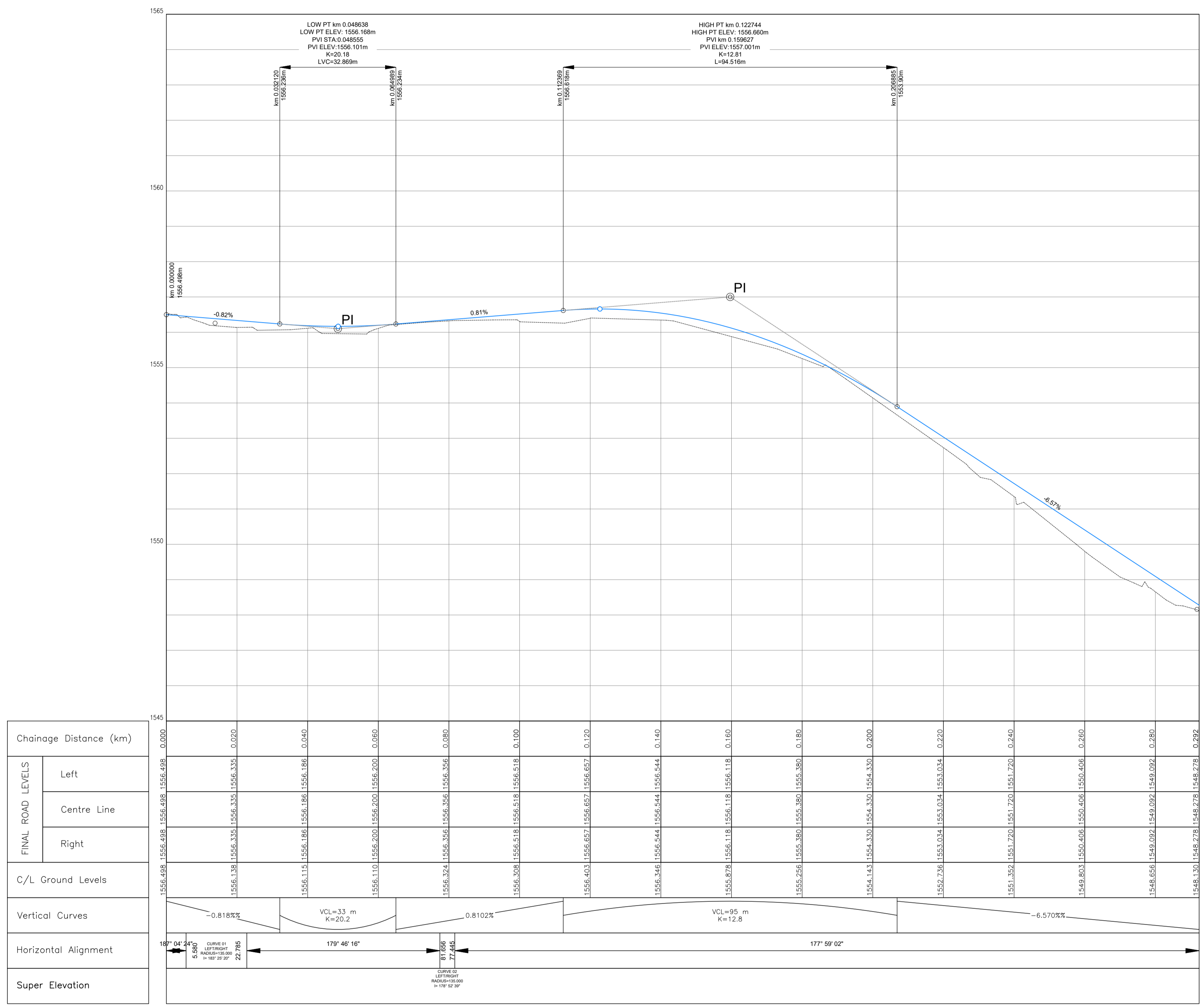
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SIGNATURE

DATE

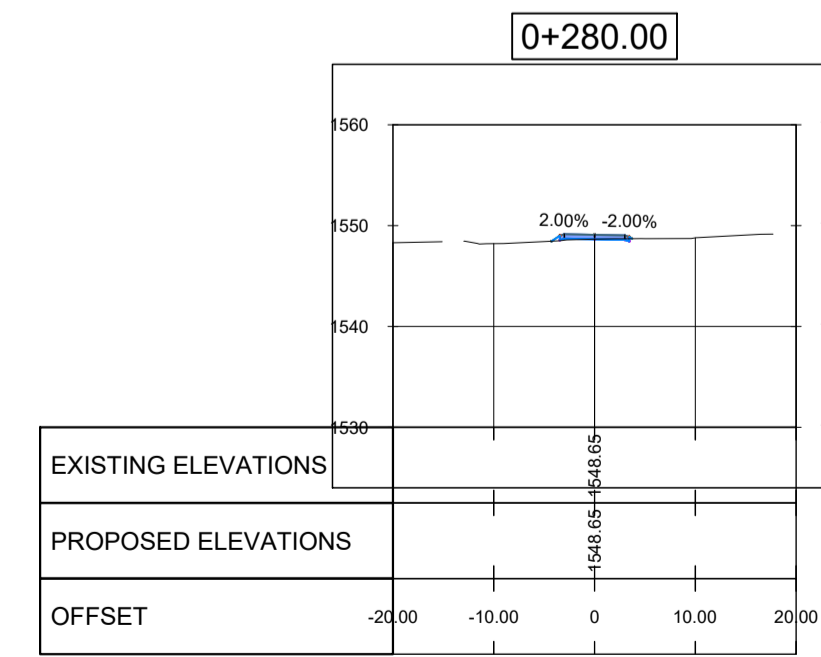
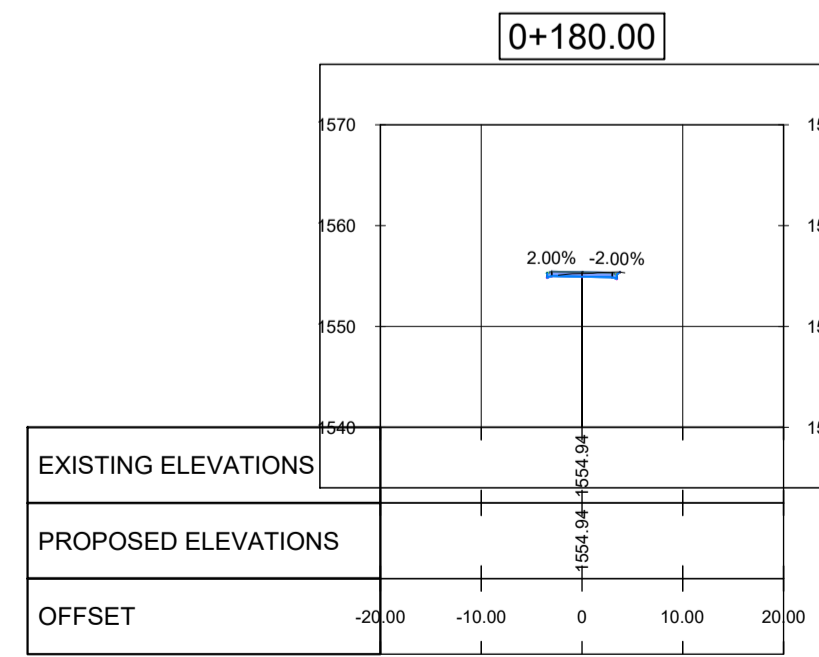
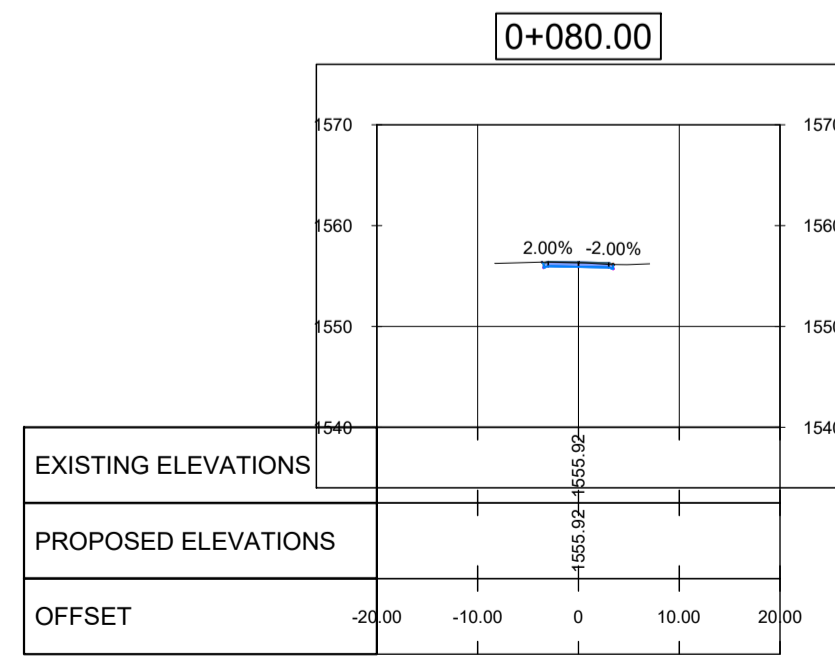
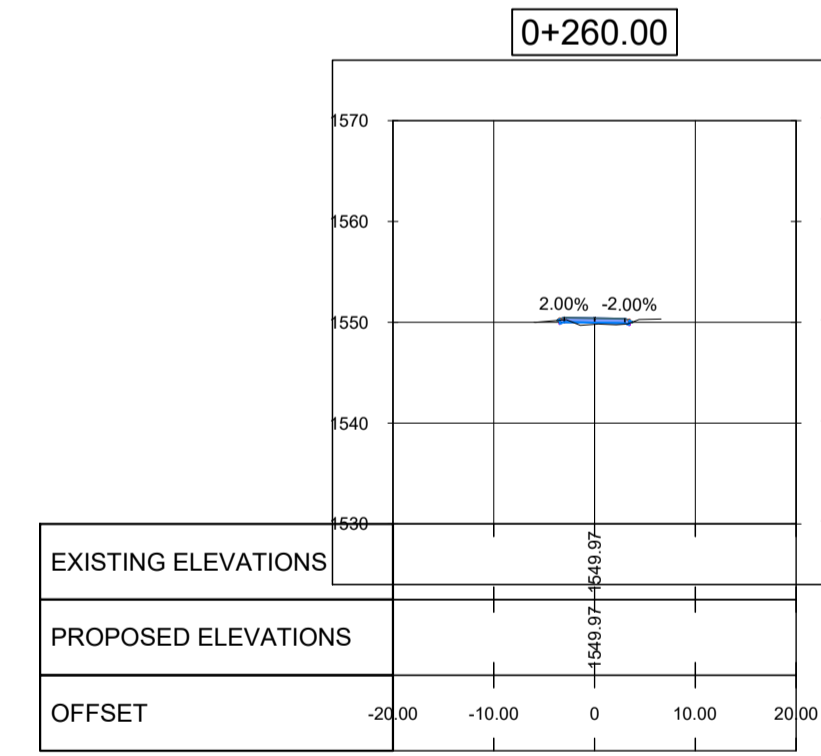
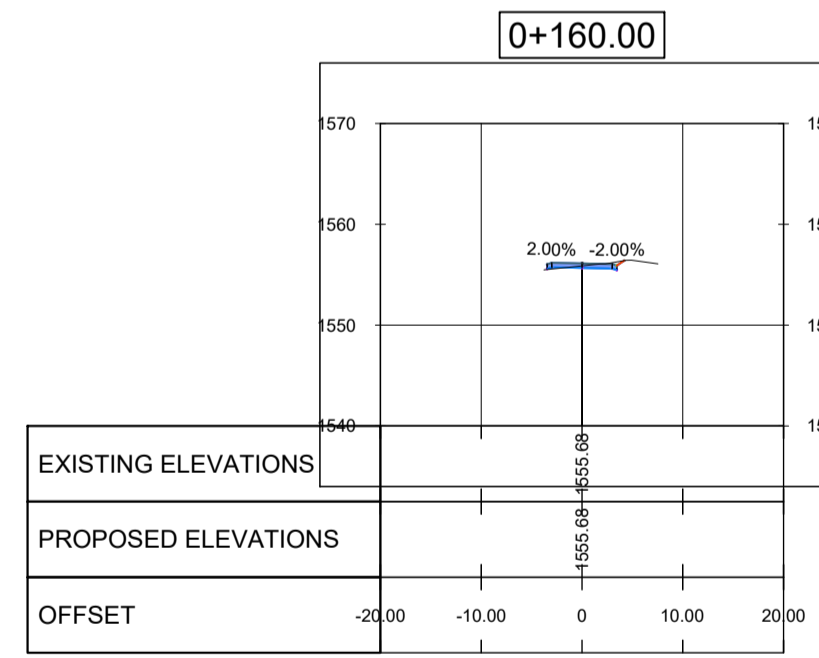
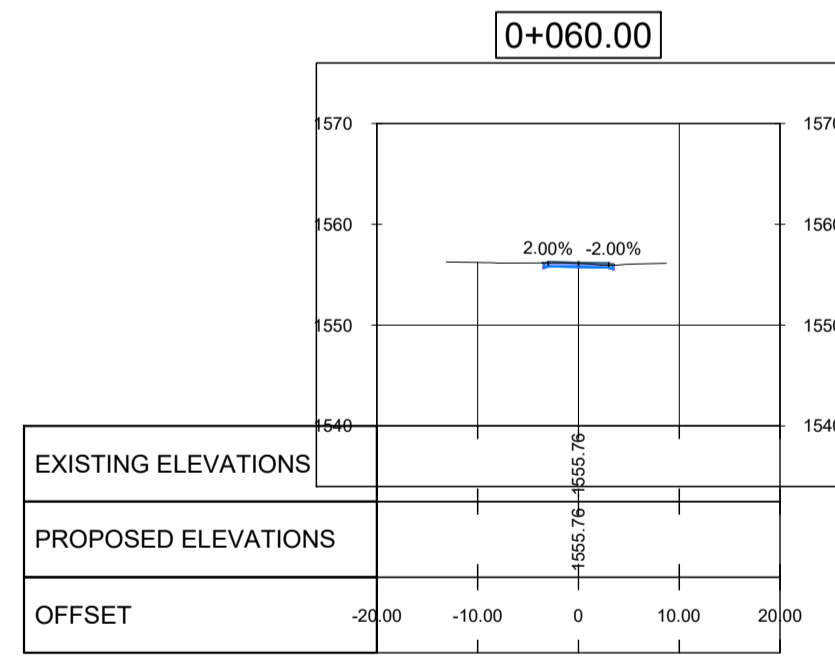
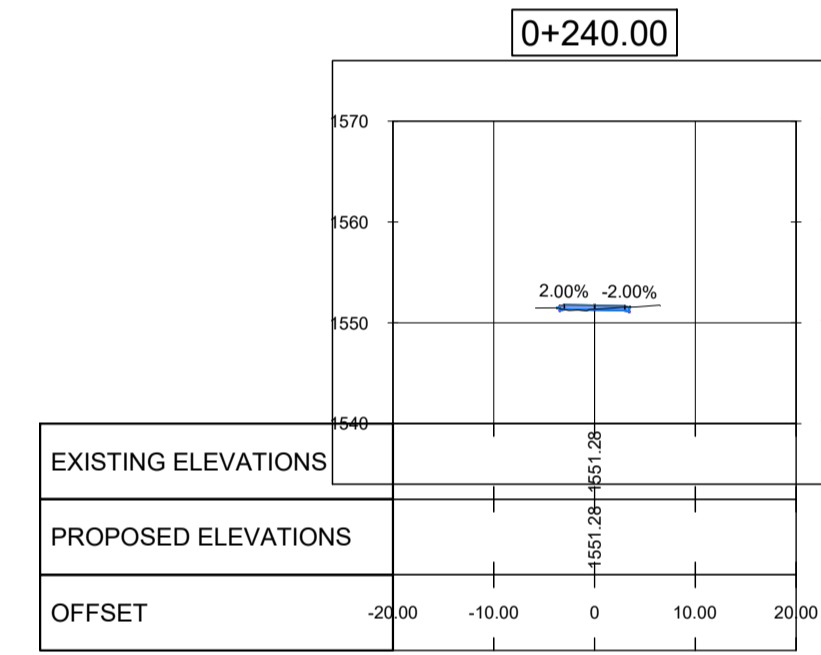
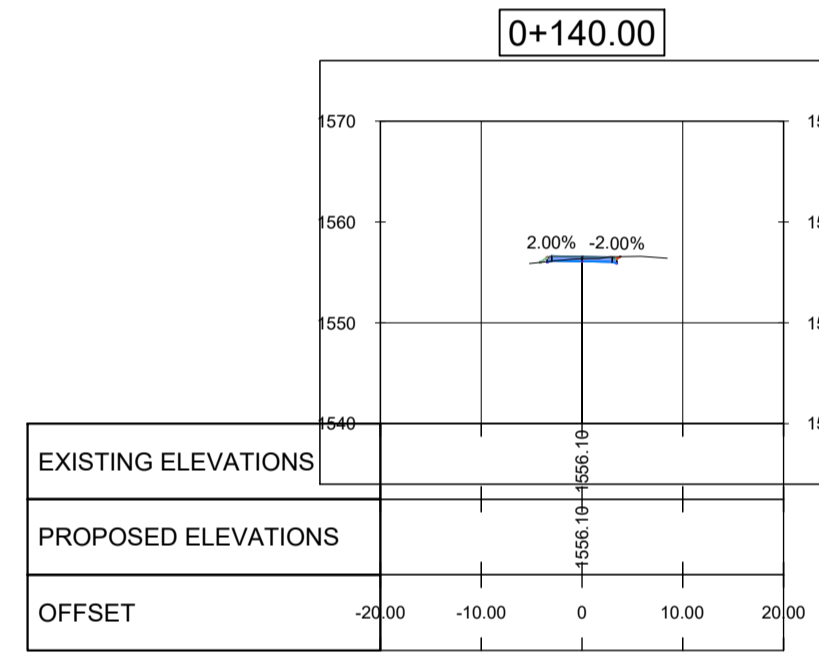
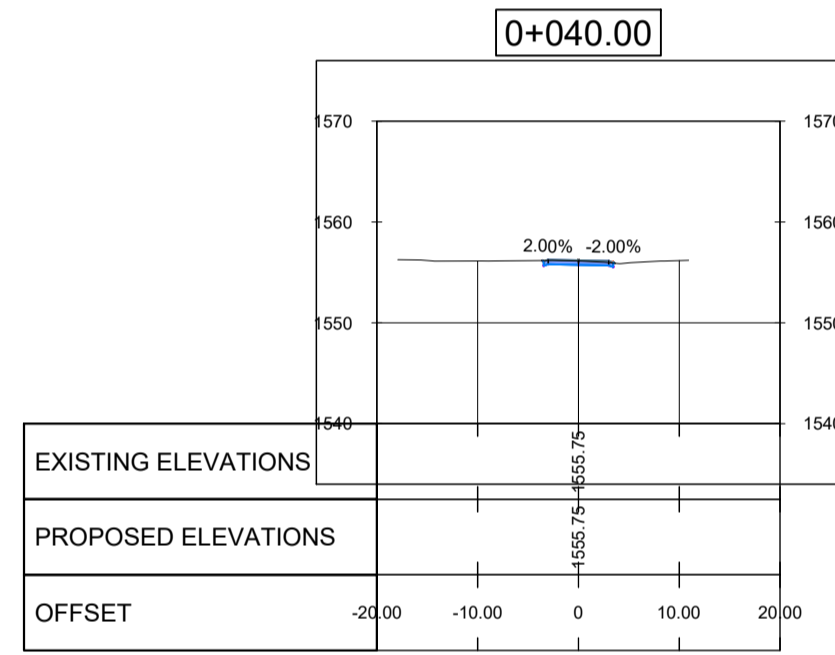
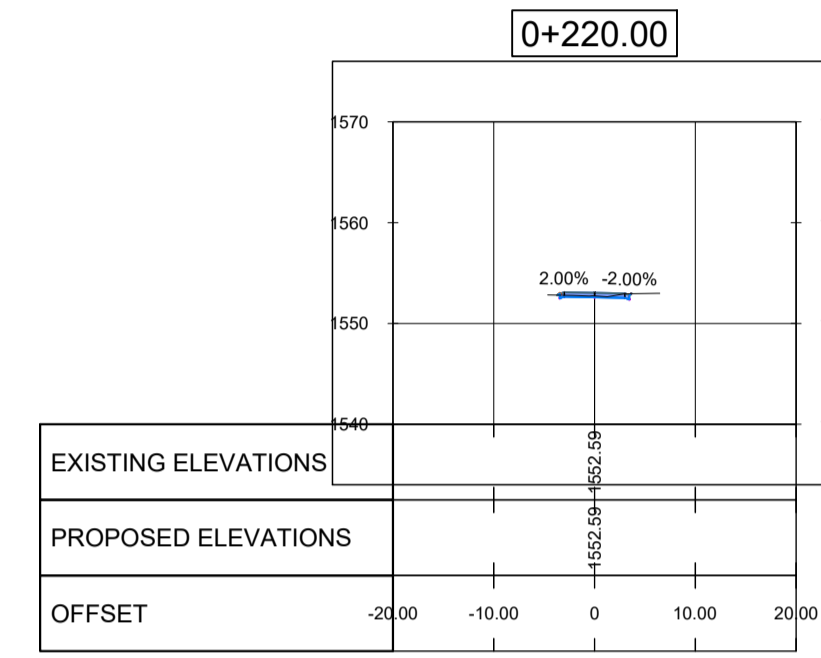
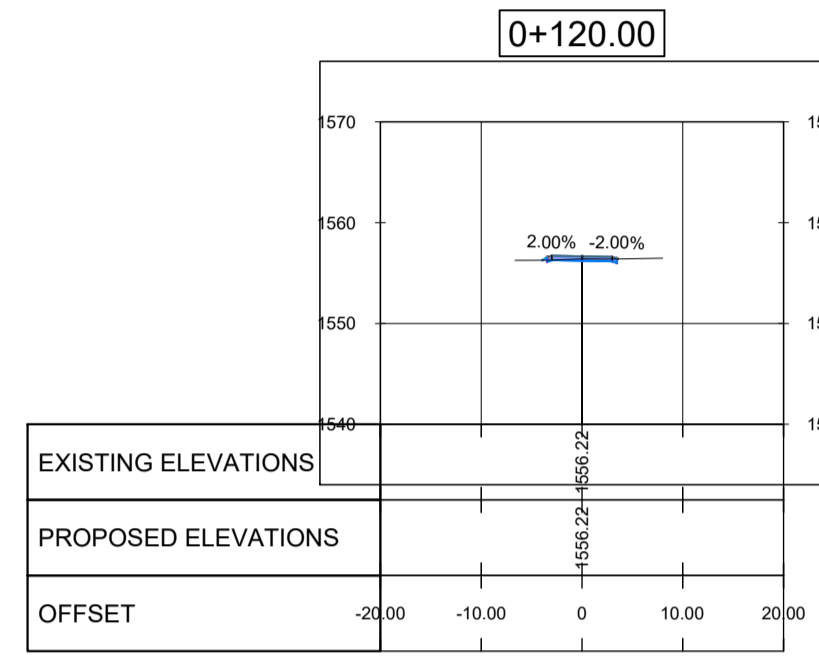
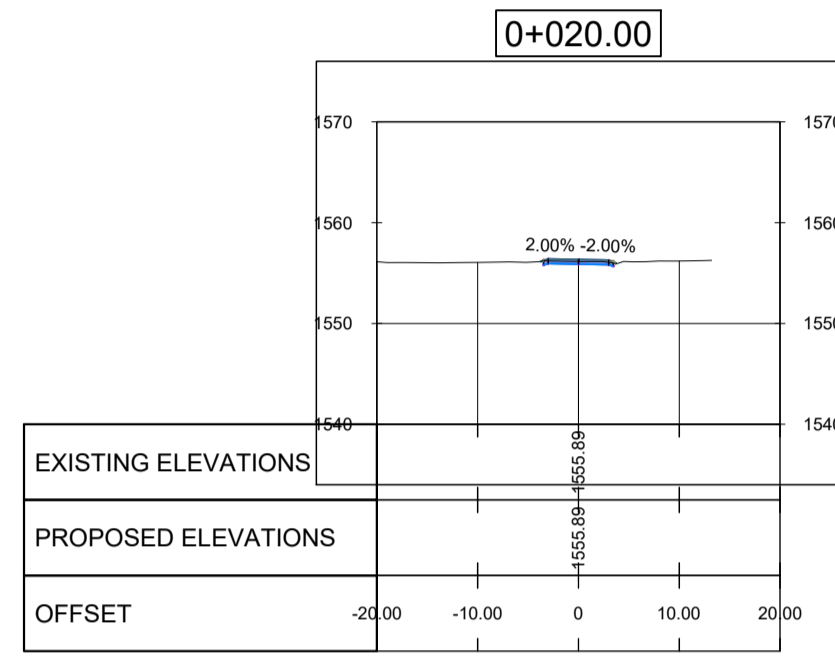
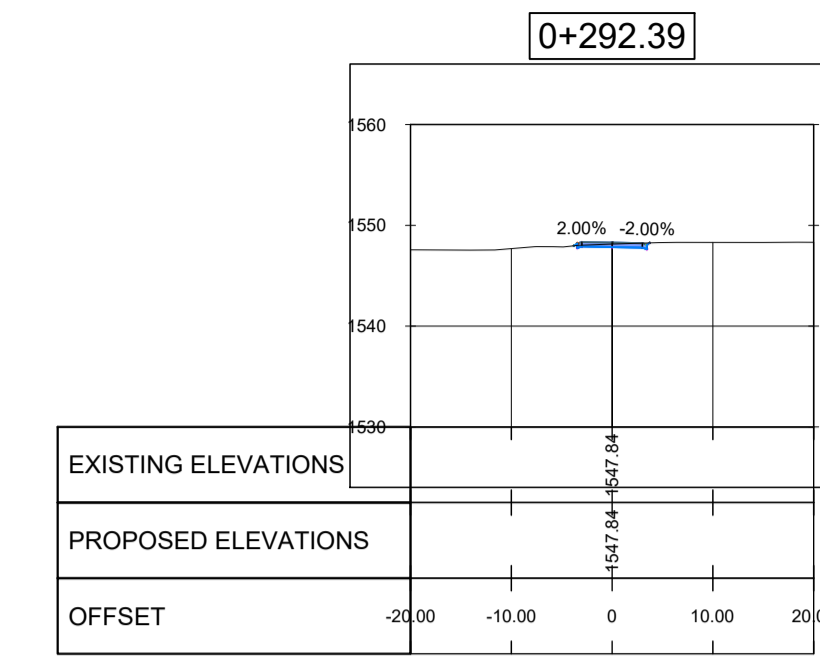
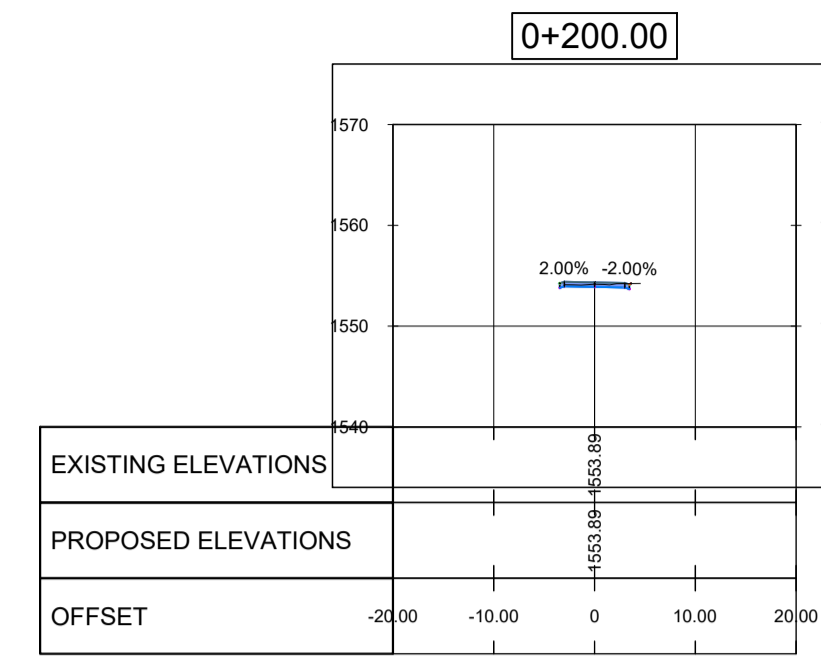
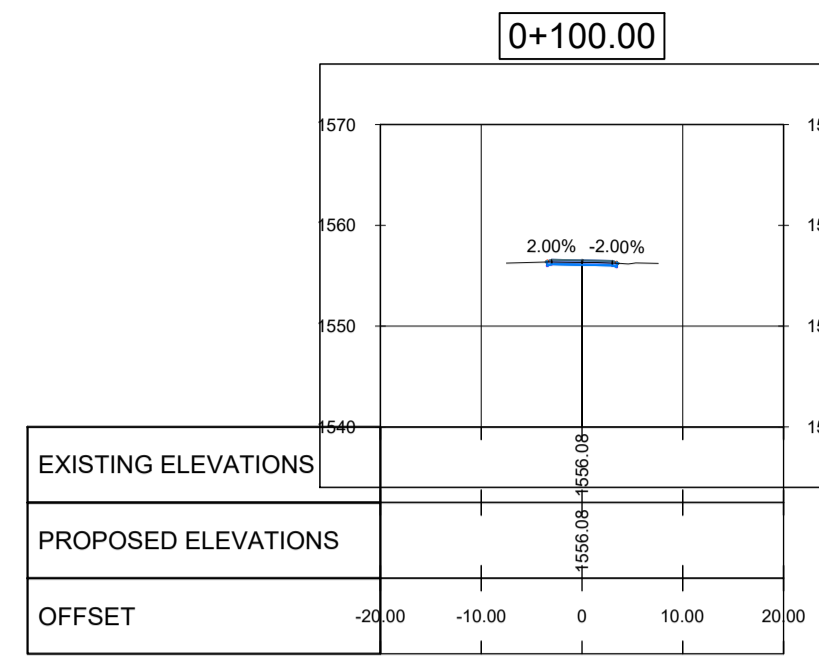
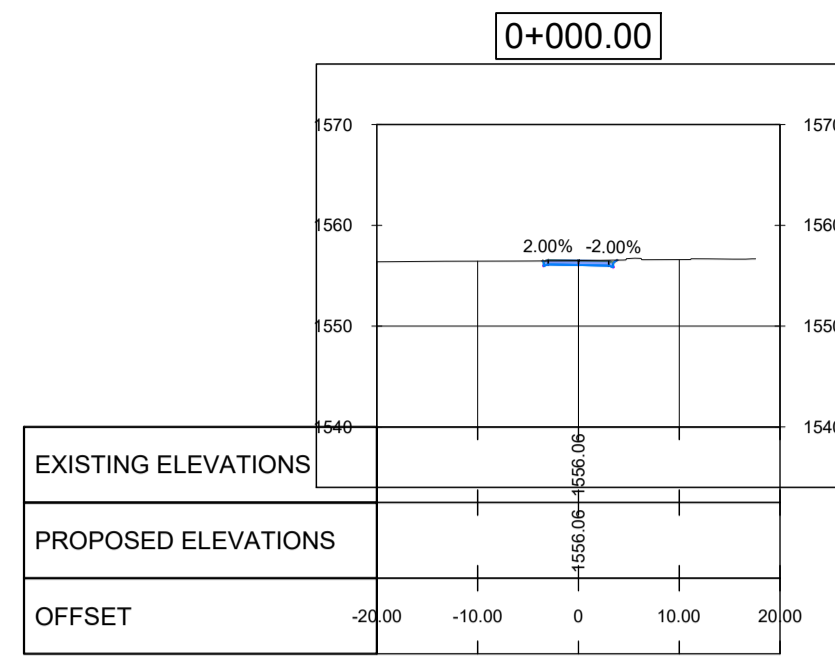
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UA1214/01	UA1214-01-005-LS-T-00		
STAGE	SHEET SIZE	SHEET No.	REVISION
DESIGN	A1	5 of 7	-

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SALIGNA ASPHALT ROAD
LONG-SECTION KM 0+000 TO KM 0+292
Scale 1:750

ISSUED FOR TENDER ONLY



SALIGNA ASPHALT ROAD
CROSS-SECTIONS
Scale 1:500

ISSUED FOR TENDER ONLY



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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN UNDERBERG TO ASPHALT ROADS

DRAWING TITLE:
CROSS SECTIONS
SALIGNA AVENUE

RESPONSIBLE PERSONNEL	SIGNATURE	DATE
DESIGNED	LH	06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022

SCALE: **AS SHOWN**

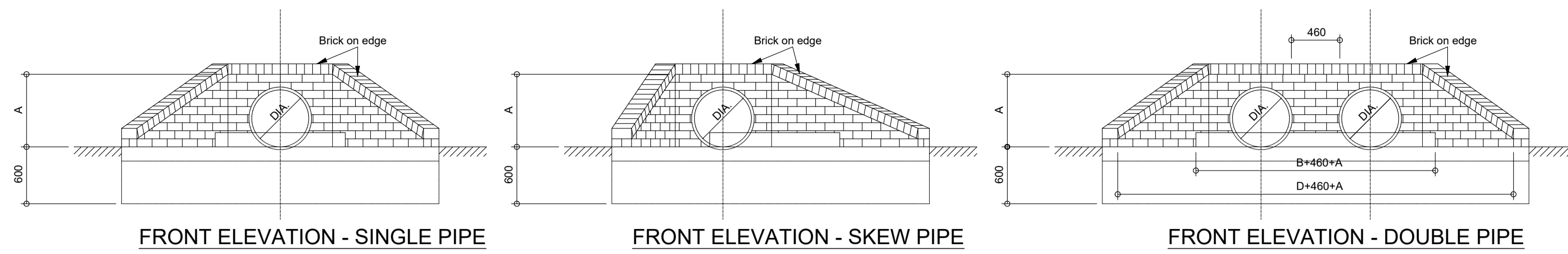
APPROVED: CLIENT

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DESIGN	A1	6 of 7	-

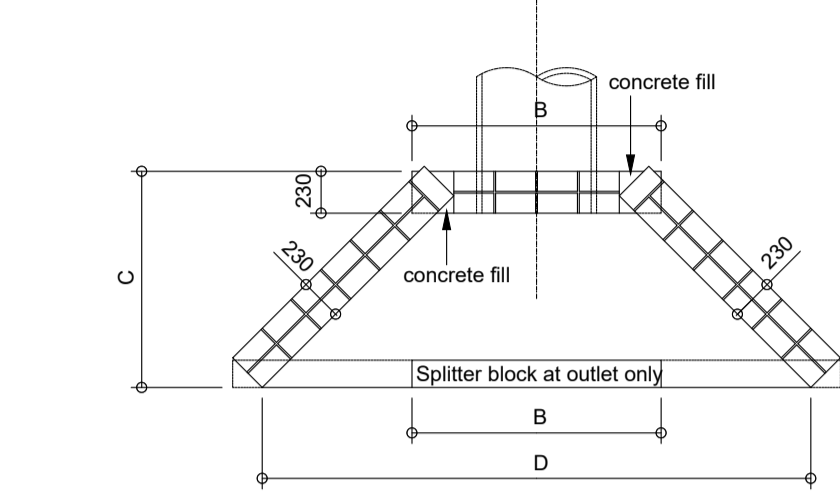
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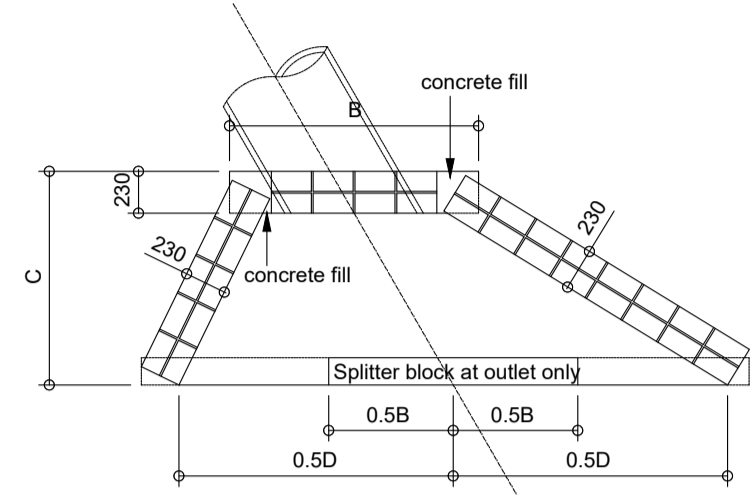
FRONT ELEVATION - SINGLE PIPE

FRONT ELEVATION - SKEW PIPE

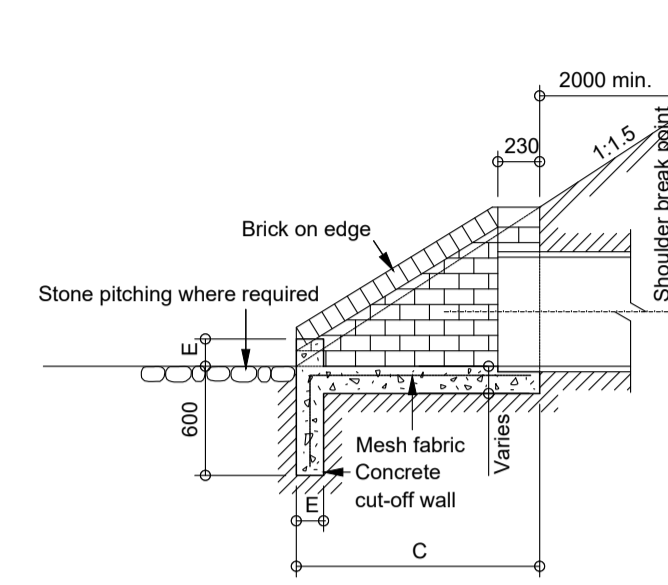
FRONT ELEVATION - DOUBLE PIPE



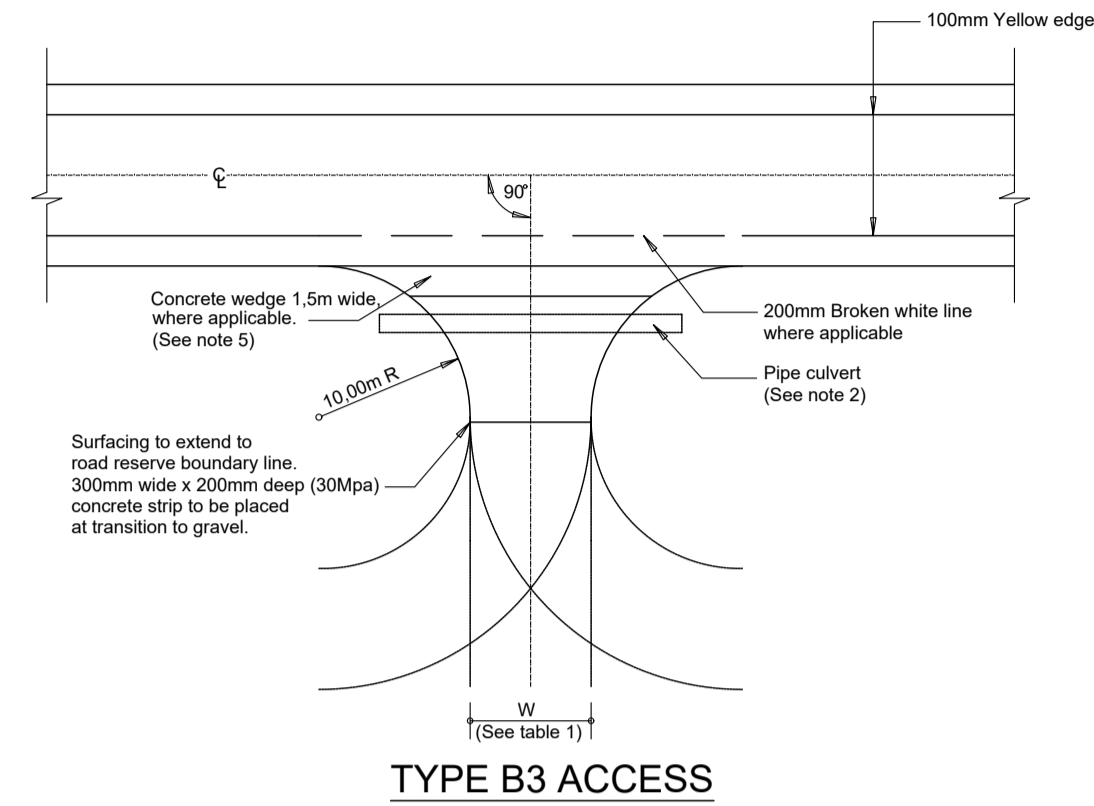
LAYOUT OF BRICKWORK



LAYOUT OF BRICKWORK



SECTION A-A



TYPE B3 ACCESS

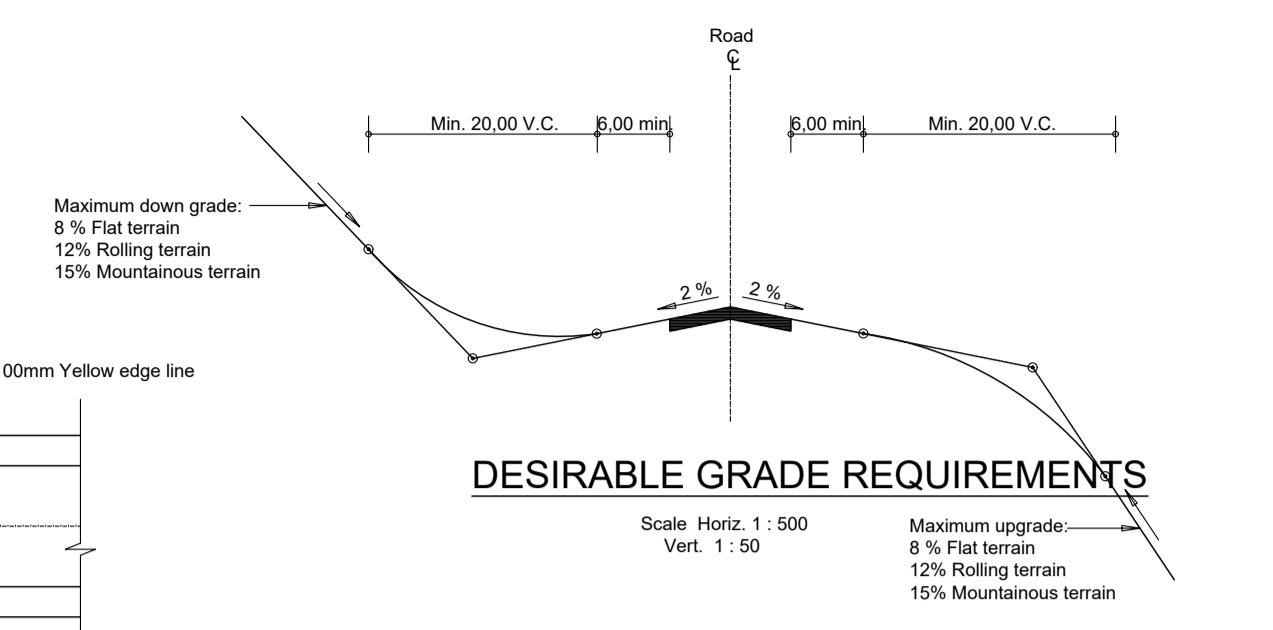
USAGE	MIN. WIDTH (W)	DESIRABLE WIDTH (W)
Predominantly light vehicles < 10vpd.	3,00	5,00
Predominantly light vehicles > 10 vpd.	5,00	7,00
Predominantly heavy vehicles < 10vpd.	5,00	8,00
Predominantly heavy vehicles > 10vpd.	7,00	10,00

TABLE 1: DESIRABLE USAGE AND DIMENSIONS FOR TYPE B1/B3 ACCESS

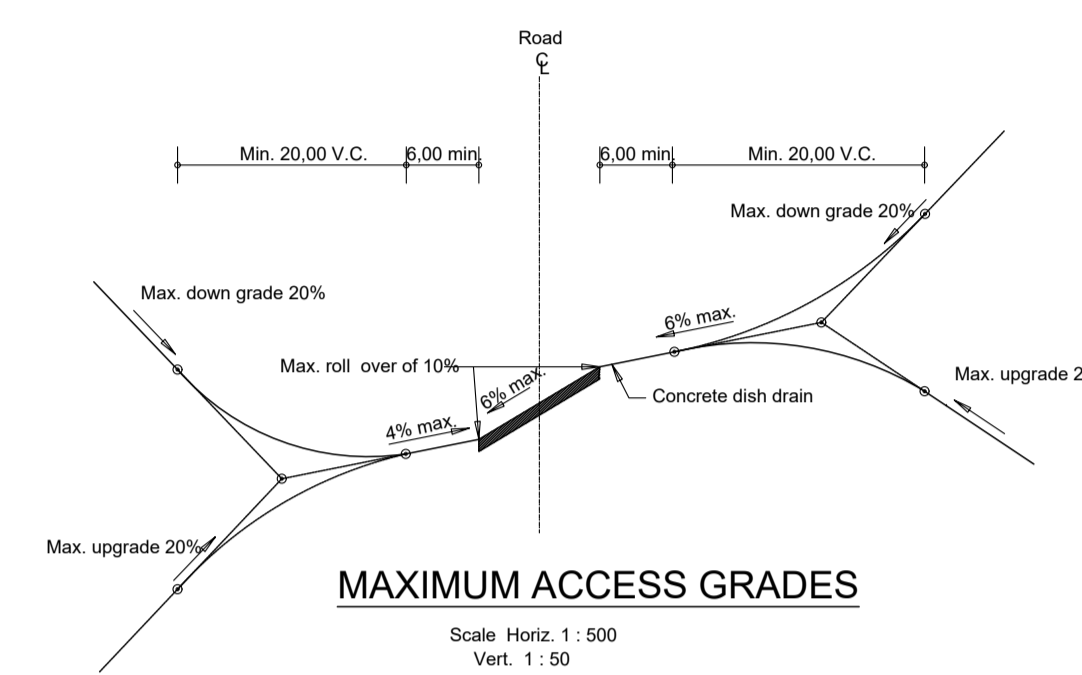
NOTES:

- Splitter block and pitching to be provided at all outlets where erosion is likely to occur.
- Splitter block may be omitted if discharge velocity is less than 0.9 m/s.
- Cut-off walls may be omitted if structure is founded on rock.
- For multiple pipe culverts increase dimensions 'E' and 'F' by $(n-1)(A+460)/mm$: Where n = number of pipes and A = nominal diameter of pipes
- Pipes to be cut flush with headwall.
- For skew pipe culverts the headwall shall be parallel to the centre line of the road.
- If corrugated metal pipes are used 4x20mmx150mm long galvanised anchor bolts in the hollows of the corrugation are to be used.
- All concrete is to be 20MPa.
- Square mesh fabric (Reference S.M.F. 193) is to be placed 50mm from top in all apron slabs and centrally in cut-off walls.
- Brickwork is to consist of good quality burnt clay common bricks in accordance with SABS 227 Specification, or cement bricks in accordance with SABS 987 Specification, uniform in size and shape laid in stretcher bond style with the skins tied together with galvanised crimped wire wall ties.
- Brickforce is to be placed every 4th course.
- Jointing on all visible faces to be pointed.
- No in-fill shall be larger than a half standard brick size unless 15MPa concrete is used.
- Pipe crossings to be verified on site.

Nominal Dia.	Dimensions (mm)				
	A	B	C	D	E
450	595	1 150	1 050	2 700	150
600	765	1 380	1 200	3 000	150
750	935	1 610	1 350	3 300	150
900	1 105	1 840	1 500	3 600	230
1 050	1 275	2 070	1 750	3 900	230
1 200	1 445	2 300	1 900	4 200	230



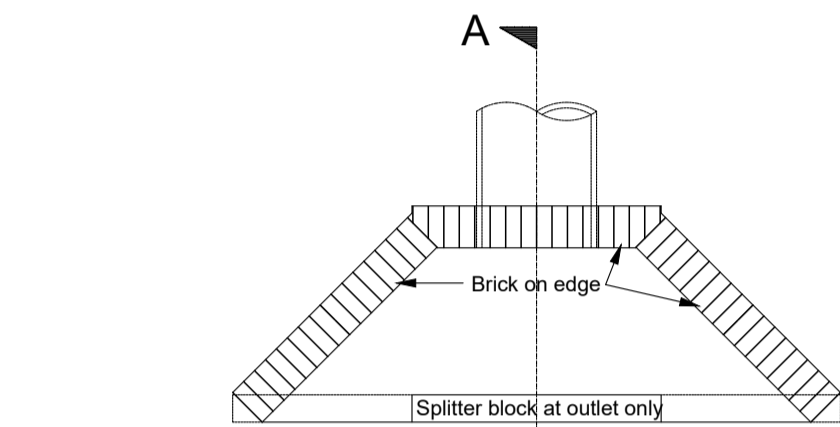
DESIRABLE GRADE REQUIREMENTS



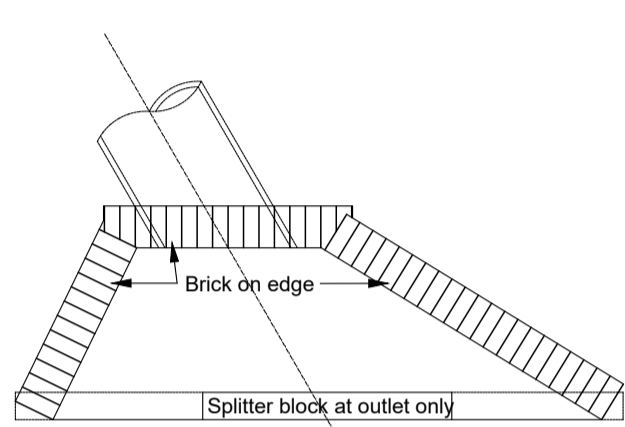
MAXIMUM ACCESS GRADES

NOTES:

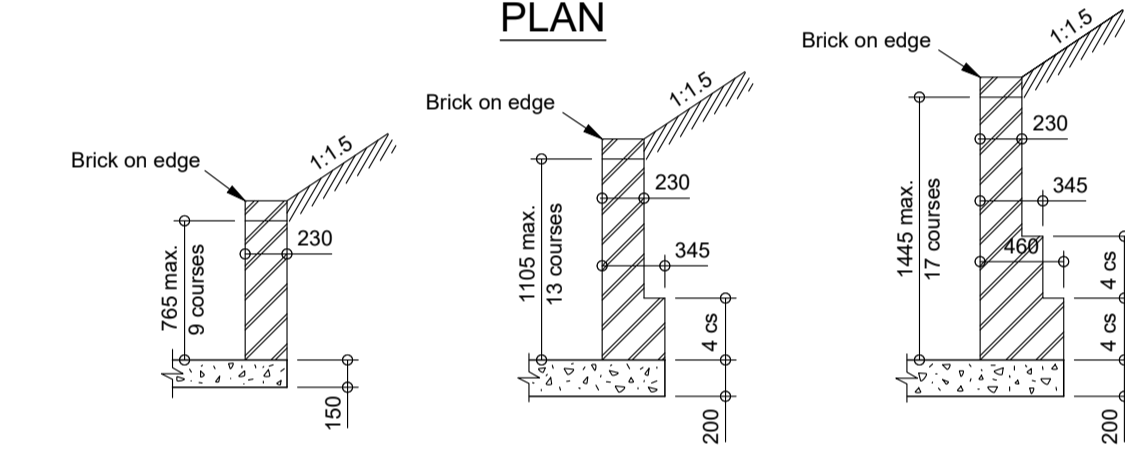
- Type B accesses are recommended for secondary and tertiary road intersections and roads serving minor developments.
- Pipe culverts are to be provided when necessary to maintain longitudinal drainage. The pipe shall be manufactured of concrete or galvanised metal with a minimum diameter of 450mm. The pipe shall be sufficiently long to clear the fill slopes.
- The access bellmouth shall be designed and constructed such that stormwater from the access will not run onto or across the road surface.
- The pavement layers shall be constructed as directed by the Engineer.
- Gravel surfacing is only permitted in isolated areas where the cost of surfacing would be unreasonably high. A concrete wedge 1.5m wide shall then be provided to protect the pavement edge.
- Where two roads intersect, the numerical difference of the gradients (roll over) should not exceed 10% with a maximum super of 6% on the main road.
- Maximum approach gradient to be 4% upgrade and 6% down grade.



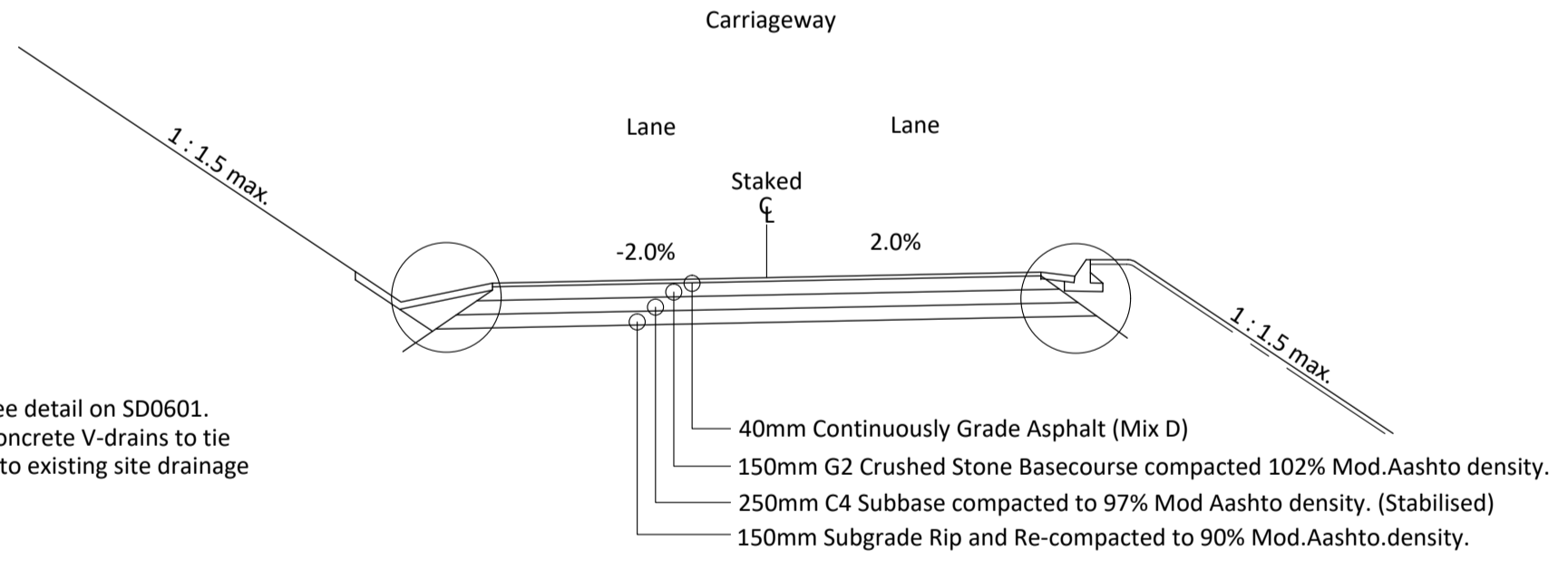
PLAN



PLAN OF SKEW CULVERT

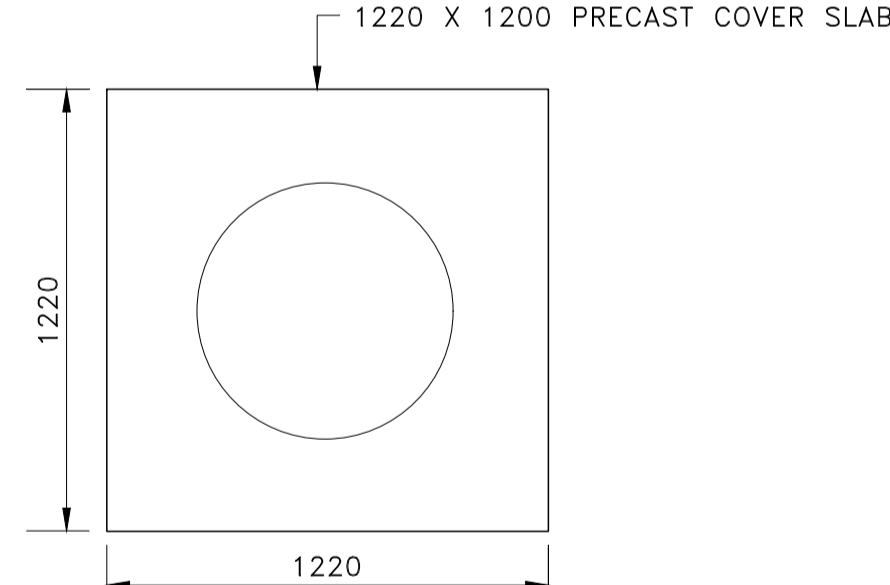


TYPICAL RETAINING WALL DETAILS

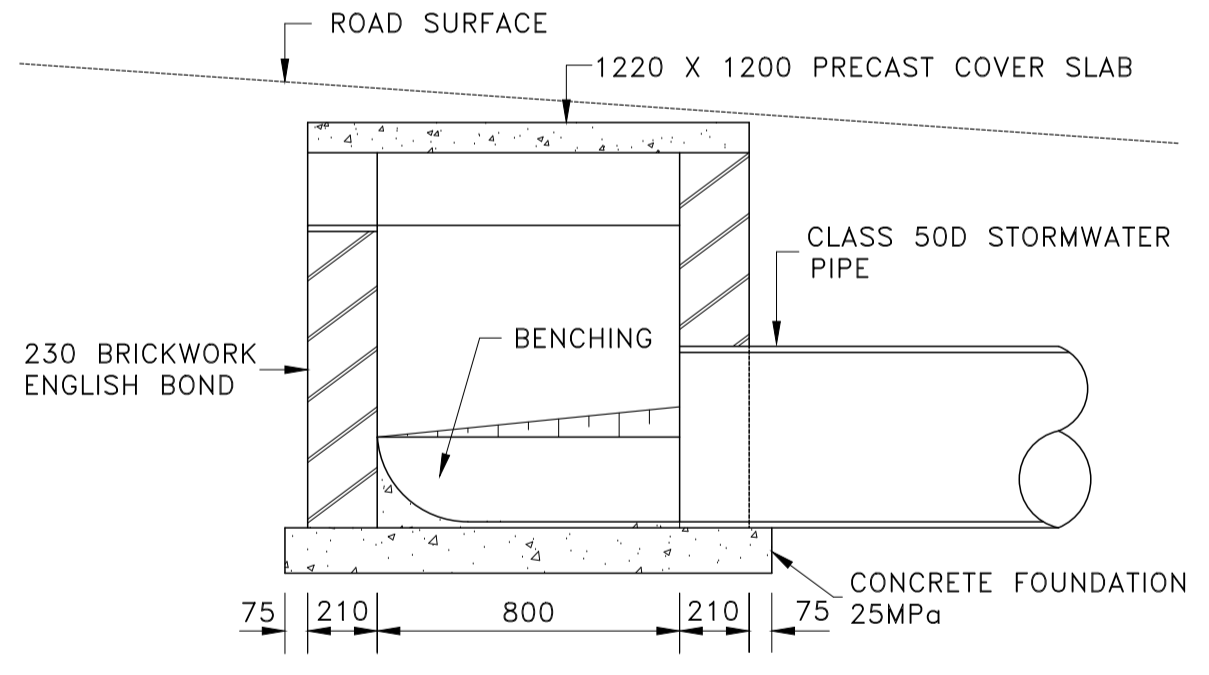


TYPICAL CROSS SECTION - 6m WIDE

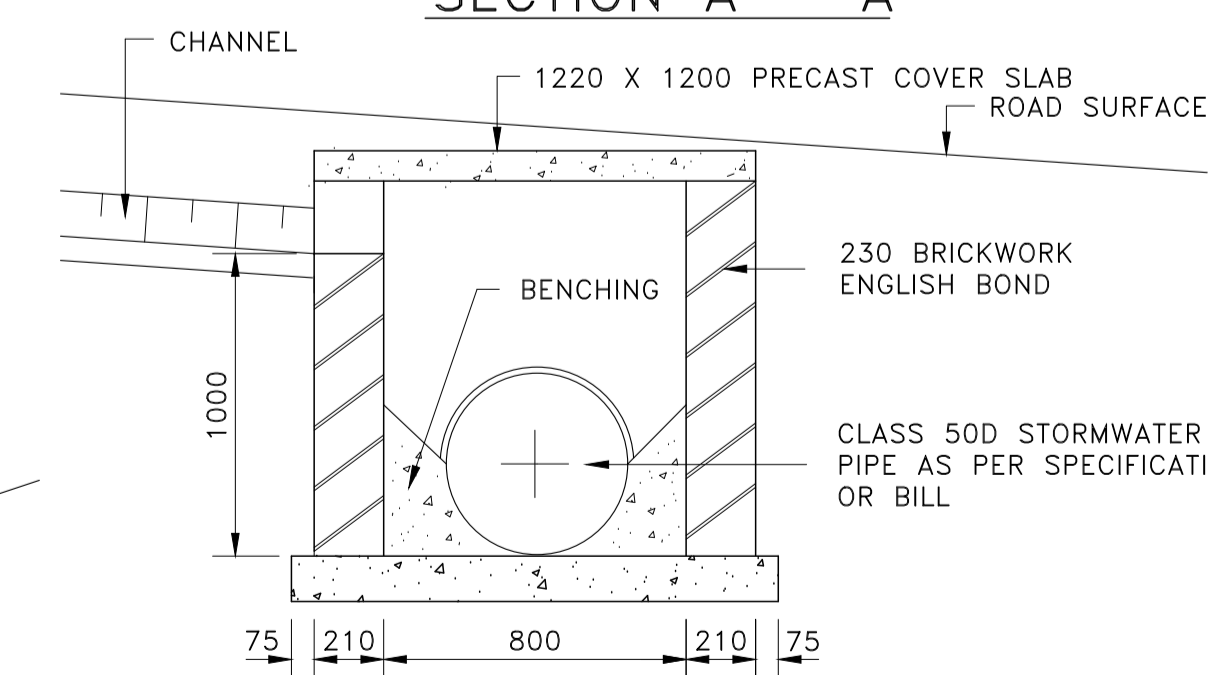
SALIGNA AVE AND SOUTH LANE ROAD



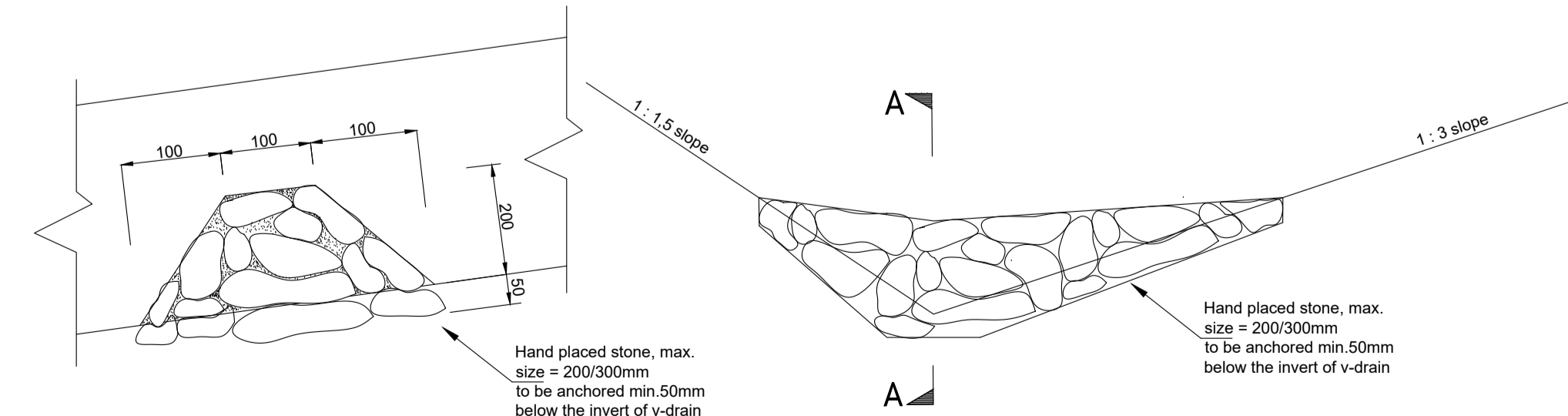
HEAVY DUTY PRECAST MANHOLE COVER



SECTION A - A

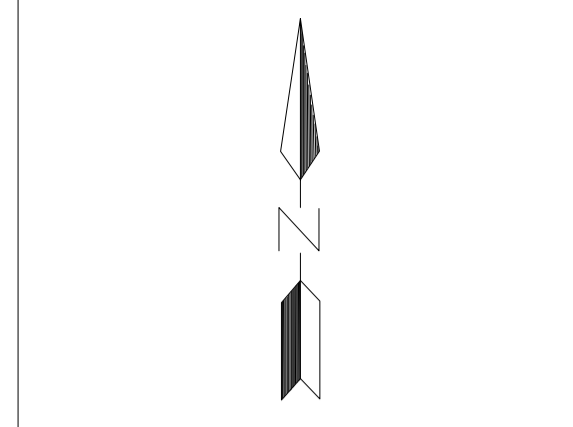



SECTION B - B



SECTION A-A N.T.S.

BOLSTERS DETAIL N.T.S.



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DRAWING REVISIONS

REV	DATE	DRAWN	CHECKED	DESCRIPTION

PROJECT NAME:

UPGRADING OF ROADS IN UNDERBERG TO ASPHALT ROADS

DRAWING TITLE:

STANDARD DETAILS

SALIGNA AVE - KM 0+000 TO KM 0+295
 POLO WAY ROAD - KM 0+000 TO KM 0+498
 SOUTH LANE ROAD - KM 0+000 TO KM 0+195

RESPONSIBLE PERSONNEL

DESIGNED	SIGNATURE	DATE
LH		06/08/2022
DRAWN	LH	06/08/2022
CHECKED	SS	06/08/2022
APPROVED	SS	06/08/2022
SCALE	NTS	

APPROVED - CLIENT

SIGNATURE _____ DATE _____

PROJECT NUMBER: UA121401 DRAWING NUMBER: UA1214-01-007-DET-A-00

STAGE: DESIGN SHEET NO: A1 SHEET NO: 7 of 7 REVISION: -

ISSUED FOR TENDER ONLY

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1230 mm

1500 mm

DR NKOSAZANA DLAMINI ZUMA MUNICIPALITY

SALIGNA AVENUE

Consulting Engineer

Shardesh Sewlal & Associates cc

Contractor

Contract Duration

4 Months

Financiers:

Municipal Infrastructure Grant (MIG)



**Cooperative Governance
& Traditional Affairs**

Department:
Co-operative Governance and Traditional Affairs
REPUBLIC OF SOUTH AFRICA

mig

**Municipal
Infrastructure
Grant**



cogta

Department:
Co-operative Governace and Traditional Affairs
PROVINCE OF KWAZULU-NATAL



NDZ MUNICIPALITY