



MAQUASSI HILLS LOCAL MUNICIPALITY




**CONSTRUCTION OF FLOOD MITIGATING STRUCTURES
IN TSWELELANG EXT 4 (CHRIS HANI)**

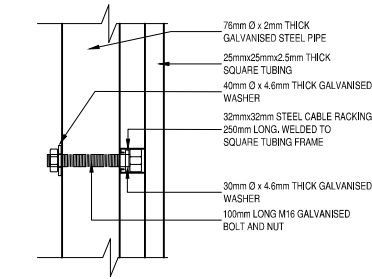
**TENDER DRAWINGS
VOLUME 2**

CONTRACT NUMBER: MHLM/SCM/MIG/ 02/2022/23

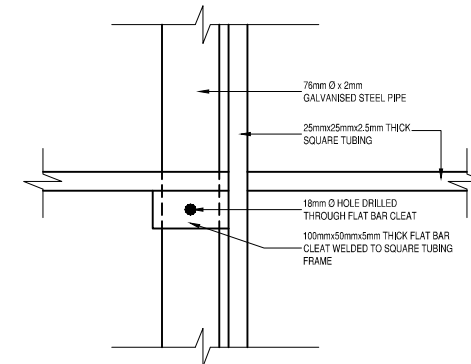
AUGUST 2022



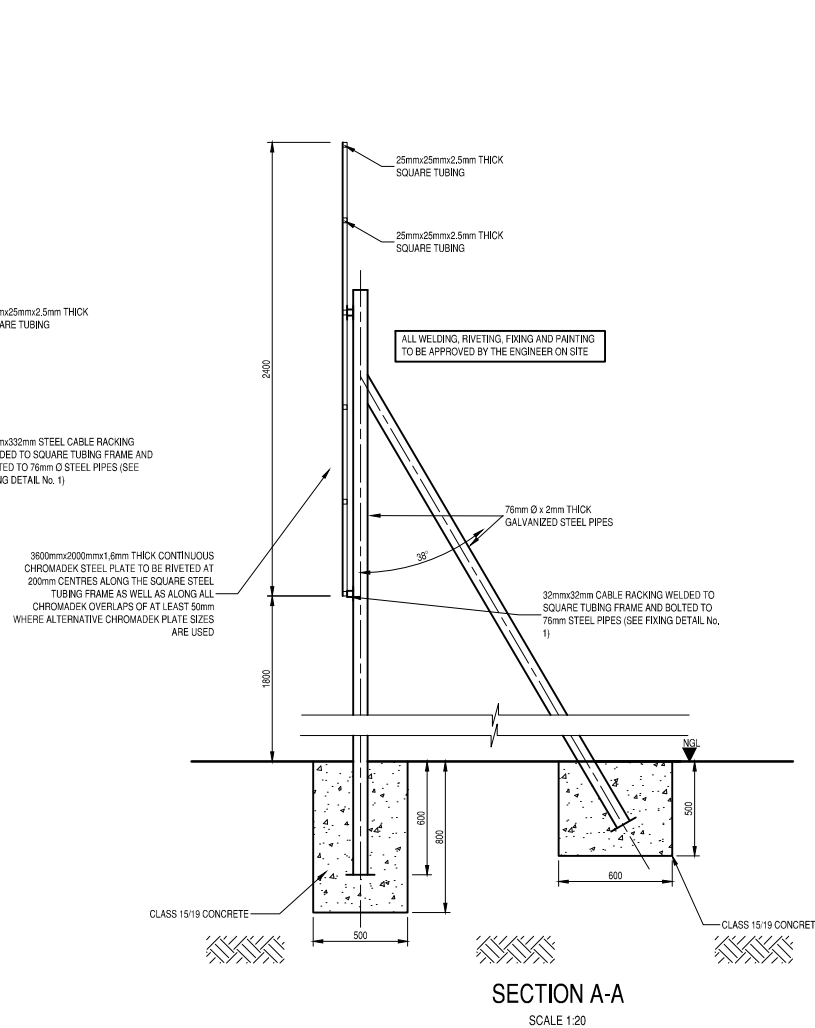
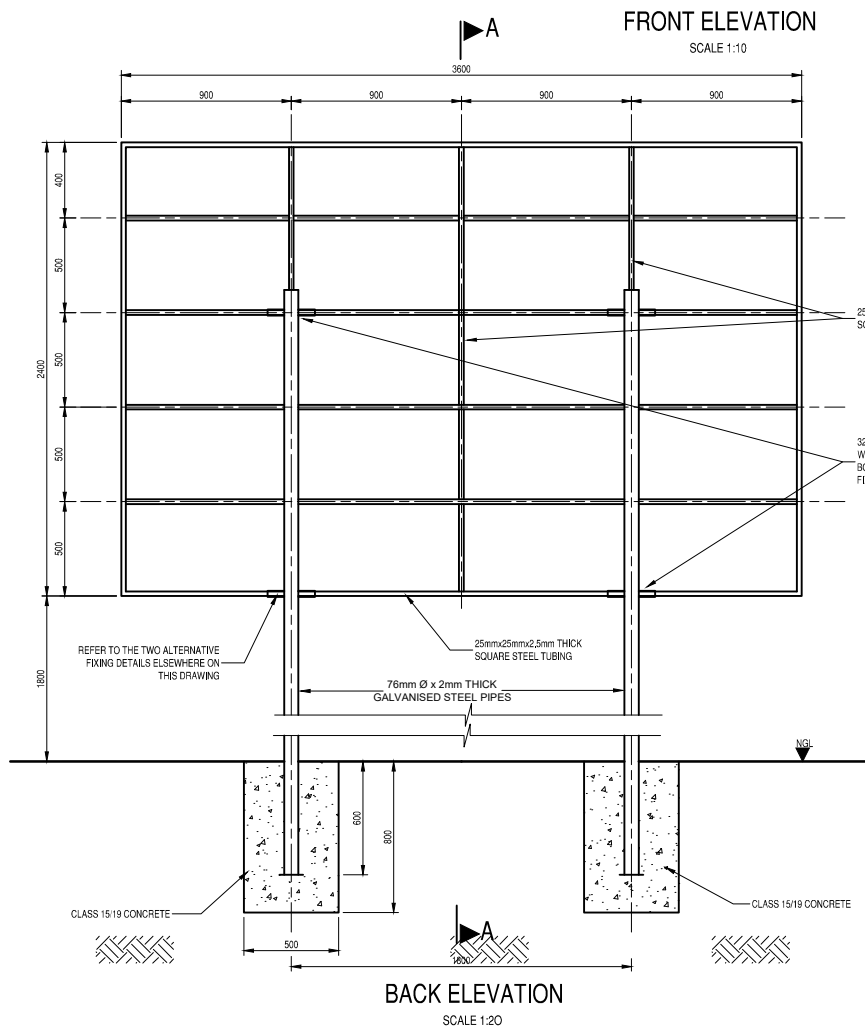
		MAQUASSI HILLS LOCAL MUNICIPALITY	
PROJECT NAME: CONSTRUCTION OF FLOOD MITIGATING STRUCTURES IN TSWELELANG EXT 4 (CHRIS HANI)			
CONTRACT NUMBER: MHLM/SCM/MIG/ 02/2022/23		PROJECT AMOUNT: -	
	FUNDING AGENT		
	MUNICIPAL INFRASTRUCTURE GRANT		
	CONSULTING ENGINEERS		
	TSELA TSWEU CONSULTING ENGINEERS		
CONTRACTOR (LOGO)	CONTRACTOR		
	CONTRACTOR NAME		



FIXING DETAIL No. 1
SCALE 1:5



FIXING DETAIL No. 2
SCALE 1:5
ALTERNATIVE FIXING DETAILS



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- Description in *Italics* must be adjusted to suit project details.
 - Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
 - LETTERS TO BE CAPITALISED.
 - Background of board to be WHITE. ALL borders & lines to be MIDDLE BLUE. Colour for logos to be AS PER RESPECTIVE.
 - All paint used should match Ref. 290 Acrylic Road Sign Paint.
 - All lettering to be painted on. Stick-on labels will NOT be permitted.

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION

APPROVED: _____
ENGINEER: _____ DATE: _____
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CLIENT: _____ DATE: _____

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PO Box 2600, Welkom, 9460, South Africa

	CLIENT MAQUASSI HILLS LOCAL MUNICIPALITY
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PROJECT
**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
PROJECT NAME BOARD

DESIGN	DATE	DRAWN	DATE
-	JUN 2022	-	JUN 2022
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022

SCALE as shown

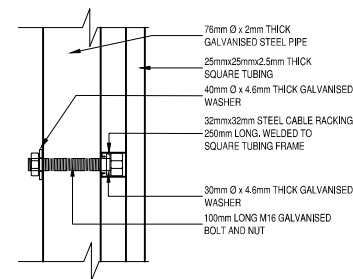
DRAWING No. 2022-05-G/D/001			
REVISION No.			
1.0			



FRONT ELEVATION

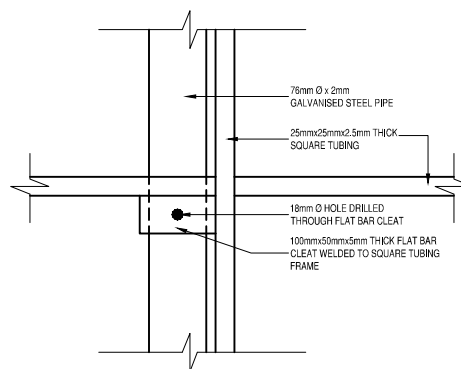
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CONSTRUCTION OF
4 (CHRIS HANI)



FIXING DETAIL No. 1

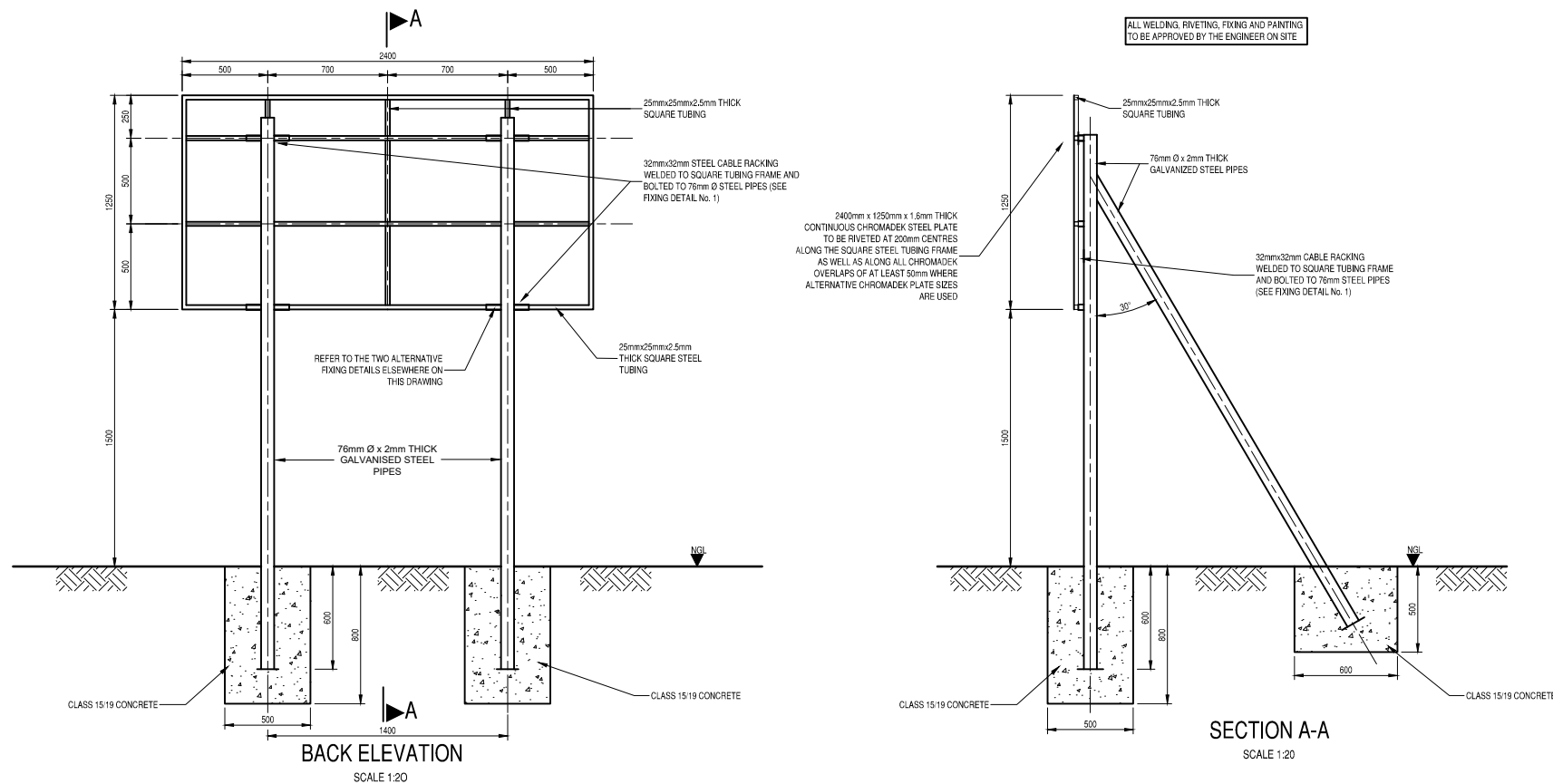
SCALE 1:5



FIXING DETAIL No. 2

SCALE 1:5

ALTERNATIVE FIXING DETAILS



BACK ELEVATION

SCALE 1:20

SECTION A-A

SCALE 1:20

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- Description in Italics must be adjusted to suit project details.
- Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
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PLAN No.	DESCRIPTION

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APPROVED:

CLIENT: DATE:

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PROJECT

**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:

MAQUASSI HILLS LM

DRAWING TITLE

**MIG
PROJECT NAME BOARD**

DESIGN	DATE	DRAWN	DATE
	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE as shown

DRAWING No.

2022-05-G/D/002

REVISION No.

1.0




NOTES	APPROVED:
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DATE:	

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION



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LOCAL MUNICIPALITY**

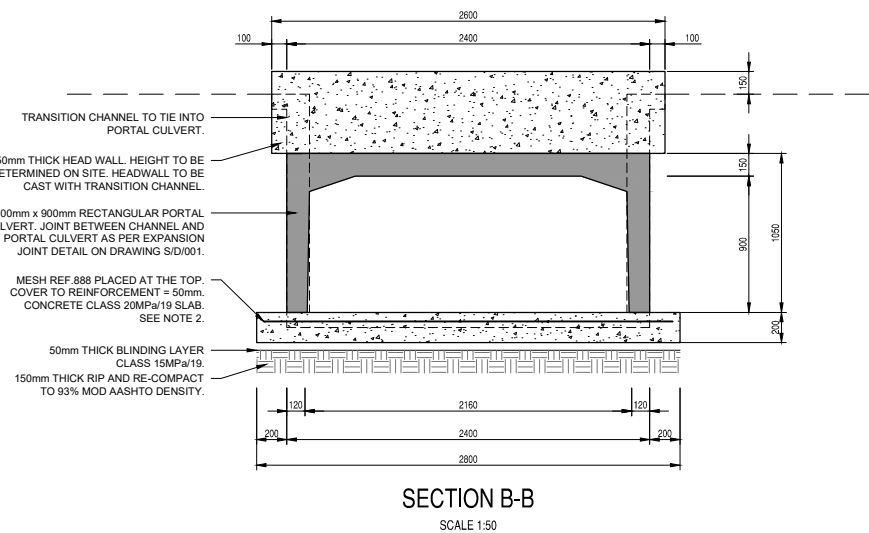
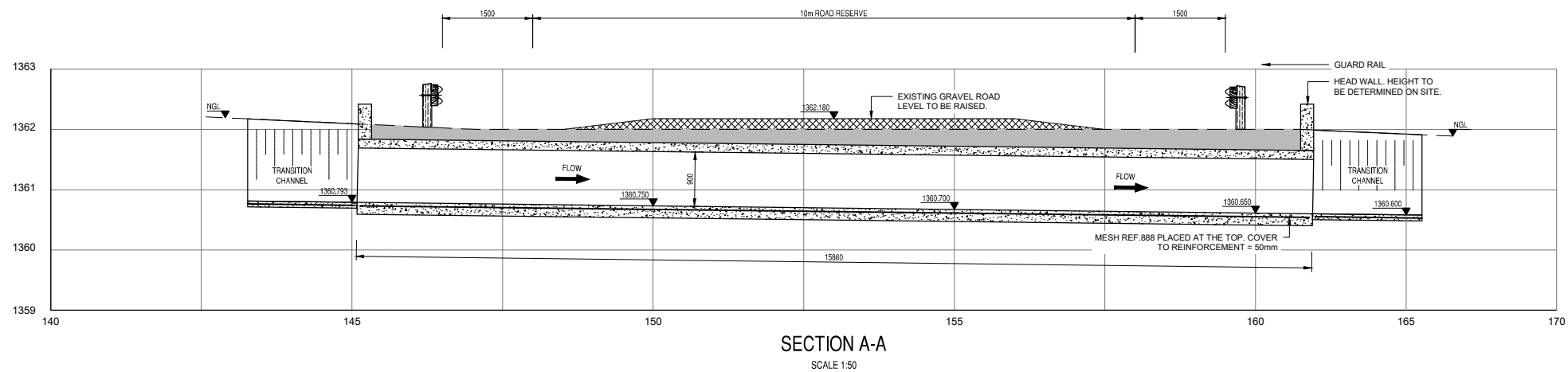
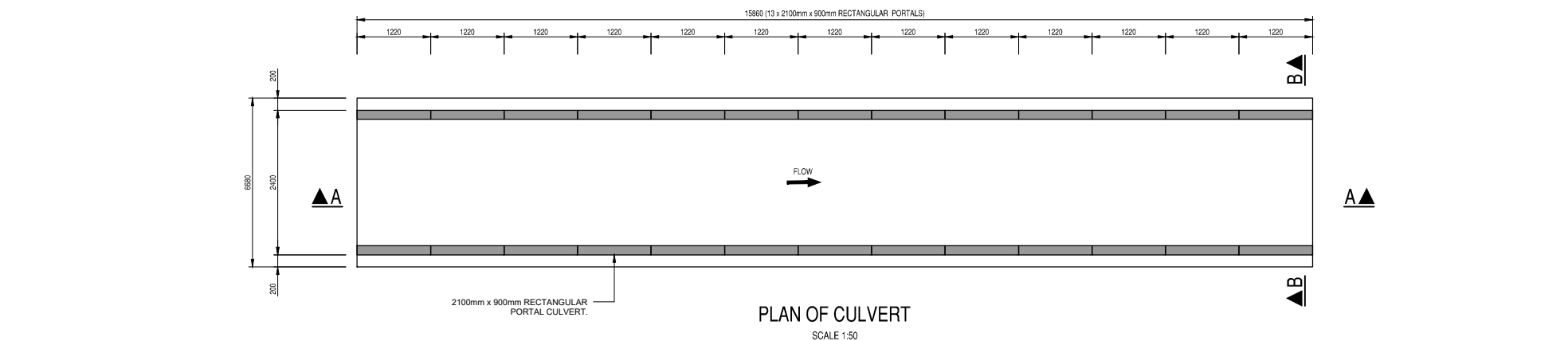
IMPLEMENTING AGENT
MAQUASSI HILLS LM

PROJECT
**CONSTRUCTION OF FLOOD MITIGATING
STRUCTURES IN TSWELELANG EXT 4 (CHRIS HANI)**

DRAWING TITLE
LOCALITY MAP

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REVISIONS			
No.	DATE	BY	DESCRIPTION
SCALE: 1:25 000			

DESIGN	DATE	DRAWN	DATE
-	-	-	-
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022
DRAWING No. 2022-05-G/P/001			
REVISION No.			
1.0			



REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- REFER TO DRAWING No. S/P/001 FOR PORTAL CULVERT POSITION.
- ALTERNATIVE TO FLOOR SLAB USE PRECAST CULVERT BASE SLABS AS SUPPLIED BY MANUFACTURER.

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

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PROJECT
**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
**RECTANGULAR PORTAL
CULVERT DETAILS**

DESIGN -	DATE JUN 2022	DRAWN -	DATE JUN 2022
SURVEYED -	DATE -	CHECKED J.BATEMAN	DATE JUN 2022

SCALE 1:25

DRAWING No.

2022-05-S/D/002

REVISION No.

1.0



NOTES

1. REFER TO DRAWING No. S/P/001 FOR GUARD RAIL POSITION.

APPROVED: _____	
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APPROVED: _____	
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PROJECT

**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

DRAWING TITLE

GUARD RAIL DETAILS

REVISION No.							
	1.0						

ROAD SETTING OUT DATA

PI No.	CH	YLo	XLo	Radius (m)	DA D M S	TL (m)	AL (m)
Const:		-90000.000	3000000.000				
PI 1	0.000	-6339.949	13944.261				
BC 2	270.599	-6610.472	13937.848				
PI 2	272.492	-6611.451	13937.825	3	36°08'58"	0.979	1.893
EC 2	272.492	-6612.255	13938.384				
PI 3	280.000	-6618.421	13942.668				

BENCHMARKS TABLE :WG 25

NAME	DESC	Y	X	ELEVATION
BM A	hic	-96303.032	3013933.859	1362.230
BM B	hic	-96459.629	3013945.342	1362.163
BM C	hic	-96617.578	3013925.630	1359.888
BM D	hic	-96503.681	3013994.550	1360.156
BM E	hic	-96544.728	3014103.795	1356.249












hic = HOLE IN CONCRETE

The drawing illustrates the layout of a 2100mm x 900mm portal culvert. Key features include:

- Stationing:** The culvert is located between station CH160 and CH175.86.
- Landmarks:** A school is located to the south of the culvert. A main tar road runs parallel to the culvert on the east. Stormwater pipes (2 x 600mm) are shown crossing the culvert.
- Construction Limits:** Limits of construction are marked at CH0 and CH280.
- Other Features:** A gate to a school is shown at the start of the culvert. Rock rubble areas are indicated along the culvert alignment.

BENCHMARKS TABLE :WG 25				
NAME	DESC	Y	X	ELEVATION
BM A	hic	-96303.032	3013933.859	1362.230
BM B	hic	-96459.629	3013945.342	1362.163
BM C	hic	-96617.578	3013925.630	1359.888
BM D	hic	-96503.681	3013994.550	1360.156
BM E	hic	-96544.728	3014103.795	1356.249
hic = HOLE IN CONCRETE				

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES	
	STORMWATER CHANNEL
	PORTAL CURB/VERT
	GUARD RAIL
PI # 	POINT OF INTERSECTION
CH#### 	CHAINAGE
	EXISTING ELECTRICITY POST
	EXISTING POWER LINE
	EXISTING FENCE LINE
	EXISTING MANHOLE
	EXISTING CADASTRAL
BM "X" 	BENCHMARK

- NOTES:
1. FOR STORMWATER CHANNEL DETAILS REFER TO DRAWING S/D/001.
 2. FOR PORTAL CULVERT DETAILS REFER TO DRAWING S/D/002.
 3. FOR GUARD RAIL DETAILS REFER TO DRAWING S/D/003.

[illegible]

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DATE RECEIVED ON _____



PROJECT	
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**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS IM

DRAWING TITLE

**NEW STORMWATER
CHANNEL LAYOUT**

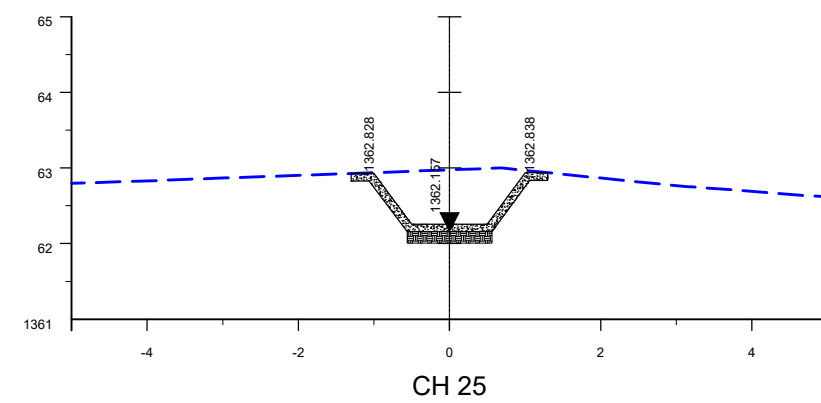
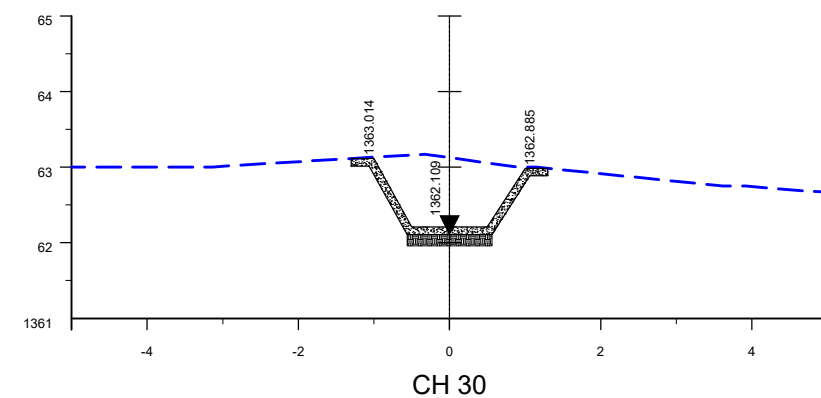
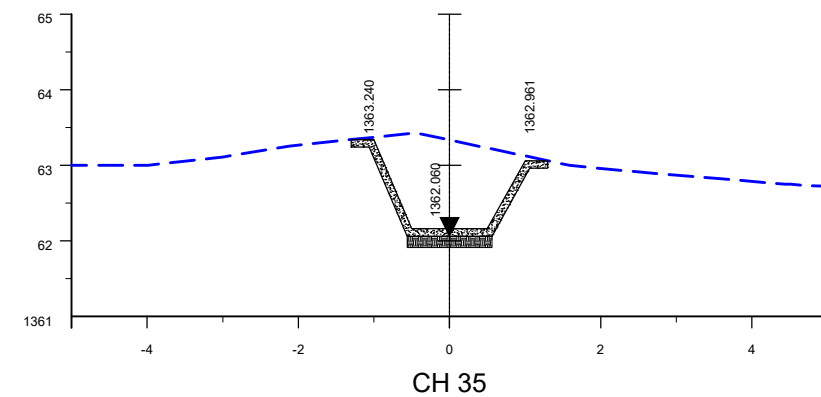
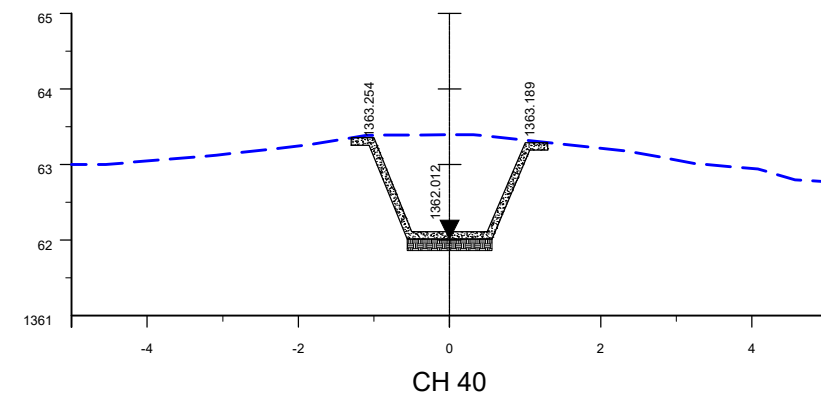
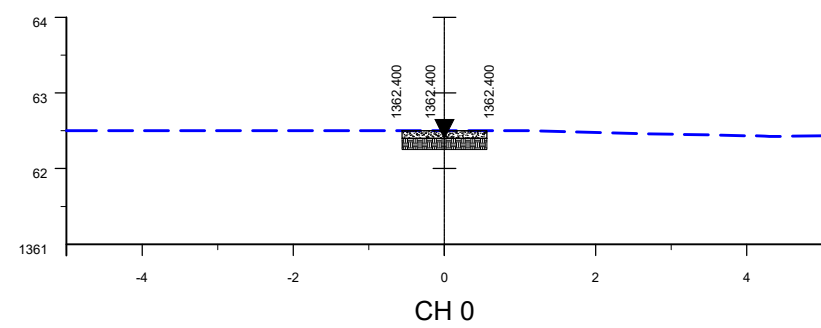
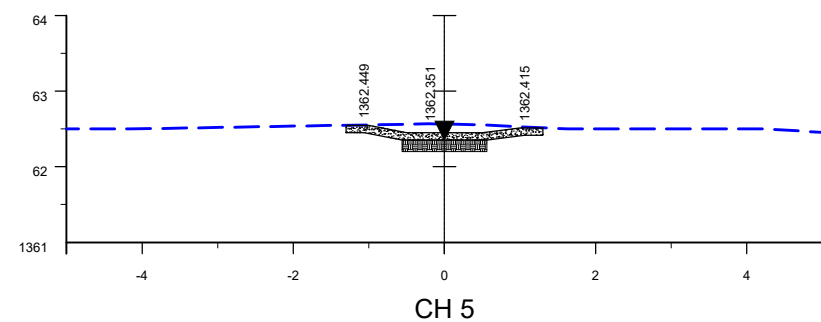
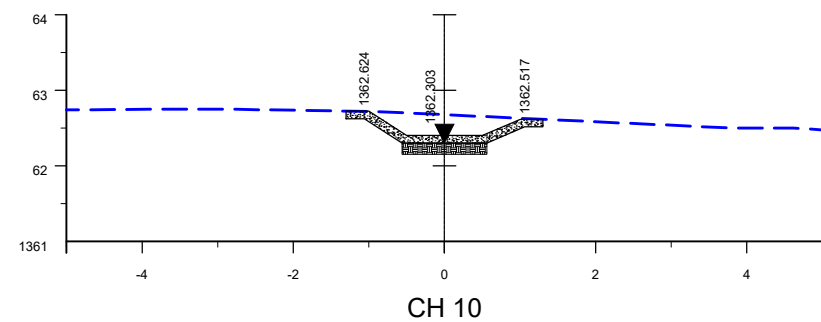
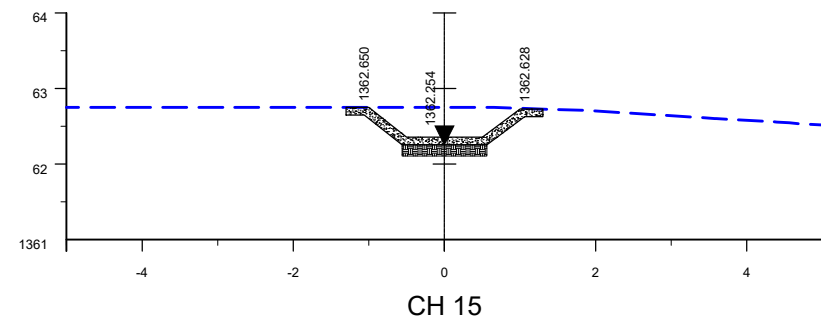
DESIGN -	DATE JUN 2022	DRAWN -	DATE JUN 2022
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SCALE 1:500

DRAWING No.

2022-05-S/P/001


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	1.0								



VERTICAL SCALE = 1:50
HORIZONTAL SCALE = 1:50

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES



REFERENCE DRAWINGS

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PROJECT

CONSTRUCTION OF FLOOD MITIGATING STRUCTURES IN TSWELELANG EXT 4 (CHRIS HANI)

IMPLEMENTING AGENT:

MAQUASSI HILLS LM

DRAWING TITLE

STORMWATER CHANNEL CROSS-SECTIONS SHEET 1

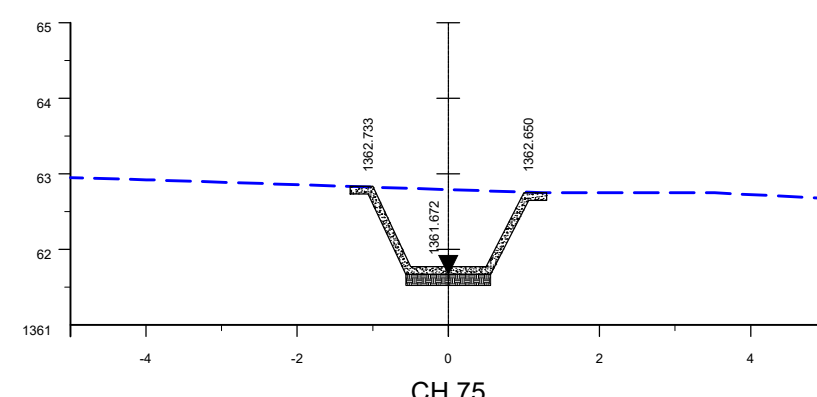
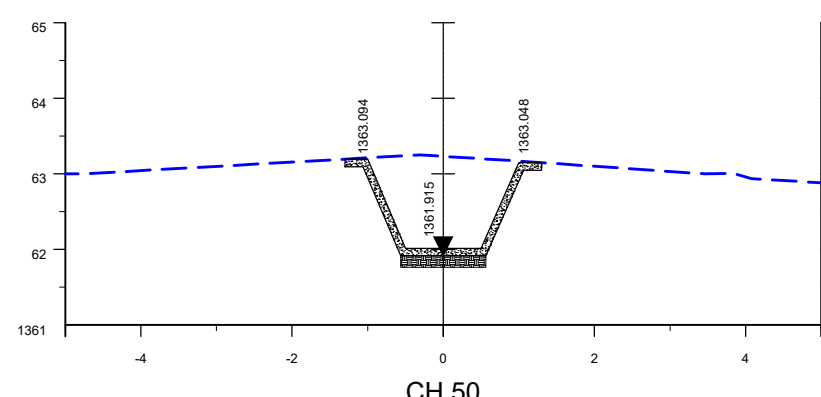
DESIGN	DATE	DRAWN	DATE
-	JUN 2022	-	JUN 2022
SURVEYED	DATE	CHECKED	DATE
-	-	J.BATEMAN	JUN 2022

SCALE	AS SHOWN
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DRAWING No.

2022-05-S/X/001

REVISION No.							
1.0							



VERTICAL SCALE = 1:50
HORIZONTAL SCALE = 1:50

REVISIONS			
No.	DATE	BY	DESCRIPTION

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REFERENCE DRAWINGS

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PROJECT

**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE

**STORMWATER CHANNEL
CROSS-SECTIONS
SHEET 2**

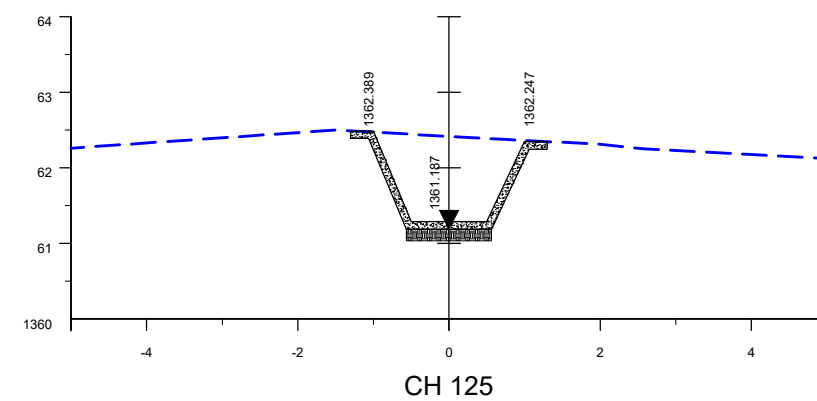
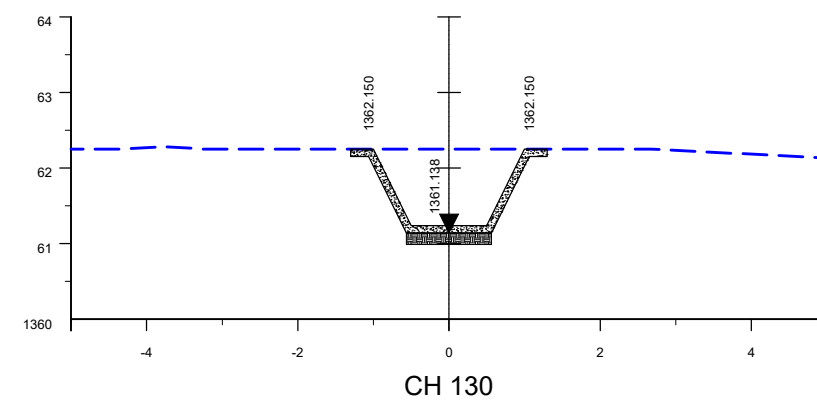
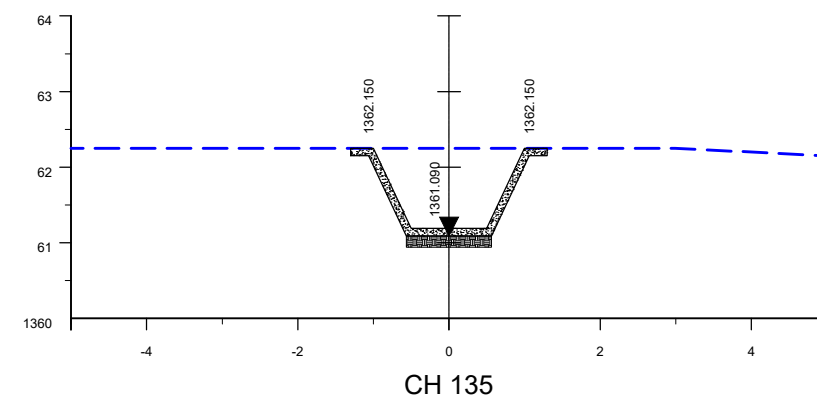
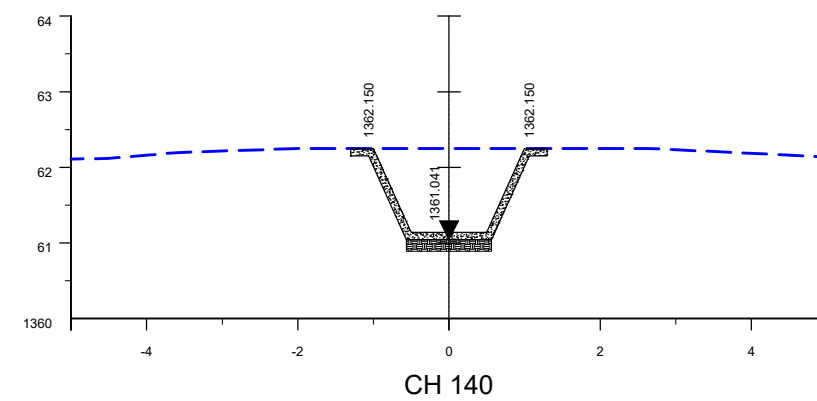
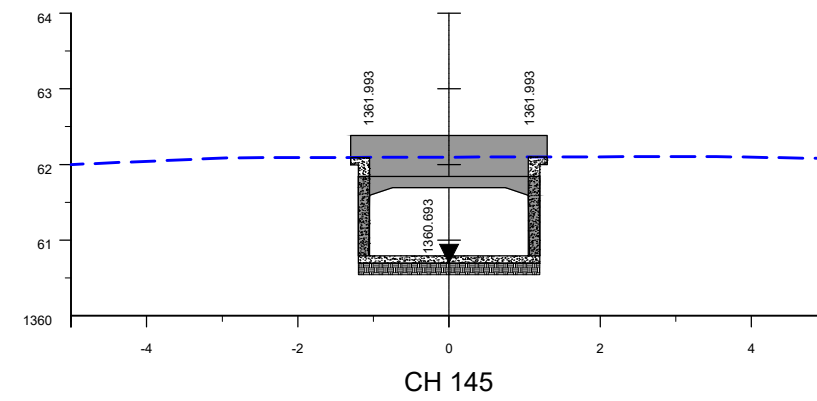
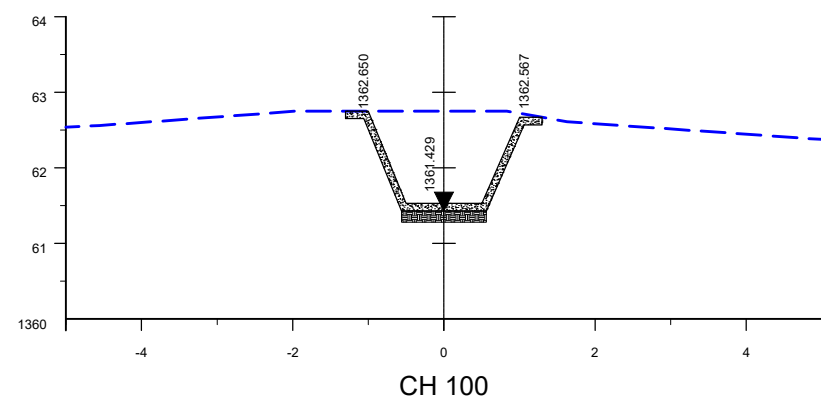
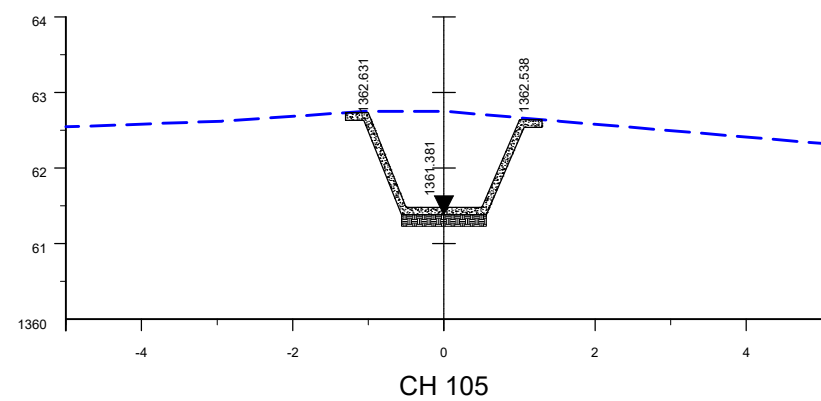
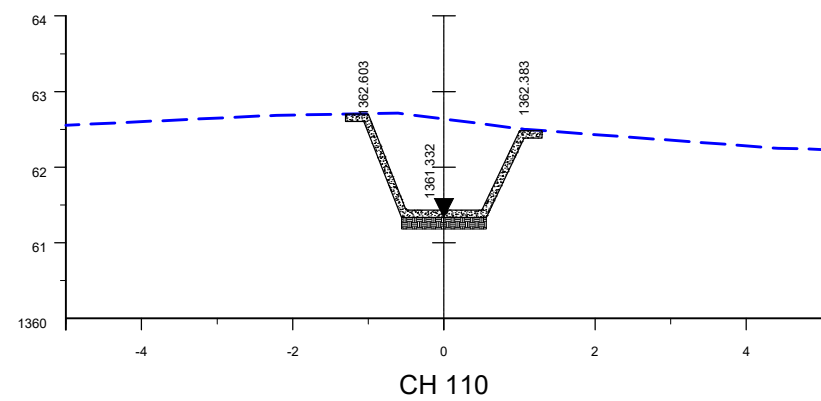
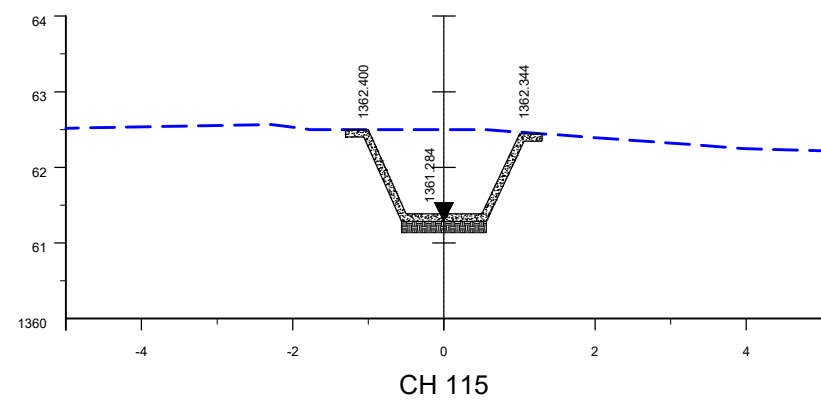
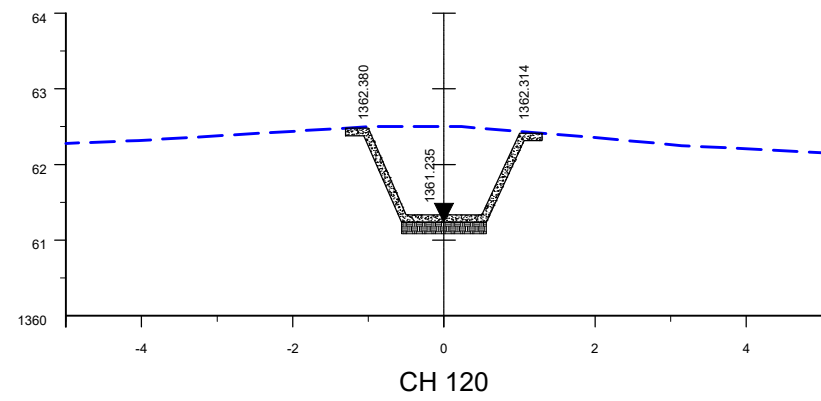
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SURVEYED -	DATE -	CHECKED J.BATEMAN	DATE JUN 2022

SCALE	AS SHOWN
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DRAWING No.

2022-05-S/X/002

REVISION No.								
10								



VERTICAL SCALE = 1:50
HORIZONTAL SCALE = 1:50

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

Diagram illustrating the cross-section of a stormwater channel structure:

- NGL** (Notional Ground Level): Indicated by a dashed line at the top.
- LAYER WORK**: The middle section, showing a cross-section of the channel structure with vertical supports.
- STORMWATER CHANNEL/PORTAL**: The bottom section, showing the channel structure with a textured surface.

[illegible]

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PROJECT

**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE

**STORMWATER CHANNEL
CROSS-SECTIONS
SHEET 3**

DESIGN -	DATE JUN 2022	DRAWN -	DATE JUN 2022
SURVEYED -	DATE -	CHECKED J.BATEMAN	DATE JUN 2022

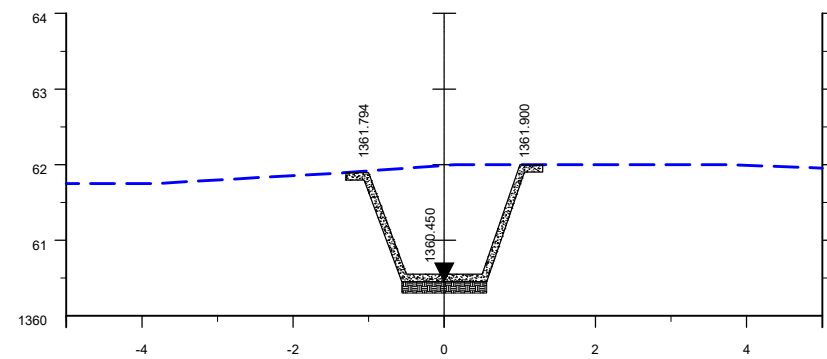
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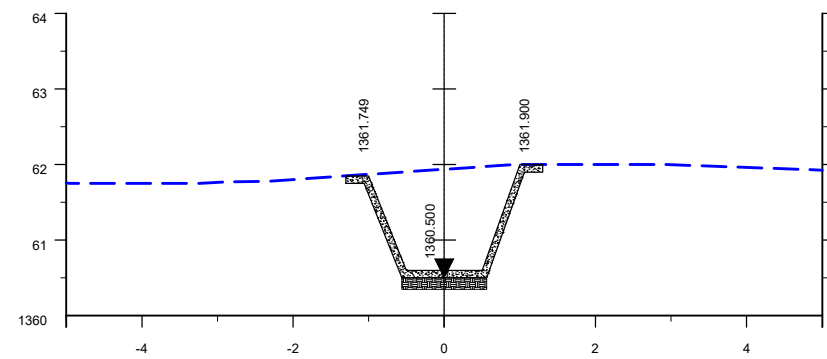
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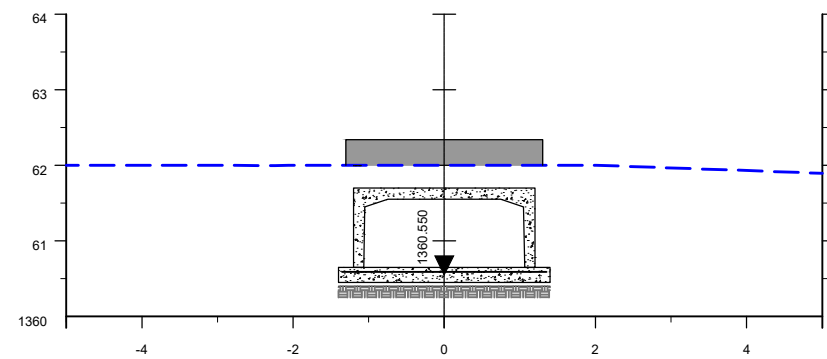
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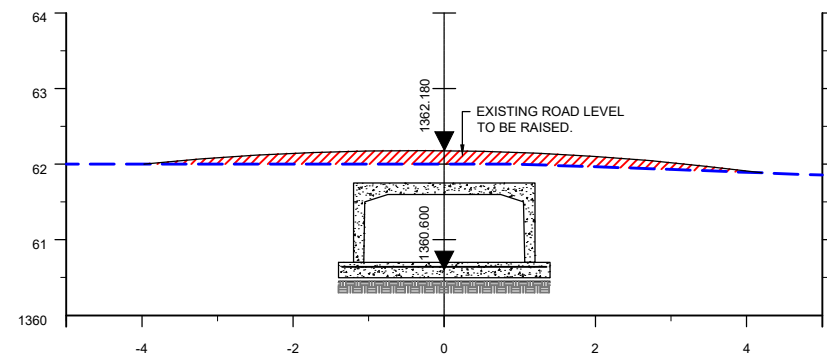
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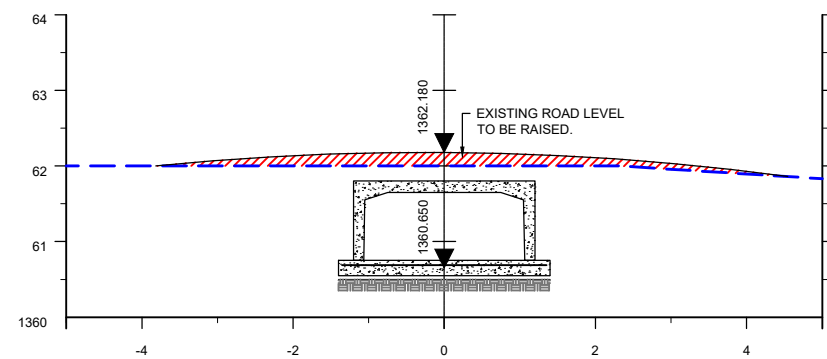
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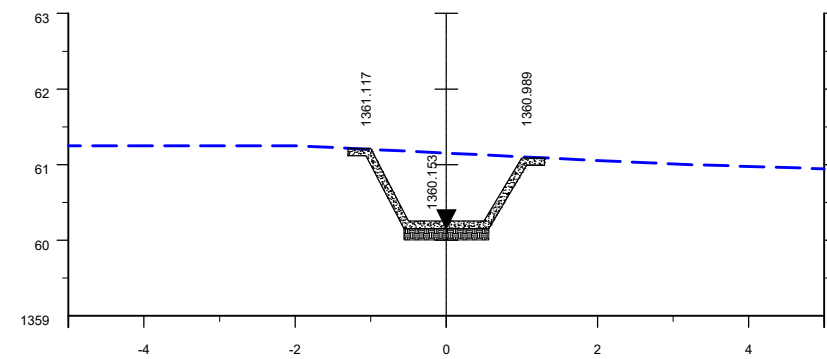
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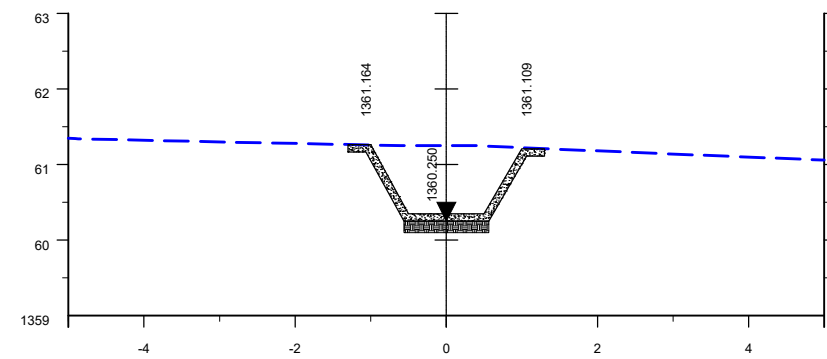
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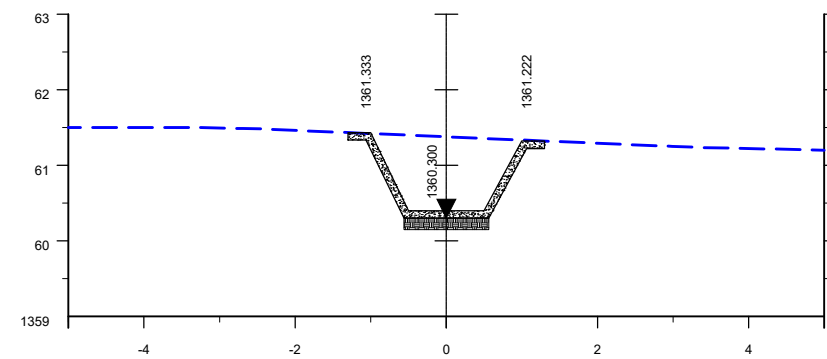
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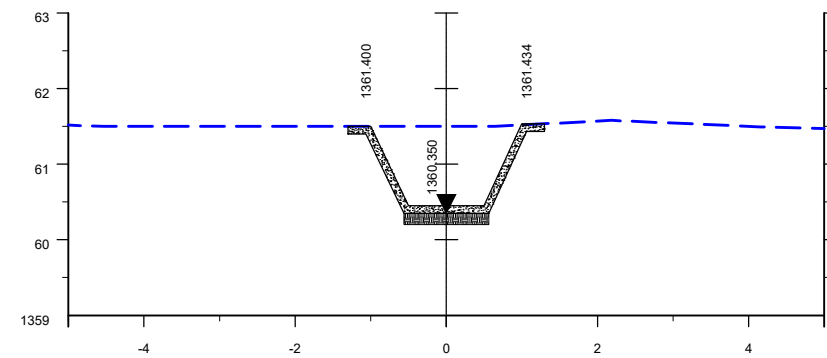
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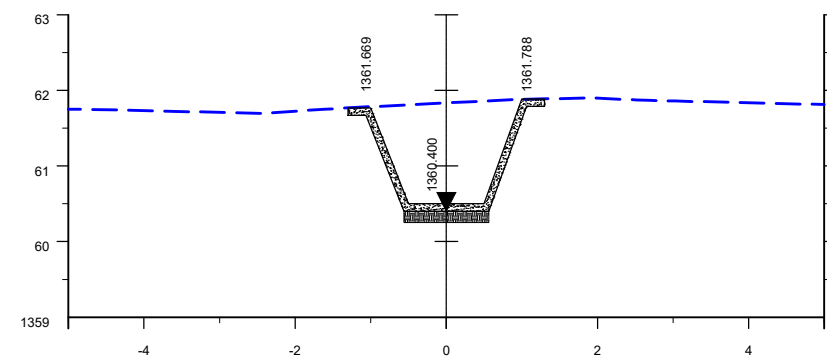
CH 190



CH 185



CH 180



CH 175

VERTICAL SCALE = 1:50
HORIZONTAL SCALE = 1:50

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- NGL
- LAYER WORK
- STORMWATER CHANNEL/PORTAL

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

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LOCAL MUNICIPALITY**

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TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE
**STORMWATER CHANNEL
CROSS-SECTIONS
SHEET 4**

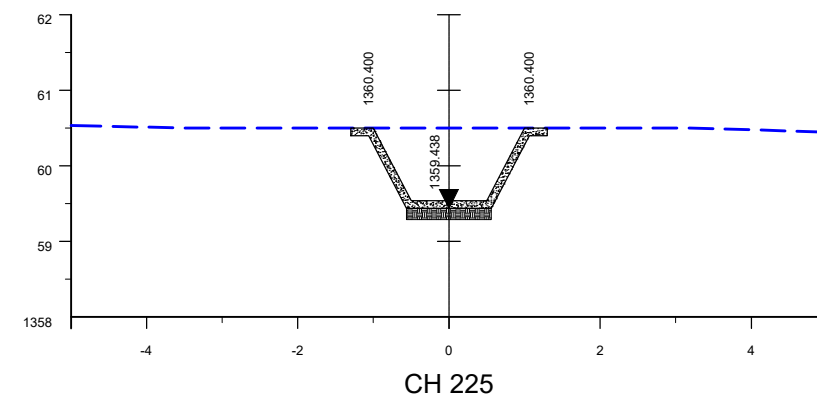
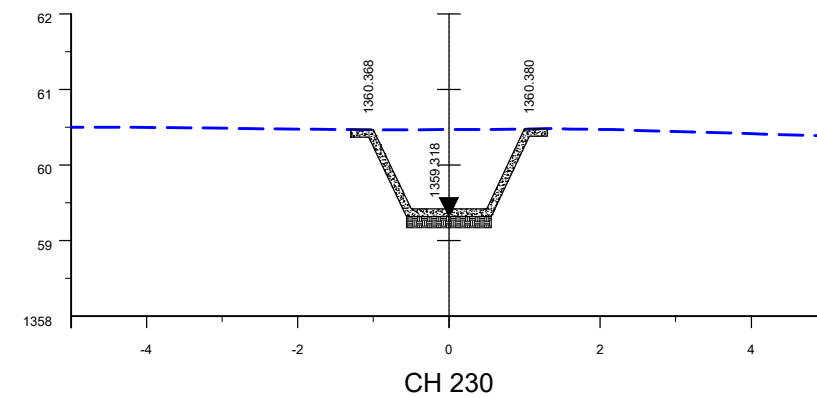
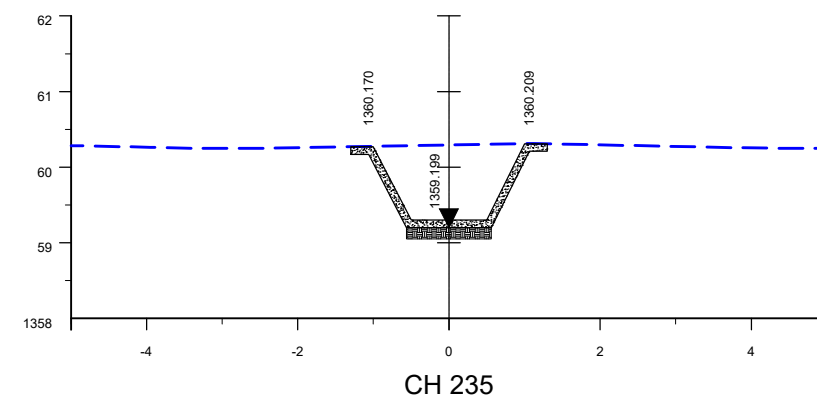
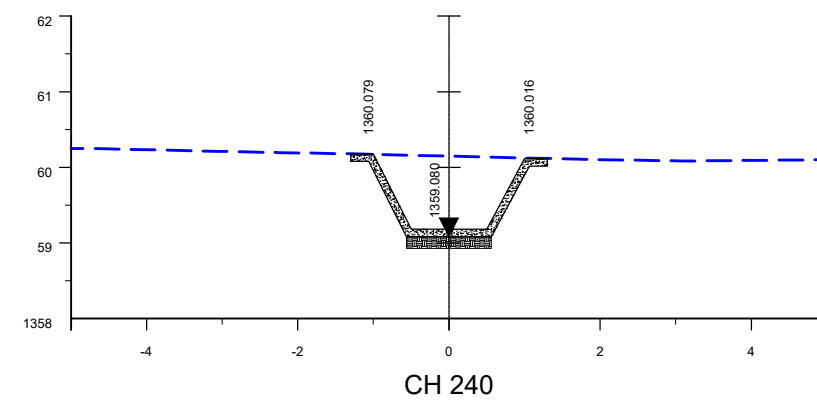
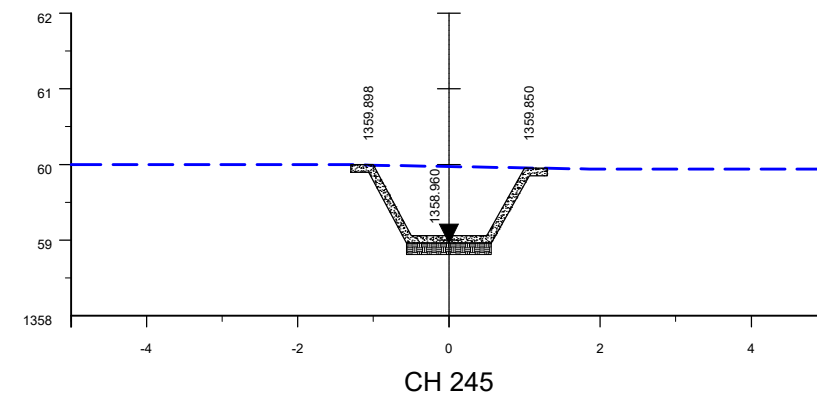
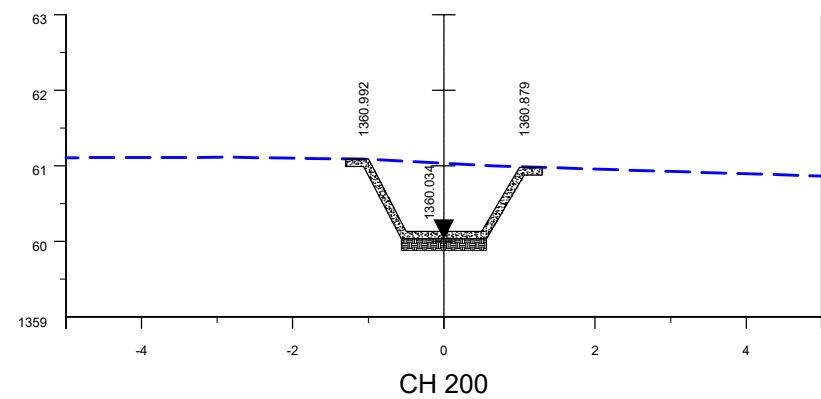
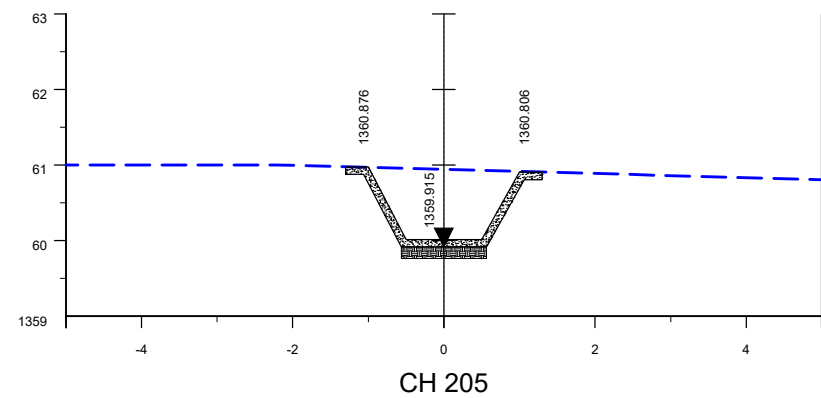
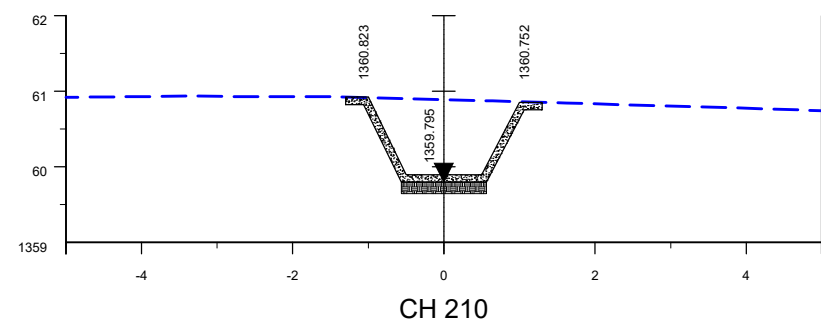
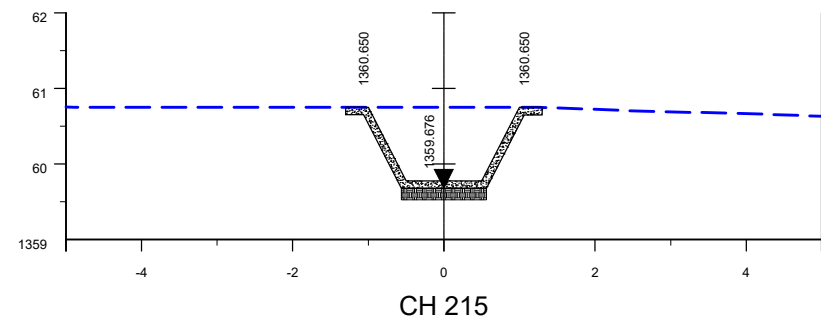
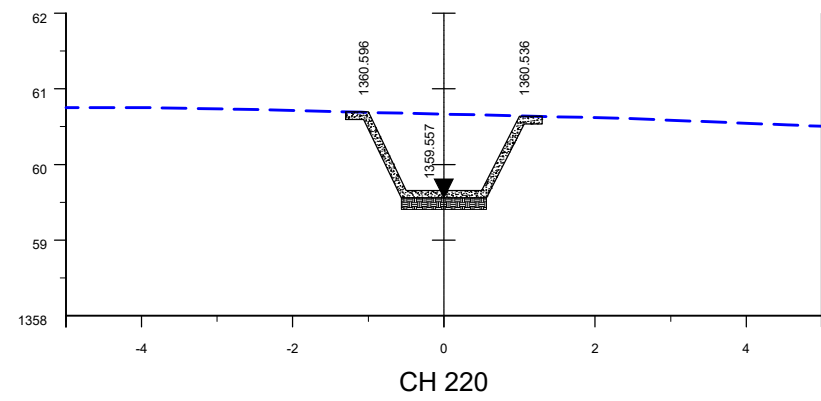
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	JUN 2022		JUN 2022
SURVEYED	DATE	CHECKED	DATE
		J.BATEMAN	JUN 2022

SCALE AS SHOWN

DRAWING No.

2022-05-S/X/004

REVISION No.							
1.0							





VERTICAL SCALE = 1:50
HORIZONTAL SCALE = 1:50

REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

--- NGL

 LAYER WORK

 STORMWATER CHANNEL/PORTAL

[illegible]

APPROVED: _____
ENGINEER: _____ DATE: _____

APPROVED: _____
CLIENT: _____ DATE: _____



PROJECT

**CONSTRUCTION OF FLOOD
MITIGATING STRUCTURES IN
TSWELELANG EXT 4 (CHRIS HANI)**

IMPLEMENTING AGENT:
MAQUASSI HILLS LM

DRAWING TITLE

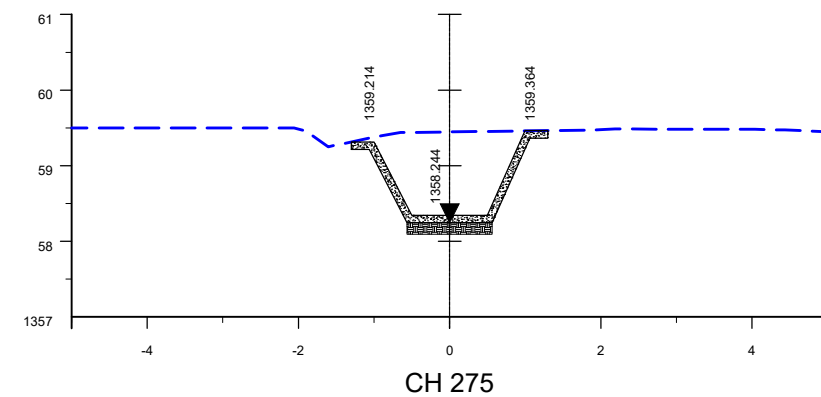
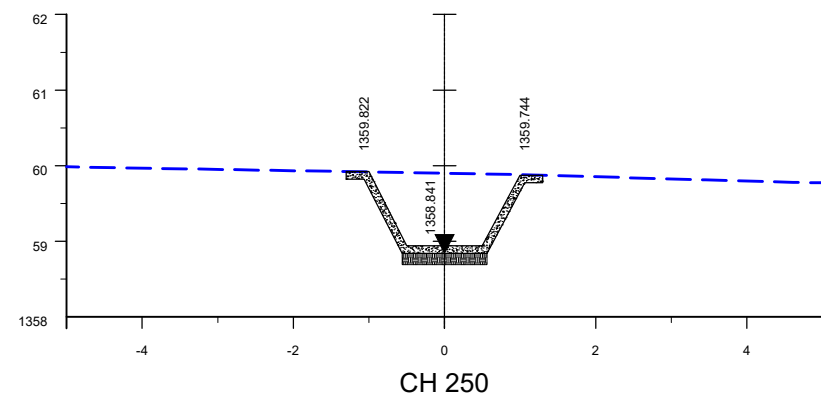
**STORMWATER CHANNEL
CROSS-SECTIONS
SHEET 5**

DESIGN -	DATE JUN 2022	DRAWN -	DATE JUN 2022
SURVEYED -	DATE -	CHECKED J.BATEMAN	DATE JUN 2022

SCALE AS SHOWN

DRAWING No.

REVISION No.								
10								



REVISION No.									
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