



SOUTHERN AFRICA TRADE AND CONNECTIVITY PROJECT
(SATCP)

MINISTRY OF TRANSPORT AND PUBLIC WORKS

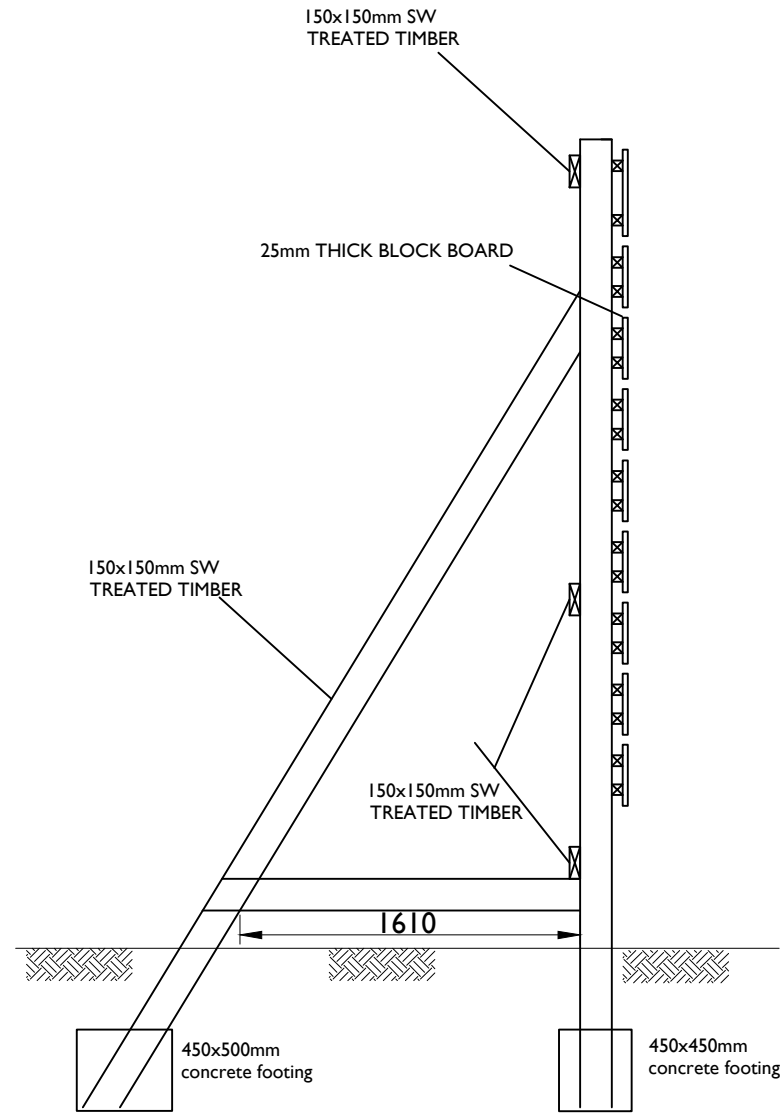
MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX
CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMs) IN BLANTYRE DISTRICT

THE BOOK OF DRAWINGS-TENDER PURPOSE

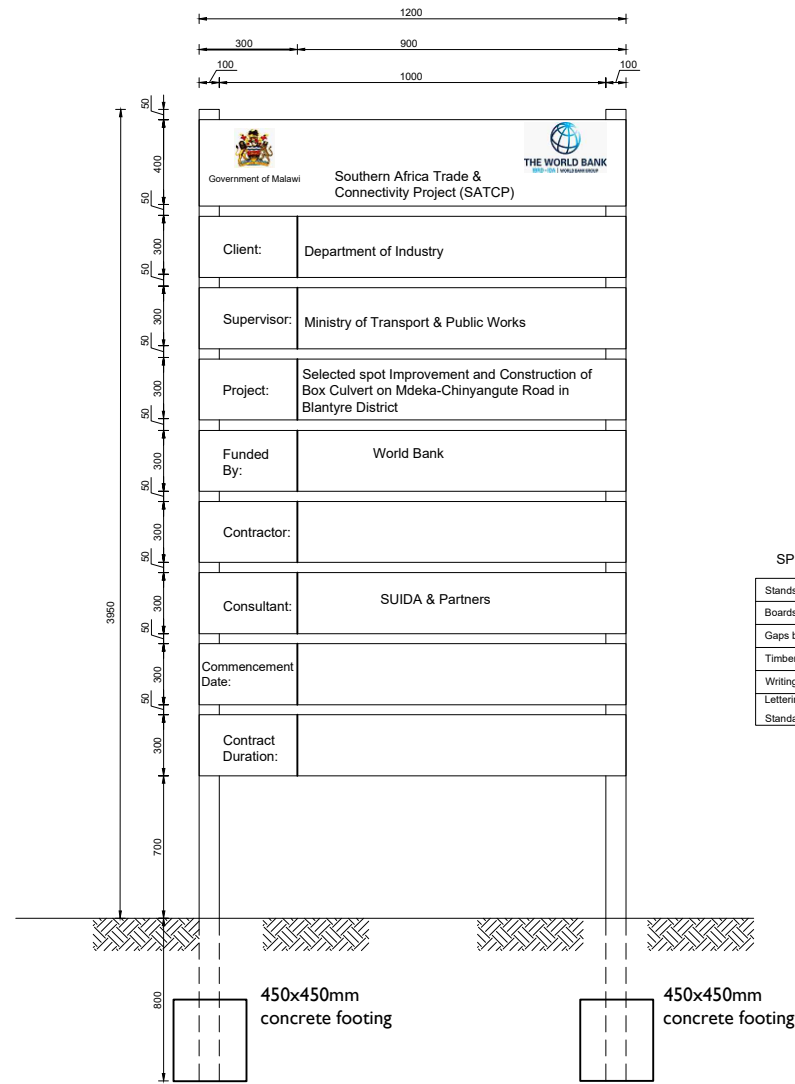
MARCH 2026



LOCATION MAP OF MDEKA-CHINYANGUTE FEEDER ROADS IN BLANTYRE DISTRICT (RED)



SIDE ELEVATION

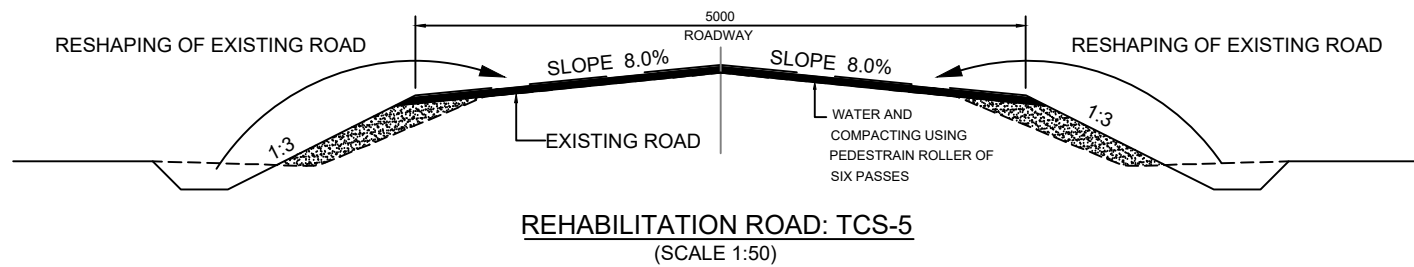
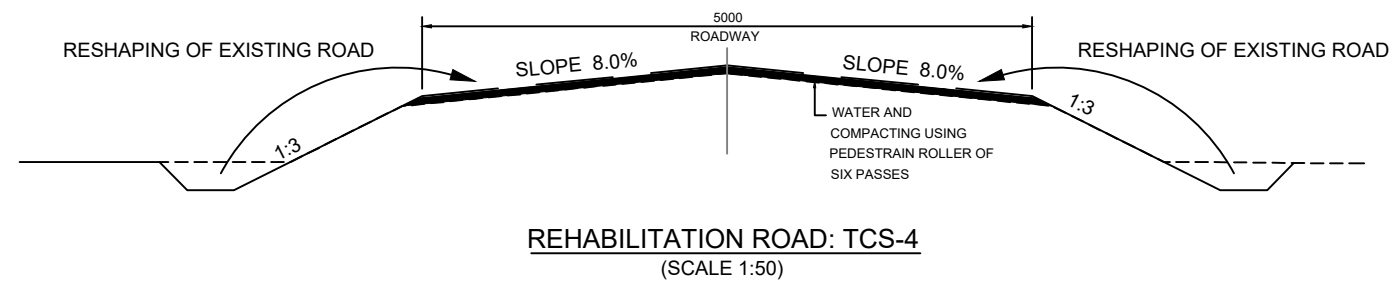


SPECIFICATIONS

Stands	100mmx50mmx3250mm
Boards	300mmx25mmx1200mm
Gaps between board	= 50mm
Timber to be treated	soft wood
Writings to appear on	one side only
Lettering	
Standard sizes of black colour	on white background.

AMENDMENTS			LEGEND	CONSULTANT'S DETAIL:	CLIENT'S DETAIL:	DESIGNED	DRAWING TITLE:	PROJECT STATUS			
NR.	DESCRIPTION	DATE		 SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com	 Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe	DESIGNED BY	DETAILS OF PROJECT SIGN BOARD	<input type="checkbox"/> DESIGN <input type="checkbox"/> DRAWING <input type="checkbox"/> CHECKED <input type="checkbox"/> APPROVED			
1	REVISION 1	25-02-206	PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1								
			DRAWING APPROVED BY MINISTRY: _____ CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025 DRAWING NO: CON/2025/SP/SATCP-LM/PSB-001 SHEET NO: 1 OF 1								

TYPICAL SECTIONS

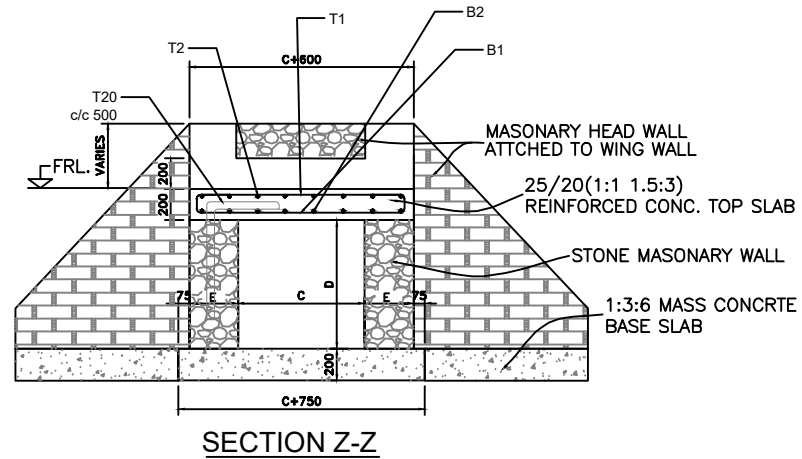
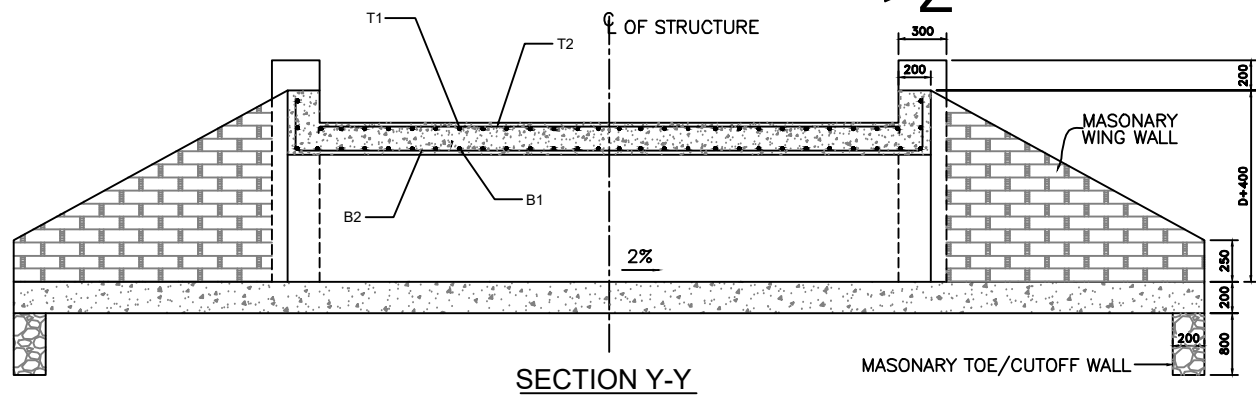
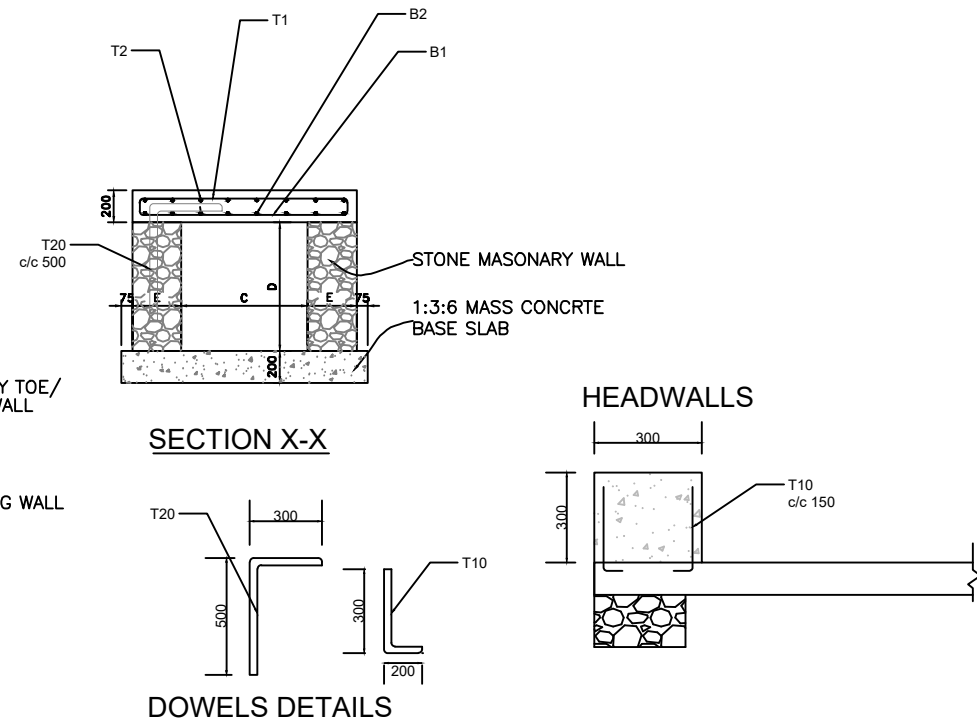
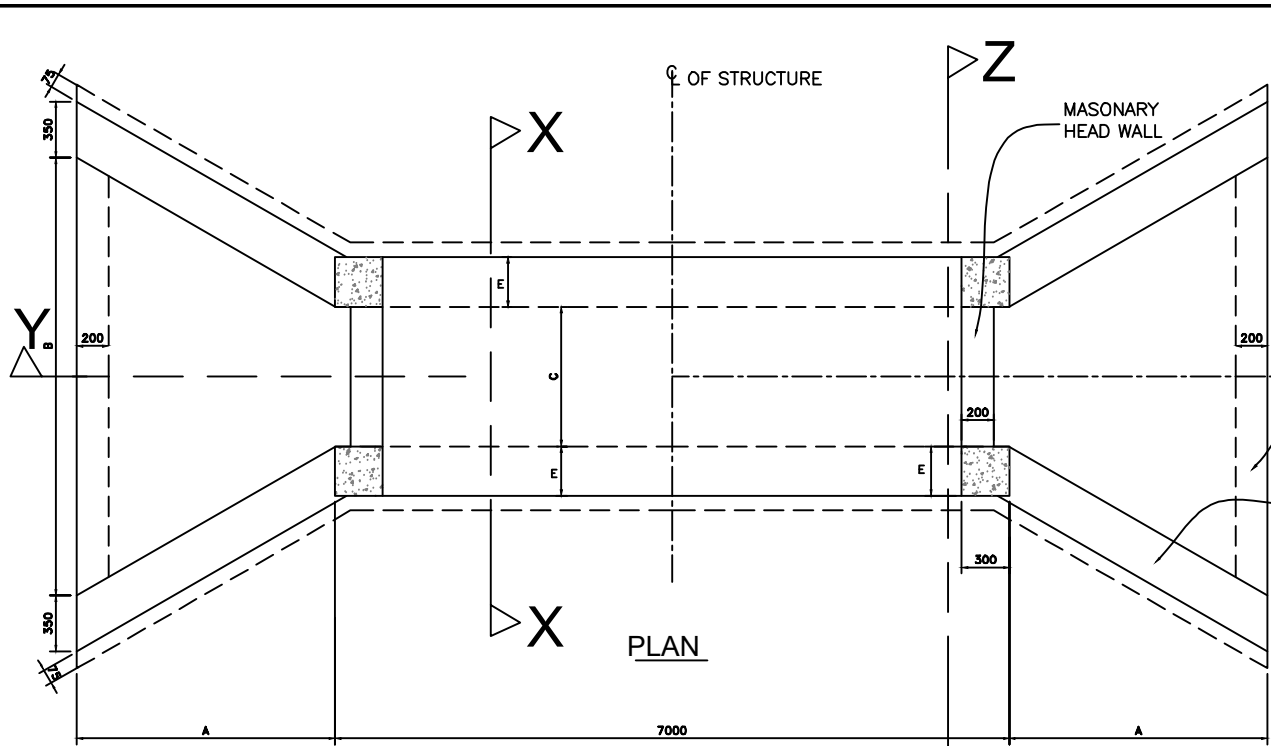


NOTE:-

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED.
2. FOR OTHER DETAILS, REFER RELEVANT MISCELLANEOUS DRAWINGS.

AMENDMENTS			LEGEND	CONSULTANT'S DETAIL:	CLIENT'S DETAIL:	DESIGNED Z. B	DRAWING TITLE: TYPICAL CROSS SECTION FOR UD ROADS UNDER RESHAPING	PROJECT STATUS						
NR.	DESCRIPTION	DATE						PLANNING/PROJECT ENGINEER	DESIGN	CONSTRUCTION	ASBUILT			
1	REVISION 1	25-02-206		SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com	Southern Africal Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe	DESIGN CHECKED BY F. N. REng	MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMs) IN BLANTYRE DISTRICT	CONTRACT No.:	PROJECT No.:	SCALE: 1:1000	DATE: NOVEMBER 2025	DRAWING NO. CON/2025/SP/SATCP-LM/TS-302	SHEET NO. 1 OF 1	ORIGINAL PAPER SIZE: A1
			INSPECTOR OF WORKS			DRAWN Z. B		REMARKS:						
						DRAWING CHECKED BY F. N. REng								
						DRAWING APPROVED BY MINISTRY								

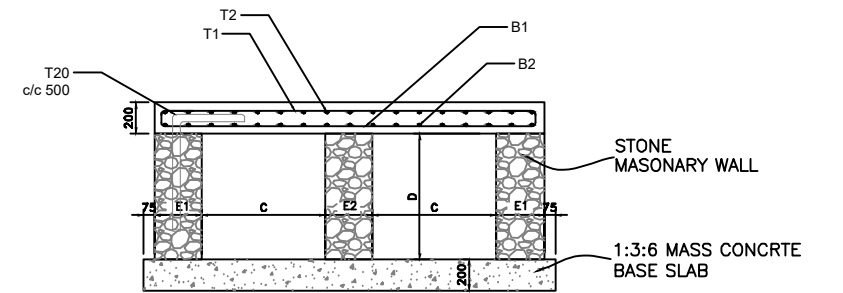
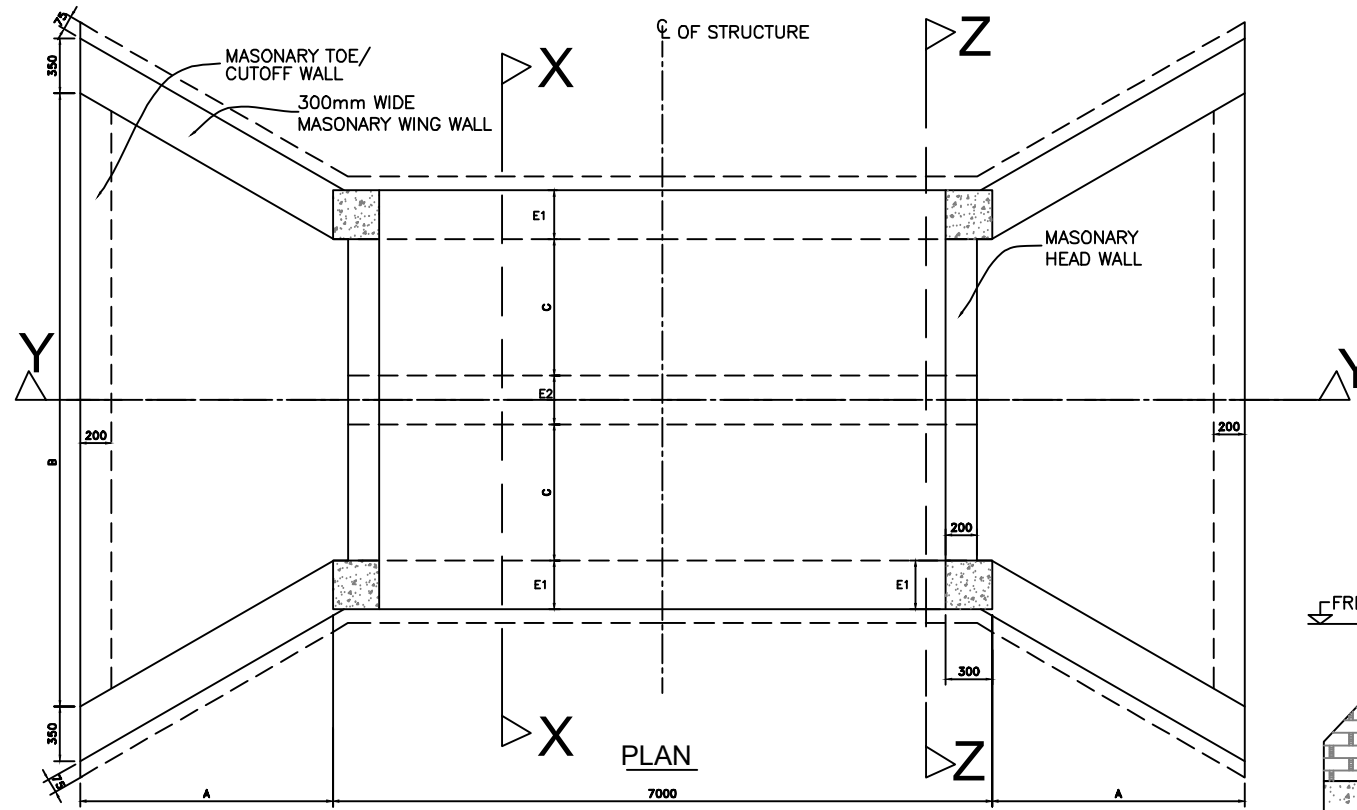
DRAINAGE STRUCTURES



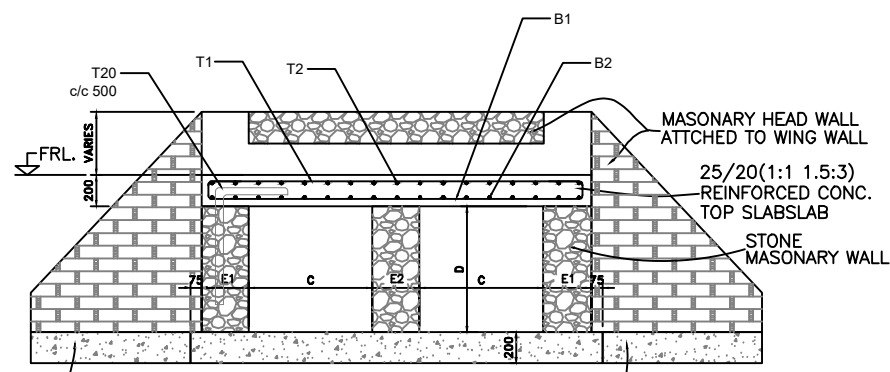
FOR 1M WIDTH SINGLE CELL BOX																
CULVERT TYPE	DIMENSIONS (MM)					NO. OF CELLS	SLAB THK. (MM)	BAR MARK	M1 (MM)	M2 (MM)	NO. OF BARS	BAR MARK	M1 (MM)	M2 (MM)	NO. OF BARS	BAR DESCRIPTION
	A	B	C	D	E											
BC1	2000	5600	1000	1000	300	1	200	B1	120	920	48	B2	120	6920	7	T10-01-150
								T1	120	920	48	T2	120	6920	7	T10-01-150
BC2	2400	6895	1500	1000	300	1	200	B1	120	1420	48	B2	120	6920	11	T12-01-150
								T1	120	1420	48	T2	120	6920	11	T10-01-150
BC3	2400	6895	1500	1500	500	1	200	B1	120	1420	48	B2	120	6920	11	T12-01-150
								T1	120	1420	48	T2	120	6920	11	T10-01-150
BC4	2800	8200	2000	1000	500	1	200	B1	120	1920	48	B2	120	6920	14	T12-01-150
								T1	120	1920	48	T2	120	6920	14	T12-01-150
BC5	2800	8200	2000	2000	600	1	200	B1	120	1920	48	B2	120	6920	14	T12-01-150
								T1	120	1920	48	T2	120	6920	14	T12-01-150

NOTES :-
 . ALL DIMENSIONS ARE IN MILLI METRES UNLESS OTHERWISE SPECIFIED.
 . ARRANGEMENT FOR COMBINATIONS OF MULTIPLE BOX CULVERTS TO BE DETERMINED BY THE

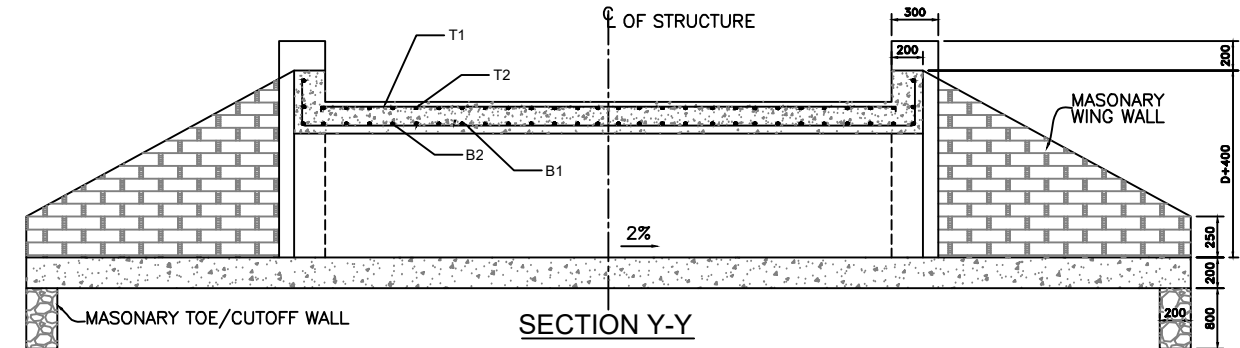
AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD SINGLE CELL BOX CULVERT DETAILS		<input type="radio"/> DESIGN <input type="radio"/> CHECKED <input type="radio"/> APPROVED <input type="radio"/> AS-BUILT	
1	REVISION 1	25-02-208							DESIGNED BY		MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: INSPECTOR OF WORKS: REMARKS: ORIGINAL PAPER SIZE: A1	
									CHECKED BY		CONTRACT No.: PROJECT No.: SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: SHEET NO: 1 OF 1	



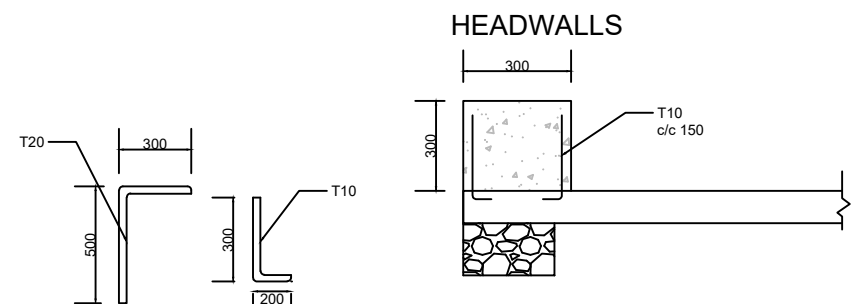
SECTION X-X



SECTION Z-Z



SECTION Y-Y



DOWELS DETAILS

NOTES :-
 . ALL DIMENSIONS ARE IN MILLI METRES UNLESS OTHERWISE SPECIFIED.
 . ARRANGEMENT FOR COMBINATIONS OF MULTIPLE BOX CULVERTS TO BE DETERMINED BY THE SUPERVISION ENGINEER ON SITE

CULVERT TYPE	FOR 1M WIDTH SINGLE CELL BOX											BAR DESCRIPTION					
	DIMENSIONS (MM)						NO. OF CELLS	SLAB THK. (MM)	BAR MARK	M1	M2		NO. OF BARS	BAR MARK	M1	M2	NO. OF BARS
	A	B	C	D	E1	E2				(MM)	(MM)				(MM)	(MM)	
BC6	2400	10200	1500	1500	500	600	2	200	B1	120	4520	48	B2	120	6920	31	T12-01-150
									T1	120	4520	48	T2	120	6920	31	T10-01-150

AMENDMENTS		
NR.	DESCRIPTION	DATE
1	REVISION 1	25-02-2008


LEGEND	

CONSULTANT'S DETAIL:



SUIDA & PARTNERS
 P.O Box 32345, Chichiri, Blantyre 3
 Malawi
 Tel: + 888 343 523/ 999 343 523
 Email info@suidamw.com

CLIENT'S DETAIL:



Southern African Trade Connectivity Project,
 Ministry of Transport and Public Works
 Capital Hill, Off Chilembwe Road
 private Bag 322, Lilongwe

DESIGNED BY: Z. B. [Signature]

DESIGN CHECKED BY: F. N. RENg [Signature]

DRAWN BY: Z. B. [Signature]

DRAWING CHECKED BY: F. N. RENg [Signature]

DRAWING APPROVED BY: [Signature]

STANDARD DOUBLE CELL BOX CULVERT DETAILS

DESCRIPTION OF PROJECT: MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT

CONTRACT No.: [Blank]

PROJECT No.: [Blank]

SCALE: 1:1000

DATE: NOVEMBER 2025

PROJECT STATUS

PLANNING/PROJECT ENGINEER: [Signature]

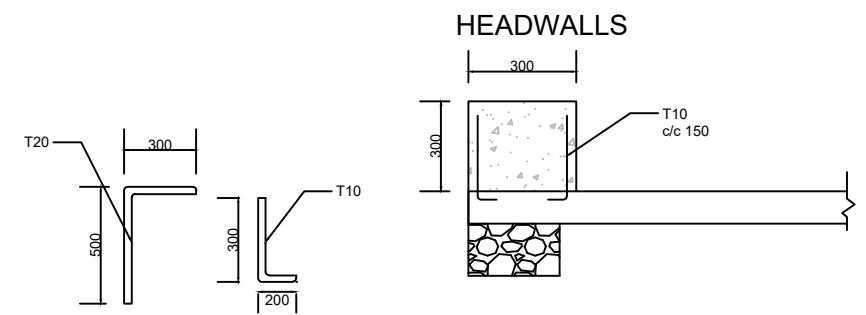
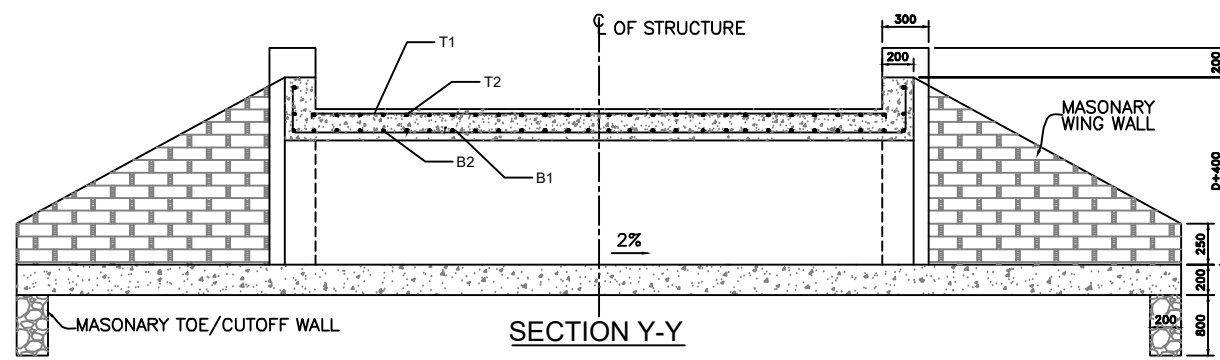
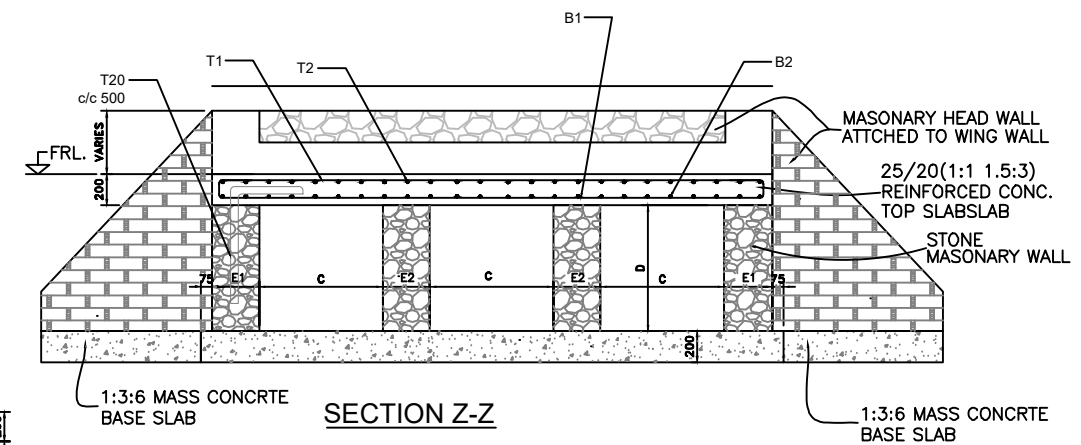
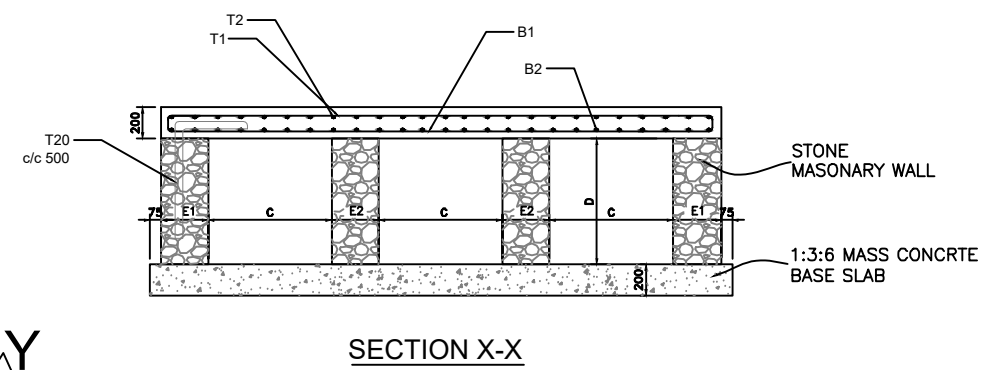
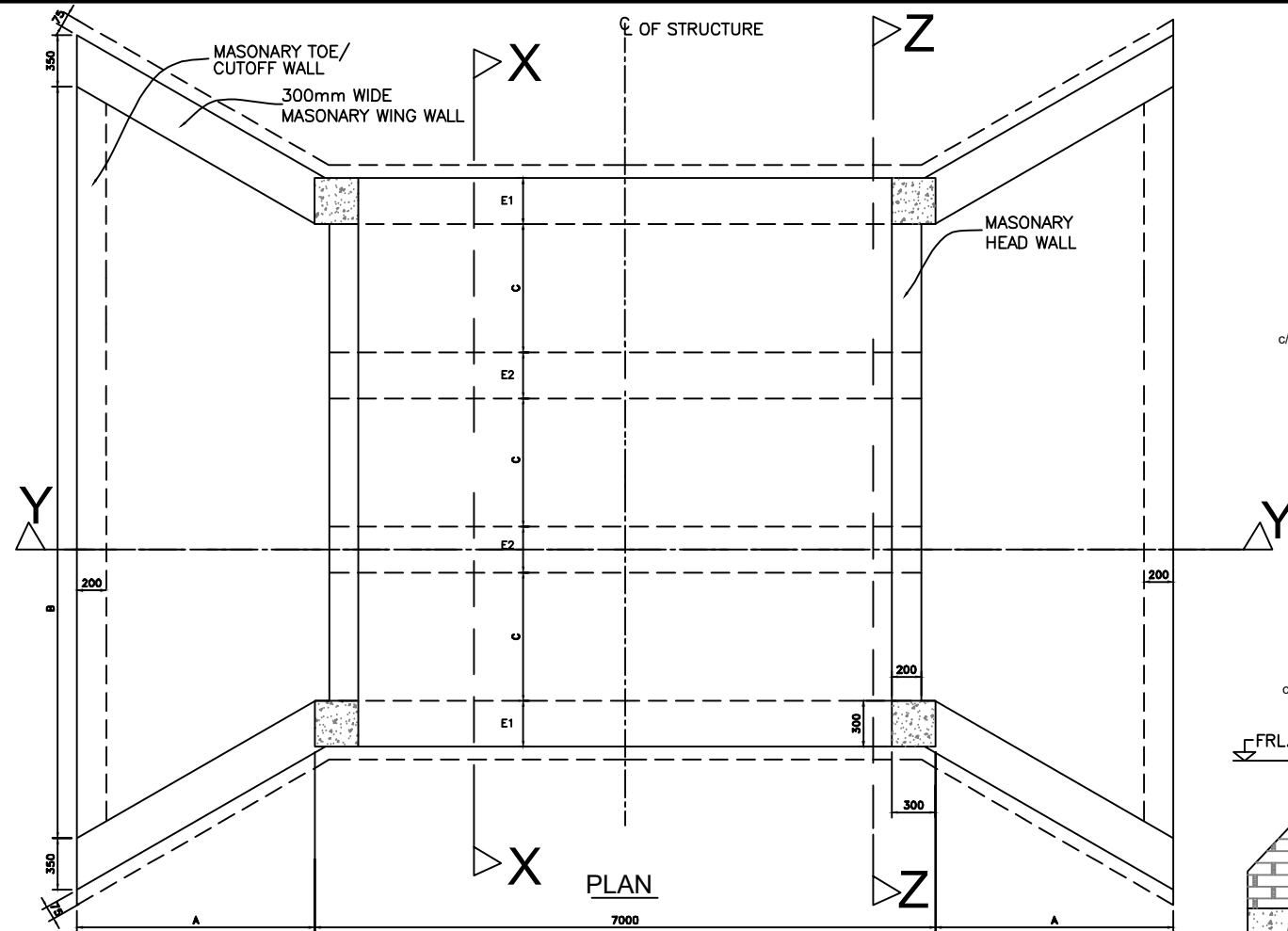
INSPECTOR OF WORKS: [Signature]

REMARKS: [Blank]

ORIGINAL PAPER SIZE: A1

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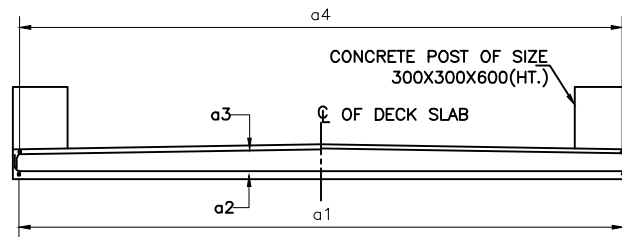
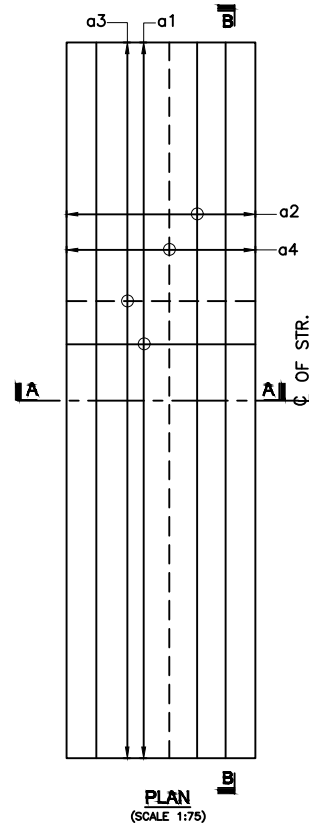
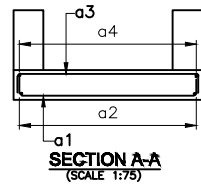
SHEET NO: 1 OF 1



NOTES :-
 . ALL DIMENSIONS ARE IN MILLI METRES UNLESS OTHERWISE SPECIFIED.
 . ARRANGEMENT FOR COMBINATIONS OF MULTIPLE BOX CULVERTS TO BE DETERMINED BY THE SUPERVISION ENGINEER ON SITE

CULVERT TYPE	DIMENSIONS (MM)						NO. OF CELLS	SLAB THK. (MM)	BAR MARK	M1		M2		NO. OF BARS	BAR MARK	M1		M2		NO. OF BARS	BAR DESCRIPTION					
	A	B	C	D	E1	E2				(MM)	(MM)	(MM)	(MM)			(MM)	(MM)	(MM)	(MM)			(MM)	(MM)			
	BC7	2800	13600	2000	1000	500				600	3	200	B1			120	7920	48	B2			120	6920	54	T12-01-150	T1
BC8	2800	13600	2000	2000	500	800	3	200	B1	120	7920	48	B2	120	6920	54	T12-01-150	T1	120	7920	48	T2	120	6920	54	T12-01-150

AMENDMENTS			LEGEND			CONSULTANT'S DETAIL:			CLIENT'S DETAIL:			DESIGNED:			DRAWING TITLE:			PROJECT STATUS		
NR.	DESCRIPTION	DATE				SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com			Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe			Z. B			STANDARD THREE CELL BOX CULVERT DETAILS			<input type="radio"/> DESIGN <input type="radio"/> CHECKING <input type="radio"/> APPROVAL <input type="radio"/> REVIEW		
1	REVISION 1	25-02-2018										DESIGN CHECKED BY F. N. RENg DATE: _____ DRAWING APPROVED BY F. N. RENg DATE: _____			MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT			PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1 SHEET NO: 1 OF 1		
CONTRACT No.:		PROJECT No.:		SCALE:		DATE:		DRAWING NO.:		CONTRACT No.:		PROJECT No.:		SCALE:		DATE:		DRAWING NO.:		
				1:1000		NOVEMBER 2025		CON/2025/SP/SATCP-LM/SBC-003												



SECTION B-B
(SCALE 1:75)

LEGEND :

TOP BARS SHOWN THUS ---
BOTTOM BARS SHOWN THUS _____

TABLE OF BAR BENDING SCHEDULE FOR SLAB HAVING SPAN 2000mm. :-

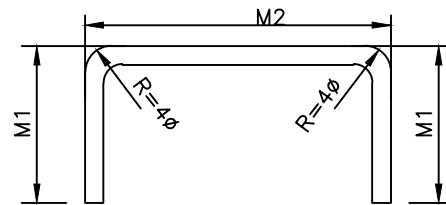
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REIN. SCHEDULE :-

SL. NO.	DESCRIPTION	SHAPE
	FOR SPAN 2000mm.	
a1	16Y @ 150 c/c	
a2	8Y @ 150 c/c	
a3	10Y @ 250 c/c	
a4	10Y @ 250 c/c	

TABLE FOR SLAB :-

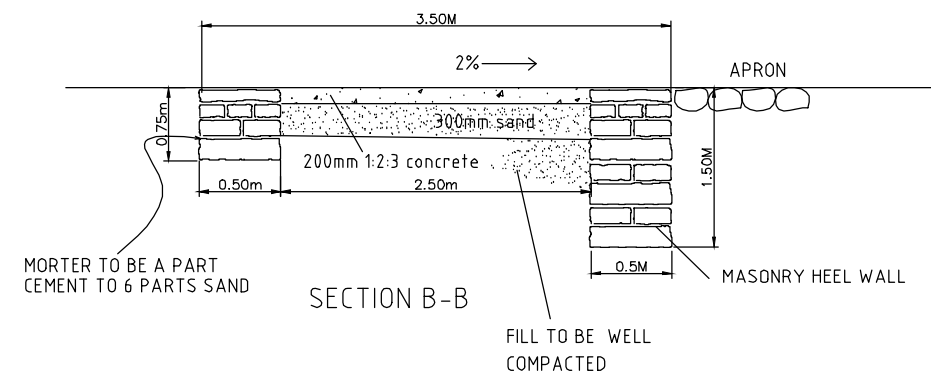
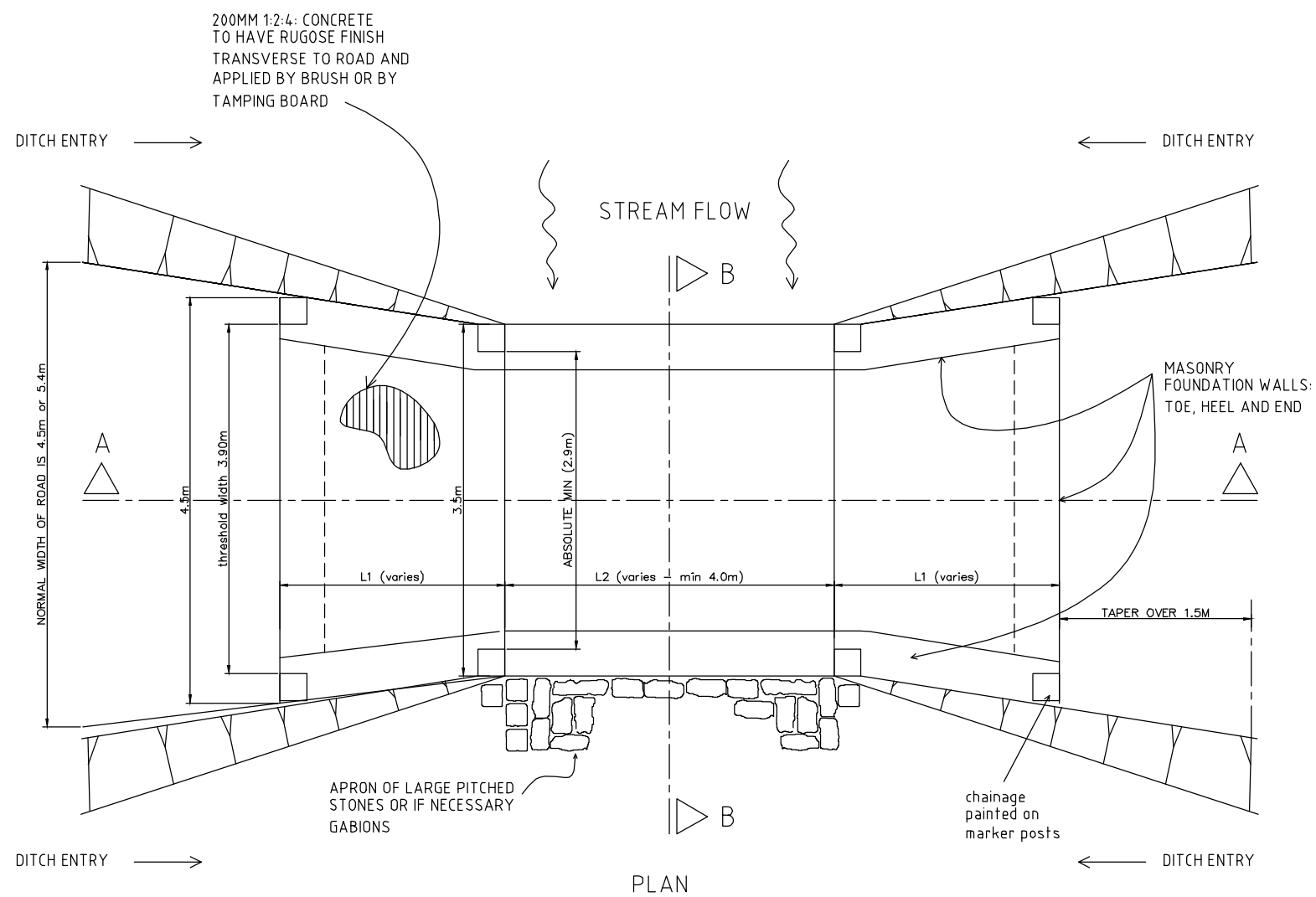
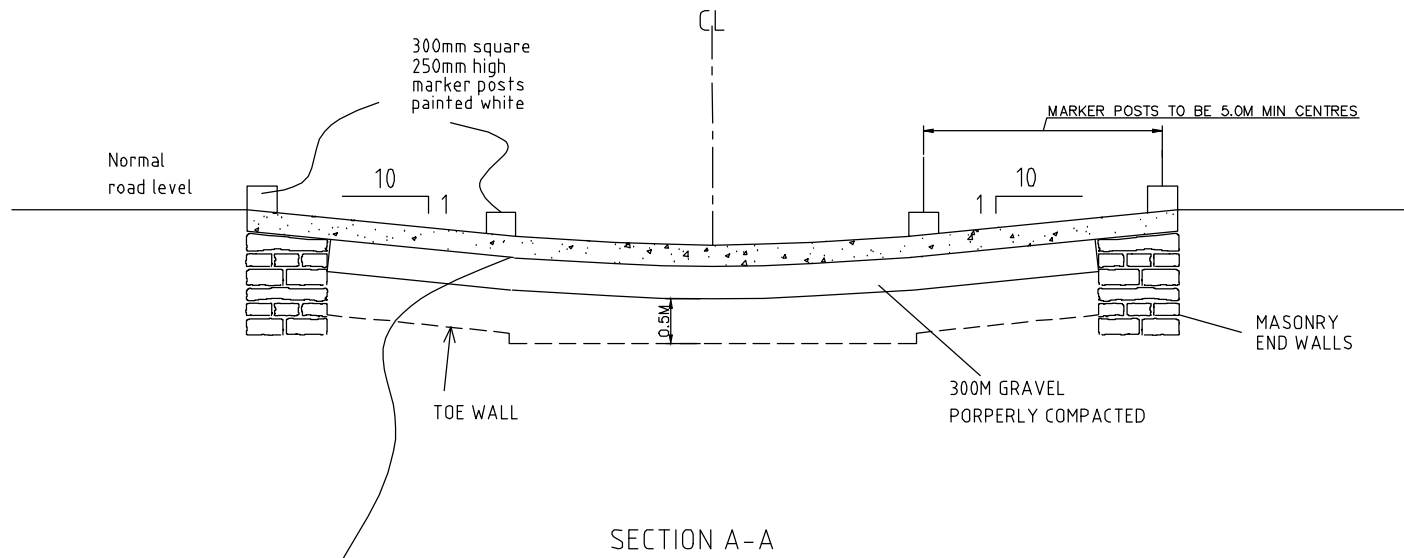
SL. NO.	SPAN (mm)	THICKNESS OF SLAB (mm)
1	2000	250 To 300



NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED OTHERWISE.
2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. CONCRETE GRADE FOR RCC PRECAST GIRDER SHALL BE CLASS 40/20.
4. GRADE OF STEEL SHALL BE H.Y.S.D. GRADE 460
5. THE CONCRETE COVER FOR REINFORCEMENT SHALL BE 40mm.
6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER SHEETS OF THIS DRAWING.
7. FOR ALL OTHER NOTES REFER 'GENERAL NOTES' DRAWING.

AMENDMENTS			LEGEND	CONSULTANT'S DETAIL:	CLIENT'S DETAIL:	DESIGNED	DRAWING TITLE:	PROJECT STATUS			
NR.	DESCRIPTION	DATE		SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com	Southern Africal Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe	DESIGNED BY Z. B	REINFORCEMENT DETAIL OF TOPSLAB OF MASONRY WALL BOX CULVERT	<input type="checkbox"/> CONSULTANT DRAWING <input type="checkbox"/> DESIGNER DRAWING <input type="checkbox"/> PROJECT ENGINEER DRAWING <input type="checkbox"/> ASSEMBLY DRAWING			
1	REVISION 1	25-02-2026				DESIGN CHECKED BY F. N. RENg	DESCRIPTION OF PROJECT	MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT			
						DRAWN BY Z. B		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____			
						CHECKED BY F. N. RENg		REMARKS: _____ ORIGINAL PAPER SIZE: A1			
						DRAWING APPROVED BY MINISTRY		CONTRACT No.:	PROJECT No.:	SCALE:	DATE:
								1:1000	NOVEMBER 2025	CON/2025/SP/SATCP-LM/SBC-004	1 OF 1



1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED OTHERWISE.
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6. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH OTHER SHEETS OF THIS DRAWING.
7. FOR ALL OTHER NOTES REFER 'GENERAL NOTES' DRAWING.

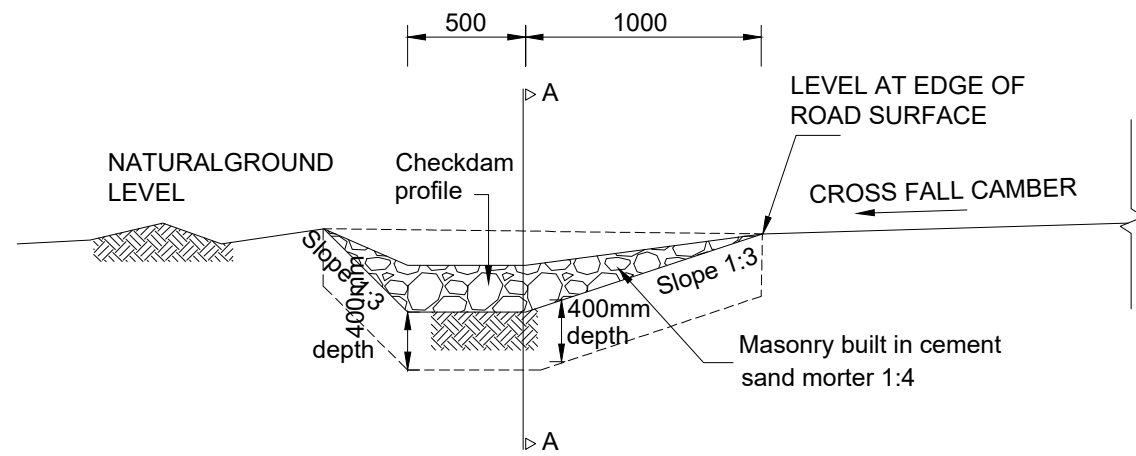
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NR.	DESCRIPTION	DATE							Z. B		TYPICAL DETAILS OF CONCRETE DRIFT		<input type="radio"/> CONSULTING ENGINEER <input type="radio"/> DESIGNER <input type="radio"/> CHECKED <input type="radio"/> APPROVED	
1	REVISION 1	25-02-2018			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africal Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		DESIGNER: Z. B CHECKED BY: F. N. RENg DRAWN: Z. B CHECKED BY: F. N. RENg APPROVED BY: F. N. RENg		MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1	
									DRAWING APPROVED BY MINISTRY		CONTRACT No.:		PROJECT No.:	
									SCALE: 1:1000		DATE: NOVEMBER 2025		DRAWING NO. CON/2025/SP/SATCP-LM/STR/CD-001	
									SIGNATURE: _____		DATE: _____		SHEET NO. 1 OF 1	

STANDARD DRAWINGS

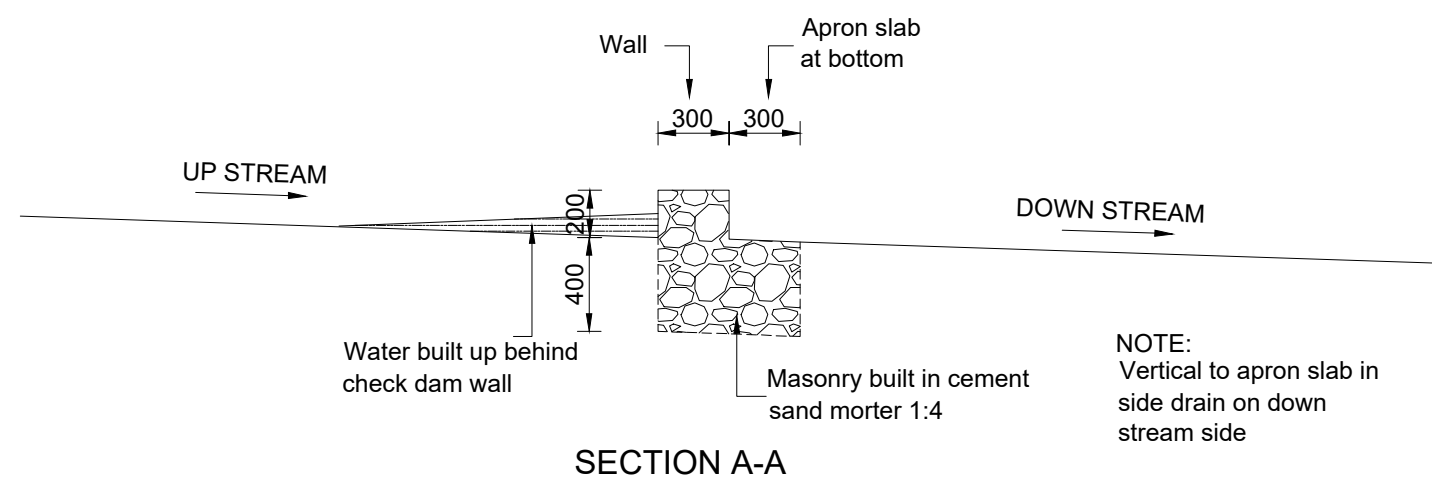
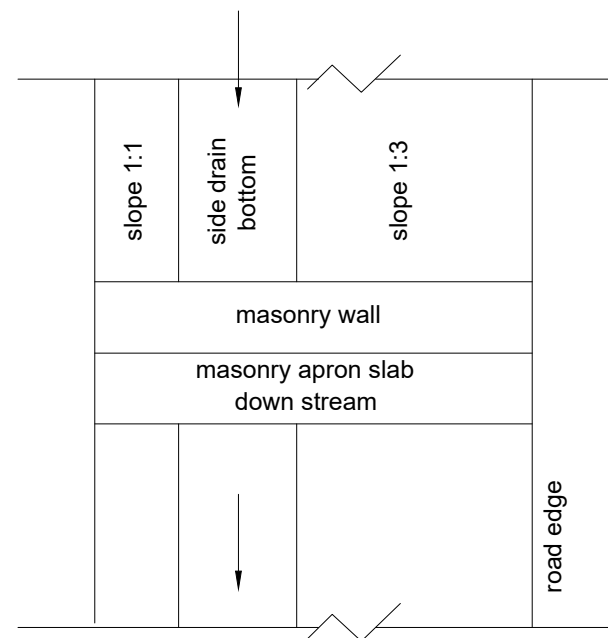
NOTE: Check dam to be used where soil is erodable and as indicated in the table below

TABLE SCOUR CHECK SPACING

GRADIENT OF ROAD (%)	SCOUR CHECK INTERNAL (m)
3	Not Required
4	17
5	13
6	10
7	8
8	7
9	6
10	5
12	4



SIDE DRAIN ELEVATION WITH CHECK DAM CONSTRUCTED



NOTE: Vertical to apron slab in side drain on down stream side

AMENDMENTS		
NR.	DESCRIPTION	DATE
1	REVISION 1	25-02-2018


LEGEND	

CONSULTANT'S DETAIL:



SUIDA & PARTNERS
P.O Box 32345, Chichiri, Blantyre 3
Malawi
Tel: + 888 343 523/ 999 343 523
Email info@suidamw.com

CLIENT'S DETAIL:



Southern African Trade Connectivity Project,
Ministry of Transport and Public Works
Capital Hill, Off Chilembwe Road
private Bag 322, Lilongwe

DESIGNED
Z. B

DESIGN CHECKED BY
F. N. RENg

DRAWN
Z. B

DRAWING CHECKED BY
F. N. RENg

DRAWING APPROVED BY MINISTRY

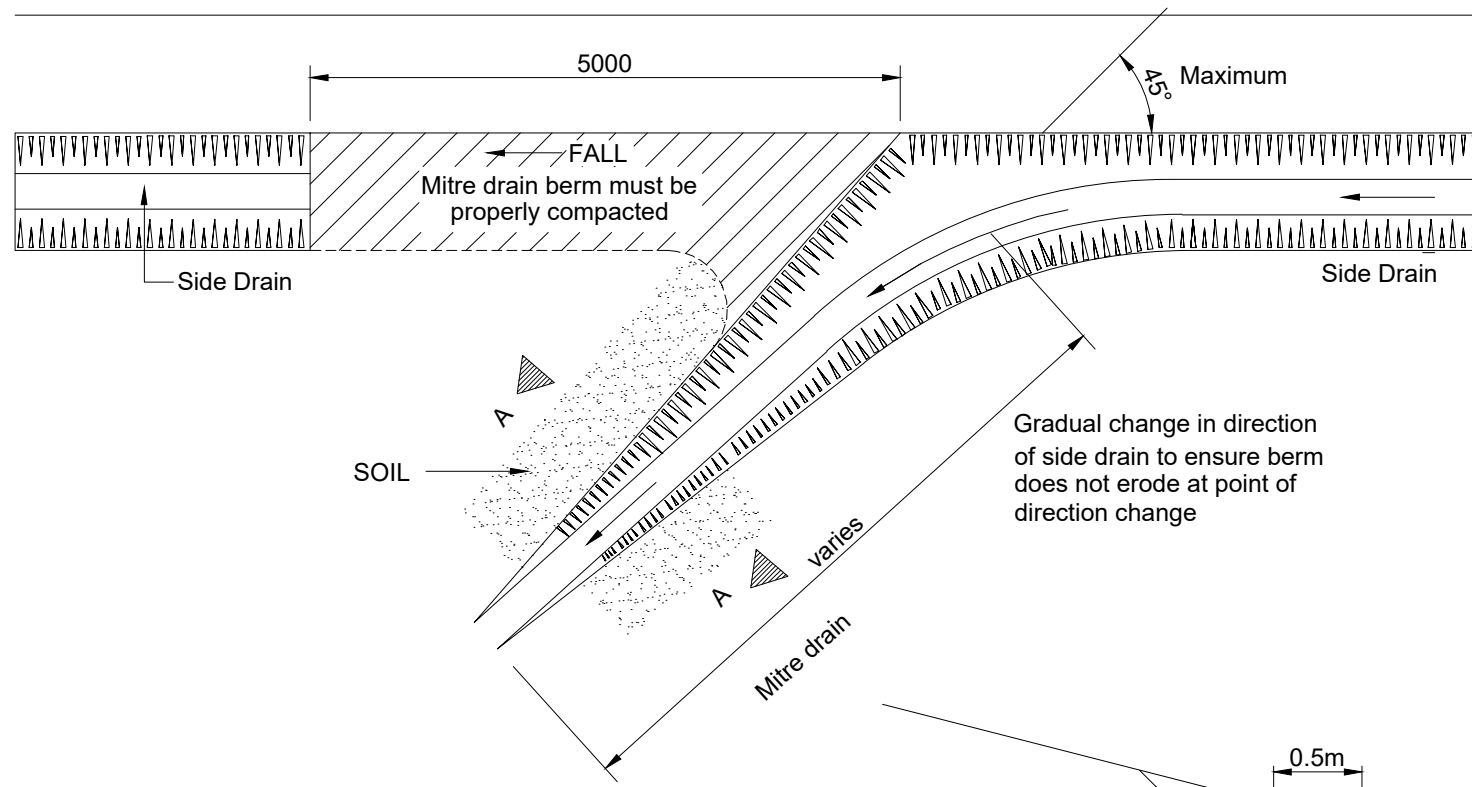
DRAWING TITLE:
TYPICAL DETAILS OF MASONRY CHECK DAMS

DESCRIPTION OF PROJECT:
MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT

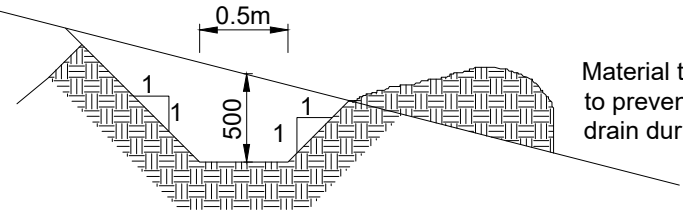
CONTRACT No.:
PROJECT No.:
SCALE: 1:1000
DATE: NOVEMBER 2025

PROJECT STATUS

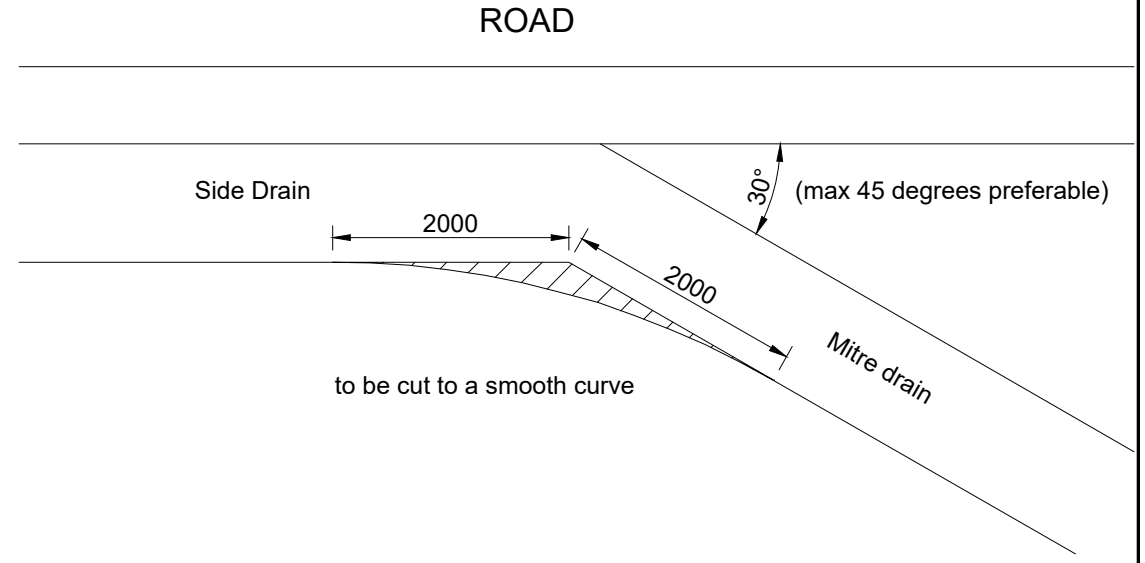
PLANNING/PROJECT ENGINEER:
INSPECTOR OF WORKS:
REMARKS:
ORIGINAL PAPER SIZE: A1
DRAWING NO: CON/2025/SP/SATCP-LM/DRN-01
SHEET NO: 1 OF 1



PLAN OF COMPLETED MITRE DRAIN

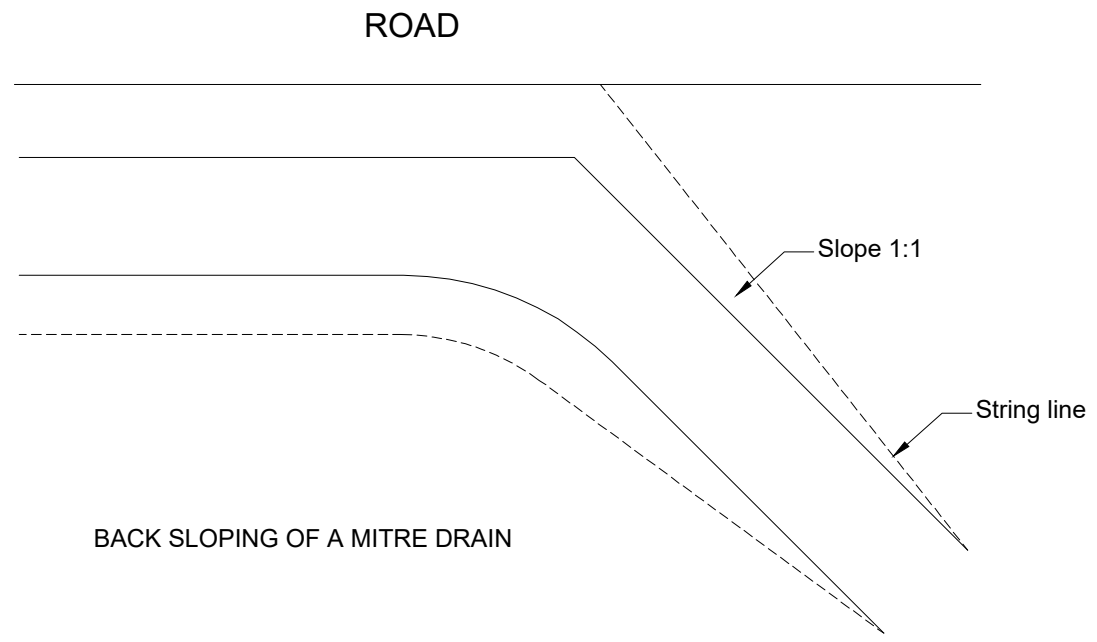


SECTION A-A



SPACING OF MITRES

Longitudinal Road Gradient (%)	Maximum Mitre Drain Interval (M)
12	40
10	80
8	120
6	150
4	200



BACK SLOPING OF A MITRE DRAIN

AMENDMENTS		
NR.	DESCRIPTION	DATE
1	REVISION 1	25-02-2018


LEGEND

CONSULTANT'S DETAIL:



SUIDA & PARTNERS
 P.O Box 32345, Chichiri, Blantyre 3
 Malawi
 Tel: + 888 343 523/ 999 343 523
 Email info@suidamw.com

CLIENT'S DETAIL:

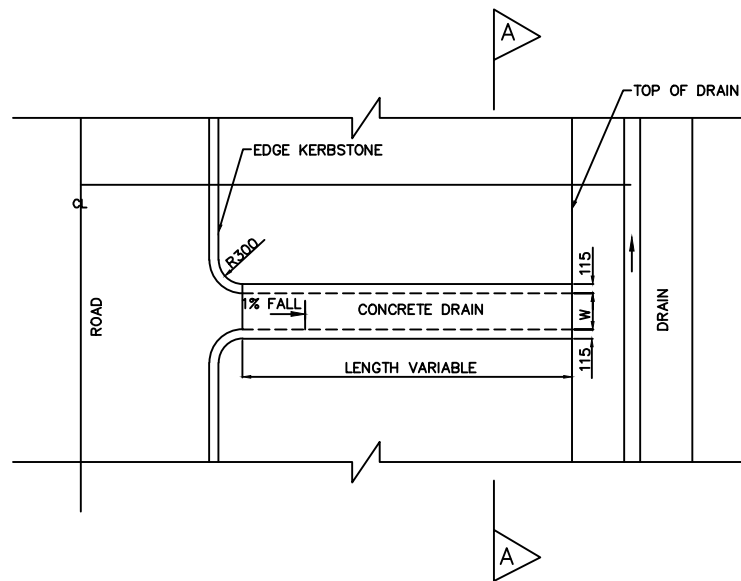


Southern Africa Trade Connectivity Project,
 Ministry of Transport and Public Works
 Capital Hill, Off Chilembwe Road
 private Bag 322, Lilongwe

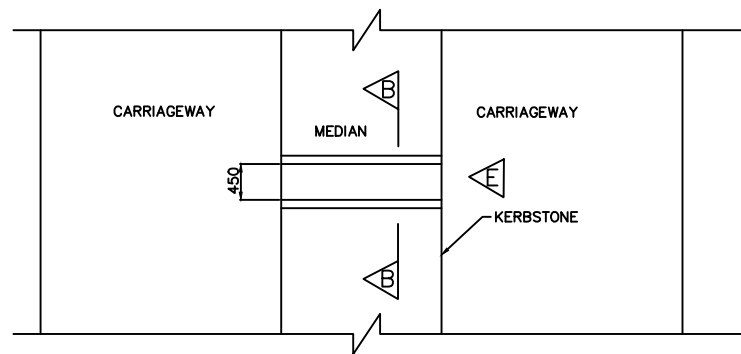
DESIGNED BY Z. B	DATE
DESIGN CHECKED BY F. N. RENg	DATE
DRAWN BY Z. B	DATE
DRAWING CHECKED BY F. N. RENg	DATE
DRAWING APPROVED BY MINISTRY	DATE
SIGNATURE	DATE

DRAWING TITLE: TYPICAL DETAILS OF MASONRY MITRE DRAIN			
DESCRIPTION OF PROJECT: MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA-CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT			
CONTRACT No.:	PROJECT No.:	SCALE: 1:1000	DATE: NOVEMBER 2025

PROJECT STATUS			
<input type="radio"/> DESIGN	<input type="radio"/> CHECKING	<input type="radio"/> CONSTRUCTION	<input type="radio"/> AS-BUILT
PLANNING/PROJECT ENGINEER:	DATE	INSPECTOR OF WORKS:	DATE
REMARKS:	ORIGINAL PAPER SIZE: A1	DRAWING NO.:	SHEET NO.:
CON/2025/SP/SATCP-LM/DRN-02	1 OF 1	NOVEMBER 2025	1 OF 1

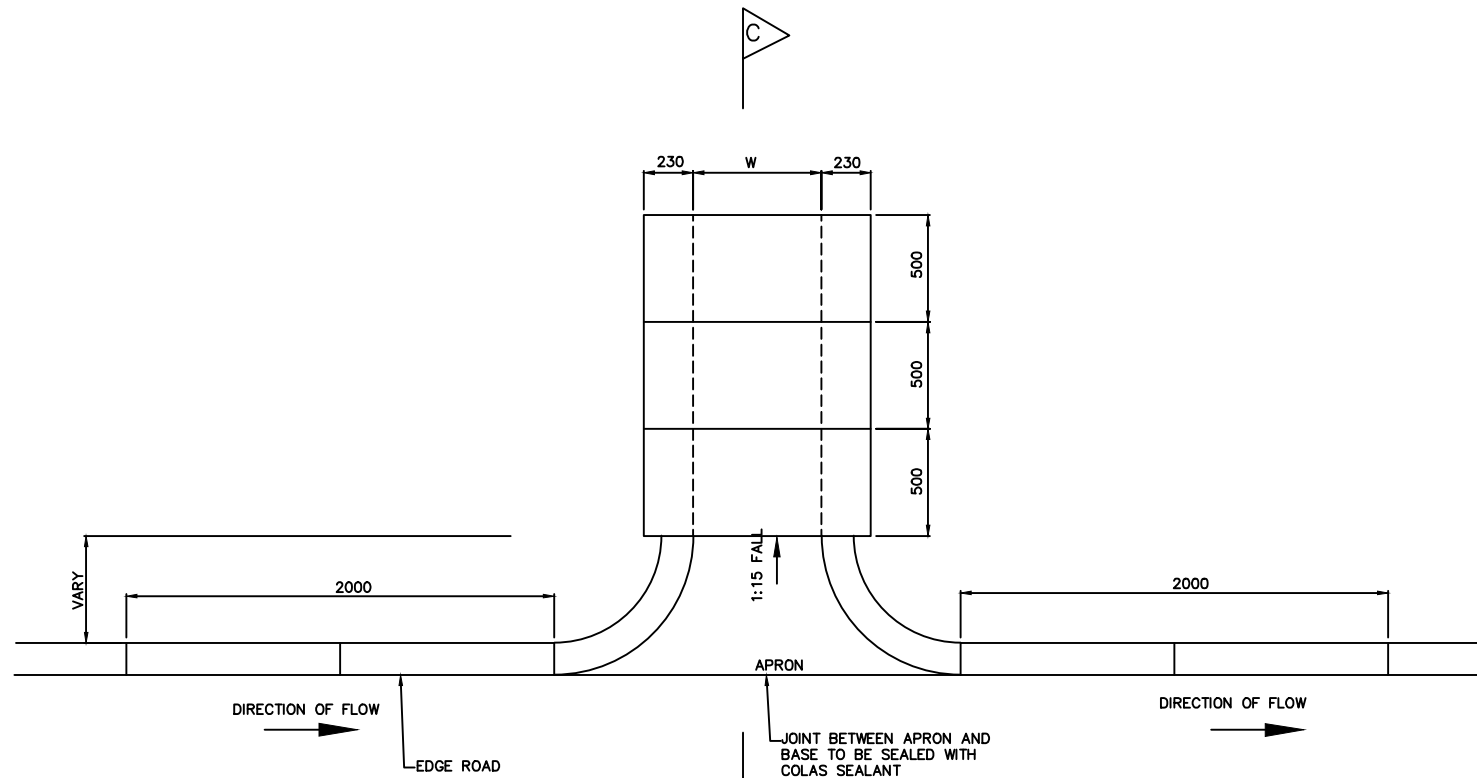


TYPICAL CONCRETE OUTLETS AND CHUTE PLANE



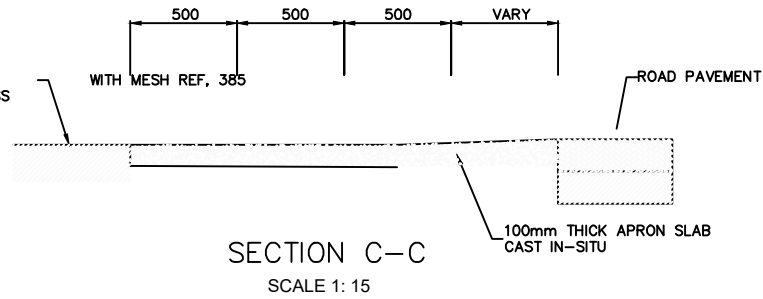
DUAL CARRIAGE ROAD PLAN

SCALE 1: 40



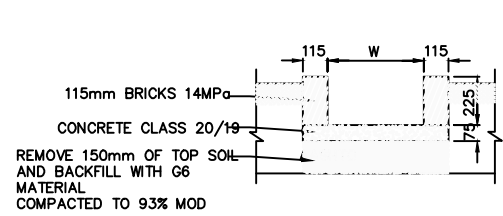
TYPICAL PLAN AT OUTLETS
SCALE 1: 15

COVER TO OUTLET AT
WALKWAY CONCRETE CLASS
20/19

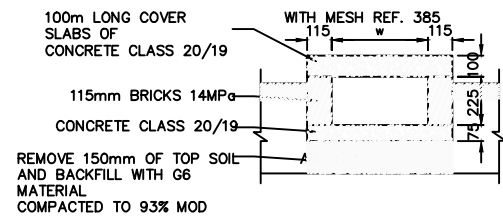


SECTION C-C
SCALE 1: 15

CHUTE	COVER	W
TYPE 1	OPEN	W=450
TYPE 2	COVERED	W=450
TYPE 3	COVERED	W=600

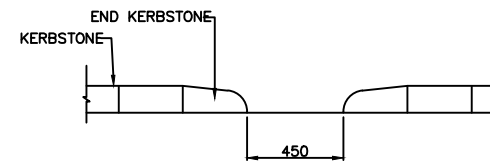


SECTION A-A OPEN CHUTES

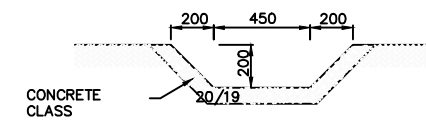


SECTION A-A COVERED
CHUTE
SCALE 1: 15

IN WALKWAYS



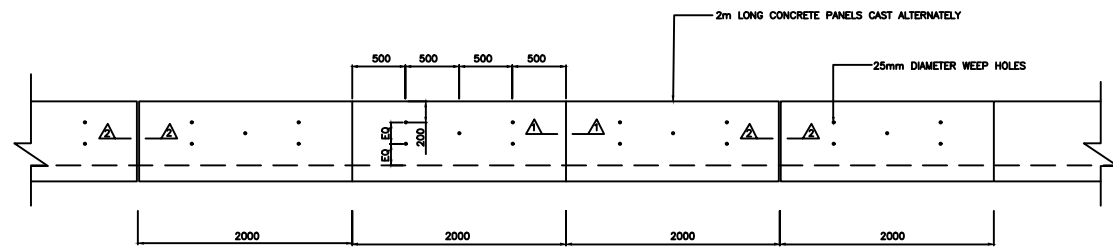
ELEVATION E
SCALE 1: 15



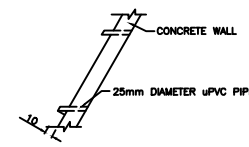
SECTION B-B

AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE:		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africal Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD DRAWINGS: STORMWATER DRAINAGE DETAILS INLETS,OUTLETS AND CHUTES		<input type="radio"/> DESIGN <input type="radio"/> CHECKING <input type="radio"/> CONSTRUCTION <input type="radio"/> AS-BUILT	
1	REVISION 1	25-02-2008							DESIGN CHECKED BY F. N. RENg		DESCRIPTION OF PROJECT MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: INSPECTOR OF WORKS: REMARKS: ORIGINAL PAPER SIZE: A1	
									DRAWN Z B NDOLO		CONTRACT No.:		PROJECT No.:	
									DRAWING CHECKED BY F. N. RENg		SCALE: 1:1000		DATE: NOVEMBER 2025	
									DRAWING APPROVED BY MINISTRY		CONTRACT No.:		PROJECT No.:	
									SIGNATURE		DATE:		DRAWING NO. CON/2025/SP/SATCP-LM/DRN-03	
									SIGNATURE		DATE:		SHEET NO. 1 OF 1	

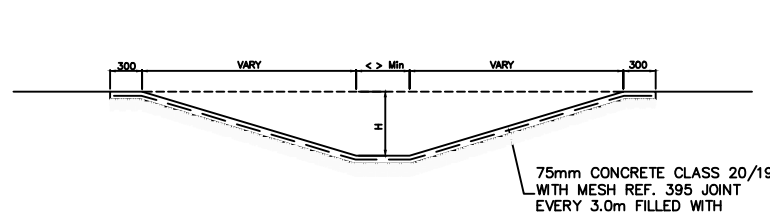
DEPTH H(m)	DEPTH H(m)
H<0.8	1:4
0.8<H<0.9	1:3
0.9<H<1.5	1:2
H>1.5	1:1.5



VEE OR TRAPEZOIDAL LINED DRAIN SIDE WALL ELEVATION
SCALE 1: 300

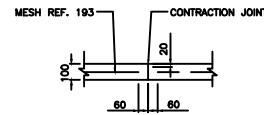


SECTION THROUGH SIDE PANEL

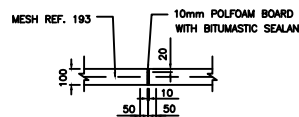


TYPICAL SECTION OF LINED TRAPEZOIDAL DRAIN
SIDE SLOVES VARY 'H' Min 300mm

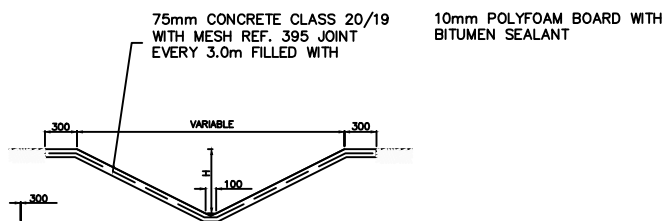
SCALE 1: 300



SECTION 2-2
EXPANSION JOINT SECTION THROUGH SIDE PANEL



SECTION 2-2
EXPANSION JOINT

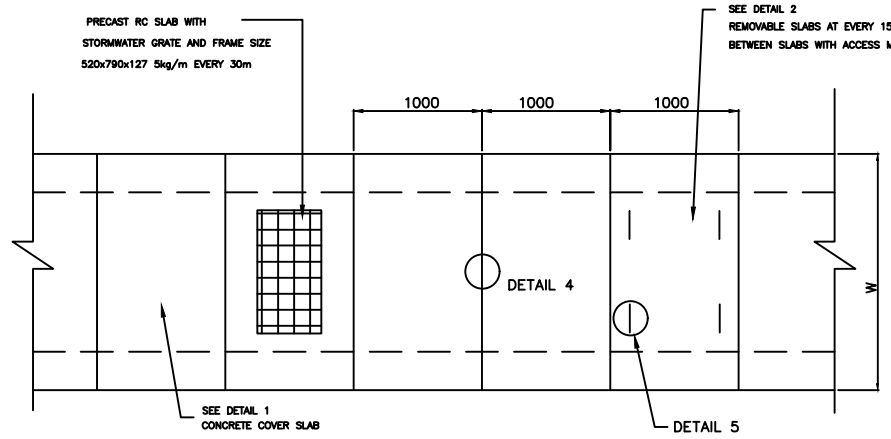


TYPICAL SECTION OF LINED VEE DRAIN
SIDE SLOVES VARY 'H' Min 300mm

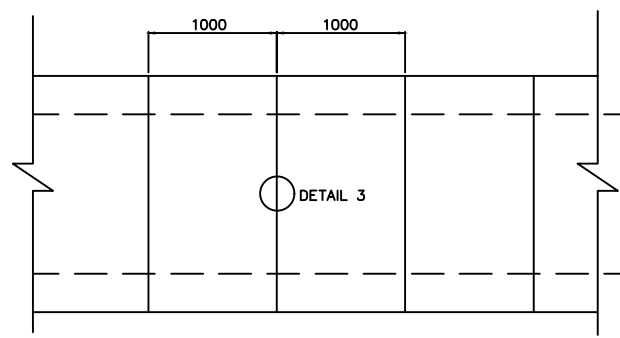
SCALE 1: 300

REFERENCE CODE	WIRE/BAR DIAMETER	MESH APERTURE	SHEET WEIGHT
REF 100	4.00 mm	200 x 200mm	14.4 kgs
REF 156	3.55 mm	100 x 100mm	22.5 kgs
REF 193	5.6 mm	200 x 200mm	27.8 kgs
REF 245	6.3 mm	200 x 200mm	35.3 kgs
REF 311	7.1 mm	200 x 200mm	44.8 kgs
REF 395	8.00 mm	200 x 200mm	56.9 kgs
REF 500	9.00 mm	200 x 200mm	72.0 kgs
REF 617	10.00 mm	200 x 200mm	88.9 kgs
REF 888	12.00 mm	200 x 200mm	127.9 kgs

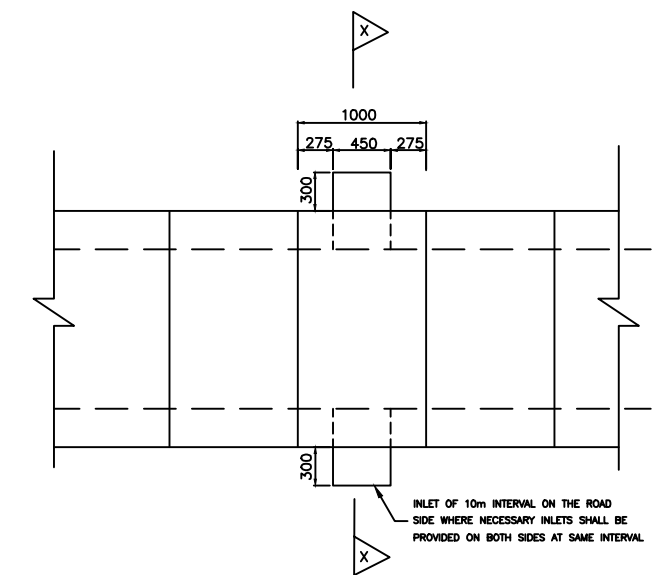
AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE:		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africal Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD DRAWINGS: TRAPEZOIDAL AND VEE DRAINS DETAILS AT ROAD CROSSING		<input type="radio"/> DESIGN <input type="radio"/> CHECKED <input type="radio"/> APPROVED FOR CONSTRUCTION <input type="radio"/> AS BUILT	
1	REVISION 1	25-02-206							DESIGN CHECKED BY F. N. RENg		DESCRIPTION OF PROJECT MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1	
									DRAWING APPROVED BY MINISTRY F. N. RENg		CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: CON/2025/SP/SATCP-LM/DRN-06 SHEET NO: 1 OF 1	



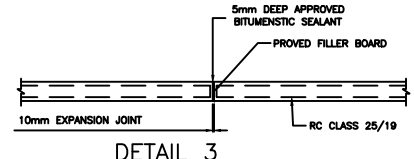
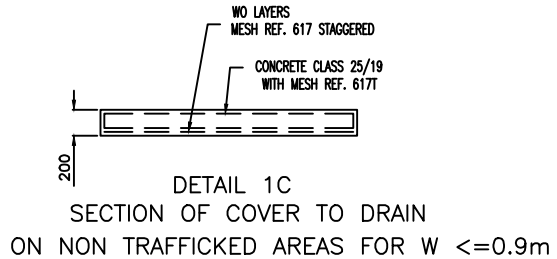
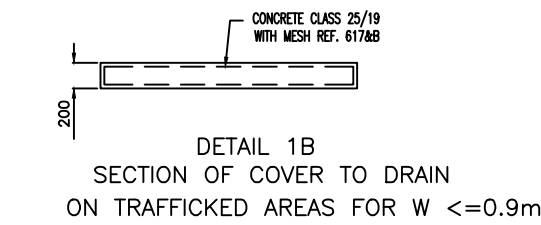
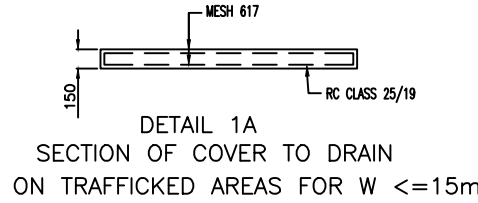
PLAN OF RECTANGULAR DRAIN COVERED WITH PRECAST SLABS



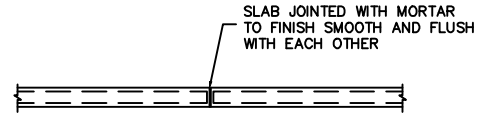
RECTANGULAR DRAIN INVERT SLAB OR CAST IN-SITU CONCRETE



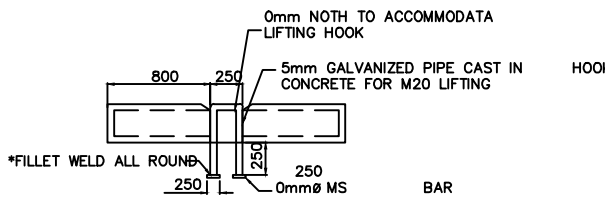
RECTANGULAR ROAD SIDE DRAIN PLAN



DETAIL 3 EXPANSION JOINT DETAIL ON WALLS AND BASE SLAB OF DRAIN AT 30m INTERVAL

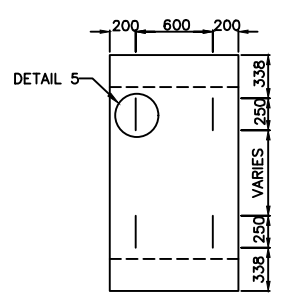


DETAIL 4 JOINT IN COVER SLAB TO DRAIN

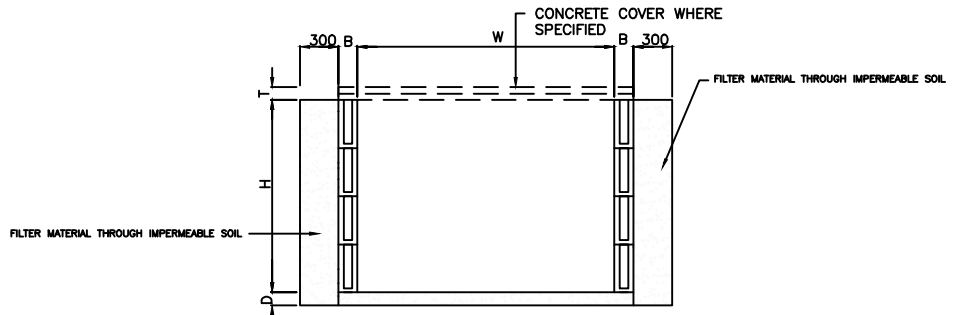


DETAIL 5 LIFTING HOOK FOR REMOVABLE SLABS

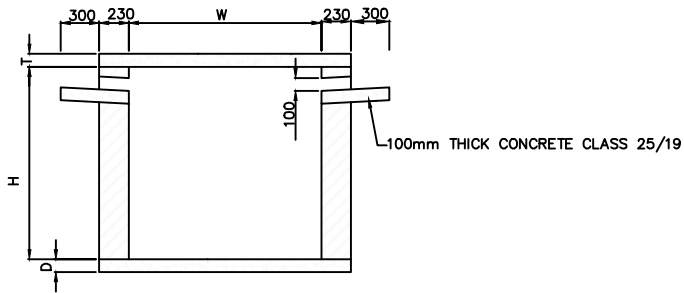
W	Varies (as specified)
B	150 mm for H less than 0.6m Y= Hollow block min 5.0MPa filled with concrete class 20/19 and reinforced with Y12 bars vertically in each hole 230mm for H greater than 0.6m less than 1.5m Y= Hollow block min 5MPa with Y12mm per hole and filled with concrete class 20/19 150 mm for H greater than 1.5m and less than 1.8 Y= class 25/19 reinforced with mesh REF. 617 each face 150 mm for H greater than 1.8m and less than 2.5m Y= class 25/19 reinforced with double layer mesh REF. 617 each face for one thirds of height and single layer for rest of height
D	100mm concrete class 25/19 reinforced with mesh Ref. 395 top face
T	Varies (as specified)



DETAIL 2 REMOVABLE PRECAST SLAB



HOLLOW BLOCK RECTANGULAR DRAIN(OUTFALL)



SECTION X-X ROAD SIDE DRAIN

AMENDMENTS		
NR.	DESCRIPTION	DATE
1	REVISION 1	25-02-206


LEGEND	

CONSULTANT'S DETAIL:



SUIDA & PARTNERS
P.O Box 32345, Chichiri, Blantyre 3
Malawi
Tel: + 888 343 523/ 999 343 523
Email info@suidamw.com

CLIENT'S DETAIL:

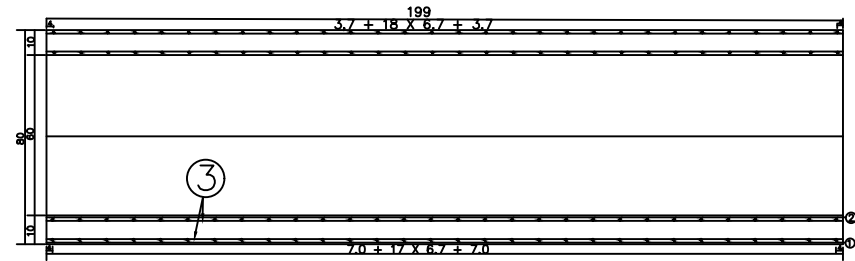


Southern African Trade Connectivity Project,
Ministry of Transport and Public Works
Capital Hill, Off Chilembwe Road
private Bag 322, Lilongwe

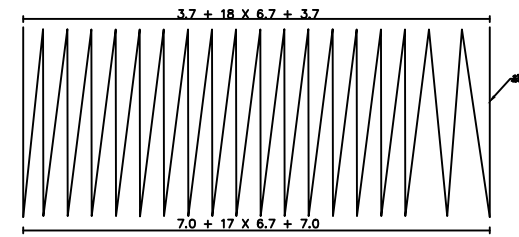
DESIGNED Z. B	DATE: _____
DESIGN CHECKED BY F. N. RENg	DATE: _____
DRAWN Z. B	DATE: _____
DRAWING CHECKED BY F. N. RENg	DATE: _____
DRAWING APPROVED BY MINISTRY	DATE: _____
SIGNATURE	DATE

DRAWING TITLE: STANDARD DRAWINGS: COVERED RECTANGULAR DRAIN DETAILS	
DESCRIPTION OF PROJECT: MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT	
CONTRACT No.:	PROJECT No.:
SCALE: 1:1000	DATE: NOVEMBER 2025

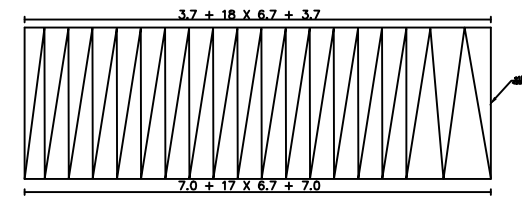
PROJECT STATUS	
<input type="radio"/> DESIGN <input type="radio"/> DRAWING <input type="radio"/> PRELIMINARY <input type="radio"/> APPROVAL	<input type="radio"/> AS-BUILT <input type="radio"/> ORIGINAL
PLANNING/PROJECT ENGINEER:	DATE: _____
INSPECTOR OF WORKS:	DATE: _____
REMARKS:	DATE: _____
DRAWING NO.:	PROJECT NO.:
CON/2025/SP/SATCP-LM/DRN-07	1 OF 1
SHEET NO.:	SCALE: A1



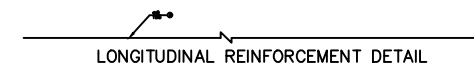
PROFILE



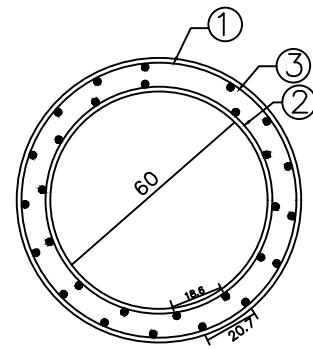
OUTER RING RIBS PROFILE



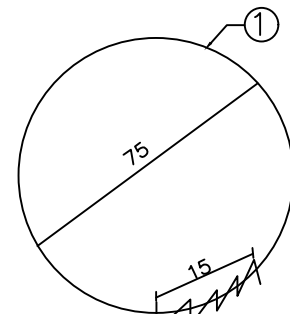
INNER RING RIBS PROFILE



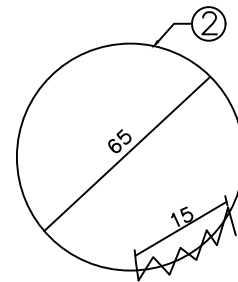
LONGITUDINAL REINFORCEMENT DETAIL



CROSS-SECTION



OUTER RING RIBS DETAILS



INNER RING RIBS DETAILS

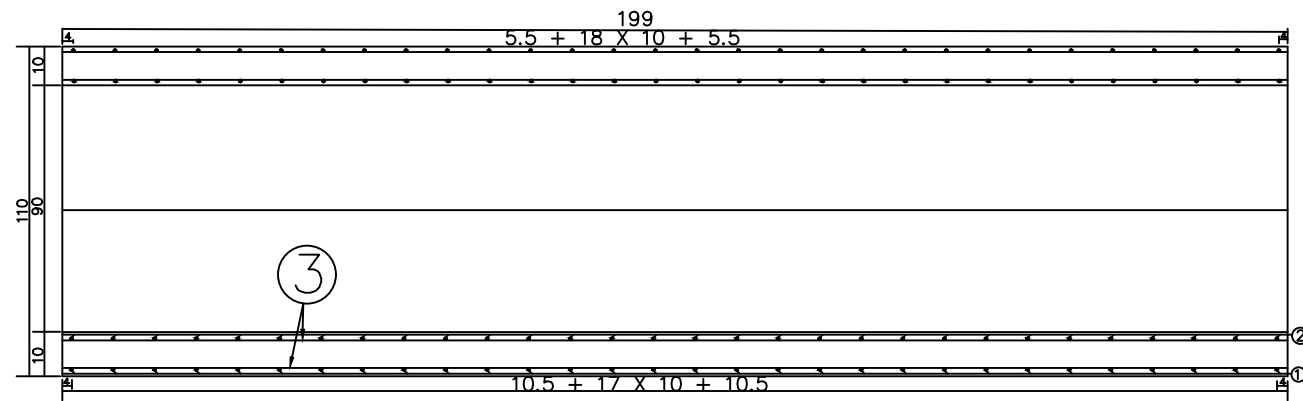
ENGINEERING QUANTITIES LIST

NUMBER	DIAMETER	EACH LENGTH	THE NUMBER	TOTAL	WEIGHT PER METER	WEIGHT	SERIAL NUMBER
Unit	mm	cm	Radius	m	kg/m	kg	
1	10	1000	1	1000	0.008	8.00	001
2	10	1000	1	1000	0.008	8.00	002
3	10	1000	1	1000	0.008	8.00	003

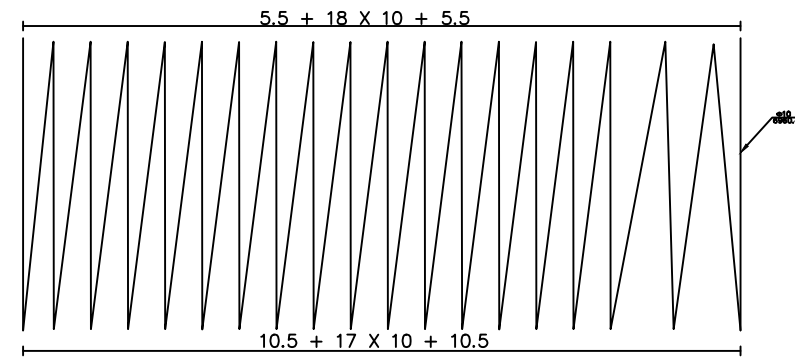
SUMMATION C20 concrete: 0.4m3 HPB235: 67.7KG

NOTES:
1. Figures in addition to the steel bar diameter in millimeters in size and indicated, the rest are in centimeters

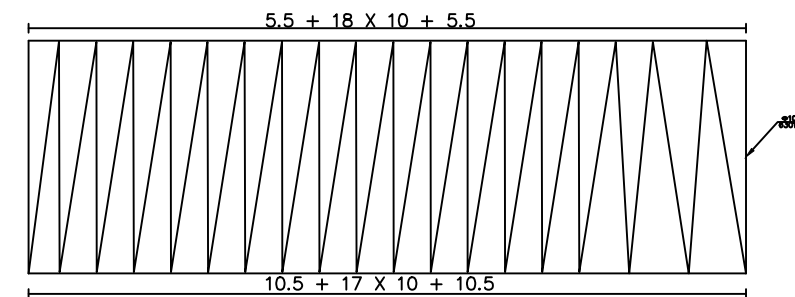
AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE:		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD DRAWINGS: 900MM DIAMETER CONCRETE DETAILS		<input type="checkbox"/> DESIGN <input type="checkbox"/> CHECKING <input type="checkbox"/> APPROVAL FOR CONSTRUCTION <input type="checkbox"/> AS-BUILT DRAWING	
1	REVISION 1	25-02-2026							DESIGN CHECKED BY F. N. REng DATE: _____		DESCRIPTION OF PROJECT MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1	
									DRAWN Z. B DATE: _____		CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: CON/2025/SP/SATCP-LM/DRN-09 SHEET NO: 1 OF 1	
									DRAWING CHECKED BY F. N. REng DATE: _____		CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: CON/2025/SP/SATCP-LM/DRN-09 SHEET NO: 1 OF 1	
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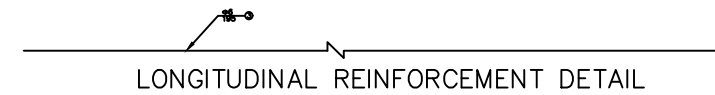
PROFILE



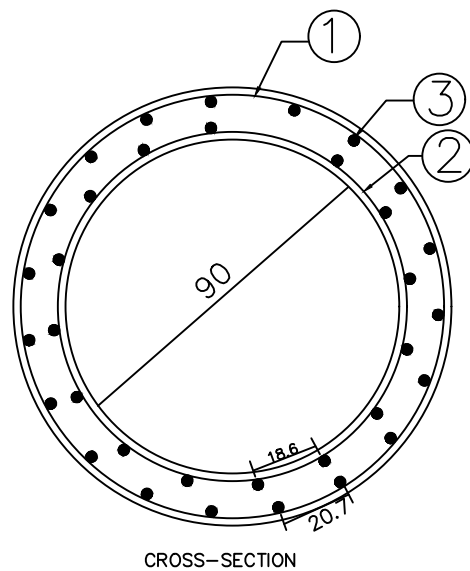
OUTER RING RIBS PROFILE



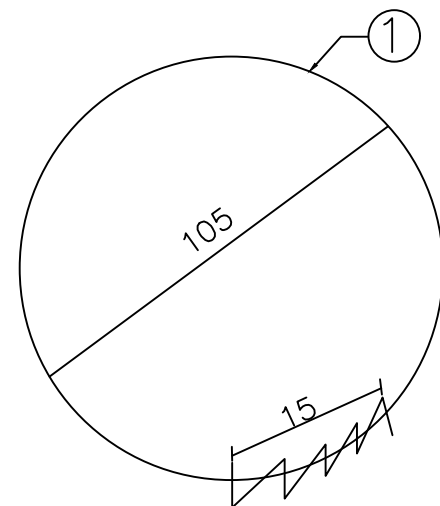
INNER RING RIBS PROFILE



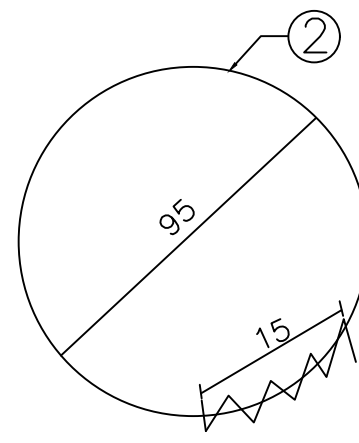
LONGITUDINAL REINFORCEMENT DETAIL



CROSS-SECTION



OUTER RING RIBS DETAILS



INNER RING RIBS DETAILS

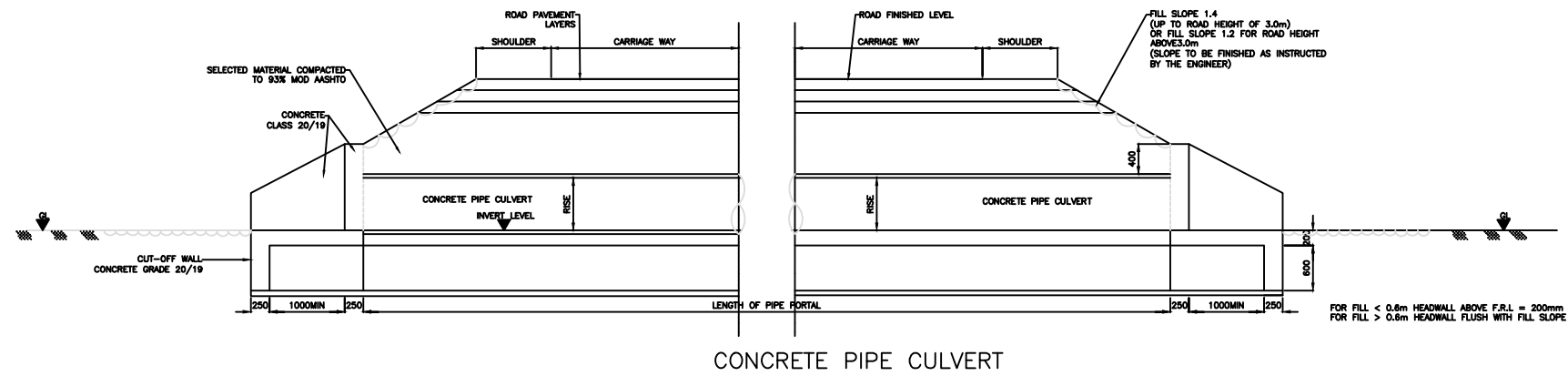
ENGINEERING QUANTITIES LIST

NUMBER	DIAMETER	EACH LENGTH	THE NUMBER	TOTAL	WEIGHT PER METER	WEIGHT	SERIAL NUMBER
Unit	mm	cm	Radical	m	kg/m	kg	
1	ø10	6003.30	1	60.0	0.62	42.98	HPB 235
2	ø10	6300.80	1	63.0	0.62	38.88	HPB 235
3	ø6	195	32	62.4	0.22	13.85	HPB 235
SUMMATION C20 concrete: 0.6m ³ HPB235: 95.7KG							

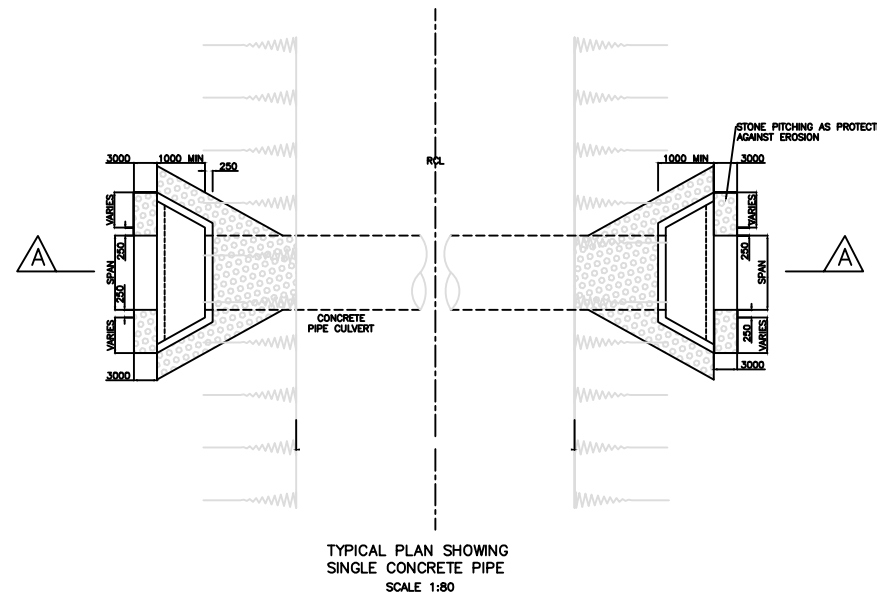
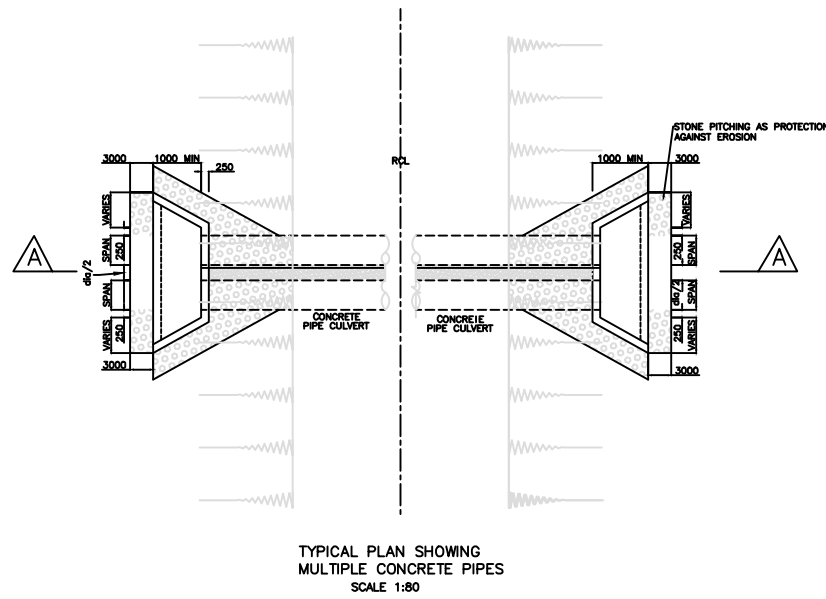
NOTES:

1. Figures in addition to the steel bar diameter in millimeters in size and indicated, the rest are in centimeters

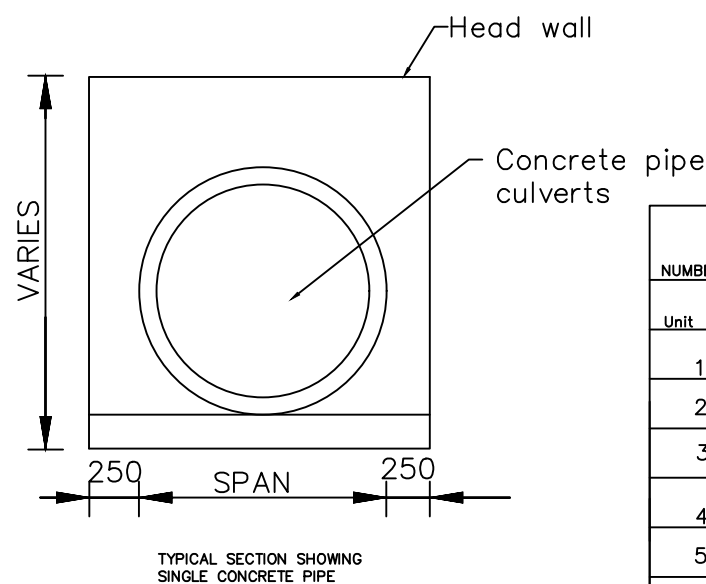
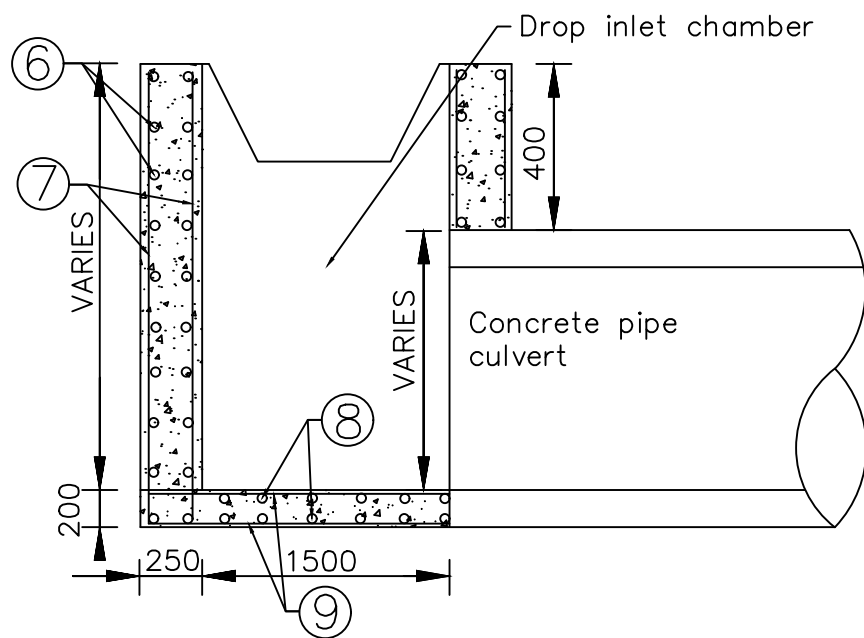
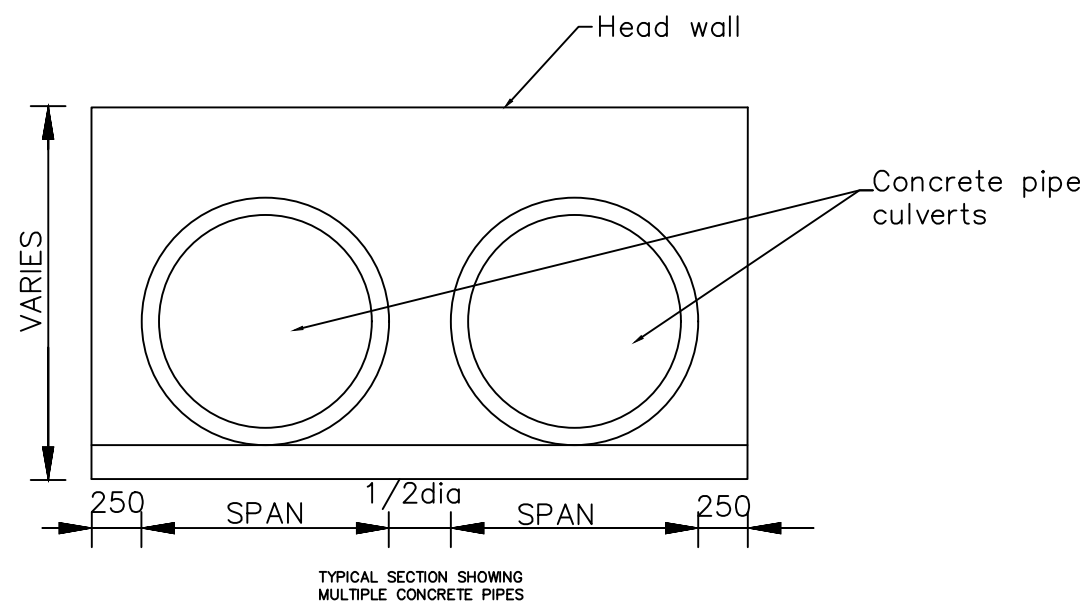
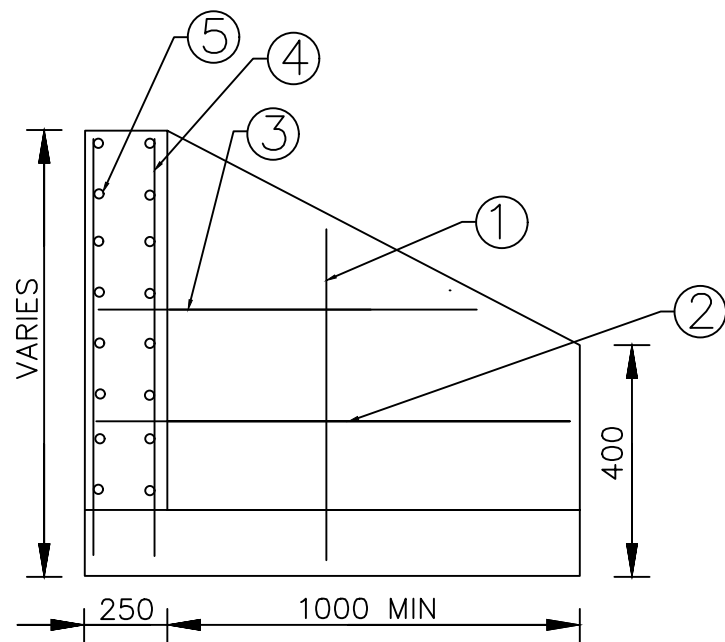
AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE:		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD DRAWINGS: 900MM DIAMETER CONCRETE DETAILS		<input type="radio"/> DESIGN <input type="radio"/> CHECKING <input type="radio"/> CONSTRUCTION <input type="radio"/> AS-BUILT	
1	REVISION 1	25-02-206							DESIGN CHECKED BY F. N. REng DATE: _____ SIGNATURE: _____		DESCRIPTION OF PROJECT MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1	
							DRAWING APPROVED BY MINISTRY DATE: _____ SIGNATURE: _____		CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: CON/2025/SP/SATCP-LM/DRN-10 SHEET NO: 1 OF 1		1 OF 1	



TYPICAL SECTION A-A
SCALE 1:30



AMENDMENTS			LEGEND	CONSULTANT'S DETAIL:	CLIENT'S DETAIL:	DESIGNED:	DRAWING TITLE:	PROJECT STATUS				
NR.	DESCRIPTION	DATE		<p>SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com</p>	<p>Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe</p>	Z. B	STANDARD DRAWINGS: GENERAL ARRANGEMENT OF REINFORCED CONCRETE RING	<input type="radio"/> DESIGN <input type="radio"/> DRAWING <input type="radio"/> CONSTRUCTION <input type="radio"/> AS-BUILT				
1	REVISION 1	25-02-206						DESIGN CHECKED BY	F. N. REING	PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____		
								DRAWN	Z. B	REMARKS: _____ ORIGINAL PAPER SIZE: A1		
								DRAWING CHECKED BY	F. N. REing	DRAWING NO: _____ SHEET NO: 1 OF 1		
								DRAWING APPROVED BY	F. N. REing	CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025 CON/2025/SP/SATCP-LM/DRN-11		



REINFORCEMENT DETAILS
(TO BE CUT AND BENT ON SITE)

NUMBER	DIAMETER	SPACING	WEIGHT PER METER	SERIAL NUMBER
Unit	mm	mm	kg/m	
1	φ12	150	0.89	HPB 235
2	φ10	150	0.62	HPB 235
3	φ10	150	0.62	HPB 235
4	φ12	150	0.89	HPB 235
5	φ10	150	0.62	HPB 235
6	φ10	225	0.62	HPB 235
7	φ10	225	0.62	HPB 235
8	φ10	225	0.62	HPB 235
9	φ10	225	0.62	HPB 235

Concrete class: C20/19

AMENDMENTS			LEGEND		CONSULTANT'S DETAIL:		CLIENT'S DETAIL:		DESIGNED		DRAWING TITLE:		PROJECT STATUS	
NR.	DESCRIPTION	DATE			SUIDA & PARTNERS P.O Box 32345, Chichiri, Blantyre 3 Malawi Tel: + 888 343 523/ 999 343 523 Email info@suidamw.com		Southern Africa Trade Connectivity Project, Ministry of Transport and Public Works Capital Hill, Off Chilembwe Road private Bag 322, Lilongwe		Z. B		STANDARD DRAWINGS: REINFORCED CONCRETE RING AND DROP INLET CHAMBER DETAILS		<input type="radio"/> DESIGN <input type="radio"/> CHECKING <input type="radio"/> APPROVAL FOR CONSTRUCTION <input type="radio"/> AS-BUILT DRAWING	
1	REVISION 1	25-02-206							DESIGN CHECKED BY F. N. RENg DATE: _____ DRAWN Z. B DATE: _____ DRAWING CHECKED BY F. N. RENg DATE: _____ DRAWING APPROVED BY MINISTRY DATE: _____		DESCRIPTION OF PROJECT MW MTPW- 544353-CW-RFB/ SELECTED SPOT IMPROVEMENTS AND CONSTRUCTION OF BOX CULVERTS ON MDEKA -CHINYANGUTE (UD) FEEDER ROADS (10.6KMS) IN BLANTYRE DISTRICT		PLANNING/PROJECT ENGINEER: _____ INSPECTOR OF WORKS: _____ REMARKS: _____ ORIGINAL PAPER SIZE: A1	
									CONTRACT No.: _____ PROJECT No.: _____ SCALE: 1:1000 DATE: NOVEMBER 2025		DRAWING NO: CON/2025/SP/SATCP-LM/DRN-12 SHEET NO: 1 OF 1			

ROAD INVENTORY

DISTRICT - BLANTYRE

DATA COLLECTED ON: 02/OCT/2025

UPDATED ON:

MDEKA - CHINYANGUTE FEEDER ROAD (UD)

Chainage		DESCRIPTION
FROM	TO	
0+000		MDEKA
0+000	5+500	Reshaping
0+004	0+850	Do nothing
0+020		Existing Concrete Pipe Culvert (600mm Dia - 1 line)
0+500		Existing Concrete Pipe Culvert (600mm Dia - 1 line)
1+100	1+210	Embankment Formation
1+160		Existing Concrete Pipe Culvert (900mm Dia - 1 liine)
1+210	1+300	Reshape section and provide earth drains - LHS & RHS
2+090	2+130	Reshape Section , Provide Earth drains and Scour Checks
2+130		Existing Concrete Pipe Culvert (900mm Dia - 4 lines)- Provide retaining walls, fill approaches, gravelling and provide 4No. Marker posts
2+160	2+200	Reshape Section , Provide Earth drains and Scour Checks- LHS & RHS
2+760		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Inlet and outlet structures required
2+870		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Provide 2No. Head walls and clean the culvert
3+310		Existing Drift - Extend drift an repair top slab
4+480		Irish Bridge - provide retaining walls and fill approaches
4+600		Irish Bridge - Requires cleaning, provide retaining walls and repair concrete slab
5+450		Existing Concrete Pipe Culvert (600mm Dia - 1 line)
5+500		NAMALONDWE
0+000		MDEKA HEALTH CENTRE
0+000	5+100	Reshape section and provide earth drains
0+280		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Provide 1No. Head walls and clean the culvert
0+500	0+600	Gravelling and Scour checks
0+670		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning
0+680		Provide mitre drain - LHS
0+700	1+290	Provide Scour Checks
1+060		Existing Drift - Provide masonry wall - RHS
1+240		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain
1+240		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain
1+240	2+000	Provide Scour checks
1+560		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires 1No. Head wall, cleaning and Excavation of outlet drain
1+820		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain
1+940		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain
2+520		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires 2No.Head walls, cleaning and Excavation of outlet drain
2+540		Existing Box Culvert - 2 cells - Provide 2 No. Marker Posts, concrete slab and Clean culvert
2+450	2+590	Gravelling and Scour checks
2+830		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires 2No.Head walls,replace 2No. 600mm Dia concrete pipe cleaning and Excavation of outlet drain.
3+150		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain.
3+160	3+290	Gravelling and provide earth drains
3+290		Existing Concrete Pipe Culvert (600mm Dia - 1 line)
3+290	3+400	Gravelling and Scour checks
3+400		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires cleaning and Excavation of outlet drain.
3+400	3+500	Gravelling
3+500	3+800	Gravelling and Scour checks
4+100	4+240	Gravelling
4+150		Existing Box Culvert - 3 cells - Provide 5 No. Marker Posts and Clean culvert
4+370		Existing Drift - Gravelling and 2No. Marker posts
4+480	4+590	Gravelling
4+530		Existing Concrete Pipe Culvert (600mm Dia - 1 line)- Requires 1No. Head walls, cleaning and Excavation of outlet drain.
4+900		Existing Concrete Pipe Culvert (600mm Dia - 1 line)
4+900	4+980	Gravelling and provide earth drains
5+100		MPANDA SCHOOL

LIST OF STRUCTURES		
DISTRICT - BLANTYRE		
DATA COLLECTED ON: 02/OCT/2025		
UPDATED ON:		
MDEKA - CHINYANGUTE FEEDER ROAD (UD)		
Chainage	DESCRIPTION	ACTION
0+000	MDEKA	
0+020	Existing Concrete Pipe Culvert (600mm Dia - 1 line)	
0+500	Existing Concrete Pipe Culvert (600mm Dia - 1 line)	
1+160	Existing Concrete Pipe Culvert (900mm Dia - 1 line)-	Demolish and construct a Box culvert - 1.5m x 1.5m. Provide Retaining walls
2+130	Existing Concrete Pipe Culvert (900mm Dia - 4 lines)-	Provide retaining walls, concrete slab,fill approaches and provide 4No. Marker posts
2+760	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Inlet and outlet structures required
2+870	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Provide 2No. Head walls and clean the culvert
4+480	Irish Bridge -	provide retaining walls and fill approaches
4+600	Irish Bridge -	Requires cleaning, provide retaining walls and concrete slab
5+100	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Provide 1No. Head walls and clean the culvert
5+450	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Provide 2No. Head walls and clean the culvert
5+500	NAMALONDWE	
0+000	MDEKA HEALTH CENTRE	
0+280	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Provide 1No. Head walls and clean the culvert
0+670	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning
1+240	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain
1+340	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain
1+560	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires 1No. Head wall, cleaning and Excavation of outlet drain
1+820	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain
1+940	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain
2+420	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires 2No.Head walls, cleaning, Excavation of outlet drain, fill approaches and provide retaining walls - RHS & LHS
2+440	Existing Box Culvert - 2 cells -	Provide 2 No. Marker Posts and Clean culvert
2+830	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires 2No.Head walls, cleaning and Excavation of outlet drain.
3+150	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain.
3+290	Existing Concrete Pipe Culvert (600mm Dia - 1 line)	
3+400	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires cleaning and Excavation of outlet drain.
4+150	Existing Box Culvert - 3 cells -	Provide 5 No. Marker Posts and Clean culvert
4+530	Existing Concrete Pipe Culvert (600mm Dia - 1 line)-	Requires 1No. Head walls, cleaning and Excavation of outlet drain.
4+900	Existing Concrete Pipe Culvert (600mm Dia - 1 line)	
5+100	MPANDA SCHOOL	