



Government of Nepal
Ministry of Physical Infrastructure and Transport
Department Of Roads
Development Cooperation Implementation Division
Strategic Road Connectivity & Trade Improvement Project
(SRCTIP)

**Detailed Design of Upgradation of Kamala- Dhalkebar- Pathlaiya
Road Section (130km) of Mahendra Highway and Bridges**

Final Design Report
Volume IV
Design Report & Drawing of Bridges

Bridge Name- Jarlahi (Kholasi Pul)
Volume-2
Detailed Drawing

April, 2023

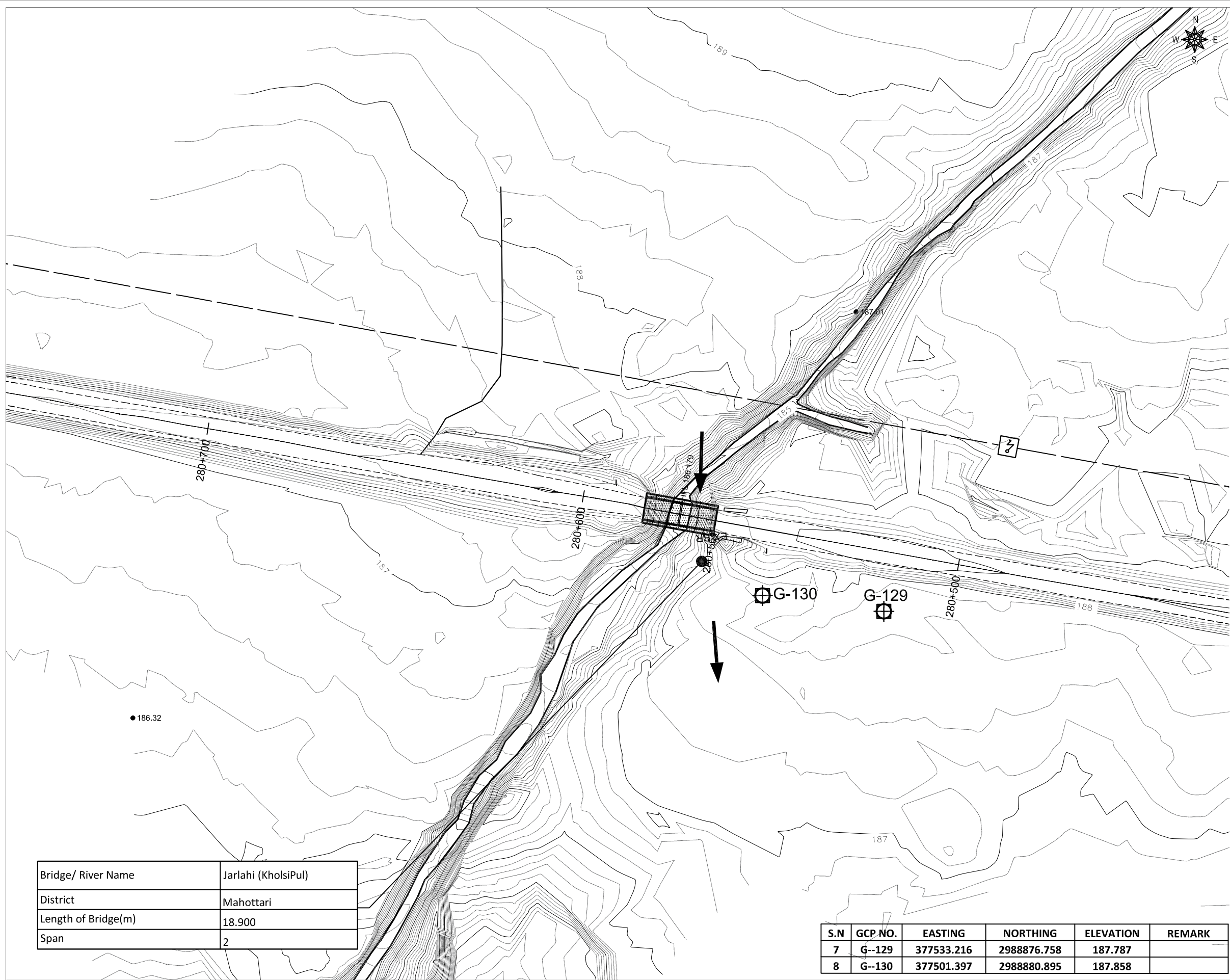
Joint Venture Of:

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Kolkata, India

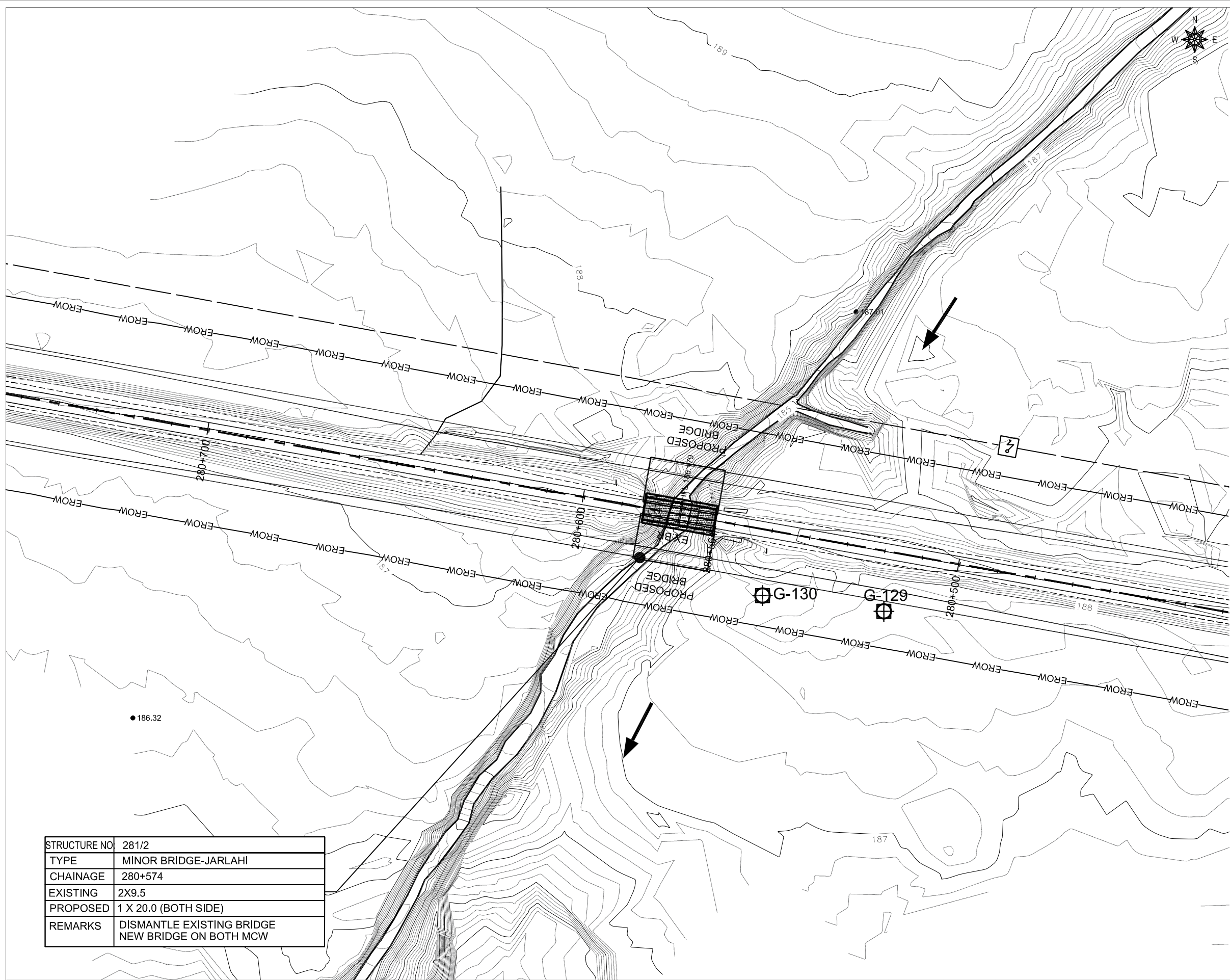
In Association With
Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited

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DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
MAIN FOOT TRAIL		ANIMAL FARM	
PLACE NAME		BAMBOO	
POLICE STATION		BIO GAS	
PETROL PUMP		BUS WAITING STATION	
Pond/ Water Body		BRIDGE	
POULTRY FARM		CONTOUR	
PROPERTY BOUNDARY		CANAL	
ROAD INFORMATION BOARD		CULVERT	
RIVER		CONTROL POINT (G)	
		CRUSHER	
SHED		DELINETOR	
SAFTY TANK		ELECTRIC POLE	
SCHOOL		FACTORY	
STREET LIGHT		FEEDAR ROAD	
TAP		FISH FARM	
TEMPORARY HOUSE		FLOW DIRECTION	
TREE		GABION WALL	
TRANSMISSION LINE TOWER		HOSPITAL	
WELL		HAND PUMP	
TEMPLE		HOUSE	
CGI SHEET HOUSE		HOADING BOARD	
TOILET		CARRIAGE WAY	
WOODEN HOUSE		HUT	
WATER TANK		INDEX CONTOUR	
TRANSFORMER		KILOMETER POST	
SHOULDER		MONASTERY	

 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkatta, India		Designed By Mr. R.A. Nec.No. 6431 CMLW Signature	Drawing Name DETAILED SURVEY TOPOGRAPHICAL MAP (EXISTING CONDITION) OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings	Scale: 1:1000 Chainage: 280+574	Date: 26.04.2023
		In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Checked By Mr. S.M. Signature			Drawing No.- KDP/DPR/STR/BR/JARLAHI(KHOLSIPUL)/DD- 2
				Approved By Mr. H.B. Signature			Sheet No. 1 / 1



STRUCTURE NO	281/2
TYPE	MINOR BRIDGE-JARLAHI
CHAINAGE	280+574
EXISTING	2X9.5
PROPOSED	1 X 20.0 (BOTH SIDE)
REMARKS	DISMANTLE EXISTING BRIDGE NEW BRIDGE ON BOTH MCW



DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
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PETROL PUMP		BUS WAITING STATION	
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				Approved By Mr. H.B. Signature			Sheet No. 1 / 1

A. GENERAL

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. DIMENSIONS ARE NOT TO BE SCALED.
3. THE LAYOUT OF THE BRIDGE/CULVERT SHALL BE SET AS PER RELEVANT HIGHWAY PLAN AND PROFILE DRAWING.
4. THE FORMATION LEVEL GIVEN IN THIS DRAWING SHALL BE VERIFIED FROM THE RELEVANT HIGHWAY DRAWING. IN CASE OF ANY DISCREPANCY THE HIGHWAY DRAWING SHALL BE CONSIDERED CORRECT.

B. DESIGN CRITERIA

1. THE DESIGN HAS BEEN PREPARED BASED ON THE FOLLOWING CODES:
a) NEPAL ROAD STANDARD 2070
b) IRC-5 2015
c) IRC-6 2017
d) IRC-78 2014
e) IRC-112 2020
f) IRC SP-13 2022
2. TOTAL WIDTH OF THE BRIDGE DECK: 11.85 M (8 M WIDE CARRIAGEWAY + 2.5 M WIDE FOOTPATH) HOWEVER THIS BRIDGE IS DESIGNED FOR THE FOLLOWING CARRIAGEWAY LIVE LOADS AS PER IRC:6-2017
a) ONE LANE OF IRC CLASS 70R (WHEELED) FOR TWO LANES + ONE LANE OF IRC CLASS A
b) THREE LANES OF IRC CLASS A
3. SEISMIC ZONE CONSIDERED IN THE DESIGN IS ZONE-V.
4. LAYING, COMPACTION, & EXTENT OF BACKFILL BEHIND ABUTMENT & RETURN/RETAINING WALLS SHALL CONSIST OF SELECTED EARTH CONFORMING TO THE APPENDIX-6 OF IRC:78-2014 HAVING PROPERTIES C=0, $\phi=30^\circ$ & DENSITY=20KN/m³.
5. 100mm DIA WEEP HOLES AT 1000mm C/C BOTH HORIZONTALLY AND VERTICALLY SHALL BE PROVIDED IN STAGGERED MANNER IN VERTICAL WALLS OF THE ABUTMENT AND RETURN WALL ABOVE GL. IN ONE OR TWO LAYERS AT A SLOPE OF 1 VERTICAL TO 20 HORIZONTAL TOWARDS THE DRAINING FACE.

C. HYDRAULIC DATA: -

1. DESIGN DISCHARGE, (Q100) - 28.10 CUMECs
2. HFL - 186.470M
3. FREE BOARD (MINIMUM) - 1 M
4. MAXIMUM SCOUR LEVEL:
ABUTMENT - 183.860m

SCOUR LEVELS WERE CALCULATED AS PER IRC 78:2014 CL 703 WITH APPROPRIATELY INCREASED DESIGN DISCHARGE

D. STRUCTURAL AND OTHER DATA: -

1. SPAN ARRANGEMENT: 1 X 20 = 20 m
2. SUPERSTRUCTURE:
PRECAST RCC LONGITUDINAL GIRDERS & CAST-IN-SITU RCC CROSS GIRDERS AND DECK SLAB.
3. SUBSTRUCTURE
A) ABUTMENTS - RCC WALL TYPE
4. FOUNDATIONS
A) ABUTMENT - OPEN FOUNDATION
5. BEARINGS
ELASTOMERIC BEARINGS
6. WEARING COAT:
65 MM THICK ASPHALTIC CONCRETE WEARING COAT AS PER STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE WORKS (2073), DEPARTMENT OF ROADS
7. EXPANSION JOINT -
SLAB SEAL TYPE EXPANSION JOINT OF PROVEN QUALITY SHALL BE PROVIDED IN ACCORDANCE WITH IRC:SP-69-2005 (GUIDELINES AND SPECIFICATIONS OF EXPANSION JOINT)
8. DRAINAGE SPOUTS - AS PER STANDARD SPECIFICATION FOR ROAD & BRIDGE WORKS 2073
9. RAILINGS/CRASH BARRIER:
RCC CRASH BARRIER AT EDGES OF CARRIAGEWAY AND FOOTPATH
10. FOOTPATH
2.5m WIDE FOOTPATH AT OUTER EDGE OF DECK

11. CONCRETE: -

- a. FOUNDATION PAD.....M35
b. BEARING PEDESTALS.....M40
c. ABUTMENTM35
d. RETURN WALL.....M35
e. LEVELING COURSE: I) BELOW APPROACH SLAB.....M15
II) BELOW PILE CAP.....M15
g. APPROACH SLABM30
h. CAST-IN-SITU CRASH BARRIERM40
i. KERBM35
j. DECK SLAB FOR RCC GIRDERS.....M35
k. PRECAST RCC GIRDERSM35
l. CAST-IN-SITU CROSS GIRDER FOR RCC GIRDERS.....M35

12. REINFORCEMENT STEEL: -

- a. H.Y.S.D. BARS - GRADE 500 CONFORMING TO IS 1786
b. REINFORCEMENT WHERE EVER NECESSARY SHALL BE LOCALLY BENT OR ADJUSTED TO ENSURE PROPER CONCRETING.

13. CONCRETE COVER

- a. DECK SLAB, GIRDER, PEDESTAL, CAP : 40 MM
b. SUBSTRUCTURE AND FOUNDATION : 75 MM

14. LAPS (Ls) ARE TO BE STAGGERED AND MINIMUM LAP LENGTH ARE TO BE AS FOLLOWS:

- a) FOR M 30 GRADE CONCRETE : 57.2 ϕ
b) FOR M 35 GRADE CONCRETE : 51.48 ϕ
c) FOR M 40 GRADE CONCRETE : 48.62 ϕ

(WHERE ϕ IS THE DIAMETER OF THE BAR)

15. LAP LENGTH SHALL BE INCREASED BY A FACTOR BASED ON THE PERCENTAGE OF LAPPED BAR RELATIVE TO THE TOTAL CROSS SECTIONAL AREA. LAP LENGTH FOR DIFFERENT GRADE OF CONCRETE AS WELL AS DIFFERENT PERCENTAGE OF LAP LENGTH ARE AS FOLLOWS:

GRADE OF CONCRETE	M30	M35	M40	M45
LAPPED BAR <25%	57.2 ϕ	51.48 ϕ	48.62 ϕ	45.76 ϕ
25% $\leq$ LAPPED BAR <33%	65.78 ϕ	62.65 ϕ	55.91 ϕ	52.62 ϕ
33% $\leq$ LAPPED BAR <50%	80.08 ϕ	72.07 ϕ	68.07 ϕ	64.06 ϕ
50% $\leq$ LAPPED BAR	85.8 ϕ	77.22 ϕ	72.93 ϕ	68.64 ϕ

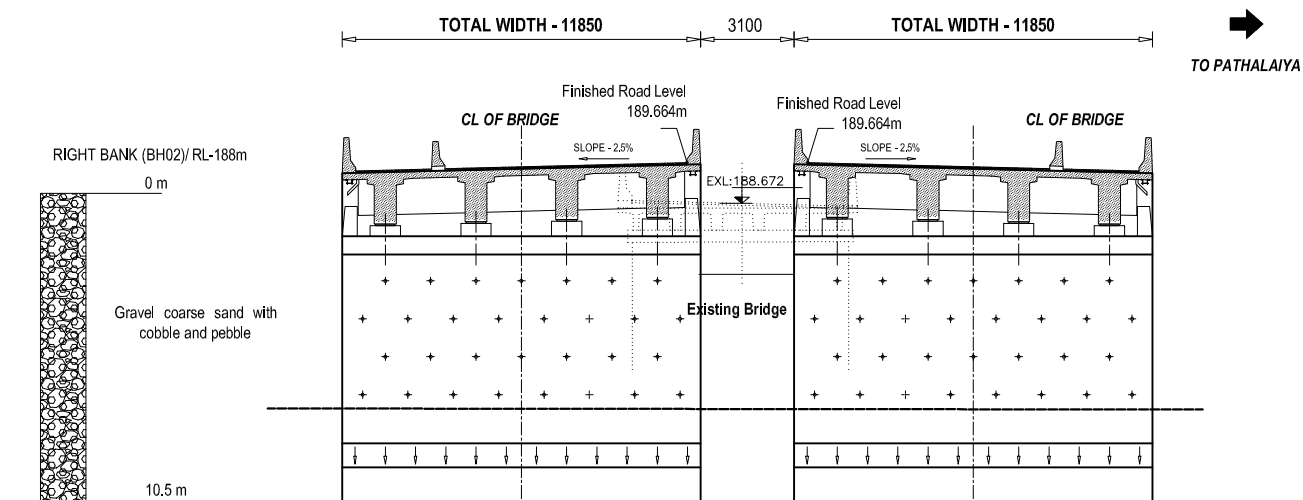
16. THE LAP LENGTH SHALL BE STAGGERED BY MINIMUM DISTANCE OF 1.3 TIMES THE LAP LENGTH.

17. HELICAL REINFORCEMENT SHALL BE LAPPED BY 1.5 TURNS.

18. INSTEAD OF LAPPING SPLICING OF REINFORCEMENT CAN BE DONE WITH WELDED JOINT AS PER CL. 15.2.5.2 OF IRC 112-2020. WELD LENGTH SHALL NOT BE LESS THAN 18D.

19. SHARP EDGES OF CONCRETE TO BE CHAMFERED MINIMUM 50 X 50

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 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.		GENERAL NOTES OF BRIDGE OVER RIVER JARLAHI KHOLSI PUL	AS SHOWN	05.05.2023
			Approved By	Mr. H.B.		Reference Drawings —	Chainage: 280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI KHOLSI PUL /DD-4
								Sheet No. 1 / 1

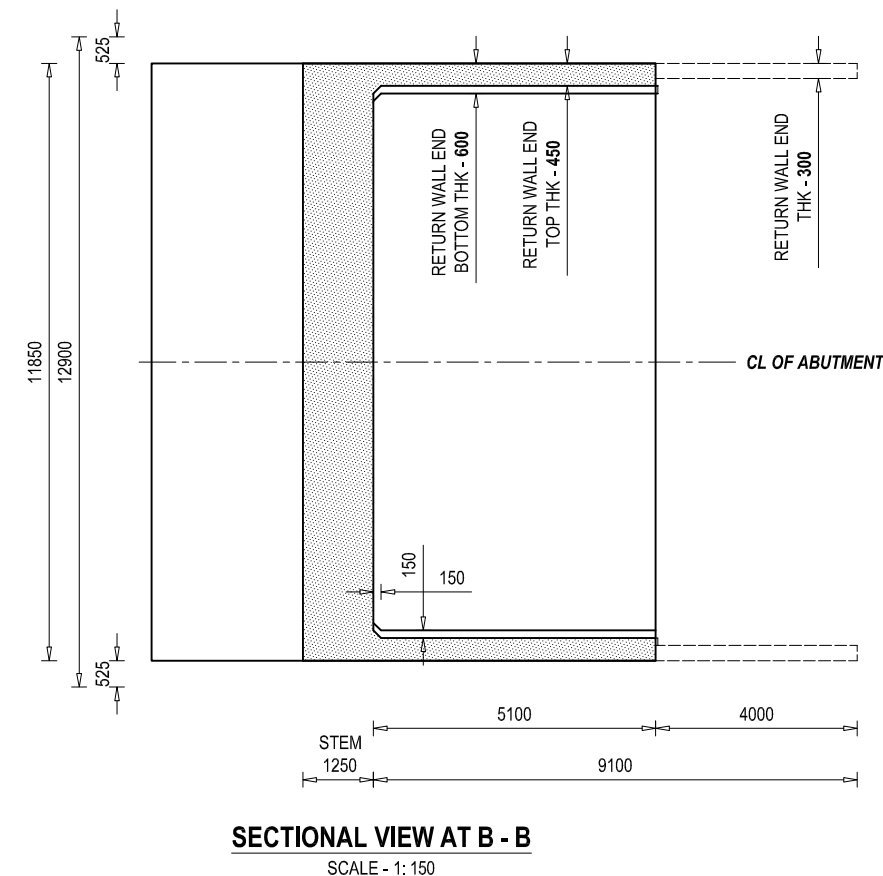


SECTIONAL VIEW AT X1 - X1

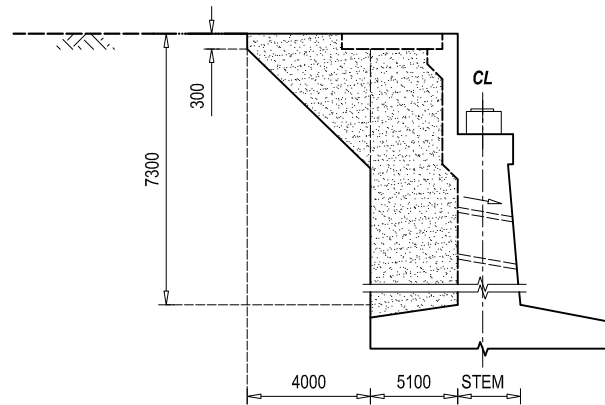
Finished Road Level(D/S)	LEFT ABUTMENT	189.664	RIGHT ABUTMENT	189.664
Finished Road Level (Existing Bridge)		188.672		188.672
Existing Ground Level(D/S)		187.505		186.821
Existing Ground Lv		186.569		187.695
Chainage		280+564		280+584

(SCALE 1 :250 @ A3)

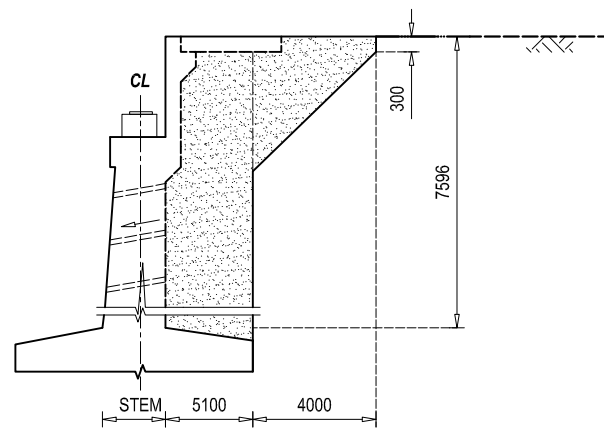
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		Checked By	Mr. S.M.				Drawing No.-
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					-	280+574	



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		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India	Checked By	Mr. S.M.					
		In Association With Udaya Consultancy, Geocom International, Sundar Krill Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.		Reference Drawings	Chainage:	280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-6
										Sheet No. 1 / 2

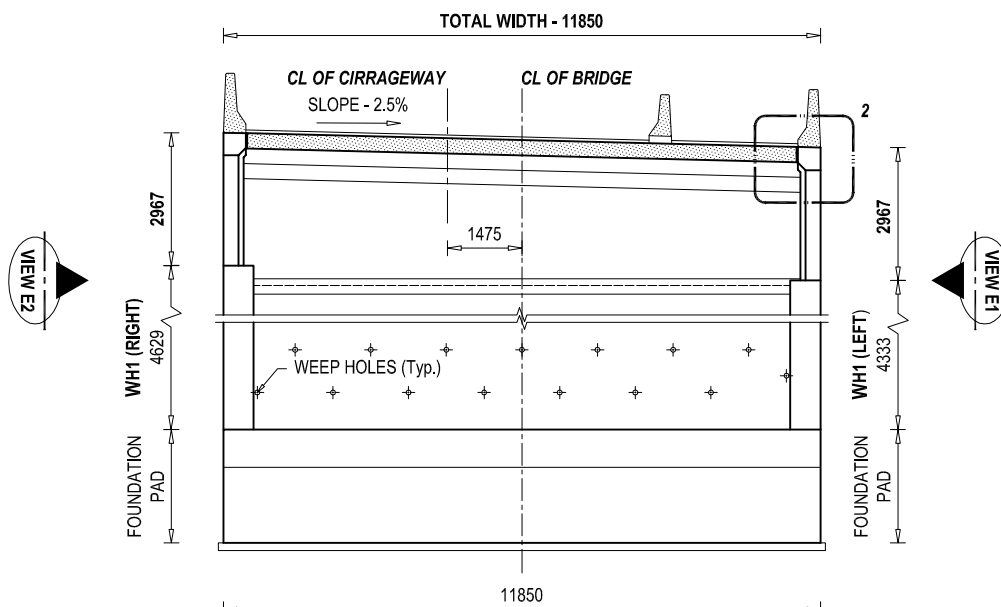


VIEW AT E1
SCALE - 1: 150

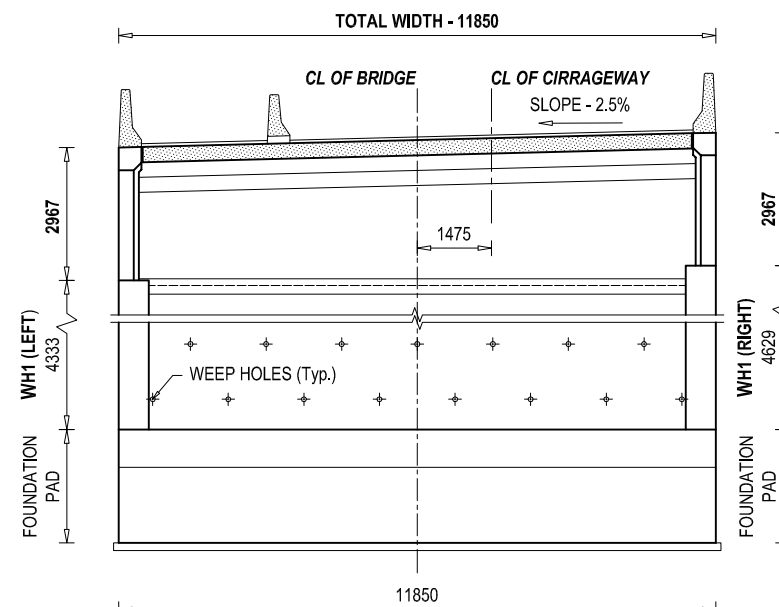


VIEW AT E2
SCALE - 1: 150

DETAIL AT RETURN WALL

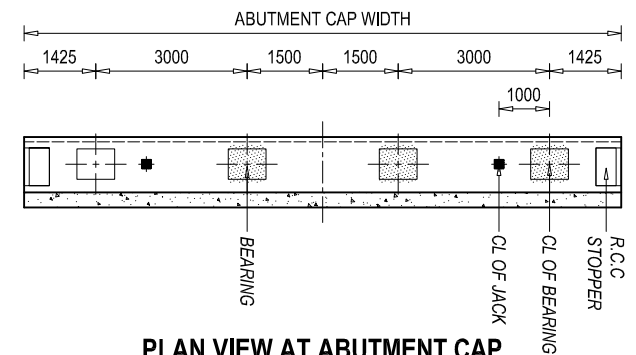


SECTIONAL VIEW AT D1 - D1
SCALE - 1: 150

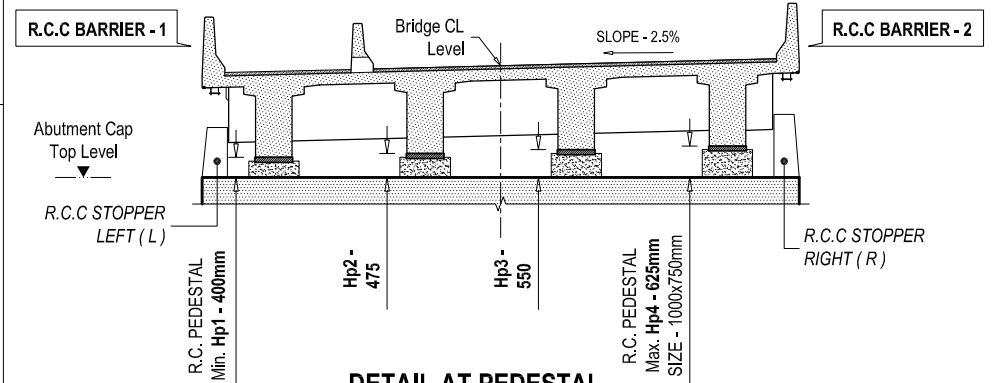


SECTIONAL VIEW AT D2 - D2
SCALE - 1: 150

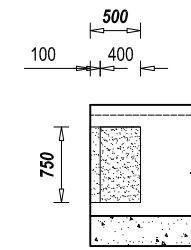
DETAIL AT DIRT WALL



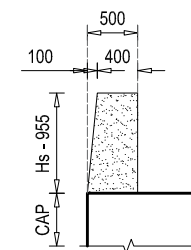
PLAN VIEW AT ABUTMENT CAP
SCALE - 1: 150



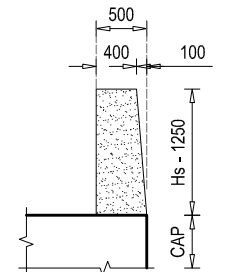
DETAIL AT PEDESTAL
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**R.C.C SEISMIC ARRESTER
PLAN VIEW**

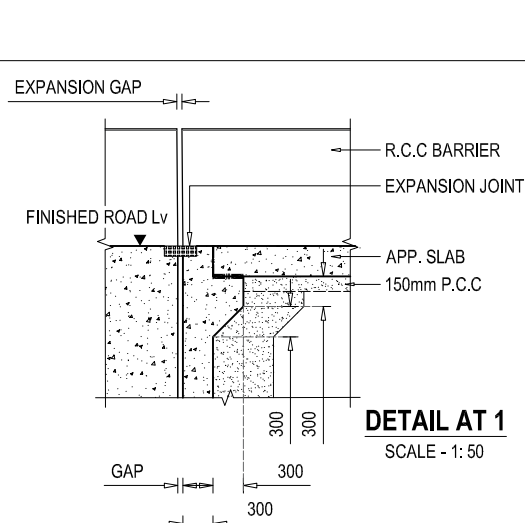


**R.C.C SEISMIC ARRESTER - LEFT
ELEVATION VIEW**

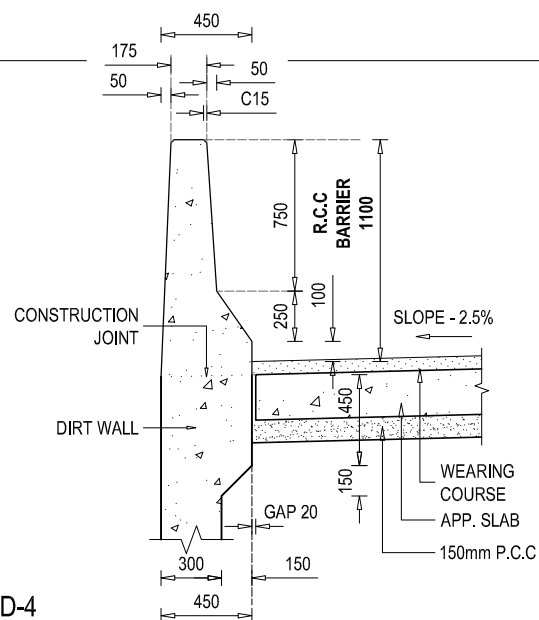


**R.C.C SEISMIC ARRESTER - RIGHT
ELEVATION VIEW**

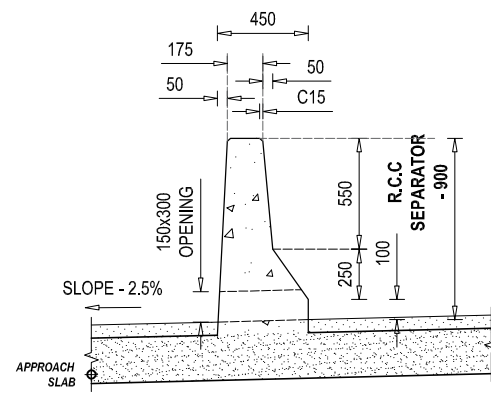
DETAIL AT PEDESTAL
SCALE - 1: 75



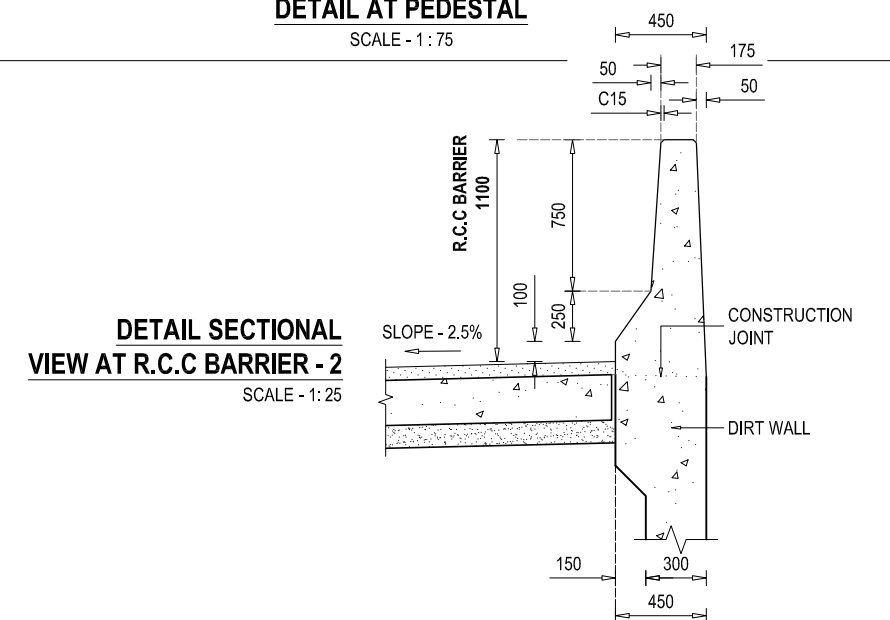
DETAIL AT 1
SCALE - 1: 50



**DETAIL SECTIONAL VIEW
AT R.C.C BARRIER - 1
DETAIL AT 2**
SCALE - 1: 25



**DETAIL SECTIONAL VIEW
AT R.C.C SEPARATOR**
SCALE - 1: 25



**DETAIL SECTIONAL
VIEW AT R.C.C BARRIER - 2**
SCALE - 1: 25

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4



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Development Cooperation Implementation
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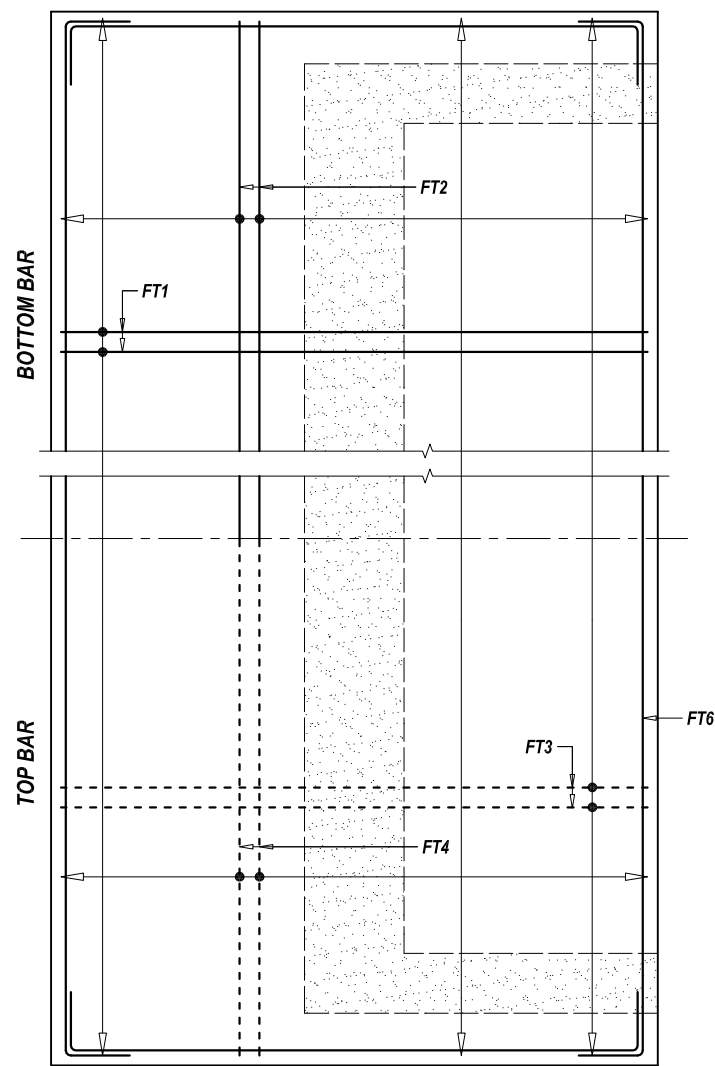
DESIGN CONSULTANTS
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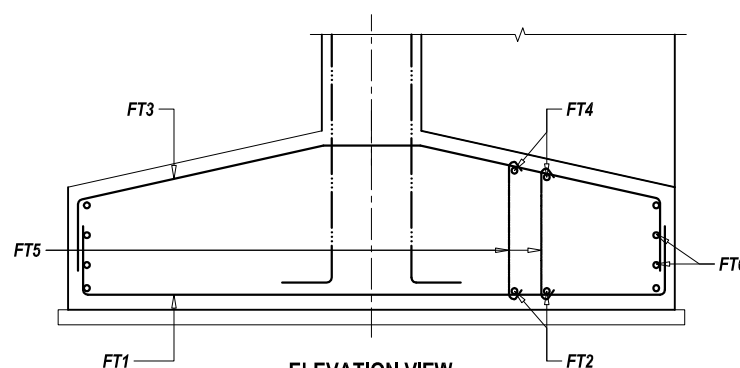
Drawing Name
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PUL)
Reference Drawings
KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-8

Scale:
AS SHOWN
Chainage:
280+574

Date:
04.08.2023
Drawing No.-
KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-6
Sheet No. 2 / 2

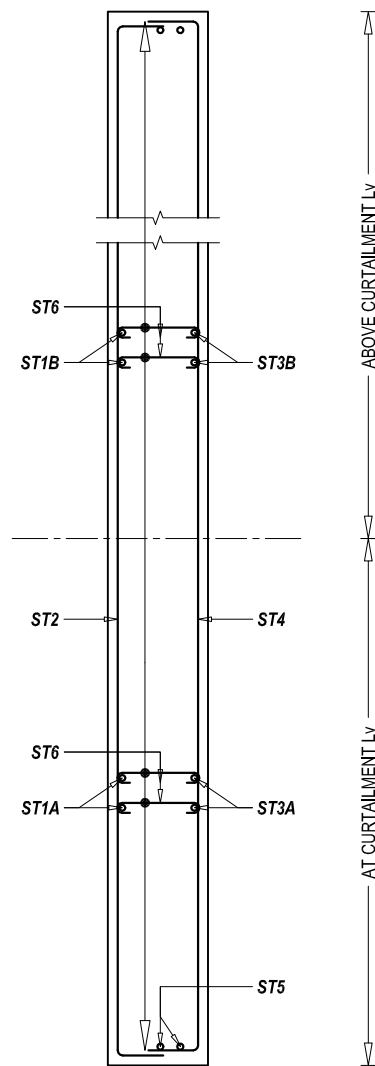


PLAN VIEW

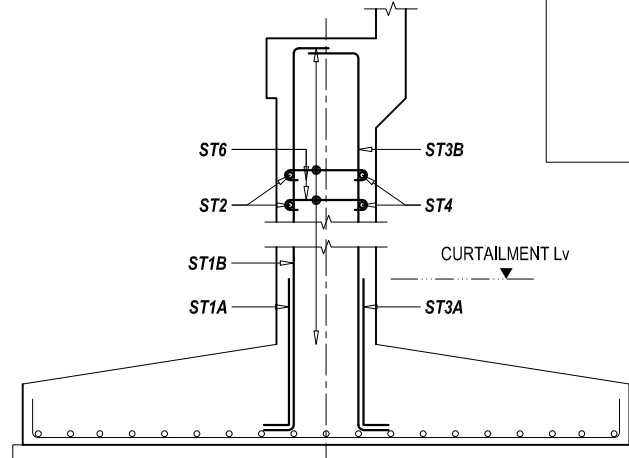


BAR DETAIL OF PILE CAP
SCALE - 1 : 75

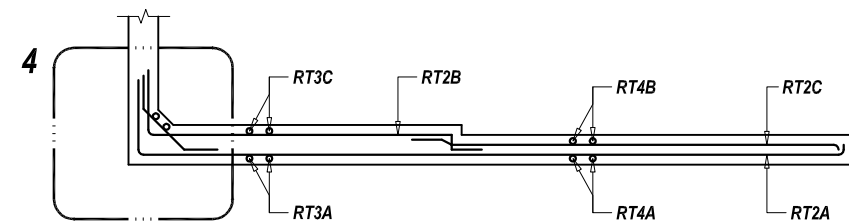
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DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4



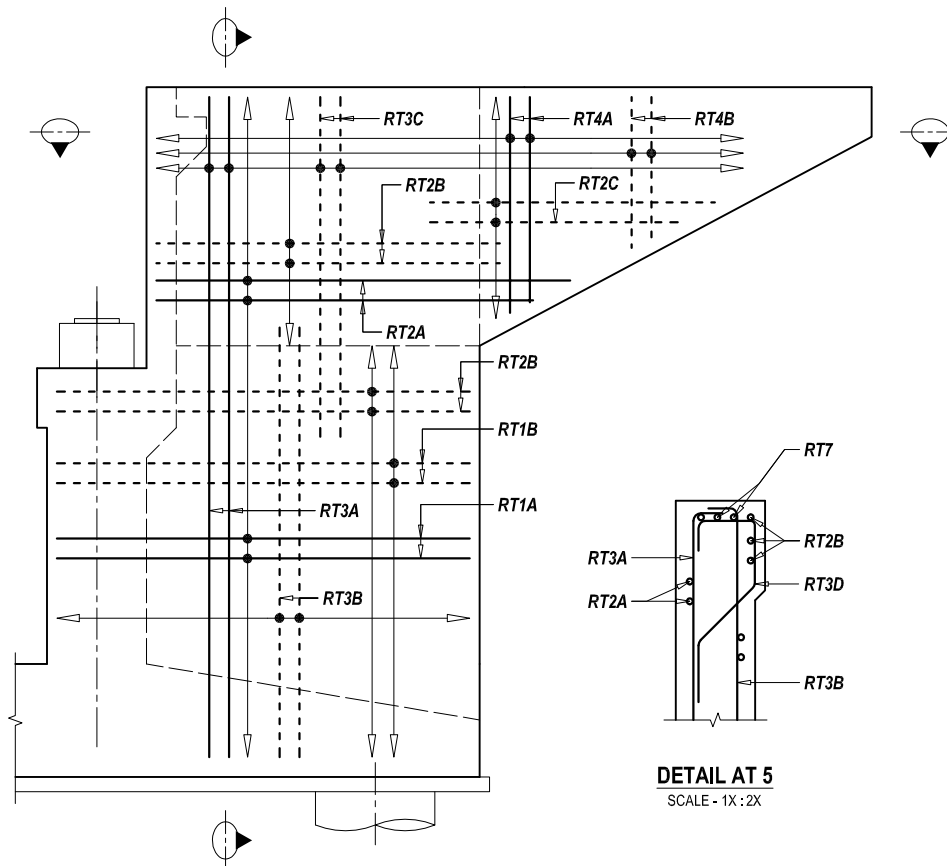
PLAN VIEW



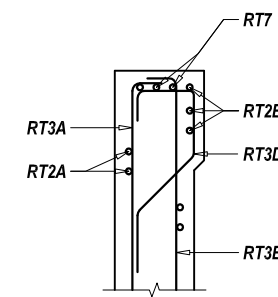
BAR DETAIL AT ABUTMENT STEM
SCALE - 1 : 75



SECTIONAL PLAN VIEW

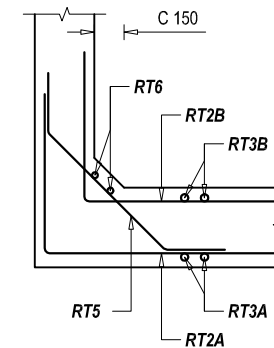


ELEVATION VIEW

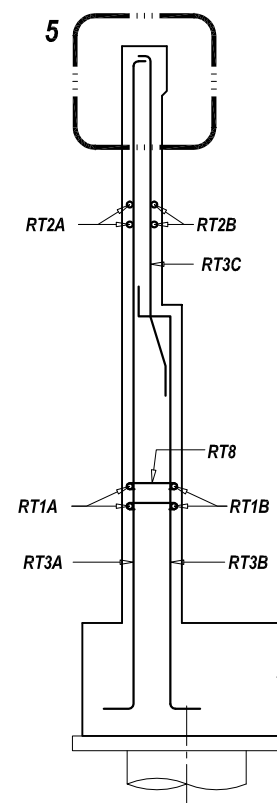


DETAIL AT 5
SCALE - 1X : 2X

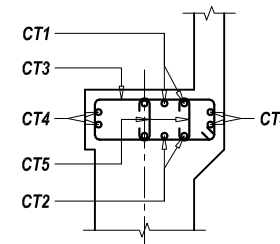
BAR DETAIL AT RETURN WALL
SCALE - 1 : 75



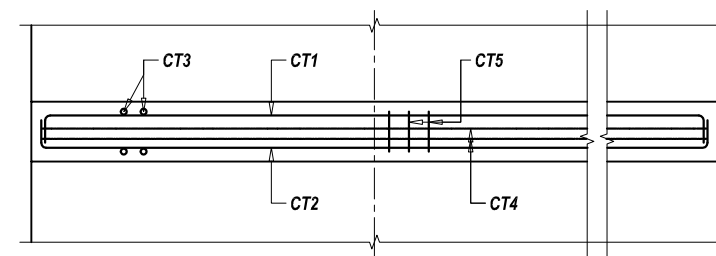
DETAILS AT 4



SECTIONAL SIDE VIEW



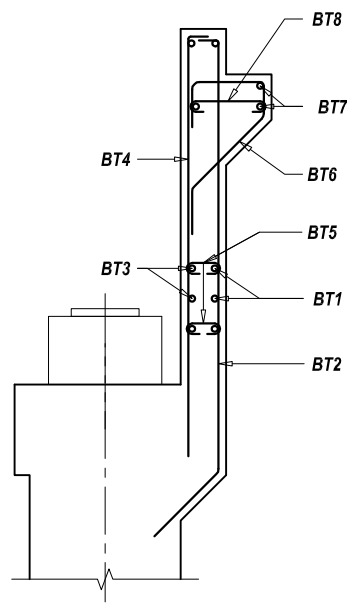
ELEVATION VIEW



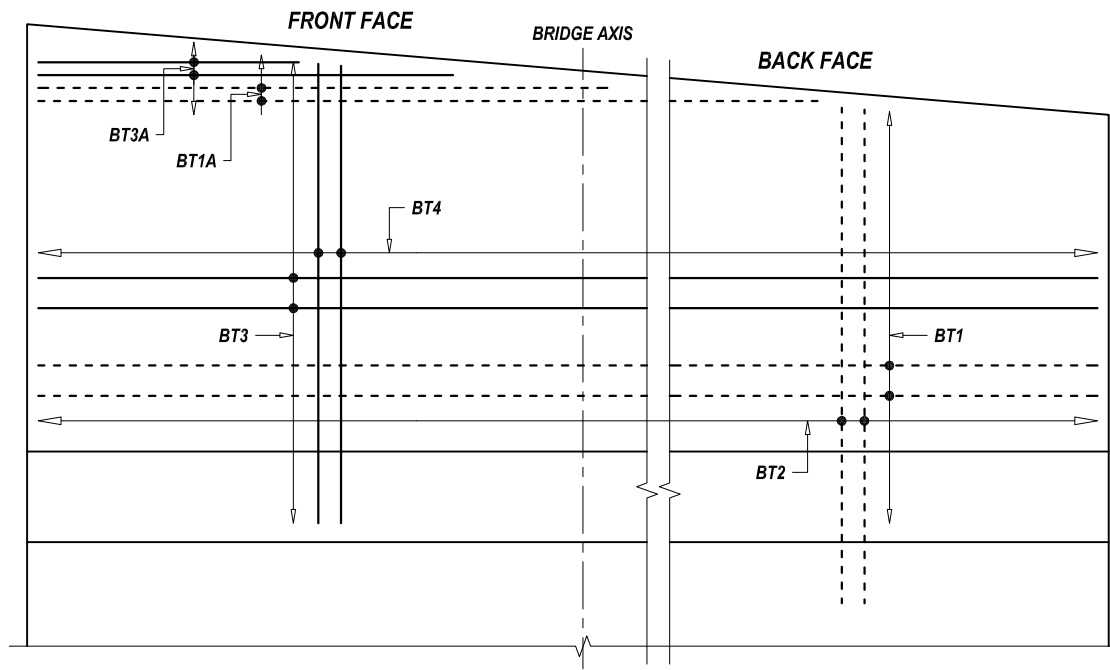
BAR DETAIL AT ABUTMENT CAP
SCALE - 1 : 75

--- TOP BAR OR NEAR FACE REINFORCEMENT
--- BOTTOM BAR OR FAR FACE REINFORCEMENT

EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Patilaia Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.A. Nec.No. 6431 CMLW Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name ABUTMENT REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-8	Scale: AS SHOWN Chainage: 280+574	Date: 04.08.2023 Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-7 Sheet No. 1 / 2
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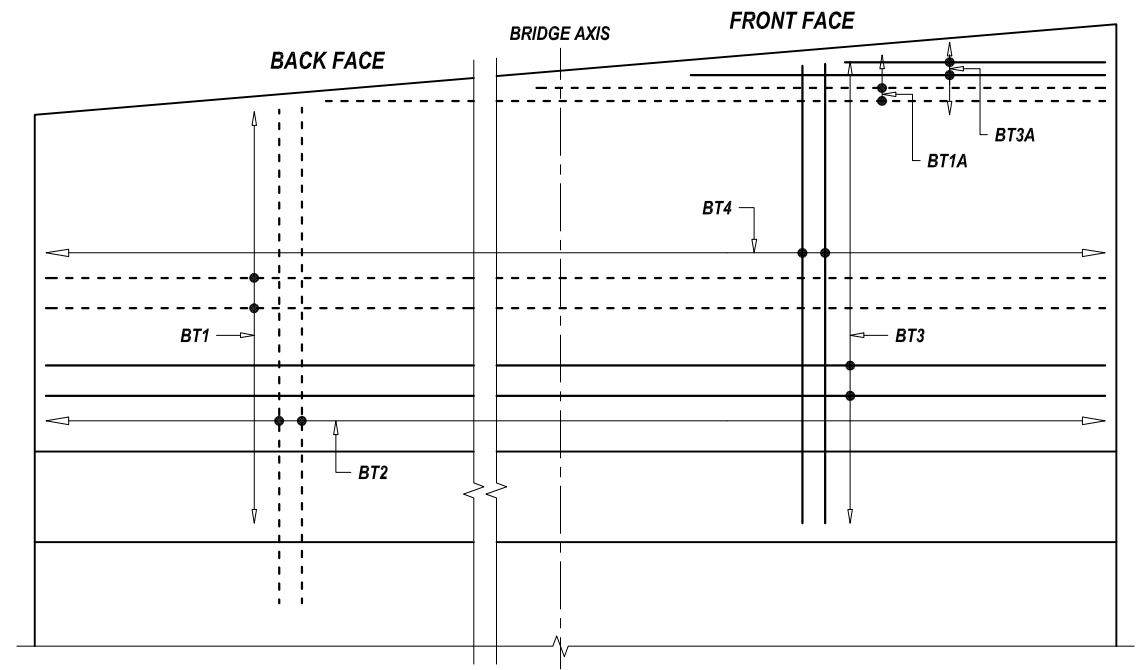
SECTIONAL SIDE VIEW



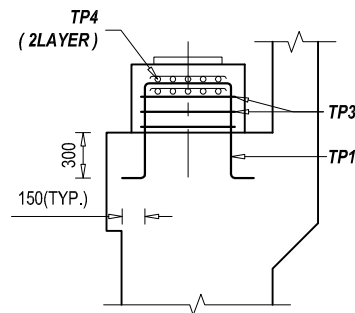
ELEVATION VIEW / VIEW AT D1

BAR DETAIL AT DIRT WALL

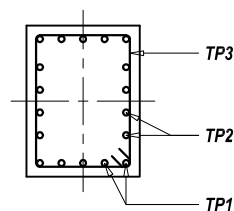
SCALE - 1 : 50



ELEVATION VIEW / VIEW AT D2



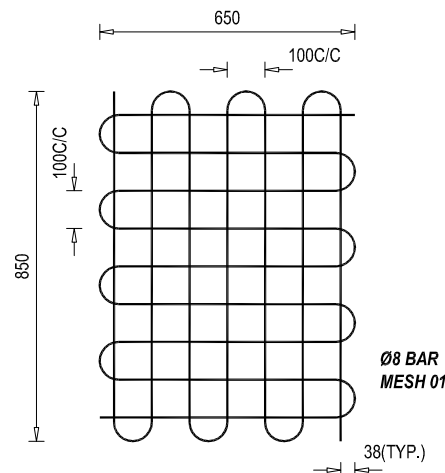
SECTIONAL SIDE VIEW



SECTIONAL PLAN VIEW
BAR DETAIL AT PEDESTAL

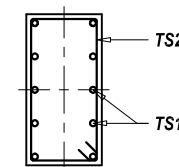
SCALE - 1 : 50

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

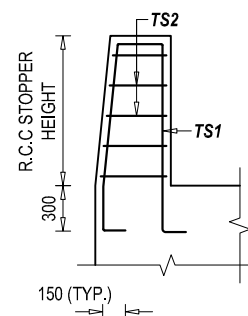


REINFORCEMENT DETAILS OF
BEARING MESH

SCALE - 1 : 50

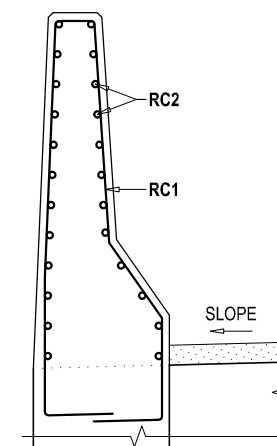


SECTIONAL PLAN VIEW



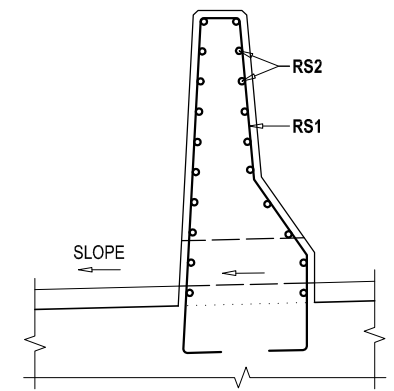
R.C.C STOPPER LEFT
ELEVATION VIEW

SCALE - 1 : 50



REINFORCEMENT DETAILS OF
R.C.C BARRIER (B)- SECTIONAL VIEW

SCALE - 1 : 25

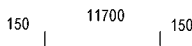
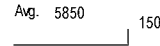
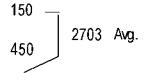
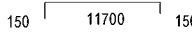
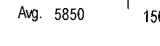
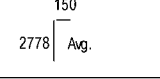
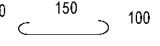
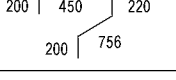
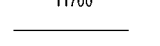
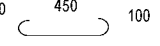


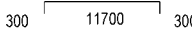
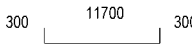
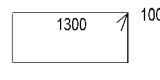
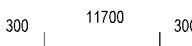
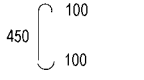
REINFORCEMENT DETAILS OF
R.C.C SEPARATOR - SECTIONAL VIEW

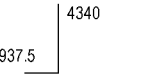
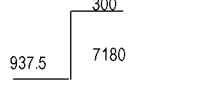
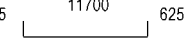
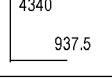
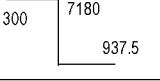
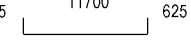
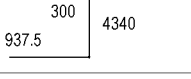
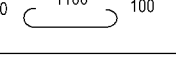
SCALE - 1 : 25

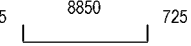
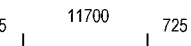
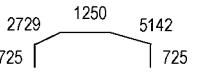
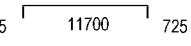
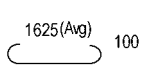
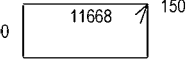
--- TOP BAR OR
NEAR FACE REINFORCEMENT
--- BOTTOM BAR OR
FAR FACE REINFORCEMENT

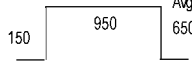
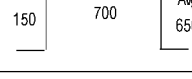
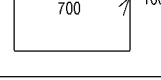
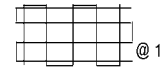
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	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP)	Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of			Designed By	Mr. R.A.	AS SHOWN	04.08.2023
				 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Checked By	Mr. S.M.			
				In Association With			Approved By	Mr. H.B.	Reference Drawings	KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-8
										Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-7
										Sheet No. 2 / 2

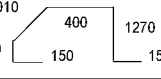
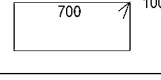
BAR BENDING SCHEDULE OF DIRT WALL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	BT 1		12	150	12.000	20	0.889	213.33
2	BT 1A		12	150	6.000	3	0.889	16.00
3	BT 2		16		3.303	90	1.580	469.76
4	BT 3		12	150	12.000	16	0.889	170.67
5	BT 3A		12	150	6.000	3	0.889	16.00
6	BT 4		12		2.928	90	0.889	234.24
7	BT 5		12	500	0.350	96	0.889	29.87
8	BT 6		12	150	1.826	80	0.889	129.85
9	BT 7		12		11.700	5	0.889	52.00
10	BT 8		12	150	0.650	158	0.889	91.29
TOTAL (KG) :								1423.00

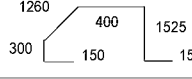
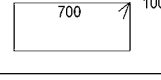
BAR BENDING SCHEDULE OF ABUTMENT CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT 1		20	140	12.300	12	2.469	364.44
2	CT 2		20	140	12.300	12	2.469	364.44
3	CT 3		16	150	3.700	80	1.580	467.75
4	CT 4		12	150	12.000	8	0.889	85.33
5	CT 5		12	Long -150 Trans.300	0.650	382	0.889	220.71
TOTAL (KG) :								1502.69

BAR BENDING SCHEDULE OF ABUTMENT STEM								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	ST 1A		20	200	5.278	59	2.469	768.82
	ST 1B		20	100	8.418	59	2.469	1226.25
2	ST 2		16	150	12.950	31	1.580	634.39
3	ST 3A		25	200	5.278	59	3.858	1201.28
	ST 3B		25	100	8.4175	59	3.858	1916.02
4	ST 4		16	150	12.950	31	1.580	634.39
5	ST 5		12	110	5.578	10	0.889	49.58
6	ST 6		12	Ver. 130 Hor.200	1.300	2160	0.889	2496.00
TOTAL (KG) :								8926.74

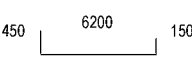
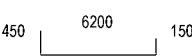
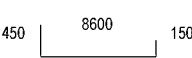
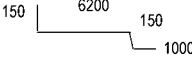
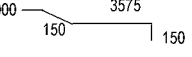
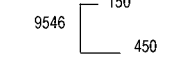
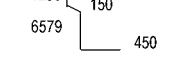
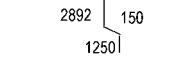
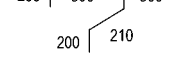
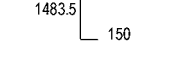
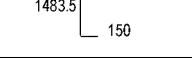
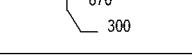
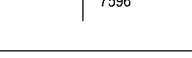
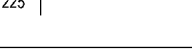
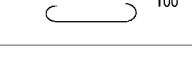
BAR BENDING SCHEDULE OF FOUNDATION								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT 1		25	150	10.300	78	3.858	3099.54
2	FT 2		16	200	13.150	45	1.580	935.11
3	FT 3		25	150	10.421	78	3.858	3135.95
4	FT 4		16	200	13.150	45	1.580	935.11
5	FT 5		10	Long. 180 Trans.180	1.825	3196	0.617	3600.43
6	FT 6		16	200	41.236	10	1.580	651.63
TOTAL (KG) :								12357.77

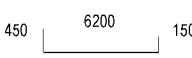
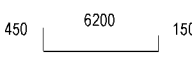
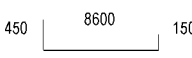
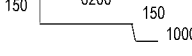
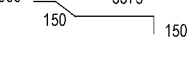
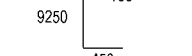
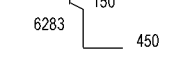
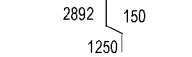
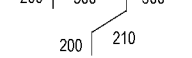
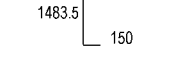
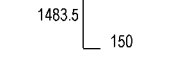
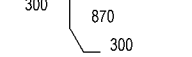
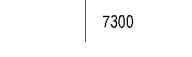
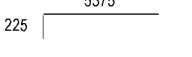
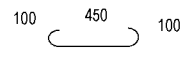
BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP 1		16	150	2.850	6	1.580	27.02
1	TP 2		16	150	2.350	8	1.580	29.71
2	TP 3		16	150	3.500	3	1.580	16.59
1	TP 4		8		13.400	2	0.395	10.59
TOTAL (KG) :								83.91

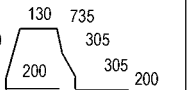
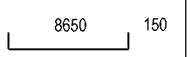
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-L		16	150	3.280	6	1.580	31.10
2	TS2-L		12	150	2.400	7	0.889	14.93
TOTAL (KG) :								46.03

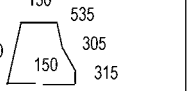
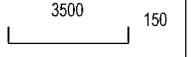
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R		16	150	3.785	6	1.580	35.89
2	TS2-R		12	150	3.400	9	0.889	27.20
TOTAL (KG) :								63.09

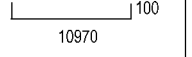
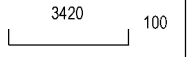
EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.A. Nec.No. 6431 C/M-14 Signature		Drawing Name ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	Scale: AS SHOWN	Date: 04.08.2023
	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Checked By						
						In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited	Approved By	Mr. H.B. Signature			

BAR BENDING SCHEDULE OF RETURN WALL - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT1A		12	150	6.800	51	0.889	308.27
2	RT1B		16	150	6.800	51	1.580	548.03
3	RT2A		12	150	9.200	21	0.889	171.73
4	RT2B		20	150	7.500	21	2.469	388.89
5	RT2C		20	150	4.875	21	2.469	252.78
6	RT3A		12	150	10.146	35	0.889	315.65
7	RT3B		25	150	8.429	35	3.858	1138.18
8	RT3C		25	150	4.442	35	3.858	599.81
9	RT3D		25	150	1.210	60	3.858	280.09
10	RT4A		12	150	1.784	50	0.889	79.27
11	RT4B		25	150	1.784	50	3.858	344.04
12	RT5		12	150	1.470	72	0.889	94.08
13	RT6		12		7.596	2	0.889	13.50
14	RT7		20		5.6	4	2.469	55.31
15	RT8		12	200	0.650	592	0.889	342.04
TOTAL (KG) :								4931.67

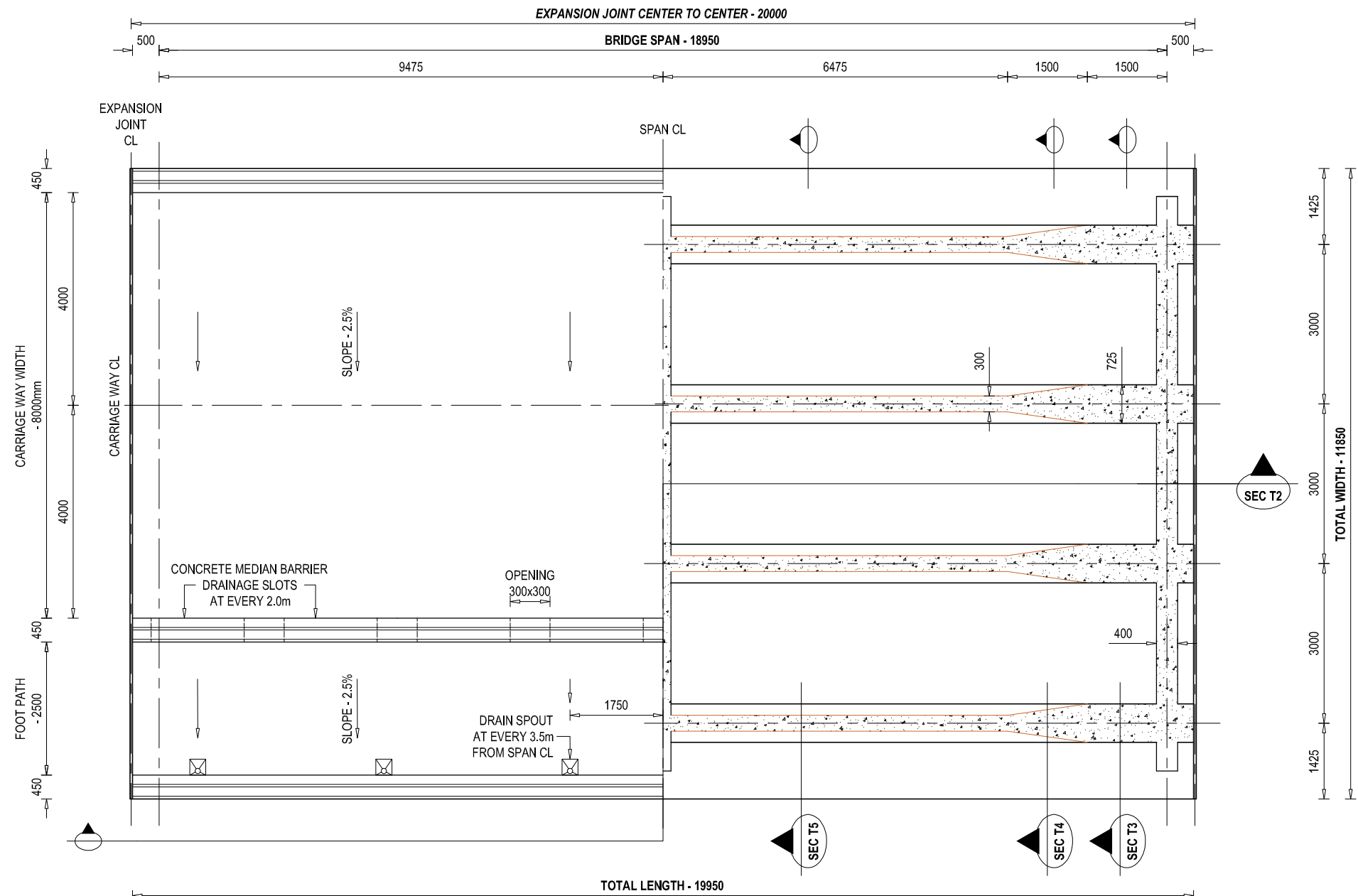
BAR BENDING SCHEDULE OF RETURN WALL - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT1A		12	150	6.800	49	0.889	296.18
2	RT1B		16	150	6.800	49	1.580	526.54
3	RT2A		12	150	9.200	21	0.889	171.73
4	RT2B		20	150	7.500	21	2.469	388.89
5	RT2C		20	150	4.875	21	2.469	252.78
6	RT3A		12	150	9.850	35	0.889	306.44
7	RT3B		25	150	8.133	35	3.858	1098.21
8	RT3C		25	150	4.442	35	3.858	599.81
9	RT3D		25	150	1.210	60	3.858	280.09
10	RT4A		12	150	1.784	50	0.889	79.27
11	RT4B		25	150	1.784	50	3.858	344.04
12	RT5		12	150	1.470	72	0.889	94.08
13	RT6		12		7.300	2	0.889	12.98
14	RT7		20		5.6	4	2.469	55.31
15	RT8		12	200	0.650	554	0.889	320.09
TOTAL (KG) :								4826.43

BAR BENDING SCHEDULE OF R.C.C BARRIER								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC1		16	150	3.170	59	1.580	295.55
2	RC2		10	150	8.950	20	0.617	110.49
TOTAL (KG) :								406.05

BAR BENDING SCHEDULE OF R.C.C SEPARATOR								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1		16	150	2.695	25	1.580	106.47
2	RS2		10	150	3.800	17	0.617	39.88
TOTAL (KG) :								146.35

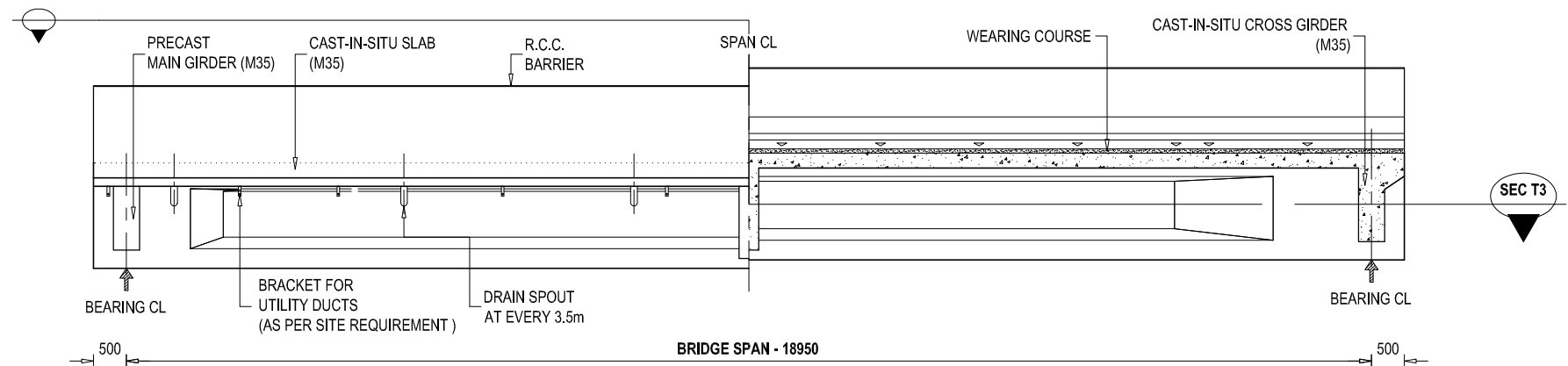
BAR BENDING SCHEDULE OF APPROACH SLAB								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	1601		16	150	11.170	48	1.580	847.27
2	1202		12	150	3.620	150	0.889	482.67
TOTAL (KG) :								1329.93

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.A. Nec.No. 6431 CMH/K Signature	Drawing Name ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	Scale: AS SHOWN	Date: 04.08.2023				
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Checked By	Mr. S.M. Signature <th rowspan="2">Reference Drawings -</th> <th rowspan="2">Chainage: 280+574</th> <th rowspan="2">Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-8</th> <th rowspan="2">Sheet No. 2 / 2</th>						Reference Drawings -	Chainage: 280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-8	Sheet No. 2 / 2
		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India											



HALF SECTIONAL PLAN VIEW OF SUPERSTRUCTURE AT SEC T1

SCALE - 1 : 100 @ A3 PAPER

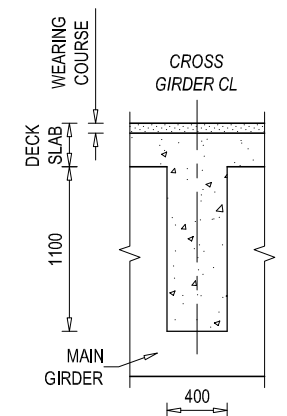


HALF ELEVATION SECTIONAL VIEW OF SUPERSTRUCTURE AT SEC T2

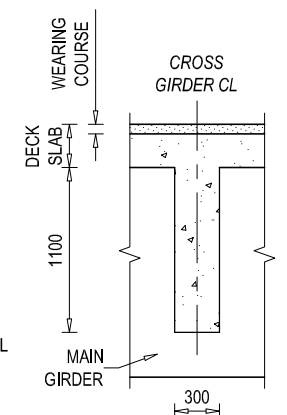
SCALE - 1 : 100 @ A3 PAPER

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Patthaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	AS SHOWN	05.05.2023
			Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	Chainage: 280+574	Drawing No.: KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-9
							Sheet No. 1 / 2



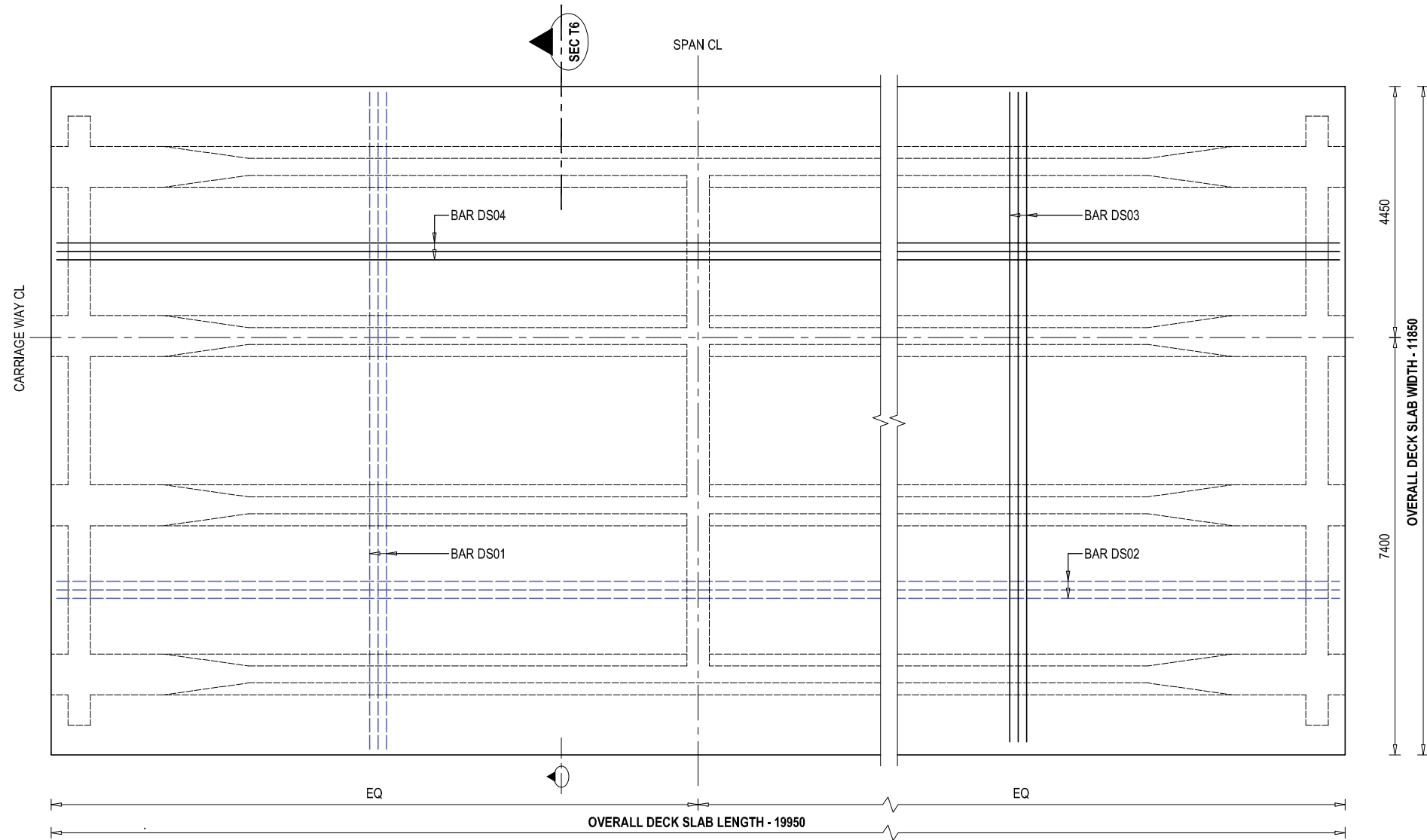
END CROSS GIRDER
- SECTIONAL DETAIL
SCALE - 1 : 50



MID CROSS GIRDER
- SECTIONAL DETAIL
SCALE - 1 : 50

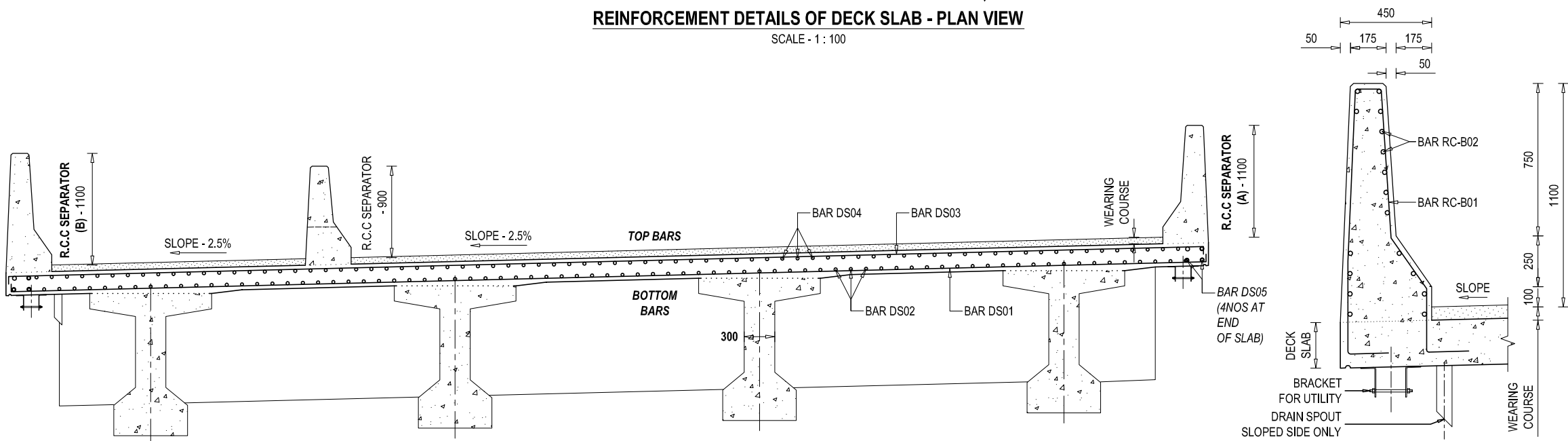
SECTIONAL VIEW AT T5
SCALE - 1 : 100 @ A3 PAPER

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Drawing Name		Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division		Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhakkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Designed By	Mr. R.A.  Signature Nec.No. 6431 QW/LK	SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	AS SHOWN	05.05.2023
			 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India		Checked By	Mr. S.M.  Signature			
			In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.  Signature	Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	Chainage: 280+574	Drawing No. - KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-9



REINFORCEMENT DETAILS OF DECK SLAB - PLAN VIEW

SCALE - 1 : 100



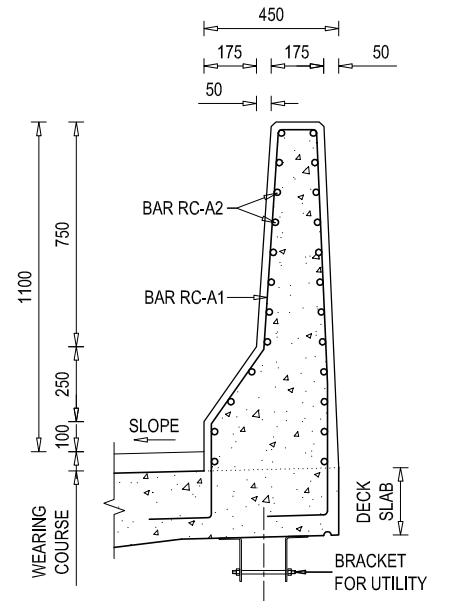
REINFORCEMENT DETAILS OF DECK SLAB - SECTIONAL VIEW AT T6

SCALE - 1 : 50

LEGEND FOR REINFORCEMENT BAR

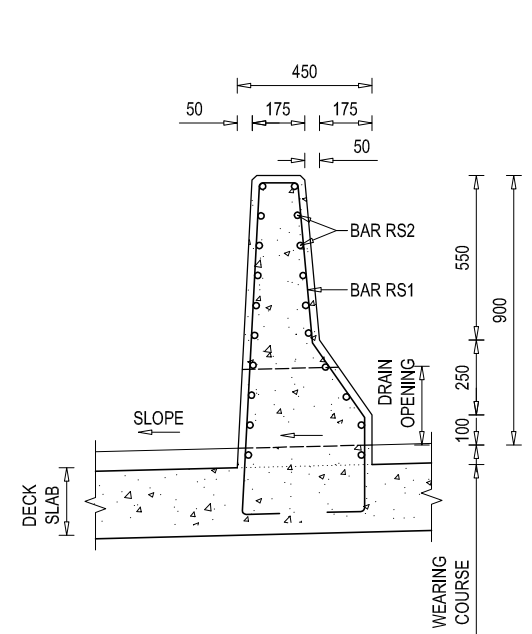
CODE	FULL FORM	CG	- CROSS GIRDER
DS	- DECK SLAB	AS	- APPROACH SLAB
RB	- R.C.C BARRIER	ST	- STOPPER
RS	- R.C.C SEPARATOR	**	- ***
MG	- MAIN GIRDER		

TOP BAR OR
NEAR FACE REINFORCEMENT
BOTTOM BAR OR
FAR FACE REINFORCEMENT



REINFORCEMENT DETAILS OF R.C.C BARRIER (A)- SECTIONAL VIEW

SCALE - 1 : 25



REINFORCEMENT DETAILS OF R.C.C SEPARATOR - SECTIONAL VIEW

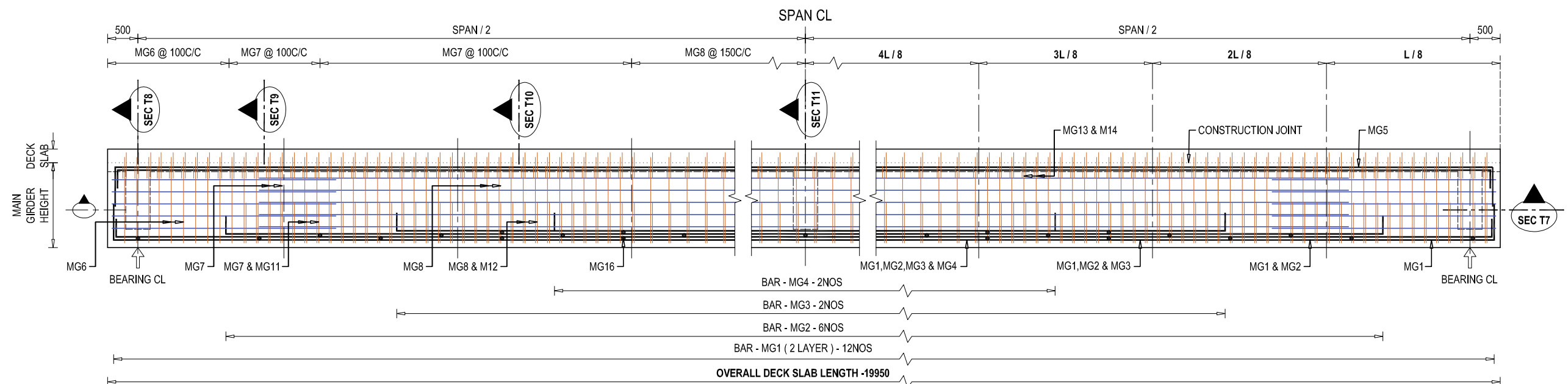
SCALE - 1 : 25

REINFORCEMENT DETAILS OF R.C.C BARRIER (B)- SECTIONAL VIEW

SCALE - 1 : 25

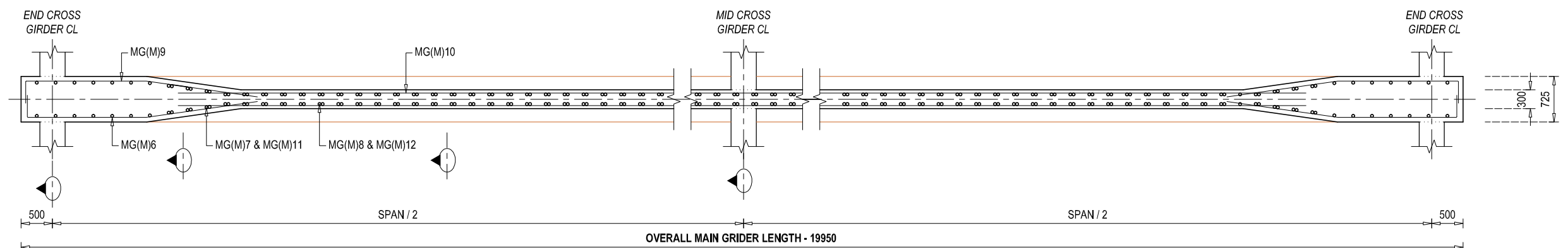
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Signature	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	Signature	DECK SLAB DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	AS SHOWN	05.05.2023
			Approved By	Mr. H.B.	Signature	Reference Drawings	Chainage:	Drawing No. - KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-10
						KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	280+574	Sheet No. 1 / 1



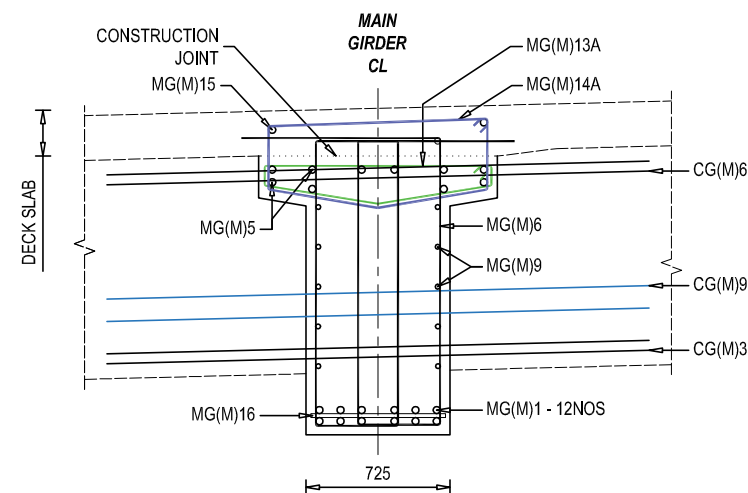
REINFORCEMENT DETAILS OF MAIN GIRDER - SECTIONAL ELEVATION VIEW

SCALE - 1 : 75



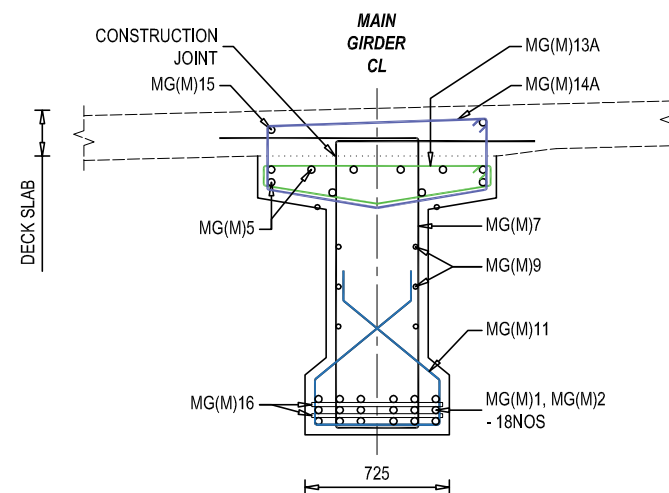
REINFORCEMENT DETAILS OF MAIN GIRDER (MID) - SECTIONAL PLAN VIEW AT T7(M)

SCALE - 1 : 75



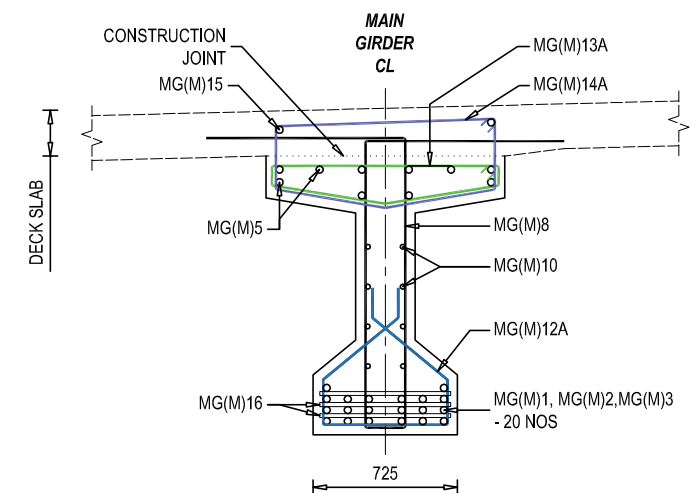
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T8**

SCALE - 1 : 50



**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T9**

SCALE - 1 : 50

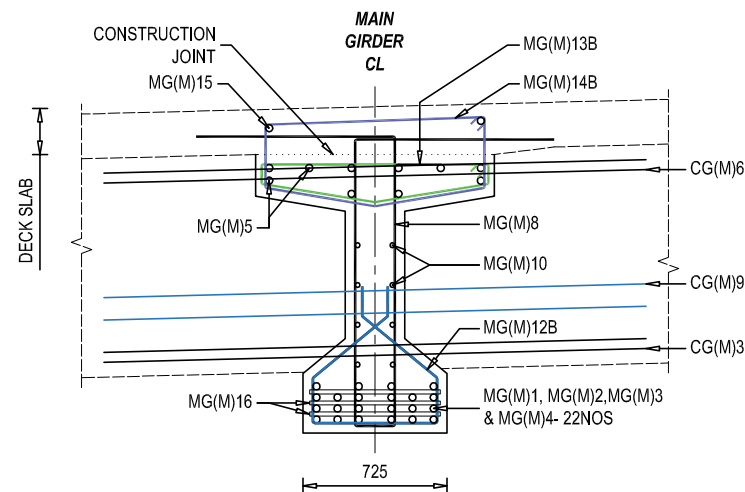


**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T10**

SCALE - 1 : 50

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

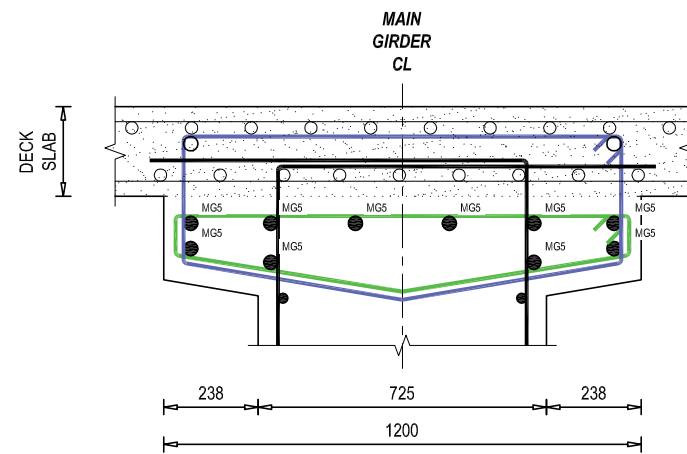
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Mr. R.A. Nec.No. 6431 CH/ML/11 Mr. S.M. Mr. H.B.	MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	AS SHOWN Chainage: 280+574	05.05.2023
						Drawing No. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-11
						Sheet No. 1 / 2



REINFORCEMENT DETAILS OF MAIN GIRDER

SECTIONAL VIEW AT T11

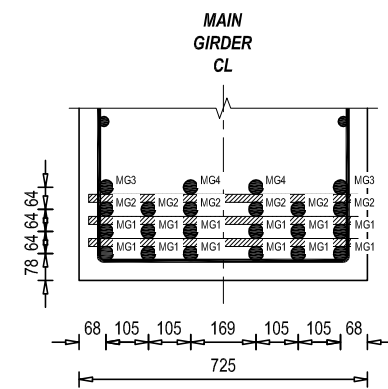
SCALE - 1 : 50



TOP BAR WEB REINFORCEMENT DETAILS

OF MAIN GIRDER

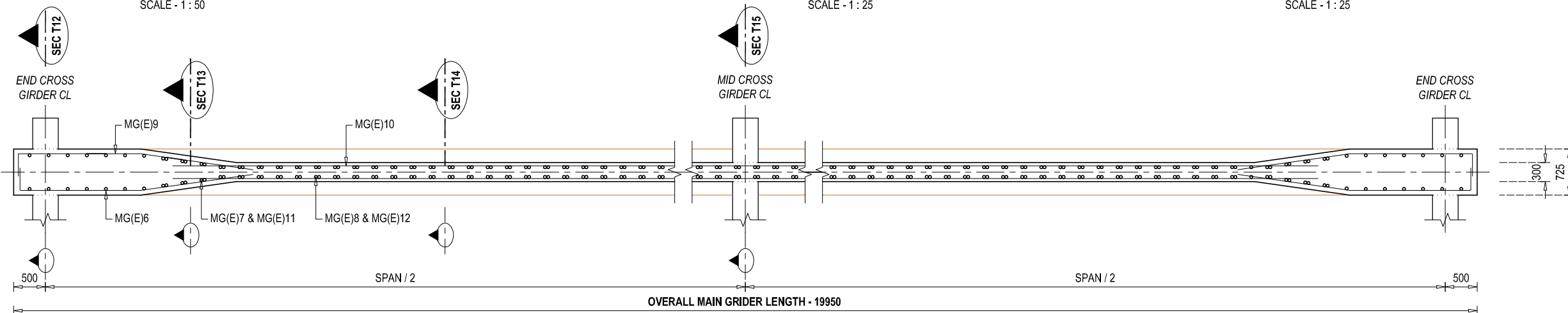
SCALE - 1 : 25



BOTTOM BAR WEB REINFORCEMENT DETAILS

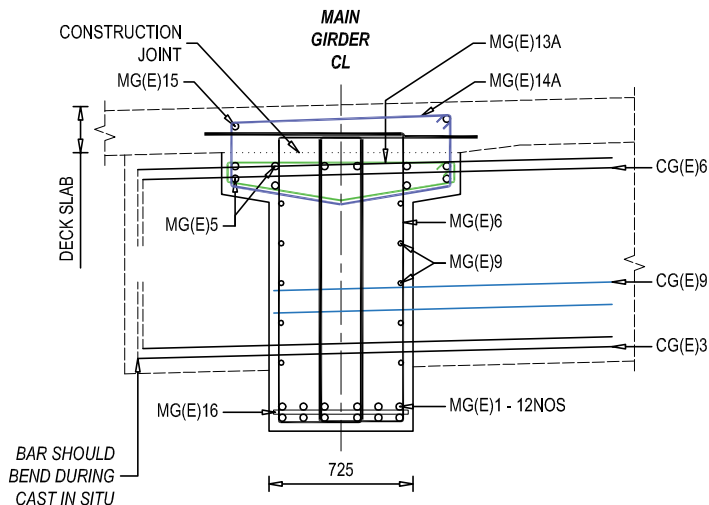
OF MAIN GIRDER

SCALE - 1 : 25



REINFORCEMENT DETAILS OF MAIN GIRDER (END) - SECTIONAL PLAN VIEW AT T7(E)

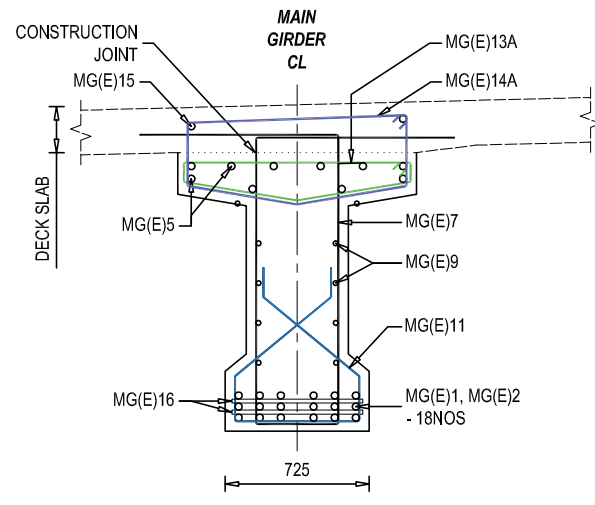
SCALE - 1 : 75



REINFORCEMENT DETAILS OF MAIN GIRDER

SECTIONAL VIEW AT T12

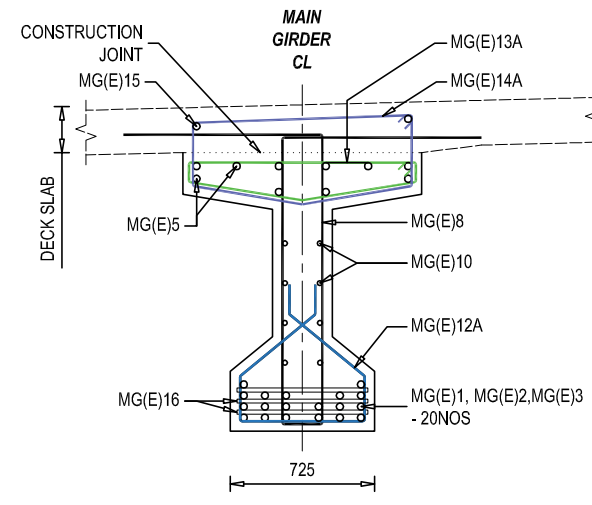
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REINFORCEMENT DETAILS OF MAIN GIRDER

SECTIONAL VIEW AT T13

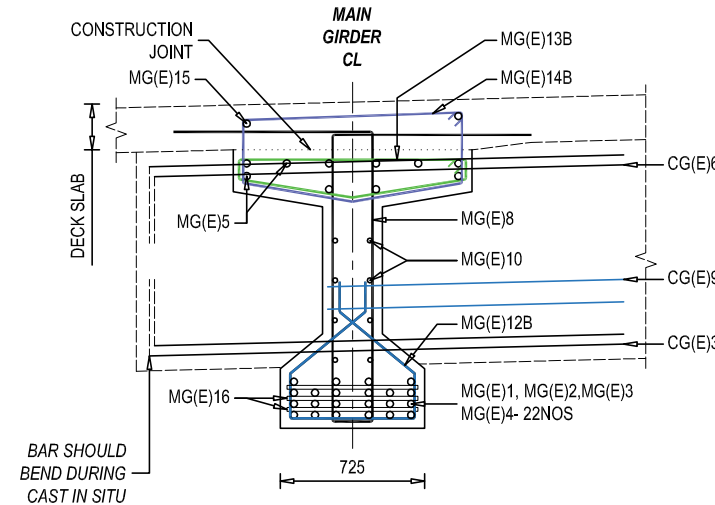
SCALE - 1 : 50



REINFORCEMENT DETAILS OF MAIN GIRDER

SECTIONAL VIEW AT T14

SCALE - 1 : 50



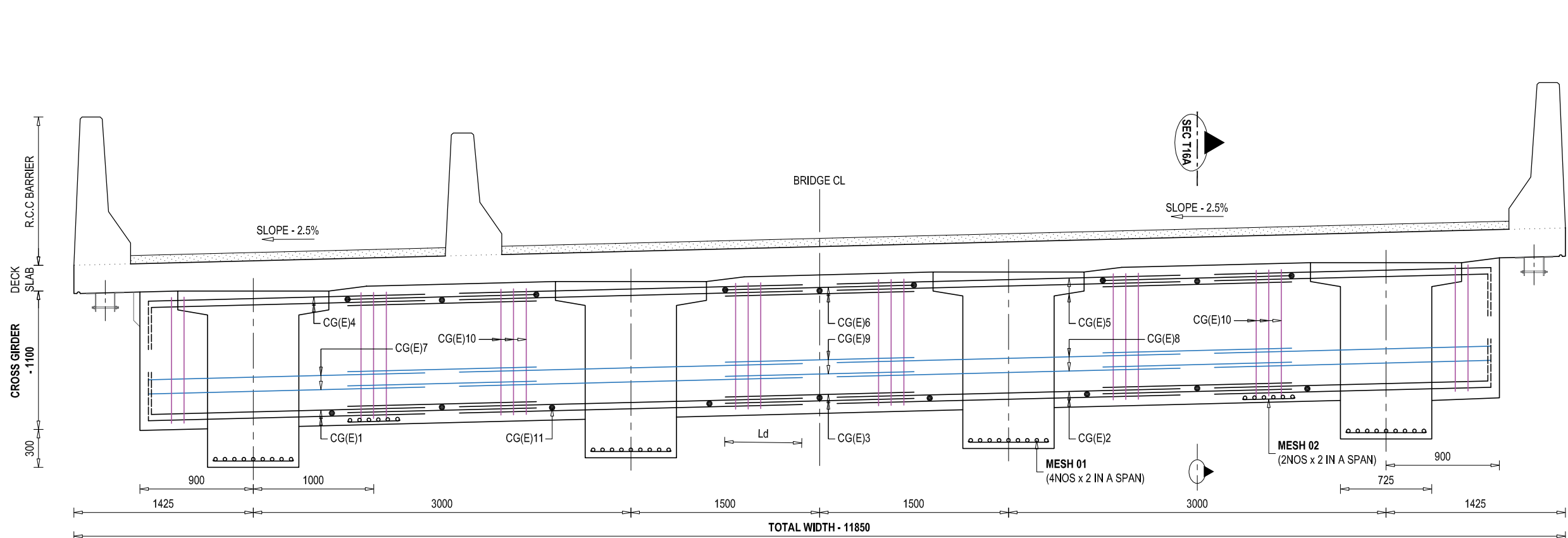
REINFORCEMENT DETAILS OF MAIN GIRDER

SECTIONAL VIEW AT T15

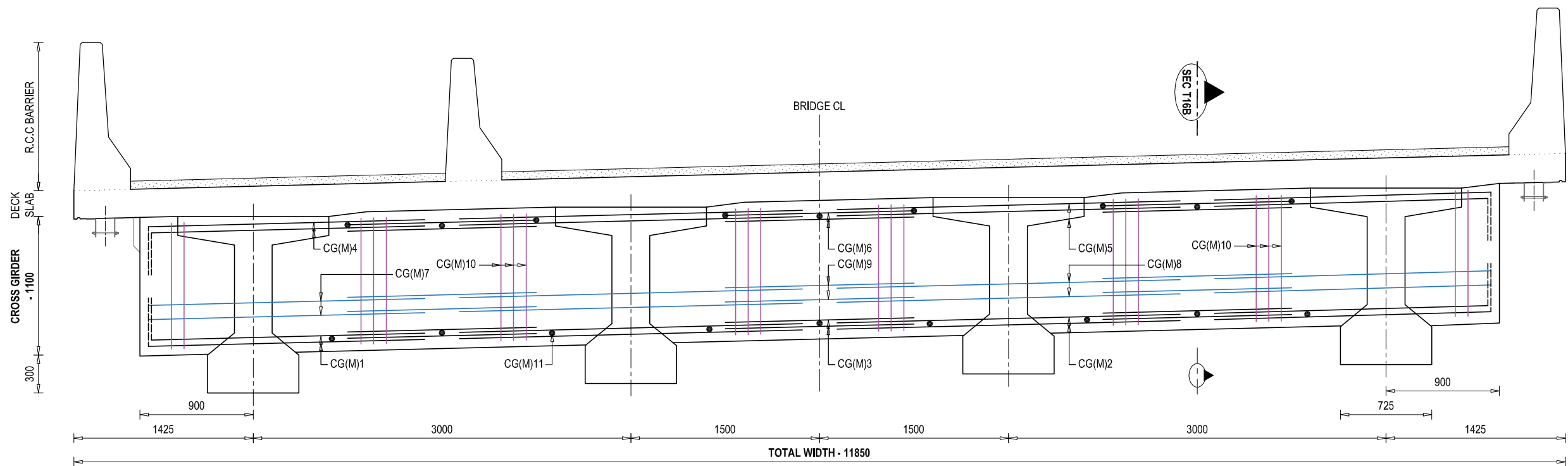
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NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

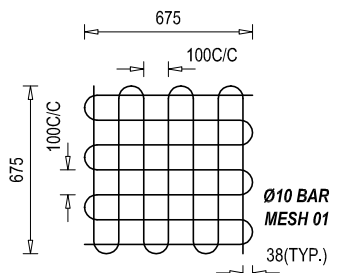
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	AS SHOWN Chainage: 280+574	05.05.2023
			Approved By	Mr. H.B.			Drawing No. -
							KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-11
							Sheet No. 2 / 2



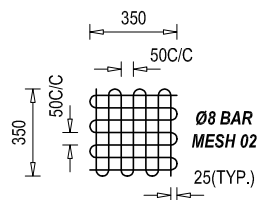
REINFORCEMENT DETAILS OF END CROSS GIRDER
SCALE - 1 : 50



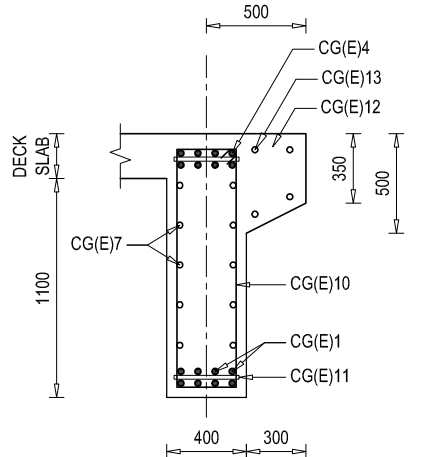
REINFORCEMENT DETAILS OF MID CROSS GIRDER
SCALE - 1 : 50



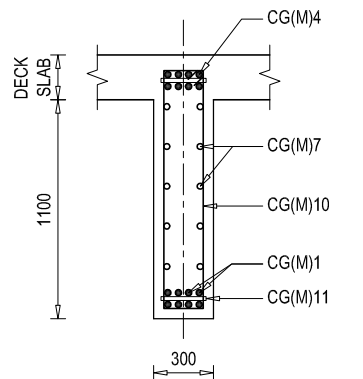
REINFORCEMENT DETAILS OF BEARING MESH
SCALE - 1 : 50



REINFORCEMENT DETAILS OF LIFTING MESH
SCALE - 1 : 50



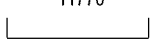
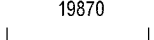
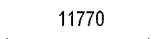
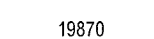
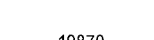
SECTIONAL REINFORCEMENT DETAILS OF END CROSS GIRDER - SEC T16A
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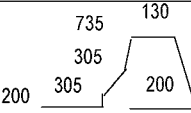
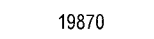


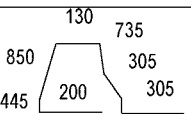
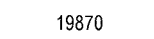
SECTIONAL REINFORCEMENT DETAILS OF MID CROSS GIRDER - SEC T16B
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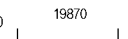
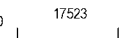
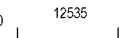
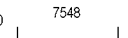
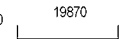
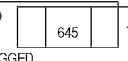
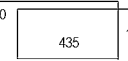
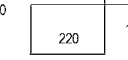
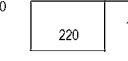
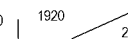
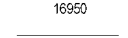
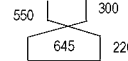
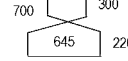
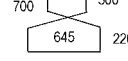
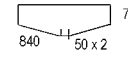
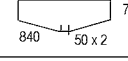
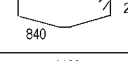
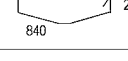
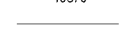
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-4

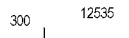
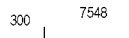
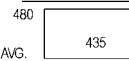
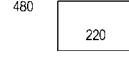
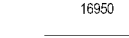
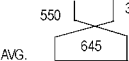
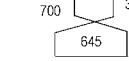
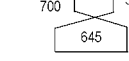
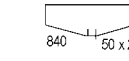
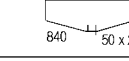
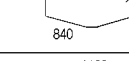
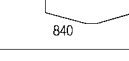
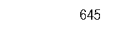
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	CROSS GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	AS SHOWN	05.05.2023
			Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	Chainage: 280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-12
							Sheet No. 1 / 1

BAR BENDING SCHEDULE OF DECK SLAB (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	DS01	150  150	16	150	12.070	134	1.580	2555.86
2	DS02	150  150	10	150	20.170	76	0.617	946.25
3	DS03	150  150	16	150	12.070	134	1.580	2555.86
5	DS04	150  150	10	150	20.170	76	0.617	946.25
6	DS05	 19870	16		19.870	8	1.580	251.20
TOTAL (KG) :								7255.41

BAR BENDING SCHEDULE OF R.C.C BARRIER (A) (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC-A1		16	150	3.170	134	1.580	671.26
2	RC-A2	150  150	10	150	20.170	20	0.617	249.01
TOTAL (KG) :								920.27

BAR BENDING SCHEDULE OF R.C.C BARRIER (B) (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RC-B1		16	150	3.170	134	1.580	671.26
2	RC-B2	150  150	10	150	20.170	20	0.617	249.01
TOTAL (KG) :								920.27

BAR BENDING SCHEDULE OF END MAIN GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MG(E)1	300  300	32		20.470	12	6.321	1552.69
2	MG(E)2	300  300	32		18.123	6	6.321	687.33
3	MG(E)3	300  300	32		13.135	2	6.321	166.05
4	MG(E)4	300  300	32		8.148	2	6.321	103.01
5	MG(E)5	300  300	12		20.470	10	0.889	181.96
6	MG(E)6	 4 LEGGED	12	100	9.260	42	0.889	345.71
7	MG(E)7	 AVG.	12	100	5.125	32	0.889	145.78
8	MG(E)8A	 1430	12	100	4.480	81	0.889	322.56
9	MG(E)8B	 1430	12	150	4.480	35	0.889	139.38
10	MG(E)9	370  2000	12	200	4.290	28	0.889	106.77
11	MG(E)10	 16950	12	200	16.950	14	0.889	210.93
12	MG(E)11	 AVG.	12	100	2.785	32	0.889	79.22
13	MG(E)12A	 220	12	150	3.085	81	0.889	222.12
14	MG(E)12B	 220	12	150	3.085	35	0.889	95.98
15	MG(E)13A	 70	12	100	3.040	151	0.889	408.04
16	MG(E)13B	 70	12	150	3.040	35	0.889	94.58
17	MG(E)14A	 270	12	100	3.440	151	0.889	461.72
18	MG14B	 270	12	150	3.440	35	0.889	107.02
19	MG(E)15	 19870	12		19.870	2	0.889	35.32
19	MG(E)16	 645	32	1500	0.645	42	6.321	171.24
TOTAL (KG) :								5637.40

BAR BENDING SCHEDULE OF MID MAIN GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MG(M)1	300  300	32		20.470	12	6.321	1552.69
2	MG(M)2	300  300	32		18.123	6	6.321	687.33
3	MG(M)3	300  300	32		13.135	2	6.321	166.05
4	MG(M)4	300  300	32		8.148	2	6.321	103.01
5	MG(M)5	300  300	12		20.470	10	0.889	181.96
6	MG(M)6	 4 LEGGED	12	100	9.260	42	0.889	345.71
7	MG(M)7	 AVG.	12	100	5.125	32	0.889	145.78
8	MG(M)8A	 1430	12	100	4.480	81	0.889	322.56
9	MG(M)8B	 1430	12	150	4.480	35	0.889	139.38
10	MG(M)9	370  2000	12	200	4.290	28	0.889	106.77
11	MG(M)10	 16950	12	200	16.950	14	0.889	210.93
12	MG(M)11	 AVG.	12	100	2.785	32	0.889	79.22
13	MG(M)12A	 220	12	150	3.085	81	0.889	222.12
14	MG(M)12B	 220	12	150	3.085	35	0.889	95.98
15	MG(M)13A	 70	12	100	3.040	151	0.889	408.04
16	MG(M)13B	 70	12	150	3.040	35	0.889	94.58
17	MG(M)14A	 270	12	100	3.440	151	0.889	461.72
18	MG14B	 270	12	150	3.440	35	0.889	107.02
19	MG(M)15	 19870	12		19.870	2	0.889	35.32
19	MG(M)16	 645	32	1500	0.645	42	6.321	171.24
TOTAL (KG) :								5637.40

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.A. Nec.No. 6421 Q/N/14 Signature	Drawing Name	Scale:	AS SHOWN	Date:	05.05.2023
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Checked By	Mr. S.M. Signature							
		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India									
		In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Approved By		Mr. H.B. Signature	-					

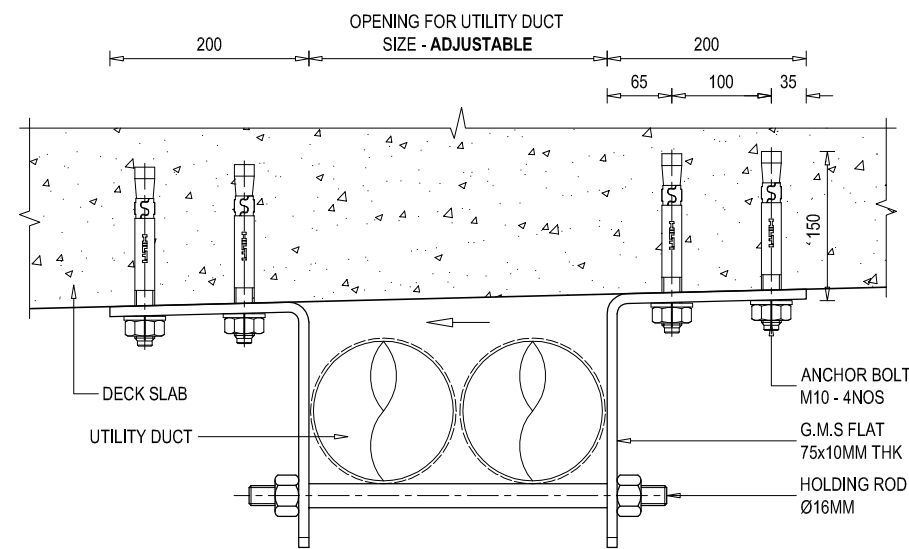
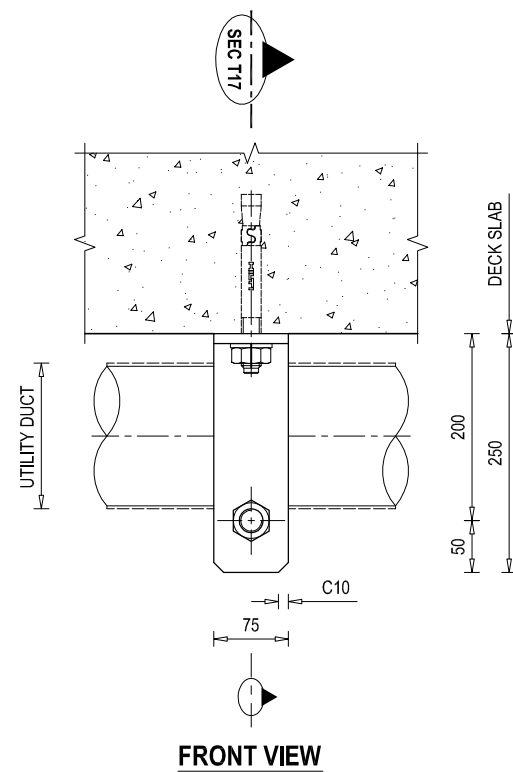
BAR BENDING SCHEDULE OF MESH (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MESH 01	675 675 @ 100	10		9.450	8	0.617	46.67
2	MESH 02	350 350 @ 50	8		4.900	4	0.395	7.74
TOTAL (KG) :								54.41

BAR BENDING SCHEDULE OF R.C.C SEPARATOR (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1	130 535 1110 150 305 315	16	150	2.695	134	1.580	570.67
2	RS2	150 19870 150	10	150	20.170	17	0.617	211.66
TOTAL (KG) :								782.34

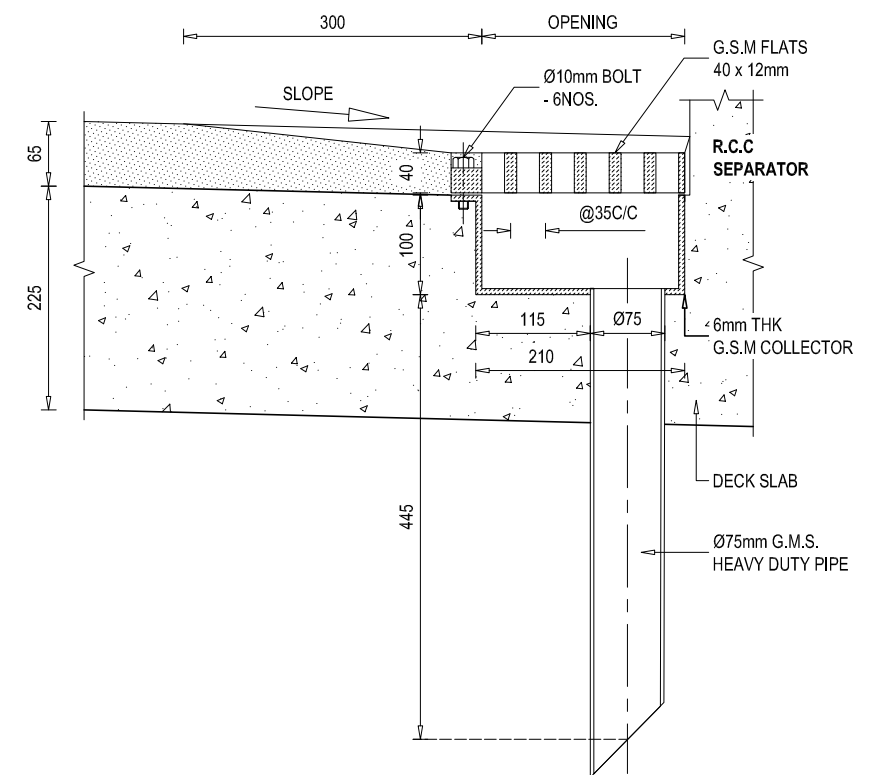
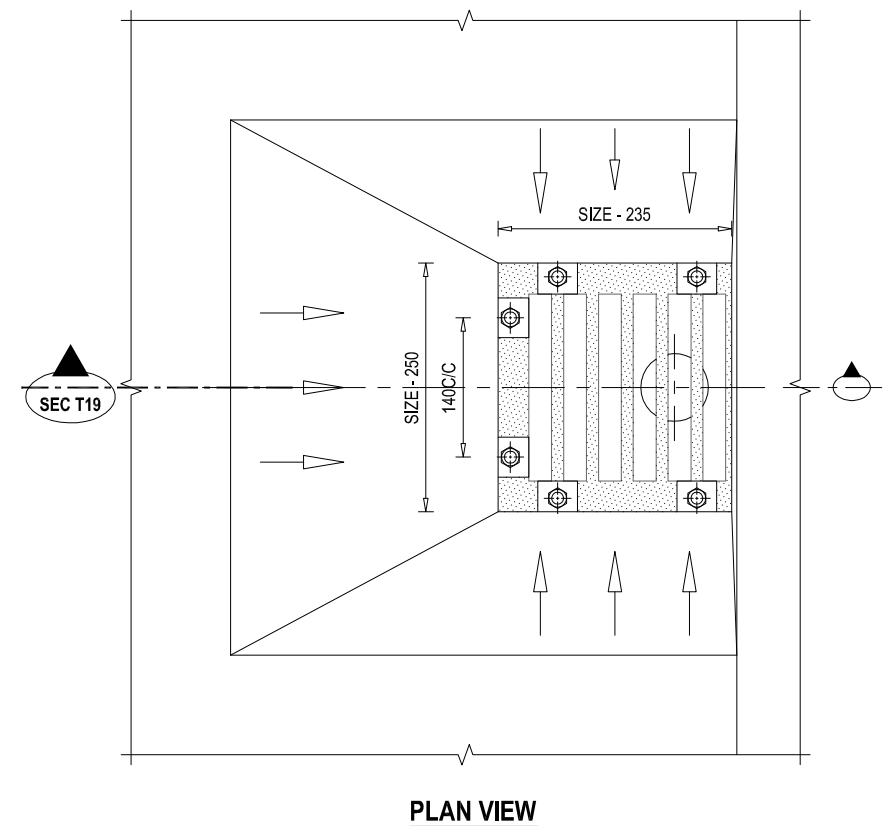
BAR BENDING SCHEDULE OF END CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(E)1	300 1825	20		2.125	8	2.469	41.98
2	CG(E)2	2625	20		2.625	8	2.469	51.85
3	CG(E)3	1675	20		1.675	8	2.469	33.09
4	CG(E)4	300 1825	20		2.125	8	2.469	41.98
5	CG(E)5	2625	20		2.625	8	2.469	51.85
6	CG(E)6	1675	20		1.675	8	2.469	33.09
7	CG(E)7	1825	12	150	1.825	8	0.889	12.98
8	CG(E)8	2625	12	150	2.625	8	0.889	18.67
9	CG(E)9	1675	12	150	1.675	8	0.889	11.91
10	CG(E)10	50 x 2 320 1220	12	200	1.640	39	0.889	56.85
11	CG(E)11	320	20	1000	0.320	18	2.469	14.22
12	CG(E)12	800 260 300 390	16	150	1.750	79	1.580	218.47
13	CG(E)13	11770	12		11.770	6	0.889	62.77
TOTAL (KG) :								649.70
TOTAL NOS OF CROSS GIRDER :								2.00
TOTAL WEIGHT (KG) :								1299.40

BAR BENDING SCHEDULE OF MID CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(M)1	300 1825	20		1.920	8	2.469	37.93
2	CG(M)2	2625	20		2.945	8	2.469	58.17
3	CG(M)3	1675	20		1.995	8	2.469	39.41
4	CG(M)4	300 1825	20		1.920	8	2.469	37.93
5	CG(M)5	2625	20		2.625	8	2.469	51.85
6	CG(M)6	1675	20		1.675	8	2.469	33.09
7	CG(M)7	1825	12	150	1.620	8	0.889	11.52
8	CG(M)8	2625	12	150	2.625	8	0.889	18.67
9	CG(M)9	1675	12	150	1.675	8	0.889	11.91
10	CG(M)10	50 x 2 320 1220	12	200	1.640	39	0.889	56.85
11	CG(M)11	320	20	1000	0.320	18	2.469	14.22
TOTAL (KG) :								371.54

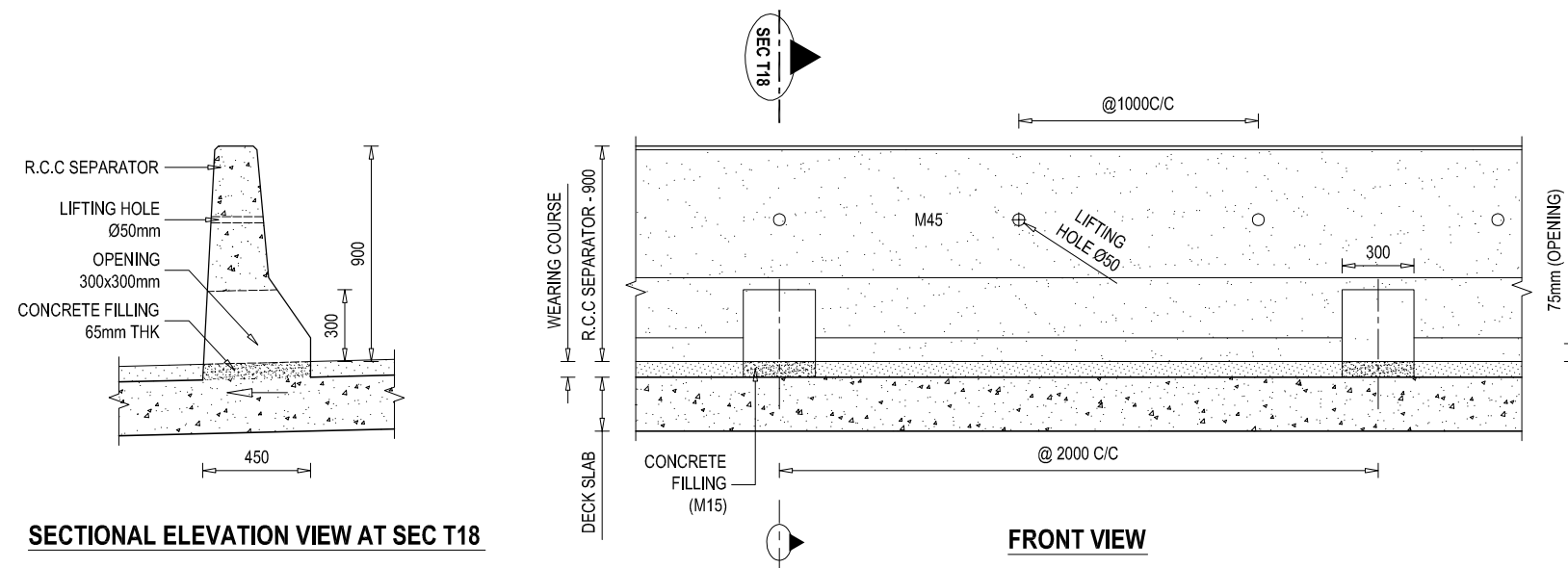
EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS			Drawing Name		Scale:		Date:	
	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges		Joint Venture of			Designed By	Mr. R.A.	AS SHOWN		05.05.2023	
				EPTISA Servicios De Ingeniera Madrid, Spain			Checked By	Mr. S.M.			Drawing No. - KDP/DPR/STR/BR/JARLAHI (KHOLSI PUL)/DD-13	
				In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited			Approved By	Mr. H.B.			Sheet No. 2 / 2	



**DETAILS OF GALVANIZED MILD STEEL (G.M.S)
UTILITY DUCT CLAMP**
SCALE - 1 : 10



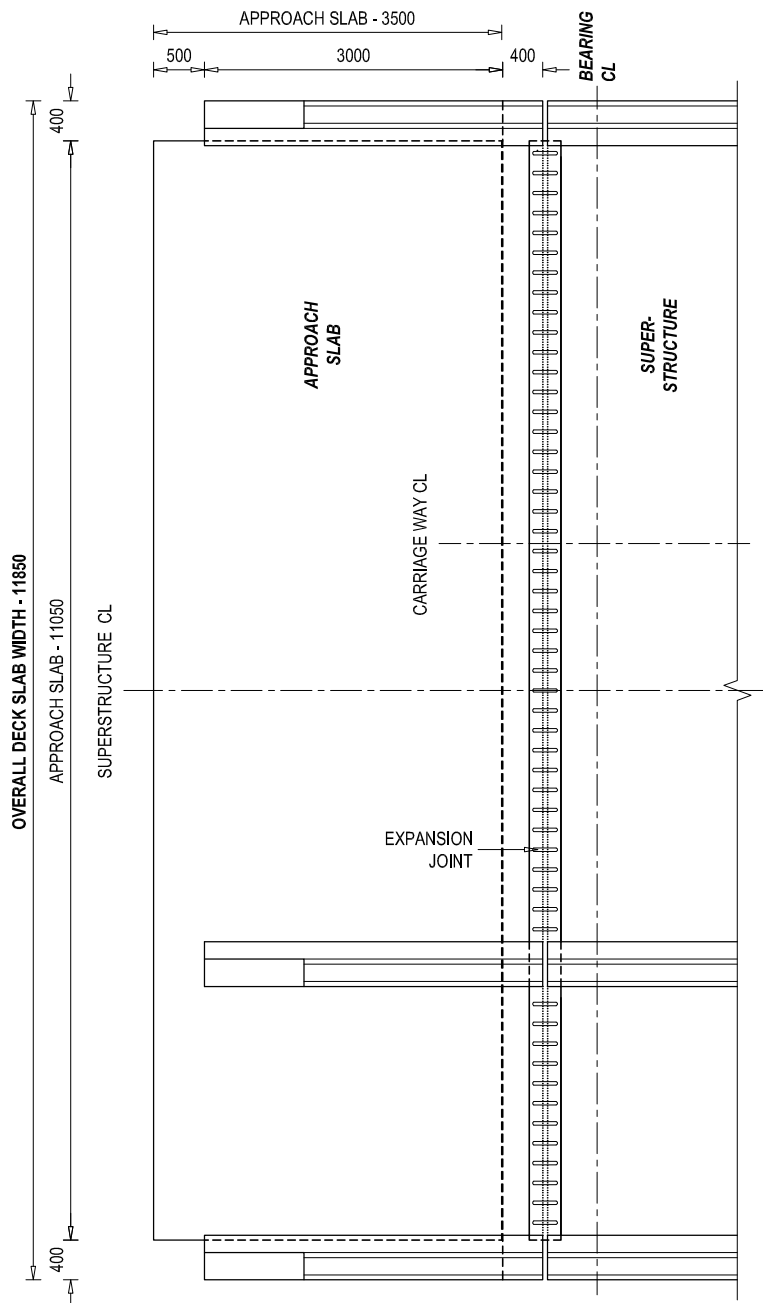
**DETAILS OF GALVANIZED MILD STEEL (G.M.S)
DRAINAGE SPOUT**
SCALE - 1 : 10



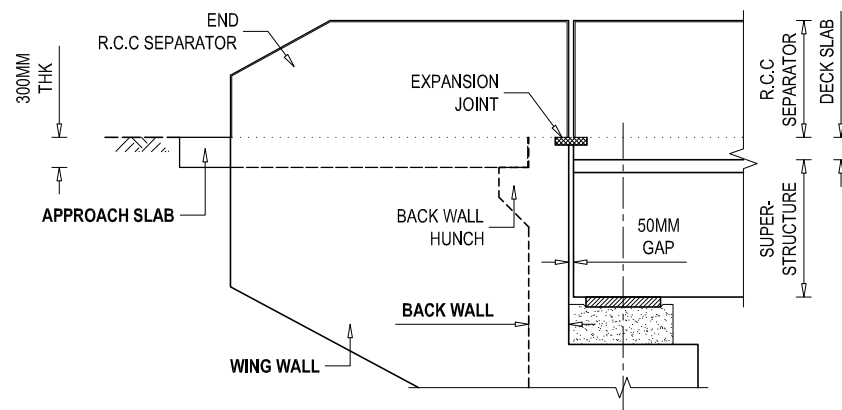
**DETAIL ELEVATION VIEW AT R.C.C SEPARATOR
& IT'S DRAIN OPENING**
SCALE - 1 : 40

SECTIONAL ELEVATION VIEW AT SEC T18

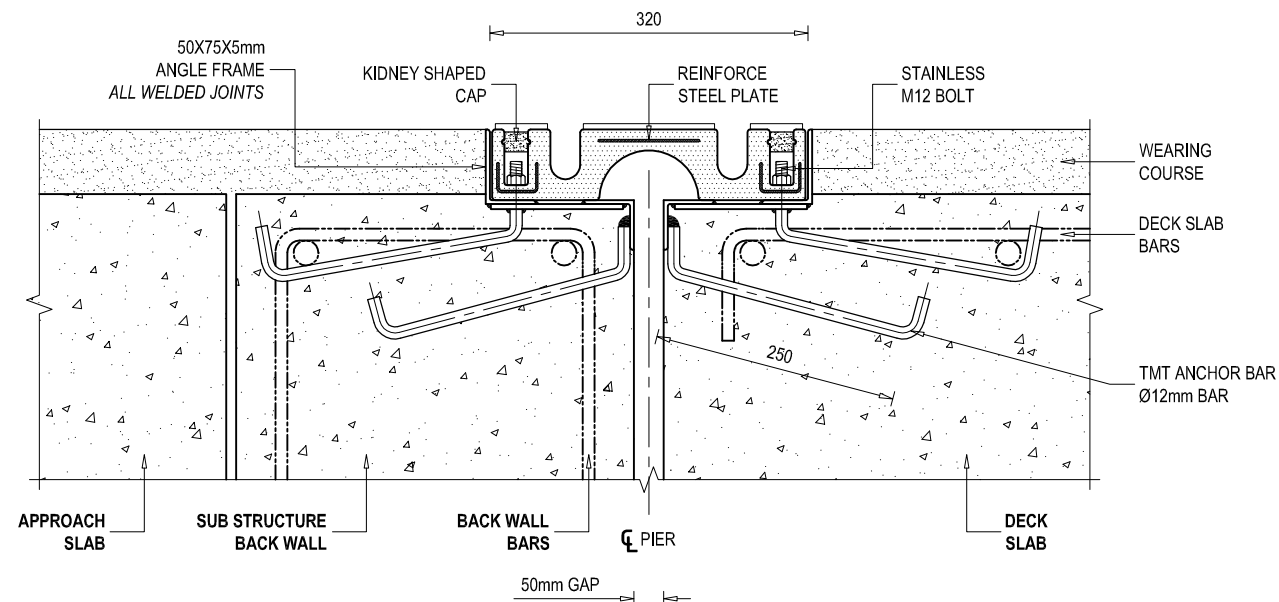
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings -	AS SHOWN Chainage: 280+574	25.04.2023
			Approved By	Mr. H.B.			Drawing No.- KDP/DPR/STR/BR/JARLAHI(KHOLSI PUL)/DD-14
							Sheet No.1 /2



PLAN VIEW AT EXPANSION JOINT, END R.C.C SEPARATOR & APPROACH SLAB

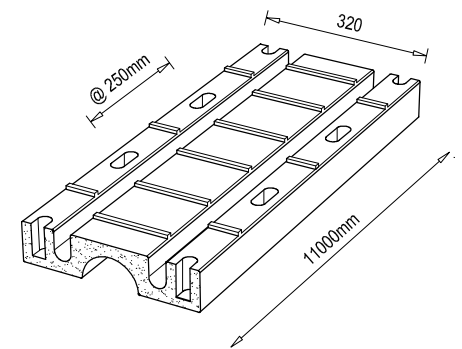


ELEVATION VIEW



SEAL TYPE EXPANSION JOINTS ARRANGEMENT IN A CARRIAGEWAY

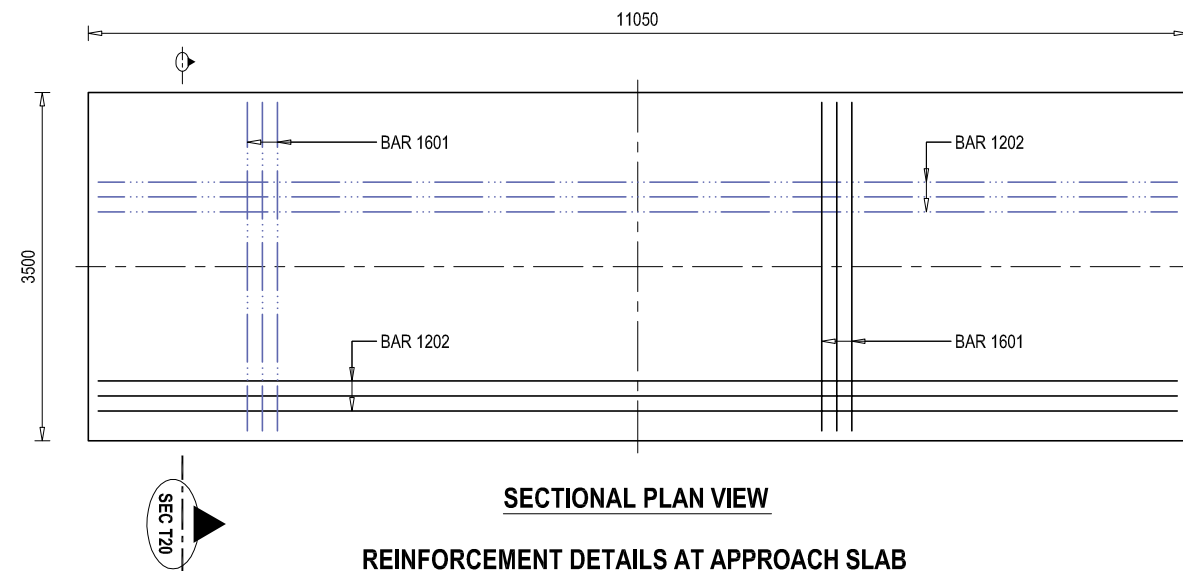
SCALE - 1 : 10 @ A3 PAPER



EXPANSION JOINT ISOMETRIC VIEW

- SEAL TYPE

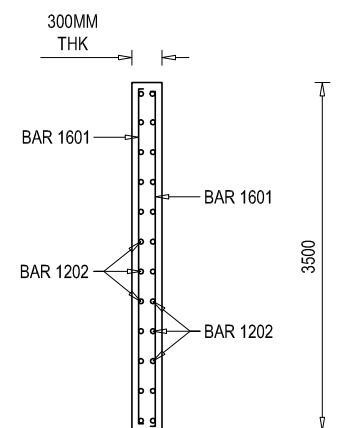
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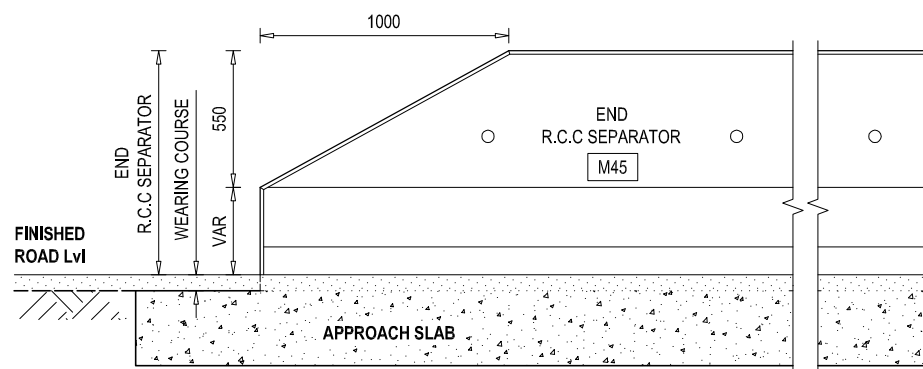
SECTIONAL PLAN VIEW

REINFORCEMENT DETAILS AT APPROACH SLAB

SCALE - 1 : 100 @ A3 PAPER

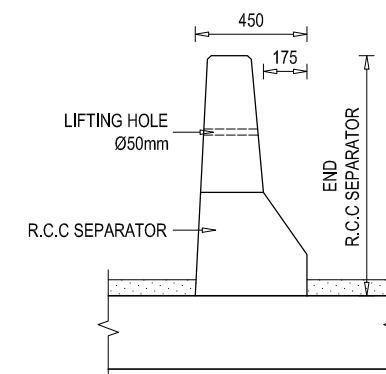


SECTIONAL ELEVATION VIEW AT SEC T20



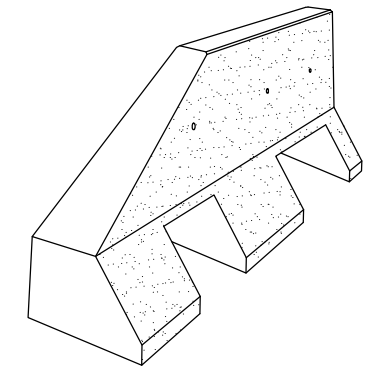
ELEVATION VIEW OF END R.C.C SEPARATOR

SCALE - 1 : 40 @ A3 PAPER



SIDE VIEW

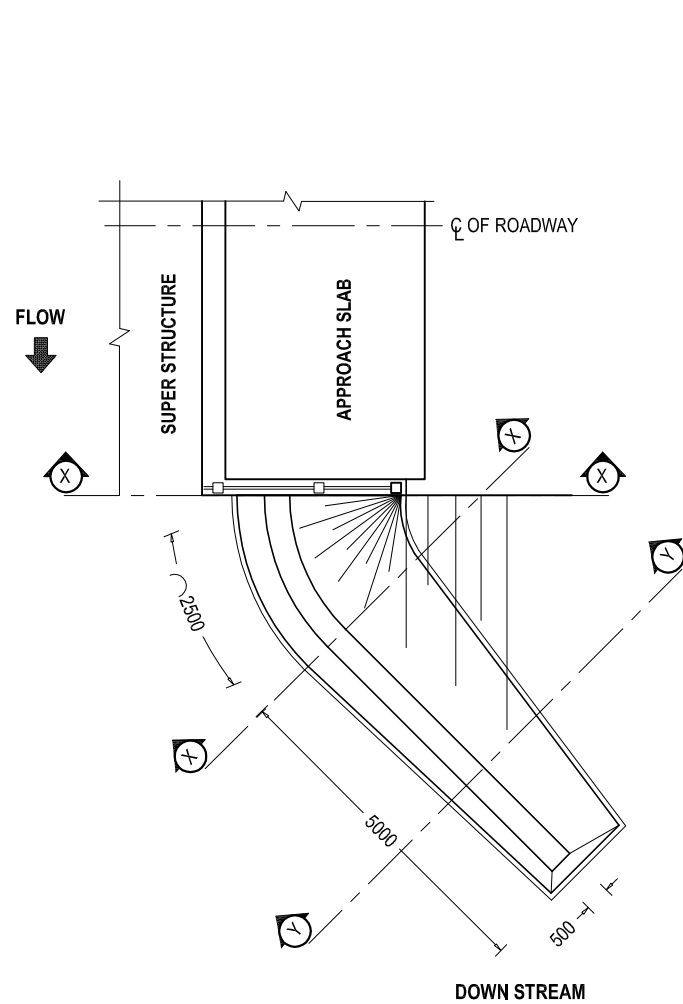
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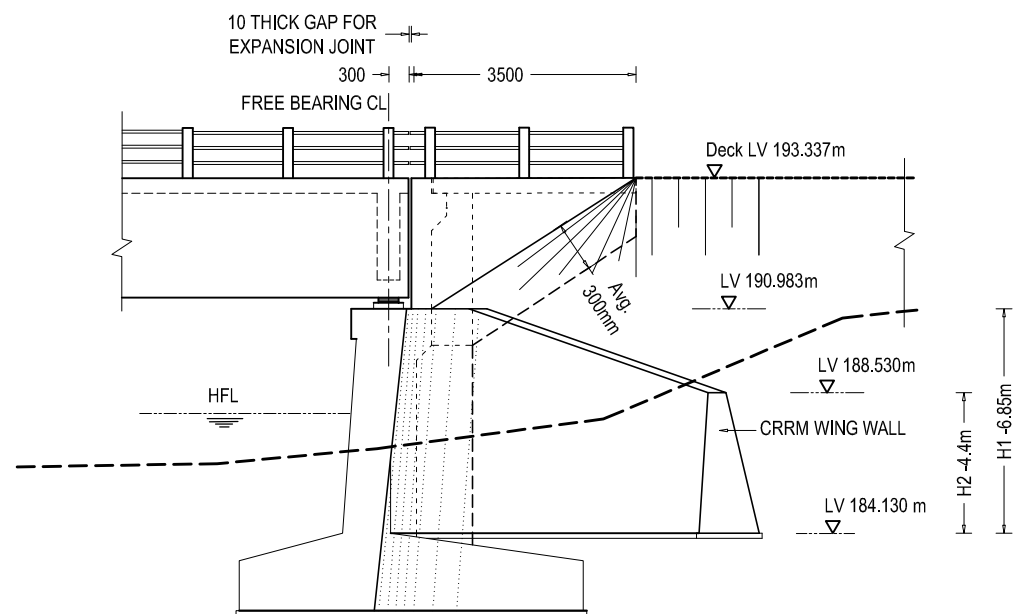
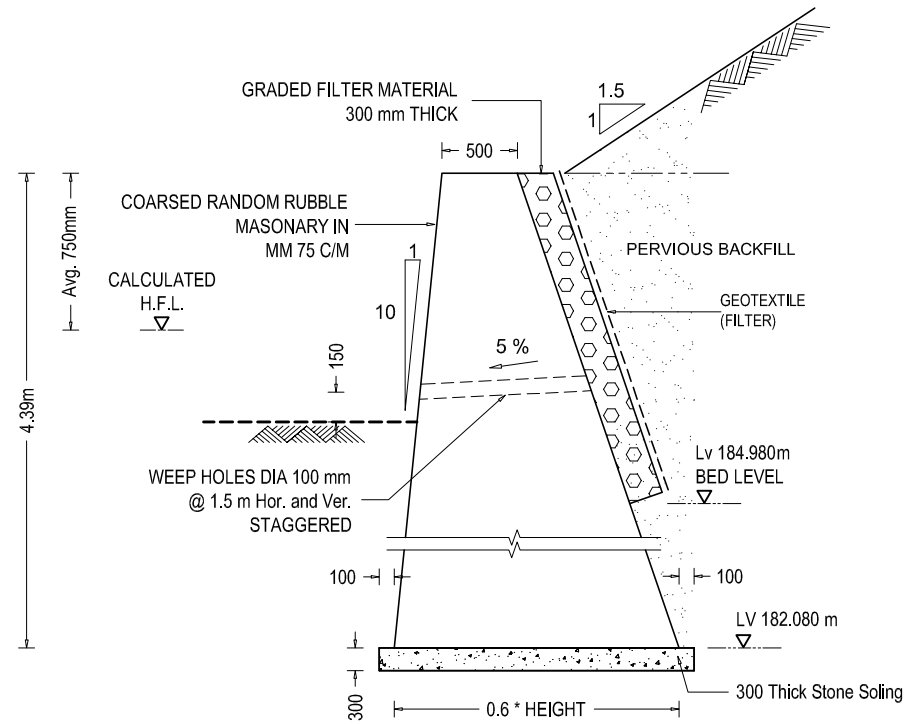
END R.C.C SEPARATOR ISOMETRIC VIEW

SCALE - NON

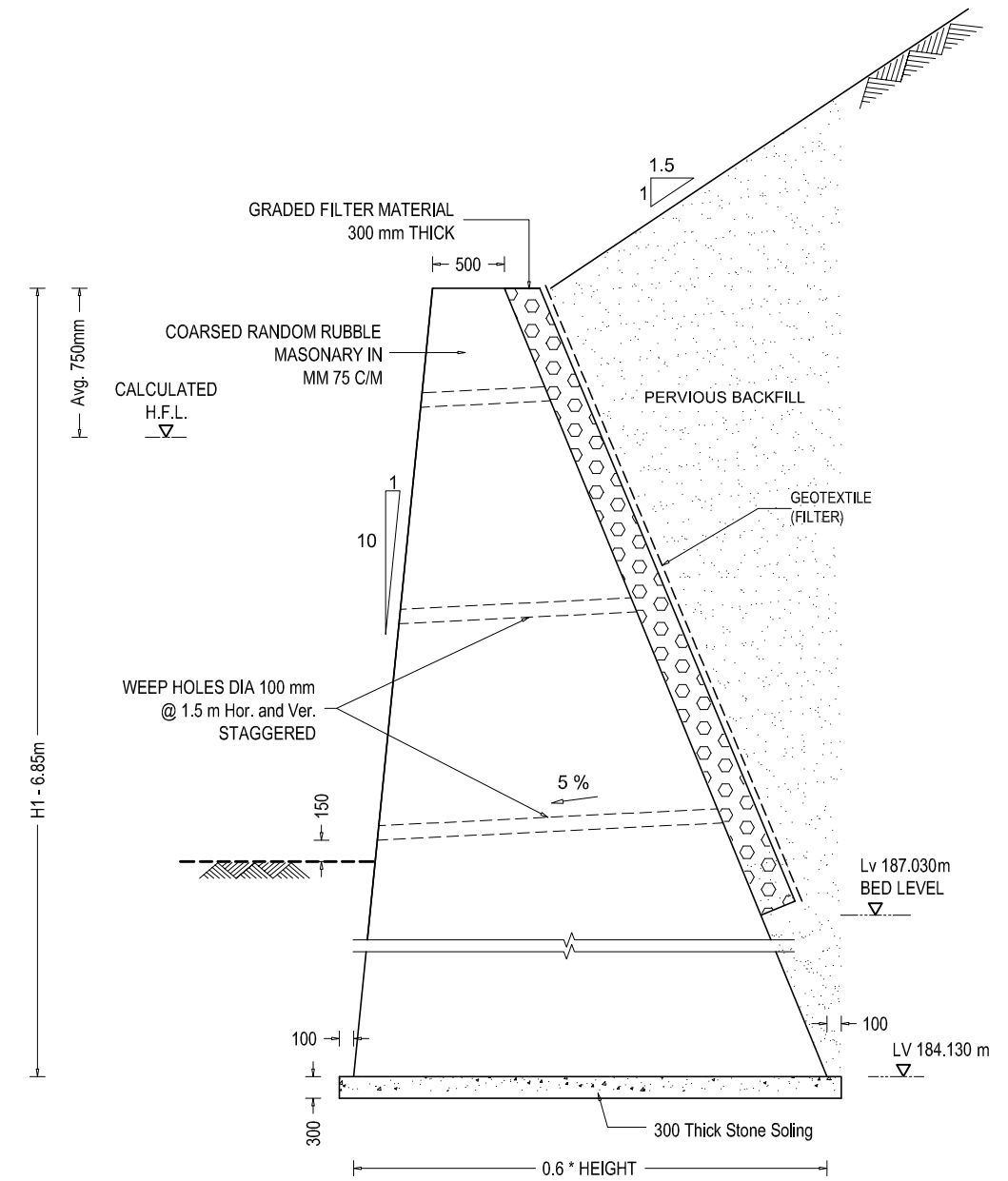
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamal-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Mr. R.A. Nec.No. 6431 CHL/14 Mr. S.M. Mr. H.B.	MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings KDP/DPR/STR/BR/JARLAHI(KHOLSIPUL)/DD-8	AS SHOWN Chainage: 280+574	25.04.2023 Drawing No.- KDP/DPR/STR/BR/JARLAHI(KHOLSIPUL)/DD-14 Sheet No.2/2
			Checked By			
			Approved By			



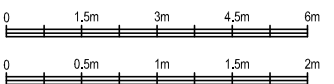
NOTE : AT DOWN STREAM ONLY



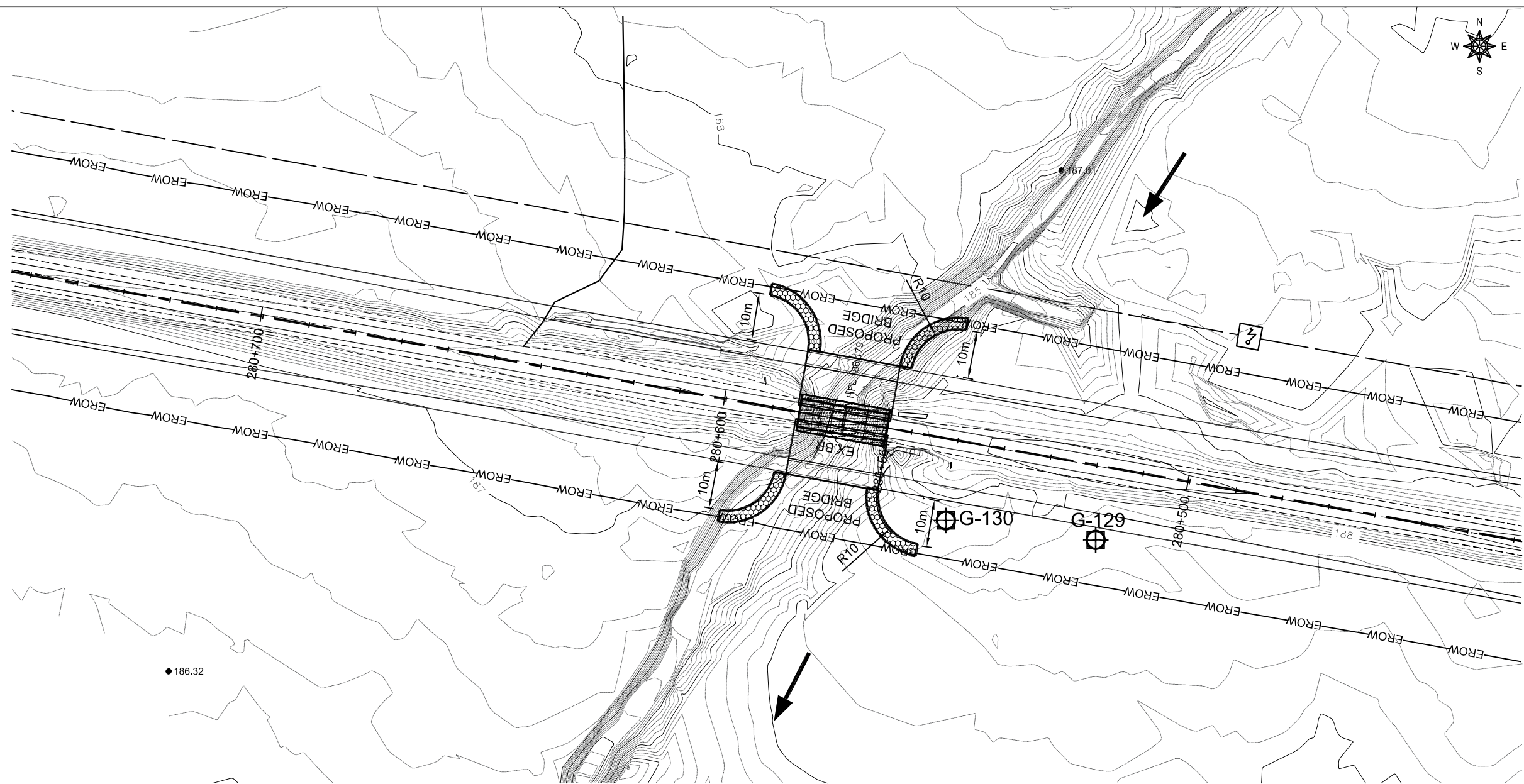
WING WALL ELEVATION



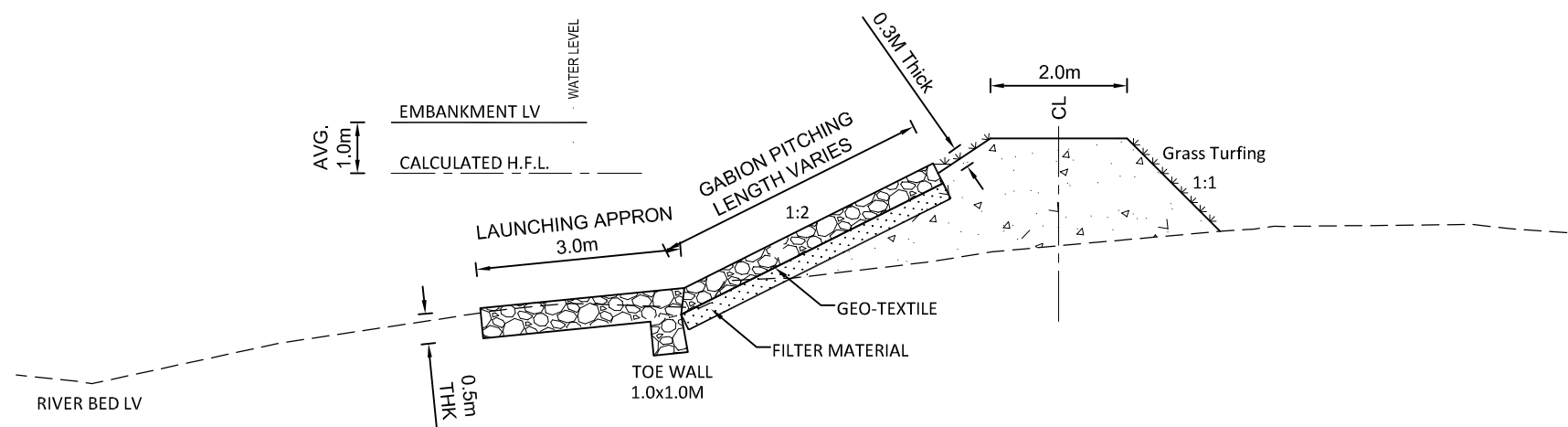
STONE MASONRY WING WALL SECTION X - X



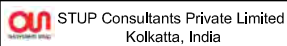
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathahya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	WING WALL DETAILS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL) Reference Drawings -	AS SHOWN Chainage: 280+574	26.04.2023 Drawing No- KDP/DPR/STR/BR/JARLAHI(KHOLSI PUL)/DD-15 Sheet No. 1 / 1
			Approved By	Mr. H.B.			



TOPOGRAPHIC MAP

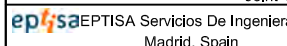


SECTION OF EMBANKMENT
SCALE - 1x : 5x

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	RIVER TRAINING WORKS OF BRIDGE OVER RIVER JARLAHI (KHOLSI PUL)	1:1000	26.04.2023
			Approved By	Mr. H.B.	Reference Drawings	Chainage: 280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI(KHOLSIPUL)/DD- 16
							Sheet No. 1 / 1

Bearing Design Data for 20m Span and 11.85m width

Load Condition	Items	Under	On each Neoprene Bearing	Unit
Under No Live Load	V	NO EQ.	46.28	Ton
		EQ.	53.22	Ton
	H _L	NO EQ.	-	Ton
		EQ.	10.41	Ton
	H _T	NO EQ.	-	Ton
		EQ.	10.41	Ton
	θ	NO EQ.	0.00266	radian
		EQ.	0.00306	radian
Δ		12.4	mm	
Under Maximum Live Load	V	NO EQ.	84.85	Ton
		EQ.	92.95	Ton
	H _L	NO EQ.	-	Ton
		EQ.	0.00	Ton
	H _T	NO EQ.	-	Ton
		EQ.	0.00	Ton
	θ	NO EQ.	0.0040425	radian
		EQ.	0.00465	radian
Δ		20.80	mm	

 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlalya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS		Designed By	Mr. R.A. Nec.No. 6431 CIVIL/24		Drawing Name BEARING DESIGN DATA OF BRIDGE OVER RIVER JARLAHI (KHOLSIPUL)	Scale: 1:1000	Date: 26.04.2023
		Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkata, India		Checked By	Mr. S.M.		Reference Drawings	Chainage: 280+574	Drawing No.- KDP/DPR/STR/BR/JARLAHI(KHOLSIPUL)/DD-17
		In Association With Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.				Sheet No.1 / 1