



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- Gadhanta
Volume-2
Detailed Drawing

April,2023

Joint Venture Of:

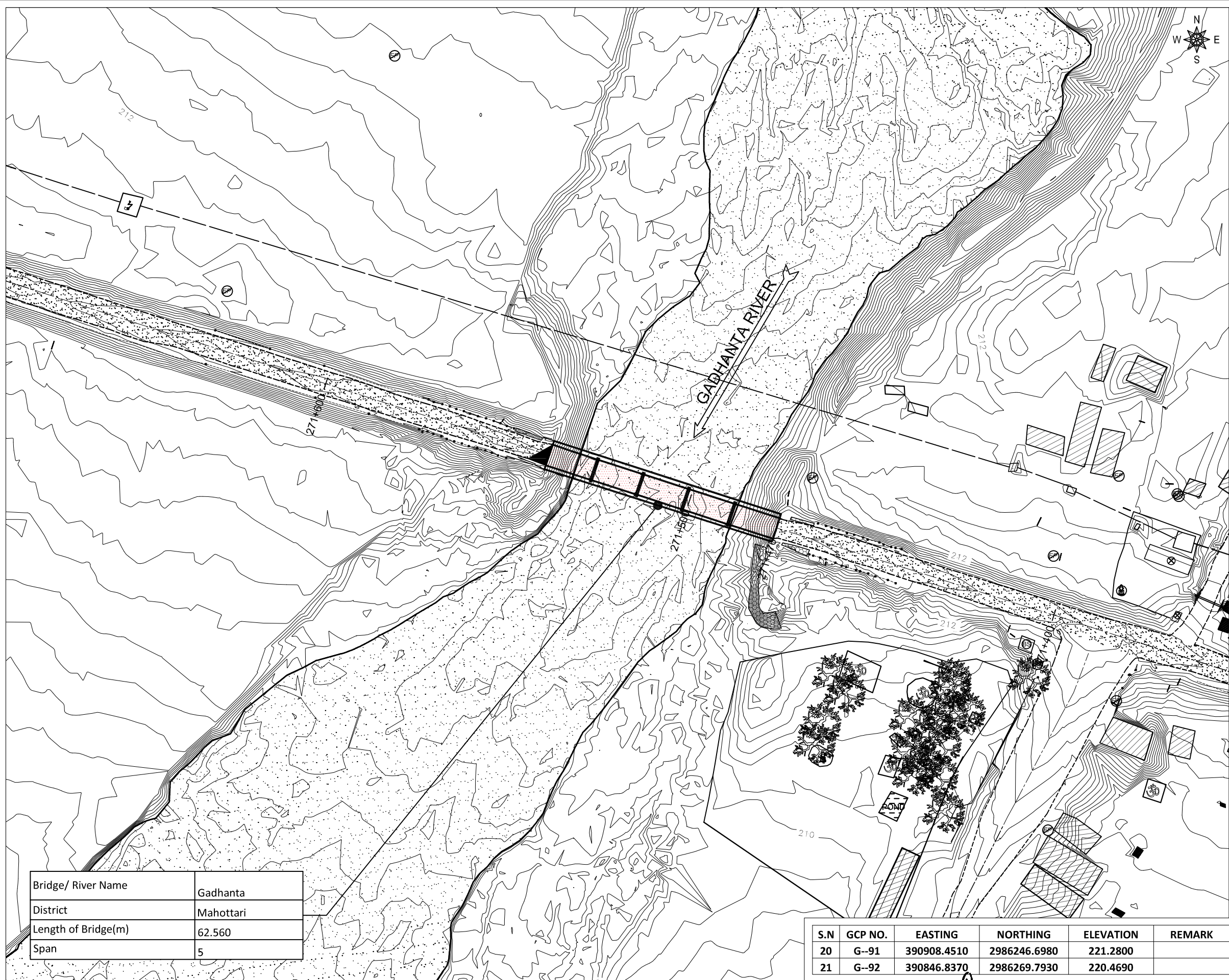
eptisa EPTISA Servicios De Ingenieria
Madrid, Spain

STUP STUP Consultants Private Limited
India

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

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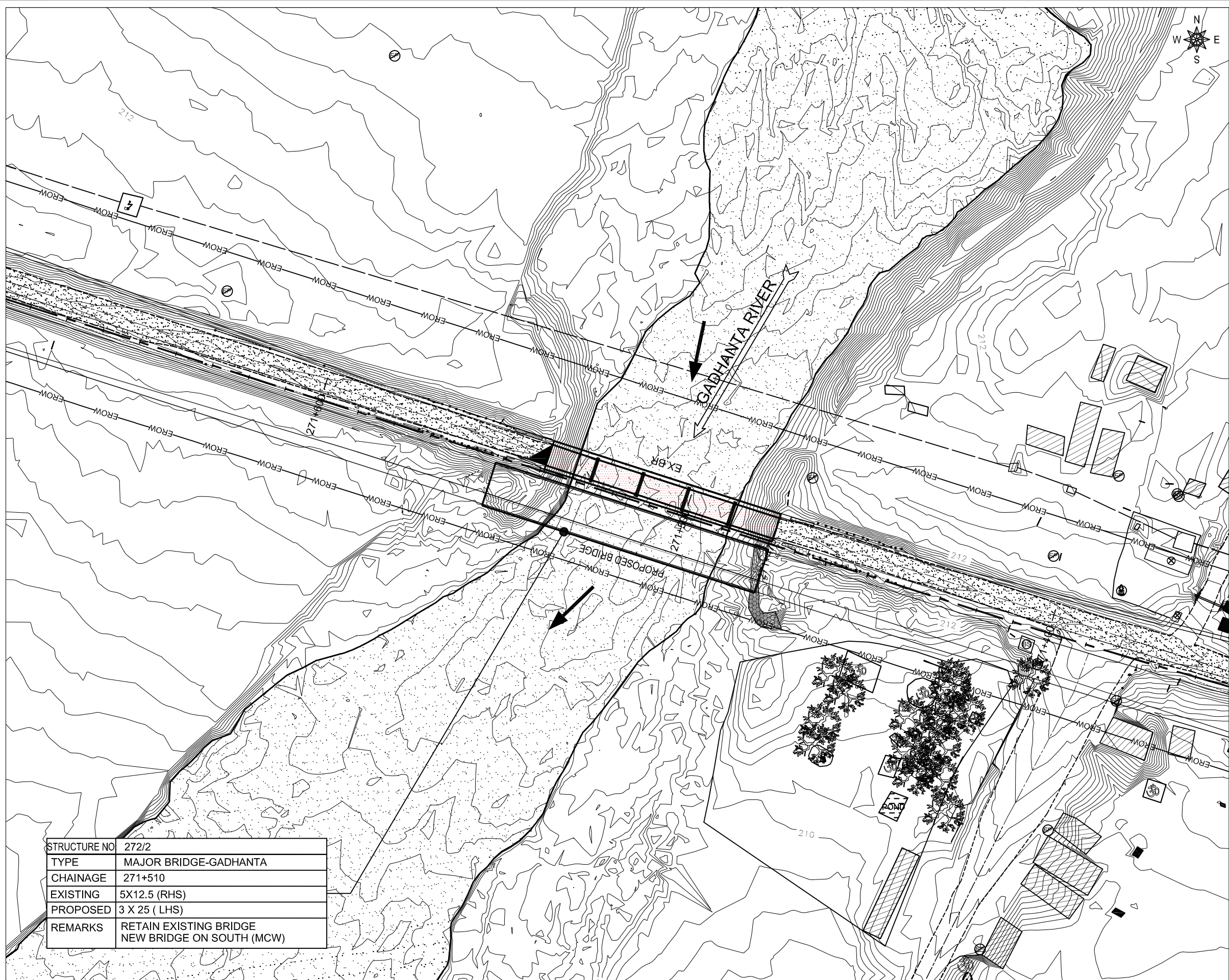
S.No.	DRAWING NAME	DRAWING No.	SHEET No.
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2	DETAILED SURVEY TOPOGRAPHIC MAP (EXISTING CONDITION) OF BRIDGE OVER RIVER GADHANTA	KDP/DPR/STR/BR/GADHANTA/DD -2	1
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DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
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)	
SPOT HEIGHT		CRUSHER	
SHED		DELINOTOR	
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	

S.N	GCP NO.	EASTING	NORTHING	ELEVATION	REMARK
20	G--91	390908.4510	2986246.6980	221.2800	
21	G--92	390846.8370	2986269.7930	220.4690	

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-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		Designed By Mr. R.D. Nec.No. 6489 CH/L/12 Signature		1:1000		23.04.2023	
				In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Checked By Mr. S.M. Signature		Chainage: 271+510		Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD- 2	
						Approved By Mr. H.B. Signature				Sheet No.1/ 1	



DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
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PLACE NAME		BAMBOO	
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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	
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						Approved By Mr. H.B. Signature				Sheet No.1/ 1	
						Reference Drawings					

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) - 128.30 CUMECs
2. HFL - 211.380 M
3. FREE BOARD (MINIMUM) - 1 M
4. MAXIMUM SCOUR LEVEL:
ABUTMENT - 207.620M
PIER - 205.630M

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

D. STRUCTURAL AND OTHER DATA: -

1. SPAN ARRANGEMENT: 3 X 25 = 75 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 - 1200 DIA BORED CAST-IN-SITU PILE
DESIGN WORKING LOAD ON PILE - 248.41 TON
B) PIER- 1200 DIA BORED CAST-IN-SITU PILE
DESIGN WORKING LOAD ON PILE - 228.91 TON
RCC BORED PILES SHOULD BE CONSTRUCTED AS PER IS: 2911(PART 1/SEC 2)-2010.
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. PILE..... M35 (CEMENT CONTENT AS PER SPECIFICATION)
b. PILE CAP.....M35
c. BEARING PEDESTALS.....M40
d. ABUTMENTM35
e. PIER.....M35
f. PIER CAP.....M35
g. RETURN WALL.....M35
h. 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 : 57.2Ø
b) FOR M 35 GRADE CONCRETE : 51.48Ø
c) FOR M 40 GRADE CONCRETE : 48.62Ø

(WHERE Ø 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:

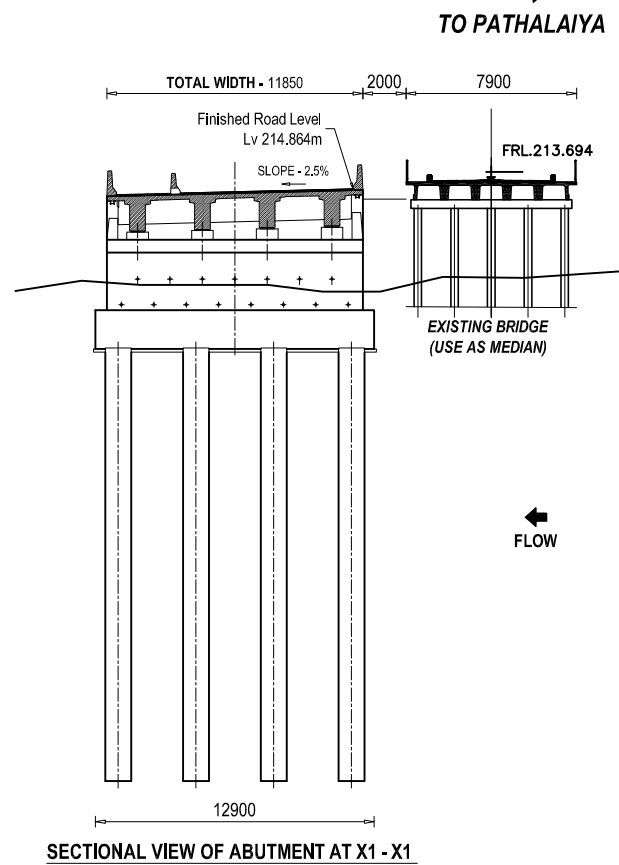
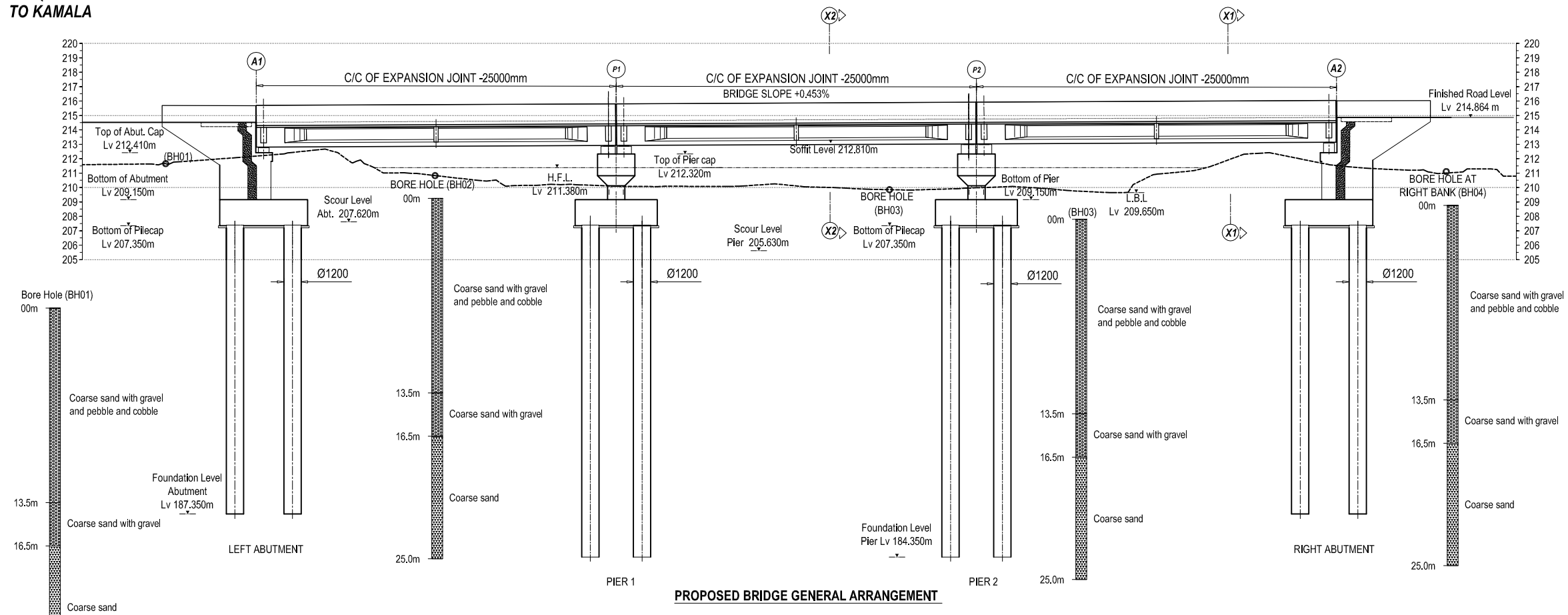
GRADE OF CONCRETE	M30	M35	M40	M45
LAPPED BAR <25%	57.2Ø	51.48Ø	48.62Ø	45.76Ø
25%≤LAPPED BAR <33%	65.78Ø	62.65Ø	55.91Ø	52.62Ø
33%≤LAPPED BAR <50%	80.08Ø	72.07Ø	68.07Ø	64.06Ø
50%≤LAPPED BAR	85.8Ø	77.22Ø	72.93Ø	68.64Ø

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 18Ø.
19. SHARP EDGES OF CONCRETE TO BE CHAMFERED MINIMUM 50 X 50

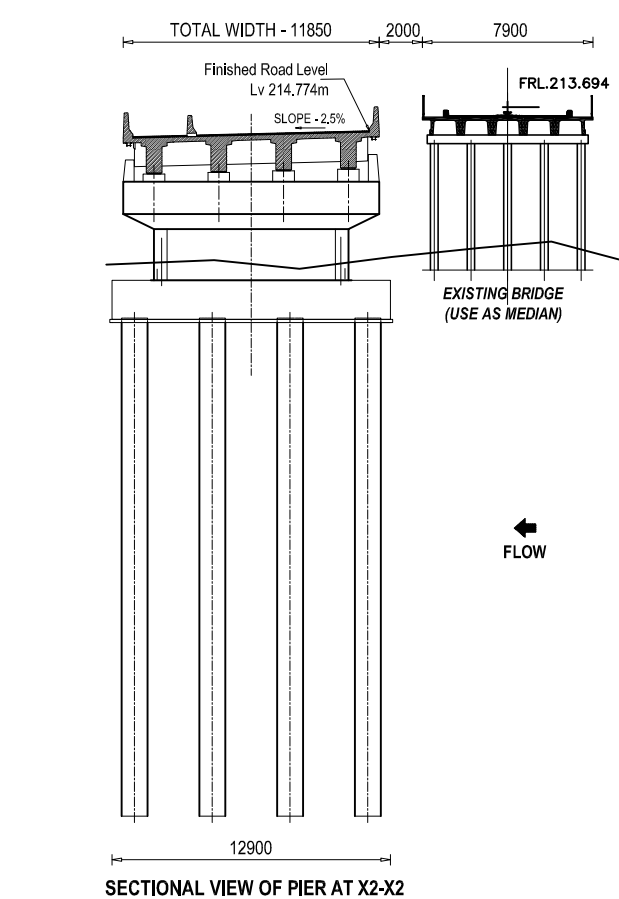
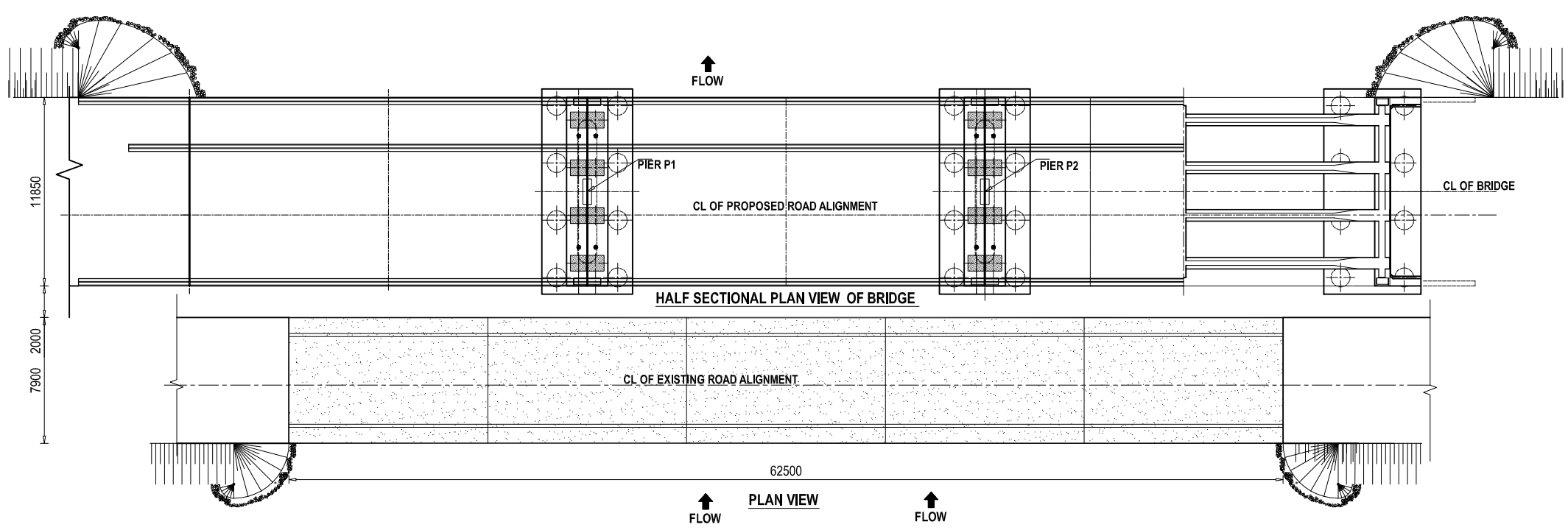
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlalya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, India	Mr. S.M.	Mr. S.M.	GENERAL NOTES OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	05.05.2023
		In Association With Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultant Private Limited	Checked By	Mr. H.B.	Reference Drawings	Chainage:	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-4
			Approved By			271+510	Sheet No. 1 / 1

TO KAMALA

TO PATHALAIYA



Finished Road Level(D/S)	214.594	214.684	214.774	214.864
Finished Road Level (Existing Bridge)	213.694	213.694	213.694	213.694
Existing Ground Level(D/S)	212.219	210.087	210.145	211.587
Existing Ground Lv	213.548	210.854	210.327	212.652
Chainage	271+472.5	271+497.5	271+522.5	271+547.5



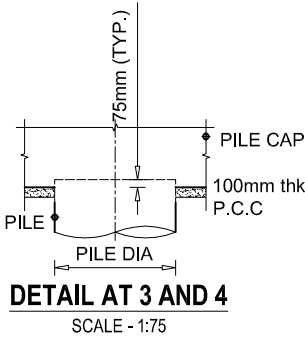
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 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of  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	Designed By Mr. R.D. Nec.No. 6489 CH/1/24	  	Drawing Name GENERAL ARRANGEMENT OF BRIDGE OVER RIVER GADHANTA	Scale: AS SHOWN	Date: 01.06.2023
			Checked By Mr. S.M.		Reference Drawings		Drawing No.: KDP/DPR/STR/BR/GADHANTA/DD- 5
			Approved By Mr. H.B.				Sheet No. 1 / 1



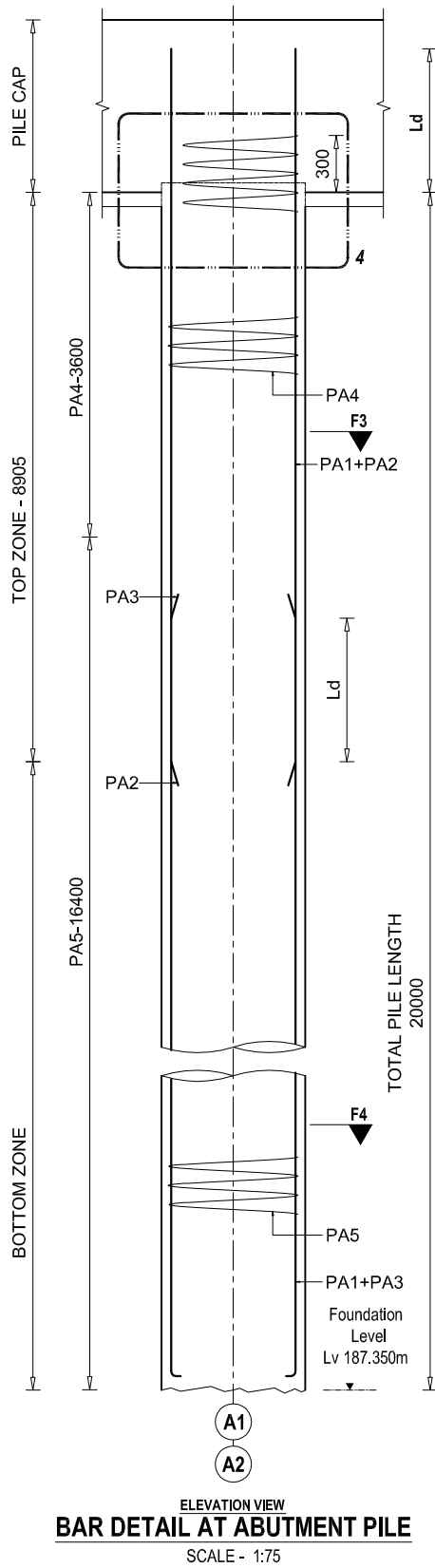
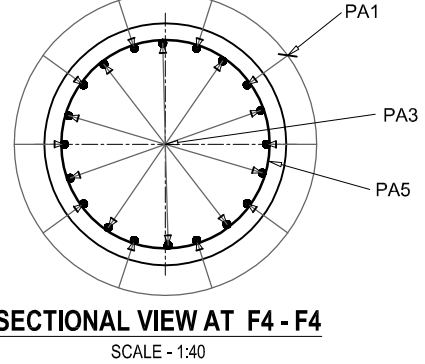
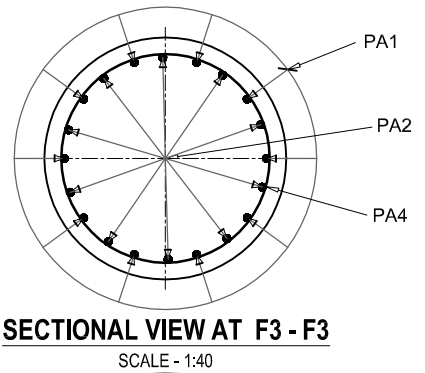
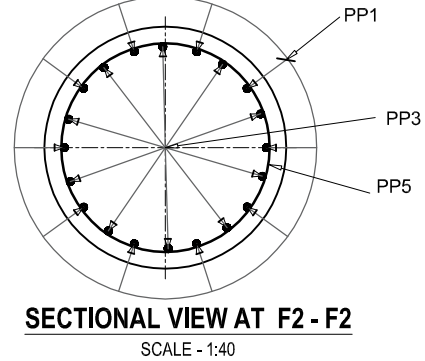
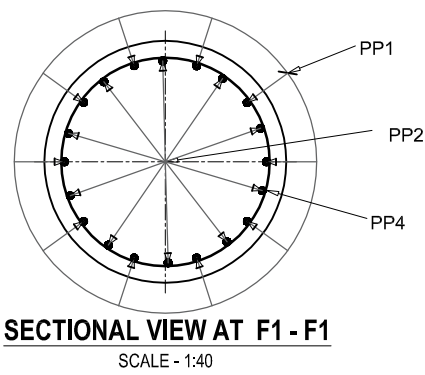
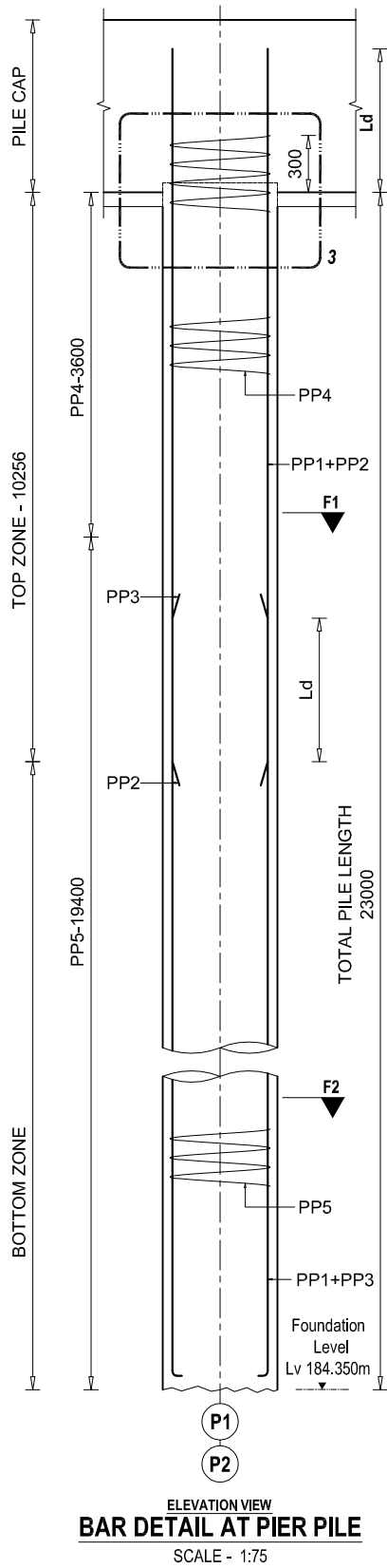
SN.	ABUTMENT/PIER	EASTING (X)	NORTHING (Y)
1	ABUTMENT (A1)	386332.775	2987769.478
2	PIER (P1)	386308.967	2987777.104
3	PIER (P2)	386285.159	2987784.731
4	ABUTMENT (A2)	386261.351	2987792.359

PILE CAPACITY		
SN.	DESCRIPTION	CAPACITY (Ton)
1	ABUTMENT	248.41
2	PIER	228.91

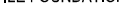


BAR BENDING SCHEDULE OF ABUTMENT PILE								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	PA1		25		21.950	10	3.858	846.84
2	PA2		25		10.63	10	3.858025	410.108
3	PA3		12		12.520	10	0.889	111.29
4	PA4	Dia. 1034  100	16	115	3.448	42	1.580	228.87
5	PA5	Dia. 1034  100	12	115	3.448	133	0.889	407.67
TOTAL (KG) :								2004.77
No. of Pile								8.00
TOTAL WEIGHT (KG) :								16638.13

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	PP1		32		24.950	10	6.321	1577.09
2	PP2		32		13.181	10	6.320988	833.1694
3	PP3		12		14.169	10	0.889	125.95
4	PP4	Dia. 1034 	16	100	3.448	48	1.580	261.56
5	PP5	Dia. 1034 	12	100	3.448	182	0.889	557.86
TOTAL (KG) :								3355.62
No. of Pile								8.00
TOTAL WEIGHT (KG) :								26844.99



NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.		Drawing Name	Scale:	Date:
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		Checked By	Approved By		Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-9	Chainage:	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-6	
								271+510



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		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Checked By	Mr. S.M. Nec.No. 6490 CHM/KC			Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-9
		In Association With Udaya Consultancy, Geocom International, Sundar K/rti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B. Nec.No. 6491 CHM/KC		Chainage: 271+510	

PLAN VIEW

BAR DETAIL OF PILE CAP
SCALE - 1 : 75

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

SECTIONAL PLAN VIEW

BAR DETAIL AT ABUTMENT STEM
SCALE - 1 : 75

SECTIONAL PLAN VIEW

ELEVATION VIEW

DETAIL AT 5
SCALE - 1X : 2X

DETAILS AT 4

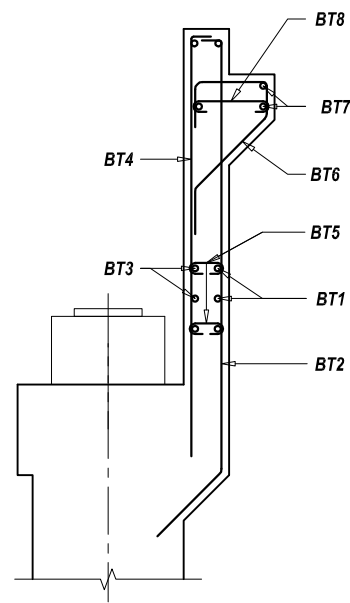
SECTIONAL SIDE VIEW

ELEVATION VIEW

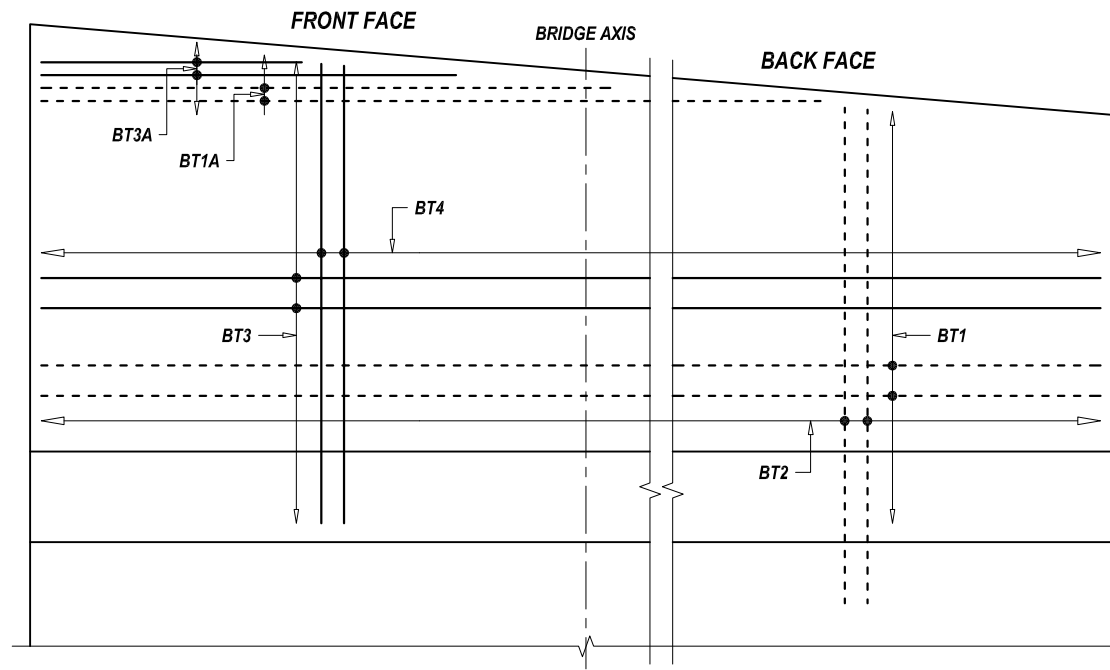
BAR DETAIL AT ABUTMENT CAP
SCALE - 1 : 75

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

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By Mr. R.D. Signature	Drawing Name ABUTMENT REINGORCEMENT DETAILS OF BRIDGE OVER RIVER GADHANTA	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)	Joint Venture of		Checked By Mr. S.M. Signature	Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-9					Chainage: 271+510
		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India							
		Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges							Sheet No. 1 / 2	



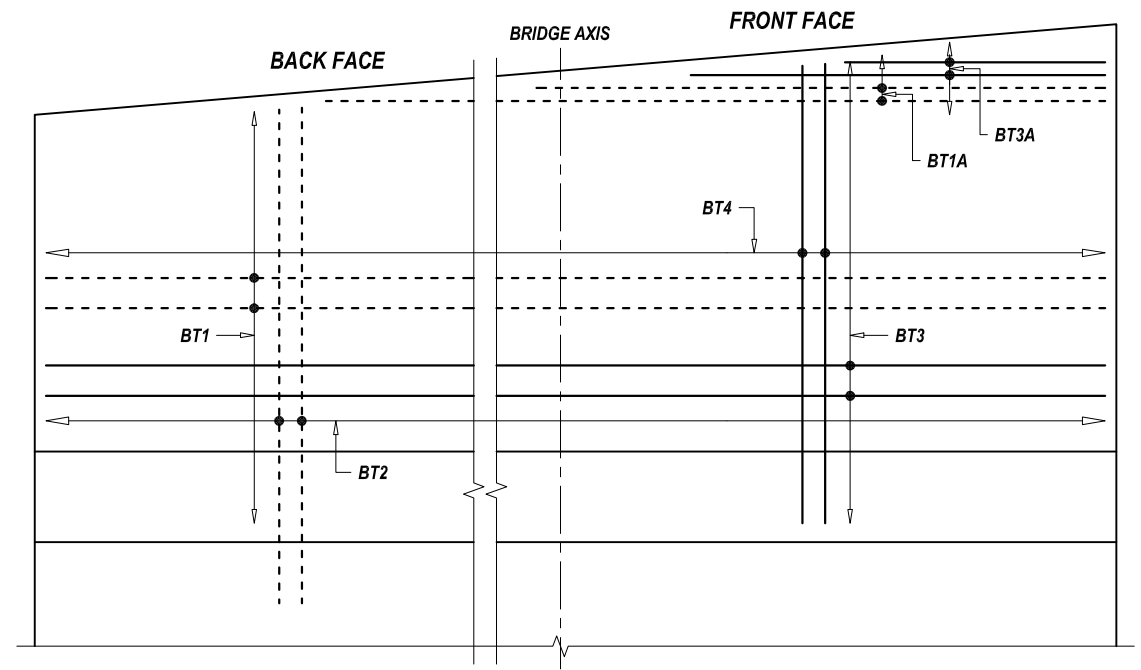
SECTIONAL SIDE VIEW



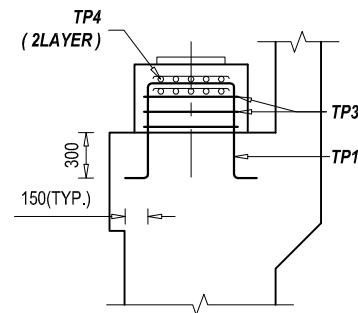
ELEVATION VIEW / VIEW AT D1

BAR DETAIL AT DIRT WALL

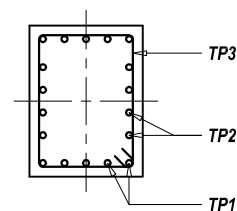
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ELEVATION VIEW / VIEW AT D2



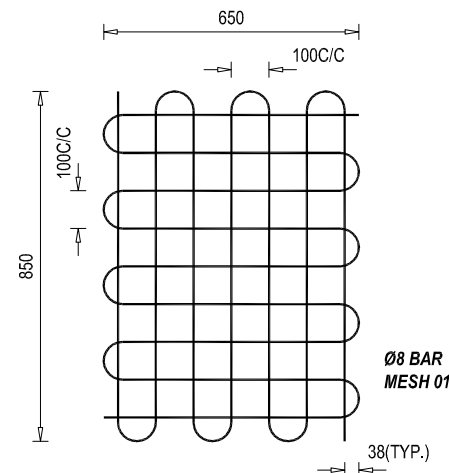
SECTIONAL SIDE VIEW



SECTIONAL PLAN VIEW
BAR DETAIL AT PEDESTAL

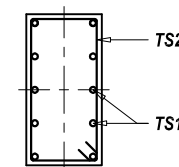
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NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

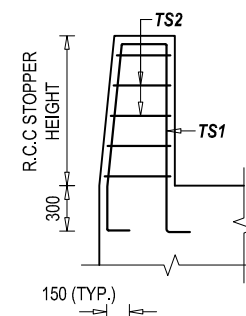


REINFORCEMENT DETAILS OF
BEARING MESH

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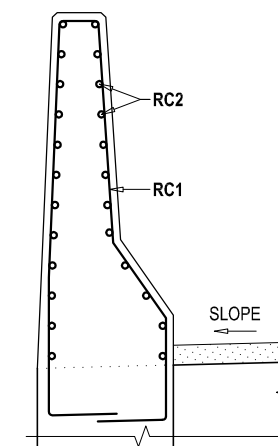


SECTIONAL PLAN VIEW



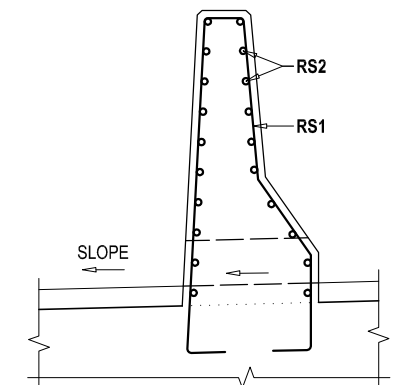
R.C.C STOPPER LEFT
ELEVATION VIEW

SCALE - 1 : 50



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

SCALE - 1 : 25

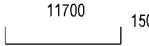
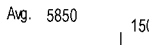
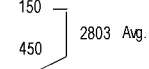
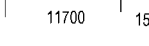
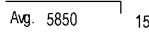
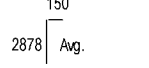
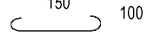
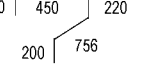
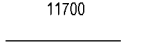
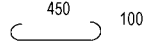


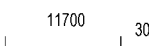
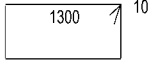
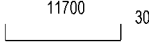
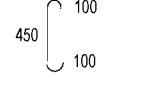
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R.C.C SEPARATOR - SECTIONAL VIEW

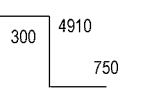
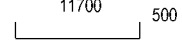
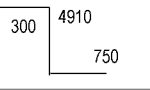
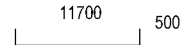
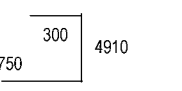
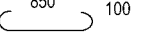
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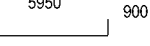
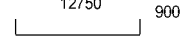
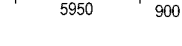
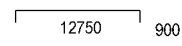
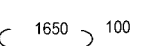
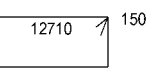
--- TOP BAR OR
NEAR FACE REINFORCEMENT
--- BOTTOM BAR OR
FAR FACE REINFORCEMENT

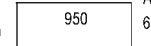
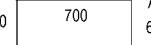
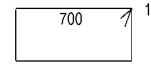
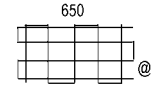
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:				
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Nec.No. 6489 CP/17/17				AS SHOWN	04.08.2023		
		 EPTISA Servicios De Ingeniera 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
					KDP/DPR/STR/BR/GADHANTA/DD-8	271+510	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD- 8				
							Sheet No. 2 / 2				

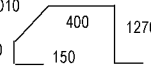
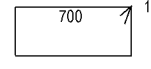
BAR BENDING SCHEDULE OF DIRT WALL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	BT1	150  150	16	200	12.000	17	1.580	322.37
2	BT1A	 150	16	200	6.000	3	1.580	28.44
3	BT2	150  Avg. 2803	16	125	3.403	96	1.580	516.25
4	BT3	150  150	16	200	12.000	13	1.580	246.52
5	BT3A	 150	16	200	6.000	3	1.580	28.44
6	BT4	150  Avg. 2878	12	125	3.028	96	0.889	258.39
7	BT5	100  100	12	500	0.350	96	0.889	29.87
8	BT6	200  220	12	200	1.826	61	0.889	99.01
9	BT7	 11700	16		11.700	5	1.580	92.44
10	BT8	100  100	12	200	0.650	120	0.889	69.33
						TOTAL (KG) :		
						1691.07		

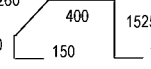
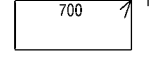
BAR BENDING SCHEDULE OF ABUTMENT CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT1	300  300	16	150	12.300	11	1.580	213.81
2	CT2	300  300	16	150	12.300	11	1.580	213.81
3	CT3	450  100	16	150	3.700	80	1.580	467.75
4	CT4	300  300	12	150	12.300	8	0.889	87.47
5	CT5	450  100	12	Long 150 Trans 300	0.650	382	0.889	220.71
						TOTAL (KG) :		
						1203.55		

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	ST1	300  750	20		5.960	120	2.469	1765.93
2	ST2	500  500	16	190	12.700	14	1.580	280.97
3	ST3	300  750	16		5.960	120	1.580	1130.19
4	ST4	500  500	16	190	12.700	14	1.580	280.97
5	ST5	300  750	16		5.960	14	1.580	131.86
6	ST6	100  100	12	Ver. 500 Hor. 500	1.050	144	0.889	134.40
						TOTAL (KG) :		
						3724.31		

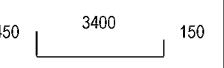
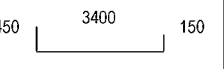
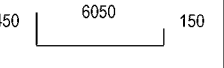
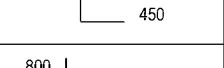
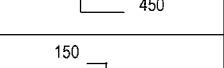
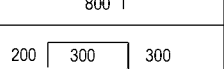
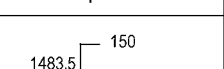
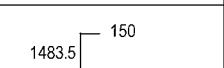
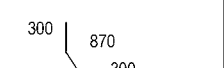
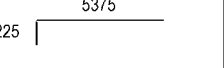
BAR BENDING SCHEDULE OF PILE CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT1	900  900	25		7.750	100	3.858	2989.97
2	FT2	900  900	20		14.550	50	2.469	1796.30
3	FT3	900  900	16		7.750	100	1.580	1224.69
4	FT4	900  900	16		14.550	50	1.580	1149.63
5	FT5	100  100	10	Long 250 Trans 500	1.850	607	0.617	693.18
6	FT6	5900  150	16	200	37.520	8	1.580	474.33
						TOTAL (KG) :		
						8328.09		

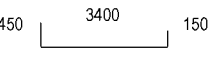
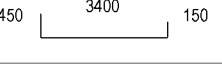
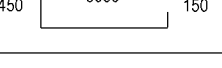
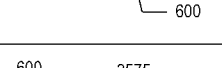
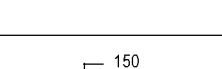
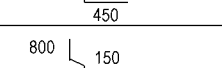
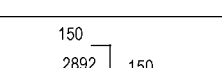
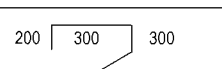
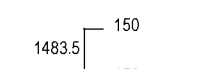
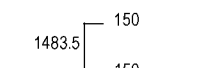
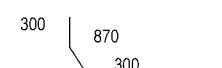
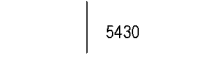
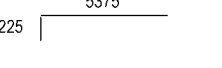
BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP1	150  Avg. 650	16	150	2.850	6	1.580	27.02
1	TP2	150  Avg. 650	16	150	2.350	8	1.580	29.71
2	TP3	950  100	16	150	3.500	3	1.580	16.59
1	TP4	850  @ 75	8		17.025	2	0.395	13.45
						TOTAL (KG) :		
						86.78		
						TOTAL NOS OF PEDESTAL :		
						4.00		
						TOTAL WEIGHT (KG) :		
						347.10		

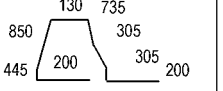
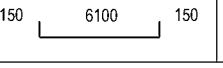
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-L	1010  150	16	150	3.280	6	1.580	31.10
2	TS2-L	400  100	12	150	2.400	7	0.889	14.93
						TOTAL (KG) :		
						48.03		

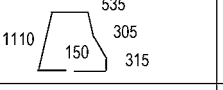
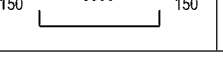
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R	1260  150	16	150	3.785	6	1.580	35.89
2	TS2-R	400  100	12	150	3.400	9	0.889	27.20
						TOTAL (KG) :		
						63.09		

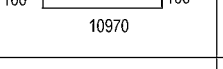
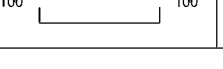
EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By Mr. R.D. Nec.No. 6489 CH/1/17 Signature	Drawing Name ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER GADHANTA	Scale: AS SHOWN	Date: 04.08.2023
	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Checked By Mr. S.M. Signature				
			 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkata, India					
			In Association With Udaya Consultancy, Geocom International, Sundar Krilli Consultant and Rays Consultant Private Limited						
						Approved By Mr. H.B. Signature	Reference Drawings -	Chainage: 271+510	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-9 Sheet No. 1 / 2

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	4.000	39	0.889	138.67
2	RT1B		12	150	4.000	39	0.889	138.67
3	RT2A		12	150	6.650	21	0.889	124.13
4	RT2B		12	150	4.300	21	0.889	80.27
5	RT2C		12	150	4.475	21	0.889	83.53
6	RT3A		12	150	7.976	18	0.889	127.62
7	RT3B		16	150	5.809	18	1.580	165.23
8	RT3C		16	150	3.992	18	1.580	113.55
9	RT3D		16	150	1.210	43	1.580	82.22
10	RT4A		12	150	1.784	50	0.889	79.27
11	RT4B		16	150	1.784	50	1.580	140.92
12	RT5		12	150	1.470	59	0.889	77.09
13	RT6		12		5.726	2	0.889	10.18
14	RT7		20		5.6	4	2.469	55.31
TOTAL (KG) :								1416.65

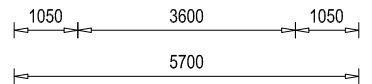
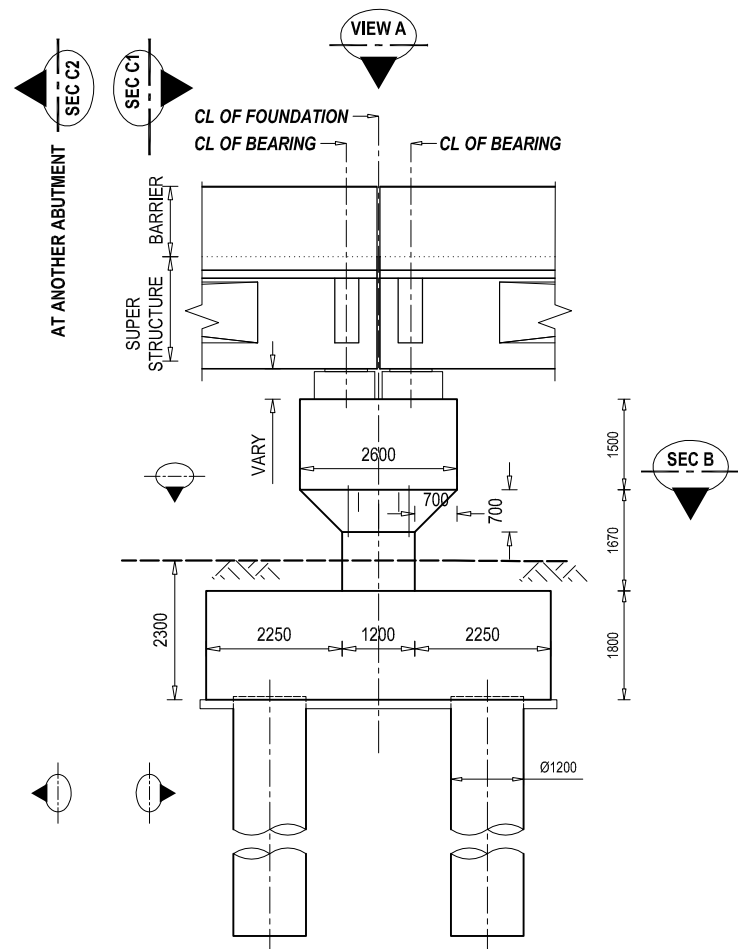
BAR BENDING SCHEDULE OF RETURN WALL - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT1A		12	150	4.000	37	0.889	131.56
2	RT1B		12	150	4.000	37	0.889	131.56
3	RT2A		12	150	6.650	21	0.889	124.13
4	RT2B		12	150	4.300	21	0.889	80.27
5	RT2C		12	150	4.475	21	0.889	83.53
6	RT3A		12	150	7.680	18	0.889	122.88
7	RT3B		16	150	5.513	18	1.580	156.81
8	RT3C		16	150	3.992	18	1.580	113.55
9	RT3D		16	150	1.210	43	1.580	82.22
10	RT4A		12	150	1.784	50	0.889	79.27
11	RT4B		16	150	1.784	50	1.580	140.92
12	RT5		12	150	1.470	59	0.889	77.09
13	RT6		12		5.430	2	0.889	9.65
14	RT7		20		5.6	4	2.469	55.31
TOTAL (KG) :								1388.75

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	42	1.580	210.39
2	RC2		10	150	6.400	20	0.617	79.01
TOTAL (KG) :								289.41

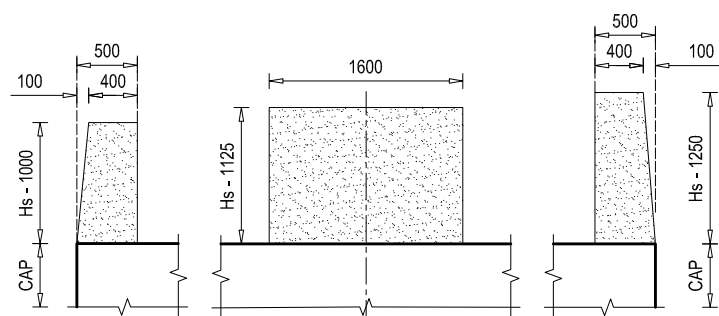
BAR BENDING SCHEDULE OF R.C.C SEPARATOR								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1		16	150	2.695	25	1.580	106.47
2	RS2		10	150	3.800	17	0.617	39.88
TOTAL (KG) :								146.35

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		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		Designed By		Mr. R.D.		ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER GADHANTA		AS SHOWN		04.08.2023	
		 EPTISA Servicios De Ingeniera Madrid, Spain		Checked By		Mr. S.M.		Reference Drawings		Chainage:		Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-9	
		In Association With		Approved By		Mr. H.B.		-		271+510		Sheet No. 2 / 2	



ELEVATION VIEW OF PIER
SCALE - 1: 125

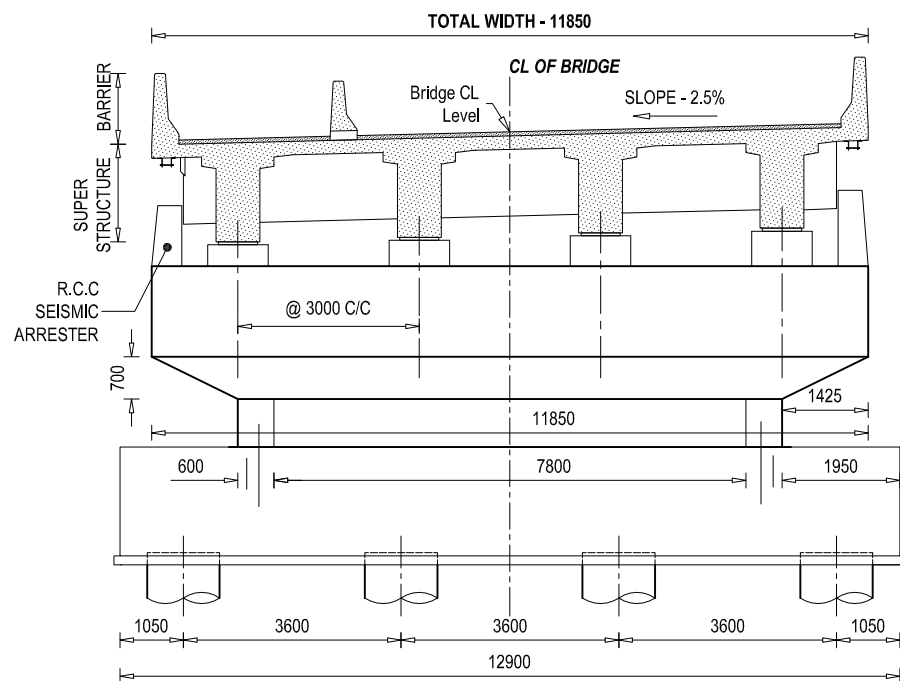


R.C.C SEISMIC ARRESTER - LEFT ELEVATION VIEW

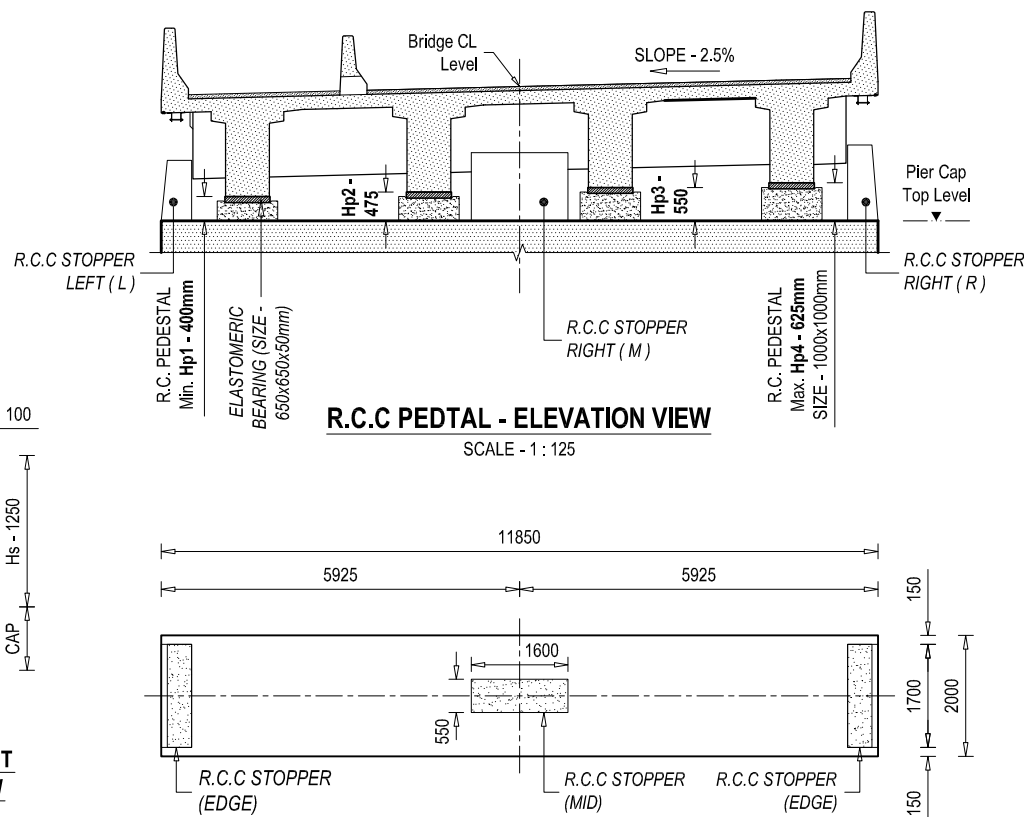
R.C.C SEISMIC ARRESTER - MID ELEVATION VIEW

R.C.C SEISMIC ARRESTER - RIGHT ELEVATION VIEW

DETAIL AT PEDESTAL
SCALE - 1: 75

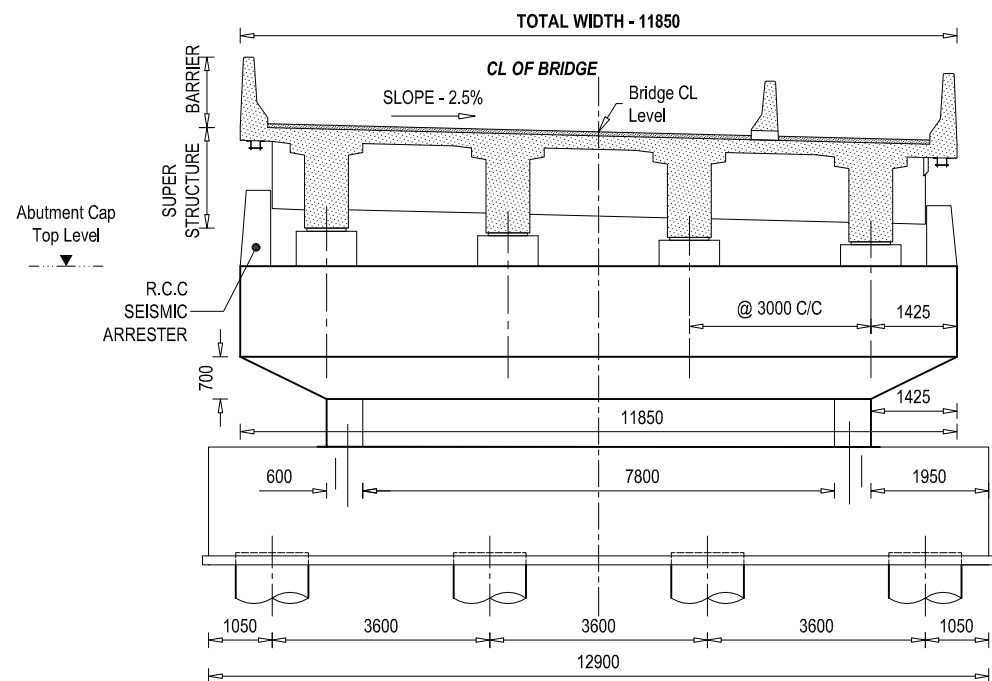


SECTIONAL VIEW AT C1 - C1
SCALE - 1: 125

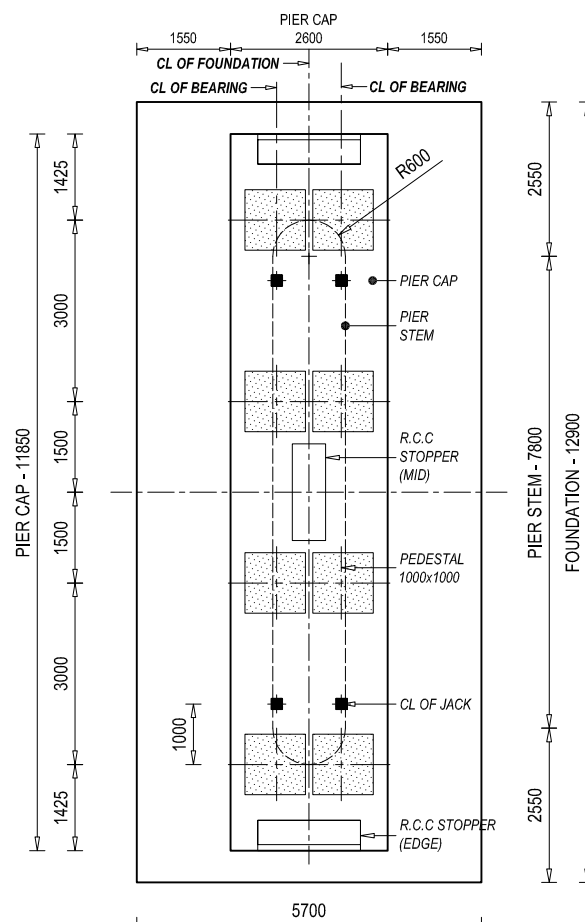


R.C.C PEDTAL - ELEVATION VIEW
SCALE - 1: 125

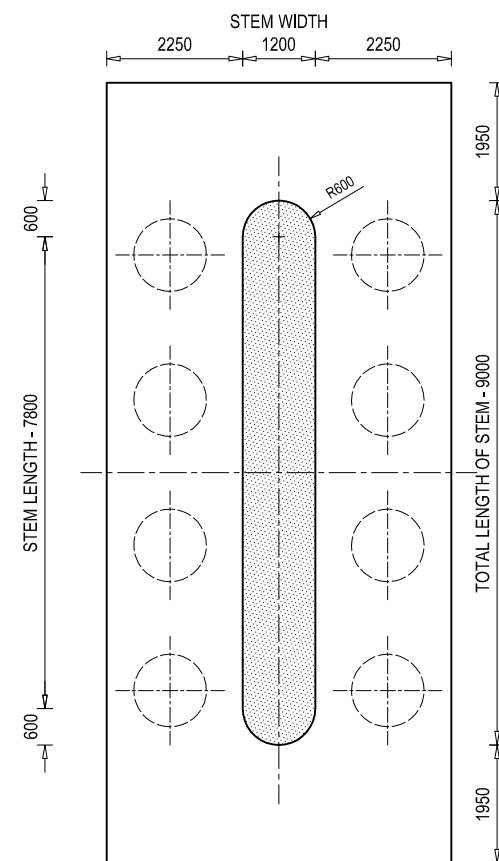
DETAIL AT R.C.C SEISMIC ARRESTER
SCALE - 1: 150



SECTIONAL VIEW AT C2 - C2
SCALE - 1: 125



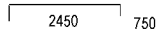
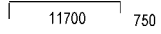
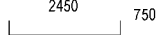
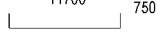
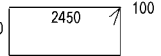
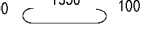
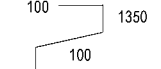
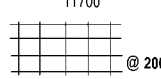
PLAN VIEW OF PIER (VIEW AT A)
SCALE - 1: 125

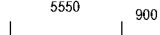
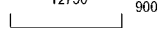
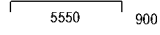
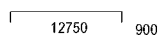
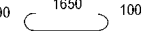
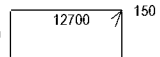


SECTIONAL VIEW AT B - B
SCALE - 1: 125

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

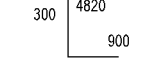
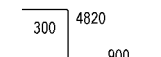
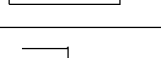
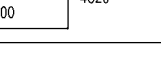
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of ep4sa EPTISA Servicios De Ingeniera Madrid, Spain and STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited	Mr. R.D. Nec.No. 6489 CH/1/24 Signature Checked By Mr. S.M. Signature Approved By Mr. H.B. Signature	PIER DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-12	AS SHOWN Chainage: 271+510	04.08.2023 Drawing No.-KDP/DPR/STR/BR/GADHANTA/DD- 10 Sheet No. 1/1

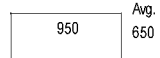
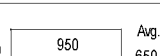
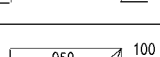
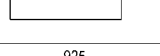
BAR BENDING SCHEDULE OF PIER CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT1	750  750	20		3.950	50	2.469	487.65
2	CT2	750  750	20		13.200	18	2.469	586.67
3	CT3	750  750	20		3.950	50	2.469	487.65
4	CT4	750  750	20		13.200	18	2.469	586.67
5	CT5	11700  100	16	150	28.500	11	1.580	495.41
6	CT6	100  100	16	X: 280 Y: 480	2.170	225	1.580	771.56
7	CT7	 100	16	150	1.550	137	1.580	335.57
8	CT8	2450  @ 200	16		296.650	5 Layer	1.580	2343.90
TOTAL (KG) :								6095.07

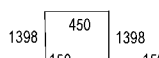
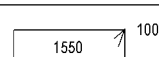
BAR BENDING SCHEDULE OF PILE CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT1	900  900	25		7.350	98	3.858	2778.94
2	FT2	900  900	25		14.550	50	3.858	2806.71
3	FT3	900  900	25		7.350	98	3.858	2778.94
4	FT4	900  900	25		14.550	50	3.858	2806.71
5	FT5	100  100	12	Long. 225 Trans. 250	1.85	1258	0.889	2068.71
6	FT6	5500  150	16	200	36.700	8	1.580	463.96
TOTAL (KG) :								13703.97

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	1010 400 1270 300 150 150	16	150	3.280	13	1.580	67.38
2	TS2-L	400 1650 100	12	150	4.300	7	0.889	26.76
TOTAL (KG) :								94.14

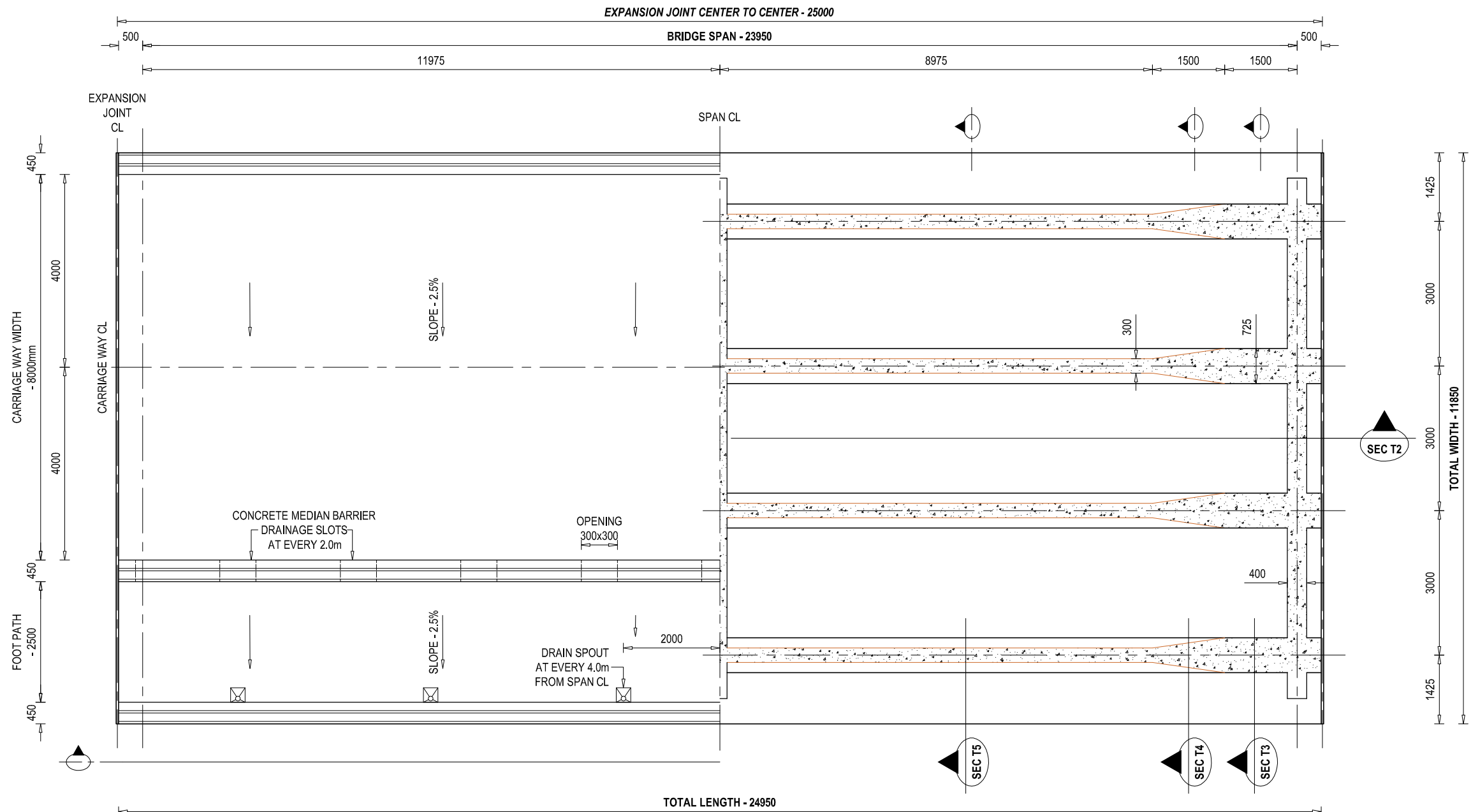
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R	1260 300 400 150 1525 150	16	150	3.785	13	1.580	77.76
2	TS2-R	400 1650 100	12	150	4.300	9	0.889	34.40
TOTAL (KG) :								112.16

BAR BENDING SCHEDULE OF PIER 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	ST1	300  900	20		6.020	50	2.469	743.21
2	ST2	100  100	16	200	7.850	9	1.580	111.64
3	ST3	300  900	20		6.020	50	2.469	743.21
4	ST4	100  100	16	200	7.850	9	1.580	111.64
5	ST5	900  300	20		6.020	16	2.469	237.83
5	ST6	720  1885	16	200	3.325	18	1.580	94.58
6	ST7	100  100	12	Ver. 155 Hor. 400	1.250	253	0.889	281.11
TOTAL (KG) :								2323.22

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	TP1	150  Avg. 650	16	150	2.850	8	1.580	36.03
2	TP2	150  Avg. 650	16	150	2.850	8	1.580	36.03
3	TP3	950  100	16	150	4.000	3	1.580	18.96
4	TP4	925  @ 75	10		24.675	2	0.617	30.46
TOTAL (KG) :								121.49
TOTAL NOS OF PEDESTAL :								4.00
TOTAL WEIGHT (KG) :								485.94

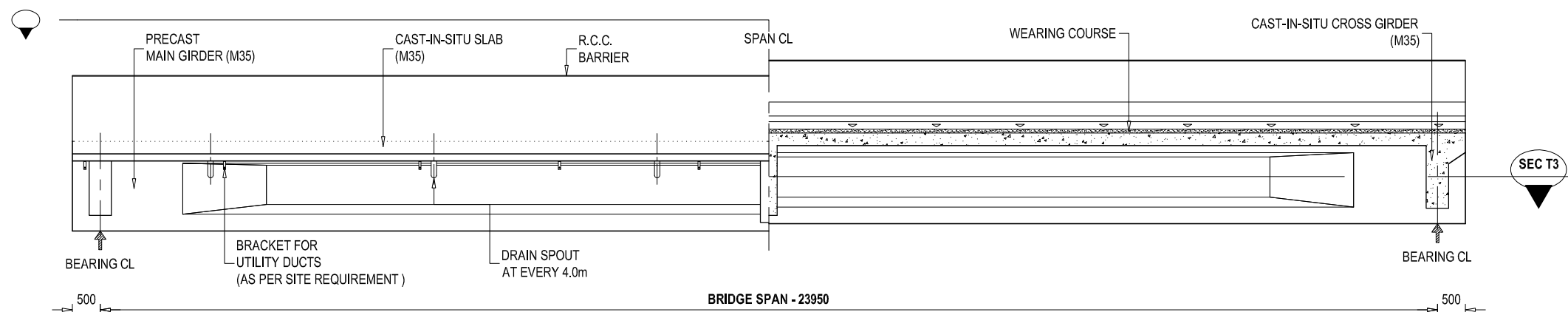
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - MID								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TU1		16	150	3.546	13	1.580	72.85
2	TU2		12	150	4.200	8	0.889	29.87
TOTAL (KG) :								102.71

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-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Designed By	Mr. R.D.	 Signature	PIER BAR BENDING SCHEDULE OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	04.08.2023				
		 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkatta, India		Checked By	Mr. S.M.				 Signature	Reference Drawings	Chainage: 271+510	Drawing No.-KDP/DPR/STR/BR/GADHANTA/DD- 12	
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.								 Signature



HALF SECTIONAL PLAN VIEW OF SUPERSTRUCTURE AT SEC T1

SCALE - 1 : 100 @ A3 PAPER

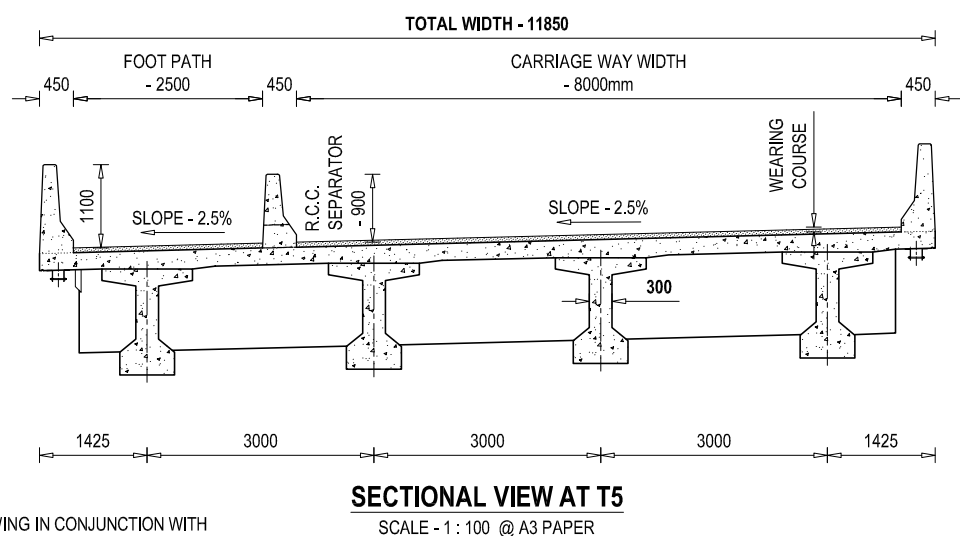
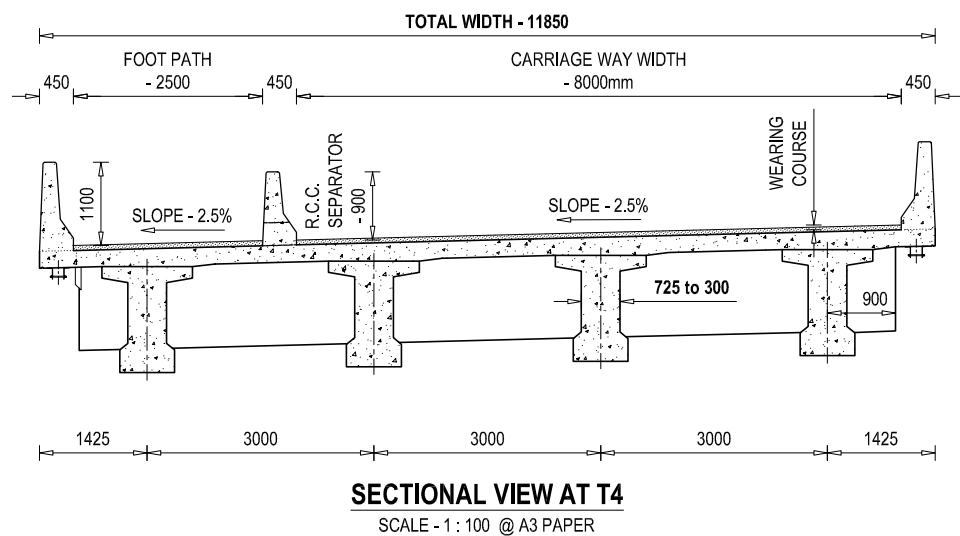
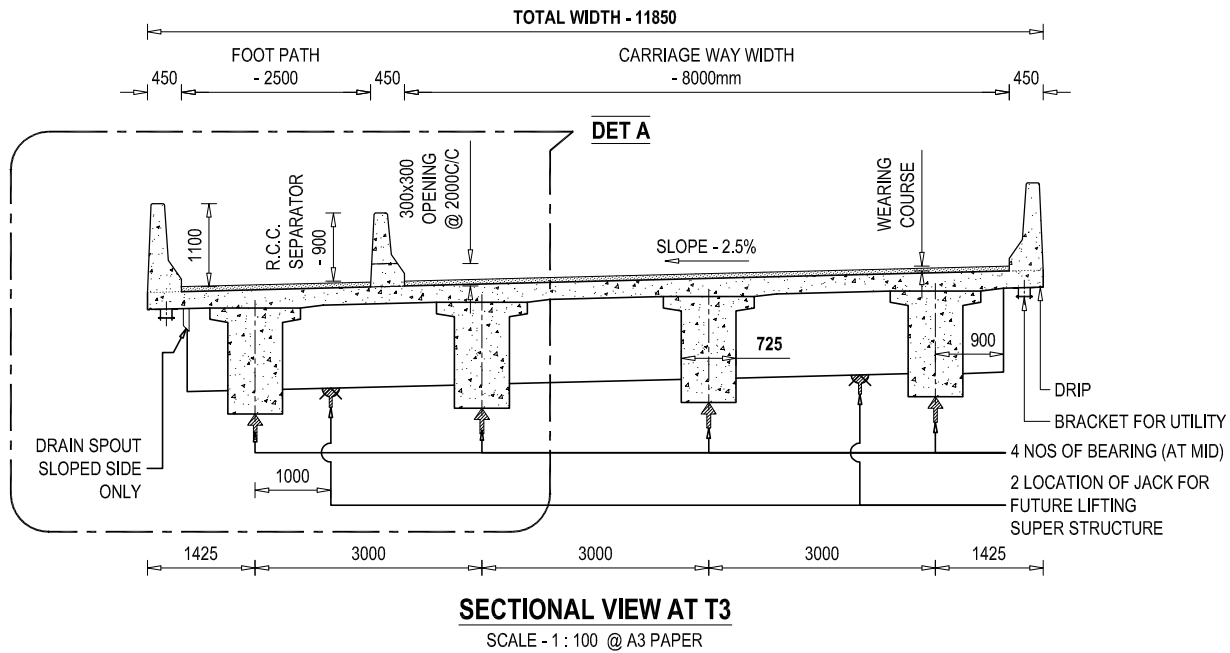


HALF ELEVATION SECTIONAL VIEW OF SUPERSTRUCTURE AT SEC T2

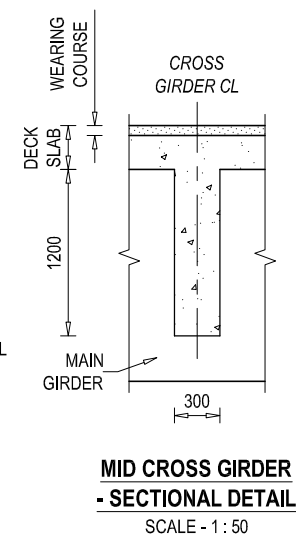
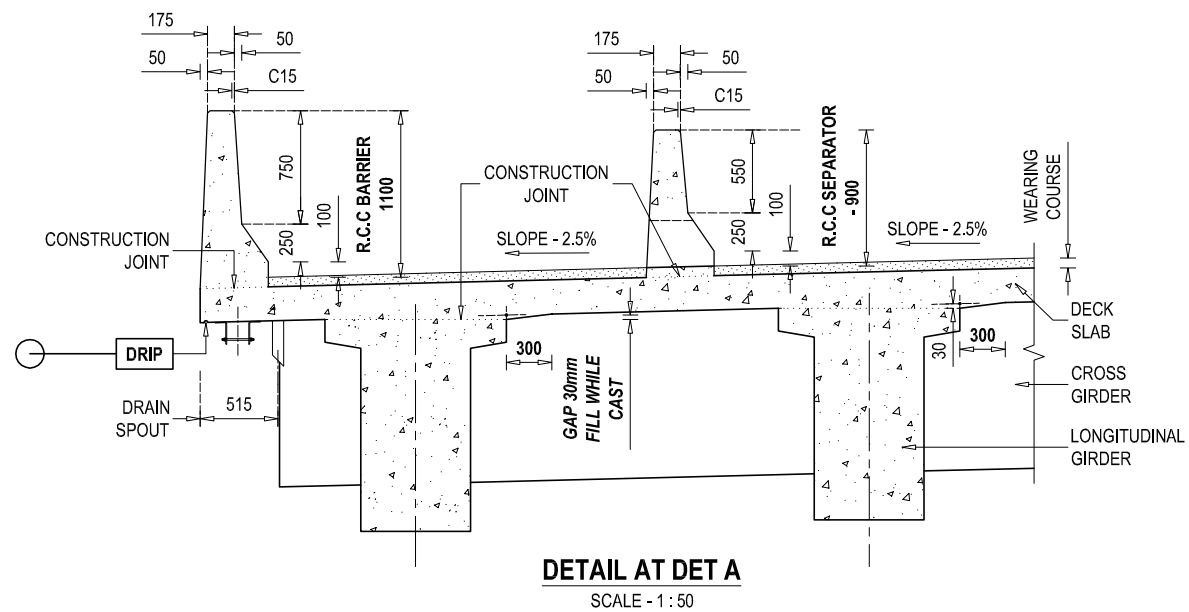
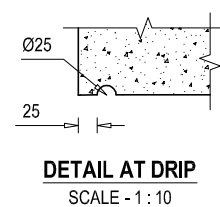
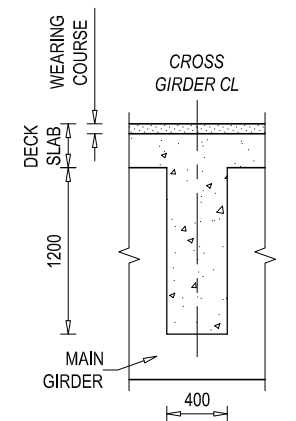
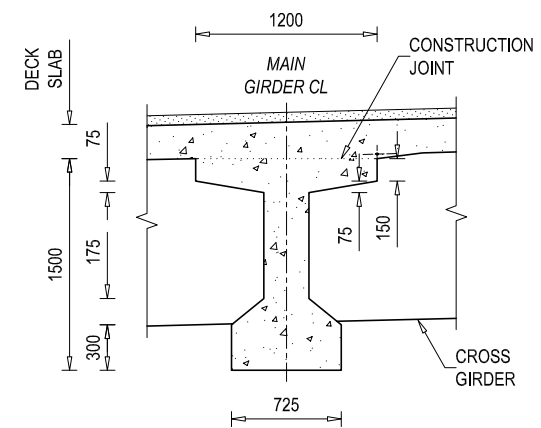
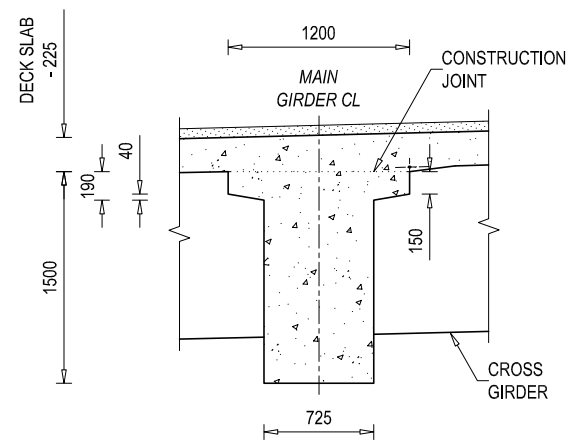
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NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

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 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 Kriti Consultant and Rays Consultant Private Limited	Mr. R.D. Nec.No. 6489 CIVIL/14	SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	02.06.2023
			Checked By Mr. S.M.	Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-17	Chainage: 271+510	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-13
			Approved By Mr. H.B.			Sheet No. 1 / 2



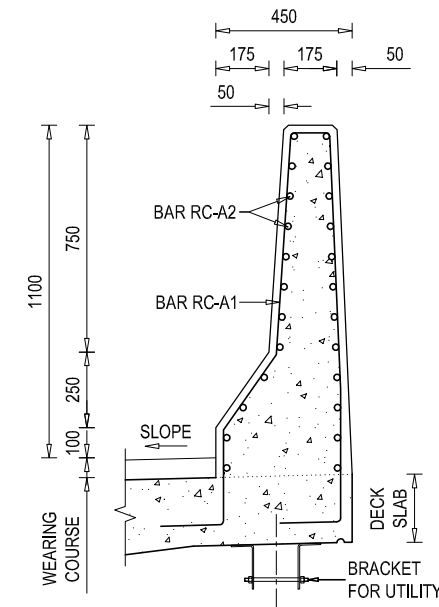
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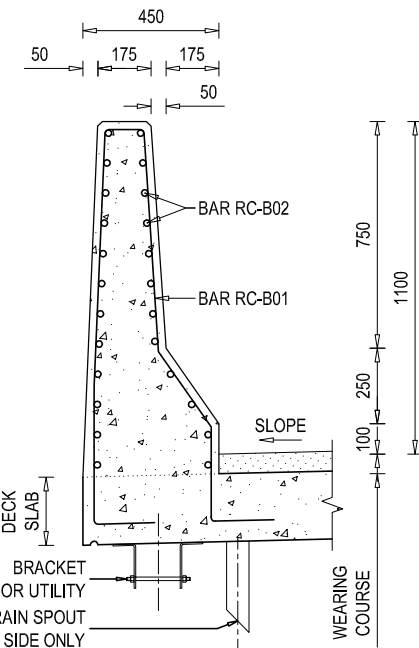
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of eptisa EPTISA Servicios De Ingenieria Madrid, Spain STUP STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVIL/14/ Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-17	Scale: AS SHOWN Chainage: 271+510	Date: 02.06.2023 Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-13 Sheet No. 2 / 2
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LEGEND FOR REINFORCEMENT BAR

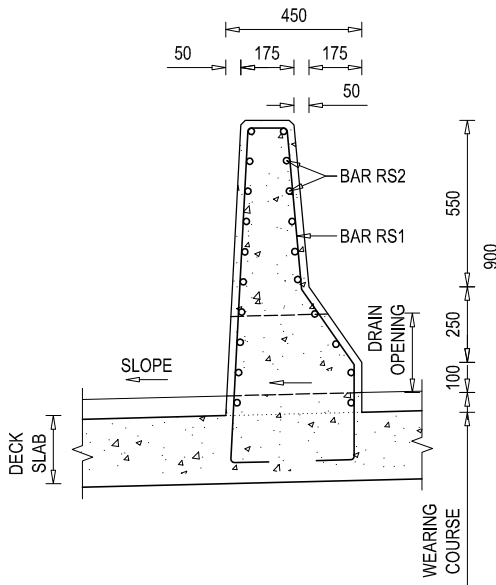
CODE	FULL FORM		
DS	- DECK SLAB	CG	- CROSS GIRDER
RB	- R.C.C BARRIER	AS	- APPROACH SLAB
RS	- R.C.C SEPARATOR	ST	- STOPPER
MG	- MAIN GIRDER	**	- ***
— TOP BAR OR NEAR FACE REINFORCEMENT			
- - - BOTTOM BAR OR FAR FACE REINFORCEMENT			



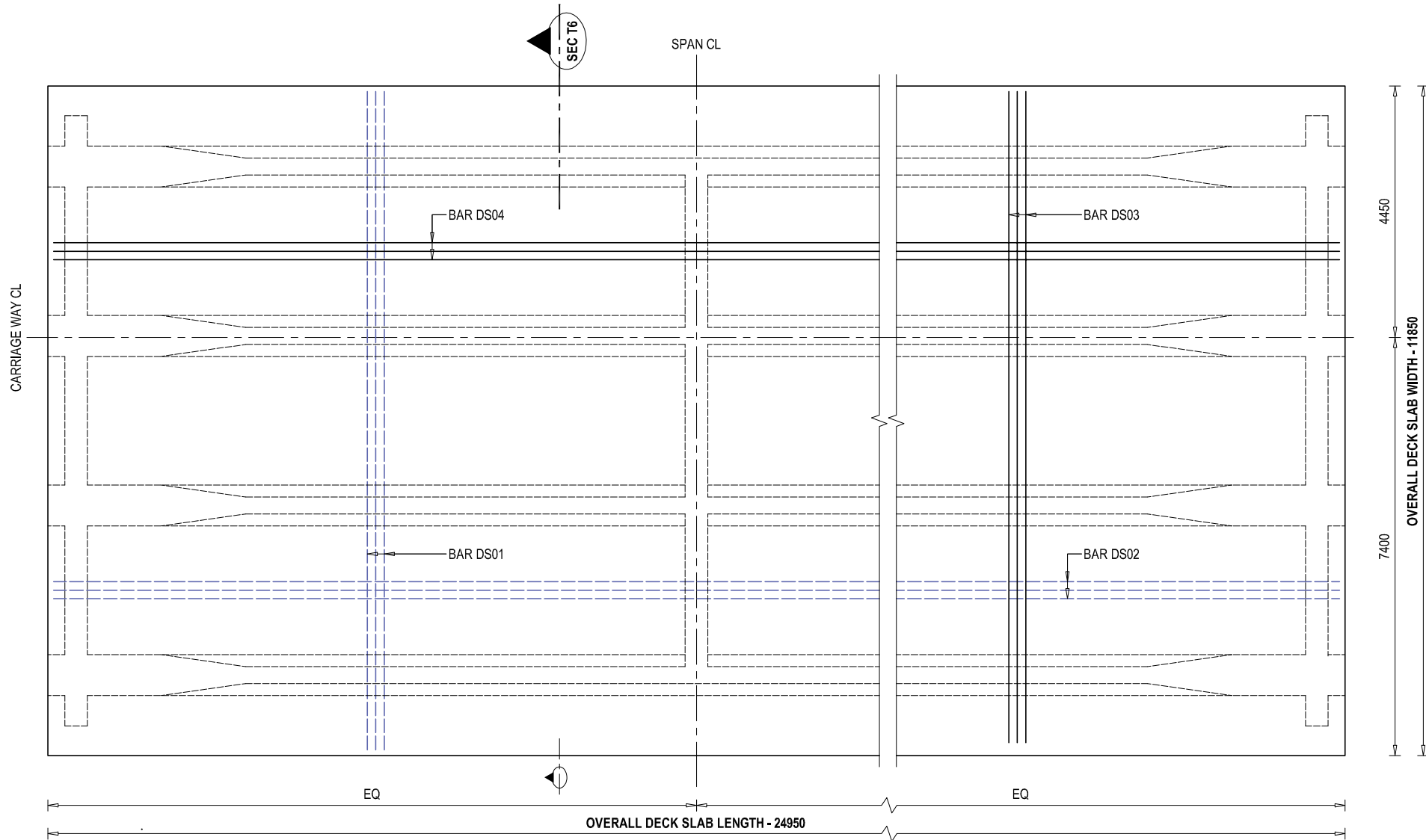
REINFORCEMENT DETAILS OF R.C.C BARRIER (A)- SECTIONAL VIEW
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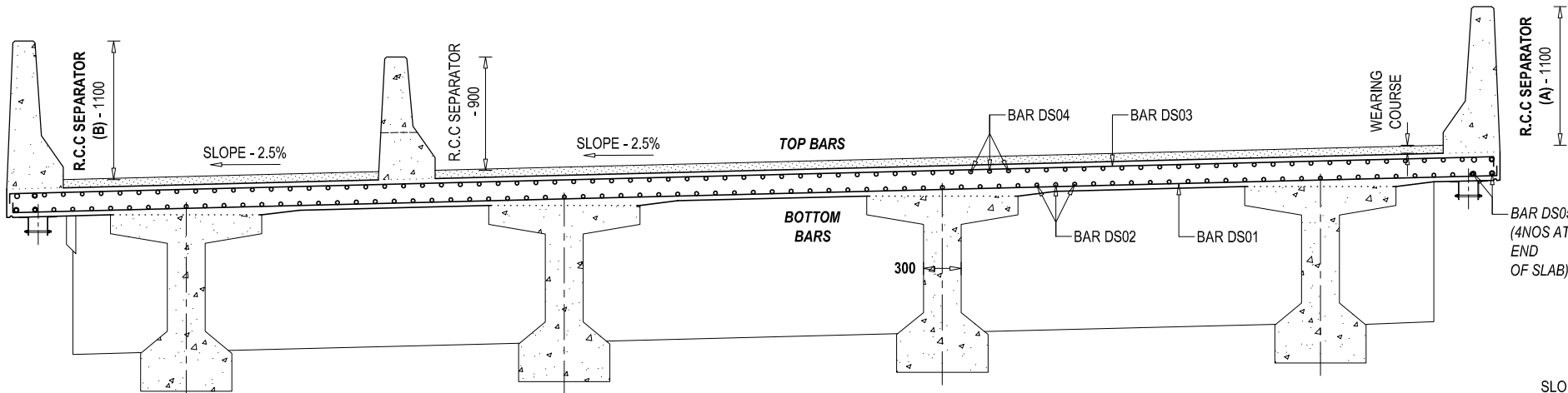
REINFORCEMENT DETAILS OF R.C.C BARRIER (B)- SECTIONAL VIEW
SCALE - 1 : 25



REINFORCEMENT DETAILS OF R.C.C SEPARATOR - SECTIONAL VIEW
SCALE - 1 : 25



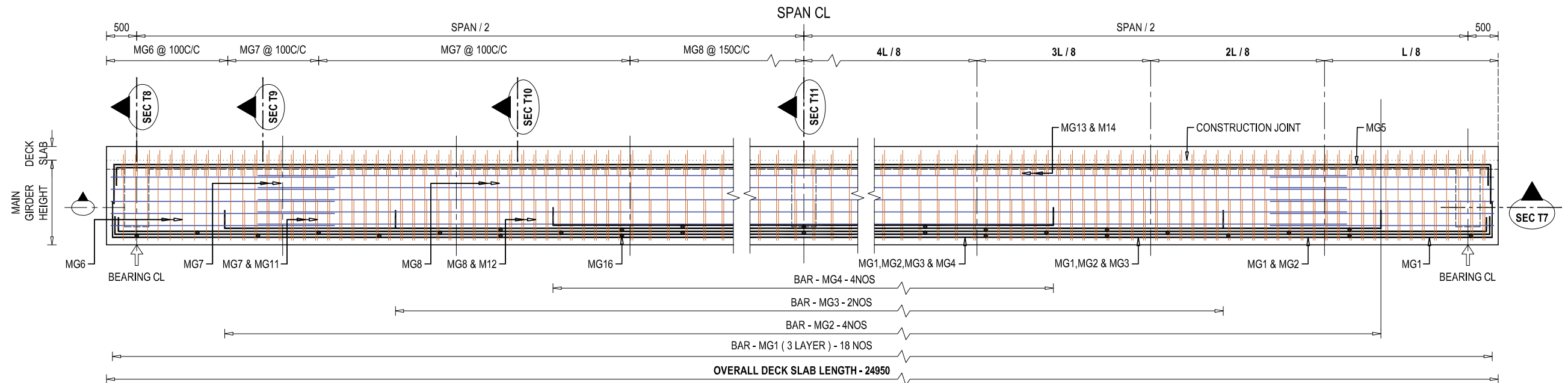
REINFORCEMENT DETAILS OF DECK SLAB - PLAN VIEW
SCALE - 1 : 100



REINFORCEMENT DETAILS OF DECK SLAB - SECTIONAL VIEW AT T6
SCALE - 1 : 50

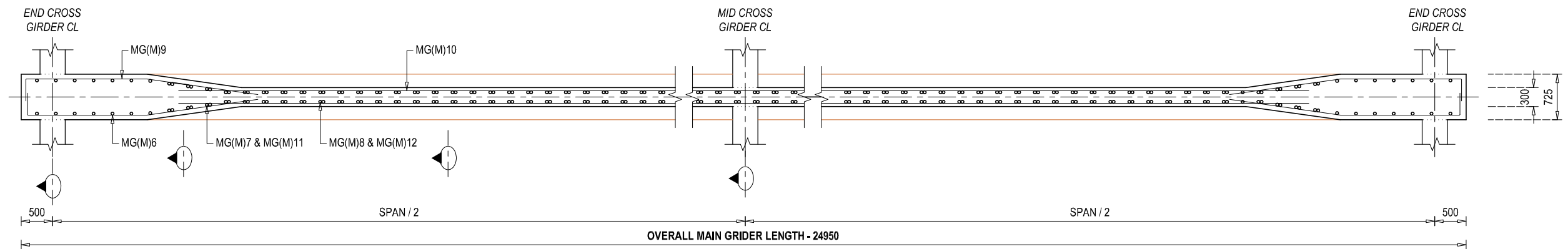
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	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.	DECK SLAB DETAILS OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	02.06.2023
			Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-17	Chainage: 271+510	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-14
							Sheet No. 1 / 1



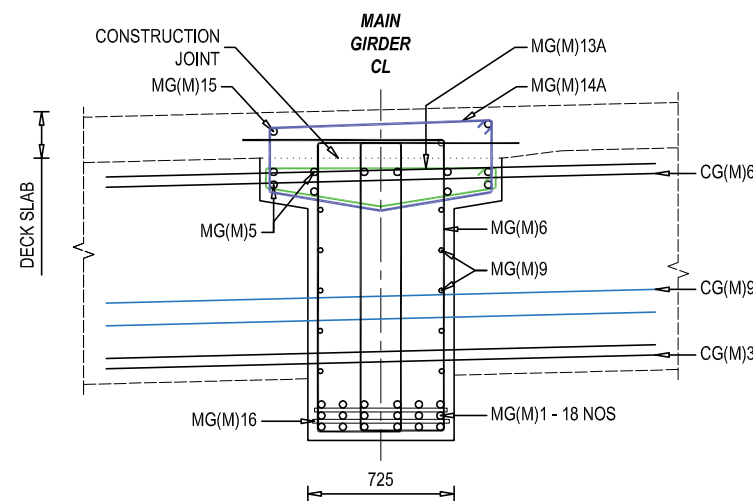
REINFORCEMENT DETAILS OF MAIN GIRDER - SECTIONAL ELEVATION VIEW

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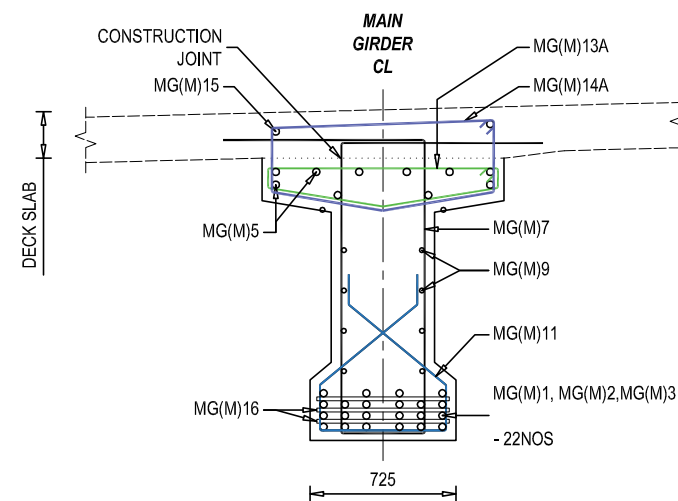
REINFORCEMENT DETAILS OF MAIN GIRDER (MID) - SECTIONAL PLAN VIEW AT T7(M)

SCALE - 1 : 75



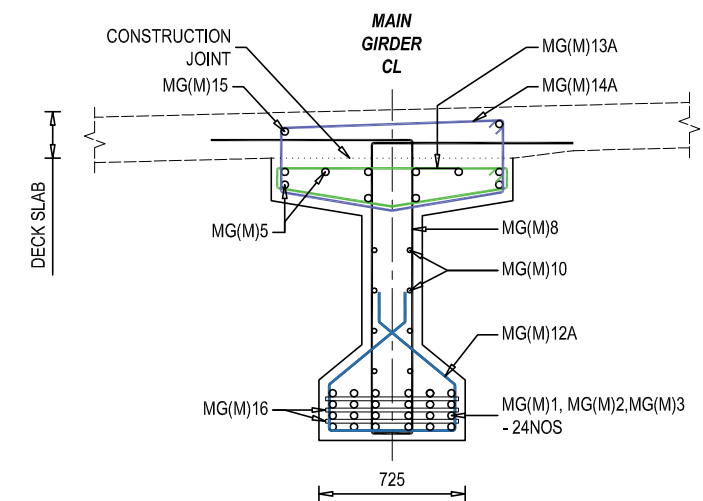
REINFORCEMENT DETAILS OF MAIN GIRDER SECTIONAL VIEW AT T8

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/GADHANTA/DD-4



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
ep4sa 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

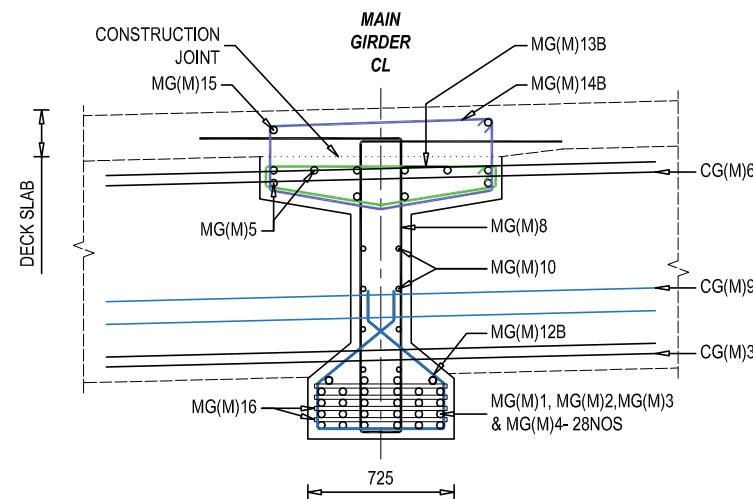
Designed By
Mr. R.D.
Nec.No. 6489 QVL/14
Checked By
Mr. S.M.
Approved By
Mr. H.B.

Signature
Signature
Signature

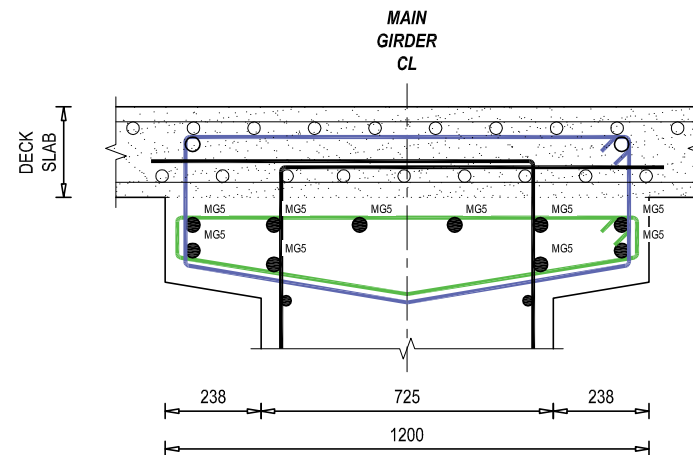
Drawing Name
MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER
RIVER GADHANTA
Reference Drawings
KDP/DPR/STR/BR/GADHANTA/DD-17

Scale:
AS SHOWN
Chainage:
271+510

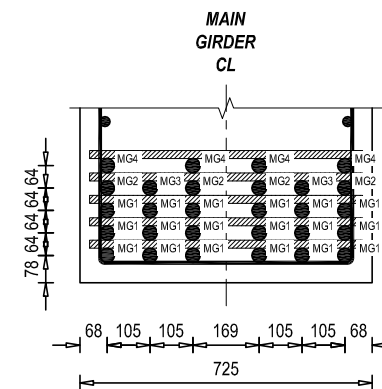
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02.06.2023
Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-15
Sheet No. 1 / 2



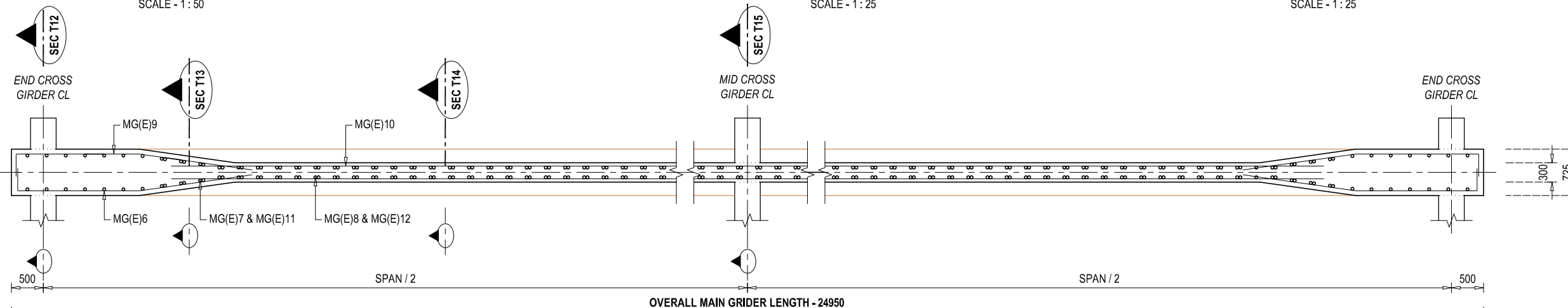
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T11**
SCALE - 1 : 50



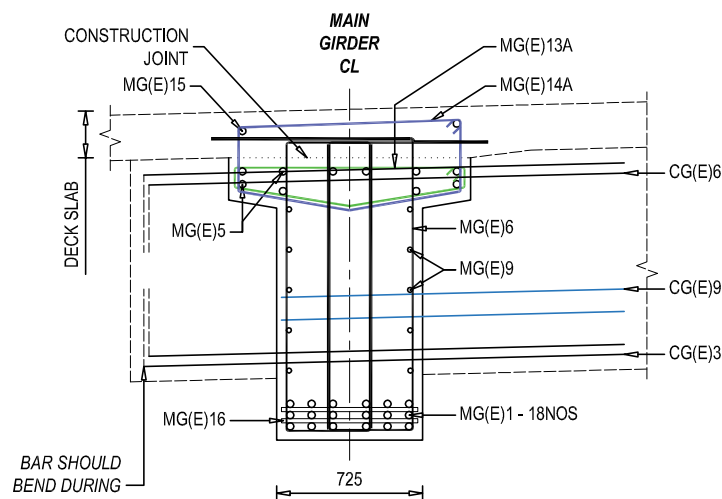
**TOP BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



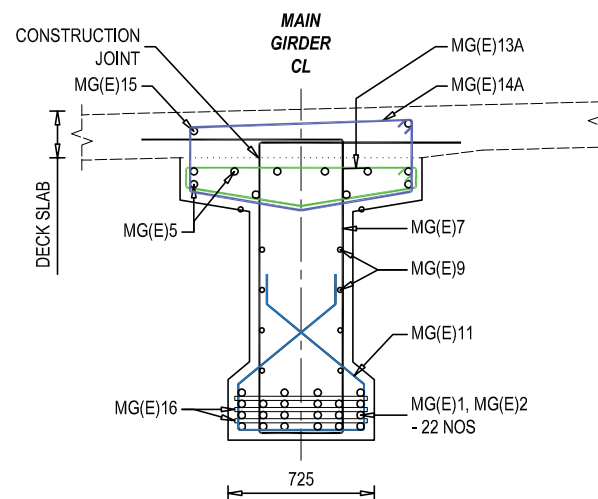
**BOTTOM BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



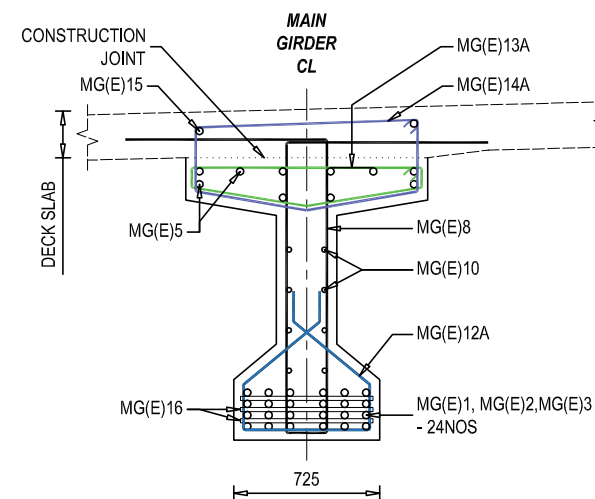
REINFORCEMENT DETAILS OF MAIN GIRDER (END) - SECTIONAL PLAN VIEW AT T7(E)
SCALE - 1 : 75



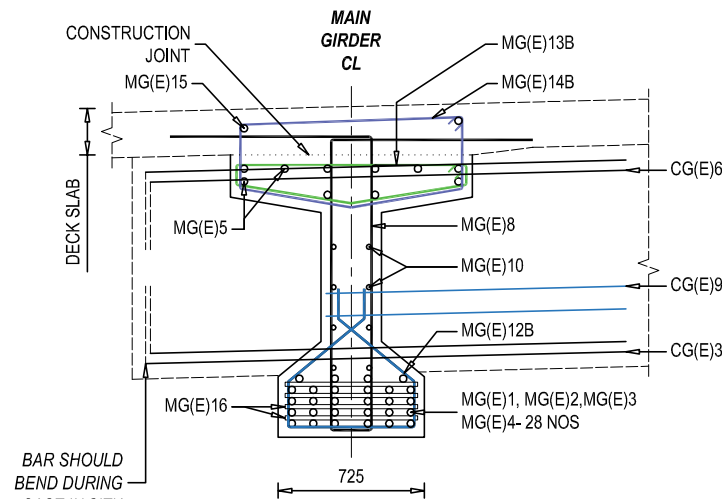
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T12**
SCALE - 1 : 50



**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T13**
SCALE - 1 : 50



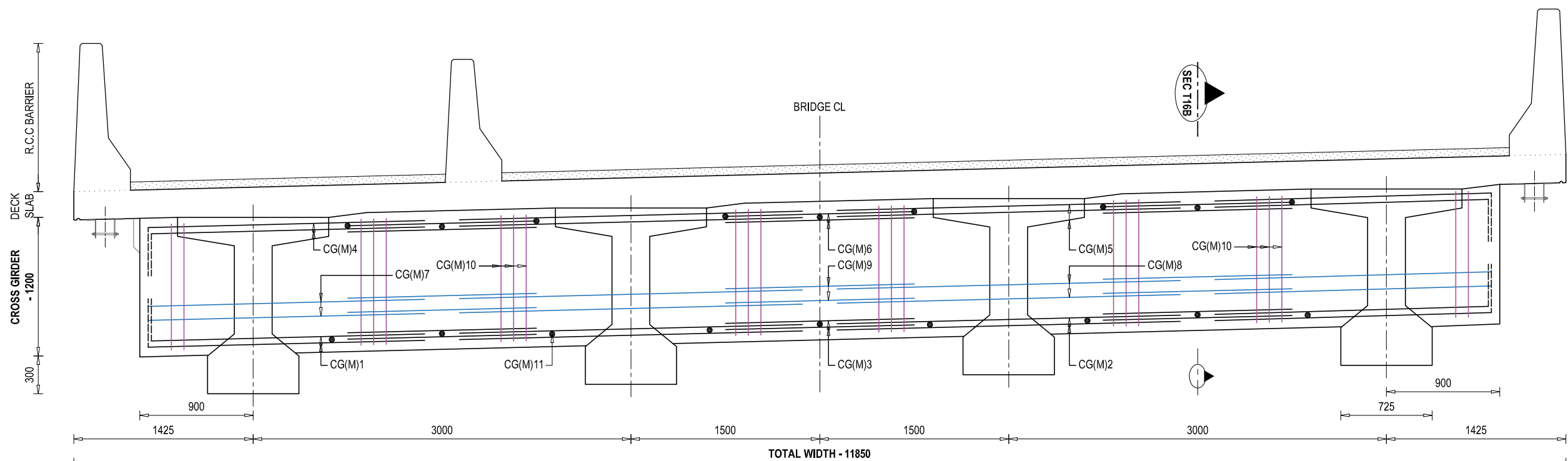
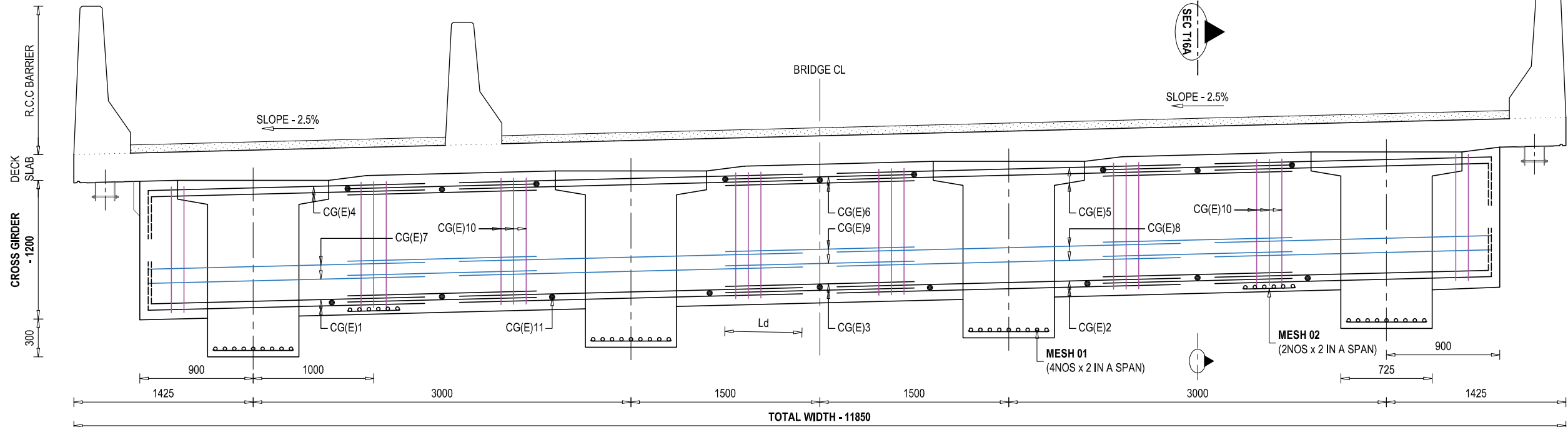
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T14**
SCALE - 1 : 50



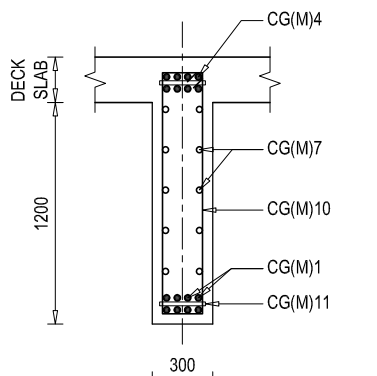
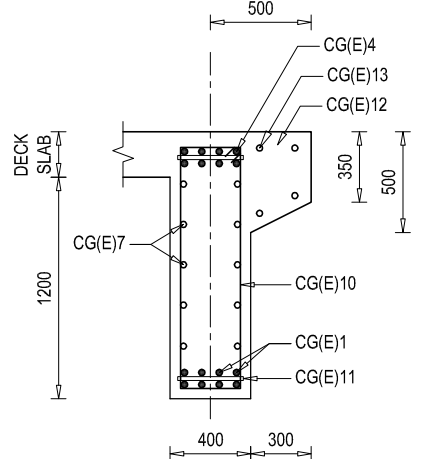
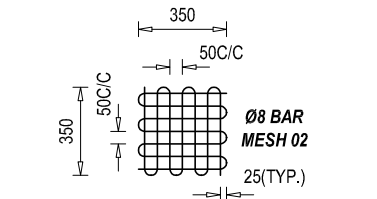
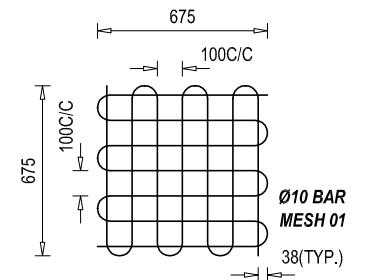
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T15**
SCALE - 1 : 50

NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/GADHANTA/DD-4

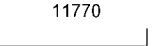
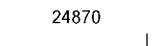
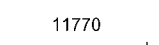
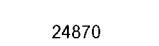
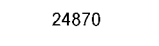
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS 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	Designed By Mr. R.D. Nec.No. 6489 QVL/VK Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-17	Scale: AS SHOWN Chainage: 271+510	Date: 02.06.2023 Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-15 Sheet No. 2 / 2
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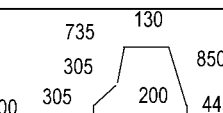
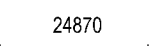


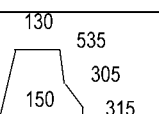
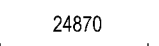
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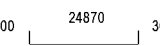
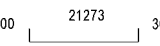
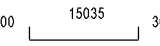
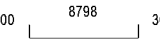
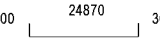
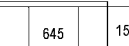
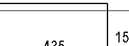
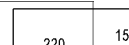
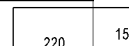
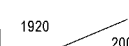
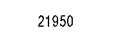
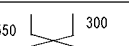
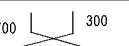
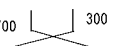
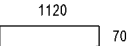
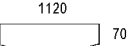
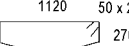
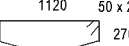
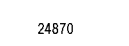
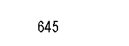


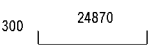
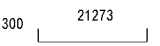
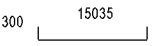
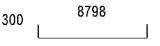
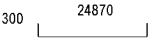
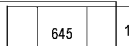
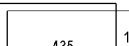
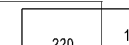
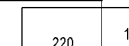
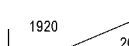
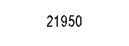
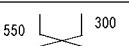
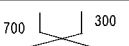
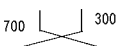
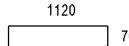
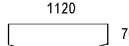
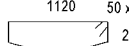
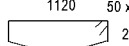
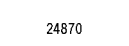
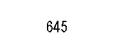
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVIL/14/ Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name CROSS GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-17	Scale: AS SHOWN Chainage: 271+510	Date: 02.06.2023 Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-16 Sheet No. 1 / 1
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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	167	1.580	3185.29
2	DS02	150  150	10	150	25.170	76	0.617	1180.81
3	DS03	150  150	16	150	12.070	167	1.580	3185.29
5	DS04	150  150	10	150	25.170	76	0.617	1180.81
6	DS05	 24870	16		24.870	8	1.580	314.41
TOTAL (KG) :								9046.61

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	167	1.580	836.57
2	RC-A2	150  150	10	150	25.170	20	0.617	310.74
TOTAL (KG) :								1147.31

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		16	150	2.695	167	1.580	711.21
2	RS2	150  150	10	150	25.170	17	0.617	264.13
TOTAL (KG) :								975.34

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		25.470	18	6.321	2897.92
2	MG (M)2	300  300	32		21.873	4	6.321	553.04
3	MG (M)3	300  300	32		15.635	2	6.321	197.66
4	MG (M)4	300  300	32		9.398	4	6.321	237.62
5	MG (M)5	300  300	12		25.470	10	0.889	226.40
6	MG (M)6	480  1530 4 LEGGED	12	100	9.660	42	0.889	360.64
7	MG (M)7	480  1530 AVG.	12	100	5.325	32	0.889	151.47
8	MG (M)8A	480  1530	12	100	4.680	91	0.889	378.56
9	MG (M)8B	480  1530	12	150	4.680	43	0.889	178.88
10	MG (M)9	370  2000	12	200	4.290	32	0.889	122.03
11	MG (M)10	 21950	12	200	21.950	16	0.889	312.18
12	MG (M)11	550  220 AVG.	12	100	2.785	32	0.889	79.22
13	MG (M)12A	700  220	12	150	3.085	91	0.889	249.54
14	MG (M)12B	700  220	12	150	3.085	43	0.889	117.92
15	MG (M)13A	 840 50 x 2	12	100	3.040	189	0.889	510.72
16	MG (M)13B	 840 50 x 2	12	150	3.040	43	0.889	116.20
17	MG (M)14A	 840 50 x 2	12	100	3.440	189	0.889	577.92
18	MG 14B	 840 50 x 2	12	150	3.440	43	0.889	131.48
19	MG (M)15	 24870	12		24.870	2	0.889	44.21
19	MG (M)16	 645	32	1500	0.645	68	6.321	277.24
TOTAL (KG) :								7720.83

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		25.470	18	6.321	2897.92
2	MG (E)2	300  300	32		21.873	4	6.321	553.04
3	MG (E)3	300  300	32		15.635	2	6.321	197.66
4	MG (E)4	300  300	32		9.398	4	6.321	237.62
5	MG (E)5	300  300	12		25.470	10	0.889	226.40
6	MG (E)6	480  1530 4 LEGGED	12	100	9.660	42	0.889	360.64
7	MG (E)7	480  1530 AVG.	12	100	5.325	32	0.889	151.47
8	MG (E)8A	480  1530	12	100	4.680	91	0.889	378.56
9	MG (E)8B	480  1530	12	150	4.680	43	0.889	178.88
10	MG (E)9	370  2000	12	200	4.290	32	0.889	122.03
11	MG (E)10	 21950	12	200	21.950	16	0.889	312.18
12	MG (E)11	550  220 AVG.	12	100	2.785	32	0.889	79.22
13	MG (E)12A	700  220	12	150	3.085	91	0.889	249.54
14	MG (E)12B	700  220	12	150	3.085	43	0.889	117.92
15	MG (E)13A	 840 50 x 2	12	100	3.040	189	0.889	510.72
16	MG (E)13B	 840 50 x 2	12	150	3.040	43	0.889	116.20
17	MG (E)14A	 840 50 x 2	12	100	3.440	189	0.889	577.92
18	MG 14B	 840 50 x 2	12	150	3.440	43	0.889	131.48
19	MG (E)15	 24870	12		24.870	2	0.889	44.21
19	MG (E)16	 645	32	1500	0.645	68	6.321	277.24
TOTAL (KG) :								7720.83

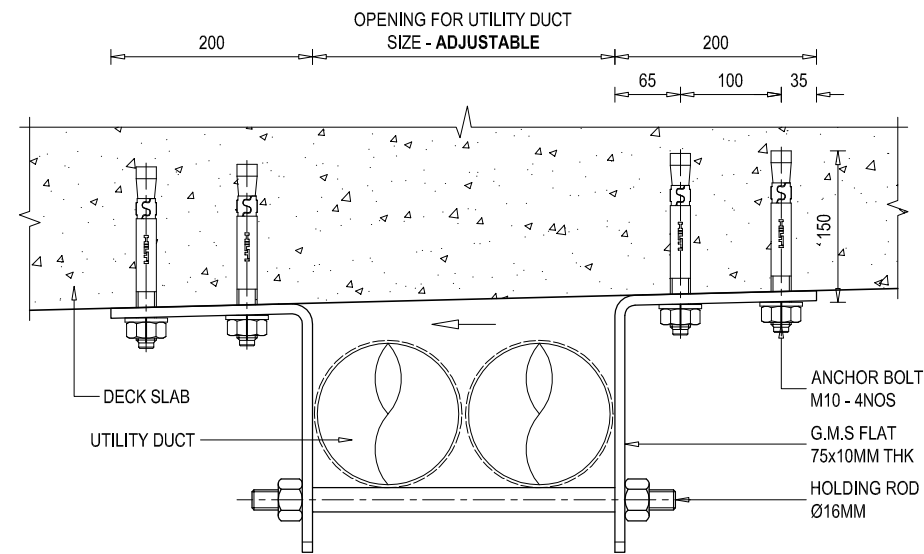
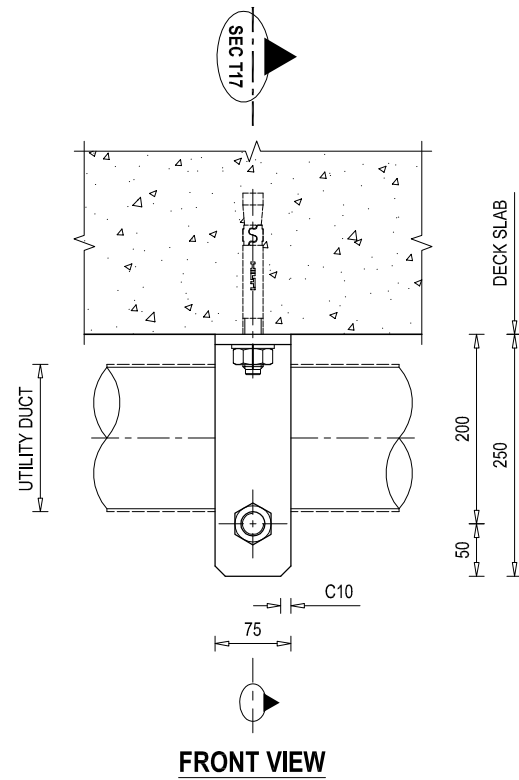
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	Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges		Joint Venture of		Designed By	Mr. R.D.	AS SHOWN		02.06.2023	
				 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Checked By	Mr. S.M.			Drawing No:- KDP/DPR/STR/BR/GADHANTA/DD-17	
						Approved By	Mr. H.B.			Sheet No. 1 / 2	

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 @ 100	10		9.450	8	0.617	46.67
2	MESH 02	350 @ 50	10		4.900	4	0.617	12.10
TOTAL (KG) :								58.77

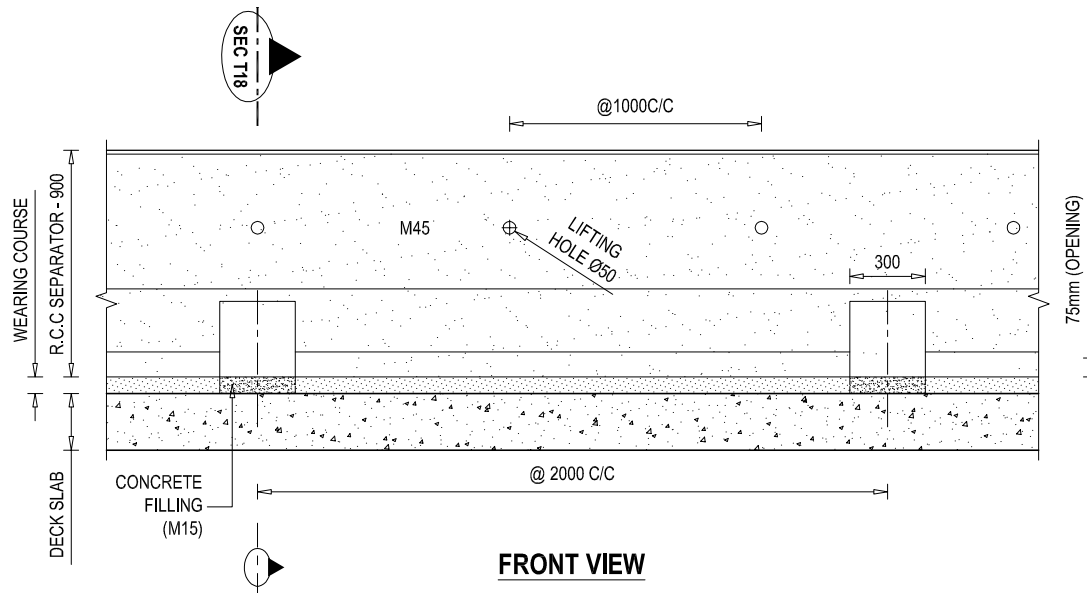
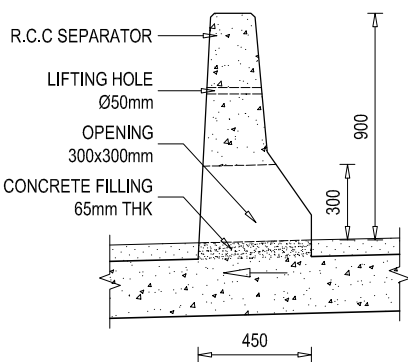
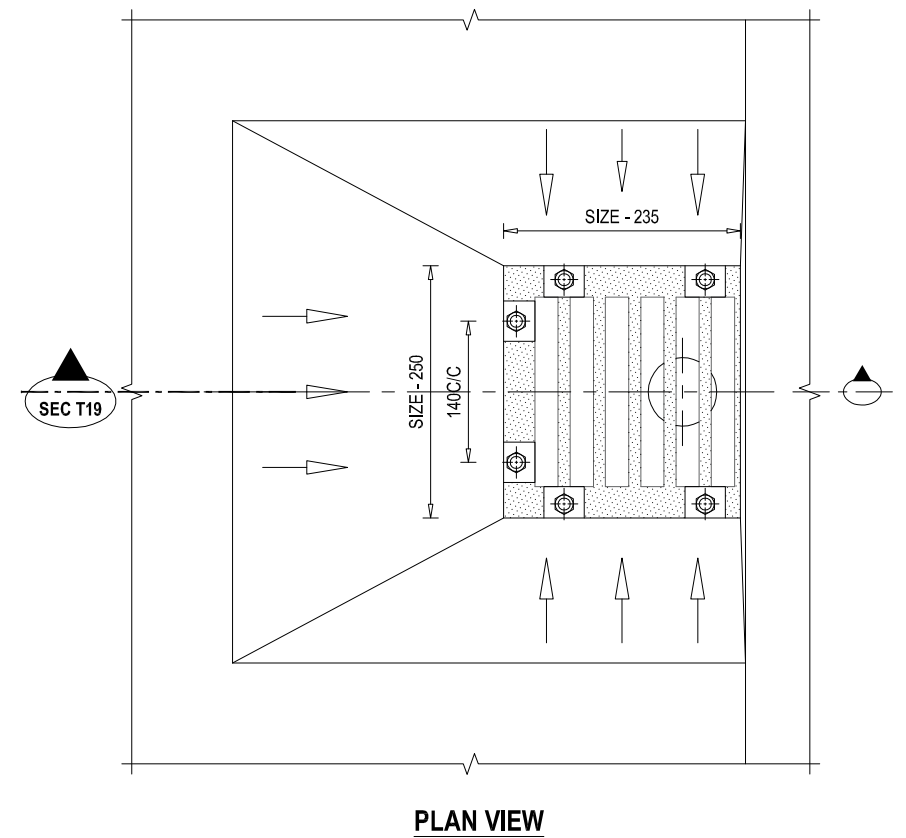
BAR BENDING SCHEDULE OF END CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(E)1	300 1825	20		2.125	8	2.469	41.98
2	CG(E)2	2625	20		2.625	8	2.469	51.85
3	CG(E)3	1675	20		1.675	8	2.469	33.09
4	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 1320	12	200	1.740	39	0.889	60.32
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) :								653.17
TOTAL NOS OF CROSS GIRDER :								2.00
TOTAL WEIGHT (KG) :								1306.33

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 1320	12	200	1.740	39	0.889	60.32
11	CG(M)11	320	20	1000	0.320	18	2.469	14.22
TOTAL (KG) :								375.01

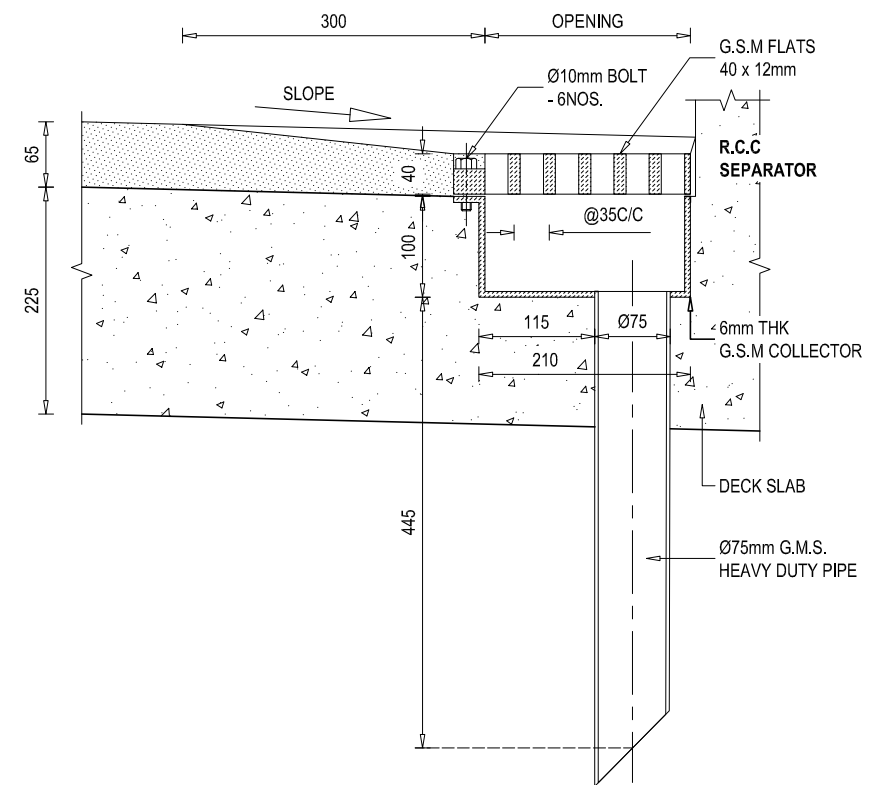
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of	Checked By	Mr. S.M.	SUPER STRUCTURE BAR BENDING SCHEDULE OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	02.06.2023
		 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India	Approved By	Mr. H.B.	Reference Drawings	Chainage:	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-17
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited			-	271+510	Sheet No. 2 / 2



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

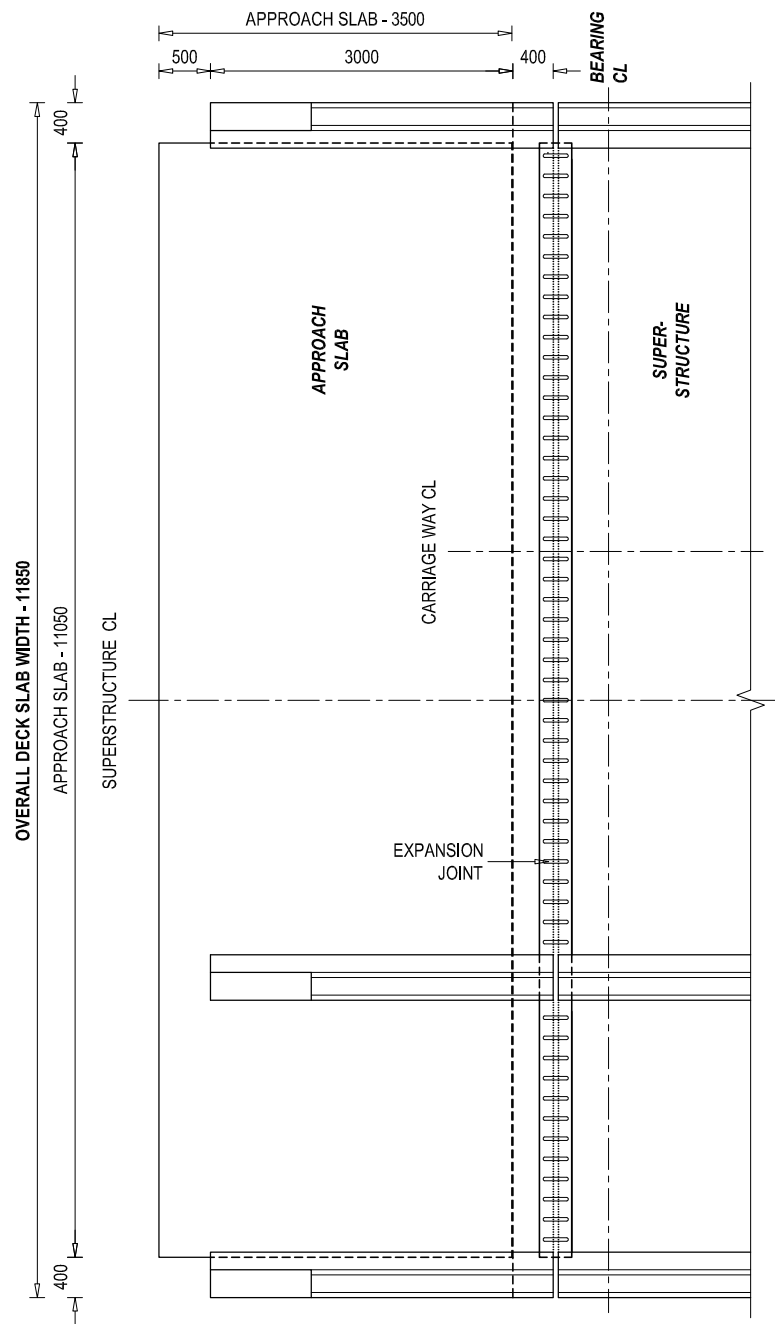


DETAIL ELEVATION VIEW AT R.C.C SEPARATOR
& IT'S DRAIN OPENING
 SCALE - 1 : 40

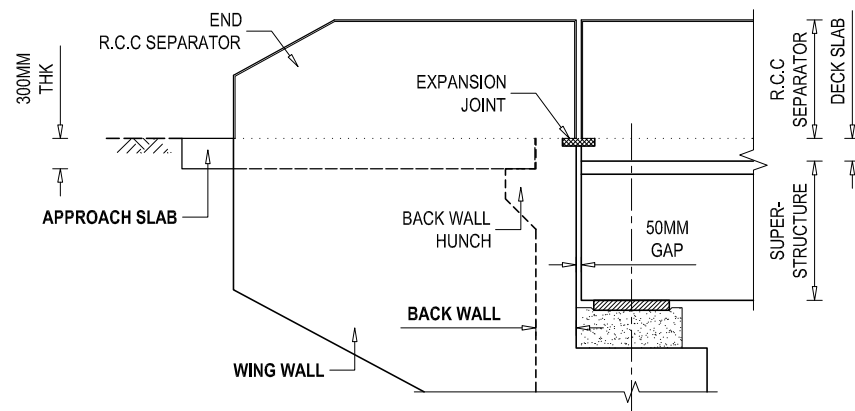


DETAILS OF GALVANIZED MILD STEEL (G.M.S)
DRAINAGE SPOUT
 SCALE - 1 : 10

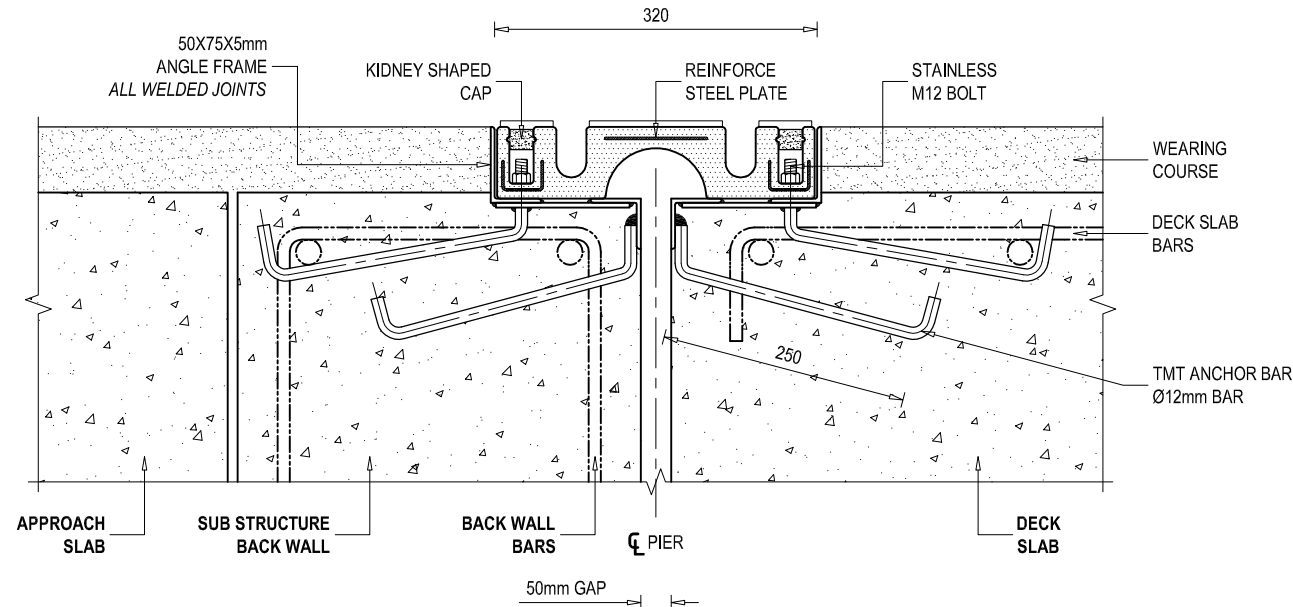
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of ep4sa EPTISA Servicios De Ingeniera Madrid, Spain on STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVIL/14 Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings	Scale: AS SHOWN Chainage: 271+510	Date: 23.04.2023 Drawing No:- KDP/DPR/STR/BR/GADHANTA/DD-18 Sheet No.1 /2
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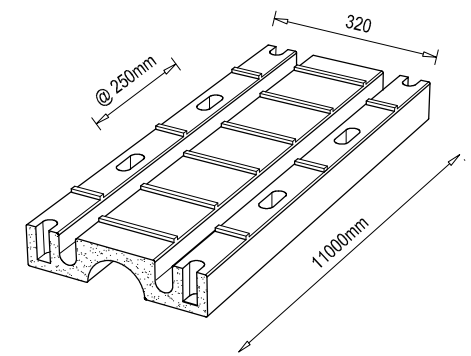
**PLAN VIEW AT EXPANSION JOINT, END R.C.C
SEPARATOR & APPROACH SLAB**



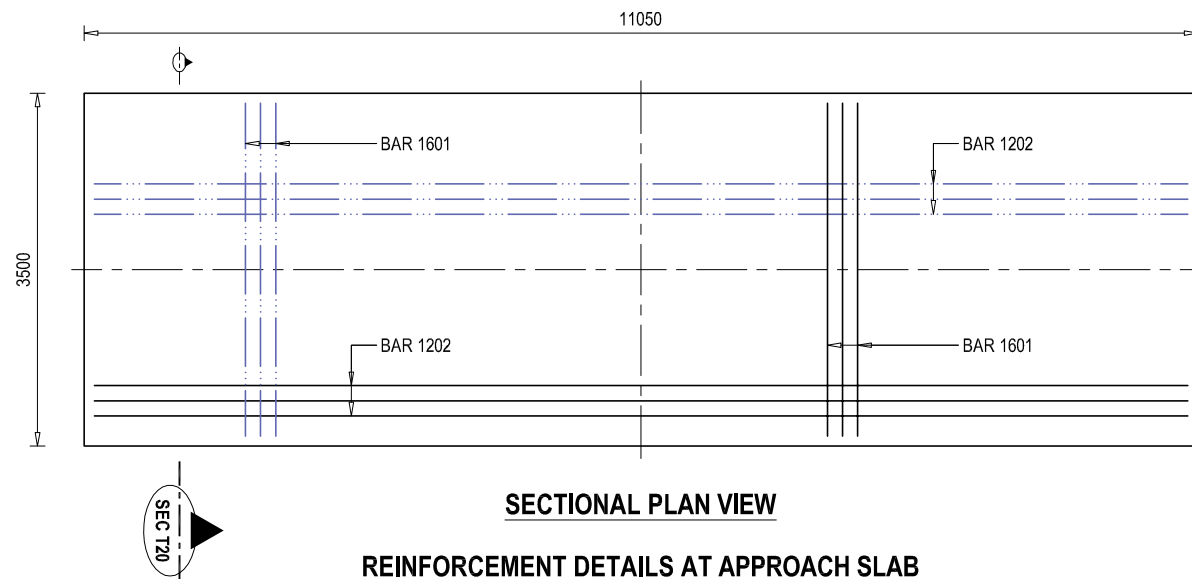
ELEVATION VIEW



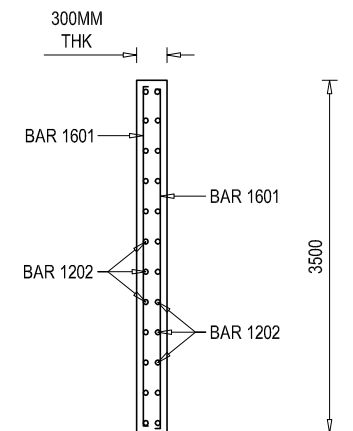
SEAL TYPE EXPANSION JOINTS ARRANGEMENT IN A CARRIAGEWAY
SCALE - 1 : 10 @ A3 PAPER



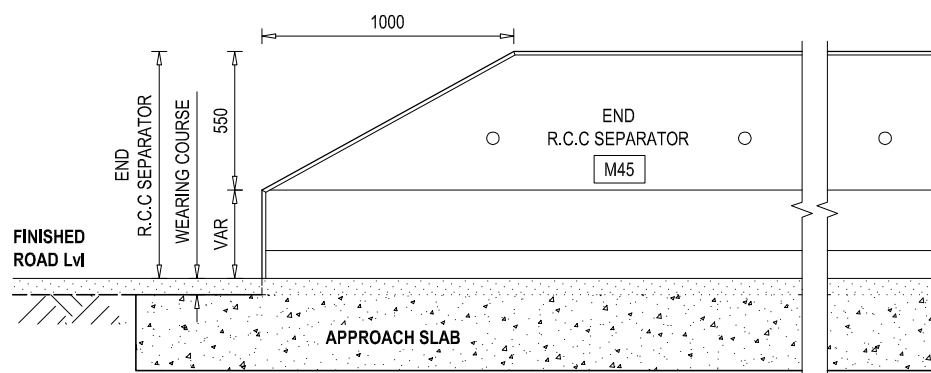
**EXPANSION JOINT ISOMETRIC VIEW
- SEAL TYPE**
SCALE - NON



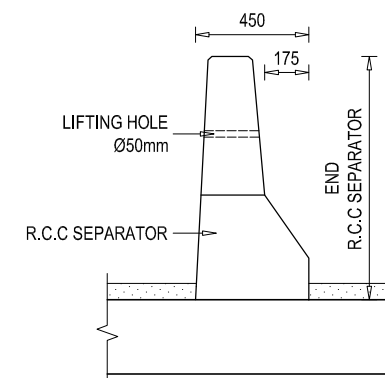
SECTIONAL PLAN VIEW
REINFORCEMENT DETAILS AT APPROACH SLAB
SCALE - 1 : 100 @ A3 PAPER



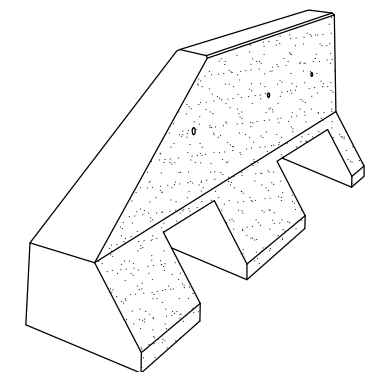
SECTIONAL ELEVATION VIEW AT SEC T20



ELEVATION VIEW OF END R.C.C SEPARATOR
SCALE - 1 : 40 @ A3 PAPER

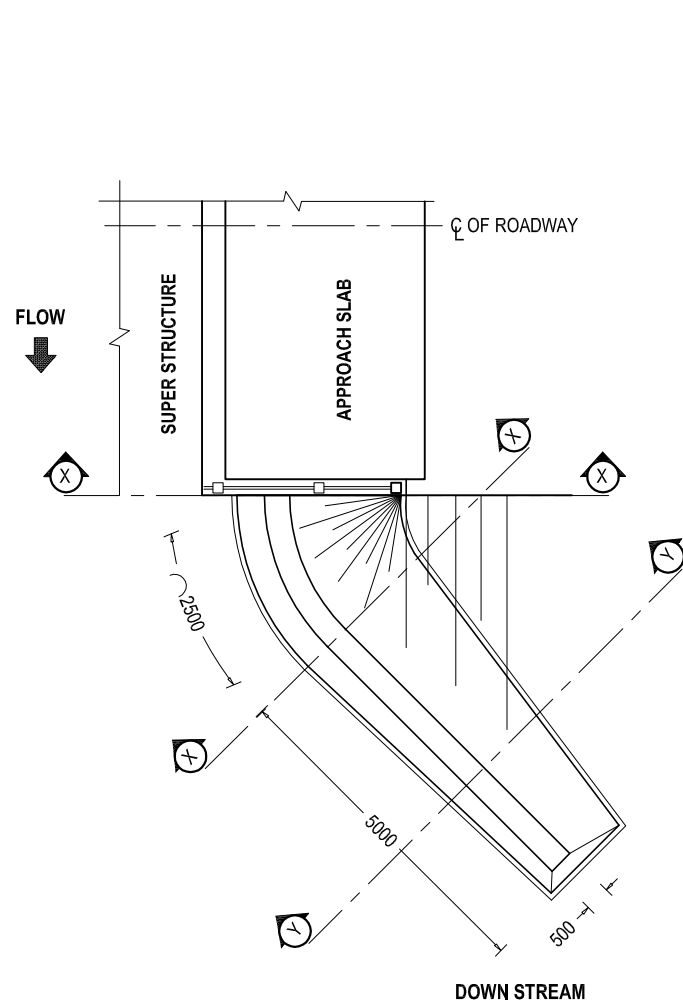


SIDE VIEW
SCALE - 1 : 40 @ A3 PAPER

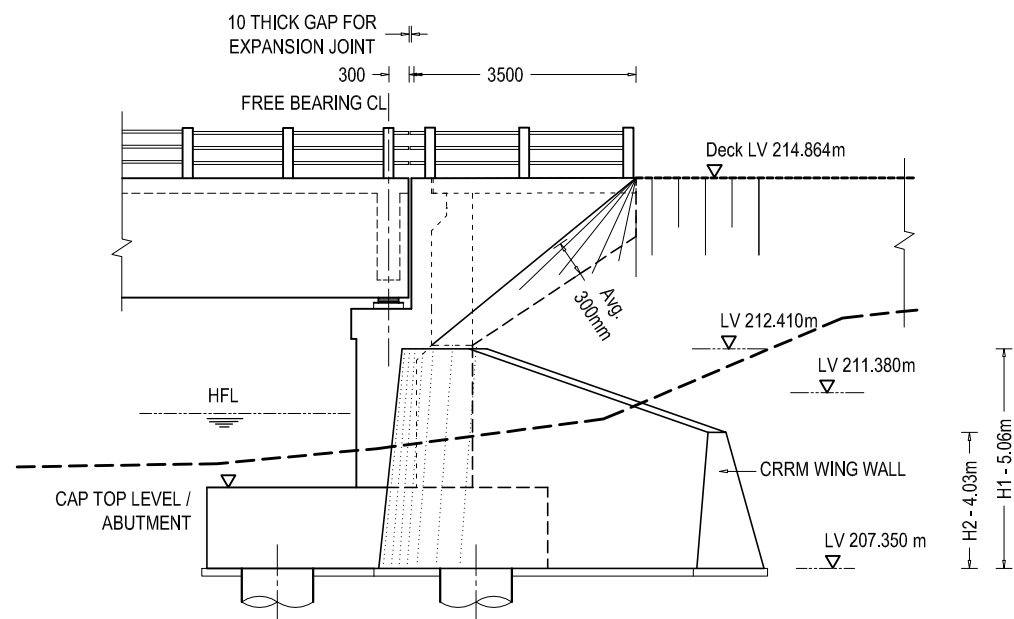
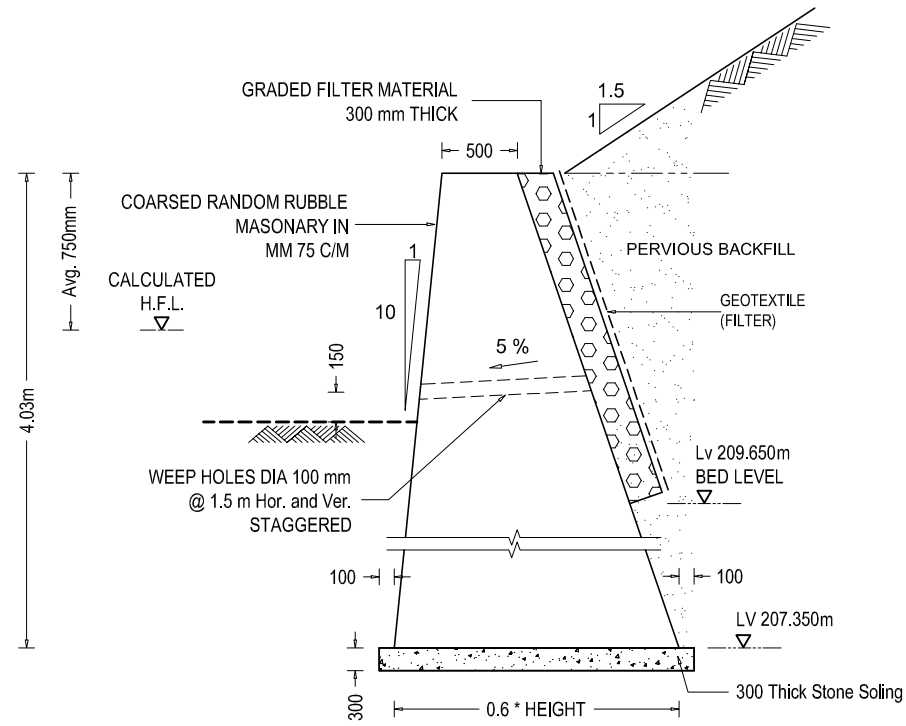


END R.C.C SEPARATOR ISOMETRIC VIEW
SCALE - NON

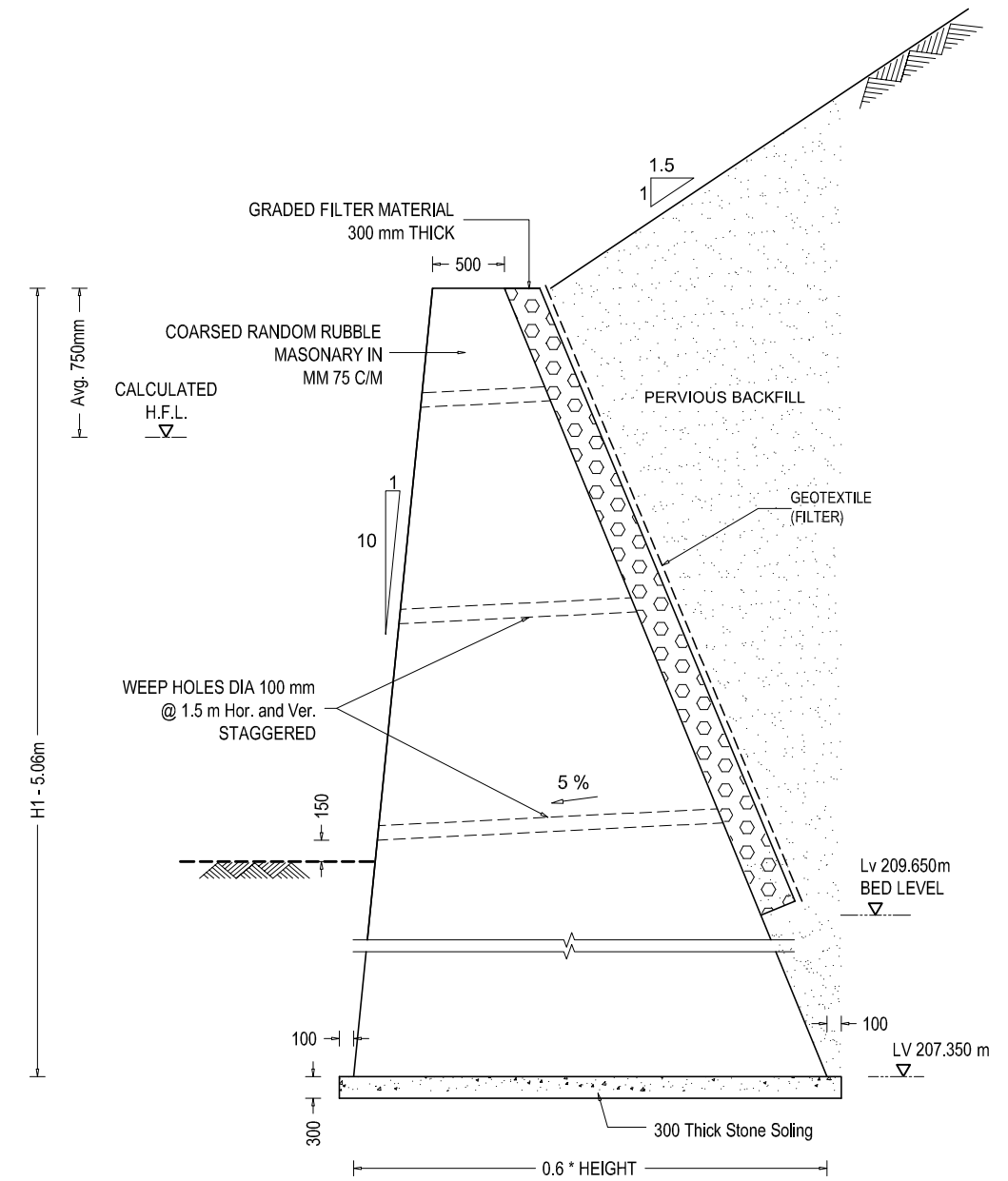
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De Ingenieria Madrid, Spain STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Designed By Mr. R.D. Nec.No. 6489 CIVIL/14 Signature Checked By Mr. S.M. Signature Approved By Mr. H.B. Signature	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings KDP/DPR/STR/BR/GADHANTA/DD-9	Scale: AS SHOWN Chainage: 271+510	Date: 23.04.2023 Drawing No:- KDP/DPR/STR/BR/GADHANTA/DD-18 Sheet No.2/2
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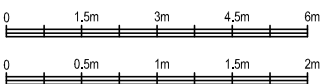
NOTE : AT DOWN STREAM ONLY



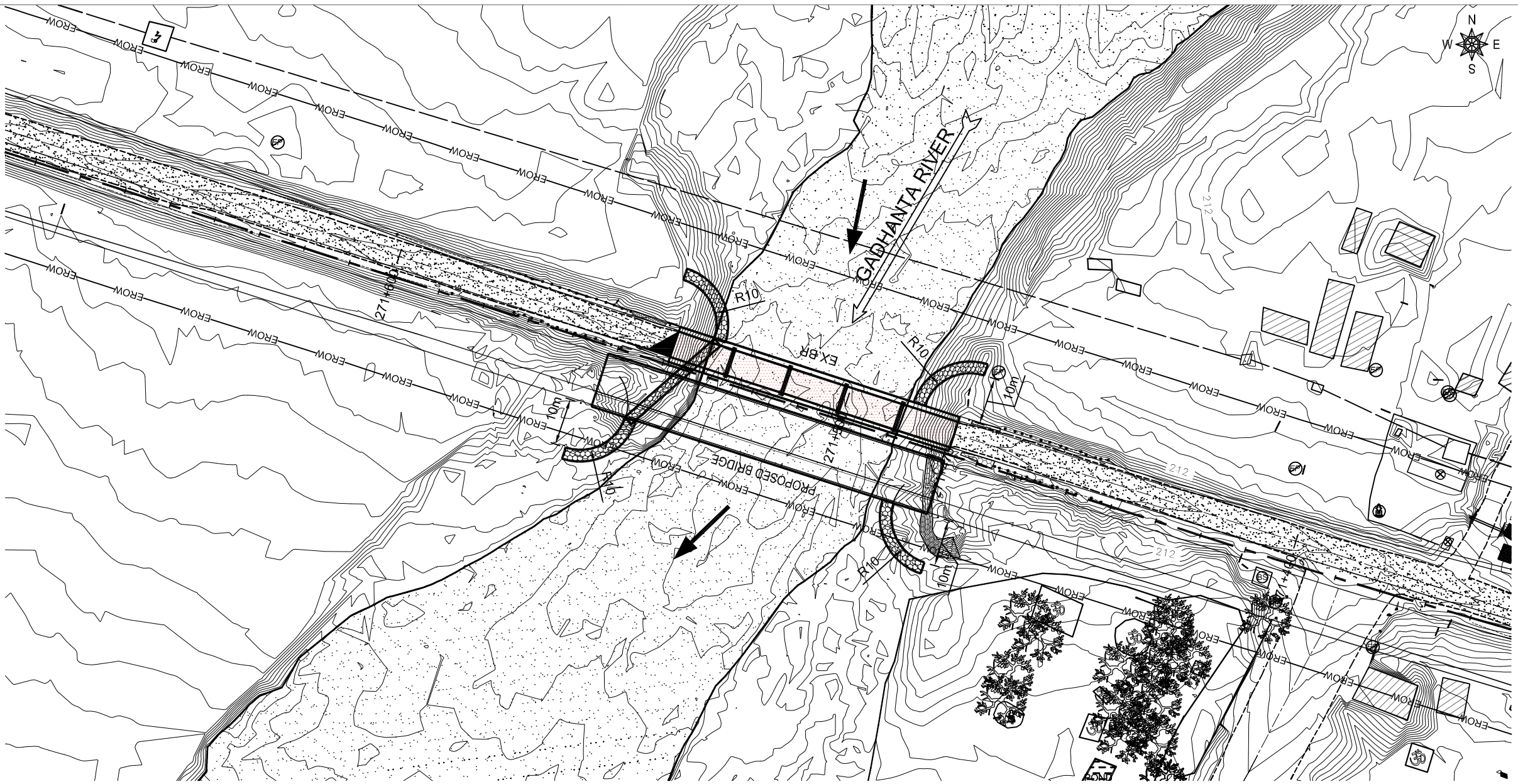
WING WALL ELEVATION



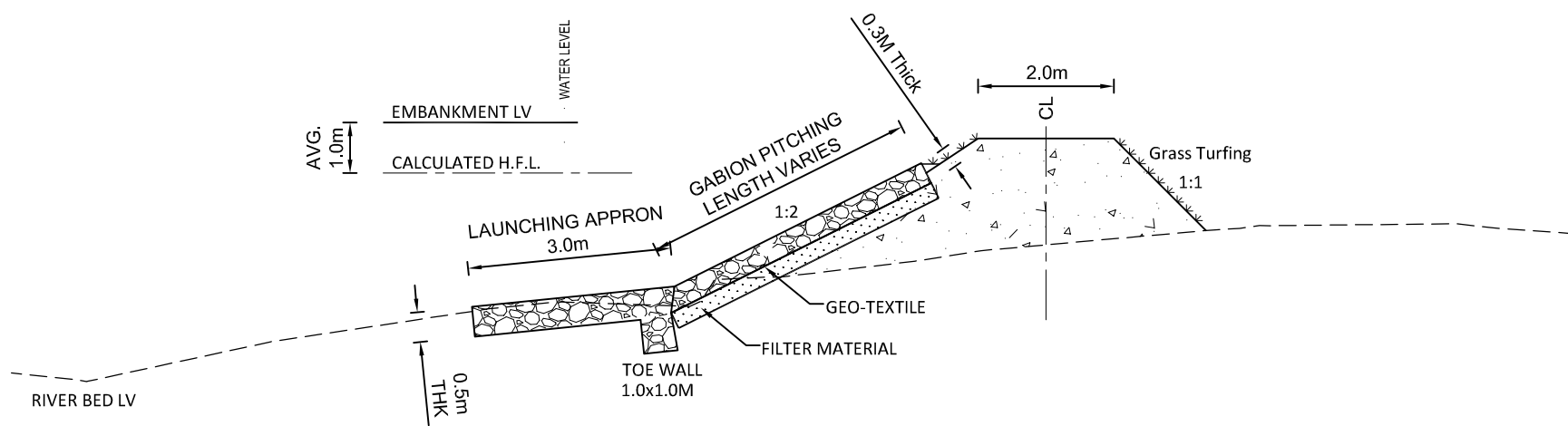
STONE MASONRY WING WALL SECTION X - X



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 Kamala-Dhalkebar-Pathalya 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	Mr. R.D. Nec.No. 6489 CIVIL/1A/ Signature Checked By Mr. S.M. Signature Approved By Mr. H.B. Signature	WING WALL DETAILS OF BRIDGE OVER RIVER GADHANTA Reference Drawings	AS SHOWN Chainage: 271+510	23.04.2023 Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-19 Sheet No. 1 / 1

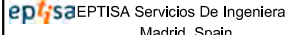


TOPOGRAPHIC MAP



SECTION OF EMBANKMENT

SCALE - 1x : 5x

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 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 Kolkatta, India In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited	Mr. R.D. Nec.No. 4489 CIVIL/12	RIVER TRAINING WORKS OF BRIDGE OVER RIVER GADHANTA	1:1000	23.04.2023
			Checked By Mr. S.M.	Reference Drawings	Chainage: 271+510	Drawing No.- KDP/DPR/STR/BR/GADHANTA/DD-20
			Approved By Mr. H.B.			Sheet No. 1/1

Bearing Design Data for 25m Span and 11.85m width

Load Condition	Items	Under	On each Neoprene Bearing	Unit
Under No Live Load	V	NO EQ.	60.54	Ton
		EQ.	69.62	Ton
	H _L	NO EQ.	-	Ton
		EQ.	13.62	Ton
	H _T	NO EQ.	-	Ton
		EQ.	13.62	Ton
	θ	NO EQ.	0.00250	radian
		EQ.	0.00288	radian
Δ		14.57	mm	
Under Maximum Live Load	V	NO EQ.	103.45	Ton
		EQ.	113.82	Ton
	H _L	NO EQ.	-	Ton
		EQ.	0.00	Ton
	H _T	NO EQ.	-	Ton
		EQ.	0.00	Ton
	θ	NO EQ.	0.00388275	radian
		EQ.	0.00447	radian
	Δ		24.23	mm

EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.D.		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-Pathalya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of				BEARING DESIGN DATA OF BRIDGE OVER RIVER GADHANTA	AS SHOWN	23.04.2023	
		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Checked By	Mr. S.M.				Drawing No.-
		In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.				Reference Drawings
						-	271+510		