



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- JALAD
Volume-2
Detailed Drawing

April, 2023

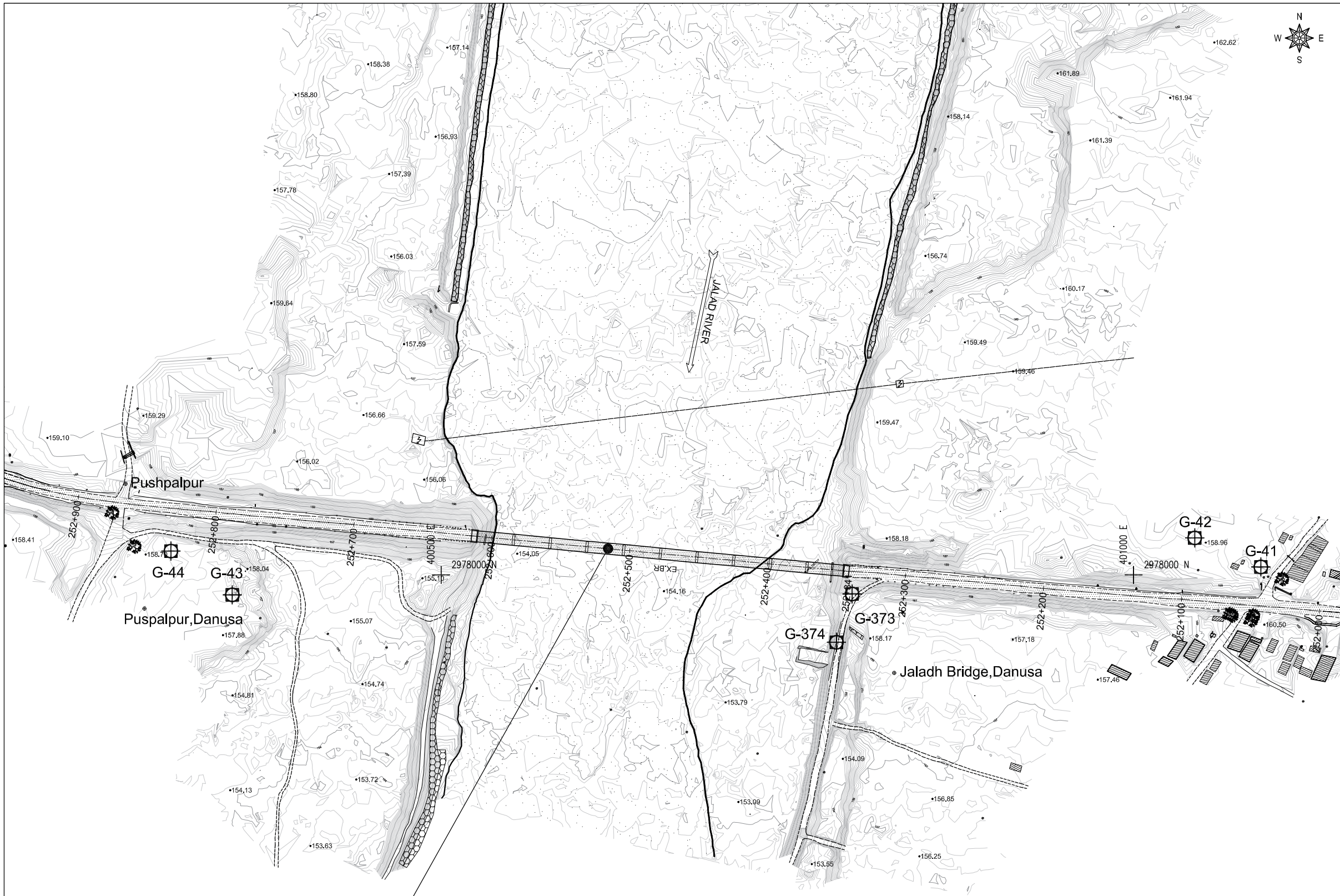
Joint Venture Of:

eptisa EPTISA Servicios De Ingenieria
Madrid, Spain

STUP Consultants Private Limited
India

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

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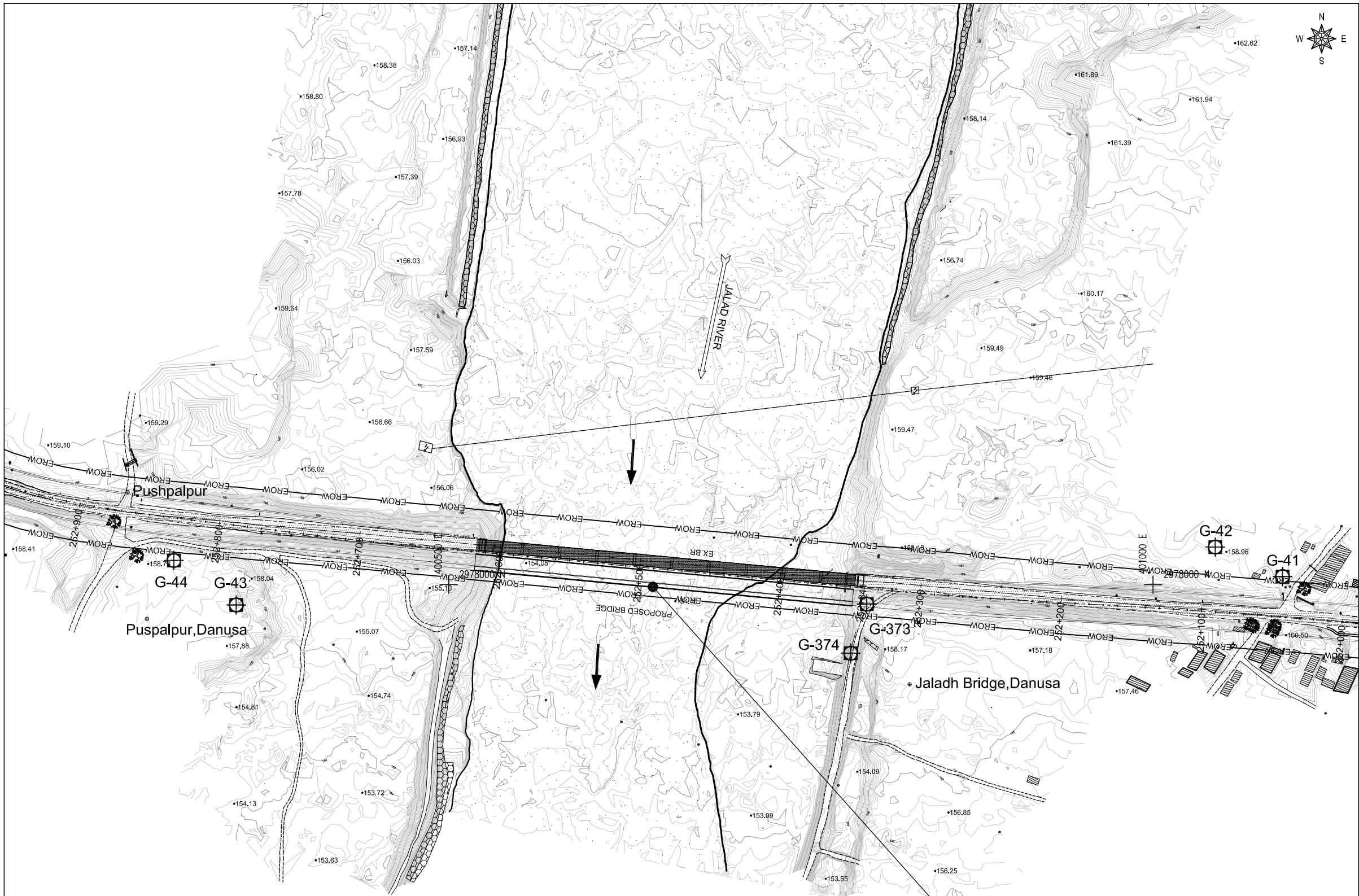


DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
MAIN FOOT TRAIL		ANIMAL FARM	
PLACE NAME		BAMBOO	
POLICE STATION		BIO GAS	
PETROL PUMP		BUS WAITING STATION	
Pond/ Water Body		BRIDGE	
POULTRY FARM		CONTOUR	
PROPERTY BOUNDARY		CANAL	
ROAD INFORMATION BOARD		CULVERT	
RIVER		CONTROL POINT (G)	
SPOT HEIGHT		CRUSHER	
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	

Bridge/ River Name	Jalad
District	Dhanusha
Length of Bridge(m)	266.113
Span	10

S.N.	GCP NO.	EASTING (X)	NORTHING (Y)	ELEVATION (Z)	REMARKS
41	G374	400785.450	2977951.418	157.949	
47	G41	401091.901	2978005.739	159.349	
48	G42	401044.162	2978026.713	159.080	
49	G43	400349.177	2977985.617	158.299	
50	G44	400304.899	2978017.225	158.774	

EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By	Mr. R.A.		Drawing Name	Scale:	AS SHOWN	Date:	19.04.2023
	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			Nec.No. 6431 CH/IL/TA					Signature	Reference Drawings
				 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India	Checked By	Mr. S.M.						
				In Association With		Mr. H.B.							
		Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited				Approved By							



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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	
SHOULDER		MONASTERY	

STRUCTURE NO	253/1
TYPE	MAJOR BRIDGE-JALAD
CHAINAGE	252+78
EXISTING	10X26.6 (RHS)
PROPOSED	10 x 26.6 (LHS)
REMARKS	RETAIN EXISTING BRIDGE NEW BRIDGE ON SOUTH (MCW)

 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 CIVIL/24	Drawing Name DETAILED SURVEY TOPOGRAPHIC MAP (WITH PROPOSED BRIDGE) OF BRIDGE OVER RIVER JALAD Reference Drawings	Scale: AS SHOWN Chainage: 252+478	Date: 19.04.2023 Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 3 Sheet No.1/1
		In Association With Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Checked By Mr. S.M.			
				Approved By Mr. H.B.			

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) - 423.26 CUMECs
2. HFL - 155.440 M
3. FREE BOARD (MINIMUM) - 1.2 M
4. MAXIMUM SCOUR LEVEL:
ABUTMENT - 152.100M
PIER - 150.330M

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

D. STRUCTURAL AND OTHER DATA: -

1. SPAN ARRANGEMENT: 10 X 26.6 = 266 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 - 370.24 TON
B) PIER- 1200 DIA BORED CAST-IN-SITU PILE
DESIGN WORKING LOAD ON PILE - 297.19 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:

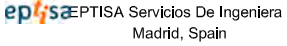
- a) FOR M 30 GRADE CONCRETE : 57.2Ø
b) FOR M 35 GRADE CONCRETE : 51.48Ø
c) FOR M 40 GRADE CONCRETE : 48.62Ø

(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

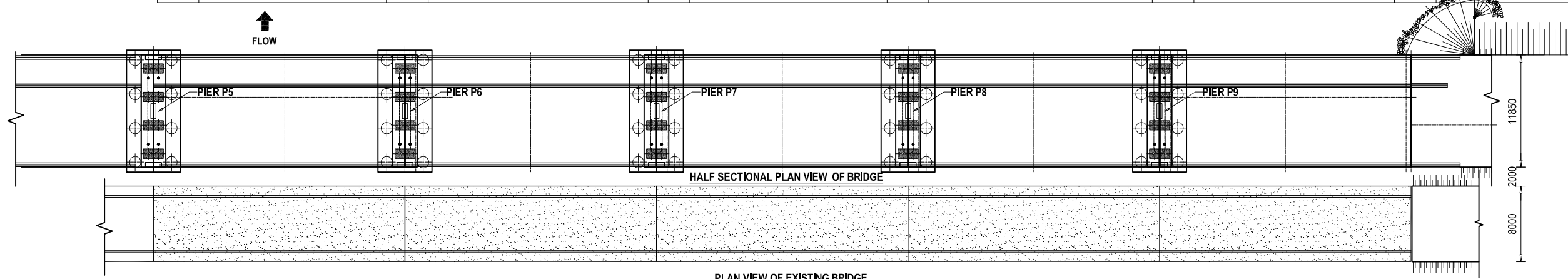
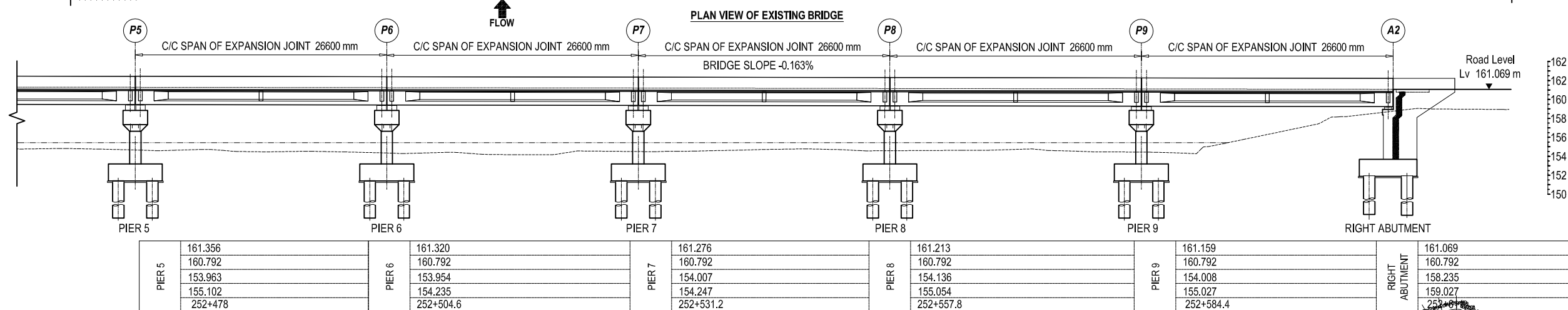
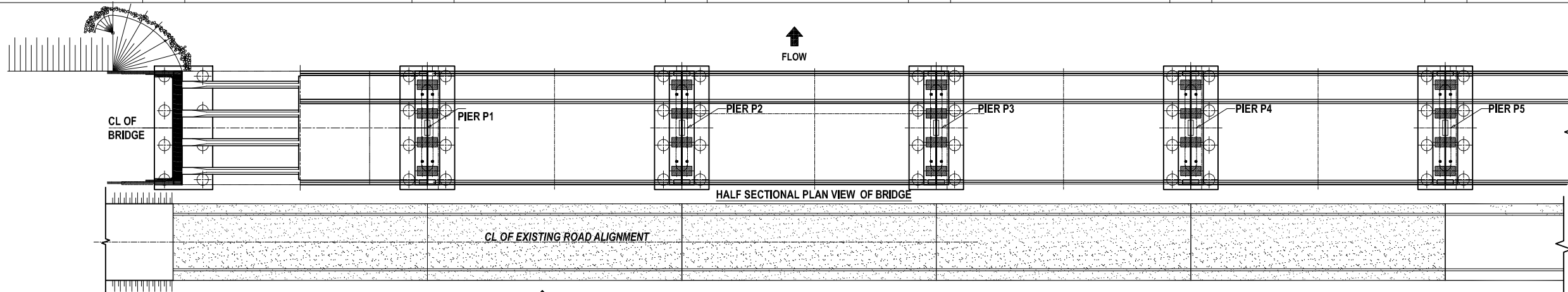
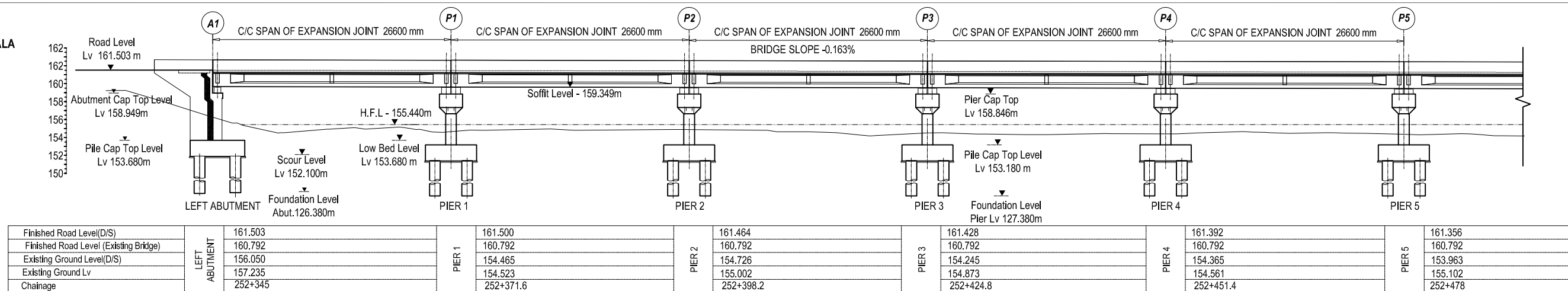
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 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkatta, 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 JALAD	AS SHOWN	05.05.2023
			Approved By	Mr. H.B.		Reference Drawings —	Chainage: 252+478	Drawing No.- KDP/DPR/STR/BR/JALAD/DD-4
								Sheet No. 1 / 1



TO KAMALA



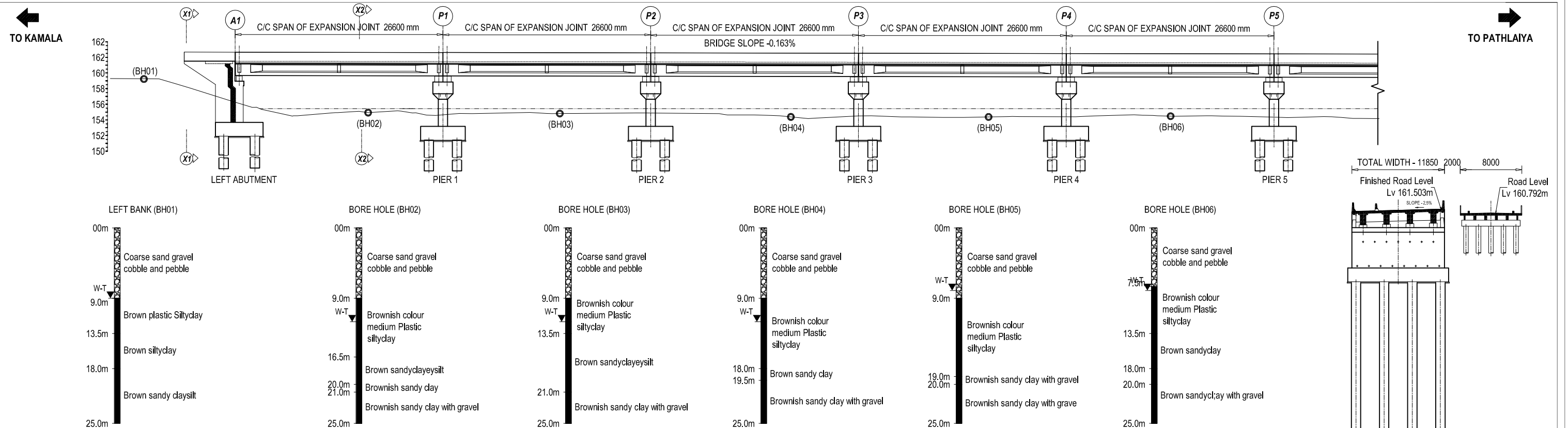
TO PATHLAIYA

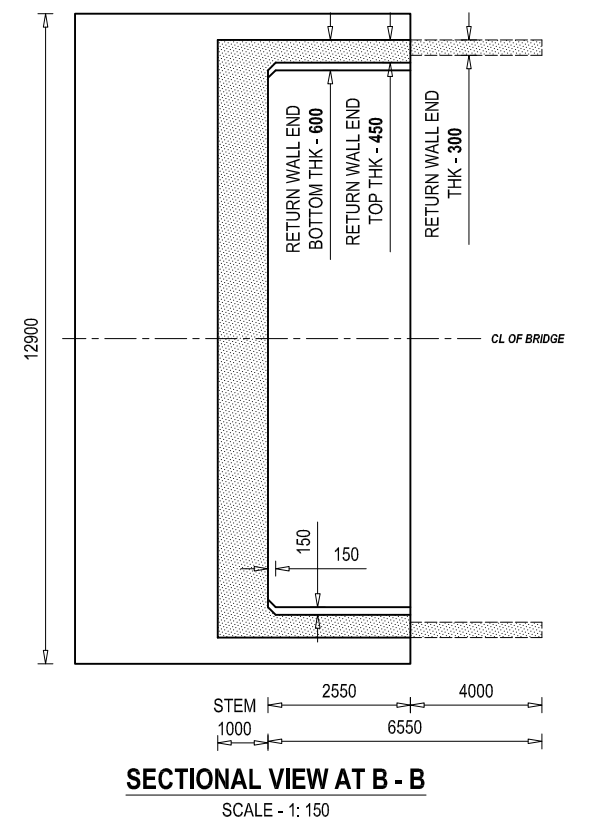
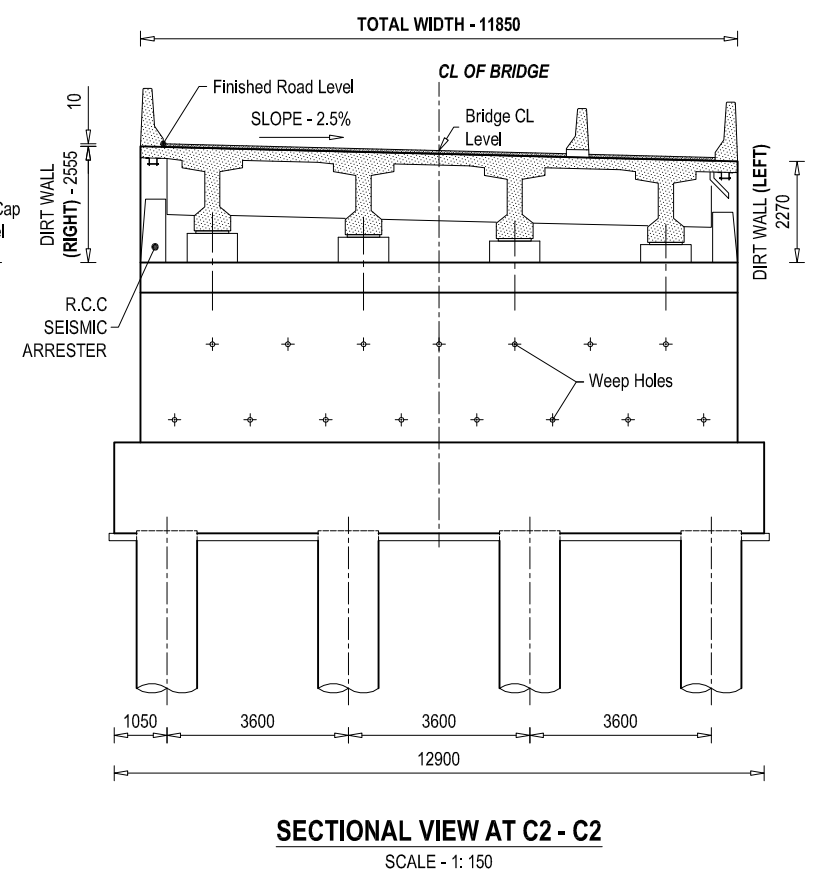
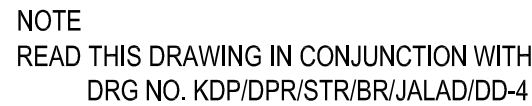


PLAN VIEW OF EXISTING BRIDGE

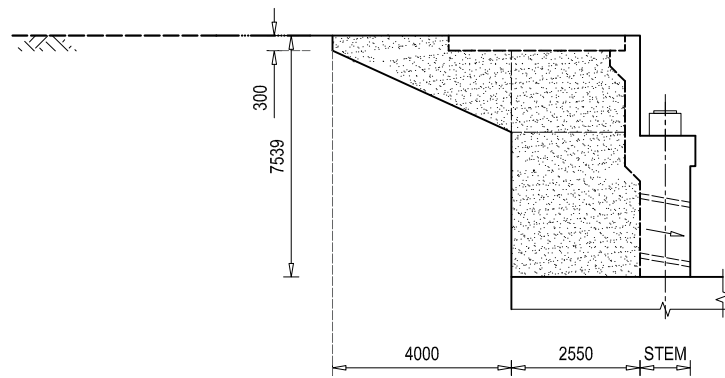
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		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India							Sheet No.1/2		
		In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited			Approved By Mr. H.B. 							

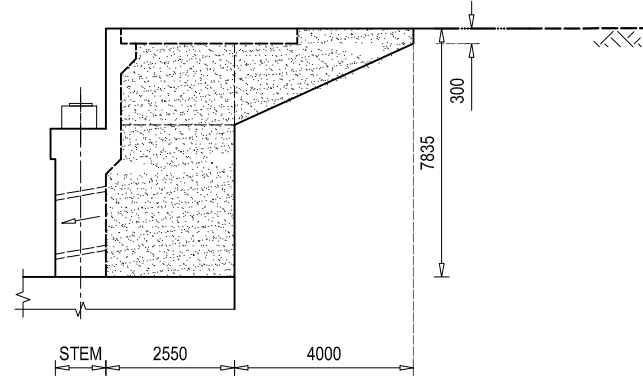




EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Designed By Mr. R.A. Nec.No. 6431 CPN/V Signature	Drawing Name ABUTMENT DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings KDP/DPR/STR/BR/JALAD/DD-9	Scale: AS SHOWN Chainage: 252+478	Date: 03.08.2023 Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 7 Sheet No. 1 / 2
 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					
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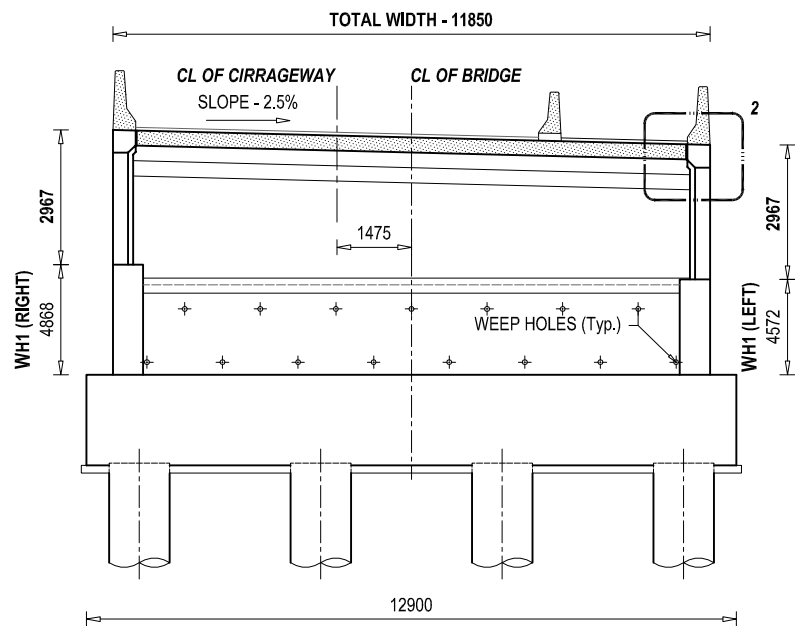


VIEW AT E1
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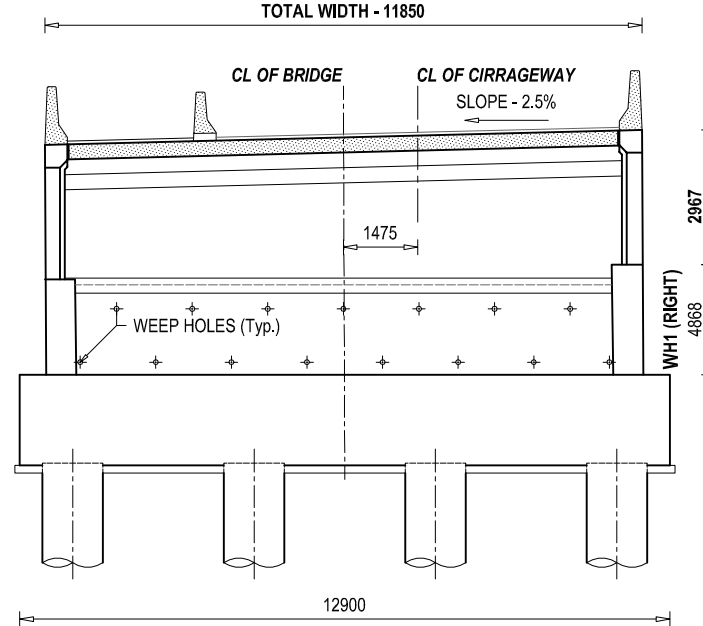


VIEW AT E2
SCALE - 1: 150

DETAIL AT RETURN WALL

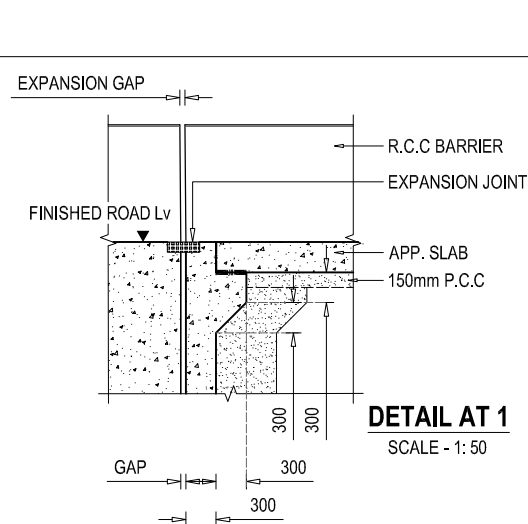


SECTIONAL VIEW AT D1 - D1
SCALE - 1: 150



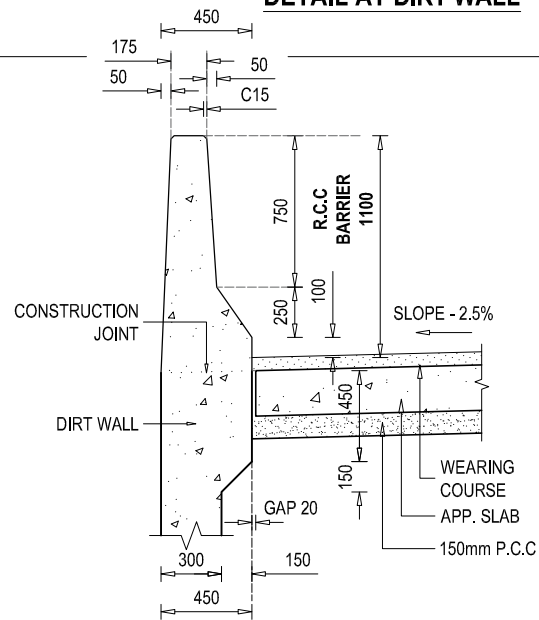
SECTIONAL VIEW AT D2 - D2
SCALE - 1: 150

DETAIL AT DIRT WALL

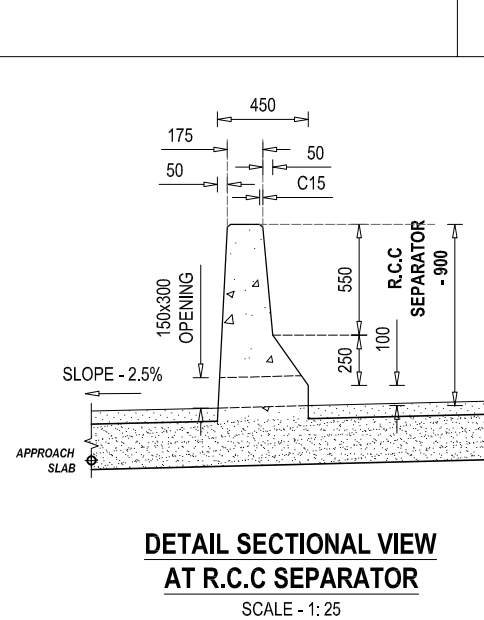


DETAIL AT 1
SCALE - 1: 50

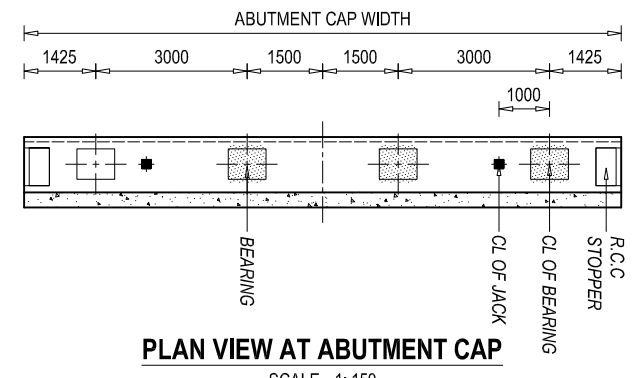
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JALAD/DD-4



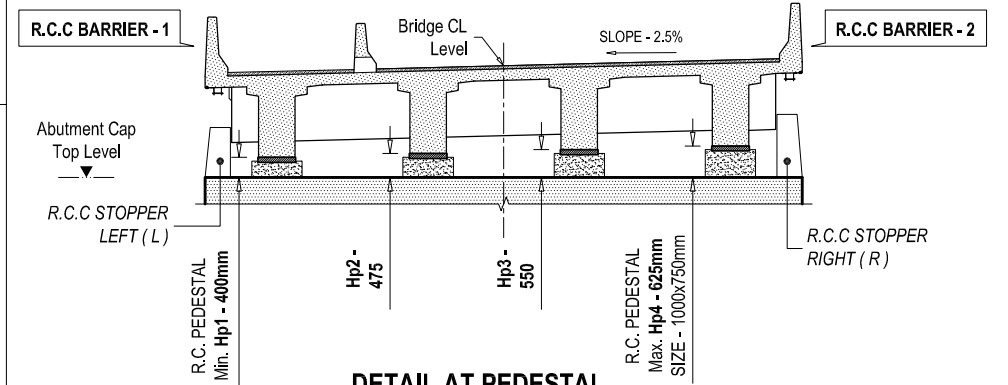
**DETAIL SECTIONAL VIEW
AT R.C.C BARRIER - 1
DETAIL AT 2**
SCALE - 1: 25



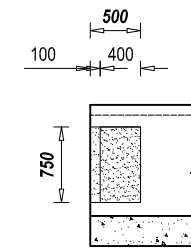
**DETAIL SECTIONAL VIEW
AT R.C.C SEPARATOR**
SCALE - 1: 25



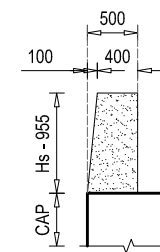
PLAN VIEW AT ABUTMENT CAP
SCALE - 1: 150



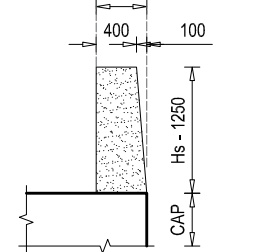
DETAIL AT PEDESTAL
SCALE - 1: 150



**R.C.C SEISMIC ARRESTER
PLAN VIEW**

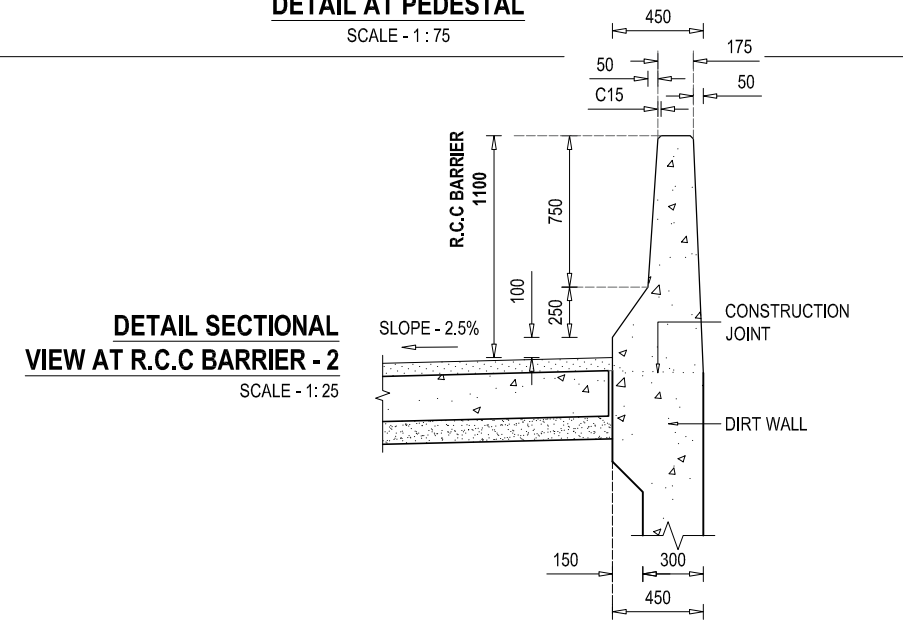


**R.C.C SEISMIC ARRESTER - LEFT
ELEVATION VIEW**



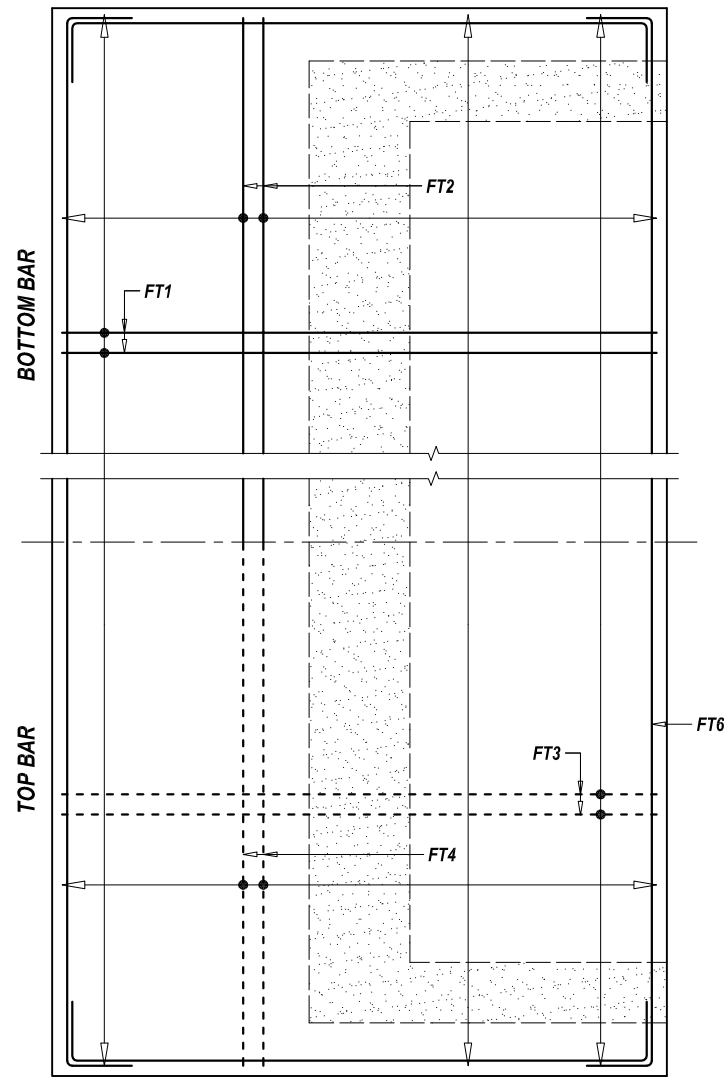
**R.C.C SEISMIC ARRESTER - RIGHT
ELEVATION VIEW**

DETAIL AT PEDESTAL
SCALE - 1: 75

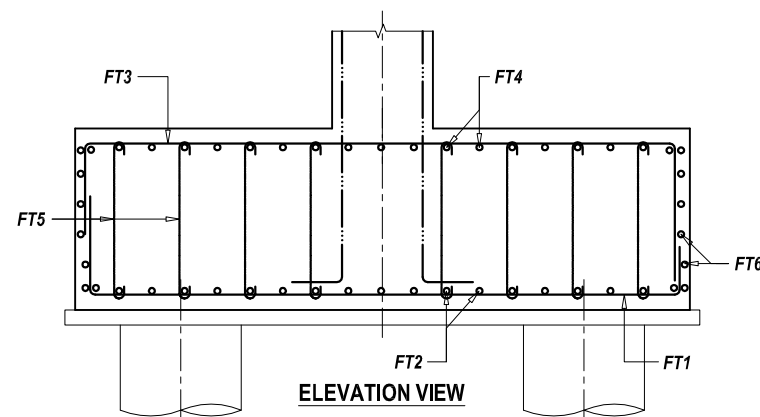


**DETAIL SECTIONAL
VIEW AT R.C.C BARRIER - 2**
SCALE - 1: 25

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-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of ep4sa EPTISA Servicios De Ingenieria Madrid, Spain cn STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kruti Consultant and Rays Consultant Private Limited	Designed By Mr. R.A. Nec.No. 5431 CML/W Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name ABUTMENT DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings KDP/DPR/STR/BR/JALAD/DD-9	Scale: AS SHOWN Chainage: 252+478	Date: 03.08.2023 Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 7 Sheet No. 2 / 2
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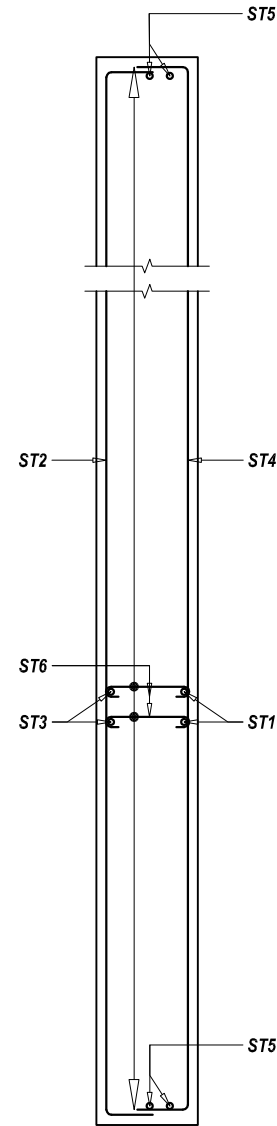


PLAN VIEW

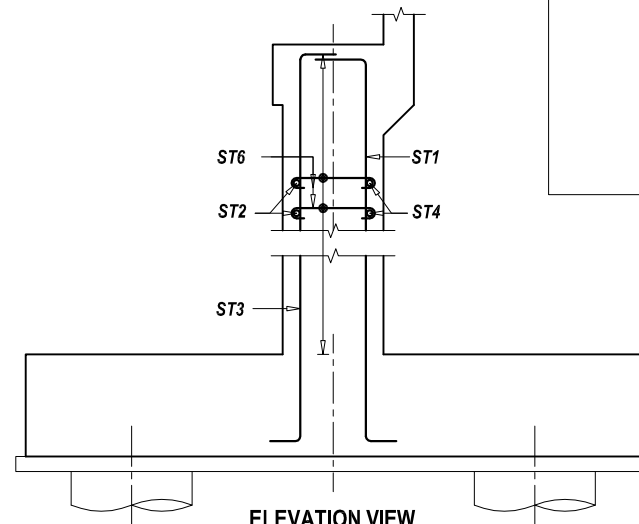


BAR DETAIL OF PILE CAP
SCALE - 1 : 75

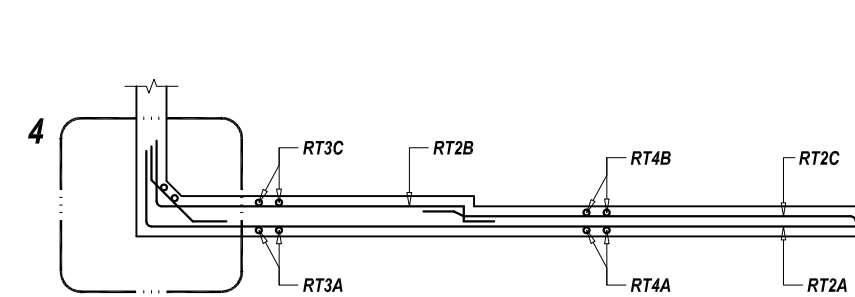
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READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JALAD/DD-4



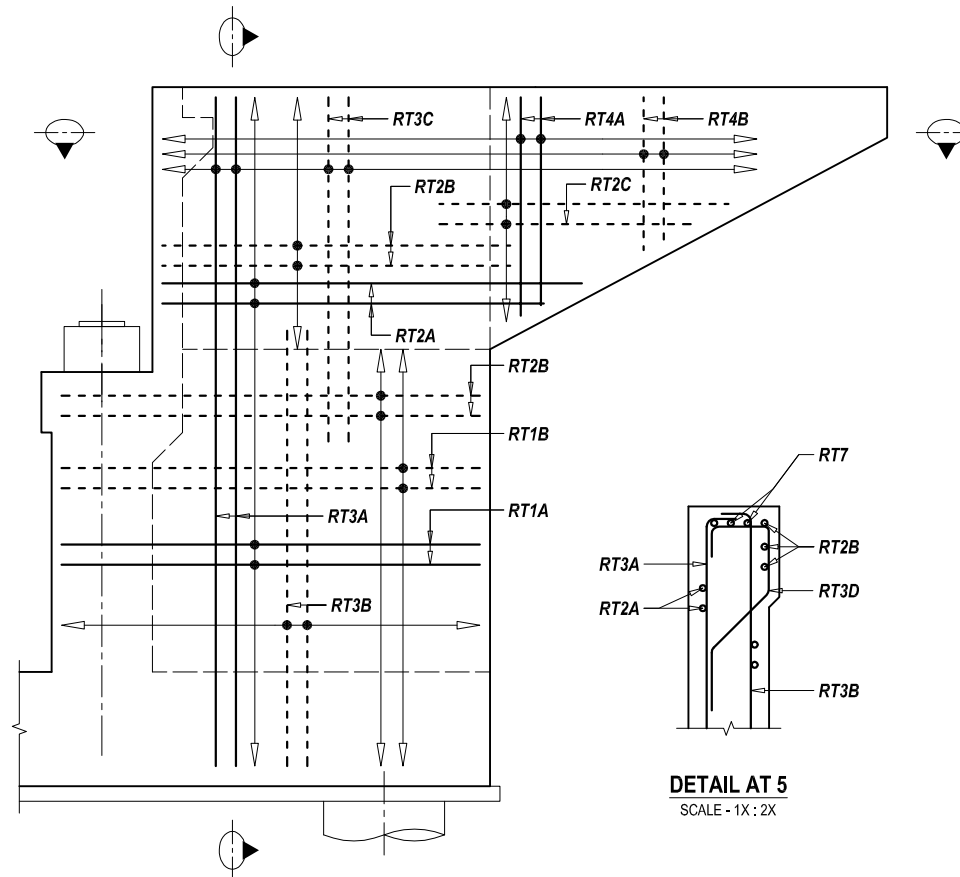
SECTIONAL PLAN VIEW



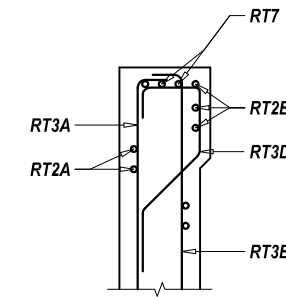
BAR DETAIL AT ABUTMENT STEM
SCALE - 1 : 75



SECTIONAL PLAN VIEW

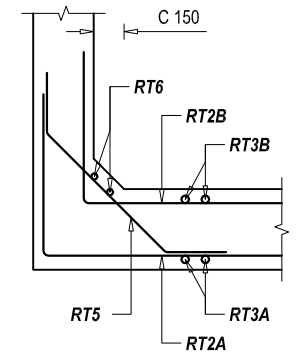


ELEVATION VIEW

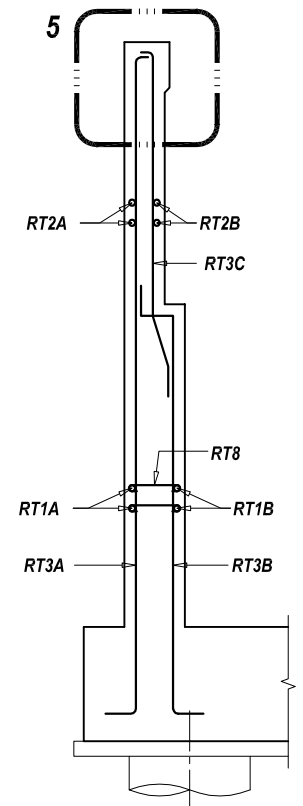


DETAIL AT 5
SCALE - 1X : 2X

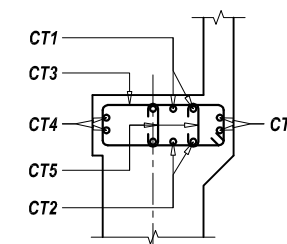
BAR DETAIL AT RETURN WALL
SCALE - 1 : 75



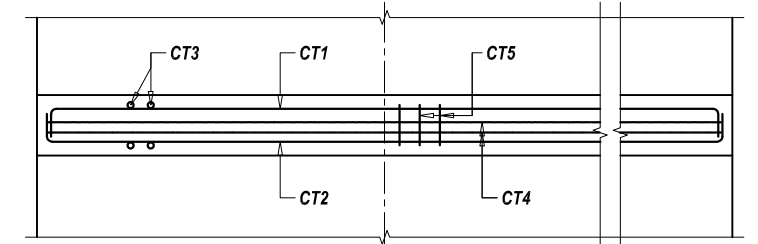
DETAILS AT 4



SECTIONAL SIDE VIEW



ELEVATION VIEW

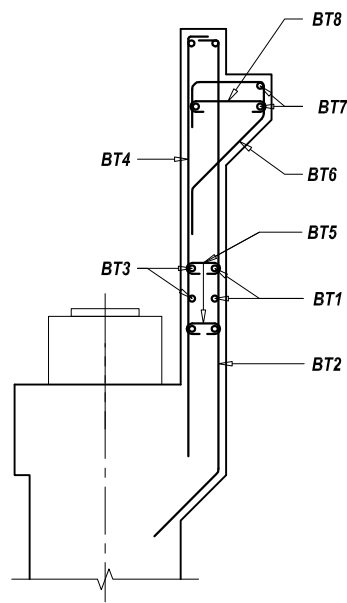


FRONT VIEW

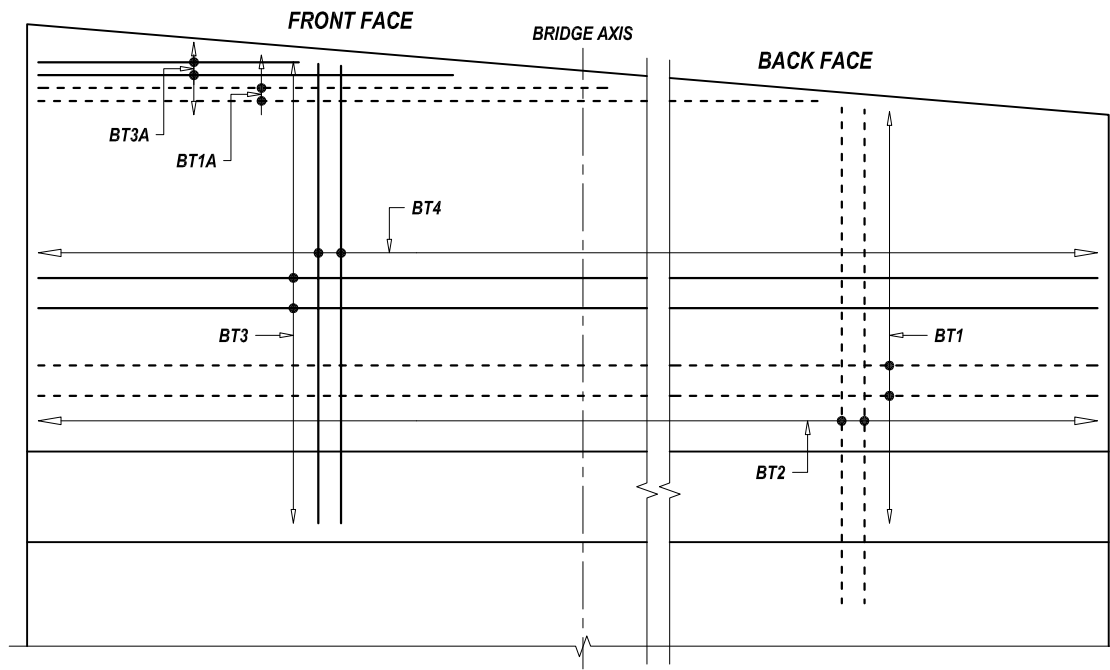
BAR DETAIL AT ABUTMENT CAP
SCALE - 1 : 75

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

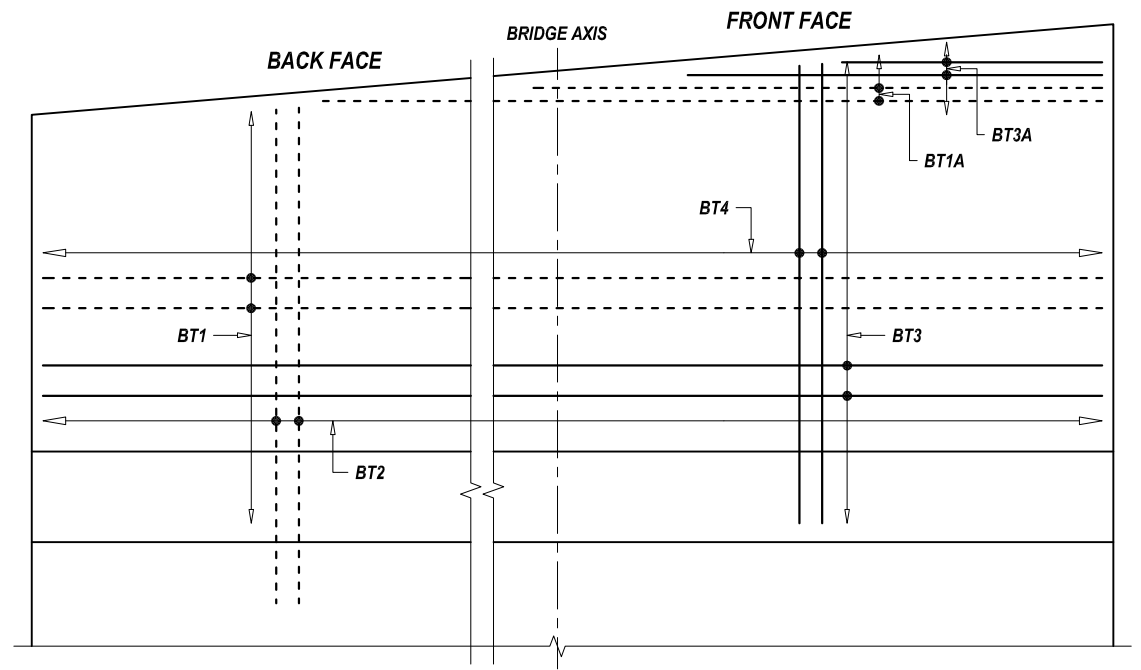
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of ep4sa 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	Checked By	Mr. S.M.	ABUTMENT REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JALAD	AS SHOWN	03.08.2023
			Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/JALAD/DD-9	Chainage: 252+478	Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 8 Sheet No. 1 / 2



SECTIONAL SIDE VIEW



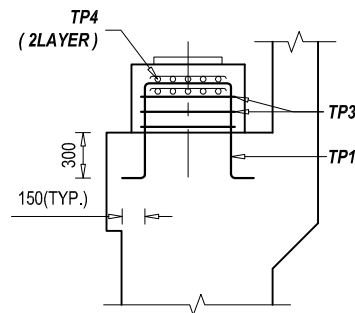
ELEVATION VIEW / VIEW AT D1



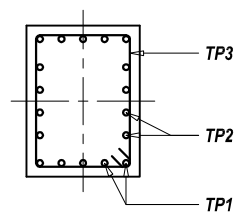
ELEVATION VIEW / VIEW AT D2

BAR DETAIL AT DIRT WALL

SCALE - 1 : 50



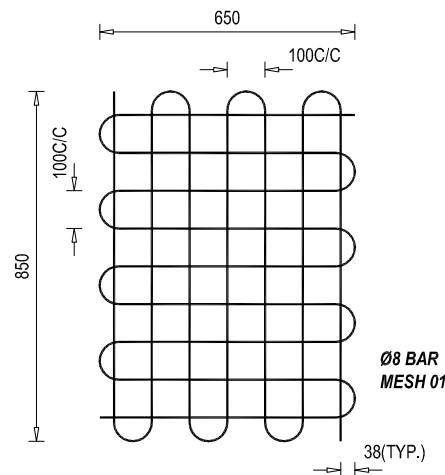
SECTIONAL SIDE VIEW



SECTIONAL PLAN VIEW
BAR DETAIL AT PEDESTAL

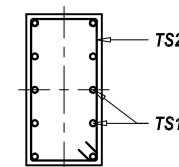
SCALE - 1 : 50

NOTE
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DRG NO. KDP/DPR/STR/BR/JALAD/DD-4

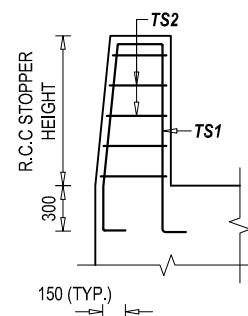


REINFORCEMENT DETAILS OF
BEARING MESH

SCALE - 1 : 50

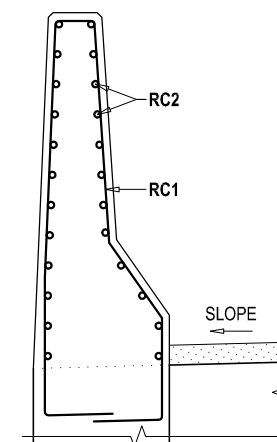


SECTIONAL PLAN VIEW



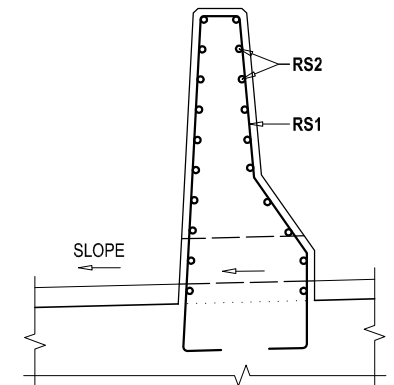
R.C.C STOPPER LEFT
ELEVATION VIEW

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

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 Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkata, India In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited	Checked By	Mr. S.M.	ABUTMENT REINGORCEMENT DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings KDP/DPR/STR/BR/JALAD/DD-9	Chainage: 252+478	Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 8 Sheet No. 2 / 2
			Approved By	Mr. H.B.			

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	150 11700 150	16	200	12.000	17	1.580	322.37
2	BT 1A	Avg. 5850 150	16	200	6.000	3	1.580	28.44
3	BT 2	150 2903 Avg. 450	16	125	3.503	96	1.580	531.42
4	BT 3	150 11700 150	16	200	12.000	13	1.580	246.52
5	BT 3A	Avg. 5850 150	16	200	6.000	3	1.580	28.44
6	BT 4	150 2978 Avg.	12	125	3.128	96	0.889	266.92
7	BT 5	100 150 100	12	500	0.350	120	0.889	37.33
8	BT 6	200 450 220 200 756	12	200	1.826	61	0.889	99.01
9	BT 7	11700	16		11.700	5	1.580	92.44
10	BT 8	100 450 100	12	200	0.650	120	0.889	69.33
TOTAL (KG) :								1722.24

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	300 11700 300	16	150	12.300	11	1.580	213.81
2	CT 2	300 11700 300	16	150	12.300	11	1.580	213.81
3	CT 3	450 1300 100	16	150	3.700	80	1.580	467.75
4	CT 4	300 11700 300	12	150	12.300	8	0.889	87.47
5	CT 5	450 100 100	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	ST 1	300 6919 750	25		7.969	130	3.858	3996.80
2	ST 2	500 11700 500	16	140	12.700	34	1.580	682.35
3	ST 3	300 6919 750	25		7.969	130	3.858	3996.80
4	ST 4	500 11700 500	16	140	12.700	34	1.580	682.35
5	ST 5	300 6919 750	16		7.969	16	1.580	201.49
6	ST 6	100 850 100	12	Ver. 450 Hor.450	1.050	297	0.889	277.20
TOTAL (KG) :								9836.98

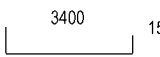
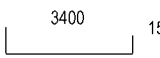
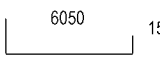
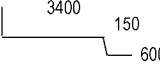
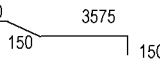
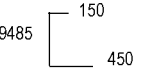
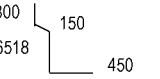
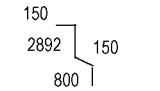
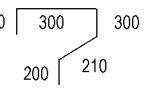
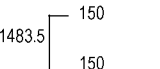
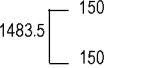
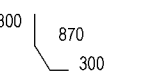
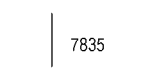
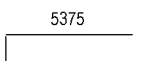
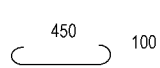
BAR BENDING SCHEDULE OF PILE CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	FT 1	900 5950 900	25		7.750	110	3.858	3288.97
2	FT 2	900 12750 900	20		14.550	50	2.469	1796.30
3	FT 3	900 5950 900	16		7.750	110	1.580	1347.16
4	FT 4	900 12750 900	16		14.550	50	1.580	1149.63
5	FT 5	100 1650 100	10	Long. 250 Trans.500	1.850	607	0.617	693.18
6	FT 6	5900 12710 150	16	200	37.520	8	1.580	474.33
TOTAL (KG) :								8749.56

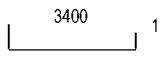
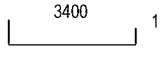
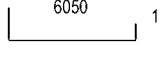
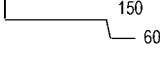
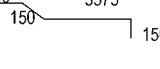
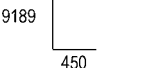
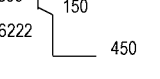
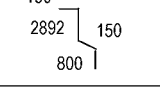
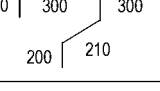
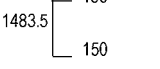
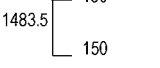
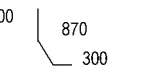
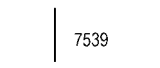
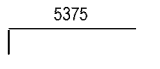
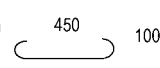
BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP 1	150 950 650 Avg.	16	150	2.850	6	1.580	27.02
1	TP 2	150 700 650 Avg.	16	150	2.350	8	1.580	29.71
2	TP 3	950 700 100	16	150	3.500	3	1.580	16.59
1	TP 4	850 650 @ 100	8		13.400	2	0.395	10.59
TOTAL (KG) :								83.91

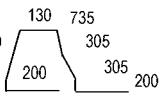
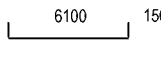
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - LEFT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-L	1010 400 1270 300 150 150	16	150	3.280	6	1.580	31.10
2	TS2-L	400 700 100	12	150	2.400	7	0.889	14.93
TOTAL (KG) :								46.03

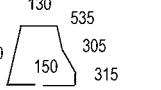
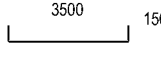
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TS1-R	1260 400 1525 300 150 150	16	150	3.785	6	1.580	35.89
2	TS2-R	400 700 100	12	150	3.400	9	0.889	27.20
TOTAL (KG) :								63.09

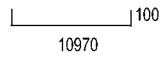
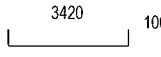
EMPLOYER		PROJECT NAME		DESIGN CONSULTANTS		Drawing Name		Scale:		Date:	
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Designed By	Mr. R.A. Nec.No. 6431 CRM/W 	ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JALAD		AS SHOWN		03.08.2023	
		 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkatta, India		Checked By	Mr. S.M. 	Reference Drawings		Chainage:		Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 9	
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B. 	-		252+478		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	53	0.889	188.44
2	RT1B		12	150	4.000	53	0.889	188.44
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	10.085	18	0.889	161.36
7	RT3B		16	150	7.918	18	1.580	225.22
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	74	0.889	96.69
13	RT6		12		7.835	2	0.889	13.93
14	RT7		20		5.6	4	2.469	55.31
15	RT8		12	200	0.650	312	0.889	180.27
TOTAL (KG) :								1813.56

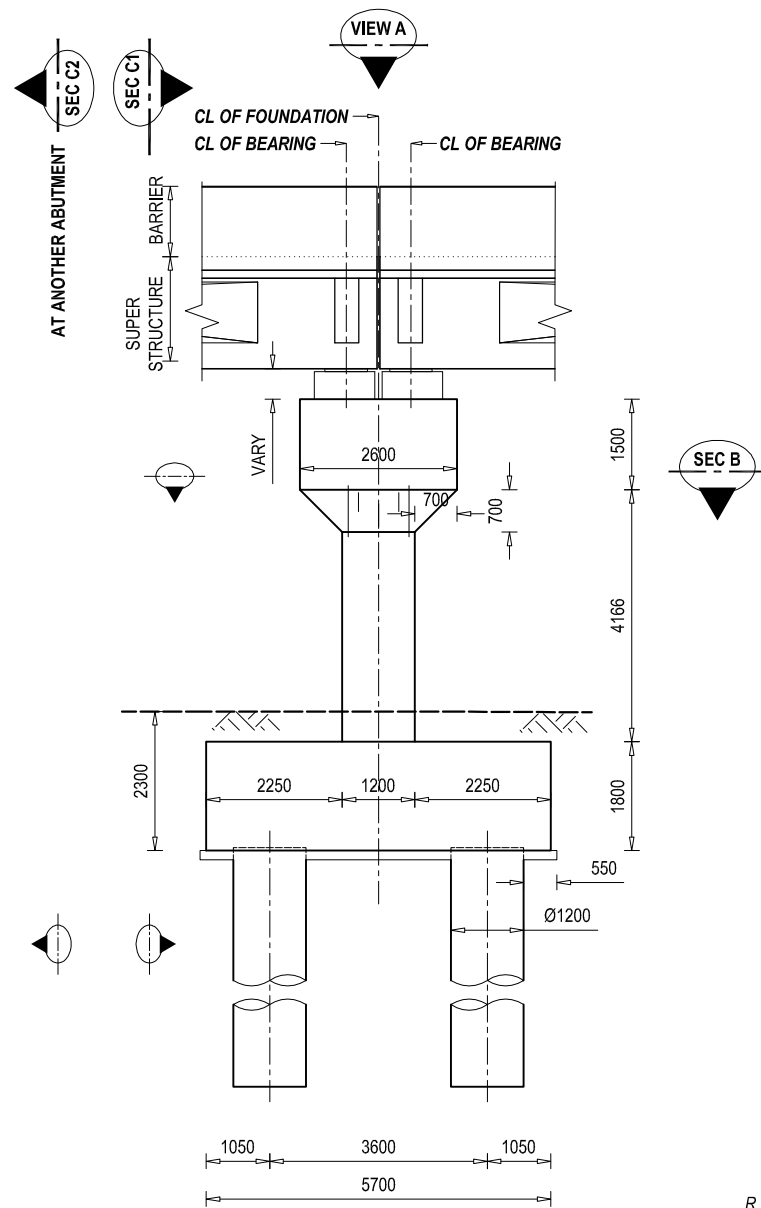
BAR BENDING SCHEDULE OF RETURN WALL - RIGHT								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RT1A		12	150	4.000	51	0.889	181.33
2	RT1B		12	150	4.000	51	0.889	181.33
3	RT2A		12	150	6.650	21	0.889	124.13
4	RT2B		12	150	4.300	21	0.889	80.27
5	RT2C		12	150	4.475	21	0.889	83.53
6	RT3A		12	150	9.789	18	0.889	156.62
7	RT3B		16	150	7.622	18	1.580	216.80
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	74	0.889	96.69
13	RT6		12		7.539	2	0.889	13.40
14	RT7		20		5.6	4	2.469	55.31
15	RT8		12	200	0.650	293	0.889	169.29
TOTAL (KG) :								1774.68

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

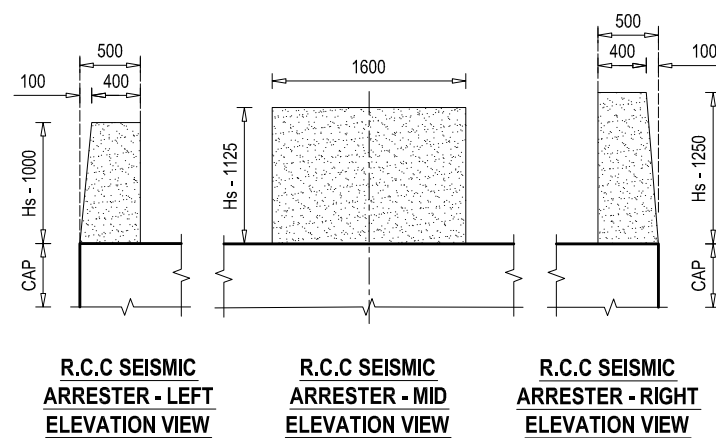
BAR BENDING SCHEDULE OF R.C.C SEPARATOR								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	RS1		16	150	2.695	25	1.580	106.47
2	RS2		10	150	3.800	17	0.617	39.88
TOTAL (KG) :								146.35

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

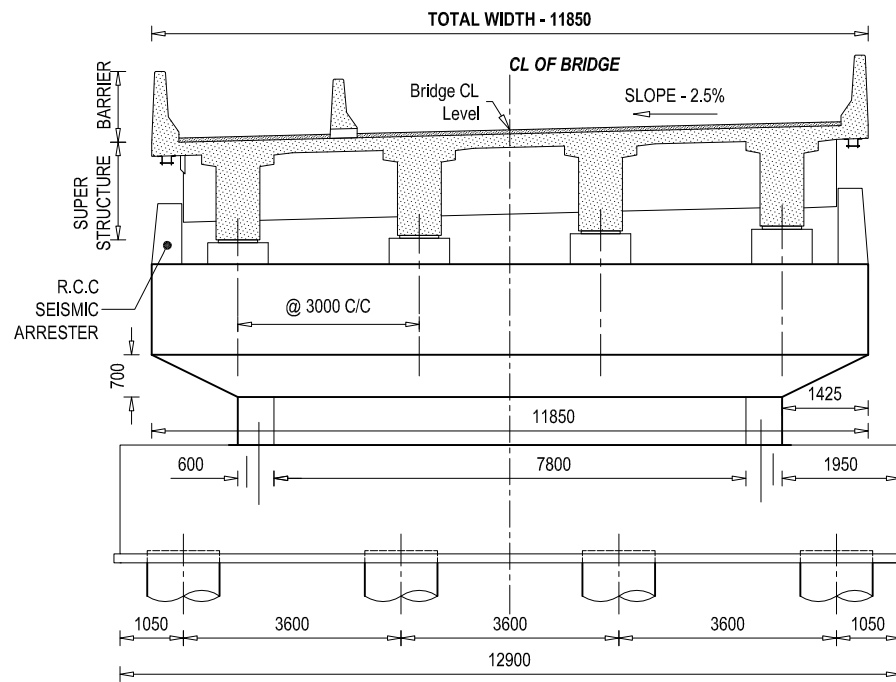
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 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Designed By	Mr. R.A. Nec.No. 6431 CRM/W 	ABUTMENT BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JALAD		AS SHOWN		03.08.2023	
		 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkatta, India		Checked By	Mr. S.M. 	Reference Drawings		Chainage:		Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 9	
		In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B. 	-		252+478		Sheet No. 2 / 2	



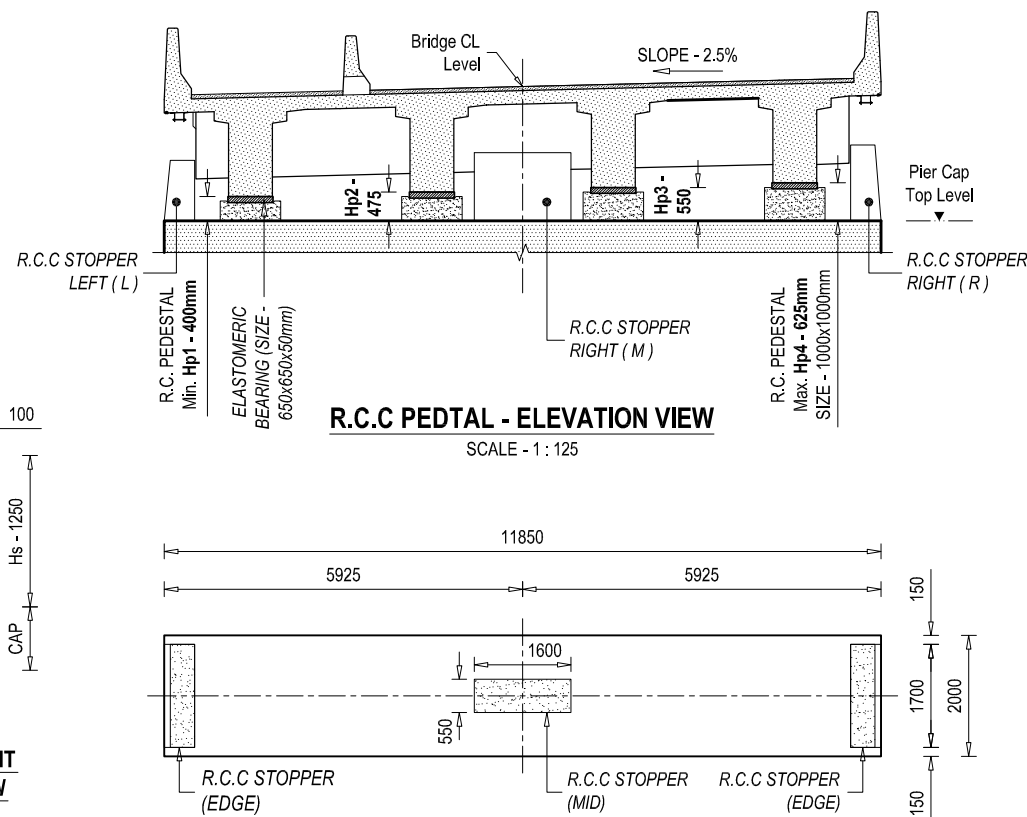
ELEVATION VIEW OF PIER
SCALE - 1 : 125



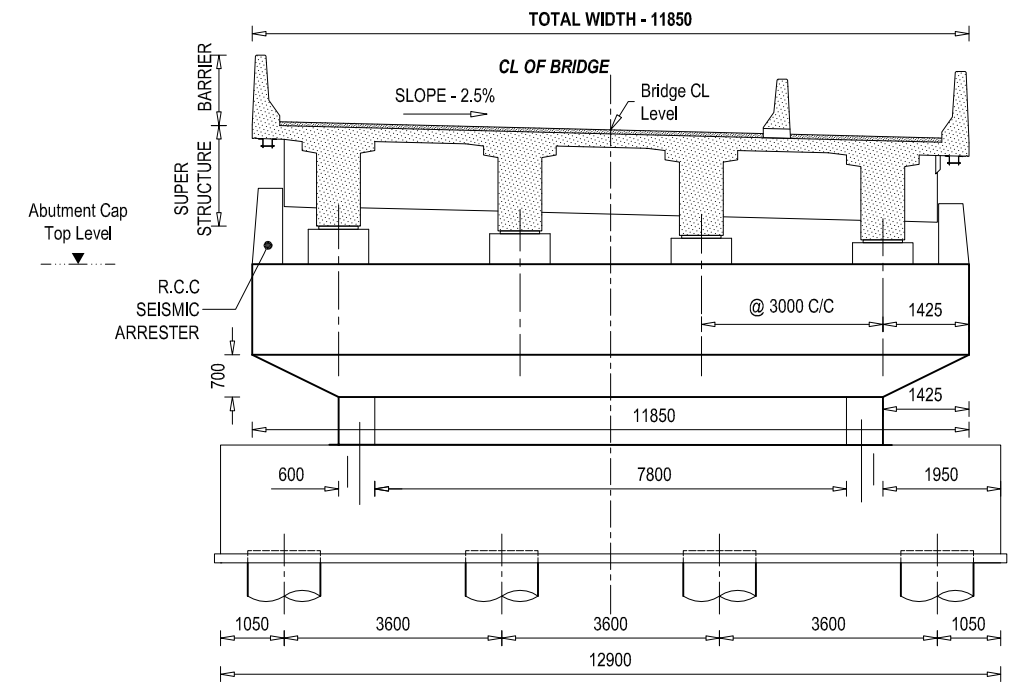
DETAIL AT PEDESTAL
SCALE - 1 : 75



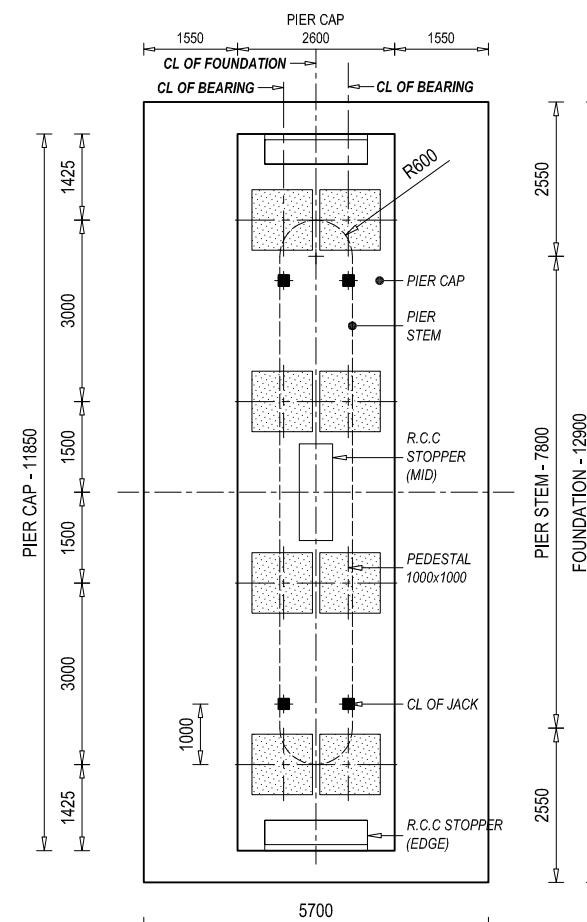
SECTIONAL VIEW AT C1 - C1
SCALE - 1 : 125



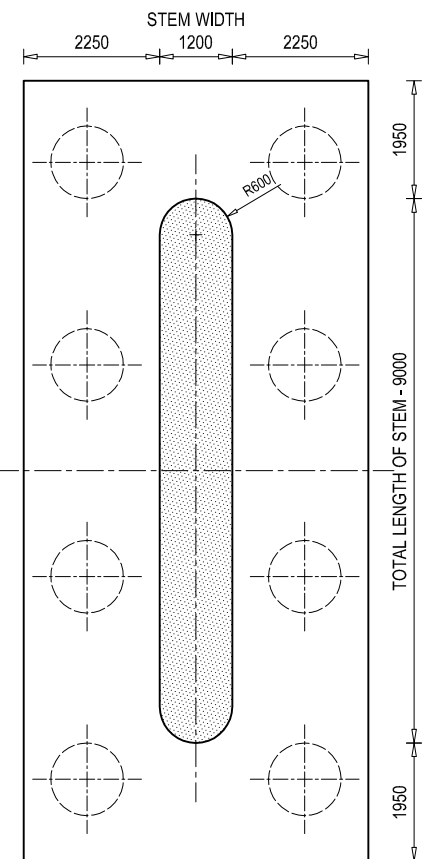
DETAIL AT R.C.C SEISMIC ARRESTER
SCALE - 1 : 150



SECTIONAL VIEW AT C2 - C2
SCALE - 1 : 125



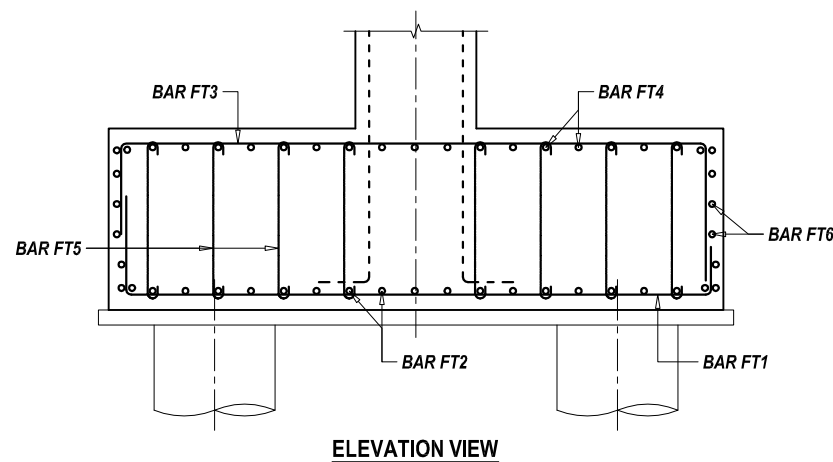
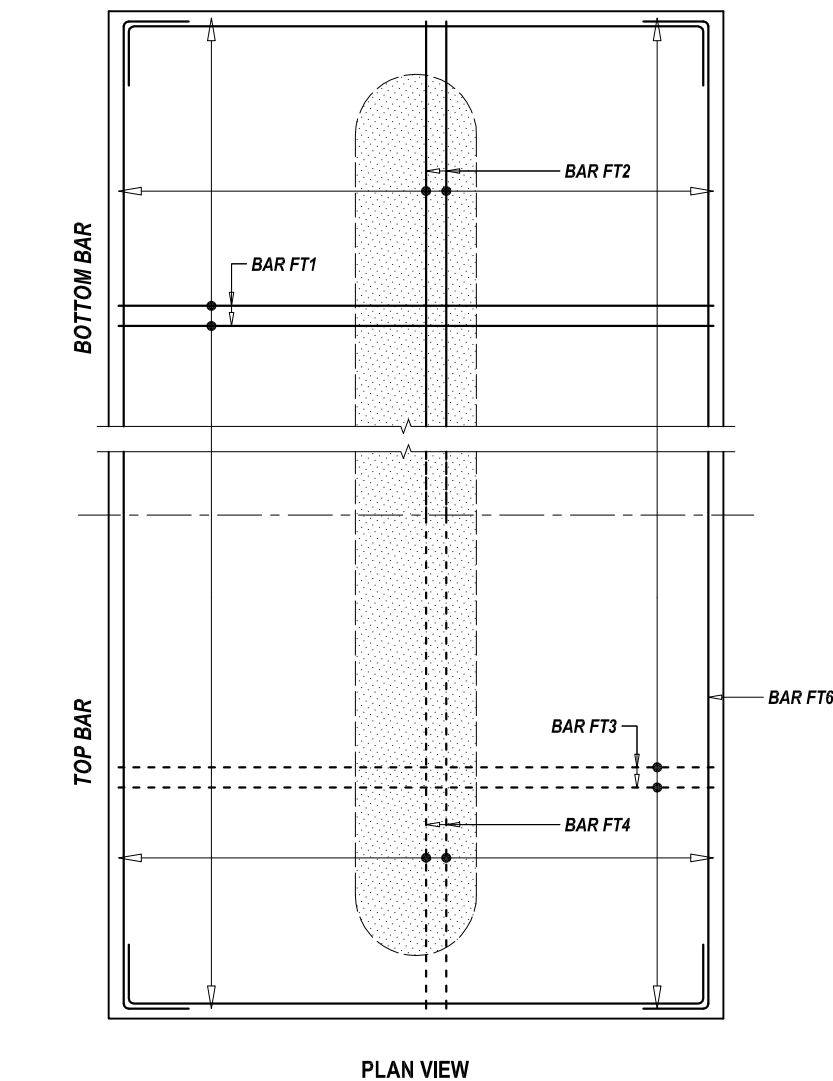
PLAN VIEW OF PIER (VIEW AT A)
SCALE - 1 : 125



SECTIONAL VIEW AT B - B
SCALE - 1 : 125

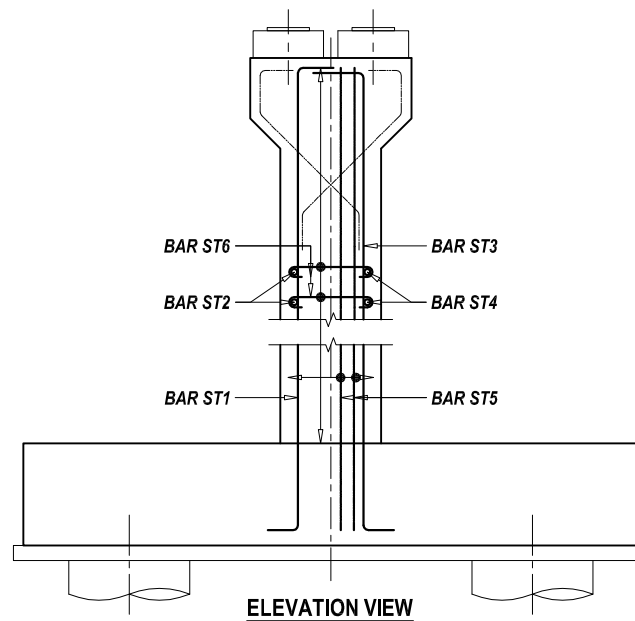
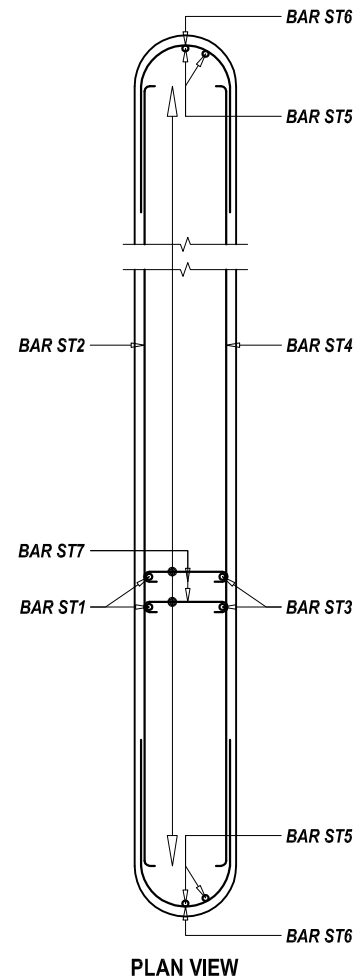
NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JALAD/DD-4

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-Dhalkabar-Pathlajay 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 Kritt Consultant and Rays Consultant Private Limited	Mr. R.A. Nec.No. 6431 CRM/W Signature Mr. S.M. Signature Mr. H.B. Signature	PIER DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings KDP/DPR/STR/BR/JALAD/DD-12	AS SHOWN Chainage: 252+478	02.06.2023 Drawing No.- KDP/DPR/STR/BR/JALAD/DD-10 Sheet No. 1/1



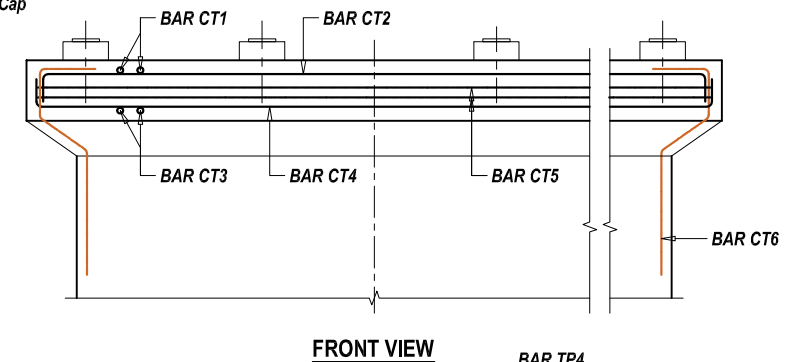
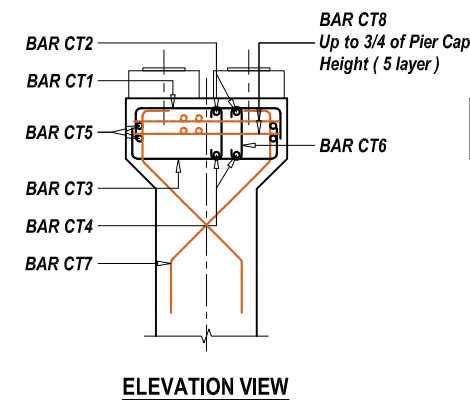
BAR DETAIL OF FOUNDATION

SCALE - 1 : 75



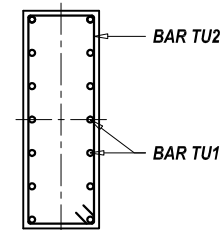
BAR DETAIL AT PIER STEM

SCALE - 1 : 75

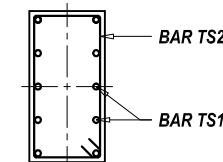


BAR DETAIL AT PIER CAP

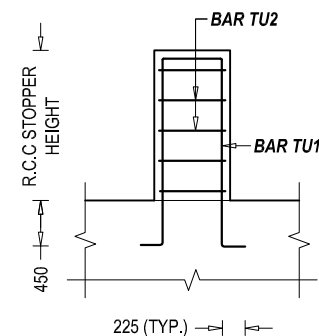
SCALE - 1 : 75



SECTIONAL PLAN VIEW



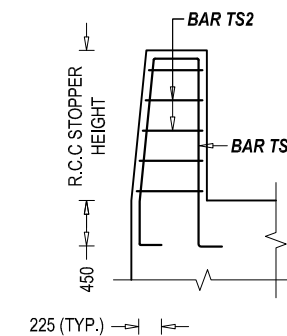
SECTIONAL PLAN VIEW



SECTIONAL ELEVATION VIEW

R.C.C STOPPER AT MID

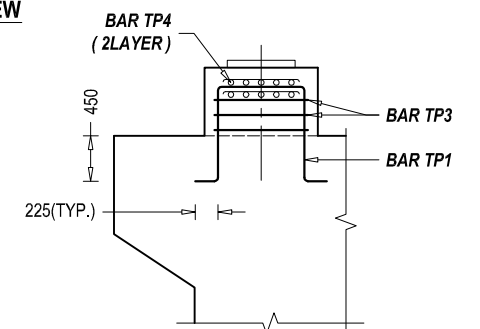
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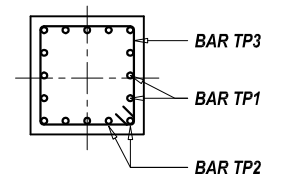
SECTIONAL ELEVATION VIEW

R.C.C STOPPER AT EDGE

SCALE - 1 : 50



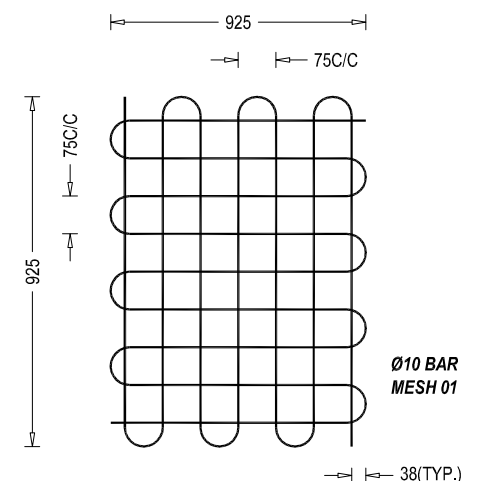
SECTIONAL SIDE VIEW



SECTIONAL PLAN VIEW

BAR DETAIL AT PEDESTAL

SCALE - 1 : 50



REINFORCEMENT DETAILS OF BEARING MESH

SCALE - 1 : 50

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

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



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

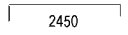
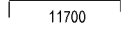
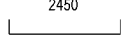
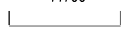
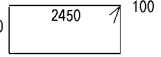
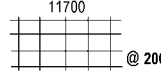
DESIGN CONSULTANTS
Joint Venture of
EPTISA Servicios De Ingeniera Madrid, Spain
STUP Consultants Private Limited Kolkata, India
In Association With
Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited

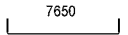
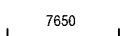
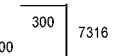
Designed By Mr. R.A.
Nec.No. 6431 CRM/W
Checked By Mr. S.M.
Approved By Mr. H.B.

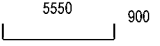
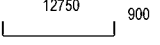
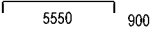
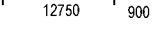
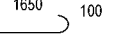
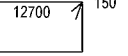
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PIER BAR DETAILS OF BRIDGE OVER RIVER JALAD
Reference Drawings
KDP/DPR/STR/BR/JALAD/DD-12

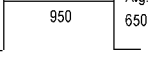
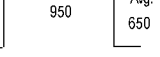
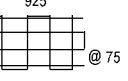
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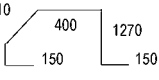
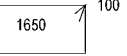
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Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 11
Sheet No.1/1

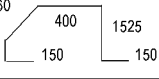
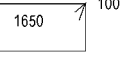
BAR BENDING SCHEDULE OF PIER CAP								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CT1	750  750	32		3.950	75	6.321	1872.59
2	CT2	750  750	32		13.200	20	6.321	1668.74
3	CT3	750  750	32		3.950	75	6.321	1872.59
4	CT4	750  750	32		13.200	20	6.321	1668.74
5	CT5	11700  100	16		28.500	11	1.580	495.41
6	CT6	100  100	16	X: 260 Y: 320	1.550	370	1.580	906.27
7	CT7	100  100	16		1.550	137	1.580	335.57
8	CT8	2450  @ 200	16		296.650	5 Layer	1.580	2343.90
TOTAL (KG) :								11163.81

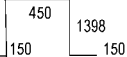
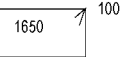
BAR BENDING SCHEDULE OF PIER STEM								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	ST1	300  900	25		8.516	70	3.858	2299.85
2	ST2	100  100	16	200	7.850	21	1.580	260.50
3	ST3	300  900	25		8.516	70	3.858	2299.85
4	ST4	100  100	16	200	7.850	21	1.580	260.50
5	ST5	300  900	25		8.516	12	3.858	394.26
5	ST6	720  1885	16	200	3.325	42	1.580	220.68
6	ST7	100  100	12	Ver. 110 Hor. 400	1.250	874	0.889	971.11
TOTAL (KG) :								6706.75

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	90	3.858	2552.08
2	FT2	900  900	25		14.550	50	3.858	2806.71
3	FT3	900  900	25		7.350	90	3.858	2552.08
4	FT4	900  900	25		14.550	50	3.858	2806.71
5	FT5	100  100	12	Long. 225 Trans. 275	1.85	1144	0.889	1881.24
6	FT6	5500  150	16	200	36.700	8	1.580	463.96
TOTAL (KG) :								13062.80

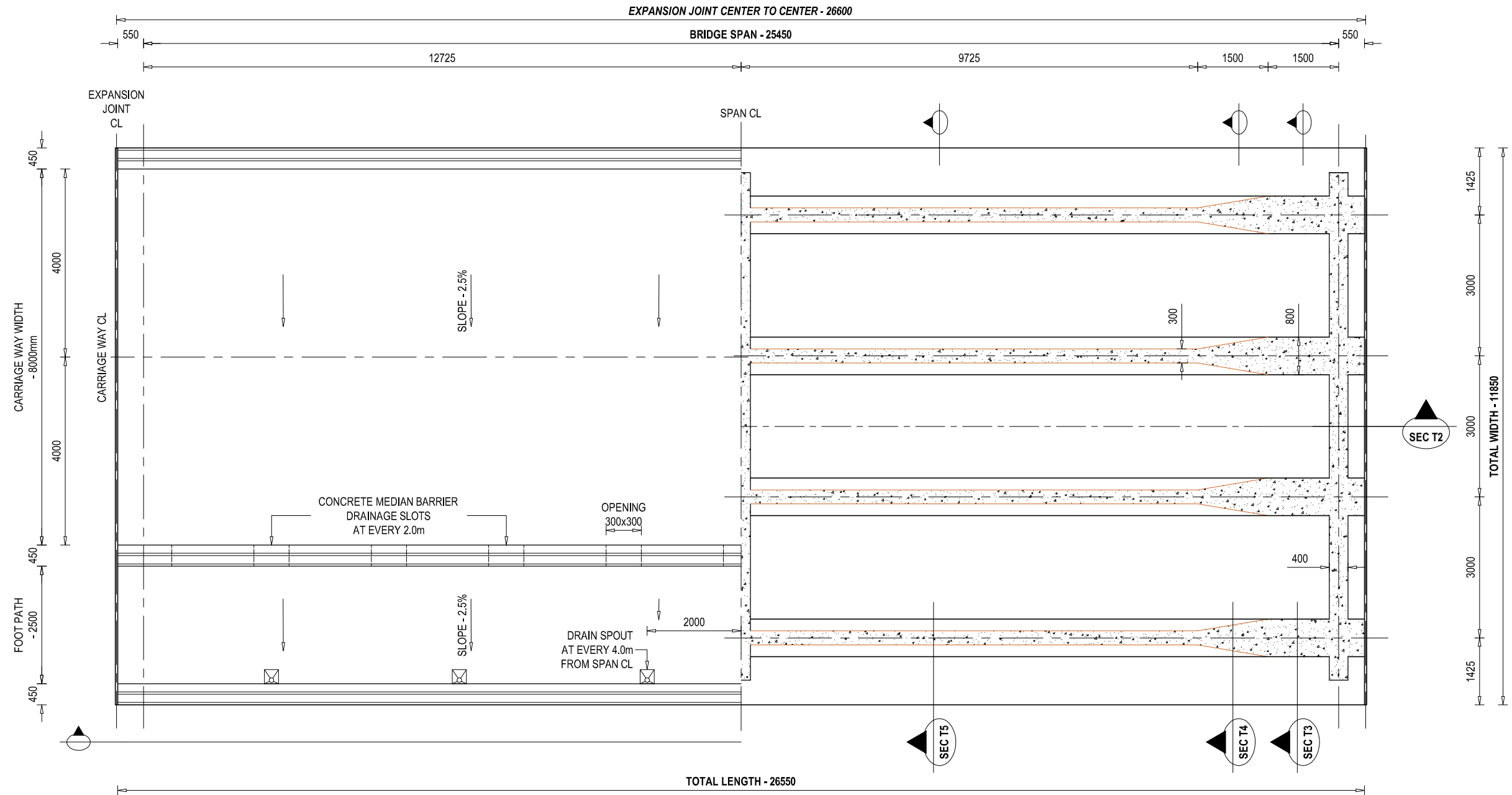
BAR BENDING SCHEDULE OF PEDESTAL								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TP1	150  Avg. 650	16	150	2.850	8	1.580	36.03
2	TP2	150  Avg. 650	16	150	2.850	8	1.580	36.03
3	TP3	950  100	16	150	4.000	3	1.580	18.96
4	TP4	925  @ 75	10		26.000	2	0.617	32.10
TOTAL (KG) :								123.12

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	13	1.580	67.38
2	TS2-L	400  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  150	16	150	3.785	13	1.580	77.76
2	TS2-R	400  100	12	150	4.300	9	0.889	34.40
TOTAL (KG) :								112.16

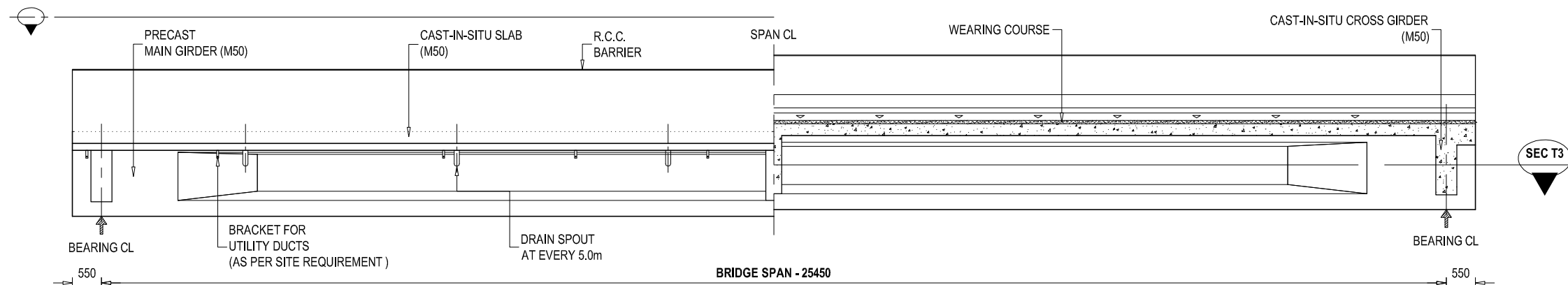
BAR BENDING SCHEDULE OF RCC SEISMIC ARRESTER - MID								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	TU1	1398  150	16	150	3.546	13	1.580	72.85
2	TU2	450  100	12	150	4.200	8	0.889	29.87
TOTAL (KG) :								102.71

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-Pathalaya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of		Designed By	Mr. R.A. Nec.No. 6431 CRM/W 	PIER BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JALAD		AS SHOWN		02.06.2023	
		 EPTISA Servicios De Ingeniera Madrid, Spain  STUP Consultants Private Limited Kolkatta, India		Checked By	Mr. S.M. 	Reference Drawings		Chainage: 252+478		Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 12	
		In Association With Udaya Consultancy, Geocom International, Sundar Kritt Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B. 	-				Sheet No. 1/1	



HALF SECTIONAL PLAN VIEW OF SUPERSTRUCTURE AT SEC T1

SCALE - 1 : 100 @ A3 PAPER

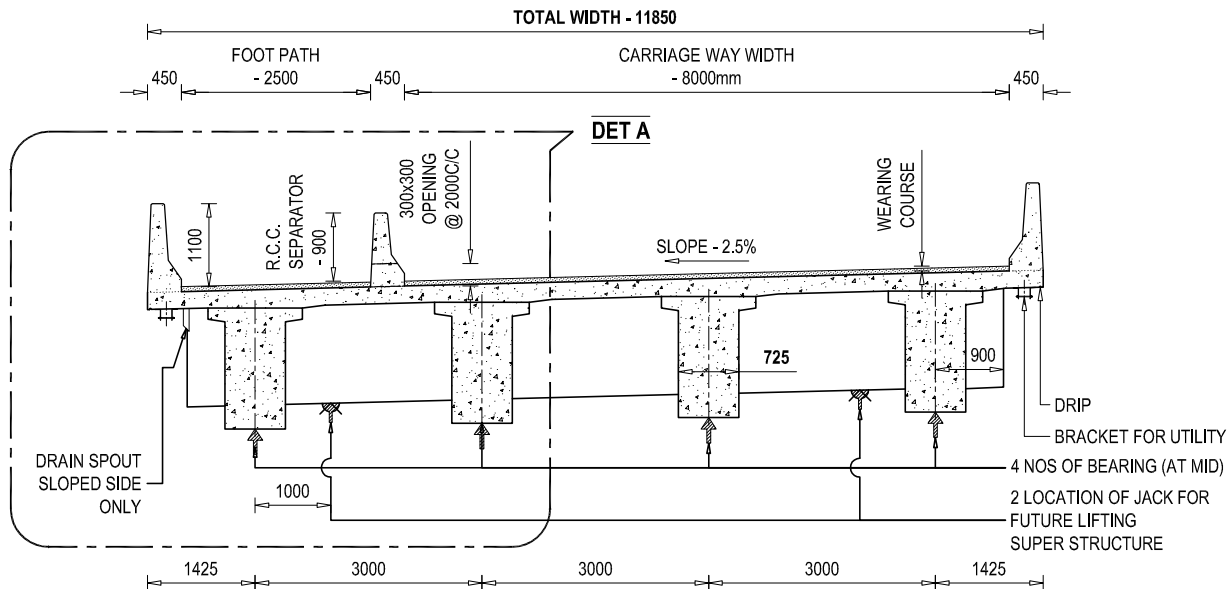


HALF ELEVATION SECTIONAL VIEW OF SUPERSTRUCTURE AT SEC T2

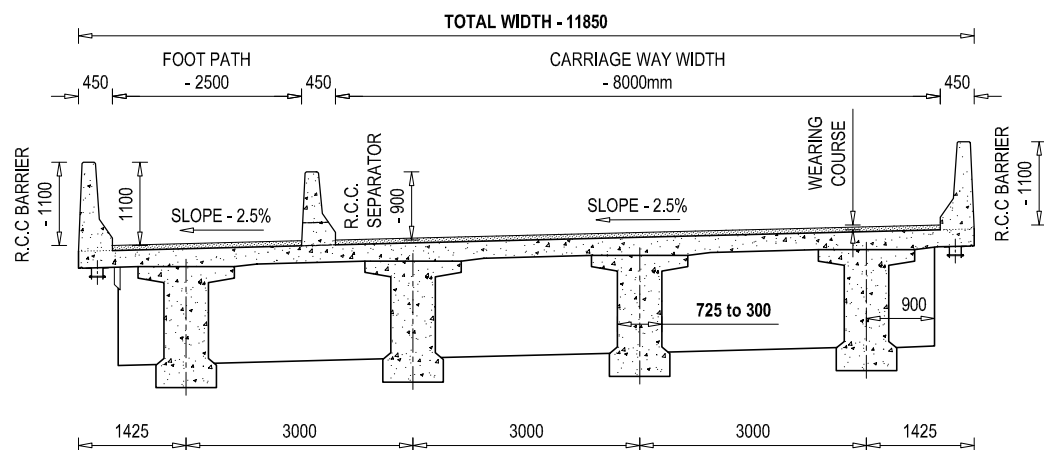
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NOTE
READ THIS DRAWING IN CONJUNCTION WITH
DRG NO. KDP/DPR/STR/BR/JALAD/DD-4

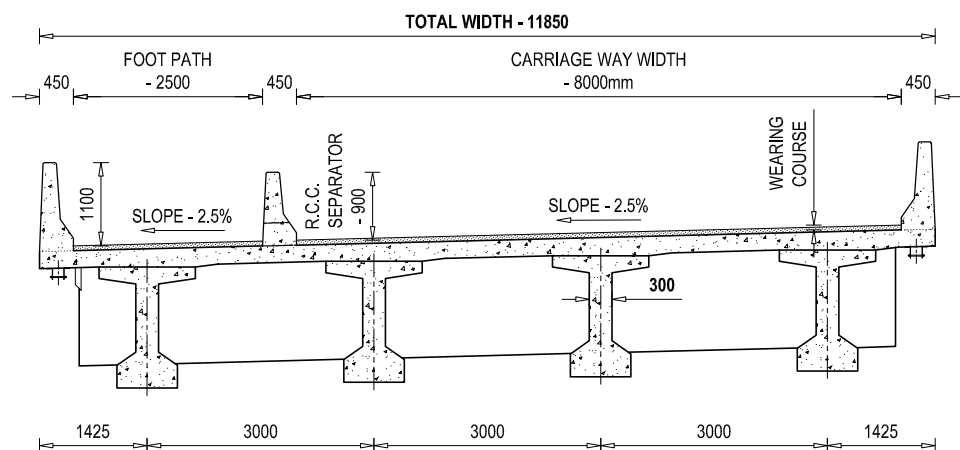
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of  EPTISA Servicios De 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.A. Nec.No. 6431 C104/W	SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER JALAD	SCALE: AS SHOWN Chainage: 252+478	19.04.2023
			Checked By Mr. S.M.	Reference Drawings KDP/DPR/STR/BR/JALAD/DD-17		Drawing No. KDP/DPR/STR/BR/JALAD/DD-13
			Approved By Mr. H.B.			Sheet No. 1 / 2



SECTIONAL VIEW AT T3
SCALE - 1 : 100 @ A3 PAPER

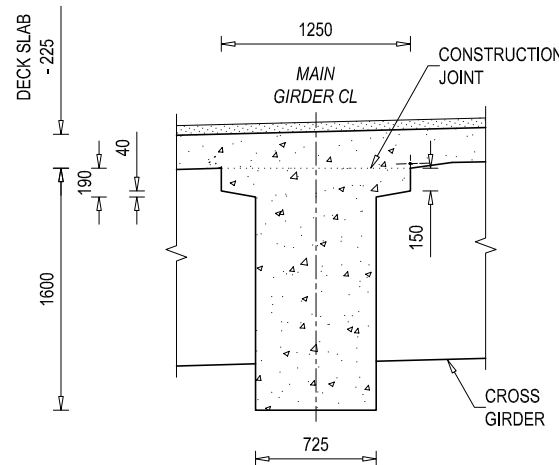


SECTIONAL VIEW AT T4
SCALE - 1 : 100 @ A3 PAPER

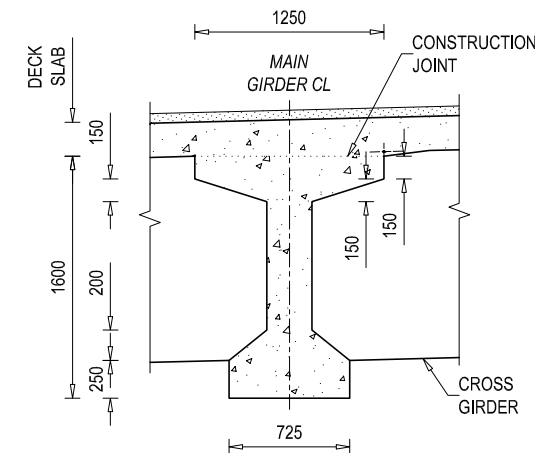


SECTIONAL VIEW AT T5
SCALE - 1 : 100 @ A3 PAPER

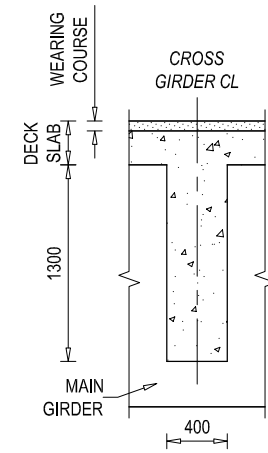
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DRG NO. KDP/DPR/STR/BR/JALAD/DD-4



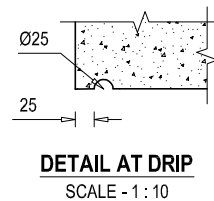
LONGITUDINAL GIRDER - SECTIONAL DETAIL AT END
SCALE - 1 : 50 @ A3 PAPER



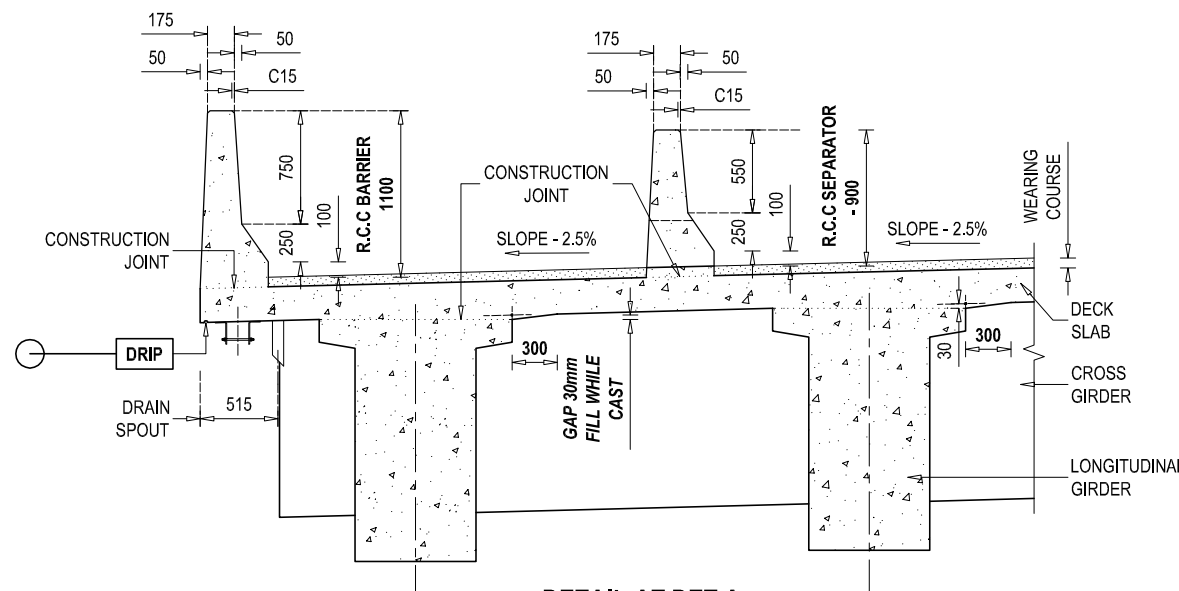
LONGITUDINAL GIRDER - SECTIONAL DETAIL AT MID
SCALE - 1 : 50 @ A3 PAPER



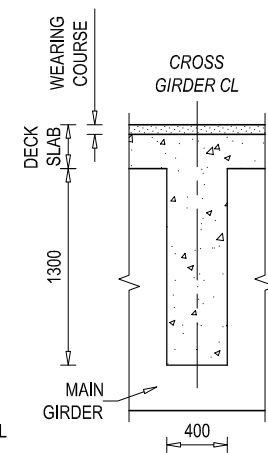
END CROSS GIRDER - SECTIONAL DETAIL
SCALE - 1 : 50



DETAIL AT DRIP
SCALE - 1 : 10



DETAIL AT DET A
SCALE - 1 : 50



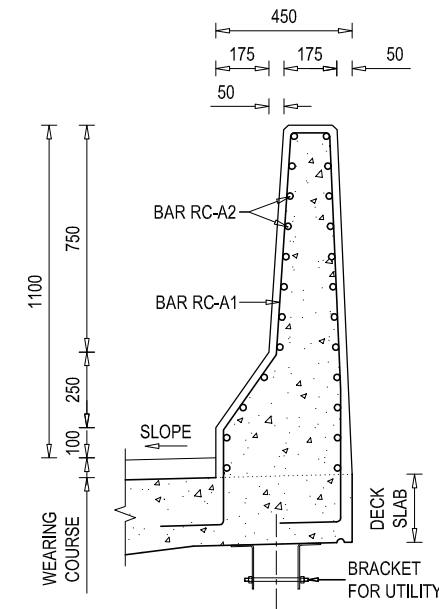
MID CROSS GIRDER - SECTIONAL DETAIL
SCALE - 1 : 50

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 Ingeniera 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.A. Nec.No. 6431 CIVIL/14/ Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name SUPER STRUCTURE DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings KDP/DPR/STR/BR/JALAD/DD-17	Scale: SCALE: AS SHOWN Chainage: 252+478	Date: 19.04.2023 Drawing No. KDP/DPR/STR/BR/JALAD/DD-13 Sheet No. 2 / 2
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LEGEND FOR REINFORCEMENT BAR

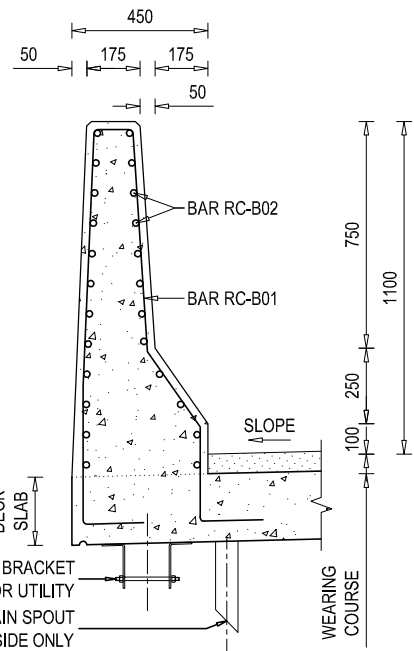
CODE	FULL FORM		
DS	- DECK SLAB	CG	- CROSS GIRDER
RB	- R.C.C BARRIER	AS	- APPROACH SLAB
RS	- R.C.C SEPARATOR	ST	- STOPPER
MG	- MAIN GIRDER	**	- ***

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



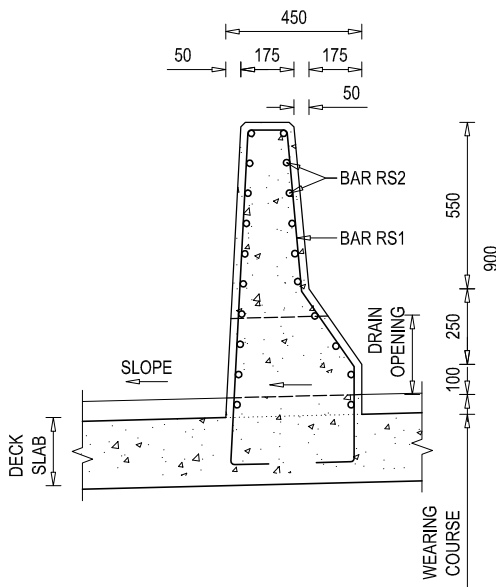
REINFORCEMENT DETAILS OF
R.C.C BARRIER (A)- SECTIONAL VIEW

SCALE - 1 : 25



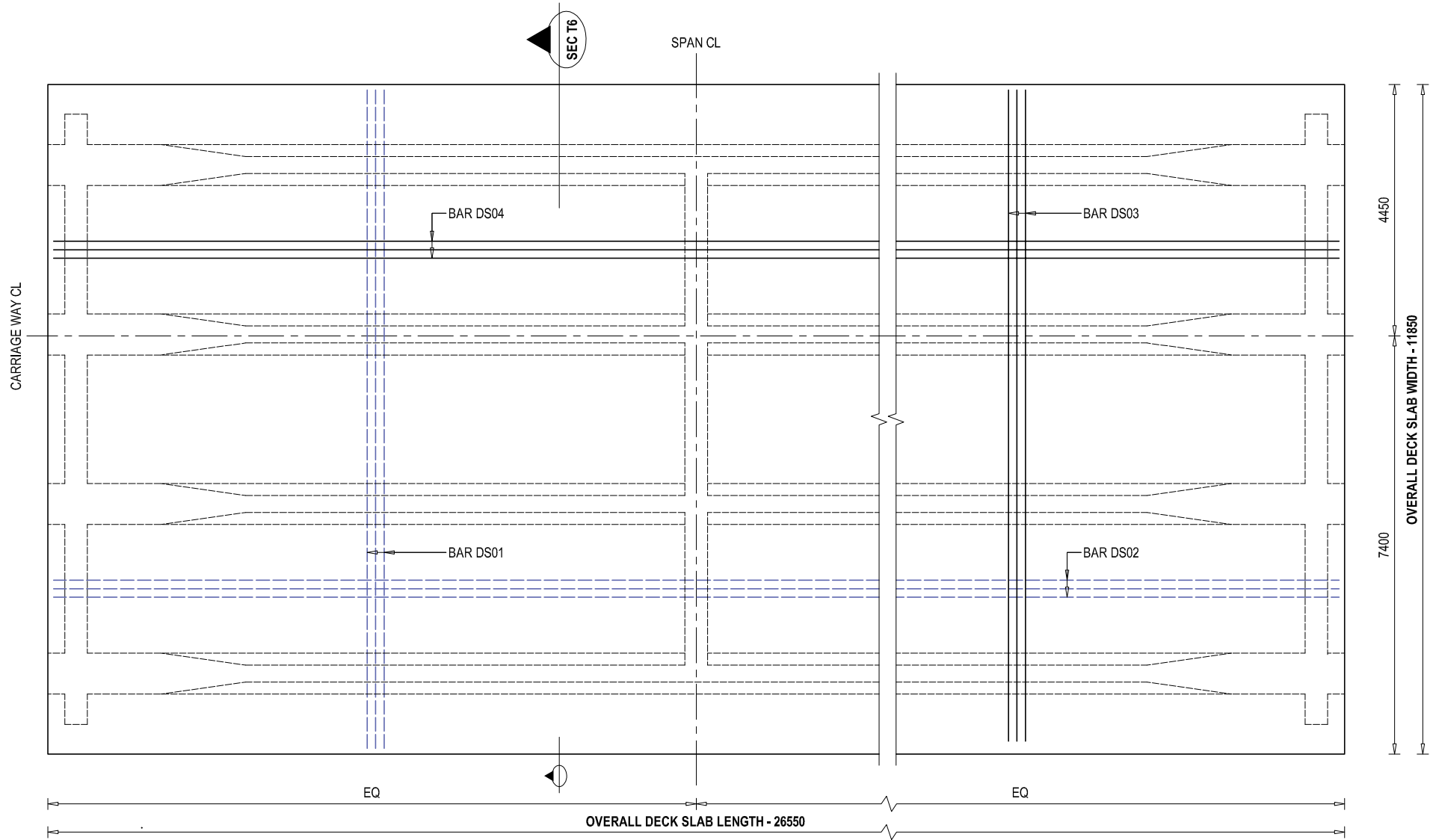
REINFORCEMENT DETAILS OF
R.C.C BARRIER (B)- SECTIONAL VIEW

SCALE - 1 : 25



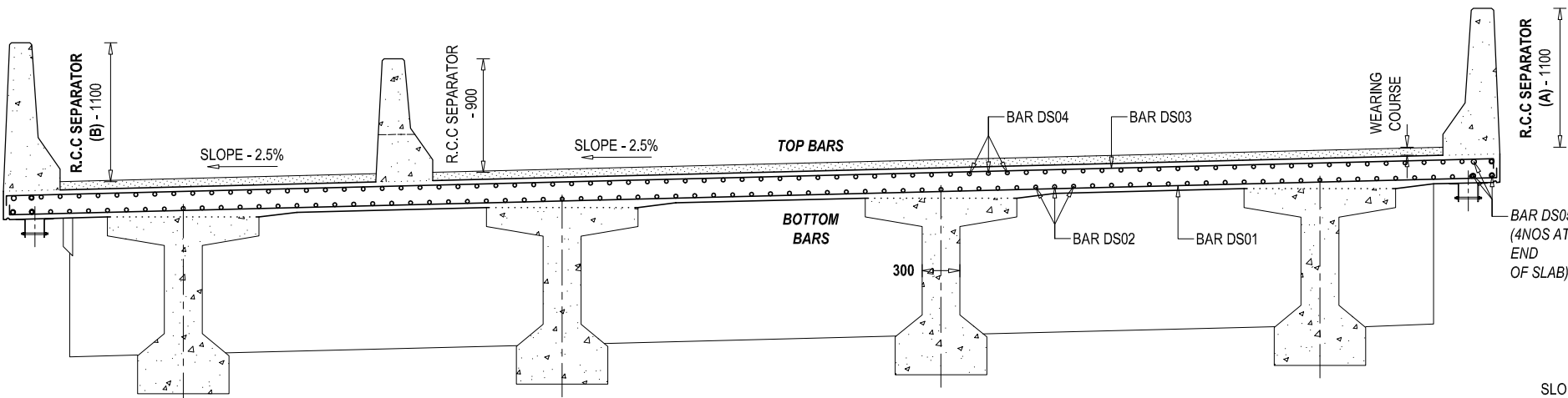
REINFORCEMENT DETAILS OF
R.C.C SEPARATOR - SECTIONAL VIEW

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/JALAD/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

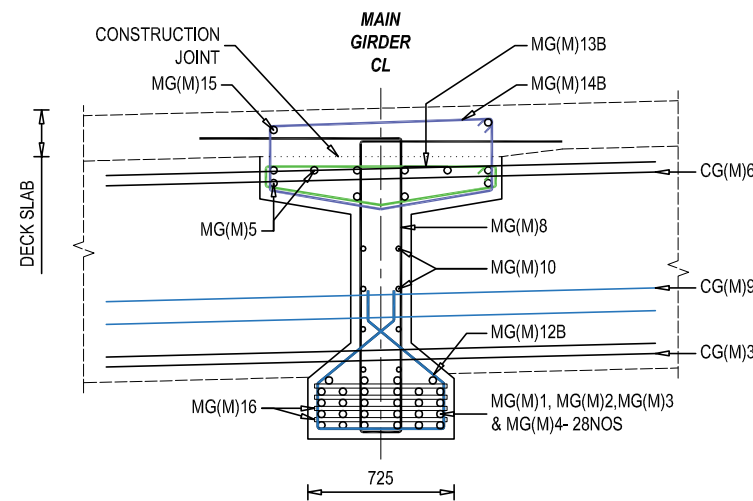
DESIGN CONSULTANTS
Joint Venture of
EPTISA Servicios De Ingeniera
Madrid, Spain
STUP Consultants Private Limited
Kolkatta, India
In Association With
Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays
Consultant Private Limited

Designed By
Mr. R.A.
Nec.No. 6431 C10/L14
Checked By
Mr. S.M.
Approved By
Mr. H.B.

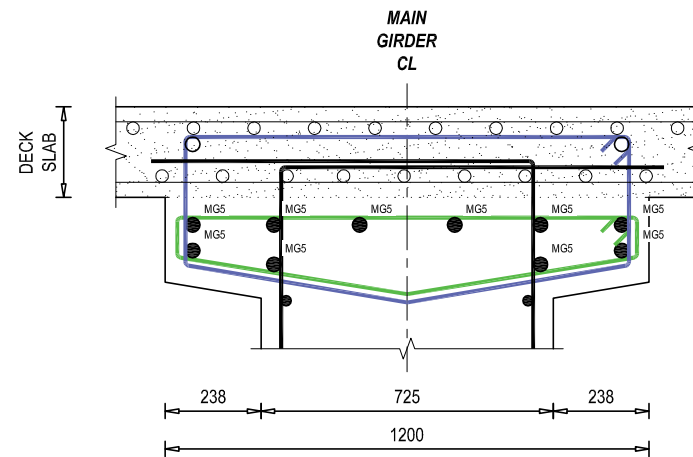
Drawing Name
DECK SLAB DETAILS OF BRIDGE OVER RIVER
JALAD
Reference Drawings
KDP/DPR/STR/BR/JALAD/DD-17

Scale:
SCALE: AS SHOWN
Chainage:
252+478

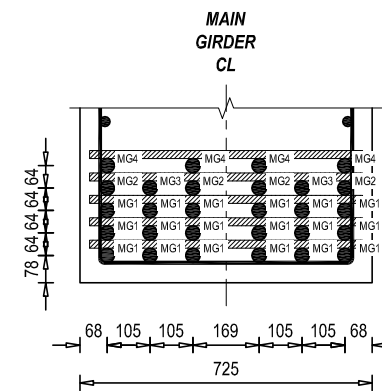
Date:
19.04.2023
Drawing No. KDP/DPR/STR/BR/JALAD/DD-14
Sheet No. 1 / 1



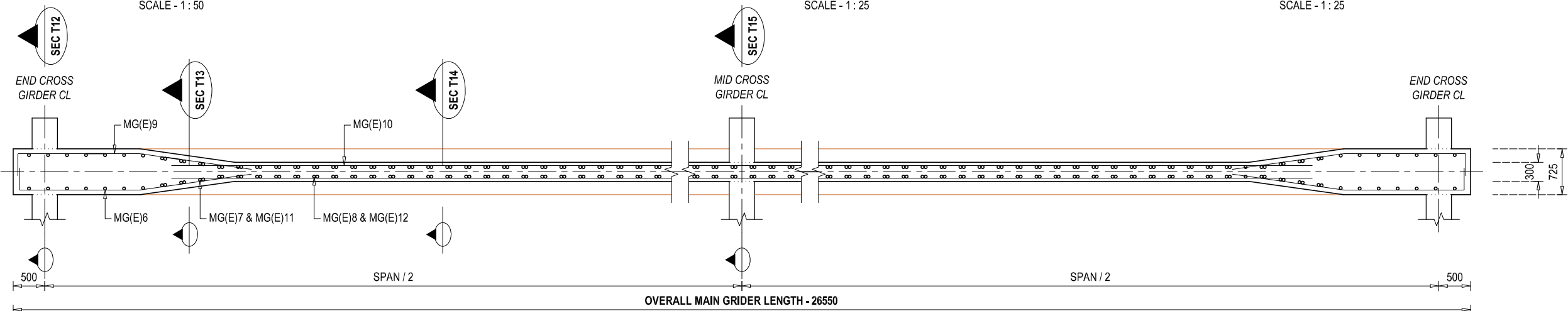
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T11**
SCALE - 1 : 50



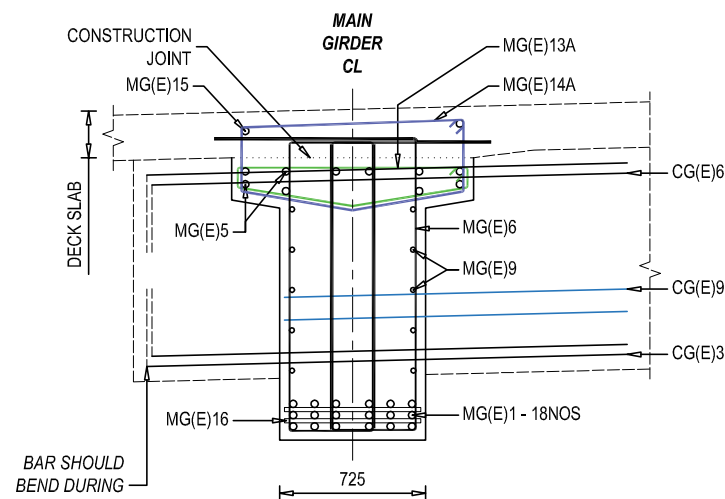
**TOP BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



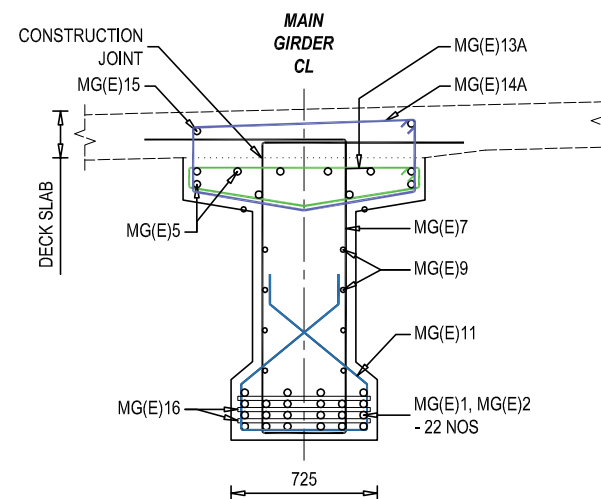
**BOTTOM BAR WEB REINFORCEMENT DETAILS
OF MAIN GIRDER**
SCALE - 1 : 25



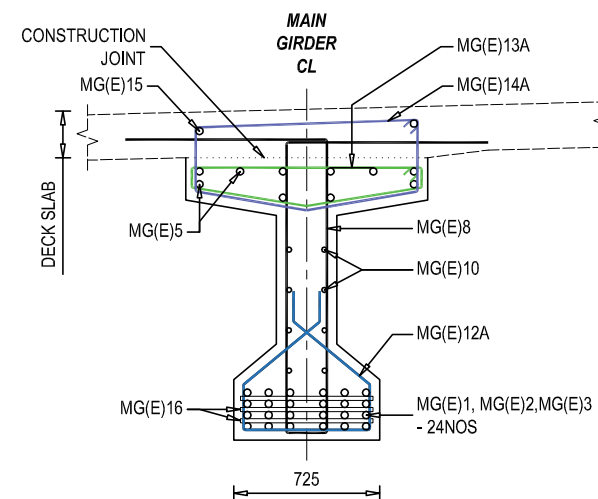
REINFORCEMENT DETAILS OF MAIN GIRDER (END) - SECTIONAL PLAN VIEW AT T7(E)
SCALE - 1 : 75



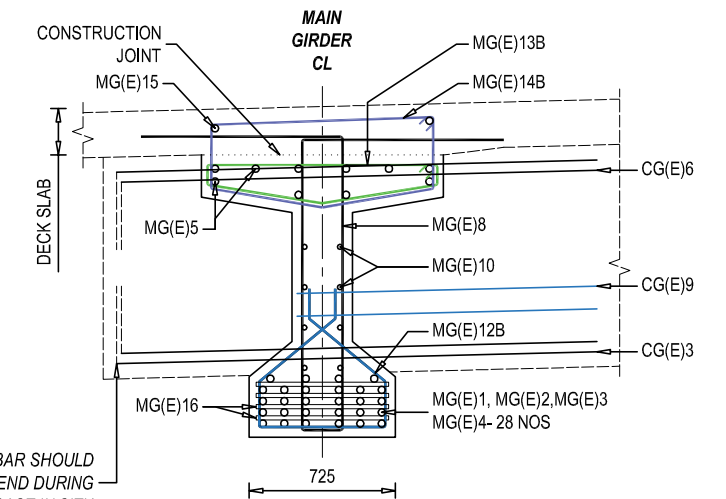
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T12**
SCALE - 1 : 50



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



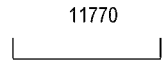
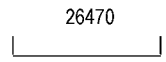
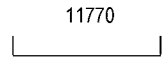
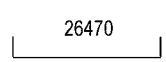
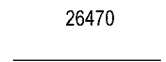
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T14**
SCALE - 1 : 50

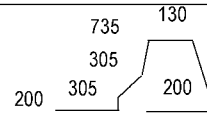
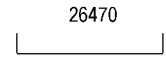


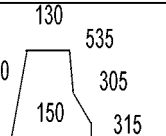
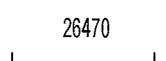
**REINFORCEMENT DETAILS OF MAIN GIRDER
SECTIONAL VIEW AT T15**
SCALE - 1 : 50

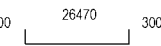
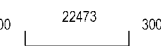
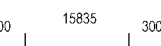
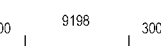
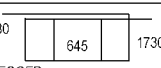
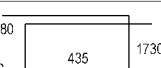
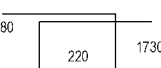
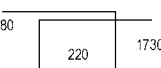
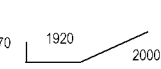
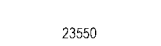
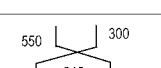
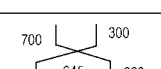
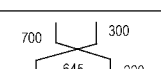
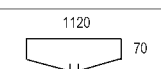
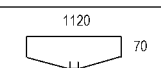
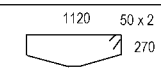
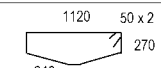
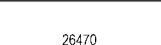
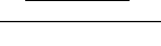
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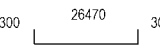
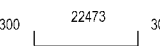
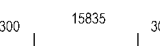
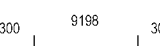
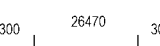
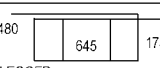
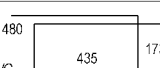
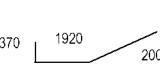
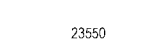
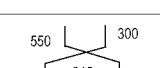
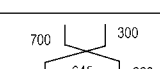
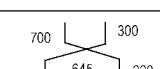
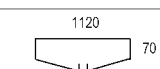
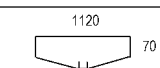
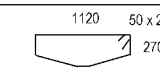
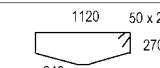
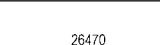
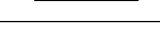
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of EPTISA Servicios De Ingeniera Madrid, Spain STUP Consultants Private Limited Kolkata, India	Checked By	Mr. S.M.	MAIN GIRDER REINFORCEMENT DETAILS OF BRIDGE OVER RIVER JALAD	SCALE: AS SHOWN	19.04.2023
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited	Approved By	Mr. H.B.	Reference Drawings KDP/DPR/STR/BR/JALAD/DD-17	Chainage: 252+478	Drawing No. KDP/DPR/STR/BR/JALAD/DD-15 Sheet No. 2 / 2

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	178	1.580	3395.10
2	DS02	150  150	10	150	26.770	76	0.617	1255.88
3	DS03	150  150	16	150	12.070	80	1.580	1525.89
5	DS04	150  150	10	150	26.770	174	0.617	2875.30
6	DS05	 26470	16		26.470	8	1.580	334.63
TOTAL (KG) :								9386.79

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	 850	16	150	3.170	178	1.580	891.67
2	RC-A2	150  150	10	150	26.770	20	0.617	330.49
TOTAL (KG) :								1222.16

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	 305	16	150	2.695	178	1.580	758.06
2	RS2	150  150	10	150	26.770	17	0.617	280.92
TOTAL (KG) :								1038.98

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		27.070	18	6.321	3079.96
2	MG(E)2	300  300	32		23.073	4	6.321	583.38
3	MG(E)3	300  300	32		16.435	2	6.321	207.77
4	MG(E)4	300  300	32		9.798	4	6.321	247.73
5	MG(E)5	300  300	12		27.070	10	0.889	240.62
6	MG(E)6	480  1730 4 LEGGED	12	100	10.460	42	0.889	390.51
7	MG(E)7	480  1730 AVG.	12	100	5.725	32	0.889	162.84
8	MG(E)8A	480  1730	12	100	5.080	130	0.889	587.02
9	MG(E)8B	480  1730	12	150	5.080	46	0.889	207.72
10	MG(E)9	370  2000	12	200	4.290	36	0.889	137.28
11	MG(E)10	 23550	12	200	23.550	18	0.889	376.80
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	130	0.889	356.49
14	MG(E)12B	700  220	12	150	3.085	46	0.889	126.14
15	MG(E)13A	 70	12	100	3.040	201	0.889	543.15
16	MG(E)13B	 70	12	150	3.040	46	0.889	124.30
17	MG(E)14A	 270	12	100	3.440	201	0.889	614.61
18	MG14B	 270	12	150	3.440	46	0.889	140.66
19	MG(E)15	 26470	12		26.470	2	0.889	47.06
19	MG(E)16	 645	32	1500	0.645	72	6.321	293.55
TOTAL (KG) :								8546.81

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		27.070	18	6.321	3079.96
2	MG(M)2	300  300	32		23.073	4	6.321	583.38
3	MG(M)3	300  300	32		16.435	2	6.321	207.77
4	MG(M)4	300  300	32		9.798	4	6.321	247.73
5	MG(M)5	300  300	12		27.070	10	0.889	240.62
6	MG(M)6	480  1730 4 LEGGED	12	100	10.460	42	0.889	390.51
7	MG(M)7	480  1730 AVG.	12	100	5.725	32	0.889	162.84
8	MG(M)8A	480  1730	12	100	5.080	130	0.889	587.02
9	MG(M)8B	480  1730	12	150	5.080	46	0.889	207.72
10	MG(M)9	370  2000	12	200	4.290	36	0.889	137.28
11	MG(M)10	 23550	12	200	23.550	18	0.889	376.80
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	130	0.889	356.49
14	MG(M)12B	700  220	12	150	3.085	46	0.889	126.14
15	MG(M)13A	 70	12	100	3.040	201	0.889	543.15
16	MG(M)13B	 70	12	150	3.040	46	0.889	124.30
17	MG(M)14A	 270	12	100	3.440	201	0.889	614.61
18	MG14B	 270	12	150	3.440	46	0.889	140.66
19	MG(M)15	 26470	12		26.470	2	0.889	47.06
19	MG(M)16	 645	32	1500	0.645	72	6.321	293.55
TOTAL (KG) :								8546.81

 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-Dhakebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS		Designed By Mr. R.A. Nac.No. 6431 CHALM Signature	Drawing Name SUPER STRUCTURE BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JALAD	Scale: SCALE: AS SHOWN	Date: 19.04.2023	
		Joint Venture of						Checked By Mr. S.M. Signature
		 EPTISA Servicios De Ingenieria Madrid, Spain	 STUP Consultants Private Limited Kolkata, India	Approved By Mr. H.B. Signature	Reference Drawings -	Chainage: 252+478	Drawing No. KDP/DPR/STR/BR/JALAD/DD-17	
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited						

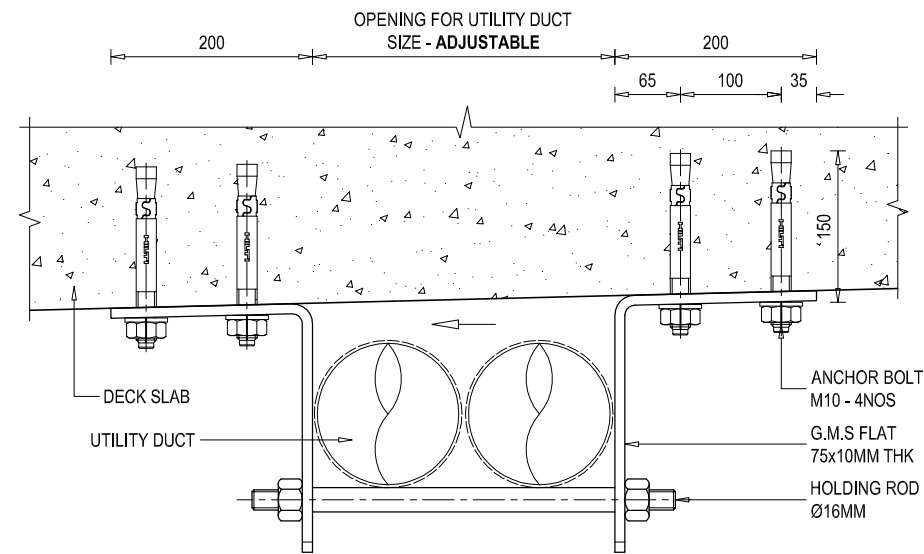
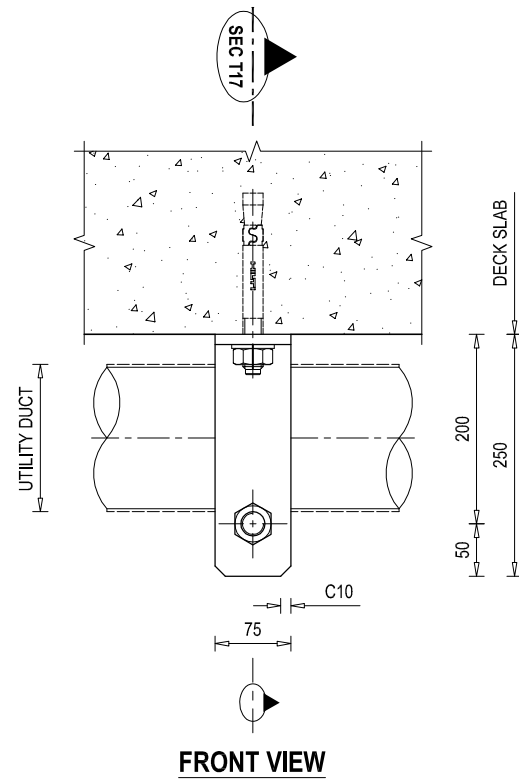
BAR BENDING SCHEDULE OF MESH (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	MESH 01	675 675 @ 100	10		9.450	8	0.617	46.67
2	MESH 02	350 350 @ 50	10		4.900	4	0.617	12.10
TOTAL (KG) :								58.77

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	130 850 200 735 305 305 200	16	150	3.170	178	1.580	891.67
2	RC-B2	150 26470 150	10	150	26.770	20	0.617	330.49
TOTAL (KG) :								1222.16

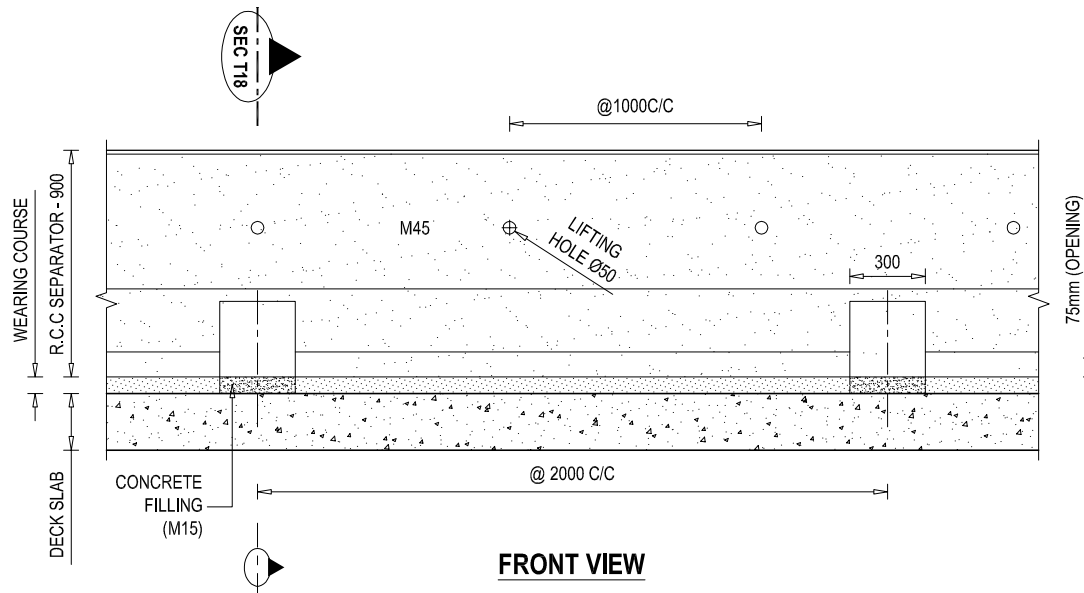
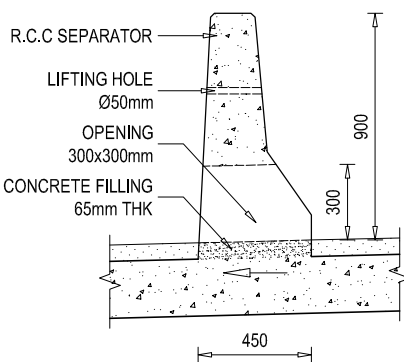
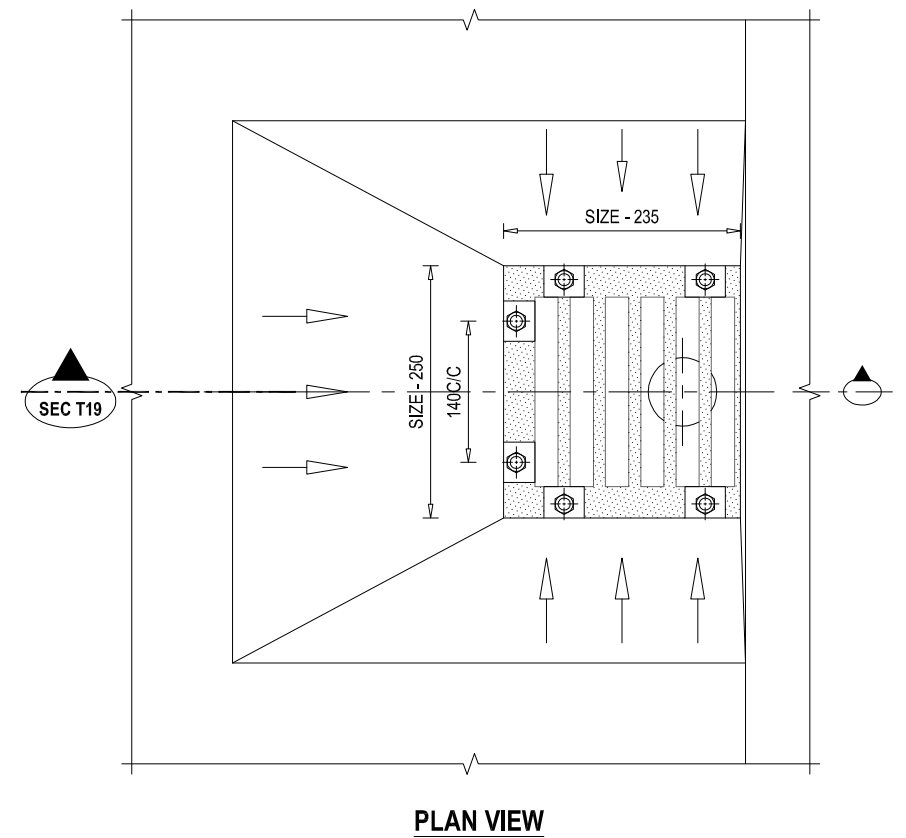
BAR BENDING SCHEDULE OF END CROSS GIRDER (1SPAN)								
S.No.	BAR MARK	DESCRIPTION OF BAR	BAR DIA.(MM)	SPACING (MM)	BAR LENGTH (M)	No. OF BARS	UNIT WEIGHT (Kg/m)	TOTAL WEIGHT (Kg)
1	CG(E)1	300 2125	20		2.425	8	2.469	47.90
2	CG(E)2	2625	20		2.625	8	2.469	51.85
3	CG(E)3	1975	20		1.975	8	2.469	39.01
4	CG(E)4	300 2125	20		2.425	8	2.469	47.90
5	CG(E)5	2625	20		2.625	8	2.469	51.85
6	CG(E)6	1975	20		1.975	8	2.469	39.01
7	CG(E)7	2125	12	150	2.125	10	0.889	18.89
8	CG(E)8	2625	12	150	2.625	10	0.889	23.33
9	CG(E)9	1975	12	150	1.975	10	0.889	17.56
10	CG(E)10	50 x 2 320 1570	12	200	1.990	39	0.889	68.99
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) :								701.76
TOTAL NOS OF CROSS GIRDER :								2.00
TOTAL WEIGHT (KG) :								1403.52

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 1920	20		2.220	8	2.469	43.85
2	CG(M)2	2625	20		2.945	8	2.469	58.17
3	CG(M)3	1975	20		2.295	8	2.469	45.33
4	CG(M)4	300 1920	20		2.220	8	2.469	43.85
5	CG(M)5	2625	20		2.625	8	2.469	51.85
6	CG(M)6	1975	20		1.975	8	2.469	39.01
7	CG(M)7	1825	12	150	1.920	10	0.889	17.07
8	CG(M)8	2625	12	150	2.625	10	0.889	23.33
9	CG(M)9	1975	12	150	1.975	10	0.889	17.56
10	CG(M)10	50 x 2 320 1570	12	200	1.990	39	0.889	68.99
11	CG(M)11	320	20	1000	0.320	18	2.469	14.22
TOTAL (KG) :								423.24

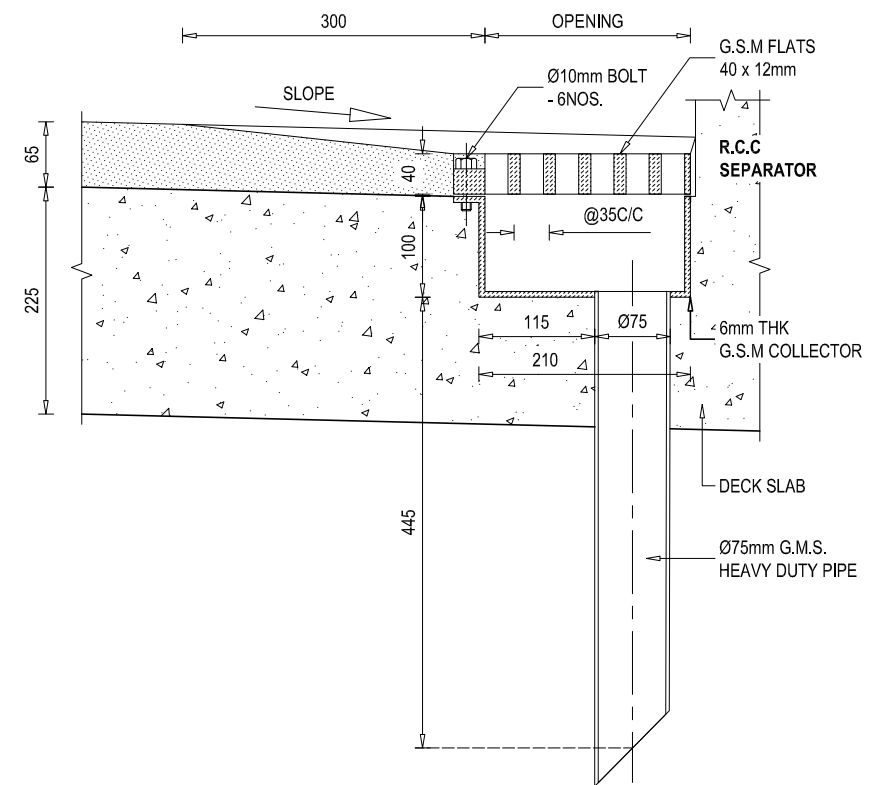
EMPLOYER	PROJECT NAME	DESIGN CONSULTANTS	Designed By	Mr. R.A.	Drawing Name	Scale:	Date:
 Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of	Checked By	Mr. S.M.	SUPER STRUCTURE BAR BENDING SCHEDULE OF BRIDGE OVER RIVER JALAD	SCALE: AS SHOWN	19.04.2023
		 EPTISA Servicios De Ingenieria Madrid, Spain  STUP Consultants Private Limited Kolkata, India	Approved By	Mr. H.B.	Reference Drawings	Chainage:	Drawing No. KDP/DPR/STR/BR/JALAD/DD-17
		In Association With Udaya Consultancy, Geocom International, Sundar Kriti Consultant and Rays Consultant Private Limited				252+478	Sheet No. 2 / 2



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

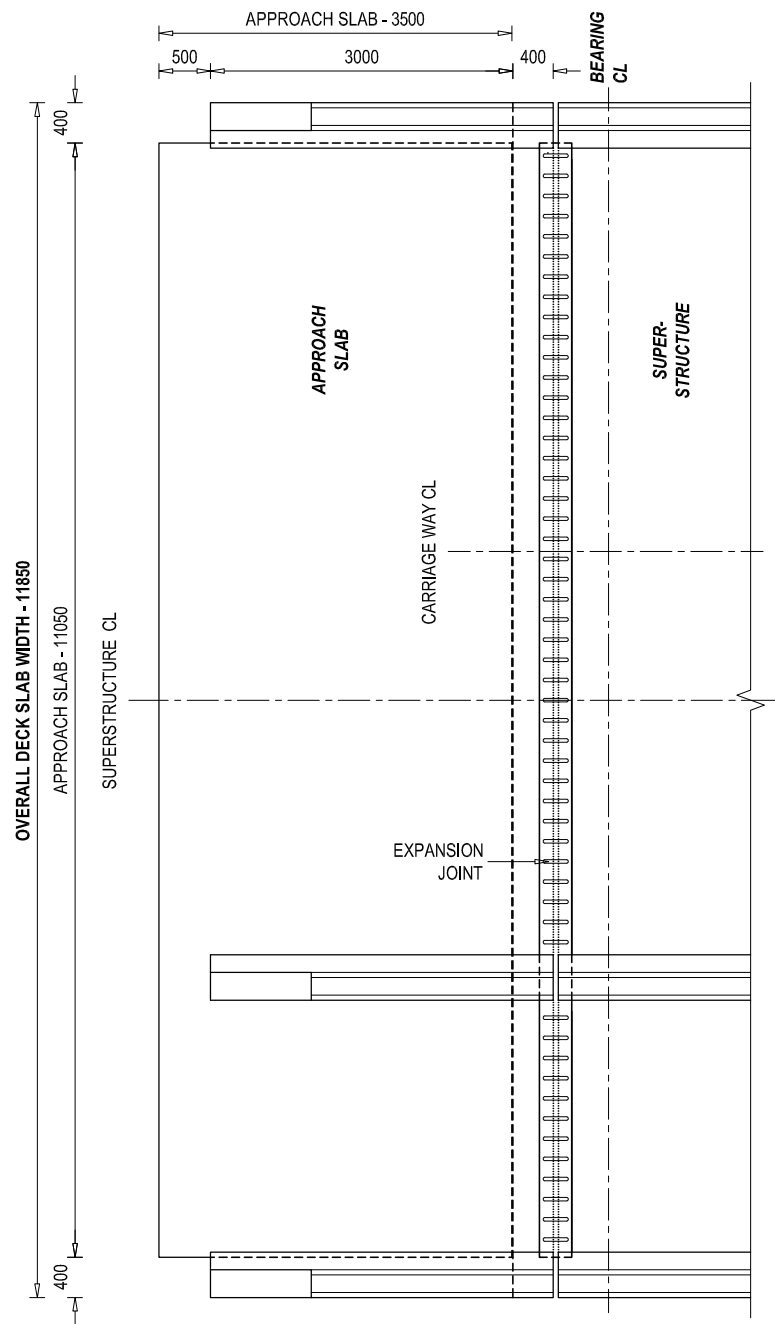


**DETAIL ELEVATION VIEW AT R.C.C SEPARATOR
& IT'S DRAIN OPENING**
SCALE - 1 : 40

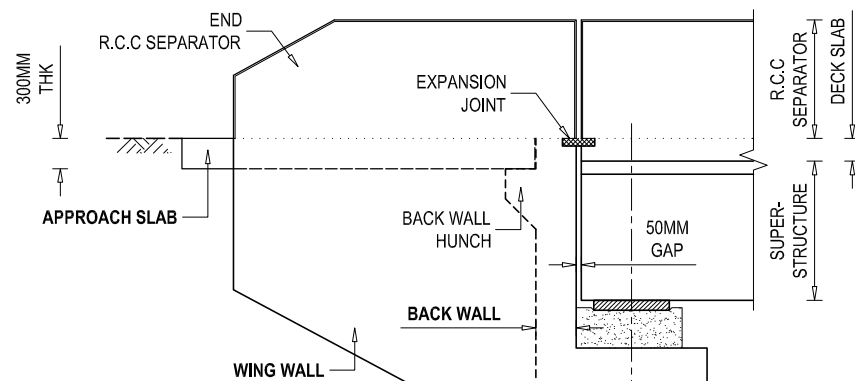


**DETAILS OF GALVANIZED MILD STEEL (G.M.S)
DRAINAGE SPOUT**
SCALE - 1 : 10

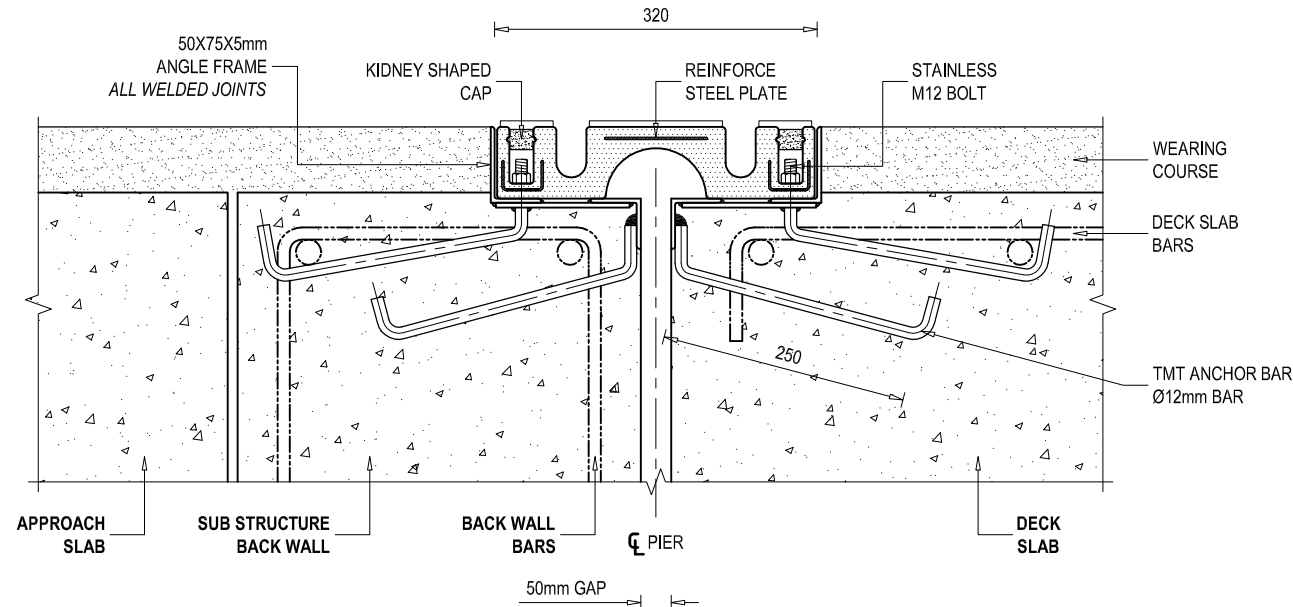
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of 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.A. Nec.No. 6431 CIVIL/14 Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings	Scale: AS SHOWN Chainage: 252+478	Date: 19.04.2023 Drawing No:- KDP/DPR/STR/BR/JAGADAVIDD-18 Sheet No.1 /2
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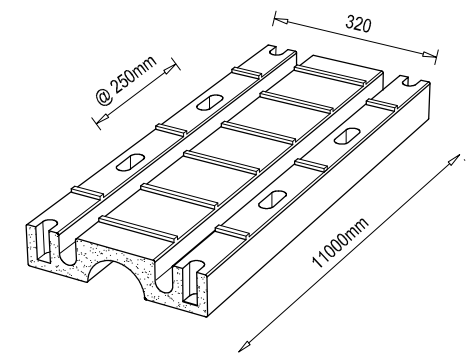
PLAN VIEW AT EXPANSION JOINT, END R.C.C SEPARATOR & APPROACH SLAB



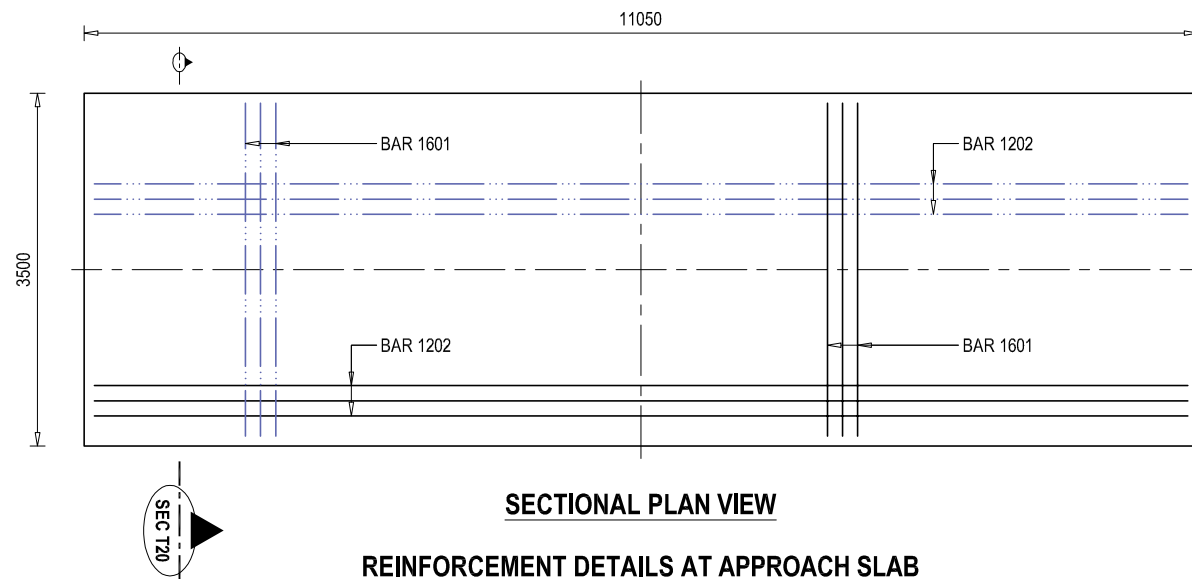
ELEVATION VIEW



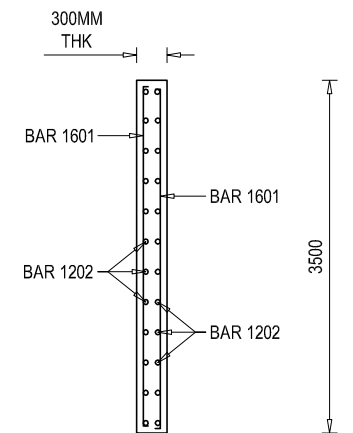
SEAL TYPE EXPANSION JOINTS ARRANGEMENT IN A CARRIAGEWAY
SCALE - 1 : 10 @ A3 PAPER



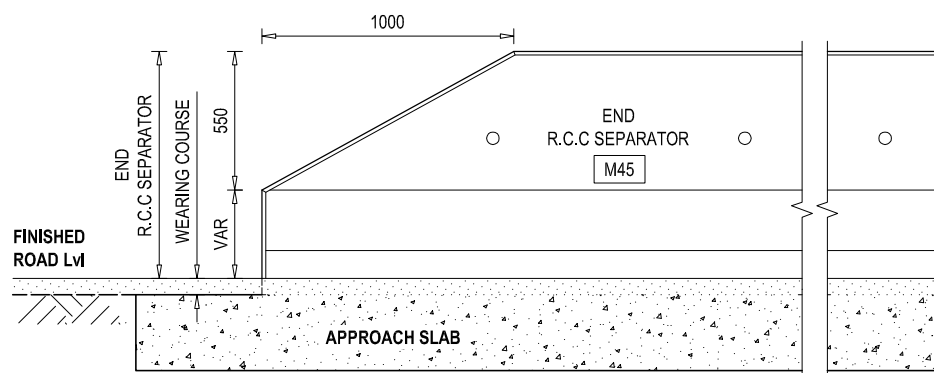
EXPANSION JOINT ISOMETRIC VIEW - SEAL TYPE
SCALE - NON



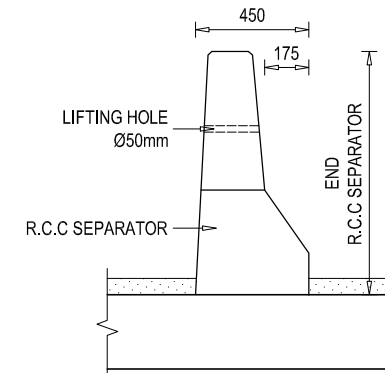
SECTIONAL PLAN VIEW
REINFORCEMENT DETAILS AT APPROACH SLAB
SCALE - 1 : 100 @ A3 PAPER



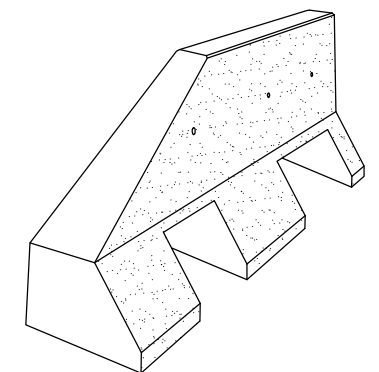
SECTIONAL ELEVATION VIEW AT SEC T20



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



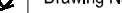
SIDE VIEW
SCALE - 1 : 40 @ A3 PAPER

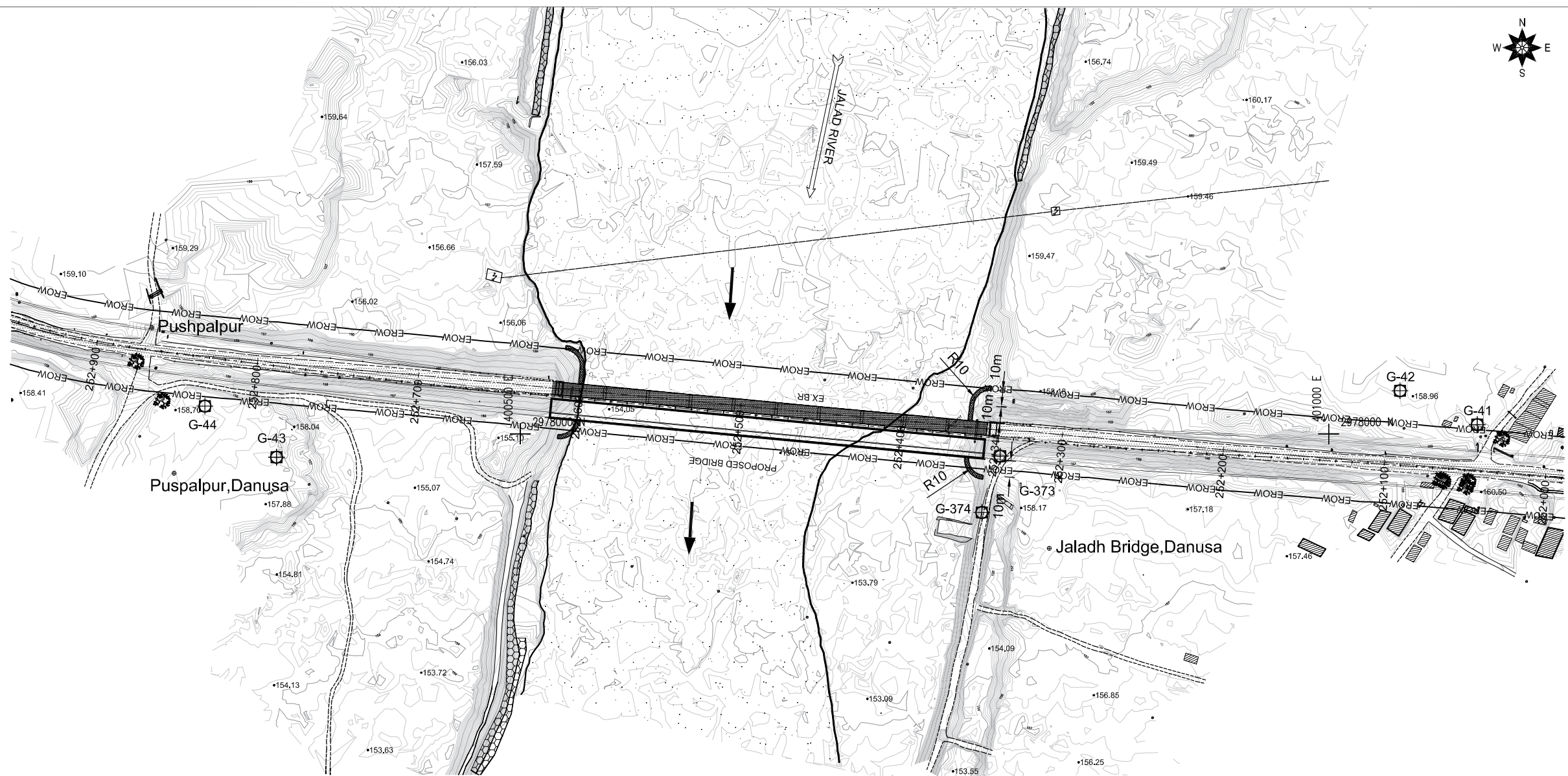


END R.C.C SEPARATOR ISOMETRIC VIEW
SCALE - NON

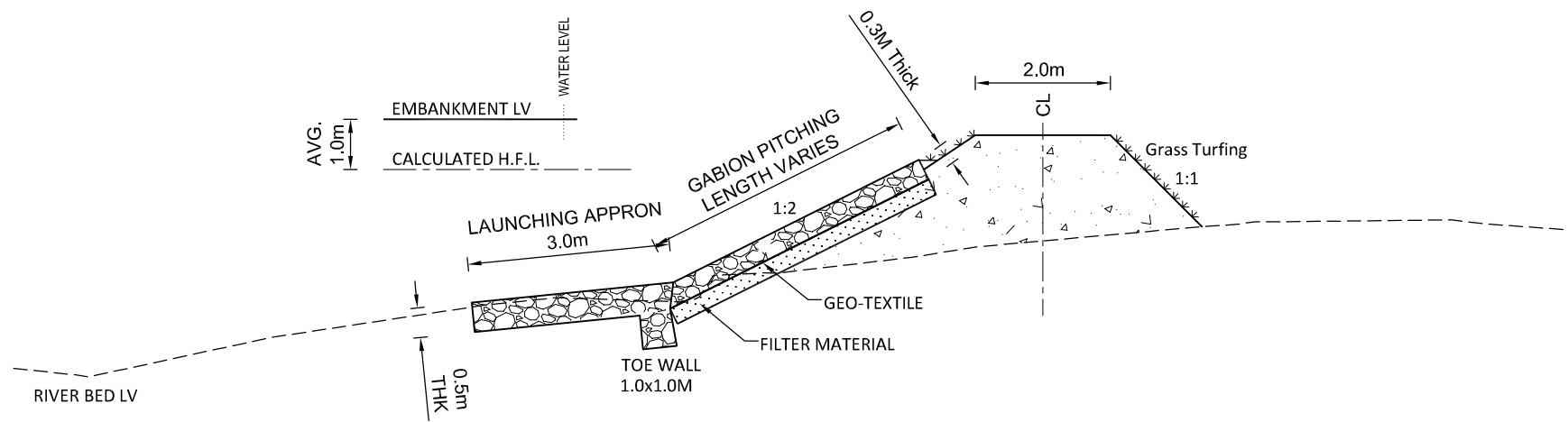
EMPLOYER Government of Nepal Ministry of Physical Infrastructure and Transport Department of Roads Development Cooperation Implementation Division	PROJECT NAME Strategic Road Connectivity & Trade Improvement Project (SRCTIP) Detailed Design of Upgradation of Kamala-Dhalkebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	DESIGN CONSULTANTS Joint Venture of EPTISA Servicios De 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.A. Nec.No. 6431 CIVIL/14/ Checked By Mr. S.M. Approved By Mr. H.B.	Drawing Name MISCELLANEOUS DETAILS OF BRIDGE OVER RIVER JALAD Reference Drawings	Scale: AS SHOWN Chainage: 252+478	Date: 19.04.2023 Drawing No:- KDP/DPR/STR/BR/JAGADAVIDD-18 Sheet No.2/2
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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-Dhalebar-Pathlaiya Road Section (130 KM) of Mahendra Highway and Bridges	Joint Venture of					WING WALL DETAILS OF BRIDGE OVER RIVER JALAD	AS SHOWN	19.04.2023
		 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 Kriti Consultant and Rays Consultant Private Limited			Approved By	Mr. H.B.		Reference Drawings	Chainage:
							-	252+478	Sheet No. 1 / 1



TOPOGRAPHIC MAP



SECTION OF EMBANKMENT

SCALE - 1x : 5x

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.A. Nec.No. 6431 CMLK	Signature  Signature  Signature 	RIVER TRAINING WORKS OF BRIDGE OVER RIVER JALAD	AS SHOWN	Chainage: 252+478	19.04.2023	
		In Association With		Checked By	Mr. S.M.					Drawing No.- KDP/DPR/STR/BR/JALAD/DD- 20	
		Udaya Consultancy, Geocom International, Sundar Kirti Consultant and Rays Consultant Private Limited		Approved By	Mr. H.B.					Sheet No.1/1	

Bearing Design Data for 26.6m Span and 11.85m width

Load Condition	Items	Under	On each Neoprene Bearing	Unit
Under No Live Load	V	NO EQ.	64.62	Ton
		EQ.	74.31	Ton
	H _L	NO EQ.	-	Ton
		EQ.	14.54	Ton
	H _T	NO EQ.	-	Ton
		EQ.	14.54	Ton
	θ	NO EQ.	0.00250	radian
		EQ.	0.00288	radian
	Δ		14.57	mm
Under Maximum Live Load	V	NO EQ.	109.10	Ton
		EQ.	120.12	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

 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.	 Signature	Drawing Name	BEARING DESIGN DATA OF BRIDGE OVER RIVER JALAD	Scale:	AS SHOWN	Date:	19.04.2023
		Joint Venture of		Checked By	Mr. S.M.		Reference Drawings		Chainage:	252+478	Drawing No.-	KDP/DPR/STR/BR/JALAD/DD- 21
		In Association With		Approved By	Mr. H.B.						Sheet No.1/1	
		 EPTISA Servicios De Ingeniera Madrid, Spain	 STUP Consultants Private Limited Kolkatta, India	Udaya Consultancy, Geocom International, Sundar Krti Consultant and Rays Consultant Private Limited								