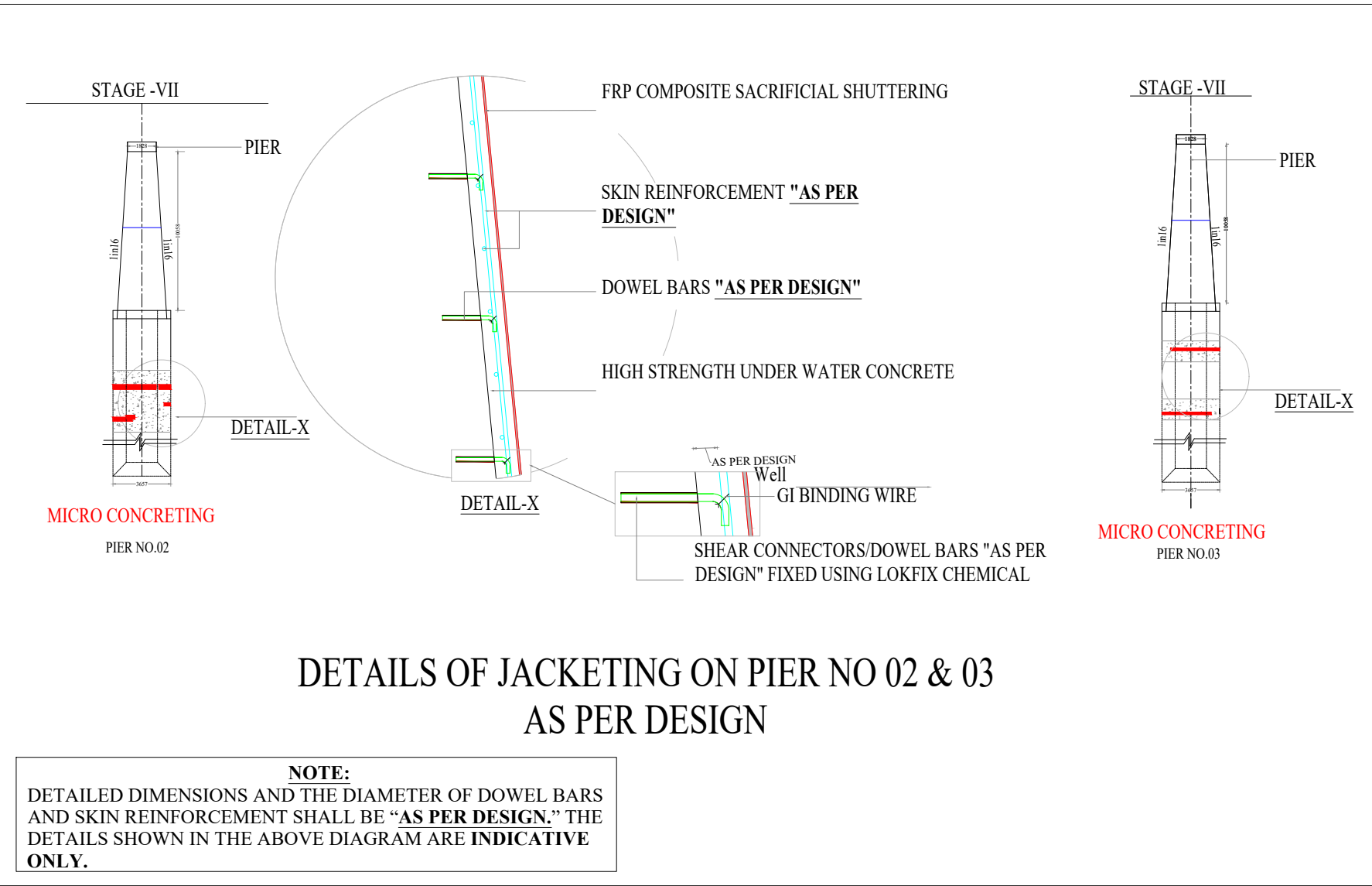
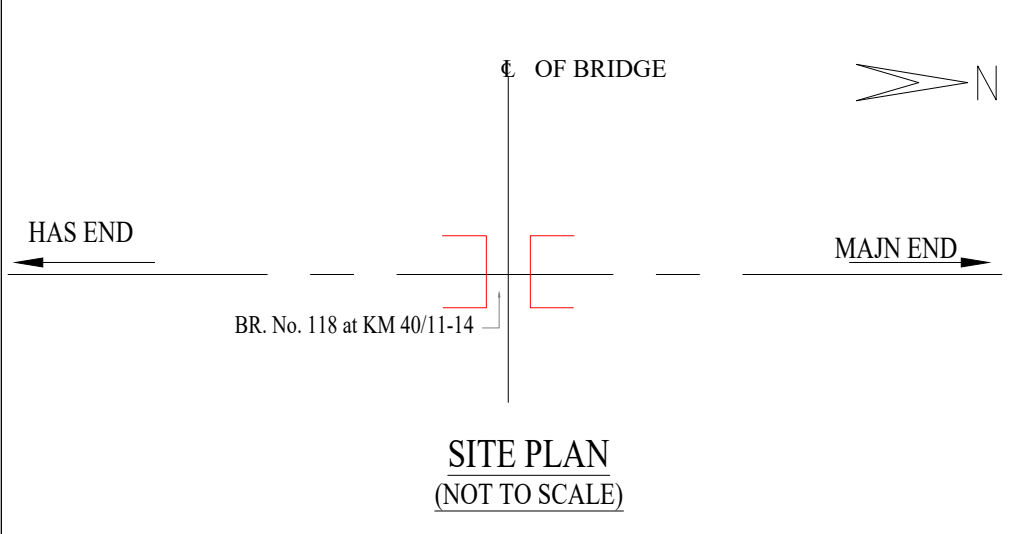


BRIDGE NO 118: EXISTING ABUTMENT AND PIER DETAILS AS PER THE COMPLETION PLAN



DETAILS OF JACKETING ON PIER NO 02 & 03
AS PER DESIGN



- GENERAL NOTES:-
- ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHER WISE.
 - PROPOSALS ARE SHOWN IN RED.
 - GRADE OF CONCRETE FOR JACKETING SHOULD BE MINIMUM M-35
 - NO CONSTRUCTION JOINT SHALL BE ALLOWED PROTECTION WORKS
 - WORK SHOULD BE CARRIED OUT AS PER IRS CONCRETE BRIDGE CODE FOR MODERATE EXPOSURE CONDITION
 - CONCRETE SHOULD BE MIXED BY APPROVED POWER DRIVEN MECHANICAL MIXTURE.
 - NECESSARY SLUMP TEST SHOULD BE FREQUENTLY CARRIED OUT DURING CONCRETING.
 - GAD IS PREPARED AS PER SITE CONDITION.
 - THICKNESS OF PROTECTIVE COVER IS MINIMUM 75MM
 - WHILE DOING THE WORK, PRECAUTION TO BE FOLLOWED AS MENTIONED IN THE IRBM PARA 513(B) FOR SPEED RESTRICTION, INSERTION OF BAR ETC. SAME AS TO BE MENTIONED.

SOUTH WESTERN RAILWAY MYSURU DIVISION

AUTHORITY OF WORK: HMRDC REVENUE

HAS-MAJN SECTION

NAME OF THE WORK:- HAS-MAJN SECTION-REPAIRS OF
DAMAGED PIERS OF BRIDGE No.118 AT KM.40/11-14 OF
PIER NO. 02 & 03 ACROSS HEMAVATHI RIVER BETWEEN
BLLT & SKLR STATION.

SCHEME FOR UNDER WATER REPAIRS OF PIER

DIVISION. DRG. NO. Br.118(GAD)/2023-24/HAS-MAJN

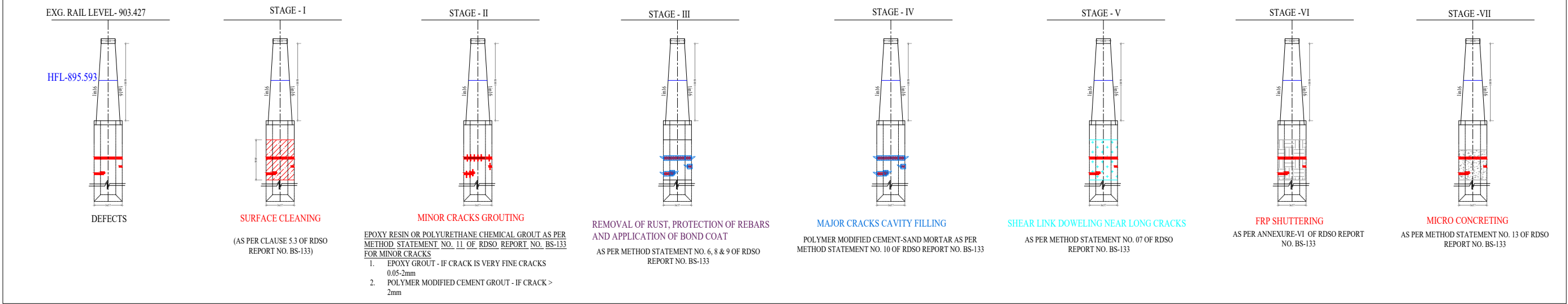
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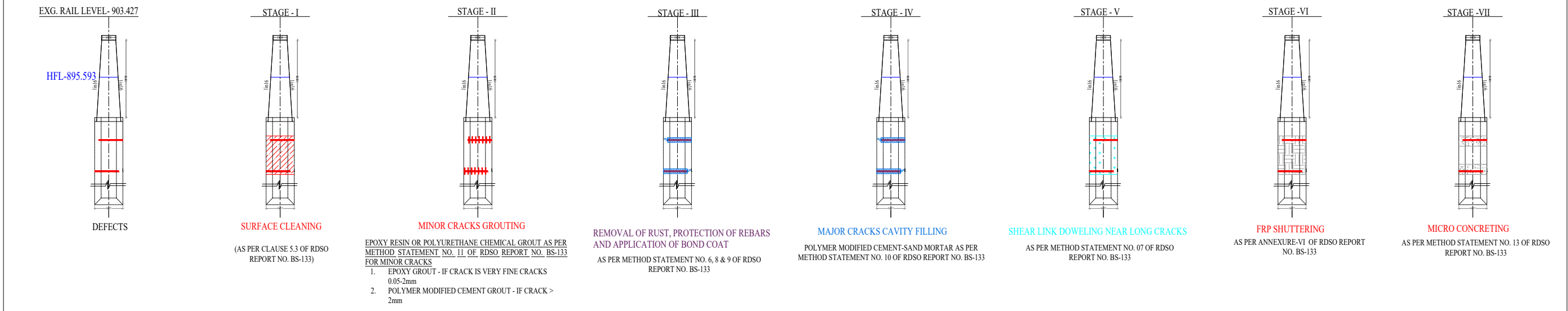
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DRM/MYS	MUDIT MITTAL Digitally signed by MUDIT MITTAL Date: 2025.06.06 15:21:21 +05'30'
SSE/DRG/BR/HQ	ARJUN LAL MEENA Digitally signed by ARJUN LAL MEENA Date: 2025.10.28 16:27:41 +05'30'
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HQ DRG. NO. SWR/2025/GAD-137/Br. No. - 118/P- 2 & 3/REPAIR/HAS-MAJN/MYS Div.

MODUS OPERANDI- DETAILS OF REPAIR WORKS ON PIER NO 02



MODUS OPERANDI- DETAILS OF REPAIR WORKS ON PIER NO 03



NOTES:-

DRILLING OF HOLES: DRILLING HOLE IN REINFORCED CEMENT CONCRETE OF REQUIRED DIAMETER (AS PER DESIGN & BS-133) TO A DEPTH OF REQUIRED DEPTH ((AS PER DESIGN & BS-133) ACROSS THE CRACK TO AN ANGLE OF 45° AT THE RATE OF REQUIRED C/C ((AS PER DESIGN & BS-133), USING CORE CUTTER MACHINE WITHOUT DISTURBING THE EPOXY MORTAR FILLED ON THE "V" GROOVE WITH THE HELP OF UNDER WATER DIVERS. THE NOZZLE SHALL BE INSERTED IN THE DRILLED HOLE AND FIXED USING THE UNDER WATER POLYESTER RESIN GROUT AND ALLOWED FOR CURING FOR FINAL SET.

GROUTING: GROUTING WITH WATER INSENSITIVE UNDERWATER GROUT BASE AND HARDENER SHALL BE MIXED WITH USING HAND HELD HEAVY DUTY ELECTRICALLY OPERATED MIXING MACHINE UNTIL UNIFORM MIX IS OBTAINED. THE MIXED MATERIAL SHALL BE POURED IN TO THE HIGH PRESSURE GROUTING MACHINE CONTAINER AND GROUTED THROUGH THE NON-RETURN NOZZLE ALREADY FIXED ON CRACKS. THE GROUTING SHALL BE DONE FROM THE BOTTOM OF CRACK UNTIL GROUT REJECTS OF ALL OTHER GROUTING PORTS. THE GROUTING SHALL BE CARRIED OUT WITH THE HELP OF UNDER WATER DIVERS AND UNDERWATER COMMUNICATION DEVICE TO KNOW THE CONDITIONS.

SHEAR CONNECTOR: SHEAR CONNECTORS TO BE FIXED WITH WITH LOKFIX CHEMICAL ANCHOR AND TMT BARS AT DESIGNED CENTER TO CENTER SPACING ON BOTH WAYS AROUND PERIPHERY OF PIER,ETC,COMPLETE PROVIDED AS SKIN REINFORCEMENT.

FRP SACRIFICIAL SHUTTERING: LEAVE IN-SITU SPECIALLY REINFORCED MATRIX ANNULAR FORM SHEETS MADE OF PRE FABRICATED COMPOSITE PANELS IN PREFIXED SPACERS WITH INBUILT SLIDE IN GROOVE JOINTS AT BOTH ENDS FOR STITCHING THE FORM ELEMENTS TOGETHER VERTICALLY ALONG THE PERIPHERY OF THE PIER. THE SHEETS ARE TO BE MOUNTED ON COMPATIBLE SLIDE IN SPECIALLY REINFORCED MATRIX A F SPACERS.

EXTERNAL PERIPHERAL TEMPORARY TIE BANDS AT REQUIRED LEVEL BELOW WATER. IT SHOULD BE OF SUITABLE DIA AS PER DESIGN AND SHOULD FORM AN ANNULAR SPACE FOR JACKETING ALL AROUND THE PERIPHERY.

PERIPHERAL RING COLLAR SHOULD BE OF SUITABLE DIAMETER AS PER SITE REQUIREMENT AND BASE COLLAR ALL AROUND THE PERIPHERY FOR FURTHER JACKETING WORKS.

COLLAR FRAME FIXING TO BE DONE WITH M12 GALVANIZED MECHANICAL ANCHORS PROVIDED WITH THE SYSTEM.

AS PER ITS SIZE INCLUDING DRILLING AND FIXING OF THE SAME UNDER WATER, THE FORM PROVIDED SHOULD HAVE INBUILT MECHANICAL ANCHOR POINTS ON EDGE FRAME AND NECESSARY INBUILT SUPPORT FRAME.

HIGH STRENGTH UNDER WATER MICRO-CONCRETE SELF COMPACTING SHOULD BE OF SUITABLE PRODUCT OF APPROVED MAKE OR EQUIVALENT AS DIRECTED BY THE ENGINEERING IN CHARGE

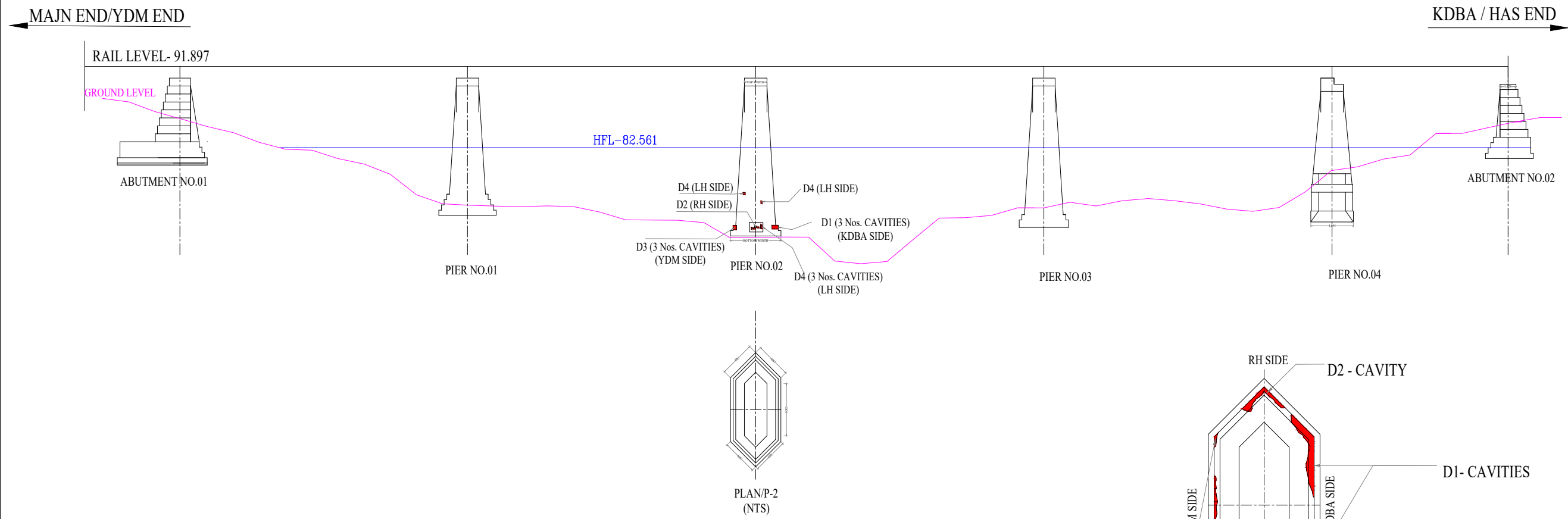
REFERENCES

S.N	DRAWING/REPORT	NUMBER
1.0	UNDER WATER INSPECTION REPORT OF BRIDGE NO. 400	UW01/SD&E/RLY-KA-118/001
2.0	COMPLETION PLAN	DENC/P/BR/MH/169-66
3.0	RDSO REPORT	BS-133
4.0	JACKETING DETAILS	AS PER DESIGN

NOTE:

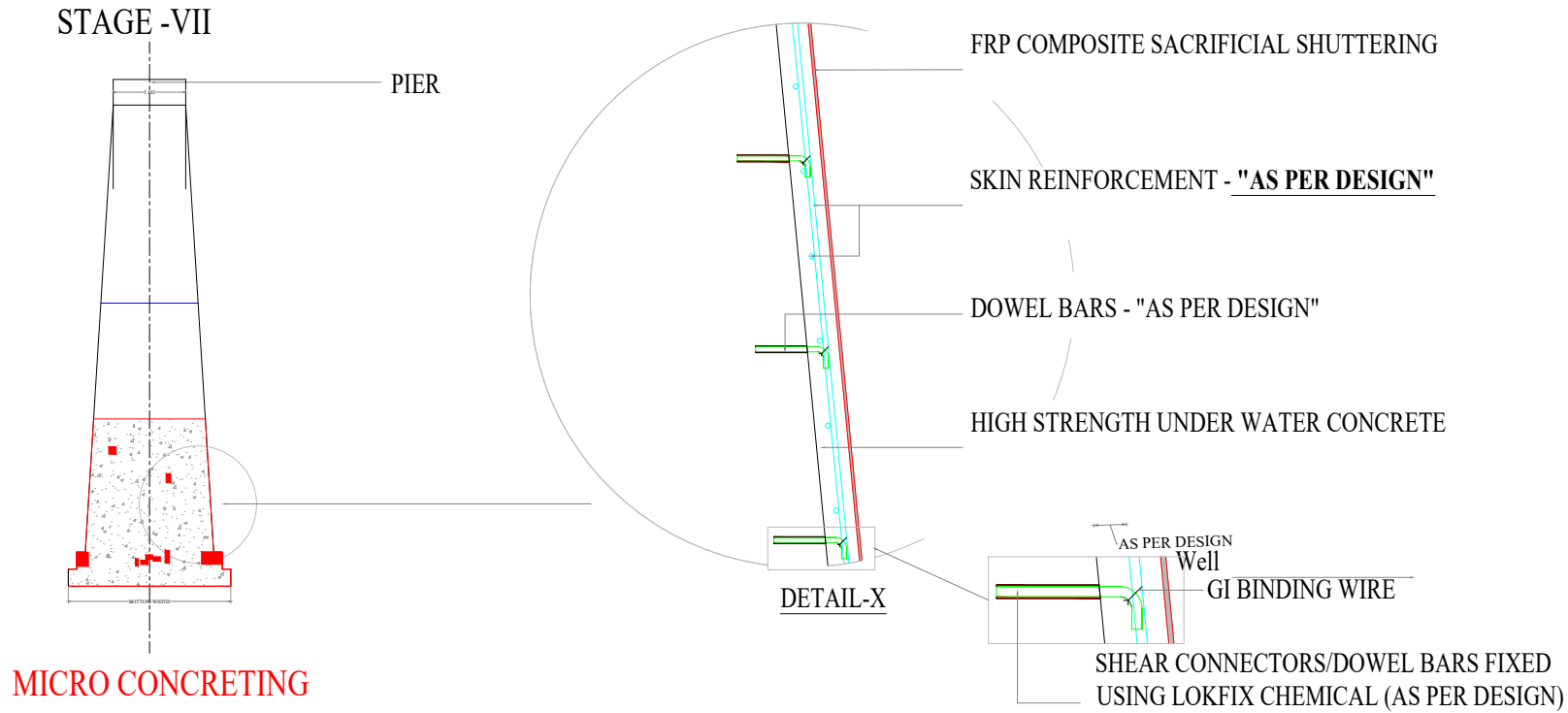
STRUCTURAL DRAWING FOR THE PROPOSED JACKETING SHALL BE PREPARED AND PROCESSED SEPARATELY FOR APPROVAL OF THE COMPETENT AUTHORITY.

SCHEMATIC DIAGRAM SHOWING DETAILS OF DEFECTS ON PIER NO 02 OF BRIDGE NO 400



ENGINEERING ANALYSIS

S.N.	PIER NO	CAVITY NO.	SIZE OF ANOMALY/CAVITIES (IN METERS) (L X B/W X D)	RAIL TOP (RL : 91.897) TO CAVITY AREA	SIDE/LOCATION	
1.	PIER-2	D-1	1.0m X 0.2m X 0.9m	18.40m	KDBA SIDE	
2.			0.80m X 0.20m X 0.50m			
3.			3.40m X 0.45m X 0.15m			
4.		D-2	1.80m X 0.50m X 0.15m	18.30m	RH SIDE	
5.			0.70m X 0.30m X 0.10m	18.70m	YDM SIDE	
6.		D-3	1.00m X 0.50m X 0.10m			
7.			1.30m X 0.40m X 0.50m			
8.		D-4	0.80m X 0.25m X 0.10m	18.30m	LH SIDE	
9.			0.60m X 0.15m X 0.50m	18.60m		
10.			0.40m X 0.15m (MORTAR LEACHING)			
11.			0.80m X 0.25m X 0.25m	14.60m (TOP SIDE)		
12.			0.80m X 0.25m X 0.20m	18.60m		
13.			0.40m X 0.30m X 0.15m	15.60m (TOP SIDE)		



DETAILS OF JACKETING ON PIER NO 02
(AS PER DESIGN)

NOTE:
DETAILED DIMENSIONS AND THE DIAMETER OF DOWEL BARS AND SKIN REINFORCEMENT SHALL BE “**AS PER DESIGN.**” THE DETAILS SHOWN IN THE ABOVE DIAGRAM ARE **INDICATIVE ONLY.**

NOTES:-

DRILLING OF HOLES: DRILLING HOLE IN REINFORCED CEMENT CONCRETE OF REQUIRED DIAMETER (AS PER DESIGN & BS-133) TO A DEPTH OF REQUIRED DEPTH ((AS PER DESIGN & BS-133) ACROSS THE CRACK TO AN ANGLE OF 45° AT THE RATE OF REQUIRED C/C ((AS PER DESIGN & BS-133), USING CORE CUTTER MACHINE WITHOUT DISTURBING THE EPOXY MORTAR FILLED ON THE “V” GROOVE WITH THE HELP OF UNDER WATER DIVERS. THE NOZZLE SHALL BE INSERTED IN THE DRILLED HOLE AND FIXED USING THE UNDER WATER POLYESTER RESIN GROUT AND ALLOWED FOR CURING FOR FINAL SET.

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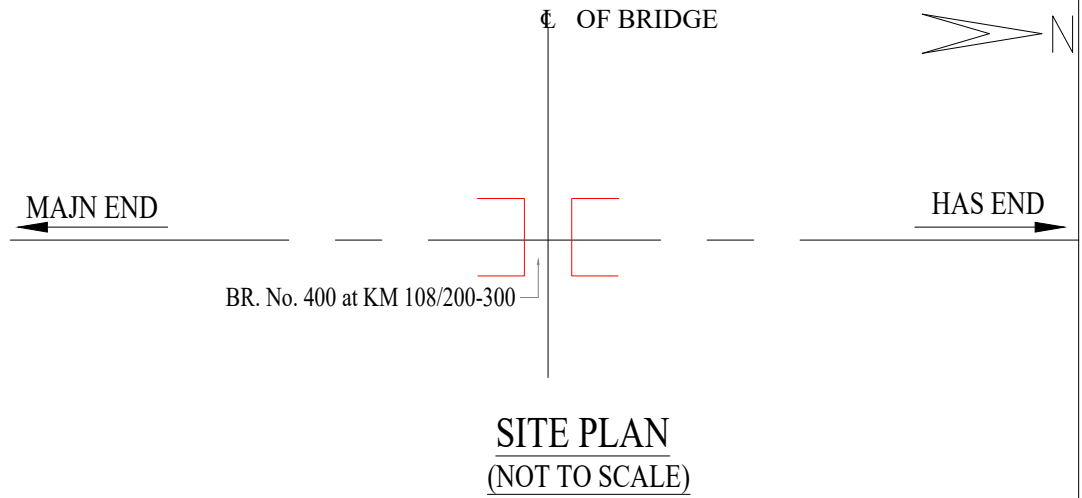
HIGH STRENGTH UNDER WATER MICRO-CONCRETE SELF COMPACTING SHOULD BE OF SUITABLE PRODUCT OF APPROVED MAKE OR EQUIVALENT AS DIRECTED BY THE ENGINEERING IN CHARGE

REFERENCES

S.N	DRAWING/REPORT	NUMBER
1.0	UNDER WATER INSPECTION REPORT OF BRIDGE NO. 400	UW02/SD&E/RLY-KA-400/002
2.0	COMPLETION PLAN	CN/156-53/1
3.0	RDSO REPORT	BS-133
4.0	JACKETING DETAILS	AS PER DESIGN

NOTE:

STRUCTURAL DRAWING FOR THE PROPOSED JACKETING SHALL BE PREPARED AND PROCESSED SEPARATELY FOR APPROVAL OF THE COMPETENT AUTHORITY.



GENERAL NOTES:-

- ALL DIMENSIONS ARE IN METERS UNLESS STATED OTHER WISE.
- PROPOSALS ARE SHOWN IN **RED**.
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- WORK SHOULD BE CARRIED OUT AS PER IRS CONCRETE BRIDGE CODE FOR MODERATE EXPOSURE CONDITION
- CONCRETE SHOULD BE MIXED BY APPROVED POWER DRIVEN MECHANICAL MIXTURE.
- NECESSARY SLUMP TEST SHOULD BE FREQUENTLY CARRIED OUT DURING CONCRETING.
- GAD IS PREPARED AS PER SITE CONDITION.
- THICKNESS OF PROTECTIVE COVER IS MINIMUM 75mm
- WHILE DOING THE WORK, PRECAUTION TO BE FOLLOWED AS MENTIONED IN THE IRBM PARA 513(B) FOR SPEED RESTRICTION, INSERTION OF BAR ETC. SAME AS TO BE MENTIONED.

SOUTH WESTERN RAILWAY
MYSURU DIVISION

AUTHORITY OF WORK: HMRDC CAPITAL

HAS-MAJN SECTION

NAME OF THE WORK:- HAS-MAJN SECTION-REPAIRS OF
DAMAGED PIERS OF BRIDGE No.400 AT KM.108/200-300 OF
PIER NO. 02 ACROSS KUMARADHARA RIVER BETWEEN
SKLR & KBPR STATION.

SCHEME FOR UNDER WATER REPAIRS OF
PIER

PROJECT ID:TO BE PROPOSED

SIGNATURE BLOCK

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HQ. DRG. NO. SWR/2025/GAD-138/Br. No.-400/P-2/REPAIR/HAS-MAJN/MYS Div.

MODUS OPERANDI- DETAILS OF REPAIR WORKS ON PIER NO 02

