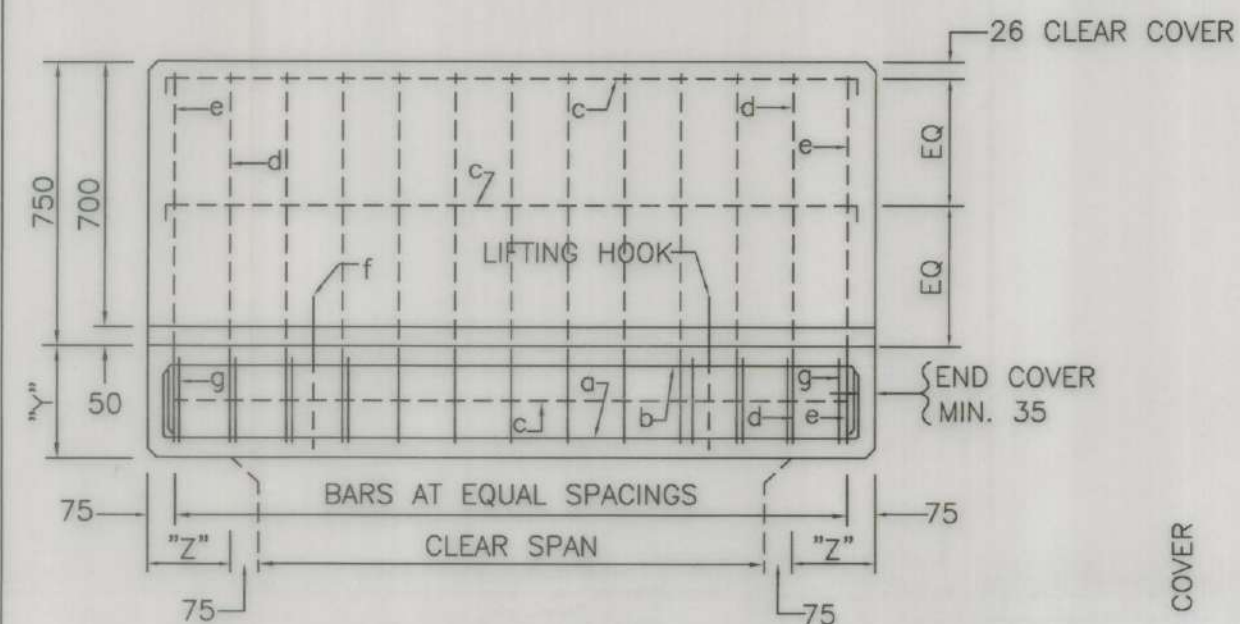
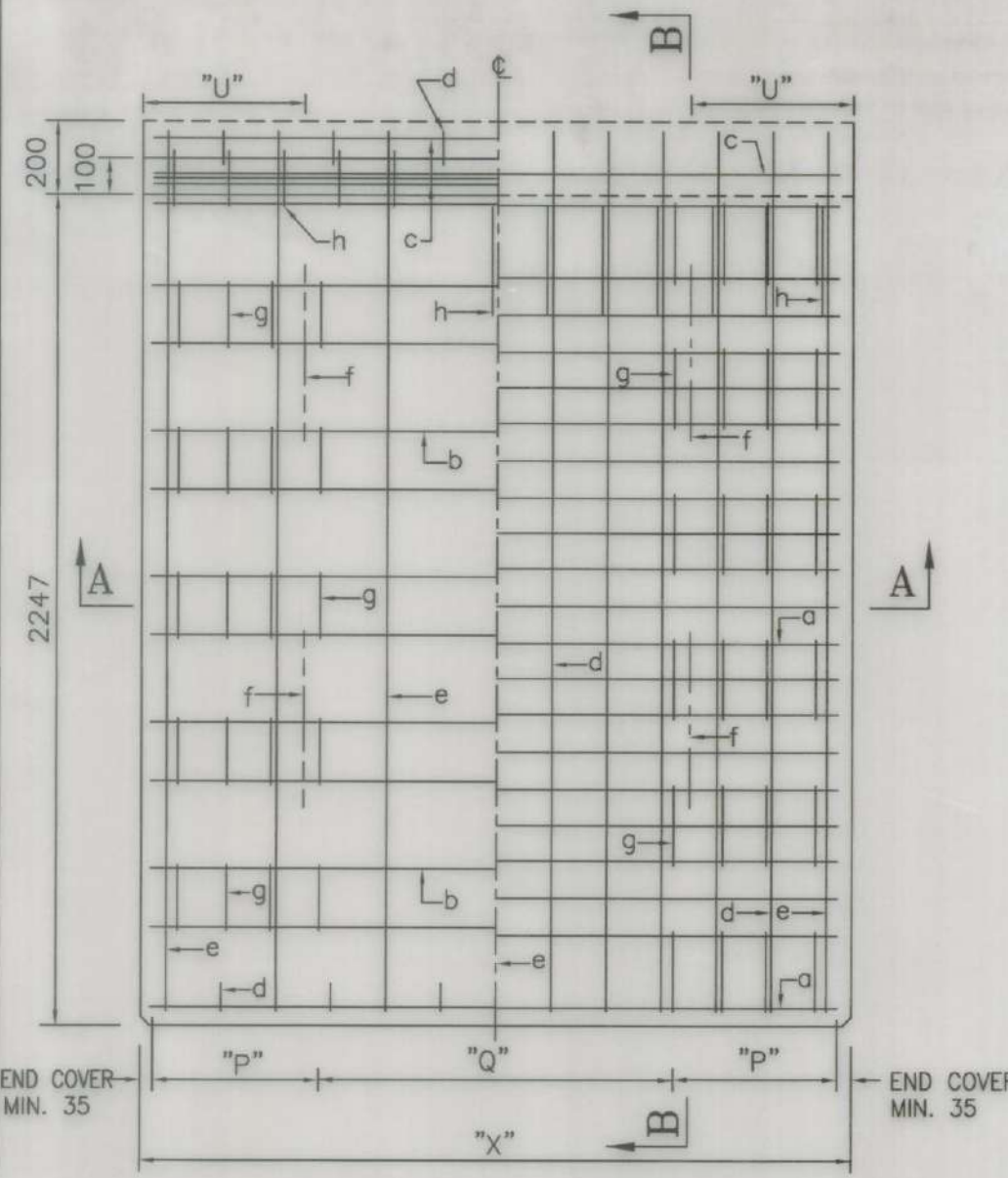
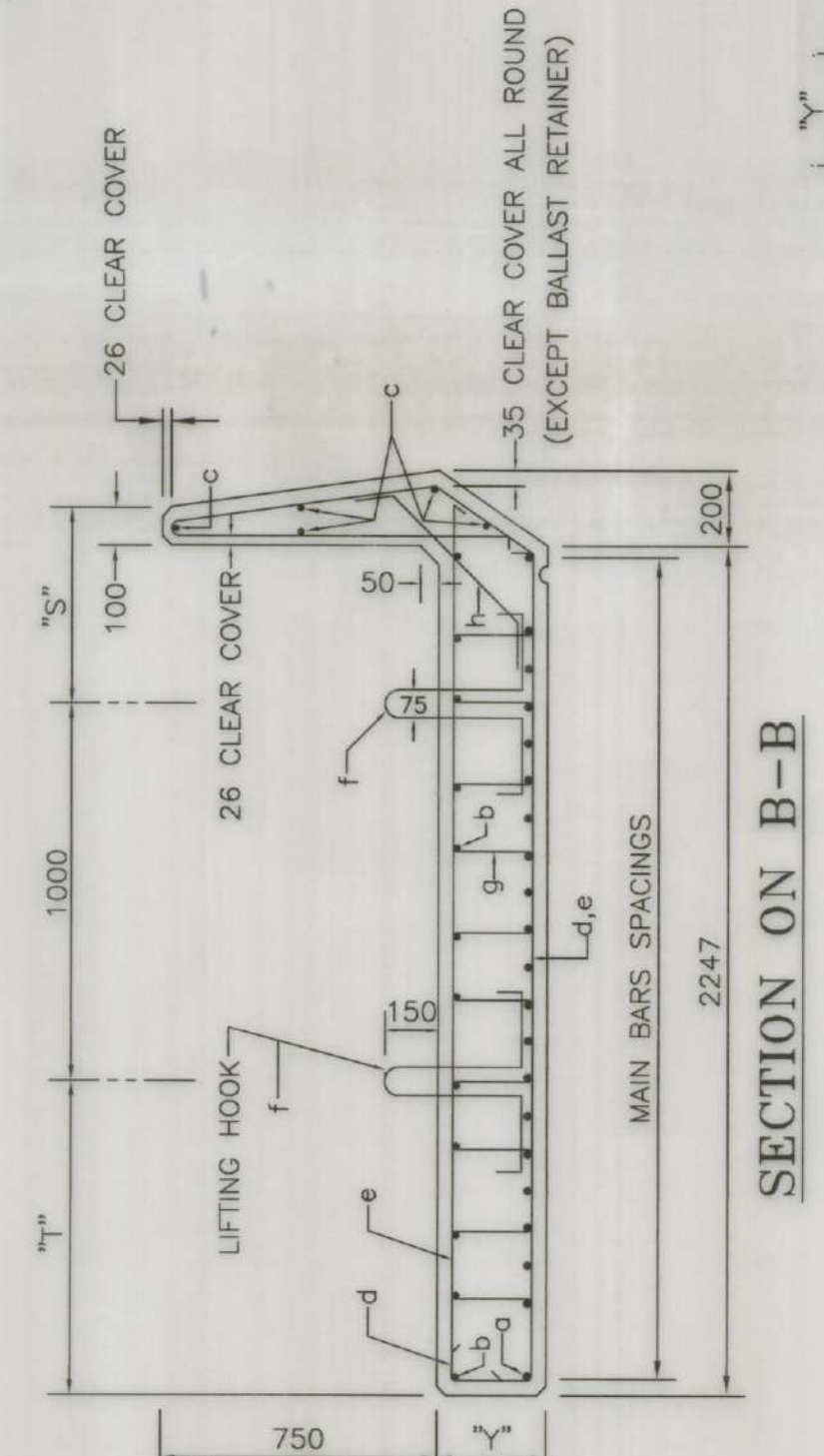




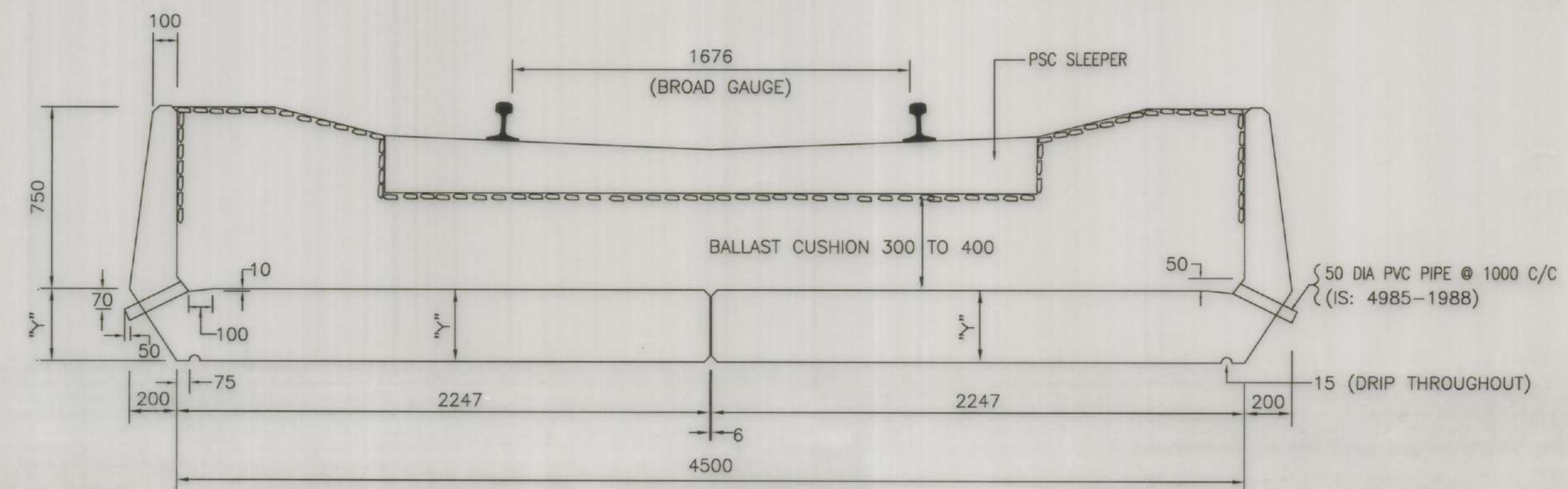
SECTIONAL ELEVATION ON A-A



HALF TOP HALF BOTTOM
TYPICAL SECTIONAL PLAN



SECTION ON B-B



GENERAL ARRANGEMENT FOR SINGLE TRACK

QUANTITY SCHEDULE FOR EACH UNIT

DESCRIPTION					
CLEAR SPANS	0.610m	0.915m	1.22m	1.83m	2.44m
WEIGHT (kN)	22.26	29.64	41.46	59.53	80.77
CUBICAL QUANTITY (cu m)	0.89	1.19	1.66	2.38	3.23
NET WEIGHT OF BARS # 8 (kg)	51.24	52.11	67.10	85.21	98.77
NET WEIGHT OF BARS # 16 (kg)	60.94	-	-	-	-
NET WEIGHT OF BARS # 20 (kg)	-	97.55	133.88	-	-
NET WEIGHT OF BARS # 25 (kg)	-	-	-	242.26	315.42
NET WEIGHT OF STEEL + 10% WASTAGE (kg)	123.39	164.62	221.08	360.21	455.62
NET WEIGHT OF STEEL + 10% WASTAGE (kN)	1.21	1.61	2.17	3.53	4.47

DESCRIPTION FOR EACH UNIT

DIMENSION OF SLAB			POSITION OF LIFTING HOOK			BEARING PRESSURE AT SUPPORT	
CLEAR SPAN (m)	LENGTH "X"	DEPTH "Y"	"S"	"T"	"U"	SUPPORT "Z"	kN/m ²
0.610	1210	265	495	852	300	225	1260
0.915	1515	285	506	841	300	225	1250
1.220	1970	310	517	830	375	300	960
1.830	2580	345	531	816	375	300	1010
2.440	3290	370	540	807	450	350	1020

ARRANGEMENT FOR SHEAR REINFORCEMENT

SPAN (m)	PORTION "P"		PORTION "Q"		TOTAL Nos OF STIRRUPS (BAR-"g")
	LENGTH (mm)	Nos OF STIRRUPS	LENGTH (mm)	Nos OF STIRRUPS	
0.610	252	3	707	-	6
0.915	131	2	1254	-	4
1.220	135	2	1700	-	4
1.830	132	2	2317	-	4
2.440	257	3	2776	-	6

BAR BENDING SCHEDULE FOR EACH UNIT

CLEAR SPAN (m)	DEPTH "Y" (mm)	BAR "a"						BAR "b"						BAR "c"						BAR "d"														BAR "e"														BAR "f"									
		DIA (mm)	NOS REQD	k	l	LENGTH OF ONE BAR	TOTAL LENGTH (mm)	DIA	NOS REQD	k	l	LENGTH OF ONE BAR	TOTAL LENGTH	DIA	NOS REQD	k	l	LENGTH OF ONE BAR	TOTAL LENGTH	DIA	NOS REQD	k	l	m	n	p	q	r	LENGTH OF ONE BAR	TOTAL LENGTH	DIA	NOS REQD	k	l	m	n	p	q	r	s	LENGTH OF ONE BAR	TOTAL LENGTH	DIA	NOS REQD	k	l	m	n	LENGTH OF ONE BAR	TOTAL LENGTH							
0.610	265	16	24	1124	179	1386	33264	8	24	1100	75	1250	30000	8	5	1132	75	1282	6410	8	6	2173	924	187	283	75	50	732	4475	26850	8	4	2173	924	187	283	75	50	732	2373	6824	27296	16	4	340	95	250	91	1326	5304							
0.915	285	20	20	1425	197	1699	33980	8	20	1397	75	1547	30940	8	5	1437	75	1587	7935	8	8	2173	939	207	300	75	50	732	4526	36208	8	4	2173	939	207	300	75	50	732	2373	6875	27500	20	4	352	120	250	95	1378	5512							
1.220	310	20	22	1880	222	2204	48488	8	22	1852	75	2002	44044	8	5	1892	75	2042	10210	8	10	2173	958	232	321	75	50	732	4591	45910	8	5	2173	958	232	321	75	50	732	2373	6940	34700	20	4	377	120	250	95	1428	5712							
1.830	345	25	20	2485	255	2844	56880	8	20	2452	75	2602	52040	8	5	2502	75	2652	13260	8	13	2173	984	267	351	75	50	732	4683	60879	8	7	2173	984	267	351	75	50	732	2373	7032	49224	25	4	402	150	250	100	1511	6044							
2.440	370	25	21	3195	280	3604	75684	8	12	3162	75	3312	39744	8	5	3212	75	3362	16810	8	17	2173	1003	292	373	75	50	732	4749	80733	8	9	2173	1003	292	373	75	50	732	2373	7098	63882	25	4	427	150	250	100	1561	6244							

- ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT OTHERWISE SHOWN.
- ALL REINFORCEMENT BARS SHALL BE OF HIGH STRENGTH DEFORMED BARS (HSD/TMT) HAVING Fe 415 GRADE CONFORMING TO IS:1786.
- BAR BENDING DIMENSIONS ARE WITH REFERENCE TO THE CENTRE LINES OF BARS. ALL BARS SHOULD BE PLACED IN ACCORDANCE WITH THE TABLE SHOWN ABOVE FOR EACH SPAN.
- CLEAR COVER TO THE REINFORCEMENT AT TOP AND BOTTOM OF THE SLAB HAS BEEN TAKEN AS 35mm IN DESIGN AS PER CLAUSE No. 15.9.2 OF IRS CONCRETE BRIDGE CODE.
- THE DESIGN IS SUITABLE FOR SEVERE ENVIRONMENT EXPOSURE CONDITIONS (i.e., DESIGN CRACK WIDTH NOT TO EXCEED 0.10 mm AS PER CLAUSE No. 10.2.1(a) OF IRS CONCRETE BRIDGE CODE).
- SLABS HAVE BEEN DESIGNED FOR 400 mm BALLAST CUSHION AND CHECKED FOR 300 mm BALLAST CUSHION VIDE CLAUSE NO. 2.2.2 OF IRS BRIDGE RULES.
- CONTROLLED CONCRETE GRADE M-35 SHALL BE USED. THE LETTER 'M' REFERS TO THE MIX AND NUMBER INDICATES THE CHARACTERISTIC CUBE STRENGTH AT 28 DAYS IN N/mm².
- MAXIMUM SIZE OF AGGREGATE TO BE USED IS 20 mm.
- WEIGHT OF REINFORCED CONCRETE HAS BEEN ASSUMED AS 25 kN/Cu m.
- 'DIA' INDICATED IN THIS DRAWING REFERS TO NOMINAL DIAMETER OF THE HSD/TMT BARS AS PER IS:1786.
- ALL CORNERS OF SLAB SHALL HAVE A CHAMFER OF 25 mm UNLESS OTHERWISE SHOWN. HOWEVER ABUTMENT WILL HAVE A CHAMFER OF 75mm.
- TOP SURFACE OF THE SLAB SHOULD BE GIVEN A FEW COATS OF COAL TAR/BITUMEN OR ANY OTHER SUITABLE WATER PROOFING TREATMENT BEFORE THE TRACK IS LAID ON THEM.
- UNITS SHOULD BE PROVIDED WITH A UNIFORM BEDDING BY PLACING IT OVER A LAYER OF CEMENT AND CAST IRON BORINGS IN 1:1 PROPORTION. THE PASTE SHOULD BE OF STIFF CONSISTENCY.
- THESE SLABS ARE SUITABLE FOR CURVED TRACK UP TO 10 DEGREE.
- THESE SLABS CAN ALSO BE USED FOR REPLACEMENT OF EXISTING SLABS, IF CLEAR SPAN OF EXISTING SLAB IS LESS THAN THAT OF THE PROPOSED SLABS SUBJECT TO AVAILABILITY OF BEARING ON ABUTMENT/PIER.
- BALLAST CUSHION MAY BE ADJUSTED TO CATER FOR SUPER ELEVATION WHILE PLACING THE SLABS ON CURVES.
- DATE OF CASTING AND NAME OF CASTING DEPOT SHOULD BE ENGRAVED ON EACH UNIT.
- THESE SLABS CAN BE USED IN YARDS, CARRYING TURNOUT OR MULTIPLE LINE SECTIONS ELIMINATING BALLAST RETAINER PORTION AND SHAPE OF BAR "d" AND "e" MAY BE MODIFIED, BAR "h" MAY BE REMOVED, IF NECESSARY.
- FOR NEW CONSTRUCTION, MINIMUM SPAN SHALL NOT BE LESS THAN 1.0 METRE.
- TO FACILITATE THE WORKING OF BALLAST CLEANING MACHINE, LIFTING HOOKS SHALL BE CUT AFTER THE PLACEMENT OF THE SLAB AND SUITABLE WATER PROOFING COAT SHALL BE APPLIED ON THE CUT.

NOTE

SPECIFICATION	SCALE	ALT	DESCRIPTION	DATE
IRS BRIDGE RULES IRS CONCRETE BRIDGE CODE IS: 1786	MILLIMETRES 200 100 0 200 400 600 800 1:20	ALT	APPROVED BY B1ST BSC VIDE REVIEW ITEM NO. 1009 03-04-2014	

RELATED DRAWINGS

DESCRIPTION	DRAWING NO.
MODERATE ENVIRONMENT CONDITION	BA-10063
EXTREME ENVIRONMENT EXPOSURE CONDITION	RDSO/B-10063/2

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R D S O

PRECAST R.C. BRIDGE SLAB
STANDARD SPANS 0.61,0.915,1.22,1.83 & 2.44m
FOR 25t LOADING-2008 (CONCRETE GRADE M-35)
(FOR SEVERE ENVIRONMENT EXPOSURE CONDITION)

PROVISIONAL DATE: 03.01.2014
DATE: 30.09.2011

RDSO/B-10063/1

CALCULATION REGISTER REFERENCE-CB-1/30 DONE BY S.DAYAL (E/D) CHD. BY A.DWIVEDI (SSE/D)	DRAWN BY-ANJANA BHASIN(SSE/D) CHECKED BY- A.DWIVEDI (SSE/D)	SCRUTINISED & CHECKED BY ADE/BKS/CB-II	SCRUTINISED & RECOMMENDED BY DIRECTOR/BKS/CB-II	APPROVED BY ED/STRUCTURES	B&S DIRECTORATE FILE No. CBS/DCS NOTING PAGE No.
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BA - 10063/1