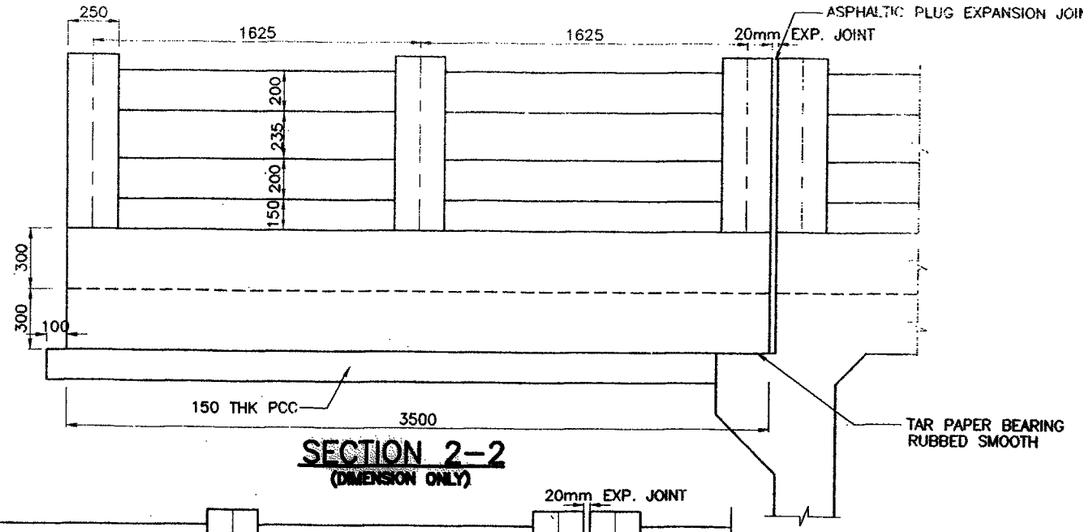
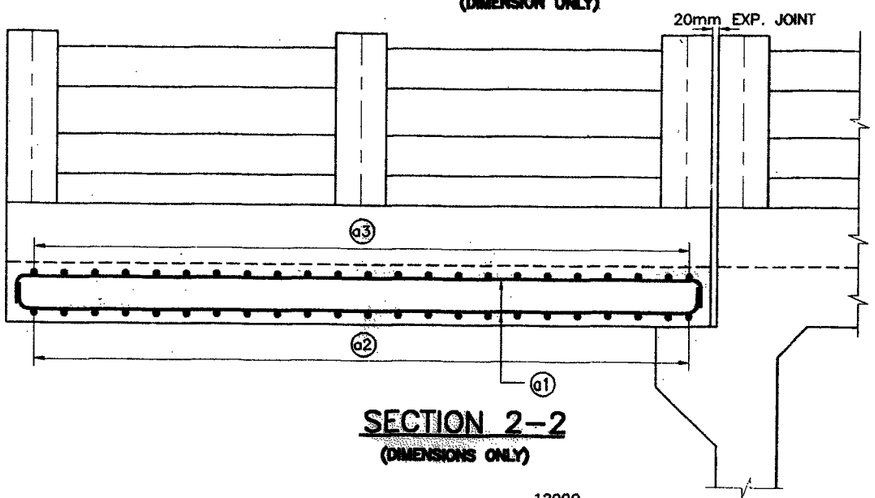
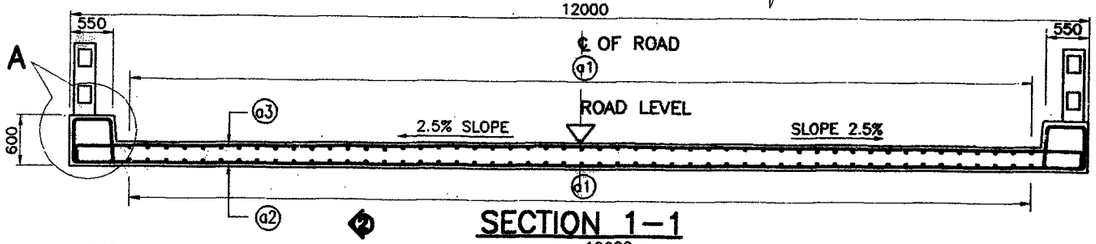
DRG.NO. SD/115 (SHEET 1 OF 4)



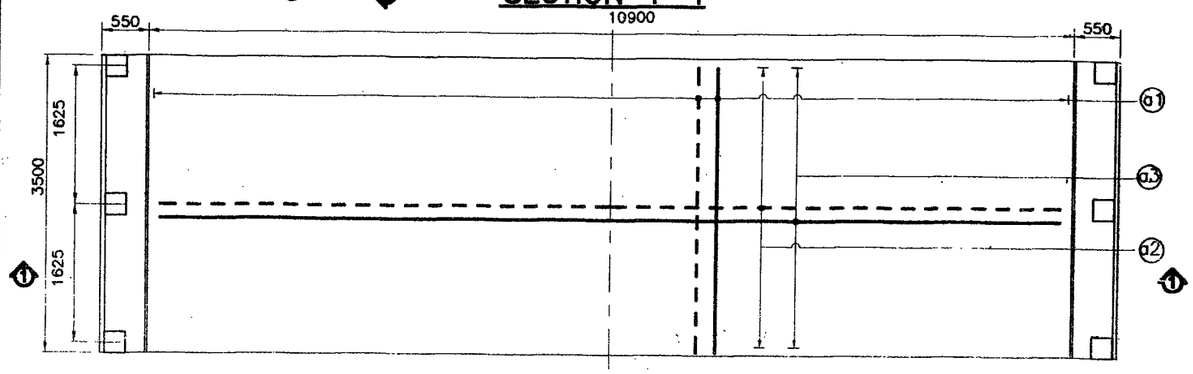
SECTION 2–2
(DIMENSION ONLY)



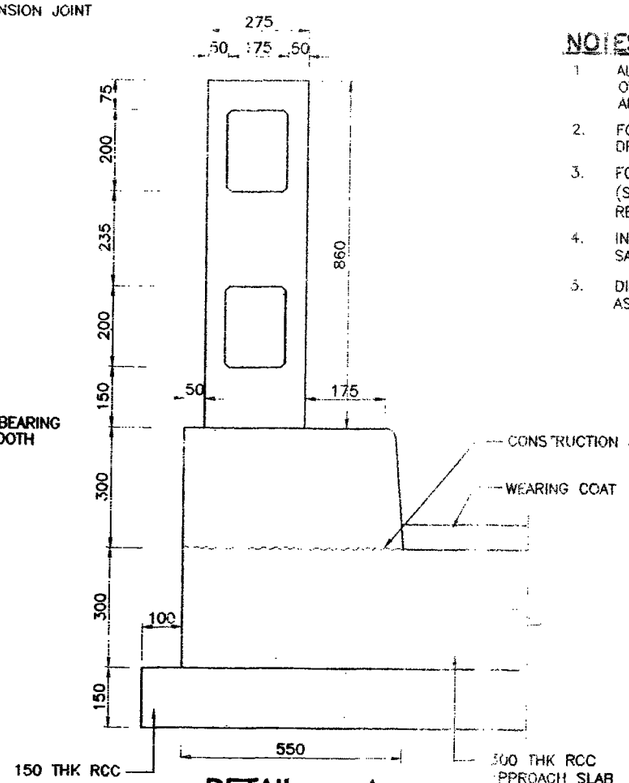
SECTION 2–2
(DIMENSIONS ONLY)



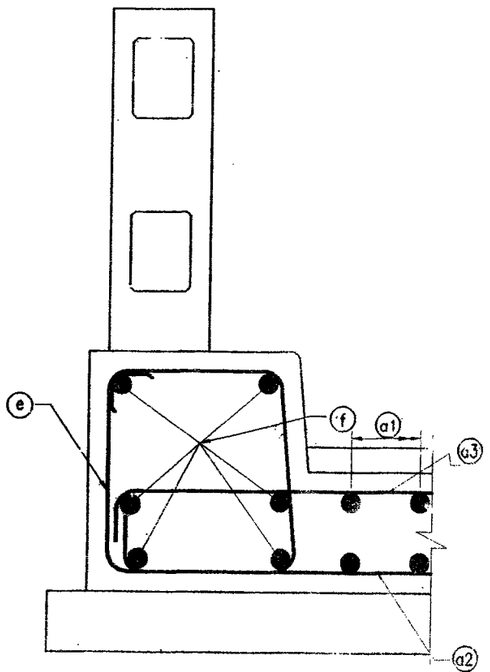
② SECTION 1–1



② PLAN OF APPROACH SLAB



DETAIL – A
(DIMENSIONS ONLY)



DETAIL – A
(REINFORCEMENT ONLY)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. FOR REINFORCEMENT DETAIL OF RAILING REFER DRG. NO.SD/115 (SHEET 2 OF 4).
3. FOR SCHEDULE OF REINFORCEMENT, REFER DRG.NO.SD-115 (SHEET 3 OF 3) DOES NOT INCLUDE CHANGE IN REINFORCEMENT AROUND RAILING & DRAINAGE SPOUT.
4. IN CASE OTHER TYPE OF RAILING IS USED, THE WEIGHT OF SAME ON EACH SIDE SHALL NOT EXCEED 3MT. PER METRE.
5. DIMENSIONS IN SCHEDULE OF REINFORCEMENT ARE GIVEN AS PER IS 2502.

BAR MKD.	REINFORCEMENT
a1	12 Ø @ 150 c/c
a2	12 Ø @ 150 c/c
a3	12 Ø @ 150 c/c
e	10 Ø 2L stirrups @ 150 c/c
f	6Nos.10 Ø

LEGEND :

——— : TOP FACE BARS/ OUTER FACE BARS

– – – – – : BOTTOM FACE BARS/ INNER FACE BARS

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.

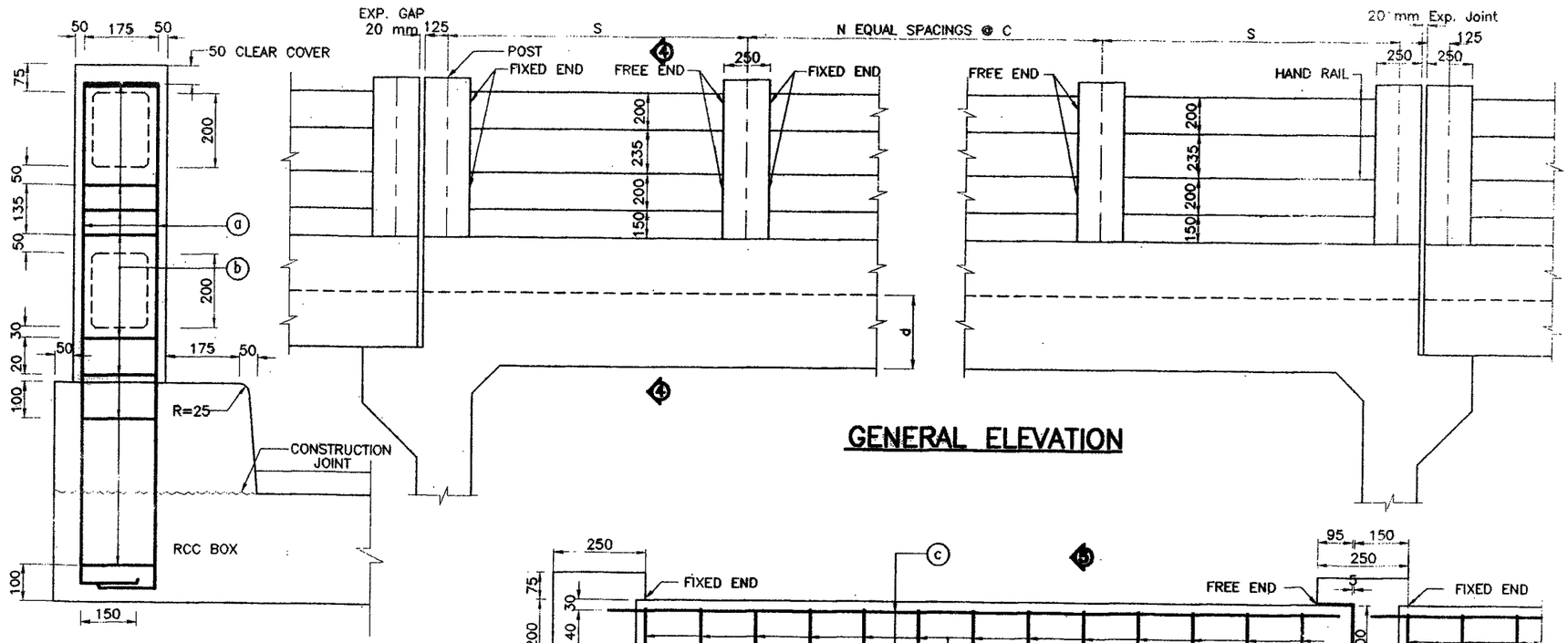
STANDARD DRAWINGS FOR BOX CELL STRUCTURES

MISCELLANEOUS DETAILS APPROACH SLAB

(WITHOUT EARTH CUSHION)

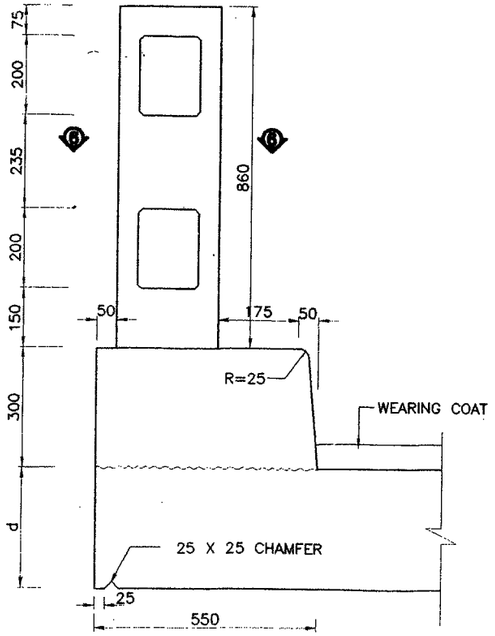
DESIGNED BY	CHECKED BY	APPROVED FOR ISSUE BY	1999
(A.R.GHOSH) CES (I) LTD	(M.C.TANDON) TOPL	(C.C.BHATTACHARYA) C.E (R) S&R MOST	DRG. NO. SD/115 (SHEET 1 OF 4)

Source: MoST Standard Drawings for Box Cell Culverts (2000) - older reference, verify with current IRC / MoRTH. Scan cleaned by helptheengineer.com



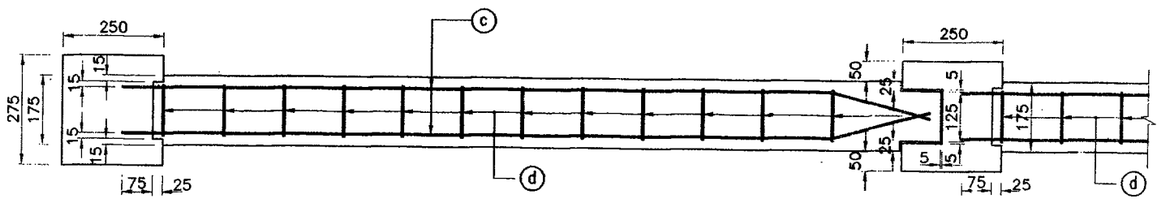
GENERAL ELEVATION

SECTION ELEVATION



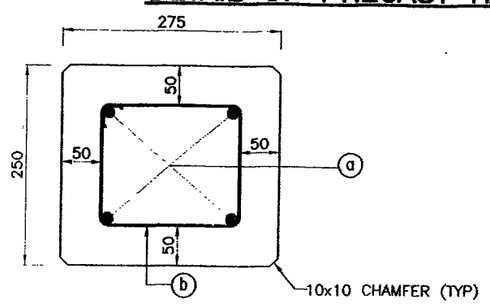
SECTION 4–4
(REINFORCEMENT ONLY)

SECTION 4–4
(DIMENSIONS ONLY)

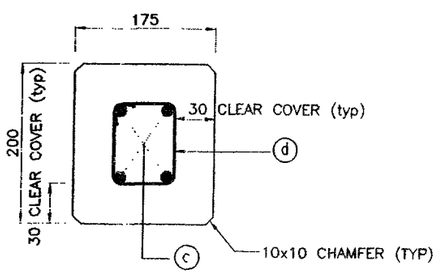


PLAN

DETAIL OF PRECAST HANDRAIL



SECTION 6–6



SECTION 5–5

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. REINFORCEMENT OF RAILING POST SHOULD BE SUITABLE ANCHORED IN TOP SLAB OF BOX CULVERT.
3. CASTING OF POST SHALL BE DONE IN SINGLE POUR AFTER ACCURATELY POSITIONING THE PRECAST HANDRAIL.
4. FOR DETAILS & NUMBER OF POST & SPACING REFER DWG.NO. SD-115 (SHEET 4 OF 4).
5. FOR SCHEDULE OF REINFORCEMENT, REFER DRG.NO. SD-115 (SHEET 4 OF 4).

BAR MKD.	REINFORCEMENT
a	4Nos.12 ϕ
b	8Nos.2L-8 ϕ stirrups
c	4Nos.8 ϕ
d	8 ϕ 2L stirrups @ 100 c/c

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING) , NEW DELHI.

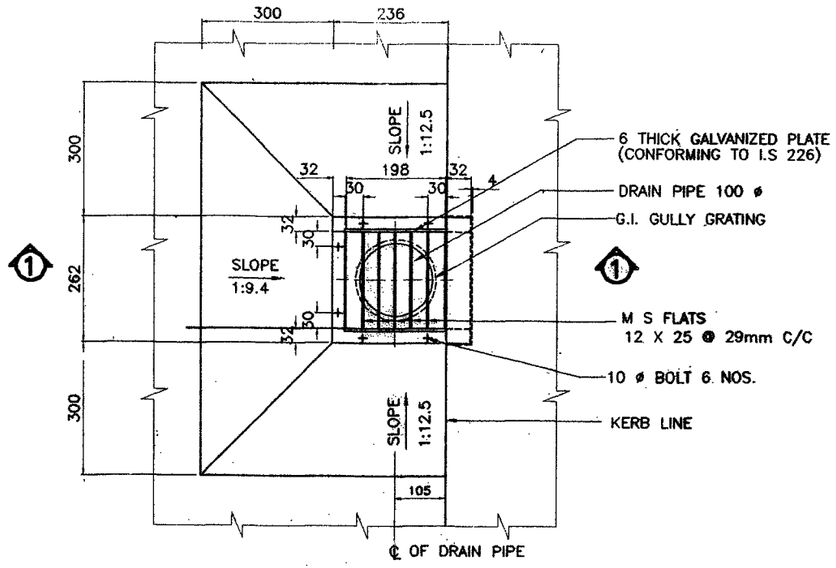
STANDARD DRAWINGS FOR BOX CELL STRUCTURES

MISCELLANEOUS DETAILS RCC RAILING
(WITHOUT EARTH CUSHION)

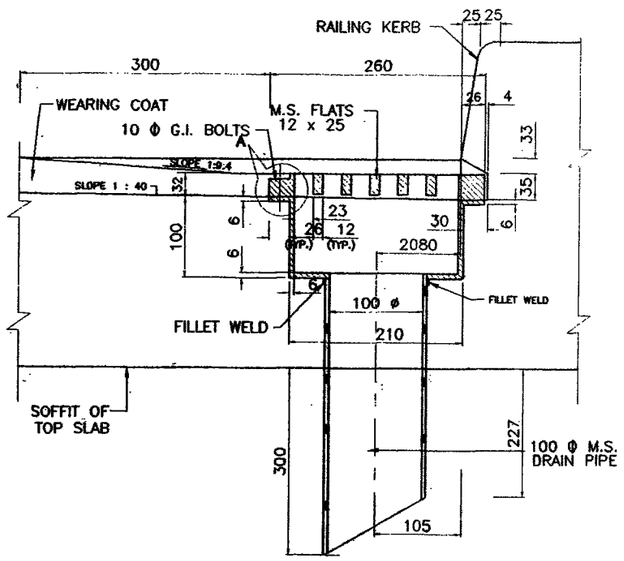
DESIGNED BY	CHECKED BY	APPROVED FOR ISSUE BY	1999
(A.R.GHOSH) CES (I) LTD	(M.C.TANDON) TCPL	(C.C.BHATTACHARYA) C.E (R) S&R, MOST	DRG. NO. SD/115 (SHEET 2 OF 4)

Source: MoST Standard Drawings for Box Cell Culverts (2000) - older reference, verify with current IRC / MoRTH. Scan cleaned by helptheengineer.com

DRG.NO. SD/115 (SHEET 3 OF 4)



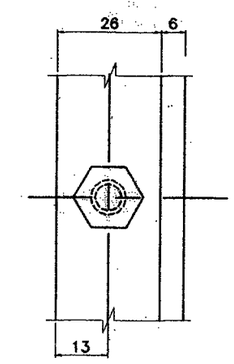
PLAN
DETAILS OF DRAINAGE SPOUT AND COLLECTION PIT



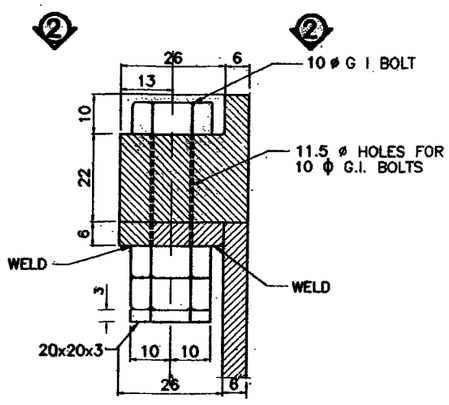
SECTION 1–1

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE REINFORCEMENT OF TOP SLAB OF BOX SHALL BE SUITABLY MODIFIED TO ACCOMMODATE THE DRAINAGE SPOUT.
3. THE DRAINAGE SPOUT SHALL BE GALVANIZED AFTER WELDING THE PLATES & FLATS.
4. FOR DRAINAGE SPOUT LOCATION REFER DETAIL–B CORRESPONDING G A DRAWING.



PLAN AT 2–2



DETAIL –A

GOVERNMENT OF INDIA MINISTRY OF SURFACE TRANSPORT (ROADS WING), NEW DELHI.			
STANDARD DRAWINGS FOR BOX CELL STRUCTURES			
MISCELLANEOUS DETAILS DRAINAGE SPOUT (WITHOUT EARTH CUSHION)			
DESIGNED BY	CHECKED BY	APPROVED FOR ISSUE BY	1999
(A.R.GHOSH) CES (I) LTD	(M.C.TANDON) TCPL	(C.C.BHATTACHARYA) C.E (R) S&R MOST	DRG. NO. SD/115 (SHEET 3 OF 4)

Source: MoST Standard Drawings for Box Cell Culverts (2000) - older reference, verify with current IRC / MoRTH. Scan cleaned by helptheengineer.com

TABLE: BAR BENDING SCHEDULE FOR RAILINGS AND POSTS

DRG.NO. SD/115 (SHEET 4 OF 4)

BOX – CELL DESIGNATION N/ab/EC	TOTAL TOP WIDTH TB (mm)	RAILING POST S (mm)	C (mm)	N (mm)	BAR MKD.– ⓐ 12 ϕ 4 NOS. PER POST — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	BAR MKD.– ⓑ 8 ϕ RINGS 8 NOS. PER POST — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	END RAILING BAR MKD.– ⓒ 8 ϕ 4 NOS. PER RAIL — LENGTH (mm)	NOS.	TOTAL LENGTH (m)	WEIGHT (kg)	INTERMEDIATE RAILING BAR MKD.– ⓒ 8 ϕ 4 NOS. PER RAIL — LENGTH (mm)	NOS.	TOTAL LENGTH (m)	WEIGHT (kg)	END RAILING BAR MKD.– ⓓ 8 ϕ RINGS @ 100c/c — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	INTERMEDIATE RAILING BAR MKD.– ⓓ 8 ϕ RINGS @ 100c/c — LENGTH (mm)	NOS.	TOTAL LENGTH (m)	WEIGHT (kg)
1/22/0	2600	1175	0	0	1593.80	24	38.25	33.98	677.33	48	32.51	12.83	1100.00	32	35.20	13.89	0.00	0	0.00	0.00	537.33	80	42.99	16.96	0.00	0	0.00	0.00
1/23/0	2700	1225	0	0	1613.80	24	38.73	34.39	677.33	48	32.51	12.83	1150.00	32	36.80	14.52	0.00	0	0.00	0.00	537.33	80	42.99	16.96	0.00	0	0.00	0.00
1/33/0	3840	1500	590	1	1663.80	32	53.24	47.27	677.33	64	43.35	17.10	1425.00	32	45.60	17.99	515.00	16	8.24	3.25	537.33	104	55.88	22.05	537.33	16	8.60	3.39
1/34/0	3920	1500	670	1	1693.80	32	54.20	48.12	677.33	64	43.35	17.10	1425.00	32	45.60	17.99	595.00	16	9.52	3.76	537.33	104	55.88	22.05	537.33	20	10.75	4.24
1/43/0	5000	1500	875	2	1693.80	40	67.75	60.15	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	800.00	32	25.60	10.10	537.33	104	55.88	22.05	537.33	56	30.09	11.87
1/44/0	5100	1500	925	2	1723.80	40	68.95	61.22	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	850.00	32	27.20	10.73	537.33	104	55.88	22.05	537.33	56	30.09	11.87
1/45/0	5260	1500	1005	2	1763.80	40	70.55	62.64	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	930.00	32	29.76	11.74	537.33	104	55.88	22.05	537.33	64	34.39	13.57
1/53/0	6140	1500	1445	2	1743.80	40	69.75	61.93	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	1370.00	32	43.84	17.30	537.33	104	55.88	22.05	537.33	96	51.58	20.35
1/54/0	6240	1500	1495	2	1763.80	40	70.55	62.64	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	1420.00	32	45.44	17.93	537.33	104	55.88	22.05	537.33	104	55.88	22.05
1/55/0	6400	1500	1050	3	1823.80	48	87.54	77.72	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	975.00	48	46.80	18.47	537.33	104	55.88	22.05	537.33	96	51.58	20.35
1/63/0	7440	1500	1397	3	1923.80	48	92.34	81.98	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1321.67	48	63.44	25.03	537.33	104	55.88	22.05	537.33	144	77.38	30.53
1/64/0	7500	1500	1417	3	1923.80	48	92.34	81.98	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1341.67	48	64.40	25.41	537.33	104	55.88	22.05	537.33	144	77.38	30.53
1/65/0	7500	1500	1417	3	1923.80	48	92.34	81.98	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1341.67	48	64.40	25.41	537.33	104	55.88	22.05	537.33	144	77.38	30.53
1/66/0	7700	1500	1483	3	1943.80	48	93.30	82.84	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1408.33	48	67.60	26.67	537.33	104	55.88	22.05	537.33	156	83.82	33.08
1/75/0	8700	1500	1363	4	1993.80	56	111.65	99.13	677.33	112	75.86	29.93	1425.00	32	45.60	17.99	1287.50	64	82.40	32.51	537.33	104	55.88	22.05	537.33	192	103.17	40.71
1/76/0	8900	1500	1413	4	2023.80	56	113.33	100.62	677.33	112	75.86	29.93	1425.00	32	45.60	17.99	1337.50	64	85.60	33.78	537.33	104	55.88	22.05	537.33	192	103.17	40.71
1/77/0	8900	1500	1413	4	2023.80	56	113.33	100.62	677.33	112	75.86	29.93	1425.00	32	45.60	17.99	1337.50	64	85.60	33.78	537.33	104	55.88	22.05	537.33	192	103.17	40.71
1/85/0	9900	1500	1330	5	2043.80	64	130.80	116.13	677.33	128	86.70	34.21	1425.00	32	45.60	17.99	1255.00	80	100.40	39.62	537.33	104	55.88	22.05	537.33	220	118.21	46.64
1/86/0	10000	1500	1350	5	2063.80	64	132.08	117.27	677.33	128	86.70	34.21	1425.00	32	45.60	17.99	1275.00	80	102.00	40.25	537.33	104	55.88	22.05	537.33	220	118.21	46.64
1/87/0	10400	1500	1430	5	2093.80	64	134.00	118.97	677.33	128	86.70	34.21	1425.00	32	45.60	17.99	1355.00	80	108.40	42.77	537.33	104	55.88	22.05	537.33	240	128.96	50.89
2/22/0	5040	1500	895	2	1643.80	40	65.75	58.38	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	820.00	32	26.24	10.35	537.33	104	55.88	22.05	537.33	56	30.09	11.87
2/23/0	5100	1500	925	2	1643.80	40	65.75	58.38	677.33	80	54.19	21.38	1425.00	32	45.60	17.99	850.00	32	27.20	10.73	537.33	104	55.88	22.05	537.33	56	30.09	11.87
2/32/0	7100	1500	1283	3	1693.80	48	81.30	72.18	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1206.33	48	58.00	22.89	537.33	104	55.88	22.05	537.33	132	70.93	27.99
2/33/0	7190	1500	1313	3	1713.80	48	82.26	73.03	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1238.33	48	59.44	23.45	537.33	104	55.88	22.05	537.33	132	70.93	27.99
3/22/0	7340	1500	1363	3	1613.80	48	77.46	68.77	677.33	96	65.02	25.66	1425.00	32	45.60	17.99	1288.33	48	61.84	24.40	537.33	104	55.88	22.05	537.33	144	77.38	30.53
3/33/0	10740	1500	1498	5	1693.80	64	108.40	96.24	677.33	128	86.70	34.21	1425.00	32	45.60	17.99	1423.00	80	113.84	44.92	537.33	104	55.88	22.05	537.33	260	139.71	55.13
App Slab	3500	1625	0	0	1543.80	48	74.10	65.79	677.33	96	65.02	25.66	1550.00	64	99.20	39.14	0.00	0	0.00	0.00	537.33	224	120.36	47.49	0.00	0	0.00	0.00

BOX – CELL DESIGNATION N/ab/EC	BAR MKD.– ⓔ 10 ϕ RINGS @ 150 C/C IN KERB — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	BAR MKD.– ⓕ 10 ϕ 6 NOS. PER KERB — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	TOTAL WEIGHT (kg)
1/22/0	2040.58	34	69.38	42.78	2685.66	12	31.99	19.72	140.1
1/23/0	2082.31	36	74.96	46.22	2765.66	12	33.19	20.46	145.4
1/33/0	2186.65	50	109.33	67.41	3905.66	12	46.87	28.90	207.4
1/34/0	2249.26	52	116.96	72.11	3985.66	12	47.83	29.49	214.9
1/43/0	2249.26	66	148.45	91.53	5085.66	12	60.79	37.48	272.6
1/44/0	2311.86	68	157.21	96.92	5165.66	12	61.99	38.22	280.4
1/45/0	2395.33	70	167.67	103.38	5325.66	12	63.91	39.40	292.2
1/53/0	2353.60	82	192.99	118.99	6205.66	12	74.47	45.91	325.9
1/54/0	2395.33	82	196.42	121.10	6305.66	12	75.67	46.65	331.8
1/55/0	2520.54	84	211.73	130.54	6465.66	12	77.59	47.84	360.6
1/63/0	2729.22	98	267.46	164.90	7505.66	12	90.07	55.53	423.7
1/64/0	2729.22	100	272.92	168.27	7565.66	12	90.79	55.97	427.9
1/65/0	2729.22	100	272.92	168.27	7565.66	12	90.79	55.97	427.9
1/66/0	2770.96	102	282.64	174.26	7765.66	12	93.19	57.45	440.0
1/75/0	2875.30	116	333.53	205.64	8765.66	12	105.19	64.85	512.8
1/76/0	2937.90	118	346.67	213.74	8965.66	12	107.59	66.33	525.1
1/77/0	2937.90	118	346.67	213.74	8965.66	12	107.59	66.33	525.1
1/85/0	2979.64	132	393.31	242.49	9965.66	12	119.59	73.73	592.9
1/86/0	3021.37	132	398.82	245.89	10065.66	12	120.79	74.47	598.8
1/87/0	3063.98	138	425.59	262.39	10465.66	12	125.59	77.43	626.7
2/22/0	2144.92	66	141.56	87.28	5105.66	12	61.27	37.77	267.1
2/23/0	2144.92	68	145.85	89.92	5165.66	12	61.99	38.22	270.5
2/32/0	2249.26	94	211.43	130.35	7165.66	12	85.99	53.01	372.1
2/33/0	2290.99	96	219.94	135.60	7255.66	12	87.07	53.68	379.5
3/22/0	2082.31	98	204.07	125.82	7405.66	12	88.87	54.79	370.0
3/33/0	2249.26	142	319.39	196.92	10805.66	12	129.67	79.95	547.4
App Slab	1936.24	92	178.13	109.83	3565.66	24	85.58	52.76	340.7

TABLE: BAR BENDING SCHEDULE FOR APPROACH SLAB

BAR MKD.– ① 12 ϕ @150c/c — LENGTH (mm)	NOS.	TOTAL LENGTH (m)	WEIGHT (kg)	BAR MKD.– ② 12 ϕ @150c/c — LENGTH (mm)	NOS. n=2xnp	TOTAL LENGTH (m)	WEIGHT (kg)	BAR MKD.– ③ 12 ϕ @150c/c — LENGTH (mm)	NOS.	TOTAL LENGTH (m)	WEIGHT (kg)	TOTAL WEIGHT (kg)
3758.8	292	1097.57	974.44	11159	46	513.30	455.72	11162.8	46	513.49	455.88	1886.04

1. FOR GENERAL NOTES REFER DWG. NO. SD/101
2. THIS DRAWING SHALL BE READ IN CONJUNCTION TO DWG. NO. SD/115 (SHEET 1&2 OF 4)

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING), NEW DELHI.

STANDARD DRAWINGS FOR BOX CELL STRUCTURES

MISCELLANEOUS DETAILS (BARBENDING SCHEDULE)

DESIGNED BY	CHECKED BY	APPROVED FOR ISSUE BY	1999
(A.R.GHOSH) CES (I) LTD	(M.C.TANDON) TCPL	(C.C.BHATTACHARYA) C.E (R) S&R MOST	DRG. NO. SD/115 (SHEET 4 OF 4)

Source: MoST Standard Drawings for Box Cell Culverts (2000) - older reference, verify with current IRC / MoRTH. Scan cleaned by helptheengineer.com