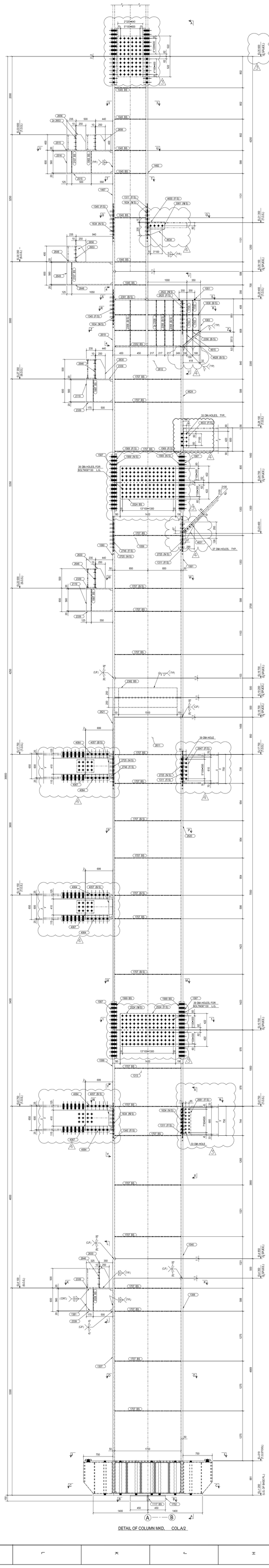

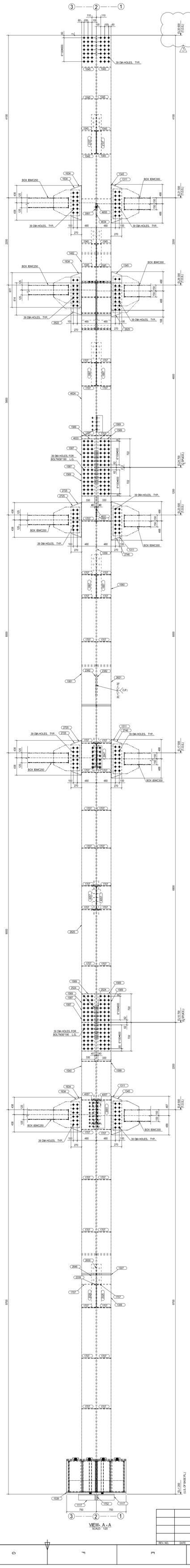

BILL OF MATERIALS — ASSEMBLY MK'D: COL/A/2 — ASSY QTY : 1

ITEM NO.:	SECTION	UNIT WT	LENGTH	TOTAL QTY.	TOTAL WT.	REMAKED
1045	PL12*356	94.20	800	14	375.59	
1051	PL732*740	251.20	1348	1	250.58	
1059	PL281*700	219.80	5457	1	2054.01	
1060	PL597*40	392.50	4987	1	1451.38	
1061	PL597*40	392.50	5967	1	1741.83	
1063	PL732*740	251.20	816	1	151.68	
1098	PLT36*150	282.60	150	8	50.87	
1115	TS50NB4.5	6.19	800	8	39.59	
1117	PL597*40	314.00	428	2	39.75	
1306	PL597*40	392.50	5502	1	1696.06	
1307	PL597*40	392.50	6002	1	1743.26	
1311	PL2*270	196.25	877	4	206.98	
1313	PL281*700	219.80	11851	1	4428.24	
1345	PL2*270	196.25	877	3	155.23	
1360	PLT36*748	282.60	1600	1	317.08	
1361	PLT36*734	282.60	1696	1	351.80	
1369	PLT36*734	282.60	1696	1	351.80	
1381	PL12*560	94.20	675	1	35.61	
1452	PL745*1930	353.25	2800	1	1483.65	
1465	PL712*296	94.20	796	4	89.36	
1466	PL712*340	94.20	796	6	152.95	
1467	PL597*40	392.50	5457	1	1596.65	
1478	PL712*334	94.20	500	8	125.85	
1482	PL597*40	392.50	7396	1	2148.17	
1536	PL718*748	125.60	800	10	751.59	
1539	PL718*734	125.60	800	8	590.02	
1540	PL597*40	392.50	6347	1	1843.49	
1569	PL597*20	392.50	1444	8	1496.27	
1587	PL497*40	314.00	1444	4	1342.11	
1599	PL597*40	392.50	5847	1	1698.26	
1634	PL2*270	197.00	877	5	185.75	
1707	PL12*356	94.20	1700	46	2622.45	
1730	PL718*356	125.60	418	2	37.38	
1731	PL718*181	125.60	356	4	34.16	
1732	PL718*201	125.60	356	8	71.90	
1733	PL718*209	125.60	356	4	37.38	
1734	PLT18*356	125.60	392	8	140.22	
1735	PL718*356	125.60	368	4	65.82	
1743	PL718*356	125.60	364	4	65.08	
1752	PL597*48	314.00	900	1	41.82	
1838	PL718*356	125.60	418	2	37.38	
1987	PL10*119	78.50	560	4	20.92	
1995	PL10*119	78.50	560	2	10.46	
2026	PL10*119	78.50	560	2	10.46	
2107	PL10*119	78.50	560	4	20.92	
2119	PL12*560	94.20	675	2	71.22	
2339	PL20*250	157.00	673	6	158.49	
2352	PL32*354	251.20	1696	2	301.63	
2356	PLT18*171	125.60	356	2	15.26	
2358	PLT18*356	125.60	1168	5	417.85	
2361	PL712*330	94.20	796	8	197.96	
2365	PL750*378	392.50	834	1	123.74	
2366	PL750*378	392.50	834	1	123.74	
2367	PL750*378	392.50	834	1	123.74	
2368	PL750*378	392.50	834	1	123.74	
2382	PLT10*500	78.50	1000	2	117.75	
2383	PLT36*748	282.60	1500	1	317.08	
2391	PL32*354	251.20	796	2	141.57	
2515	PL20*250	157.00	1173	2	92.08	
2516	PL12*560	94.20	1175	1	61.98	
2524	PL28*644	219.80	1420	4	1053.75	
2611	PL281*700	219.80	8497	1	3174.99	
2612	PL281*700	219.80	10896	1	4160.23	
2619	PL597*40	392.50	5397	1	1997.06	
2620	PL597*40	392.50	7997	1	2322.73	
2621	PL597*40	392.50	8997	1	3613.16	
2622	PL20*270	157.00	814	1	34.49	
2625	PL2*270	196.25	862	1	45.69	
2630	PL712*250	78.50	500	3	29.44	
2646	PLATE10*250	78.50	500	3	29.44	
2647	ISA130X130X12	23.50	610	1	14.32	
2648	PL20*250	157.00	1173	2	92.08	
2649	PL12*560	94.20	1175	1	61.98	
2653	PLATE10*250	78.50	400	3	23.55	
2656	PL10*250	78.50	400	3	23.55	
2681	ISA200X200X25	73.90	685	1	50.60	
2725	PL2*270	157.00	877	4	148.63	
2746	PL2*270	196.25	877	2	103.49	
3061	PL12*560	78.50	420	1	5.93	
4057	ISA100X100X10	14.80	400	6	35.80	
4064	PLATE20*250	196.25	685	6	201.65	
4067	NPB600X220X122.45	122.45	699	3	256.78	
4615	PLT32*950	251.20	740	1	102.26	
4624	PL597*40	392.50	4664	1	1354.66	
4628	PL718*299	125.60	356	2	26.76	
4631	PL12*389	94.20	419	1	11.42	
4633	ISA150X150X16	35.80	420	1	15.03	
4634	PL20*350	196.25	430	1	29.54	
4655	PL10*180	78.50	420	1	5.53	
			TOTAL	53852		

SUMMARY OF STEEL

SR. No.	DESCRIPTION	TOTAL WT.
1	ISA100X100X10	35.80
2	ISA130X130X12	14.32
3	ISA150X150X16	15.03
4	ISA200X200X25	50.60
5	NPB600X220X122	256.78
6	TS50NB4.5	39.59
7	PLT 10 THK	298.37
8	PLT 12 THK	3806.40
9	PLT 16 THK	2294.37
10	PLT 20 THK	711.55
11	PLT 25 THK	742.57
12	PLT 28 THK	15903.18
13	PLT 32 THK	947.72
14	PLT 36 THK	1388.62
15	PLT 40 THK	1423.72
16	PLT 45 THK	1483.65
17	PLT 50 THK	23670.41
	TOTAL IN KGS.	53852.67

HSFG BOLT					WASHERS		
GRADE	SECTION	LENGTH (mm)	QUANTITY (Nos.)	WEIGHT (KG)	QUANTITY (Nos.)	SPECIFICATION	REMARKS.
8.8	36 X HSFG-ACH	130.0	224	340.71	448	AS PER CONTRACT	Site
8.8	36 X HSFG-ACH	190.0	336	672.00	672	AS PER CONTRACT	Site
			TOTAL WEIGHT	1012.71			

BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT

This approval status shall be interpreted as laid down in the contract and it shall not relieve the contractor from his contractual obligations.

APPROVAL CATEGORY AWARDED.

CAT I = Approved
CAT II = Approved with comments as Noted
CAT III = Not Approved / To Be Resubmitted
CAT IV = Reference Drawing

DEPARTMENT	CIVIL
NAME	SIGNATURE
ABHAY KUMAR	for–

REFERENCE DRG. NO.
1. 9585-001-315-PVC-C-0003A(R2)
2. 9585-001-315-PVC-C-0004(R3)
3. 9585-001-315-PVC-C-0022A(R1)
4. 9585-001-315-PVC-C-0025A(R0)
5. 9585-001-315-PVC-C-0050(R1)

MINIMUM WELD SIZE FOR VARIOUS PLATE	
PLATE SIZE	WELD SIZE*
6 mm & 10 mm	6 mm
12 mm	8 mm
16 mm & 20 mm	10 mm
25 mm	12 mm
28 mm & 32 mm	16 mm
36 mm & 40 mm	20 mm
45 mm & 50 mm	25 mm

*MAXIMUM WELD SIZE SHOULD NOT BE MORE THAN THE MINIMUM SIZE OF CONNECTING PLATE.

MINIMUM THICKNESS OF GUSSET PLATE	
8 mm	TRUSS/BRACING MEMBER WITH MEMBER THICKNESS SHALL BE 8 MM OR LESS
12 mm	TRUSS/BRACING MEMBER WITH MEMBER THICKNESS SHALL BE 10 MM OR MORE

NOTES:
1. ALL DIMENSIONS ARE IN mm & LEV. ARE IN M. U.O.S
2. ALL MINIMUM WELD SIZE & MINIMUM GUSSET THK. SHALL BE AS PER TABLE
3. ALL WELDING SYMBOLS ARE AS PER IS: 813.
4. PERMANENT BOLT SHOWN THUS ——+
5. ALL WELDING ELECTRODES SHOULD CONFORM TO IS: 814.
6. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO IS:1363 & IS: 2016 RESPECTIVELY.
7. THE MATERIAL OF BOLTS & NUTS SHALL BE AS PER 8.8, IS:1367 & 4, IS:1367 RESPECTIVELY & MATERIAL OF WASHER SHALL BE MS, IS:2062
8. ALL MEMBERS SHALL BE FINALIZED AT SHOP AFTER FULL SCALE LAYOUT.
9. GENERAL NOTES REFER DRG. NO.9585-001-315-PVC-C-0089A(R1)

REV. NO.	DATE	DESCRIPTION

CUSTOMER
PROJECT
EPC CONTRACTOR
SUB CONTRACTOR
CONSULTANT

	NAME	SIGNATURE	DATE
DRAWN			
CHECKED			
APPROVED			

DRAWING TITLE :-
DRAWING DESCRIPTION:- DETAIL OF COLUMN MKD. A2
DRAWING/DOCUMENT NO.:-

SHEET No.	No.OF SHEET	REV. NO.	DRG. SIZE	SCALE
1	3	4	A0	1:1

REV. NO.	DATE	DESCRIPTION

CUSTOMER	
PROJECT	
EPC CONTRACTOR	
SUB CONTRACTOR	
CONSULTANT	

DRAWING TITLE :-

DRAWING DESCRIPTION:- DETAIL OF COLUMN MKD. A2

DRAWING/DOCUMENT NO.:-

SCALE	DRG. SIZE	REV. NO	SHEET NO.	NO.OF SHEET
1:1	A0	4	5	2

SIZE A0

VIEW- H - H
SCALE- 1:10

VIEW- P - P
SCALE- 1:10

VIEW- W - W
SCALE- 1:10

VIEW- T - T
SCALE- 1:10

VIEW- V - V
SCALE- 1:10

VIEW- F - F
SCALE- 1:10

VIEW- G - G
SCALE- 1:10

VIEW- N - N
SCALE- 1:10

VIEW- E - E
SCALE- 1:10

VIEW- D - D
SCALE- 1:10

VIEW- L - L
SCALE- 1:10

VIEW- M - M
SCALE- 1:10

VIEW- C - C
SCALE- 1:10

VIEW- J - J
SCALE- 1:10

VIEW- K - K
SCALE- 1:10

VIEW- I - I
SCALE- 1:10

VIEW- B - B
SCALE- 1:10

VIEW- 3 - 3
SCALE- 1:10

VIEW- O - O
SCALE- 1:10

VIEW- U - U
SCALE- 1:10

VIEW- S - S
SCALE- 1:10

VIEW- X - X
SCALE- 1:10

VIEW- Z - Z
SCALE- 1:10

VIEW- R - R
SCALE- 1:10

VIEW- Y - Y
SCALE- 1:10

VIEW- 4 - 4
SCALE- 1:10

VIEW- 1 - 1
SCALE- 1:10

DETAIL OF ITEM NO. 1482

REV. NO.	DATE	DESCRIPTION

DRAWING DESCRIPTION:- DETAIL OF COLUMN MKD. A2

DRAWING/DOCUMENT NO.:-

SHEET No. 3 | NO.OF SHEET 3 | REV. NO. 4 | DRG. SIZE A0 | SCALE 1:1

DRAWING TITLE :-

CONSULTANT				
PROJECT				
EPC CONTRACTOR				
SUB CONTRACTOR				
CUSTOMER				

Size A0

DETAIL OF ITEM NO. 1059

PL28*1720 x 5497

56 NOS 39 DIA HOLES

DETAIL OF ITEM NO. 4655

4 NOS 39 DIA HOLES

PL10*180 x 420

DETAIL OF ITEM NO. 4634

4 NOS 39 DIA HOLES

DETAIL OF ITEM NO. 4631

4 NOS 27 DIA HOLES

PL12*289 x 419

DETAIL OF ITEM NO. 2026

PL10*119 x 560

DETAIL OF ITEM NO. 1905

PL10*119 x 560

DETAIL OF ITEM NO. 1887

PL10*119 x 560

DETAIL OF ITEM NO. 1599

42 NOS 39 DIA HOLES

PL50*740 x 5497

DETAIL OF ITEM NO. 1634

12 NOS 39 DIA HOLES

PL20*270 x 877

VIEW- A - A

SCALE- 1:10

12 NOS 39 DIA HOLES

DETAIL OF ITEM NO. 2681

16 NOS 33 DIA HOLES

DETAIL OF ITEM NO. 2516

PL12*560 x 1175

DETAIL OF ITEM NO. 2649

PL12*560 x 1175

DETAIL OF ITEM NO. 2646

3 NOS 22 DIA HOLES

PL41E*250 x 500

DETAIL OF ITEM NO. 1730

PL16*356 x 418

DETAIL OF ITEM NO. 1731

PL16*191 x 356

DETAIL OF ITEM NO. 1732

PL16*201 x 356

DETAIL OF ITEM NO. 2630

PL10*250 x 500

DETAIL OF ITEM NO. 2619

42 NOS 39 DIA HOLES

PL50*740 x 5397

DETAIL OF ITEM NO. 1466

796 (PL12*740 x 796)

DETAIL OF ITEM NO. 2381

PL12*354 x 796

DETAIL OF ITEM NO. 1117

PL16*168 x 428

DETAIL OF ITEM NO. 1734

PL16*206 x 382

DETAIL OF ITEM NO. 1115

T550NB4.5 x 800

DETAIL OF ITEM NO. 1733

PL16*209 x 356

DETAIL OF ITEM NO. 2524

112 NOS 39 DIA HOLES

PL28*844 x 1420

DETAIL OF ITEM NO. 1707

PL12*356 x 1700

DETAIL OF ITEM NO. 2246

14 NOS 39 DIA HOLES

PL25*270 x 977

DETAIL OF ITEM NO. 1669

21 NOS 39 DIA HOLES

PL50*330 x 1444

DETAIL OF ITEM NO. 1476

PL12*234 x 500

DETAIL OF ITEM NO. 2515

1115 (PL20*250 x 1173)

DETAIL OF ITEM NO. 1306

PL50*740 x 5502

DETAIL OF ITEM NO. 1083

PL12*740 x 816

DETAIL OF ITEM NO. 4067

6 NOS 39 DIA HOLES

NP8600X2ZOX12.45 x 699

DETAIL OF ITEM NO. 4067

12 NOS 39 DIA HOLES

DETAIL OF ITEM NO. 2621

42 NOS 39 DIA HOLES

PL50*740 x 8997

DETAIL OF ITEM NO. 1536

PL16*748 x 800

DETAIL OF ITEM NO. 1307

PL50*740 x 6002

DETAIL OF ITEM NO. 4057

ISA10OX10OX10 x 400

DETAIL OF ITEM NO. 3061

4 NOS 39 DIA HOLES

PL10*180 x 420

DETAIL OF ITEM NO. 2656

PL12*250 x 400

DETAIL OF ITEM NO. 1381

PL12*560 x 675

DETAIL OF ITEM NO. 2239

675 (PL20*250 x 673)

DETAIL OF ITEM NO. 1465

796 (PL12*298 x 796)

DETAIL OF ITEM NO. 2382

PL110*500 x 1500

DETAIL OF ITEM NO. 4633

4 NOS 33 DIA HOLES

ISA15OX15OX16 x 420

DETAIL OF ITEM NO. 2352

PL12*354 x 1696

DETAIL OF ITEM NO. 2358

PL16*356 x 1168

DETAIL OF ITEM NO. 1838

PL16*356 x 418

DETAIL OF ITEM NO. 1645

PL12*266 x 800

DETAIL OF ITEM NO. 1587

84 NOS 39 DIA HOLES

PL60*740 x 1444

DETAIL OF ITEM NO. 4624

21 NOS 39 DIA HOLES

21 NOS 39 DIA HOLES

PL60*740 x 4664

4 NOS 33 DIA HOLES

42 NOS 39 DIA HOLES

DETAIL OF ITEM NO. 2119

PL12*560 x 675

DETAIL OF ITEM NO. 4628

PL16*299 x 366

DETAIL OF ITEM NO. 1345

14 NOS 39 DIA HOLES

PL25*270 x 977

DETAIL OF ITEM NO. 2647

6 NOS 39 DIA HOLES

ISA13OX13OX12 x 610

DETAIL OF ITEM NO. 2107

PL10*119 x 560

VIEW- A - A

SCALE- 1:10

DETAIL OF ITEM NO. 1752

PL16*748 x 900

DETAIL OF ITEM NO. 1743

PL16*266 x 364

DETAIL OF ITEM NO. 1735

PL16*356 x 368

DETAIL OF ITEM NO. 1467

42 NOS 39 DIA HOLES

PL50*740 x 5497

DETAIL OF ITEM NO. 1060

42 NOS 39 DIA HOLES

PL50*740 x 6997

1060

DETAIL OF ITEM NO. 4064

12 NOS 39 DIA HOLES

PLA1E25*250 x 665

DETAIL OF ITEM NO. 1061

42 NOS 39 DIA HOLES

PL50*740 x 5997

1060

DETAIL OF ITEM NO. 2611

PL28*1700 x 6497

36 NOS 39 DIA HOLES