



HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED
(A State Govt. Undertaking)

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No. HPSEB/SEDES/132kV Kangoo-AIIMS/SSD-463/2021- 5327-29

Dated: 21.09.2021

To

The Superintending Engineer
Electrical System Circle,
HPSEBL, Hamirpur.

Sub:

Construction of 132 kV D/C Transmission Line on D/C towers from Kangoo to proposed 132/33 kV, 2x31.5 MVA GIS Sub-Station for AIIMS at Bilaspur (Kothipura) - Regarding Finalization of TLC thereof.

Ref: -

Sr. Executive Engineer, ES Division, HPSEBL, Bilaspur Office Letter No. HPSEBL/ESDB/DB-115(FCA)/AIIMS/2020-21-4188 dated 20.09.2021.

Sir,

Based on the data contained in the revised detailed Survey Profile Sheets, plan and contour, the Tower Location Chart is hereby revised and approved along with extensions.

It is requested to obtain statutory clearances i.e. PTCC clearance, Forest clearance etc. from the concerned departments.

The copy of approved TLC is enclosed for your reference and necessary action please.

Yours Sincerely,

(Er. K.K Bhardwaj)
Superintending Engineer (D),
ES, HPSEBL, Hamirpur.
Tele fax 01972-221469
Email sedeshmr@gmail.com

Copy to the following for information please: -

1. The Chief Engineer, Electrical System, HPSEBL, Hamirpur (HP).
2. The Sr. Executive Engineer, ES Division, HPSEBL, Bilaspur (HP).

Assistant Engineer
Elect. System Sub-Divn.
HPSEBL, Sunder Nagar (H.P.)

(Er. K.K Bhardwaj)
Superintending Engineer (D),
ES, HPSEBL, Hamirpur.

DETAILED SURVEY FOR CONSTRUCTION OF 132 KV D/C TRANS. LINE ON D/C TOWERS FROM KANCOO TO PROPOSED 132/33 KV, 2025/1.5 MVA GIS SUB-STATION FOR AIMS AT BILASPUR (KOTHRUPA)

TOWER LOCATION CHART

St. No.	Tower No.	Line Angle Horizon tal (Deg.)	Left/ Right	Reduced Level (M)	GR Cutting	Effective reduced Level (M)	Effective reduced Level including Exn.(M)	Horizontal Distance (Span)(M)	Inclined Distance (M)	Sum of adjacent Spans (M)	Horizontal distance										18.300 Kms.	18.640 Kms.	Lag Extension	Remarks		
											Weight Span at 75 Deg. Cent. (Tension 3011 kg)				Weight Span at 75 Deg. Cent. (Tension 1747 kg)				Broken Wire Condition						Type of Tower	Full body Extension
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		26
1	Gantry	0.00°		562.144	0	562.144	562.144			46.14																27
2	T-1	77°52'	R	557.817	0	557.817	557.817	18.802	19.29																	
3	T-2	37°00'	L	514.744	0	514.744	514.744	147.55	153.71	166.352	-226	974	748	-226	596	370	-226	976	E							With Abutment X arm 1 No 33 KV line (Truncated Tower) 1 No 132 KV / 1 No 33 KV line (Truncated Tower)
4	T-3	28°33'	R	511.066	0	511.066	511.066	175.32	175.36																	
5	T-4	8°05'	L	511.693	0	511.693	511.693	90.99	90.99	266.31	23	24	47	50	33	83	23	68	C							1 No 220 KV line (Truncated Tower)
6	T-5	6°55'	L	523.762	0	523.762	526.762	178.03	178.67	269.02	67	-172	-105	58	-62	-5	-172	85	B							1 No 220 KV line (Truncated Tower)
7	T-6	10°00'	L	532.971	0	532.971	532.971	178.07	178.18	356.1	350	-19	332	241	27	267	-19	368	B	1						1 No 220 KV line (Truncated Tower)
8	T-7	19°49'	L	533.293	0	533.293	536.293	191.69	191.72	369.76	197	42	239	151	65	216	42	216	B							1 No Road
9	T-8	3°29'	R	528.279	0	528.279	528.279	272.68	272.80	464.37	149	227	376	127	189	316	127	246	C	1						1 No Road
10	Gantry-1	15°80'	L	527.269		527.269	527.269			36.5																1 No 220 KV line crossing
11	Gantry-11	15°32'	L	525.771		525.771	525.771	35	35.03	71.5	-67	150	82	-31	94	63	-67	153	G							
12	T-9	14°57'	R	521.496	0	521.496	521.496	50.91	51.09	85.91	-115	285	170	-59	176	117	-115	288	G							
13	T-10	9°11'	R	569.763	0	569.763	575.763	510.2	513.08	561.11	-234	-73	-307	-125	65	-60	-234	70	B							Sliding River / 1 No Road
14	T-11	16°40'	L	627.280	0	627.280	633.28	146.74	159.47	658.94	583	-1119	-535	445	-618	-172	-1119	598	ES							
15	T-12	26°20'	R	707.975	0	707.975	713.975	224	238.09	372.24	1267	-999	268	767	-533	234	-999	1290	ES							
16	T-13	14°24'	L	715.528	0	715.528	715.528	172.64	172.65	396.64	1223	59	1282	757	70	827	59	1241	ES							1 No 33 KV line
17	T-14	30°40'	R	726.555	0	726.555	726.555	151.37	151.77	324.01	114	-149	-35	102	-55	48	-149	129	B							

Scanned with CamScanner

Asst. Engineer
Elect. System Sub-Divn.
HPSEBL, Sunder Nagar (H.P.)

Sc. No.	Tower No.	Line Angle Horizontal (Deg)	Left/Right	Reduced Level (M)	CN Cutting	Effective reduced Level (M)	Effective reduced Level including Extra (M)	Horizontal Distance (Span)(M)	Inclined Distance (M)	Sum of adjacent spans (M)	Weight Span at 15 Deg. Cent. (Tension 3011 kg)	Weight Span at 75 Deg. Cent. (Tension 1747 kg)	Broken Wire Condition	Type of Tower	Full body Extension	Lrg Extension	Remarks										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
18	115	0°32'	L	724.182	0	724.182	724.182	85.18	85.21	315.37	-43	137	93	-7	128	120	-43	145	B							27	
19	116	44°09'	L	722.559	0	722.559	722.559	230.19	230.20																	1 No 33 KV line / 1 No Neutral	
20	117	6°21'	L	714.160	0.000	714.160	714.16	234.45	234.60	464.64	93	228	321	102	181	284	93	251	D			2				1 No 33 KV line	
21	118	13°15'	L	698.110	0	698.110	698.11	185.13	185.82	419.58	7	360	367	53	248	301	7	383	B								
22	119	8°12'	R	689.835	0	689.835	689.835	479.33	479.40	664.46	-175	293	118	-63	271	208	-175	311	B								
23	120	15°56'	L	688.841	0	688.841	688.841	308.52	308.52	787.85	186	164	351	209	160	369	160	240	B			2					
24	121	4°30'	L	682.910	0	682.910	688.910	354.55	354.55	663.07	144	177	321	148	177	325	144	208	C			1					
25	122	6°44'	R	779.380	0	779.380	779.38	299.15	312.53	653.7	178	-783	-606	178	-392	-214	-783	208	E			1					
26	123	24°22'	R	803.134	0	803.134	803.134	137.77	139.80	436.915	1083	-463	620	691	-240	451	-463	1096	ES								
27	124	5°19'	R	802.827	0	802.827	802.827	168.47	168.47	306.233	601	90	691	378	87	465	87	618	D				2				
28	125	16°45'	R	790.939	0	790.939	790.939	141.38	141.88	309.852	79	330	409	81	221	302	79	347	B			1					
29	126	48°1'	R	798.154	0	798.154	804.154	171.97	172.48	313.352	-189	-151	-340	-80	-52	-131	-189	-37	C					2			
30	127	26°53'	L	773.203	0	773.203	779.203	238.67	239.97	410.639	323	442	765	224	306	530	224	459	D			1			1		
31	128	0°27'	R	701.119	0	701.119	701.119	443.24	450.06	681.91	-203	765	562	-68	537	469	-203	789	E								
32	129	14°27'	L	658.840	0	658.840	658.840	472.09	473.98	915.328	-322	512	190	-94	396	303	-322	557	C								
33	130	17°12'	L	591.327	0	591.327	591.327	420.19	425.58	892.279	-40	706	666	76	498	573	-40	733	E			1					
34	131	41°13'	R	597.900	0	597.900	597.9	167.92	194.22	543.11	-286	-104	-389	-78	-34	-112	-286	8	C				4				
35	132	25°22'	R	695.500	0	695.500	695.5	137.55	143.46	290.84	226	-1709	-1483	157	-956	-799	-1709	243	ES								
36	133	3°6'	L	736.250	0	736.250	736.25	265.71	271.58	305.47	1877	-845	1032	1124	-462	663	-845	1891									
37	134	31°44'	L	792.416	0	792.416	792.416	316.36	319.21	403.26	983	-519	463	599	-246	354	-519	1009	E			1					
										582.07	785	-257	528	511	-83	429	-257	817	E					2			

NH AND NALLA CROSSING
 228 AND 400 KV AND NH LINE CROSSING
 HT LINE CROSSING
 LT LINE CROSSING
 HT LINE CROSSING

Sr. No.	Tower No.	Line Angle Horizontal (Deg)	Left/Right	Reduced Level (M)	GR Cutting	Effective reduced Level (M)	Effective reduced Level including Exn (M)	Horizontal Distance (Span)(M)	Inclined Distance (M)	Sum of adjacent Spans (M)	Weight Span at 15 Deg. Cent. (Tension 3011 kg)			Weight Span at 75 Deg. Cent. (Tension 1247 kg)			Birken Wire Condition	Type of Tower	Leg Extension						Remarks	
											Back site (M)	Fore site (M)	Total (M)	Back site (M)	Fore site (M)	Total (M)			Min.	Max.	3M	6M	1.5 M	3M		4.5 M
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
38	T-35	12°48'	L	828.961	0	828.961	834.961	228.14	306.44	594.5	573	-1287	-714	399	-689	-290	-1287	601	E5		1					
39	T-36	40°7'	R	957.577	0	957.577	961.577	75.78	81.77	353.92	1566	-1213	353	967	-488	279	-1213	1573	E5		1	2				
40	T-37	21°35'	L	994.294	0	994.294	994.294	149.46	151.80	225.24	1288	-474	815	763	-243	520	-474	1303	E5			1	1			
41	T-38	28°34'	R	1020.865	0	1020.865	1020.865	149.46	151.80	328.31	623	-1512	-888	393	-839	-447	-1512	641	E5					1		
42	T-39	28°39'	R	1113.677	0	1113.677	1113.677	178.85	201.50	364.11	1690	43	1734	1018	64	1082	43	1709	E5			2	2			
43	T-40	59°06'	L	1116.640	0	1116.640	1116.640	185.26	185.28	380.87	142	288	430	121	208	329	121	307	D			2	1			
44	T-41	13°48'	L	1101.581	0	1101.581	1104.581	195.61	195.98	633.81	-92	587	495	-13	433	420	-92	607	D			1	1	1		
45	T-42	08°26'	L	1052.288	0	1052.288	1052.288	438.20	441.31	898.46	-149	427	278	5	344	350	-149	471	B							
46	T-43	38°19'	L	1022.955	0	1022.955	1022.955	460.26	461.19	686.62	34	31	65	116	66	182	31	139	D			2				
47	T-44	13°27'	R	1028.959	0	1028.959	1028.959	226.36	226.44	400.02	195	-619	-424	161	-322	-162	-619	212	D			1				
48	T-45	17°06'	R	1062.668	0	1062.668	1068.668	173.66	178.14	559.69	792	-193	599	496	-31	465	-193	831	E			1	1			
49	T-46	18°39'	R	1110.985	0	1110.985	1116.985	386.03	389.04	558.02	579	-396	184	417	-193	224	-396	596	C					1		
50	T-47	0°0'	R	1137.830	0	1137.830	1143.83	121.99	124.07	344.13	568	319	886	365	221	566	221	585	C			1	1	1		
51	T-48	31°43'	L	1130.843	0	1130.843	1130.843	172.14	172.63	531.2	-147	94	-53	-49	130	81	-147	147	D					1	1	
52	T-49	14°07'	R	1140.863	0	1140.863	1140.863	359.56	359.70	194.86	266	197	-62	230	143	372	143	279	C							
53	T-50	36°18'	R	1135.203	0	1135.203	1135.203	135.30	135.42	448.99	-61	831	770	-7	548	541	-61	845	E					2		
54	T-51	16°41'	R	1066.656	0	1066.656	1066.656	313.69	321.09	547.26	-517	-495	-1013	-234	-238	-473	-517	-203	C					1		
55	T-52	41°24'	R	1113.117	0	1113.117	1113.117	219.54	219.55	453.61	729	75	804	472	89	562	75	751	E					2		
56	T-53	5°20'	R	1115.621	0	1115.621	1115.621	268.94	274.98	488.48	145	-523	-378	130	-247	-117	-523	172	C							
57	T-54	1°04'	R	1172.931	0	1172.931	1172.931	138.65	139.44	407.59	792	-261	531	516	-122	394	-261	806	E				1			
58	T-55	5°56'	R	1187.773	0	1187.773	1187.773	225.23	228.80	373.88	400	-422	-22	261	-195	66	-422	423	C							

Sr. No.	Tower No.	Line Angle (Deg.)	Left/Right	Reduced Level (M)	CR. Cutting	Effective reduced Level (M)	Effective reduced Level including Estn.(M)	Horizontal Distance (Span)(M)	Inclined Distance (M)	Sum of adjacent Spans (M)	Weight Span at 5 Deg. Cent. (Tension 3011 kg)				Weight Span at 75 Deg. Cent. (Tension 1747 kg)				Broken Wire Condition		Type of Tower	Full body Extension						Leg Extension						Remarks
											Back site (M)	Fore site (M)	Total (M)	Back site (M)	Fore site (M)	Total (M)	Min.	Max.			3M	6M	1.5 M	3M	4.5 M	6M								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26									
59	T-56	23°16'	R	1228.899	0	1228.899	1228.899	251.29	253.12	486.52	657	-248	409	431	-91	340	-248	682	D									Z						
60	T-57	3°58'	R	1259.312	0	1259.312	1259.312	234.84	235.29	486.13	499	-73	426	342	7	349	-73	523	C															
61	T-58	41°44'	L	1273.779	0	1273.779	1273.779	123.61	123.87	358.45	307	-140	168	228	-55	173	-140	320	D															
62	T-59	32°27'	L	1281.851	0	1281.851	1281.851	125.50	131.49	249.11	263	1027	1290	179	622	801	179	1040	E															
63	T-60	28°49'	L	1242.616	0	1242.616	1242.616	181.14	187.83	306.64	-902	937	35	-497	582	85	-902	949	E															
64	T-61	30°00'	L	1192.922	0	1192.922	1192.922	282.48	283.27	463.62	-756	-89	-845	-400	8	-393	-756	26	E															
65	T-62	30°00'	R	1214.021	0	1214.021	1214.021	204.32	207.40	486.8	372	-436	-64	275	-210	65	-436	392	D															
66	T-63	7°12'	L	1249.643	0	1249.643	1249.643	224.70	225.68	429.02	640	401	1041	414	280	694	280	662	D															
67	T-64	30°50'	L	1228.591	0	1228.591	1228.591	163.92	165.33	388.62	-177	-324	-501	-55	-154	-209	-324	-39	D															
68	T-65	3°08'	R	1250.155	0	1250.155	1250.155	124.38	125.71	288.3	488	-390	97	317	-200	117	-390	500	C															
69	T-66	30°46'	L	1262.402	0	1262.402	1262.402	150.73	152.34	124.38	515	-377	137	325	-187	137	-377	530	D															
70	T-67	23°53'	R	1284.520	0	1284.520	1284.520	344.45	377.00	495.18	528	1545	2073	338	968	1307	338	1560	E5															
71	T-68	2°25'	L	1131.290	0	1131.290	1137.29	197.52	206.83	541.97	-1200	1057	-143	-624	655	31	-1200	1091	E5															
72	T-69	21°18'	R	1075.941	0	1075.941	1075.941	361.49	375.08	559.01	-859	1035	175	-457	676	219	-859	1054	E5															
73	T-70	19°10'	L	969.883	0	969.883	975.883	338.80	350.89	700.29	-673	1001	328	-315	652	337	-673	1037	E															
74	T-71	18°33'	L	878.582	0	878.582	884.582	208.22	213.75	547.02	-662	-611	-1273	-313	-311	-624	-662	-277	D															
75	T-72	8°8'	L	926.878	0	926.878	932.878	355.09	367.53	563.31	820	1526	2346	519	960	1479	519	1547	E5															
76	T-73	0°12'	L	771.679	0	771.679	777.679	116.37	116.44	197.28	168	278	446	122	178	300	122	290	B															
77	T-74	3°12'	L	781.828	0	781.828	781.828	80.91	81.15	382.54	-197	367	170	-97	276	179	-197	375	C															
78	T-75	27°05'	L	775.600	0	775.600	775.600	301.63	302.37	487.25	-45	-157	-222	26	-52	-36	-157	44	B															
79	T-76	0°50'	L	754.504	0	754.504	754.504	185.62	186.23	487.25	-45	-157	-222	26	-52	-36	-157	44	B															

Sr. No	Tower Na	Line Angle Horizontal (Deg.)	Left/Right	Reduced Level (M)	C.R. Cutting	Effective reduced Level (M)	Effective reduced Level including Extn.(M)	Horizontal Distance (Span)(M)	Inclined Distance (M)	Sum of adjacent Spans (M)	Weight Span at 15 Deg. Cent. (Tension 3011 kg)	Weight Span at 75 Deg. Cent. (Tension 1747 kg)	Broken Wire Condition	Type of Tower	Full body Extension	Leg Extension	Remarks									
1	2	3	4	5	6	7	8	9	10						3M	6 M	1.5 M	3 M	4.5 M							
80	T-77	44°24'	L	766.529	0	766.529	769.529			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
81	T-78	17°33'	L	782.100	0	782.100	782.100	208.87	209.25	394.49	343	-81	261	238	-3	234	-81	363	D	1						
82	T-79	27°41'	L	764.73	0	764.730	764.730	116.11	117.40	324.98	290	520	810	212	326	538	212	540	C			2				
83	T-80	0°2'	L	762.914	0	762.914	762.914	205.54	205.55	321.65	-403	130	-273	-210	119	-91	-403	142	C				1			
84	T-81			740.86	0	740.860	740.860	216.76	217.88	422.3	76	422	498	87	290	377	76	443	C			2				
85	Gantry	0°0'		742.840	0	742.840	742.840	35.43	35.49	252.19	-206	-155	-360	-74	-82	-156	-206	-52	D			1				
Total				742.840	0	742.840	742.840				190	9275	9465	118	9222	9340	118	9279		4	18	60	32	8	0	
NOTE																										
18299.666																										
18640.414																										

NOTE

- i) The tension between terminal towers and gantry structure should be restricted to 1000 kg. (Maximum)
 ii) Tension for conductor has been considered as 3011 kg and 1747 kg at 15 deg C and 75 deg C respectively. (As per design of DDT-255)
 iii) The requisite electrical clearances between power lines/tele-communication/buildings/roads etc. shall be maintained as per I.E. Rules 1956 and as per IS: 5613 (Part-2, Section 1) -1985 with latest amendments.

Sr. No.	132 kV type tower	Qty.	Full Body Extension				Leg Extension			
			3 m	6m	1.5m	3m	4.5m	1.5m	3m	4.5m
1	B	14	1	0	4	1	0			
2	C	18	1	2	18	5	3			
3	D	18	2	3	17	10	2			
4	E	15	0	4	13	4	1			
5	ES	16	0	9	8	12	2			
6	Gantry	2								
TOTAL		83	4	18	60	32	8			

ABSTRACT

Assistant Engineer
 O/O Superintending Engineer (Design)
 Electrical System, HPSEBL Hamirpur

St. Executive Engineer
 O/O Superintending Engineer (Design)
 Electrical System, HPSEBL Hamirpur

Superintending Engineer (Design)
 Electrical System, HPSEBL Hamirpur

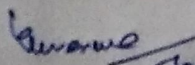
Assistant Engineer
 Elec. System Sub-Divn.
 HPSEBL, Sunder Nagar (H.P.)

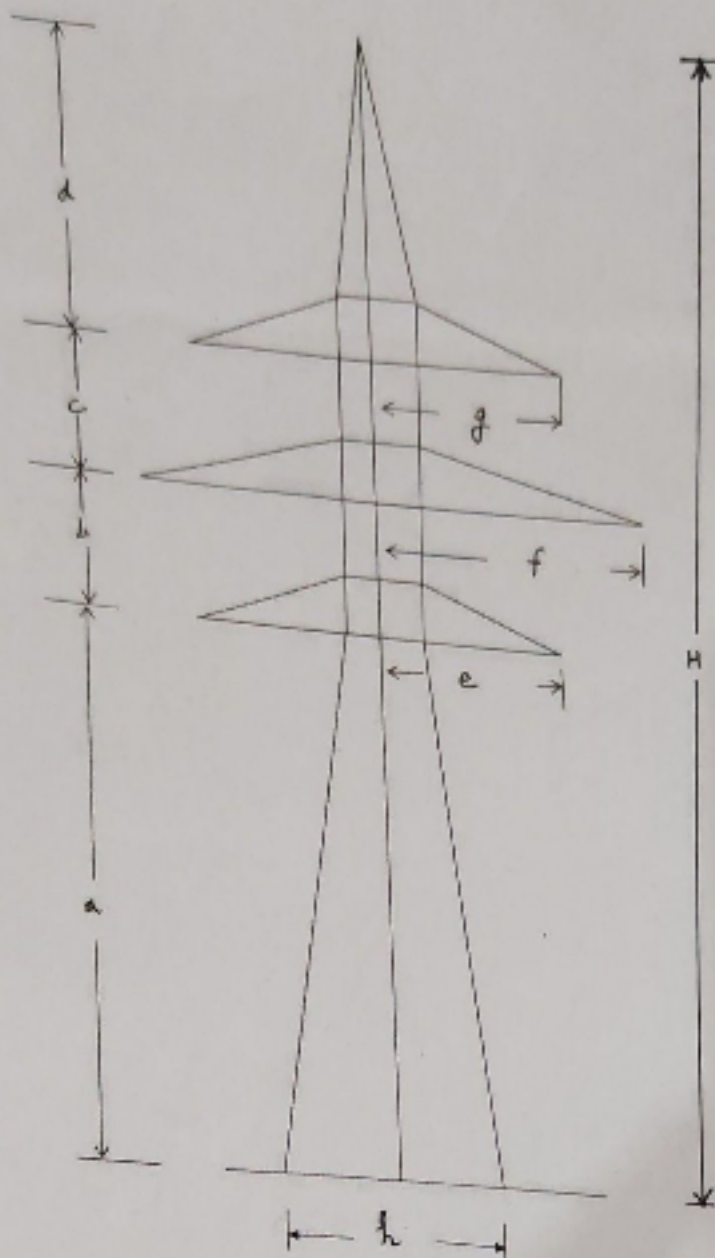
GPS COORDINATES OF T-1 TO T-81 OF PROPOSED 132 kV TRANSMISSION LINE FROM 220/132/33
kV SUB STATION KANGOO TO PROPOSED 132/33 Kv, 2x25/3.15 MVA GIS SUB STATION AIIMS
KOTHIPURA(BILASPUR).

Sr. No.	TOWER NO.	NORTHING	EASTING
1	Gantry Kangoo 132 kV Sub Station	31°25'24.37"N	76°49'59.00"E
2	Existing Tower	31°25'23.57"N	76°49'58.36"E
3	T-2	31°25'25.23"N	76°49'52.39"E
4	T-3	31°25'23.75"N	76°49'47.54"E
5	T-4	31°25'24.03"N	76°49'43.76"E
6	T-5	31°25'21.37"N	76°49'36.85"E
7	T-6	31°25'20.19"N	76°49'30.92"E
8	T-7	31°25'16.58"N	76°49'24.30"E
9	T-8	31°25'10.81"N	76°49'16.24"E
10	Gantry	31°25'10.22"N	76°49'14.75"E
11	T-9	31°25'08.68"N	76°49'13.51"E
12	T-10	31°24'55.74"N	76°49'00.42"E
13	T-11	31°24'52.97"N	76°48'56.51"E
14	T-12	31°24'47.92"N	76°48'50.77"E
15	T-13	31°24'41.77"N	76°48'44.93"E
16	T-14	31°24'41.83"N	76°48'40.79"E
17	T-15	31°24'41.00"N	76°48'37.72"E
18	T-16	31°24'39.30"N	76°48'29.32"E
19	T-17	31°24'32.87"N	76°48'24.50"E
20	T-18	31°24'27.59"N	76°48'21.56"E
21	T-19	31°24'12.81"N	76°48'16.98"E
22	T-20	31°24'03.02"N	76°48'13.41"E
23	T-21	31°23'51.66"N	76°48'12.91"E
24	T-22	31°23'43.75"N	76°48'14.59"E
25	T-23	31°23'41.27"N	76°48'14.27"E
26	T-24	31°23'33.13"N	76°48'12.42"E
27	T-25	31°23'28.75"N	76°48'12.11"E
28	T-26	31°23'23.51"N	76°48'11.02"E
29	T-27	31°23'18.69"N	76°48'04.12"E
30	T-28	31°23'04.06"N	76°48'00.85"E
31	T-29	31°22'49.45"N	76°47'56.18"E
32	T-30	31°22'35.79"N	76°47'55.09"E
33	T-31	31°22'31.62"N	76°48'54.86"E
34	T-32	31°22'26.99"N	76°47'50.65"E
35	T-33	31°22'21.33"N	76°47'46.58"E
36	T-34	31°22'15.15"N	76°47'38.78"E
37	T-35	31°22'09.41"N	76°47'34.69"E
38	T-36	31°22'01.45"N	76°47'34.25"E
39	T-37	31°21'58.56"N	76°47'32.41"E
40	T-38	31°21'53.48"N	76°47'30.98"E
41	T-39	31°21'47.94"N	76°47'33.91"E
42	T-40	31°21'43.04"N	76°47'37.76"E
43	T-41	31°21'40.03"N	76°47'37.96"E
44	T-42	31°21'23.70"N	76°47'37.68"E
45	T-43	31°21'16.47"N	76°47'36.64"E

Signature
Assistant Engineer
Elect. System Sub-Divn.
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46	T-44	31°21'10.18"N	76°47'46.90"E
47	T-45	31°20'59.27"N	76°47'51.83"E
48	T-46	31°20'48.72"N	76°47'55.11"E
49	T-47	31°20'42.07"N	76°47'55.34"E
50	T-48	31°20'36.46"N	76°47'55.19"E
51	T-49	31°20'29.01"N	76°48'00.06"E
52	T-50	31°20'22.43"N	76°48'02.84"E
53	T-51	31°20'13.62"N	76°47'58.44"E
54	T-52	31°20'07.48"N	76°47'55.02"E
55	T-53	31°19'57.76"N	76°47'56.01"E
56	T-54	31°19'51.65"N	76°47'51.54"E
57	T-55	31°19'46.75"N	76°47'51.41"E
58	T-56	31°19'38.27"N	76°47'51.78"E
59	T-57	31°19'30.89"N	76°47'47.52"E
60	T-58	31°19'26.67"N	76°47'45.55"E
61	T-59	31°19'24.42"N	76°47'43.57"E
62	T-60	31°19'16.69"N	76°47'41.20"E
63	T-61	31°19'11.33"N	76°47'41.52"E
64	T-62	31°19'02.81"N	76°47'35.60"E
65	T-63	31°18'58.13"N	76°47'33.01"E
66	T-64	31°18'52.91"N	76°47'30.30"E
67	T-65	31°18'48.50"N	76°47'25.34"E
68	T-66	31°18'45.86"N	76°47'22.13"E
69	T-67	31°18'44.79"N	76°47'17.47"E
70	T-68	31°18'38.48"N	76°46'56.25"E
71	T-69	31°18'34.53"N	76°46'50.32"E
72	T-70	31°18'29.69"N	76°46'55.53"E
73	T-71	31°18'28.05"N	76°46'55.02"E
74	T-72	31°18'20.14"N	76°46'56.01"E
75	T-73	31°18'14.81"N	76°46'39.21"E
76	T-74	31°17'56.10"N	76°46'38.33"E
77	T-75	31°17'47.79"N	76°46'38.07"E
78	T-76	31°17'42.31"N	76°46'47.21"E
79	T-77	31°17'37.34"N	76°46'52.63"E
80	T-78	31°17'36.39"N	76°46'55.24"E
81	T-79	31°17'35.25"N	76°46'55.34"E
82	T-80	31°17'36.43"N	76°46'55.53"E
83	T-81	31°17'34.57"N	76°46'55.02"E


 Assistant Engineer
 Elect. System Sub-Divn.
 HPSEBL, Sunder Nagar (H.P.)



132KV D/C TRANSMISSION TOWERS DIMENSION (MM)

Sl. No.	Dim.	D/C TOWER (DDT-255)				
		A	B	C	D	E/ESP
1	a	15075	12919	12875	12918	12918
2	b	3900	4350	5275	5900	6575
3	c	4270	4350	5275	5900	6528
4	d	3970	5941	6170	7675	7675
5	e	3620	3460	4150	5380	5230
6	f	4500	4340	5030	6280	6130
7	g	3400	3430	3530	4430	4430
8	h	4750	5750	6600	7600	7600
9	H	27105	28160	29505	32293	32645

Chaverno
 Assistant Engineer
 Elect. System Sub-Divn.
 HPSEBL, Sunder Nagar (H.P.)

Approved
[Signature]
 S.E. (Design) ES