

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Revised Tower Schedd

Client: Power Grid Corporation Of India Limited  
 Joint Venture of M/S Aster Private Limited And M/S Tamchi Kusk (Itanagar) Arunachal Pradesh  
 Tower Schedule for MC.17 To AP.40/O

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			DMS (As per New)		Degree of Curve		Deflect. Method Details		Crossing Details Village Name	Remark
											Left	Right	Total	Left	Right	Total	Existing	Northing	Latitude	Longitude	DMS (Lat)	DMS (Long)		
1	MC.17	MD+0	0	33'22'52"RT			0	308.000	231.00	135.50	0.00	118.71	118.71	0.00	120.74	120.74	575011.00	3005810.00	27.172881	93.757192	27° 10' 22.37"	93° 45' 25.89"		
2	AP.26/O	DD+0	0	25'15'37"RT	231.0	231.0	231.0	302.591	633.00	316.50	112.29	592.93	705.22	110.26	841.02	951.28	575188.00	3005959.00	27.174216	93.758988	27° 10' 27.38"	93° 45' 32.36"		
3	Loc.26/1	DD+9	9	34'59'07"LT	402.0	402.0	402.0	206.711	861.99	491.50	-190.93	248.22	57.29	-439.02	221.45	-217.57	575577.00	3006062.00	27.175125	93.762920	27° 10' 30.45"	93° 45' 46.51"		Wind span violation
4	Loc.26/3	DBN+0	0	08'46'57"LT	581.0	581.0	581.0	229.258	873.00	436.50	332.78	327.76	660.54	359.55	442.81	802.36	575952.00	3006506.00	27.179112	93.766733	27° 10' 44.8"	93° 46' 0.24"		
5	Loc.26/4	DBN+0	0	08'49'12"RT	292.0	292.0	292.0	199.992	750.00	375.00	-35.76	335.32	299.56	-150.81	402.62	251.81	576104.00	3006755.00	27.181952	93.768283	27° 10' 52.87"	93° 46' 5.82"		
6	AP.27	DBN+0	0	10'58'52"RT	458.0	458.0	458.0	173.140	768.00	384.00	122.68	-0.64	122.04	55.38	-99.16	-43.78	576400.00	3007105.00	27.184495	93.771292	27° 11' 4.18"	93° 46' 16.65"		Nala
7	AP.28	DD+9	9	34'57'09"LT	310.0	310.00	310.0	190.745	600.00	300.00	310.64	-410.88	-100.24	409.16	-762.76	-353.60	576642.30	3007299.10	27.186234	93.773751	27° 11' 10.44"	93° 46' 25.5"		
8	AP.29	DBN+9 RC+3.0	12	06'53'35"LT	290.0	290.00	290.0	276.638	924.00	462.00	700.88	427.77	1129.65	1052.76	497.89	3550.65	576723.54	3007577.37	27.188741	93.774592	27° 11' 19.47"	93° 46' 28.53"		Weight span violation
9	AP.30	DD+9	9	18'34'50"RT	634.0	634.00	634.0	240.913	1819.99	626.00	206.23	409.78	614.01	136.11	473.57	609.68	576827.60	3008199.70	27.194354	93.775677	27° 11' 39.67"	93° 46' 32.44"		Individual span violation Wind span violation
10	AP.31	DC+9	9	19'33'28"RT	618.0	618.00	618.0	206.570	869.00	434.50	208.22	-413.51	-705.29	144.41	-796.36	-641.99	577118.00	3008745.00	27.199260	93.778643	27° 11' 57.34"	93° 46' 43.12"		Individual span violation Wind span violation & Weight span violation
11	Loc.31/1	DBN+9	9		351.0	579.0	289.5	320.574	579.00	289.50	161.91	-266.19	498.32	1137.38	-506.86	630.50	577377.31	3008981.80	27.201383	93.781276	27° 12' 4.98"	93° 46' 52.59"		Weight span violation
12	AP.32	DBN+9	9	00'01'35"RT	228.0			368.374	567.00	283.50	494.19	708.87	1379.46	394.89	1091.29	1071.38	577945.80	3009135.70	27.202763	93.782987	27° 12' 9.95"	93° 46' 58.75"		Weight span violation
13	AP.33	DD+9	9	51'12'00"LT	339.0	339.00	339.0	268.464	882.00	441.00	-364.97	541.19	176.22	-703.29	711.90	8.61	577795.90	3009363.90	27.204809	93.785527	27° 12' 17.31"	93° 47' 7.9"		Weight span violation
14	AP.34	DC+9	9	19'36'00"RT	543.0	543.00	543.0	187.713	573.00	487.50	1.81	-198.92	-195.11	-168.90	-458.30	-627.20	577762.00	3009506.00	27.209705	93.785219	27° 12' 34.94"	93° 47' 6.79"		Wind span violation
15	AP.35	DD+9	9	29'39'5"RT	432.0	432.00	432.0	286.077	531.00	417.00	533.42	237.88	916.80	880.30	342.88	1731.11	577833.00	3010321.00	27.213444	93.786467	27° 12' 48.4"	93° 47' 11.28"		DD Tower due to Weight Span & Sum of adjacent span Violation.
16	AP.36	DBN+3	3	04'50'35"RT	402.0	402.00	402.0	272.817	773.00	386.50	114.12	128.80	242.92	59.12	92.91	152.03	578172.00	3010601.00	27.215955	93.789403	27° 12' 57.44"	93° 47' 21.85"		
17	Loc.36/1	DB+3	3		371.0	512.0	256.0	284.417	512.00	256.00	263.30	142.63	184.83	178.09	188.28	466.37	578459.30	3010835.74	27.218058	93.792319	27° 13' 5.01"	93° 47' 32.35"		DB Tower due to Weight Span Violation.
18	AP.37	DD+9	9	39'7'19" LT	141.0			272.809	495.00	247.50	-1.63	236.19	234.56	-47.28	273.66	226.38	578568.30	3010924.80	27.218856	93.793425	27° 13' 7.88"	93° 47' 36.33"		
19	AP.38	DC+0	0	25'53'52"RT	354.0	354.00	354.0	270.254	522.00	261.00	117.81	569.00	686.81	80.34	870.04	956.35	578639.70	3011271.80	27.221984	93.794168	27° 13' 19.14"	93° 47' 39.01"		Cart Track
20	AP.39	DD+0	0	18'28'18"RT	168.0	168.00	168.0	225.324	409.00	204.50	-401.00	451.92	50.92	-708.01	661.72	-46.29	578742.00	3011405.00	27.223181	93.795210	27° 13' 23.45"	93° 47' 42.76"		Weight span violation
21	AP.40	DD+3	3	08'28'9" LT	241.0	241.00	241.0	178.280	511.00	255.50	-210.92	207.62	-3.80	-420.72	253.59	-167.13	578882.50	3011385.60	27.222992	93.797637	27° 13' 22.77"	93° 47' 51.49"		400KV D/C T/U/line, 132KV D/C T/line X-line CHANGED AS PER TOWER SPOTTING DATA AP40 TO AP50

Tower Type.	+0 Extn.	+3 Extn.	+6 Extn.	+9 Extn.	+18 Extn.	Total
DA	0	1	0	0	0	1
DBN	3	1	0	3	0	7
DC	1	0	0	3	0	4
DD	2	1	0	5	0	8
<b>Total Tower</b>						<b>20</b>
<b>Section Length in metre</b>						<b>7,386</b>

*(Signature)*  
 R. Santosh / A. Santosh  
 Engineer / Engineer  
 Bhaaskar Yojana / Con. p. Scheme  
 Power Grid, Nirjuli / POWERGRID, Nirjuli  
 Arunachal Pradesh / Arunachal Pradesh

*(Signature)*  
 VIJAY SRIVASTAVA  
 MANAGER (Comp. Scheme)  
 POWER GRID CORPORATION OF INDIA LTD.

अरुण विद्युत निगम  
 उप महाप्रबंधक / DGM  
 ब्यास्क योजना / Con. p. Scheme  
 पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
 अरुणाचल प्रदेश / Arunachal Pradesh

*(Signature)*  
 DC Bharali  
 General Manager (Comp. Scheme)  
 पावर ग्रिड निगम / Power Grid Corporation of India Ltd.  
 अरुणाचल प्रदेश / Arunachal Pradesh

Surveyed By  
 For Tamchi Astor

Submitted By

Checked By

Recommended By  
 For Power Grid Corporation of India Ltd.

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Client: Power Grid Corporation Of India Limited  
 Joint Venture of M/S Aster Private Limited And M/S Tamchi Kusk (Itanagar) Arunachal Pradesh  
 Tower Schedule for AP.40/0 To AP.56/0

Sl.No.	Loc.No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			ITM/MS (408) Year		Degree Decimals		Degree Minutes Seconds		Crossing Details Village Name	Remark
											Left	Right	Total	Left	Right	Total	Existing	Northing	Latitude	Longitude	DMS (Lat)	DMS (Long)		
1	AP.40	DC+3	03°20'44" LT	241.0	251.00	241.0	241.0	178.260	511.00	255.50	-230.92	107.42	3.30	420.72	231.50	167.13	578982.50	3011385.60	27.222592	93.297637	27° 13' 22.70"	93° 02' 51.49"		
2	AP.41	DO+0	31°17'58" RT	270.0	270.00	270.0	512.0	170.458	484.00	242.00	62.38	-373.37	-310.99	16.41	677.45	-461.04	579252.1	3011380.2	27.222828	93.800359	27° 13' 22.54"	93° 08' 1.29"	132KV S/C T/Line. NH.13, Znos.33kv Line.	
3	AP.42	DO+6	48°44'03" LT	214.0	214.00	214.0	725.0	221.154	413.00	206.50	587.37	-84.53	502.84	891.45	-201.50	650.43	579430.8	3011262.1	27.221851	93.801156	27° 13' 18.67"	93° 08' 2.76"	132KV D/C Transmission Line Crossing	
4	AP.43	DD+0	03°46'10" LT	190.0	199.00	199.0	924.0	247.348	359.00	199.50	283.53	87.22	370.75	400.02	76.14	479.16	579522.8	3011314.0	27.222314	93.804089	27° 13' 20.33"	93° 08' 14.75"		
5	AP.43/1	DBN+6	00°00'00"	200.0	200.00	200.0	1,124.0	242.757	434.00	207.00	112.78	324.66	437.64	120.86	462.77	583.63	579511.9	3011370.0	27.222893	93.806012	27° 13' 22.41"	93° 08' 21.64"		Strengthening
6	AP.44	DBN+0	02°58'34" RT	214.0	214.00	214.0	1,318.0	223.048	547.00	273.50	-110.85	508.24	437.48	-248.77	790.04	542.27	58004.1	3011448.8	27.223512	93.808058	27° 13' 24.64"	93° 08' 29.01"		Strengthening
7	AP.45	DC+0	15°18'16" RT	333.0	333.00	333.0	1,671.0	152.933	548.00	274.00	-215.34	612.18	396.84	-157.04	981.66	474.62	580034	3011542	27.224326	93.811285	27° 13' 27.57"	93° 08' 40.65"		Strengthening
8	AP.46	DC+0	26°21'10" RT	215.0	215.00	215.0	1,886.0	93.659	527.00	263.50	-397.18	109.48	-291.70	-716.66	70.24	-446.42	580549.1	3011548.7	27.224373	93.811467	27° 13' 27.74"	93° 08' 48.48"		Strengthening
9	AP.47	DBN+3	01°10'35" LT	312.0	312.00	312.0	2,198.0	99.134	529.00	264.50	208.52	-136.22	72.30	241.76	-251.13	-49.37	580832.8	3011418.9	27.223185	93.816324	27° 13' 23.47"	93° 08' 58.77"	Cart Track, River	
10	AP.48	DC+9	22°45'27" LT	217.0	217.00	217.0	2,415.0	122.417	468.00	234.00	353.22	190.40	548.62	503.13	231.49	739.62	581031.9	3011332.8	27.222196	93.818329	27° 13' 20.63"	93° 09' 5.94"	Cart Track, 2Nos. Tar Road	
11	AP.49	DD+0	15°31'49" RT	251.0	251.00	251.0	2,666.0	122.414	519.00	259.50	60.60	68.19	128.79	18.51	26.53	-46.04	581782.9	3011329.9	27.222155	93.820865	27° 13' 20.48"	93° 09' 15.11"		
12	AP.50	DC+0	25°28'53" RT	268.0	268.00	268.0	2,934.0	132.16	537.00	268.50	199.81	120.36	320.17	241.47	111.41	352.88	581499.3	3011171.3	27.220915	93.823037	27° 13' 15.29"	93° 09' 22.93"		
13	AP.51	DC+0	20°24'00" RT	269.0	269.00	269.0	3,203.0	134.257	587.00	293.50	148.64	17.41	164.09	157.59	-72.21	85.38	581627.1	3010994.6	27.218766	93.824312	27° 13' 7.56"	93° 09' 27.53"		
14	AP.52	DD+6	64°34'48" LT	318.0	318.00	318.0	3,521.0	153.085	577.00	288.50	300.59	-382.84	-81.25	390.21	-707.15	-316.94	581671	3010620	27.215923	93.824735	27° 12' 57.32"	93° 09' 19.05"		Nala
15	AP.53	DD+6	49°35'33" RT	259.0	259.00	259.0	3,760.0	226.257	494.00	247.00	641.84	289.16	922.00	966.17	383.12	1349.27	581876.4	3010452.5	27.214489	93.826798	27° 12' 52.16"	93° 09' 36.47"		
16	AP.54	DD+0	58°25'10" LT	215.0	235.00	235.0	4,025.0	211.179	601.00	300.50	-45.16	271.18	185.02	-148.12	261.67	113.55	581888.4	3010278.1	27.212373	93.828904	27° 12' 44.54"	93° 09' 36.85"	132KV D/C (PARE_MLP) Twr.11, 12	
17	AP.55	DD+0	44°32'16" RT	366.0	366.00	366.0	4,381.0	201.456	660.00	330.00	134.82	235.33	370.15	104.31	291.74	395.57	582209.5	3010052.7	27.210770	93.830134	27° 12' 38.77"	93° 09' 48.48"	Tar Road	
				234.0	201.00	234.0	4,675.0	187.136	294.00	147.00	58.07	0.00	58.67	2.76	0.00	2.36	582294.7	3009771.1	27.108223	93.830976	27° 12' 29.6"	93° 09' 58.51"		

Tower Type	+0 Extn.	+3 Extn.	+6 Extn.	+9 Extn.	+18 Extn.	Total
DA	0	0	0	0	0	0
DBN	2	1	1	0	0	4
DC	4	0	0	1	0	5
DD	5	1	3	0	0	9
Total Tower						19
Section Length in metre						4,675

*(Signature)*  
 लिखा नापा / Lina Napa  
 अभियंता / Engineer  
 व्यापक योजना / Comp. Scheme  
 पावरग्रिड, नित्तली / POWERGRID, Nirjuli  
 अरुणाचल प्रदेश / Arunachal Pradesh

*(Signature)*  
 VIJAY SRIVASTAVA  
 MANAGER (Comp. Scheme)  
 POWER GRID CORPORATION OF INDIA LTD.  
 Nirjuli

*(Signature)*  
 10/5/2024

M/s Tamchi Kusk  
*(Signature)*  
 Authorised Signatory

M/s Tamchi Kusk  
*(Signature)*  
 Authorised Signatory

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Client: Power Grid Corporation Of India Limited  
 Joint Venture of M/S Aster Private Limited And M/S Tamchi Kusuk (Itanagar) Arunachal Pradesh  
 Tower Schedule for AP.56/0 To AP.165/0

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			DMS (D/C)		Tower Details		Crossing Details	Remark		
											Left	Right	Total	Left	Right	Total	Lat (m)	Northing	Latitude	Longitude			DMS (Lat)	DMS (Long)
1	AP.56	DC+0	0	294.0	294.0	294.0	0.0	187.136	625.00	312.50	58.67	11.61	70.28	2.76	-85.81	-83.05	582293.43	3009773.98	27.208231	93.830963	27° 12' 29.63"	93° 49' 51.47"		
2	AP.57	DC+0	0	331.0	331.0	331.0	331.0	215.225	962.00	481.00	319.39	357.49	676.88	416.81	384.07	800.88	582274.00	3009442.00	27.205253	93.830745	27° 12' 18.91"	93° 49' 50.68"		DC Tower Provided due to individual Span Violation
3	AP.59	DC+6	6	391.0	391.0	391.0	962.00	194.614	1072.00	511.00	273.51	224.89	498.40	246.93	243.49	490.42	582295.00	3008811.00	27.199556	93.830914	27° 11' 58.4"	93° 49' 51.29"		make 2 nos in sum of Adj. Span (m)
4	AP.60	DD+0	0	243.0	243.0	243.0	1,353.0	194.278	634.00	317.00	166.11	228.18	394.29	147.51	295.71	448.22	582441.25	3008448.87	27.195278	93.832367	27° 11' 46.6"	93° 49' 56.52"		33KV Line
5	AP.61	DC+3	3	233.0	233.0	233.0	1,596.0	176.583	476.00	238.00	14.82	372.86	387.68	-52.71	535.14	482.43	582678.88	3008398.04	27.195805	93.834762	27° 11' 44.5"	93° 50' 5.14"		2Nos. Tar Road
6	AP.62	DC+3	3	572.0	572.0	572.0	1,829.0	144.045	805.00	402.50	-139.86	279.60	139.74	-362.14	275.55	-26.59	582911.15	3008416.45	27.195957	93.837108	27° 11' 45.45"	93° 50' 13.59"		33KV Line, Tar Road
7	AP.64	DBN+3	3	197.0	197.0	281.0	2,401.0	146.063	769.00	384.50	292.40	180.12	472.52	295.45	251.79	528.24	583457.05	3008580.27	27.197403	93.842631	27° 11' 50.65"	93° 50' 33.47"		Tar Road
8	AP.65	DD+0	0	365.0	365.0	333.5	2,598.0	140.196	562.00	281.00	16.88	291.33	308.01	-34.79	359.50	325.11	583639.81	3008653.81	27.198056	93.844481	27° 11' 53"	93° 50' 40.13"		Tar Road
9	AP.66	DBN+0	0	302.0	302.0	302.0	2,963.0	118.331	667.00	333.50	73.87	174.97	248.84	5.10	150.14	195.24	583962.80	3008483.81	27.196501	93.847730	27° 11' 47.4"	93° 50' 51.83"		
10	AP.67	DBN+0	0	255.0	255.0	255.0	3,265.0	114.340	557.00	278.50	327.03	-10.00	117.03	111.86	-97.08	14.83	584253.28	3008401.21	27.195738	93.850657	27° 11' 44.66"	93° 51' 2.37"		
11	AP.68	DD+9	9	384.0	384.0	384.0	3,520.0	124.674	639.00	319.50	265.00	396.96	561.96	352.03	526.71	878.74	584473.69	3008272.83	27.194585	93.852872	27° 11' 40.44"	93° 51' 10.34"		2Nos. Tar Road
12	AP.69	DBN+3	3	224.0	224.0	224.0	3,904.0	87.273	608.00	304.00	-12.96	364.68	351.72	-142.71	524.63	381.92	584855.59	3008312.07	27.194836	93.856731	27° 11' 41.63"	93° 51' 24.23"		13KV Line, 2Nos. 33KV Line
13	AP.70	DC+6	6	521.0	521.0	521.0	4,128.0	53.062	745.00	372.50	-140.68	315.70	175.02	-300.63	350.64	50.01	585070.02	3008376.84	27.195467	93.858901	27° 11' 43.68"	93° 51' 32.04"		
14	AP.71	DD+9	9	307.0	307.0	307.0	4,649.0	34.203	828.00	414.00	205.30	-123.49	81.81	170.36	-298.83	-128.47	585515.51	3008466.97	27.197878	93.863417	27° 11' 52.36"	93° 51' 48.3"		11KV Line, Cart Track, Nala
15	AP.72	DC+3	3	397.0	397.0	397.0	4,956.0	87.094	704.00	352.00	430.49	179.73	610.22	605.13	167.85	773.68	585580.40	3008947.03	27.200583	93.864693	27° 12' 2.2"	93° 51' 50.73"		33KV Line, Tar Road
16	AP.73	DBN+0	0	191.0	191.0	191.0	5,353.0	94.703	588.00	294.00	217.27	-100.92	116.35	229.15	-225.26	3.89	585818.33	3009264.53	27.203437	93.866517	27° 12' 12.37"	93° 51' 59.46"		2Nos. Tar Road
17	AP.74	DC+3	3	628.0	628.0	628.0	5,544.0	111.891	819.00	409.50	291.92	380.34	672.26	416.25	422.34	838.50	585937.98	3009413.72	27.204774	93.867736	27° 12' 17.19"	93° 52' 3.85"		2Nos. Tar Road
18	AP.76	DC+6	6	271.0	271.0	271.0	6,172.0	85.916	899.00	449.50	247.66	373.74	621.40	205.66	524.55	730.21	586416.61	3009816.88	27.208383	93.872596	27° 12' 30.18"	93° 52' 21.35"		33KV Line
19	AP.77	DBN+3	3	267.0	267.0	267.0	6,443.0	53.314	538.00	269.00	-102.74	127.67	24.93	-253.55	123.98	-129.57	586601.62	3010014.9	27.210159	93.874478	27° 12' 36.57"	93° 52' 28.12"		33KV Line
20	AP.78	DC+6	6	247.0	247.0	247.0	6,710.0	51.172	514.00	257.00	139.33	-215.48	-76.15	143.02	-430.06	-287.04	586750.97	3010236.22	27.212148	93.876032	27° 12' 43.73"	93° 52' 38.61"		Nala
21	AP.79	DC+3	3	310.0	310.0	310.0	6,957.0	100.342	557.00	278.50	462.48	242.75	705.23	527.06	236.29	975.35	586828.87	3010470.62	27.214259	93.876805	27° 12' 51.33"	93° 52' 36.5"		Weight Span Violation Strengthening Not Required.
22	AP.80	DC+0	0	311.0	311.0	311.0	7,267.0	88.342	621.00	316.50	67.25	-65.37	1.88	11.71	-205.18	-193.47	587021.15	3010713.78	27.216442	93.878764	27° 12' 59.19"	93° 52' 43.55"		
23	AP.81	DBN+0	0	261.0	261.0	261.0	7,578.0	126.22	572.00	286.00	376.37	402.64	779.01	516.18	574.91	601.09	587139.65	3011001.32	27.219030	93.879981	27° 13' 8.51"	93° 52' 47.93"		Weight Span Violation Strengthening Not Required.
24	AP.82	DBN+0	0	227.0	227.0	227.0	7,839.0	87.053	488.00	244.00	-141.64	-327.76	-469.40	-313.51	607.08	-920.98	587214.99	3011251.21	27.221281	93.880759	27° 13' 16.61"	93° 52' 50.73"		Weight Span Violation Strengthening Not Required.
25	AP.83	DC+0	0	368.0	368.0	368.0	8,066.0	142.287	595.00	297.50	554.76	258.50	613.26	816.06	305.66	3139.38	587263.54	3011472.95	27.223279	93.881265	27° 13' 23.81"	93° 52' 52.58"		132KV D/C (PARE-NLPT)/Line Twr No.37_38 (Underhead X-ing)
26	AP.84	DC+0	0	336.0	336.0	336.0	8,434.0	127.169	704.00	352.00	108.50	188.43	298.93	82.34	203.00	265.34	587489.39	3011768.81	27.225936	93.883496	27° 13' 33.37"	93° 53' 0.99"		Weight Span Violation Strengthening Required.
27	AP.85	DBN+0	0	273.0	273.0	273.0	8,770.0	123.198	609.00	304.50	146.57	61.46	204.03	133.00	14.95	146.95	587769.12	3011543.96	27.227499	93.884404	27° 13' 39"	93° 53' 11.05"		

M/s Tamchi Kusuk  
 Authorised Signatory

Engineer  
 Comp. Scheme  
 POWERGRID, Nijali

VIJAY SRIVASTAVA  
 MANAGER (Comp. Scheme)  
 POWER GRID CORPORATION OF INDIA

Arjun Tiwari  
 Sr General Manager (Comp Scheme)  
 DC Bharali Di. R. Bharti  
 Sr General Manager (Comp Scheme)  
 Power Grid Corporation of India

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Client: Power Grid Corporation Of India Limited

Joint Venture of M/S Aster Private Limited And M/S Tamchi Kusuk (Itanagar) Arunachal Pradesh

Tower Schedule for AP.56/0 To AP.165/0

Sl.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative Change (m)	Reduced Level (m)	Sum of Adjacent Level (m)	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			UTM Co-Ord (4893)		Degree Declination		Degree Minutes Seconds		Crossing Details	Remark
											Left	Right	Total	Left	Right	Total	Latitude	Longitude	Latitude	Longitude	DMS (Lat)	DMS (Long)		
28	AP.86	DC+0	0 15° 18' 44.32" LT	261.0	261.0	261.0	9,043.0	134.495	534.00	267.00	211.54	153.20	364.74	250.05	167.57	426.62	587964.44	3012134.7	27.229208	93.888390	27° 13' 45.15"	93° 53' 18.2"		
29	AP.87	DBN+0	0 13° 5' 56.91" RT	291.0	291.0	291.0	9,304.0	131.228	552.00	276.00	107.80	297.20	405.00	93.43	393.22	486.65	588016.42	3012355.87	27.231233	93.889739	27° 13' 52.44"	93° 53' 23.06"		
30	AP.88	DBN+0	0 13° 50' 50.54" RT	358.0	358.0	358.0	9,595.0	106.886	649.00	324.50	-6.20	29.39	33.19	-102.22	-65.31	-167.53	588296.61	3012571.07	27.233126	93.891776	27° 13' 59.26"	93° 53' 30.39"		
31	AP.89	DBN+0	0 4° 28' 36.09" LT	161.0	161.0	161.0	9,593.0	136.42	519.00	259.50	328.61	-57.80	270.81	423.31	-145.34	277.97	588597.9	3012764.43	27.234852	93.894832	27° 14' 5.47"	93° 53' 41.41"		
32	AP.90	DD+0	0 30° 37' 24.5" LT	235.0	235.0	235.0	10,114.0	148.698	396.00	198.00	218.80	73.86	292.66	306.34	46.24	352.58	588726.2	3012861.7	27.235722	93.896135	27° 14' 8.61"	93° 53' 46.09"		
33	AP.91	DBN+0	0 6° 21' 3.06" RT	240.0	240.0	240.0	10,349.0	154.353	475.00	237.50	161.14	188.99	350.13	188.76	232.66	421.42	588815.09	3013079.24	27.237680	93.897049	27° 14' 15.45"	93° 53' 49.38"		
34	AP.92	DBN+0	0 8° 9' 12.42" RT	339.0	339.0	339.0	10,589.0	145.223	579.00	289.50	51.01	492.03	543.10	7.34	286.31	703.64	588929.87	3013290.01	27.239575	93.898223	27° 14' 22.47"	93° 53' 53.6"		Weight Span Violation Strengthening Not Required
35	AP.93	DC+0	0 22° 10' 55.39" RT	370.0	370.0	370.0	10,928.0	84.919	709.00	354.50	-153.09	-57.76	-210.85	-357.30	-211.44	-568.74	589192.58	3013561.73	27.242015	93.900290	27° 14' 31.25"	93° 54' 1.04"		
36	AP.94	DBN+0	0 11° 45' 14.25" LT	257.0	257.0	257.0	11,298.0	134.45	627.00	313.50	427.76	169.33	597.03	581.44	195.17	776.61	589448.37	3013752.89	27.243720	93.903503	27° 14' 37.39"	93° 54' 12.61"		
37	AP.95	DBN+0	0 14° 41' 18" LT	305.0	305.0	305.0	11,555.0	128.664	462.00	231.00	87.67	79.54	167.61	61.83	65.66	127.49	589637.77	3013927.68	27.245286	93.905419	27° 14' 43.03"	93° 54' 19.51"		
38	AP.96	DC+0	0 25° 51' 41.2" LT	363.0	363.0	363.0	11,760.0	131.234	568.00	284.00	125.06	407.97	533.03	139.34	551.34	693.68	589747.81	3014100.64	27.246840	93.906543	27° 14' 48.62"	93° 54' 23.56"		
39	AP.97	DD+0	0 42° 11' 57.83" RT	370.0	370.0	370.0	12,123.0	85.881	733.00	366.50	-44.97	125.16	80.19	-188.34	87.27	-101.07	589789.64	3014461.23	27.250032	93.906992	27° 15' 0.33"	93° 54' 25.17"		
40	AP.98	DBN+0	0 12° 3' 6.02" LT	326.0	326.0	326.0	12,493.0	98.091	695.00	348.00	244.84	211.22	456.06	282.73	241.74	524.47	590068.43	3014704.48	27.252270	93.909826	27° 15' 8.17"	93° 54' 35.37"		
41	AP.99	DBN+0	0 7° 10' 36.32" RT	253.0	253.0	253.0	12,819.0	89.423	573.00	289.50	114.78	156.19	270.97	84.26	174.98	259.24	590263.93	3014965.36	27.254612	93.911820	27° 15' 16.6"	93° 54' 42.55"		
42	AP.100	DC+0	0 20° 55' 14.38" LT	346.0	346.0	346.0	13,072.0	85.281	599.00	299.50	95.81	351.00	447.81	78.02	463.67	541.69	590439.75	3015147.28	27.256243	93.913609	27° 15' 22.47"	93° 54' 48.99"		
43	AP.101	DBN+6	6 2° 12' 20.15" RT	265.0	265.0	265.0	13,418.0	45.32	611.00	305.50	-5.00	138.95	134.95	-117.67	144.66	26.99	590575.57	3015405.51	27.259106	93.915004	27° 15' 32.78"	93° 54' 54.02"		
44	AP.102	DBN+3	3 5° 1' 11.82" LT	228.0	228.0	228.0	13,683.0	47.232	493.00	246.50	125.05	57.47	182.52	120.34	21.69	142.03	590888.88	3015705.06	27.261261	93.916167	27° 15' 40.54"	93° 54' 58.2"		
45	AP.103	DD+0	0 30° 01' 14.19" RT	554.0	554.0	554.0	13,911.0	57.339	782.00	391.00	170.53	345.96	516.48	206.31	389.59	595.90	590767.98	3015918.9	27.263186	93.916981	27° 15' 47.47"	93° 55' 1.13"	11KV Line	
46	AP.105	DC+9	9 16° 4' 31.35" RT	319.0	319.0	319.0	14,405.0	27.278	873.00	436.50	208.05	-213.79	-5.74	164.41	-450.09	-285.68	591180.94	3016287.63	27.266487	93.921180	27° 15' 59.36"	93° 55' 16.25"	2Nos.Nals	
47	AP.106	DBN+9	9 9° 24' 49.84" RT	226.0	226.0	226.0	14,784.0	92.94	545.00	272.50	532.79	221.75	754.54	280.39	290.59	591468.4	3016425.94	27.267717	93.924094	27° 16' 3.78"	93° 55' 26.74"		Weight Span Violation Strengthening Required.	
48	AP.107	DC+0	0 19° 48' 34.6" LT	244.0	244.0	244.0	15,010.0	88.387	470.00	235.00	4.25	72.71	76.96	-64.59	41.51	-23.06	591685.33	3016489.31	27.268274	93.926291	27° 16' 5.79"	93° 55' 34.65"		
49	AP.108	DBN+0	0 13° 34' 17.36" LT	273.0	273.0	273.0	15,254.0	95.019	517.00	258.50	171.29	187.10	359.19	202.49	220.64	422.93	591862.52	3016633.03	27.269599	93.928293	27° 16' 10.41"	93° 55' 41.86"		
50	AP.109	DBN+0	0 11° 49' 23.16" LT	234.0	234.0	234.0	15,527.0	87.281	507.00	258.50	85.10	116.58	201.08	52.56	116.32	168.88	592059.28	3016841.08	27.271425	93.930095	27° 16' 17.19"	93° 55' 48.34"		
51	AP.110	DD+0	0 40° 52' 44.58" RT	409.0	409.0	409.0	15,761.0	87.335	643.00	321.50	117.42	186.78	304.20	117.68	175.57	293.25	592171.05	3017046.66	27.273273	93.931239	27° 16' 23.78"	93° 55' 52.46"		
52	AP.111	DBN+0	0 2° 49' 35.84" LT	321.0	321.0	321.0	16,170.0	91.331	730.00	365.00	222.22	-7.96	214.26	233.43	-114.59	118.84	592553.87	3017190.63	27.274547	93.935117	27° 16' 28.37"	93° 56' 6.42"		
53	AP.112	DC+0	0 26° 52' 58.47" LT	278.0	278.0	278.0	16,491.0	121.149	599.00	299.50	328.96	118.57	447.53	435.59	105.64	541.23	592848.39	3017318.29	27.275679	93.938102	27° 16' 32.45"	93° 56' 17.17"		
54	AP.113	DBN+0	0 2° 27' 29.30" RT	391.0	391.0	391.0	16,769.0	124.281	669.00	334.50	159.43	109.45	268.88	172.38	54.98	227.34	593025.95	3017532.2	27.277598	93.939912	27° 16' 39.35"	93° 56' 23.69"		
55	AP.114	DBN+0	0 5° 43' 19.75" LT	307.0	307.0	307.0	17,160.0	142.834	698.00	349.00	281.55	-39.74	241.81	316.02	-162.07	174.95	593288.36	3017822.07	27.280197	93.942586	27° 16' 48.71"	93° 56' 33.31"		
56	AP.115	DBN+3	3 1° 15' 36.83" LT	285.0	285.0	285.0	17,467.0	172.548	592.00	296.00	346.74	-71.13	275.61	489.07	-206.37	262.70	593470.68	3018069.07	27.282414	93.944446	27° 16' 56.69"	93° 56' 40.01"		
57	AP.116	DBN+6	6 9° 29' 37.45" LT	392.0	392.0	392.0	17,752.0	203.122	677.00	338.50	356.13	258.02	614.15	491.37	297.28	788.65	593626.63	3018307.61	27.284557	93.946040	27° 17' 4.41"	93° 56' 45.75"		
58	AP.117	DD+0	0 32° 29' 16.42" LT	276.0	276.0	276.0	18,144.0	195.716	668.00	334.00	133.98	58.25	192.23	94.72	7.76	102.48	593784.1	3018666.59	27.287787	93.947659	27° 17' 16.09"	93° 56' 51.57"		
59	AP.118	DBN+3	3 7° 33' 44.26" LT	382.0	382.0	382.0	18,420.0	204.854	658.00	329.00	217.75	463.98	681.73	268.24	646.78	905.02	593741.95	3018939.35	27.290252	93.947254	27° 17' 24.91"	93° 56' 50.11"		Weight Span Violation Strengthening Not Required
60	AP.120	DBN+3	3 1° 12' 44.12" LT	244.0	244.0	244.0	18,802.0	147.352	626.00	313.00	-81.98	302.07	220.09	-254.78	416.06	161.28	593634.54	3019305.6	27.293565	93.946196	27° 17' 36.84"	93° 56' 46.31"		
61	AP.121	DBN+6	6 12° 17' 9.43" LT	355.0	355.0	355.0	19,046.0	120.124	599.00	299.50	-58.07	153.72	95.65	-172.06	138.67	-33.39	598552.87	3019535.53	27.295646	93.945389	27° 17' 44.33"	93° 56' 43.4"		
62	AP.122	DBN+0	0 5° 32' 58.1" RT				19,401.0	130.779	684.00	342.00	201.28	106.13	307.41	216.33	69.18	285.51	593365.62	3019837.13	27.297717	93.945389	27° 17' 44.33"	93° 56' 43.4"		

M/S Tamchi Kusuk  
Authorized Signatory

Engineer  
Comp. Scheme  
POWER GRID CORPORATION OF INDIA

V. JAY SRIVASTAVA  
MANAGER (Comp. Scheme)  
POWER GRID CORPORATION OF INDIA

Arjun Tiwari  
Arjun Tiwari / DGM  
Comp. Scheme  
POWER GRID CORPORATION OF INDIA

DC Bharali  
Sr General Manager (Comp Scheme)  
POWER GRID CORPORATION OF INDIA

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

**Client: Power Grid Corporation Of India Limited**  
**Joint Venture of M/S Aster Private Limited And M/S Tamchi Kujuk (Itanagar) Arunachal Pradesh**  
**Tower Schedule for AP.56/0 To AP.165/0**

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Sectine Length (m)	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			DMS/OMS (km)		DMS/OMS (m)		Crossing Details	Remark	
											Left	Right	Total	Left	Right	Total	Lat/Long	North/South	Latitude	Longitude			DMS (Lat)
63	AP.123	DD+0	0 48' 29" 31.75" RT	329.0	329.0	329.0	19,730.0	141.369	610.00	305.00	222.87	354.14	577.01	259.82	483.38	749.20	593219.91	3020132.1	27.301054	93.942070	27° 18' 3.8"	93° 56' 31.45"	
64	AP.124	DC+0	0 21' 45" 54.25" RT	281.0	281.0	281.0	20,011.0	108.265	660.00	330.00	-73.14	241.73	170.59	-208.38	270.06	69.68	593326	3020392.31	27.303396	93.943162	27° 18' 12.23"	93° 56' 35.38"	
65	AP.125	DC+0	0 21' 9" 53.04" RT	379.0	379.0	379.0	20,390.0	96.951	644.00	322.00	135.27	288.04	423.31	100.94	386.50	487.44	593588.96	3020605.24	27.305842	93.945840	27° 18' 21.03"	93° 56' 45.02"	Nala
66	AP.126	DBN+0	0 13' 23" 44.91" RT	265.0	265.0	265.0	20,655.0	74.202	619.00	309.50	-23.04	11.47	-11.57	-121.50	-93.31	-214.61	593829.3	3020776.47	27.306833	93.948277	27° 18' 24.6"	93° 56' 53.8"	
67	AP.127	DBN+0	0 4' 25" 32.86" LT	354.0	354.0	354.0	21,009.0	106.514	608.00	304.00	342.53	359.62	702.15	447.31	506.87	954.18	594176.16	3020847.59	27.107448	93.951788	27° 18' 26.81"	93° 57' 6.44"	
68	AP.128	DD+0	0 31' 50" 34.54" LT	477.0	477.0	477.0	21,263.0	73.933	731.00	365.50	-105.62	178.28	70.66	-252.87	136.89	-115.98	594420.39	3020917.37	27.308011	93.954261	27° 18' 28.02"	93° 57' 15.34"	Nala
69	AP.130	DC+0	0 15' 24" 37.49" LT	284.0	284.0	284.0	21,740.0	90.299	761.00	380.50	300.72	-50.18	250.54	340.11	-171.84	168.27	594738.97	3021268.39	27.311207	93.957500	27° 18' 40.35"	93° 57' 27.03"	
70	AP.131	DBN+0	0 12' 10" 16.64" RT	425.0	425.0	425.0	22,024.0	120.396	709.00	354.50	334.18	378.90	713.08	455.84	484.23	940.07	594871.52	3021519.55	27.313465	93.958667	27° 18' 48.48"	93° 57' 31.92"	
71	AP.132	DC+0	0 17' 30" 4.41" RT	302.0	302.0	302.0	22,449.0	81.399	727.00	363.50	46.10	251.09	299.19	-59.23	317.72	258.49	595144.64	3021845.18	27.316386	93.961652	27° 18' 58.99"	93° 57' 41.95"	
72	AP.133	DC+0	0 22' 25" 41.68" LT	415.0	415.0	415.0	22,751.0	64.397	717.00	358.50	48.91	120.82	169.73	-15.72	65.96	50.74	595398.29	3022007.93	27.317834	93.964238	27° 19' 4.2"	93° 57' 51.26"	
73	AP.135	DBN+0	0 3' 31" 17.58" RT	195.0	195.0	195.0	23,165.0	84.232	610.00	305.00	294.18	4.63	298.81	349.04	-54.16	294.88	595636.26	3022345.15	27.320895	93.966660	27° 19' 15.11"	93° 57' 58.98"	Nala
74	AP.136	DC+0	0 27' 56" 9.59" RT	300.0	300.0	300.0	23,361.0	94.218	495.00	247.50	190.57	210.00	403.37	249.16	247.98	497.14	595757.87	3022497.59	27.322232	93.967901	27° 19' 20.04"	93° 58' 4.84"	
75	AP.137	DBN+3	3 9' 38" 28" LT	321.0	321.0	321.0	23,681.0	81.292	621.00	310.50	90.00	223.94	311.94	52.02	264.09	316.11	596033	3022617.38	27.323292	93.970691	27° 19' 23.85"	93° 58' 14.49"	11KV Line
76	AP.138	DBN+0	0 10' 40" 20.38" LT	407.0	407.0	407.0	23,982.0	73.063	728.00	364.00	97.06	137.75	234.81	56.91	96.13	153.04	596301.82	3022732.63	27.324857	93.973421	27° 19' 29.49"	93° 58' 24.32"	
77	AP.139	DC+3	3 21' 48" 34.13" LT	312.0	312.0	312.0	24,389.0	84.819	719.00	359.50	269.25	170.03	389.28	310.87	97.27	408.14	596595.58	3023074.32	27.327379	93.976413	27° 19' 38.57"	93° 58' 35.09"	
78	AP.140	DBN+9	9 9' 36" 51.58" LT	133.0	133.0	133.0	24,701.0	85.007	445.00	222.50	191.97	289.18	979.11	214.73	328.82	328.82	596724.49	3023358.44	27.329935	93.977338	27° 19' 47.77"	93° 58' 39.86"	Weight Span Violation Strengthening Required
79	AP.141	DD+9	9 57' 56" 51.05" RT	378.0	378.0	378.0	24,834.0	32.155	511.00	255.50	-84.14	121.58	-532.56	3336.80	78.91	-1081.41	596758.45	3023487.03	27.331093	93.978092	27° 19' 51.94"	93° 58' 41.13"	Weight Span Violation Strengthening Required
80	AP.142	DC+3	3 16' 46" 9.04" RT	338.0	338.0	338.0	25,212.0	52.207	716.00	358.00	256.42	279.24	535.66	299.09	349.02	648.11	597119.38	3023599.36	27.332082	93.981749	27° 19' 55.49"	93° 58' 54.3"	LT Line, 11KV Line, 2Nos. 33KV Line, Ranganadi River, BRO Road (K/min_Poia)
81	AP.143	DD+0	0 53' 36" 38.61" LT	138.0	138.0	138.0	25,550.0	34.66	476.00	238.00	58.76	29.85	88.61	-11.02	5.07	-5.95	597457.36	3023602.47	27.332086	93.985165	27° 19' 55.51"	93° 59' 6.59"	Ranganadi River
82	AP.144	DBN+0	0 6' 4' 46.91" RT	248.0	248.0	248.0	25,688.0	37.639	386.00	198.00	108.15	154.12	262.27	132.93	173.19	306.12	597538.26	3023714.27	27.333089	93.985992	27° 19' 59.12"	93° 59' 9.57"	Cart Track
83	AP.145	DD+0	0 50' 26" 10.69" RT	191.0	191.0	191.0	25,936.0	33.52	489.00	219.50	93.88	-947.24	-453.36	74.81	951.15	-879.29	597704.1	3023898.66	27.334742	93.987683	27° 20' 3.07"	93° 59' 15.66"	Weight Span Violation Strengthening Not Required
84	AP.146	DC+9	9 22' 43" 48.01" LT	300.0	300.0	300.0	26,127.0	92.215	491.00	245.50	28.24	285.74	3023.46	1165.10	371.67	4036.27	597894.94	3023890.74	27.334657	93.989611	27° 20' 4.76"	93° 59' 22.6"	Weight Span Violation Strengthening Required
85	AP.147	DD+0	0 55' 32" 49.15" RT	207.0	207.0	207.0	26,427.0	78.759	507.00	253.50	14.26	55.80	69.86	-71.67	25.27	-46.40	598176.23	3023995.03	27.335578	93.992462	27° 20' 8.08"	93° 59' 32.87"	
86	AP.165	DBN+9	9 03' 00" 0.59" RT	26,634.0	26,634.0	26,634.0	26,634.0	75.227	207.00	103.50	151.40	210.91	362.31	181.73	229.85	411.58	598345.42	3023475.77	27.334489	93.994163	27° 20' 4.16"	93° 59' 38.99"	33KV Line, Tar Road

M/S Tamchi Kujuk  
 Authorised Signatory

ए. संतोष / A. Santosh  
 अभियंता / Engineer  
 व्यापक योजना / Comp. Scheme  
 पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
 अरुणाचल प्रदेश / Arunachal Pradesh

VIJAY SRIVASTAVA  
 MANAGER (Comp. Scheme)  
 POWER GRID CORPORATION OF INDIA  
 Nirjuli

अरुण तियाजी / Arun Tiwari  
 उप महासंचालक / OGM  
 व्यापक योजना / Comp. Scheme  
 पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
 अरुणाचल प्रदेश / Arunachal Pradesh

Dr. Chhara  
 General Manager (Comp. Scheme)  
 पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
 अरुणाचल प्रदेश / Arunachal Pradesh

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Client: Power Grid Corporation Of India Limited

Joint Venture of M/S Aster Private Limited And M/S Tamchi Kujuk (Itanagar) Arunachal Pradesh

Tower Schedule for AP.166/0 - AP.187/0

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length	Section Length	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			UTM/UPS (43-44P) New		Crossing Details	Remark
											Left	Right	Total	Left	Right	Total	Easting	Northing		
5	AP.166/0	DD+9	9	45° 37' 22" LT	255	255	1419	102.975	617.00	308.50	151.09	99.39	250.48	132.15	81.59	213.74	598652.00	3023683.00	2Nos Nala	
6	AP.166A	DC+9	9	24° 13' 27" LT	298	298	1674	106.928	553.00	276.50	155.61	-216.57	-60.96	173.41	-447.98	-274.57	598900.00	3023743.00	Nala	
7	AP.167/0	DD+0	0	40° 48' 47" RT	382	382	1972	176.000	680.00	340.00	514.57	-74.86	439.71	745.98	-243.15	502.83	599137.00	3023927.00	Tar Road	
8	AP.169/0	DC+6	6	21° 45' 58" LT	389	389	2354	226.002	771.00	385.50	456.86	150.21	607.07	635.15	122.18	747.33	599518.00	3023907.00	Cart Track	
9	AP.170/0	DBN+9	9	14° 00' 56" LT	331	331	2743	232.502	720.00	360.00	238.79	325.89	564.68	266.82	427.41	694.23	599886.00	3024032.00		
10	AP.171/0	DBN+0	0	01° 04' 06" LT	306	637	3074	212.228	637.00	318.50	5.11	202.01	207.12	-96.41	233.04	136.63	600164.00	3024211.00	Cart Track	
11	AP.172/0	DBN+3	3	02° 36' 57" LT	254	254	3380	200.958	560.00	280.00	103.99	-218.62	-114.63	72.96	-437.41	-364.45	600419.00	3024382.00		
12	AP.173/0	DC+9	9	26° 07' 27" LT	272	272	3634	243.367	526.00	263.00	472.62	481.87	954.49	691.41	700.81	1392.22	600627.00	3024532.00		
13	AP.173A/0	DBN+9	9	12° 40' 59" LT	242	242	3906	191.491	514.00	257.00	-209.87	876.37	666.50	-428.81	1354.53	925.72	600747.00	3024773.00	Tar Road	Strengthening Required
14	AP.174/0	DD+9	9	34° 13' 11" RT	131	242	4148	90.690	373.00	386.50	-634.37	73.47	-560.90	-1112.53	78.52	-1034.01	600808.00	3025005.00	Tar Road	Strengthening Required
15	Loc.174/1	DBN+6	6		104	235	4279	93.114	235.00	117.50	57.53	544.90	602.43	52.48	856.91	909.39	600907.00	3025091.00		Maintaining Ground clearance Strengthening Required.
16	AP.175/0	DBN+6	6	06° 20' 37" LT	254	254	4383	64.847	358.00	179.00	-440.90	-102.53	-543.43	-752.91	-247.82	-1000.73	600986.00	3025160.00	Tar Road, Nala	Strengthening Required.
17	AP.177/0	DBN+3	3	15° 00' 00" RT	278	254	4637	99.995	532.00	266.00	356.53	160.52	517.05	501.82	178.14	675.96	601158.00	3025347.00	Tar Road	
18	Loc.177/1	DBN+0	0	12° 50' 47" LT	179	457	4915	99.696	457.00	228.50	117.48	-19.79	97.69	103.86	-88.98	14.88	601393.00	3025496.00		
19	AP.178/0	DD+3	3	42° 26' 57" LT	123	123	5094	107.484	302.00	151.00	198.79	661.60	860.59	267.98	1041.80	1309.78	601521.00	3025625.00	Tar Road	Strengthening Required
20	AP.179/0	DD+9	9	43° 54' 24" LT	243	123	5217	60.768	366.00	183.00	-538.80	129.37	-409.43	-918.80	134.35	-784.45	601526.00	3025748.00	Tar Road	
21	AP.180/0	DD+0	0	56° 22' 08" RT	313	243	5460	68.714	356.00	178.00	113.63	-200.80	-87.17	108.65	-163.68	-255.03	601303.00	3025943.00		
22	Loc.180/1	DBN+0	0		210	323	5573	84.747	323.00	161.50	313.80	99.90	413.70	476.68	96.67	573.35	601382.00	3026052.00		To maintain weight span we have taken DBN type of tower
23	AP.181/0	DD+9	9	38° 49' 32" RT			5783	76.338	391.00	195.50	110.10	-499.77	-389.67	113.33	-873.42	-760.09	601433.00	3026246.00		

Surveyed By  
For Tamchi Aster

Submitted By

Checked By  
Power Grid Corporation  
fs (Elec)

Recommended By  
For Power Grid Corporation

DC Bharali  
20/11/2021  
Arunachal Pradesh

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Sl. No.	Loc.	DC	G	RT	308	308	90.5	5964	138.252	561.00	280.50	Hot			Cold			601579.00	3026353.00	Cart Track	Strengthening Required
												LT	RT	Total	LT	RT	Total				
24	Loc.182/D	DC+6	6	19° 49' 32" RT	380	380	380	6344	162.683	751.00	375.50	277.96	258.37	576.33	333.64	369.82	703.46	601804.00	3026647.00	Tar Road	
25	AP.183/D	DC+0	0	18° 24' 10" RT	371	371	371	6715	139.592	804.00	402.00	72.63	245.41	318.04	1.18	263.71	264.89	602082.00	3026838.00		
26	AP.184/D	DBN+0	0	05° 01' 18" RT	433	433	433	7148	132.690	743.00	371.50	187.58	534.76	722.35	169.29	775.16	944.45	602425.00	3027157.00	Cart Track	More Than Sum of Adjacent Span (m)
27	AP.185/D	DC+0	0	13° 12' 01" RT	310	766	383	7458	54.772	613.00	306.50	-224.76	181.62	-43.14	-465.16	200.69	-264.47	602709.00	3027282.00	Nala	
28	Loc.185/1	DBN+3	3		303			7761	59.739	456.00	228.00	121.38	-259.48	-138.10	102.31	-472.15	-369.85	602986.00	3027405.00		
29	Loc.185/2	DBN+3	3		153			7934	91.085	391.00	195.50	412.48	168.10	580.58	625.16	199.18	824.34	603126.00	3027467.00		
30	AP.186/D	DBN+0	0	00° 37' 34" RT	238	238	238	8152	84.641	617.00	308.50	69.90	324.00	393.90	38.82	405.14	447.96	603345.00	3027561.00		
31	AP.187/D	DD+0	0	36° 05' 18" RT																	

Tapaswini Refson  
 Surveyed By  
 For Tamchi Aster

*[Signature]*  
 Submitted By

Checked By  
 Debanjan Ghosh  
 P. Bora  
 05/10/2021  
 Recommended By  
 For Power Grid Corporation of India Ltd.

*[Signature]*  
 20/10/2021  
 DC Bharati  
 Sr. General Manager (Comp. Scheme)  
 Approved By  
 For Power Grid Corporation of India Ltd.

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Client: Power Grid Corporation Of India Limited  
 Joint Venture of M/S Aster Private Limited And M/S Tamchi Kusuk (Itanagar) Arunachal Pradesh  
 Tower Schedule for AP.188/0\_208/0

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative Churnage (m)	Reduced Level (m)	Sum of Adjacent Span (m)	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			UTM (U.P. 45E)		Original Stationing		Crossing Details Village Name	Remarks
											Left	Right	Total	Left	Right	Total	Easting	Northing	DMS (Lat)	DMS (Long)		
1	AP.188/0	DBN+6	6	2°32'45" RT	284.6	284.60	0.00	148.389	284.60	142.30	0.00	4.69	4.69	0.00	-82.42	-82.42	603709.90	3027470.00	27° 21' 59.53"	94° 3' 55.29"		
2	Loc.188/1	DBN+3	3	9°25'36" LT	99.4	99.40	284.60	172.385	384.00	192.00	279.91	-65.93	213.98	367.02	-139.13	237.89	603977.36	3027372.75	27° 21' 55.68"	94° 3' 8.54"	Tar Road, 11KV Line, Nala, Cart Track	
3	AP.189/0	DD+0	0	42°28'53" LT	190.5	190.50	384.00	182.323	289.90	144.95	165.33	-118.67	46.66	218.53	-254.09	-15.56	604075.09	3027354.94	27° 21' 56.3"	94° 3' 4.99"	33KV Line	
4	AP.190/0	DD+3	3	51°42'46" LT	217.5	217.50	574.50	201.795	408.00	204.00	309.17	0.24	309.41	444.99	-68.45	376.14	604236.80	3027455.30	27° 21' 58.91"	94° 3' 14.46"		
5	Loc.190/1	DBN+0	0	9°26'37" RT	301.1	301.10	792.00	217.809	518.60	259.30	217.26	-20.34	196.92	285.95	-128.52	157.43	604260.90	3027671.50	27° 22' 5.93"	94° 3' 15.4"		
6	Loc.190/2	DBN+0	0	2°17'13" LT	166.9	166.90	1093.10	246.183	468.00	234.00	321.44	-458.43	-136.99	429.62	-801.45	-371.83	604342.90	3027961.20	27° 22' 15.32"	94° 3' 18.48"		Strengthening required
7	AP.191/0	DBN+9 RC+3	12	0°54'11" LT	288.2	288.20	1260.00	284.054	455.10	227.55	625.33	106.34	731.67	968.35	82.44	1050.79	604381.90	3028123.50	27° 22' 20.58"	94° 3' 19.95"		Strengthening required.
8	Loc.191/1	DBN+9	9	4°2'42" RT	410.0	410.00	1548.20	293.055	698.20	349.10	181.86	356.54	538.40	205.76	452.46	658.22	604444.80	3028404.70	27° 22' 29.7"	94° 3' 22.32"		
9	Loc.191/2	DC+0	0	20°56'55" RT	341.1	341.10	1958.20	267.795	751.10	375.55	53.46	337.55	391.01	-42.46	443.26	400.80	604562.30	3028797.50	27° 22' 42.44"	94° 3' 26.72"	Tar Road, 33KV Line	
10	AP.192/0	DC+3	3	24°16'12" RT	349.3	349.30	2299.30	233.384	690.40	345.20	3.55	267.34	270.89	-102.16	326.01	223.85	604770.40	3029067.70	27° 22' 51.16"	94° 3' 34.38"		
11	Loc.192/1	DBN+3	3	3°20'52" LT	119.1	119.10	2648.60	215.531	468.40	234.20	81.96	-61.33	20.63	13.29	-137.85	-114.56	605078.50	3029232.40	27° 22' 56.42"	94° 3' 45.65"	33KV Line, Nala, Cart Track	
12	Loc.192/2	DC+0	0	18°3'46" LT	217.0	217.00	2767.70	226.470	336.10	168.05	180.43	75.63	256.06	256.95	54.83	311.78	605180.10	3029294.60	27° 22' 58.42"	94° 3' 49.35"		
13	AP.193/0	DBN+0	0	2°27'36" LT	378.6	378.60	2984.70	230.403	595.60	297.80	141.37	85.51	226.88	162.17	19.81	181.98	605321.00	3029458.60	27° 23' 3.74"	94° 3' 54.54"	Tar Road	
14	Loc.193/1	DBN+0	0	0°26'22" LT	138.3	138.30	3363.30	252.071	516.90	258.45	293.09	14.64	307.73	358.79	-19.86	338.93	605554.30	3029757.80	27° 23' 13.37"	94° 4' 3.13"	Nala	
15	Loc.193/2	DA+0	0	00°00'00"	137.8	137.80	3501.60	256.228	276.10	138.05	123.66	131.70	255.36	158.16	171.45	329.61	605638.70	3029867.40	27° 23' 16.9"	94° 4' 6.24"		
16	AP.194/0	DBN+9	9	3°26'28" RT	308.4	308.40	3639.40	242.456	446.20	223.20	6.10	441.07	447.17	-33.65	622.66	589.01	605722.80	3029976.60	27° 23' 20.43"	94° 4' 9.33"		
17	AP.195/0	DBN+6	6	13°26'30" LT	289.5	289.50	3947.80	196.671	597.90	298.95	-132.67	228.10	95.43	-314.26	280.86	-33.40	605925.30	3030209.20	27° 23' 27.93"	94° 4' 16.78"	Cart Track	
18	Loc.195/1	DBN+9	9	9°7'40" LT	189.9	189.90	4237.30	180.365	479.40	239.70	61.40	157.49	218.89	8.64	197.08	205.72	606059.40	3030465.70	27° 23' 36.23"	94° 4' 21.74"		
19	AP.196/0	DBN+9	9	7°53'18" LT	313.1	313.10	4427.20	179.816	503.00	251.50	32.41	178.72	213.33	-7.18	192.76	185.58	606119.60	3030645.90	27° 23' 42.03"	94° 4' 23.99"		
20	Loc.196/1	DBN+0	0	17°49'40" RT	196.8	196.80	4780.30	178.988	509.90	254.95	134.38	6.65	141.03	120.34	-51.43	68.91	606177.10	3030953.60	27° 23' 52.05"	94° 4' 26.18"	Nala	
21	Loc.196/2	DA+0	0	00°00'00"	183.3	183.30	4937.10	188.945	380.10	190.05	190.15	100.49	290.64	248.23	106.09	354.32	606255.30	3031134.20	27° 23' 57.9"	94° 4' 29.08"		
22	AP.197/0	DD+3	3	32°25'19" RT	240.7	240.70	5120.40	185.051	424.00	212.00	82.81	26.30	109.11	77.21	-33.23	43.98	606328.20	3031302.40	27° 24' 3.34"	94° 4' 31.79"		
23	AP.198/0	DBN+6	6	5°40'57" RT	437.5	437.50	5361.10	194.534	678.20	339.10	214.40	17.87	232.27	273.93	-109.29	164.64	606527.40	3031437.50	27° 24' 7.68"	94° 4' 39.08"	Nala	
24	Loc.198/1	DD+6	6	27°52'45" LT	391.9	391.90	5798.60	242.997	829.40	414.70	419.63	238.81	658.44	546.79	265.95	817.74	606912.00	3031646.00	27° 24' 14.34"	94° 4' 53.15"		
25	AP.199/0	DBN+0	0	4°38'7" RT	182.1	182.10	6190.50	239.734	574.00	287.00	153.09	91.03	244.13	125.95	91.02	216.97	607329.20	3031972.20	27° 24' 24.88"	94° 5' 1.16"		
26	AP.199A/0	DBN+0	0	00°00'00"	160.10	160.10	6372.60	239.736	320.10	160.10	91.67	493.86	584.93	91.08	762.77	853.85	607342.10	3032115.20	27° 24' 29.5"	94° 5' 5.32"		Strengthening required

M/s Tamchi Kusuk  
 (Bhuskum Lal)  
 Authorized Signatory

M/s Tamchi Kusuk  
 Authorized Signatory

लिखा नाप / लिखा Napa  
 अभियंता Engineer  
 व्यापक योजना : Co-op. Scheme  
 पावरग्रिड, निजामी / POWERGRID, Nirjami  
 अरुणाचल प्रदेश Arunachal Pradesh

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative Chainage (m)	Reduced Level (m)	Sum of Adjacent Span (m)	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			UTM/UPS (494)		Degree, Minutes, Seconds		Crossing Details Village Name	Remarks	
											Left	Right	Total	Left	Right	Total	Easting	Northing	DMS (Lat)	DMS (Long)			
27	Loc.199A/1	DBN+3	3	8°36'54" RT	138.1	138.10	138.10	6510.70	204.886	466.60	233.30	-355.76	313.90	-22.26	-624.67	440.63	-184.04	607327.70	3032223.80	27° 24' 32.99"	94° 5' 8.47"		
28	Loc.199A/2	DBN+6	6	1°21'36" RT	328.5	328.50	328.50	6839.70	170.728	570.10	285.05	-5.00	18.07	23.07	-112.13	-30.63	-142.76	607567.80	3032448.00	27° 24' 40.22"	94° 5' 17.28"		
29	Loc.199A/3	DC+6	6	17°47'23" RT	241.6	241.60	241.60	7080.80	183.082	483.60	241.80	311.53	-32.75	180.78	272.23	-130.07	142.16	607747.90	3031608.80	27° 24' 45.39"	94° 5' 23.89"	Cart Track	
30	AP.200/0	DC+3	3	16°31'57" LT	242.0	242.00	242.00	7322.80	206.599	461.40	230.70	274.75	319.01	393.76	372.07	124.90	496.97	607909.10	3032707.00	27° 24' 48.52"	94° 5' 31.98"	Cart Track	
31	AP.201/0	DBN+9	9	13°41'14" LT	219.4	219.40	219.40	7542.20	199.473	403.80	203.90	100.39	60.83	39.56	94.50	-157.71	-63.21	608136.00	3032849.40	27° 24' 53.1"	94° 5' 38.1"		
32	AP.202/0	DBN+9	9	5°44'20" RT	184.4	184.40	184.40	7726.80	215.034	460.90	230.45	245.23	180.41	425.64	342.11	207.10	549.21	608244.00	3032998.90	27° 24' 57.93"	94° 5' 42.08"		
33	AP.203/0	DO+9	9	35°29'23" RT	276.5	276.50	276.50	8003.10	208.606	630.90	315.45	96.09	366.16	462.25	69.40	485.77	555.17	608427.50	3033205.70	27° 25' 4.59"	94° 5' 48.83"		
34	AP.204/0	DBN+3	3	10°2'4" LT	354.4	354.40	354.40	8357.50	177.679	703.00	351.50	-11.76	230.57	216.81	-131.37	266.18	134.81	608773.00	3033285.00	27° 25' 7.07"	94° 6' 1.44"		
35	AP.205/0	DC+3	3	19°51'30" LT	348.6	348.60	348.60	8706.10	166.863	639.70	319.85	118.03	78.30	196.33	82.42	35.73	118.15	609094.00	3033421.00	27° 25' 11.4"	94° 6' 13.17"		
36	Loc.205/1	DBN+0	0	0°0'0" LT	291.1	291.10	291.10	8997.20	180.658	626.20	313.10	212.80	-117.43	95.37	255.37	-297.83	-42.46	609307.50	3033618.80	27° 25' 17.76"	94° 6' 21.01"	Nala	
37	Loc.205/2	DBN+6	6	0°1'26" LT	335.1	335.10	335.10	9332.30	227.318	485.90	242.95	452.53	55.98	508.51	632.93	43.68	676.61	609553.40	3033846.50	27° 25' 25.09"	94° 6' 30.04"	Nala	
38	AP.206/0	DBN+9	9	1°25'58" LT	150.8	150.80	150.80	9463.10	225.933	532.00	266.00	94.82	447.25	542.07	107.12	609.71	716.83	609664.00	3033949.00	27° 25' 28.39"	94° 6' 34.1"		
39	AP.207/0	DBN+9	9	3°14'32" LT	381.2	381.20	381.20	9864.30	171.985	786.80	393.40	-66.05	71.10	5.05	-228.51	-12.27	-240.78	609937.00	3034215.00	27° 25' 36.95"	94° 6' 44.13"	Cart Track, Nala	
40	AP.208/0	DBN+9	9	11°16'11" LT	405.6	405.60	405.60	10269.900	201.441	405.60	202.80	334.50	0.00	334.50	417.87	0.00	417.87	610211.00	3034514.00	27° 25' 46.59"	94° 6' 54.2"		

*(Signature)*  
 M/s Tamchi Kusuk  
 Authorised Signatory

M/s Tamchi Kusuk  
 Authorised Signatory

*(Signature)*  
 लिखा नापा / Engineer  
 अभियंता  
 व्यापक योजना : Camp. Scheme  
 पावतीड, निलकुली / POWERGRID, Nirjuli  
 अल्मवाल प्रदेश / Arunachal Pradesh

Client: Power Grid Corporation Of India Limited  
 Joint Venture of M/S Aster Private Limited And M/S Tamchi Kujuk (Itanagar) Arunachal Pradesh  
 Tower Schedule for AP.208/1 - AP 229/0

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length	Section Length	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			Degree Minutes Seconds		Crossing Details Village Name	Weight Span / Sum of Adjacent Span / Remark
											Left	Right	Total	Left	Right	Total	DMS (Lat)	DMS (Long)		
				220																
29	Loc.208/1	DBN+0	0	00° 00' 00"	610	305.00	9219	147.766	630.00	305.00	142.98	325.27	468.25	163.86	407.73	571.99	27° 25' 52.68"	94° 6' 58.4"	Boginadi Forest Beat	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)
				390																
30	AP.209	DBN+0	0	01° 35' 41" RT			9609	119.751	625.00	412.50	64.73	29.84	94.57	-17.73	-88.95	-106.68	27° 26' 3.46"	94° 7' 5.84"	Boginadi Forest Beat	
				435																
31	AP.210	DBN+9	9	05° 54' 28" RT	435	435.00	10044	155.765	630.00	315.00	405.16	208.73	613.89	523.95	279.13	803.08	27° 26' 15.29"	94° 7' 14.52"	Boginadi Forest Beat	
				195																
32	Loc.210/1	DBN+0	0	00° 00' 00"	369	184.50	10239	152.805	369.00	184.50	-13.73	379.10	365.37	-84.13	564.01	479.88	27° 26' 20.2"	94° 7' 19"	Boginadi Forest Beat	To maintain weight span we have taken DBN type tower instead of DA type
				174																
33	AP.211	DBN+0	0	05° 44' 33" LT			10413	124.778	561.00	280.50	-205.10	263.85	58.75	-390.01	308.38	-81.63	27° 26' 24.58"	94° 7' 22.99"	Boginadi Forest Beat	
				387																
34	AP.212	DC+6	6	21° 33' 31" LT	387	387.00	10800	103.765	739.00	369.50	123.15	165.49	288.64	78.52	158.84	237.46	27° 26' 35.08"	94° 7' 30.75"	Boginadi Forest Beat	
				352																
35	AP.213	DC+9	9	15° 12' 23" RT	352	352.00	11152	102.805	638.00	319.00	186.51	-350.08	-163.57	193.15	-662.21	-469.05	27° 26' 46.27"	94° 7' 33.38"	Boginadi Forest Beat	
				286																
36	AP.214	DC+9 RC+3	12	26° 59' 38" RT	286	286.00	11438	177.568	763.00	381.50	636.08	359.41	995.49	948.21	435.95	1384.16	27° 26' 54.22"	94° 7' 38.74"	Boginadi Forest Beat	Required weight span and adjacent span not get this tower. We are proposed strengthening tower
				477																
37	AP.215	DBN+9	9	03° 47' 03" LT	477	477.00	11915	148.765	710.00	355.00	117.59	275.62	398.21	41.05	376.34	417.39	27° 27' 2.42"	94° 7' 53.47"	Boginadi Forest Beat	
				233																
38	Loc.215/1	DC+9	9	00° 00' 00"	461	230.50	12148	128.321	461.00	230.50	-42.62	667.70	625.08	-143.34	1018.20	874.86	27° 27' 6.84"	94° 8' 0.35"	Boginadi Forest Beat	To maintain weight span we have taken DC type tower
				228																
39	AP.216	DD+0	0	31° 51' 23" LT			12376	67.707	678.00	339.00	-439.70	-379.83	-819.53	-790.20	-762.70	-1552.90	27° 27' 11.18"	94° 8' 7.11"	Boginadi Forest Beat	
				450																
40	Loc.216/1	DC+0	0	00° 00' 00"	623	311.50	12826	217.792	623.00	311.50	629.83	-247.66	582.17	1212.70	-459.19	753.51	27° 27' 24.7"	94° 8' 13.35"	Boginadi Forest Beat	Required weight span and Sum of adjacent span not get this tower. We are proposed strengthening tower
				173																
41	AP.217	DC+3	3	16° 25' 30" RT			12999	246.670	613.00	306.50	420.66	25.86	446.52	632.19	-97.03	535.16	27° 27' 29.89"	94° 8' 15.75"	Boginadi Forest Beat	
				440																

Tapankumar

29/10/2021

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**132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)**

Sl.No.	Loc. No.	Type of Tower		Angle of Deviation	Span Length	Section Length	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			Degree Minutes Seconds		Crossing Details Village Name	Weight Span / Sum of Adjacent Span / Remark	
		DBN+3	3									Left	Right	Total	Left	Right	Total	DMS (Lat)	DMS (Long)			
42	Loc.217/1	DBN+3	3	00° 00' 00"		741	370.50	13489	298.773	741.00	370.50	414.34	197.84	611.95	537.03	227.81	764.84	27° 27' 41.04"	94° 8' 25.79"	Paro Basti	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					301																	
43	AP.218	DC+0	0	14° 35' 05" RT				13740	288.915	745.00	373.00	103.16	744.23	847.39	73.19	1074.49	1147.68	27° 27' 48.66"	94° 8' 32.66"	Paro Basti	Required weight span and Sum of adjacent span not get this tower. We are proposed strengthening tower	
					445																	
44	AP.218/1	DBN+9	9	00° 00' 00"		767	383.50	14185	151.891	767.00	383.50	-299.23	-154.95	-454.18	-629.49	-354.95	-984.44	27° 27' 57.29"	94° 8' 45.68"	Faro Basti	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					322																	
45	AP.219	DD+0	0	33° 16' 00" LT				14507	216.991	552.00	276.00	476.95	202.69	679.64	676.95	258.19	935.14	27° 28' 3.53"	94° 8' 55.08"	Paro Basti		
					230																	
46	Loc.219/1	DBN+0	0	00° 00' 00"		570	285.00	14737	205.870	570.00	285.00	27.31	271.04	298.35	-28.19	335.00	306.81	27° 28' 10.54"	94° 8' 57.96"	Paro Basti	To maintain weight span we have taken DBN type tower instead of DA type	
					340																	
47	AP.220	DC+0	0	19° 17' 53" RT				15077	186.926	504.00	252.00	68.96	86.68	155.64	5.00	89.64	94.64	27° 28' 20.92"	94° 9' 2.22"	Paro Basti		
					164																	
48	Loc.220/1	DBN+0	0	00° 00' 00"		411	205.50	15241	186.503	411.00	205.50	77.32	517.22	594.54	74.36	766.45	840.81	27° 28' 25.04"	94° 9' 6.01"	Paro Basti	To maintain weight span we have taken DBN type tower instead of DA type	
					247																	
49	AP.221	DD+0	0	33° 38' 31" RT				15488	132.877	567.00	283.50	-270.22	364.06	93.84	-519.45	493.23	-26.22	27° 28' 31.24"	94° 9' 11.72"	Paro Basti		
					320																	
50	Loc.221/1	DBN+0	0	00° 00' 00"				15808	96.870	620.00	310.00	-44.06	69.84	25.78	-173.23	19.10	-154.13	27° 28' 34.27"	94° 9' 22.88"	Nala, Cart Track Dollungmukh		
					300																	
51	Loc.221/2	DBN+6	6	00° 00' 00"		3025	341.67	16108	104.131	705.00	352.50	230.16	289.11	519.27	280.90	343.99	624.83	27° 28' 37.11"	94° 9' 33.33"	Dollungmukh	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					405																	
52	AP.222	DD+3	3	31° 26' 15" LT				16513	87.789	970.00	485.00	115.89	341.25	257.14	61.07	51.83	112.90	27° 28' 40.95"	94° 9' 47.46"	Dollungmukh	Required Sum of adjacent span not get this tower. We are proposed strengthening tower	
					565																	
53	Loc.222/1	DBN+0	0	00° 00' 00"		1087	362.33	17078	134.797	830.00	415.00	423.75	-4.74	419.01	513.17	-91.61	421.56	27° 28' 54.68"	94° 10' 1.13"	Dollungmukh	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					265																	
54	Loc.222/2	DBN+0	0	00° 00' 00"				17343	154.851	522.00	261.00	269.74	114.72	384.46	356.61	106.00	462.61	27° 28' 1.11"	94° 10' 7.54"	Dollungmukh	To maintain weight span we have taken DBN type tower instead of DA type	
					257																	
55	AP.223	DC+0	0	23° 16' 38" RT				17600	156.804	633.00	316.50	142.28	357.57	499.85	151.00	464.92	615.92	27° 29' 7.34"	94° 10' 13.75"	Nala, Cart Track Dollungmukh		
					376																	
56	Loc.223/1	DBN+0	0	00° 00' 00"		1137	379.00	17976	121.645	787.00	393.50	18.43	325.09	343.52	-88.92	400.80	313.88	27° 29' 12.53"	94° 10' 26.16"	Dollungmukh	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					411																	
57	Loc.223/2	DBN+0	0	00° 00' 00"				18387	94.541	761.00	380.50	85.91	185.81	271.72	10.20	192.66	202.86	27° 29' 18.19"	94° 10' 39.72"	Dollungmukh	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
					350																	
58	AP.224	DC+3	3	25° 35' 01" LT				18737	89.454	660.00	330.00	164.19	90.48	254.67	157.34	49.64	206.98	27° 29' 23.02"	94° 10' 51.27"	Dollungmukh 3Nas. Tar Road, Cart Track		
					310																	
59	Loc.224/1	DBN+6	6	00° 00' 00"		620	310.00	19047	97.483	620.00	310.00	219.52	231.28	450.80	260.36	279.57	539.93	27° 29' 30.8"	94° 10' 58.42"	Dollungmukh	To maintain weight span we have taken DBN type tower instead of DA type	
					310																	
60	AP.225	DD+0	0	33° 04' 55" LT				19357	90.443	643.00	321.50	78.72	-62.57	16.15	30.43	-207.57	-177.14	27° 29' 38.59"	94° 11' 5.58"	Dollungmukh		
					333																	
61	AP.226	DBN+0	0	03° 13' 40" LT		333	333.00	19690	132.506	542.00	271.00	395.57	-316.96	78.58	540.57	-583.80	-43.23	27° 29' 49.33"	94° 11' 6.89"	Dollungmukh		
					209																	
62	AP.227	DD+0	0	40° 48' 52" RT		209	209.00	19899	181.082	515.00	257.50	525.99	285.22	811.21	792.80	368.91	1161.71	27° 29' 56.12"	94° 11' 7.29"	Dollungmukh		
					305																	
63	AP.228	DBN+0	0	08° 19' 20" RT		306	306.00	20205	158.772	681.00	340.50	20.78	150.03	170.81	-62.91	126.31	63.40	27° 30' 3.3"	94° 11' 15.02"	Dollungmukh		
					375																	
64	AP.229	DD+0	0	42° 21' 20" RT		375	375.00	20580	166.520	695.00	347.50	224.97	353.26	578.23	248.69	475.60	724.29	27° 30' 10.78"	94° 11' 25.82"	Dollungmukh		

Tapan Singh  
29/10/2021

29/10/2021

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length	Section Length	Average Span	Cumulative change (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			Degree Minutes Seconds		Crossing Details Village Name	Weight Span / Sum of Adjacent Span / Remark	
											Left	Right	Total	Left	Right	Total	DMS (Lat)	DMS (Long)			
				320	1346	224.33															
65	Loc.229/1	DBN+0	0	00° 00' 00"			20900	132.418	547.00	273.50	-88.26	101.79	68.53	-155.60	94.37	-61.23	27° 30' 9.97"	94° 11' 37.44"	Dollungmukh		
				227																	
66	Loc.229/2	DA+9	9	00° 00' 00"			21127	124.884	470.00	235.00	125.21	206.91	332.12	132.63	260.98	393.61	27° 30' 9.38"	94° 11' 45.69"	Dollungmukh		
				243																	
67	Loc.229/3	DBN+0	0	00° 00' 00"			21370	122.439	558.00	279.00	36.09	364.82	400.91	-17.98	496.05	478.07	27° 30' 8.77"	94° 11' 54.52"	Dollungmukh	To maintain weight span we have taken DBN type tower instead of DA type	
				315																	
68	Loc.229/4	DBN+0	0	00° 00' 00"			21685	86.428	650.00	325.00	-49.82	313.23	263.41	-181.05	405.48	224.43	27° 30' 7.96"	94° 12' 5.96"	Dollungmukh	More Than Sum of Adjacent Span (m) To maintain weight span we have taken DB type tower instead of DA type More Than Sum of Adjacent Span (m)	
				335																	
69	Loc.229/5	DBN+0	0	00° 00' 00"			22020	59.507	561.00	280.50	21.77	121.22	142.99	-70.48	126.42	55.94	27° 30' 7.1"	94° 12' 18.18"	Dollungmukh	To maintain weight span we have taken DBN type tower instead of DA type	
				226																	

*Rajendra Prasad*

M/s Tanishi Kusik  
*(Signature)*  
Proprietor

29/10/2021  
P. Bora / Mr. Bora  
Manager (Comp. Scheme)  
POWERGRID, Nepal / *(Signature)*  
Ananchal Pradesh / *(Signature)*

29/10/2021  
DC Bharali  
General Manager (Comp. Scheme)  
POWERGRID Nepal  
Ananchal Pradesh

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Tower Schedule for AP.230/0\_237/0

SL.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length (m)	Section Length (m)	Average Span	Cumulative Chainage (m)	Reduced Level (m)	Sum of Adjacent Span (m)	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			UTM/UPS (460)		Degree Minutes Seconds		Crossing Details Village Name	Remark
											Left	Right	Total	Left	Right	Total	Easting	Northing	DMS (Lat)	DMS (Long)		
41	AP.230/0	DBN+9	9	13°33'53" LT			0	154.435	287.10	143.55	0.00	171.01	171.01	0.00	188.40	188.40	619253.00	3042598.00	27° 30' 6.52"	94° 12' 26.34"		
42	Loc.230/1	DA+0	0	00°00'00"	287.10	287.10	287.1	159.087	564.60	282.30	116.09	180.31	296.40	98.70	206.62	305.32	619535.20	3042650.70	27° 30' 8.15"	94° 12' 36.64"		
43	Loc.230/2	DBN+6	6	00°00'00"	277.50	277.50	564.6	146.727	534.90	267.45	97.19	260.57	357.76	70.88	344.04	414.92	619808.00	3042701.70	27° 30' 9.72"	94° 12' 46.6"		
44	AP.231/0	DC+0	0	18°10'41" LT	257.40	257.40	822.0	134.010	548.30	274.15	-3.17	39.32	36.15	-86.64	-27.86	-114.50	620061.00	3042749.00	27° 30' 11.17"	94° 12' 55.84"		
45	Loc.231/1	DC+3	3	26°18'53" LT	290.90	290.90	1,112.9	148.034	625.00	312.50	251.58	119.54	371.12	318.76	89.47	408.23	620316.00	3042889.00	27° 30' 15.64"	94° 13' 5.18"		
46	Loc.231/2	DC+9	9	21°21'37" RT	334.10	334.10	1,447.0	150.786	631.60	315.80	214.56	255.18	469.74	244.63	322.55	567.18	620507.20	3043162.90	27° 30' 24.48"	94° 13' 12.25"	Cart Track, Nala	
47	Loc.231/3	DD+0	0	36°14'29" LT	297.50	297.50	1,744.5	142.926	626.70	313.35	42.32	73.65	115.97	-25.05	16.07	-8.98	620754.70	3043328.10	27° 30' 29.77"	94° 13' 21.33"		
48	AP.233/0	DC+0	0	21°58'28" RT	329.20	329.20	2,073.7	158.897	525.80	262.90	255.58	60.36	315.91	313.13	36.35	349.48	620867.50	3043637.40	27° 30' 39.78"	94° 13' 25.55"	Tar Road, 33kV Line, Cart Track	
49	AP.234/0	DBN+0	0	7°0'20" RT	196.60	196.60	2,270.3	162.950	606.50	303.25	136.24	181.58	317.82	160.25	166.78	327.03	620999.10	3043783.50	27° 30' 44.49"	94° 13' 30.4"		
50	AP.235/0	DBN+9	9	14°53'59" RT	409.90	409.90	2,680.2	159.233	580.20	290.10	228.32	108.22	336.54	243.12	122.82	365.94	621308.50	3044052.30	27° 30' 53.12"	94° 13' 41.77"		
51	Loc.235/1	DBN+0	0	4°8'11" RT	170.30	170.30	2,850.5	166.067	447.50	223.75	62.08	135.67	197.75	47.48	133.81	181.29	621461.50	3044127.20	27° 30' 55.51"	94° 13' 47.37"		
52	Loc.235/2	DC+0	0	19°13'13" LT	277.20	277.20	3,127.7	166.515	540.60	270.30	141.53	135.89	277.42	143.39	138.54	281.93	621718.60	3044230.80	27° 30' 58.79"	94° 13' 56.78"		
53	AP.236/0	DBN+9	9	4°28'40" LT	263.40	263.40	3,391.1	156.907	439.20	219.60	127.51	96.79	224.30	124.86	102.42	227.28	621916.90	3044404.20	27° 31' 4.36"	94° 14' 4.07"		
54	Loc.236/1	DD+0	0	33°24'47" LT	175.80	175.80	3,566.9	165.045	410.80	205.40	79.01	137.59	216.60	73.38	150.30	238.68	622039.80	3044529.90	27° 31' 8.41"	94° 14' 8.59"		
55	AP.237/0	DD+0	0	54°3'43" RT	235.00	235.00	3,801.9	162.442	235.00	117.50	97.41	0.00	97.41	84.70	0.00	84.70	622084.40	3044760.60	27° 31' 15.89"	94° 14' 10.3"		

Tower Type.	+0 Extn.	+3 Extn.	+6 Extn.	+9 Extn.	+18 Extn.	Total
DA	2	0	0	0	0	2
DBN	8	4	5	10	0	27
DC	2	3	2	0	0	7
DD	1	2	0	1	0	4
Total Tower						40
Section Length in metre						10,269.90

Tower Type.	+0 Extn.	+3 Extn.	+6 Extn.	+9 Extn.	+18 Extn.	Total
DA	1	0	0	0	0	1
DBN	2	0	1	3	0	6
DC	3	1	0	1	0	5
DD	3	0	0	0	0	3
Total Tower						15
Section Length in metre						3,801.90

Tower Type.	+0 Extn.	+3 Extn.	+6 Extn.	+9 Extn.	+18 Extn.	Total
DA	3	0	0	0	0	3
DBN	10	4	6	13	0	33
DC	5	4	2	1	0	12
DD	4	2	0	1	0	7
Total Tower						55
Section Length in metre						14,071.80

लिखा नापा / L... Napa  
अभिषेक / Engineer  
व्यापक योजना / Comp. Scheme  
पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
अठ्ठगण्डा न पर्वत / Anandgadha Pradesha

M/s Tamchi Kusuk  
Authorised Signatory  
Sunved Rv

M/s Tamchi Kusuk  
Authorised Signatory  
Submitted Rv

M/s Tamchi Kusuk  
Authorised Signatory

जेनिया राजी / Geniya Raji  
अभिषेक / ENGINEER  
व्यापक योजना / Comp. Scheme  
पावरग्रिड, निरजुली / POWERGRID, Nirjuli  
अठ्ठगण्डा न पर्वत / Anandgadha Pradesha  
Checked Rv

Recommended Rv

Approved Rv

132 KV S/C (ON D/C TOWER) NAHARLAGUN - GERUKAMUKH TRANSMISSION LINE (TW12)

Sl.No.	Loc. No.	Type of Tower	Angle of Deviation	Span Length S49	Section Length	Average Span	Cumulative chanaze (m)	Reduced Level (m)	Sum of Adjacent	Wind Span (m)	Weight Span Hot (m)			Weight Span Cold (m)			Degree Minutes Seconds		Crossing Details Village Name Note	Weight Span / Sum of Adjacement Span / Remark
											Left	Right	Total	Left	Right	Total	DMS (Lat)	DMS (Long)		
86	AP.238	DD+0	0	25° 22' 25" RT	549	549.00	27153	79.024	905.00	452.50	279.92	140.66	420.58	283.35	117.02	400.37	27° 31' 22.82"	94° 14' 28.23"	Dallungmukh	DD tower provided due to Sum of adjacent Span violation
					581	290.50														
87	loc.238/1	DBN+0	0	00° 00' 00"	225		27509	86.354	581.00	290.50	215.34	128.71	344.05	238.98	138.97	377.95	27° 31' 22.63"	94° 14' 41.2"	Dallungmukh	To maintain weight span we have taken DBN type tower instead of DA type
88	AP.239	DD+0	0	31° 47' 31" LT	340	340.00	27734	84.343	565.00	282.50	96.29	302.84	399.13	86.03	386.92	472.95	27° 31' 22.5"	94° 14' 49.4"	Dallungmukh	
89	AP.240	DD+3	3	01° 00' 08" LT	123	123.00	28074	56.438	463.00	231.50	37.16	360.66	397.82	-46.92	550.04	503.12	27° 31' 28.16"	94° 15' 0.03"	Dallungmukh	
90	Bay	Bay	-3.31	00° 00' 00"	28197	123	28197	42.457	123.00	61.50	-237.66	0.00	-237.66	-427.04	0.00	-427.04	27° 31' 30.27"	94° 15' 3.85"	Sub_Station / Dallungmukh	

Summary sheet	
Tower type	Qty in Nos.
DA	4
DBN	123
DC	66
DD	56
<b>Total Qty</b>	<b>249</b>
<b>Total Line Length</b>	<b>74838 M</b>

*Rupam Singh*

*M/s Tamchi Kusuk*  
*(Proprietor)*

*29/10/2021*  
P. Bora / R. Bora  
Manager (Comp. Scheme)  
POWERGRID, Nepal / गण्डकी प्रदेश  
Ananchal Pradesh / गण्डकी प्रदेश

*29/10/2021*  
DC Bhatara  
General Manager (Comp. Scheme)  
POWERGRID Nepal / गण्डकी प्रदेश  
Ananchal Pradesh / गण्डकी प्रदेश