



Procurement of Plant Design, Supply, Delivery, Installation, Testing and Commissioning of
Lot 1: Lapsiphedhi-Ratmate-New Hetauda 400kV D/C Transmission Line
Lot 2: Ratmate-New Damauli 400kV D/C Transmission Line
Lot 3: New Damauli-New Butwal 400kV D/C Transmission Line (Base) And New Butwal -Nepal/India Border 400kV D/C Transmission Line (Option)

ADDENDUM #4

This Addendum No. 4 modifies respective portions of the Bidding Document issued on 28 November 2022 and amended through Addendum No. 1 on 4 January 2023 and Addendum No. 2 on 14 February 2023 and Addendum No. 3 on 27 February 2023. The changes, as indicated below, are effective on the date of issue of this Addendum.

Except as expressly amended by this Addendum, all other terms and conditions of the Bidding Document - issued on 28 November 2022 and amended through Addendum No. 1 on 4 January 2023 and Addendum No. 2 on 14 February 2023 and Addendum No. 3 on 27 February 2023 remains unchanged and shall remain in full force and effect in accordance with their terms.

SN	Pages/Paragraph	Amendments
1.	Part 1: Page 52, Section II. Bid Data Sheet, ITB 19.1	<p>The number of copies shall be: 5 (five)</p> <p>The Bidder must submit:</p> <p>Technical Offer: one (1) original and five hard copies, and a scanned copy of the original in PDF format and Work Schedule in MS Project on a flash drive.</p> <p>Financial Offer: one (1) original and five hard copies, and a scanned copy of the original in PDF format on a flash drive. Schedule of Prices must also be submitted in Microsoft Excel format.</p> <p>has been replaced by:</p> <p>The number of copies shall be: 1 (One)</p> <p>The Bidder must submit:</p>





		<p>Technical Offer: one (1) original and one hard copy, and a scanned copy of the original (complete Technical Offer) in PDF format (preferably readable) and Work Schedule in MS Project on a flash drive.</p> <p>Financial Offer: one (1) original and one hard copy, and a scanned copy of the original (complete Financial Offer) in PDF format (preferably readable) on a flash drive. Schedule of Prices must also be submitted in Microsoft Excel format.</p>						
2.	<p>Part 1: Page 130, Section IV. Bid Submission Forms, TECH-11: Technical Data Schedule, Data Sheets, TS6. Insulator Strings, Technical DATA Schedules – Insulator Strings, Page 168, 3.5</p>	<table border="1" data-bbox="631 495 1325 558"> <tr> <td>Insulating Material</td> <td>Type</td> <td>Porcelain</td> </tr> </table> <p>has been replaced by:</p> <table border="1" data-bbox="631 722 1325 785"> <tr> <td>Insulating Material</td> <td>Type</td> <td>Glass</td> </tr> </table>	Insulating Material	Type	Porcelain	Insulating Material	Type	Glass
Insulating Material	Type	Porcelain						
Insulating Material	Type	Glass						
3.	<p>Part 1: Page 197, Section IV. Bid Submission Forms, Appendix to Letter of Financial Offer, Adjustment for Changes in Cost, Sub-Clause 13.8</p>	<p>For this Contract of Transmission Line, the price adjustment clause is applicable only for the tower superstructures, including accessories as stated under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 1 (only Iron and Zinc component) and ACSR conductors under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 2 (Aluminum and Steel component).</p> <p>has been replaced by:</p> <p>For this Contract of Transmission Line the price adjustment clause is applicable only for the tower superstructures, including accessories as stated under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 1 (only Iron and Zinc component) and ACSR conductors under Schedule No. 2. Plant and Mandatory Tools and Spare Parts Supplied from Abroad, item number 2 (Aluminum and Steel component). The adjustment shall be applied for the first time from the second Interim Payment (IP) and shall be applied progressively in every IP.</p>						
4.	<p>Part 2 Employer's Requirement: B1 and its Annexures</p>	<p>All insulators string shall be of Glass type.</p>						

5.	<p>Part 2 Employer's Requirement: B1, 221023_Section-V-B1, 5.A402. Employer's Design Requirements, Page 9</p>	<p>b. The re-survey activities for approximately 30km of the route under different sections is ongoing and is expected to be completed by December 2022. Walkover survey has already been completed and in the annex H1 the scope of re-survey sections of the alignment has been identified. However, the detailed survey of those sections will be completed soon and the Employer will provide updated KMZ and PLS-CADD drawings and revised tower schedule during the pre-bid meeting.</p> <p>has been replaced by:</p> <p>b. The re-survey activities for approximately 30km of the route under different sections is ongoing and is expected to be completed by August 2023. Detail technical survey along with Geotechnical investigation work has already been completed and in the annex H2 of the scope of re-survey sections of the alignment has been identified (Latest route alignment (KmZ), latest tower schedule/structure list and tower footprint details) are available in annex H2). PLS-CADD drawings for 30km sections are available in annex G1. The LIDAR data of the original route has been provided in Annex I and the contour data of 30km has been provided in annex I1. The updated KMZ, PLS-CADD drawings, revised tower schedule, tower foot print calculation, LIDAR data and Contour data for 30 km survey are attached to this addendum.</p> <p>For 30 km section the environmental and social (E&S) investigations are ongoing the reports will be available at a later date (by August 2023) and the same will be provided to the Contractors. Any changes in tower schedule and route alignment after the E&S investigations will be considered as Variation.</p>
6.	<p>Part 2 Employer's Requirement: B1, Annex_B1, 9. Annex G_PLS_CADD Files_Final Design Report-2019-11-08</p>	<p>Add a new Annex, Annex G1 (attached with this addendum):</p> <p>Please consider Annex G along with Annex G1 - the additional PLS CADD files for revised route alignment (approximately of 30km route- in stretches) for preparing Technical and Financial Offer.</p>
7.	<p>Part 2 Employer's Requirement: B1, Annex_B1, 10. Annex H_KMZ Files_Final Design Report-2019-11-08 and 11. Annex H1 Latest KMZ File</p>	<p>Add a new Annex, Annex H2 (attached with this addendum):</p> <p>Add additional information to Annex H and Annex H1 as Annexure, Annex H2 the latest route alignment (KmZ), latest tower schedule/structure list and tower footprint details for preparing Technical and Financial Offer.</p>

	and info about Changes	
8.	Part 2 Employer's Requirement, Section V, B1, Annexure I (New Annexure)	<p>Add a new Annex I and Annex I2 (attached with this addendum):</p> <p>Please consider Annex I (LIDAR Data) along with Annex I2 Contour data of approximately 30km route for preparing Technical and Financial Offer.</p> <p>LIDAR data can either be downloaded from the link provided below or can be obtained from MCA-Nepal office. The bidder may bring their external HDD/SSD with sufficient capacity to copy the LIDAR data.</p>
9.	Part 2 Employer's Requirement: B1, Annex B1, 6. Annex D_Technical Specifications_Final Design Report-2019-11-08, Annex D Appendix 6 - Tower Specification Rev 1, 2.0 Tower Design and Detailing, 2.1 Tower Design, Page 2.5	<p>E. The minimum thickness of angle sections used in the design of towers, unless otherwise specified elsewhere in this Specification, shall be kept not less than the following values:</p> <ol style="list-style-type: none"> 1. Main corner leg members including the earthwire peak and main cross arm: 5 mm 2. All other members: 4 mm <p>has been replaced by:</p> <p>E. The minimum thickness of angle sections used in the design of towers, unless otherwise specified elsewhere in this Specification, shall be kept not less than the following values:</p> <ol style="list-style-type: none"> 1. Main corner leg members including the earthwire peak and main cross arm: 5 mm 2. All other members: 4 mm <p>Note: Strengthening of crossarms can be proposed by the Bidder.</p>
10.	Part 2 Employer's Requirement: B1, 221023_Section-V-B1, 2- Tower Type Selection, page 18	<p>o. Bidders shall take into account accessories such as marker balls, bird diverters, etc. Structure distribution listing shall be submitted to the Engineer along with the PLS-CADD line model indicating both sub-weight spans values at each tower location. Those are indicative of the level of the vertical loads transferred to the tower from each side (back span side and ahead span side), either in uplift (negative) or in positive vertical load. Sub-weight-spans values are required as supplemental information to be added in the Structure List (to be submitted to the Engineer for his review and approval of the Contractor's submittal for the PLS-CADD line model). The sub-weight-span values, that can be observed at average ambient temperature during construction, shall be given for each of the following ambient weather load conditions, for the initial cable condition:</p> <ol style="list-style-type: none"> i. Every day (non-energized), ambient condition at 20° C, no wind ii. Cold weather, (non-energized) ambient condition, -5° C, no wind <p>has been replaced by:</p>

		<p>o. Bidders shall take into account accessories such as marker balls, bird diverters, etc. Structure distribution listing shall be submitted to the Engineer along with the PLS-CADD line model indicating both sub-weight spans values at each tower location. Those are indicative of the level of the vertical loads transferred to the tower from each side (back span side and ahead span side), either in uplift (negative) or in positive vertical load. Sub-weight-spans values are required as supplemental information to be added in the Structure List (to be submitted to the Engineer for his review and approval of the Contractor's submittal for the PLS-CADD line model). The sub-weight-span values, that can be observed at average ambient temperature during construction, shall be given for each of the following ambient weather load conditions, for the initial cable condition:</p> <ol style="list-style-type: none"> i. Every day (non-energized), ambient condition at 20° C, no wind ii. Cold weather, (non-energized) ambient condition, -5° C, no wind iii. Maximum Temperature 32° C
11.	<p>Part 2 Employer's Requirement: B0, Annex_B0, Annex 10 MCA-N ESHSMP, Annex A: Safety Absolutes, 5. Working at Height, Page 95 221023_Section-V-B1, 2- Tower Type Selection, page 18</p>	<ul style="list-style-type: none"> • You must tie-off when working at unprotected elevations > 1.8 metres above the ground. • You must never go above 1.8 metres above the ground without another person being present. • You must always take action to prevent objects from falling. <p>has been replaced by:</p> <ul style="list-style-type: none"> • You must tie-off when working at unprotected elevations > 1.8 metres above the ground. • You must never go above 1.8 metres above the ground without another person being present. • You must always take action to prevent objects from falling. • Fall arrest system shall be as per IEEE 1307.
12.	<p>Part 2 Employer's Requirement: B1, 221023_Section-V-B1, 5.A406 Structures, Page 47</p>	<p>f. The towers must be tested in accordance with IEC 60652 and subjected to the loads as derived from the structure spotting, Design Criteria, IS 802, and IEC 60826. The proposed structure types, Design Criteria and test program must be submitted to the Engineer.</p> <p>has been replaced by:</p> <p>f. Full scale testing of tower with highest body extension of maximum overturning moment, maximum uplift in maximum loading condition to be done as per CBIP-3223 (2014 with latest amendment) and IS-802 (2015 with latest amendment)- one Tower per type per lot.</p> <p>In case multiple lots are awarded to the contractor then one tower per type for all lots will be required, provided the same tower design is considered for the type in all lots.</p>

		<p>The contractor is free to propose their own design as per the design criteria mentioned in section V, B1 and its annexures. Overload factor of 1.2 to be considered in the design of non-tested towers and their foundation.</p>
<p>13.</p>	<p>Part 2 Employer's Requirement: B1, Annex_B1, 2. Final Design Report_2019-11-08, Final Design Report - Main Document - 19 March 2020, 2.8 Structures, Page 2.27</p>	<p>e. The towers must be tested in accordance with IEC 60652 and subjected to the loads as derived from the structure spotting, Design Criteria, IS 802, and IEC 60826. The proposed structure types, Design Criteria and testing approach must be approved by the Employer or the Employer's designated representative.</p> <p>has been replaced by:</p> <p>e. Full scale testing of tower with highest body extension of maximum overturning moment, maximum uplift in maximum loading condition to be done as per CBIP-3223 (2014 with latest amendment) and IS-802 (2015with latest amendment)- one Tower per type per lot.</p> <p>In case multiple lots are awarded to the contractor then one tower per type for all lots will be required, provided the same tower design is considered for the type in all lots.</p> <p>The contractor is free to propose their own design as per the design criteria mentioned in section V, B1 and its annexures. Overload factor of 1.2 to be considered in the design of non-tested towers and their foundation.</p>

<p>Annex G 1_ The additional PLS CADD files for revised route alignment (approximately of 30km route- in stretches)</p>	 <p>230214_PLS-CADD_30KM.rar</p>
<p>Annex H2_ Latest route alignment (KmZ), latest tower schedule/structure list and tower footprint details</p>	   <p>230214_Nepal_Mast_er_Structure_Lists.pdf 230214_Tower_Footprint_calculation.pdf 230214_Nepal_Route_Alignment.kmz</p>
<p>Annex I_ LIDAR Data</p>	<p>https://drive.google.com/drive/folders/16jJzoiYHFfBHc8-RoHNE9w2FoZfw3MeE?usp=sharing</p>
<p>Annex II_ Contour data of approximately 30km route (in stretches)</p>	<p>https://drive.google.com/drive/folders/1fsKjs-Irras4pcLIZEhzz8XGeyA467K5?usp=share_link</p>

Annex G 1_ The additional PLS CADD files for revised route alignment (approximately of 30km route- in stretches)

Attached with email

**Annex H2_ Latest route alignment (KmZ), latest tower
schedule/structure list and tower footprint details**

KMZ file is attached with email

NEPAL - STRUCTURE COUNTS BY TYPE & VARIANT

S.N	TL	NO.	TOTAL QUANTITIES FOR TOWERS & LINE LENGTH									
	SEGMENTS		D1A	D1B	D1C	D1D	D1E	D1FS	D1FL	ARBOR	LINE LENGTH (KM)	AVERAGE SPAN (M)
1	NEW BUTWAL TO INDIA BORDER	52	27	6	10	1	8	0	0	1	18	346
2	NEW BUTWAL TO NEW DAMAULI	250	22	96	46	2	48	32	4	2	91	362
3	NEW DAMAULI TO RATMATE	243	23	77	59	5	44	30	5	2	89	367
4	RATMATE TO NEW HETAUDA	144	33	37	16	9	22	23	4	2	58	404
5	RATMATE TO LAPSIPHEDI	161	14	50	38	2	37	18	2	2	59	367
	TOTAL	850	119	266	169	19	159	103	15	9	315	

INDIA BORDER TO NEW BUTWAL																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
1	D1E	51.5	0.0	296	296	161	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174499.789	3038047.698	102.2	
2	D1A	53.5	0.0	292	294	270	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174632.746	3038312.637	101.6	
3	D1C	52.0	-23.8	321	307	331	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174763.620	3038573.423	101.3	
4	D1A	53.5	0.0	341	331	304	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174779.626	3038894.443	101.5	
5	D1C	52.0	-18.1	387	364	349	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174796.631	3039235.516	102.3	
6	D1A	62.5	0.0	375	381	428	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174694.907	3039608.423	103.1	
7	D1A	59.5	0.0	394	384	383	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174596.316	3039969.840	102.7	
8	D1A	56.5	0.0	401	397	371	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174492.729	3040349.576	102.6	
9	D1A	59.5	0.0	403	402	411	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174387.291	3040736.095	102.8	
10	D1A	59.5	0.0	398	400	418	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174281.336	3041124.509	104.0	
11	D1A	56.5	0.0	384	391	365	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174176.694	3041508.111	104.2	
12	D1A	59.5	0.0	390	387	413	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		174075.739	3041878.196	104.5	
13	D1A	56.5	0.0	400	395	371	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173973.070	3042254.567	105.1	
14	D1A	59.5	0.0	373	387	391	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173867.734	3042640.712	105.6	
15	D1C	61.0	-19.8	479	426	239	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173769.549	3043000.642	105.1	
16N	D1B	59.5	-5.8	229	354	401	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173493.964	3043392.854	105.6	
17/1N	D1E	57.5	78.6	335	282	284	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173344.003	3043566.085	105.4	
17/2N	D1C	52.0	-22.0	303	319	298	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173549.274	3043831.134	105.6	
18N	D1C	52.0	-24.3	428	366	333	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173631.479	3044123.277	105.9	
19N	D1B	59.5	-8.8	443	435	519	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173567.704	3044546.122	106.9	
20N	D1C	53.5	15.1	236	340	296	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173434.955	3044969.104	107.3	
21N	D1E	57.5	36.7	386	311	355	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173425.243	3045205.194	107.7	
22	D1E	57.5	-44.1	394	390	194	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173643.076	3045524.069	107.8	
23	D1A	59.5	0.0	393	393	405	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173576.251	3045911.915	107.7	
24	D1A	59.5	0.0	392	393	396	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173509.452	3046299.605	108.2	
25	D1B	53.5	11.4	373	383	392	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173442.810	3046686.387	108.6	
26	D1A	56.5	0.0	327	350	338	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173453.356	3047058.805	108.9	
27	D1A	56.5	0.0	326	326	326	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173462.607	3047385.500	109.5	
28	D1A	56.5	0.0	358	342	343	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173471.830	3047711.210	110.3	
29	D1A	56.5	0.0	358	358	349	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173481.953	3048068.714	110.8	
30	D1C	55.0	22.3	389	373	384	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173492.085	3048426.517	111.0	
31	D1A	59.5	0.0	335	362	364	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173649.760	3048781.630	111.1	
32	D1A	59.5	0.0	359	347	351	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173785.837	3049088.098	111.2	
33	D1E	54.5	-66.3	377	368	372	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173931.398	3049415.928	112.1	
34	D1A	56.5	0.0	376	376	371	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173677.741	3049694.234	112.5	
35	D1A	56.5	0.0	389	382	370	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173424.701	3049971.862	112.6	
36	D1A	59.5	0.0	357	373	400	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173162.481	3050259.563	113.0	
37	D1A	56.5	0.0	290	324	344	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		172922.179	3050523.215	113.4	
38	D1A	50.5	0.0	280	285	253	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	40		172726.558	3050737.845	113.8	
39	D1A	50.5	0.0	252	266	267	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	40		172538.256	3050944.444	113.9	
40	D1B	50.5	2.3	268	260	254	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	40		172368.705	3051130.471	113.872	
41N	D1C	59.5	26.5	316	292	290	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	40		172196	3051336	115.00	
42	D1C	59.5	23.3	268	292		INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172121.779	3051643.357	115.00	
43	D1A	50.5	0.0	248	258	289	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		172166.831	3051907.501	115.6	
44	D1B	47.5	-3.9	266	257	216	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172208.486	3052151.732	112.2	
45N	D1E	51.5	81.8	209	237	327	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172235	3052416	116.0	
45/1N	D1E	48.5	-79.2	310	260	250	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172444	3052425	115.0	
46N	D1A	67.0	0.2	527	419	235	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		172489	3052732	116.0	
47N	D1C	65.5	27.7	542	534	414	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172567	3053253	118.0	
48/AN	D1D	62.5	-22.0	350	446	561	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172887	3053690	120.0	
50/1N	D1B	56.5	-13.1	242	296	400	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		172973	3054029	121.0	
51N	D1E	51.5	13.1	114	178	204	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		172978	3054271	122.0	
New Butwal	ARBOR	22.5	80.1	0	57	146	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		173006	3054381	123.0	

Total Length 17976

Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).

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NEW BUTWAL TO NEW DAMAULI																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
New Butwal S/S	ARBOR1	22.5	0.0	61		24	#N/A	#N/A	#N/A	-	20		173050.88	3054365.63	121.1	1. Coordinates provided are tentative and will be finalized during check survey by the Contractor.
1N1 (DE-MCA-Nepal)	D1E	59	0.0	91	76	NA	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2				27d34'23.87"	83d41'18.82"	121.0	2. Arbor 1 and Arbor 2 (Gantry structure inside substation) will be constructed by MCA-Nepal (Through substation contract).
New Butwal S/S	ARBOR2	22.5	0.0	42		NA	#N/A	#N/A	#N/A				NA	NA	NA	3. Tw-1N2 (Dead End tower of NEA) is in the scope of this TL contract.
1N2 (DE-NEA)	D1E	43	0.0	110	76	NA	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2				27°34'24.41"N	83°41'18.17"E	121.0	4. Stringing of Conductor, OPGW and OHGW upto the Gantry of MCA-Nepal and NEA is in the present scope of work with additional length of conductor/OPGW/OHGW for terminaiton. The termination of conductor at equipment inside the substation is under Substation contract. The bidder should also consider fixing of splicing boxes at Gantry and termination of OPGW.
1	D1E	59	-82.0	242	176	258	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173002.41	3054221.96	118.3	1. Quad circuit towers are required from Str. 1 to Str. 16. MCA-Nepal will utilize the bottom two circuits while NEA will utilize the top two circuits. However, the entire work is in the scope of the Contractor. 2. One existing 132kV line (New Butwal to Bardaghar) and two Future 220kV Line (of NEA) Crossings (New Butwal to Bardaghat & New Butwal to New Bharatpur). Locations of line crossings are still not available. However, the details for such crossing will be finalized during check survey by the Contractor. Any changes during check survey will be considered as variation (positive or negative). 3. For Quad Circuit towers (from Tw1 to Tw 16), the bidders should consider 2 No. OPGW instead of 1 No. OPGW and 1 No. OHGW for the preparation of offers (technical and financial).
2	D1E	51.5	-68.6	242	242	141	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173223.15	3054122.92	121.6	
3	D1A	65.5	0.0	265	253	269	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		173409.84	3054276.53	122.6	
4	D1C	71.5	-19.8	220	242	380	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173614.53	3054444.12	123.7	
5	D1C	64	30.0	180	200	113	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		173730.22	3054631.63	121.0	
6	D1E	62	-39.1	332	256	230	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173887.69	3054719.50	125.3	
7	D1B	62.5	14.9	407	369	440	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		174012.21	3055027.06	131.8	
8	D1E	62	-41.7	376	391	342	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		174254.28	3055353.79	127.9	
9	D1B	62.5	10.9	348	362	478	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174247.97	3055729.59	137.5	
10	D1E	62	-35.2	291	320	210	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174205.52	3056075.34	125.0	
11	D1C	62.5	23.2	367	329	386	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174089.72	3056342.20	133.7	
12	D1B	56.5	6.3	300	334	302	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		174101.47	3056709.13	134.2	
13	D1B	55	4.6	395	348	295	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		173992.57	3056988.79	134.3	
14	D1C	62.5	-28.6	414	404	472	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		173962.51	3057382.58	142.8	
15	D1E	66.5	51.5	439	426	411	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		173857.13	3057782.69	141.3	
16	D1E	71	52.6	511	475	548	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		174051.85	3058175.78	147.2	
17	D1FS	62	0.0	505	508	447	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		174555.54	3058264.38	141.2	
18	D1A	67	0.0	371	438	483	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		175054.76	3058339.22	143.5	
19	D1A	56.5	0.0	371	371	337	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		175420.458	3058403.592	148.6	
20	D1A	56.5	0.0	371	371	369	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		175786.199	3058465.275	150.9	
21	D1A	58	-1.9	412	391	405	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	60		176152.041	3058526.975	152.3	
22	D1E	54.5	-39.4	295	353	333	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		176554.51	3058613.20	151.0	
23	D1B	47.5	0.0	302	298	159	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		176738.634	3058843.613	159.5	
24	D1B	44.5	13.5	281	291	353	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		176929.135	3059077.375	192.9	
25	D1C	46	-20.3	241	261	270	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		177152.312	3059247.645	210.7	
26	D1A	52	0.0	270	255	232	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		177281.330	3059451.041	223.0	
27	D1B	44.5	0.0	193	231	-21	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		177425.832	3059678.846	245.2	
28	D1B	44.5	4.7	331	262	231	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		177529.013	3059841.511	294.7	
29	D1B	56.5	-2.5	290	311	149	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		177729.129	3060105.784	370.5	
30	D1A	59.5	0.6	228	259	256	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		177894.132	3060344.789	492.3	
31	D1B	53.5	4.9	273	251	372	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		178025.765	3060530.930	590.7	
32	D1B	53.5	-10.8	635	454	533	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	80		178201.944	3060739.568	685.4	
33	D1A	68.5	0.0	337	486	481	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		178513.314	3061292.416	871.3	
34	D1B	68.5	12.0	174	255	86	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		178723.66	3061556.21	962.5	
35	D1E	60.5	56.8	279	226	550	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		178799.460	3061712.366	1075.0	
36	D1B	59.5	2.1	156	217	345	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		179076.63	3061679.53	1142.8	
37	D1C	58	-17.0	555	355	1081	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		179228.675	3061645.163	1175.6	
38	D1B	56.5	-10.6	201	378	211	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		179781.23	3061698.14	1015.7	
39	D1E	45.5	-53.5	311	256	383	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		179974.39	3061754.19	992.4	
40	D1B	62.5	11.7	190	250	42	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		180079.25	3062047.32	900.8	
41	D1B	74.5	-8.9	506	348	747	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	60		180181.54	3062207.00	867.0	
42	D1B	76	-6.7	255	380	292	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	40		180382.17	3062671.11	721.8	
43	D1B	74.5	9.0	545	400	267	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	60		180438.17	3062919.94	648.6	
44	D1FS	57.5	-0.6	569	557	458	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	60		180661.77	3063416.46	553.4	

NEW BUTWAL TO NEW DAMAULI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
45	D1FS	53	9.7	425	497	581	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	60		180885.62	3063939.54	487.3	
46	D1B	68.5	8.2	293	359	370	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		181124.32	3064290.71	395.3	
47	D1FS	66.5	13.5	776	534	244	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	80		181318.917	3064509.802	346.3	
48	D1FL	54.5	-59.2	390	583	1059	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		181954.916	3064953.697	364.8	
49	D1B	62.5	-6.1	416	403	28	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		181909.41	3065341.00	242.1	
50	D1B	56.5	9.6	426	421	272	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		181852.961	3065752.648	231.7	
51	D1E	57.5	46.7	344	385	-112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		181834.08	3066177.75	255.9	
52	D1E	57.5	-33.2	239	292	527	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		182084.805	3066413.994	388.4	
53	D1C	58	20.1	470	355	672	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		182138.034	3066647.327	446.4	
54	D1B	47.5	4.6	335	403	865	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		182393.502	3067042.134	472.1	
55	D1B	53.5	0.0	218	276	135	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		182597.251	3067307.816	381.4	
56	D1E	48.5	33.3	525	371	81	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		182729.638	3067480.444	352.4	
57	D1B	56.5	2.0	304	414	406	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		183225.521	3067653.207	356.9	
58	D1B	47.5	10.4	269	287	81	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		183515.666	3067742.807	376.3	
59	D1B	47.5	-1.1	232	251	195	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		183784.76	3067754.40	421.4	
60	D1B	56.5	-12.1	331	281	620	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		184010.707	3067806.220	461.7	
61	D1B	50.5	10.4	483	407	-129	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		184321.602	3067919.598	465.2	
62	D1B	50.5	-8.0	364	423	721	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		184797.791	3068000.552	640.4	
63	D1B	62.5	-7.4	364	364	718	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		185144.270	3068110.888	687.2	
64	D1C	58	21.5	495	429	352	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		185473.604	3068264.770	673.5	
65	D1B	62.5	-8.0	328	411	-225	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		185967.607	3068295.546	664.5	
66	D1E	75.5	-33.4	352	340	477	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186293.69	3068330.50	787.0	
67	D1E	63.5	-45.1	400	376	340	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186516.498	3068603.311	916.3	
68	D1A	68.5	0.0	185	292	441	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	20		186516.498	3069003.402	1070.1	
69	D1C	65.5	-29.6	389	287	1005	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186516.498	3069188.063	1124.9	
70	D1D	62.5	-25.4	268	329	10	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186324.386	3069526.604	1063.1	
71	D1C	61	23.0	369	319	309	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186104.829	3069680.486	1075.4	
72	D1E	63.5	84.3	265	317	961	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		185909.333	3069993.485	1088.4	
73	D1B	59.5	0.6	328	296	192	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186118.657	3070155.456	989.1	
74	D1C	67	-19.7	463	395	296	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		186379.742	3070353.397	890.9	
75	D1E	63.5	-35.2	379	421	636	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		186630.48	3070742.21	800.9	
76	D1E	63.5	48.0	253	316	127	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186627.73	3071120.73	663.4	
77	D1C	52	-25.9	357	305	569	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	40		186798.06	3071307.38	626.6	
78	D1B	53.5	3.6	250	304	-647	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186908.435	3071647.044	486.0	
79	D1E	63.5	34.6	226	238	211	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		186998.10	3071880.30	547.6	
80	D1B	56.5	-9.0	718	472	635	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	80		187193.555	3071992.923	620.1	
81	D1FS	54.5	-13.3	256	487	274	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		187737.171	3072461.887	761.9	
82	D1B	53.5	-2.5	396	326	496	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		187887.453	3072669.017	854.4	
83	D1FS	60.5	13.0	589	492	273	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		188105.627	3072999.176	944.3	
84	D1FL	60.5	-49.1	509	549	784	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	60		188532.509	3073405.086	1212.4	
85	D1C	55	23.7	161	335	706	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		188509.332	3073913.951	1365.3	
86	D1D	50.5	-15.8	374	268	909	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	40		188567.221	3074064.164	1378.1	
87	D1FS	54.5	20.6	828	601	135	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	80		188606.77	3074436.38	1235.5	
88	D1FS	48.5	17.4	266	547	983	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		188984.80	3075172.63	1211.1	
89	D1B	53.5	2.3	395	331	214	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	40		189153.530	3075378.553	1103.4	
90	D1C	49	-23.8	382	389	433	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	40		189433.34	3075657.83	1024.4	
91	D1C	49	17.0	354	368	-45	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		189578.245	3076011.798	932.7	
92	D1C	55	-17.3	166	260	254	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		189800.118	3076287.470	936.4	
93	D1B	53.5	-12.8	598	382	58	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		189861.080	3076441.827	942.3	
94	D1E	57.5	32.4	224	411	1490	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		189950.84	3077032.75	1086.4	
95	D1B	47.5	3.6	254	239	29	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		190109.81	3077191.15	984.6	
96	D1B	47.5	-1.6	329	291	216	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		190280.604	3077378.886	910.2	
97	D1B	62.5	-2.9	363	346	228	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		190505.516	3077618.530	822.2	
98	D1B	68.5	-10.6	371	367	404	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		190740.214	3077894.962	765.5	
99	D1E	48.5	42.8	407	389	323	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		190923.72	3078217.55	727.0	

NEW BUTWAL TO NEW DAMAULI																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
100	D1B	53.5	-10.0	335	371	560	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		191308.600	3078351.121	677.4	
101	D1B	59.5	-7.8	337	336	-323	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		191605.459	3078506.293	593.5	
102	D1E	54.5	-38.5	207	272	782	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		191882.72	3078698.04	663.8	
103	D1B	50.5	-0.6	328	267	-270	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		191937.553	3078897.613	638.4	
104	D1B	65.5	12.4	193	260	236	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		192025.075	3079213.301	693.0	
105	D1C	67	-21.8	188	191	606	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		192115.556	3079383.912	741.6	
106	D1E	54.5	35.6	249	219	54	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		192135.644	3079571.030	749.1	
107	D1A	71.5	0.0	367	308	521	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		192301.672	3079757.129	756.3	
108	D1A	74.5	1.2	478	423	878	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	7	-		192546.288	3080031.316	731.5	
109	D1E	57.5	32.8	172	325	-777	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		192873.78	3080379.70	576.6	
110	D1B	50.5	-12.5	262	217	683	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		193040.400	3080423.064	659.4	
111	D1B	65.5	-6.6	245	253	743	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		193273.957	3080541.121	668.9	
112	D1C	49	-15.3	334	290	-331	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		193478.563	3080676.075	632.5	
113	D1A	53.5	0.6	252	293	284	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		193697.25	3080928.67	693.5	
114	D1C	55	19.1	405	328	387	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		193867.108	3081114.206	736.4	
115	D1FS	69.5	-17.9	642	524	914	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		194221.318	3081311.217	789.770	
116	D1FS	48.5	29.1	370	506	-203	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		194664.00	3081776.04	758.0	
117	D1B	56.5	-1.8	172	271	273	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		195015.509	3081890.388	897.2	
118	D1A	53.5	1.1	144	158	378	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		195177.68	3081947.06	989.7	
119	D1C	49	18.6	449	297	480	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		195313.863	3081993.065	1032.7	
120	D1FS	59	6.4	657	553	883	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		195763.179	3081991.012	1087.7	
121	D1C	64	-16.4	160	409	43	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		196416.24	3081916.84	1045.9	
122	D1E	69.5	-48.7	712	436	1220	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		196574.312	3081944.269	1073.2	
123	D1FL	57.5	43.4	384	548	425	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		196947.809	3082550.881	855.9	
124	D1B	65.5	-2.6	337	361	605	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		197319.281	3082650.059	768.0	
125	D1B	56.5	10.0	180	259	-183	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		197641.09	3082750.17	653.7	
126	D1A	68.5	1.6	653	417	928	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	3	80		197819.790	3082774.869	633.6	
127	D1FS	62	0.4	311	482	-365	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		198468.922	3082843.083	369.0	
128	D1B	59.5	6.6	480	395	663	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		198779.58	3082853.84	427.9	
129	D1E	63.5	-31.0	279	380	-3	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	40		199259.467	3082865.013	435.5	
130	D1B	56.5	4.1	343	311	594	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		199501.237	3083004.915	518.7	
131	D1E	48.5	-31.3	258	300	22	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		199809.122	3083155.100	559.8	
132	D1B	47.5	-1.7	218	238	125	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		199948.663	3083372.522	634.0	
133	D1B	59.5	-9.1	371	295	458	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		200060.942	3083559.354	708.9	
134	D1C	58	-17.2	311	341	1153	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		200199.705	3083903.875	811.2	
135	D1E	48.5	34.7	182	247	175	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		200225.689	3084214.287	745.1	
136	D1FS	63.5	-16.2	838	510	447	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		200341.30	3084354.72	692.5	
137	D1FS	59	9.3	326	582	764	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		200672.270	3085124.547	577.7	
138	D1B	62.5	-3.8	301	313	142	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		200847.505	3085399.344	490.9	
139	D1C	49	27.8	297	299	-108	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		201002.93	3085656.55	465.5	
140	D1E	60.5	31.7	333	315	685	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		201250.88	3085819.75	491.6	
141	D1B	62.5	-3.1	358	346	294	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		201583.563	3085838.116	453.8	
142	D1A	62.5	-0.4	331	344	445	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		201940.342	3085868.892	435.4	
143	D1C	58	-16.4	493	412	434	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		202269.677	3085899.669	394.9	
144N	D1C	58	19.0	346	420	322	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		202721.000	3086099.000	327.0	Coordinates provided are tentative and will be finalized during check survey by the Contractor. However, for the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023). Any changes in future during check survey will be considered as Variation (positive or negative)
145N	D1B	50.5	-10.2	283	315	186	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203066.000	3086123.000	326.0	
146N	D1B	50.5	13.6	434	359	466	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203340.000	3086195.000	337.0	
147N	D1E	63.5	-60.5	426	430	417	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203774.000	3086200.000	337.0	
148N	D1E	66.5	-43.1	347	386	258	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203974.000	3086576.000	343.0	
148AN	D1C	62.5	-26.1	213	280	355	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203889.000	3086912.000	396.0	
148BN	D1E	51.5	-39.9	157	185	-112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203750.000	3087074.000	426.0	
148CN	D1E	51.5	33.0	459	308	325	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203595.000	3087099.000	460.0	
149	D1E	66.5	32.5	194	327	786	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203257.000	3087410.000	567.1	
150	D1C	58	25.0	364	279	810	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203210.16	3087598.17	658.46	
151	D1B	50.5	0.0	376	370	236	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203258.02	3087958.95	652.1	

NEW BUTWAL TO NEW DAMAULI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
152	D1FS	69.5	25.6	916	646	455	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	14	-		203312.570	3088331.007	665.5	
153	D1FL	63.5	43.6	447	682	1502	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		203834.32	3089084.31	885.0	
154	D1C	55	-24.2	392	420	-156	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		204268.16	3089193.59	767.4	
155	D1C	52	17.1	416	404	623	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		204582.268	3089427.793	805.9	
156	D1B	47.5	4.6	271	343	-20	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		204974.030	3089566.375	792.3	
157	D1B	47.5	-8.3	230	250	1114	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		205235.606	3089636.061	844.5	
158	D1C	52	27.9	246	238	-197	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		205446.596	3089726.395	753.2	
159	D1B	53.5	11.3	332	289	-106	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		205691.848	3089706.165	733.3	
160	D1C	58	-19.0	599	466	414	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	60		206011.269	3089614.629	790.7	
161	D1E	63.5	-35.3	239	419	1266	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		206609.192	3089645.583	921.9	
162	D1A	65.5	-0.1	292	266	351	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		206797.304	3089793.790	846.4	
163	D1C	49	20.9	160	226	3	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		207026.497	3089974.927	751.2	
164	D1B	47.5	7.5	520	340	-233	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		207179.56	3090019.80	716.5	
165	D1B	68.5	-14.7	350	435	801	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		207690.84	3090112.52	784.4	
166	D1C	55	21.1	302	326	366	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		208009.417	3090258.005	780.9	
167	D1B	62.5	0.6	463	383	-80	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		208311.21	3090277.85	748.3	
168	D1FS	56	-11.4	623	543	1082	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		208774.038	3090300.699	856.7	
169	D1B	53.5	6.9	266	445	-70	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		209377.855	3090455.642	786.6	
170	D1C	79	-19.9	255	261	961	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		209635.72	3090520.09	826.5	
171	D1C	70	-21.7	390	323	116	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		209876.48	3090605.35	781.3	
172	D1E	66.5	33.7	358	374	201	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		210131.82	3090900.40	752.3	
173	D1B	65.5	0.0	243	301	151	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		210477.976	3090993.652	759.5	
174	D1B	62.5	0.0	672	458	276	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	80		210712.547	3091057.847	792.0	
175	D1B	62.5	7.4	210	441	975	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		211360.820	3091235.260	960.2	
176	D1FS	69.5	-2.0	990	600	479	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	100		211569.030	3091264.260	936.1	
177	D1FS	72.5	-14.1	314	652	696	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		212544.240	3091434.790	929.3	
178	D1B	59.5	5.7	339	327	149	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		212831.270	3091562.650	932.7	
179	D1E	66.5	-44.8	222	280	905	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		213147.37	3091685.50	956.0	
180	D1E	54.5	42.8	276	249	-71	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		213257.79	3091877.59	892.6	
181	D1A	65.5	0.0	249	262	306	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		213516.255	3091973.205	860.8	
182	D1E	54.5	-36.6	331	290	-369	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		213749.680	3092059.460	838.9	
183	D1E	57.5	-33.1	235	283	1146	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		213930.350	3092336.710	940.7	
184	D1E	60.5	72.6	750	493	-108	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	80		213930.210	3092571.930	881.0	
185	D1FS	66.5	-1.6	281	516	1353	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		214646.687	3092793.797	996.7	
186	D1B	62.5	0.0	318	300	-62	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		214911.724	3092887.974	888.5	
187	D1B	50.5	0.0	268	293	-345	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		215212.384	3092991.599	861.9	
188	D1A	68.5	0.0	193	230	819	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	20		215470.28	3093063.51	929.2	
189	D1B	62.5	13.8	383	288	-253	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	40		215646.850	3093141.340	912.1	
190	D1C	52	24.7	441	412	783	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		216028.29	3093174.86	1022.6	
191	D1B	58	-5.2	203	322	662	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		216443.530	3093026.360	1028.1	
192	D1B	59.5	0.0	232	217	75	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		216640.387	3092976.396	987.7	
193	D1B	56.5	3.9	284	258	285	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		216865.110	3092919.360	969.6	
194	D1B	65.5	-12.4	282	283	602	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		217135.240	3092830.970	931.0	
195	D1B	65.5	-6.2	345	314	101	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		217415.580	3092803.110	842.1	
196	D1C	64	-17.2	345	345	-284	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		217761.040	3092806.260	790.9	
197	D1C	64	22.1	267	306	310	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		218089.730	3092911.150	875.0	
198	D1B	68.5	-3.2	451	226	335	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		218356.404	3092897.944	939.9	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
200	D1B	64	2.8	706	226	147	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	80		218807.660	3092900.790	920.7	
201	D1FS	78.5	6.3	327	516	673	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		219512.980	3092870.830	1172.7	
202	D1B	74.5	7.9	310	318	1297	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		219835.829	3092821.325	1266.3	
203	D1B	50.5	0.0	302	306	116	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		220132.418	3092732.673	1181.9	
204	D1A	58	0.0	308	305	270	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		220421.381	3092646.300	1117.3	
205	D1A	59.5	0.0	302	305	275	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		220716.602	3092558.057	1059.9	
206	D1B	53.5	-13.8	317	309	-66	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		221006.080	3092471.530	1012.5	

NEW BUTWAL TO NEW DAMAULI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
207	D1A	65.5	0.0	315	316	631	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		221322.47	3092481.26	1029.3	
208	D1B	68.5	0.0	303	309	74	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		221634.720	3092440.195	982.5	
209	D1FS	60.5	0.0	702	503	357	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		221937.138	3092425.120	1001.3	
210	D1FS	63.5	4.6	466	584	866	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		222638.60	3092391.65	1085.2	
211	D1FS	60.5	-11.1	655	561	299	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		223100.350	3092329.820	1067.0	
212	D1FS	59	32.4	787	721	1295	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		223754.380	3092371.960	1146.5	
213	D1FS	59	9.2	342	564	874	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		224444.210	3091994.170	960.5	
214	D1C	52	-25.0	319	331	-646	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		224714.160	3091784.200	816.8	
215	D1C	67	-22.7	335	327	1052	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		225025.304	3091712.872	874.4	
216	D1B	71.5	12.6	307	321	146	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		225355.230	3091769.810	793.1	
217	D1C	64	-19.5	364	336	112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		225662.150	3091754.530	768.2	
218	D1B	65.5	4.0	409	387	524	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		226011.030	3091859.000	776.0	
219	D1FS	81.5	-34.2	706	557	1122	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		226410.230	3091948.670	740.2	
220	D1FS	63.5	26.5	313	509	-557	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		226892.900	3092463.530	444.0	
221	D1C	52	-24.4	333	323	320	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		227183.41	3092578.92	557.1	
222	D1B	71.5	5.0	249	291	-8	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		227451.76	3092775.27	632.1	
223	D1A	77.5	0.2	109	179	882	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		227638.04	3092941.19	821.9	
224	D1FS	78.5	18.1	921	515	1169	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	-		227700.13	3093031.30	828.4	
225	D1FS	57.5	-25.4	493	707	-117	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		228558.760	3093365.310	554.1	
226	D1B	59.5	0.0	259	376	277	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		228895.266	3093725.061	684.4	
227	D1C	52	26.2	336	298	1577	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		229072.100	3093914.110	788.4	
228	D1E	86	57.0	335	336	-700	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		229389.46	3094025.84	576.8	
229	D1B	62.5	-9.3	377	356	586	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		229660.44	3093828.73	683.0	
230	D1B	65.5	-6.5	330	354	-210	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		230021.52	3093719.57	711.2	
231	D1B	59.5	-9.0	309	320	467	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		230324.14	3093588.12	901.4	
232	D1B	64	-7.2	423	366	1528	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		230619.99	3093497.36	1029.9	
233	D1FS	63.5	-16.7	1563	993	551	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	20	-		231042.25	3093474.45	893.3	
234	D1FS	75.5	31.5	346	954	1199	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		232568.47	3093809.21	864.8	
235	D1E	87.5	-51.0	354	350	918	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		232874.57	3093648.62	806.9	
236	D1C	92.5	-23.3	316	335	393	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233172.25	3093839.99	642.3	
237	D1FS	57.5	7.0	638	477	-241	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		233372.70	3094084.56	483.1	
238	D1B	62.5	4.5	269	454	113	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233776.04	3094578.62	463.8	
239	D1C	64	19.2	268	269	324	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233967.57	3094767.82	517.1	
240	D1E	63.5	-31.3	205	236	-15	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234212.24	3094876.84	559.2	
241	D1B	56.5	-2.0	263	234	108	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234324.570	3095048.070	639.1	
242	D1E	63.5	-72.3	369	316	1377	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234464.570	3095270.580	757.5	
243	D1C	58	15.8	363	366	609	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234228.76	3095554.22	674.1	
244	D1B	59.5	10.8	331	347	342	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234071.25	3095880.75	538.2	
245	D1B	59.5	-8.7	320	326	147	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233996.97	3096203.69	410.3	
246	D1E	51.5	36.7	67	194	-195	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233870.79	3096498.18	345.7	
New Damauli	ARBOR	22.5	0.0	0	34	-144	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233884.62	3096564.22	338.6	

Total Length 90601

NEW DAMAULI TO RATMATE																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
New Damauli	ARBOR	22.5	0.0	65	31	-64	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233907.81	3096630.01	335.6	
1	D1D	50.5	8.0	374	216	180	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		233971.01	3096616.76	335.7	
2	D1B	62.5	13.2	392	381	-174	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234312.820	3096465.450	355.0	
3N	D1E	81.5	-50.9	377	385	1209	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234625.85	3096229.15	406.9	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
4	D1E	60.5	40.8	340	359	-248	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		234992.070	3096319.260	350.0	
5	D1A	62.5	0.0	356	348	367	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		235295.078	3096164.736	361.8	
6	D1E	60.5	30.9	270	319	-134	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		235612.050	3096003.090	366.8	
7	D1A	65.5	0.0	247	269	337	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		235755.062	3095774.615	450.6	
8	D1A	56.5	0.0	372	313	895	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	4	-		235885.982	3095565.457	527.0	
9	D1B	47.5	8.2	391	401	-390	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		236080.88	3095248.15	492.0	
10	D1FS	63.5	-4.4	741	588	1044	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		236241.440	3094891.620	649.2	
11	D1FS	69.5	28.9	251	504	222	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		236591.620	3094239.030	724.9	
12	D1E	54.5	-59.8	226	247	1045	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		236588.490	3093988.350	818.3	
13	D1B	43.0	0.0	261	247	57	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		236782.456	3093872.417	778.5	
14	D1C	52.0	17.7	242	252	153	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		237006.580	3093738.460	748.0	
15	D1C	58.0	-16.7	397	322	34	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		237166.820	3093557.220	736.1	
16	D1C	58.0	20.0	351	377	779	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		237503.960	3093347.780	797.4	
17	D1B	50.5	-13.7	291	321	280	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		237720.450	3093071.990	771.3	
18	D1E	51.5	38.4	252	272	279	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		237950.35	3092893.80	752.4	
19	D1E	48.5	-35.2	450	351	141	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		238006.670	3092647.730	736.9	
20	D1E	51.5	-42.5	191	322	169	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		238344.060	3092350.480	759.9	
21	D1C	61.0	22.4	280	238	751	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		238534.580	3092354.190	782.2	
22	D1E	48.5	34.2	213	249	-171	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		238795.260	3092252.440	748.5	
23	D1A	56.5	0.0	223	220	643	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		238915.823	3092076.646	766.9	
24	D1B	53.5	0.0	341	284	-10	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		239042.032	3091892.619	726.0	
25	D1FS	69.5	-19.7	986	674	1022	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		239234.870	3091611.440	718.5	
26	D1FS	48.5	20.6	345	679	678	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		240034.510	3091033.740	541.5	
27	D1E	51.5	-48.8	343	354	-381	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		240225.290	3090745.730	475.2	
28	D1C	58.0	27.3	464	413	580	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		240564.900	3090699.850	565.7	
29	D1C	61.0	-20.5	176	326	237	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		240944.920	3090433.860	642.0	
30	D1C	58.0	18.7	352	272	1028	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		241115.470	3090389.730	689.8	
31	D1A	53.5	0.0	359	368	409	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		241410.285	3090196.984	610.4	
32	D1B	47.5	14.6	394	383	-76	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		241711.170	3090000.270	511.9	
33	D1C	49.0	15.5	155	278	-99	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		241975.700	3089708.410	519.1	
34	D1C	58.0	-22.6	362	269	222	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		242045.180	3089570.140	555.2	
35	D1B	62.5	-13.2	167	272	748	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		242319.260	3089334.220	655.9	
36	D1C	58.0	28.2	335	260	738	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		242467.670	3089256.870	659.6	
37	D1C	58.0	-17.2	224	289	-447	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		242655.930	3088980.100	550.9	
38	D1A	62.5	0.0	357	292	475	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		242830.670	3088840.479	583.8	
39	D1E	54.5	41.4	175	271	-157	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		243109.900	3088617.370	600.9	
40	D1E	57.5	-36.5	213	205	176	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		243140.290	3088445.420	658.5	
41	D1B	47.5	7.8	397	323	315	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		243294.670	3088299.230	743.7	
42	D1C	52.0	-16.9	150	296	143	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		243543.390	3087989.800	879.7	
43	D1B	65.5	8.6	704	438	1052	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		243667.540	3087904.930	945.0	
44	D1B	50.5	5.4	241	488	-142	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		244182.840	3087424.650	991.3	
45	D1B	62.5	6.5	301	293	1466	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		244342.550	3087244.750	1102.8	

NEW DAMAULI TO RATMATE																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
46	D1FS	66.5	-19.1	1225	771	409	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	17	-		244515.680	3086998.310	1008.7	
47	D1FS	69.5	-16.6	278	760	195	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		245509.060	3086281.410	939.895	
48	D1B	59.5	6.6	112	203	810	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		245771.620	3086189.830	1040.27	
49	D1FS	60.5	11.3	1029	579	755	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	15	-		245872.270	3086141.100	1032.004	
50	D1FS	66.5	32.3	188	639	-528	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		246690.73	3085517.54	840.856	
51	D1A	65.5	0.0	170	213	536	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		246760.713	3085343.383	985.7	
52	D1E	63.5	-30.2	400	297	932	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		246819.530	3085183.490	1069.34	
53	D1B	65.5	-13.2	235	322	671	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		247129.940	3084930.490	1055.4	
54	D1D	65.5	-18.0	293	271	202	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		247341.530	3084827.490	994.4	
55	D1B	59.5	11.5	225	262	-55	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		247631.580	3084787.200	940.2	
56	D1A	68.5	0.0	221	229	700	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		247844.230	3084712.288	936.2	
57	D1A	68.5	0.0	288	271	390	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		248052.226	3084639.015	863.7	
58	D1B	62.5	0.0	266	293	118	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		248323.436	3084543.473	746.3	
59	D1FS	60.5	1.3	971	663	-293	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	14	-		248574.410	3084455.060	677.2	
60	D1FL	78.5	43.2	292	671	1397	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		249482.320	3084111.980	1057.6	
61	D1FL	60.5	-59.5	703	516	826	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	-		249610.920	3083849.580	1045.8	
62	D1FS	72.5	-17.4	382	568	563	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		250312.370	3083795.960	811.1	
63	D1E	66.5	48.4	273	343	367	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		250684.870	3083882.460	703.4	
64	D1E	63.5	-42.3	282	293	-708	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		250907.253	3083724.750	618.7	
65	D1A	74.5	0.0	290	295	705	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		251187.438	3083759.094	708.8	
66	D1C	73.0	-21.2	281	291	-8	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		251475.640	3083794.420	727.8	
67	D1B	83.5	3.4	319	306	545	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		251722.840	3083927.170	791.2	
68	D1C	73.0	27.4	310	315	478	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		252012.420	3084061.310	837.2	
69	D1B	50.5	-14.8	344	334	-103	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		252321.800	3084047.460	860.3	
70	D1A	62.5	0.0	279	322	448	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		252658.331	3084120.593	953.8	
71	D1B	50.5	0.0	287	292	156	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		252930.710	3084179.784	1018.8	
72	D1C	52.0	-25.8	383	347	429	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		253211.253	3084240.750	1105.8	
73	D1B	62.5	0.0	384	404	190	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		253513.033	3084476.860	1186.2	
74	D1C	70.0	24.1	399	415	557	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		253815.580	3084713.570	1335.5	
75	D1E	60.5	44.3	384	392	-143	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		254202.700	3084809.660	1456.4	
76N	D1C	55.0	-18.5	436	417	1167	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		254534.131	3084615.235	1522.5	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
77	D1B	74.5	1.8	303	370	-186	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		254961.040	3084525.460	1411.2	
78	D1C	70.0	16.4	367	344	246	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		255255.570	3084453.770	1335.3	
79	D1B	65.5	0.0	252	313	57	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		255573.179	3084270.142	1265.3	
80	D1B	59.5	14.0	207	230	-42	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		255791.150	3084144.120	1261.4	
81	D1C	76.0	-16.6	283	246	551	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		255939.860	3084000.200	1275.1	Existing 132kV Line Crossing (Bharatpur to Marsyangdi).
82	D1D	68.5	-3.3	274	283	-207	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		256190.510	3083869.680	1264.9	
83	D1A	56.5	0.0	191	239	315	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		256440.368	3083757.393	1353.6	
84	D1A	59.5	0.0	210	203	485	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		256614.844	3083678.982	1391.1	
85	D1C	55.0	26.4	278	250	732	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		256806.790	3083592.720	1396.5	
86	D1B	59.5	-6.5	623	451	672	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		256983.350	3083377.890	1305.8	
87N	D1C	52.0	-17.0	346	491	107	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		257431.038	3082944.068	1188.5	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
88	D1B	59.5	13.3	156	251	309	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		257738.686	3082786.621	1200.0	
89	D1C	73.0	-17.6	385	274	255	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		257857.610	3082685.460	1151.5	
90	D1E	66.5	41.4	325	382	905	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		258212.200	3082536.310	1096.6	

NEW DAMAULI TO RATMATE																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
91	D1C	61.0	-25.4	393	413	401	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		258353.710	3082244.020	915.4	
92	D1C	61.0	30.0	258	360	53	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		258659.880	3081998.200	693.6	
93	D1B	71.5	-9.9	398	393	900	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		258753.360	3081757.990	603.1	
94	D1C	67.0	-25.5	351	441	-940	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	40		258959.300	3081417.150	278.9	
95	D1B	59.5	-3.9	282	324	544	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		259252.390	3081223.840	380.6	
96	D1E	57.5	33.4	138	215	-23	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		259498.330	3081084.880	421.0	
97	D1E	63.5	-52.1	692	421	680	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		259561.320	3080962.140	460.1	
98	D1FS	69.5	-7.7	395	546	880	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		260240.670	3080832.770	536.0	
99	D1C	61.0	25.2	395	419	-423	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		260635.090	3080811.310	511.2	
100	D1E	69.5	-36.3	320	410	294	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		260982.800	3080624.250	701.6	
101	D1FS	75.5	2.2	735	560	1163	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	-		261299.700	3080669.080	894.9	
102	D1E	69.5	50.1	245	493	787	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		262030.650	3080743.990	1005.7	
103	D1C	73.0	-18.7	293	272	-112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		262205.850	3080573.390	992.2	
104	D1C	64.0	-21.7	293	305	103	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		262469.980	3080447.440	1061.5	
105	D1B	62.5	-3.4	316	330	187	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		262762.380	3080428.220	1164.3	
106	D1C	64.0	28.1	220	302	206	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		263078.440	3080426.220	1311.9	
107	D1D	62.5	3.9	185	231	352	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		263272.150	3080321.250	1441.0	
108	D1B	62.5	-2.3	704	453	1507	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		263428.650	3080222.110	1531.0	
109	D1B	74.5	-8.5	224	493	-627	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		264057.43	3079905.74	1342.9	
110	D1B	71.5	-7.7	396	350	583	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		264249.734	3079790.655	1479.0	
111	D1B	68.5	1.1	696	546	290	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		264633.955	3079696.567	1616.3	
112N	D1B	74.5	-2.1	414	557	912	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		265306.277	3079517.946	1637.3	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
115	D1E	60.5	43.3	582	501	-72	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		265710.10	3079426.15	1596.2	
116	D1FS	51.5	-10.3	557	580	313	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		266034.640	3078943.150	1468.8	
117	D1C	64.0	-19.4	359	462	704	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		266423.730	3078544.980	1425.3	
118	D1C	64.0	-24.8	423	395	30	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		266745.780	3078386.210	1350.5	
119	D1C	52.0	26.9	398	416	100	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		267168.920	3078375.280	1371.3	
120	D1B	65.5	-8.0	221	315	468	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		267519.500	3078185.850	1444.3	
121	D1A	65.5	0.0	358	291	573	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		267726.804	3078108.920	1476.9	
122	D1E	57.5	33.0	234	297	94	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		268062.620	3077984.300	1462.8	
123	D1C	70.0	27.6	371	317	1018	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		268202.320	3077796.740	1468.1	
124	D1B	68.5	-10.7	396	398	-271	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		268260.750	3077430.060	1323.0	
125	D1E	69.5	-36.9	398	398	617	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		268394.730	3077057.320	1345.0	
126	D1FS	60.5	10.3	700	555	157	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		268727.600	3076838.500	1322.8	
127	D1FS	51.5	23.8	313	512	787	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		269234.020	3076355.330	1452.2	
128	D1C	55.0	-26.0	287	319	1051	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		269354.290	3076065.880	1448.6	
129	D1C	52.0	-26.7	361	343	-248	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		269569.530	3075875.620	1301.8	
130	D1C	73.0	24.8	273	319	-70	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		269918.860	3075783.810	1251.5	
131	D1B	71.5	-14.8	263	282	1287	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		270129.420	3075610.330	1296.2	
132	D1C	55.0	-28.7	209	253	-355	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		270368.28	3075500.54	1176.2	
133	D1C	64.0	27.1	206	215	441	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		270576.320	3075519.890	1148.4	
134	D1A	59.5	0.0	355	296	502	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		270766.237	3075438.851	1107.1	
135	D1C	88.0	26.7	261	333	427	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		271092.410	3075299.670	940.5	
136	D1C	88.0	-28.7	578	433	-323	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		271260.740	3075100.630	820.4	
137	D1FS	66.5	7.5	396	503	1200	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		271800.260	3074892.770	878.5	
138	D1FS	72.5	-4.9	1269	854	65	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	21	-		272147.760	3074703.820	714.3	
139	D1FS	81.5	-6.5	373	850	386	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		273310.320	3074196.210	888.8	
140	D1A	83.5	0.0	172	298	670	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		273667.00	3074085.57	1079.2	

NEW DAMAULI TO RATMATE																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
141	D1B	71.5	-12.4	251	227	-89	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		273831.870	3074035.920	1127.3	
142	D1A	80.5	0.0	664	483	697	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	7	-		274080.75	3074006.72	1235.6	
143	D1B	59.5	8.6	207	455	1444	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		274743.580	3073960.740	1445.1	
144	D1B	59.5	-2.2	191	213	188	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		274944.670	3073913.000	1365.7	
145	D1B	62.5	-10.8	291	254	194	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		275132.150	3073875.880	1292.4	
146	D1FS	60.5	-13.0	725	514	11	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		275422.73	3073873.69	1209.1	
147	D1FS	60.5	-16.5	758	742	918	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		276131.75	3074027.24	1231.6	
148	D1FS	69.5	-26.1	540	653	526	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		276792.970	3074398.200	1168.2	
149	D1C	64.0	25.8	311	426	554	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		277107.33	3074837.63	1178.3	
150	D1D	68.5	8.1	392	351	412	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		277372.48	3074999.40	1151.7	
151	D1B	62.5	13.6	476	437	406	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		277738.380	3075139.220	1115.9	
152	D1C	61.0	23.6	275	385	808	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		278209.677	3075202.326	1078.6	
153	D1B	65.5	0.0	315	311	226	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		278473.700	3075126.986	968.4	
154	D1B	62.5	-0.8	294	314	119	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		278776.190	3075040.670	874.5	
155	D1FS	63.5	-30.6	1350	836	856	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	20	-		279060.450	3074963.730	823.4	
156	D1FS	63.5	33.2	557	966	1117	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		280361.260	3075324.010	577.1	
157	D1B	56.5	-13.1	312	451	-412	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		280893.92	3075161.62	445.9	
158	D1A	59.5	0.0	146	244	644	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		281204.201	3075133.182	550.8	
159	D1B	56.5	0.0	312	235	-119	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		281349.69	3075121.31	555.5	
160	D1FS	63.5	-5.4	737	568	418	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		281660.490	3075096.630	636.7	
161	D1FS	84.5	27.8	209	505	1207	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		282397.85	3075107.50	930.0	
162	D1A	71.5	0.0	180	192	292	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		282585.541	3075016.490	931.7	
163	D1E	69.5	-44.7	424	306	414	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		282744.20	3074931.47	903.8	
164	D1B	77.5	-4.9	305	368	241	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		283148.240	3075061.230	810.0	
165	D1FS	75.5	-1.4	708	511	103	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		283430.200	3075178.570	776.9	
166	D1C	70.0	-22.5	226	480	82	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		284076.460	3075466.510	878.4	
167	D1C	64.0	23.4	247	255	333	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		284231.670	3075630.440	984.1	
168	D1B	71.5	12.5	356	327	1542	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		284458.390	3075727.460	1067.4	
169	D1B	62.5	5.0	288	342	184	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		284808.04	3075792.77	911.2	
170	D1C	73.0	-23.0	438	377	229	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		285093.51	3075828.18	807.9	
171	D1B	65.5	11.9	288	372	355	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		285482.355	3076030.544	711.0	
172	D1B	71.5	11.9	391	342	1184	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		285755.741	3076119.775	646.0	
173N	D1B	59.5	-1.0	595	521	-383	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		286144.013	3076161.983	440.8	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
175N	D1C	61.0	-20.4	190	394	794	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		286734.805	3076236.413	423.7	
176N	D1C	52.0	27.0	325	268	359	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		286902.83	3076324.04	400.7	
177N	D1B	50.5	-14.6	214	285	984	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		287227.92	3076327.06	513.0	
178N	D1B	62.5	1.9	471	350	-384	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		287434.01	3076382.93	574.0	
180N	D1B	53.5	0.6	235	363	1878	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		287892.08	3076491.07	635.3	
181N	D1E	69.5	-68.0	211	236	656	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		288120.932	3076542.725	716.8	
181AN	D1E	54.5	30.5	211	225	-446	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		288155.026	3076751.021	677.3	
181BN	D1B	56.5	-10.9	608	422	864	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		288289.98	3076913.107	579.0	
182	D1E	59.0	40.5	262	442	180	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		288584.1	3077445.72	504.0	
183N	D1E	57.5	-54.2	356	315	-122	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	40		288829.054	3077537.976	435.7	1. Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
184N	D1E	50.0	44.9	387	374	212	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		288922.572	3077881.957	396.0	
185N	D1E	69.5	-34.8	239	316	-353	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		289258.062	3078075.068	412.3	2. Existing NEA 132KV and 220KV lines crossing in between Tw185 to Tw189 (under passing).
186N	D1E	59.0	48.5	308	302	1348	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		289359.917	3078291.003	470.9	
189	D1C	61.0	20.4	380	236	987	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		289655.768	3078376.963	654.0	
190	D1FS	57.5	2.6	780	282	369	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		290034.310	3078349.000	674.0	

NEW DAMAULI TO RATMATE																
STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
191	D1FL	63.5	-38.2	697	743	810	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	-		290813.560	3078382.840	597.6	
192	D1FL	60.5	42.0	380	546	3	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		291341.880	3078837.690	510.0	
193	D1FS	63.5	-10.5	602	500	544	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		291721.69	3078829.91	587.3	
194	D1B	62.5	-10.7	251	447	34	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		292316.55	3078921.48	698.9	
195	D1B	62.5	-6.0	389	336	918	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		292551.220	3079010.060	828.3	
196	D1C	64.0	27.0	148	269	320	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		292901.250	3079179.670	859.7	
197	D1A	65.5	0.0	325	238	518	INSUL-SHT-1-B	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		293049.492	3079176.685	870.0	
198	D1B	71.5	-12.0	291	314	506	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		293374.080	3079170.150	818.3	
199	D1C	64.0	15.9	252	276	-143	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		293659.730	3079224.860	754.1	
200	D1B	62.5	0.0	285	270	71	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		293910.864	3079202.845	759.1	
201	D1A	65.5	0.0	381	336	722	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	-		294195.272	3079177.913	803.8	
202	D1A	68.5	0.0	208	300	618	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		294574.589	3079144.662	763.0	
203	D1B	50.5	0.0	205	212	-106	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		294781.986	3079126.481	712.4	
204	D1B	50.5	1.6	331	268	91	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		294985.960	3079108.600	691.7	
205	D1B	53.5	13.0	214	275	615	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		295314.470	3079070.340	693.5	
206	D1C	52.0	-21.5	396	316	455	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		295515.890	3078998.560	651.2	
207	D1B	68.5	0.0	369	394	-342	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		295912.051	3079011.733	516.8	
208	D1B	71.5	-8.1	213	298	167	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296281.240	3079024.010	578.7	
209	D1C	61.0	-23.1	365	294	714	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296491.380	3079061.060	651.0	
210	D1E	45.5	-43.0	397	385	47	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		296797.390	3079260.490	666.1	
211	D1FS	54.5	33.9	548	521	94	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296892.890	3079645.730	740.6	
212	D1C	71.5	-22.2	346	492	1111	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		297298.930	3080014.220	1046.8	
213	D1C	53.5	16.7	641	513	201	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		297448.210	3080326.110	1088.2	
214N	D1B	82.0	-4.5	311	499	1628	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		297877.516	3080801.998	1310.2	Coordinates provided are tentative and will be finalized during check survey by the Contractor. However, for the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023). Any changes in future during check survey will be considered as Variation (positive or negative)
215	D1C	65.5	29.8	277	298	-165	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		298067.253	3081048.750	1240.4	
216N	D1B	47.5	9.9	366	326	883	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		298322.748	3081155.478	1241.6	
217	D1B	59.5	-4.3	288	332	577	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		298679.336	3081236.582	1139.3	
218	D1A	83.5	0.0	318	303	871	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		298954.874	3081321.138	1025.9	
219	D1B	68.5	-14.9	364	380	-455	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299258.850	3081414.420	800.8	
220	D1C	46.0	16.3	274	323	602	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299568.150	3081607.060	806.5	
221	D1C	61.0	-22.0	384	340	427	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299832.300	3081680.780	727.4	
222	D1E	57.5	-30.8	369	396	-591	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		300136.330	3081914.920	620.9	
223	D1FL	63.5	50.9	657	528	829	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		300272.180	3082257.660	747.7	
224	D1FS	69.5	-25.0	411	538	855	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		300898.550	3082454.510	842.3	
225	D1E	60.5	43.3	374	410	972	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		301201.920	3082732.080	834.5	
226	D1B	56.5	-5.3	307	358	-112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		301576.150	3082726.400	675.1	
227	D1B	83.5	-9.6	272	294	497	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		301882.460	3082750.230	618.1	
228	D1B	71.5	-4.4	302	291	38	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302145.890	3082816.320	566.7	
229	D1B	68.5	-11.4	397	353	-28	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302431.990	3082911.890	549.8	
230	D1E	66.5	31.4	273	338	583	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		302776.540	3083109.900	621.3	
231	D1B	62.5	8.8	409	342	177	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		303049.240	3083102.640	629.0	
232	D1E	60.5	31.1	436	422	525	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		303451.110	3083029.190	674.1	
233N	D1B	59.5	-10.8	522	502	-470	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303777.596	3082740.464	607.9	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
234N	D1E	69.5	-35.0	449	515	1727	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304226.143	3082474.190	809.7	
235N	D1C	79.0	-28.5	583	526	282	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		304674.286	3082507.993	672.3	

NEW DAMAULI TO RATMATE

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
236	D1C	55.0	23.0	651	618	452	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		305164.000	3082823.970	639.5	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
237	D1E	71.0	43.9	330	501	1307	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		305805.740	3082934.640	633.5	
238N	D1E	69.5	46.8	634	496	251	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	40		306079.238	3082749.21	513.35	
240N	D1B	59.5	4.2	246	449	-556	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		306179.482	3082122.931	432.5	
241N	D1E	60.5	-82.6	331	295	1018	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		306200.588	3081877.452	511.0	
242N	D1B	59.5	-5.4	267	299	299	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		306531.296	3081863.209	516.2	
243N	D1B	62.5	-6.5	450	360	596	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		306798.367	3081877.079	518.7	
243AN	D1B	59.5	10.5	160	306	329	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307241.960	3081951.129	480.8	
244N	D1E	54.5	54.5	137	168	-1984	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307402.039	3081948.154	475.7	
245N	D1E	57.5	-53.9	311	243	2273	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307479.419	3081835.213	583.3	
246N	D1E	57.5	-60.9	189	258	1253	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307789.955	3081825.994	572.9	
247N	D1E	54.5	39.9	125	168	-137	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307886.908	3081988.618	495.5	
ID Bay(RATAMATE S)	ARBOR	22.5	0.0	0	65	-699	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308005.202	3082029.996	484.2	

Total Length 89219

RATMATE TO NEW HETAUDA

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
RM SS	ARBOR	22.5	0.0	102	52	8	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308025.457	3081983.377	490.3	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
DE	D1E	51.5	-35.0	139	127	-895	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307930.203	3081946.697	488.4	
1N	D1B	49.0	-10.8	102	135	-411	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		307852.569	3081831.168	544.8	
2N	D1E	51.5	-54.7	309	215	1997	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307812.673	3081737.590	606.5	
3N	D1B	50.5	8.8	194	258	-817	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307974.548	3081474.396	586.5	
4N	D1E	63.5	47.0	499	364	752	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308049.561	3081295.497	646.0	
5	D1C	65.5	-28.7	375	261	807	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307844.850	3080840.510	795.6	
6	D1B	59.5	0.0	375	436	1873	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307873.850	3080467.110	1081.0	
7	D1A	70.0	-0.4	442	427	362	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		307920.979	3080095.013	955.0	
8	D1E	63.5	46.4	387	415	666	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		307979.827	3079656.674	834.5	
9	D1A	59.5	0.3	325	363	-424	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		307737.696	3079354.689	743.8	
10N	D1A	65.5	-0.6	304	325	1359	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		307533.181	3079102.251	787.8	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
11	D1B	65.5	3.6	338	328	-553	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307344.539	3078864.344	678.0	
12	D1E	54.5	-36.3	345	356	-214	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307118.43	3078613.56	517.5	
13	D1B	43.0	7.0	430	383	-132	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		307110.548	3078268.923	506.2	
14	D1B	47.5	0.0	261	368	77	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307040.519	3077844.868	614.3	
15	D1A	59.5	0.0	267	287	495	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		306997.947	3077587.075	738.4	
16	D1D	62.5	3.9	562	423	770	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		306954.511	3077324.054	824.1	
17	D1A	68.5	0.0	321	444	422	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		306825.575	3076777.095	874.3	
18	D1B	47.5	0.0	439	391	91	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		306751.857	3076464.375	923.8	
19	D1A	62.5	-0.9	454	468	450	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	5	-		306651.142	3076037.132	1050.7	
20	D1B	74.5	-8.2	419	474	1659	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		306553.747	3075593.903	1180.4	
21	D1D	59.5	9.2	406	453	394	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		306547.11	3075174.50	988.3	
22	D1A	62.5	0.0	418	448	481	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	3	-		306429.902	3074785.281	813.9	
23	D1B	73.0	-14.7	414	440	59	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		306332.763	3074379.180	604.3	
24	D1C	56.5	29.9	780	597	-46	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		306341.514	3073964.782	552.7	1. Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
25N	D1C	79.0	-8.8	593	707	866	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		305967.241	3073280.104	755.9	2. Existing NEA 220kV line crossing in between Tw24 to Tw25 (under passing).
26	D1B	50.5	1.0	126	367	618	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		305765.961	3072722.126	887.6	Existing 132kV Line Crossing (Marsyangdi to Siuchatar) between Tw27 and Tw28.
27	D1B	80.5	8.1	266	197	682	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		305721.15	3072604.08	889.2	
28	D1B	77.5	-3.0	365	308	204	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		305555.390	3072396.070	865.8	
29	D1C	59.5	-21.7	288	336	383	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		305357.680	3072089.282	871.8	
30	D1C	73.0	-15.2	277	277	152	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		305267.54	3071815.68	838.0	
31	D1FS	69.5	4.6	814	532	415	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		305316.250	3071543.146	844.5	
32	D1C	67.0	29.0	162	490	379	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		305309.112	3070728.936	917.0	
33	D1A	47.5	0.0	583	376	398	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	8	-		305229.462	3070588.405	966.4	
34	D1B	53.5	0.0	367	483	333	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		304942.069	3070081.344	1040.6	
35	D1FS	50.0	-27.9	839	625	605	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	-		304761.198	3069762.226	1136.5	
36	D1FS	57.5	7.7	291	580	394	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304736.845	3068923.438	1363.8	
37	D1A	65.5	0.0	242	279	672	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		304673.86	3068639.36	1471.1	
38	D1E	57.5	41.6	256	270	423	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304650.035	3068398.094	1515.2	
39	D1C	56.5	-15.2	678	469	354	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		304450.82	3068236.96	1527.0	
40	D1FS	51.5	-14.0	551	611	971	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		304051.338	3067689.547	1607.3	
41	D1B	44.5	-10.8	357	457	518	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		303846.868	3067178.385	1554.4	
42	D1C	53.5	18.2	469	426	-281	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303778.784	3066828.071	1495.8	
43	D1D	67.0	-2.6	282	388	1108	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303550.161	3066418.957	1627.1	
44	D1A	71.5	0.0	285	296	629	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		303424.067	3066167.044	1581.6	
45	D1B	44.5	0.0	590	448	-111	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		303296.576	3065912.340	1492.5	
46	D1FS	60.5	-13.2	781	686	665	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		303032.414	3065384.589	1478.8	
47	D1FL	57.5	37.1	772	777	414	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		302851.402	3064624.595	1487.0	

RATMATE TO NEW HETAUDA

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS	
													Easting	Northing			
48N	D1FL	57.5	49.9	498	657	-76	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302255.329	3064133.751	1476.5	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).	
49N	D1E	54.5	-30.8	557	549	1259	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		301765.246	3064223.703	1692.1		
50N	D1B	50.5	-11.3	637	601	366	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		301243.389	3064029.811	1696.0		
51N	D1C	46.0	-18.1	244	452	297	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		300700.834	3063695.126	1804.1		
51/1N	D1A	50.5	0.8	209	236	700	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	-		300543.337	3063508.649	1890.8		
52N	D1B	64.0	3.0	654	438	1149	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		300406.189	3063350.578	1906.5		
58	D1C	53.5	23.1	158	406	67	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299952.783	3062879.496	1802.7		
59	D1D	60.5	-23.6	572	381	-43	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		299807.658	3062818.014	1717.1		
60	D1B	47.5	0.0	247	414	182	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299413.936	3062402.762	1610.2		
61	D1C	55.0	-26.8	268	276	950	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		299244.250	3062223.798	1596.2		
62	D1A	64.0	0.0	299	327	421	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		299167.416	3061967.045	1445.7		
63	D1D	50.5	10.0	475	413	-318	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		299081.837	3061681.066	1271.6		
64	D1B	79.0	2.9	422	449	358	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		298868.741	3061256.384	1219.3		
65	D1FL	83.0	-45.3	780	606	1033	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		298660.576	3060888.863	1219.5		
66	D1C	56.5	25.2	159	485	117	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		298862.65	3060135.68	1037.2		
67	D1B	53.5	0.0	641	411	302	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		298838.622	3059978.751	1033.9		
68	D1FS	53.0	0.0	861	751	800	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		298734.072	3059346.357	1063.2		
69	D1FS	51.5	-2.3	281	571	712	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		298593.669	3058497.100	1079.6		
70	D1E	53.0	36.1	516	409	-134	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	60		298559.001	3058217.812	1059.4		
71	D1FS	48.5	-1.2	505	540	405	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		298205.690	3057841.190	1210.8		
72	D1A	68.5	0.0	288	419	672	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	40		297868.576	3057465.835	1393.2		
73	D1A	71.5	0.0	229	267	1004	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	40		297676.068	3057251.489	1454.3		
74	D1FS	62.0	0.0	867	556	345	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	80		297523.170	3057081.246	1394.7		
75	D1FS	71.0	0.0	393	646	960	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		296943.993	3056436.369	1278.6		
76	D1A	83.5	0.0	473	473	664	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	60		296681.644	3056144.260	1126.8		
77	D1FS	74.0	-25.8	850	690	189	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	13	100		296365.663	3055792.359	896.7		
78	D1FS	60.5	-9.8	441	650	676	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	60		296129.194	3054975.479	820.0		
79	D1B	43.0	5.7	406	440	-319	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		296080.557	3054536.823	784.4		
80	D1B	50.5	-3.9	166	308	1462	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		295995.635	3054139.704	932.4		
81	D1E	62.0	-45.4	320	250	-322	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		295971.960	3053975.815	851.5		
82	D1C	74.5	-17.2	206	265	553	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		296165.320	3053720.770	838.3		
83	D1E	53.0	34.6	714	466	417	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	-		296332.891	3053600.462	820.0		
84	D1FS	78.5	12.2	505	614	506	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		296574.282	3052928.047	688.7		
85	D1A	71.5	0.0	271	389	389	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	-		296640.470	3052427.110	661.5		
86	D1FS	57.5	22.5	1013	675	65	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	13	-		296675.920	3052158.811	651.4		
87	D1FS	92.0	4.6	313	735	320	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296414.041	3051180.238	984.9		
88	D1D	92.5	10.5	294	343	1164	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296309.375	3050885.693	1218.8		
89	D1A	59.5	0.0	347	336	531	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		296161.864	3050630.965	1276.4		
90	D1D	67.0	-16.2	397	373	238	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		295990.73	3050329.33	1244.2		
91	D1B	50.5	-3.6	352	364	100	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		295884.575	3049946.652	1271.6		
92	D1E	68.0	-38.1	373	367	519	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		295821.926	3049600.624	1325.0		
93	D1A	52.0	-1.1	454	415	431	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	5	-		295995.842	3049270.639	1381.9		
94	D1B	43.0	13.3	397	444	-32	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		296214.929	3048872.877	1426.6		
95	D1E	47.0	47.7	212	322	880	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296321.023	3048490.388	1596.0		
96	D1A	53.5	0.0	292	254	529	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	3	-		296208.018	3048310.741	1604.4		
97	D1A	71.5	-0.5	604	479	911	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	3	-		296052.382	3048063.321	1543.7		
98	D1FS	66.5	1.4	312	523	795	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		295735.194	3047549.815	1272.0		
99	D1E	48.5	-39.1	504	445	-281	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		295564.760	3047288.227	1068.0		
100	D1FS	57.5	-28.8	645	576	426	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		295617.847	3046787.285	1007.9		
101	D1B	61.0	9.9	329	488	580	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		295986.592	3046257.805	997.8		
102	D1B	53.5	0.0	455	415	-333	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		296125.348	3045958.966	984.5		
103	D1A	86.5	0.0	161	331	736	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		296316.918	3045546.381	1163.0		
104	D1B	76.0	13.0	437	327	1276	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		296384.802	3045400.178	1195.6		
105	D1FS	69.5	-1.6	689	605	346	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		296475.267	3044972.503	981.9		
106	D1A	62.5	0.0	234	493	821	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		296637.062	3044302.951	782.1		
107	D1D	49.0	-0.8	295	281	-404	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		296691.998	3044075.611	664.3		
108	D1B	50.5	0.0	534	416	165	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		296765.522	3043789.426	647.6		
109	D1FS	54.5	-2.8	635	605	259	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		296898.312	3043272.553	701.1		

RATMATE TO NEW HETAUDA

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
110	D1A	59.5	0.0	235	459	651	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		297086.357	3042666.516	925.4	
111	D1A	65.5	1.5	563	409	402	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		297164.18	3042445.07	973.8	
112	D1FL	62.0	-51.9	445	516	1233	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		297308.613	3041901.285	1103.6	
113	D1B	53.5	0.0	201	331	-334	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		297720.651	3041732.057	1004.7	
114	D1A	65.5	0.0	259	232	444	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		297906.337	3041655.794	1036.3	
115	D1A	65.5	0.0	256	258	338	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		298145.821	3041557.436	1049.8	
116	D1B	50.5	4.1	683	465	579	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		298382.912	3041460.060	1059.5	
117	D1A	56.5	0.0	215	450	423	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		298996.75	3041160.38	1013.8	
118	D1A	59.5	0.0	237	232	305	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		299187.509	3041060.950	999.5	
119	D1C	43.0	23.1	379	310	-68	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		299399.733	3040955.679	989.5	
120	D1FS	51.5	-23.0	713	548	888	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		299646.101	3040667.688	1033.4	
121	D1FS	51.5	1.5	408	539	651	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		300283.822	3040349.891	984.8	
122	D1D	47.5	8.3	295	354	173	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		300628.50	3040131.43	938.7	
123	D1A	56.5	0.0	342	345	488	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		300879.863	3039977.366	926.8	
124	D1A	65.5	0.0	466	406	364	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		301156.044	3039774.986	880.1	
125	D1B	44.5	5.1	424	446	329	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		301531.983	3039499.505	856.7	
126	D1A	56.5	0.0	471	448	424	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	6	-		301850.754	3039219.300	844.9	
127	D1A	68.5	0.0	384	432	763	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	-		302204.884	3038908.014	834.7	
128	D1B	59.5	1.7	361	378	272	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		302493.543	3038654.278	760.6	
129	D1A	50.5	0.0	223	296	422	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	2	-		302757.775	3038408.105	725.8	
130	D1E	51.5	38.0	369	300	-236	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		302921.211	3038255.840	673.0	
131	D1FS	51.5	0.0	720	549	973	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		302978.921	3037891.528	716.9	
132	D1E	68.0	-46.9	525	622	-113	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		303091.622	3037180.056	612.7	
133N	D1B	59.5	-2.7	292	408	946	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303526.000	3036886.000	729.0	
133AN	D1FS	51.5	17.4	363	327	244	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303775.000	3036734.000	717.0	
134N	D1B	59.5	15.0	222	292	920	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		304014.000	3036461.000	722.0	
135N	D1B	59.5	11.6	375	299	462	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304112.000	3036262.000	656.0	
136N	D1B	59.5	-4.3	552	464	-86	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304207.000	3035899.000	499.0	
137N	D1E	68.0	50.5	220	386	212	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304386.000	3035377.000	436.0	
138N	D1B	59.5	12.1	221	220	249	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304271.000	3035190.000	435.0	
139N	D1E	68.0	55.4	565	393	413	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		304118.000	3035030.000	434.0	
140N	D1C	67.0	-16.8	430	498	491	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303560.000	3035120.000	429.0	
141N	D1E	68.0	31.4	109	270	214	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303134.000	3035063.000	425.0	
142N (QC)	D1E	68.0	48.6	403	256	328	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		303034.000	3035107.000	425.0	
143N (QC)	D1C	67.0	-23.9	35	219	380.9.3	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302912.000	3035491.000	425.0	
Gantry (NEA)	ARBOR	NA	NA	NA	NA	NA	NA	NA	NA				NA	NA	NA	
144N	D1E	68.0	-33.9	75	55	-205	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302889.000	3035517.000	425.0	
145N	D1E	68.0	81.3	29	52	349	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302816.000	3035536.000	425.0	
146N	D1E	68.0	68.0	54	42	-173	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302819.000	3035565.000	425.0	
Gantry (MCA-Nepal)	ARBOR	22.5	16.8	0	27	27	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		302871.000	3035580.000	425.0	

Total Length 58150

1. Coordinates provided are tentative and will be finalized during check survey by the Contractor. However, for the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023). Any changes in future during check survey will be considered as Variation (positive or negative)

2. Stringing of Conductors (in all circuits) and OPGW (in both circuits) of Quad towers are in the scope of this Transmission Line Contract.

3. Stringing of Conductor, OPGW and OHGW upto the Gantry of MCA-Nepal and NEA is in the present scope of work with additional length of conductor/OPGW/OHGW for termination. The termination of conductor at equipment, inside the substation, is under the scope of Substation Contract. The bidder should also consider fixing of splicing boxes and necessary termination work at Gantry of both MCA-Nepal and NEA for termination of OPGW.

4. Existing NEA 220kV lines crossing between 133N and 133AN and NEA 132kV line crossing between 131N and 132N.

RATMATE TO LAPSIHEDI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
LF Bay (New Ratmate SS)	ARBOR	22.5	0.0	122	61	96	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308045.05	3081928.33	497.83	Coordinates provided has been finalized recently during 30KM survey. For the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023).
1N (DE)	D1E	48.5	-49.8	159	141	-351	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307936.74	3081872.29	495.78	
2N	D1E	71.0	79.3	248	204	419	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		307901.42	3081716.88	531.69	
3	D1A	74.5	0.3	193	220	253	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		308149.27	3081707.88	561.6	
4	D1E	69.5	32.2	208	204	-11	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308341.763	3081694.757	581.6	
5	D1B	68.5	-7.7	211	222	874	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308509.712	3081572.470	630.8	
6	D1E	48.5	-51.2	248	226	-322	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308682.84	3081451.38	608.6	
7	D1B	47.5	0.0	194	215	20	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		308909.684	3081550.526	646.1	
8	D1A	64.0	0.0	502	353	944	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	4	-		309092.323	3081616.399	694.8	
9	D1E	45.5	40.7	448	447	91	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		309550.577	3081820.673	663.7	
10	D1B	71.5	-2.0	324	397	126	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		309977.51	3081684.52	689.0	
11	D1C	67.0	16.3	201	299	757	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		310289.212	3081596.532	816.7	
12	D1E	54.5	-35.2	229	219	648	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		310459.230	3081489.640	834.1	
13	D1FS	69.5	0.0	1137	688	213	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	16	-		310687.674	3081501.960	758.7	
14	D1FS	72.5	-28.1	229	729	1241	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		311823.156	3081563.195	824.5	
15	D1B	68.5	0.0	667	453	84	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		312019.30	3081681.85	747.2	
16	D1FS	54.5	24.3	684	639	393	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		312589.891	3082027.029	752.5	
17	D1B	71.5	9.3	244	477	679	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		313268.930	3082108.753	827.7	
18	D1B	67.0	9.0	253	240	428	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		313512.63	3082098.47	835.7	
19	D1FS	66.5	-25.9	1053	648	662	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	10	-		313762.29	3082059.96	814.3	
20	D1FS	51.5	0.0	465	772	631	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		314781.918	3082323.640	714.1	
21	D1B	67.0	9.1	244	354	269	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		315231.694	3082439.943	692.3	
22	D1B	61.0	-13.7	430	338	566	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		315474.104	3082463.042	709.0	
23	D1B	56.5	6.7	284	358	292	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		315879.792	3082604.138	672.1	
24	D1C	56.5	-17.6	515	400	393	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		316157.360	3082665.420	657.2	
25	D1C	56.5	-29.3	315	416	209	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		316603.463	3082923.105	631.5	
26	D1D	59.5	13.5	330	323	549	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		316764.452	3083194.015	651.7	
27	D1C	70.0	28.1	356	344	314	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		316994.770	3083430.530	622.1	
28	D1E	65.0	-30.1	426	392	319	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		317334.398	3083538.724	612.4	
29	D1E	68.0	34.2	240	342	896	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		317620.854	3083854.444	610.3	
30	D1E	54.5	-42.5	239	248	-342	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		317854.633	3083910.712	532.4	
31	D1B	62.5	11.3	176	223	-272	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		317987.900	3084108.578	528.9	
32	D1A	71.5	0.0	280	237	442	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		318095.48	3084248.42	596.6	Existing 66kV Line Crossing (Devighat HEP to New Chabel).
33	D1B	65.5	13.1	305	296	82	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		318310.553	3084428.397	656.6	
34	D1E	60.5	-32.5	384	359	1021	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		318570.116	3084588.192	775.0	
35	D1C	68.5	27.0	437	411	405	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		318737.60	3084933.35	740.2	
36	D1C	62.5	23.7	441	436	457	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		319083.032	3085200.267	719.5	
37	D1C	53.5	-27.4	330	407	607	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		319511.814	3085303.085	695.6	
38	D1C	61.0	-20.3	405	377	418	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		319761.15	3085518.90	614.6	
39	D1C	59.5	25.1	426	404	134	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		319967.061	3085867.668	531.1	
40	D1C	56.5	29.3	429	443	-220	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		320311.306	3086118.501	510.7	Existing 66kV Line Crossing (Trishuli HPP to Balaju).
41	D1C	47.5	-18.1	334	404	551	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		320737.516	3086168.932	686.0	
42	D1A	53.5	0.0	246	298	518	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		321040.985	3086309.536	777.1	
43	D1C	67.0	28.8	388	318	630	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		321263.996	3086412.862	792.9	
44	D1B	71.5	13.5	266	328	453	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		321650.659	3086386.501	763.0	

RATMATE TO LAPSIPHEDI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
45	D1C	49.0	-20.1	378	325	-106	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		321903.989	3086306.991	748.5	
46	D1E	57.5	33.4	188	285	374	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		322281.582	3086324.514	787.7	
47	D1B	80.5	-9.9	722	455	508	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	-		322442.936	3086228.453	777.5	
48	D1E	53.0	56.5	218	473	1154	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		323117.311	3085971.285	835.7	
49	D1E	62.0	-75.6	257	246	-529	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		323172.37	3085759.89	736.6	
50	D1B	59.5	0.0	572	435	122	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		323429.144	3085763.569	765.9	
51	D1B	56.5	10.6	361	471	874	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		324000.868	3085746.140	952.8	
52	D1A	53.5	0.0	300	323	464	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	4	-		324353.58	3085668.62	978.5	
53	D1B	56.5	0.0	589	445	288	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		324646.49	3085604.25	959.3	
54	D1A	76.0	0.0	248	428	743	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		325221.68	3085477.85	981.0	
55	D1B	62.5	-3.3	351	311	48	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		325464.332	3085424.512	954.2	
56	D1B	64.0	12.0	321	339	652	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		325811.321	3085368.743	963.6	
57	D1C	59.5	27.1	496	411	168	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		326111.108	3085252.878	917.0	
58	D1B	53.5	-6.3	164	330	480	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		326441.197	3084883.143	916.6	
59	D1B	47.5	-13.4	317	241	20	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		326563.051	3084773.527	904.1	
60	D1C	53.5	17.8	414	366	665	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		326841.832	3084621.706	910.4	
61	D1B	53.5	-5.0	372	395	23	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		327133.43	3084328.20	847.9	
62	D1B	47.5	-5.7	255	325	955	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		327411.56	3084081.36	883.5	
63	D1B	47.5	0.0	293	283	-65	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		327619.66	3083933.47	795.9	
64	D1E	48.5	-30.5	393	342	109	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		327852.621	3083756.310	769.6	
65	D1C	55.0	20.7	360	385	-7	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		328243.835	3083720.694	783.0	
66	D1E	57.5	-38.4	235	316	1249	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		328567.603	3083563.622	892.6	
67	D1C	64.0	17.0	364	303	214	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		328787.98	3083644.07	811.4	
68	D1C	47.5	18.4	521	437	184	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		329147.552	3083590.064	749.3	
69	D1B	50.5	11.8	335	431	38	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		329628.139	3083387.868	710.9	
70	D1A	59.5	-0.5	316	329	425	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		329903.628	3083197.683	767.5	
71	D1E	66.5	-53.8	325	328	795	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		330164.848	3083020.535	794.8	
72	D1E	69.5	39.6	190	259	-152	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		330468.20	3083137.25	734.9	
73	D1B	53.5	-11.0	583	372	576	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	7	-		330646.908	3083072.603	765.8	
74	D1C	65.5	-29.5	373	482	668	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		331224.11	3082992.83	733.5	
75	D1E	66.5	52.5	316	358	-43	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		331573.528	3083124.544	672.6	
76	D1B	53.5	-12.0	264	291	468	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		331841.677	3082957.813	713.7	
77	D1B	59.5	-6.7	347	306	293	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		332090.392	3082868.040	703.8	
78	D1B	59.5	-10.7	361	354	348	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		332428.472	3082789.320	701.6	
79	D1B	68.5	-11.9	356	365	249	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		332788.771	3082774.465	691.7	
80	D1C	70.0	-19.1	197	277	338	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		333139.919	3082833.78	715.0	
81	D1A	53.5	0.0	213	191	283	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		333314.598	3082924.993	743.4	
82	D1C	62.5	23.3	384	300	272	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		333507.62	3083013.93	725.1	
83	D1B	50.5	7.9	229	325	90	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		333888.686	3083057.607	732.7	
84	D1C	61.0	-22.4	423	332	324	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		334117.68	3083047.69	758.9	
85	D1A	65.5	0.0	475	445	533	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		334518.78	3083182.70	817.5	
86	D1C	71.5	19.4	391	433	743	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		334964.501	3083347.815	849.9	
87	D1E	68.0	-31.0	274	333	155	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		335355.149	3083351.373	815.3	
88	D1E	71.0	50.7	259	274	168	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		335588.984	3083494.554	815.4	
89	D1E	71.0	-45.3	292	283	-24	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		335833.46	3083409.51	836.9	
90	D1E	71.0	49.5	275	283	700	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		336099.984	3083528.438	916.8	
91	D1E	71.0	-41.3	209	242	142	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		336352.205	3083419.611	919.7	
92	D1C	64.0	26.5	348	281	661	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		336551.071	3083484.127	942.5	

RATMATE TO LAPSIPHEDI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
93	D1C	64.0	-16.8	328	341	-62	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		336894.997	3083432.819	886.1	
94	D1B	62.5	7.5	337	335	701	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		337219.647	3083480.089	914.8	
95	D1C	67.0	17.8	246	297	-327	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		337556.574	3083484.451	865.2	
96	D1A	62.5	0.0	338	296	764	INSUL-SHT-1-B	OHGW-SHT-1-B	OPGW-SHT-1-B	-	-		337791.941	3083412.106	937.1	
97	D1E	71.0	-44.9	322	314	-28	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		338114.672	3083312.907	910.8	
98	D1C	71.5	23.4	557	446	503	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	8	-		338406.82	3083448.94	960.5	
99	D1E	50.0	38.1	273	438	730	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		338962.531	3083491.227	1064.9	
100	D1A	77.5	0.0	286	279	304	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		339189.311	3083339.641	1029.6	
101	D1C	68.5	-29.1	621	455	353	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		339430.53	3083186.20	1018.3	
102	D1FS	72.5	-4.1	650	638	594	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		340049.425	3083130.549	1019.5	
103	D1FS	72.5	12.2	466	569	690	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		340699.408	3083124.717	1043.3	
104	D1E	65.0	-33.8	404	437	259	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		341154.27	3083022.29	1034.2	
105	D1C	70.0	29.3	227	309	202	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		341534.790	3083157.206	1057.6	
106	D1B	65.5	0.0	241	244	-84	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		341759.309	3083124.997	1094.8	
107	D1C	55.0	24.7	206	232	703	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		341997.470	3083090.830	1200.1	
108	D1A	74.5	0.0	705	457	693	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	9	-		342170.815	3082978.962	1196.4	
109	D1FS	69.5	0.0	329	519	479	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		342763.424	3082596.522	1136.5	
110	D1B	71.5	-11.1	295	317	-160	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		343040.003	3082418.032	1113.2	
111	D1E	63.5	-41.2	224	266	348	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		343314.194	3082308.839	1195.3	
112	D1C	70.0	18.8	433	331	640	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		343525.764	3082383.508	1233.1	
113	D1C	44.5	23.7	222	335	163	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		343958.375	3082388.402	1256.8	
114	D1B	68.5	12.1	253	254	-324	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		344166.70	3082310.57	1256.7	
115	D1B	70.0	0.0	343	310	1323	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		344369.662	3082159.523	1386.7	
116	D1FS	71.0	-26.9	1003	683	152	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	-		344650.556	3081962.152	1330.6	
117	D1FS	71.0	-10.2	242	631	786	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		345643.278	3081818.884	1510.0	
118	D1A	65.5	0.0	316	280	311	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		345885.052	3081827.337	1538.8	
119	D1B	71.5	5.6	350	339	847	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		346201.201	3081838.390	1546.7	
120	D1C	65.5	-28.9	481	432	-436	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		346550.252	3081816.356	1462.9	
121	D1FL	69.5	37.9	536	522	746	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		346984.860	3082021.840	1603.5	
122	D1C	70.0	29.7	330	439	982	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		347508.510	3081905.300	1682.0	
123	D1C	50.5	23.6	186	272	-680	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		347753.300	3081683.300	1638.9	
124	D1B	70.0	-3.2	222	214	906	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		347829.510	3081513.550	1708.3	
125	D1E	74.0	-30.9	388	309	-59	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		347931.650	3081316.700	1700.5	
126	D1C	62.5	-17.1	314	369	84	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		348262.027	3081112.778	1792.4	
127	D1B	62.5	10.4	258	300	1050	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	9	-		348566.210	3081033.910	1923.3	
128	D1B	71.5	3.0	596	434	636	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	6	-		348799.924	3080925.100	1892.6	
129	D1FS	68.0	22.1	542	580	531	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		349326.042	3080645.923	1772.0	
130	D1FS	69.5	0.0	536	555	730	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		349674.260	3080230.019	1675.4	
131	D1B	59.5	0.0	337	449	214	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		350018.450	3079818.926	1524.7	
132	D1D	50.5	13.6	327	334	308	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		350234.560	3079560.809	1489.0	
133	D1C	55.0	-16.6	262	296	73	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		350379.605	3079267.689	1447.3	
134	D1B	67.0	14.0	189	245	1112	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		350558.256	3079075.743	1439.4	
135	D1E	50.0	30.8	416	322	-414	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		350649.737	3078910.082	1332.9	
136	D1C	53.5	-27.3	259	338	173	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		350635.648	3078494.175	1308.4	
137	D1A	53.5	0.0	263	255	284	INSUL-SHT-1-A	OHGW-SHT-1-A	OPGW-SHT-1-A	-	-		350746.500	3078259.807	1326.1	
138	D1E	71.0	-32.5	261	263	340	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		350856.32	3078021.18	1313.6	
139	D1B	71.5	-13.1	473	371	567	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	-		351070.20	3077872.22	1307.7	
140	D1FS	51.5	30.5	664	565	334	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	-		351523.019	3077735.431	1267.8	

RATMATE TO LAPSIPHEDI

STRUCTURE	TOWER TYPE ⁽¹⁾	MINIMUM HEIGHT (m)	LINE ANGLE (deg) ⁽²⁾	AHEAD SPAN (m)	WIND SPAN (m)	WEIGHT SPAN (m)	INSULATOR ASSEMBLY DRAWING NUMBER	OHGW ASSEMBLY DRAWING NUMBER	OPGW ASSEMBLY DRAWING NUMBER	NUMBER OF MARKER BALLS IN AHEAD SPAN	NUMBER OF BIRD DIVERTERS IN AHEAD SPAN ⁽³⁾	NUMBER OF BIRD NESTING PLATFORMS PER STRUCTURE	COORDINATES (WGS84/UTM Zone 45N)		GROUND ELEVATION (m)	COMMENTS
													Easting	Northing		
141	D1FS	68.0	-34.4	554	608	853	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	4	-		351953.374	3077229.599	1258.6	
142	D1FL	65.0	42.0	484	518	146	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		352491.03	3077095.32	1186.1	
143	D1B	47.5	2.6	259	371	535	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	5	-		352741.985	3076681.560	1246.2	
144	D1B	50.5	-2.7	560	412	180	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		352872.179	3076457.371	1241.3	
145	D1B	50.5	14.1	271	422	282	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	2	40		353175.918	3075987.227	1318.1	
146	D1E	65.0	49.1	292	292	178	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		353262.851	3075730.881	1369.6	
147	D1E	56.0	-72.9	221	268	186	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		353115.467	3075478.933	1471.4	
148	D1E	71.0	41.8	261	246	1254	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		353260.10	3075311.42	1542.3	
149	D1B	71.5	1.5	251	276	154	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	13	40		353263.12	3075050.18	1467.0	
150	D1FS	62.0	-3.0	814	553	-68	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	80		353260.46	3074799.31	1421.0	
151	D1B	53.5	5.4	164	493	393	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		353291.063	3073986.072	1589.4	
152	D1B	71.5	-3.8	354	262	668	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	11	40		353282.153	3073822.758	1620.1	
153	D1FS	72.5	0.0	681	519	699	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	12	80		353286.221	3073469.240	1623.4	
154	D1FS	57.5	0.0	1084	887	571	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	100		353294.052	3072788.668	1569.5	
155	D1FS	69.5	31.9	246	670	634	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		353306.527	3071704.438	1671.1	
156	D1E	68.0	-41.9	183	229	1146	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	3	20		353182.17	3071492.67	1706.7	
157	D1E	47.0	52.7	464	346	-122	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		353212.371	3071312.307	1629.8	
158	D1B	52.0	-14.5	460	460	194	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	60		352905.52	3070963.65	1554.8	
159	D1B	53.5	0.0	303	375	10	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		352684.83	3070560.58	1562.6	
160	D1E	66.5	-72.0	353	369	891	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	40		352551.63	3070288.24	1630.6	
161	D1E	51.5	96.9	37	245	118	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	20		352754.10	3069999.31	1615.9	
psiphedi Substati	ARBOR	22.5	0.0	0	33	45	INSUL-SHT-2	OHGW-SHT-2	OPGW-SHT-2	-	-		352717.59	3069993.59	1638.9	

Coordinates provided are tentative and will be finalized during check survey by the Contractor. However, for the preparation of the offer (technical and financial) the bidder should consider the coordinates and other details stated in this present Nepal Master Structure List (dated 14 Feb 2023). Any changes in future during check survey will be considered as Variation (positive or negative).

Total Length 59020

Tower Foundation Footprint Calculation for Various Type of Towers of Various Height:

Footprint width @12% average slope

Tower Height (m)	50.5	52.0	53.5	55.0	56.5	58.0	59.5	61.0	62.5	64.0	65.5	67.0	68.5	70.0
Extension	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00	25.50
FOOTPRINT: For Type D1A & D1B	21	21	22	22	22	23	23	24	24	24	25	25	25	26
<i>Diagonal Radius (m)</i>	14.85	14.85	15.56	15.56	15.56	16.26	16.26	16.97	16.97	16.97	17.68	17.68	17.68	18.38
	71.5	73.0	74.5	76.0	77.5	79.0	80.5	82.0	83.5	85.00	86.50			
	27.00	28.50	30.00	31.50	33.00	34.50	36.00	37.50						
	26	26	27	27	27	28	28	29	29	29	30			
	18.38	18.38	19.09	19.09	19.09	19.80	19.80	20.51	20.51	20.51	21.21			

Tower Height (m)	47.5	49	50.5	52	53.5	55	56.5	58	59.5	61	62.5	64	65.5	67
Extension	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00	25.50
FOOTPRINT: For Type D1C, D1D & D1E	24	24	25	25	25	26	26	27	27	27	28	28	28	29
<i>Diagonal Radius (m)</i>	16.97	16.97	17.68	17.68	17.68	18.38	18.38	19.09	19.09	19.09	19.80	19.80	19.80	20.51
	68.5	70	71.5	73	74.5	77.5	80.5	82	83.5	85	86.5	88	91	92.20
	27.00	28.50	30.00	31.50	33.00	36.00	39.00	40.50	42.00	43.50	45.00		49.50	
	29	29	30	30	30	31	32	32	33	33	33	34	34	35
	20.51	20.51	21.21	21.21	21.21	21.92	22.63	22.63	23.33	23.33	23.33	24.04	24.04	24.75

Tower Height (m)	47.5	48.5	50.5	52	53.5	55	56.5	58	59.5	61	62.5	64	65.5	67
Extension	6		9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00	25.50
FOOTPRINT: For Type D1F	25	25	26	26	26	27	27	28	28	28	29	29	29	30
<i>Diagonal Radius (m)</i>	17.68	17.68	18.38	18.38	18.38	19.09	19.09	19.80	19.80	19.80	20.51	20.51	20.51	21.21
	68.5	69.50	71	72.50	75.50	78.50	81.50	83.00	84.50	87.50	92.00			
	27.00													
	30	30	31	31	32	32	33	34	34	35	36			
	21.21	21.21	21.92	21.92	22.63	22.63	23.33	24.04	24.04	24.75	25.46			

FOOTPRINT For MULTICIRCUIT	40
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Annex I_ LIDAR Data

<https://drive.google.com/drive/folders/16jJzoiYHFfBHc8-RoHNE9w2FoZfw3MeE?usp=sharing>

Annex I1_ Contour data of approximately 30km route (in stretches)

https://drive.google.com/drive/folders/1fsKjs-Irras4pcLizehzz8XGeyA467K5?usp=share_link