NEPAL ELECTRICITY AUTHORITY

(An Undertaking of Government of Nepal)

Distribution and Consumer Service Directorate

Community Rural Electrification Department

TENDER NO.: CRED/Rehab/2074/075-06

SUPPLY, DELIVERY, INSTALLATION AND REHABILITATION OF 11/0.4-0.23 kV ELECTRICAL DISTRIBUTION NETWORK
AT
THE DISTRIBUTION AREA OF

Simthali Samudayik Gramin Bidhutikaran Upabhokta Sanstha, Simthali, Kavre

July 2017

Abbreviations

BD ... .Bidding Document
BDF .... Bidding Forms
BDS .... Bid Data Sheet
BOQ ... . Bill of Quantities
CBO ..... Community Based Organization
COF ..... . Contract Forms
DP ..... . Development Partners
ELI ... . Eligibility
EQC .... Evaluation and Qualification Criteria
EXP ... . Experience
FIN ... . Financial
GCC ... . General Conditions of Contract
GoN .... Government of Nepal
ICC ... . International Chamber of Commerce
IFB ……..... Invitation for Bids
ITB ... . Instructions to Bidders
JV ... . Joint Venture
LIT ... . Litigation
NCB ... . National Competitive Bidding
PAN ... . Permanent Account Number
PPA ... . Public Procurement Act
PPMO ... . Public Procurement Monitoring Office
PPR ... . Public Procurement Regulations
PL ... .Profit & Loss
SBD .... Standard Bidding Document
SCC ... . Special Conditions of Contract
TS ... .Technical Specifications
VAT ... . Value Added Tax
WRQ ... . Works Requirements

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Invitation for Bids

(First date of Publication : 26th July 2017 AD (2074.04.11 BS)

Invitation for the Bids for the following Tenders

1. Nepal Electricity Authority Invites sealed bids from eligible bidders for Supply, Delivery, Installation/Erection, Testing and Commissioning of 11/0.4-0.23 kV Electrical Distribution Network (S. No.1-2) and Supply, Delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network (S.No. 3 to 7) as specified below.
2. Eligible Bidders may obtain further information and inspect the bidding documents at the office below. For electronic bidding the website is: http://www.eproc.nea.org.np
3. All Bids accompanied by a bid bond (as specified below) must be delivered in accordance with the Instruction to Bidders latest by **12:00 Noon (local time)** on or before the dates specified and at the address given below. The bids shall be opened at **CRED, NEA, Balaju, Kathmandu** at **2:00 PM (local time)** on the last date of bid submission, in the presence (or without presence) of the authorized representatives of the bidders who choose to be present.
4. If the last date of purchasing and /or submission falls on a government holiday, then the next working day shall be considered as the last date. In such case the validity period of the bid security shall remain the same as specified for the original last date of bid submission.

S. No.	Tender No.	Description	Cost of Bid Document (NRs.)	Last Date for Bid Purchase	Last Date of Bid Submission	Bid Bond		Deposit Account Number
						Amount (NRs.)	Validity Period	
1	CRED/Line/2074/075-01	The distribution area of Basanta Samaj Bikash Kendra, Basantapur, Tehrathum.	3,000.00	2074.05.09 25 Aug. 2017	2074.05.11 27 Aug. 2017	1,00,000.00	120 Days (Bid validity : 90 days)	**Account No.00100100004910000001 at Jyoti Bikash Bank, Kathmandu**
2	CRED/Line/2074/075-02	The distribution area of Panchadhura Samudayik Bidhutikaran Upabhokta Samuha, Maisthan, Mahottari.	3,000.00	2074.05.09 25 Aug. 2017	2074.05.11 27 Aug. 2017	3,50,000.00	120 Days (Bid validity : 90 days)	
3	CRED/Rehab/2074/075-03	The distribution area of Timal Gramin Samudayik Bidhutikaran Sahakari Sanstha Ltd., Timal, Kavre	3,000.00	2074.05.11 27 Aug. 2017	2074.05.12 28 Aug. 2017	4,25,000.00	120 Days (Bid validity : 90 days)	
4	CRED/Rehab/2074/075-04	The distribution area of Damek Samudayik Gramin Bidhut Upabhokta Samiti, Damek, Baglung	3,000.00	2074.05.11 27 Aug. 2017	2074.05.12 28 Aug. 2017	1,75,000.00	120 Days (Bid validity : 90 days)	
5	CRED/Rehab/2074/075-05	The distribution area of Gramin Samudayik Bidhut Upabhokta Samiti, Phirphire, Tanahu	3,000.00	2074.05.12 28 Aug. 2017	2074.05.13 29 Aug. 2017	70,000.00	120 Days (Bid validity : 90 days)	
6	CRED/Rehab/2074/075-06	The distribution area of Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre	3,000.00	2074.05.12 28 Aug. 2017	2074.05.13 29 Aug. 2017	1,00,000.00	120 Days (Bid validity : 90 days)	
7	CRED/Rehab/2074/075-07	The Distribution area of Wami Gramin Bidhyut Upabhokta Samiti, Wami, Gulmi	3,000.00	2074.05.12 28 Aug. 2017	2074.05.13 29 Aug. 2017	1,10,000.00	120 Days (Bid validity : 90 days)	

Nepal Electricity Authority (NEA)
Distribution and Consumer Service Directorate
Community Rural Electrification Department
Balaju, Kathmandu
Phone: +977-1-4388610, Fax: +977-01-4360057
Email: cred.nea@gmail.com

Part - I

BIDDING PROCEDURES

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SECTION - I

Instructions to Bidders

A. General	
1. Scope of Bid	1.1 In connection with the Invitation for Bids indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of Works as specified in Section V (Works Requirements). The name, identification, and number of Contracts of the National Competitive Bidding (NCB) are provided in the BDS. 1.2 Throughout this Bidding Document: (a) the term "in writing" means communicated in written form and delivered against receipt; (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and (c) "day" means calendar day.
2. Source of Funds	2.1 GoN Funded: In accordance with its annual program and budget, approved by the GoN, the implementing agency indicated in the BDS plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued. Or Public Entities' own Resource Funded: In accordance with its annual program and budget, approved by the public entity, the implementing agency indicated in the BDS plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued. Or DP Funded: The GoN has applied for or received financing (hereinafter called "funds") from the Development Partner (hereinafter called "the DP") indicated in the BDS toward the cost of the project named in the BDS. The GoN intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued. 2.2 DP Funded: Payment by the DP will be made only at the request of

	the GoN and upon approval by the DP in accordance with the terms and conditions of the financing agreement between the GoN and the DP (hereinafter called the "Loan/Grant Agreement"), and will be subject in all respects to the terms and conditions of that Loan/Grant Agreement. No party other than the GoN shall derive any rights from the Loan Agreement or have any claim to the funds.
3. Fraud and Corruption	3.1 The Government of Nepal (GoN) requires that the Procuring Entities as well as bidders, suppliers and contractors and their sub-contractors under GoN/DP-financed contracts, shall adhere to the highest standard of ethics during the procurement and execution of such contracts. In this context, the Employer; (a) defines, for the purposes of this provision, the terms set forth below as follows: (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party; (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; (iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; (iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party. (v) "Obstructive practice" means: (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a GoN/DP investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or

intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the GoN's/DP's inspection and audit rights provided for under sub-clause 3.5 below.

(b) will reject bid(s) if it determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

3.2 The Bidder shall not carry out or cause to carry out the following acts with an intention to influence the implementation of the procurement process or the procurement agreement :

(a) give or propose improper inducement directly or indirectly,

(b) distortion or misrepresentation of facts,

(c) engaging in corrupt or fraudulent practice or involving in such act,

(d) interference in participation of other competing bidders,

(e) coercion or threatening directly or indirectly to cause harm to the person or the property of any person to be involved in the procurement proceedings,

(f) collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Employer the benefit of open competitive bid price,

(g) contacting the Employer with an intention to influence the Employer with regards to the bids or interference of any kind in examination and evaluation of the bids during the period from the time of opening of the bids until the notification of award of contract.

3.3 PPMO, on the recommendation of the Procuring Entity may blacklist a Bidder for a period of one (1) to three (3) years for its conduct including on the following grounds and seriousness of the act committed by the bidder:

(a) if convicted by a court of law in a criminal offence which disqualifies the Bidder from participating in the contract,

	(b) if it is established that the contract agreement signed by the Bidder was based on false or misrepresentation of Bidder's qualification information, (c) if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing,- a GoN/DP-financed contract. (d) if the successful bidder fails to sign to contract. 3.4 A bidder declared blacklisted and ineligible by the GoN, Public Procurement Monitoring Office (PPMO) and/or the DP in case of DP funded project, shall be ineligible to bid for a contract during the period of time determined by the GoN, PPMO and/or the DP. 3.5 The Contractor shall permit the GoN/DP to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the GoN/DP, if so required by the GoN/DP. 3.6 DP Funded: In pursuance of the fraud and corruption policy, the DP. (a) will reject a proposal if it determines that the bidder recommended for award has directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question; (b) will cancel the portion of the loan/ credit/ grant allocated to a contract if it determines at any time that representative(s) of the GoN or of a beneficiary of the fund engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the GoN having taken timely and appropriate action satisfactory to the DP to remedy the situation.
4. Eligible Bidders	4.1 A Bidder may be a natural person, private entity, or government - owned entity—subject to ITB 4.5—or any combination of them in the form of a Joint Venture (JV) under an existing agreement, or with the intent to constitute a legally-enforceable joint venture. In the case of a JV: (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. Maximum number of JV shall be as specified in the BDS. The qualification requirement of the parties to the JV

	shall be as specified in Section III Evaluation and Qualification Criteria, and (b) the JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during Contract execution. 4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of any country or eligible countries mentioned in the BDS. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, or incorporated, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed Sub-Contractors or suppliers for any part of the Contract including related services. 4.3 A Bidder shall not have a conflict of interest. A Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process, if: (a) they have controlling partners in common; or (b) they receive or have received any direct or indirect subsidy from any of them; or (c) they have the same legal representative for purposes of this bid; or (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or (e) a Bidder participates in more than one bid in this bidding process either individually or as a partner in a joint venture. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same sub-Contractor in more than one bid; or (f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Contract that is the subject of the Bid; or (g) a Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer for the Contract.

	4.4 A firm that is under a declaration of ineligibility by the GoN/DP in accordance with ITB 3, at the date of the deadline for bid submission or thereafter, shall be disqualified. 4.5 Enterprises owned by Government shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the GoN. 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request. 4.7 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders. 4.8 Firms shall be excluded in any of the cases, if (a) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Nepal prohibits any import of goods or Contracting of works or services from that country or any payments to persons or entities in that country. (b) DP Funded: as a matter of law or official regulation, Nepal prohibits commercial relations with that country, provided that the DP is satisfied that such exclusion does not preclude effective competition for the supply of goods or related services required; (c) DP Funded: a firm has been determined to be ineligible by the DP in relation to their guidelines or appropriate provisions on preventing and combating fraud and corruption in projects financed by them. 4.9 The bidder shall meet the eligibility criteria specified in section III (Evaluation and Qualification Criteria) of bid document.
5. Eligible Materials, Equipment and Services	5.1 The materials, equipment and services to be supplied under the Contract shall have their origin in any source countries as defined in ITB 4.2 above and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services. 5.2 For purposes of ITB 5.1 above, "origin" means the place where the

	materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.
B. Contents of Bidding Documents	
6. Sections of Bidding Document	6.1 The Bidding Document consist of Parts I, II, and III, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8. PART I Bidding Procedures Section I Instructions to Bidders (ITB) Section II Bid Data Sheet (BDS) Section III Evaluation and Qualification Criteria (EQC) Section IV Bidding Forms (BDF) PART II Requirements Section V Works Requirements (WRQ) Section VI Bill of Quantities (BOQ) PART III Conditions of Contract and Contract Forms Section VII General Conditions of Contract (GCC) Section VIII Special Conditions of Contract (SCC) Section IX Contract Forms (COF) 6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Document. 6.3 The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids. 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.
7. Clarification of Bidding Document, Site	7.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address indicated in BDS or raise any question or curiosity

Visit, Pre-Bid Meeting	during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer shall be required to make available as soon as possible the answer to such question or curiosity in writing to any request for clarification, provided that such request is received as mentioned in ITB 7.5. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 22.2. 7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the bid and entering into a Contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense. 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection. 7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. 7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer as mentioned in BDS. 7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum

	pursuant to ITB 8 and not through the minutes of the pre-bid meeting. 7.7 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.
8. Amendment of Bidding Document	8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing agenda. 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3. 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2
C. Preparation of Bids	
9. Cost of Bidding	9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
10. Language of Bid	10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.
11. Documents Comprising the Bid	11.1 The Bid shall comprise the following: (a) Letter of Bid; (b) completed Schedules, in accordance with ITB 12 and 14, or as stipulated in the BDS; (c) Bid Security, in accordance with ITB 19; (d) alternative bids, at Bidder's option and if permissible, in accordance with ITB 13; (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;

	(f) documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the Contract; (g) Technical Proposal in accordance with ITB 16; (h) In the case of a bid submitted by a JV, the JV agreement, or letter of intent to enter into a JV including a draft agreement, indicating at least the parts of the Works to be executed by the respective partners; and (i) Any other document required in the BDS. 11.2 The Bidder is solely responsible for the authenticity of the documents submitted by the Bidder.
12. Letter of Bid and Schedules	12.1 The Letter of Bid, Schedules, and all documents listed under ITB 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
13. Alternative Bids	13.1 Unless otherwise indicated in the BDS, alternative bids shall not be considered. 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the BDS, as will the method of evaluating different times for completion. 13.3 When specified in the BDS pursuant to ITB 13.1, and subject to ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document must first price the Employer's design as described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer. 13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified in the BDS and described in Section V (Works Requirements). The method for their evaluation will be stipulated in Section III (Evaluation and Qualification Criteria).

14. Bid Prices and Discounts	14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below. 14.2 The Bidder shall submit a bid for the whole of the works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section IV(Bidding Forms). In case of Unit Rate Contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities. 14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered. 14.4 Unconditional discounts, if any, and the methodology for their application shall be quoted in the Letter of Bid, in accordance with ITB 12.1. 14.5 If so indicated in ITB 1.1, bids are invited for individual Contracts or for any combination of Contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the bids for all Contracts are submitted and opened at the same time. 14.6 Unless otherwise provided in the BDS and the Conditions of Contract, the prices quoted by the Bidder shall be fixed. If the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Table of Adjustment Data in Section IV (Bidding Forms) and the Employer may require the Bidder to justify its proposed indices and weightings. 14.7 The bidder is subject to local taxes such as VAT, social charges or income taxes on nonresident international personnel, and also duties, fees, levies on amounts payable by the employer under the Contract. All duties, taxes, and other levies payable by the Contractor under

		the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total bid price submitted by the Bidder.
15. Currency of Bid and Payment	15.1	The currency of the bid and payment shall be in Nepalese Rupees.
16. Documents Comprising the Technical Proposal	16.1	The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.
17. Documents Establishing the Qualifications of the Bidder	17.1	To establish its qualifications to perform the Contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section IV (Bidding Forms).
18. Period of Validity of Bids	18.1	Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Employer. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.
	18.2	In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended 30 days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its Bid.
19. Bid Security	19.1	The Bidder shall furnish as part of its bid, in original form, a bid security as specified in the BDS.
	19.2	The bid security shall be, at the Bidder's option, in any of the following forms: (a) an unconditional bank guarantee from "A" class commercial bank or; (b) a cash deposit voucher in the Employer's Account as specified in BDS. In the case of a bank guarantee, the bid security shall be

	submitted either using the Bid Security Form included in Section IV (Bidding Forms) or in another Form acceptable to the employer. The form must include the complete name of the Bidder. The bid security shall be valid for minimum thirty (30) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2. 19.3 The bid security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal. 19.4 Any bid not accompanied by an enforceable and substantially compliant bid security shall be rejected by the Employer as nonresponsive. 19.5 The bid security of unsuccessful Bidders shall be returned within three days, once the successful bidder has furnished the required performance security and signed the Contract Agreement pursuant to ITB 38.1and 39.1. 19.6 The bid security shall be forfeited if: (a) a Bidder requests for withdrawal or modification of its bid, except as provided in ITB 18.2: (i) during the period of bid validity specified by the Bidder on the Letter of Bid, in case of electronic submission; (ii) from the period twenty-four hours prior to bid submission deadline up to the period of bid validity specified by the Bidder on the Letter of Bid, in case of hard copy submission. (b) a bidder changes the prices or substance of the bid while providing information pursuant to clause 27.1; (c) a bidder involves in fraud and corruption pursuant to clause 3.1; (d) the successful Bidder fails to: (i) furnish a performance security in accordance with ITB 39.1; (ii) sign the Contract in accordance with ITB 40.1; or (iii) accept the correction of arithmetical errors pursuant to clause 32 ; 19.7 The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

20. Format and Signing of Bid	20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it ORIGINAL". Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the bid in the number specified in the BDS, and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail. 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid, except for un amended printed literature, shall be signed or initialed by the person signing the bid. 20.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.
D. Submission and Opening of Bids	
21. Sealing and Marking of Bids	21.1 Bidders may always submit their bids by mail or by hand or by courier. When so specified in the BDS, bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows: (a) Bidders submitting bids by mail, by hand or by courier i. Bidders shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope. ii. The inner and outer envelopes shall: (aa) bear the name and address of the Bidder; (bb) be addressed to the Employer as provided in BDS 22.1; (cc) bear the specific identification of this bidding

	process indicated in BDS 1.1; and (dd) The outer envelope and the inner envelope containing the Bid shall bear a warning not to open before the time and date for the opening of Bid in accordance with ITB 25.1. iii. If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid. (b) Bidders submitting bids electronically shall follow the electronic bid submission procedures specified in the BDS.
22. Deadline for Submission of Bids	22.1 Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS. 22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
23. Late Bids	23.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
24. Withdrawal, and Modification of Bids	24.1 A Bidder may withdraw, or modify its bid after it has been submitted either in hard copy or by e-submission. Procedures for withdrawal or modification of submitted bids are as follows: Bids submitted in hard copy (a) Bidders may withdraw or modify its bids by sending a written notice in a sealed envelope, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2 before 24 hours prior to the deadline of submission of bids. The corresponding modification of the bid must accompany the respective written notice. All notices must be: (aa) prepared and submitted in accordance with ITB 20 and ITB 21,and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "MODIFICATION;" and (bb) received by the Employer twenty four hour prior to the deadline prescribed for submission of bids, in accordance with ITB 22.

	24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders after completion of the bid opening. 24.3 Bidder may submit request for withdrawal or modification only one time. 24.4 No bid may be withdrawn if the bid has already been modified. 24.5 Request for withdrawal or modification must be made through the same medium of submission. Request for withdrawal or modifications through different medium shall not be considered. 24.6 The following provisions apply for withdrawal or modification of the Bids: (i) In case of bids submitted in hard copy no bid shall be withdrawn or modified in the interval between 24 hours prior to the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof. (ii) In case of e-submitted bids no bids shall be withdrawn or modified in the interval between deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.
25. Bid Opening	25.1 The Employer shall open the bids in public at the address, date and time specified in the BDS in the presence of Bidders' designated representatives who choose to attend. 25.2 The Employer shall download the e-submitted bid files. 25.3 Electronically submitted bid shall be opened at first in the same time and date as specified above. Electronic Bids shall be opened one by one and read out. The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files shall be considered incomplete. 25.4 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be Permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request

	the modification and is read out at bid opening. Only envelopes that are opened and read out at bid opening shall be considered further. 25.5 All other envelopes shall be opened one at a time, reading out: the name of the Bidder; the Bid Price(s), including any discounts and alternative bids and indicating whether there is a modification; the presence of a bid security and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out at bid opening shall be considered for evaluation. No bid shall be rejected at bid opening except for late bids, in accordance with ITB 23.1. 25.6 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; the Bid Price, per Contract if applicable, including any discounts and alternative offers; and the presence or absence of a bid security. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.
E. Evaluation and Comparison of Bids	
26. Confidentiality	26.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids and recommendation of Contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders. 26.2 Any attempt by a Bidder to influence the Employer in the evaluation of the bids or Contract award decisions may result in the rejection of its bid. 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing.
27. Clarification of Bids	27.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be

	sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 32. In case of e-submission of bid, upon notification from the employer, the bidder shall also submit the original of documents comprising the bid as per ITB 11.1 for verification of submitted documents for acceptance of the e-submitted bid. 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Employer's request for clarification, its bid may be rejected.
28. Deviations, Reservations, and Omissions	28.1 During the evaluation of bids, the following definitions apply: (a) "Deviation" is a departure from the requirements specified in the Bidding Document; (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
29. Determination of Responsiveness	29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB11. 29.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that, (a) if accepted, would: (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids. 29.3 The Employer shall examine the technical aspects of the bid

	submitted in accordance with ITB 16, Technical Proposal, in particular, to confirm that all requirements of Section V (Works Requirements) have been met without any material deviation, reservation or omission. 29.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission. 29.5 In case of e-submission bids, the Employer evaluates the bid on the basis of the information in the electronically submitted bid files. If the Bidder cannot substantiate or provide evidence to establish the information provided in e-submitted bid through documents/ clarifications as per ITB Clause 27.1, the bid shall not be considered for further evaluation.
30. Nonconformities, Errors, and Omissions	30.1 Provided that a bid is substantially responsive, the Employer may waive any non-conformities, errors & omission in the bid that do not constitute a material deviation, reservation, or omission. 30.2 Provided that a bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the bid. Failure of the Bidder to comply with the request may result in the rejection of its bid. 30.3 Provided that a bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price may be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the methods indicated in Section III (Evaluation and Qualification Criteria). 30.4 If minor discrepancies are found such as in technical specification, description, feature which does not make the bid to be rejected, then the cost, which is calculated to the extent possible due to such differences, shall be included while evaluating the bid. 30.5 If the value of such non-conformities is found to be more than fifteen percent of the quoted amount of the bidder on account

	of minor discrepancies pursuant to ITB 30.4, such bid shall be considered ineffective in substance and shall not be involved in evaluation.
31. Correction of Arithmetical Errors	31.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis: (a) only for unit price Contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected; (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and (c) If there is a discrepancy between the bid price in the Summary of Bill of Quantities and the bid amount in item (c) of the Letter of Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Bid will be corrected. (d) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a), (b) and (c) above. 31.2 If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security shall be forfeited.
32. Evaluation of Bids	32.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted. 32.2 To evaluate a bid, the Employer shall consider the following: (a) the bid price, excluding Value Added Tax, Provisional Sums, and the provision, if any, for contingencies in the Summary Bill of Quantities**,** for Unit Rate Contracts, or Schedule of Prices for lump sum Contracts, but including Day work items, where priced competitively;

	(b) price adjustment for correction of arithmetic errors in accordance with ITB 32; (c) price adjustment due to discounts offered in accordance with ITB 14.4; (d) adjustment for nonconformities in accordance with ITB 30; (e) application of all the evaluation factors indicated in Section III (Evaluation and Qualification Criteria); 32.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation. 32.4 If this Bidding Document allows Bidders to quote separate prices for different Contracts, and to award multiple Contracts to a single Bidder, the methodology to determine the lowest evaluated price of the Contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III (Evaluation and Qualification Criteria). 32.5 If the bid for an Unit Rate Contract, which results in the lowest Evaluated Bid Price, is seriously unbalanced, front loaded or substantially below updated estimates in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder as mentioned in BDS to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. 32.6 In case of e-submission bids, the Employer evaluates the bid on the basis of the information in the electronically submitted bid files. If the Bidder cannot substantiate or provide evidence to establish the information provided in e-submitted bid through documents/ clarifications as per ITB Clause 27.1, the bid shall not be considered for further evaluation.
33. Comparison of Bids	33.1 The Employer shall compare all substantially responsive bids in accordance with ITB 32.2 to determine the lowest evaluated bid.

34. Qualification of the Bidder	34.1 The Employer shall determine to its satisfaction during the evaluation of Bids whether Biddersmeet the qualifying criteria specified in Section III (Evaluation and Qualification Criteria). 34.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.1. 34.3 An affirmative determination of qualification shall be a prerequisite for the opening and evaluation of a Bidder's Price Bid. A negative determination shall result into the disqualification of the Bid.
35. Employer's Right to Accept Any Bid, and to Reject Any or All Bids	35.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to Contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.
F. Award of Contract	
36. Award Criteria	36.1 The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
37. Letter of Intent to Award the Contract/Notification of Award	37.1 The Employer shall notify the concerned Bidder whose bid has been selected in accordance with ITB 37.1 within seven days of the selection of the bid, in writing that the Employer has intention to accept its bid and the information regarding the name, address and amount of selected bidder shall be given to all other bidders who submitted the bid. 37.2 If no bidder submits an application pursuant to ITB 40 within a period of seven days of the notice provided under ITB 37.1, the Employer shall, accept the bid selected in accordance with ITB 36.1 and Letter of Acceptance shall be communicated to the selected bidder prior to the expiration of period of Bid validity, to furnish the performance security and sign the contract within fifteen days.
38. Performance Security	38.1 Within Fifteen (15) days of the receipt of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security in accordance with the Conditions of

	Contract, as specified below from A class Commercial Bank using Sample Form for the Performance Security included in Section IX (Contract Forms), or another form acceptable to the Employer. The performance security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal. i) If bid price of the bidder selected for acceptance is up to 15 (fifteen) percent below the approved cost estimate, the performance security amount shall be 5 (five) percent of the bid price. ii) For the bid price of the bidder selected for acceptance is more than 15 (fifteen) percent below of the cost estimate, the performance security amount shall be determined as follows: **Performance Security Amount = [(0.85 × Cost Estimate – Bid Price) × 0.5] + 5% of Bid Price.** The Bid Price and Cost Estimate shall be inclusive of Value Added Tax. 38.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily. The process shall be repeated according to ITB 37.
39. Signing of Contract	39.1 The Employer and the successful Bidder shall sign the Contract Agreement within the period as stated ITB 38.1. 39.2 At the same time, the Employer shall affix a public notice on the result of the award on its notice board and make arrangement for causing such notice to be affixed on the notice board also of the District Development Committee, District Administration Office and District Treasury and Controller Office. The Employer may make arrangements to post the notice into its website, if it has; and if it does not have, into the website of the Public Procurement Monitoring Office, identifying the bid and lot numbers and the following information: (i) the result of evaluation of bid; (ii) date of publication of notice inviting bids; (iii) name of newspaper; (iv) reference number of notice; (v) item of procurement; (vi) name and address of bidder making contract

	and (viii) contract price. 39.3 Within thirty (30) days from the date of issuance of notification pursuant to ITB 37.1 unsuccessful bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their bids were not selected. The Employer shall promptly respond in writing to any unsuccessful Bidder who, requests for debriefing. 39.4 If the bidder whose bid has been accepted fails to sign the contract as stated ITB 39.1, the Public Procurement Monitoring Office shall blacklist the bidder on recommendation of the Public Entity.
40. Complaint and Review	40.1 If a Bidder is dissatisfied with the Procurement proceedings or the decision made by the Employer in the intention to award the Contract, it may file an application to the Chief of the Public Entity within Seven (7) days of providing the notice under ITB 38.1 by the Public Entity, for review of the proceedings stating the factual and legal grounds. 40.2 Late application filed after the deadline pursuant to ITB 40.1 shall not be processed. 40.3 The chief of Public Entity shall, within five (5) days after receiving the application, give its decision with reasons, in writing pursuant to ITB 40.1: (a) whether to suspend the procurement proceeding and indicate the procedure to be adopted for further proceedings; or (b) to reject the application. The decision of the chief of Public Entity shall be final for the Bid amount up to the value as stated in 40.4. 40.4 If the Bidder is not satisfied with the decision of the Public Entity in accordance with ITB 40.3, or the decision by the Employer is not given within five (5) days of receipt of application pursuant to ITB 40.1, it can, within seven (7) days of receipt of such decision, file an application to the Review Committee of the GoN, stating the reason of its disagreement on the decision of the chief of Public Entity and furnishing the relevant documents. The application may be sent by hand, by post, by courier, or by electronic media at the risk of the Bidder itself. 40.5 Late application filed after the deadline pursuant to ITB 40.4 shall not be processed. 40.6 Within three (3) days of the receipt of application from the

	Bidder, pursuant to ITB 40.4, the Review Committee shall notify the concerning Public Entity to furnish its procurement proceedings, pursuant to ITB 40.3. 40.7 Within three (3) days of receipt of the notification pursuant to ITB 41.6, the Public Entity shall furnish the copy of the related documents to the Review Committee. 40.8 The Review Committee, after inquiring from the Bidder and the Public Entity, if needed, shall give its decision within one (1) month of the receipt of the application filed by the Bidder, pursuant to ITB 40.4. 40.9 The Bidder, filing application pursuant to ITB 41.4, shall have to furnish a cash amount or Bank guarantee from "A" class commercial bank equivalent to zero point one five percent (0.15%) of its quoted Bid amount with the validity period of at least ninety (90) days from the date of the filing of application pursuant to ITB 40.4. 40.10 If the claim made by the Bidder pursuant to ITB 41.4 is justified, the Review Committee shall have to return the security deposit to the applicant, pursuant to ITB 40.9, within seven (7) days of decision made.

SECTION - II
Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids is: **CRED/Rehab/2074/075-06**
ITB 1.1	The Employer is: **Nepal Electricity Authority** **Distribution and Consumer Services Directorate** **Community Rural Electrification Department** **Balaju, Kathmandu**
ITB 1.1	The number and identification of lots comprising this bidding process is: **N/A** Following is the addition of the new definitions: (a) "Bidder" shall mean a legally registered entity submitting the Bid proposal. The entity may be a supplier or manufacturer of the tendered Goods or contractor or any combination of them in the form of a Joint Venture as specified in Qualification Requirements. (b) "Joint Venture" shall mean a legally enforceable association constituted by legally registered entities with the purpose of committing the obligations required by the Bid. (c) "Goods" shall mean equipment, plant, goods, materials, etc. to be supplied and installed for the completion of the work as particularly described in the specifications. The name of project is : **Supply, delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network at the Distribution area of Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre**
ITB 2.1	The DP is: **Not Applicable** The implementing agency is: **Nepal Electricity Authority (NEA)** Source of Fund: **GoN Funded and Community Based Organization (CBO)**
ITB 4.1 (a)	Maximum number of partner in a joint venture shall be : 3 (three)

	The qualification requirement of the parties to the JV shall be : Lead partner – at least 40% Other partners – at least 25% Overall (Lead partner plus other partners) – 100 %
ITB 4.2	Eligible Countries - **All Countries**
B. Bidding Document	
ITB 7.1	For clarification purposes only, the Employer's address is: Attention: **Project Manager** Address: **Nepal Electricity Authority** **Distribution and Consumer Services Directorate** **Community Rural Electrification Department** **Balaju, Kathmandu** Telephone: **+977-1- 4388610** Facsimile number: **+977-1- 4360057** Electronic mail address: **cred.nea@gmail.com**
ITB 7.4	A Pre-Bid meeting **"shall not"** be held. A site visit shall not be organized by the Employer.
ITB 7.5	Time for request: Requests for clarification should be received by the Employer no later than 10 days prior to the deadline for submission of bids.
C. Preparation of Bids	
ITB 10.1	The language of the bid is: **English/Nepali**
ITB 11.1 (b)	In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the bid, including the priced Bill of Quantities for Unit Rate Contracts and Schedule of Prices for lump sum contracts: **N/A**
ITB 11.1 (i)	The Bidder shall submit with its bid the following additional documents: **None**
ITB 13.1	Alternative bids "shall not be" permitted.

ITB 13.2	Alternative times for completion "shall not be" permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: **None**
ITB 14.6	The prices quoted by the Bidder shall not be subject to adjustment during the performance of the Contract.
ITB 18.1	The bid validity period shall be: **90 days.**
ITB 19.1	The Bidder shall furnish a bid security, from "A" class commercial bank with a minimum of **NRs. 1,00,000.00** which shall be valid for 30 days beyond the validity period of the bid.
ITB 19.2 (b)	Account Name:**Nepal Electricity Authority** Bank Name: **Jyoti Bikas Bank** Bank Address: **Kamaladi, Kathmandu, Nepal** Account Number: **00100100004910000001**
ITB 20.1	In addition to the original of the bid, the number of copies are: Not Applicable
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall indicate: (a) The name and description of the documentation required to demonstrate the authority of the signatory to sign the Bid such as a Power of Attorney; and (b) In the case of Bids submitted by an existing or intended JV, an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
D. Submission and Opening of Bids	
ITB 21.1	Bidders "shall" have the option of submitting their bids electronically.
ITB 22.1	For bid submission purposes only, the Employer's address is :

	Nepal Electricity Authority **Distribution and Consumer Services Directorate** **Community Rural Electrification Department** **Balaju, Kathmandu** Telephone: **+977-1- 4388610** Facsimile number: **+977-1- 4360057** Electronic mail address: **cred.nea@gmail.com** The deadline for bid submission is : Date: **August 29, 2017** Time: **On or Before 12:00 noon.**
ITB 25.1	The bid opening shall take place at : **Nepal Electricity Authority** **Distribution and Consumer Services Directorate** **Community Rural Electrification Department** **Balaju, Kathmandu** Telephone: **+977-1- 4388610** Facsimile number: **+977-1- 4360057** Electronic mail address: **cred.nea@gmail.com** Date : **August 29, 2017** Time : **At 14:00 hours**
E. Evaluation and Comparison of Bids	
ITB 32.5	The amount of the performance security shall be increased by Eight (8) percent of the quoted bid price.

F. Special Instructions to Bidders for e-Bidding

A) Bid preparation:

A Bidder who wish to submit the bid electronically may purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.

B) **Description of bid submission procedure through electronically (e-submission) only :**

i. Interested bidders shall, either purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.

ii. The Bidder shall fill the following documents and forms (in hard copy of issued bid documents), signed by the authorized representative with seal of the company
   a) Bill of Quantity (BOQ) with rate, amount
   b) Forms of Bid, Qualification Information

iii. The Bidder shall then scan the completed original documents, forms in PDF files with appropriate filename shown in the table below.

S. No.	Document Name	Mandatory	Filename	Remarks
Single Envelop Document set (As Guided by PPMO)				
1	Letter of Bid	1	Letter bid -1	
2	Bid Security (Bank Guarantee)	1	Bid security-2	
3	Company registration,	1	Company reg-3	
4	VAT registration,	1	VAT reg-4	Mandatory for National Firms
5	Tax clearances certificate,	1	Tax-5	Mandatory for National Firms
6	Power of Attorney of Bid signatory	1	Power of att-6	
7	Business Registration (License) Certificate	1	Licence-7	
8	Bank Voucher for Cost of Bid Doc	1	Voucher-8	
9	Joint Venture Agreement	1	JV-Doc-9	Mandatory for JV Firms
10	Qualification Information	1	Qualification -10	
11	Applicable Price Adjustment Table	1	Price adjust-11	Mandatory if Applicable
12	Complete BOQ	1	BOQ-12	

Two Envelop Document set (As Guided by PPMO)				
1	Letter of Technical Bid	1	Letter tech bid -1	Technical Document
2	Bid Security (Bank Guarantee)	1	Bid security-2	Technical Document
3	Company registration,	1	Company reg-3	Technical Document
4	VAT registration,	1	VAT reg-4	Technical Document [Mandatory for National Firms]
5	Tax clearances certificate,	1	Tax-5	Technical Document [Mandatory for National Firms]
6	Power of Attorney of Bid signatory	1	Power of att-6	Technical Document
7	Business Registration (License) Certificate	1	Licence-7	Technical Document
8	Bank Voucher for Cost of Bid Doc	1	Voucher-8	Technical Document
9	Joint Venture Agreement	1	JV-Doc-9	Technical Document [Mandatory for JV Firms]
10	Qualification Information	1	Qualification -10	Technical Document
11	Letter of Price Bid	1	Letter Price bid -1	Financial Document
12	Applicable Price Adjustment Table	1	Price adjust-11	Financial Document [Mandatory if Applicable]
13	Complete BOQ	1	BOQ-12	Financial Document

Note: ***Mandatory*** *means the mentioned files shall be in e-submission and non submission of such file shall be considered as non-responsive.*

iv. For e-submission purpose the Bidder shall, at first, register in the e-procurement section of NEA Web site **http://www.nea.org.np**

v. After preparing all the required bidding documents in PDF scan files as specified in (ii) and

vi. The Bidder shall upload the PDF bid files and submit his complete bid online through e-procurement section of NEA website **http://www.nea.org.np** within the specified date and time.

C) The Employers address for the purpose of e-submission of bid:

i. The Employers address for the purpose of electronic Bid submission is e-procurement section of http://www.nea.org.np**.**

ii. In case of e-submission of bid, the bidder shall submit his bid electronically in PDF files in the manner as specified above and additional submission of hard copy of "Original plus one copy of bid" is not mandatory.

iii. In case both the electronic bid and original bid in hard copy are submitted to the Employer within the specified time period, the Bidder's electronic bid and original bid in hard copy will be accepted for evaluation provided the Bid price in Bill of Quantity Sheet is same. If there is any discrepancy in Bid price in Bill of Quantity between the electronic and original bid in hard copy it will be treated as two separate bids from one Bidder and hence, both the electronic bid and original bid in hard copy shall be disqualified, as per ITB Clause.

iv. However, for electronically submitted bid in PDF files, the bidder shall be required to submit documents/clarifications as specified in ITB Clause.

D) The deadline for e-submission of bids shall be :

i. Bidders shall be also explained about the details of e-submission procedures in the pre-bid meeting.

ii. The e-procurement system will accept the e-submission of bid during office hours from the date after publishing the notice and will automatically not allow the e-submission of bid after the deadline for submission of bid, as specified above.

iii. The standard time for e-submission is Nepalese standard time as set out in the server of NEA.

iv. In case of e-submission of bid, the Bidder shall submit his bid electronically in PDF files in the manner as specified in ITB Clause only, and submission of "original plus one copy" shall not be required before deadline for submission time as per ITB Clause.

E) **Provision for Substitution or Modification or Withdrawal of Bid :**

When a bidder submits his bid in hard copy the e-procurement section **does not allow** the Bidder to submit his Substitution, or Modification, or Withdrawal through e-procurement section of NEA's Web site

In case of e-submitted bid;

i. Bidders may submit his Substitution or Modification or Withdrawal either in hard copy or through e-submission.

ii. For Substitution of Bid the Bidder shall follow similar steps as specified in ITB Clause with a Substitution letter in PDF file.

iii. For Modification or Withdrawal of bid the Bidder is required to submit PDF scan copy of their Modification or Withdrawal letter and a written Power of Attorney of the signatory for Modification/ Withdrawal, duly signed by Authorized Representative/s of the Firm / all authorized Joint Venture partners.

Bid opening for e-submitted bid;

i. Electronically submitted bid shall be opened first at the same time and date as specified in the ITB and IFB notice.

ii. The e-procurement system allows the Employer to download and open the e-submitted bid files from bidders only after the time for opening the bids.

iii. The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files (not complying the ITB Clauses) shall be considered incomplete and rejected for further bid evaluation.

iv. After opening of e-submitted bids files, all files shall be printed and recorded at the time of bid opening

In case of "WITHDRAWAL" or "MODIFICATION" or "SUBSTITUTION" by the Bidder through e-submission, the e-submitted PDF files under "WITHDRAWAL" or "MODIFICATION" or "SUBSTITUTION" shall be opened and read out first. Bids for which acceptable notice of "WITHDRAWAL" or "SUBSTITUTION" has been submitted pursuant to ITB Clause shall not be opened.

Clarification of Bid

In case of e-submission of bid, the Bidder shall be required to submit the original completed Bid consisting of Forms of Bid, Qualification Information, Special Conditions of Contract, Bill of Quantities, Supplementary Information and other clarifications for verification purpose upon notification to do so from the Employer.

Examination of e-submitted Bids and Determination of Responsiveness

For an e-submitted bid to be substantially responsive the requirement as specified in the ITB Clauses shall be fulfilled.

F) **Evaluation and Comparison of e-submitted Bids:**

i. In case of e-submitted bids, the Employer evaluates the bid based on the information as per electronically submitted bid files. For clarification/ verification purpose, the Employer may request the Bidder to submit documents/ clarifications as specified in ITB Clause.

ii. In case, the Bidder could not substantiate or provide evidence to prove the information provided in e-submitted bid through documents/ clarifications as per ITB Clause, the bid shall not be considered for further evaluation and respective ITB Clause for forfeiture of bid security shall be applicable.

G) **Steps to be followed by a Bidder to submit the electronic bid submission**

i. **Prepare the paper bid document**

- Either purchase the Bid Document directly from the Employer office or may download the bid document from the website and deposit the equivalent amount in the Revenue account of the employer as specified in the notice or/and Bid Document.
- Fill the rates and amount in BOQ,
- Fill the Bid Form,
- Prepare the necessary copy of Company registration, VAT/PAN registration , Tax clearance certificate,

- Prepare the necessary specific papers like Power of Attorney for bid signatory, Joint Venture agreement, if bidding in JV,
- Prepare summary of qualification information sheet (Financial turnover, Experience, Manpower, Equipment, Credit line, Litigation etc) in the specified format,
- Prepare the bid guarantee letter for the specified bid security amount and in the specified format,

ii. **Prepare the Electronic bid files in pdf format**

- Once prepared the above paper documents the bidder shall prepare the electronic bid files in pdf format as follows;
- Scan the above documents in pdf format, give the specific file name for each document,
- Prepare all scanned bid files in pdf format and save them in a separate folder in own computer to ease bid uploading process,

iii. **Electronic bid submission**

- Once the electronic bid files are ready the Bidder shall connect to internet,
- Open the NEAs website www.nea.org.np and open E-procurement section,
- Register in the Bidders name and get User name and Password for Login,
- Confirm the registration by clicking the specified link in auto generated e-mail from NEAs web site,
- After confirmation for bidders registration click Bidder, fill User name, Password and Login,
- Choose and click the specific tender notice for which the electronic bid files has been prepared,
- Click the Bid now button to submit the electronic bid files,
- Upload each specified electronic bid files by clicking the Upload button and select the respective bid files by Browsing,
- Once all the electronic bid files are uploaded, click the Submit the Bid button for final e-submission of electronic Bid,

- Once the e-submission is successfully completed the Bidder shall receive a auto generated confirmation e-mail from the NEAs website,
- Bidder to keep the conventional paper bid document , qualification information, and other related documents safe as the Buyer may seek the supporting bid documents and clarifications, as necessary during bid evaluation process.
- The Bidder shall submit the necessary supporting documents and clarifications (conventional bid document)

SECTION - III
Evaluation and Qualification Criteria

This Section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders by post-qualification exercise. **GoN/**DP requires bidders to be qualified by meeting predefined, precise minimum requirements. The method sets pass-fail criteria, which, if not met by the bidder, results in disqualification. In accordance with ITB 32 and ITB 34, no other methods, criteria and factors shall be used. The Bidder shall provide all the information requested in the forms included in Section IV (Bidding Forms).

1. Evaluation

In addition to the criteria listed in ITB 32.2 (a) – (e) the following criteria shall apply:

Note:
Use the evaluation criteria listed below as appropriate and required for the project.

1.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity, to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V (Works Requirements).

1.2 Multiple Contracts (Not Applicable)

1.3 Completion Time

Time to complete the plant and services from the effective date for determining time for completion of pre-commissioning activities is: **09 months**. Earlier Completion will be appreciable.

1.4 Alternative Technical Solutions (Not Applicable)

1.5 Quantifiable Nonconformities, Errors and Omissions

The evaluated amount of quantifiable nonconformities, errors and/or omissions shall be determined by ascertaining the price of such effect on an equal basis by adjusting the same to the quoted price of the bid. A bid having minor deviations and having no material deviation to cause any serious effect upon the scope, quality, characteristics, terms and conditions, performance or any other requirements stated in the bidding documents and acceptable to the Employer can be considered to be substantially responsive.

2. Qualification

Failure to fulfill any of the requirements specified in Qualification Requirements given below from 2.1 to 2.11shall result in disqualification of the Bid.

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.1 Power of Attorney					
The Bid shall include a notarized power of attorney authorizing the signatory of the bid to commit on behalf of the Bidder.	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
2.2 Legal Status					
i) For the Bidder which is not a Joint-Venture: The Bidder shall be a supplier or manufacturer of the tendered Goods or contractor legally registered for at least five (5) years. A notarized copy of legal registration certificate shall be submitted along with the Bid.	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
ii) For the JV Bidder: (a) Original of joint venture agreement legally binding on all JV partners shall be included in the Bid. The joint venture agreement shall bear the seal of the entity and signatures of personnel authorized by the respective entities forming the joint venture. All such authorization documents shall also be	must meet requirement	not applicable	must meet requirement	not applicable	

included in the Bid. These Authorization document shall be on the original letterhead of the respective entity with stamp/seal of the entity. (b) The number of joint venture partners shall not exceed three (3). (c) The Partners of the JV shall be a manufacturer or contractor legally registered for at least five (5) years. (d) Notarized copies of legal registration certificates for each JV partners shall be submitted along with the Bid.					

2.3 Eligibility

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.3.1 Nationality					
Nationality in accordance with ITB 4.2	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Forms ELI – 1, with attachments
2.3.2 Conflict of Interest					
No conflicts of interest in accordance with ITB Sub-Clause 4.3.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Letter of Bid

2.3.3 Government-owned Entity					
Bidder required to meet conditions of ITB Sub-Clause 4.5.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Forms ELI – 1, ELI - 2, with attachments
2.3.4 UN Eligibility					
Not having been declared ineligible based on a United Nations resolution or Employer's country law, as described in ITB Sub-Clause 4.8.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Letter of Bid
2.3.5 Other Eligibility					
Copy of Firm Registration Certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Copy of Business Registration Certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Copy of VAT and PAN Registration certificate ***(only for domestic bidders)***	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Copy of Tax Clearance Certificate/Tax return submission evidence for the **F/Y2072/073.** ***(Only for domestic bidders)***	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment

2.4 Pending Litigation

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.4.1 Pending Litigation					
All pending litigation shall be treated as resolved against the Bidder and so shall in total not represent more than 50 percent of the Bidder's net worth.	must meet requirement by itself or as partner to past or existing JV	not applicable	must meet requirement by itself or as partner to past or existing JV	not applicable	Form LIT – 1

2.5 Financial Situation

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.5.1 Historical Financial Performance					
Submission of audited balance sheets and income statements, for the last **3 (Three)** years to demonstrate the current soundness of the Bidder's financial position. As a minimum, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive.	must meet requirement	not applicable	must meet requirement	Not applicable	Form FIN - 1 with attachments

2.5.2 Average Annual Construction Turnover					
Minimum average annual construction turnover of **NRs.63,90,000.00** calculated as total certified payments received for construction contracts in progress or completed, over the last three consecutive years.	must meet requirement	must meet requirement	must meet 25 % of the requirement	must meet 40 % of the requirement	Form FIN -2
2.5.3 Financial Resources					
Using Forms FIN - 3 and FIN - 4 in Section IV (Bidding Forms) the Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet : ❑ The following cash-flow requirement, at least **NRs.24,07,000.00**	must meet requirement	must meet requirement	must meet 25 % of the requirement	must meet 40 % of the requirement	Form FIN - 3 and Form FIN - 4

2.6 Quality of Goods

i. In case the Bidder is not the manufacturer of Goods offered, the Bidder shall submit manufacturer's certificate authorizing the Bidder to supply the manufacturers' Goods. This certificate shall bear details of the	must meet requirement	must meet requirement	Not Applicable	Not Applicable	Letter of manufacturer's authorization

Goods that the manufacturer will be supplying under the authorization. The authorization shall be on the manufacturer's original letter head with seal/stamp of the manufacturer.					
ii. The manufacturer of Goods to be supplied under this Bid shall hold valid quality ISO certificate as required by the specifications and a copy of ISO certificate shall be included in the Bid.	must meet requirement	must meet requirement	Not Applicable	Not Applicable	Copy of ISO Certificate
iii. Type test certificate, if applicable, shall be included in the Bid and shall bear a date that is not earlier than five (5) years from the last date of Bid submission unless otherwise stated in the Technical specifications. The type test certificate shall have been issued by a reputed independent laboratory accredited by International Laboratory Accreditation Corporation (ILAC) or International Accreditation Forum (IAF) or other reputed accreditation agencies. In case the Type test certificate is not as per the requirement, the bidder shall, upon award of the Contract, undertake to carry out the required Type tests from an	must meet requirement	must meet requirement	Not Applicable	Not Applicable	Copy of Type test certificate as per requirement

independent laboratory qualified as above or in the laboratory owned or nominated by the Client / Employer before delivery of the corresponding equipment at no extra cost to the Client / Employer.					

2.7 Experience

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.7.1 General Construction Experience					
Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last **5 (Five) years** prior to the applications submission deadline.	must meet requirement	not applicable	must meet requirement	not applicable	Form EXP - 1
2.7.2 Specific Construction Experience					
(a) Contracts of Similar Size and Nature					
Participation as Prime contractor, management contractor, or subcontractor, in at least **one (1)** contract within the last ten (10) years, each with a value of at least **NRs. 25,56,000.00** that have been successfully or are substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity,	must meet requirement	must meet requirement	not applicable	not applicable	Form EXP - 1

methods, technology or other characteristics as described in Section V, Works Requirements.					
(b) Construction Experience in Key Activities					
For the above or other contracts executed during the period stipulated in 2.7.2(a) above, a minimum construction experience in the following key activities : a) The bidder shall have successfully executed of Supply, Delivery, Installation/Erection, Testing and Commissioning of 11/0.4-023 kV Electrical Distribution Network of project size and nature or number of contract of similar nature whose aggregate size is not less than the size of this Bid within last 10 years as of the last date of bid submission. b) To substantiate the above qualification, the bidder must submit certificate from clients (end-user certificates) for all number of projects specified as above.	must meet all requirement	must meet all requirements	not applicable	not applicable	Form EXP - 2(b)

2.8 Manufacturer's Experience

Manufacturers for the following major items of supply or services must meet the following minimum criteria, herein listed for that item:

Item No.	Description of Item	Minimum Criteria to be met
1.	Steel Tubular Pole, Distribution Transformer	i) Must have manufacturing experience of at least 5 (Five) years. ii) The Bidder shall submit at least two numbers of end user certificate showing that the Bidder or manufacturer has successfully completed the supply of Steel Tubular Pole and Distribution Transformer at least twice the Bid Quantity of offered items as a main supplier over last five (5) years period ending on the last date of bid submission. Out of supplied quantity, a minimum of half the Bid quantity for each item offered shall have been in operation satisfactorily to the end user for at least one (1) year. The end user certificates shall be on the letterhead of the end user with valid address for correspondence and signed by or on behalf of the end user. iii) Must submit the type test report carried out by independent testing laboratory for the offered item.

2.9 Miscellaneous

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
The Bidder or any of the Joint Venture partners shall not be on the blacklist circulated by Public Procurement Monitoring Office, Government of Nepal or Nepal Electricity Authority.	must meet requirement	not applicable	must meet requirement	not applicable	Form LIT – 1

2.10 Personnel

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirement:

No.	Position	Academic Qualification *[When position demands]*	Total Work Experience [Years]	Experience in Similar Works [years]
1.	Project Manager	Bachelor Degree	3	2
2.	Electrical engineer	Bachelor in Electrical Engineering	2	1
3.	Electrical Supervisor	Diploma in Electrical Engineering	3	2

The Bidder shall provide details of the proposed personnel and their experience records in the relevant Information Forms included in Section IV (Bidding Forms).

In case the bidder proposes to consider Personnel that may be spared from committed/ongoing contracts for evaluation, the bidder shall provide details of personnel which will be spared from such committed/ongoing contracts based on the physical progress at the date of bid submission. The details so submitted by the bidder and the physical progress of the ongoing contracts only the spared personnel shall be taken into the consideration during evaluation.

2.11 Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	Equipment Type and Characteristics	Min. Requirement
1.	Survey equipment (Theodolite or Total station)	1 set
2.	Draw Vice/ Ratchet Puller	4 set
3.	5,000 volt Digital Megger	2 set
4.	Digital Multi-meters	2 set
5.	Digital Tongue Tester	2 set
6.	Crimping Tools	4 set
7.	Wire Cutter	4 set
8.	Rollers, Ropes	1 Lot
9.	Safety equipment (Safety Belt, Helmet, Gloves, Safety Boots)	As required
10.	Ladders	As required

In case the Bidder proposes to consider Equipment that may be spared from committed/ongoing contracts for evaluation, the Bidder shall provide details of Equipment which will be spared from committed / ongoing contracts clearly demonstrating the availability of such equipment with respect to the physical progress of the ongoing contracts on the date of bid submission. Based on the details so submitted by the Bidder, only the spared equipment proposed for the contract shall considered for evaluation.

In case of Equipment to be leased /hired the same procedures as mentioned above shall apply. The Bidder must demonstrate that it has the key equipment listed hereafter.

i**. For the equipment under Bidder's ownership**

No.	Equipment Type and Characteristics	Total Nos. of Equipment under Bidder's Ownership	No. of Equipment engaged/proposed for ongoing/committed contracts	Nos. of Equipment proposed for this contract
1.				
2.				
3.				
4.				
5.				

ii. For the equipment to be leased/hired

No.	Equipment Type and Characteristics	Total Nos. of Equipment under the ownership of lease/hire provider	No. of Equipment engaged/committed for other works	Nos. of Equipment proposed to be leased/hired for this contract
1.				
2.				
3.				
4.				
5.				

The Bidder/Lease Owner shall be solely responsible for the data provided. However, this shall not limit the right of employer to verify the authenticity of submitted information.

The Bidder shall provide further details of proposed items of equipment using the relevant Form in Section IV (Bidding Forms)

SECTION - IV

Bidding Forms

This Section contains the forms which are to be completed by the Bidder and submitted as part of its Bid.

Letter of Bid

The Bidder must accomplish the Letter of Bid in its letterhead clearly showing the Bidder's complete name and address.

Date: .....

Name of the contract: .....

Invitation for Bid No.: .....

To: ……..

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8;

(b) We offer to execute in conformity with the Bidding Documents the following Works:

(c) The total price of our Bid, excluding any discounts offered in item (d) below is:

(d) The discounts offered and the methodology for their application are:

(e) Our bid shall be valid for a period of ***[insert validity period as specified in ITB 18.1]*** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;

(g) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries or any countries [insert the nationality of the Bidder, including that of all parties that comprise the Bidder if the Bidder is a consortium or association, and the nationality of each Subcontractor and Supplier];

(h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3;

(i) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3, other than alternative offers submitted in accordance with ITB 13;

(j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any

part of the contract, has not been declared ineligible, under the Employer's country laws or official regulations or by an act of compliance with a decision of the United Nations Security Council;

(k) We are not a government owned entity/We are a government owned entity but meet the requirements of ITB 4.5.1

(l) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(m) We declare that, we have not been black listed as per ITB 3.4 and no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or business.

(n) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and

(o) If awarded the contract, the person named below shall act as Contractor's Representative:

(p) We agree to permit the Employer/DP or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Employer.

Name: .....

In the capacity of .....

Signed ……...

Duly authorized to sign the Bid for and on behalf of ……

Date ……....

Bid Security
Bank Guarantee

Bank's Name, and Address of Issuing Branch or Office
(On Letter head of the 'A' class Commercial Bank)

Beneficiary: ..... name and address of Employer …….

Date: ……...

Bid Security No.: .....

We have been informed that . ……. .[insert name of the Bidder] (hereinafter called "the Bidder")intends to submit its bid (hereinafter called "the Bid") to you for the execution of …….. name of Contract . …… under Invitation for Bids No. …… ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee. At the request of the Bidder, we……. . name of Bank. …….. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of . . ……...amount in figures ……. (. …….. .amount in words …….) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a) has withdrawn or modifies its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
(c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, in accordance with the ITB.
(d) is involved in fraud and corruption in accordance with the ITB

This guarantee will remain in force up to and including the date ……number……days after the deadline for submission of Bids as such deadline is stated in the instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not letter than the above date.

This Bank guarantee shall not be withdrawn or released merely upon return of the original guarantee by the Bidder unless notified by you for the release of the guarantee.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

. . .Bank's seal and authorized signature(s) . . .

Note:

The bid security of ……. has been counter guaranteed by the Bank ……..…...…… on ……..... (Applicable for Bid Security of Foreign Banks).

Manufacturer's Authorization Letter

[This letter of authorization should be on the letterhead of the manufacturer and should be signed by the person with the proper authority to sign documents that are binding on the manufacturer]

Date: _____

IFB No.: _____

To: _____

WHEREAS _____ who are official manufacturers of _____ having factories at _____ do hereby authorize _____ exclusively to submit a Bid in relation to the Invitation for Bids indicated above, the purpose of which is exclusively to provide the following Goods, manufactured by us _____ and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 27 of the General Conditions of Contract, with respect to the Goods offered by the above firm in reply to this Invitation for Bids.

Name _____

In the capacity of: _____

Signed _____

Duly authorized to sign the Authorization for and on behalf of _____

Date _____

Technical Proposal Format

Personnel

Equipment

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Others

Personnel

Form PER - 1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements for each of the positions listed in Section III (Evaluation and Qualification Criteria). The data on their experience should be supplied using the Form below for each candidate.

No.	Name	Position*	Academic Qualification	Total Work Experience [Years]	Experience in Similar Works [years]
1.					
2.					
3.					
4.					
5.					

* As listed in Section III (Evaluation and Qualification Criteria).

Form PER - 2: Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Fields with asterisk (*) shall be used for evaluation.

Position*		
Personal Information	**Name**	**Date of Birth**
	Professional qualifications	
Present employment	**Name of employer**	
	Address of employer	
	Telephone	**Contact (manager/personnel officer)**
	Fax	**E-mail**
	Job title	**Years with present employer**

Summarize professional experience over the last twenty years in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From*	To*	Company, Project, Position and Relevant Technical and Management Experience*

Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria). A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder. The Bidder shall provide all the information requested below, to the extent possible. Fields with asterisk (*) shall be used for evaluation.

(i) For the equipment under Bidder's ownership

No.	Equipment Type and Characteristics	Total Nos. of Equipment under Bidder's Ownership	No. of Equipment engaged/proposed for ongoing/committed contracts	Nos. of Equipment proposed for this contract
1.				
2.				
3.				
4.				
5.				

(ii) For the Equipment to be leased/hired

No.	Equipment Type and Characteristics	Total Nos. of Equipment under the ownership of lease/hire provider	No. of Equipment engaged/committed for other works	Nos. of Equipment proposed to be leased/hired for this contract
1.				
2.				
3.				
4.				
5.				

Type of Equipment*		
Equipment Information	**Name of manufacturer**	**Model and power rating**
	Capacity*	**Year of manufacture**
Current Status	**Current location**	
	Details of current commitments	
Source	**Indicate source of the equipment** **☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured**	

The following information shall be provided only for equipment not owned by the Bidder.

Owner	**Name of owner**	
	Address of owner	
	Telephone	**Contact name and title**
	Fax	**email**
Agreements	**Details of rental / lease / manufacture agreements specific to the project**	

Bidder's Information and Qualification Format

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Others

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
Bidder's legal name	
In case of JV, legal name of each partner	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are copies of the following original documents.	
1. In case of single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2. 2. Authorization to represent the firm or JV named in above, in accordance with ITB 20.2. 3. In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1. 4. In case of a government-owned entity, any additional documents not covered under 1 above required to comply with ITB 4.5.	

Form ELI - 2: JV Information Sheet

Each member of a JV must fill in this form

JV / Specialist Subcontractor Information	
Bidder's legal name	
JV Partner's or Subcontractor's legal name	
JV Partner's or Subcontractor's country of constitution	
JV Partner's or Subcontractor's year of constitution	
JV Partner's or Subcontractor's legal address in country of constitution	
JV Partner's or Subcontractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are copies of the following original documents.	
1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2. 2. Authorization to represent the firm named above, in accordance with ITB 20.2. 3. In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5.	

Form LIT - 1: Pending Litigation

Each member of a JV must fill in this form

Pending Litigation			
☐ No pending litigation in accordance with Criteria 2.4.1 of Section III (Evaluation and Qualification Criteria) ☐ Pending litigation in accordance with Criteria 2.4.1 of Section III (Evaluation and Qualification Criteria)			
Year	**Matter in Dispute**	**Value of Pending Claim in NRS**	**Value of Pending Claim as a Percentage on Net Worth**

Form FIN - 1: Financial Situation

Each Bidder or member of a JV must fill in this form

Financial Data for Previous 3 Years [in NRS]		
Year 1 :	**Year 2 :**	**Year 3 :**

Information from Balance Sheet

Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			

Information from Income Statement

Total Revenues			
Profit Before Tax			
Profit After Tax			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three or above years, as indicated above, complying with the following conditions.
- All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
- Historic financial statements must be audited by a certified auditor.
- Historic financial statements must be complete, including all notes to the financial statements.
- Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Form FIN - 2: Average Annual Construction Turnover

Each Bidder or member of a JV must fill in this form

The information supplied should be the Annual Turnover of the Bidder or each member of a JV in terms of the amounts billed to clients for each year for work in progress or completed to NRs at the end of the period reported.

Annual Turnover Data for the Last 3Years	
Year	**Amount Currency**

- **Average Annual Turnover**

Form FIN - 3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in Section III (Evaluation and Qualification Criteria).

Financial Resources		
No.	**Source of financing**	**Amount (in NRS)**
1		
2		
3		

Note :

The letter from the Bank must be unconditional.

Form FIN- 4: Current Contract Commitments / Works in Progress

Bidders and each partner to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments									
No.	**Name of Contract**	**Name of the Contractor/s**	**Employer's Contact Address, Tel, Fax**	**Contract Amount**	**Contract Date**	**Contract Duration**	**Value of outstanding works [NRS]**	**Estimated Completion Date**	**Average Monthly Invoicing [NRS/month]**
1									
2									
3									
4									
5									
6									

Form EXP - 1: General Project Experience

Each Bidder or member of a JV must fill in this form.

General Construction Experience				
Starting Month Year	**Ending Month Year**	**Year**	**Contract Identification and Name and Address of Employer Brief Description of the Works Executed by the Bidder**	**Role of Bidder**

Form EXP - 2(a): Specific Project Experience

Fill up one (1) form per contract.

Contract of Similar Size and Nature			
Contract No…… of…..	**Contract Identification**		
Award Date		**Completion Date**	
Role in Contract	☐ **Contractor**	☐ **Management Contractor**	☐ **Subcontractor**
Total Contract Amount	☐ **NRS ……..**		
If Partner in a JV or subcontractor, specify participation of total contract amount	**Percent of Total**	**Amount**	
Employer's Name **Address** **Telephone/Fax Number** **E-mail**			
Description of the similarity in accordance with Criteria 2.7.2 (a) of Section III			
Note : ***The Employer should insert here contract size, complexity, methods, technology, or other characteristics as described in Section V (Work Requirements) against which the bidder demonstrates similarity in the box on the right-hand-side.***			

Form EXP - 2(b): Specific Project Experience in Key Activities

Fill up one (1) form per contract.

Contract of Similar Size and Nature			
Contract No…… of……..	**Contract Identification**		
Award Date		**Completion Date**	
Role in Contract	☐ **Contractor**	☐ **Management Contractor**	☐ **Subcontractor**
Total Contract Amount	☐ **NRS ……..**		
If Partner in a JV or subcontractor, specify participation of total contract amount	**Percent of Total**	**Amount**	
Employer's Name **Address** **Telephone/Fax** **Number** **E-mail**			
Description of the similarity in accordance with Criteria 2.7.2 (a) of Section III			
Note : *The Employer should insert here production rate(s) for the key activity (activities) subject contract against which the bidder demonstrates in the box on the right-hand-side production rates achieved by him on previous contracts.*			

Part - II

REQUIREMENTS

Table of Clauses

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SECTION - V

Works Requirements

This Section contains the Specification, the Drawings, and supplementary information that describe the Works to be procured.

Scope of Work

1. Description of the Project:

1.1 General:

The main components of the **Rehabilitation of 0.4-0.23 kV Electrical Distribution Network Project** include:"Supply, delivery, replacement and rehabilitation of 400/230 volts electrical distribution network on turnkey basis."The scope of supply of material and related services under this Project, but not limited to, are given below:

1.2 This Tender Document mainly includes rehabilitation of 400-230 volt Distribution lines and replacement of Distribution Transformer. The Contractor shall have to carry out preconstruction survey, prepare list of line material and equipment required, supply and delivery all the required line materials as specified or referred to in the technical specifications of this Tender Document& equipment, install/erect and construct the 400-230 Volt Distribution network, test, commission and handover the network to Community Based Organization (CBO) in witness of NEA after completion.

1.3 If any discrepancies in the specifications and drawing are found, shall be discussed and rectified before or at the time of final approval of drawings.

1.4 The bidders are requested to visit site(s) at its own to get the general idea about 11/0.4-0.23 kV Electrification network location and quote the price accordingly.

1.5 The Contractor shall have adequate manpower to execute the works at site(s) to complete the work within the scheduled time.

1.5.1 Equipment and Materials:

The Contractor to his designated store area shall deliver all equipment and materials. Such materials shall be delivered, unloaded and placed in stores in an acceptable manner and approved by the Employer or his authorized representative.

1.5.2 Erection:

When 0.4-0.23 kV Electrification network area has been completed and accepted by the Employer, the Contractor will make an inventory of the assemblies erected, and submit it to the Employer for approval and final payment.

Before the Taking-Over of the works, the Contractor shall clean up all areas in which he has worked, place all unused materials in the designated stores and settle any claims, which may have resulted from his work and occupancy of the area. He shall then remove all equipment, vehicles, manpower and facilities, which, he has brought in except those which may be specifically exempt by the Employer.

1.6 **Contract Scope:**

This section outlines all major work to be carried out by the Contractor all the new and existing 11/0.4-0.23 kV Electrification network. All engineering design and materials shall be subject to the Employer/Employer's Representative approval.

2. Special Requirements of the Project

2.1 **General**

2.1.1 This specification covers the general requirements for design, manufacture, assembly, shop test, delivery, field, test, dismantling and installation commissioning of works for 11/0.4-0.23 kV Electrification network.

2.1.2 Any deviation from this specification or the Technical Specification shall be clearly stated with reasons.

2.2 **Codes and Standards**

2.2.1 All plants and equipment supplied under this Contract shall conform to or be of higher quality than the latest applicable standard as listed in the following:

IEC - International Electro technical Commission

ANSI - American National Standard Institute

BS - British Standard

NEMA - National Electrical Manufacturers Association

IEEE - Institute of Electrical and Electronics engineers

ASTM - American Society of Testing and Materials

ASME - American Society of Mechanical Engineers

IPCEA - Insulated Power Cable Engineers Association

ISO - International Organization for Standardization

ASCE - American Society of Civil Engineers

ACI - American Concrete Institute

NEC - National Electrical Code (ANSI CI)

ISI - Indian Standard Institute

2.2.2 If the Specifications contained in this Contract conflict in any way with any of the reference standards, the Specifications shall take precedence. If there are conflicts between different specified reference standards covering the same material or equipment, the standard which will provided the highest quality and most suitable application as determined by the Employer/Employer's Representative shall prevail.

2.2.3 References to standards or to equipment of a particular manufacturer shall be regarded as followed by the words "or equivalent" except as otherwise noted. The Contractor may propose alternative standards, or equipment, which shall be equal to those, specified. If the Contractor for any reason proposes alternatives to or deviations from the above standards, or desires to use equipment not covered by the above standards, the Contractor shall state the exact nature of the change, the reason for making the change, and shall submit, for the approval, relevant specifications of the equipment in the original language, and in case that these specifications are written in language other than English, the English version shall be attached and shall govern. The decision of the Employer/Employer's Representative in the matter of equality will be final.

2.3 Construction Management

2.3.1 The overall management of the supply, delivery and construction activities of the Contractor shall be the right of the NEA and shall be performed by the Personnel authorized by CRED/NEA. The Authorized Personnel shall supervise and administer the Contract work and inform the NEA.

2.3.2 **The Authorized Personnel shall:**

a) Identify specific portions of the total works and establish priorities of construction works of those portions to permit an orderly rehabilitation of existing facilities and reduce consumer outages to the minimum extent practicable.

b) Revise and approve all Contractors' rolling work schedules to ensure the compliance with system construction and/or rehabilitation priorities and sequences, and co-ordinate necessary outages with local CRED/NEA, operations forces.

c) Supervise and inspect the work completed by the Contractor for conformance with the Schedule of Requirements, Construction Standards, approved Construction Drawings and other Contract requirements.

d) Carry out field measurement of the Works carried out by the Contractor and maintain a field measurement book to assess the progress made every day/month. Measurement so made shall be the basis for raising invoices of the Contractor for making progress payment for that part of the Works completed.

e) Review and recommend for the approval of Contractor's periodic invoices for completed construction works.

f) Prepare and issue the certificates of Provisional and Final Acceptance and make such payments to the Contractor as required by the Contract.

g) Supervise the issue, receipt, and accounting of CRED/NEA -furnished materials and equipment to, and from the Contractor.

h) Assist to administer the Contract in all respects.

2.3.3 The Engineer, as assigned by the CRED/NEA, shall assist the Authorized Personnel in all general functions listed in Clause 2.3.2 above, and in particular, the general functions described in Clause 2.3.2 a, b and c.

(a) The assigned Inspector(s) as shall inspect the work performed by the Contractor for compliance with the Schedule of Requirements, Construction Standards and the approved construction drawings and maintain records of such approved works to enable periodic payments to the Contractor for work performed, and acceptance of the Work.

2.4 **On the Job (OJT) Training Management during Construction:**

2.4.1 All construction activities shall be conducted in close supervision of representatives of CBO or CRED/NEA representative**.** Contractor shall provide ***OJT training*** to CBO's personnel during the Pre-construction survey and line construction period. The contractor shall provide ***training allowances @ NRs 500 per day*** to trainees and representative of Local NEA Branch. The total numbers of days that the contractor provides allowances

shall be limited to **40 days** for **1 (one) numbers** of Local NEA Distribution Center representatives and **2 (two) numbers** CBO representatives (i.e, 120 man days).

2.4.2 Pursuance to above clause 2.4.1, contractors shall be responsible to provide the OJT training in the field like orientation class for **construction management, pre-construction survey, pole erection, conductor stringing, testing & commissioning of distribution line and finally takeover handover of distribution system** to CBO. The Responsibility of CRED/ NEA representative is but not limited to supervise the training, assist the contractor during training period, and setting necessary co-ordination among concerned communities, contractors and CRED/NEA.

2.4.3 In accordance with the clause 2.4.1 and 2.4.2, after training; if CBO's manpower and resources are utilized by the contractor, they shall be paid as per the official district labor rate. The allocation of land and right of way etc. for the line alignment during preconstruction survey and construction period shall be the responsibility of the concerned CBO and joint minute shall be prepared by the CBO **and Local NEA Distribution Center** for the record. Involvement of CBO's manpower/resources shall be obligatory to the bidder as far as practicable.

2.5 Contractor's Workforce

2.5.1 The Contractor shall employ only the experienced, competent and skilled staffs. Staffs shall include engineers, surveyors, draftsmen, superintendents, foremen, lineman, laborers, mechanics, drivers, and persons of other skills necessary to perform the Works in accordance with the Construction Standards, the approved design and construction drawings, structure data sheet, manufacturer's recommendations, to perform the necessary administrative and warehouse functions, and to complete the Works in accordance with the Contract Execution Schedule.

All line construction staff shall be examined for working skills and must demonstrate to the CRED/NEA's satisfaction, working skills and knowledge of all the materials and equipment they will be assigned to work with before being assigned to field work.

2.5.2 The Contractor shall maintain his workforce in sufficient numbers and skills at all times to maintain the smooth execution of works in accordance with the approved Rolling Construction Schedule.

2.5.3 Whenever, in the opinion of the Authorized Personnel, any employee of the Contractor is unable to perform his assigned task adequately, incompetent, careless, or obstructs the progress of Work, the Contractor shall, on receipt of written notice from the Authorized Personnel, discharge, or otherwise remove that employee from the Work and not employ the employee again under the Contract.

2.5.4 During the progress of work, the Contractor shall assign to the work to an experienced and formally qualified engineer and experienced construction superintendent, both of who can communicate well in the spoken and written English language, and who shall be

designated in writing to the Authorized Personnel as an authoritative representative of the Contractor.

2.5.5 The Contractor's workforce shall at all times during the work have in their immediate possession the latest approved Construction Standards, and Structure Data Sheets covering the work that is being performed. The Contractor shall provide copies of the relevant plans and Standards to his construction workforce at his cost. In the event that the Contractor's workforce are found to be working without possession of the above-listed construction documents, the Inspector shall have the right to stop the work being performed until such time as the workforce is provided with the required documents.

2.6 Contractor's Facilities

2.6.1 The Contractor shall establish, and maintain throughout the period of the performance of the Contract Works sufficient and adequate facilities to store and maintain materials and equipment and to serve as a base for all Contractor operations necessary to perform the Works.

2.6.2 The Contractor shall establish and maintain security of Contractors' store by himself.

2.6.3 The Contractor shall establish a Project Office at a location approved by CRED/NEA wherein he will conduct general administrative operations. That office shall be provided with telephone communications facilities. Other facilities, which the Contractor may require, shall be so located and provided to permit efficient operations and minimize delays.

2.6.4 Prior to the beginning of construction activities the Contractor shall establish, at his Project headquarters location, a demonstration and training installation of each of the following structures as listed in Construction Standards and Drawings

The installation shall include at least 3 spans of ACSR conductor of each size to illustrate the type of materials used for tangent, angle and dead-end construction for 400/230 V lines and shall be built and dismantled frequently by the Contractor as part of the training and testing requirements. Structures need not be spaced more than 10 meters apart. The intent is to provide visible examples of the application of the various materials used on the project and to provide training and testing facility for the Contractors line construction personnel.

The structures shall be inspected and approved by the Engineer.

The cost of erecting and dismantling the above structures shall be borne by the Contractor.

3. Technical Preambles

3.1 General Information

This describes the requirements of those items which have not been included in the Construction Standard and which are of general nature.

(a) All the Construction Units shall include the cost of preparation, revision and reproduction of supporting Structure Data Sheets (SDS) and drawings.

(b) All Construction Units shall include the cost of cutting and painting bolt ends extending more than 30 mm beyond the nut if necessary.

(c) All Construction Units shall include necessary cost for trimming and cutting of trees to clear route for new or existing works. Trimming and Cutting of trees shall be the responsibility of the Contractor but **CRED/NEA** shall assist to obtain necessary permit for the same.

3.2 Construction Unit 1

Pre-Construction Survey, Mappings, Preparation of SDS, Single line diagram and Final BOQ

The Construction Unit is for carrying out pre-construction survey, preparation of pre-construction drawings/mappings, single line diagram and SDS; **detail analysis of existing quantities (Provided by NEA) to be used in different construction units**, and preparation of final SDS and As Built Drawing. In drawing the contractor should point out all the poles and special indication to the pole, which shall be replaced.

Unit: This construction unit is per km of line length.

3.2.1 Structure Data Sheet (SDS)

SDS shall be prepared to provide the details of specific construction information necessary for erection of pole structures with hardware & accessories and conductor stringing. The SDS shall be used in conjunction with the area plan drawing to document the works to be performed. A copy of the SDS format shall be provided in the event the bidder awarded the contract. The column for the pole, which will be changed, should be present.

Abbreviations used in the preparation of SDS shall be defined as follows:

S. No.	Nomenclatures	Meaning
A	Pole Construction No.	Number assigned by the Contractor to identify pole on plan drawing.
B	Span	Length of conductor span between poles
C	BK	Angle of line deflection in degrees
D	Pole	Pole quantity
F	Stay	The Construction Standard for stay to be installed.

E	Transformer	The Construction Standard for which the transformer/installation is to be framed.
F	Conductor	The number and size of ACSR conductors in mm^2 for 33,11 kV
G	Conductor (km.)	Running km length of conductor.
H	A	Single wire type stay
I	B	Double wire type Stay
J	C	Flying type stay
K	D	Flying type with shorter stay lead or bow type stay

Note:

- Information for a single pole location need not be confined to a single row.
- All works, whether new or on existing systems, shall be documented on the SDS.
- Each SDS shall include the applicable "As Built" Plan Drawing number(s).
- Similarly each "As Built" Plan Drawing shall include the applicable SDS number(s).

3.2.2 Pre-Construction Survey

Standard check survey and drafting procedure shall be used to carry out the survey works and preparation of drawings.

The activities of this Construction Unit shall include the checking of drawings provided by the project and preparation of staking drawings for sections of line specified by the **CRED/ NEA** and preparation of final BOQ.

Check survey with reference to the drawing provided by the **CRED/ NEA** and staking, as specified in the Scope of Work, as being part of the Contractor's work shall be performed in pursuant to the General Specifications.

Following points should be considered while preparing the drawing.

1. As far as possible, the replacement should be decayed wooden pole and not reusable one. The healthy wooden pole should not be replaced, as far as practicable.
2. If possible, alternate pole shall be replace instead of continuous pole. The last pole should be replace by steel tubular pole.

3. 400/230 volts distribution line shall not exceed 2 km radial distance from the distribution transformer.

Staking drawings shall include but shall not be limited to:

- Location, description and coverage of NEA existing HV/LV line and communication line in the area of proposed Electrification works;
- Identification and fixing of HT Tapping point, load centers, beneficiary households and HT/LT route alignment
- Existing Transformer of NEA utilized for LT tapping if any.
- Identification and fixing of pole structure during the road crossing, river crossing and in the crossing of any other facilities like Bridges, Pipelines etc. if any existed in the area of proposed Electrification.
- Details of Feeder line and Households details of every identified load center
- Slide, slopes/cross slopes etc. in the proposed route of HT/LT line.
- Wild Reserve area/ Forest if any in the proposed route of HT/LT line.
- Notations regarding areas unsuitable for pole line structures e.g. swamp, solid rock etc.;
- All features within 50 meters of the proposed route which are significant in construction and maintenance of the line;
- Details of Construction units if differs from the Contract agreement Units.

3.2.3 Contractor's Drawing/mapping and Data

The Contractor shall provide **GIS mapping** of the proposed line route of HT/LT line in the forms of computer printed drawing showing the chain edge of each pole location/angle point in **1:5000 scale** with **electronic copy in compact disc (CD)** required for construction and record purposes. The required number of construction plan drawings and associated SDSs shall be at least **Five (5) copies** and shall be duly **recommended** from the concerned community and local NEA Distribution Center office.

Checking and revising the Drawings and Structure Data Sheets if necessary, is a part of the Scope of Work of the Contractor. The contractor shall produce the revised or final drawings in accordance with the General Specifications.

Revised Line Staking Drawings shall be provided by the Contractor for the approval of the CRED/NEA for the execution of construction works.

The Contractor shall submit the drawings and data to CRED/NEA for approval in the following manner:

The title of Contractor's drawing shall also include the followings:

(a) NEPAL ELECTRICITY AUTHORITY (Government of Nepal' UNDERTAKING)

(b) Name of the Department

(c) Contract No.

(d) Name of the district / community

(e) Ratings of the line

The size of the drawings except otherwise specified in the Specification shall be any one of the following sizes.

A1	594mm x 841mm	(23.39" x 33.11")
A2	420mm x 594mm	(16.54" x 23.39")
A3	297mm x 420mm	(11.69" x 16.54")
A4	210mm x 297mm	(8.27" x 11.69")

Reproducible of all final approved drawings shall be made on computer printed drawings with computer electronic files in CD.

All drawings for approval and final as built drawings shall be produced in A1 and shall be bound neatly.

Computer Electronic File (CEF)

The Contractor shall prepare and submit the computer printed drawing with Computerized Electronic File (CEF) for all final Approved As Built Drawings within one **(1) months** after the completion of the Works.

Photographs of the Work

The Contractor shall provide along with the monthly progress the **digital photographs** of the work during construction and installation of each construction unit as and when required by the Department.

The Contractor shall also submit the electronic copy of the photograph to the CRED/NEA.

Structural Data Sheet

Structural Data Sheet shall be checked and prepared in such a manner that it shall show each and every items installed in each pole and transformer platform and the actual length of each and every span.

3.3 Construction Unit 1

0.4/0.23 kV Supports, Insulators and Hardware

This covers the work such as Supply and delivery of all the necessary materials from respective factory warehouse, excavate pole hole, set pole, if necessary, back fill and tamp poles, compact the back filling adequately, realign, if necessary, install framing including insulators and hardware all complete.

Support Type	Description	Reference Specification/Standard	
		Equipment	Construction
PL11	8 m LT 3 Phase-4 wire		
PL12	8 m LT 2 Phase-3 wire		
PL13	8 m LT 1 Phase-2 wire		
PL21	8 m LT 3 Phase-4 wire (Tee-Off)		
PL22	8 m LT 3 Phase-3 wire (Tee-Off)		
PL23	8 m LT 3 Phase-2 wire (Tee-Off)		

3.4. Construction Unit 2

400/230 volts Conductor and Accessories

This construction unit is for the supply, delivery and stringing of 400/230 V conductor and accessories.
This unit covers the Supply and delivery of all the necessary materials from respective factory warehouse to the site, set up wire stringing reels, pulling lines, stringing blocks on poles/cross-arms, install and remove temporary guard structures, if necessary, install and remove temporary structures to keep conductor from dragging on earth, if necessary. Pull conductors, sag and dead-end, remove conductor from stringing blocks, tie to insulators, make necessary compression joints, and connect jumpers and complete installation.

Conductor Type	Description	Reference Specification/Standard	
		Equipment	Construction
CL21	400 V, four wire Rabbit		
CL22	400 V, four wire Weasel		
CL32	400 V, three wire Weasel		
CL42	230 V, two wire Weasel		

3.5 Construction Unit 3

Stays and Anchors

This Construction unit is for the supply, Delivery and installation of complete single, double, flying or bow type stay assembly.

This Unit includes the Supply and delivery of all the required materials from factory warehouse to site, excavate hole, install anchor rod, back fill with gravel if specified, ramp till well compacted, install stay wire and stay insulator, adjust tension and further adjust tension if necessary after installation and stringing of conductor. Provide sand and stone as a local material for the installation of stay for LT distribution line and install the stay sets as per the construction standard drawings.

Type of Stays and Anchors:

Stay Type	Description	Reference Specification/Standard	
		Equipment	Construction
ST22	LT Single Stay Steel Tubular Pole		

3.6 Construction Unit 4

11/0.4 kV Transformers

This Construction unit is for the Supply, Delivery and Installation of 11/0.4 kV outdoor pole mounted type distribution transformer and associated lightening arresters, drop out fuse set, low voltage protection panel, cables, earthings, and related works for complete installation.

This will cover the supply and delivery of all the necessary materials from respective factory warehouse to the installation site, pole mount transformer on elevated platform, install LV cable between transformer LV terminals and protection panels, including cable and jumper connections, connect LV neutral earth terminal with earth lead etc.

S.N.	Transformers Capacity	Reference Specification/Standard	
		Equipment	Construction
TR13	100 KVA, 11/0.4-0.23 kV, three Phase Transformer (Middle of the HT span)		

3.7 Construction Unit 5

Labour Rates

This construction unit is intended to use for such work, which has not been defined by a Construction standard. Contractor shall submit to CRED/NEA, along with the bid, a written description of work which may have to be performed under certain situation and which was not foreseen during the design and study. This shall include location, number and classification of personnel to perform the work and estimated number of hours/day per man. This construction unit is to be charged only upon the approval of CRED/NEA. This unit includes necessary transport of equipment to perform the assigned work.

S.N.	*Designation*	Rate per hour or per day
1	Engineer	
2	Supervisor	
3	Foreman	
4	Lineman/ Electrician	
5	Helper	
6	Skilled Labour	
7	Unskilled Labour	

Note : ***The construction unit outlined in these sections contains general information and may vary. The actual construction units will be as per BOQ of the financial proposal.***

TECHNICAL SPECIFICATION

(Electrical Equipment)

SPECIFICATION – CRED-01

ACSR CONDUCTOR

1. Scope

This Specification covers the fabrication and supply of aluminum conductors, steel reinforced (ACSR) commonly used on overhead power line construction.

2. Description

2.1 The ACSR conductor shall be a concentrically strand right-hand lay conductor.

2.2 The ACSR conductor shall be fabricated in accordance with BS: 215/ IEC: 209, latest revision, and all referenced standards therein or other equivalent national standards which will result in a conductor of same stranding, quality, conductor diameter, stand size, direction of lay, and lay ratio. These equal characteristics are required to achieve full tensioning capability with bolted type tension sets; with full/tension compression splices and other commonly use line hardware.

2.3 The following conductors in the quantities specified in the Price Schedule shall be supplied:

Code name	Nominal area, mm^2	Stranding, (Al/steel)	Breaking strength, kN	Mass, kg/km	Resistance at 20 ° C (Ohm/Km)
Dog	100	6/7	32.7	394	0.273
Rabbit	50	6/1	18.35	214	0.540
Weasel	30	6/1	11.4	128	0.907

2.4 The ACSR conductors must be manufactured by a company approved to quality standard ISO 9001 or ISO 9002. The ISO certification number, the name of the authorized approving authority with the contact address and telephone and fax numbers shall also be stated. The Bidder shall enclose a verified copy of the ISO certificate with the bid.

3. Packing

3.1 All conductors shall be packaged in non-returnable wooden reels and shall be protected against damage in handling, shipping, and storage by heavy wood lagging securely applied to each reel. All reels shall be sufficiently sturdy to withstand shipment, storage and field construction operations without distortion or disintegration.

3.2 Each reel of the conductors furnished shall contain only one (1) length of conductor.

3.3 All reels shall be legibly marked in paint with the following information:

a) Size of conductor

b) Type of conductor

c) Length in meters

d) Net weight of conductor

e) Direction of rolling

3.4 The standard length of the completed conductor is shown in the table below:

Conductor size, mm^2	30	50	100
Normal length of the conductor, m	3,000	2,000	1,000

4. Tests

4.1 The manufactured conductor shall be tested in full compliance with the governing standard (including the following tests) and a certified test report shall be produced for all tests conducted.

Aluminum Wire

(a) Tensile Test

(b) Wrapping Test

(c) Resistivity Test

Steel Wire

(a) Tensile Test

5. Bid Documentation

5.1 The Bidder shall provide with the Bid two (2) clear copies of the standard governing fabrication and testing of the conductor and two (2) clear copies of all other specifications referenced therein as relevant to the fabrication and testing of the ACSR conductor.

5.2 The Bidder shall provide the name and the address of the manufacturers of the conductor being offered and the length of the conductor in the manufacturer's standard reels, including net and gross weights.

5.3 The Bidder shall also furnish the Certificate of Compliance, as specified in Paragraph 4.3 of BS 215, Part 2:1970, at the time of the shipment of each lot of conductor, or as required by the appropriate section of the equivalent national standard.

5.4 All data shall be bound separately from the Bid documents.

SPECIFICATION CRED-02

STEEL TUBULAR POLE

1. Scope

1.1 This Specification covers the design, fabrication, testing and supply of tubular steel poles commonly used in overhead electric lines.

2. General

The steel pole shall be fabricated in several lengths and strengths as specified in Table 1 contained herein.

2.1 The steel tubular poles must be manufactured b y a company approved to quality standard ISO 9001:2000. The ISO 9001 certification number, the name of the authorized approving authority with the contact address and telephone and fax numbers shall also be stated. The Bidder shall enclose a copy of the ISO 9001 certificate with the bid.

3. Description

3.1 The steel poles shall be of swagged design and shall consist of three (3) separate lengths of steel tubing swagged at two joints to fabricate the poles. However, there are some numbers of poles as mentioned in the price and delivery schedule which shall be of folding type. The quantities of such folding poles shall be intimated at the time of contract.

3.2 The steel tubing used in pole fabrication shall be of steel of any approved process possessing a minimum tensile strength of 42 Kg/sq. mm and a chemical composition of not more than 0.06% sulphur and not more than 0.06% phosphorous.

3.3 The tubing diameter and tubing wall thickness shown in Table 1 for each length of pole are the minimum size to be used in fabricating each length of pole. It shall be the responsibility of the Bidder to determine the adequacy of the component tubing shown for the load to be sustained. However, in no case the tubing diameter and wall thickness for any component tube be less than the value shown in Table 1.

3.4 Tubular poles shall be made of welded tubes, swagged and joined together. The upper edge of each joint shall be chamfered at an angle of about 45-degree. The steel poles shall be composed of three sections of diminishing diameters and minimum diameter thickness and lengths of pole shall be as shown in Table 1.

3.5 All tubes forming parts of the above supports shall be made from hot insulated seamless or continuously welded steel in accordance with BS 6323 or equivalent applicable Standards.

3.6 The entire section of the poles including the base plate shall be fully galvanized with minimum coating of weight not less than 460-gm/-sq. m internally and externally. Cap of the pole should be green colour.

3.7 Each pole shall be provided with a steel top plate 3-mm minimum thickness welded to the end of the section. The top plate shall not project beyond the perimeter of the top section. Each pole shall also be provided with a welded base plate welded to the bottom of the pole.

3.8 The pole shall, be drilled in accordance with the drilling patterns as defined in the Figure. All the holes shall be of 18 mm dia. However, the manufacturer must get approval of the drilling pattern before manufacturing the poles. Each pole shall be marked with the appropriate length as shown in Figure.

3.9 The folding type of poles shall be fabricated in such a way that the section pieces can be carried to the site and fitted on the site itself. The pole section on top shall have a flange and the section under it shall overlap to a length of 25 cm as shown in the diagram. The poles shall be drilled in such a way that the section in top could be securely fixed the section under it by two bolts of 5/8" x 7" at 90 degree each other. Two such joints form a complete pole of three sections as shown in Fig 2 and 3.

3.10 The size of the base plate shall be as per governing standard.

4. Tolerance

4.1 The following tolerances shall be maintained:

a) Negative tolerance on diameter: Not Applicable
b) Negative tolerance on weight: Not Applicable
c) Negative tolerance thickness: Not Applicable

d) Straightness: The finished poles shall not be out of straightness by more than 1/600 of the height.

5. Tests

5.1. The following test (s) shall be performed for the pole furnished. All testing shall be fully documented and certified test reports shall be provided to NEA.

a Tensile test and chemical analysis for sulphur and phosphorous
b. Deflection test
c. Permanent set test
d. Drop test

5.2 Number of poles selected for conducting tensile test and chemical analysis for sulphur and phosphorous shall be as given below:

Lot Size	No. of poles
Up to 500	1
501 to 1000	2
1001 to 2000	3
2001 to 3000	4
3001 and above	5

5.3 Number of poles selected or conducting deflection test, permanent set test and drop test shall be as given below:

Lot Size	No. of poles
Up to 500	5
501 to 1000	8
1001 to 2000	13
2001 to 3000	18
3001 and above	20

The deflection test, permanent set test and drop test shall be conducted in succession on each of the poles selected.

5.4 Deflection Test (Not applicable for joint pole)

Each pole shall be rigidly supported for a distance from the butt end equal to the depth which it is to be planted in the ground. It shall then be loaded as cantilever and the appropriate deflection load of Table applied at right angles of the axis of pole 30 cm from the top of the poles up to 9 m (overall) and 60 cm from the top for poles over 9 m (overall). For convenience in testing, the pole may be fixed horizontally and the load applied vertically. The temporary deflection due to the applied load at the point of application of load shall not exceed 157.5 mm.

5.5 Permanent Set Test (Not applicable for joint pole)

This test shall be carried out immediately after the deflection test. After application of proper load specified in Table 1 the permanent set measured from the zero position after the release of the appropriate applied load at the point of application of the load shall not exceed 13 mm.

5.6 Drop Test (Not applicable for joint pole)

The test shall be made in the case of swagged poles. The pole shall be dropped vertically with the butt end (bottom end) downwards, three times in succession from a height of 2 m on to a hardwood block 150 mm thick laid on concrete foundation. The pole shall not show any signs of telescoping or loosening of joints.

5.7 Should of any of the poles selected fail to pass any of the tests specified above two further poles shall be selected for testing from the same lot in respect of each failure. Should both these additional poles fail, the test material represented by the test samples shall be deemed as not complying with these specifications.

6. Quality Assurance Program

Along with the Bid the Bidder shall furnish quality assurance program of the manufacturer which includes the Quality System and the Quality Plans, which shall include, among others, information to meet the following requirement, failing which the Bid shall be liable for rejection.

1. The structure of the organization;
2. The duties and responsibilities assigned to staff ensuring quality of works;
3. The system for purchasing, taking delivery and verification of materials;
4. The system for ensuring quality of workmanship;
5. The quality assurance arrangement shall conform to relevant requirements of ISO9001:2000;
6. Statement giving list of important raw materials, names of manufacturer for the raw materials, list of standards according to which the raw materials are tested, list of test normally carried out on raw materials;
7. List of manufacturing facilities available with supporting documents;
8. List of areas in manufacturing process, where stage inspections are normally carried out for quality control and details of such tests and inspections;
9. List of testing equipment available with the manufacturer for final testing of equipment specified and the test plant limitation, if any, vis-à-vis the type, special, acceptance and routine tests specified in the relevant standards.

7. Bid Documentations

7.1 The Bidder shall provide with the Bid two (2) clear copies of the governing standards for selections of steel tubings, and any standard followed in the fabrication and testing of the poles offered.

7.2 The Bidder shall provide a description and certified dimensional drawings of each type of pole otherwise the bid offer shall be rejected.

7.3 Two (2) clear certified copies of all type tests performed on similar type of poles and similar working loads otherwise the bid offer shall be rejected. The type test must have been carried out in recognized national or international testing laboratory or independent testing laboratory other than manufacturer.

7.4 A clause-by-clause commentary of specification, specifying compliance and deviations, if any.

7.5 All` data, drawings, catalogues and other technical documents shall be bound separately from the Bid documents.

Table 1

Poles Specifications

IS Designation	410SP- 52	410 SP-43	410 SP-31	410 SP-13
Overall Length	11 m	10 m	9 m	8 m
Planting depth. m	1.8	1.8	1.5	1.5
Sections:				
Length, m				
Top (h1)	2.7	2.4	2	1.75
Middle (h2)	2.7	2.4	2	1.75
Bottom (h3)	5.6	5.2	5	4.50
Outside Diameter, mm				
Top (h1)	114.3	114.3	114.3	88.9
Middle (h2)	139.7	139.7	139.7	114.3
Bottom (h3)	165.1	165.1	165.1	139.7
Thickness, mm				
Top (h1)	3.65	3.65	3.65	3.25
Middle (h2)	4.5	4.5	4.5	3.65
Bottom (h3)	4.5	4.5	4.5	4.5
Approximate weight, Kg	175	160	147	101
(Excluding the Weight of Galvanization, Base Plate and Cap)				
Crippling load, kgf	307	348	367	301
Application of load from top of pole, m	0.6	0.6	0.3	0.3

SPECIFICATION – CRED-03

STAY SETS

1. Scope

This Specification covers the fabrication and supply of adjustable threaded, galvanized, ferrous, stay sets and nuts for use in overhead line construction.

2. Description

2.1 The stay set shall consist of mild steel; galvanized stay rod; stay tightener or adjustable head complete with stay plate a thimble of dimensions shown in the drawings in Construction Standards of the Bidding Document.

2.2 The stay rod shall be fabricated of mild steel of minimum tensile strength of 4200 kg/sq.cm. The other technical features and dimensions are given in Table 1 attached herewith.

2.3 The stay tightener shall be made of mild steel of minimum ultimate tensile strength of 42,000kg/sq.cm. The thimbles shall be made of 1.219mm (18 SWG) GI sheet, and shall be suitable for terminating steel stay wire with a preformed grip.

2.4 The stay plate shall be square type MS plate of dimensions shown in the attached drawings and mentioned in Table 1. The plate shall have a matching hole at the center to fit the end of the stay rod.

3. Fabrication

3.1 The stay rod and nut shall be fabricated to the shape and dimensions shown in Drawingsin Construction Standards Volume I of the Bidding Document.

3.2 The thread form at the threaded end of the rod, and that of the accompanying nut, shall be optional with the supplier. However, it shall be the responsibility of the Supplier to supply the stay rod with a thread form that shall sustain the rated loads specified in Table 1 without creep or stripping over the full life of the rod material at specified diameter.

3.3 After fabrication, the stay rod and nut shall be hot-dip zinc galvanized in accordance with IS 2629-1985, latest edition, or to an equivalent hot-dip galvanizing standard which produces equal or superior result.

3.4 After galvanizing, the nut and rod threading shall be such that the nut may be run the full length of the thread without the use of tools.

4 Tests

4.1 Apart from the tests indicated in the relevant referenced standard of steel , the stay set shall undergo following tests:

-Visual Inspection.

-Verification of dimensioned.

–Tensile strength: The stay set assemblies shall withstand a minimum tensile loads specified in Table 1.

-Bend test: The stay rod shall be bend-tested over a mandrel of 19 mm millimeter through an angle of 90 degrees at any point in the un-threaded section of the rod without fracture of the steel. Temperature of the test shall be 68 degrees Fahrenheit (22.5 deg Celsius).

5. Bid Documentation

5.1 The Bidder shall furnish with the Bid a complete description of the stay sets proposed to be supplied including, but not limited to, steel classification of base metal, detailed drawings showing shape, dimensions, and threading certified type test results as required by paragraph 4 herein, the identity of the proposed manufacturer, and manufacturers catalogue number, plus catalogue cuts. The technical data furnished shall be bound separately from the Bid Document.

Table 1

Ratings and Features

	HT Stay	**LT Stay**
Length of stay rod	2.4 m	1.8 m (6')
Diameter of stay rod	19 mm	16 mm
Ultimate tensile strength of stay rod and turn-buckle	4200 Kg/sq.cm	4200 kg/sq.cm
Minimum breaking load	10,454 kg	6,433 kg
Length of threaded portion	300 mm	300 mm
Thimble shape	Suitable for 7/10 SWG stay wire	Suitable for 7/12 SWG stay wire
Thimble section	18 SWG (min.)	18 SWG (min.)
Stay plate section	600×600×6mm	300×300×6mm
Eyebolt length	300 mm	300mm
Galvanization	IS: 2629-1985	IS: 2629-1985

SPECIFICATION – CRED-04

SILICON STEEL CORE TYPE DISTRIBUTION TRANSFORMER

1. Scope

These specifications cover the requirements of oil-immersed, naturally cooled single and three-phase distribution transformers suitable for outdoors installation on 11kV and 33 kV, 50 Hz distribution systems.

2. Service Condition

The transformers shall be designed and constructed for outdoor installation and operation under the following conditions:

Ambient temperature:	-5°C to 45°C
Relative humidity:	up to 95%
Altitude:	up to 2000 m above the mean sea level

3. Standards and Quality Certification

3.1 The equipment specified in this Section of the Contract shall conform to the latest edition of the appropriate IEC specifications and/or other recognised international standards *equivalent to IEC Standards*. In particular:

IEC 60076	Power transformers
IEC 60137	Insulating Bushings for alternating voltages above 1 kV
IEC 60156	Insulating liquids-Determination of the breakdown voltage at power frequency-test method
IEC 60296	Specification for uninhibited mineral insulating oils for transformers and switchgear
IEC 60551	Determination of transformer and reactor sound levels
IEC 60616	Terminal and tapping materials for power transformer
IEC 60722	Guide to lightning and switching impulse testing of power transformers and reactors
IEC 60733	Determination of water in insulating oils.
IEC 5493	Protective coating of iron and steel structures against corrosion.

3.2 The manufacturer of the offered transformers must have been accredited with valid ISO 9000 quality certification with design in its scope of registration.

4. Description

4.1 Technical details are given in Table 1 to Table 3. The quantity of the transformers to be supplied shall be as given in the Price Schedule.

4.2 *Tank*

The tank shall be of welded construction and fabricated from mild steel of adequate thickness. All seams shall be properly welded to withstand requisite impact during short circuit without distortion. All welding shall be stress relieved. The tank cover shall be bolted on to the tank with weatherproof, hot-oil resistant, resilient gasket in between for complete oil tightness. Pressed-steel radiators shall be mounted on transformer-tanks of 100 kVA and higher rating transformers. The radiator shall be of pressed-steel of corrugated type design. Heat dissipation calculation in respect of the number, size and length of the radiators are to be satisfied by design calculation.

Each transformer shall be provided with a case of rigid construction, which shall be oil-tight and gas-tight. The thickness of all tank sides except the tank-bottom and cover shall not be less than 3.2 mm. The thickness of tank-bottom and cover shall not be less than 4.0 mm. The tank shall be capable of withstanding, without leakage or permanent deformation, a pressure 25% greater than the maximum operating pressure. The tank cover shall be bolted on to the main-tank. Each transformer shall be provided with earthing terminal with clamp type connector.

4.3 Painting

All sheet steel works shall be phosphated in accordance with the following procedure and in accordance with BS 2569 and BS 5493.

The tank body shall be sand/shot blasted to remove the welding scales. Oil, grease, dirt shall be thoroughly removed by emulsion cleaning. Rust and scale shall be removed by pickling with dilute acid followed by washing with running water, rinsing with slightly alkaline hot water and drying. After phosphating, thorough rinsing shall be carried out with clean water, followed by final rinsing with dilute dichromate solution and even drying. The phosphate coating shall be sealed by the application of two coats of stoving type zinc chromate primer. The first coat may be "flash dried" while the second coat shall be stoved. After application of the primer, two coats of finishing synthetic enamel paint shall be applied, each coat followed by stoving. Touch up shall be applied after completion of tests. The color for the finishing paint shall be light gray or as approved by Employer. The final finished thickness of paint film on steel shall not be less than *60* microns. Finished painted surface shall present aesthetically pleasing appearance free from runs and drips. A small quantity of finishing paint shall be supplied for minor touching up required at site.

4.4 *Core*

The transformer shall be of core type. The cores shall be constructed with prime core-material of interleaved grade non-aging, low loss, high permeability, grain oriented and

cold rolled silicon steel laminations, properly treated after being sheared to remove any burrs and shall be re-annealed to remove any residual stresses. The steel shall be thin in lamination.

The yoke laminations shall be in single piece instead of pieces to reduce chances of introducing more air gaps in the core construction.

All steel sections used for the support of the core shall be thoroughly sand blasted after cutting, drilling and welding.

All laminations shall be properly insulated with the materials that will not deteriorate due to pressure and hot oil.

The core shall be rigidly clamped with positive locking device to ensure adequate mechanical strength. Core and coil assembly shall be capable of withstanding the vibrations and shock during transportation, installation, service and adequate provision shall be made to prevent movement of core and coil assembly relative to the tank during these conditions. The core shall be provided with lifting lugs suitable for lifting complete core and coil assembly of transformer.

Permissible Flux Density and Over Fluxing
Flux density at rated voltage and frequency shall not exceed 1.6 T. The no-load current at rated voltage and at 112.5% voltage shall not exceed the values given below with tolerance as indicated.

At 100% rated voltage	2% of rated full load current + 30% as tolerance.
At 112.5% rated voltage	max 4% of rated full load current

The bidder shall submit the design calculation in support of flux density and no-load current at 100% and 112.5% voltage along with drawings of core-steps, limb-diameter, window-height, limb-center, etc.

4.5 *Winding*

The design, construction and treatment of winding shall give proper consideration to all service factors. The winding shall be so designed that all coil assemblies are of identical voltage ratio and shall be interchangeable. All delta leads should be clamped tightly on to the special frame/bracket making pie (π) frame. The leads leading to the bushing terminals should be clamped to the horizontal support base of the pie frame so that vibration during short circuit is not passed on to the windings. The completed assembly of core and coils shall be dried in a vacuum sufficient to ensure elimination of air and moisture within the insulating structure. After the drying process, the assembly shall be immediately impregnated with dry oil to develop full electrical strength in the windings. The windings of the transformer shall be fabricated from **high conductivity E.C.Grade (A)** copper materials for 50 kVA and higher rating transformer, whereas it may be of **high conductivity E.C.Grade (A)** copper or aluminum for lower rating transformers.

Current Density
Current density for any part of the winding shall not exceed the following values:

Copper winding transformers	$\leq$ 2.8 amp/mm^2
Aluminum winding transformers	$\leq$ 1.5 amp/mm^2

4.6 *Oil Preservation System*

The transformers up to 25 kVA of voltage rating 11/0.4 kV and 11/0.23 kV shall be completely oil filled type. The transformers of higher ratings shall be provided with conservator. The conservator vessel shall have a capacity between highest and the lowest levels of not less than 7.5% of the total cold oil volume of the transformer.

Each conservator vessel shall be fitted with a sufficient-size breather in which silica-gel shall be used as the drying agent. Windows in the silica-gel breathers shall be sufficiently large enough to allow crystal color change to be easily observed from a distance of 6 m. The position of the silica gel breather shall be such that maintenance can be carried out without the need to de-energize the transformer.

4.7 *Tap Changer*

An externally - operated tap changer for transformers rated 100 kVA and above shall be furnished with each transformer, to be operated only when the transformer is de-energized. The tap changer shall include an operating handle, visible indication of tap position and means for locking the tap changer in any desired position. The locking device shall be arranged to prevent locking the tap changer in an off position. Mechanical means shall be provided for limiting the maximum and minimum travelling of the extreme tap positions to be at the maximum and minimum position of the tap changer.

4.8 *Insulating Oil*

All transformers shall be filled to the required level with a new, unused, clean, standard mineral oil in compliance with IEC 60296. Type tests certificate of oil being used shall be produced at the time of inspection.

4.9 *Bushings*

The bushings shall be made of homogeneous and well vitrified porcelain. The color of the insulator shall be brown and the surface shall have polished glaze.

The high voltage bushings shall have clamp-type terminal lugs suitable for terminating 30-120 mm^2 stranded conductor.

The low voltage bushings shall have clamp-type terminal lugs suitable for terminating aluminum conductor compatible to the kVA rating (with 100% factor of safety) of the transformer.

The low voltage neutral bushings shall include a clamp-type terminal lug for terminating together an earth-wire and an aluminium conductor of neutral circuit of the LV system.

4.10 *Temperature rise*

Maximum oil-temperature rise and maximum winding-temperature rise above ambient-temperature of 45^{o}C when carrying maximum continuous rated current shall not exceed the following;

a. In oil by thermometer 50°C

b. In winding by resistance 55°C

The temperature rise of the insulating oil shall be measured near the top of the main tank.

4.11 *Gaskets*

All sealing washers / Gaskets shall be made of oil and heat resistance nitrile / neoprene/ synthetic rubber bonded with cork gasket. Gasket made with natural rubber and cork shall not be acceptable. The thickness of the tank cover gasket shall not be less than 6 mm before compression.

4.12 *Clearances*

Minimum electrical clearances between the phases and phase to earth shall not be less than the values given below:

Voltage	Medium	Phase to phase, mm	Phase to earth, mm
33 kV	Air	330	320
11 kV	Air	255	205
400 V	Air	75	55

The clearances shall be maintained by fixing the bimetallic connectors in position.

4.13 *Accessories*

The following accessories shall be provided with each transformer.

- Lower oil filter and drain valve
- Liquid level gauge
- Lifting Lug
- Name plate
- Tank grounding terminal connector suitable for grounding cable
- Pressure relief device of explosion-vent type for 25 kVA and higher ratings

4.14 *Rating and Terminal Marking Plate*

Each transformer shall be provided with a non detachable rating and terminal marking plate of weather proof material, preferably of brass fitted in a visible position mentioning the following information:

- Guaranteed No Load Loss and Load loss
- Details of rating (rated output, voltage, phases, frequency etc.)
- Cooling
- Connection and vector diagram
- Weights (Total, weight of core, weight of winding and weight of oil)

- Name of manufacturer and year of manufacture
- Standards of manufacture
- Physical dimension of the transformer
- Any other relevant information

The face of the transformer body shall display the words "Property of Nepal Electricity Authority" on two sides written in indelible paint.

5 Tests

Tests shall be performed in accordance with these specifications in line with relevant IEC standards.

5.1 Type Tests

The Bidder shall submit, along with the Bid, type test reports (detail) on the following tests performed on identical units.

- Temperature rise tests
- Dielectric Type test
  i) Impulse voltage tests
  ii) Separate source AC withstand voltage test

- Short circuit test.

The type test certificates shall be furnished for each type of transformer offered which, in addition to other required data, shall show the actual no-load and full-load losses of the transformer at rated load. For the purpose of evaluation, the higher values of no-load and load losses shall be considered from the values guaranteed by the Bidder and the values given in the type test reports. The test of the transformer shall have been conducted by an accredited independent laboratory.

If the type test report for identical unit of transformer is not available, the type test report of similar type transformer may be considered acceptable during bid evaluation, provided, the bidder shall upon award of the Contract and prior to mass production of transformer, undertake to carry out type test on identical unit of each capacity of transformer in an independent laboratory accredited by International Accreditation Corporation (ILAC) of International Accreditation Forum (IAF) or other reputed Accreditation Agencies in the presence of representative appointed by Nepal Electricity Authority at no extra cost to the Client/Employer. In this case, for purpose of evaluation, the values of no-load and load losses shall be considered from the values guaranteed by the bidder.

5.2 Routine Tests

The following tests shall be performed on each unit of transformer by the manufacturer before dispatch and submit the test-reports to the Employer.

- Applied voltage test

- Induced voltage test
- No load loss and excitation current test
- Impedance voltage and load loss tests
- Winding resistance measurement
- Ratio tests
- Polarity and phase relation tests
- Tank leakage tests
- Insulation resistance tests
- Separate source power frequency voltage withstand test
- Dielectric breakdown strength of oil

The bidders are required to furnish the details of testing facilities available at the manufacturer's premises for conducting the tests listed above in 5.2

5.3 Tests to be witnessed by the Employer

To ensure about the quality of transformers, the inspection shall be carried out by the NEA's representative and/or by third party in following stage:

Pre dispatch inspection will be carried out at finished stage i.e. transformers are fully assembled and are ready for dispatch. As and when the transformers are ready for dispatch, an offer intimating about the readiness of transformers, for pre dispatch inspection for carrying out routine tests (specified in Clause 5.2) on minimum 20% quantity of offered lot shall be sent by the supplier along with Routine Test Certificates as specified in Clause 5.2.

In addition to above the Purchaser's representative(s) shall also witness at the manufacturer's plant (a) temperature-rise test, (b) dielectric type-test for each type (and rating) of transformer on at least 2 (two) % of each type (and rating) of transformer to be procured. The sample shall be selected by the Employer's representative(s) from the complete-lot ready for dispatch. No additional costs shall be paid for such tests.

The calibration certificate of all the measuring instruments e.g., Wattmeter, Voltmeter, manometer, CT & PT and other instrument (Calibrated and sealed not exceeding one year at the time of inspection) shall be produced to the Inspecting officer at the time of Pre-dispatch Inspection and Testing. In case of any dispute regarding calibration of instruments, instruments will be sealed and signed by the representative of the "Supplier" and "Purchaser" and will be sent to an institute/Laboratory of repute for calibration at the cost of "Supplier".

5.4 Testing after Delivery of Goods:

The Supplier shall carry-out [which the Purchaser's representative(s) shall witness] the following tests in a laboratory owned or nominated by the Employer after delivery in Nepal which shall be the Final Test for acceptance of Transformers.

a) Temperature rise test on at least one transformer of each rating.

b) No Load Loss and Load Loss test on 100 (hundred) % of transformer

Cost for such tests shall be quoted in the Price Schedule and shall be paid by the Supplier.

5.5 Dispute on quality of Goods:

The purchaser has all the rights to conduct the test including type tests, at his own cost by an independent agency whenever there is dispute regarding the quality of supply or interpretation of test results. In the event of failure of transformers in such tests, the expenses incurred in testing shall be to the supplier's account as already mentioned above in case of Testing after Delivery of Goods.

6. Evaluation

6.1 **The transformer no-load and load losses shall not exceed the following guaranteed values. Any transformer shall be rejected if losses exceed the following guaranteed value by an amount in excess of the following (as prescribed in IEC 60076, Power transformers):**

Total losses: 10%
Component losses: 15% (unless the total loss exceeds 10 %)

For 11/0.4 /.23 kV

S.N.	*Rating*	*No Load Loss (Watts)*	*Load Loss (Watts)*
1	10 kVA, 1-ph	45	225
2	15 kVA, 1-ph	62	300
3	25 kVA, 3-ph	75	460
4	50 kVA, 3-ph	120	750
5	100 kVA, 3-ph	220	1210
6	200 kVA, 3-ph	365	2100
7	300 kVA, 3-ph	550	3000

For 33/0.4/0 .23 kV

S.N.	*Rating*	*No Load Loss (watts)*	*Load Loss (watts)*
1	50 kVA, 3-ph	140	800
2	100 kVA, 3-ph	290	1800

6.2 Transformers shall be evaluated for the loss values (no-load losses and load losses) during bid evaluation based on the following loss capitalization formula:

$P_E = P_b + K_L L_L + K_{NL} N_{LN}$

Where,

P_E = Evaluated price

P_b = Bid price

K_{NL} =Value of no-load loss

K_L = Value of load loss

L_L = Guaranteed load losses at rated current

L_{NL}= Guaranteed no-load losses.

The transformer losses shall be capitalized as follows:

K_{NL} =Value of no-load loss= USD 4,684/ kW

K_L = Value of load loss= USD 618/ kW

6.3 Penalty for Excessive losses: During testing, if it is found that the actual measured losses are more than the values guaranteed by the **bidder (provided that they are within the limit specified in Clause 6.1 above)**, a penalty shall be recovered from the bidder at double the loss capitalization rates arrived at clause 6.2 above. For fraction of a kW, proportionate penalty will be recovered.

6.4 For the purpose of this Specification type tests are defined as tests performed on similar transformers of the same general arrangements, same voltage and same mechanical and electrical characteristics.

If the type test report for identical unit of transformer is not available, the type test report of similar type transformer may be considered acceptable during bid evaluation, provided, the bidder shall upon award of the Contract and prior to mass production of transformer, undertake to carry out type test on identical unit of each capacity of transformer in an independent laboratory accredited by International Accreditation Corporation (ILAC) of International Accreditation Forum (IAF) or other reputed Accreditation Agencies in the presence of representative appointed by Nepal Electricity Authority at no extra cost to the

Client/Employer. In this case, for purpose of evaluation, the values of no-load and load losses shall be considered from the values guaranteed by the bidder.

6.5 If at any stage it is established that the type test report submitted by the bidder is not satisfactory, discrepant or ambiguous, then NEA reserves the right to ask the bidder/supplier to conduct the type test on the rating/s of transformers chosen by the NEA in the presence of their representative at reputed national/international testing laboratory prior to its mass production *and/or* dispatch. The costs involved in organizing and conducting such tests shall be borne by the bidder/supplier.

7. Bid Documentation

7.1 The Bidder shall furnish with the Bid, the following documentation:

a) One (1) clear copy of the IEC standards governing fabrication and testing of the transformers.

b) Two (2) clear certified copies of type tests carried out for each rating as required by the governing IEC standard and the specifications.

c) Two (2) copies of certified outline drawings for each kVA rating showing dimensions, arrangements, and locations of all parts.

d) A clause-by-clause commentary on the specification, specifying compliance or deviations, if any.

RATINGS AND FEATURE FOR DISTRIBUTION TRANSFORMER

TABLE 1

Type		Three-phase, 11/0.4 kV
Rated power		As specified in the Price Schedule
Rated voltage	- Primary	11kV
	- Secondary	400/230V
Max system voltage	- Primary	12kV
	- Secondary	440V
Rated Frequency		50Hz
Connection	- Primary	Delta
	- Secondary	Grd. Wye
Cooling System		ONAN
Vector group		Dyn 11
Rated impedance voltage		3.5 - 4.5%
BIL for windings and bushings for primary side		75kV
Withstand voltage, 50 Hz, 60 Sec.		
	- Primary	28kV
	- Secondary	3kV
No load tap changer		+/- 2.5%, +/- 5% on HV side (for 100 kVA and above)
Mounting		Platform
Insulation levels (IEC) 76		LI 75 AC 28/AC 3
Insulation temperature class (IEC 76)		A
Maximum allowable noise level at 3 metre hemispherical radius		<44 dB
Applicable standard		These Specifications and IEC

TABLE 2

Type		Three-phase, 33/0.4 kV
Rated power		As specified in the Price Schedule
Rated voltage	- Primary	33kV
	- Secondary	400/230V
Max system voltage	- Primary	36 kV
	- Secondary	440V
Rated Frequency		50Hz
Connection	- Primary	Delta
	- Secondary	Grd.Wye
Cooling System		ONAN
Vector group		Dyn 11
Rated impedance voltage		3.5 - 4.5%
BIL for windings and bushings for primary side		170 kV
Withstand voltage, 50 Hz, 60 Sec.		
	- Primary	70 kV
	- Secondary	3 kV
No load tap changer		+/- 2.5%, +/- 5% on HV side (For 100 kVA and above)
Mounting		Platform
Insulation levels (IEC) 76		LI 170 AC 70/AC 3
Insulation temperature class (IEC 76)		A
Maximum allowable noise level at 3 metre hemispherical radius		<44 dB
Applicable standard		These Specifications and IEC

TABLE 3

Type		Single-phase, 11/0.23 kV
Rated power		As specified in the Price Schedule
Rated voltage	- Primary	11kV
	- Secondary	230V
Max system voltage	- Primary	12kV
	- Secondary	250V
Rated Frequency		50Hz
Cooling System		ONAN
Rated impedance voltage		2.5 - 4%
BIL for windings and bushings for primary side		75kV
Withstand voltage, 50 Hz, 60 Sec.		
	- Primary	28kV
	- Secondary	3kV
Mounting		Pole
Insulation levels (IEC) 76		LI 75 AC 28/AC 3
Insulation temperature class (IEC 76)		A
Maximum allowable noise level at 3 metre hemispherical radius		<44 dB
Applicable standard		These Specifications and IEC

CONSTRUCTION STANDARD

CONSTRUCTION WORKS

1. General

1.1 These specifications together with the Construction Standards shall govern the performance of the Works and shall be the basis for inspection and acceptance of the Works by the NEA.

1.2 These specifications and the Construction Standards shall be considered as mutually inclusive, and the conditions stated in each shall supplement the other as appropriate.

1.1 All these specifications shall be followed at all times by the Contractor unless specifically accepted in writing by the NEA, or unless some aspects of the work covered by these specifications are not required by the scope of work.

2. Route of Circuits

2.1 The line routes shown on line route drawings are provisional and subject to finalization by the Contractor. To the greatest extent practicable, all overhead circuits should be located along streets or traveled ways ordained by the Village Development Committee or required authority as public property, except as required for service drops and circuits to individual consumers.

2.2 To the greatest extent practicable, all facilities should be located on public property, and in no case shall private property be occupied unless specifically authorized by the NEA. *Community shall be responsible for providing right of way.*

3. Surveys and Staking

3.1 All structures should be located at the outer limits of public property along streets or travelled ways. Structures should also be located along streets at property lines of adjacent private property. Structures and stays running parallel or perpendicular to the line route shall not block portions of streets, travelled ways, drives, passages, or gates.

3.2 All structures shall be so located as to reduce, to the greatest extent practicable, obstacles to pedestrian and vehicular traffic.

3.3 Where underground facilities are indicated by surface conditions, or where such facilities can be located, structures and stays shall be so located as to avoid conflict with such facilities during construction.

3.4 All structure and stay lead locations shall be staked. At points of intersection (PI) of tangent line sections, steel rebar stakes shall be used to locate the PI. A minimum of two (2) side sightings will be made at each PI to permit re-location of PI in the event of stake removal. All structure locations in tangent line sections shall be staked.

3.5 All distances between structures, and other necessary measurements of length, shall be measured to accuracy of 0.1 meter and all angles shall be determined by transit to an accuracy of 0.1 decimal degree. All elevations shall be measured to an accuracy of 0.1 meter by means acceptable to the NEA.

3.6 All measuring and staking activity shall be accomplished by personnel with experience in survey procedures; and standard survey equipment acceptable to the NEA, shall be used to perform the survey work. Field survey notes covering all survey work shall be produced and maintained and shall be returned to the NEA at the time of submission of final PCS report. The format of proposed survey notes shall be submitted to the NEA for approval.

3.7 Survey work shall include centerline and structure location and staking; determination of overhead and side clearings of other structures, wires, and obstacles; area surveys and plotting; and centerline profiles of terrain; as directed by the NEA.

4. Technical Documentation

4.1 All technical documentation as specified herein shall be prepared by the Contractor. The Contractor shall employ skilled drafting personnel to produce all documentation specified. All technical documentation prepared by the Contractor shall be subject to the approval of the NEA prior to acceptance by the NEA of such documentation. All technical documentation shall be prepared in the English language.

4.2 Documentation shall be prepared using the following mediums:

(a) A4 Size of paper shall be used to produce the base Structure Data Sheet (SDS) and A1 size of drawing papers for As-Built Drawings and other drawings specified by the NEA. The scale for drawing shall be 1:5000.

A1	594 mm x 841 mm	(23.39" x 33.11")
A4	210 mm x 297 mm	(8.27" x 11.69")

(b) Computerized geographical information system shall be used to produce small area plotting, profiles of line-sections and centerline plotting necessary for the development of SDS and As-Built Drawings.

(c) A set of digitized data on CD shall be submitted separately.

4.3 SDS shall be prepared, *Preamble to Price Schedules* by the Contractor showing his proposed construction details for erection of facilities in accordance with the Construction Standards. The SDS shall be prepared after the centerline survey and staking is completed, for any line section designated by NEA, and shall be submitted to NEA for approval prior to any construction of the facilities shown in SDS. Submission of SDS for approval shall be in A4 size paper.

NEA may require any revisions to be made, at their sole discretion, prior to approval of the SDS for construction. An approved and field checked SDS is required for all Construction Units invoiced by the Contractor. The Contractor and NEA representative shall perform Field checking of the SDS jointly. The SDS and As Built Plan are intended as permanent records for NEA. Any construction performed prior to the Contractor's receipt of approved SDS from NEA shall be completely at the Contractor's risk, and NEA

shall have the right to require any correction due to the un-approved construction activities.

4.4 As-Built Drawings shall be prepared by the Contractor in the general format provided by the NEA. Drawing size shall be approximately 841 x 594 mm overall and the scale shall be 1:5000. The NEA shall provide any available environmental background data for inclusion on the various drawings and the Contractor shall record (in ink) all facilities As Built.

4.5 The Contractor shall prepare other technical drawings, in the same medium and format as the As-Built Drawings, for example As-Built Drawings index sheets, pole maps, and one line diagrams as specified and required by the NEA.

4.6 The Contractor shall prepare and furnish Transformer Record documents, in the format specified by the NEA, for each transformer installed.

5. Material Storage

5.1 The Contractor shall be responsible for storage of all materials and equipment delivered by him for the work; and security of materials. The Contractor shall manage all labor, equipment, and vehicles to load and transport said materials and equipment to the worksites.

5.2 Worksite

(a) Extended storage of materials along the routes of lines will not be permitted.

(b) Conductor reels may be spotted at the worksites for a short period prior to installation provided that crating and reel lagging are intact to protect the items. Poles may be spotted at structure locations for short periods prior to setting.

(c) All poles, and conductor placed at the worksites shall be located so that the items are not subject to damage and do not impede pedestrian or vehicular traffic.

(d) Any damage caused by imprudent placement of equipment and materials by the Contractor at the worksites shall be corrected by the Contractor, in a manner acceptable to the NEA, at the Contractor's cost.

5.3 Contractor's Storage Facility

The Contractor shall be financially responsible for the secure and proper storage of materials, prior to installation of the materials and equipment, to prevent loss or damage to any materials. However Contractor may use NEA sub-stations premises subject to approval of concern NEA/Substation Authorities.

6. Poles and Cross Arms

6.1 Pole Numbering

Poles and structures shall be numbered in accordance with a numbering system provided by NEA. Each pole shall be marked permanently through template with the assigned number.

6.2 Pole Framing

Pole and structures shall generally be framed in accordance with Construction Standards and the construction SDS. Where special framing requirements are necessary, the Site Engineer or Engineer shall provide framing instructions for the specific structure.

Each cross-arm shall be attached to the pole by a pole clamp or by machined bolts of sufficient length to pass completely through the holes provided on the pole and cross-arms and receive their full complement of nuts.

Bolts of proper length shall be used. Excess nuts shall not be used to make use of a bolt, which would otherwise be too long. The end of a machined bolt projecting more than 3 centimeters beyond the nut shall be cut off to a length of 2 centimeters beyond the nut. Each bolt, when installed, shall have its full complement of nuts.

Washers shall be used where specified in these standards. For wooden pole, bolted connection through wood members should be drawn tight to allow for shrinkage of wood. Bolts should be pulled up so that the wood is compressed but not so tight to break the wood fibers. Fiber breaks on the surface of the pole increases probability of decay.

During the erection work at the field there may be necessity to modify galvanized steel hardware and may have to be drilled, reamed, filed or cut. Under such a condition the area of the steel exposed, after these modifications, shall be coated with a zinc-rich paint to protect the steel from corrosion.

6.3 Excavation

All excavations made for the installation, or demolition, of facilities shall be accomplished in a timely manner according to the scheduled installation. Required excavations shall be opened, material installed, and backfill placed, as specified, in a continuing operation to the greatest extent practicable.

Any excavation left open during discontinuous construction, which is accessible to the public or along public thoroughfare, shall be covered or barricaded, and marked by suitable visual means, to prevent a public hazard.

Excavations shall be properly located and sized for the intended use. Pole and stay plate/ anchor excavations shall be correctly sized to retain undisturbed soil to the greatest extent consistent with the means of excavation. Pole holes shall be made by power-driven auger or by manual methods; power-driven shovel equipment shall not be used. Pole holes shall

be excavated to the specified depth with no tolerance shallow and tolerance of ten (10) centimeters deep. The bottom of pole holes shall be undisturbed soil, gravel or rock. Stay plate holes shall be excavated by manual methods to specified depth with no disturbed soil in the direction of the anchor rod.

All excavations shall be backfilled with excavated material, or as specified for the installation. Backfill shall be free of foreign materials and shall be well tamped with excess backfill graded over the excavated area to prevent depressions resulting from eventual natural compaction. The Contractor if so directed by NEA shall remove large amounts of excess backfill from the site. If so directed by NEA, the Contractor shall provide suitable backfill materials for excavations where existing removed materials is insufficient, or inappropriate, to provide suitable grading of the excavated area.

6.4 Pole Setting

Poles shall be set in accordance with the appropriate Sections of the Construction Standards.

Each pole shall be assigned a unique construction number at the time of structure staking for preliminary identification and preparation of SDS.

Pole holes shall be dug large enough in diameter to admit a tamping bar all around the periphery of the pole and shall have a uniform dimension as per the type of pole used at the top and bottom. Poles shall be planted in the ground to the depth specified in construction. Drawings before planting a pole, the bottom of the hole made for planting the pole, shall be cleaned of free soil and firmly tamped, to prevent the hole from settling.

The stability of a pole, particularly a pole without stay, is greatly influenced by the size of the pole hole, the nature of the soil and the care exercised in back filling and tamping. Two active hand tampers and one slow shovel shall result in good compaction.

Poles shall be set to stand perpendicular except at terminals, angles and other points of excessive strain where they shall be given a rake not to exceed 10 centimeters against the direction of strain. Poles located at the sides of banks or other locations, where washouts may occur, shall be protected by suitable cribbing, or shall be referred to the Engineer for recommended action.

After the pole is in position and the hole is back filled and tamped, soil shall be piled and packed firmly around the pole. Pole setting shall be inspected prior to acceptance and any back fills that have sunk shall be refilled.

Where it is necessary to set poles at locations where the soil has very low bearing value, or in swampy conditions, a pole may be fitted with a bog shoe in accordance with construction drawings the engineer may specify that type of construction.

Poles located in shallow riverbeds shall be protected by gabions as designated by the Site Engineer or Engineer. Gabions should be approximately 2 meters x 1 meter x 1 meter. Four such gabions are required for each pole.

Set pole and pour 860 mm diameter foundation as per construction standard construction drawing. Level areas around pole and set gabions in pattern shown in construction drawing. It is important to lace adjacent gabions together along the perimeter of all contact surfaces. Fill gabions with hard, durable, clean stone, 100 mm to 200 mm in size in three layers. Install two connecting wires at each layer. Lace gabion lids securely making certain all edges are closed. Fill void between pole and gabion with hard, durable, clean rock 200 mm minimum size.

7. Stays

7.1 Stay leads specified in construction documents are defined as the horizontal distance from the centerline of the pole at ground line to the point where the anchor rod should enter the ground assuming the ground to be level. For the correction in stay leads for uneven ground see construction drawing.

The Engineer, upon request, may designate the actual location of stay anchor rods on slope of hills. The stay stake indicates the point where the anchor rod enters the ground. The anchor hole shall be dug accordingly.

The attachment of one stay shall not overlap that of another stay when 2 or more stays are carried to a pole or anchor. Each shall be entirely independent of the other. This does not prevent the use of multiple eye rods for nuts designed for such use.

All stays to be installed on a pole line shall be placed and drawn reasonably taut before the conductors are tensioned. After the conductors are tensioned and sagged to their final position, the stays shall be carefully inspected to see that each is carrying its share of the load on the pole as intended. If multiple stays are not carrying equal strain, the slack stay shall be pulled up until it is sharing load as intended.

Stay anchors must be installed full depth and set to pull against undisturbed soil to develop full tension. An anchor not properly installed will move and allow movement of the top of the pole, thus slacking the conductors. Stay anchors installed in soft or unstable earth shall be placed at specified depth and back filled with 5 cm. maximum size crushed stone placed to a depth of 1 meter from the bottom of the pole.

7.2 Installation of Stays

Where stays are installed on a line angle structure, line of stay shall bisect the outside line angle.

The span of stay extending between poles shall not be greater than 60 meter.

Anchor and anchor rods shall be set so that the axis of the rod and line of stay shall be straight. The portion of the anchor rod above the ground shall not be bent at an angle to connect a stay wire. If this occurs, anchor and anchor rod shall be reset. The anchor rod shall not be exposed for more than 15 centimeters above the ground after the anchor is set.

If gravel back fill is required to set anchor in soft or unstable soil, as per construction drawing the Contractor will have to carry out the gravel back fill as directed by Engineer.

If a stay is installed on a pole where low voltage conductor is dead ended or double dead ended and extends past stay, a piece of plastic hose slit along the length shall be placed over the stay wire extending from the upper stay attachment to 200 mm below lowest low voltage conductor. After installation, the hose shall be wrapped with plastic tape and the hose shall be secured to the upper stay bolt with tie wire.

7.3 Stay Insulators

Stay insulators shall be installed on all stays in accordance with the construction drawings.

8. Conductor

Aluminum Conductor Steel Reinforced (ACSR) conductor shall be used for 33,11,0.4/0.23 kV overhead lines.

8.1 Sagging

Conductors shall be sagged in accordance with the sag chart specified by these specifications.

The importance of careful sagging of conductors cannot be over emphasized. Conductors have definite characteristic that control their behavior resulting from changes of temperature, wind speed and additional load due to ice or wet snow.

Conductors must not be sagged too tightly (less than specified sag) as unspecified extra tensions may result in failure of conductor structure.

Conductors sagged too loosely (more than specified sag) may contact adjacent conductors hardware or any structure. Excess sag can reduce clearance beneath the line with the ground to the point of danger.

8.2 Sag Charts

Unless otherwise noted, all sag charts are calculated on the basis of 35 kg/m^2 wind pressure

Sag is always measured vertically, without wind, when conductors are being installed or re-sagged.

Unless otherwise specified by the Site Engineer or Engineer for a specific condition, initial or stringing sag shall be applied to the installation of all new unstressed conductors. The initial sag is always less than the final sag. The most practical method of obtaining the correct sag is by sighting between two adjacent structures. Choose the structure, which is reasonably near the same elevation

Sags for the various temperatures shall be furnished by the Engineer in a table form for spans not covered by the sag chart.

In order to ascertain the sag for a given stringing temperature, select the point corresponding to the proper temperature on the scale on the left-hand side of the sag chart. Lay a straight edge so that it passes through this point and the point of the center scale representing the length of span to be sagged. The straight edge will then indicate the proper stringing sag on the right-hand scale. Interpolate if the temperature of span is not exactly the same as designated on the chart. The low voltage neutral conductor shall be sagged with the same sag as the low voltage phase conductor. If the low voltage conductor, as a group, has less design sag than the high voltage phase conductor installed above it, the low voltage conductor, as a group, shall be installed to the same sag as the high voltage conductors installed above. The sag of pre stressed conductors such as installed with a tensioning machine shall be specified by the Engineer for the job.

8.3 Stringing

All cable grip used for the installation of conductors shall be of the type designed to prevent injury to the conductor.

Attach targets to each structure at a distance below each point of the support of conductor equal to the required sag. Sight from one target to the other. The line of sight between targets may be horizontal or inclined. Draw the conductor up to the proper sag, which will be reached when its lowest point will be in line with the target.

Where terrain and / or length of span in such that the targets would fall below the ground line, the difference in elevation between the lower conductor attachment and the lowest point of sag, sag below lowest support will be furnished by the engineer in the tabular form.

The dynamometers and similar apparatus shall be used for tensioning of conductor to obtain appropriate sagging of conductors. Dynamometer shall be used only when the sight method is not feasible. Dynamometer shall be checked for accuracy before using.

For stringing of ACSR conductors of all sizes, stringing rollers or roller shall be used to support the conductor as it is pulled out and sagged. Stringing rollers shall be used regardless of size of aluminum conductors, bare or covered.

Stringing rollers shall be suspended at each insulator support position so that the conductor shall roll smoothly over the roller-protecting conductor from any physical damage.

Stringing sheaves shall have a diameter at least 20 times the conductor diameter and so finished as to prevent damage of any kind to the conductor as it is pulled through the sheaves.

Conductor drum shall be located at a sufficient distance from the first structure to avoid excessive bending of the conductor over the sheaves and excessive downward loading on the cross-arms.

Attention shall be paid to the fact that all sag charts contained herein for ACSR conductors are calculated on the basis of non pre-stressed conductor. For this reason, at no time during the stringing or sagging operation, shall conductors of this type be pulled to sag, which are less than those shown by the charts.

Special care shall be taken at all times to prevent the conductor from becoming kinked, twisted or abraded in any manner. Where it is necessary to drag conductors on the ground, the conductors shall be protected by covering all stones or other objects, which might damage the conductor with boughs or trees or suitable pieces of lumber. These requirements are especially important when ACSR conductor is being handled on river crossing spans. Floats with rollers shall be used to prevent the conductor from dragging along the river bottom.

In stringing conductors across highways, the conductors shall be fully protected from passing vehicles by use of temporary guard structures.

8.4. Damaged Conductor

Damaged conductors shall be repaired by using a repair sleeve provided that no more than 2 strands of the outer aluminum layer are damaged and further provided that none of the sleeve core strands are damaged. For a conductor damaged in excess of the above conditions, the damaged section of the conductor shall be cut out and a tension splice installed.

When cutting out damaged section of conductor, no more than 1 tension splice shall be permitted in a span and no splice is made within 8 meters of an insulator attachment.

8.5 Sag Error

Sag error shall not exceed ± 40 mm from the sag defined by the sag chart.

8.6. Conductor Attachment

Conductors shall be secured to pin insulators with pre-formed conductor ties or with tie wire. Insulator ties, except at jumper supports in structures, shall be made with pre-formed ties when available.

Conductors shall be connected to dead end assemblies with tension set.

8.7 Line Splices for Tensioning and Looping

Cleaned and polished contact surfaces are necessary to make conductor splices so that it shall remain free from trouble. Great care shall be taken to completely clean the strands of

aluminum conductor. The splicing sleeve must be centered over the conductor ends before compressing to make a splice of required strength.

Appropriate sleeve shall be used for splicing ACSR conductors prior to installation. The outer strands of aluminum shall be carefully cleaned with a wire brush to remove all foreign matter till the aluminum shines brightly. The cleaning applies to both new and old conductors. The manufacturer pre-filled with inhibitor compound supplies splicing sleeves for aluminum conductor.

Splices in line conductors shall be so located that the end of the splicing sleeve is at least 30 cm from the end of a suspension or dead end clamp. Non-tension loops, such as between dead ends, shall be spliced with a connector when the conductors are of same metal and size.

8.8 Connectors

Cleaned and polished contact surfaces are necessary to make electrical connections that will be free from trouble.

Tap connectors are supplied by manufacturers pre-filled with inhibitor compound. Excess inhibitor compound shall not to be removed but it shall be wiped over the connector as a moisture seal. Connectors shall not be covered or taped.

Compression connectors shall be located in such a manner that there shall be at least 30 cm of conductor between the end of the connector and the end of a dead end

Connectors shall be installed on non-tensioned portion of the conductor such as loops in preference to the conductor in the span.

Connectors installed on conductor shall be located in a span adjacent to the crossing rather than the crossing span when practicable.

Aluminum compression connectors, pre-filled with inhibitor compound, shall be compressed on the cleaned area of aluminum conductor. Where necessary, inhibitor compound shall be applied to the cleaned conductor and connector before assembly.

Aluminum compression connectors shall be used for connecting aluminium-to-aluminium conductors.

8.9 Conductor Accessories

Pre-Formed Ties and Grips

Taps for jumpers and services shall not be made over the legs of ties or dead end grips.

Pin Insulator Ties

Pin insulator ties are of 2 types:

a. With single top grooves: Single top ties may be used to turn line angles to 7 degrees where single insulators are permitted. Please refer construction drawing for specific applications.

b. With side grooves with specific size of ties for specific conductor in each tie style: Specific usage is dictated by insulator pin loading and use of single insulators as specified in construction drawing.

Shackle Insulator Ties

Shackle insulator ties are furnished in one type with specific size of ties for specific conductor. Shackle ties may be used to turn line angles at 20 degree. At the line angles, the conductor shall be located on the side of the vertically installed shackle insulator that causes the conductor to be forced against the shackle insulator. Angle loading shall not be imposed on the ties itself.

Preformed Stay Wire Binder

Preformed stay wire binder for stay wire are furnished as per construction drawing.

Preformed stay wire binder are right hand lay. Preformed stay wire binder may be removed and replaced up to 3 times, when initially installed, to permit adjustment of stay tension.

When applying ties or grips the manufacturer's identification tag and colour coding shall be checked to insure that the tie or grip is the right unit specified for application on the specific conductor or wire strand.

Perform for stay wire are furnished with 2 crossover markings. When applying perform on hardware, the grip shall be installed using the crossover point closest to the loop of the grip.

Compression Fittings

Full-tension conductor splices and repair sleeves are furnished for all conductors to be installed.

a. Full Tension Conductor Splice

Full-tension spliced for ACSR conductor is provided in a 2/1-piece unit. Full tension conductor splices will develop full conductivity of the conductor and a minimum of 95% of the rated conductor breaking strength. Please see construction drawing for splicing instructions.

b. **Repair Sleeves**

Conductor repair sleeves are furnished for all conductors to be used to restore the rated current carrying capacity of conductors with broken strands. Repair splices have no tension rating.

8.10 PG Clamps

PG clamps are furnished in a full range of sizes for application in the non-tension connection in 33, 11 kV circuits. The PG clamps are designed for general use in making tap and jumper connections of various types.

In all applications of PG clamp fittings, the conductor metal shall be wire-brushed to a bright condition to remove surface oxidation on the conductor.

8.11 Application

When applying ties or grips the manufacturer's identification tag and colour coding shall be checked to insure that the tie or grip is the right unit specified for application on the specific conductor or wire strand.

Preformed for stay wire are furnished with 2 crossover markings. When applying preformed on hardware, the grip shall be installed using the crossover point closest to the loop of the grip.

In all applications of PG clamp fittings, the conductor metal shall be wire-brushed to a bright condition to remove surface oxidation on the conductor.

8.12 Line Construction

Attachments to Poles

Bolt holes are provided on poles for cross-arms, cross-arm braces and stay bolts.

Conductor Ties

Pre-formed ties and grips shall be used for attaching conductors to structures when available.

If pre-formed materials are not available, the wire shall be soft conductor so that when made up, the tie wire will bind the conductor tightly. No tie wire shall be used for a second time.

Tie wire shall be of the same metal as that of the bare conductor to which the tie is applied.

Conductor Support

The conductor supports on straight lines shall be carried on the top wire groove of the pin insulator. Conductors shall be attached to the side conductor groove of pin insulator on the outside of angles so that transverse conductor tension will tend to hold the conductor in the insulator groove.

Conductor ties shall not hold a conductor on the insulator when uplift exists. If uplift is found, it is required to consult with the Site Engineer or the Engineer to determine remedial action to be taken.

8.13 **Pole Wiring**

All taps or connections passing from one level to another on the pole shall, as far as possible, be vertical. Connections shall have sufficient length so that the line conductors are not moved from normal positions and normal movement is not restricted. Connections shall have at least 30 centimetres clearance from other conductors. Any connection carried from one side of the pole to the other side shall be supported on pin insulators.

9. Installation Criteria

9.1 The line alignment should be as straight as possible to minimize requirements for stays.

The basic span shall be maintained within the following limits:-

Low voltage and composite line:

S. No.	No of wire	Span in meter
1.	4 wire	35-40
2.	3 wire	40-45
3.	2 wire	45-50

9.2 The entire construction works shall be performed as per the construction units specified. Whenever the construction unit does not cover any specific activity, the Contractor and the CRED shall mutually settle the cost as per the man-hour involvement for the same and according to the labor rate quoted by the Contractor in his Bid.

9.3 Detailed schedules of material to be used are provided in each structure drawing of the construction standards. It shall be the responsibility of the Contractor to judge the appropriateness of the listed material according to the site conditions. If there is any need for addition/reduction or deviation from the listed material size/quantity, the Contractor shall ask the CRED for the approval of the same.

9.4 All types of line clearances shall be maintained as per the construction standards provided to the Contractor. Deviations from the standards may be allowed only for unique or special conditions.

9.5 Safety rules of the NEA shall be strictly observed at all times by the CRED and the Contractor and their personnel. Special care shall be taken to maintain the optimum conductor sag to provide adequate safety to the construction and the property or people.

9.6 All fastenings (e.g. preforms, nut bolts, stays and the like) shall be so installed that the constructed line components shall not fail to remain within the safety margin while maximum working load is applied.

9.7 If the Contractor requires clarification of any construction standard or unit or he feels any doubt in his interpretation of construction activities he should clarify the points with the CRED in writing and the decision thus made shall be valid for further work.

10. Installation of Stays

10.1 The Contractor, in general, shall install at least one stay for the supports in the following cases

(a) Dead end structure

(b) Tee-off (Tap) structure

10.2 Stay may not be installed in the following conditions

LV line with 8 m pole

a) - 3x30 mm^2+1x30 mm^2 LV

- Span 50 m (max)

- Break angle: 2.5 deg.

For conditions different from the above, the Contractor shall provide calculations showing the number of stays necessary and get approval from CRED prior to installation.

11. 400/230 Volt Low Voltage Circuits

General Instructions

11.1 General

Bare wire 400/230 Volt circuits shall be supported on shackle insulator with D-iron. Generally, shackle insulator with D-iron shall be placed on the same side of the pole throughout the length of the line. Care shall be taken to see that shackle insulator with D-iron shall be mounted on that side of the pole from where most of the house service connection shall be extended.

Spacing between two conductors for low voltage circuit shall be 305 mm.

The three low voltage phase conductor shall be located in descending order from the top of the pole with Red (R) on the top, Yellow (Y) below Red and Blue (B) below Yellow. The low voltage neutral conductor shall occupy the bottom position.

11.2. Neutral Conductor

Neutral conductor may be the same size as the phase conductor or be sized smaller than the phase conductors. The neutral conductor size shall be specified by the work plan.

All neutral conductors shall be bare ACSR.

11.3 Phase Conductor

Phase conductors shall be bare ACSR conductor as specified by the work plan.

12. Safety

12.1 The Contractor shall take all measures required to safeguard the public, public and private property from any hazard to life, limb, or property, which may arise during the performance of the construction of the works. Such measures shall include, but not be limited to barricades, signs, newspaper announcements, traffic control by police, or other advisory and control methods deemed appropriate.

12.2 The Contractor shall provide his work force with all tools and equipment in sufficient numbers and quality to perform all aspects of the works in a safe manner. The Contractor shall provide protective headgear for all members of his workforce, and shall provide protective clothing as required for specific tasks. The Contractor shall instruct his work Force in proper and safe construction techniques and shall continuously monitor compliance with safety instructions throughout the period of the Contract.

12.3 The Contractor shall provide, and require use of, protective grounding equipment when :

a) Work is being performed on lines adjacent, either in extension of, or parallel to, energized circuits.

b) Work is being performed on isolated circuits after conductors have been installed

12.4 The Contractor shall maintain all tools and equipment in good working order. All mechanized equipment shall have adequate safety mechanisms and guards in place and be fully operational. Operators of such equipment shall be skilled and fully trained in the operation of such equipment.

12.5 The Contractor shall provide and maintain emergency medical supplies to cover with accidents and snakebites for his work force on a readily available basis. The Contractor shall also instruct all supervisory personnel in the action to be taken in the event of serious injury, and the sources and locations of professional medical assistance, which shall be employed in such cases.

12.6 The Contractor shall apply all accidental insurance policies to his work force for an accident occurring during the working period of the construction.

13. Tests

13.1 The Contractor shall furnish the electrical test equipment and personnel to perform electrical tests of equipment and circuits, as specified by, and under the supervision of the NEA.

13.2 The Contractor shall meggar all circuits installed with a motor-driven megger or equivalent instrument to demonstrate the acceptable insulation characteristics of the line prior to energization and Provisional Acceptance. 400/230 V overhead circuits shall be tested at 500 volts AC.

13.3 The Contractor shall conduct DC hi-potential tests on all underground circuits, after makeup but prior to backfilling. The test shall be made with DC hi-potential test set

capable of non-destructively testing the cable at approximately 300% of cable voltage rating.

13.4 The Contractor shall megger all transformers with a motor-driven megger prior to connection to the LV network.

13.5 All tests specified shall be conducted during suitable atmospheric conditions under the supervision and witness of the NEA. All test results shall be documented and signed by both parties.

14. Demolition

14.1 The Contractor shall perform the removal of all existing facilities in accordance with the specific directions of the Authorized Personnel. All materials removed shall remain the property of NEA and the Contractor shall deliver all salvaged materials to the NEA warehouse, or as specifically directed by the Branch Chief in writing.

15. Cleanup

15.1 The Contractor shall ensure that all worksites shall be free of all manner of debris resulting from the construction activity.

15.2 All crating, conductor reels, packaging materials, conductor scraps, and other miscellaneous items are removed from the workplace. All holes resulting from removal of facilities shall be filled. If trees or brush have been cut or trimmed, all cuttings shall be removed. The worksites shall be left in clean natural conditions.

15.3 Site cleanup shall be an integral part of the Provisional Acceptance process, and no line section shall be provisionally accepted unless all cleanup work has been accomplished.

16. Tree Cutting and Trimming

16.1 Any tree cutting or tree trimming shall be accomplished by the Contractor in coordination with CBO.

16.2 All cutting shall be removed by the Contractor with disposition of cutting as specified by NEA.

17. Interruptions to Existing Service

17.1 The Contractor shall arrange for interruptions of service to existing lines with NEA. Every effort shall be made to limit such interruptions to the minimum.

17.2 If it is possible to maintain service to a section of line by constructing temporary facilities approved by NEA, the Contractor shall detail man hours and classification of personnel required to construct such facilities and submit to NEA for approval prior to any work being performed. Payment for approved work shall be based on the rates covered in *Preamble to Price Schedules*.

TECHNICAL DATA SHEET

(To be completed by the Bidder)
ACSR Conductor

	Description	***Queries***
1.	Manufacturer	
2.	Copies of fabrication standards attached?	Yes/No
3.	If standards are other than BS: 215 / IEC: 209 (Part II) Then conductor specifications are same as	
	BS: 215 / IEC: 209 requirements in respect of the following?	
	Diameter	Yes/No
	Strand size	Yes/No
	Direction of lay	Yes/No
	Lay ratio	Yes/No
	Materials	Yes/No

4. Technical data:

Code Name	Nominal Area (sq. mm)	Stranding (Al/Steel)	Breaking Strength (KN)	Mass (kg/km)	Resistance at 20°C (Ohm/Km)
DOG					
RABBIT					
WEASEL					

Signature _____

As representative for _____

Address _____

Date _____

S. No.	Description	Unit	Steel Tubular Poles 11m.	8m
a)	Manufacturer			
b)	Governing Standards for tubing Manufacturing and Testing			
c)	Governing Standard for Galvanization			
d)	Copies of Standards Attached?	**Yes/No**		
e)	Overall Length	(m)		
f)	Sections details:			
	(i)Length, m			
	Top (h1)			
	Middle (h2)			
	Bottom (h3)			
	ii) Outside Diameter, mm			
	Top (h1)			
	Middle (h2)			
	Bottom (h3)			
	iii) Thickness, mm			
	Top (h1)			
	Middle (h2)			
	Bottom (h3)			
	Approximate weight, Kg **(Excluding the Weight of Galvanization, Base Plate and Cap)**			
	Criplling load, kgf			
	Application of load from top of pole, m			

Signature _____

As representative for _____

Address _____

Date _____

Stay Insulator

	Description	Queries
1.	Manufacturer	
2.	Catalog No.	
3.	Model number	
4.	Applicable standards	
5.	Copies of standards attached?	Yes/No
6.	If not IS standards, are standards	
	Used equivalent?	Yes/No
7.	Copies of alternate standards attached?	Yes/No
8.	Ratings:	
	Highest system voltage	kV
	Rated voltage	kV
	Creepage distance (min)	mm
	Minimum failing load	kN
	Power frequency withstand voltage, 1 minute	
	Dry	kV
	Wet	kV
	IS designation	

Signature _____

As representative for _____

Address _____

Date _____

Stay Rod

	Description	Queries
1.	Manufacturer	
2.	Catalogue Numbers	
3.	Steel Classification	
4.	Load rating	kg
5.	Type tests-tensile load data attached?	Yes/No
6.	Type test-bend test data attached?	Yes/No
7.	Drawing attached?	Yes/No

Signature _____

As representative for _____

Address _____

Date _____

Stranded Stay Wire

	Description	Queries
1.	Manufacturer	
2.	Strand diameter (overall)	mm
3.	No. of Strands	
4.	Minimum Breaking load	kg
5.	Nominal diameter of coated	
6.	Left hand lay	Yes/No
7.	Fabrication Specification	
	B.S. 183 1972 (1983)	mm
8.	If not what standard?	Yes/No
9.	Standard copies (2) attached	Yes/No
10.	If not B.S. 183 is strand offered equivalent in all respects?	Yes/No
11.	Class of zinc coating?	

Signature _____

As representative for _____

Address _____

Date _____

Distribution Transformer

(To be completed by Bidder for each transformer rating)

Item		Description
1.	Manufacturer	
2.	Copies of IEC standards attached?	Yes/No
3.	Copies of type test for each rating attached?	Yes/No
4.	Copies of outline drawings for each size attached?	Yes/No
5.	Winding material:	_____
6.	Primary Winding BIL	_____kV
7.	Primary Bushing BIL	_____kV
8.	Accessories listed below furnished?	
	a) Lower oil filter valve	Yes/No
	b) Liquid level gauge	Yes/No
	c) Lifting lugs	Yes/No
	d) Hand hole	Yes/No
	e) Tank earthing terminal	Yes/No
	f) Overload protection	Yes/No
	If yes, details attached?	Yes/No

9. Testing facilities available at Manufacturer's Plant

Description	Name of the test equipment/facility
Applied voltage test	
Induced voltage test	
No load loss and excitation current test	
Impedance voltage and load loss tests	
Resistance measurement	
Ratio tests	
Polarity and phase relation tests	
Leakage tests	
Insulation resistance tests	
Temperature rise test	
Dielectric Type test	
Tank pressure test	

10. Design information

Rated kVA (IEC rating), kVA……..

Number of phases ….....……..

Frequency, Hz .....

Voltage ratio at no-load , kV.....

Winding connections.....

Type of core sheet……

Magnetising current at normal ratio:

hv, Amp …….

lv, Amp ……..

Maximum flux density in core iron at normal

voltage and frequency based on the net section of iron:

Cores, T ……

Yokes, T ……..

Type of winding:

hv .. ……..

lv …….

Maximum current density in winding at rated power:

hv, Amp/mm^2 …….

lv, Amp/mm^2 ……..

Type of insulation used for:

hv winding …….

lv winding ……..

No-load loss at normal voltage ratio and 75°C, Watt .....

Load loss at rated current and at 75°C, Watt .....

Regulation at 75°C and rated power as a percentage of normal voltage:

at 1 p.f, % ……

at 0.8 p.f, % .....

Impedance voltage at 75°C and rated power:

at normal tapping,% ……..

at -5% tapping % ……

at +5% tapping % ……

Efficiency at 1p.f and 125% load, % .....
Efficiency at 1p.f and 100% load, % .....
Efficiency at 1p.fand 75% load, % .....
Efficiency at 1p.fand 50% load, % .....
Efficiency at 1p.fand 25% load, % .....

Load at which maximum efficiency will occur, % …….

Maximum efficiency, % ……..

Temperature rise at rated kVA by

thermometer in oil .....

Temperature rise at rated kVA by

resistance of windings .....

Permissible overload .....

Transformer insulating oil specification ……...

Total volume of insulating oil at 20^{o}C, litre ……..…

Effective expansion capacity of conservator, litre …….

11 Approximate weight and dimensions

Weight of core, kg.....

Weight of winding, kg, ……..

Weight of tank and fittings, kg.....

Weight of oil , kg.....

Total weight, kg.....

12 Radiator details

No of radiators per transformer, no ……

No. of fins per radiator, no ……..

Width of each fin, mm ……..

Thickness of radiator, mm……

13 Tank dimensions

Length, mm ……..

Breadth, mm ……

Height, mm ……..

Tank sheet thickness (sides x bottom x top), mm ……

14 Approximate dimensions including fittings:

Overall length, mm.....

Overall width, mm.....

Overall height, mm.....

15. Winding resistance values

Per phase resistance of HV winding AB .....BC ..... CA .....

Per phase resistance of HV winding an .....bn ..... cn .....

Signature _____

As representative for _____

Address _____

Date _____

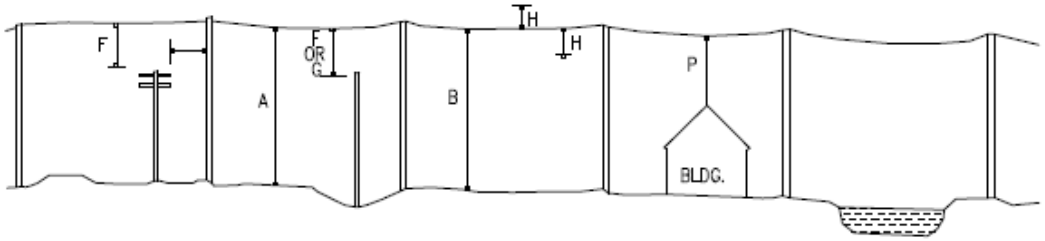
Drawings

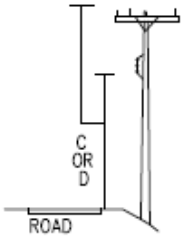
Note:

1. It is customary to bind the drawings in a separate volume, which is often larger than other volumes of the contract documents. The size will be dictated by the scale of the drawings, which must not be reduced to the extent that details are reduced illegible.

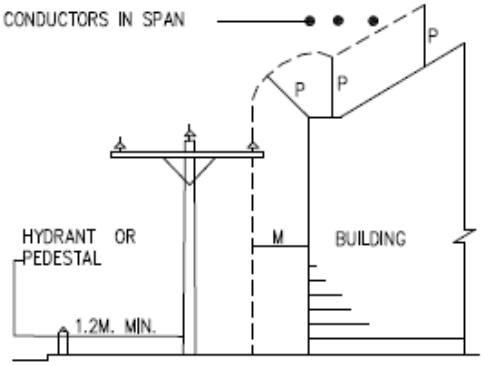
2. A simplified map showing the location of the Site in relation to the local geography, indicating major roads, posts, airports, and railroads, is helpful.

3. The construction drawings, even if not fully developed, must show sufficient details to enable bidders to understand the type and complexity of the work involved and the price the Bill of Quantities.





POLES ADJACENT TO ROADS



MINIMUM CLEARANCE FROM BUILDINGS

	CROSSING OVER	VOLTAGE OF CIRCUIT CROSSING	METER
A	ROAD, STREET, HIGHWAY OR LIMITED ACCESS HIGHWAY	230/400 V – 11 KV*	5.80
		11 KV** – 33 KV	6.10
B	AREAS ACCESSIBLE TO PEDESTRIANS ONLY	230/400 V – 11 KV*	4.60
		11 KV** – 33 KV	5.20
	LINE ALONG SIDE OF		
C	MAIN HIGHWAYS, STREETS OR ALLEYS	230/400 V – 11 KV*	5.50
		11 KV** – 33 KV	5.80
D	RURAL ROADS NO VEHICLE CROSSING UNDER	230/400 V – 11 KV*	4.60
		11 KV** – 33 KV	5.20

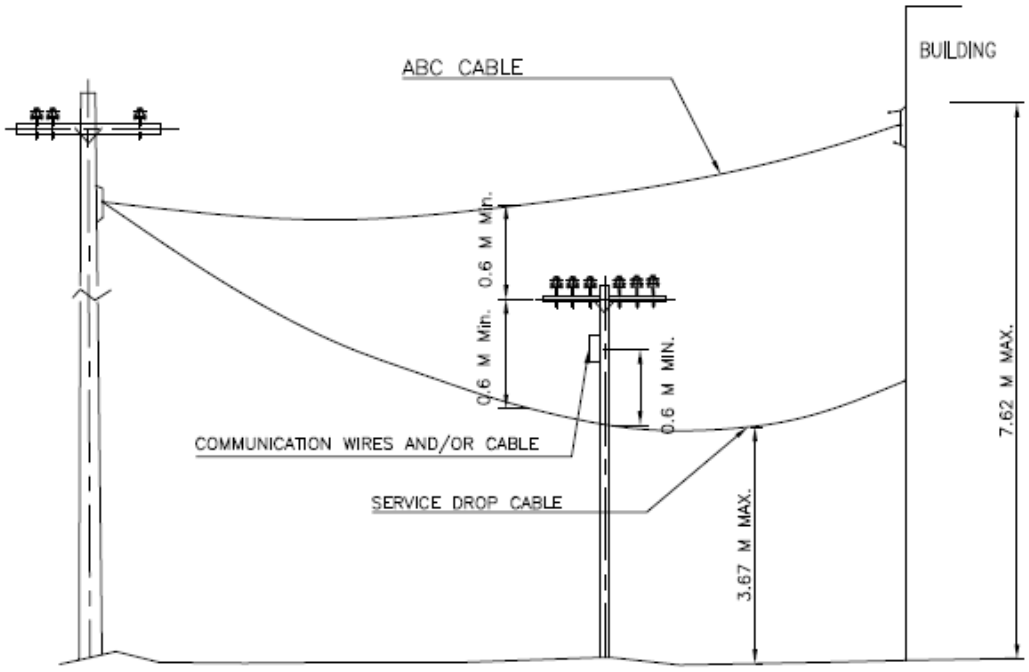
* Exclusive ** Inclusive

LOCATIONS	VOLTAGE	CLEARANCE (METER)
Min. Horizontal Clearance from Buildings, M	230/400 V – 11 KV**	1.25
	11 KV* – 33 KV	2.00
Min. Vertical Clearance from tallest pt. of Garage, Hut or Wall, P	230/400 V	3.00

CLEARANCE M ALSO SPECIFIED HORIZONTAL CLEARANCE FROM BALCONIES.

Note: While maintaining the above mentioned distances, the maximum deflection due to air swing shall also be calculat-

Drawing CSG-Clr-01	**Conductor Clearance**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**

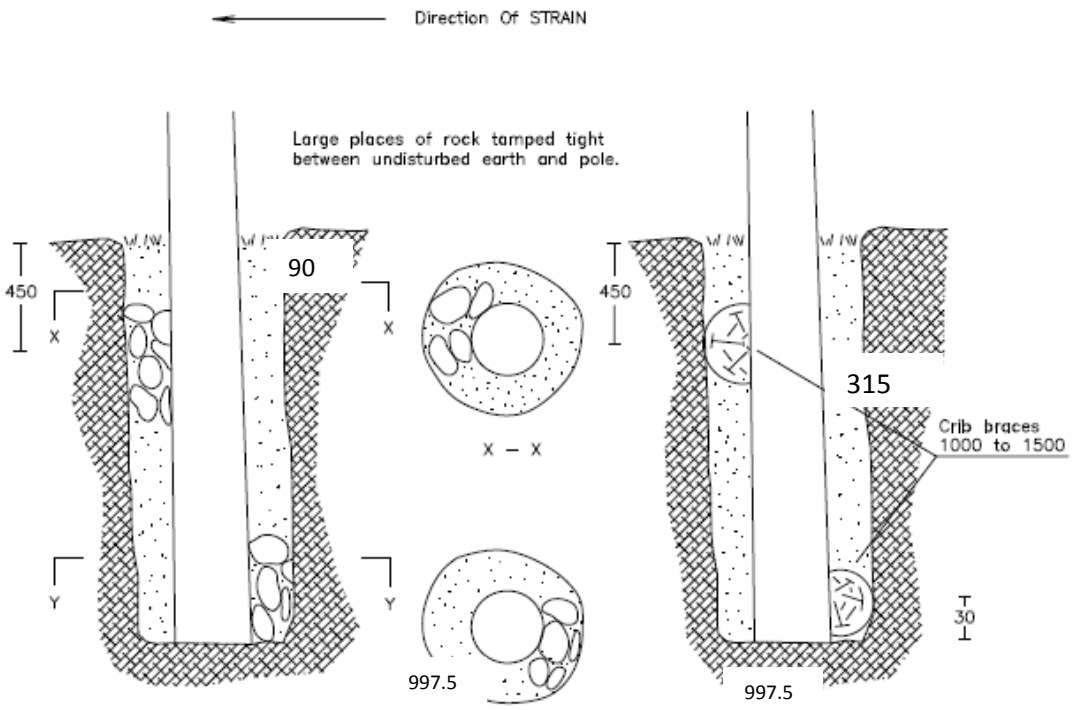


SERVICE DROP

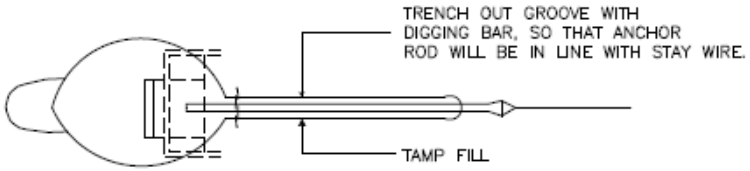
Install service over communication facilities where practical and attach to ploe when available; otherwise cross under communication facilities; with proper clearance.

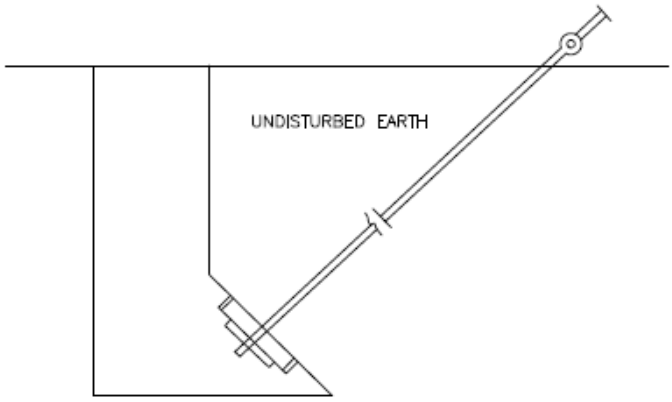
SERVICE DROP (0–600V) CROSSING OVER	CLEARANCE
DRIVEWAY TO RESIDENCE GARAGE OF OVER PARKING LOT EXCLUDING TRACKS	3.67 M.
DRIVEWAY AND COMMERCIAL PARKING LOT OR AREA SUBJECT TO TRUCK TRAFFIC	4.57 M.

Drawing		
CSG-CLR-02	**Conductor Clearance**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



Drawing CSG-POLE-02	**Pole Burial**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**

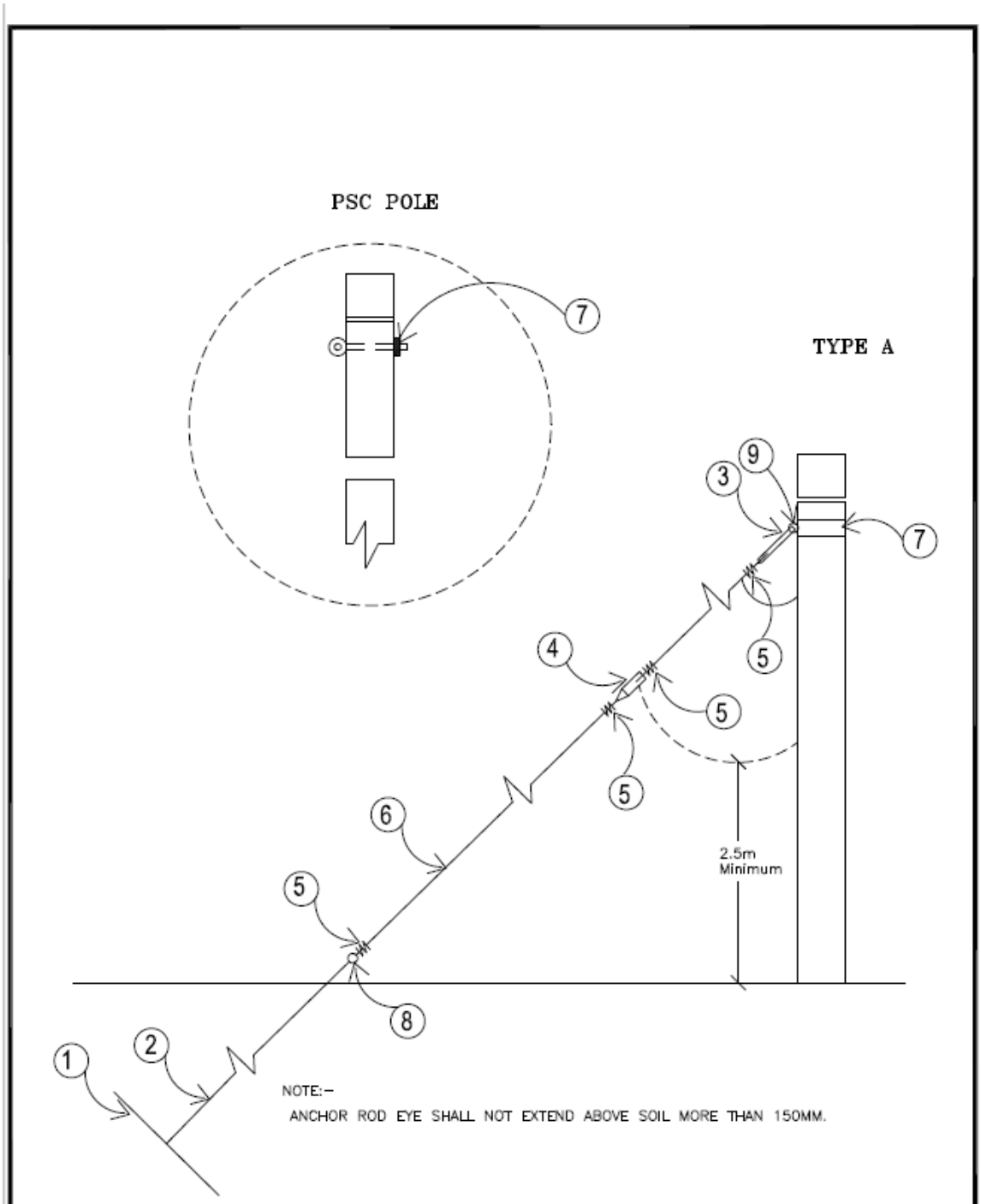




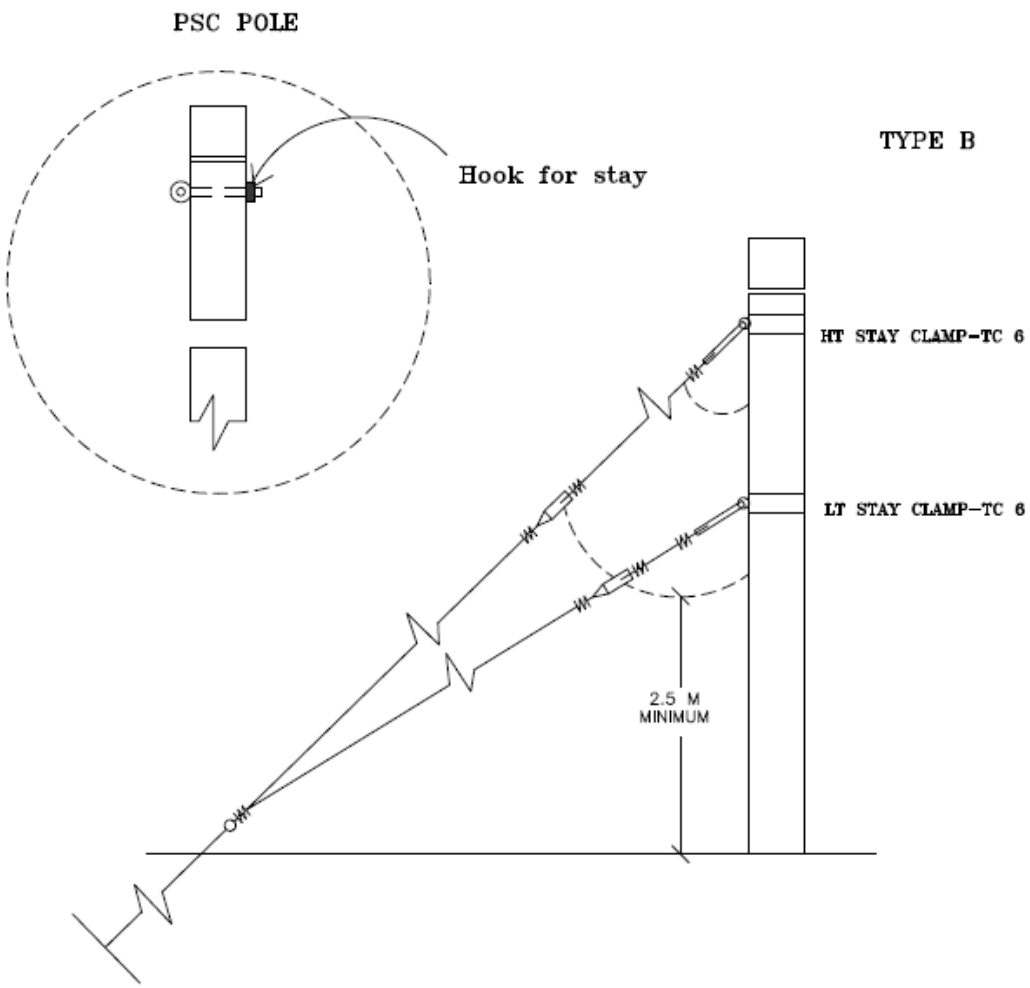
MAKE UNDERCUT AT BOTTOM OF ANCHOR HOLE,
PLATE TO BEAR AGAINST UNDISTURBED EARTH.

1. BACKFILL SHALL BE THOROUGHLY TAMPED.
2. BACKFILL FOR ANCHORS PLACED IN SOFT OR UNSTABLE SOIL SHALL BE 50MM GRAVEL PLACED TO DEPTH OF 1000 MM ABOVE ANCHOR PLATE

Drawing **CSG-STAY-01**	**Stays and Anchors**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



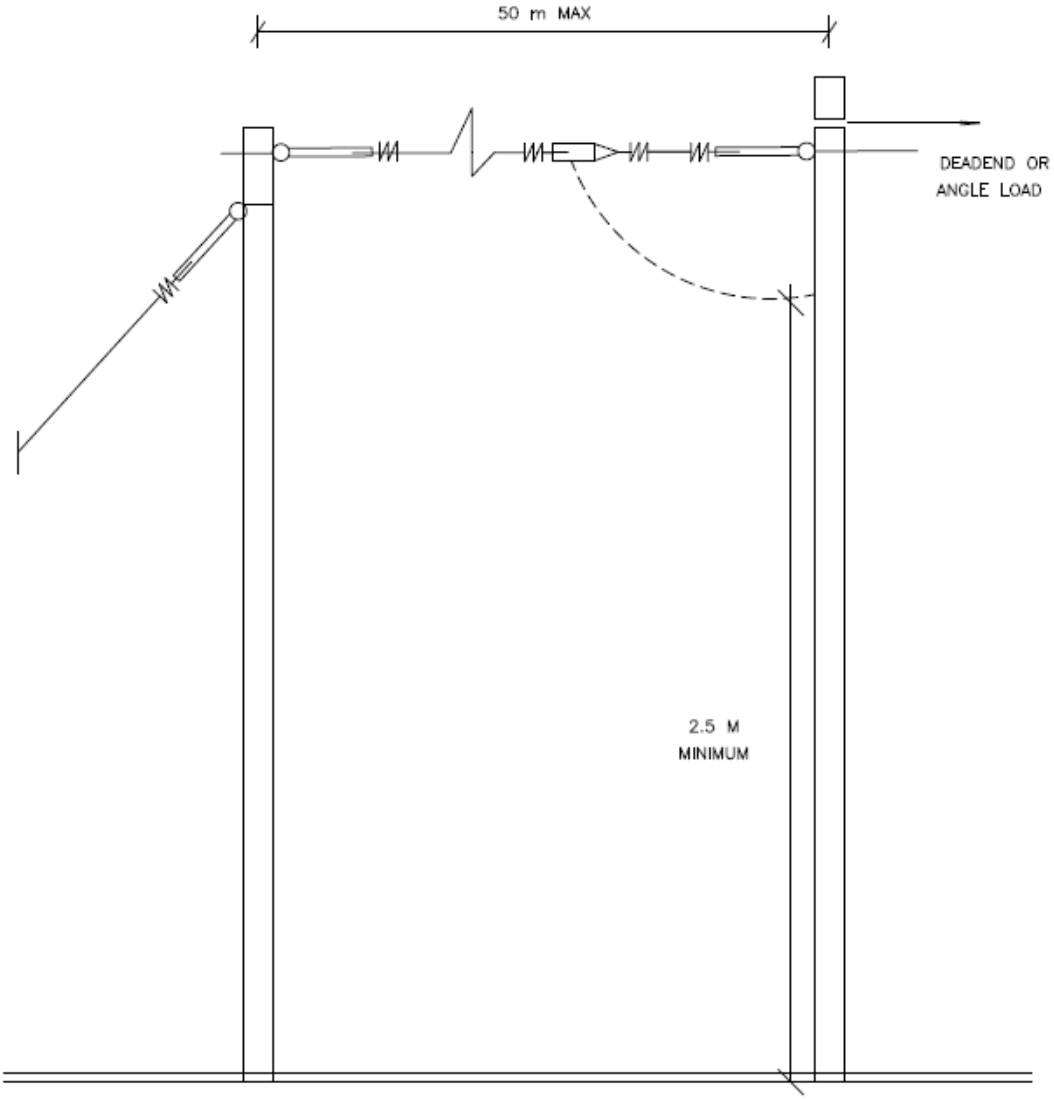
Drawing	Stays and Anchors	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-02	**HT and LT Stay - Type A**	**Community Rural Electrification Department**



NOTE:
STAY ROD EYE SHALL NOT EXTEND ABOVE SOIL MORE THAN 150mm.

Drawing	Stays and Anchors	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-03	**HT and LT Stay - Type B**	**Community Rural Electrification Department**

TYPE C



NOTE:

SPAN OF STAY SHALL BE LIMITED TO A MAXIMUM LENGTH OF 50 METERS.

Drawing		
CSG-STAY-04	**Stays and Anchors** **HT and LT Stay - Type C**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**

NOTES

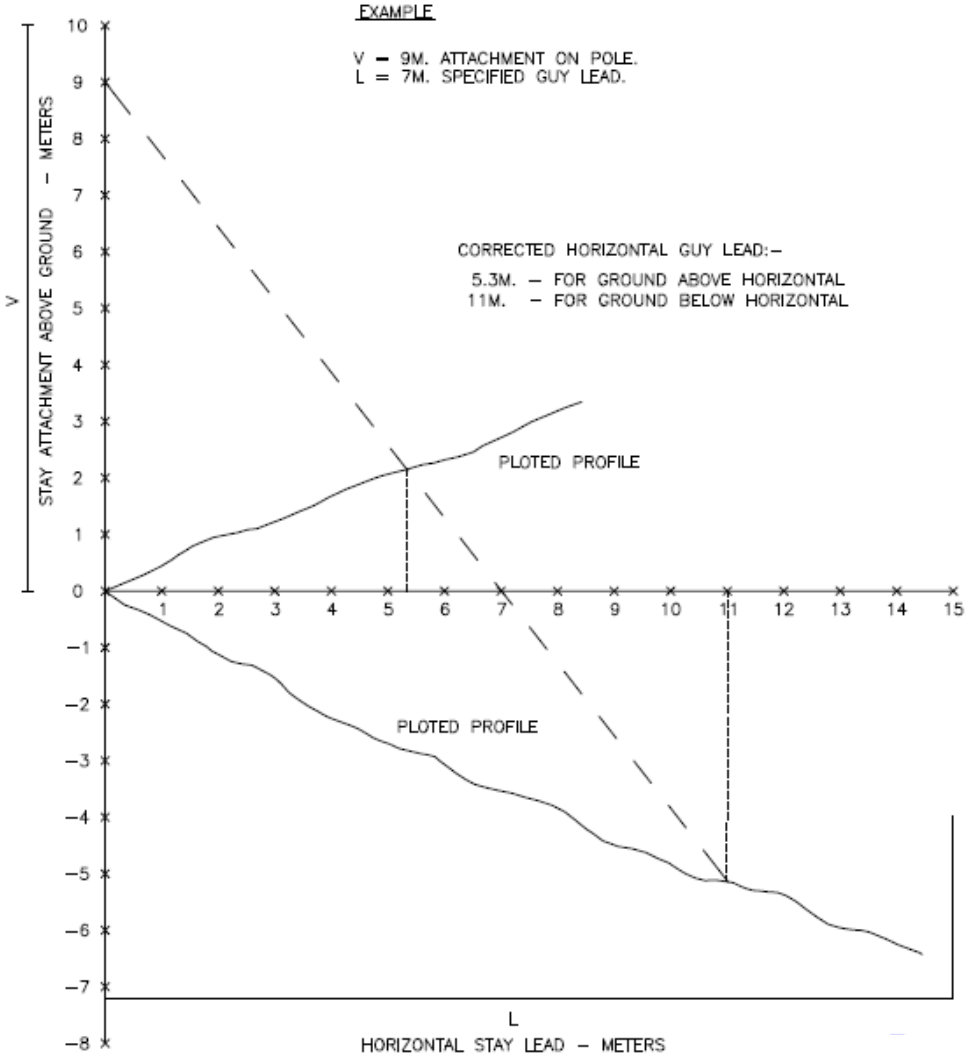
A. PLOT APPROXIMATE GROUND LINE PROFILE UNDER PROPOSED STAY.

B. SELECT A POINT ON VERTICAL SCALE "V" CORESPONDING TO GUY ATTACHMENT ON POLE , SELECT A POINT ON HORIZONTAL SCALE "L" CORESPONDING TO SPECIFIED STAY LEAD. LAY A STRAIGHT EDGE SO THAT IT PASSES THROUGH THESE TWO POINTS.

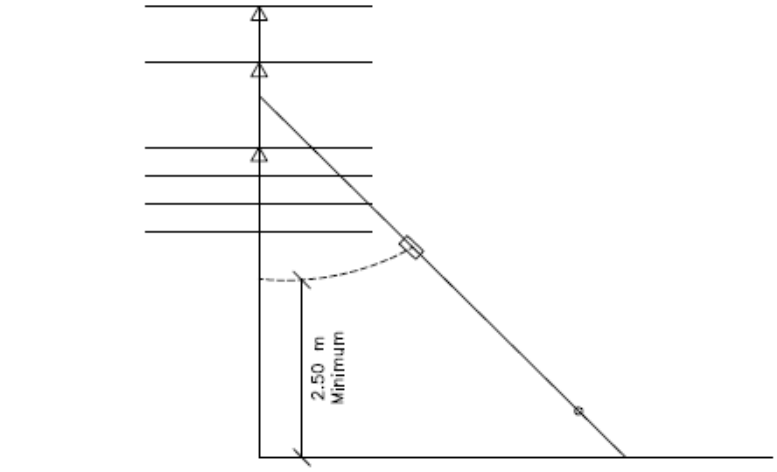
C. PROJECT POINT WHERE STRAIGHT EDGE INTERSECTS GROUND LINE PROFILE VERTICALLY TO HORIZONTAL SCALE "L" AND READ CORRECTED HORIZONTAL STAY LEAD.

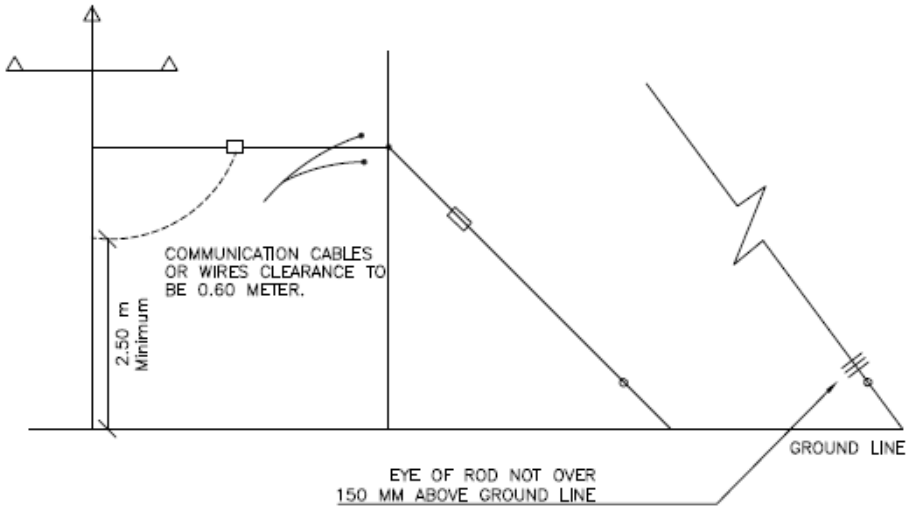
EXAMPLE

V = 9M. ATTACHMENT ON POLE.
L = 7M. SPECIFIED GUY LEAD.

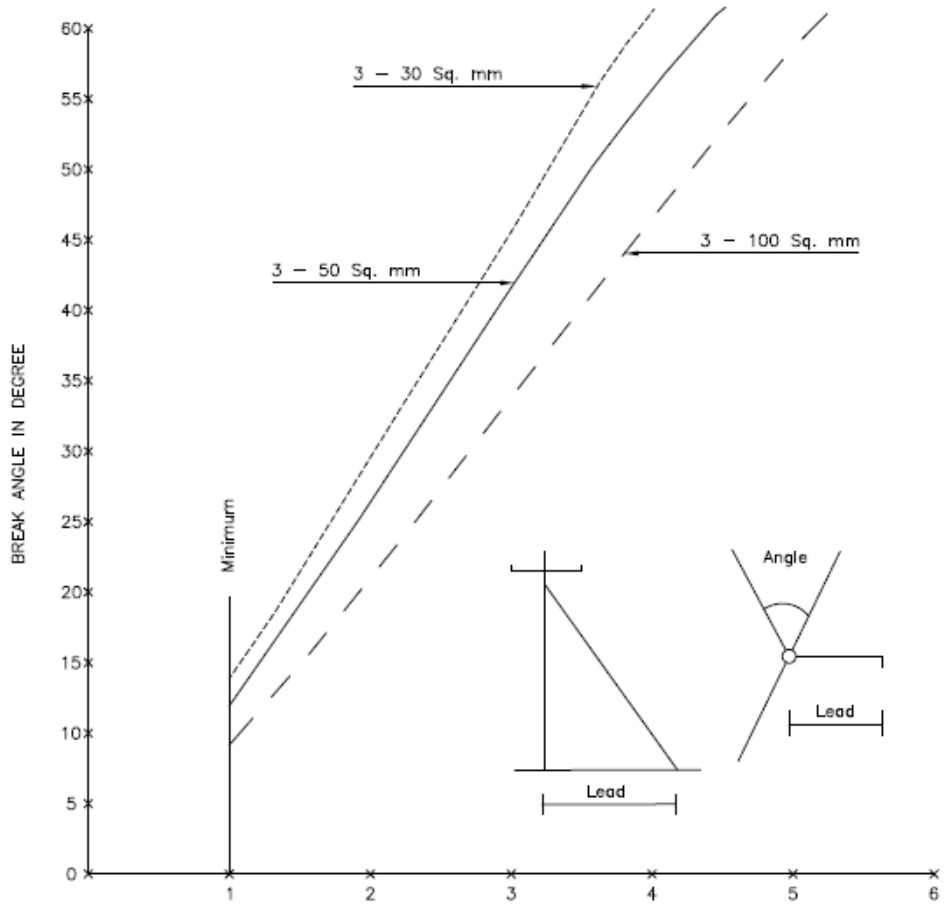


Drawing	Stays and Anchors	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-05	**Stay Lead Correction Graph**	**Community Rural Electrification Department**

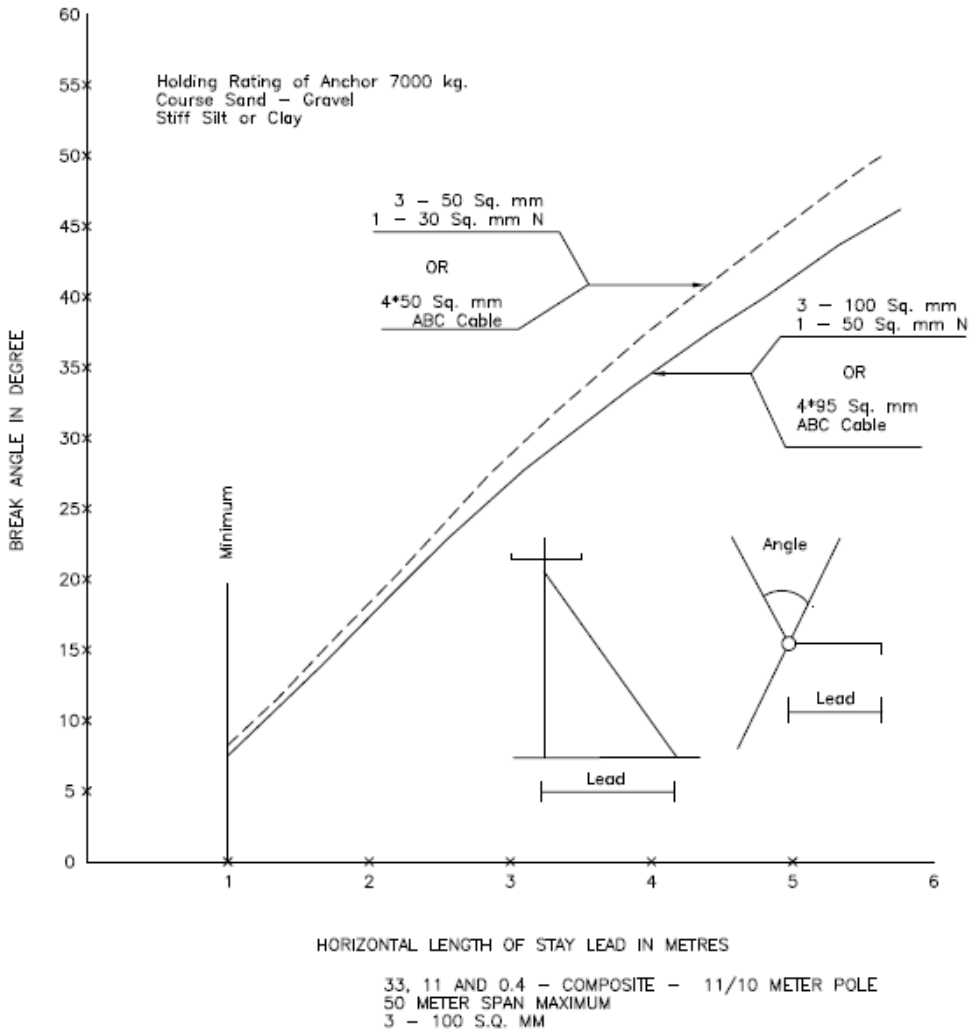




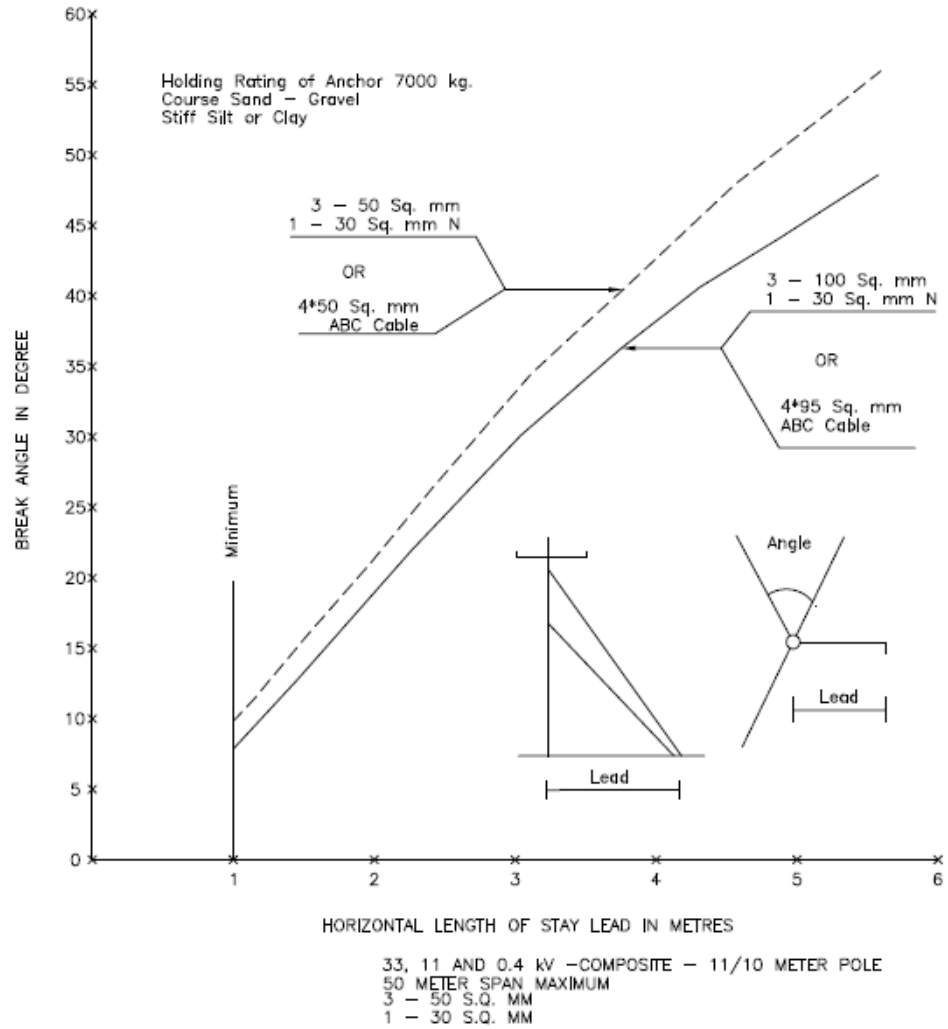
Drawing		
CSG-STAY-06	**Stays and Anchors**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



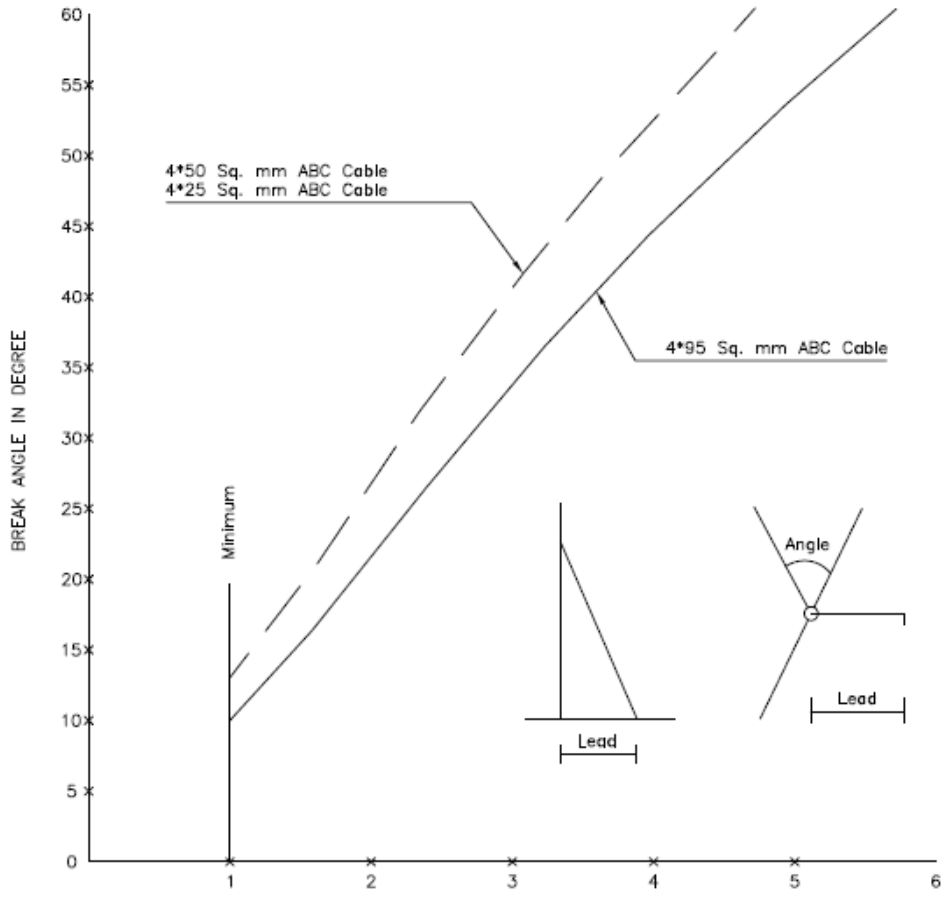
Drawing	Minimum Lead for Side	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-07	**Angle Stays**	**Community Rural Electrification Department**



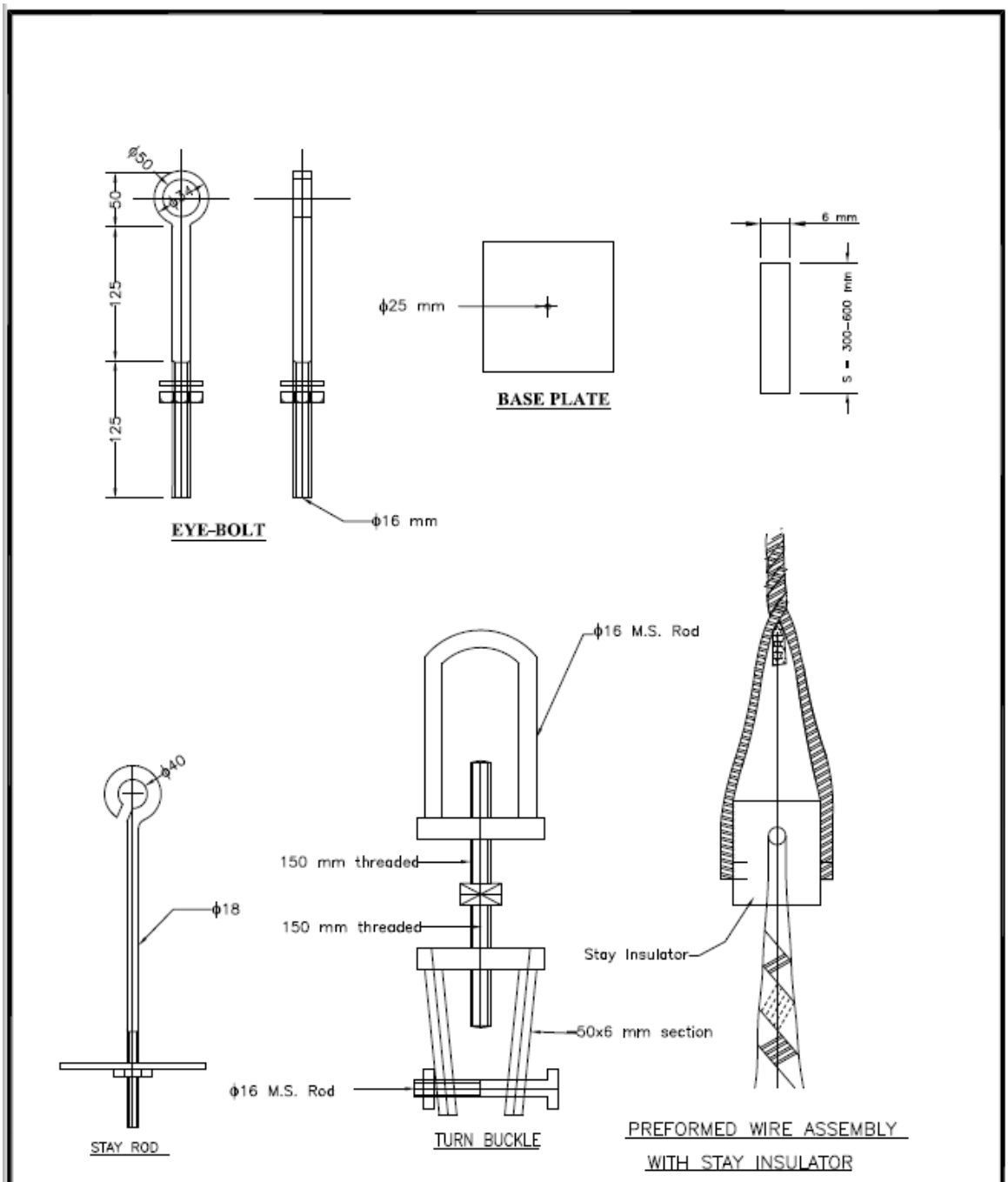
Drawing	Minimum Lead for Side	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-08	**Angle Stays**	**Community Rural Electrification Department**



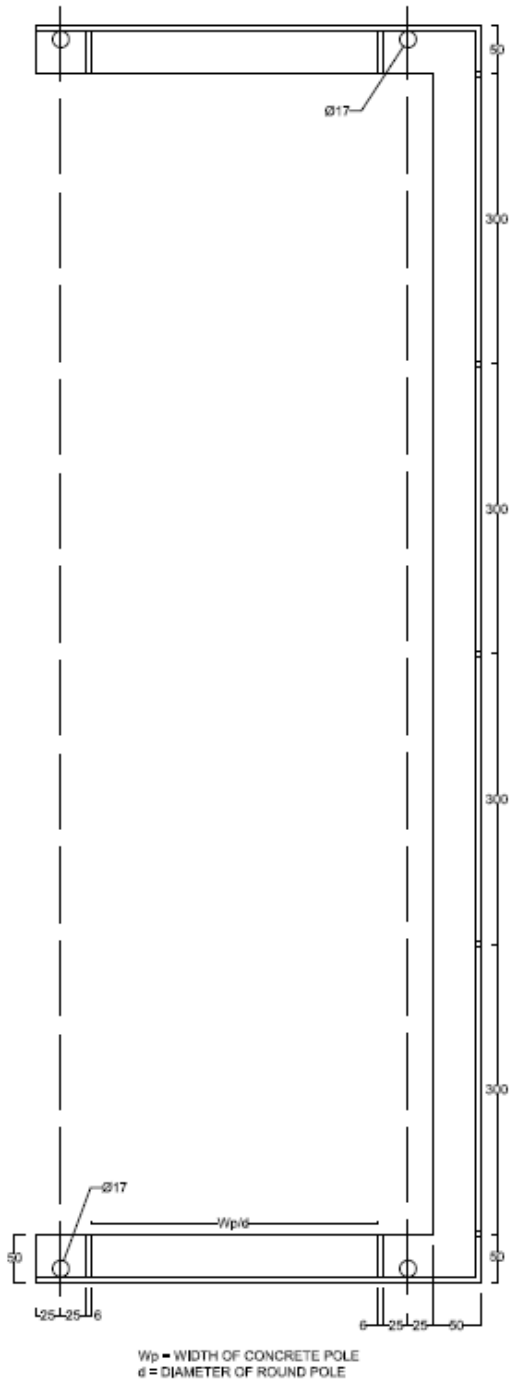
Drawing	**Minimum Lead for Side**	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-09	**Angle Stays**	**Community Rural Electrification Department**



Drawing	Minimum Lead for Side	NEPAL ELECTRICITY AUTHORITY
CSG-STAY-10	**Angle Stays**	**Community Rural Electrification Department**

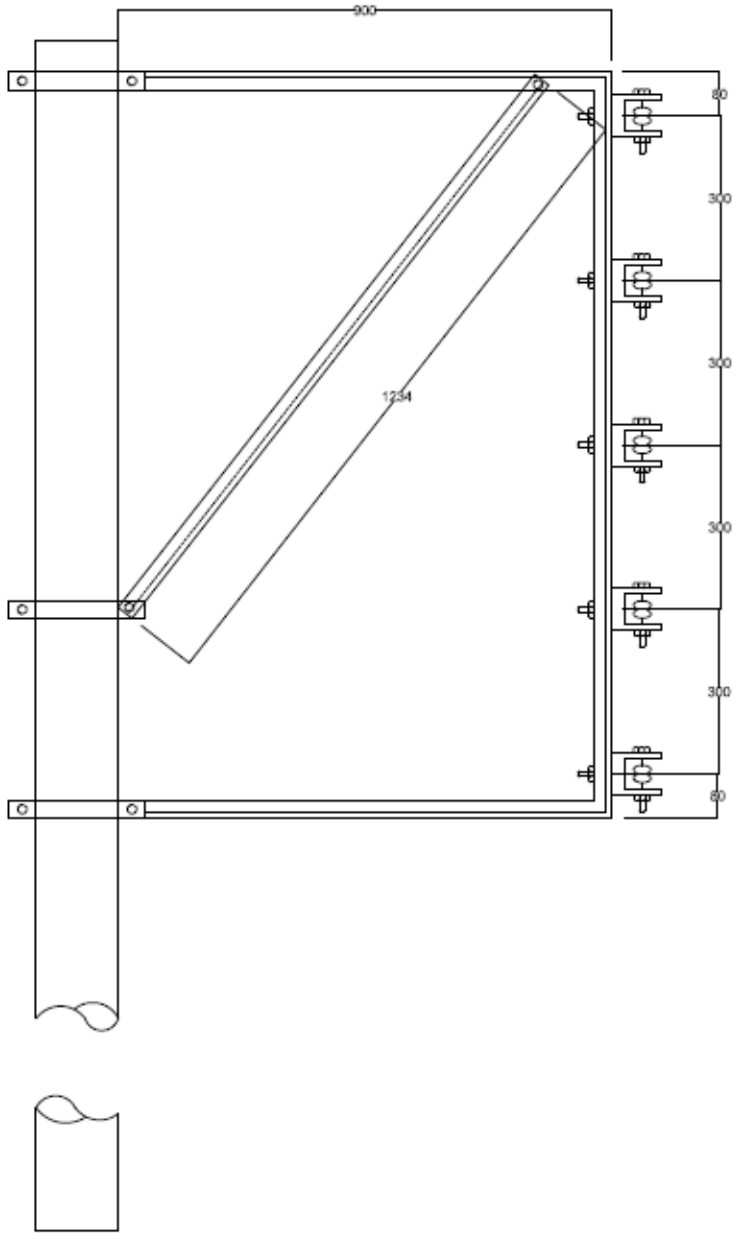


Drawing **CSG-STAY-11**	**Hardware for Stay Set**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**

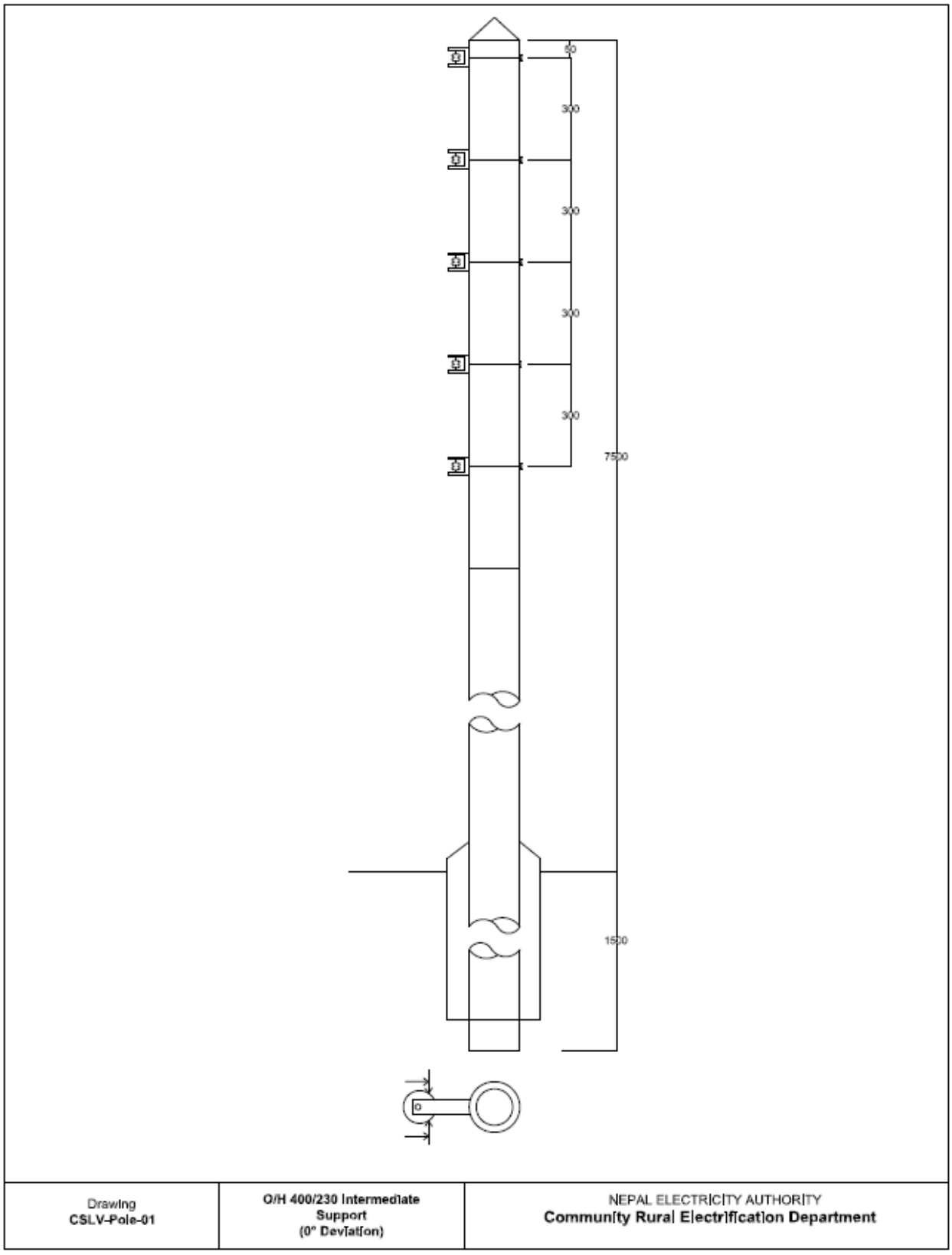


Wp = WIDTH OF CONCRETE POLE
d = DIAMETER OF ROUND POLE

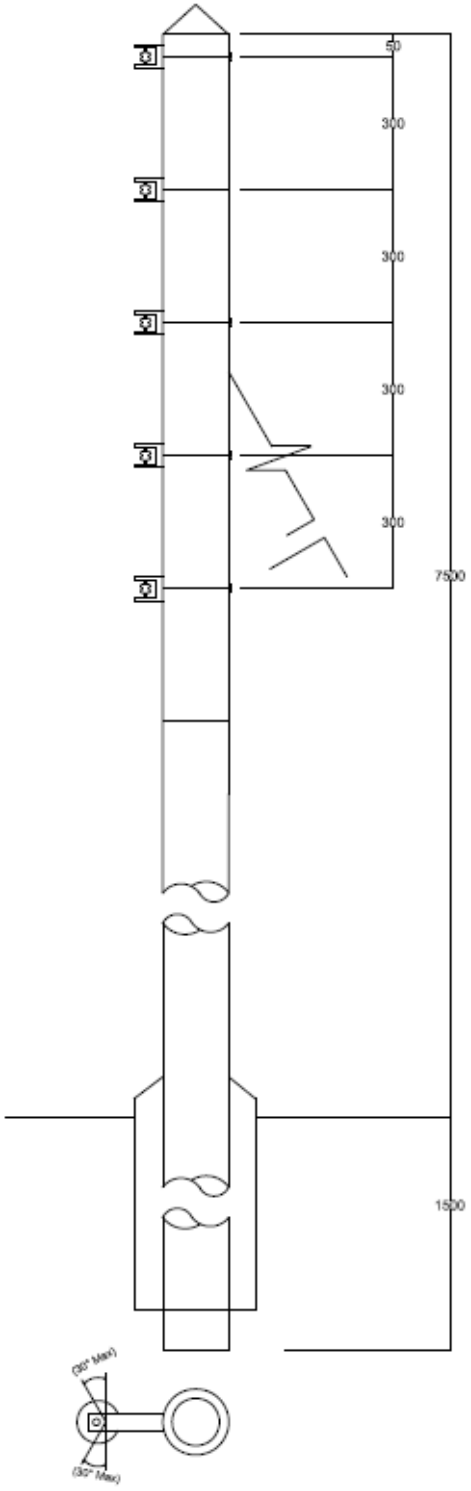
Drawing **CSLV-DB-01**	**D-Bracket for LV Line Support In Pole**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



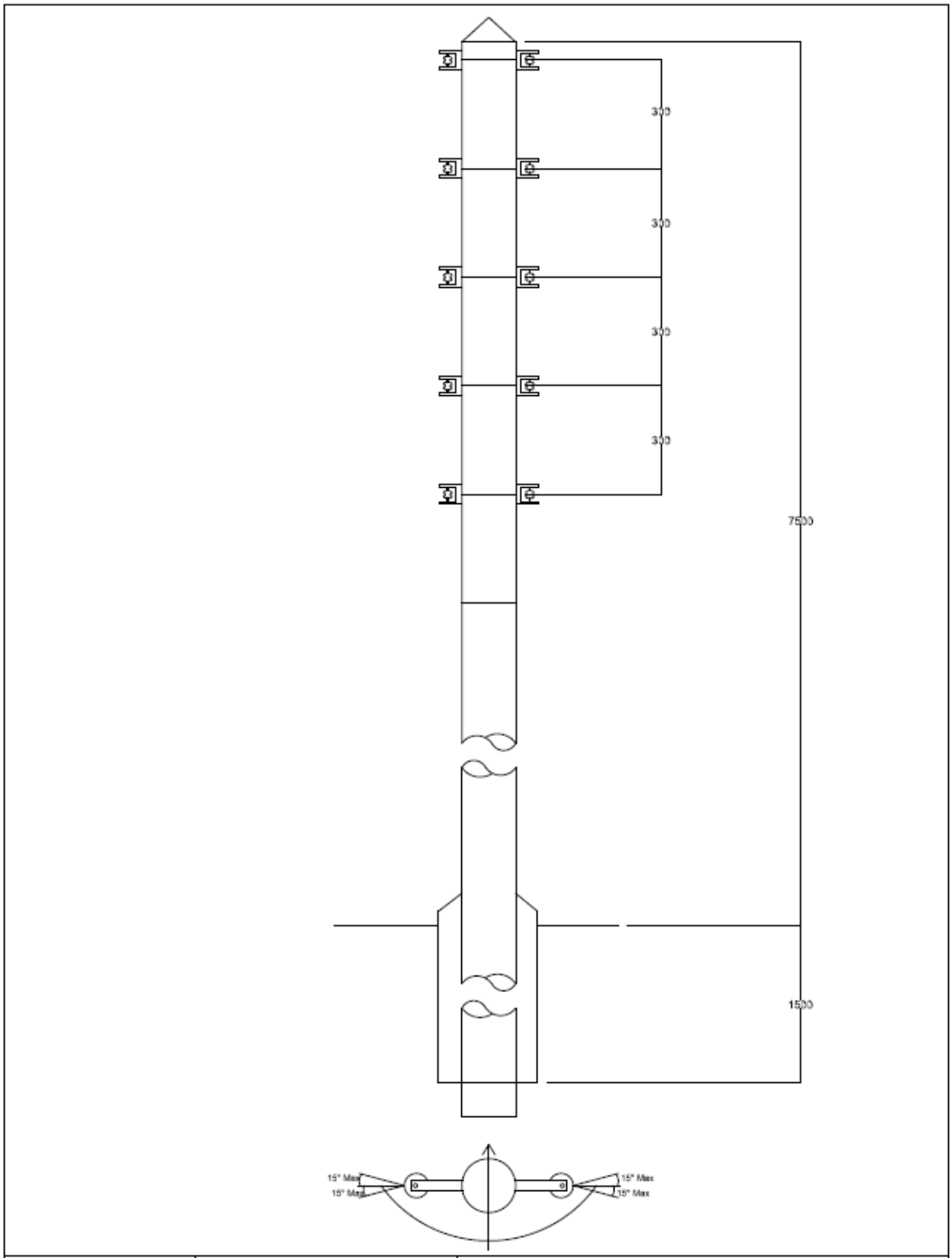
Drawing **CSLV-DB-02**	LV O/H LINE POLE WITH D-BRACKET	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



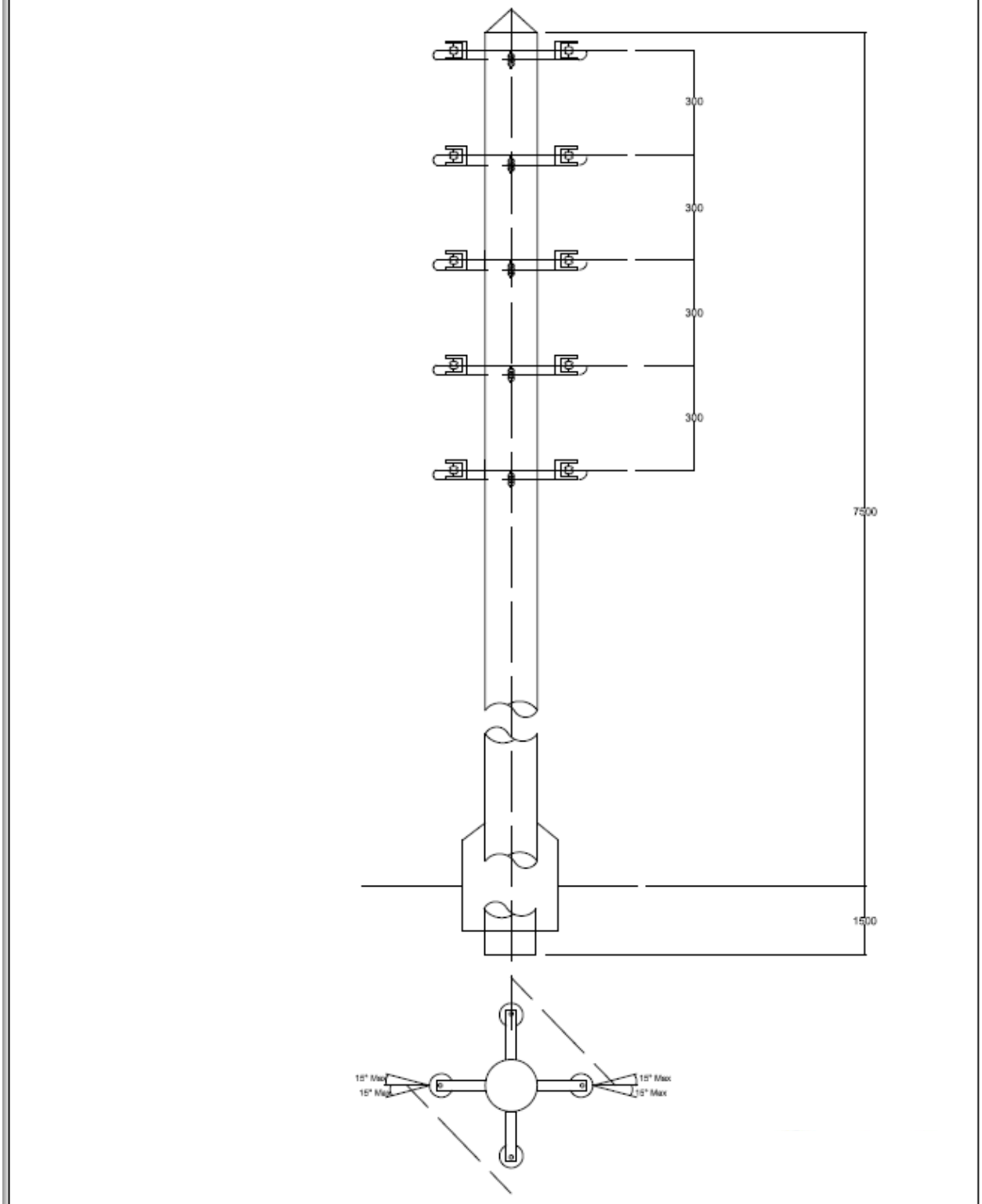
Drawing **CSLV-Pole-01**	**O/H 400/230 Intermediate Support (0° Deviation)**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



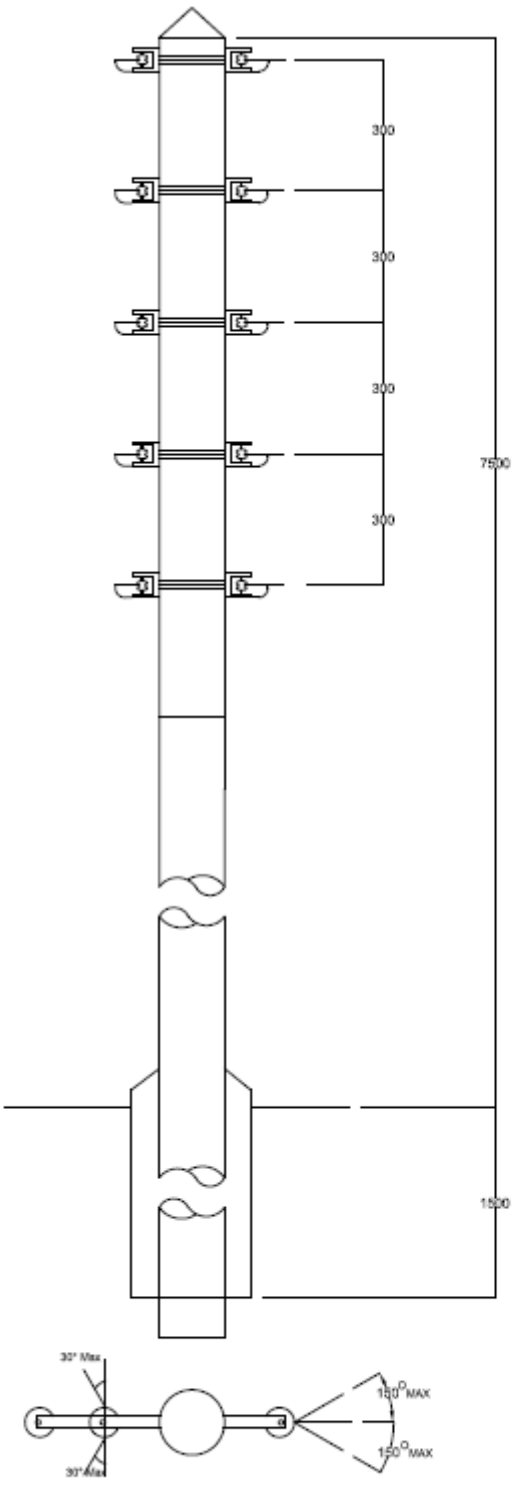
Drawing **CSLV-Pole-02**	**O/H 400/230 V Angle Support (15° to 60° Deviation)**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



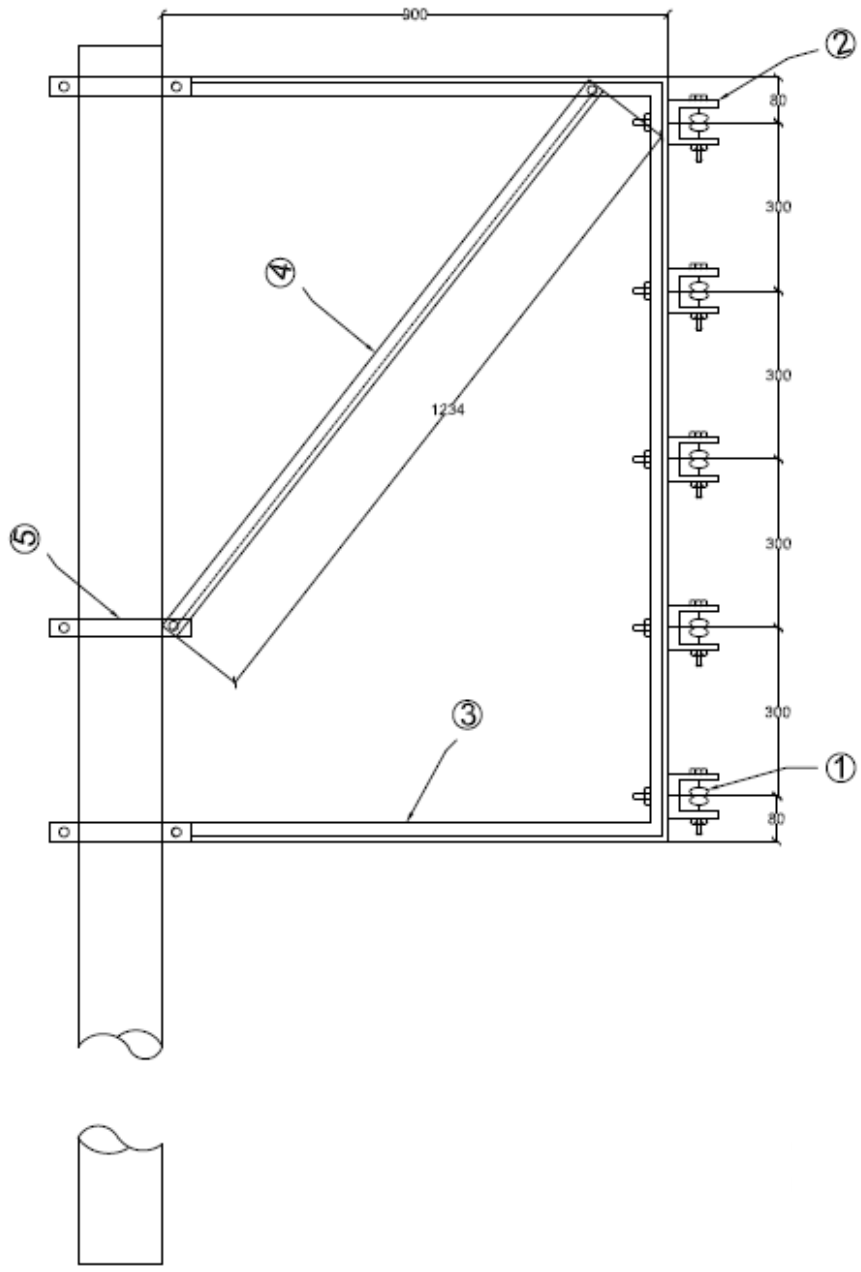
Drawing **CSLV-Pole-03**	**O/H 400/230 V Angle Support (Deviations up to 30°)**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



Drawing **CSLV-Pole-04**	**O/H 400/230 V Three or Four Way Arrangement (Deviation Over 30°)**	NEPAL ELECTRICITY AUTHORITY **Community Rural Electrification Department**



Drawing CSLV-Pole-05	O/H 400/230 V Intermediate Angle Support with Tee - off Connection	NEPAL ELECTRICITY AUTHORITY Community Rural Electrification Department



Drawing CSLV-CC-06	LV O/H Line Pole with D – Bracket	NEPAL ELECTRICITY AUTHORITY Community Rural Electrification Department

SECTION - VI

Bill of Quantities[1]

Preamble of Bill of Quantities

A. General

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Special Conditions of Contract, Technical Specifications, and Drawings.

2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Project Manager and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Project Manager may fix within the terms of the Contract.

3. For any item for which measurement is based on records made before or during construction the records shall be prepared and agreed between the Engineer and the Contractor. Should the Contractor carry out such work without the prior agreement of the Engineer, the Engineer may request the Contractor to carry out investigations to confirm the extent of the work and the quantity of work certified for payment shall be solely at the Engineer's discretion. The cost of any such investigation shall be borne by the Contractor.

4. The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction equipment, labor, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.

5. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.

6. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.

7. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities. The Specification Clause references where given in the item description of the Bills of Quantities are for the convenience of bidders and generally refer to the principal relevant- specification clause but do not necessarily represent the whole of the specification requirements for the work required within the item. The presence of a

[1]In lump sum contracts, delete "Bill of Quantities" and replace with "Schedule of Activities" throughout this section.

Specification clause reference shall not in any way reduce the Bidders obligation to complete work in accordance with all the requirements of the Specification.

8. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Project Manager in accordance with the Conditions of Contract.

9. The method of measurement of completed work for payment shall be in accordance with the Specifications.

Nepal Electricity Authority

Distribution and Consumer Service Directorate

Community Rural Electrification Department

Balaju, Kathmandu

CRED/Rehab/2074/075-06 Supply, delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network at the Distribution area of Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre

Summary of Cost

Name of Community	Cost Estimate NRs.					
	Materials Cost (NRs) (1)	Labour Cost (NRs) (2)	Total Cost (NRs) (3=1+2)	VAT @ 13 % (NRs) (4= 13% of 3)	Total of Material & Labour Cost with VAT (NRs) (5 = 3 + 4)	Total Cost in Words
Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre						

Name of the Bidder:

Signature:

Seal/Stamp of the Bidder:

Date:

Nepal Electricity Authority
Distribution and Consumer Service Directorate
Community Rural Electrification Department
Balaju, Kathmandu

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Note:-The unit rates shall be reflected from the item under Annex-1 to Annex-3. In case of descripancy between the unit rate of each item under Annex-1 to Annex-3, the minimum quoted rate shall prevail and accordingly employer shall correct the price during evaluation pursuant to Section 1, ITB clause 31

A. Material Cost

S. No.	Type	Description	Unit	Qty	Rate NRs.	Amount NRs.
1	**Supply of 8 m. Steel Tubular Pole**					
1.1	PL	8 m. Steel Tubular Pole as per drawing and specification for LT	Nos.	164		
2	**Supply of Conductor Complete set with Accessories**					
2.1	CH12	50 sq. mm. ACSR Conductor with all accessories complete as per drawing and specification (For 11 kV)	km.	0.500		
3	**Supply of Stay Set Complete with Accessories**					
3.1	ST	Single Stay set with all accessories complete as per drawaing and specifications for LT Steel Tubular Pole-Type-A	Nos.	14		
4	**Supply of Transformer Complete set with all Accessories**					
4.1	TR13	Replacement of 50 kVA Transformer Structure for 11 m. Steel Tubular Poles with 100 kVA Transformer (If Transformer is to be installed in the middle of the HT Span)	Nos.	1		
		Total Material Cost				

Name of the Bidder:

Signature:

Seal/Stamp of the Bidder:

Date:

Nepal Electricity Authority

Distribution and Consumer Service Directorate

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B. Labour Cost

S. No.	Type	Description	Unit	Qty	Rate NRs.	Amount NRs.
1		Pre-Construction Survey , Geographical Maping, Drawing, Staking, Preparatin of Structure Data Sheet , Single Line Diagram & Final Bill of Quantity etc.	km.	2.00		
2	**Erection of Steel Tubular Pole**					
2.1		8 m. Steel Tubular Pole as per drawing and specification for LT	Nos.	164		
3	**Stringing of Conductor Complete set with Accessories**					
3.1	CH12	50 sq. mm. ACSR Conductor with all accessories complete as per drawing and specification (For 11 kV)	km.	0.500		
4	**Shifting of ACSR Conductor with Accessories from wooden poles to Steel Tubular Poles**					
4.1	CL22	30 sq. mm. ACSR Conductor with all accessories complete as per drawaing and specifications (LT Four Wire)	rkm.	5.042		
4.2	CL32	30 sq. mm. ACSR Conductor with all accessories complete as per drawaing and specifications (LT Three Wire)	rkm.	2.300		
4.3	CL42	30 sq. mm. ACSR Conductor with all accessories complete as per drawaing and specifications (LT Two Wire)	rkm.	9.093		

Name of the Bidder:
Signature:
Seal/Stamp of the Bidder:
Date:

5	**Supply of Stay Set Complete with Accessories**					
5.1	ST	Single Stay set with all accessories complete as per drawaing and specifications for LT Steel Tubular Pole-Type-A	Nos.	14		
6	**Supply of Transformer Complete set with all Accessories**					
6.1	TR13	Replacement of 50 kVA Transformer Structure for 11 m. Steel Tubular Poles with 100 kVA Transformer (If Transformer is to be installed in the middle of the HT Span)	Nos.	1		
7		**Dismantling of the existing wooden pole and transport to nearest NEA Office**				
7.1		Dismantling of the existing wooden pole and transport to nearest office, NEA	Nos.	164		
8		Preparation of Final as built drawing, Testing, Charging of electric Distribution system and handover with documentation CBO.	km.	2.00		
		Total Material Cost				

Name of the Bidder:

Signature:

Seal/Stamp of the Bidder:

Date:

Nepal Electricity Authority

Distribution and Consumer Service Directorate

Community Rural Electrification Department

Balaju, Kathmandu

CRED/Rehab/2074/075-06 Supply, delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network at the Distribution area of Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre

Annex - 1 (Unit Rate Calculation of ACSR Conductor with Accessories)

Type	Description	unit	Qty	Rate NRs.	Rate In Words	Amount NRs.
CH12 Type (0.05 sq. inch ACSR Conductor for 11 kV)	0.05 sq. inch ACSR Conductor "RABBIT"	km	3.15			
	Binding Wire suitable for 0.05 sq. inch ACSR Conductor	Lot	1			
	PG Clamp for 0.05 sq. inch ACSR Conductor "RABBIT"	Nos.	6			
	Sub-Total					

Name of the Bidder:
Signature:
Seal/Stamp of the Bidder:
Date:

Nepal Electricity Authority

Distribution and Consumer Service Directorate

Community Rural Electrification Department

Balaju, Kathmandu

CRED/Rehab/2074/075-06 Supply, delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network at the Distribution area of Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre

(Annex- 2) Price Schedules of Unit Quantities for Supply of Transformer with Accessories

TR13 Type (Steel Tubular Pole) : Installation of 100 kVA Transformer in Steel Tubular Pole (if transformer is to be installed in the middle of the HT span)

S.No.	Description	Unit	Qty	Rate (NRs)	Rate in Words	Amount (NRs.)
1	11/0.4 kV 100 KVA Three Phase Transformer	Nos.	1			
2	11 meter Steel Tubular Pole (Folding)	Nos.	2			
3	9 kV Surge Arrestor with fitting arrangements	Set	1			
4	11 kV Distribution Cutout with suitable fuse holders	Set	1			
5	Earthing set for Lightning Arrester & Transformer Neutral (2.5 meter long & 40 mm dia. GI pipe or 25 mm. dia Copper coated steel pipe with clamps and 16 sq. mm PVC Insulated Copper Wire).	Set	2			
6	Earthing set for transformer body (2.5 meter long & 40 mm dia. GI pipe or 25 mm. dia Copper coated steel pipe with clamps and 8 SWG copper or GI wire).	Set	1			
7	0.05 sq. inch ACSR Conductor "RABBIT"	m	10			
8	PG Clamp for 0.05 sq. inch ACSR Conductor "RABBIT"	Nos.	3			
9	95 sq. mm single core unarmored Aluminium Cable with necessary cable lug, shoes etc.	m	18			
10	MCCB 150 A (Short Circuit Current 35 KA for 1 Second)	Nos.	1			
11	Nut & Bolts of 5/8" x Length as required for Transformer	Lot	1			
	Sub-Total					

Name of the Bidder:
Signature:
Seal/Stamp of the Bidder:
Date:

Nepal Electricity Authority

Distribution and Consumer Service Directorate

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(Annex-3) Unit Rate Calculation of Stay Set

Type	S.No.	Description	Unit	Qty	Rate (NRs)	Rate in Words	Amount (Nrs.)
ST - Steel Tubular Pole (Type A) (Single Stay Set for LT)	1	Stay Plate (6×300×300 mm)	Nos.	1			
	2	Stay Rod 16 mm	Nos.	1			
	3	Turn Buckle	Set	1			
	4	Thimble	Nos.	2			
	5	Preform Wire Compatible for Stay Wire of size 7/2.64 mm	Set	4			
	6	Eye Bot and Washer	Set	1			
	7	Stay Insulator	Nos.	1			
	8	Stay Wire 7/12 SWG	kg	5			
		Sub-Total					

Name of the Bidder:
Signature:
Seal/Stamp of the Bidder:
Date:

Part - III

CONDITIONS OF CONTRACT AND CONTRACT FORMS

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SECTION - VII
General Conditions of Contract

General Conditions of Contract

A. General	
1. Definitions	1.1 Boldface type is used to identify defined terms. (a) The **Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects. (b) **The Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events. (c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.2 hereunder. (d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid. (e) **Compensation Events** are those defined in GCC 42 hereunder. (f) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 53.1. (g) The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC 2.3 below. (h) The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer. (i) The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer. (j) The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract. (k) **Days** are calendar days; months are calendar-months.

(l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

(m) A **Defect** is any part of the Works not completed in accordance with the Contract.

(n) The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.

(o) The **Defects Liability Period** is the period calculated from the Completion Date where the Contractor remains responsible for remedying defects.

(p) **Drawings** include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

(q) The **Employer** is the party who employs the Contractor to carry out the Works, as specified in the **SCC.**

(r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

(s) **Force Majeure** means an exceptional event or circumstance: which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party.

(t) The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

(u) The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the **SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

(v) **Letter of Intent** is the letter of the Employer expressing his intention to award the contract.

(w) **Letter of Acceptance** means the formal acceptance by the Employer of the Bid and denotes the formation of the contract at the date of acceptance.

	(x) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works. (y) **"Party"** means the Employer or the Contractor, as the context requires. (z) **SCC** means Special Conditions of Contract (aa) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function. (bb) The **Project Manager** is the person named in the **SCC** (or any other competent person appointed by the employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract. (cc) **Retention Money** means the aggregate of all monies retained by the Employer pursuant to GCC 46.1. (dd) The **Site** is the area defined as such in the **SCC**. (ee) **Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site. (ff) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager. (gg) The **Start Date** is given in the **SCC.** It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates. (hh) A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site. (ii) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works. (jj) A **Variation** is an instruction given by the Project Manager which varies the Works. (kk) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as

	defined in the **SCC.**
2. Interpretation	2.1 In interpreting these GCC, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC. 2.2 If sectional completion is specified in the **SCC,** references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works). 2.3 The documents forming the Contract shall be interpreted in the following order of priority: (a) Contract Agreement, (b) Letter of Acceptance, (c) Contractor's Bid, (d) Special Conditions of Contract, (e) General Conditions of Contract, (f) Specifications, (g) Drawings, (h) Bill of Quantities (or Schedules of Prices for lump sum contracts), and (i) Any other document listed in the **SCC** as forming part of the Contract.
3. Language and Law	3.1 The language of the Contract and the law governing the Contract are stated in the **SCC.**
4. Project Manager's Decisions	4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.
5. Delegation	5.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.
6. Communications	6.1 Communications between parties that are referred to in the

	Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
7. Subcontracting	7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.
8. Other Contractors	8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the SCC. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.
9. Personnel and Equipment	9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid to carry out the Works, or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid. 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
10. Employer's and Contractor's Risk	10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.
11. Employer's Risks	11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks: (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable

	result of the Works or (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor. (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed. 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to (a) a Defect which existed on the Completion Date, (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or (c) the activities of the Contractor on the Site after the Completion Date.
12. Contractor's Risks	12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.
13. Insurance	13.1 The Contractor shall provide insurance in the joint names of the Employer and the Contractor from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **SCC** for the following events which are due to the Contractor's risks: (a) loss of or damage to the Works, Plant, and Materials; (b) loss of or damage to Equipment; (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and (d) Personal injury or death.
	13.2 Policies and certificates for insurance shall be delivered by

	the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the proportions of Nepalese Rupees required to rectify the loss or damage incurred. 13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due. 13.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager. 13.5 Both parties shall comply with any conditions of the insurance policies.
14. Site Investigation Reports	14.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **SCC,** supplemented by any information available to the Bidder.
15. Contractor to Construct the Works	15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
16. The Works to Be Completed within intended Completion Date	16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them within the Completion Date.
17. Design by contractor and Approval by the Project Manager	17.1 The contractor shall be responsible for the design of permanent works as specified in SCC. 17.2 Contractor shall be responsible for design of the Temporary Works. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval. 17.3 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, shall be subject to prior approval by the Project Manager before their use. 17.4 The Project Manager's approval shall not alter the Contractor's responsibility for design of temporary works.

18. Safety, Security and Protection of the Environment	18.1 The Contractor shall, throughout the execution, and completion of the works and remedying of any defects therein: a. Have full regard for the safety of all persons entitled to be upon the site and keep the site (so as the same is under his control) and the works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons. b. Provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when necessary or required by the Project Manager or by any duly constituted authority, for the protection of the Works of for the safety and convenience of the public or others. c. Take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. d. Ensure that any cut or fill slopes are planted in grass or other plant cover as soon as possible to protect them from erosion. e. Any spoil or material removed from drains shall be disposed off to designated stable tipping areas as directed by the Project Manager. f. Shall not use fuel wood as a means of heating during the processing or preparation of any materials forming part of the works. g. The Project Manager shall have the power to disallow any working practice or activity of the Contractor or direct that such practices or activities be modified should the Project Manager consider, on the advice of the relevant Government Departments, that the practices or activities will be harmful to wildlife. h. Provide on the Site such lifesaving apparatus as may be appropriate and an adequate and easily accessible first aid outfit or such outfits as may be required by any government ordinance, factory act, etc., subsequently published and amended from time to

	time.
19. Discoveries	19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
20. Possession of the Site	20.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the SCC, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.
21. Access to the Site	21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
22. Instructions, Inspections and Audits	22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located. 22.2 The Contractor shall permit the GoN/DP and/or persons appointed by the GoN/DP to inspect the Site and/or the accounts and records of the Contractor and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the GoN/DP if required by the GoN/DP. The Contractor's attention is drawn to Sub-Clause 58.2 which provides, inter alia, that acts intended to materially impede the exercise of the GoN's/DP's inspection and audit rights provided for under this Sub-Clause constitute a obstructive practice subject to contract termination.
23. Dispute Settlement	23.1 The Employer and the Contractor shall attempt to settle amicably by direct negotiation any disagreement or dispute arising between them under or in connection with the Contract. 23.2Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one

	Party of the other Party's request for such amicable settlement may be referred to Arbitration within 30 days after the expiration of amicable settlement period.
	Not Applicable.
25. Procedures for Disputes	25.1 In case of arbitration, the arbitration shall be conducted in accordance with the arbitration procedures published by the Nepal Council of Arbitration (NEPCA) at the place given in the **SCC.**
B. Time Control	
26. Program	26.1 Within the time stated in the SCC, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule. 26.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities. 26.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the SCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall Provide an updated Activity Schedule within 15 days of being instructed to by the Project Manager. 26.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date	27.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost. 27.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information at least 7 days prior to the intended completion date. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
28. Acceleration	28.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor. 28.2 If the Contractor's priced proposals for acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.
29. Delays Ordered by the Project Manager	29.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
30. Management Meetings	30.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure. 30.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer.

	The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.
31. Early Warning	31.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible. 31.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.
C. Quality Control	
32. Identifying Defects	32.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.
33. Tests	33.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
34. Correction of Defects	34.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the

	SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. 34.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.
35. Uncorrected Defects	35.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.
D. Cost Control	
36. Contract Price	36.1 In the case of a Unit Rate contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item. 36.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.
37. Changes in the Contract Price	37.1 In the case of an Unit Rate contract: (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 2 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. (b) The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer. (c) If requested by the Project Manager, the Contractor

	shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities. 37.2 In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.
38. Variations	38.1 All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor. 38.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered. 38.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs. 38.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event. 38.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning. 38.6 In the case of an Unit Rate contract, if the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in GCC 37.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the

	nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.
39. Cash Flow Forecasts	39.1 When the Program, or, in the case of a lump sum contract, the Activity Schedule, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.
40. Payment Certificates	40.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously. 40.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor within 30 days of submission by contractor. 40.3 The value of work executed shall be determined by the Project Manager. 40.4 The value of work executed shall comprise: (a) In the case of an Unit Rate contract, the value of the quantities of work in the Bill of Quantities that have been completed; or (b) In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule. 40.5 The value of work executed shall include the valuation of Variations and Compensation Events. 40.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
41. Payments	41.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest as indicated in the **SCC** on the late payment

	in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made. 41.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute. 41.3 Items of the Works for which no rate or price has been entered in BOQ shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
42. Compensation Events	42.1 The following shall be Compensation Events: (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC 20.1. (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract. (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time. (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects. (e) The Project Manager unreasonably does not approve a subcontract to be let. (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site. (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or

	other reasons. (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor. (i) The advance payment is delayed. (j) The effects on the Contractor of any of the Employer's Risks. (k) The Project Manager unreasonably delays issuing a Certificate of Completion. (l) Force majeure events as determined by the Project Manager. 42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended. 42.3 As soon as information demonstrating effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event. 42.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.
43. Tax	43.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the

	Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC 45.
44. Currency	44.1 The currency of Contracts shall be Nepalese Rupees.
45. Price Adjustment	45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the **SCC.** If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due. 45.2 **Adjustment Formulate[1]:** "The adjustment to the Interim Payment Certificates in respect of changes in cost and legislation shall be determined from separate formulae for each of the types of construction work to be performed and Plant to be supplied. The formulae will be of the following general type: $$pn = A + b\frac{Ln}{Lo} + c\frac{Mn}{Mo} + d\frac{En}{Eo} + etc.$$ Where: **pn** is a price adjustment factor to be applied to the amount for the payment of the work carried out in the subject month, determined in accordance with Sub-Clause 41; **A** is a constant, specified in the Bidding Forms- Table of Price Adjustment data, representing the nonadjustable portion in contractual payments;[2] **b, c, d,** etc., coefficients representing the estimated proportion of each cost element (labor, materials, equipment usage, etc.) in the Works or sections thereof,

[1] For complex Works involving several types of construction work with different inputs, a family of Formulae will be necessary. The various items of Day work may also require different formulae, depending on the nature and source of the inputs.

[2] Insert a figure for factor A only where there is a part of the Contractors' expenditures which will not be subject to fluctuation in cost or to compensate for the unreliability of some indices. A should normally be 0.15. The sum of A, b, c, d, etc., should be one.

	net of Provisional Sums, as specified in the SCC; **Ln, Mn, En,** etc., are the current cost indices or reference prices of the cost elements for month "n," determined pursuant to Sub-Clause 45.4, applicable to each cost element; and **Lo, Mo, Eo,** etc., are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 45.4
	45.3 **Sources of Indices and Weightings:** The sources of indices shall be those listed in the Bidding Forms- Table of Price Adjustment data, as approved by the Project Manager and stated in SCC. Indices shall be appropriate for their purpose and shall relate to the Contractor's proposed source of supply of inputs on the basis of which his Contract shall have been computed. As the proposed basis for price adjustment, the Contractor shall have submitted with his bid the tabulation of Weightings and Source of Indices in the Bidding Forms, which shall be subject to approval by the Project Manager. 45.4 **Base, Current and Provisional Indices:** The base cost indices or prices shall be those prevailing on the day 30 days prior to the latest date for submission of bids. Current indices or prices shall be those prevailing on the day 30 days prior to the last day of the period to which a particular Interim Payment Certificate is related. If at any time the current indices are not available, provisional indices as determined by the Project Manager will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available. 45.5**Weightings:** The weightings for each of the factors of cost given in the Bidding Forms shall be adjusted if, in the opinion of the Project Manager, they have been rendered unreasonable, unbalanced or inapplicable as a result of varied or additional work already executed or instructed under Clause 38 or for any other reason. 45.6**Subsequent Legislation:** If, after the date 30 days prior to the latest date for submission of bids for the Contract, there occur changes to any National Statute, Ordinance,

	Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such Statute, Ordinance, Decree, Law, regulation or by-law which causes additional or reduced cost to the Contractor, other than under the preceding sub-clauses of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Project Manager and shall be added to or deducted from the Contract Price and the Project Manager shall notify the Contractor accordingly, with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already have taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Sub-Clauses 45.2
	45.7Where, price adjustment provision is not applicable pursuant to Sub-clause 45.1 then the Contract is subject to price adjustment only for construction material in accordance with this clause. If the prices of the construction materials stated in the contract is increased or decreased in an unexpected manner in excess of ten (10%) percent in comparison to the base price construction material stated in Section –IV, Bidding Forms-Table of Price Adjustment Data, then the price adjustment for the increase or decrease of price of the construction material beyond 10% shall be made by applying the following formulas: For unexpected increase in price $P = [R_1 - (R_0 \times 1.10)] \times Q$ For unexpected decrease in price P $= [R_1 - (R_0 \times 0.90)] \times Q$ Where: "P" is price adjustment amount "R_1" is the present price of the construction material (Source of indices shall be those listed in the Bidding forms) "R_0" is the base price of the construction material

	"Q" is quantity of the construction material consumed in construction during the period of price adjustment consideration If the Base price and source is to be proposed by the Bidder as per the provision made in Section –IV, Bidding Forms-Table of Price Adjustment Data then the Base price and source filled by Bidder for the construction material stated in the Bidding Form shall be subject to the approval of the Project manager and shall be as stated in SCC.. 45.8The Price Adjustment amount shall be limited to a maximum of the initial Contract Amount as specified in the **SCC**. 4.9 The Price Adjustment provision shall not be applicable for delayed period if the contract is not completed in time due to the delay caused by the contractor or the contract is a Lump sum Contract or a Fixed Budget Contract.
46. Retention	46.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the SCC until Completion of the whole of the Works. 46.2 Upon the issue of a Defects Liability Certificate by the Project Manager, in accordance with GCC 55.1, half the total amount retained shall be repaid to the Contractor and half when the Contractor has submitted the Tax evidence document issued by the concerned Internal Revenue Office that the contractor has submitted his Income Returns . On completion of the whole works, the Contractor may substitute retention money with an "on demand" bank guarantee.
47. Liquidated Damages	47.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the **SCC**. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities. 47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by

	the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC.41
48. Bonus	48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the **SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.
49. Advance Payment	49.1 The Employer shall make advance payment to the Contractor of the amounts stated in the SCC by the date stated in the SCC, against provision by the Contractor of an unconditional bank guarantee from 'A' class commercial Bank in a form and by a bank acceptable to the Employer in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.
	49.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager. 49.3 The advance payment shall be repaid by deducting proportionate amounts, as stated in SCC, from payments otherwise due Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.
50. Securities	50.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the SCC, by a'A' class commercial bank

	acceptable to the Employer, and denominated in Nepalese Rupees. The Performance Security shall be valid until a date 30 days from the date of issue of the Defect Liability Certificate in the case of a bank guarantee. 50.2 Additional Performance Security required as per ITB 34.5 shall be valid until a date 30 days from the date of issue of the Certificate of Completion in the case of a bank guarantee 50.3 The performance security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal.
51. Day works	51.1 If applicable, the Day works rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way. 51.2 All work to be paid for as Day works shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done. 51.3 The Contractor shall be paid for Day works subject to obtaining signed Day works forms.
52. Cost of Repairs	52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.
E. Finishing the Contract	
53. Completion	53.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the work is completed.
54. Taking Over	54.1 The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a

	certificate of Completion.
55. Final Account	55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 60 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 60 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
56. Operating and Maintenance Manuals	56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **SCC.** 56.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the SCC** pursuant to GCC 56.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.
57. Termination	57.1 In no case, the contractor shall terminate the contract unilaterally, without duly notifying the Employer. 57.2 The Employer may terminate the Contract at any time if the contractor : (a) does not commence the work as per the Contract, (b) abandons the work without completing, (c) fails to achieve progress as per the Contract. 57.3The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. 57.4 Fundamental breaches of Contract shall include, but shall not be limited to, the following : (a) The Contractor uses the advance payment for matters

other than the contractual obligations,

(b) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;

(c) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;

(d) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation.

(e) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 90 days of the date of the Project Manager's certificate;

(f) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;

(g) the Contractor does not maintain a Security, which is required; and

(h) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the SCC.

(i) If the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract, pursuant to GCC 58.1.

57.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC 57.2 above, the Project Manager shall decide whether the breach is fundamental or not.

57.6 Notwithstanding the above, the Employer may terminate the Contract for convenience.

57.7 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and

	leave the Site as soon as reasonably possible.
58. Fraud and Corruption	58.1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 15 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site. 58.2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9. For the purposes of this Sub-Clause; (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party. (ii) "fraudulent practice"[3] is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; (iii) "collusive practice"[4] is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; (iv) "coercive practice"[5] is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence

[3] a "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

[4] "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

[5] a "party" refers to a participant in the procurement process or contract execution.

	improperly the actions of a party; (v) "obstructive practice" is (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (bb) acts intended to materially impede the exercise of the GON's/DP's inspection and audit rights provided for under Sub-Clause 22.2.
59. Black Listing	59.1 Without prejudice to any other rights of the Employer under this Contract, GoN, Public Procurement Monitoring Office (PPMO), on the recommendation of procuring entity, may blacklist a Bidder for its conduct for a period of one (1) to three (3) years on the following grounds and seriousness of the act committed by the bidder. (a) if it is established that the Contractor has committed substantial defect in implementation of the contract or has not substantially fulfilled its obligations under the contract or the completed work is not of the specified quality as per the contract.
60. Payment upon Termination	60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer. 60.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of

	Contract or for any other fault by the Contractor, the performance security shall be forfeited by the Employer. In such case, amount to complete the remaining works as per the Contract shall be recovered from the Contractor as Government dues. 60.3 If the Contract is terminated because of fundamental breach of Contract or for any other fault by the Contractor, the performance security shall be forfeited by the Employer.
61. Property	61.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.
62. Release from Performance	62.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.
63. Suspension of DP Loan/Credit/Grant	63.1 In the event that the Donor Agency suspends the loan/ credit/grant to the Employer from which part of the payments to the Contractor are being made: a. the Employer is obligated to notify the Contractor of such suspension within 7 days of having received the Donor Agency's suspension notice; and b. if the Contractor has not received sums due him within the 30 days for payment provided for in Sub-Clause 41.1, the Contractor may immediately issue a 15-day termination notice.
64. Project Manager's Duties and Authorities	64.1 The Project Manager's duties and authorities are restricted to the extent as stated in the SCC.
65. Quarries and Spoil Dumps	65.1 Any quarry operated as part of this Contract shall be maintained and left in a stable condition without steep slopes and be either refilled or drained and be landscaped by appropriate planting. Rock or gravel

	taken from a river shall be removed over some distance so as to limit the depth of material removed at any one location, not disrupt the river flow or damage or undermine the river banks. The Contractor shall not deposit excavated material on land in Government or private ownership except as directed by the Project Manager in writing or by permission in writing of the authority responsible for such land in Government ownership, or of the owner or responsible representative of the owner of such land in private ownership, and only then in those places and under such conditions as the authority, owner or responsible representative may prescribe.
66. Local Taxation	66.1 The prices tendered by the Contractor shall include all taxes that may be levied in accordance to the laws and regulations in being in Nepal on the date 30 days prior to the closing date for submissions of Bids on the Contractor's equipment, plant and materials acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in Nepal on profits made by him in respect of the Contract.
67. Value Added Tax	67.1 The Contract is not exempted from value added tax. An amount specified in the schedule of taxes shall be paid by the Contractor in the concerned VAT office within time frame specified in VAT regulation.
68. Income Taxes on Staff	68.1 The Contractor's staff, personnel and labor will be liable to pay personal income taxes in Nepal in respect of their salaries and wages, as are chargeable under the laws and regulations for the time being in force, and the Contractor shall perform such duties in regard to such deductions as may be imposed on him by such laws and regulations. 68.2 The issue of the Final Account Certificate pursuant to clause 55 shall be made only upon submittal by the Contractor of a certificate of income tax clearance from the Government of Nepal.
69. Duties, Taxes and	69.1 Any element of royalty, duty or tax in the price of any

Royalties	goods including fuel oil, and lubricating oil, cement, timber, iron and iron goods locally procured by the Contractor for the works shall be included in the Contract rates and prices and no reimbursement or payment in that respect shall be made to the Contractor. 69.2 The Contractor shall familiarize himself with GON the rules and regulations with regard to customs, duties, taxes, clearing of goods and equipment, immigration and the like, and it will be necessary for him to follow the required procedures regardless of the assistance as may be provided by the Employer wherever possible. 69.3 The Contractor shall pay and shall not be entitled to the reimbursement of cost of extracting construction materials such as sand, stone/boulder, gravel, etc. from the river beds or quarries. Such prices will be levied by the local District Development Committee (DDC) as may be in force at the time. The Contractor, sub-contractor(s) employed directly by him and for whom he is responsible, will not be exempted from payment of royalties, taxes or other kinds of surcharges on these construction materials so extracted and paid for to the DDC.
70. Member of Government, etc., not Personally Liable	70.1 No member or officer of GoN or the Employer or the Project Manager or any of their respective employees shall be in any way personally bound or liable for the act or obligations of the Employer under the Contract or answerable for any default or omission in the observance or performance of any of act, matter or thing which are herein contained.
71. Approval of Use of Explosives	71.1No explosives of any kind shall be used by the Contractor without the prior consent of the Employer in writing and the Contractor shall provide, store and handle these and all other items of every kind whatsoever required for blasting operations, all at his own expense in a manner approved in writing by the Employer.
72. Compliance with Regulations for Explosives	72.1 The Contractor shall comply with all relevant ordinances, instructions and regulations which the Government, or other person or persons having due authority, may issue from time to time regarding the

	handling, transportation, storage and use of explosives.
73. Permission for Blasting	73.1 The Contractor shall at all times maintain full liaison with and inform well in advance, and obtain such permission as is required from all Government authorities, public bodies and private parties whatsoever concerned or affected, or likely to be concerned or affected by blasting operation.
74. Records of Explosives	74.1 Before the beginning of the Defects Liability Period, the Contractor shall account to the satisfaction of the Project Manager for all explosives brought on to the Site during the execution of the Contract and the Contractor shall remove all unused explosives from the Site on completion of works when ordered by the Project Manager.
75. Traffic Diversion	75.1 The Contractor shall include the necessary safety procedures regarding and pedestrian traffic diversion that is needed in execution of the works. The Contractor shall include in his costing of works, any temporary works or diversion that are needed during the construction period. All traffic diversion should be designed for the safety of both the motoring public and the men at work. It shall ensure the uninterrupted flow of traffic and minimum inconvenience to the public during the period concerned. As such, adequate warning signs, flagmen and other relevant safety precautionary measures shall be provided to warn motorists and pedestrians well ahead of the intended diversion as directed by the Project Manager. All traffic devices used shall be designed in accordance with the instruction of Project Manager.

SECTION - VIII
Special Conditions of Contract

The following Special Conditions of Contract shall supplement the GCC. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC

Special Conditions of Contract

A. General	
GCC 1.1 (q)	The Employer is: **Nepal Electricity Authority** **Distribution and Consumer Services Directorate** **Community Rural Electrification Department** **Balaju, Kathmandu**
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be **09** months.
GCCs 1.1 (bb) & 4.1	The Project Manager is a person assigned by the employer.
GCC 1.1 (dd)	The Site is located at the areas of **Simthali Samudayik Gramin Bidhutikaran Sanstha, Simthali-4, Kavre.**
GCC 1.1 (gg)	The Start Date shall be: The effective date, upon which the period until the time for completion of the facilities shall be counted from, is the date when all of the following conditions have been fulfilled: (a) This Contract Agreement has been duly executed for and on behalf of the Employer and the Contractor; (b) The Contractor has submitted to the Employer the performance security and the advance payment guarantee. (c) The Employer has paid the Contractor the advance payment. Each party shall use its best efforts to fulfill the above conditions for which it is responsible as soon as practicable. **If the contractor fails to submit the Advance Payment Guarantee within 15 days of signing of Contract or does not require Advance Payment, the Contract shall be effective 15 days after the signing of Contract.**
GCC 1.1 (kk)	The Works consist of **Supply, Delivery, Installation and Rehabilitation of 11/0.4-0.23 kV Electrical Distribution Network on *turnkey basis*** as defined in the bidding data and scope of work.
GCC 1.1 (l l)	***Add the following terms and definitions after 1.1 (kk).*** The terms "Facilities" and "Works" are used interchangeably. The terms "Final Acceptance Certificate" and "Defect Liability Certificate" are

<table>
<tr><td></td><td>used interchangeably.

Add new definition as follows:

Final Acceptance means the acceptance by the Employer of the facilities, which certifies the Contractor's fulfillment of the entire contract. The "Final Acceptance Certificate" shall be issued to the Contractor after the expiry of the last Defect Liability Period provided the Contractor has also fulfilled all its obligation towards the Income Tax Department and the Customs Department of Government of Nepal.</td></tr>
<tr><td>GCC 2.2</td><td>Sectional Completions are: None</td></tr>
<tr><td>GCC 2.3(i)</td><td>The following documents also form part of the Contract:
(a) Minutes of Meeting as agreed upon
(b) Value Added Tax (VAT) Certificate
(c) PAN Certificate
(d) Tax clearance Certificate</td></tr>
<tr><td>GCC 3.1</td><td>The language of the contract is ENGLISH/NEPALI

The law that applies to the Contract is the LAW OF NEPAL</td></tr>
<tr><td>GCC 8.1</td><td>Schedule of other contractors: None</td></tr>
<tr><td>GCC 13.1</td><td>The minimum insurance covers shall be:

(a) <u>Cargo Insurance:</u>
Covering loss or damage occurring, while in transit from the supplier's or manufacturer's works or stores until arrival at the Site, to the Facilities (including spare parts therefore) and to the construction equipment to be provided by the Contractor or its Subcontractors.

<table>
<tr><td>Amount</td><td>Deductible Limits</td><td>Parties Insured</td><td>From</td><td>To</td></tr>
<tr><td>110% of CIP Cost</td><td>(*)</td><td>Contractor</td><td>Dispatch Certificate</td><td>Arrival to Site</td></tr>
</table>
(*) Excess 5% of claimed amount subjected to minimum of NRs. 20,000 for normal and NRs. 80,000 for act of God/major perils and collapse.

(b) <u>Installation All Risk Insurance:</u>
Covering physical loss or damage to the Facilities at the Site, occurring prior to completion of the Facilities, with extended maintenance coverage for the Contractor's liability in respect of any loss or damage occurring</td></tr>
</table>

during the defect liability period while the Contractor is on the Site for the purpose of performing its obligation during the defect liability period.

Amount	Deductible Limits	Parties Insured	From	To
110% of Contract Value	(*)	Contractor	Dispatch Certificate	Final Acceptance Value

(*) Excess 5% of claimed amount subjected to minimum of NRs. 10,000 for normal period and NRs. 30,000 for testing period.

(c) Third Party:

Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property (including the Employer's property and any parts of the Facilities that have been accepted by the Employer) occurring in connection with the supply and installation of the Facilities.

Amount	Deductible Limits	Parties Insured	From	To
NRs. 1 Million	As in (b) above	Contractor's Employees	Commencement of Works	Defect Liability Certificate
NRs. 1 Million	As in (b) above	Employer's Personnel	Commencement of Works	Defect Liability Certificate
NRs. 4 Million	As in (b) above	Third Party Personnel	Commencement of Works	Defect Liability Certificate

Automobile Liability Insurance:

Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the supply and installation of the Facilities. Comprehensive insurance in accordance with statutory requirements.

Worker's Compensation:

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

<table>
<tr><td></td><td>

Employer's Liability:

In accordance with the statutory requirements applicable in any country where the Facilities or any part thereof is executed.

Other Insurances:

The Contractor is also required to take out and maintain at its own cost the following insurances:

Details: None

<table>
<tr><td>Amount</td><td>Deductible Limits</td><td>Parties Insured</td><td>From</td><td>To</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table>

The Employer shall be named as co-insured under all insurance policies taken out by the Contractor except for the third party liability, Workers' Compensation and Employer's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insured's under all insurance policies taken out by the Contractor, except for the Cargo, Worker's Compensation and Employer's Liability Insurances. All insures's rights of subrogation against such co-insured's for losses or claims arising out of the performance of the Contract shall be waived under such policies.

The minimum cover for personnel injury or death insurance shall, however, be not less than as per requirement of the Labor Act of Nepal.

</td></tr>
<tr><td>GCC 14.1</td><td>Site Investigation Reports are: To be submitted by the Contractor</td></tr>
<tr><td>GCC 17.1</td><td>The following shall be designed by the Contractor: As applicable</td></tr>
<tr><td>GCC 20.1</td><td>The Site Possession Date(s) shall be: as agreed during Contract signing</td></tr>
<tr><td>GCC 25.1</td><td>The place of arbitration shall be: Kathmandu, Nepal.</td></tr>
<tr><td colspan="2">B. Time Control</td></tr>
<tr><td>GCC 26.1</td><td>The Contractor shall submit for approval a Program for the Works within 30 days from the date of the Letter of Acceptance.</td></tr>
<tr><td>GCC 26.3</td><td>The period between Program updates is 30 days.
The amount to be withheld for late submission of an updated Program is: All due bills shall be withheld.</td></tr>
<tr><td>GCC 27.3</td><td>Add this new Sub-Clause:</td></tr>
</table>

	If the Contractor intends to apply for an extension of the Time for Completion, the Contractor shall give notice to the Employer's Representative of such intention as soon as possible and in any event within 14 days of the start of the event giving rise to delay. Within 28 days of the start of the event giving rise to the delay, the Contractor shall submit full supporting details of his application.
C. Quality Control	
GCC 33.1	***Add following before Clause 33.1*** 1. The Employer or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Employer. Technical Specifications shall specify what inspections and tests the Employer requires and where they are to be conducted. The Employer shall notify the Contractor in writing, in a timely manner, of the identity of any representatives retained for these purposes. 2. The inspections and tests may be conducted on the premises of the Contractor of its subcontractor(s), at point of delivery, and/or at the Good's final destination. If conducted on the premises of the Contractor or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Employer. 3. Should any inspected or tested Goods fail to conform to the Specifications, the Employer may reject the Goods, and the Contractor shall either replace the rejected Goods or make alternations necessary to meet specification requirements free of cost to the Employer. 4. The Employer's right to inspect, test and, where necessary, reject the Goods after the Goods arrival in Nepal shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Employer or its representative prior to the Goods shipment from the country of origin. 5. The Employer will depute his Engineers to witness the factory test at Contractor's factory. Number of personnel and items of equipment whose tests will be witnessed by NEA personnel shall be as follows. Travelling expenses, per diem, accommodation, living and all other expenses incurred by such personnel during their visit for shop inspection shall be borne by the Employer.. Steel Tubular Poles: 2 person (1 lot) Distribution Transformer: 2 person (1 lot) 6. Nothing in Clauses here above shall in any way release the Contractor

	from any warranty or other obligations under this Contract
GCC 34.1	The Defects Liability Period is: 365 days
D. Cost Control	
GCC 37.1(d)	***Add this new sub-clause:*** The quantities entered in the Price Schedule are only estimated quantities. After detailed site investigation and design, the Contractor shall prepare a final Price Schedule within 45 days from the date of Contract Signing and submit to the Project Manager for approval. The Contractor shall agree to make no claims to anticipated profit or alleged losses because of any difference between the quantities actually furnished and erected and the estimated quantities from Contract. NEA reserves the right at the time of award of contract or within three months from the effective date of contract to increase or decrease the quantities of the Price Schedule by up to fifteen percent (15%) of the contract price. Taking this into consideration, the Bidder shall present a fairly balanced price on Bill of Quantities.
GCC 41	***Delete sub-clause 41.1, 41.2 and 41.3 and replace with the following:*** **General** Payments of the plant and equipment offered from outside the Nepal shall be made in Nepalese Currency only and no Letter of Credit shall be established. Payments for insurance, clearing, forwarding and transportation up to site, locally manufactured equipment and construction and installations shall also be made only in local currency, i.e. in Nepali Rupees. ***Advance Payment:*** Up to 10 % (Ten Percent) of total Contract price may be payable in two installments: 5% after the signing of agreement for the mobilization of contractor's team at the site. The remaining 5 % (Five Percent) is conditional and shall be payable to the contractor after the contractor completes full mobilization at site and has fulfilled contractual obligations such as submission of insurance policies, work program, approval of PCS report. For the advance payment, the Bidder shall produce the advance payment bank guarantee valid for **10 months** (i.e. 30 days beyond the contract completion period), which shall be deducted in proportion to each and every running bill submitted by the contractor. Conditional bank

guarantee shall not be accepted.

If the Contractor fails to complete the work within the said time of Contract agreement and accordingly fails to clear the advance payment received, the advance payment made to the contractor shall be recovered by forfeiting the advance bank guarantee and additional 10 % amount shall be penalized as an interest for unrecovered advance money.

Payment for Supply, Construction and Installations

i. Payments to the Contractor for progress payments shall be made by the NEA to the Contractor within reasonable time after receipt of invoices.

ii. Payments to be made to the Contractor by the NEA other than progress payments shall be made in accordance with the relevant clauses governing each type of payment.

iii. All payments to the Contractor for work performed under the Contract shall be in Nepalese Rupees in accordance with supply and construction items unit prices pursuant to the Bid Price Schedules. Notwithstanding NEA procedural assistance to the Contractor, will neither make any foreign currency payments to the Contractor for any reason whatsoever nor guarantee any foreign currency commitment by the Contractor.

iv. Payments shall be made adhering to actual measurements at site strictly. For any variations in quantity the unit rate of the bid shall prevail. Measurement at site shall be jointly carried out by the representative/engineer of employer, contractor and community.

v. Progress Payment shall be made only after the completion of work under any construction unit complete as mentioned in BOQ as per standard drawing, specification and as directed by the **CRED/NEA**. Contractor shall not receive any amount against material delivered at sites until these materials are installed or erected at site. Further the progress Bill less than 20% of contract amount shall not be processed for payment.

Retention Amount

Five percent (5%) from each progress payment for Plant and Materials; Insurance, Clearing, Forwarding and Inland Transportation to Site; and Construction and Installation works shall be retained. The following conditions shall be fulfilled for the payment of such retained amount:

(a) Issuance of Defect Liability Certificate by the Employer's

	Representative. (b) Receipt of income tax clearance certificate by Government of Nepal (GON), Internal Revenue Department (IRD) and custom clearance documents showing the re-export of all the returnable items or tax payment Certificate for items disposed in the Country including fulfillment of all outstanding obligations. If the Contractor fails to clear all the required taxes, custom clearances and all outstanding obligations as mentioned above, such money shall be deducted from this portion of the Retention money. (c) The Employer shall pay the Contractor the amounts certified by the Manager within 45 days from the date of approval of each certificate. **Income Tax Deduction** From each progressive bill, an amount, as determined by the prevalent rules and regulation of GOVERNMENT OF NEPAL, shall be deducted and deposited with the concerned Tax Department in the country as a deposit towards Contractor's income tax.
GCC 42.1	***Delete sub-clause 42.1 (e),(f), (g) & (i)***
GCC 43	***Delete sub-clause 43.1 and replace with the following:*** **1. In the country of Origin** The prices bid by the Contractor shall include all taxes, duties and other charges imposed outside the Employer's country on the production, manufacture, seller and transport of the Contractor's Equipment, Plant, Materials and supplied to be used on or furnished under the Contract, and on the services performed under the Contract. **2. In Nepal** **General:** (a) Unless otherwise specifically declared in the contract documents, the prices bid by the Contractor and its suppliers and subcontractors shall include business taxes and other taxes that may be levied in accordance with the laws and regulations in force or in effect in Nepal as of 28 days prior to the closing date for submission of tenders in the Employer's country on the Equipment, Plant, Materials and Supplies (permanent, temporary and consumables) acquired for the purpose of Contract and on the services performed under the Contract. Whatsoever provisions made in the Contract document shall not relieve the Contractor, its suppliers and subcontractors from their responsibility to pay income tax

that may be levied in the Employer's country on profits made by the Contractor, its suppliers and subcontractors in respect of the Contract.

(b) **Value Added Tax (VAT):** value added tax (VAT) shall be imposed on all imported equipment and materials to be supplied and delivered exclusively for use in the Project. The prices bid by the Contractor and its suppliers and subcontractors shall include the VAT as specified on Price Schedule.

(c) In the event that the origin of any of the contractor's or its subcontractor's or the nominated subcontractor's plant, equipment and materials is India, the provisions for the exemption of customs duties as is mentioned in this clause shall be applied only under the following conditions. Failure to comply with these conditions will result in application of normal customs duties, as per prevailing rules and regulation of Government of Nepal (GON).

Staff Income Tax:

The Contractor's staff, personnel and laborers, and those of its subcontractors, will be liable to pay personal income tax in the Employer's country, irrespective of whether they are local or foreign nationals on income earned including salaries and wages as applicable under the laws and regulation of Nepal. The Contractor shall perform such duties in regard to Tax Deduction at Source (TDS) thereof as may be applicable by such laws and regulations.

Duties on Equipment, Plant, Materials and Supplies:

(a) The Contractor shall pay all applicable customs & taxes and shall be included in the Contract Rates and Prices.

(b) Income tax assessed in accordance with the prevailing Income Tax Act of Nepal and as per the provision of any specific Double Taxation Agreement, shall be imposed on the Contractor, its sub-contractors and nominated sub- contractors. An advance income tax as per the prevailing income Tax Act and Finance Act shall be deducted from the monthly progress payment of the Contractor.

(c) The Contractor shall pay all duties, taxes, fees and contributions levied in Nepal in Nepalese Rupees as directed by the relevant governmental department or office, or any other local statutory agency or body in accordance with the relevant rules and regulations.

(d) Other local fees and charges (toll taxes) shall be applied in accordance with the prevailing laws and regulations of Nepal.

	(e) The Contractor shall pay all applicable customs & taxes and shall be included in the Contract Rates and Prices. (f) Locally available goods, construction materials including fuel, lubricating oil, cement, timber, iron and steel goods, etc. shall be procured locally. All taxes for such goods procured from the local market shall be included in the Contract Rates and Prices and no reimbursement or payment in that respect shall be made to the Contractor.
GCC 45	***Delete sub-clause 45.1, 45.2 & 45.3 and replace with the following:*** This is Fixed Price Contract.
GCC 45	***Delete sub-clause 45.7 & 45.8 and replace with the following:*** This is Fixed Price Contract.
GCC 46.1	The proportion of payments retained is: **5 (FIVE) PERCENT**
GCC 47.1	The liquidated damages for the whole of the Works are 0.05 PERCENT of the final Contract Price per day. The maximum amount of liquidated damages for the whole of the Works is 10 PERCENT of the final Contract Price.
GCC 48.1	The Bonus for the whole of the Works is **Not Applicable.**
GCC 49.1	The Advance Payments shall be limited to Ten percent (10%) of the initial Contract price excluding the provisional sums, day works and VAT and shall be made to the Contractor upon submission of acceptable Bank Guarantee for advance payment.
GCC 49.3	The Advance Payment will be recovered as follows: Deduction will be at the rate of at least 10% of respective invoices until such time as the advance payment has been repaid.
GCC 50.1	i) The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price: ***5 percent*** and an ***additional amount of 8%*** of the Contract price if the Employer has increased the Performance Security amount pursuant to ITB Sub Clause 38.1 and ITB Sub Clause 34.5. or ii) If contract price is below 15% of estimated amount then performance security shall be 5 percent of contract price and an addition 50% amount of difference between 15% of estimated amount and contract price, i.e.

	Performance Security Amount = [(0.85 x Cost Estimate –Bid Price) x 0.5] + 5% of Bid Price or iii) The Performance Security shall be for the following minimum amounts equivalent as a percentage of the Contract Price: amount in clause ii and an additional amount of 8% of the Contract price if the Employer has increased the Performance Security amount to ITB Sub Clause 38.1 and ITB Sub Clause 34.5. The Standard form(s) of Performance Security acceptable to the Employer shall be "an Unconditional Bank Guarantee" acceptable to the Employer of the type presented in section IX of the Bidding Documents.
E. Finishing the Contract	
GCC 53.1	***Replace the whole clause with the following:*** The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, after completion of the Works in accordance with the Contract, including Tests on Completion. A pre-requisite for such request is that the entire Work has been subjected to normal operating stresses for at least two (2) weeks and that no defects or elements of danger have developed during this period (except for minor outstanding work that does not affect the use of the Works or Section for their intended purpose). The Employer's right to subject part of the Work to normal operating stresses during the course of execution is not affected by the provisions of this article. When the Employer/Employer's Representative along with CBO are satisfied that the whole Works have been completed and has established that the individual components are impeccable in all respects and fulfill the stipulated conditions, and after any defects that may have come to light have been remedied, a Hand-Over Certificate will be issued by the Employer's Representative along with CBO with copy to the Employer. The right to determine whether or not the whole Work is completed rests with the Employer/Employer's Representative. The issuance of the Hand-Over Certificate marks the beginning of the Defect Liability Period. The Employer can reject the application, giving his reason and specifying the work required to be done by the Contractor to enable the Hand-Over Certificate to be issued: the Contractor shall then complete such work before issuing a further notice under this Sub-Clause.

GCC 56.1	The date by which operating and maintenance manuals are required is: Prior to the issuance of the Certificate of Completion. The dates by which "as built" drawings are required is: Prior to Completion Certificate. Moreover, should any change is required in the "as-built" drawings because of rectification of any defects within the Defects Liability Period, such changes shall be incorporated and "as-built" drawing shall be updated accordingly before issuance of the Final Acceptance Certificate.
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or Operating and Maintenance manuals by the date required is: Full value of last invoice.
GCC 57.4 (h)	The maximum number of days is: 200 days
GCC 61.1	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is: 25%
GCC 64	The Manager has to obtain the specific approval of the Employer for taking any of the following actions: a. Approving subcontracting of any part of the work under General Conditions of Contract Clause 7; b. Certifying additional costs determined under General Conditions of Contract Clause 42; c. Determining the extension of the intended Completion Date under General Conditions of Contract Clause 27; d. Issuing a Variation under General Conditions of Contract Clause 1 and 38, except in an emergency situation, as reasonably determined by the Manager; emergency situation may be defined as the situation when protective measures must be taken for the safety of life or of the works or of adjoining property. e. There shall be no changes in unit rates quoted by the contractor pursuant to clause 37 of General Conditions of Contract. Add the Clause 64 in GCC with the following Sub Clauses: **64.1 Inspection and Tests** (A) General The quality, workmanship and performance of all items and the Works or Equipment (raw materials, components, intermediate

	assemblies and end products) shall be subject to inspections and tests by the Employer/Employer's Representative to the extent practicable, at the relevant locations and in any event prior to Taking Over. Unless otherwise directed, testing and inspection shall be done according to the best commercial method for the particular type and class of work. The Employer/Employer's Representative shall be entitled at all reasonable times before and during the periods of design, manufacture, shipment, site erection, commissioning and guarantee period to inspect, examine and test the design work, materials and workmanship of all work and equipment to be supplied under the Contract, and if part of the Work or equipment is being manufactured on other premises, the Contractor shall obtain for the Employer/Employer's representative permission to inspect, examine and test as if the said Works or equipment were being manufactured on the Contractor's premises. The inspection, examination or testing, if made, shall not release the Contractor from any responsibility and obligation under the Contract. Work and equipment not manufactured or erected in accordance with the Contract shall be removed by the Contractor at his own expense. Inspectors and other properly authorized representatives of the Employer/Employer's Representative shall be free at all times to perform their duties and any intimidation or attempted intimidation of any one of them by the Contractor or by any of his employees or Sub-Contractor shall be sufficient reason, if the Employer so decides, for the termination of Contract. The Contractor shall furnish all reasonable aid and assistance required by the Employer/Employer's Representative, or inspectors, for the proper inspection and examination of the Work and all parts thereof. For tests on the premises of the Contractor or of any Sub-Contractor or at Site (unless otherwise stated in the Specifications), the Contractor shall provide at his expense such as means of access, space, vehicles, machine, labor, materials, electricity, fuel, stores, apparatus and instruments, as well as make availability the use of all Contractor's facilities as may be required and as may be demanded reasonably to perform these tests efficiently. The Contractor shall analyze and test all materials and equipment, which the Employer/Employer's Representative requires to be analyzed or tested. Selection of samples for testing material or equipment shall be made by the Employer/Employer's

Representative. The Contractor shall analyze and test these materials and equipment in the manner and at the time and place stated in the Contract Documents or required by the Employer/Employer's Representative in accordance with the provisions of the Contract.

Under completion of manufacture at the factory, the Employer will depute his personnel to the Contractor's factory to witness the fabrication, assembly and testing of any or all parts of the equipment and materials as specified in Sub-Clause 64.2 of SCC.

Unless waived in writing by the Employer/Employer's Representative or unless otherwise stated in Specifications, all inspections and tests shall be made in the presence of the Employer / Engineer or inspector authorized by the Employer. Only those materials and parts of the Work and equipment, which have been approved by the Employer/Engineer shall be used and shipped.

(B) Cost of tests borne by the Contractor

Unless otherwise specified, all costs related to the fabrication, assembly and test or tests shall be arranged and borne by the Contractor at its own cost. This shall apply to tests performed at the Site or elsewhere.

(C) Dates for inspection and testing

The Contractor shall agree with the Employer/Employer's Representative the date on and the place at which any Work will be ready for testing as provided in the Contract and if the Employer/Employer's Representative fails to attend at the place so named on the date agreed the Contractor may proceed with the tests, which shall be deemed to have been made in the Employer/Employer's Representative presence, and shall forthwith forward to the Employer/Engineer duly certified copies of the test readings.

(D) Facilities for testing

Where the Contractor provides for tests on the premises of the Contractor or of any Sub-Contractor the Contractor shall provide such assistance, labor, materials, electricity, fuel, stores, apparatus and instruments as may be requisite and as may be reasonably demanded to carry out such tests efficiently.

(E) Rejection

If as a result of such inspection, examination or test of the Work the Employer/Employer's Representative shall decide that such Work is

	defective or not in accordance with the Contract he shall notify the Contractor accordingly stating in writing his objection and reasons therefore, the Contractor shall with all speed make good the defect free or ensure that the Work complies with the Contract. Thereafter, if required by the Employer/Employer's Representative, the tests shall be repeated under the same terms and conditions and all expenses borne by the Contractor. All costs incurred by the Employer by the repetition of the tests or false calls shall borne by the Contractor. Any delay in delivery due to retest or false call shall not constitute a release of the Contractor for his responsibilities for delay. (F) Commissioning Commissioning shall be defined as those parts of the tests on completion which include the trial runs and operational tests to be carried out in order to put equipment into service under real operating conditions. Commissioning shall take place in accordance with instructions of the manufacturers of the relevant parts of equipment. **64.2 Inspection and Test at Factory** Whenever the Contractor is ready to carry out any such test and inspection, it shall give reasonable advance notice, including the place and time, to the Employer. The Contractor shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Employer or its designated representative to attend the test / or inspection. Upon Contractor's such notification, the Employer shall notify the Contractor in writing of the identity of any representatives retained for these purposes. The Employer shall bear all its own costs and expenses incurred in connection with such attendance including, but not limited to, travelling and board and lodging expenses. Inspection Schedule shall be finalized during Contract Negotiation. Following plant, equipment and material shall be witnessed and tested by the Employer's representatives at the manufacturer's factory before dispatching it to the Site. Steel Tubular Poles Distribution Transformer

SECTION - IX

Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

Table of Forms

1) Letter of Intent…….....IX-2
2) Letter Of Acceptance…….IX-3
3) Contract Agreement……..IX-4
4) Performance Security….....IX-5
5) Advance payment Security……..…IX-6

Letter of Intent

[on letterhead paper of the Employer]

Date: ... ……

To: ... .name and address of the Contractor .....

Subject: ..... Issuance of letter of intent to award the contract .....

This is to notify you that, it is our intention to award the contract .....[insert date] .....for execution of the ..... [insert name of the contract and identification number, as given in the Contract Data/SCC] to you as your bid price ..... [insert amount in figures and words in Nepalese Rupees] as corrected and modified in accordance with the Instructions to Bidders is hereby selected as substantially responsive lowest evaluated bid.

Authorized Signature: ……

Name: ... …….

Title: …….

Letter of Acceptance

[on letterhead paper of the Employer]

Date: ……..

To: .... name and address of the Contractor ……...

Subject:..... Notification of Award

This is to notify that your Bid dated .....date ……..for execution of the……..name of the contract and identification number, as given in the Contract Data/SCC …….... for the Contract price of Nepalese Rupees [insert amount in figures and words in Nepalese Rupees], as corrected in accordance with the Instructions to Bidders is hereby accepted in accordance with the Instruction to Bidders.

You are hereby instructed to contact this office to sign the formal contract agreement within 15 days with Performance Security as specified in the SCC consisting of a Bank Guarantee in the format included in Section IX (Contract Forms) of this Bidding Document.

The Employer shall forfeit the bid security, in case you fail to furnish the Performance Security and to sign the contract within specified period.

Authorized Signature: ……...

Name and Title of Signatory: ……

Contract Agreement

THIS AGREEMENT made the .....day of …….. between……. name of the Employer …….. (hereinafter "the Employer"), of the one part, and ……name of the Contractor ……(hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as …….... name of the Contract .....should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects in the sum of NRs ….....…..[insert amount of contract price in words and figures including taxes] (hereinafter "the Contract Price").

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement.
   (a) the Letter of Acceptance;
   (b) the Letter of Bid;
   (c) the Addenda Nos. ..... insert addenda numbers if any ……
   (d) the Special Conditions of Contract;
   (e) the General Conditions of Contract;
   (f) Bills of Quantities (BOQ);
   (g) the Specification;
   (h) the Drawings;
   (i) the Activity Schedules; and
   (j) [Specify if there are any other document]
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Nepal on the day, month and year indicated above.

Signed by ……. for and on behalf the Contractor in the presence of	Signed by…….. for and on behalf of the Employer in the presence of
Witness, Name Signature, Address, Date	Witness, Name, Signature, Address, Date

Performance Security

(On letterhead paper of the 'A' class commercial Bank)

..... Bank's Name, and Address of Issuing Branch or Office .....

Beneficiary: ..... Name and Address of Employer …….....

Date: .....

Performance Guarantee No.:…….

We have been informed that ... ... [insert name of the Contractor] (hereinafter called "the Contractor") has been notified by you to sign the Contract No. .. .. [insert reference number of the Contract] for the execution of ... .. [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required. At the request of the Contractor, we ... . [insert name of the Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ..... [insert name of the currency and amount in figures*] (... .. insert amount in words) such sum being payable in Nepalese Rupees, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the ... . Day of ..... **, and any demand for payment under it must be received by us at this office on or before that date.

……

Seal of Bank and Signature(s)

Advance Payment Security

(On letterhead paper of the 'A' class commercial Bank)

..... Bank's Name, and Address of Issuing Branch or office.....
Beneficiary: ..... ***Name and Address of Employer***
.....
Date: .....
Advance Payment Guarantee No.:.....

We have been informed that . . . . . ***name of the Contractor***. . . . . (hereinafter called "the Contractor") has entered into Contract No. . . . . ***reference number of the Contract***. . . . . dated . . . . .with you, for the execution of . . . . . ***name of contract and brief description of Works***. . . . .(hereinafter called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum . . . . . ***name of the currency and amount in figures****. . . . . (. . . . . ***amount in words***. .. . .) is to be made against an advance payment guarantee. At the request of the Contractor, we . . . . . ***name of the Bank***. . . . . hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of . . . . . ***name of the currency and amount in figures****. . . . . (. . . . . ***amount in words***. . . . .) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the . . . day of . . . . . , ...**, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

. . . . . .
Seal of Bank and Signature(s)