NEPAL ELECTRICITY AUTHORITY

(A Government of Nepal Undertaking)

Generation Directorate

Medium GenerationOperation and Maintenance Department

Sunkoshi Hydro Power Station

Sealed Tender No: **SHPS-2073/74-CT-05**

Sealed Tender Document (Two Envelope)

For

Retrofitting work in Barrage, Intake and Control room of SHPS

First Date of Notice Publication:	2074-Ashadh-30
Last Date/Time of Purchasing:	2074-Shrawan-29 during Office Hour
Last Date/Time of Submission:	2074-Shrawan-31 before 12:00
Time of Bid Opening:	2074-Shrawan-31 after 14:00

Nepal Electricity Authority
Medium Generation, Operation and Maintenance Department
SunkoshiHydroPower Station
Lamosanghu, Sindhupalchowk
Tel No: 011-482155

Issued to: M/S ……

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June 2017

Abbreviations

BD ... Bidding Document

BDF ... Bidding Forms

BDS ... Bid Data Sheet

BOQ ... Bill of Quantities

COF ... Contract Forms

DP ... Development Partners

DoLIDAR ... Department of Local Infrastructure Development and Agricultural Roads

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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Nepal Electricity Authority
Generation Directorate
Medium Generation Operation and Maintenance Department
Sunkoshi Hydropower Station
Lamosanghu, Sindupalchowk

Invitation for Bids

Notice No.: SHPS-2073/74
First Date of Publication: 2074/03/30

1. Nepal Electricity Authority, Generation Directorate, Medium Operation and Maintenance Department, Sunkoshi Hydropower Station invites sealed bids or electronic bids from eligible bidders for the **Retrofitting work in Barrage, Intake and Control room of SHPS** and Contract No : **SHPS-2073/74-CT-05**under National Competitive Bidding – Two Envelope Bidding procedures.Only eligible bidders with the following key qualifications should participate in this bidding:
   Minimum Average Annual Construction Turnover of the best 3 years within the last 10 years: NRs.35million (3.5Crore)
   Minimum Work experience of similar size and nature: At least 1 (One) project within the last 10 (ten) years, with a value of with at least
   NRs.14Million (1.4Crore)
2. Eligible Bidders may obtain further information and inspect the bidding documents at the office below. For electronic bidding the website is: http://www.e-nea.org.np
3. Bidding documents may be purchased during office hours on all working days by any eligible bidders upon submission of a written application, along with a copy of Company /firm registration certificate and accompanied by a bank voucher of the amount (Non-refundable) as specified in the table below towards the cost of the Bid Document,deposited inA/C of Sunkoshi Hydro Power Station, current account no: **104010002001** at RastriyaBanijya Bank Limited, Dhulikhel, Kavre.The bid document shall be available at the office below.

Nepal Electricity Authority
Generation Directorate
Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu
Tel/Fax: +977-01-4153014

4. Pre-bid meeting shall be held at **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu at 21st daysfrom first date of tender notice publication.**
5. All Bids accompanied by a bid bond (as specified below) must be delivered in accordance with the Instruction to Bidders latest by 12:00 hours (local time) on or before the dates specified below at **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu.**The bids shall be opened at **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu**at 14:00 hours (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.

Tender No	Cost of Bid Document (NRs.)	Last Date for Bid Purchase	Last Date of Bid Submission	Bid Bond	
				Amount(NRs.)	Validity Period
SHPS-2073/74-CT-05	5,000.00/	2074-04-29	2074-04-31	**6,00,000.00/-**	120 Days

6. If the last date of date of purchasing, submission and opening falls on a government holiday then the next working day shall be considered the last day. In such a case the bid validity and bid security shall be reorganized with effect from the original bid submission deadline.
7. NEA shall not be responsible for any cost or expenses incurred by Bidders in connection with the preparation and submission of Bids.
8. Mode of Bidding is **National Competitive Bidding (NCB)**.
9. NEA reserves the right to accept or reject any bids, partly or wholly, or cancel the bid altogether, without assigning any reason whatsoever.

Project Manager

Part - I

BIDDING PROCEDURES

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 NEA 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 Nepal Electricity Authority requires that the Procuring Entities as well as bidders, suppliers and contractors and their sub-contractors under NEA/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 setforthbelow 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. (iv) "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 NEA/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 NEA's/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 suchact, (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 submissionof 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 the Contract..
	3.4 A bidder declared blacklisted and ineligible by the GoN, PublicProcurement 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 NEA, GoN, PPMO and/or the DP.
	3.5 The Contractorshall permit the NEA/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 NEA/GoN/DP, if so required by the NEA/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 NEA/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 NEA/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 andQualification 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.
	4.2A Bidder, and all parties constituting the Bidder, shall have thenationality 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 processeither 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.
	4.4A firm that is under a declaration of ineligibility by the GoN/DP in accordance with ITB 3, at the date of the deadline for bidsubmission or thereafter, shall be disqualified.
	4.5Enterprises owned by Government shall be eligible only if they canestablish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent

	agency of the GoN.
	4.6Bidders 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, Nepalprohibits 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 andServices	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 Visit, Pre-Bid Meeting	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 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 advisedto 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 ofthe Works. The costs of visiting the Site shall be at the Bidder's own expense.
	7.3The Bidder and any of its personnel or agents will be grantedpermission 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.
	8.3To 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 <u>The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid containing the documents listed in ITB 11.2 and the other the Price Bid containing the documents listed in ITB 11.3, both envelopes enclosed together in an outer single envelope.</u> 11.2 The Technical Bid shall comprise the following: (a) Letter of Technical Bid;

	(b) Bid Security in accordance with ITB 19; (c) alternative Bids, at Bidder's option and if permissible, in accordance with ITB 13; (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2; (e) documentary evidence in accordance with ITB 17, establishing the Bidder's qualifications to perform the contract; (f) Technical Proposal in accordance with ITB 16; (g) 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 (h) Any other document required in the BDS. 11.3 The Price Bid shall comprise the following: (a) Letter of Price Bid; (b) completed Price Schedules, in accordance with ITB 12 and ITB 14, or as stipulated in the BDS; (c) alternative price Bids, at Bidder's option and if permissible, in accordance with ITB 13; (d) Any other document required in the BDS.
	11.4 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 Technical Bid and Price 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 ofprices, 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 Price 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 notbe 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.
	14.3The price to be quoted in the Letter of Price 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 Price 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, levieson 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.	16.1 The Bidder shall furnish a Technical Proposal including astatement

DocumentsComprising theTechnical Proposal	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. DocumentsEstablishing theQualifications ofthe 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. In case of e-submission of bid, the Bidder shall upload scanned copy of Bid security letter at the time of electronic submission of the bid. The Bidder accepts that the scanned copy of the Bid security shall, for all purposes, be equal to the original. The details of original Bid Security and the scanned copy submitted with e-bid should be the same otherwise the bid shall be non-responsive.
	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) acash 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 compliantbid security shall be rejected by the Employer as nonresponsive. In case of e- Submission, if the scanned copy of an acceptable Bid Security letter is not uploaded with the electronic Bid then Bid shall be rejected.
	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 forfeitedif: (a) a Bidderrequests 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 Technical Bid and Price 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 Technical Bid and Price 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. In case of e-submission of bid, the Bidder shall submit his bid electronically in PDF or web forms files as specified in ITB Clause 21.1(b), If a Bidder submits both the electronic bid and a bid in hard copy within the bid submission deadline, then the submitted Bids shall be accepted for evaluation provided that the facts and figures in hard copy confirm to those in electronic bid. If there is any major discrepancy in fact and figures in the electronic bid and bid in hard copy, it shall be treated as two separate bids from one Bidder and both the Bids shall be disqualified,

	as per ITB Clause 4.3 (e).
	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 unamended 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 andMarking 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 of the Technical Bid, and the original of the Price Bid and each copy of the Technical Bid and Price Bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as : "ORIGINAL TECHNICAL BID","ORIGINALPRICE BID", "ALTERNATIVE BID" and "COPYOF TECHNICAL BID" and "COPY OF PRICE BID". These envelopes containing the original and the copies shall then be enclosed in one single envelope. ii.The inner and outer envelopes shall: (a) bear the name and address of the Bidder; (b) be addressed to the Employer as provided in BDS 22.1; (c) bear the specific identification of this bidding process indicated in BDS 1.1; (d) The outer envelope and the inner envelope containing Technical Bid shall bear a warning not to open before the time and date for the opening of Technical Bid in accordance with ITB 25.1. iii. The inner envelope containing the Price Bid shall bear a warning not to open until advised by the Employer in accordance with ITB 25.7 iv.If all envelopes are not sealed and marked as required,the Employer will assume no responsibility for themisplacement or premature opening of the bid. (b) Electronic Bid Submission **P**rocedures : Bidders submitting Bids electronically shall follow the electronic bid submission procedure specified in this clause as follows:

i. For e-submission, the bidder is required to register in the e-GP portal https://www.bolpatra.gov.np. for downloading and submitting the bid electronically.

ii. Interested bidders may either purchase the bidding documents from the employer's office as specified in the invitation for bid (IFB) or bidders registered in the e-GP portal of PPMO may download the bidding document fromhttp://www.bolpatra.gov.np after login. If bidders choose to download the bidding document and submit the bid electronically, then the cost of the bidding document shall be deposited as specified in IFB. In addition, electronic scanned copy (.pdf format) of the bank deposit voucher/cash receipt should also be submitted along with the electronic bid files.

iii. The bidder shall then prepare/fill the documents and forms included in the issued bid documents or the downloaded bid documents from the e-GP portal of PPMO - http://www.bolpatra.gov.np. as applicable. The required documents and forms shall be prepared in PDF form and/or shall be filled in the web forms in the e-GP system as specified below:

Technical Bid:

S. N.	Document	Requirement	Remarks
1	Letter of Technical Bid	Mandatory	PDF/Web Forms
2	Bid Security (Bank Guarantee)	Mandatory	PDF
3	Company/Firm Registration Certificate	Mandatory	PDF
4	VAT registration	Mandatory	PDF
5	Tax clearances certificate or evidence of tax return submission	Mandatory	PDF
6	Power of Attorney of Bid signatory	Mandatory	PDF
7	Business Registration (Licence) Certificate	Mandatory, if Applicable	PDF
8	Bank Voucher for cost of bid document	Mandatory	PDF
9	Joint venture agreement	Mandatory	Mandatory in case of JV Bids Only

10	Qualification Information	Mandatory	Web Forms (Experience, Turnover, etc.)

Price Bid;

S. N.	Document	Requirement	Remarks
1	Letter of Price Bid	Mandatory	PDF/Web Forms
2	Applicable Price Adjustment Table	If applicable	No Price adjustment will be treated if the indices in the Price Adjustment Table are not provided.
3	Completed BOQ or Price Schedule	Mandatory	Web Forms

Note:

a) The documents specified as "Mandatory" should be included in e-submission and non submission of the documents shall be considered as non-responsive bid.

b) Bidders (all partners in case of JV)should verify/update their profile documents as appropriate for the specific bid before submitting their bid electronically.

iv) The Bidder shall then upload the PDF bid files and submit the complete bid online through e-GP portal of PPMO-http://www.bolpatra.gov.np within the specified date and time.

v) Bidders are advised to download the bid submission report to ensure that all the documents/ files are up to date and complete.

vi) The Bidder / Bid shall meet the following requirements and conditions for e-submission of bids;

aa) The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files (not complying as per ITB Clause 21.1(d) shall be considered incomplete and rejected for further bid evaluation.

bb) In addition to electronically submitted PDF files/web forms, the Bidder shall be required to submit original bid security letter/ documents and clarifications as specified in ITB Clause 27. If a bidder does not submit the original Bid security letter and requested documents and or clarifications within the specified time limit then the bid shall not be considered for further evaluation.

cc) If major discrepancy is found between the electronically submitted PDF bid files and the documents/ clarifications provided by the Bidder as per ITB Clause 27, then the bid shall not be considered

	for further evaluation. dd) The facility for submission of bid electronically through e-submission is to promote transparency, non-discrimination, equality of access, and open competition in the bidding process. The Bidders are fully responsible to use the e- submission facility properly in e-GP portal of PPMO- http://www.bolpatra.gov.npas per specified procedures and in no case the Employer shall be held liable for Bidder's inability to use this facility. ee) When a bidder submits electronic bid through the PPMO e-GP portal, it is assumed that the bidder has prepared the bid by studying and examining the complete set of the Bidding documents including specifications, drawings and conditions of contract. ff) Bidders who submit electronic bid should deposit the bidding document fee as specified in IFB and upload the scan copy (in pdf format) of the deposit voucher at the time of bid submission. The deposited amount shall be verified by the Employer during the bid evaluation process. The submitted Bid shall be non-responsive and shall not be evaluated if the cost for bidding document is not deposited as specified in the IFB.
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. In case of e-submission, the standard time for e-submission is NepalStandard Time as set out in the server. The e-procurement system will accept the e-submission of bid from the date of publishing of notice and will automatically not allow the e-submission of bid after the deadline for submission of bid.
	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 beensubmittedeither in hard copy or by e-submission. Procedures forwithdrawal or modification of submitted bids are as follows: (i) Bids submitted in hard Copy a) Bidders may withdraw or modify its bidsby 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 writtennotice. 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. ii)E-submitted bids. a) Bidder may submit modification or withdrawal prior to the deadline prescribed for submission of bid through e-GP system by using the forms and instructions provided by the system. Once a Bid is withdrawn, bidder will not be able to submit another bid response for the same bid.
	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, on the date and time specified in the BDS in the presence of Bidders` designated representatives who choose to attend. Then the Employer shall segregate the Technical Bid and Price Bid separately.The Price Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening. If the Technical Bid and Price Bid are submitted together in one inner envelope, the Employer may reject the entire Bid.
	25.2 The Employer shall download the e-submitted Bid files. The e-procurement system allows the Employer to download the e-submitted bid files (report) only after bid opening date and time after

	login simultaneously by at least two members of the Bid opening committee.
	25.3 After downloading the each e-bid, electronically submitted Technical 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 technical bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files shall be considered incomplete.
	25.4 Thereafter, 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 bePermitted 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 Technical Bid and/or Price Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at bid opening. Only the Technical Bid, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original and Modification, will remain unopened in accordance with ITB 25.1.
	25.5 All other envelopes holding the Technical Bid shall be opened one at a time, reading out: the name of the Bidder; whether there is a modification; the presence of a bid security and any other details as the Employer may consider appropriate. Only Technical Bids read out and recorded at bid opening shall be considered for evaluation. No bid shall be rejected at opening of Technical Bids except for late bids, in accordance with ITB 23.1.
	25.6The Employer shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; 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 andeffect of the record.
	25.7 At the end of the evaluation of the Technical Bids, the Employer will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Price Bids.
	25.8 The Employer will notify Bidders in writing who have been rejected

	on the grounds of their Technical Bids being substantially nonresponsive to the requirements of the Bidding Document and return their Price Bids unopened.
	25.9 The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders` representatives who choose to attend at the address, on the date, and time specified by the Employer. The Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.
	25.10 All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded: (a) the name of the Bidder; (b) whether there is a modification; (c) the Bid Prices, including any discounts and alternative offers; and (d) any other details as the Employer may consider appropriate. Only Price Bids, discounts, modifications, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation..No Bid shall be rejected at the opening of Price Bids.
	25.11 The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum, the name of the Bidder, the Bid Price (per lot if applicable), any discounts, modifications and alternative offers. 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 Technical and Price 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 substance of the Technical Bid or prices in the Price Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Price Bids.In case of e-submission of bid, upon notification from the employer, the bidder shall also submit the original of documents comprising the Technical and Price Bid as per ITB 11 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. Responsiveness of Technical Bid	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 Technical 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, 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 bidthat do not constitute a material deviation, reservation, or omission.
	30.2 Provided that a Technical 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 Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid. Failure of the Bidder to comply with the request may result in the rejection of its bid.
	30.3 Provided that a Technical Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall 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 foundto be more than fifteen percent ofthe 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 Qualification of the Bidder	31.1 The Employer shall determine to its satisfaction during the evaluation of Technical Bids whether Biddersmeet the qualifying criteria specified in Section III (Evaluation and Qualification Criteria).
	31.2 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.
	31.3 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, in which event the Employer shall return the unopened Price Bid to the Bidder.

32. Correction of Arithmetical Errors	32.1 During the evaluation of Price Bids, 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; (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 Price Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Price 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.
	32.2 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.
33Subcontractors	33.1 The Employer may permit subcontracting for certain specialized works as indicated in Section 3. When subcontracting is permitted by the Employer, the specialized sub-contractor's experience shall be considered for evaluation. Section 3 describes the qualification criteria for sub-contractors. Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as **specified in the BDS**
34. Evaluation of Price Bids	34.1 The Employer shall evaluate Price Bid of each bid for which the Technical Bid has been determined to be substantially responsive. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
	34.2 To evaluate a Price 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);
	34.3 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.
	34.4 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 Price Bid, is specified in Section III (Evaluation and Qualification Criteria).
	34.5 If the bid for an Unit Rate Contract, which results in the lowest Evaluated Bid Price is seriously unbalanced or front loadedor 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.
	34.6In 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, the bid shall not be considered for further evaluation.
35. Comparison of Bids	35.1 The Employer shall compare all substantially responsive bids in accordance with ITB 34.2 to determine the lowest evaluated bid.

36. Employer's Right to Accept Any Bid, and to Reject Any or All Bids	36.1 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	
37. Award Criteria	37.1 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.
38. Letter of Intent to Award the Contract/Notification of Award	38.1 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.
	38.2 If no bidder submits an application pursuant to ITB 40 within a period of seven days of the notice provided under ITB 38.1, the Employer shall, accept the bid selected in accordance with ITB 37.1 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.
39. Performance Security	39.1 Within Fifteen (15) days of the receipt of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance securityin 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 x Cost Estimate –Bid Price) x 0.5] + 5% of Bid Price.** The Bid Price and Cost Estimate shall be inclusive of Value Added Tax.
	39.2 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 38.
40. Signing of Contract	40.1 The Employer and the successful Bidder shall sign the Contract Agreement within the period as stated ITB 39.1.
	40.2 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
	40.3 Within thirty (30) days from the date of issuance of notification pursuant to ITB 38.1 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.
	40.4 If the bidder whose bid has been accepted fails to sign the contract as stated ITB 40.1, the Public Procurement Monitoring Office shall blacklist the bidder on recommendation of the Public Entity.
41. Complaint and Review	41.1 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.
	41.2 Late application filed after the deadline pursuant to ITB 41.1 shall not be processed.
	41.3 The chief of Public Entity shall, within five (5) days after receiving the application, give its decision with reasons, in writing pursuant to ITB 41.1: (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 41.4.

	41.4 If the Bidder is not satisfied with the decision of the Public Entity in accordance with ITB 41.3, is not given within five (5) days of receipt of application pursuant to ITB 41.1, 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.
	41.5 Late application filed after the deadline pursuant to ITB 41.4 shall not be processed.
	41.6 Within three (3) days of the receipt of application from the Bidder, pursuant to ITB 41.4, the Review Committee shall notify the concerning Public Entity to furnish its procurement proceedings, pursuant to ITB 41.3.
	41.7 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.
	41.8 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 41.4.
	41.9 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 onefive 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 41.4.
	41.10 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 41.9, within seven (7) days of such decision made.

SECTION - II
Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids is : **SHPS-2073/74-CT-05**
ITB 1.1	The Employer is: SunkoshiHydropower Station Lamosanghu, Sindhupalchowk Medium Generation, Operation and Maintenance Department, Generation Directorate Nepal Electricity Authority
ITB 1.1	The number and identification of lots comprising this bidding process is: NA
ITB 2.1	The name of the Project is: **Retrofitting work in Barrage, Intake & Control room in SHPS** The DP is: NA The implementing agency is: SunkoshiHydropower Station Lamosanghu, Sindhupalchowk Nepal Electricity Authority NEA Funded or DP Funded: NEA Funded
ITB 4.1 (a)	Maximum number of partner in a joint venture shall be : 3 (three)
ITB 4.2	Eligible countries : Nepal only
B. Bidding Document	
ITB 7.1	For clarification purposes only, the Employer's address is: Attention: Station- Manager Address: Sunkoshi Hydropower Station alchowk Telephone: **011-482155**
ITB 7.4	A Pre-Bid meetingshall beheld. Pre-Bid Meeting will takeplace at the following date, time and place: Date: at 21st days from first date of tender notice publication Time: 12:00hour Place: **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu** 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 11.3 (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: None
ITB 11.3 (d)	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 completionshall not be permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: Not applicable
ITB 14.6	The prices quoted by the Bidder shall be subjectto adjustment during the performance of the Contract.
ITB 18.1	The bid validity period shall be: Ninety (90) days after last date of bid submission
ITB 19.1	The Bidder shall furnish a bid security, from "A" class commercial bank with a minimum of ***6,00,000.00/- (Six Lakhs),*** which shall be valid for 30 days beyond the validity period of the bid.
ITB 19.2 (b)	Account Name:Sunkoshi Hydropower Station Bank Name: RastriyaBanijya Bank Limited Bank Address: Dhulikhel, Kavre Account Number: 104010002001
ITB 20.1	In addition to the original of the bid, the number of copy/ies is/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	Biddersshall have the option of submitting their bids electronically.
ITB 22.1	For bid submission purposes only, the Employer's address is : Attention : Station Manager Address : **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu** The deadline for bid submission is : Date : 2074-04-31 Time : ***12:00 hours***
ITB 25.1	The bid opening shall take place at : Address : **Medium Generation Operation and Maintenance Department, Durbarmarg, Kathmandu** Date : 2074-04-31 Time : ***14:00 hours***
E. Evaluation and Comparison of Bids	
ITB 33.1	Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: *25% of the total contract amount*
ITB 34.5	The amount of the performance security be increased by Eight (8) percent of the quoted bid price.

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, 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

Pursuant to Clauses of the Instructions to Bidders, if Works are grouped in multiple contracts, evaluation will be as follows:

Works are grouped in multiple contracts and pursuant to Clauses of the Instructions to Bidders, the Employer will evaluate and compare Bids on the basis of a contract, or a combination of contracts, or as a total of contracts in order to arrive at the least cost combination for the Employer by taking into account discounts offered by Bidders in case of award of multiple contracts.

If a bidder submits several successful (lowest evaluated substantially responsive) bids, the evaluation will also include an assessment of the Bidder's capacity to meet the aggregated requirements regarding:

- Experience
- Financial situation
- Current contract commitments,
- Cash flow capacity,
- Equipment to be allocated, and
- Personnel to be fielded.

1.3 Completion Time

An alternative Completion Time, if permitted under ITB 13.2, will be evaluated as follows: NA

1.4 Alternative Technical Solutions

Alternative technical solutions, if permitted under ITB 13.4, will be evaluated as follows:**NA**

1.5 Quantifiable Nonconformities, Errors and Omissions

NA

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

2.1 Eligibility

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.1.1 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
2.1.2 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
2.1.3 UN Eligibility					
Not having been declared ineligible based on a United Nationsresolution 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
2.1.4 Other Eligibility					
Firm Registration Certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment

Business Registration Certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
VAT and PAN Registration certificate ***(only for domestic bidders)***	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Tax Clearance Certificate/Tax return submission evidence/evidence of time extension for the F/Y 2072/73***(Only for domestic bidders)***	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment

2.2 Pending Litigation

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.1.1 Pending Litigation					
All pending litigation shall be treated as resolved against the Bidder and so shall in total not represent more than 75 %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

2.3 Financial Situation

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.3.1 Historical Financial Performance					
Submission of audited balance sheets and income statements, for the 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

2.3.2 Average Annual Construction Turnover					
Minimum average annual construction turnover of NRS **3.5 crore (35 Million)** calculated as total certified payments received for construction contracts in progress or completed, within best three years out of last ten years.	must meet requirement	must meet requirement	must meet 25 % of the requirement	must meet 40 % of the requirement	Form FIN - 2

2.3.3 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, **1.2 crore (12 Million)**	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

2.4 Experience

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.4.1 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

2.4.2 Specific Construction Experience					
(a) Contracts of Similar Size and Nature					
Participation as Prime contractor, management contractor, or subcontractor, in at least one contracts within the last ten (10) years, each with a value of at least NRS **1.4 crore (14 Million)** that have been successfully or are	must meet requirement	must meet requirement	not applicable	not applicable	Form EXP - 1

substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods, technology or other characteristics as described in Section V, Works Requirements.					

Note:

(2) Insert number of contracts, the range should be one to two, depending on the size and complexity of the subject contract, the exposure of the risk to the Employer by contractor's default.

(3) Insertamount in Nepalese rupees, which is usually 80% of the estimated value of the subject contract. Only the net amount worked out after deducting the amount for VAT shall be computed and such amount shall be adjusted to the present value by applying wholesale price index of Nepal Rastra Bank.

(b) Construction Experience in Key Activities					
For the above or other contracts executed during the period stipulated in 2.4.2(a) above, a minimum construction experience in the following key activities :	must meet all requirements	must meet all requirements	not applicable	not applicable	Form EXP - 2(b)
120 Cum. Concreting works (M30 and Above) works in Column and Beams of Structure in past 3 years period in a single retrofitting project in case of Single Entity otherwise combined works from single retrofitting project of each JV partners.					
1200 Sqm. of Formwork in a single retrofitting project in last 3 years period in case of Single Entity otherwise combined works from single retrofitting project of each JV partners.					
1000 Rm.(2000 Nos. Metallic Packer/ Nozzle) of Epoxy grouting work in Columns and Beams in a single retrofitting work in past 3 years in case of Single Entity otherwise combined works from single retrofitting project of each JV partners.					
45 Mt of Rebar Work in a single retrofitting project in last 3 years period in case of Single Entity otherwise combined works from single retrofitting project of each JV partners.					
Anchoring longitudinal rebar in columns and longitudinal and transverse rebar in shear walls in a single Retrofitting work project with Epoxy grout of following Diameters and Numbers: 8500 Nos. of Rebar of dia. 10mm. and above					

2.5 Personnel

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

No.	Position	Academic Qualification *[When position demands]*	Total Work Experience [Years]	Experience in Similar Works [years]
1.	Project Manager	Msc. in Construction Management/ Engineering Management	Overall minimum 12 years work experience but minimum 7 years work experience after Msc.	2
2.	Structural Engineer	Msc. in Structure Engineering	Overall minimum 10 years work experience but minimum 5 years work experience after Msc.	2
3.	Civil Engineer	BE in Civil Engineering	Minimum 10 years	2
4.	Civil Overseer	Diploma in Civil Engineering	Minimum 8 years	1

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.

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

2.6 Equipment

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

No.	Equipment Type and Characteristics	Min. Number Requirement
1.	Truck tipper	2
2.	Concrete Mixture (Minimum 0.8 Cum)	2
3.	Concrete Vibrator	4

4.	Concrete Cube Mould (150x150x150)mm	20
5.		

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 Equipments 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 equipments under Bidder's ownership**

No.	Equipment Type and Characteristics	Total Nos. of Equipments under Bidder's Ownership	No. of Equipments engaged/proposed for ongoing/committed contracts	Nos. of Equipments proposed for this contract
1.	Truck tipper	2		2
2.	Concrete Mixture (Minimum 0.8 Cum)	2		2
3.	Concrete Vibrator	4		4
4.	Concrete Cube Mould (150x150x150)mm	20		20
5.				

ii. For the equipments to be leased/hired

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

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

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 Technical Bid

The Bidder must accomplish the Letter of Technical 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) Our Bid consisting of the Technical and the Price Bidshall 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;

(d) 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];

(e) 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;

(f) 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;
(g) We are not a government owned entity/We are a government owned entity but meet the requirements of ITB 4.5;[1]

(h) We declare that, we including any subcontractors or suppliers for any part of the contract do not have any conflict of interest in the proposed procurement proceedings and we have not been blacklisted as per ITB 3.4 and punished for an offense relating to the concerned profession or business.

(i) 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.

(j) If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section III (Evaluation and Qualification Criteria) and our technical proposal, or as otherwise agreed with the Employer.

Name: .....

In the capacity of .....

Signed ……...

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

Date ……....

Letter of Price Bid

The Bidder must accomplish the Letter of Price 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:

(d) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8;
(e) We offer to execute in conformity with the Bidding Documents the following Works:

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

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

(h) 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;

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

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

(i) 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.
(j) If awarded the contract, the person named below shall act as our Representative:

Name: .....

In the capacity of .....

Signed ……...

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

Date ……....

Table of Price Adjustment Data

[To be used if Price Adjustment is applicable as per GCC 45.1]

Code	Index Description	Source of Index*	Base Value and Date	Employer's Proposed Weighting Range (coefficient)	Bidder's Proposed Weighting (coefficient)**
1	2	3	4	5	6
	Non - adjustable (A)				0.15
	Labor (b)				
	Materials (c)				
	Equipment usage (d)				
		Total			**1.00**

*Normally following source of index shall apply. Public Entity shall choose applicable Index for each item.

(a) Labor: "National Salary and Wage Rate Index"- "Construction Labor" of Nepal Rastra Bank
or
rate fixed by District Rate Fixation Committee

(b) Material:"National Wholesale Price Index" - Construction Materials" of Nepal Rastra Bank

(c) Equipment usage:

"National Wholesale Price Index" - "Transport Vehicles and Machinery Goods" of Nepal Rastra Bank

or

"Fuel" Price fixed by Nepal Oil Corporation.

** Bidders proposed weightings should be within the range specified by the Employer in column - 5

Table of Price Adjustment Data

[To be used if Price Adjustment is applicable as per GCC 45.7]

Code	Construction Material*	Unit	Base Price (NRs/Unit) (Ex-factory)	Source (Factory)**
1	2	3	4	5

* Major construction materials to be specified by Employer in column - 2.

** Base Price and source normally to be specified by Employer (or alternatively informed to be proposed by bidder) in column 4 and5.

Note:
The base prices of the construction materials shall be taken as of 30 days before the deadline for submission of the Bid as quoted by the Bidder and verified by the Employer. For the purpose of calculation of price adjustment, the Ex-factory price of the same source shall be taken into consideration.

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).

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***

Note:

In case of e-submission the Resume of Proposed Personnel shall be submitted on notification by the Employer as per ITB 27.

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.

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.				

(i) 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**	

Note:

In case of e-submission the "Agreements" shall be submitted on notification by the Employer as per ITB 27.1

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 2.2 of Section III (Evaluation and Qualification Criteria) ☐ Pending litigation in accordance with Criteria 2.2 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).

Note:
In case of e-submission the attachments should not be uploaded but shall be submitted on notification by the Employer as per ITB 27.

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 10 Years (Construction only)	
Year	**Amount Currency**

- **Average Annual Construction Turnover (Best three years within the last 10 years)**	

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 Construction 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 Construction 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 2.4.2 (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 Construction 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 2.4.2 (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

SECTION - V
Works Requirements

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

Scope of Work

Sunkoshi Hydropower Station is situated at Lamosanghu in SindhupalchowkDistrictat a distance of 81 km from Kathmandu. This is one of the important Power Station generating 10.05 MW generation under Nepal Electricity Authority, Generation Directorate, Medium Electricity Operation and Maintenance Department, Durbarmarg, Kathmandu.

Due to the earthquake on 2072 Baishak, the civil structure like barrage, intake, forebay etc. of Sunkoshi Hydropower station had been badly affected. Sunkoshi Hydropower station is intending to carry out repair and maintenance works by retrofitting such structures. So this contract consists the retrofitting of civil structures.

The major works in this contract are:

1. Supplying & applying Heavy Duty Mortar (HDM) on cleaned concrete surface.
2. High strength concrete works of M30 grade.
3. Epoxy grouting on spill out concrete crack surface.
4. Tor/ TMT reinforcement work for RCC

All the work must be started simultaneously on direction of Site Engineer.

Bidders are advised to visit the construction site with their own cost before bidding so that knowledge of the site condition will facilitate in bidding.

Specifications

Acknowledgement

Acknowledgements are made to the following publications and documents which have been consulted during reviewing of these Specifications Building works.

1. The Bureau of Indian Standard (BIS) Hand book -1996
2. The British Standards Institution (BSI) Catalogue - 2000
3. Annual Book of ASTM Standards Vol.00.01 (Index) -1986
4. IS Codes
5. BS Codes
6. Technical Specifications of TUTH, ColdWardBuilding Construction Project
7. Nepal Standards
8. Standard Specifications For Roads & Bridge Works

Notes:

(1) In these Specifications references are made to various codes. In case of their disagreement, when referred to, they shall be in the hierarchy as given below.

(i)NS (iii)IS (iv)BS (v)ASTM (vi) Others

(2) If any works are not covered under these Standard Specifications or require modifications to some of the Specifications, appropriate specifications or modifications to the relevant Standard Specifications may be drafted in Special Specifications to suit the nature of the works. Such specifications or modifications shall need approval by the Director General of the Department of Urban Development & Building Construction, before they are implemented.

SPECIFICATION FOR MATERIALS AND RETROFITTING WORKS

1. GENERAL NOTES FOR CONTRACTOR AND DEFINITIONS

1.1 The work shall be carried out according to the specifications whether specifically mentioned in it or not. No extra in any form shall be paid unless it is definitely stated as an item in the Bill of Quantities. Whenever the specifications are not given or ambiguous, the relevant Indian Standard and further amendments or decision of the Engineer shall be considered as final and binding.

1.2 The work shall be carried out simultaneously with the electrical, plumbing, sanitary, HVAC and other services and in cooperation with the contractors of the above services. The work shall be carried on till it is completed satisfactorily along with the completion of essential portion of other services. The contractor shall keep the other contractors informed well in advance of the proposed program of the work so that the proposed work is not hindered. The contractor shall further cooperate with other contractors in respect of any facilities required by them e.g. making holes in shuttering for pipes, electric conduits, fan hooks etc. However, nothing extra shall be admissible to him for such reasonable assistance and facilities afforded to other contractors and the contractor shall be deemed to have taken factor into consideration while quoting his rates.

1.3 The work shall be related to the drawings, which the contractor is presumed to have studied. Nothing extra will be paid for any item because of its shape, location or other difficult circumstances, even if the schedule makes no distinction as long as the item is shown in the drawing.

1.4 The sources of materials stated in the specifications are those from which materials are generally available. However, materials not conforming to the specifications shall be rejected even if they come from the stated sources. The contractor should satisfy himself that sufficient quantity of material of acceptable specification is available from the stated or other sources.

1.5 "Engineer" shall mean **CARD Consult (P) LTD.**

1.6 "Owner" shall mean**,**

Sunkoshi Hydropower Station

1.7 Engineer's representative means Engineer's representative/ technical persons deputed from “Engineer”

1.8 The requirements of specifications under (A) General (B) Materials shall be fulfilled by the Contractor without extra charge including transportation or any other taxes involved that are the item rates quoted shall be deemed to have taken these into account.

2. GENERAL OFFICIAL ACCESSORIES

2.1 DRAWING, INSTRUCTION, MEASUREMENTS

All the work shall be done according to the drawings and instructions of the Architect and the Contractor shall arrange to test materials and/ or portions of the works at his own cost in order to prove their soundness and sufficiency. If after any such test and in the opinion of the Architect any work or position of work is found to be defective or unsound, the Contractor shall pull down and re-execute the same at his own cost. Defective materials shall be removed from the site.

2.2 MEASURING MATERIALS

Materials requiring measuring shall be measured separately in boxes of appropriate sizes before being mixed. They should be calibrated and marked with red if necessary in presence of Engineer's representative. Generally measuring box of size 12”W*12”B*15”H equivalent to one bag of cement is allowed.

2.3 TEMPORARY PROTECTION

All trenches, walls, newly laid concrete or other work requiring protection from weather or accidental injury shall be protected by means of tarpaulin or in any other way so as to keep the work safe. Nothing extra shall be paid for this matter.

2.4 QUALITY OF WORK

Materials, tools and plants and workmanship shall be the best of several kinds obtainable in the market and as approved by the Engineer.

2.5 LEAVE CLEAN

On completion, all work must be cleaned, rubbish removed and the works and land cleaned of surplus materials, debris and other accumulations and everything left in clean and orderly condition.

2.6 SAMPLES

Samples of each class of work required shall be submitted by the Contractor for the approval of the Engineer and after such approval these samples shall be deposited at a place chosen by the Egineer. The Contractor will be required to perform all work under the contract in accordance with these approved samples.

2.7 STORAGE

Safe, dry and proper storage shall be provided for all materials, particularly for cement. The capacity of the cement storage shall be equal to one-fourth of the total quantity to be used but may not exceed 200 tones at the site of work.

2.8 CONTRACTOR'S LABORATORY

The Contractor shall provide a laboratory with equipments at his own cost within 25 days after signing the "Form of Agreement" then maintain till the Contract period for carrying out

the tests therein under the supervision of a qualified Engineer to be removed on completion of the work. The laboratory shall be at least 20 meter square housed in a weatherproof building designated and used exclusively for the purpose of testing. The laboratory shall be maintained in a clean, tidy and orderly fashion to the satisfaction of the Engineer. The Contractor's laboratory shall have the following equipments in working condition, labor and materials required for tests.

Compresive strength testing machine for concrete cube		1 set.
Standard I.S. Sieves for testing sand and	...	2 set.
aggregatesupto 40mm.		
Weighing balance upto 10 kg.	...	1 set.
Field balance minimum 5 gm.	...	1 set.
Weighing scale minimum 1 gm.	...	1 set.
Glass measuring flask 1/2 liter and 1 liter	...	4 sets.
Oven for sand drying	..	1 set.
Slump cone	..	1 set.
Cube molds metal	...	9 nos.
for one casting		
Water tank for curing of concrete cubes, work		
benches, tables, etc. to the satisfaction of		
the Engineer's Representative	...	12 sets.

2.9 SURVEYING EQUIPMENTS

The contractor should supply following surveying instrument if necessary and required for above for checking of contractor's work to the Engineer's representative.

a)	Theodolite (least count 10")	-	1 set.
b)	Level (Dumpy level)	-	1 set.
c)	Measuring tape (Tazima Standard)	-	2 sets.
d)	Necessary staff and other equipments.		

The Contractor shall maintain the equipments in a serviceable condition and immediately corrected or replaced if it is found to be inaccurate. The contractor must perform the concrete cube casting and testing in presence of Engineer's Representative and as directed by him. All casting of testing cubes should be carried out at actual site condition and should be cured it as according to the main casted slab or beams. The Contractor shall perform tests on materials and concrete cubes as specified as presence of Engineer's Representative and as directed by

him and shall submit to the Engineer's Representative two copies of the results of each test, such results being entered on forms as approved by the Engineer. The third copy of the result of each test shall be retained in the Contractor's Laboratory. Without relieving the Contractor any of his responsibilities for the testing of materials the Engineer's Representative may, as and when desired, carry out any of the tests, using the facilities provided by the Contractor, for this work.

3. MATERIALS

3.1 GENERAL

The materials supplied and used in the works shall comply with the requirements of these Specifications. They shall be new, except as may be provided elsewhere in the Contract or permitted by the Engineer in writing.The materials shall be manufactured, handled and used in a workmanlike manner to ensure completed work in accordance with the Contract. Where an Indian Standard is specified, the latest version of the standard quoted shall be considered to apply.

3.2 SOURCES

The source of materials should be selected and notified to the Architect or Engineer and approved by him. The use of any one kind or class of material from more than one source is prohibited, except by written permission of the Engineer. Such permission, if granted, will set forth the conditions under which the change may be made. The source or kind of materials shall not be changed at any time without written permission of the Engineer. If the product from any source proves unacceptable at any time, the Contractor shall make such arrangements as may be necessary to assure acceptable material, either by alterations in plant operations or by a change of source. Claims for increased costs, which may be occasioned by such alterations or changes, will not be given consideration, unless the source of the unacceptable material was designated in the Contract as a source of material.

When any manufactured product, either new or used, is furnished by the owner, the location at which such material will be delivered to the Contractor will be designated in the contract. In such cases the contractor shall haul the materials from the designated delivery point to point of use, and compensation for such hauling will be considered to be included in the Contract unit price for placing the materials in the finished work.

3.3 INSPECTION AND ACCEPTANCE OF MATERIALS

Final inspection and acceptance of materials will be made only at the site of the work. The Engineer reserves the right to sample, inspect and test materials throughout the duration of the work, and to reject any materials, which are found to be unsatisfactory at the time of use.

A preliminary inspection of materials may be made at the source for the convenience of the Contractor, but the presence of Engineer's representative at the source shall not relieve the contractor of the responsibility of furnishing materials, which comply with these specifications. The Engineer's Representatives shall have free entry at all times to those parts of any plant which concern the manufacture or production of the materials ordered.

3.4 SAMPLES AND TESTS

The Contractor shall submit sample of all materials for the approval of the Engineer prior to commencement of work. The Contractor shall give immediate notification of the placing of orders for shipment of materials to permit testing. He shall furnish without charge all samples required and he shall afford such facilities, as the Engineer requires for collecting and forwarding such samples.

The Contractor shall not make use of or incorporate into the work the materials represented by the samples until the tests have been made and the materials are found to comply with the requirements of the specifications, except that any materials which have a satisfactory record of compliance with the Specifications may, at the discretion of the Engineer, be used until the tests are completed. If the material fails to pass the tests, no further use thereof shall be made until the Contractor has taken steps satisfactory to the Engineer to correct the deficiencies.

When required by the Architect/Engineer's Representative preliminary samples of the character and quantity prescribed shall be submitted by the Contractor or producer for examination and shall be tested in accordance with the methods referred to in this Specification. The acceptance of a preliminary sample, however, shall not be construed as acceptance of materials from the same source delivered later. Only the materials actually delivered for the work will be considered, and their acceptance or rejection will be based on the results of the tests and inspections prescribed in these Specifications.

3.5 DEFECTIVE MATERIALS

All materials, which do not conform to the requirements of the Contract, will be rejected whether in place or not.They shall be removed immediately or taken away from the site immediately there after. No rejected material, the defects of which have been subsequently corrected, shall be used in the work unless approval in writing has been given by the Engineer's Representative. Upon failure of the Contractor to comply promptly with any order of the Engineer given under this Clause, the Engineer's Representative shall have authority to cause the removal and replacement of rejected material and to deduct the cost thereof from any monies due to the Contractor.

3.6 TRADE NAMES AND ALTERNATIVES

For convenience in designation in the Contract, certain articles or materials to be incorporated in the work may be designated under a trade name or the name of a manufacturer and his catalogue information. The use of an alternative article or material, which is of equal quality and of the required characteristics for the purpose intended, will be permitted, subject to the following requirements:

a) The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor and he shall furnish all information as required by the Engineer. The Engineers shall be the sole judges as to the quality and suitability of all alternative articles or materials and his decision shall be final.

b) Whenever the specifications permit the substitution of a similar or equivalent material or article, no tests or action relating to the approval of such substitute material will be made until the request for substitution is made in writing by the Contractor accompanied by

complete data as to the quality of the material or article proposed. Such request shall be made in ample time to permit approval without delaying the work.

3.7 FOREIGN MATERIALS

Materials which are manufactured, produced or fabricated outside Nepal shall be delivered to a distribution point in Nepal, unless otherwise required in these specifications or the special provisions, where they shall be retained for a sufficient period of time to permit inspection, sampling, and testing. The Contractor shall not be entitled to an extension of time for acts or events occurring outside Nepal and it shall be the Contractor's responsibility to deliver materials obtained from outside Nepal to the point of entry into Nepal in sufficient time to permit timely delivery to the job site. The Contractor shall provide the facilities and arrange for any testing required at his own cost. All testing by the Contractor shall be subject to witnessing by the Engineer. The manufacturer, producer or fabricator of foreign material shall furnish to the Engineer a "Certificate of Compliance" with the specifications where required.

3.8 CONTRACT DOCUMENTS

The contractor is bound to execute & realize the Project works covered under these contract documents.

These contract documents to cover the said work shall along with that is normally understood therein comprise of

a) These Tender Documents.

b) All Tender and Working Drawings issued by the owner prepared by this Engineer.

c) All site instructions made in the site order book or logbook by the Engineer or his appointed representative.

d) All instructions given to the contractor by the Engineer be in the form of sketches, directions along with requests for additional data, shop drawings, measurements details etc. from the contractor related of this work.

e) All shop drawings and samples approved by the Engineer.

f) All manufacturers' specifications, data brochures information etc. approved by the Engineer.

g) All aspects of work checked and approved by the Engineer either on, or off, the project site.

h) All samples and guidelines that Engineers shall instruct the contractor to follow. In particular covering all works where the contractor shall follow the existing designs, decoration, methods of construction, finishes proportions, elevations etc. of the existing building.

4. CHIPPING WORKS & CUTTING HOLES

Chipping RCC raft top, column, beam, slab for exposure of mother layer of concrete and reinforcement, including disposal of the debris out of the site, all complete, as per drawings and instruction of site engineer.

Cutting holes in 150 mm thick RCC slab including cleaning and disposal of the debris out of the site as per drawing and instruction of site engineer.

4.1.1 MEASUREMENT

The chipping work shall be the product of length or perimeter and breadth or height chipped as per BOQ.

The cutting hole shall be the running meter of chipped slab as per BOQ.

5. BONDING CHEMICAL

The use of bond chemical to improve the strength, bonding must be the same as quoated in the Bill of quantity also the decision of Engineer-in-charge on all matters relating to the use of bonding chemical shall be final.

Bond Chemical shall be stored in suitable waterproof building. Any material which has deteriorated or which has been contaminated whether during transit to the site, at the site or otherwise, shall not be used in the work and shall be immediately removed from the site and replaced at the expense of the contractor.

5.1 MEASUREMENT

Measurement shall be the product of the exact length or perimeter and width or height of the area of the application of chemical according to the drawing or the Engineers Representative's instructions.

6. M30 RCC

Providing and laying PCC for RCC work with stone aggregate 20mm and down gauge well graded excluding the cost of formwork and the cost of the reinforcement

i) M 30

6.1 MATERIALS

The materials used in the works shall be of the qualities and kinds specified. Materials delivered to the works shall be equal to the approved samples, which shall be deposited with the Engineer's Representative at least 7 days before it is required for use in work. The quantity of all necessary materials should be checked by Engineer's Representative for any casting. Delivery shall be made sufficiently in advance of constructional requirements to enable further samples to be selected and tested if so desired by the Engineer's Representative. No material shall be used in the works until approved. Materials failing to comply with the

approved samples and specification shall be immediately removed from the works at the Contractor's Cost.

6.1.1 WATER

Water used in mixing concrete shall be free from injurious amounts of oils, acids, alkalies, iron oxide, organic materials or other deleterious substances. It should be clean as drinking water.

6.1.2 CEMENT

The cement shall be Ordinary Portland Cement of 43/53 grade approved brand and manufacture and shall comply in all respects with the I.S. 269-1967 for Ordinary Portland Cement. It shall be delivered on the site in packages with an unbroken seal fixed by the makers and plainly marked with the name of brand and the manufacture. It shall be stored in a dry place, in such a manner that it will be efficiently protected from moisture and contamination. Set cement shall be immediately removed from the work and replaced by the Contractor at his own expense. If desired, tests shall be made by taking samples of cement from stores or elsewhere from the works. The selection of samples and procedure for testing shall comply with appropriate I.S. specification.

6.1.3 AGGREGATE

All aggregates shall conform to I.S. 383 - 1970. Aggregate shall, where possible, be derived from a source that normally produces aggregate satisfactory for concrete, and if requested by the Engineer's Representative the Contractor shall supply evidence to this effect. If he is instructed to do so, the contractor shall supply samples of the aggregate for the purpose of making preliminary concrete test cubes as hereinafter specified.

Aggregate shall consisists of naturally occurring sand and machine stone crushed only. They shall be hard, strong, dense, durable, clean and free from veins and adherent coating. Flaky, over sized, under sized as per the relevant standard and elongated pieces shall not be used.

Aggregate shall not contain any harmful materials, such as iron pyrites, coal, mica, shale or similar laminated materials, clay, alkali, soft fragments, organic impurities etc. in such quantity as to affect the strength or durability of the concrete or in addition to the above for reinforced concrete, any material which attack the reinforcement. Aggregate, which are chemically reactive with the alkalies of cement, are harmful, as cracking of concrete may take place. These aggregate shall be protected from spilling oils, mobiles, and diesels over it on site.

6.1.4 FINE AGGREGATES (SAND)

The fine aggregate shall be natural river sand or sand derived by crushing suitable gravel or stone and shall be free from coagulated lumps. Sand derived from a stone unsuitable for coarse aggregate shall not be used as the fine aggregate. Pit sand or quarry sand.is not allowed.

The fine aggregate shall conform to the requirements of I.S. 383 - 1970. Fine aggregate shall not contain more than 3% of material removable by decantation test, nor more than 1% dry lumps. The total of silts, mica, coal, clay lumps, shale, soft fragments and other deleterious substance shall not be more than 4%. The percentage of silts, clay shall be determined by measuring cylindrical glass test. The given sample of sand is kept in the 250 or 500 ml cylinder. Water is added along with salt and it is vigorously shakened. It is then left still to get sedimented for 24 hours. After 24 hours, the percentage or silts, clay shall not be more than 4% by volume of sand.

The fine aggregate shall be well graded from fine to coarse and shall meet the following gradation requirements:

Table - 1 GRADATION FOR FINE AGGREGATE

Sieve designation Percentage by weight passing

Sieve Designation	10mm	No.4	No.16	No.30	No.50	No.100
Fine Aggregate	100	95-100	45-80	25-55	10-30	2-10

Blending will be permitted in order to meet the gradation requirements for the fine aggregate.

6.1.5 COARSE AGGREGATE

The coarse aggregate shall be machine-crushed stone aggregate. Hand crushed or round aggregate from the river source is not allowed. The pieces of aggregates shall be angular. Friable, flaky and laminated pieces, Mica, shale shall only be present in such quantities as not to affect adversely the strength and durability of the concrete as ascertained by tests on concrete cubes. After twenty-four hours immersion in water, a previous dried sample shall not have gained in weight more than 5% and not more than 10% if it is to be used in plain concrete or elsewhere as described. The coarse aggregate shall conform to the requirements of I.S. 383 - 1970. The percentage of wear at 500 revolutions of Los Angeles Rattler Test shall not be more than 50%. The coarse aggregate shall meet the gradation of 2. Moreover it should confIrm previous specification on coarse aggregate.

Table - 2 GRADATIONS FOR COARSE AGGREGATE.

	Percentage by weight passing						
Sieve Designation	50mm	40mm	25mm	20mm	10mm	No.4	No.8
40mm down	100	90-100	20-25	0-15	0-5		
20mm down			100mm	90-100	20-25	0-10	0-5

All R.C.C. work shall be carried out in strict accordance with these specifications, I.S. Specifications and the working drawings. Any discrepancies in the dimensions on the drawings or any points not clear to the Contractor shall be brought to the notice of the Engineer's Representative or clarified in advance before proceeding with the work.

The Contractor shall allow for all wastage in all materials. He shall also allow for all tests of concrete materials and if required produce manufacturer's certificate for cement and steel unless issued by the Owner.

1) All form work should be get checked for leveling and dimensions as well as all necessary supporting spouts from Engineer's Representative

2) Only after getting the formwork checked, reinforcement should be placed properly as according to the drawing and detailing.

3) The date and time of any casting of concrete should be informed to the Engineer's Representative 2 days in advance.

No concrete work shall be cast in the absence of the Engineer's Representative. The Contractor's Engineer shall personally check that both the formwork and reinforcement have been correctly placed and fixed and satisfy himself that all work preparatory to casting is completely ready, before requesting the Engineer's Representative for final inspection and approval.

6.1.6 ADMIXTURES

The use of admixtures to improve the workability must be the same as quoated in the Bill of quantity also the decision of Engineer-in-charge on all matters relating to the use of admixtures shall be final.

Admixtures shall be stored in suitable waterproof building. Any material which has deteriorated or which has been contaminated whether during transit to the site, at the site or

otherwise, shall not be used in the work and shall be immediately removed from the site and replaced at the expense of the contractor.

6.1.7 MIX DESIGN

Mix design will be allowed for this retrofitting works. The Mix design report should be submitted to the engineer's representatives for final approval. The contractor will not be allowed for casting until approval.

6.1.8 MEASUREMENT AND PROPORTIONING OF CONCRETE MATERIALS

The aggregate shall be measured by volume in a gauge box of correct and approved size based on the weight of the material or by other approved accurate means. The gauge box or other container shall be filled with the aggregate without compacting to a predetermined uniform depth, accurate allowance being made for bulking due to moisture content of the fine aggregate, if required on site.

The cement shall be measured by weight, one or more complete bags containing 50 kgs. being used for a single batch of concrete and as the size of the mixer shall permit this to be done. One weighing machine shall be placed in standby condition on casting day and if Engineer's Representative feels that any concrete bag contains less than 50 kg, he can measure the weight of it and will direct contractor to fulfill necessary weight of cement from contractor's side.

The normal proportions of cement and aggregate shall comply with the quantities specified below for the concrete described for each part of the work.

6.2 PROPERTIES OF CONCRETE

The minimum cement content of the mixture shall be as below in specified in clause no 6.2.1

6.2.1 CONCRETE PROPORTIONS

The minimum cement content of mixture shall be as below:

Grade	Minimum cement content in Kg/cu.m.
M 30	450

6.2.2 WATER CEMENT RATIO

In general, w/c ratio of the concrete mix shall be kept minimum during casting. Generally one bag of cement concrete mix shall use 35.6 litres of water or as necessary. As moisture content of fine and coarse aggregate varies. For workability of concrete mix, the Engineer's Representative may vary the water quantity and once the water quantity to be placed for one bag of cement concrete mix is fixed by the Engineer's Representative, the Contractor shall follow it strictly. As information to the contractor the Engineer's Representative will depute one checking supervisor to the mixing batch. The quantity of water used shall be varied to suit the moisture content of the aggregate, and shall be just sufficient to produce a dense concrete, consistent with practical workability.

6.2.3 CONCRETE GRADE AND STRENGTH

The compressive strength (cube strength) for Ordinary Portland cementconcrete shall be in accordance with I.S. 456-1964.

Grade	Preliminary Test at 7 days	Work Test at 28 days
M 30	210 Kg/cm2	300 Kg/cm2

6.2.4 CONTROL OF CONCRETE

(i) Preliminary Tests

The contractor shall be called upon to submit representative samples of individual materials to be used for concrete in order that they may be tested at a laboratory and the suitability of materials established. All expenses in connection with the above materials, tests shall be done by the contractor.

(ii) Works Cube Tests

During the progress of the work 15 cm. cubes shall be made as per I.S. 456-1964 as necessary and tested in accordance with I.S. 516-1959.In total six cubes are required for testing. Three cubes are to be tested for seven days strength and remaining six are to be used for twenty-eight days strength. All expenses in connection with the above materials, tests shall be done by the contractor. Cubes are to be made in six nos in each RCC Casting day such as for Columns, Shear wall during each consecutive day of RCC Casting days.

6.2.5 MEASUREMENT OF CONSISTENCY

The consistency shall be determined by making trial mixtures with dried aggregate. The consistency of the trial mixture of approved consistency shall be measured as instructed.

The slump of approved trial mixture shall be measured and this slump shall not be exceeded throughout all batches of concrete made from the same materials mixed in the same proportions as the trial mixtures and used in these parts of the works as instructed. In no case, however, shall the slump exceed 50mm. for concrete in slabs, or exceed 25 mm. for consolidated by mechanical vibration. The slump test shall be made on concrete actually being placed in the works at the commencement of each grade of concrete placing and such other times as instructed.

The apparatus used for the slump test shall be standard cone. When cone is filled, it shall be raised vertically clear of the concrete and the measurement of the slump shall be measured. Care shall be taken to prevent vibration of the sample being tested. If the Engineers Representative requires the use of other means for testing the consistency of the concrete it shall be done as instructed without any extra charge. For this standard I.S. Method shall be followed.

A cone cylinder shall be used to determine the slump for consistency test.

6.2.6 CONCRETE MIXING

The cement and aggregates shall be thoroughly mixed together in the specified proportions by volume or weight in a batch type mechanical mixer, unless another type of mixer is approved. The water shall be admitted to drum of the mixer only when all the cement and aggregates constituting one batch be in the drum. The concrete shall be mixed until the mixer is of uniform color and in no case for less than one minute. Materials spilled from the skip or other container shall not be used. No partly set or frozen concrete shall be used in the work. Partly set concrete shall not be remixed with the cement or aggregate of the next batch.

6.2.7 DISTRIBUTION OF CONCRETE

The concrete shall be distributed from the mixers to the position of placing in the works by approved means that do not cause separation or otherwise impair the quality of the concrete. While transporting concrete over slabs and over beams by any suitable means, the contractor shall conform that the tied bar i.e. upper bar and lower bar shall not get distorted or displaced from its original place.

6.2.8 PREPARATIONS FOR PLACING CONCRETE

Before the concrete is placed the shuttering shall be trued - up and any water accumulated therein shall be removed. All saw dust, chips, nails, and other debris shall be washed out or otherwise removed from within the formwork. The reinforcement shall then be inspected for accuracy of fixing. Immediately before placing the concrete the formwork shall, except in frosty weather, be well watted and inspection opening closed.

6.2.9 PLACING CONCRETE

The interval between adding the water to the dry mix and completion of the concrete placing operation shall not exceed 20 minutes nor, when an approved admixture that accelerates the initial setting of the cement be used, exceed ten minutes or as directed by Engineer's Representative.

Except where otherwise approved for slabs and large sections concrete shall be placed in the formwork by shovels or other approved implements and shall not be dropped from height more than 5 ft. nor handled in a manner to cause separation. Accumulations of hardened concrete dropping on the reinforcement shall be avoided. Concrete shall be sorted along the formwork to that position.

Each layer of concrete while being placed shall be consolidated by approved methods of ramming, ramming, or mechanical vibrations to form a dense surface free from honey combing and tolerably free from watermarks and air holes or other blemishes. The concrete shall be tamped against the face of the formwork so as to produce dense fair surface. The number and type of mechanical vibrations shall be approved before consolidating by vibration. Placing and consolidation of concrete shall be done in such a manner as not to disturb concrete already placed, and reinforcement projecting from concrete already placed shall not be vibrated or jarred.

The laying of concrete over slabs should be uniform thick of require thickness after vibration. This can be conforming by dipping wooden pegs of required length. The level of all slabs should be in level unless otherwise specified and directed by Engineer's Representative. If required, the Engineer's Representative will check the thickness and give order to the contractor to fill up the newly vibrated slab concrete surface. Any slab thickness after construction, if found less thickness than specified, the contractor will be responsible for above job.

Any water accumulating on the surface of the newly placed concrete shall be removed by approved means and no further concrete shall be placed thereon until such water is removed. No fresh concrete shall be brought into contact with the concrete containing cement of different type. Unless otherwise approved or instructed, concrete shall be placed in a single operation to the full depth of slabs, beams, and members similar thereto and shall be placed in horizontal layers not exceeding 0.50m. deep in walls, columns until completion of the part of the work between construction joints as specified hereafter or of a part of approved extent.

6.3.6 PROTECTION AND CURING OF CONCRETE

Immediately after placing or finishing, concrete surface not covered by forms shall be protected from loss of surface moisture for at least seven days when the average daily temperature is at least 21^{O}C, where Portlandcement has been used. Protection from loss of surface water shall be done by any of the following methods where applicable to the type of work involved:

i) By water Ponding.

ii) By covering of surfaces with Jute bags

Water curing shall be performed by keeping the concrete surface wet by ponding, by continuous spraying or by covering the surface with jute bags and continuously the water should be sparyed on the jute bags so that the jute bgas will not get dry. The exposed concrete surfaces shall be saturated with water throughout the full-stipulated curing period. Where forms remain in place during the curing period, they shall be kept sufficiently wetted with clean water to reduce cracks and to prevent joints from opening from opening in the forms. Wet curing shall be done for at least seven days where as sprinkle curing is done for at least seven days.

6.3.7 FINISHES

The concrete surface shall in general be smooth finish. However, immediately after stripping form work, minor defects and honey combed areas shall be patched as per instruction of engineer and holes filled before the concrete is thoroughly dry

6.4 TEST ON STRUCTURE

The Engineer's Representative shall instruct that a loading test be made on the works or any part thereof if in his opinion such a test be deemed necessary for one or more of the following reasons:

a) The site - made concrete test cubes failing to attain the specified strength.

b) Over - loading during construction of the works or part thereof.

c) The shuttering being prematurely removed.

d) Concrete improperly cured.

e) Any other circumstances attributable to alleged negligence on the part of the contractor, which in the opinion of the Engineer's Representative may result in the works or part thereof being less than the expected strength.

f) Any reason other than the foregoing.

If the loading test be instructed to be made solely or in part for the reason mentioned above, The test shall be made at the contractor's own cost. If the test be instructed to be made for one or more of the reasons from (a) to (e) inclusive, and If the test be instructed to be made for the reason (f),

The contractor shall make the test and shall be reimbursed for all cost relating thereof irrespective of the result of the test.

For the purpose of the load test on floors, roofs and similar structures and their supports, the test lead shall be equivalent to 1 and 2/3 times the superimposed load for which the works or part thereof to be tested have been designed. The test load shall not be applied within 90 days (or 28 days if rapid hardening Portland cement be used) of the completing of placing of the concrete in the part of the works to be tested, and the latter shall not be supported during the test by shuttering or other nonpermanent support. Means shall be taken to ensure that in the event of a failure under the test temporary support of the loaded member shall be immediately available. The test shall proceed strictly as instructed. For the loading test on floors, roofs or similar structures the result shall be deemed satisfactory if upon removal of the test load the residual deflection does not exceed one - quarter of the maximum deflection after 24 hours loading. If the residual deflection exceeds this amount the test loading shall be repeated, and the result shall be deemed to be satisfactory if the residual deflection after removal of the second test load does not exceed one-quarter of the maximum deflection occurring during the second test.

If the result of the loading test be not satisfactory, the Engineer's Representative shall instruct that part of the works concerned shall be taken down or removed and reconstructed to comply with this specification, or that such other remedial measures shall be taken as to make the works secure. If the test be instructed to be made for one or more of the reasons (a) to (e) inclusive as herein before specified, the contractor shall take down or remove and reconstruct the defective work or shall take the remedial measures instructed at his own cost.

6.4.1 MEASUREMENT

In calculating the contents of any R.C.C. member, for measurement proposes the dimensions adopted shall be structural concrete members exclusive of any finish,

6.4.1.1 COLUMNS

These shall be measured in cu.m. of work done according to the drawings from top of the footing or raft slab to the top of slab in case of ground floor and from top of slab to the top of slab for all other floors. Unless specified otherwise nothing extra shall be admissible for any odd size and for any special section and shape of column i.e. square, rectangular, round, elliptical etc. and laid at any angle as may be shown on drawings.

6.4.1.2 SHEAR WALLS

These shall be measured from end of raft top/slab/column/beam, termed wall. It shall be paid in cubic metre excluding the finish.

7. REINFORCEMENT

7.1 INSTALLMENT OF REINFORCEMENT STEEL

Supplying and fixing torsteell reinforcement of different sizes in RCC work including bending, binding with GI wire, placing in position including the cost of binding wire, as per drawing

Reinforcement shall be free from pitting due to corrosion, loose rust, mill scale, paint, oil, grease, adhering earth, or other materials that may impair the bond between the concrete and the reinforcement or that may in the opinion of the Engineer's Representative cause corrosion of the reinforcement or disintegration of the concrete.

7.2 BAR REINFORCEMENT

Bar reinforcement described as "tmt steel" shall be hot rolled deformed bars or cold twisted steel bars. With respect to manufacture, quality, physical properties and related requirements, reinforcement of the fore-going descriptions shall comply with appropriate parts of IS Standards Nos. 432-1966, 1139-1966 and IS 1786-1966 for mild steel and tor steel respectively.

7.3 CERTIFICATES AND TESTS FOR REINFORCEMENT

For each consignment of bar reinforcement used in the works the Contractor shall, if required, supply a certificate giving the ultimate strength, yield stress, bend and rebend test and elongation and the result of the cold bend test for each type and each size of bar. Tests for the purpose of obtaining the information shall conform to relevant I.S. specification.

The reinforcements supplied for which the makers test sheets or other records be not available, or where in the opinion of the Engineer's Representative materials has been subject to corrosion or other bad effects the Engineer's Representative shall select as many test pieces as he deems necessary, and the Contractor shall supply and deliver the test pieces free of cost without reimbursement and pay the cost of preparing and testing them as well. This test shall perform in presence of Engineer's Representative.

7.4 DIMENSIONS OF REINFORCEMENT

The size of reinforcement bar described in the working drawings or elsewhere shall be the minimum and the rolling margin and other tolerances shall be wholly above this size. Bar bending schedule shall be prepared by the Contractor and submitted for approval of the

Engineer's Representative. Such schedules shall be prepared based on reinforcement details, prior to the execution of the work. Nothing extra shall be paid for this.

7.5 FIXING REINFORCEMENT

Reinforcement shall be accurately fixed and by approved means maintained in the position described in the drawings. Bars intended to be in contact shall be securely wired together at all such points with 18 gauge soft iron tying wire. Binders, stirrups and links shall tightly embrace the bars with which they are intended to be in contact and shall be securely wired or, if approved, spot-welded thereof.

Reinforcement shall be lapped, joined or spliced only at the positions described. Splices and the like found to be necessary elsewhere shall be formed only if and as instructed. Lapping shall be provided as shown in the drawing and as permitted. Where practicable bars in each member shall be assembled and fixed in the form of a rigid cage or skeleton before placing in the moulds or formwork. In case of columns & shear wall the lapping

of bar shall be permitted only at the centre zone of column.

Lap shall be provided half in nos of total laps in each floor for vertical member where as lap shall be provided at every 12 meter for horizontal member.

7.6 LAPPING LENGTH

b) In case of columns & shear wall the lapping length shall be 60 dia. of the designed bar.

Immediately before concreting, the reinforcement shall be checked for position, cleanliness, and freedom from rust or retarding liquid. Means shall be taken to ensure that reinforcement remains correctly in position with required cover during the placing and consolidating of the concrete.

Reinforcement projecting from work being concreted or already concreted shall not be bent out or its correct position for any reason unless approved and shall be protected from deformation or other damage. Reinforcement left projecting for bending with future extensions shall be thoroughly coated with cement grout wash or encased in concrete or otherwise protected from corrosion as instructed.

7.7 COVER OF CONCRETE AND SPACING OF BARS

Unless otherwise described, the clear cover of concrete to the reinforcement shall be as follows:

7.7.1 Horizontal, Vertical or Inclined Slabs

15 mm. or the size of the bars whichever is greater.

7.7.2 Columns

Cover for main bars for columns not exceeding 20 mm. diametre shall be 25 mm. and the main bars in columns exceeding 20 mm. diameters shall be 40 mm. or the size of the main bars whichever is greater

7.8 CHAIRS AND SUPPORT'S FOR REINFORCING BARS

Chairs of appropriate depth in suitable form shall be installed on all top bars in case of slab. The shape of chair shall be getting checked from Engineer's Representative. The spacing for slab top bar chairs will be such that during casting time, the reinforcement shall not get disturbed.

7.9 CONCRETE CHAIR BLOCK FOR BOTTOM BARS

All bottom bars in slabs shall be raised as accordance with cover for concrete by means of small concrete blocks tied with binding wires. These blocks shall be placed at sufficient intervals during casting time, to maintain the cover for reinforcement.

In case of beams, the bottom blocks as well as side reinforcement shall be provided with concrete chair blocks so that the reinforcement shall not get disturbed during casting.

7.10 MEASUREMENT

For the purpose of ascertaining payments due to the contractor the basis of measurements of bar reinforcement used in the works shall be the calculated weight in kg which shall be computed from the sizes and lengths of the bars or wires described on the working drawings or elsewhere. No allowance in the weight shall be made for cutting to waste, rolling margin, extra length, or other tolerances. The Contractor is deemed to have taken this factor into consideration and quoted his rate accordingly in the tender. The Contractor's rate for unit weight of bar reinforcement shall be deemed to include all allowances omitted in calculating the weight and for any other tolerances, and for providing tying wire, spacer bars, and cover blocks as specified hereinafter for carriage and handling, for bending hooking, cranking, and for fixing and maintaining in the correct position in the works. Standard laps of the lengths as shown in the drawing or as instructed at site shall be admissible. Standard hooks (10 times the dia. for each hook for tor steel) shall be added to the finished length to arrive at the length of the bar for cutting and measurement. For vertical members, lap length is given for fifty percent (half nos) of total nos of bars in each floor and lap for rest nos of bars is given for next floor where as horizontal member it is at every 12 m interval.Total numbers of lap in horizontal length, numbers of chairs will be provided to the contractor as per approved bar bending schedule.

8. FORMWORK

8.1 CENTERING AND SHUTTERING

Centering and shuttering of 18 mm thick plywood in shear walls, columns including steel propping, strutting etc. and removal of forms including applying form oil to shuttering

8.2 DESIGN

Formwork shall be designed and constructed for removal so that the concrete can be properly placed and thoroughly compacted. Formwork shall be firmly supported and adequately strutted, braced, or tied. It shall be capable of adjustment to the lines and dimensions of the finished concrete and it shall be sufficiently strong to resist without distortion, the pressure of concrete during its placing and compaction, and other loads to which it may be subjected. It shall not be liable to suffer distortion under the influence of the weather. When concrete is to

be vibrated, special care shall be taken to ensure that the formwork will remain stable and the joints tight.

The safety and adequacy of centering and shuttering shall be the sole responsibility of the Contractor. The Contractor shall if required supply to the Engineer drawings and calculations for the formwork he proposes to use, for the concrete work.

8.3 MATERIAL FOR FORMWORK

For surface: All surface of the formwork shall be of 18 mm thick marine plywood, which shall give uniform concrete surface after removal. No wooden planks or other means of formwork shall be acceptable. Struts and props: Contractor shall use steel props or Iron lifting type strut over form base i.e. it shall not get depressed at the time of loading or casting. Any strut, if found defective shall be replaced as directed by Engineer's Representative.No wooden or bamboo or other means of supporting props members are allowed. Plywood should not be used by more than four times.

8.4 SUPPORTS

Formwork shall be constructed so that the formwork to the sides of members can be removed without disturbing the soffit formwork or its supports. Steel Props and supports shall be designed to allow the formwork to be adjusted accurately to line and level and to be erected and removed in an approved sequence without injury to the concrete. Supports shall be carried to construction, which is sufficiently strong to afford the necessary support without injury to any portion of the structure. This may mean in some cases that it be carried down to the foundations or other suitable base. Props and bracing shall be provided for the temporary support of composite construction where separately specified

8.5 CLEANING AND TREATMENT OF FORMWORK

Spaces to be occupied by concrete shall be free from all rubbish, chipping, shavings, sawdust, dirt and tying wire etc., before concrete is placed. The formwork to be in contact with the concrete shall be cleaned and treated with suitable non-staining form oil or other approved material. Care shall be taken that oil or composition is kept away from contact with the reinforcement or with concrete at any construction joints. Surface retarding agents shall not be used except with the permission of the Engineer's Representative. Formwork shall be thoroughly cleaned after each use. Damaged or distorted formwork shall not be used.

8.6 REMOVAL OF FORMWORK

All formwork shall be removed without shock or vibration that might damage the concrete. Before the soffit and props are removed the surface of the concrete shall be exposed where necessary in order to ensure that the concrete has hardened sufficiently. In no circumstances shall formwork be struck of until the concrete reaches cube strength of at least three times the stress to which the concrete may be subjected at the time of striking. The formwork to vertical surfaces such as walls, columns and sides of beams may be removed after 24 hours in normal weather conditions although care must be taken to avoid damage to the concrete, especially to arise and features. In cold weather a longer period may be necessary before striking. Suitable curing methods should immediately follow the removal of the formwork.

8.8 MEASUREMENT

Measurement for payment shall be done of the area on which centering shuttering has been done. It shall include the application of the form oil and removal of the formwork as well.

9. CARBON FIBRE WRAPPING.

Providing & applying carbon fibre strips manufactured by Simpsons Stron-Tie Asia, horizontally and vertically, of following thickness including 100 mm lapping bothways.For carbon fibre wrapping, the contractor shall follow the instruction of site engineer and the instruction given in the working drawing. At site, the two types of thickness of carbon fibre shall be used i.e. 1 mm and 2 mm.

MEASUREMENT

Measurement for payment shall be done as per BOQ.

10. SCAFFOLDS / STAGGING WORKS

i) Suitable scaffolds shall be provided for workmen for all works that cannot safety be done from the ground, or from solid construction except in the case of short duration work which can be one safely from ladders. When a ladder is used, it shall be of rigid construction made either of good quality wood or aluminium or steel. The steps shall have a minimum width of 450 mm. and a maximum rise of 300 mm. Suitable hand holds of good quality wood or aluminium or steel shall be provided and the ladder shall be given an inclination not steeper than ¼ to 1 (¼ horizontal and 1 vertical).

ii) Scaffolding or staging more than 4 m. above the ground floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly bolted, braced or otherwise secured, at least 1 m. above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

iii) Working platforms, gangways and stairway shall be so constructed that they do not sag unduly or unequally and if the height of the platform, gangway or stairway is more than 4 m. above ground level or floor level, they shall be closely boarded and shall have adequate width and be suitably fenced as described in (ii) above.

iv) Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 m.

Wherever there are open excavations in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavated pits.

v) Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m. in length while the width between side rails in rung ladder shall in no case, be less than 290 mm. for ladder upto and including 3 m. in length. For longer ladders this width shall be increased at least 20 mm. for each additional meter of length.

vi) A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to construction.

OTHER SAFETY MEASURES:

vii) All personnel of the contractor working within the plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal workers shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.

viii) viii) Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.

Specific Specification

EPOXY GORUTING AND REBAR ANCHORING SYSTEM

1. Standard Conformance

A. American Standard for Testing and Materials (ASTM)

i. ASTM D694, Standard Test Method for Compressive strength properties of Polymer Matrix Composite Materials

2. Submittals

The following items must be submitted by the contractor for the proposed composite system.

i. An approved ICC Evaluation Report in the name of the proposed system and the system's manufacturer.

ii. Manufacturer's product data for both the proposed fiber and epoxy to be supplied, specifications and recommended application procedures showing compliance with the specified requirements.

iii. Certificate from the manufacturer of the systems materials properties including previously complete ASTM D694 test result of the proposed system.

iv. Complete shop drawings containing details of the number and thickness of layers joints.

v. Project references of the previously completed projects using the proposed FRP system in the last two years.

3. Composite Strengthening System

i. Uni-Directional Carbon Fabrics. Unique fiber spreading techniques are utilized to obtain a wide range of UD fabric weights for a varied set of composite part applications.

ii. Epoxy Saturant :

iii. Anchoring system compatible anchors shall be provided as detailed on submitted construction drawing.

Material Specification

1. MASTER BOND (or EQUIVALENT) – EPOXY CONCRETE BONDING AGENT

Master Bond is a permanent epoxy adhesive for internal or external bonding or rendering, granolithic toppings, and concrete. The ultimate bond strength is greater than the tensile strength of concrete. Master Bond does not shrink and provides an even and stress free bond. Master Bond is a two component epoxy based bonding agent.

SPECIFICATION
ASTM C881 Type2, Class B and C.

PROPERTIES
Typical properties of Master Bond are as follows:
Colour: Pale yellow
Specific Gravity: 1.265at250C
Flash point: 2000C
Pot Life: Approx1.hour
Tack Free Time: Within approx. 6 hours
Full Cure: 7 days

2. RUST REMOVER(or EQUIVALENT) - WATER BASED RUST REMOVER AND CORROSION INHIBITOR

RUST REMOVER is an aqueous green liquid which removes the rust and forms a protective cover around the reinforcement and other steel members. Rust Remover is just brush applied on the metal surfaces. It is an essential pretreatment to the rebar before starting Bond SBR or Bond-AR treatments. It is also a pretreatment to steel before any epoxy or Polyurethane coating.

PROPERTIES
Physical form: Green Liquid
Specific Gravity: 1.30

3. HEAVY DUTY MORTAR (or EQUIVALENT)- THREE COMPONENT HEAVY DUTY EPOXY CONCRETE

HEAVY DUTY MORTAR – (HDM) is a **Three Component** high performance epoxy resin based concrete that provides rough looking extremely strong bedding mortar or screed mortar to industrial floors.
This product in also used in heavy duty repairs of dams, tunnels, spillways, bridge girders etc.

Typical Properties:

Density:	2000kg/m
Pot Life:	20 min at 30°C
Compressive strength:	80 N/mm 30°C
Tensile strength:	18 N/mm 30°C
Flexural strength:	50 N/mm 30°C
Bond Strength:	**A)** In Concrete - **3** N/mm
	B) In Steel - **15** N/mm
Storage Condition:	+10 °C + 40°C
Chemical Resistance:	Excellent-to a wide range of chemicals, oil, etc

4. BOND SBR (or EQUIVALENT)– HIGH STRENGTH REPAIR MORTAR AND BONDING AGENT

Bond SBR is an aqueous emulsion of Styrene Butadiene Copolymer latex, specially formulate for use with cement. SBR modifies the property of cement in mortars and in concrete to make them perform better. In terms of water proofing, repair, corrosion inhibition, bonding, durability and wear resistance.

PROPORTIES:

Form:	Liquid
Colour:	Milky White
Specific gravity:	1.01
Solid content:	40% +/- 1
PH:	9.0
Solubility:	Mixes with water
Application Temperature:	Above5°C
Physiological Effect:	Neutral
Toxicity:	Non Toxic
Particle size:	0.17micron
Antioxidant:	Yes
Bactericide:	Yes
Antifoam:	Yes

PERFORMANCE DATA:

PROPERTIES OF HARDENED MORTAR
Results obtained with hardened mortar after 28days are as follows:

Compressive Strength:	40 to 45 N/mm^2
Tensile strength:	6 to 8N/mm^2
Flexural strength:	9 to 11 N/mm^2
Bond strength concrete to mortar:	1.8 to 2.2N/mm^2
Bond strength steel to mortar:	1.8 to 2.2N/mm^2

5. EPOXY 100-EG (or EQUIVALENT) – LOW VISCOSITY ROOM TEMPERATURE CURING EPOXY INJECTION GROUTING SYSTEM

Epoxy 100 –EG is a two component epoxy suitable for injecting into the porous concrete to consolidate the structural elements.

Properties:

BASE

Solvent less modified epoxy

Form:	Pale Brown to yellow clear liquid
Specific gravity:	1.15 at 25deg C
Viscosity:	500-600 CP
Epoxy Eq.:	220-240
Flash Point:	above 100 deg C
Shelf life:	12 months

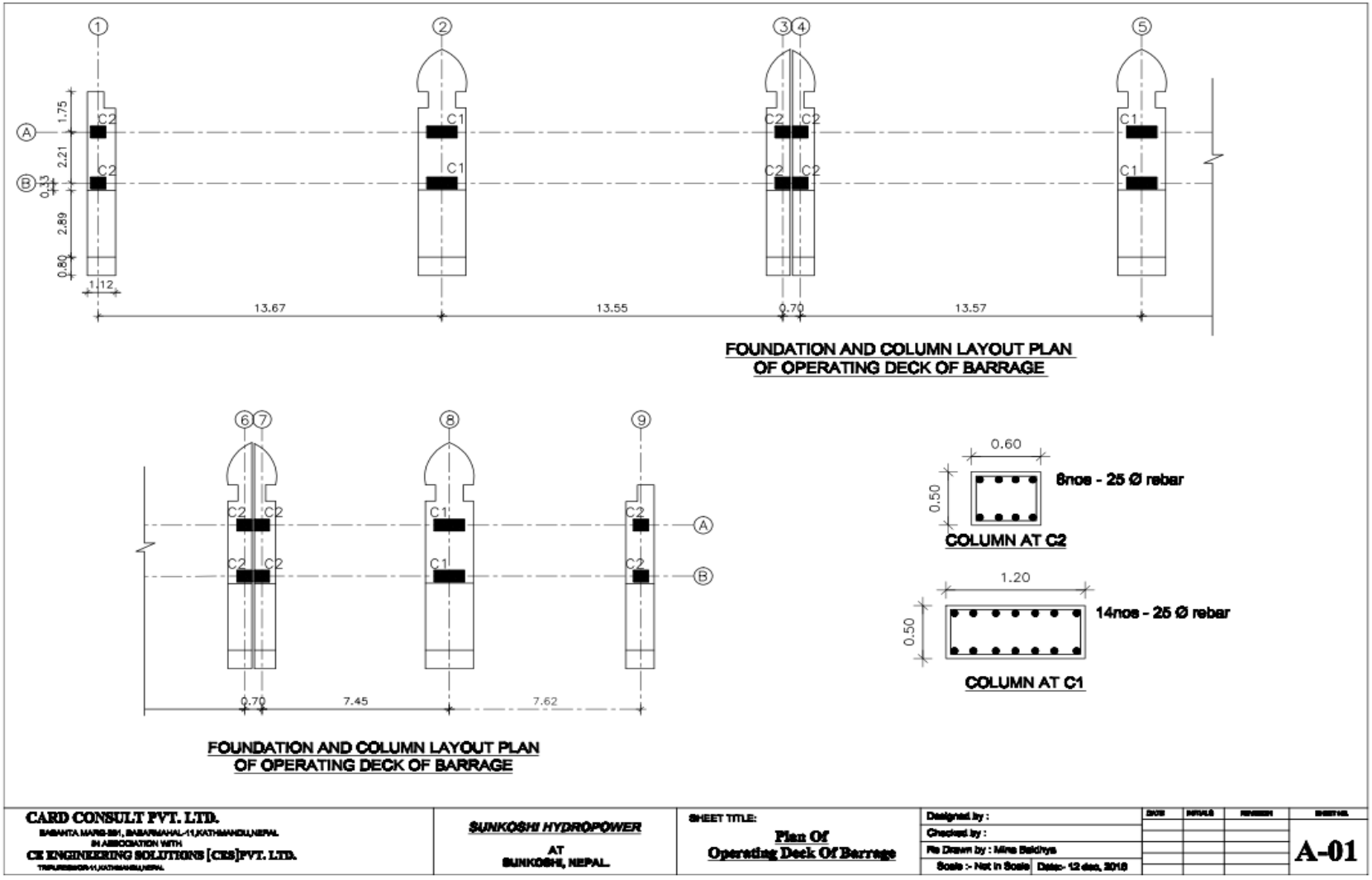
REACTOR

Polyamide

Form:	Brownish/dark brown hazy liquid
Specific gravity:	0.97 at 25deg C
Viscosity:	350-550 CP
Amine Value:	360-400
Flash Point:	above 100 deg C
Shelf life:	12 months

Drawings

ARCHITECTURE DRAWING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2
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B
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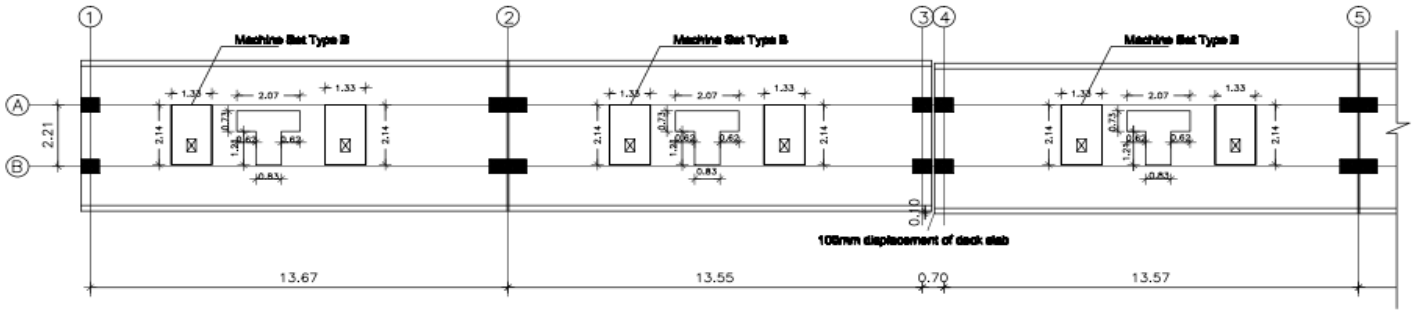
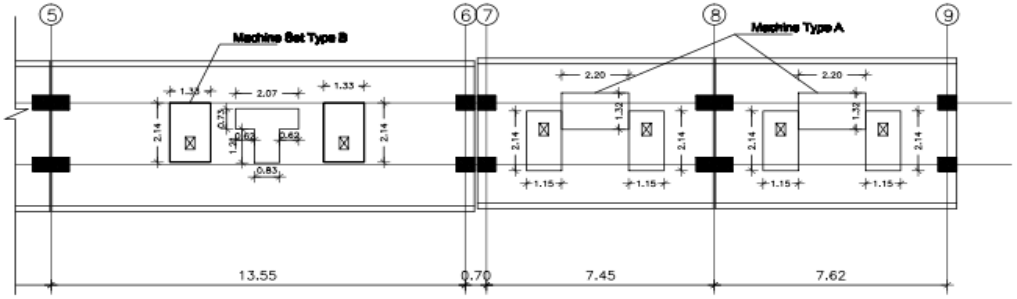
0.70
13.57
FOUNDATION AND COLUMN LAYOUT PLAN
OF OPERATING DECK OF BARRAGE
6 7
8
9
7.45
7.62
0.60
0.50
8nos - 25 Ø rebar
COLUMN AT C2
1.20
14nos - 25 Ø rebar
COLUMN AT C1
FOUNDATION AND COLUMN LAYOUT PLAN
OF OPERATING DECK OF BARRAGE
CARD CONSULT PVT. LTD.
BASANTA MARG-551, BABARMAHAL-11,KATHMANDU,NEPAL
IN ASSOCIATION WITH
CE ENGINEERING SOLUTIONS [CES]PVT. LTD.
SUNKOSHI HYDROPOWER
AT
SUNKOSHI, NEPAL.
SHEET TITLE:
Plan Of
Operating Deck Of Barrage
Designed by :
Checked by :
Re Drawn by : Mina Baidhya
Scale :- Not in Scale
Date:- 12 dec, 2018
A-01

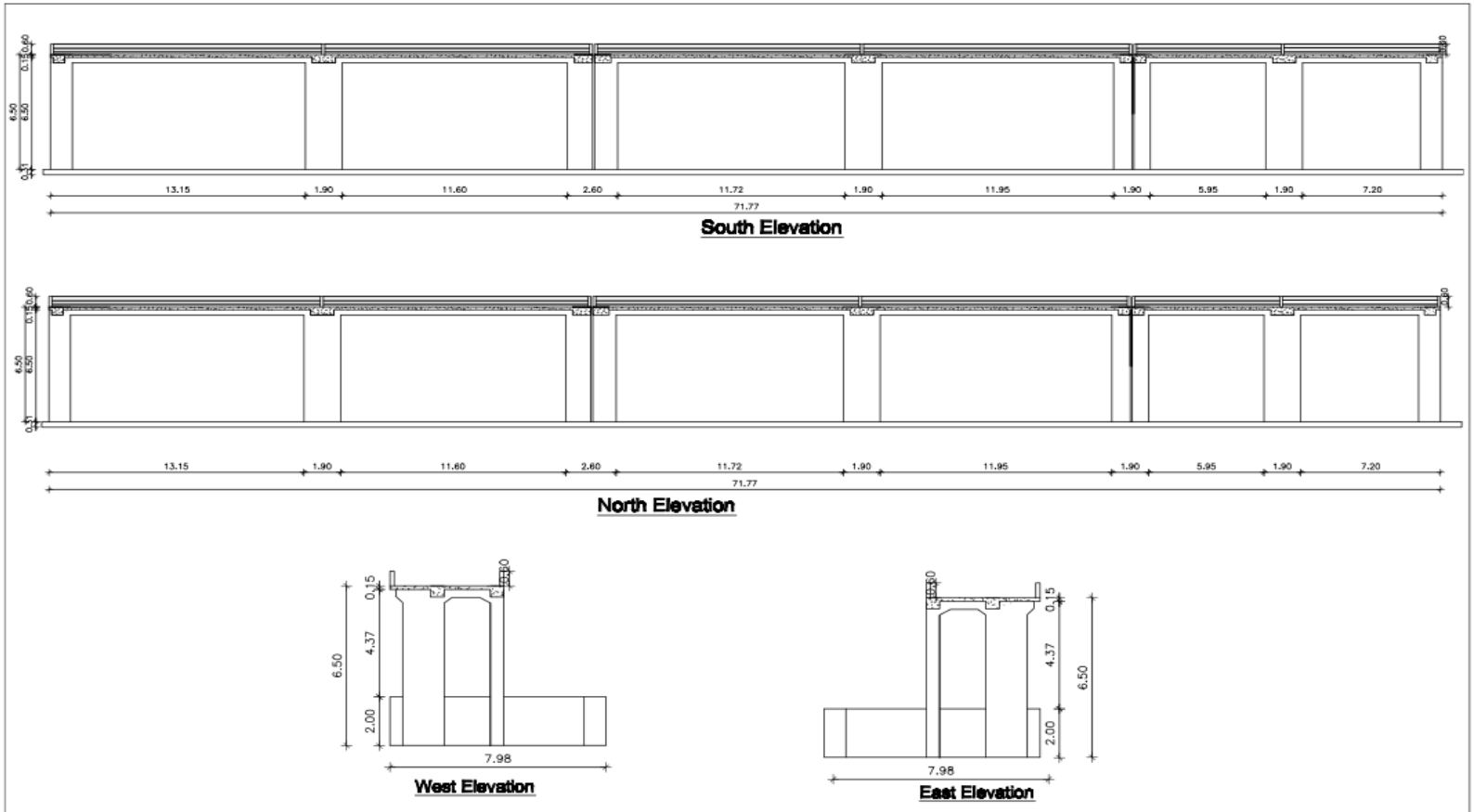


TOP FLOOR PLAN (Machine area)
OF OPERATING DECK OF BARRAGE



TOP FLOOR PLAN (Machine area)
OF OPERATING DECK OF BARRAGE

CARD CONSULT PVT. LTD. BASANTA MARG-591, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPUREESWOR-11,KATHMANDU,NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Plan Of Operating Deck Of Barrage	Designed by : Checked by : Re Drawn by : Mina Baidhya Scale :- Not In Scale Date:- 12 dec, 2018	DATE / INITIALS / REVISION	A-02



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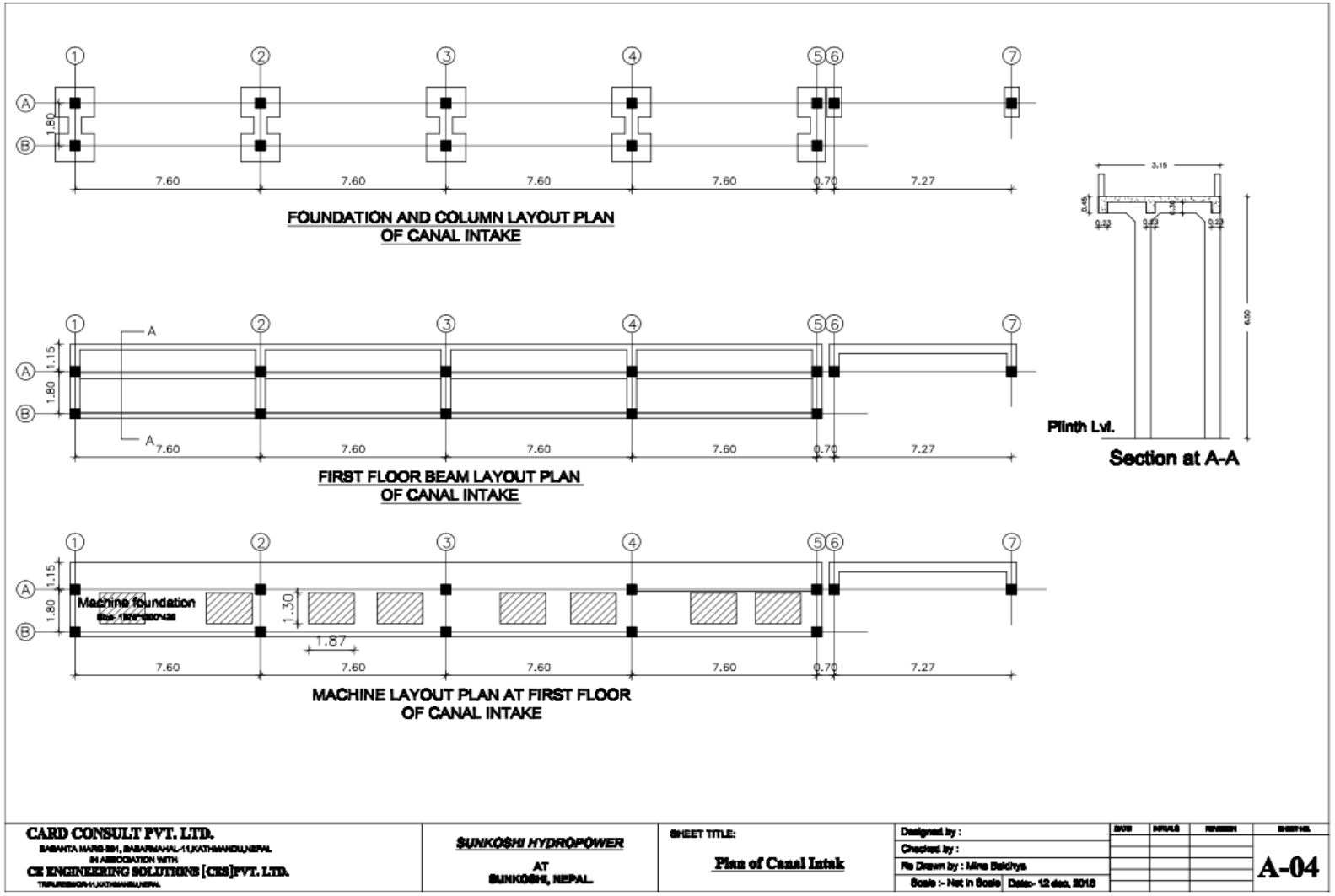
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2
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6
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B
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7.60
7.60
7.60
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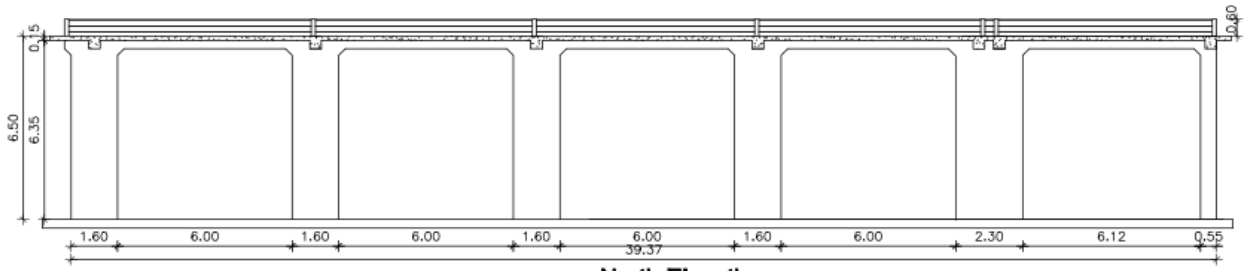
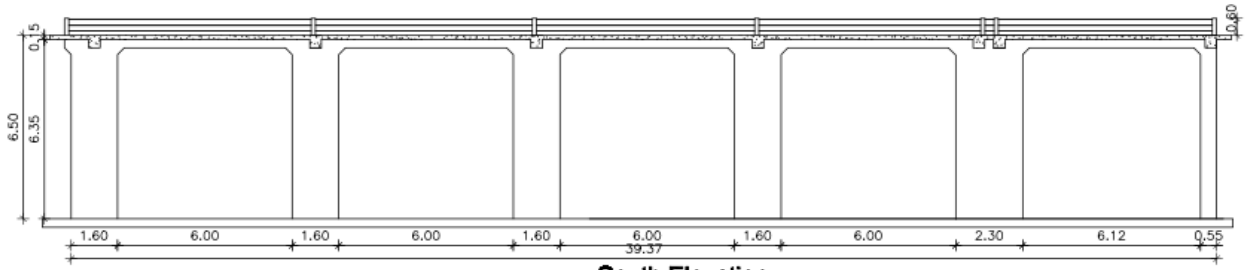
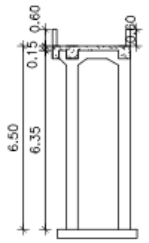
FOUNDATION AND COLUMN LAYOUT PLAN
OF CANAL INTAKE
1.15
1.80
A
A
FIRST FLOOR BEAM LAYOUT PLAN
OF CANAL INTAKE
Machine foundation
1.30
1.87
MACHINE LAYOUT PLAN AT FIRST FLOOR
OF CANAL INTAKE
3.15
0.45
0.23
0.23
0.23
6.50
Plinth Lvl.
Section at A-A
CARD CONSULT PVT. LTD.
BASANTA MARG-331, BASANTAPUR-11,KATHMANDU,NEPAL
IN ASSOCIATION WITH
CE ENGINEERING SOLUTIONS [CES]PVT. LTD.
SUNKOSHI HYDROPOWER
AT
SUNKOSHI, NEPAL.
SHEET TITLE:
Plan of Canal Intak
Designed by :
Checked by :
Re Drawn by : Mina Baidhya
Scale :- Not in Scale
Date:- 12 dec, 2018
A-04



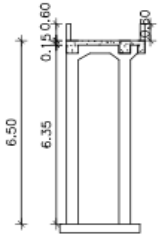
North Elevation



South Elevation

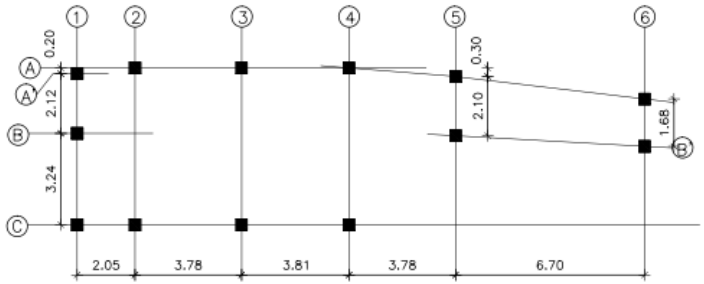


West Elevation

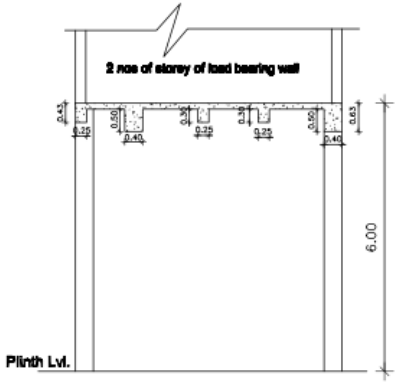


East Elevation

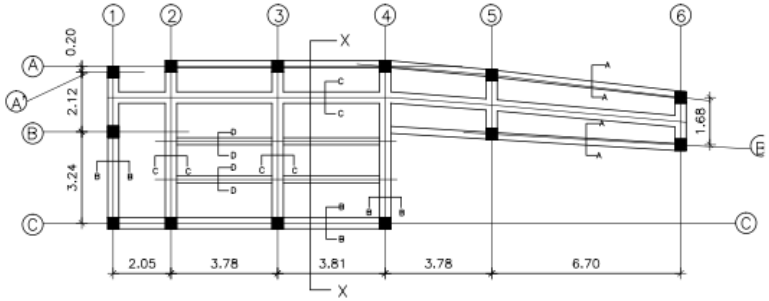
CARD CONSULT PVT. LTD. BABANTA MARG-591, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPURESWOR-11,KATHMANDU,NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Elevation of Canal Intak	Designed by : Checked by : Re Drawn by : Mina Baidhya Scale :- Not in Scale Date:- 12 dec, 2018	DATE	A-05



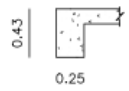
COLUMN LAYOUT PLAN
OF CONTROL HOUSE OF HEADWORKS AREA



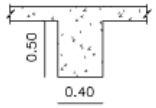
Section at X-X



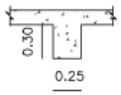
BEAM LAYOUT PLAN
OF CONTROL HOUSE OF HEADWORKS AREA



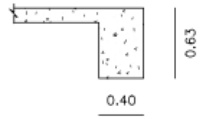
Beam section at A-A



Beam section at C-C

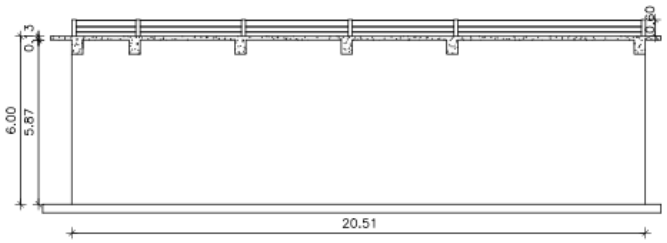


Beam section at D-D

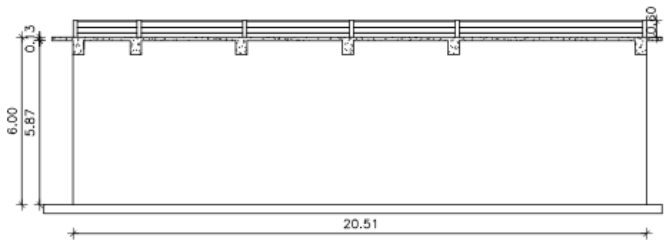


Beam section at B-B

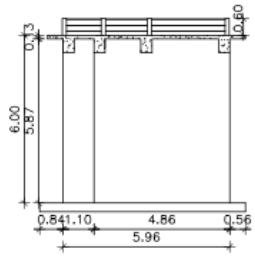
CARD CONSULT PVT. LTD. BABARMAHAL-11, KATHMANDU, NEPAL IN ASSOCIATION WITH CK ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPURESWOR-11, KATHMANDU, NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Plan of Control House Of Headworks Area	Designed by : Checked by : File Drawn by : Mina Baidhya Scale :- Not in Scale Date:- 12 dec, 2018	DATE / REVISED / REVISION	SHEET NO. A-06



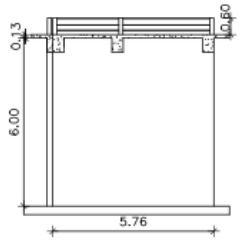
North Elevation



South Elevation



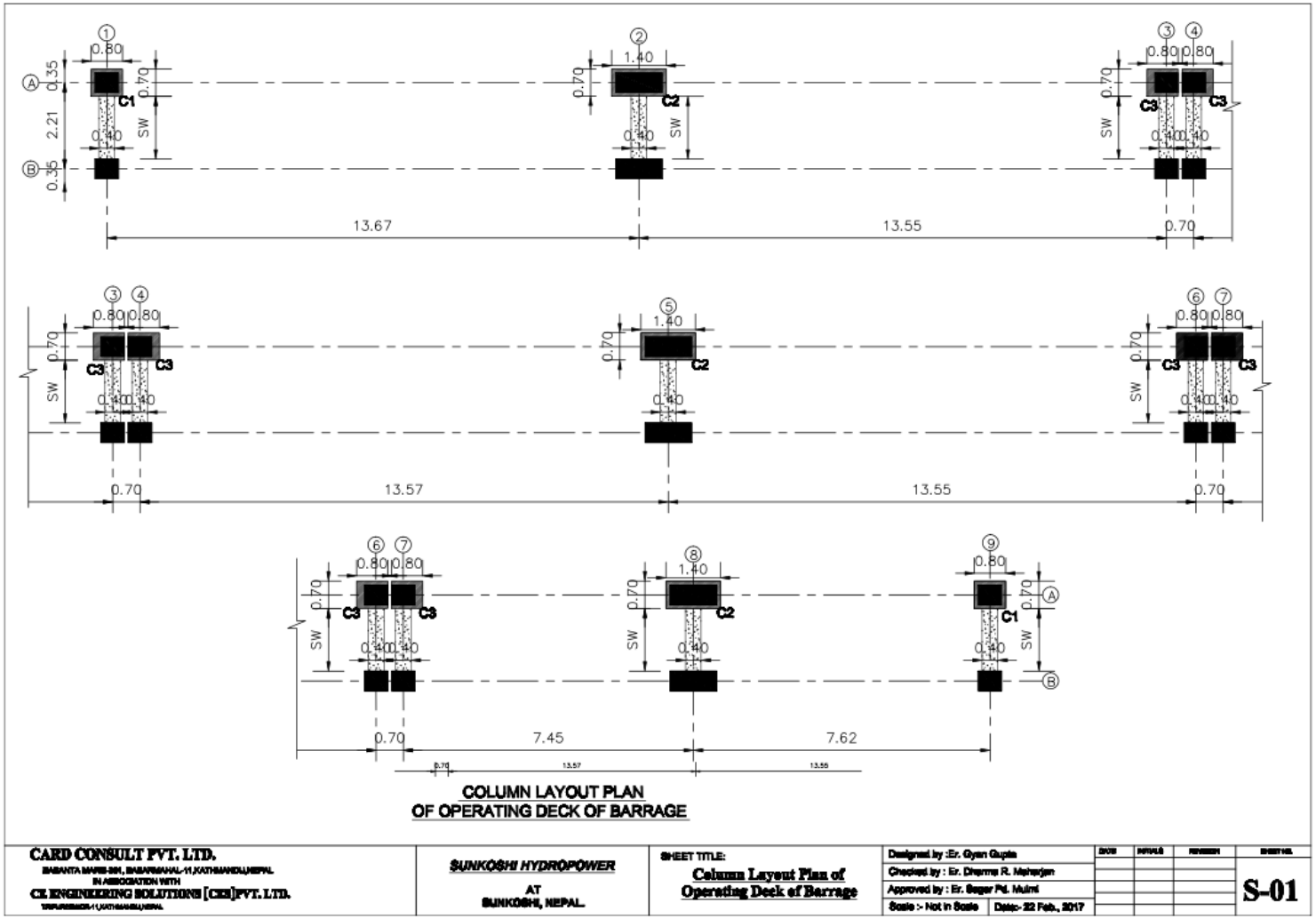
East Elevation



West Elevation

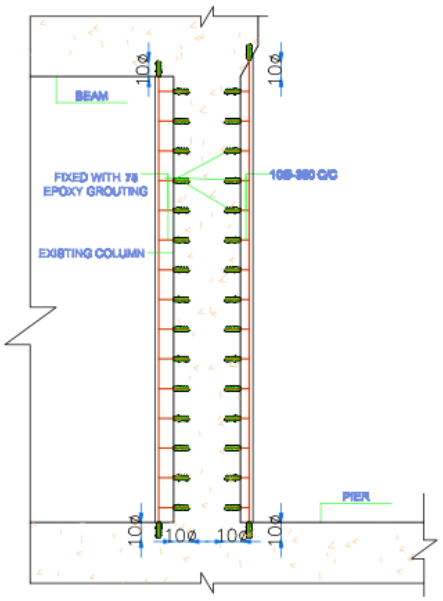
CARD CONSULT PVT. LTD. BABARMAHAL-331, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CK ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPURESWOR-11,KATHMANDU,NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Elevation of Control House of Headworks Area	Designed by : Checked by : File Drawn by : Mina Baidhya Scale :- Not in Scale Date:- 12 dec, 2018	DATE / INITIALS / REVISION	SHEET NO. A-07

STRUCTURE DRAWING

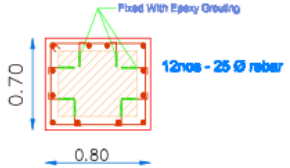


COLUMN LAYOUT PLAN
OF OPERATING DECK OF BARRAGE

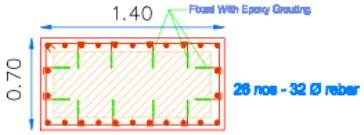
CARD CONSULT PVT. LTD. BABANTA MARG-304, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CK ENGINEERING SOLUTIONS [CES]PVT. LTD.	*SUNKOSHI HYDROPOWER* AT SUNKOSHI, NEPAL.	SHEET TITLE: **Column Layout Plan of Operating Deck of Barrage**	Designed by :Er. Gyan Gupta Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not to Scale Date:- 22 Feb., 2017	**S-01**



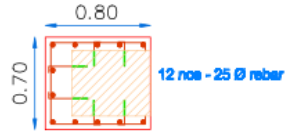
TYP. COLUMN SECTION



REINFORCEMENT DETAIL
OF COLUMN C1

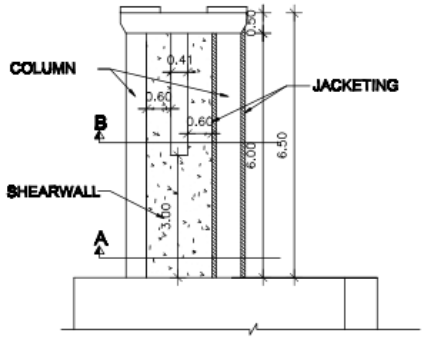


REINFORCEMENT DETAIL
OF COLUMN C2

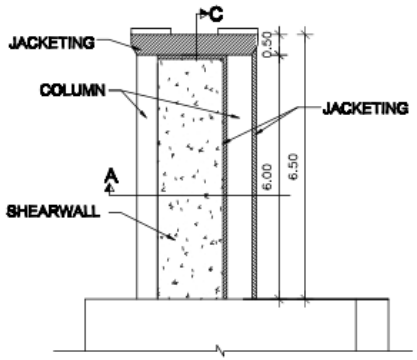


REINFORCEMENT DETAIL
OF COLUMN C3

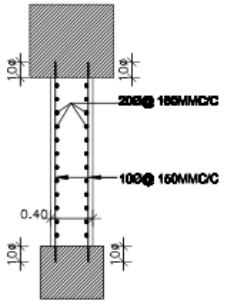
CARD CONSULT PVT. LTD. BASANTA MARG-2(H), BASANTAPUR-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPURESWOR-11,KATHMANDU,NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Column Jacketing Details of Barrage	Designed by :Er. Gyan Gupta Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not in Scale Date:- 22 Feb., 2017 DATE / DETAILS / REMARKS / SHEET NO. S-02



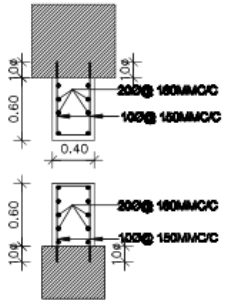
SHEARWALL DETAIL AT GRID 1-1/3-3



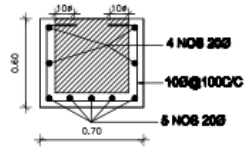
SHEARWALL DETAIL AT GRID 2-2



SHEARWALL SECTION AT A

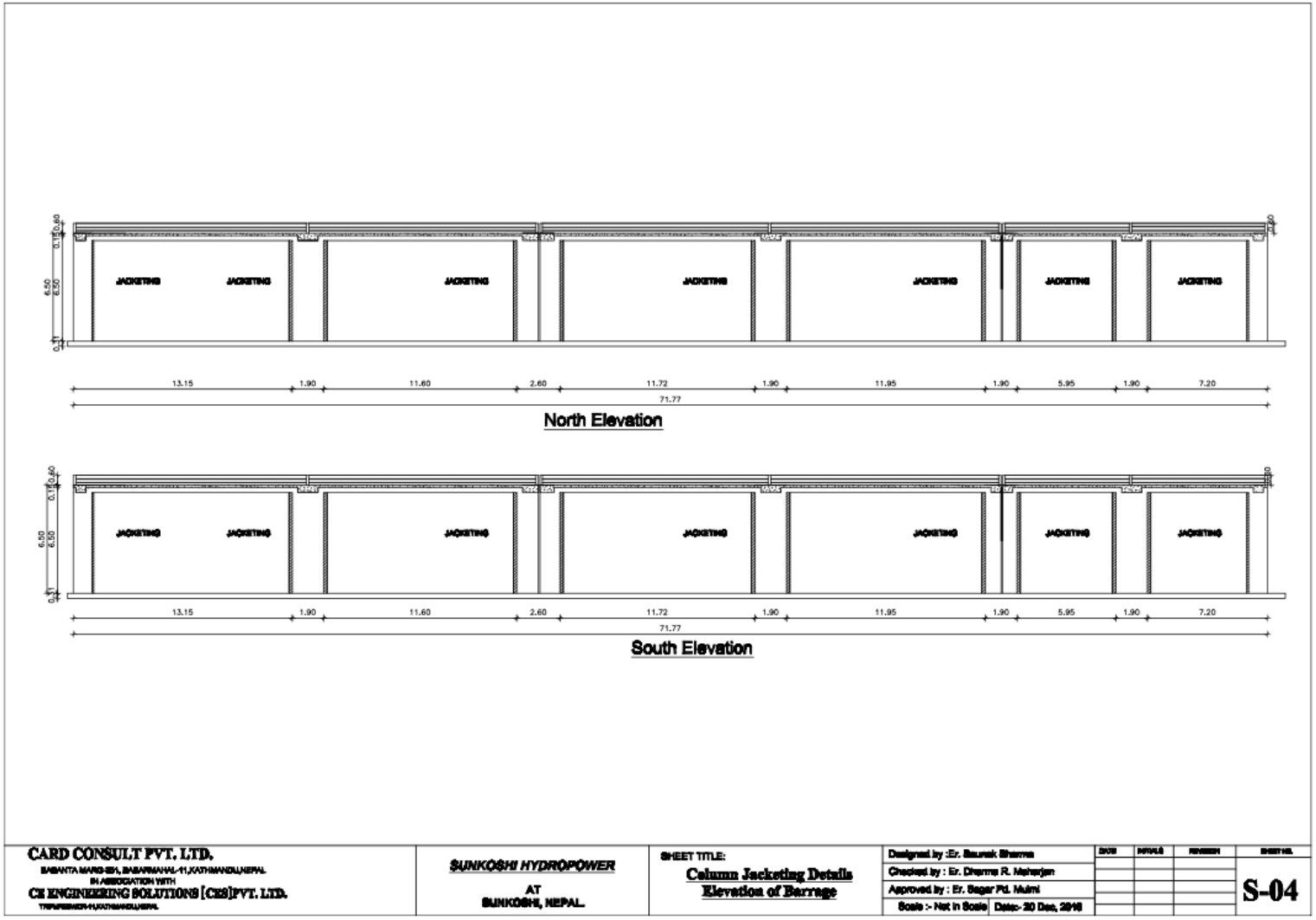


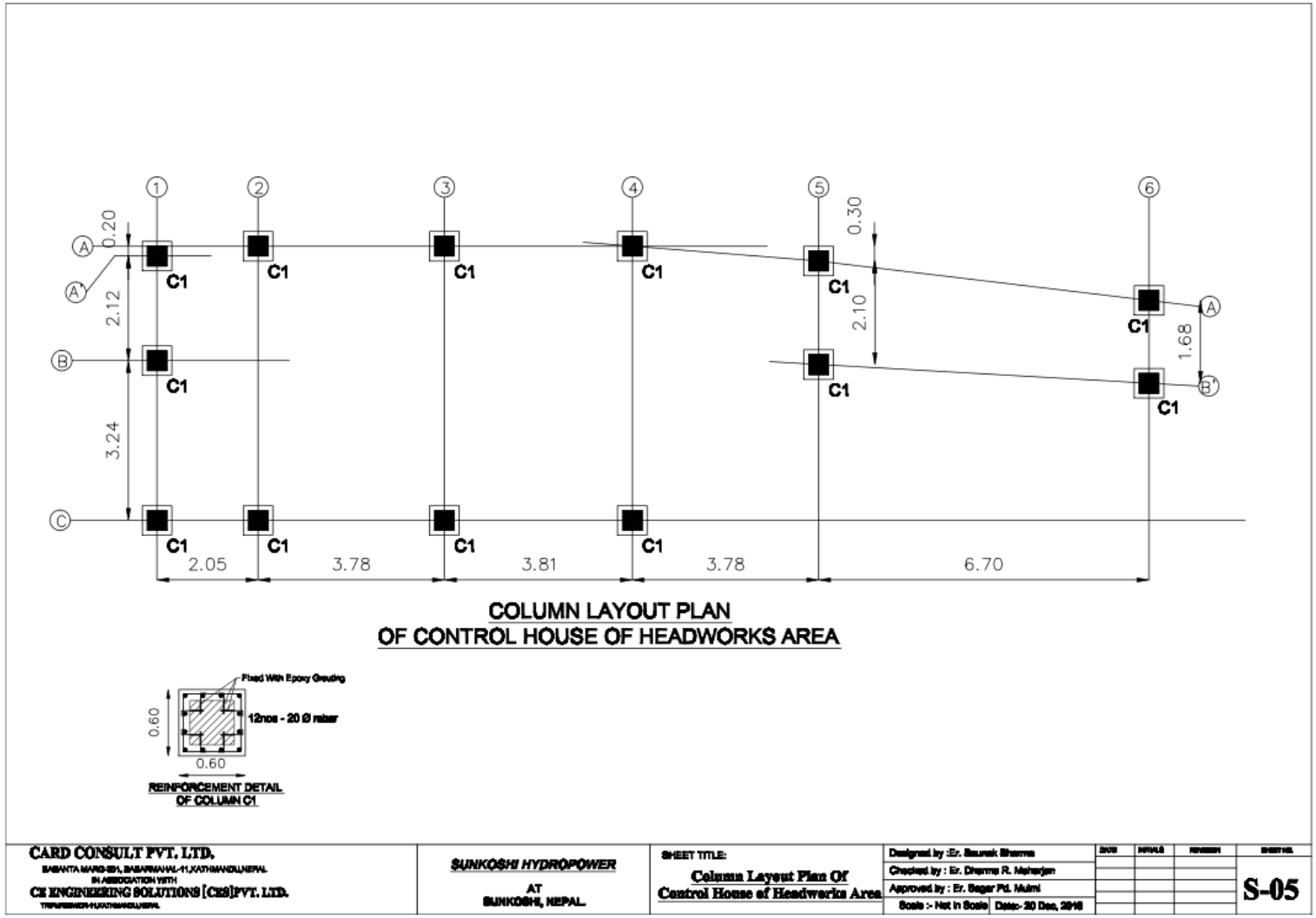
SHEARWALL SECTION AT B

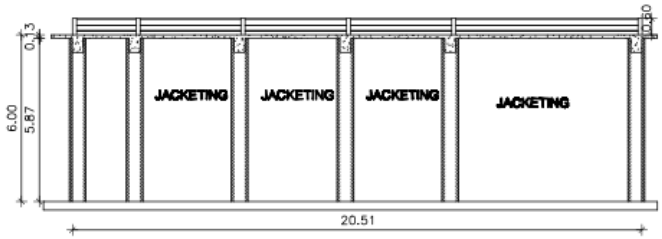


BEAM SECTION AT C

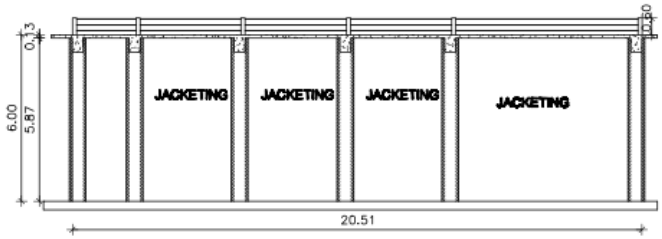
CARD CONSULT PVT. LTD. BABANTA MARG-304, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD.	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Column Jacketing Details Elevation of Barrage	Designed by :Er. Gyan Gupta Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not In Scale Date:- 22 Feb., 2017	DATE / REVISED / REVISION	S-03


JACKETING
13.15
1.90
11.60
2.60
11.72
1.90
11.95
1.90
5.95
1.90
7.20
71.77
North Elevation
South Elevation
CARD CONSULT PVT. LTD.
CE ENGINEERING SOLUTIONS [CES]PVT. LTD.
SUNKOSHI HYDROPOWER
AT
SUNKOSHI, NEPAL.
SHEET TITLE:
Column Jacketing Details
Elevation of Barrage
Designed by :Er. Saurav Sharma
Checked by : Er. Dharma R. Maharjan
Approved by : Er. Sagar Pd. Mulmi
Scale :- Not in Scale
Date:- 30 Dec, 2018
S-04

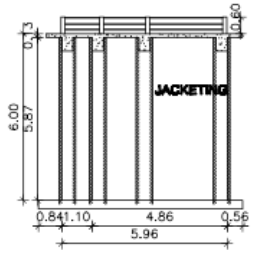

1
2
3
4
5
6
A
A'
B
B'
C
0.20
2.12
3.24
0.30
2.10
1.68
C1
2.05
3.78
3.81
3.78
6.70
COLUMN LAYOUT PLAN
OF CONTROL HOUSE OF HEADWORKS AREA
Fixed With Epoxy Grouting
12nos - 20 ø rebar
0.60
0.60
REINFORCEMENT DETAIL
OF COLUMN C1
CARD CONSULT PVT. LTD.
BASANTA MARG-251, BASANTAPUR-11,KATHMANDU,NEPAL
IN ASSOCIATION WITH
CE ENGINEERING SOLUTIONS [CES]PVT. LTD.
SUNKOSHI HYDROPOWER
AT
SUNKOSHI, NEPAL.
SHEET TITLE:
Column Layout Plan Of
Control House of Headworks Area
Designed by :Er. Saurav Sharma
Checked by : Er. Dharma R. Maharjan
Approved by : Er. Sagar Pd. Mulmi
Scale :- Not in Scale
Date:- 20 Dec, 2018
S-05



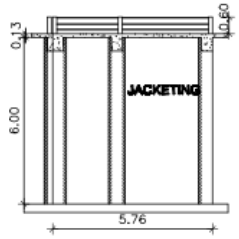
North Elevation



South Elevation

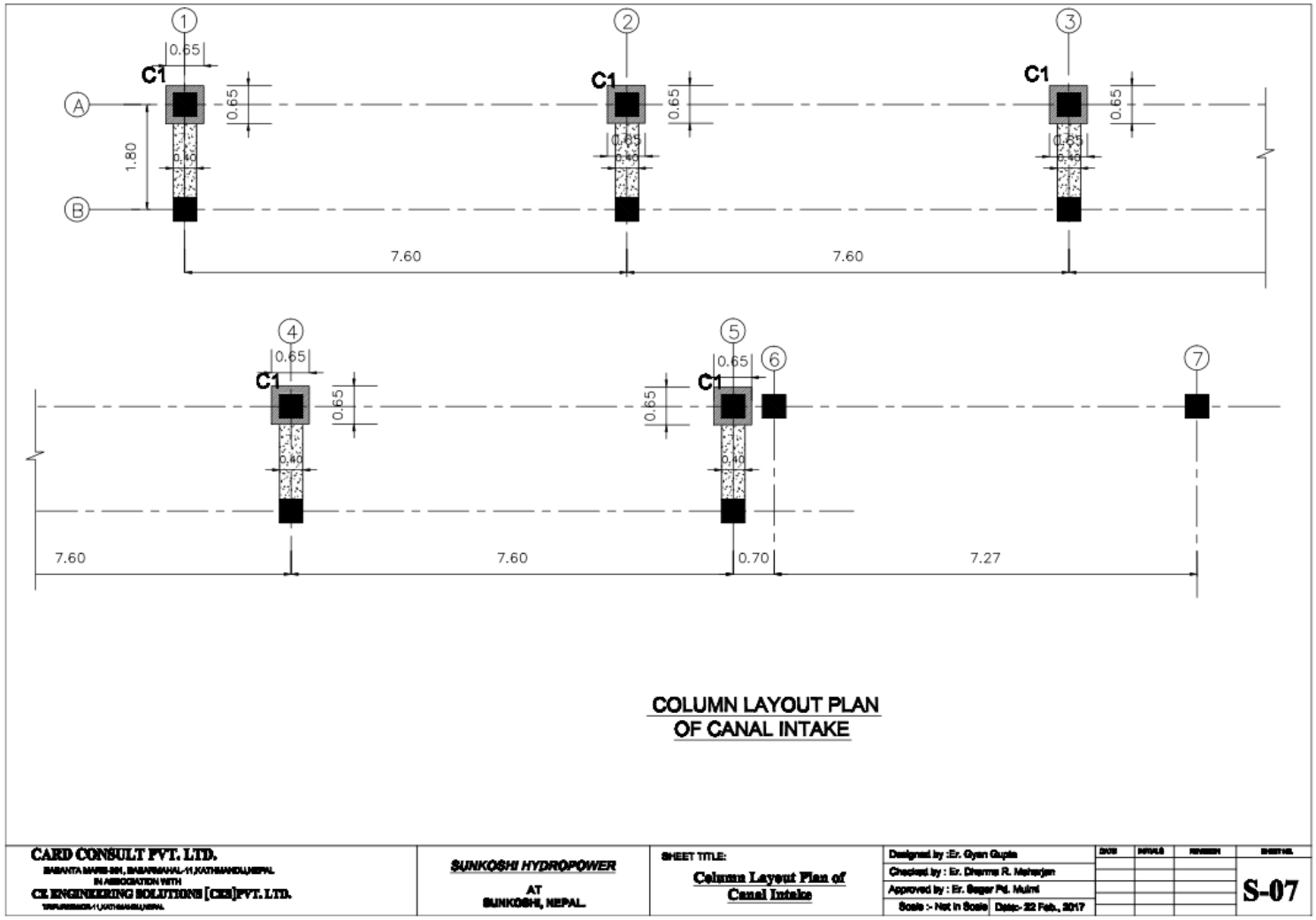


East Elevation



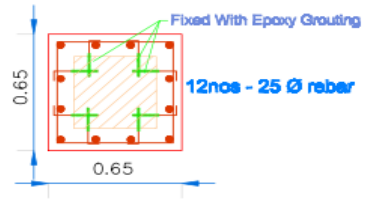
West Elevation

CARD CONSULT PVT. LTD. BASANTA MARG-251, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CK ENGINEERING SOLUTIONS [CKS]PVT. LTD.	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Column Jacketing Details Elevation of Control House	Designed by :Er. Saurab Sharma Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not in Scale Date:- 20 Dec, 2018	DATE / INITIALS / REVISION	S-06

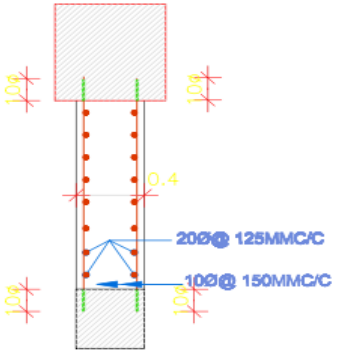


COLUMN LAYOUT PLAN OF CANAL INTAKE

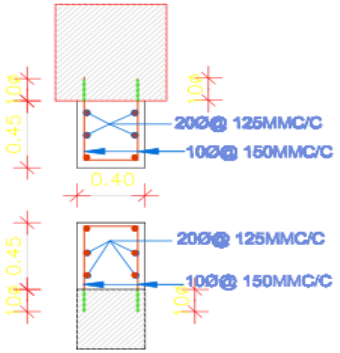
CARD CONSULT PVT. LTD. BABANTA MARG-301, BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD.	*SUNKOSHI HYDROPOWER* AT SUNKOSHI, NEPAL.	SHEET TITLE: Column Layout Plan of Canal Intake	Designed by :Er. Gyan Gupta Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not in Scale Date:- 22 Feb., 2017	S-07



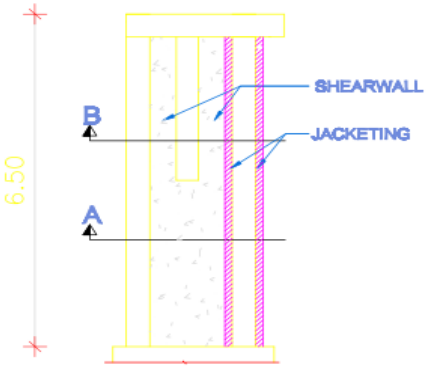
REINFORCEMENT DETAIL
OF COLUMN C1



TYP. SHEARWALL DETAILS AT-B

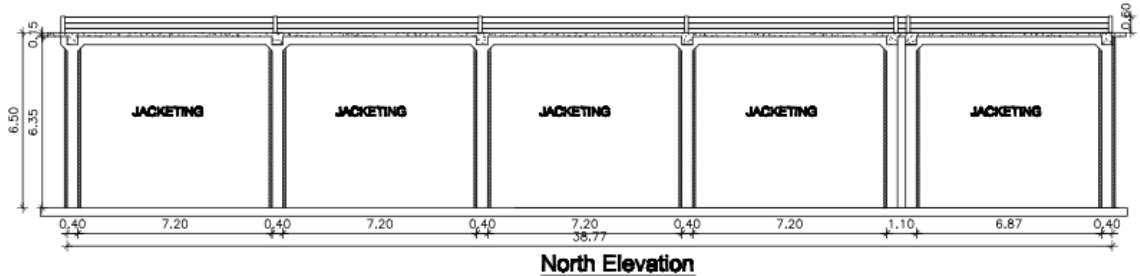


TYP. SHEARWALL DETAILS AT-A

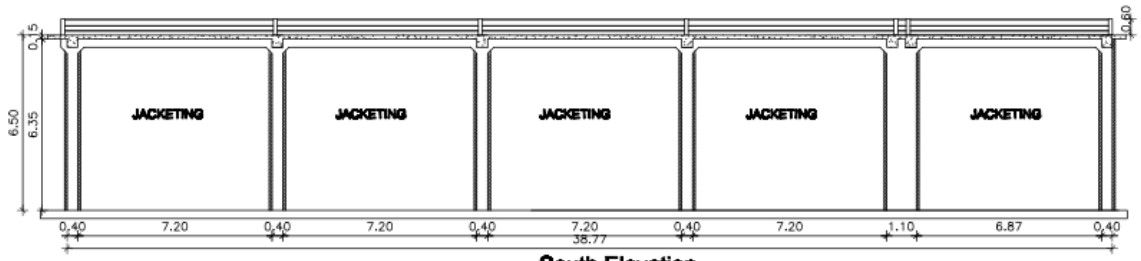


TYP. ELEVATION

CARD CONSULT PVT. LTD. BASANTA MARG-3(E), BHAINSEPHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD. TRIPURESWOR-11,KATHMANDU,NEPAL	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Shearwall Details Canal Intake	Designed by :Er. Gyan Gupta Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not to Scale Date:- 22 Feb., 2017 DATE / DETAILS / REMARKS / SHEET NO. S-08



North Elevation



South Elevation

CARD CONSULT PVT. LTD. BASANTA MARG-5(A), BABARMAHAL-11,KATHMANDU,NEPAL IN ASSOCIATION WITH CE ENGINEERING SOLUTIONS [CES]PVT. LTD.	SUNKOSHI HYDROPOWER AT SUNKOSHI, NEPAL.	SHEET TITLE: Column Jacketing Details Elevation of Canal Intake	Designed by :Er. Saurab Sharma Checked by : Er. Dharma R. Maharjan Approved by : Er. Sagar Pd. Mulmi Scale :- Not in Scale Date:- 20 Dec, 2018	DATE / INITIALS / REVISION	S-09

Supplementary Information

None

SECTION - VI
Bill of Quantities

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 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.

11. The abbreviations and symbols used in this Bill of Quantities are: None

B. Day work Schedule

a) **General**

1. Work shall not be executed on a day work basis except by written order of the Project Manager. Bidders shall enter basic rates for day work items in the Schedules. These rates shall apply to any quantity of day work ordered by the Project Manager. Nominal quantities have been indicated against each item of day work, and the extended total for day work shall, be carried forward as a Provisional Sum to the Summary Total Bid Amount. Unless otherwise adjusted, payments for day work shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

b) Day workLabor

1. In calculating payments due to the Contractor for the execution of day works, the hours for labor will be reckoned from the time of arrival of the labor at the job site to execute the particular item of day work to the time of departure from the job site, but excluding meal breaks and rest periods. Only the time of classes of labor directly doing work ordered by the Project Manager and are competent to perform such work will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
2. The Contractor shall be entitled to payment in respect of the total time that labor is employed on day work, calculated at the basis rates entered by it in the " SCHEDULE OF DAY WORK RATES: 1. LABOR". The rates for labor shall be deemed to cover all costs to the Contractor including (but not limited to) i) the amount of wages paid to such labor, transportation time, overtime, subsistence allowances, ii) any sums paid to or on behalf of such labor for social benefits in accordance with Nepal law, iii) Contractor's profit, overheads, superintendence, liabilities and insurance and iv) charges incidental to the foregoing.

c) Day work Equipment

1. The Contractor shall be entitled to payments in respect of Constructional Plant already on site and employed on day work at the basis rental rates entered by him in the “SCHEDULE OF DAY WORK RATES:2 EQUIPMENT ”. The said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricant, and other consumables and all overhead, profit and administrative costs related to the use of such equipment. The cost of drivers, operators and assistants also shall be included in the rate of the equipment and no separately payment shall be made for it.
2. In calculating the payment due to the Contractor for Constructional Plant employed on day work, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Project Manager, the travelling time from the part of the Site where the Construction Plant was located when ordered by the Project Manager to be employed on day work and the time for return journey there to shall be included for payment.

d) Day work Materials

1. The Contractor shall be entitled to payment in respect of materials used for day work (except for materials for which the cost is included in the percentage addition to labor costs as detailed heretofore), at the rates entered by him in the "SCHEDULE OF DAY WORK RATES: 3 MATERIALS" and shall be deemed to include overhead charges and profit as follows;

   (i) the rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc. and shall provide for delivery to store for stockpiling at the Site.

(ii) the cost of hauling materials for use on work ordered to be carried out as day work, from the store or stockpile on the Site to the place where it is to be used also shall be include in the same rate.

Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the manner in which they will be used, and under whose authority (usually the Project Manager's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Employer to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

Bill of Quantities

Nepal Electricity Authority
Generation Directorate
Generation Operation and Maintenance Department

Sunkoshi Hydro Power Station

Bill of Quantities

Contract Identification No : SHPS-2073/74-CT-05

Job: Retrofitting of Barrage, Intake and Control room of Sunkoshi HPS FY 2073/74

Location: Khadichaur, Sindhupalchowk

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
1	**General works**						
i	Clearing the site for preparation of Retrofitting works all complete.	Ls	1.00				
ii	Providing safety Helmets and Reflector Jackets for all Supervisors, Site Engineers, Project Manager and Visitors at site.	Ls	1.00				
iii	Providing proper sinage at construction site for information and safety.	PS	1.00				
iv	Provide insurance to cover as per Contractors Associated Risk (CAR) policy of the project during the construction period as per condition of contract.	PS	1.00				
v	Site office room for consultant representative including all following items: working table with chair, laptop setup with printer.	Ls	1.00				
vi	Providing vehicle for consultant representative on rental basis.	month	6.00				
vii	Contractor office setup for contractors engineers and supervisiors.	Ls	1.00				

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
viii	Materials/Lab testing						
	Lab testing of cubes, quality checking of materials (sand, Cement, Coarse Aggregrate, Reinforcement, Brick etc.) as per specification and instruction of engineer as following details:	Ls	1.00				
	a) M30 concrete test 3 nos.						
	b) Rebar-3 nos. each dia. During the project and changing in brand						
	c) Cement-Changing in brand and type						
ix	Scaffolding works with platform and applying safety net for surface cleaning, application of chemicals and retrofitting works.	Cum	927.00				
2	**Concrete crack treatment works on all concrete cracks area**						
A	**Repairing with Epoxy based chemical as per manufactures specifications all complete.**						
i	Surface preparation works by removing all loose particles and making about 5mm groove along the crack length and cleaning the surface with wire brush, cup brush and with jet of water and Supplying and applying **Epoxy Based Bond** on cleaned concrete surface upto the width of 150mm top and 150mm bottom of the crack length.	Sqm	267.00				
ii	Supplying and applying **Heavy Duty Mortar (HDM)** on cleaned concretesurface upto the width of 150mm top and 150mm bottom of the crack length.	Sqm	267.00				

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
iii	**Epoxy Grouting on cracked surface**						
a	Supplying and fixing **metallic packer/nozzle @ 500mm c/c** for epoxy grout. The packer with fixed with epoxy based mortar.	No.	534.00				
b	Applying Epoxy grout on concrete surface with injection grouting system, **PERMA EPOXY 100 EG or Equivalent** (Resin+Hardener), **a low viscosity** product hence flows freely even into the finest cracks and pores of concrete as per manufactures specifications all complete.						
c	Cutting only the exposed part of **metallic packer/nozzle** with grinding machine and sealing the area with protection layer of epoxy based mortar preventing the corrosion of metallic packer.						
3	**Concrete Spill out/damaged Treatment works:**						
A	**Repairing with Epoxy based Micro Concrete as per manufactures specification all complete.**						
i	Surface preparation works by removing all loose particles and cleaning concrete surface and exposed reinforcement with wire brush, cup brush and with jet of water and providing and applying **Epoxy Based Bond** on cleaned concrete surface for bonding old concrete and new micro concrete surface.	Sqm	62.00				
ii	Providing and applying **Rust remover** along with primer on exposed reinforcement surface.	Sqm	42.70				

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
iii	**Epoxy Grouting on Spill out Concrete crack surface**						
a	Supplying and fixing **metallic packer/nozzle @ 500mm c/c** for epoxy grout. The packer with fixed with epoxy based mortar.	No.	124.00				
b	Applying Epoxy grout on concrete surface with injection grouting system, **PERMA EPOXY 100 EG or Equivalent** (Resin+Hardener), **a low viscosity product** hence flows freely even into the finest cracks and pores of concrete as per manufactures specifications all complete.						
c	Cutting only the exposed part of **metallic packer/nozzle** with grinding machine and sealing the area with protection layer of epoxy based mortar preventing the corrosion of metallic packer.						
4	**Column Retrofitting works**						
A	**Retrofitting by Concrete Jaketing works**						
i	Surface preparation works by removing all loose particles and cleaning concrete surface and exposed reinforcement with wire brush, cup brush and with jet of water and providing and applying **Epoxy Based Bond** on old concrete surface for bonding old concrete and new micro concrete surface.	Sqm	375.24				
ii	**High strength-Concrete (M30) works**						
	Providing and applying **High strength-Concrete (M30)** in Column including removal of formworks &Wraping with jute and Curing with water for 7 days all complete works as per specification and manufacture manuals and instruction of site engineer.	Cum	106.39				

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
iii	**Formworks**						
	Providing , Fabricating, erecting and fixing in position plained centering & shuttering of plywood true to line level, including proping, staging, applying shutter removing emulsion/oil as approved, required bracing etc. making leak proof jointa dismantling the afforeside assembly after specified or as approved period from the day of casting concrete in required heights, depths and leads.	Sqm	737.35				
iv	Stagging work	Cum	927.00				
v	**Reinforcement**						
	Tor/TMT Reinforcement work for RCC work including supplying, straighting, cutting, bending, binding and laying of different diameter steel rod in all type of RCC work as per design. Drawing, specification and instruction all complete work. (Rebar of Himal, Panchakanya, Hama or equivalent)	Mt	25.25				

S.N.	Description of works	Unit	Quantity	Rates (Excluding VAT)		Amount Nrs.	Remarks
				in Figure	in Words		
vi	Anchoring rebar of 10-32mm diaupto 200mm depth with **Epoxy grout** as per manufacture specification all complete work as per directed by Engineer.						
a	10mm Dia. With cost of bar	Nos.	5263.00				
b	10mm Dia. Without cost of bar	Nos.	2952.00				
c	20mm Dia.	Nos.	312.00				
d	20mm Dia.	Nos.	757.00				
e	25mm Dia.	Nos.	970.00				
f	32mm Dia.	Nos.	192.00				

Signature of Authorized Person:

Name of Authorized Person:
Contractor's Name:
Address :
Telephone No.:
Seal:
Date:

Part - III

CONDITIONS OF CONTRACT AND CONTRACT FORMS

SECTION - VII

General Conditions of Contract

Sunkoshi Hydropower Station

Lamosanghu, Sindhupalchowk

SHPS-2073/74-CT-05

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 additionto 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 Acceptance means the formal acceptance by the Employer of the Bid and denotes the formation of the contract at the date of acceptance. (w) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works. (x) Party means the Employer or the Contractor, as the context requires. (y) SCC means Special Conditions of Contract (z) Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function. (aa) 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. (bb) Retention Moneymeans the aggregate of all monies retained by the Employer pursuant to GCC 46.1. (cc) The Site is the area defined as such in the SCC. (dd) Site Investigation Reports are those that were includedin

	the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
	(ee) Specificationmeans the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager. (ff) 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. (gg) 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. (hh) Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works. (ii) A Variation is an instruction given by the Project Manager which varies the Works. (jj) 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.
1. 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.
2. 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.
3. Communications	6.1 Communications between parties that are referred to in theConditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
4. 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.
5. 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
6. 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.
7. 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. 15.2 The Contractor shall construct and install a Notice Board in the Construction Site containing the information as per the Clause 111 of the PPR.
16. The Works toBeCompletedwithin intendedCompletion 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 intendedCompletion Date.
17. Design by contractor andApproval by theProject 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. 17.4The Project Manager's approval shall not alter the Contractor's responsibility for design of temporary works.
18. Safety, Security and Protection of the Environment	18.1The Contractor shall, throughout the execution, and completionof 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 life saving 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 58.2which 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 obstructivepractice subject to contract termination.
23. Dispute Settlement	23.1 The Employer and the Contractor shall attempt to settleamicably by direct negotiation any disagreement or dispute arising between them under or in connection with the Contract. 23.2 Any 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 anytime. A revised Program shall show the effect of Variations andCompensation 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 Orderedby the ProjectManager	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 2percent 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 10 percent, except with the prior approvalof 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 thenature 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 Contractorwithin 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: "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; b, c, d, etc., coefficients representing the estimated proportion of each cost element (labor, materials, equipment usage, etc.) in the Works or sections thereof, 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-TableofPrice Adjustment data, as approved by the Project Managerand 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 **B**ase, 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
	45.7 Where, 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.. 45.8 The Price Adjustment amount shall be limited to a maximum of the initial Contract Amountas specified in the SCC. 45.10 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 TheEmployer 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 byadjusting 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 shalldemonstrate 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 AdditionalPerformance 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 theContractor on forms approved by the Project Manager. Each completed form shall be verified and signed bythe 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 theContractor 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,ortheydonot 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 unilaterly, 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. 57.3 The 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) theEmployer 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 theSite 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 haveengaged 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) "corruptpractice" 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" 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" is an arrangement between two or more parties designed to achieve an improper purpose,including to influence improperly the actionsof another party; (iv) "coercive practice" is 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; (v) "obstructive practice" is (aa) deliberately destroying, falsifying, altering orconcealing of evidence material to the investigationor making false statements to investigators in order tomaterially 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 ofmatters relevant to the investigation or from pursuing the investigation; or (bb) acts intended to materially impede the exercise ofthe 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 ofone (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. AdditionalLiquidated 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 by the Employer, the Project Manager shall issue a certificate for

	the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate. 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. In such case, amount to complete the remaining works as per the Contract shall be recovered from the Contractor as Government dues.
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 underminethe 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 Royalties	69.1 Any element of royalty, duty or tax in the price of any 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	71.1 No 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, Generation Directorate, Medium Generation, Operation and Maintenance Department, Sunkoshi Hydropower Station, Lamosanghu, Sindhupalchowk
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be **180 days.**
GCCs 1.1 (aa) & 4.1	The Project Manager is **Station Manager**. The Project Manager and Engineer are synonyms.
GCC 1.1 (cc)	The Site is located at Lamosanghu, Sindhupalchowk.
GCC 1.1 (ff)	The Start Date shall be the date of contract agreement.
GCC 1.1 (jj)	The Works consist of retrofitting of barrage, intake and control room.
GCC 2.2	Sectional Completions are: NA
GCC 2.3(i)	The following documents also form part of the Contract: ***NA***
GCC 3.1	The language of the contract is ENGLISH/NEPALI The law that applies to the Contract is the law of NEPAL
GCC 8.1	Schedule of other contractors: None
GCC 13.1	The minimum insurance amounts and deductibles shall be: 1. The minimum cover for loss of or damage to the Works, Plant and Materials is:110% of the Contract Amount. 2. The maximum deductible for insurance of the Works and of Plant and Materials is: 100% 3. The minimum cover for loss or damage to Equipment is: Replacement cost 4. The maximum deductible for insurance of Equipment is: 50,000 (Fifty thousand) 5. The minimum for insurance of other property is: 1,000,000 (One Million) with unlimited number of occurrences 6. The maximum deductible for insurance of other property is:50,000 (Fifty thousand) 7. The minimum cover for personal injury or death insurance i. For the the Contractor's employees is that specified in the Labor act of Nepal and ii. for other people is : 500,000 (Five Hundred Thousand)with an unlimited number of occurrences iii. For Employer's/Engineer's staff: NRS. 1,000,000 (One Million) per person(Maximum 10 persons)with an unlimited number of occurrences
GCC 14.1	Site Investigation Reports are: None

GCC 17.1	The following shall be designed by the Contractor: NA
GCC 20.1	The Site Possession Date(s) shall beat the dayof signing contract.
GCC 23.2	Not Applicable.
GCC 24.1	Not Applicable.
GCC 24.3	Appointing Authority for the DRC members: NEPCA
GCC 25.3	The Adjudicator/DRC Members shall be paid by the hour at the rate of: NRS 3000 (Three Thousand). Fees and types of reimbursable expenses to be paid to the Adjudicator or the DRC members : Reimbursable expenses as office accommodation, transportation, stationery and secretarial services and field expenses shall be as per actual
GCC 25.4	The place of arbitration shall be: Kathmandu, Nepal
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within 7 days from the date of the Letter of Acceptance.
GCC 26.3	The period between Program updates is 15 days. The amount to be withheld for late submission of an updated Program is 100,000 (One Hundred Thousand).
C. Quality Control	
GCC 34.1	The Defects Liability Period is: 365 days.
D. Cost Control	
GCC 41.1	*8% (eight percent)*
GCC 45.1	The Contract ***is*** subject to price adjustment, and the following information regarding coefficients ***does apply***. The coefficients and indices for adjustment of prices in Nepalese Rupees shall be as specified in the Table of Adjustment Data submitted by bidder together with the Letter of Bid which is approved by the Project manager and attached as Annex-1.
GCC 45.7	Base Price of Construction Materials applicable for price adjustment shall be as per the Table of Adjustment Data submitted by Bidder together with the Letter of Bid which is approved by the Project manager and attached as Annex-1
GCC 45.8	The Price Adjustment amount shall be limited to a maximum ***25 (twenty five)*** percentage of the initial Contract Amount
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 0.05PERCENT of the final Contract Price per day. The maximum amount of liquidated damages for the whole of the Works is 10 PERCENT of the finalContract Price.
GCC 48.1	NA
GCC 49.1	The Advance Payments shall be: up to 10 (Ten) % of the initial contract price, excluding provisional sums, day works and VAT and shall be paid to the Contractor no later than: Payment shall be made in two installments; first installment of 5 (Five) % shall be made to the contractor after adequate budget sanction of FY 073/74 upon submission of equivalent acceptable Bank Guarantee for advanced payment and the second installment of 5 (Five) % shall be made after the contractor completes works that are valued at not less than 5 (five) % of the Contract Price upon submission of equivalent acceptable Bank Guarantee. The advanced payment guarantee shall be valid until the intended completion date for whole of the works.
GCC 49.3	Deductions from Payment Certificates will commence in the first certificate in which the value of works executed exceeds 30% of the Contract Price. Deduction will be at the rate of [Insert percentage][1] of the respective Monthly Interim Payment Certificate until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the end of 80 % of the approved contract period.
GCC 50.1	a) Within Fifteen (15) days of the receipt of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security as under mentioned from "A" class Commercial Bank in accordance with the conditions of Contract 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) percentage less than the approved cost estimate, the performance security amount shall be 5 (five) percent of the bid price. ii) For the bid price less than 15 percent of the cost estimate, the performance security amount shall be determined as follows: **Performance Security Amount = [(0.85 x Cost Estimate – Bid Price) x 0.5] + 5% of Bid Price.** *The Bid Price and Cost Estimate shall be inclusive of Value Added Tax* b) Failure of the successful Bidder to submit the above mentioned Performance Security or sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

E. Finishing the Contract	
GCC 56.1	The date by which operating and maintenance manuals are required is***NA***
	The date by which "as built" drawings are required is ***NA***
GCC 56.2	The amount to be withheld for failing to produce "as built" drawings and/or Operating and maintenance manuals is ***NA***
GCC 57.2 (g)	The maximum number of days is: 200
GCC 64	The Project 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 works under General Conditions of Contract Clause 7; b. Certifying additional costs determined under General Conditions of Contract Clause 42; c. Determining start date under General Conditions of Contract Clause 1; d. Determining the extension of the intended Completion Date under General Conditions of Contract Clause 27; e. Issuing a Variation under General Conditions of Contract Clause 1 and 38, except in an emergency situation, as reasonably determined by the Project 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. f. Adjustment of rates under General Conditions of Contract Clause 37;

Annex-1

Table of Price Adjustment Data
[SCC 45.1]

Code	Index Description	Source of Index*	Base Value and Date	Employer's Proposed Weighting Range (coefficient)	Bidder's Proposed Weighting (coefficient)**
1	**2**	**3**	**4**	**5**	**6**
	Non - adjustable (A)			0.15	0.15
	Labor (b)	District rate of Sindhupalchowk		0.15-0.25	
	Materials (c)	National Wholesale Price Index" - Construction Materials" of Nepal Rastra Bank		0.30-0.40	
	Equipment usage (d)	Nepal oil corporation		0.20-0.30	
		Total			**1.00**

Note: Base value and Bidder's proposed weighting coefficient to be filled as per "Bid Form of Table of Price Adjustment Data" in Bidding Forms (Section-IV) after verification by the Employer in case of the alternative provision of Bidder proposed value and weighting coefficient.

Table of Price Adjustment Data
[SCC 45.7]

Code	Construction Material*	Unit	Base Price (NRs/Unit) ** (Ex-factory)	Source (Factory)**
1	2	3	4	5

** For the purpose of calculation of price adjustment, the Ex-factory price of the same source mentioned in the table shall be taken into consideration.

Note: Base Price and source to be filled as per "Bid Form of Table of Price Adjustment Data" in Bidding Forms (Section-IV) after verification by the Employer in case of the alternative provision of Bidder proposed source and base price.

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.

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: ……..

CC:
[Insert name and address of all other Bidders, who submitted the bid]

[Notes on Letter of Intent
The issuance of Letter of Intent is the information of the selection of the bid of the successful bidder by the Employer and for providing information to other unsuccessful bidders who participated in the bid as regards to the outcome of the procurement process. This standard form of Letter of Intent to Award should be filled in and sent to the successful Bidder only after evaluation and selection of substantially responsible lowest evaluated bid.]

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 of NRs. ……. in accordance with the Conditions of Contract consisting of a Bank Guarentee using for that purpose the Performance security Formatincluded 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) Table of Price Adjustment Data
   (k) .....[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

Witness, Name Signature, Address, Date

Signed by……..
for and on behalf of the Employer in the presence of

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 thisguarantee must be received by us at this office on or before that date.

Seal of Bank and Signature(s)

Note:

All italicized text is for guidance on how to prepare this demand guarantee and shall be deleted from the final document.

* The Guarantor shall insert an amount representing the amount of the advance payment in Nepalese Rupees of the advance payment as specified in the Contract.

** Insert the date Thirty days after the expected completion date. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee".