BIDDING DOCUMENT

for

THE PROCUREMENT OF

[Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi]

National Competitive Bidding (NCB)
Single-Stage: Single-Envelope Bidding Procedure

[Water Resource and Irrigation Development Division Office, Rupandehi]

Issued on: 2083/06/22 [8th October, 2026]

Issued to: All Eligible Bidders

Invitation for Bids No.: WRIDDORUP/NCB-02/2083-084

NCB No.: NCB-02/2083-084

Contract Identification No.: WRIDDORUP/NCB-02/2083-084

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Abbreviations

BD ... . Bidding Document

BDF .... Bidding Forms

BDS .... Bid Data Sheet

BOQ ... . Bill of Quantities

COF ..... Contract Forms

DP ... . Development Partners

DoLI... .....Department of Local Infrastructure

e-GP…….Electronic Government Procurement

ELI ... . Eligibility

EEC... .... Evaluation and Eligibility Criteria

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

NCB ... . National Competitive Bidding

NRs ..... Nepalese Rupees

PAN ... . Permanent Account Number

PPA ... . Public Procurement Act, 2063

PPMO ... . Public Procurement Monitoring Office

PPR ... . Public Procurement Regulations, 2064

PS …….. Provisional Sum

SBD .... Standard Bidding Document

SCC ... . Special Conditions of Contract

TS ... .Technical Specifications

VAT ... . Value Added Tax

WRQ ... . Works Requirements

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Invitation for Bids

[Government of Lumbini Province/Ministry of Urban Development, Energy, Irrigation & Water Supply]

[Water Resource and Irrigation Development Division Office, Rupandehi]

Invitation for Bids No: WRIDDORUP/NCB-02/2083-084

Date of publication: 2083/06/22 [8th October, 2026]

1. ***Water Resource and Irrigation Development Division Office, Rupandehi*** invites sealed bids from Nepalese eligible bidders for the construction of ***Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi*** under National Competitive Bidding procedures. The estimated amount for the works is NRs. ***37,10,168.26***
2. Eligible Bidders may obtain further information and inspect the Bidding Documents at the office of ***Water Resource and Irrigation Development Division Office, Rupandehi*** or may visit Office website https://widdrupandehi.lumbini.gov.np/en/.
3. A complete set of Bidding Documents may be purchased from the Office ***Water Resource and Irrigation Development Division Office, Rupandehi*** or may download the bidding documents from Office website https://widdrupandehi.lumbini.gov.np/en/ by eligible Bidders on the submission of a written application, along with the copy of company/firm registration certificate, and upon payment of a non-refundable fee of ***3000*** till ***2083/07/19 (5th November, 2026)*** during office hours in the account as specified below.

   Name of the Bank: Rastriya Banijya Bank Ltd.
   Name of Office: Water Resource and Irrigation Development Division Office, Rupandehi
   Office Code no.: **3080048025**
   Account no.: **1000100200010000**
   Rajaswa (revenue) Shirshak no. : **14229**

4. Pre-bid meeting shall be held at ***Water Resource and Irrigation Development Division Office, Rupandehi*** at ***14:00 on 2083/07/09 (26th October, 2026)***.
5. Sealed bids must be submitted to the office ***Water Resource and Irrigation Development Division Office, Rupandehi*** by hand/courier on or before ***12:00*** on ***2083/07/20 (6th November, 2026).*** Bids received after this deadline will be rejected.
6. The bids will be opened in the presence of Bidders' representatives who choose to attend at ***14:00 on 2083/07/20 (6th November, 2026)*** at the office of ***Water Resource and Irrigation Development Division Office, Rupandehi.*** Bids must be valid for a period of ***90 days*** from the bid submission deadline and must be accompanied by a bid security amounting to a minimum of ***93000.00***, which shall be valid for 30 days beyond the validity period of the bid.
7. If the last date of purchasing and /or submission falls on a government holiday, then the next working day shall be considered as the last date. In such case the validity period of the bid and bid security shall remain the same as specified for the original last date of bid submission.

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Part - I Bidding Procedures

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SECTION– I: Instructions to Bidders

A. General	
1. Scope of Bid	1.1 In connection with the Invitation for Bids indicated in the **Bid Data Sheet (BDS)**, the Employer, as indicated **in the BDS**, issues this Bidding Document for the procurement of Works as specified in Section V (Works Requirements). The name, identification, and number of lots (Contracts) / multiple 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 through e-GP system or e-mail or fax or courier; (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and (c) "day" means calendar day.
2. Source of Funds	2.1 GoN Funded: In accordance with its annual program and budget, approved by the GoN, the implementing agency indicated **in the BDS** plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued. Or Public Entities' own Resource Funded: In accordance with its annual program and budget, approved by the public entity, the implementing agency indicated **in the BDS** plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued. Or DP Funded: The GoN has applied for or received financing (hereinafter called "funds") from the Development Partner (hereinafter called "the DP") indicated **in the BDS** toward the cost of the project named in the BDS. The GoN intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
	2.2 DP Funded: Payment by the DP will be made only at the request of the GoN and upon approval by the DP in accordance with the terms and conditions of the financing agreement between the GoN and the DP (hereinafter called the "Loan/Grant Agreement"), and will be subject in all respects to the terms and conditions of that Loan/Grant Agreement. No party other than the GoN shall derive any rights from the Loan Agreement or have any claim to the funds.
3. Fraud and Corruption	3.1 Procuring Entities as well as bidders, suppliers and contractors and their sub-contractors under GoN/DP-financed contracts, shall adhere to the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this; (a) the Employer adopts, for the purposes of this provision, the terms as

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	defined below: (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party; (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; (iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; (iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party. (v) "obstructive practice" means (a) deliberately destroying, falsifying, altering, or concealing of evidence material to an investigation; (b) making false statements to investigators in order to materially impede an investigation; (c) failing to comply with requests to provide information, documents, or records in connection with an investigation; (d) 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 (e) materially impeding GoN/DP's contractual rights of audit or access to information; and (vi) "integrity violation" is any act which violates Anticorruption Policy, including (i) to (v) above and the following: abuse, conflict of interest, violations of GoN/DP sanctions, retaliation against whistleblowers or witnesses, and other violations of Anticorruption Policy, including failure to adhere to the highest ethical standard. (b) the Employer will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the contract; (c) DP will cancel the portion of the financing allocated to a contract if it determines at any time that representative(s) of the GoN or of a beneficiary of DP-financing engaged in corrupt, fraudulent, collusive, or coercive practices or other integrity violations during the procurement or the execution of that contract, without the GoN having taken timely and appropriate action satisfactory to DP to remedy the situation. (d) DP will impose remedial actions on a firm or an individual, at any time, in accordance with DP's Anticorruption Policy and related Guidelines (as amended from time to time), including declaring ineligible, either indefinitely or for a stated period of time, to participate in DP-financed, -

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	administered, or -supported activities or to benefit from an DP-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and (e) The Contractor shall permit the GoN/DP to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the GoN/DP, if so required by the GoN/DP.
	3.2 The Bidder shall not carry out or cause to carry out the following acts with an intention to influence the implementation of the procurement process or the procurement agreement: (a) give or propose improper inducement directly or indirectly, (b) distortion or misrepresentation of facts, (c) engaging in corrupt or fraudulent practice or involving in such act, (d) interference in participation of other competing bidders, (e) coercion or threatening directly or indirectly to cause harm to the person or the property of any person to be involved in the procurement proceedings, (f) collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Employer the benefit of open competitive bid price, (g) contacting the Employer with an intention to influence the Employer with regards to the bids or interference of any kind in examination and evaluation of the bids during the period from the time of opening of the bids until the notification of award of contract.
	3.3 PPMO, on the recommendation of the Procuring Entity may blacklist a Bidder for a period of one (1) to three (3) years for its conduct including on the following grounds and seriousness of the act committed by the bidder: (a) if convicted by a court of law in a criminal offence which disqualifies the Bidder from participating in the contract, (b) if it is established that the contract agreement signed by the Bidder was based on false or misrepresentation of Bidder's qualification information, (c) if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, a GoN/DP-financed contract. (d) if the successful bidder fails to sign the contract. (e) if the bidder fails to inform or informs after the specified time about the saturation of the maximum number of contracts as per ITB 4.9. (f) a Bidder requests for withdrawal or modification of its bid: (i) after the Bid Submission deadline and during the period of validity

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	specified by the Bidder on the Letter of Bid, in case of electronic submission; (ii) from the period twenty-four hours prior to bid submission deadline up to the period of bid validity specified by the Bidder on the Letter of Bid, in case of hard copy submission. (g) if the bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification pursuant to ITB 24.1. (h) a Bidder changes the prices or substance of the bid while providing information pursuant to ITB 24.1.
	3.4 A bidder declared blacklisted and ineligible by the GoN, Public Procurement Monitoring Office (PPMO), by a competent authority under the prevailing law for failure to repay a loan disbursed by a bank or financial institution, and/or the DP in case of DP funded project, shall be ineligible to bid for a contract during the period of time determined by the GoN, PPMO, the competent authority and/or the DP. 3.5 In case of a natural person or firm/institution/company which is already declared blacklisted and ineligible by the GoN, any other new or existing firm/institution/company owned partially or fully by such Natural person or Owner or Board of director of blacklisted firm/institution/company; shall not be eligible bidder.
	3.6 Furthermore, Bidders shall be aware of the provisions of GCC 28.3 and GCC 72.3(j).
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 eligibility criteria requirement of the parties to the JV shall be as specified in Section III Evaluation and Eligibility Criteria, and (b) the JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during Contract execution.
	4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of any country or eligible countries mentioned **in the BDS**. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, or incorporated, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed sub-Contractors or suppliers for any part of the Contract including related services.

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	4.3 A Bidder shall not have a conflict of interest. A Bidder found to have a conflict of interest shall be disqualified. if any of, including but not limited to, the following apply: (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 improperly influence on the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or (e) a Bidder participates in more than one bid in this bidding process either individually or as a partner in a joint venture. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a)-(d) above, this does not limit the participation of the same subcontractor in more than one bid; or (f) a Bidder or any of its affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or (g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer as Engineer for the Contract. or (h) a Bidder that has a close business or family relationship with a professional staff of the Procuring Entity.
	4.4 A firm that is under a declaration of ineligibility by the GoN/DP in accordance with ITB 3, at the date of the deadline for bid submission or thereafter, shall be disqualified. A firm shall not be eligible to participate in any procurement activities under an DP-financed, -administered, or -supported project while under temporary suspension or debarment by DP pursuant to the DP's Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by the DP, or enforced by other DPs pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporary suspended or debarred firm will be rejected.
	4.5 Enterprises owned by Government shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the GoN.
	4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
	4.7 Firms shall be excluded in any of the cases, if (a) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Nepal prohibits any import of goods or Contracting of works

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	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.
	4.8 The Bidder, including all parties constituting the Bidder, shall be ineligible to participate in the open competitive bidding process if it has already secured maximum number of construction contracts (in open competitive bidding) **as specified in BDS** and has not yet completed the work as stipulated in the respective contracts. 4.9 For the purpose of ITB 4.8 above, the bidder shall declare that the bidder, and all parties constituting the Bidder have not already secured maximum number of construction contracts (in open competitive bidding in procurement of works) **as specified in BDS**. If the bidder, and all parties constituting the Bidder has participated in bidding processes of many public entities and during that period the maximum number of contracts have been attained as specified saturates due to issuance of letters of acceptance by a particular public entity, the bidder shall inform in writing to all other concerned public entities, where the bidder have participated in bidding process, within three days of issuance of last letter of acceptance that saturates the maximum number of contracts as specified.
5. Eligible Materials, Equipment and Services	5.1 The materials, equipment and services to be supplied under the Contract shall have their origin in any source countries as defined in **the BDS** 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)

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	Section II Bid Data Sheet (BDS) Section III Evaluation and Eligibility Criteria (EEC) 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 (IFB) 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 and to furnish with its bid all information and documentation as is required by the Bidding Documents. 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 the BDS** or raise any question or curiosity during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received within the period 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 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 17.2
	7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the bid and entering into a Contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
	7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

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	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**.
	7.5 The Bidder is requested, 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 Nonattendance 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 addendum or several addenda.
	8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3.
	8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 19.2. However, the time available to submit bids shall not be less than five (5) days since amendment in bidding document.
C. Preparation of Bids	
9. Cost of Bidding	9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
10. Language of Bid	10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified **in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified **in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.
11. Documents Comprising the Bid	11.1 The Bid shall comprise the following: (a) Letter of Bid; (b) completed Bill of Quantities (BoQ), in accordance with ITB 12 and ITB 13, or as stipulated **in the BDS**;

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	(c) Bid Security, in accordance with ITB 16; (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 17.2; (e) documentary evidence of establishing the Bidder's eligibility; (f) Bids submitted by a Joint Venture shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed agreement. The Joint Venture agreement, or letter of intent to enter into a Joint Venture including a draft agreement shall indicate at least the parts of the Works to be executed by the respective partners; (g) Table of Price Adjustment (if applicable); and (h) any other required documents required, in the **BDS**.
	11.2 The Bidder is solely responsible for the authenticity of the submitted documents.
12. Letter of Bid and Schedules	12.1 The Letter of Bid, Schedules, and all documents listed under ITB 11, shall be prepared using the relevant forms in Section IV (Bidding Forms) and in Section VI (Bill of Quantities).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. Bid Prices and Discounts	13.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below.
	13.2 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 VI (Bill of Quantities). In case of Unit Rate Contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.
	13.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered. Absence of the total price in the Letter of Bid may result in rejection of the Bid.
	13.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.
	13.5 If so indicated in ITB 1.1 and ITB 29.4, 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 13.4, provided the bids for all Contracts are submitted and opened at the same time.

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	13.6 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.
	13.7All 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.
14. Currency of Bid and Payment	14.1 The currency of the bid and payment shall be in Nepalese Rupees.
15. Period of Validity of Bids	15.1 Bids shall remain valid for the period specified **in the BDS.** The bid validity period shall start from the bid submission deadline as prescribed by the Employer in accordance with ITB 19.1. If the prescribed bid submission deadline date falls on a government holiday, then the next working day shall be considered as the bid submission deadline date. In such case the validity period of the bids shall be considered from the original bid submission deadline date. In the case of electronic bid submission, if any technical issue arises in the handling of the e-GP system, the PPMO may extend the deadline for bid submission. However, the validity period of the bids shall still be counted from the original bid submission deadline. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.
	15.2 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 16, 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 and to include any additional conditions against the provisions specified in Bid Documents.
16. Bid Security	16.1 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.

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	16.2 The bid security shall be, at the Bidder's option, in any of the following forms: (a) an unconditional bank guarantee from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law or; (b) a cash deposit voucher in the Employer's Account as specified **in BDS**. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV (Bidding Forms) or in another Form acceptable to the employer. The form must include the complete name of the Bidder. The bid security shall be valid for minimum thirty (30) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 15.2. A bid security valid for a shorter period shall be rejected by the Employer as nonresponsive.
	16.3 Any bid not accompanied by an enforceable and substantially compliant bid 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.
	16.4 The public entity shall return the bid securities except those that are to be forfeited as per ITB 16.5 to the respective bidders within three (3) days after the successful bidder has furnished the required performance security and signed the Contract Agreement pursuant, to ITB 34.1 and ITB 35.1.
	16.5 The bid security shall be forfeited if: (a) a Bidder requests for withdrawal or modification of its bid, except as provided in ITB 15.2: (i) during the period of bid validity specified by the Bidder on the Bid, in case of electronic submission; (ii) from the period twenty-four hours prior to bid submission deadline up to the period of bid validity specified by the Bidder on the Letter of Bid, in case of hard copy submission. (b) a Bidder changes the prices or substance of the bid while providing information pursuant to ITB 24.1; (c) a Bidder involves in fraud and corruption pursuant to ITB 3.1; (d) the successful Bidder fails to: (i) furnish a performance security in accordance with ITB 29.5, ITB 29.8 and ITB 34.1; or (ii) sign the Contract in accordance with ITB 35.1 or (iii) accept the correction of arithmetical errors pursuant to ITB 28.1; (e) if the bidder fails to inform about the saturation of the maximum number of contracts as per ITB 4.9.
	16.6 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

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	mentioned in ITB 4.1.
17. Format and Signing of Bid	17.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it ORIGINAL". 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 18.1(b),
	17.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified **in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid, except for un amended printed literature, shall be signed or initialed by the person signing the bid.
	17.3 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	
18. Sealing and Marking of Bids	18.1 Unless otherwise specified **in BDS**, Bidders shall submit their bids by electronic or by mail/by hand/by courier. Procedures for submission, sealing and marking are as follows: (a) Bidders submitting bids by mail, by hand or by courier i. Bidders shall enclose the original and each copy of the Bid. These envelopes containing the original and the copies shall then be enclosed in one single envelope. ii. The inner and outer envelopes shall: (aa) bear the name and address of the Bidder; (bb) be addressed to the Employer as provided **in BDS**19.1; (cc)bear the specific identification of this bidding process indicated **in BDS** 1.1; and (dd) bear a warning not to open before the time and date for bid opening. iii. If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid. (b) Bidders submitting Bids electronically shall follow the electronic bid submission procedure specified **in BDS**.
19. Deadline for Submission of Bids	19.1 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 Nepalese Standard 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

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	not allow the e-submission of bid after the deadline for submission of bid.
	19.2 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.
20. Late Bids	20.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 19. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
21. Withdrawal, and Modification of Bids	21.1 A Bidder may withdraw, or modify its bid after it has been submitted either in hard copy or by e-submission. Procedures for withdrawal or modification of submitted bids are as follows: (i) Bids submitted in hard Copy a) Bidders may withdraw or modify its bids by sending a written notice in a sealed envelope, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 17.2 before 24 hours prior to the last deadline of submission of bid. The corresponding modification of the bid must accompany the respective written notice. All notices must be: (aa) prepared and submitted in accordance with ITB 17 and ITB 18, 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 19. ii) E-submitted bids. a) Bidder may submit modification or withdrawal prior to the deadline prescribed for submission of bids through e-GP system by using the forms and instructions provided by the system.
	21.2. Bids requested to be withdrawn in accordance with ITB 21.1 shall not be opened. In case of hard copy submission, the Bid will be returned unopened to the Bidders.
	21.3 Except in case of any modification or correction in bid document made by procuring entity, Bidder may submit request for withdrawal or modification only one time. 21.4 In case of hard copy bid, no bid may be withdrawn if the bid has already been modified; except in case of any modification or correction in bid document by procuring entity.
	21.5 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.
	21.6 The following provisions apply for withdrawal or modification of the Bids:

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	(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.
	21.7 Once a Bid is withdrawn, bidder will not be able to submit another bid for the same bid.
22. Bid Opening	22.1 The Employer shall open the bids in public at the address, date and time specified **in the BDS** in the presence of Bidders` designated representatives who choose to attend.
	22.2 The Employer shall download the e-submitted bid files. The e-GP system allows the Employer to download the e-submitted bid files (report) only after bid opening date and time after login simultaneously by two members of the Bid opening committee.
	22.3 Electronically submitted bid shall be opened at first in the same time and date as specified above. Electronic Bids shall be opened one by one and read out. The e-submitted bids must be readable through open standards interfaces. Unreadable and or partially submitted bid files shall be considered incomplete.
	22.4 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 be Permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "MODIFICATION" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only envelopes that are opened and read out at bid opening shall be considered further.
	22.5 All other envelopes shall be opened one at a time, reading out: the name of the Bidder; the Bid Price(s), including any discounts and alternative bids and indicating whether there is a modification; the presence of a bid security and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out at bid opening shall be considered for evaluation. No bid shall be rejected at bid opening except for late bids, in accordance with ITB 20.1.

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	22.6 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; the Bid Price, per Contract if applicable, including any discounts and alternative offers; and the presence or absence of a bid security. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.
E. Evaluation and Comparison of Bids	
23. Confidentiality	23.1 Information relating to the examination, evaluation, comparison, 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.
	23.2 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.
	23.3 Notwithstanding ITB 23.2, 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.
24. Clarification of Bids	24.1 To assist in the examination, evaluation, and comparison of the bids, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 28. In case of e-submission of bid, upon notification from the employer, the bidder shall also submit the original of documents comprising the bid as per ITB 11.1 for verification of submitted documents for acceptance of the e-submitted bid.
	24.2 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 shall be rejected.
25. Deviations, Reservations, and Omissions	25.1 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.
26. Determination of Responsiveness	26.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB 11.
	26.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material

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	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.
	26.3 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.
	26.4 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 24.1, the bid shall not be considered for further evaluation.
27. Nonconformities, Errors, and Omissions	27.1 Provided that a bid is substantially responsive, the Employer may waive any non-conformities in the bid that do not constitute a material deviation, reservation, or omission.
	27.2 Provided that a bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the bid. Failure of the Bidder to comply with the request may result in the rejection of its bid.
	27.3 Provided that a bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price 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 Eligibility Criteria).
	27.4 If the monetary value of such non-conformities is found to be more than fifteen percent of the Bid Price of the bidder on account of minor discrepancies pursuant to ITB 27.3, such bid shall be considered non responsive and shall not be involved in evaluation.
28. Correction of Arithmetical Errors	28.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis: (a) only for unit price Contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity,

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	the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected; (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and (c) If there is a discrepancy between the bid price in the Summary of Bill of Quantities and the bid amount in item (c) of the Letter of Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Bid will be corrected. (d) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) ,(b) and (c) above.
	28.2 If a Bidder does not accept the correction of arithmetical errors, its bid shall be disqualified and its bid security shall be forfeited.
29. Evaluation of Bids	29.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
	29.2 To evaluate a bid, the Employer shall consider the following: (a) the bid price, excluding Value Added Tax and Provisional Sums 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) adjustment for correction of arithmetic errors in accordance with ITB 28.1; (c) adjustment due to discounts offered in accordance with ITB 13.4; (d) adjustment for nonconformities in accordance with ITB 27.3; (e) application of all the evaluation factors indicated in Section III (Evaluation and Eligibility Criteria); If the evaluated Bid Price of the Bidder is more than 30 (thirty) percent below or substantially higher than the cost estimate, the Employer shall reject the Bid as non-responsive.
	29.3 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.
	29.4 If this Bidding Document allows Bidders to quote separate prices for different Lots (Contracts), and to award multiple Contracts to a single Bidder **as specified in BDS**, the methodology to determine the lowest evaluated price of the Contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III (Evaluation and Eligibility Criteria).
	29.5 If the bid for a Unit Rate Contract, evaluated as per ITB 30.1, is front-loaded or has quoted abnormally high rate for any item believing that the item was underestimated, the Employer **shall** require the Bidder to provide clarification along with detailed rate analysis, for any or all items of the Bill of Quantities

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	as per ITB 24.1. The rate analysis submitted shall be analyzed and compared against prevailing norms and rates, on the basis of the work execution methodology, technology, and management methods specified by the bidder. If the clarification is deemed unsatisfactory, the Employer shall require that the amount of the performance security be increased at the expense of the Bidder as **specified in BDS**.
	29.6 In case of e-submission bids, the Employer evaluates the bid on the basis of the information in the electronically submitted bid files. If the Bidder cannot substantiate or provide evidence to establish the information provided in e-submitted bid through documents/ clarifications as per ITB Clause 24.1, the bid shall not be considered for further evaluation.
	29.7 If all the Bids evaluated are substantially higher than the cost estimate, the employer may negotiate with the bidder who submitted the lowest evaluated substantially responsive Bid to propose a lump sum discount rate in order to bring the bid price within the approved cost estimate. However, no change in the substance of the bid is permitted during the negotiations.
	29.8 If no agreement can be reached as per ITB 29.7, the employer shall cancel the procurement proceedings.
30. Comparison of Bids	30.1 The Employer shall compare all substantially responsive bids in accordance with ITB 29.2. The Employer shall determine the Average Bid Price of all the substantially responsive Bids. The Bid Price which is closest to the Average Bid Price AND is not substantially higher than the cost estimate shall be selected for awarding the contract. In case two or more Bid Prices are determined to be equally closest to the Average Bid Price, the Bid Price which is below the Average Bid Price shall be selected for awarding the contract.
	30.2 While evaluating the Bid Price as per ITB 30.1, if the Bid Price of two or more Bidders is found to be equal, the Employer shall select the bid for awarding the contract by drawing of lots in presence of Bidders' designated representatives who choose to attend in date, time and place as notified by the Employer in writing to the concerned bidders. The Bidders' representatives who are present shall be requested to sign a record evidencing their attendance. The omission of a Bidder's signature on the record or the absence of a Bidder during the drawing of lots shall not invalidate the contents and the effect of the record. The method of drawing of lots shall be determined by the Employer.
31. Employer's Right to Accept Any Bid, and to Reject Any or All Bids	31.1 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.
	31.2 The public entity shall give notice of the rejection of bids or the cancellation of the procurement proceedings pursuant to ITB 31.1, along with the reasons

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	for such rejection or cancellation, to all bidders participating in the bid**.**
	31.3 Where any bidder requests, within thirty (30) days of the communication of the notice pursuant to ITB 31.2, the grounds for the rejection of all bids or the cancellation of the procurement proceedings, the public entity shall provide such information to that bidder**.**
F. Award of Contract	
32. Award Criteria	32.1 The Employer shall award the Contract to the Bidder whose Bid Price is selected as per ITB 29.7, ITB 30.1 or ITB 30.2 and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
33. Letter of Intent to Award the Contract/Notification of Award	33.1 The Employer shall notify the concerned Bidder whose bid has been selected in accordance with ITB 32.1 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.
	33.2 After issuance of the notice under ITB 33.1 if the concerned bidder provides information pursuant to ITB 4.9 regarding saturation of maximum number of contracts, the employer shall disqualify the bidder and shall select the next Bidder whose Bid Price is closest to the previously determined Average Bid Price in accordance with ITB 32.1 and notify accordingly as per ITB 33.1.
	33.3 If no bidder submits an application pursuant to ITB 36 within a period of seven days of the notice provided under ITB 33.1, the Employer shall, accept the bid selected in accordance with ITB 32.1 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.
	33.4 After communicating letter of acceptance under ITB 33.3, if the concerned bidder provides information pursuant to ITB 4.9 regarding saturation of maximum number of contracts, the employer shall reject the bid of that bidder and shall select the next Bidder whose Bid Price is closest to the previously determined Average Bid Price in accordance with ITB 32.1 and shall issue the notice accordingly as per ITB 33.1. In such case bid security of the rejected bidder shall not be forfeited.
34. Performance Security	34.1 Within Fifteen (15) days of the receipt of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security in an amount equal to 5 (five) percent of the Bid Price from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law in Nepal 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 Bid Price shall be without VAT but including Provisional Sum.

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	34.2 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 Bidder whose Bid Price is closest to the previously determined Average Bid Price in accordance with ITB 32.1 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 33.
35. Signing of Contract	35.1 The Employer and the successful Bidder shall sign the Contract Agreement within the period as stated ITB 34.1.
	35.2 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 Coordination Committee, District Administration Office, Provincial Treasury and Controller 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 (vii) contract price.
	35.3 Within thirty (30) days from the date of issuance of notification pursuant to ITB 33.1 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.
	35.4 If the bidder whose bid is accepted fails to sign the contract as stated ITB 35.1, the Public Procurement Monitoring Office shall blacklist the bidder on recommendation of the Public Entity.
36. Complaint and Review	36.1 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 33.1 by the Public Entity, for review of the proceedings stating the factual and legal grounds.
	36.2 Late application filed after the deadline pursuant to ITB 36.1 shall not be processed.
	36.3 The chief of Public Entity shall, within five (5) days after receiving the application, give its decision with reasons, in writing pursuant to ITB 36.1: (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.

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SECTION - II
Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids is: ***WRIDDORUP/NCB-02/2083-084***
ITB 1.1	The Employer is: ***Water Resource and Irrigation Development Division Office, Rupandehi***
ITB 1.1	**Multiple Contract or lots (contracts) is *not applicable.***
ITB 2.1	The name of the Project is: ***Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi*** The implementing agency is: ***Water Resource and Irrigation Development Division Office, Rupandehi***.
ITB 4.1 (a)	Maximum number of partner in a joint venture shall be: ***3 (three)***
ITB 4.2	Eligible countries: Nepal
ITB 4.4	For GoN: [https://www.ppmo.gov.np]
ITB 4.8 & ITB 4.9	For GoN Funded: The Bidder, including all parties constituting the Bidder, shall be ineligible to participate in the open competitive bidding process if it has already secured **five (5)** construction contracts (in open competitive bidding) and has not yet completed the work as stipulated in the respective contracts. Following Procurement of Works contracts shall not be counted for this purpose: a) The works for which tender were invited or contracts accepted before 2078-12-03 B.S (March 17, 2022 A.D) b) The works for which tender have been invited and contracts accepted after 2078-12-03 B.S (March 17, 2022 A.D) but the work acceptance report has been approved according to Rule 117 of PPR. c) The works for which tenders were invited or contracts accepted under all types of foreign assistance.
ITB 5.1	For GoN funded: For the purpose of Country of Origin: "all Countries"
B. Bidding Document	
ITB 7.1	For clarification purposes only, the Employer's address is: Attention: **Mr. Bhesh Raj Bhusal** Address: **Bhairahawa, Rupandehi**

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	Telephone: **9857015201** Facsimile number: _____ Electronic mail address: **widd6.rupandehi@gmail.com**
ITB 7.4	A Pre-Bid meeting **shall** held. Pre-Bid Meeting will **Take place at the following date, time and place:** Date: 2083/07/09 (26th October, 2026) Time: 14:00 Place: **Water Resource and Irrigation Development Division Office, Rupandehi** A site visit ***shall not be*** organized by the Employer.
ITB 7.5	Time for request: Requests for clarification should be received by the Employer no later than 10 days prior to the deadline for submission of bids.
C. Preparation of Bids	
ITB 10.1	The language of the bid is: English / Nepali
ITB 11.1 (b)	In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the bid, including the priced Bill of Quantities for Unit Rate Contracts and Schedule of Prices for lump sum contracts: ***"Not Applicable"***
ITB 11.1 (h)	The Bidder shall submit with its bid the following additional documents: ***"Not Applicable"***
ITB 13.6	The prices quoted by the Bidder ***shall not be*** subject to adjustment during the performance of the Contract.
ITB 15.1	The bid validity period shall be: ***Ninety (90) days***.
ITB 16.1	The Bidder shall furnish a bid security, from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law in Nepal with a minimum of **NRs *93000.00***, which shall be valid for 30 days beyond the validity period of the bid.
ITB 16.2 (b)	Account Name: KHA-2-3: DHARAUTI A/C (PRA.LE.NI.KA Bank Name: **Rastriya Banijya Bank Ltd.** Bank Address: **Butwal, Rupandhi** Account Number: **31201002020300000** Office Code: **3080048025** Office Name: **Water Resource and Irrigation Development Division Office, Rupandehi**
ITB 17.1	In addition to the original of the bid, the number of copy/ies is/are: ***"Not Applicable"***
ITB 17.2	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

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<table>
<tr><td></td><td>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.</td></tr>
<tr><td colspan="2">D. Submission and Opening of Bids</td></tr>
<tr><td>ITB 18.1</td><td>Bidders shall have the option of submitting their bids: "by hand / by courier".</td></tr>
<tr><td>ITB 18.1 (b)</td><td><u>Electronic bid submission procedure:</u>
(a) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in this clause.
i. Bidders who choose to submit their bids electronically, can view/download the bidding documents from "published bids" section of e-GP system, https://bolpatra.gov.np/egp.
ii. For the purpose of e-Submission, the bidder shall, at first, register in e-GP system and maintain their organization profile data and documents required during bid response preparation. The details of e-GP registration and profile management procedure are specified in Article No 9 and 10 respectively of e-GP Directives issued by PPMO, which can be downloaded from Download section of e-GP system.
iii. The bidders shall prepare their bids using data and documents maintained in bidder's profile, instruction provided by e-GP system and forms/format provided in the bidding document.
iv. Bidders may submit bids as a single entity or as a joint venture (JV). Bidder submitting bid in JV shall have to upload joint venture agreement along with partner(s) Bolpatra ID provided during bidder's registration.
v. Bidders (all partners in case of JV) shall update their profile data and documents required during preparation and submission of their bids.
vi. In case of bid submission in JV, the consent of the partners shall be obtained through the confirmation link sent to the registered email address and the partners shall have to acknowledge their confirmation.
vii. Bidders shall submit the required documents as specified in Section I-Instruction to Bidders, Section II-Bid Data Sheet and Section III-Evaluation and Eligibility Criteria of the bidding document. The format of the documents shall be in PDF and/or web form as provisioned in the e-GP system.
The required forms and documents shall be part of bid.
<table>
<tr><th>No.</th><th>Document</th><th>Requirement</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Letter of Bid</td><td>Mandatory</td><td>PDF</td></tr>
</table>
</td></tr>
</table>

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2.	Bid Security / Bank Guarantee	Mandatory	PDF
3.	Firm or Company registration Certificate	Mandatory	PDF
4.	VAT and PAN registration Certificate	Mandatory (for domestic bidders only)	PDF
5.	Business Registration Licence	Mandatory	PDF
6.	Tax Clearance Certificate / Tax return submission evidence / evidence of time extension	Mandatory (for domestic bidders only)	PDF
7.	Power of Attorney of Bid signatory	Mandatory	PDF
8.	Joint venture agreement	Mandatory in case of JV Bids Only	PDF
9.	Completed Bill of Quantities (BoQ)	Mandatory	Online Forms
10.	Price Adjustment Table (if Applicable)	Mandatory (If Applicable)	Online Forms
11.	Additional documents specified in ITB 11.2 (h)	Mandatory (If any)	PDF

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.

viii. After providing all the details and documents, the e-GP system will generate bid response documents for the bidder. Bidders shall download, verify and confirm the bid response documents prior to bid submission.

ix. For verifying the authentic user, the system will send one time password (OTP) in the registered e-mail address of the bidder. System will validate the OTP and then only allow bidders to submit their bid.

x. Electronically submitted bids can be modified and/or withdrawn through the system within the bid submission deadline.

xi. The bidder/bid shall meet the following requirements and conditions for e-submission of bids;

aa) The e-submitted bids must be readable through PDF reader.

bb) The bidders are fully responsible for using the e-GP system as per specified procedures and in no case the employer shall be held liable for

Division Chief

	bidder's inability to use the system. cc) When a bidder submits electronic bid through the e-GP System, it is assumed that the bidder has prepared the bid by studying and examining the complete set of the bidding document and e-GP instruction including the provision stipulated in e-GP Directives.
ITB 19.1	**For bid submission purposes only, the Employer's address is :** Attention: Division Chief Address: Water Resource and Irrigation Development Division Office, Rupandehi **The deadline for bid submission is :** Date: 2083/07/20 (6th November, 2026) Time: 12:00
ITB 22.1	The bid opening shall take place at: Address: Water Resource and Irrigation Development Division Office, Rupandehi Date: 2083/07/20 (6th November, 2026) Time: 14:00
E. Evaluation and Comparison of Bids	
ITB 29.4	Bidders are ***not permitted*** to quote separate prices for lots (Contracts), and a single Bidder will be awarded multiple lots (Contracts) based on provision of ***Paragraph 1.1, Multiple Contracts Section III (Evaluation and Eligibility Criteria).***
ITB 29.5	The amount of the performance security be increased by Eight (8) percent of the quoted bid price (without VAT but Including PS).

Division Chief

SECTION - III
Evaluation and Eligibility Criteria

This Section contains all the criteria that the Employer shall use to evaluate bids and eligible Bidders. GoN/DP requires bidders to be qualified by meeting predefined eligibility criteria. In accordance with ITB 29, 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 29.2 (a) - (e) the following criteria shall apply:

1.1 Multiple Contracts

Pursuant to Sub-Clause ITB 29.4 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 Sub-Clause 29.4 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.

1.2 Quantifiable Nonconformities and Omissions

Subject to ITB 13.2 and ITB 29.2, the evaluated cost of quantifiable nonconformities including omissions, is determined as follows:

[***Insert in bidding document:*** "Pursuant to ITB 27.3, the cost of all quantifiable nonmaterial nonconformities shall be evaluated, but excluding omission of prices in the Bill of Quantities. The Employer will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of bids."]

2. Eligibility

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
2.1 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
2.2 Government/DP Eligibility					
Not having been declared ineligible by government/DP, as described in ITB Sub-Clause 4.4.	must meet requirement	must meet requirement	must meet requirement	not applicable	Letter of Bid

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2.3 Government-owned Entity					
Bidder required to meet conditions of ITB Sub-Clause 4.5.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Letter of Bid, Forms ELI - 1, ELI - 2, with attachments
2.4 UN Eligibility					
Not having been declared ineligible based on a United Nations resolution or Employer's country law, as described in ITB Sub-Clause 4.7.	must meet requirement	existing or intended JV must meet requirement	must meet requirement	not applicable	Letter of Bid
2.5 Bidder's Running Contracts					
Bidder's have not yet secured **five (5)** number of construction contracts[1](in open competitive bidding) 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, Form ELI-3
2.6 Other Eligibility					
Firm or Company Registration Certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Business Registration License	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
VAT and PAN Registration certificate	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment

[1]Note: Following Procurement of Works contracts shall not be counted for this purpose:

a) The works for which tender were invited or contracts accepted before 2078-12-03 B.S or March 17, 2022 A.D

b) The works for which tender have been invited and contracts accepted after 2078-12-03 B.S or i.e March 17, 2022 A.D and accepted but the work acceptance report has been approved according to Rule 117 of PPR.

c) The works for which tenders were invited or contracts accepted under all types of foreign assistance

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Tax clearances certificate for the **F/Y 2082/083** or Tax return submission evidence or evidence of tax time extension for.	must meet requirement	not applicable	must meet requirement	not applicable	Document attachment
Additional requirements ***[Not Applicable]***	…….	……	……	……	……

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SECTION - IV

Bidding Forms

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

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Letter of Bid

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

Date: .....

Name of the contract: .....

Invitation for Bid No.: .....

To: ***[Insert Complete name of Employer]*** ……

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: ***[Insert Description of the works].***

(c)The total price of our Bid, excluding any discounts offered in item (d) below is: ***[Insert one of the options below as appropriate]*** or when left blank is the Bid Price indicated in the Bill of Quantities.

Option 1, in case of single contract: Total price is: ***[insert the total price of the Bid in words and figures]***;

Or

Option 2, in case of multiple lots (contracts): (i) Total price of each lot (contracts): ***[insert the total price of each lot in words and figures]***; (ii) Total price of subject contract [say Lot1] and Lot2 [another contract] [insert the total price in words and figures]; (iii) Total price of subject contract [say Lot1]and Lot3 [another contract] ***[insert the total price in words and figures]***; Total price of subject contract [say Lot1], Lot2 [another contract], Lot3 [another contract], **……..*[insert the total price in words and figures];***

(d) The discounts offered and the methodology for their application for subject contract [single contract] are:…….. [For Bidding Documents not provisioning multiple contracts]

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Add following if Bidding Document provisions applicability of multiple contracts

The discounts offered and the methodology for their application for subject contract [say Lot1] and Lot2 [another contract] are:……..

The discounts offered and the methodology for their application for subject contract [say Lot1] and Lot3 [another contract] are:……..

The discounts offered and the methodology for their application for subject contract [say Lot1], Lot2 [another contract] and Lot3 [another contract],……,
are:……..

[Note:

1. Formulate possible combinations depending upon the number of lots under Bidding Process and modify accordingly Paragraph (c) and (d)]

(e) Our bid shall be valid for a period of ……..***[insert validity period as specified in ITB 15.1]*** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

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

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

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

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

(j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible, under the Employer's country laws or official regulations or by an act of compliance with a decision of the United Nations Security Council;

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

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

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

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(n) We declare that we have not yet secured five (5) number of constructions contracts[2] (in open competitive bidding) as described in ITB Sub-Clause 4.9.

(o) We understand that you are not bound to accept the bid closest to the Average Bid Price or any other bid that you may receive; and

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

(q) 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.

(r) We declare that we are solely responsible for the authenticity of the documents submitted by us. The document and information submitted by us are true and correct. If any document/information given is found to be concealed at a later date, we shall accept any legal actions by the Employer.

Name: ***[insert complete name of the person signing the Bid]***.....

In the capacity of ***[insert legal capacity of person signing the Bid]***.....

Signed ***[signature of the person whose name and capacity are shown above]***……

Duly authorized to sign the Bid for and on behalf of ***[insert complete name of the Bidder]***……

Date ***[insert date of signing]***…….....

---

[*] Note: Use one of the two options as appropriate.

[2] Note: Following Procurement of Works contracts shall not be counted for this purpose

a) The works for which tender were invited or contracts accepted before 2078-12-03 B.S (March 17, 2022 A.D).

b) The works for which tender have been invited and contracts accepted after 2078-12-03 B.S (March 17, 2022 A.D) and accepted but the work acceptance report has been approved according to Rule 117 of PPR.

c) The works for which tenders were invited or contracts accepted under all types of foreign assistance.

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Table of Price Adjustment Data[3]

[To be used if Price Adjustment is applicable as per GCC 53.1]

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)				
	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"-"Machinery and Equipment" 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

***Note: The materials can be broken down into major construction materials if necessary. In this case the source of index shall be the specified by Employer, preferably as per the published ex-factory price or published price from the sole authorized seller.

[3] Non-compliance of the data (stipulated by the bidder in this table) with requirements described here shall not be grounds for bid rejection and such non-compliance will be subject to clarification and rectification prior to contract award.

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Table of Price Adjustment Data[4]

[To be used if Price Adjustment is applicable as per GCC 53.6]

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.

[4] Non-compliance of the data (stipulated by the bidder in this table) with requirements described here shall not be grounds for bid rejection and such non-compliance will be subject to clarification and rectification prior to contract award.

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Bid Security

Bank Guarantee

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

(On letterhead paper of the Bank)

Beneficiary: ..... ***[Insert 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 ……... ***[Insert name of Contract*** **.** …… under Invitation for Bids No. ……***[insert IFB 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……. . ***[Insert name of Bank]*** …….. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of Nepalese Rupees. . ***……...[Insert amount in figures and 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:

(i) during the period of bid validity specified by the Bidder on the Letter Bid, in case of electronic submission

(ii) from the period twenty-four hours prior to bid submission deadline up to the period of bid validity specified by the Bidder on the Letter of Bid, in case of hard copy submission; 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; or

(d) is involved in fraud and corruption in accordance with the ITB; or

(e) a Bidder changes the prices or substance of the bid while providing information pursuant to ITB 24.1; or

(f) if the bidder fails to inform about the saturation of the maximum number of contracts as per ITB 4.9.

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 (URDG), 2010 Revisions, ICC Publication No. 758 .except that the supporting statement under Article 15(a) is hereby excluded.

. . .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).

Division Chief

Bidder's Information Format

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Others

Division Chief

Bidder's Information

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 17.2. 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.	

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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 .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.	

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Form ELI - 3: Bidder's Running Contracts****

Each member of a JV must fill in this form

	Bidder's Running Contracts				
Name of office	**Contract Identification no.**	**Source of Fund***	**Date of issuance of Letter of Acceptance**	**Status of contract****	**Date of Issuance of Taking Over Certificate*****

* Mention GON funded or DP funded or Other PE (Insert name) funded

** Mention "Yet to sign" if contract is not signed, "Running" if contract has been signed and contract is running and "Substantially completed" if taking over certificate has been issued.

*** Insert date of issuance of taking over certificate if the awarded contract has been substantially completed and taking over certificate has been issued.

****Note: Following Procurement of Works contracts shall not be counted for this purpose

a) The works for which tender were invited or contracts accepted before 2078-12-03 B.S (March 17, 2022 A.D).

b) The works for which tender have been invited and contracts accepted 2078-12-03 B.S (March 17, 2022 A.D) but the work acceptance report has been approved according to Rule 117 of PPR.

c) The works for which tenders were invited or contracts accepted under all types of foreign assistance.

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Part – II

REQUIREMENTS

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SECTION - V
Works Requirements

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

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Scope of Work

[Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi]

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Specifications

Notes on the Specifications

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Employer without qualifying or conditioning their Bids. The specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of economy, efficiency and fairness in procurement be realized, responsiveness of Bids be ensured, and the subsequent task of bid evaluation facilitated. The specifications should require that all goods and materials to be incorporated in the Works be new, unused, of the most recent or current models, and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
Samples of specifications from previous similar projects are useful in this respect. The use of metric units is encouraged by the Funding Agency in case of funding assisted projects. Most specifications are normally written specially by the Employer or Project Manager to suit the Contract Works in hand. The available standard specification of works of Ministry of Physical Infrastructure and Transport, DoLI and Other line Ministries can be adopted for respective civil construction works.
There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, urban housing, irrigation, and water supply, in the same country or region where similar conditions prevail. The General Specifications should cover all classes of workmanship, materials, and equipment commonly involved in construction, however it may not necessarily be adequate to be used in a particular Works Contract and may necessitate preparation of Particular (Special) Specifications to amend and or supplement the provision of the General Specifications to meet the requirement of the particular Works.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for goods, materials, and workmanship, recognized international standards should be used as much as possible. Where other particular standards are used, whether national standards of Nepal or other standards, the specifications should state that goods, materials, and workmanship that meet other authoritative standards, and which ensure substantially equal or higher quality than the standards mentioned, will also be acceptable.

Employers should decide whether technical solutions to specified parts of the Works are to be permitted. Alternatives are appropriate in cases where obvious (and potentially less costly) alternatives are possible to the technical solutions indicated in the Procurement Documents for certain elements of the Works, taking into consideration the comparative specialized advantage of potential bidders. For example:

The Employer should provide a description of the selected parts of the Works with appropriate references to Drawings, Specifications, Bill of Quantities, and Design or Performance criteria, stating that the alternative solutions if applicable shall be at least structurally and functionally equivalent to the basic design parameters and specifications.

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Such alternative solutions shall be accompanied by all information necessary for a complete evaluation by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, proposed construction methodology, and other relevant details.

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be accepted subject to the Project Manager's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Project Manager at least 30 days prior to the date when the Contractor desires the Project Manager's consent. In the event the Project Manager determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents. These Notes for Preparing Specifications are intended only as information for the Employer or the person drafting the Procurement Documents. They should not be included in the final documents.

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Technical Specifications

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1. SUMMARY OF WORK

1.1 Contract description

The works of this contract are described in **Bidding Data**.

All the materials shall be supplied by the Contractor on his own cost the approval of which will have to be obtained from the employer.

1.2 Rainfall and climate

Climatic conditions in the Project area are dominated by Terai region monsoons. Average annual rainfall is 2448 mm. Over 80% of the total annual rainfall is concentrated from June to October.

1.3 Drawings

The location, extent, types and arrangement of the required construction and improvements are shown and noted on the Drawings accompanying this specification, which Drawings are hereby made a part of the Specification and this Contract.

The Drawings accompanying the Specification, along with the quantities given in the Bill of Quantities are for tendering purpose and for obtaining comparable tenders. The Drawings accompanying the Specification indicate the scope and character of the Works to be performed. They are not fully detailed and are not released for construction purpose.

1.4 Standards and supplementary specifications

All workmanship, materials, and components throughout shall where applicable, and unless otherwise stated in the Contracted Documents, comply either:

With the relevant Nepali, British or Indian Standard Code of Practice Current on the date fixed for receipt of tenders, or

With other Standards or Codes of Practice Proposed by the Contractor at the time or tendering provided that these standards or Codes of Practice are equivalent or superior to the relevant Nepali, British, or Indian Standard or Code of Practice.

The acceptance of a tender based upon a Standard or Code of Practice proposed by the Contractor shall only Signify the Engineer's general approval to the use of such Standard or Code of Practice, and shall not make the Engineer liable to accept a Standard of workmanship subsequently found to be inferior to the corresponding Nepali, British, or Indian Standard or Code of Practice.

Where the relevant standard provides for the Furnishing of a certificate to the Employer or Engineer at their request, stating that the materials supplied comply in all respects with the standard, the Contractor shall obtain the certificate and forward it to the Engineer. If no standard is indicated, then the relevant Nepali, British, or Indian Standard, if any, shall apply.

Wherever reference is made within these documents to certain standard specifications the reference shall unless otherwise specifically stated be construed to mean the standards, with all subsequent amendments, change or additions as thereafter adopted and published that are in effect on the date of issue of the Tender Documents.

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2 CONSTRUCTION FACILITIES

2.1 Transportation facilities

The Contractor shall investigate the availability of transportation facilities and shall make all arrangements necessary for the delivery of materials to be used on the work. The Contractor shall make his own investigations on the condition of available public roads, access rights of way, and of restrictions, bridge load limits and other limitations affecting transportation and ingress.

2.2 Sanitation

The Contractor shall maintain the Site and all working areas in a sanitary condition and in all matters of health and sanitation shall comply with the requirements of the local medical office or other competent authority.

2.3 Potable water supply

The Contractor shall install, operate and maintain an adequate supply of fresh potable water to all staff quarters, labor camps, offices, workshop and other sheds and places of work on the Site. The supply shall be continuously available at all the Contractor's housing sites. Potable water shall mean water free of harmful impurities.

2.4 Safety measures and public convenience

The Contractor shall provide for the protection of all persons and property at all times. The Contractor shall comply with a manual acceptable to the Engineer, to the extent that such provisions do not conflict with the applicable laws. The Contractor shall take all necessary measures to protect the work and prevent accidents during the construction. He shall provide and maintain sufficient night lights, barricades, guards, temporary sidewalks, temporary bridges, danger signals, watchmen and necessary appliances and safeguards to properly safeguard life and property. He shall also protect all excavations, equipment and materials so that the public will not be endangered.

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to traffic, and he shall have under construction no greater amount of work than he can handle properly with due regard for the rights of the public. Where, existing streets or footpaths are not available as detours, as possible, unless otherwise authorized by the Engineer.

The Contractor shall be responsible for all damage or injury which may be caused on any property by trespass by the Contractor or his employees in the course of their employment, whether the said trespass by the Contractor or his employees in the course of their employment, was committed with or without the consent or knowledge of the Contractor.

2.4.1 Temporary fencing

If and where required the Contractor shall erect, maintain, and remove suitable and approved temporary fencing to enclose such areas of the works and all areas of land occupied by the Contractor within the site as may be necessary. Where any temporary fencing has to be erected alongside a public road, footpath, etc., it shall be of the type required by and shall be erected to the satisfaction of the authority concerned.

2.4.2 Notice board

The Contractor shall erect a notice board of a size of not less than 1.0 m by 2.5 m at each work Site. The notice boards shall be painted and the inscription shall be approved by the Engineer. The board is to be erected at a suitable place upon the commencement of the works.

2.4.3 Costs

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The costs of providing constructing facilities shall be included in the prices tendered for the various items of the Bill of Quantities for which the construction facilities are required, and no separate payment will be made therefore.

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3 CONTROL OF WATER

3.1 General

The Contractor shall be responsible for the control of water met within the excavations due to ground water, springs, seepage, rain or other causes. He shall take all measures and necessary precautions to control water seepage into excavations by suitable diversions and by bailing out or by pumping, if necessary, to keep the excavations dry during excavation, concrete construction, and embankment or backfill placement and compaction.

The Contractor shall submit to the Engineer for approval, details of such measures as he proposes to adopt for the control of water from any source. Notwithstanding any approval by the Engineer of the contractor's arrangements for the exclusion of water, the Contractor shall be responsible for the sufficiency thereof and for keeping the works safe at all times particularly during any floods, and for making good at his own expenses any damage to the works including any that may be attributable to floods.

Pumping from the interior of any foundation enclosure shall be done in such a manner as to preclude the possibility of the movement of water through any fresh concrete. No pumping shall be permitted during the placing of concrete or for any period of at least 24 hours thereafter unless it is done from a suitable pump separated from the concrete work by a watertight wall or other similar means.

At the discretion of the Contractor, cement grouting or other approved methods may be used to prevent or reduce seepage and to protect the excavation area.

3.2 Works to be kept clear of water

The Contractor shall keep the works well drained until the Engineer certifies that the whole of the works is substantially complete and shall ensure far as is practicable all work is carded out in the dry. Temporary works such as temporary dams, water courses and other works of all kinds including pumping and well-point de-watering that may be necessary to exclude water from the works while construction is in progress shall not be removed without the approval of the Engineer's Representative. The Contractor is to take all necessary precautions to avoid floatation of any partially completed structure.

3.3 Discharge of water into existing streams

The Contractor shall make provision for the discharge of disposal from the works and temporary works of all water and waste products howsoever arising, and the methods or disposal shall be to the satisfaction of the Engineer and of any Authority methods or disposal shall be to the satisfaction of the Engineer and of any Authority or person having an interest in any pond or water course over or in which water and waste products may be so discharged Care shall be taken so that discharge of drained water will not cause damage to the works, crops or any other property.

3.4 Costs

Costs incurred by the Contractor in complying with the requirements of this Section shall be deemed to be included in the prices tendered for the various items of the Bill of quantities for which the control of the water is required and no separate payment will be made thereof.

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4 STORAGE MATERIALS

4.1 General

Materials shall be stored so as to ensure preservation of their specified quality and fitness for the work. They shall be placed on a hard, clean surface, and, when required, they shall be placed under cover as approved by the Engineer. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the owner or losses and payment to him if necessary.

The stockpile site shall be prepared by clearing and leveling as approved by the Engineer.

Aggregate storage piles shall be built up and removed in layers not exceeding 1m. The height of such stockpiles shall be limited to 5.0m. The center of the storage areas shall be raised and sloped to the sides, as required to provide proper drainage of excess moisture. The material shall be stored in such a manner as to prevent segregation and to ensure proper gradation and moisture content.

Immediately upon receipt at site of work, cement shall be stored in a dry weather tight, properly ventilated structure with adequate prevention of absorption of moisture. The contractor's method of handling and storing of cement shall be to the approval of the Engineer.

Not more than 13 bags of cement shall be permitted to be piled up and this number shall be limited to 7 bags when the storage is expected to be longer than 2 month, these bags of cement shall be piled up or stored so as to permit easy access for identification, inspection and testing.

4.2 Costs

The costs of providing for storage for materials shall be included in the prices tendered for the various items of the Bill of Quantities for which storage of materials is required, and no separate will be made thereof.

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5 MEASUREMENT AND PAYMENT

5.1 Preliminary note

The items as set out in the Bill of Quantities are understood to be full compensation.

A. for the preparation of Working Drawings for the civil Engineering works and conforming to the requirements for the equipment and drawings as set out in the Specification, Conditions of Contract, Information and Instructions, Drawings, Schedules and Appendices Submitted with the Tender Documents;

B. for all material, parts and labor cost as well as the cost of supervision, quality inspection and testing and all other costs for the supply of the equipment and materials;

C. for all cost of labor, supervising, erection of plant and temporary works, materials and other things of whatever nature required for storing, moving into final position, setting out, handling and erecting, final painting and protection, quality inspection and testing;

D. For all duties and obligations as set out in the Conditions of Contract, the Specification, Information and Instruction, Drawings, Schedules and Appendices.

Measurement methods specified in the individual Sections of the Specification shall govern if they differ from methods specified in the Section.

The Engineer will compute all quantities and will take measurements as required for such computations.

5.2 Measurement of quantity

5.2.1 Measurement standards

All work to be paid for at a contract price per unit of measurement will be measured by the Engineer in accordance with Metric Standard Measures. A ton shall consist of 1,000 kilograms.

5.2.2 Measurement of quantities

Steel shapes, castings, miscellaneous metal, metal fabrications, and similar items to be paid for by weights for the type and quantity of material actually furnished and used.

The Engineer may be present to witness the weighing and to cheek and compile the daily record of such scale weights; however, in any case, the Engineer will require that the Contractor furnish weigh slips and daily summary weigh sheets. In such cases, furnish a duplicate weigh slip or a load slip to each vehicle weighed and deliver the slip to the Engineer at the point of delivery of the material.

5.2.3 Measurement by volume

Measurement by volume will be by the cubic dimension listed or indicated in the Bill of Quantities. Method of volume measurement will be as determined or directed by the Engineer.

When material is to be measured and paid for on a volume basis and it is impractical to determine the volume by the specified method of measurement, or when requested by the Contractor in writing and accepted by the Engineer in writing, the materials will be weighed in accordance with the requirements specified for weight measurement. Such weights will be converted to weight measurement. Such weights will be converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer

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and shall be agreed to by the Contractor before such method of measurement of payment quantities will be accepted.

5.2.4 Measurement by area

Measurement by area will be by the square dimension listed or indicated in the Bill of Quantities. Method of square measurement will be as determined or directed by the Engineer.

5.2.5 Linear measurement

Linear measurement will be by the linear dimension listed or indicated in the Bill of Quantities. Method of linear measurement will be as determined or directed by the Engineer. Generally, items components, or work to be measured will be measured at the centerline of the item in place.

5.2.6 Lump-sum measurement

Lump-sum measurement will be for the entire item, unit of work, structure, or combination thereof, as listed or indicated in the Bill of Quantities.

If the Contractor requested progress payments for lump-sum items or amounts in the Bill of Quantities, such progress payments will be made in accordance with a well-balanced, detailed program of payment apportioning, prepared by the Contractor and submitted to the Engineer for approval.

Such program for each applicable lump-sum item shall show estimated quantities and unit prices as allocated by the Contractor to the different features of the work and major subdivisions thereof it shall also show the amounts allocated by the Contractor for:

E. Costs of the various materials to be furnished,

F. Direct labor costs and derivative charge,

G. Other itemized costs,

H. Overhead,

I. Insurance, and

J. Profit, The Summation of extensions of quantities and unit prices and related costs total, in each case, the exact amount to be paid under the lump-sum Contract Price for the item.

Such programs will be used for computing progress payments as provided herein, but will not be used to determine the amount of the final payment for the work of this Contract.

5.3 Field measurement for payment

The Engineer will compute for payment purposes all quantities of Work performed by the Contractor, of materials and equipment delivered to the site.

The Contractor shall assist the Engineer in the taking of measurements by providing all equipment and workers, as required to measure quantities in accordance with the provisions for measurement specified herein.

All measurement services required of the Contractor, as specified shall be performed under the direction and supervision of the Engineer.

5.4 Rejected materials

Quantities of material waste or disposed of in a matter not called for under the Contract, rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the 'Provisions of the Contract; material not unloaded from the transporting

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vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities; No compensation will be permitted for loading, hauling and disposing of rejected material.

Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Bill of Quantities, or incidental to the Project.

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6 CLEARING AND GRUBBING

6.1 General description

This Specification Section covers clearing, grubbing, and removing of vegetation and other objectionable materials from the site and the right-of-way.

6.2 Clearing of the site: General

Within limits established by the Engineer, the Contractor shall remove all trees, shrubs, bushes and other vegetation standing above the ground surface. Trees designated by the Engineer to remain shall be protected.

On the instructions of the Engineer, the Contractor shall demolish and remove all timber buildings, fences and similar structures within the same areas.

Where directed by the Engineer, usable materials and equipment should be salvaged and handed over to the representative of the Employer. All other material cleared shall be disposed of by burning on site, as prescribed below, or by removal to waste lands beyond the site boundaries. The location of such disposal areas shall be subject to approval by the Engineer before use.

6.3 Clearing the right of way

All areas which require clearing for purpose of earthworks and construction including right of way, borrow areas, stock pile sites and elsewhere as directed by the Engineer shall be cleared of trees, brush, roots, rubbish and other objectionable matter and such materials shall be removed from the site of the work or otherwise disposed of as approved by the Engineer. On the approval of the Engineer fences, walls, buildings and ruins shall be removed from the same areas.

All materials to be burnt shall be piled neatly and when in a suitable condition shall be burnt completely. Piling for burning shall be done in such a manner and in such locations as to cause the least fire risks. The Contractor shall at all times take special precautions to prevent fire from spreading.

In general, only such trees that would interfere with the construction required under these specifications shall be removed, and trees along the right-of-way shall be left place in place to the greatest extent practicable. The Contractor shall dispose of all material cleared as prescribed above.

During the Contractor's operations the removal of certain trees and shrubs outside the right of way may be required, in which case the Contractor may remove such trees and shrubs after obtaining prior approval of the Engineer. All trees and shrubs designated to remain in place shall be protected from damage. Any damage to the Works and public or private property caused by the Contractor's operations in clearing and grubbing shall be repaired or replaced by the Contractor at his cost.

6.4 Measurement and payment

When indicated as an item in the Bill of Quantities, clearing and grubbing will be measured for payment in terms of area from toe to toe of the canal alignment and the area covered by borrow pit. No payment shall be made for any clearance made by the Contractor for making access to the canal alignment outside the right of way or to the borrow pit. Where the Bill of quantities for a schedule does not include an item for clearing and grubbing, no separate payment will be made for such work and all costs therefore shall be included in the unit rates tendered for the various type of excavation.

In general, borrow material will be taken from agricultural land in the vicinity of canal embankments as indicated in the Bill of Quantities utilizing shallow, leveled and drained borrow pits to be returned for agricultural use after excavation. The completion of works in a single stretch of canal system will generally require that a single dry season crop compensation will require to be paid to occupiers of the borrow area. The crop compensation shall be measured for payment in terms of area from toe to toe of

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the canal alignment and the area covered by borrows pit. No payment shall be made for any clearance made by the Contractor for making access to the canal alignment outside the right of way or to the borrow pit. Prior to the commencement of the works, the Contractor shall conduct survey measurement detailing the list of the occupiers of the borrow area and the right of way of the canal alignment and their individual areas for approval by the Engineer. The rate and the sum for crop compensation given in the Bill of Quantities are provisional only. The rates for compensation shall be determined by the Engineer in consultation with the local district authority. Upon approval of the list of occupiers and rates, the Contractors shall make payment for crop compensation to the occupiers and the evidence of such payment shall be submitted to the employer. An advance payment to the Contractor may be made for crop compensation. The payment for crop compensation to the Contractors shall be made only to extent of actual amount paid to the occupiers. The Contractor's rate for excavation from borrows area shall include for the survey, measurement and administration of such compensation.

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7 DEMOLITION OF EXISTING STRUCTURES

7.1 General description

This Specification Section covers the partial and complete demolition of existing structures constructed of concrete, brick, and stone.

7.2 Demolition

Existing structures shall be demolished as directed by the Engineer. Where the structure interferes with the new construction, it shall be demolished completely. Where incorporated into the works, such structures are to be incorporated into the Works; such structures shall be partially demolished as specified below.

Materials resulting from demolition which are suitable for reuse shall be considered as the property of the Employer and shall be salvaged. Should brick and stone shall be neatly stockpiled at locations directed by the employer and shall be salvaged. Sound brick and stone shall be neatly stockpiled at location directed by the Engineer. Rubble resulting from demolition of concrete shall be stockpiled when directed by the Engineer, for use in backfill, embankment, or for other purposes.

Partial demolition of existing structures which are to be incorporated into the Works shall consist of the removal of all unsound portions of the structures, and other portions as directed by the Engineer., as necessary to incorporate the remaining, sound portions into the Works. Care shall be taken to preserve the portions designated to remain in sound condition, Concrete structures shall be cut with a suitable equipment to a depth of 40mm before the cut-off portion is demolished, all unsound concrete which spells when struck with a hammer shall be removed. All bricks and stores which can be easily pried loose, and all bricks and stones set in unsound mortar shall be removed.

7.3 Measurement and payment

Separate measurement for payment will not be made for work required under this Section unless otherwise stated in Bill of Quantities. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Bill of Quantities or incidental to the Project. Accidental demolition of parts of structures designated to remain shall be repaired by contractor at his expenses.

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8 EXCAVATION FOR IRRIGATION CANALS AND OTHER STRUCTURES

8.1 General description

This Specification Section covers excavation required for the construction and rehabilitation of irrigation canals, associated structures such as abutments, flumes, piers, and retaining walls, ancillary work such as drainage pipes and foundation of any structures.

Excavation shall consist of excavation, removal and satisfactory disposal of all materials necessary for the construction of permanent works in accordance with the requirements of the Specification to the lines, grades and cross-sections shown on the Drawings or as otherwise directed by the Engineer. This work shall include the hauling and stacking, or hauling to sites of embankment also the disposal of unsuitable materials in specified manner, de-watering and pumping, and the trimming and finishing of excavation lines to such widths, depths, levels and profiles as shown on drawings or to such other dimensions and levels as may be ordered by the Engineer.

8.2 Classification of materials

For payment purposes materials excavated shall be classified by the types of facilities or structures shown in the Bill of Quantities.

8.3 Construction operations

8.3.1 Preliminary operations:

Before commencement of excavation, a survey of the existing ground levels shall be made by the Engineer. The survey records shall serve as initial measurement for the determination of the final quantities of excavation performed under the Contract, and for related purposes.

Clearing and grubbing shall be performed in all excavation areas.

Stripping and storing of topsoil shall be performed as specified.

8.3.2 General requirements

All excavation shall be made in accordance with the provision stated herein or as directed by the Engineer and to the grades shown on the Drawings or established by the Engineer.

A. Change of Slopes: During progress of the work it may be found necessary or desirable by the Engineer to vary the slopes of excavation or the slopes of embankments and the dimensions dependent thereon, and the Contractor shall execute the work in accordance with these specifications. Any increase or decrease of quantities excavated as a result of such variations shall be subject to the provisions stipulated for variations set forth in the Conditions of Contract.
B. Sliding Material: Materials which will not stand on the slopes shown on the Drawings or established by Engineer, and materials which are a part of slides extending beyond the established lines of excavation which move into excavated areas, shall be removed by the Contractor in an approved manner, and the slopes shall be refinished to lines and grades established by the Engineer. The Contractor shall be required to excavate potential slide areas beyond the limits of the originally staked excavation where, in the judgment of the Engineer, such excavation is necessary to prevent damage to the work.
C. Excavation lines: Where excavations are not to be covered by structures or other required construction, they shall be made to the full dimensions required and shall be finished to the neat line sand grades shown on the Drawings or to such other lines and levels determined by the Engineer. All necessary precautions shall be taken to preserve the material below the lines of all excavation in the soundest possible condition. Any over excavation made for the

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convenience of the Contractor or for any purpose or reason, except as otherwise provided herein, shall be refilled and compacted by the Contractor at his expense.

D. Use of Material: It is anticipated that most of the materials from required excavation will be suitable for use in the construction required under the Contract. As for as practicable, all suitable materials shall be placed in the designated final locations directly from the excavation, except, the backfill materials, which shall be place in temporary stockpiles and later placed in the designated location. As determined by the Engineer, all materials designated for use in compacted embankments shall be brought to the proper water content before and during excavation.
E. Subsurface Water: Part of the required excavation will be below the subsurface water level. Any lines of water levels shown on the Drawings can be considered as tentative information only. The Contractor shall not be entitled to derive any claim therefrom and he shall select his equipment and program his constructional operations and the timing of these operations so as to complete the works to the satisfaction of the Engineer.
F. Surface Water: The Contractor shall take all, necessary precautions to protect the work from surface water by constructing provisional funds drains or similar means, or by pumping, as may be approved or directed by the Engineer.
G. Whenever it becomes necessary during the course of the work to determine the volume of excavation in channels which are filled or partially filled with water, the Contractor shall furnish and maintain the required equipment for measuring and shall assist the Engineer in making such measurements.
H. Gravel: Where gravel is encountered during excavation and such gravel in suitable for surfacing operations and maintenance or service roads or paths, or for further gravel lining, as may be determined by the Engineer, the materials shall in so far as practicable be stockpiled along the right-of-way where designated by the Engineer.
I. Spoil Banks: Excavated materials containing stumps, roots, vegetable matter and other objectionable materials and excavated materials that are not required for backfill, embankments and other permanent construction shall be placed in designated spoil banks in waste areas designated by the Engineer. Spoil banks adjacent to the canal embankments shall be continuous except for gaps at suitable intervals for transverse drainage as shown on the Drawings or as directed by the Engineer. All spoil banks and waste areas shall be leveled and sloped to drain and trimmed to reasonably regular lines as shown on the Drawings or as directed by the Engineer.

8.3.3 Rock excavations:

When rock is encountered in the excavation shall be removed down to the foundation level or as otherwise indicated on the Drawings. Where, however, unstable shale or other similar materials are interfaced at the foundation level, these shall be excavated to the extent of 500mm below the foundation level or as otherwise directed. In all cases, the excavation operations shall be so carried out that at no point on cut formation shall the rock protrude above the specified levels; provided, however, that a negative tolerance of 300 mm shall be permissible.

Slopes in rock cuts shall be finished to uniform lines corresponding to slope line shown on the Drawings or as directed by the Engineer. Notwithstanding the foregoing, all loose pieces of rock on excavated slope surface which move when raised by a, crowbar shall be removed.

Where blasting is to be resorted to; the same shall be carried out as per instruction of Engineer.

8.3.4 Slushy soil excavation:

The excavation of marshes and swamps shall be carried out as per the program laid down by the Engineer.

Excavation of marshes shall begin at one end and proceed in one direction across the entire marsh immediately ahead of back filling. The method and sequence of excavation and back filling shall be such as to assure, to the maximum extent practicable, complete removal or displacement of all muck

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from within the internal limits called for on the Drawings or as stated by the Engineer, and to the bottom of the marsh, firm support, or levels indicated.

8.3.5 Excavation for surface drains

Where the Contract provides for construction of surface drains excavation for these shall be carried out in proper sequence with other works as approved by the Engineer.

8.3.6 Preparation of foundation

Upon completion of the excavation of the lines and levels shown on the Drawings or directed by the Engineer, the foundation shall be inspected by Engineer and the cut formation shall be prepared to receive the base course as directed by the Engineer.

Where material in a poor state of compaction is encountered at the foundation level, the same shall be loosened to a depth of 500mm and compacted in 250mm thick loose layers in accordance with the requirements. Any unsuitable materials encountered shall be removed at the discretion of the Engineer.

The bottom of the foundation shall be leveled both longitudinally and transversely or stepped as directed by the Engineer. Before placing the concrete, the surface shall be watered and rammed if necessary, but no standing water shall be permitted on the foundation. In the event of the foundation having been made deeper than that shown on the drawings or as otherwise ordered by the Engineer; the extra depth shall be made up with concrete or masonry to the foundation grade at the contractor's cost. Ordinary backfill shall not be used for the purpose of bringing the foundation to level.

When rock or other hard stratum is encountered, it shall be left free of all soft and loose material, cleaned out to a firm surface either level, stepped or serrated as directed by the Engineer. All seams shall be cleaned out and filled with cement mortar or grout to the satisfaction of the Engineer.

8.3.7 Finishing operations

Finishing operations shall include the work of properly shaping and dressing all excavated surfaces.

When completed, no point from the slopes shall vary from the designated slopes by more than 150mm measured at right angles to the slope, except where excavation is in rock (hard or soft) where no point shall vary more than 600mm from designated slope. In no case shall any portion of the slope encroach on the finished lines of structures.

The finished cut formation shall satisfy the surface tolerance described elsewhere.

Where directed, the top soil removed earlier and stored shall be spread over cut slopes, embankments and other disturbed areas. Slopes may be roughened and moistened slightly prior to the application of topsoil in order to provide satisfactory bond. The depth of topsoil shall be sufficient to sustain plant growth, the usual thickness being 75mm to 150mm.

8.4 Excavation for structures

8.4.1 General

The bottom and the side slope of excavation upon or against which structures or other required constructions are to be placed shall be finished accurately to the Drawings and, if required by the Engineer, shall be moistened with water and tamped or rolled with suitable tools or equipment for the purpose of forming a firm foundation.

8.4.2 Over excavation

If, at any point in the excavation, material is excavated beyond the established lines and grades, it shall be over compacted by tamping or rolling in layers not more than 15cm thick at the Contractor's expense. Whenever the natural foundation material is disturbed or loosened because of the

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Contractor's excavation operation, it shall be consolidated by tamping or rolling, if required by the Engineer, or shall be removed and replaced at the Contractor's expense with selected material which shall be thoroughly compacted.

After excavation is completed, the Contractor shall inform the Engineer to that effect and no footing bedding material or structure shall be placed until the Engineer has approved the depth and the suitability of foundation material. Rock and other hard foundation material shall be cleaned of all loose materials.

8.4.3 Unsuitable material

If, at any point in any structure excavation or excavation for other required construction, material unsuitable for foundations is encountered, as determined by the Engineer, the Contractor shall, if so ordered by the Engineer, in writing, remove all such unsuitable material and refill with selected and approved materials thoroughly compacted by tamping or rolling in layers not more than 15 cm thick.

8.4.4 Stability of excavation

Excavation for structures shall be carried out to the lines necessary to permit the proper construction of the structure and the Contractor will be responsible for ensuring the stability of side slopes and for the provision of such timbering, stuttering or other support as he may deem to be necessary. The approval of the Engineer shall not relieve the Contractor of his obligation to carry out all excavation in a safe manner.

8.4.5 Variation of slopes

During the progress of the work, it may be found necessary to vary the slopes of the dimensions of the Excavation from those shown on the Drawings or established by the Engineer. Subject to the provisions set forth in the Condition of Contract, the Contractor shall not be entitled to additional allowance above the unit rates quoted for structure excavation in the Bill of Quantities or to any other variation of the applicable unit rate for excavation.

8.5 Excavation for canals and drains

8.5.1 Variation of dimensions

Canals, farm ditches, and drains shall be excavated (or rehabilitated) to the lines and grades shown on the Drawings, unless the Engineer determines that the stability of the earth material (in which the canals, ditches, and drain will be constructed and which will form the banks) or other factors make it necessary or desirable during the progress of work to vary the slopes of embankment and the dimensions dependent thereon and so informs the Contractor in writing. Subject to the provisions set forth in the Conditions of Contract; the Contractor shall not be entitled to the variation of the unit rates quoted for excavation of drains and canals in the Bill of Quantities in payment for such additional work.

8.5.2 Over excavation

Excavation in such a manner as to cause over excavation which in the opinion of the Engineer is excessive will not be permitted. Canals, ditches, and drains shall be excavated to the full depth and width required and shall be finished uniformly to the prescribed lines and grades; provided that if the Contractor prefers to excavate under water that portion of the canal section may be over excavated to not more than 30 centimeters measured normal from the prescribed lines and grades; provided further that where the existing cross section of a canal or drain is exceeding the design section, refilling will not be required.

8.5.3 De-watering

De-watering a canal, ditch, or drain for dry excavation will be permitted provided the measures taken by the contractors have been approved by the Engineer, and provided further that regardless of

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whether the canal, ditch, or drain is excavation dry or wet the Contractor shall not be entitled to a variation of the unit rates quoted for excavation of canals, ditches, and drains in the Bill of quantities in payment for such work.

8.6 Measurements and payment

8.6.1 Measurement

Excavation shall be measured by taking cross sections at suitable intervals in the original position before the work starts and after its completion and computing the volume in cubic meters by the method of average and areas. Where it is not feasible to compute volumes by this method because or erratic location of isolated deposit, the volume shall be computed by other accepted method.

Where the Bills of Quantities includes an item for stripping in the schedule, measurement for payment for excavation will be computed from elevation 0.3m below original ground level.

At the option of the Engineer, the Contractor shall leave depth indication during excavation of such shape and size and in such positions as directed so as to indicate the original ground level as accurately as possible. The Contractor shall see that these remain intact the final measurements are taken.

Excavation for canals, farm ditches, drains and structures shall be measured in cubic meters for the respective features, limited to the dimension shown on the Drawings or as otherwise directed by the Engineer.

8.6.2 Payment

Payment for the various types of excavation shall be made at the Contract unit rates tendered thereof in the Bill of Quantities. The Contract unit rates for the items of excavation shall include full compensation for the following operations:

A. Site clearance where the Bill of Quantities contains no item for clearing and grubbing in the Schedule.
B. Assistance in setting out profiles.
C. Removal of boulders including loosening to required depth for the removal of surface boulders and other unsuitable materials if any back filling and compacting, if required.
D. Excavation in all types of materials.
E. Transporting the excavated material and depositing on the sides of embankments spoil banks or stacking as directed.
F. Trimming bottoms and slopes of excavation.

All labor, equipment, tools sheeting, bracing, drills, explosives and other incidental used to complete the work.

Payment will be made under the applicable item of the Bill of Quantities for the excavation of the unsuitable foundation material, excavation of slide materials from slides which are beyond the control of the Contractor, and for refilling and compacting of such excavation as directed and approved by the Engineer. Measurement and payment will be made under the applicable item of the Bill of Quantities for placing of backfill in such excavations. Cost of re-handling and transporting backfill material from stockpiles, if so required, shall be included in the unit rate tendered in the Bill of Quantities for backfill around structures.

No Payment will be made for excavation made for the convenience to the Contractor for any purpose or reason, for over excavation or fill beyond the established lines and grades, and for removal of materials disturbed of loosened because of the Contractor's Operations.

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9 CONCRETE CONSTRUCTION

9.1 Scope

This Specification Section includes furnishing all materials except reinforcement steel, and production, transportation, placing, finishing, curing, repair and protection of all concrete, grout used in connection with the concrete work, and grout, mortar or concrete used for setting equipment which is a part of this Contract.

All concrete required to be used for structures to be constructed under the Contract and for all related purposes and as may be required by the Engineer, shall consist of the materials herein specified and shall be according to the Drawings and the requirements stated herein. The stipulations and requirements herein set forth shall apply except when such stipulations are specifically modified by the Engineer for any particular item of the work. Any stipulations and requirements not specified herewith shall conform to Nepal or IS or BS standards.

9.2 Storage and handling cement

The Contractor shall provide suitable storage for cement at approved places convenient to the work. And the cement shall at all times be carefully protected against moisture and exposure. Cement store house shall be weather tight, shall have close fitting floors set at a height of at least 30cm above ground, shall be large enough to maintain a sufficient supply of cement on hand to prevent delays or interruptions to the work and shall have sufficient floor space to store each truck load of cement separately and affording convenient access thereto for sampling, counting of sacks and removal. And the height shall be limited to one meter when the storage period is expected to be longer than 60 days.

To prevent undue aging of sacked cement after delivery, the Contractor shall use sacked cement in the chronological order in which it was delivered on the job. Each shipment of sacked cement shall be stored so that it may readily be distinguished from other shipments.

All condemned sacks shall be promptly disposed of or marked by means approved by the Engineer.

9.3 Class and grade of concrete

9.3.1 General

All structural concrete shall conform to the appropriate class and grade for strength and exposure conditions of the appropriate Nepal or IS or BS standards.

9.3.2 Unreinforced concrete for foundation and floor slabs and other structural parts (M10, M 15 and M20)

Furnish form and place foundation concrete as specified. Concrete shall be placed in sections according to the construction drawings or as specified by the Engineer. Contraction joints shall not be the subject of separate payment items. Construction joint in the foundation slab shall be only allowed if directed by the Engineer. On connection to walls, water stops shown on the Drawings or as specified by the Engineer shall be cast into the fresh concrete. Visible concrete surface shall be finished in fair-faced concrete. This item includes the construction of all recesses, block outs and voids.

9.4 Concrete mixes:

Concrete shall consist of cement, graded aggregate and water thoroughly mixed and completed to provide the strengths as IS Code detailed below:

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Types of Concrete Mix		Proportion Of materials	Min. Compressive strength at 28 days
A	38mm	1:2:4	150kg/cm^2
AA	19mm	1:2:4	150kg/cm^2
B	38mm	1:3:6	100kg/cm^2

The mix proportions shown in the table above are given as a guide to the mixes ordinarily needed to achieve the specified strengths. The actual mix designed after tests will depend upon the closeness of control which the contractor is prepared to exercise in production and upon the quality of the materials which will be obtained. The contract rates included in the Bill of Quantities for all type of concrete are to allow for any additional cement which may be required to achieve the specific strengths and to produce a dense impermeable and stable concrete.

Preliminary tests of concrete will be carried out by the Engineer to determine the mixes which will satisfy the specification with the available materials. These mixes will be designed with due regard for the workability necessary to allow the contractor to place and compact the concrete with the equipment be proposes to use in any particular situation.

9.5 Water cement ratio

The water cement ratio for the various types of concrete shall be determined by the preliminary test and in no case shall the water ratios used be allowed to exceed by more than those determined by the preliminary tests.

The contractor shall be required to have knowledge of the moisture content of all sand and coarse aggregate as they reach the mixer and shall make such adjustments to the mix, as are necessitated by changes in the moisture content of all aggregates.

9.6 Composition

Unless otherwise specified and/or approved by the Engineer, concrete shall be composed of Portland cements and coarse aggregate and water as specified, well mixed and brought to the proper consistency.

Grout shall be composed of Portland cement, sand and water all proportioned and mixed to the consistency approved by the Engineer. A non-shrink compound may be required by the Engineer where this is deemed necessary, in which case an extra payment shall be agreed upon between the Engineer and the Contractor.

For nonstructural concrete and blinding, the proportion of Portland cement to sand and aggregate shall not be less than 1 to 8 by volume. The minimum weight of cement in each cubic meter of concrete placed shall be 225 kg.

For structural concrete the "Design Mix" shall be used. The "Design Mix" will be established from the test mixes to attain the stipulated characteristic strength. The minimum quantity of cement in each cubic meter of concrete placed shall be 325 kg.

The proportion in which various ingredients are to be used shall be as determined and approved from time to time during the progress of the works and test made of the aggregates and the resulting concrete. The mix proportion and the appropriate water/cement ratio will be determined on the basis of producing concrete having suitable impermeability, durability, workability and required strength without the use of an excessive amount water or cement. The new water/cement ratio of the concrete (inclusive of the water within or absorbed by the aggregate) shall not exceed 0.54 weights for structural concrete, and not exceed 0.66 by weight for other classes. Test for the concrete will be

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made by the Engineer and the mix proportion shall be changed whenever necessary for the purposes of securing the required economy, workability, density, impermeability, durability or strength, and the Contractor shall not be entitled to additional compensation because of changes.

Additives: Plasticizers, waterproofing compounds and the other additives will not be used unless approved in writing by the Engineer.

The Contractor at his expense shall provide the Engineer with such equipment and activities as may be necessary for procuring and testing representative samples of the concrete or cement to the satisfaction of the Engineer.

The frequency of the tests shall be determined by the Engineer on the basis of placement rate and the structure, but not often than necessary to make sure that the concrete being placed conforms the Specification and the design requirements.

9.7 Materials for concrete

9.7.1 Portland cement

The Portland cement shall conform to the NS or IS Code or equivalent.

9.7.2 Concrete reinforcement steel

The Contractor-furnished steel reinforcement bars shall conform to NS or IS Code or equivalent.

9.7.3 Water

The Water in the concrete, mortar and grout shall be free from objectionable quantities of silt, organic matter, alkalis sulphates, and other impurities. The water to be used in all concrete, mortar and grout will be subject to the approval of the Engineer.

9.7.4 Sand and coarse aggregate

9.7.4.1 General

All sand and coarse aggregate materials to be used for Contract and for all related purpose, and as may be required by the Engineer, shall consist of materials herein specified and the requirements set forth herein shall apply except where such stipulations and requirements are specifically modified by the Engineer for any particular item of work.

9.7.4.2 Handling and stockpiling.

The Contractor shall excavated as required, load, transport, unload, handle and stockpile stand and aggregates as required to perform the construction of the Works and structures herein. All methods employed by the Contractor for unloading, loading, handling and stockpiling of sand and aggregates and the location and arrangement of all stockpile areas shall be subject to the approval of the Engineer.

The Contractor shall clear and evenly grade for drainage all sites destined for stockpiling and shall handle stockpiling operations of sand and aggregates so that the segregation and breakage will be kept to a minimum and that stockpiled materials will not be contaminated with soil or other foreign material due to surface floods of ground water.

The Contractor will be required at his own expense to reprocess any sand or aggregates which may become segregated or contaminated due to improper stockpiling and lack of adequate protection as directed by the Engineer.

The Contractor shall conduct all stockpiling operations in such a manner as to deposit all materials directly in final position in the stockpiles and in layers of not more than 1.5 meter height. Sand and aggregates shall not be moved from place to place in the stockpiles except as superficial leveling may

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be necessary to provide suitable road-ways for trucks in placing successive layers, and the Contractor shall provide effective means to prevent breakage of aggregates caused by trucks operating over stockpiles. Dumping over the ends or sides of the stockpiles will not be permitted.

9.7.4.3 Sand

All natural sand required for the construction of the works shall be furnished by the Contractor and may be obtained from river deposits or other approved natural sources. If natural sand is obtained from sources not owned or controlled by the Employer, the Contractor shall make all necessary arrangements with the source owner and shall pay all rentals or other costs connected therewith.

Samples: The Contractor shall submit to the Engineer, for preliminary tests and approval of the material, a representative sample about 15 km of natural sand proposed for use at least 14 days before use of such materials is required. Approval by the Engineer of sources of natural sand shall not be construed as constituting approval of all materials taken from the sources, and the Contractor shall be responsible for the specified quality of all such materials used in the work.

The deposit of natural sand shall be cleared by the Contractor or all vegetation and other objectionable matters, and all unsuitable soil sand and gravel shall be removed. The deposit shall be developed and operated so as not to detract from the usefulness of the deposits. The materials shall be screened and washed as necessary to produce natural sand meeting the requirements set forth herein.

Cleanliness and Quality: Sand or fine aggregates shall be clean and free from clay lumps, soft and flaky particles, alkali, organic matter, loam, mica and injurious amounts of deleterious substances. The sum of percentages of all deleterious substances shall be sharp, cubical, hard and durable; Loss of fine aggregate subject to five cycles of sodium sulphate soundness test shall not exceed 5 percent.

Fine aggregates:

Fine aggregate shall be natural sand or sand derived by crushing gravel or stone and shall be free from coagulated lumps, sand derived from stone unsuitable for coarse aggregate shall not be used as fine aggregate. The following grading shall be taken for general guidance.

Percentage Weight Passing B.S. Sieves for fine aggregates

B.S. 410 Test Sieve	Grading Zone 2
5.52 mm	100
4.76	91-100
2.40	75-100
1.20	55-90
1.60	35-59
0.30	8-30
0.15	0-10

All natural and blended sand will be subject to testing by the Engineer to determine whether the sand produced conforms to the requirements of the specification. The Contractor shall furnish, without charge, such assistance as the Engineer may require in obtaining representative samples for testing purposes and in inspecting plant facilities and operations of the Contractor. The Contractor shall at his expense furnish the Engineer with all the equipment needed in order to make above tests and analysis.

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9.7.4.4 Coarse aggregate

Coarse Aggregate shall be crushed or uncrushed gravel or crushed stone. The pieces shall be angular or rounded in shape and shall have granular or crystalline or smooth (but not glossy) nor-powdery surfaced friable, flaky, and laminated piece mica and shall only be present in such quantities as not to affect adversely the strength and durability of the concrete. The nominal sizes of the coarse aggregate shall be 38 mm to 5mm in structural Concrete and well graded to the satisfaction of the Engineer.

The coarse aggregates are required to conform to the specifications and if, when tested by the Engineer, they do not meet the specified grading requirements, the Contractor shall re-screen or process the materials, at his own cost, to the extent necessary to produce aggregates to the satisfaction of the Engineer.

The following grading shall be taken for general guidance percentage by weight passing 85 sieves.

Percentage Weight Passing B.S. Sieves for course aggregates

B.S. 410	Normal Size of graded aggregate	
	38 mm to 5 mm	19 mm to 5 mm
76.20	100	0
63.05	0	0
38.10	95.00	100
19.5	30.00	95.00
12.70	0	0
19.50	10.35	22.55
4.66	0.5	0.10

9.8 Batching

The Contractor shall provide such means and equipment as are required accurately to determine and control the amount of each separate ingredient entering the concrete mix. Such means and the equipment and its operation shall at all times be subject to approval of the Engineer. All dry materials entering the mixer shall be measured by weight or calibrated volume boxes.

9.9 Mixing

The concrete ingredients shall be mixed in a batch mixer or portable mixer for not less than 1 ½ minutes after all ingredients (except for the full amount of water) are in the mixer. The mixing time will be increased where the batch mixer exceeds a capacity of 1.5m^3. The Engineer reserves the right to increase the mixing time when the charging and mixing operations fail to produce a concrete batch throughout which the ingredients are evenly distributed and consistency uniform. The concrete shall be uniform in composition and consistency from batch to batch except when changes in composition, consistency are required. Water shall be added prior to, during and following the mixer charger operations. Excessive over mixing requiring the addition of water to preserve the required concrete consistency will not be permitted.

Hand mixing of concrete will not be permitted, except that the Engineer may approve such operations for small size concrete works upon request of the Contractor.

Truck mixers will be permitted only when the mixers and their operation are such that the concrete throughout the mixed batch and from batch to batch is uniform with respect to consistency and grading. Any concrete retained in truck mixers so long as to require additional water to permit satisfactory placing shall be discarded at the expense of the Contractor.

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Any mixer that at any time produces unsatisfactory results shall be repaired. Mixers in centralized batch and mixing plants shall be arranged so that mixing action in the mixers can be observed from a location convenient to the mixing plant operator's station. Mixers shall not be loaded in excess of their rated, capacity unless specifically authorized. Each mixer of more than 0.3 m^3 capacity shall be equipped with a mechanically of the required mixing period and will count the batches.

9.10 Formwork (shuttering and centering)

9.10.1 Design and material:

Forms shall conform to the various shapes, lines, grades, and dimensions of the concrete structures as shown on the Drawings or as determined by the Engineer. The material to be used and the design of the forms shall be subject to approval by the Engineer before the construction of the forms is started; provided however that such approval will not relieve the Contractor from his responsibility for the adequacy of the forms for from his obligation to remedy and defects which may develop or become apparent with use of the forms. The engineer may at any time condemn any sections of forms found deficient in any respect, and the Contractor shall promptly remove the condemned forms from the work and replace them at his expense. Showing the general design and dimensions for forms for structures need not be submitted by the Contractor to the Engineer for approval unless the Engineer orders such submission.

9.10.2 Form constructions:

Forms to confine the concrete and shape it to the required lines shall be used wherever necessary. Forms shall be of metal, of metal lined timber, plywood lining, tempered pressed wood lining, or of smooth planed boards, in good conditions as required to produce the surface finish specified herein.

The surface of concrete exposed to view on completion of the works shall be fair faced. The forms for such surfaces may be made of metal and shall be true in every respect to required shape and size and shall be of sufficient strength and rigidity to maintain their position and shape under the loads and operations incident to placing and vibrating the concrete. All forms on waterway surfaces shall be planed and cleaned to eliminate marks in so far as it is practicable. Suitable and effective means shall be provided in the construction of forms for holding adjacent edges and ends of panels and sections tightly together and in accurate alignment so as to prevent the formation of ridge line offsets of similar surface defects in the finished concrete. Forms when erected shall be grout tight. Only in specific cases, where it requires smoothening the corners and curves, wooden forms shall be allowed upon the approval by the Engineer.

9.10.3 Surface treatment

Adequate and suitable means for removing the form without injury to the surface of the finished concrete shall be provided. Before concrete is placed, the surface of the forms shall be oiled with commercial form oil that will effectively prevent sticking of the concrete to the forms and will not stain the concrete. Bond breaking materials or processes shall be used only after approval by the Engineer. Care shall be taken in applying oil to avoid contract with reinforcing steel with resulting loss of bond.

9.10.4 Chamfering

Chamfer strips shall be placed in the corners so as to produce leveled edges on permanently exposed concrete surfaces. Interior angles on such surfaces and edges at formed joints will not require leveling unless requirement for leveling is so indicated on the Drawings.

9.10.5 Centering

Forms shall be properly secured in position so as to prevent floating or other movement during the placing or concrete. They may be supported during placement of concrete on concrete piers, metal pedestals or by other approved means. Form supports shall be carried to firm foundation so that no settlement of the forms will be possible during construction.

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9.11 Fabrication and cleaning reinforcing steel

Reinforcement bars before being placed shall be free from loose mill scale rust, oil, grease and any coatings that will destroy or reduce the bond. When after placing there is delay in placing the concrete the steel bars shall be re-inspected and cleaned when required by the Engineer.

The steel bars shall be accurately bent and formed to the dimensions indicated on the Drawings included herein or on the approved reinforcing steel detail drawings.

The steel bars shall not be straightened or be bent in a manner that will injure the material. Bars with kinks or bends not shown on the Drawings shall not be used. All bars shall be bent cold. Heating of the bars for bending will be permitted only if the entire operation is approved by the Engineer.

9.12 Placing of reinforcement

9.12.1 General

Reinforcement bars shall be accurately positioned as shown on the Drawings, and secured against displacement by using iron wire ties or suitable clips at intersections, and shall be supported as required by concrete or metal supports for horizontal reinforcement shall be used so that there will be not sagging of the bars or mesh. Where portions of the supports will be exposed on concrete surfaces designed to receive a smooth finish the supports shall be made of non-corrodible metal.

9.12.2 Cover

The minimum concrete to reinforcement shall be 30 mm or as specified by the Engineer but in no case will the minimum concrete cover be less that 1.5 bar diameters. Bars shall be bent and fixed with suitable spacers to ensure that the minimum cover is maintained. The ends of tying wires shall be-bent inwards or cut off so as to have 30 mm minimum concrete cover.

9.12.3 Spacing

The minimum distance between parallel bars shall be 25mm, but in no case be less than 1.5 times the maximum size of the coarse concrete aggregate, unless particular instruction are given by the Engineer.

9.12.4 Splicing

When it becomes necessary to splice reinforcement bars at points other than shown on the Drawings, the charter of walls and columns the minimum overlaps of splices shall be thirty times the steel diameter and shall be subject to approval of the Engineer.

9.13 Preparations for placing of concrete

No concrete shall be placed until all form work, reinforcement, installation of parts to be embedded, bracing of forms and preparation of surfaces necessary before placing have been approved by the Engineer. No concrete shall be placed in water without the written permission of the Engineer, and the method of depositing the concrete shall be subject to his approval. Concrete shall not be placed in running water until the concrete has sufficiently hardened. All surfaces of forms and embedded materials that have become encrusted with dried mortar or grout from concrete previously placed shall be cleaned of all such mortar or grout before the surrounding or adjacent concrete is placed.

9.13.1 Cleaning of surface

Immediately before placing concrete, all surfaces upon or against which the concrete is to be placed shall be free from standing water, mud, debris or loose material. The surfaces of absorptive materials against or upon which concrete is to be placed shall be moistened thoroughly so that moisture will not be drawn from the freshly placed concrete.

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9.13.2 Blinding course

Where shown on the Drawings or where required by the Engineer the Contractor shall lay a blinding course of nonstructural concrete. The surface of the blinding course shall be finished to the dimensions shown on the Drawings and shall be dense and smooth. No concrete shall be placed on the blinding course until at least 24 hours after lying. No structural concrete shall be placed against the ground without either form work or blinding.

9.13.3 Construction joint surfaces

Concrete surfaces upon or against which concrete is to be placed, and to which new concrete is to adhere, and which have become so rigid that the new concrete be incorporated integrally, are defined herein as construction joints. The surfaces of construction joint shall be clean and moistened when covered with fresh concrete or mortar. Cleaning shall consist of the removal of all loose or defective concrete coatings or foreign material. The surface of construction joints shall be cleaned by wet sand blasting, scraping, chipping or other approved methods and then washed thoroughly (e.g. with high pressure air-water jets) to the satisfaction of the Engineer immediately prior to placement of fresh concrete. All pools of water shall be removed from the surface of construction joints before placing of the following concrete layer.

9.13.4 Placing equipment

Concrete shall be compacted, except when the Engineer decides otherwise, with the help of concrete vibrators of approved type and capacity. Transporting concrete inside the forms with the help of vibrators will not be allowed. Before placing of any concrete; the Contractor shall present to the Engineer for approval the list of all equipment available for the particular pour of concrete, including number capacity and the state of repair of the said equipment. The methods and equipment used for transporting and placing of concrete will be such that concrete having the required composition and consistency will be delivered to and placed into the work, without objectionable segregation or loss of slump.

9.14 Placing of concrete

Concrete shall be placed only in the presence of the Engineer or his authorized representative. After the surface has been prepared satisfactorily, surfaces or construction joints upon which new concrete is to be placed, shall be flushed with a coat or neat cement grout or covered with a layer of mortar approximately 3 cm thick. The mortar shall have the same proportion of cement and sand as the regular concrete mixture, unless otherwise directed. The water-cement ratio of the mortar shall be suitable for placing and working in the manner herein specified. The mortar shall be spread uniformly and shall be worked thoroughly into all irregularities of the surfaces. Concrete shall then be placed immediately upon the fresh mortar. In placing concrete against formed construction joint, special contact with the surface of the joints, by careful pudding and spading with the aid of suitable tools.

Remembering of concrete will not be permitted. Any concrete which has become so stiff that proper placing cannot be assured shall be discarded and no payment will be made to the Contractor for such wasted concrete. Concrete shall be deposited in all cases as nearly as practicable directly in its final position and shall not flow in a manner to permitted or cause segregation. Excessive separation of coarse aggregates in concrete, caused by allowing the concrete to fall freely from too great a height or at too great an angle from the vertical, or to strike the forms or reinforcement steel will not be permitted and where such separation would otherwise occur, the Contractor shall provide suitable drop chutes and baffles to confine and control the falling concrete.

Except as intercepted by joints, all formed concrete shall be placed in continuous horizontal layers, the depths of which generally shall not exceed 50 cm. The Engineer reserves the right to require lesser depths of layers where concrete in 50cm layers cannot be placed in accordance with the requirements of this specification. All intersections of construction joints with concrete surfaces which will be exposed to view shall be made straight and level or plumb, unless otherwise shown on the Drawings as ordered by the Engineer.

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9.14.1 Large blocks

In placing Concrete in large thick exposed areas the Contractor shall maintain the exposed area of fresh concrete at the practicable minimum by first building up the concrete to full width of structures and to full height of the lift over a restricted area at one end of the structure and then continuing in similar progressive stages to the full area of the structure. The slope formed by the unconfined edges of concrete shall be kept as steel as practicable in order to keep its area to a minimum. Concrete along these edges shall not be vibrated until adjacent concrete in the layer is placed except that it shall be vibrated immediately when conditions are such that the concrete will harden to the extent that later vibrations will not fully consolidate and integrate it with more recently placed adjacent concrete. Clusters of large aggregate shall be scattered before new concrete is placed over it. Once placement of concrete has commenced in a structure, placement shall not be interrupted, unless adequate construction joints can be made.

9.14.2 Rain

Concrete shall not be placed during rains sufficiently heavy or prolonged to wash mortar from coarse aggregate on the slopes of the placement. During such rains mortar should not be spread on construction joints and diluted mortar already spread shall be removed and replaced before continuing with the work.

9.14.3 Buckets

Concrete buckets where used shall be capable of promptly discharging the low-slump concrete mixes specified and the dumping mechanism shall be designed to permit the discharged of as little as 0.35 m portions of the load in one place. Buckets shall be suitable for attachment to and use of drop chutes where required in confined locations.

9.14.4 Concrete around openings

If concrete is placed monolithically around openings having vertical dimensions greater than 60 mm, and if concrete in decks, floor slabs, beams, girders or other similar parts of structures if placed monolithically with the concrete of structures, the following instructions shall be strictly observed;

A. Placing of concrete shall be delayed from one to three hours at the top of openings and at the bottom of bevels under decks, floor slabs, girders or other similar parts of structure member when bevels are not specified, but in no case shall placing be delayed so long that the vibrating unit will not readily penetrate of its own weight into concrete placed before the delay. When consolidating the concrete placed after the delay, the vibrating unit shall penetrate and vibrate the concrete placed before the delay.
B. The last 60cm or more of concrete placed immediately before the delay shall be placed with as low slump as practicable and special care shall be exercised to effect through consolidation of the concrete.
C. The surface of concrete where delays are made shall be clean and free from loose and foreign material when concrete is started after the delay.
D. Concrete placed over openings and in decks, floors, beams, girders and other similar parts of structures shall be placed with as low a lump as practicable and special care shall be exercised to effect through consolidation of concrete.

9.14.5 Consolidation

Each layer of concrete shall be consolidated to the maximum practicable density, so that it is free from pockets of aggregates and closes snugly against all surfaces of forms and embedded materials. In consolidating each layer of concrete the vibrating head of the vibrator shall be allowed to penetrate and reverberate the concrete in the upper portion of the underlying layer. All concrete for major structures shall be consolidated with electric or pneumatic power driven immersion type vibrators, operating at speeds of at least 7,000 revolutions per minute when immersed in the concrete. Hand consolidation, using slice bars, may be employed for minor structures at the Engineer's direction.

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Additional layers of concrete shall not be placed until the layers previously placed have been compacted thoroughly as specified. Equipment used for consolidating the concrete shall be subject to the approval of the Engineer.

9.15 Temperature of concrete

The temperature of concrete when it is being placed shall not be more than 30^0C. When the temperature range is between 27^0C and 32^0C the concrete shall be mixed at the job site and be placed immediately after mixing. If the weather conditions are such that the temperature rise above + 32^0C the contractor shall take the necessary steps to keep the concrete temperature below that specified above (e.g. placing of concrete during the night)

9.16 Removal of forms

The time and method of removal and moving of forms shall be subject to approval by the Engineer, and this work shall be done with care so as to avoid injury to the concrete. No loading on "green" concrete will be permitted. As soon as the forms are removed, the surface of the concrete shall be carefully examined and any irregularities in the surface shall be immediately repaired to the satisfaction of the Engineer.

In general, the minimum time between placing of the concrete and the removal of forms shall be two days for unloaded walls and other side forms, seven days for supporting walls and conduits, and 14 days for bridge decks.

9.17 Curing of concrete and protection of surfaces

All concrete shall be cured by water or by white pigmented sealing compound, as hereinafter specified. The Engineer shall have the right to determine which type of curing shall be used by the Contractor in the different portions of the work in order to prevent damages.

Concrete cured with water shall be kept wet for at least fourteen consecutive days immediately following placement, beginning as soon as the concrete has hardened sufficiently to prevent damage. Curing shall consist of covering the exposed concrete surfaces and the forms with water saturated material or a system of perforated pipes, mechanical sprinklers or porous hose, or by any other approved method which will keep all surface to be cured continuously (not periodically) wet. Water used for curing shall meet the requirements of the Specification for water used for mixing concrete.

Exposed surfaces of all concrete, except surfaces of concrete coated with white pigmented sealing compound, shall be protected against direct access of sum rays for at least the first three days after placing. Such protection shall be made effective as soon as practicable after the removal of the forms. The Contractor shall protect all concrete against injury until final acceptance by the Engineer.

9.18 Surface finishing and repair

9.18.1 Testing of surface finishing

Finishing and repair of concrete surfaces shall be performed only by skilled workmen and in the presence of the Engineer. Concrete surfaces will be examined by the Engineer where necessary to determine whether surface irregularities are within the limits hereinafter specified.

Surface irregularities will be classified as "abrupt" or "gradual". Offsets caused by displaced sheeting or lining of form sections or by loose knots or otherwise defective form lumber will be considered as abrupt irregularities and will be tested by direct measurement.

All other irregularities will be considered as gradual irregularities and will be tested by use of a template, consisting of a straight edge or the equivalent thereof for curved surface. The length of the template will be 1.5 m for testing or formed surfaces and 3 m for testing of unformed surfaces.

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9.18.2 Finishing of formed surfaces

Finishing of formed surfaces shall consist of filling all recesses larger than 5 mm, or which have been caused by removal of form ties, and grinding or filling as necessary to produce surfaces with no abrupt irregularities exceeding 6mm and no gradual irregularities exceeding 13mm. Before acceptance of the work the Contractor shall, clean all exposed surface of unsightly encrustation and stains.

9.18.3 Sloping of Unformed Surface

Interior unformed surfaces shall be sloped for drainage where shown on the Drawings or as directed by the Engineer. Surfaces which will be exposed to the weather shall be sloped for drainage. Unless the use of other slopes on normally level surfaces is indicated on the Drawings or directed by the Engineer, narrow surfaces such as tops of walls and curbs shall be sloped approximately 20mm per meter or width; broader surfaces such as platforms and decks shall be sloped approximately 10mm per meter.

9.18.4 Finishing of unformed surfaces

Clauses of finish for unformed surfaces shall be as follows:

Unformed surfaces that will be covered by backfill or by concrete shall be finished by sufficient leveling and screening to produce an even uniform surface. Surface irregularities measured as described in **this section** above shall not exceed 1.9 cm.

A hard steel trowel finish shall be applied to unformed surfaces that will be subjected to the action of flowing water. Bridge deck surfaces which are subject to pedestrian or vehicular traffic shall be given a standard light broom finish. Floating and troweling may be performed by use of hand or power driven equipment. Floating and troweling shall be started as soon as the screened surface has stiffened sufficiently and shall be the minimum necessary to produce a surface that is free from screed marks and is uniform in texture.

Surface irregularities, measured as described in **in this section**, above shall not exceed 6 mm, no trowel marks or abrupt irregularities will be permitted. Joints and edges shall be tooled

9.18.5 Repair of concrete surface

If, after stripping of forms, any concrete is found to be not formed as shown on the Drawings or is out of alignment of level or shows a defective surface, it shall be considered as not conforming with the intent of the specification and shall be removed and replaced by the Contractor within 72 hours of concrete age at his expense unless the Engineer grants permission to patch the defective area, in which case patching shall be performed as described in the following paragraphs and subject to further detailed instruction as the Engineer may consider necessary.

Defects that require replacement or repair are those that consist of honeycombs, damage due to stripping of forms, loose pieces of concrete, bolt holes, tie-rod holes, fudges at formed joints, and bulges due to movement of the forms.

Ridges and bulges shall be removed by chipping or tooling followed by rubbing with a grinding stone.

Honeycombed and other defective connect shall be chipped out, the chipped openings being sharp-edged and shaped so that the filling will be keyed in place. All holes shall be thoroughly moistened for 24 hours before the filling is placed. The surface or the filling shall be finished flush with the surrounding concrete surface and shall have the same texture. All patches shall be cured as specified above for concrete, and to the satisfaction of the Engineer.

Imperfections, bolt and tie-rod holes, and the chipped out honeycomb areas to be repaired, shall be filled with dry patching mortar composed of one part of Portland cement and two parts of regular concrete sand (volume measurement) together with a non-shrink patching compound approved by the

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Engineer, in the amount specified by the manufacturer, and just enough water, so that after the ingredients are thoroughly mixed the mortar will stick together on being molded into a ball by slight pressure of the hands and will not extrude free water. Mortar repairs shall be placed in thin layers and thoroughly compacted by suitable tools. Care shall be taken in filling rod, bolt and pipe holes so that the entire depth of the holes is completely filled with compacted mortar.

Where concrete be exposed to view, the mortar shall be made to match the color of concrete by substituting white Portland cement in the required amount for a portion of the regular cement. When, in the opinion of the Engineer, the extent of the imperfections in structures exposed to view is such that patching alone would not produce a surface of satisfactory appearance the Contractor will be required to give such surfaces, as well as adjacent surfaces a sack rubbed mortar finish in accordance with the Engineer's instructions.

9.19 Contraction joints

Contraction joints shall be constructed as shown on the Drawings or as directed by the Engineer. The joints shall be filled with filler material supplied by the Contractor and approved by the Engineer. The edges of the concrete at contraction joint exposed to view shall be chamfered in accordance with the Engineer's instructions and as specified. The completed contraction joints shall be neat in appearance to the satisfaction of the Engineer.

9.19.1 Water stops

The Contractor shall furnish and install waterstops of polyvinyl chloride in the shape and dimensions specified, and in the locations as shown on the Drawings, or as directed by the Engineer. For convenience of placement in forms, a waterstop utilising a split flange may be used; however, prior to placement of final concrete, the split flange portion shall be jointed in an approved manner such that no concrete or mortar can enter between the two split portions of the flange.

The Contractor shall take suitable precautions to support and protect the water-stops during the progress of the work, and to ensure their proper incorporation in the Works.

Waterstops shall be manufactured by the extrusion process from an elastomeric plastic compound, the basic resin of which is one hundred (100) per cent polyvinyl chloride (PVC). The product shall be dense, homogeneous and free from holes and other imperfections.

The waterstops as described herein shall have the following physical properties as per IS:15058:2002

Specific gravity	1.33 + 0.03 at 23°C	
Tensile strength, min.	13.8 Mpa	(IS8543 Part 4-sec 1)
Ultimate elongation, min	285%	(IS8543 Part 4-sec 1)
Brittleness	- 25°C	(Annex of IS 9766)
Hardness (Shore-A) min	65	(IS 13360 Part 5 sec 1)
Maximum water absorption	0.6	Annex 0f IS:5058:2002

The Contractor shall provide the Engineer with a sample to be used in the Works and the manufacturer’s test certificate for the Engineer’s approval, before issuing the purchasing order to the suppliers, and shall, if requested, supply a sufficient length of each sample for confirmatory tests to be carried out in accordance with the appropriate test procedure, at the Contractor’s own expense.

9.19.2 Joint Filler

The Contractor shall supply and fix pre-moulded joint fillers in expansion joints as shown on the Drawings. Unless otherwise specified, the joint filler shall be resin bonded cork such as Expandite

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"Hydrocor" or similar approved. It shall be obtained from manufacturers approved by the Engineer and shall be stored and fixed in accordance with the manufacturer's instructions.

The Contractor shall provide the Engineer with a sample to be used in the Works and the manufacturer's test certificate for the Engineer's approval, before issuing the purchasing order to the suppliers, and shall, if requested, supply sufficient of each sample for confirmatory tests to be carried out in accordance with the appropriate test procedure.

The joint filler of the thickness specified shall be cut to shape, and fixed to fill the whole space between the concrete faces of the joint which is not otherwise filled by waterstop or joint sealer. Abutting pieces shall be placed in close contact and the joints covered on each side to prevent passage of cement grout.

Measurement for payment of joint filler shall be made for the surface area in square metre of joint in accordance with the Drawings, or as directed by the Engineer. Payment for joint filler shall be made at the unit rate per square metre for relevant Item of the Bill of Quantities, which unit rate shall include all costs of furnishing and placing the joint filler all in accordance with these Specifications.

9.19.3 Joint Sealer

Joint sealer shall be Expandite "Thioflex 600 based on a liquid polysulphide polymer", or similar approved. It shall be obtained from manufacturers approved by the Engineer, and shall be used in accordance with the manufacturer's instruction inclusive of the supply and application of any priming materials. An approved bond breaker shall be supplied for placing between the sealant and the joint filler.

The Contractor shall provide the Engineer with a sample to be used in the Works and the manufacturer's test certificate for the Engineer's approval, before issuing the purchasing order to the suppliers, and shall, if requested, supply sufficient of each sample for confirmatory tests to be carried out in accordance with the appropriate test procedure.

Measurement for payment of joint sealer shall be made the unit rate in running meter of relevant Item of the bill of quantities actually placed in the joint in accordance with the Drawings, or as directed by the Engineer.

9.19.4 Measurement and payment

No separate payment will be made for handling cement or for formwork (shuttering and centering), contraction joints, fine concrete topping or grout, and all costs in connection therewith shall be included in the prices quoted for the various types of concrete.

Expansion joint material will be measured for payment by the square meters. Quantities for payment will be determined by direct measurement of the joint material in place.

Payment for expansion joint material will each be made at the unit price per square meter; except in case where the Bill of Quantities do not show expansion joint material in the Schedule, such material shall be included in the price for concrete.

Polyvinyl Chloride water stop will be measured for payment by the linear meter. Quantities for payment will be determined by direct measurement of the water stop in place.

Payment for polyviny1 chloride water stop will be made at the unit price per linear meter; except in cases where the bill of quantities does not show water stop in the Schedule, such material shall be included in the price for concrete.

Concrete will be measured for payment by the cubic meter. Quantities for payment for formed concrete and slabs will be computed from the line, grades and dimensions shown on the Drawings.

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Concrete used as backfill of holes and other areas directed by the Engineer will be measured for payment at the mixer.

Concrete will be paid for at the respective unit prices per cubic meter quoted; except that where backfill concrete is required due to fault for negligence of the Contractor such concrete will be at the Contractor's expense.

9.20 Measurement and payment of reinforced steel

Measurement for payment for furnishing and placing reinforcement bars will be made only of the weight of the bars placed in the concrete in accordance with the Drawings or as directed by the Engineer. Payment for furnishing and placing reinforcement bars will be made at the Contract rate per kg in the Bill of Quantities, which contract rate shall include the cost of furnishing reinforcement bars, furnishing and attaching wire tied and metal supports of use, and of delivering unloading, hauling, storing, sorting, cutting bending, cleaning, placing and securing and maintaining in position all reinforcement bars as shown on the Drawings or as directed by Engineer.

Payment for handling and Installing Employer furnished Steel reinforcing Bars will be made at the unit price per kg quoted therefore in the Bill of Quantities which price shall include full compensation for furnishing labor, tools, equipment, and incidentals, and for doing all the work involved in handling, cutting, bending and placing the bar reinforcing steel, complete in place as shown or directed.

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10 PROTECTION WORKS

10.1 Stone Works

10.1.1 Materials

10.1.1.1 Stones

Stones shall be procured from an approved source. The sources shall be the natural boulders from the rivers or from rock quarrying of granite, quartzite, or similar material having a minimum specific gravity of 2.5. The stones shall be free from seams and other defects, and shall be hard, sound and durable. Stones shall be the best available and shall be sound, durable, free from flaws and soft weathered or decomposed parts. The compressive strength shall not be less than 40 N/sq.mm. The stone and the source from which it is obtained shall be subject to approval of the Engineer before any of that material is brought to site.

Stones shall be hammer dressed to the size and shape as shown on the Drawings, or as required by the Engineer, to fit the size of the structure.

10.1.2 Dry Stone/ Boulder Pitching

Dry stone/boulder pitching shall be employed for upstream and downstream protection work of cross drainage structures, water level and discharge regulators, bridges, aqueducts and any other structures.

Stones/boulder for dry stone pitching shall comply these Specifications.

Thickness of dry stone/boulder pitching shall be as shown on the Drawings, or as directed by the Engineer. Stones shall be tightly placed so that the gaps or voids among stones are reduced, as much as possible. The exposed surface shall be neatly combined and levelled so that no stone can be easily removed by humans, animals or water flow. Other requirements shall be as for wet stone pitching but with the omission of mortar.

Measurement for payment of dry stone pitching shall be made by volume to the lines and dimensions shown on the Drawings, or as directed by the Engineer. Payment for dry stone pitching shall be made at the unit rate per cubic metre of Item specified in the Bill of Quantities. The unit rate shall cover the cost of all labour, materials, equipment and tools, and operations required for dry stone pitching.

10.2 Gabion Mattresses

10.2.1 Materials

10.2.1.1 Stones

Stones used for filling gabion boxes shall comply in this section above. The smallest dimension of any stone shall be at least twice that of the longer dimension of the mesh of the box. The exposed face of the boulder filled in gabion boxes shall be chiselled and trimmed.

10.2.1.2 Gabion

Gabions shall consist of steel wire mesh boxes. The steel wire shall be mild steel wire complying with IS 280-1978 or NS 169-2045. All wire used in the manufacture of the boxes, diaphragms, binding, and connecting wire shall be galvanised with a heavy coating of zinc by an electrolytic galvanising process. The weight of deposition of zinc shall be in accordance with IS 4826-1979 or NS 169-2045. Zinc coatings shall be uniform and at all points more than 25 mm from a cut end, the coating shall be able to withstand a minimum number of dips and adhesion tests specified as per IS 4826-1979. Tolerance on diameter of wire shall be $\pm$2.5 per cent. The tensile strength shall be between 300 to 550 N/sq.mm.

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For Machine made and mechanically selvedge Gabion Boxes:

Gabions shall be manufactured in the standard sizes shown below:

Gabions and mattresses shall be of the mesh type, wire diameter and box sizes as shown on the table below.

S. N.	Mesh Type	Wire Diameter (mm)			Box size (L x B x H) m	Tolerances in Box Sizes
		Mesh	Selvedge	Lacing		
1	6 x 8	2.20	2.70	2.20	L = 3 m, 4 m, 5 m, 6 m B = 2 m H = 0.17 m, 0.23 m, 0.3 m	±3% on length and width and ±2.5 cm on depth
2	10 x 12	3.00	3.90	2.40	L = 1.5 m, 2 m, 3 m, 4 m B = 1 m, 2 m, H = 0.5 m, 1 m	±5% on each
3	10 x 12	2.70	3.40	2.20		

Diaphragms shall be manufactured of the same materials as the parent gabion and shall have selvedge wire throughout their perimeter. Diaphragms shall be positioned in such a way that no internal dimension in a gabion box and mattress exceeds 1.0 m along length of the gabion boxes.

All boxes shall be supplied with binding and connecting wires of sufficient quantity to bind all diaphragms and closing edges.

Mechanical properties of meshes of different size

The wire mesh making the gabions and mattresses shall have the mesh size, mesh panel strength and selvedging strength (connection to selvedges) as per the table below:

Mesh Type	Nominal Mesh Opening and Tolerances		Wire Diameter (mm)		Ultimate Tensile Strength (kN/m)	Connection to Selvedges Mesh (kN/m)
	Mesh opening (D)	Tolerances	Mesh	Selvedge		
6 x 8	60.00 mm	+18% - 4%	2.20	2.70	35.00	12.20
10 x 12	100.00 mm	+16% - 4%	2.70	3.40	35.00	17.00
10 x 12	100.00 mm	+16% - 4%	3.00	3.90	43.00	20.00

i. For Box Sizes with 0.50 m or 1.0 m thickness:

The wire shall be woven into a hexagonal mesh of 100 mm x 120 mm mesh type made by 3mm mesh wire with a minimum of double twists with a selvedge wire of 3.90 mm. The tightness of the twisted joints shall be such that a force of 7 KN is required to pull on one wire to separate it from the other wire provided that each wire is prevented from turning and the whole process is done in one plane. All edges of the boxes shall be finished with a selvedge wire. Gabions shall be manufactured in the standard sizes boxes with number of diaphragm as shown in the Bill of Quantities.

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Diaphragms shall be manufactured of the same materials as the parent gabion and shall have selvedge wire throughout their perimeter. Diaphragms shall be positioned in such a way that no internal dimension in a gabion box and mattress exceeds 1.0 m along length of the gabion boxes.

All boxes shall be supplied with binding and connecting wires of 2.40 mm lacing wire in sufficient quantity to bind all diaphragms and closing edges.

ii. For Box Sizes with 0.30 m thickness:

The wire shall be woven into a hexagonal mesh of 60 mm x 80 mm mesh type made by 2.20 mm mesh wire with a minimum of double twists with a selvedge wire of 2.70 mm mesh wire. The tightness of the twisted joints shall be such that a force of 7 KN is required to pull on one wire to separate it from the other wire provided that each wire is prevented from turning and the whole process is done in one plane. All edges of the boxes shall be finished with a selvedge wire. Gabions shall be manufactured in the standard sizes boxes with number of diaphragm as shown in the Bill of Quantities.

Diaphragms shall be manufactured of the same materials as the parent gabion and shall have selvedge wire throughout their perimeter. Diaphragms shall be positioned in such a way that no internal dimension in a gabion box and mattress exceeds 1.0 m along length of the gabion boxes.

All boxes shall be supplied with binding and connecting wires of 2.20 mm lacing wire in sufficient quantity to bind all diaphragms and closing edges.

For Hand woven Gabion Boxes:

The wire shall be woven into a double knotted square mesh of mesh size as given in Bill of Quantities. The tightness of the knotted joints shall be such that a force of 7 kN is required to pull on one wire to separate it from the other wire provided that each wire is prevented from turning and the whole process is done in one plane. All edges of the boxes shall be finished with a selvedge wire of at least 2 gauges heavier than the mesh wire. Gabions shall be manufactured in the box sizes as shown in the Drawings or as directed by the Engineer.

All boxes shall be supplied with binding and connecting wires of sufficient quantity to bind all diaphragms and closing edges.

10.2.2 Construction of Gabions

10.2.2.1 General Requirements

Before filling any gabion boxes and mattresses the Contractor shall also submit samples of gabion boxes and gabion mattresses assembled and erected, including filling, for approval, which when approved shall be retained for reference and comparison with the gabions built as part of the permanent Works. The size, type and location of the samples shall be as directed by the Engineer. Geotextile shall be laid under gabion boxes. The geotextile used shall comply as specified in the specification.

The measurement and payment of geotextile shall be made in square meter for the relevant item of the Bill of Quantities.

Gabion boxes/mattresses shall be assembled and erected; including filling in the dry prepared surfaces, except as may be otherwise approved. Approval for assembling and erecting gabions in water will be given only if, in the Engineer's opinion, such a method will produce work which is otherwise in accordance with the Specifications.

10.2.2.2 Preparation of Foundation and Surface for Bedding

The bed on which the gabion boxes/mattresses are to be laid prior to filling shall be at the levels shown on the Drawings with an even surface.

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10.2.2.3Assembly

Gabion boxes/mattresses shall be assembled on a hard flat surface. After fabrication or unpacking and unfolding, they shall be stretched out and any kinks removed. Creases shall be in the correct position for forming the box/mattress compartments. The side and end panels shall be folded into an upright position to form rectangular boxes or compartments. The top corners shall be joined together with the thick selvedge wires sticking out of the corners of each panel. The tops of all sides and partitions shall be levelled except as may be appropriate to special units. The sides and end panels shall be wired together using binding wire starting at the top of the panel by looping the wire through the corner and twisting the wires together. Binding shall continue by lacing the wire through each mesh and around both selvages, which shall be joined tightly together, with two round turns after every second mesh. Finally the end of the wire shall be secured at the bottom corner and the end poked inside the unit. The diaphragms shall be secured in their correct positions by binding in the same way. The binding wire shall be fixed using 250 mm long nose fencing pliers or equivalent approved tools.

10.2.2.4Filling

The boxes shall be placed in their final position before filling commences. They shall be stretched to their full dimensions and securely pegged to the ground or wired to adjacent gabions before filling. The vertical corners shall be kept square and to full dimensions by inserting a steel bar of at least 20 mm diameter at each vertical corner, maintaining it in the correct final position throughout the filling process, and removing it when the box is full. Before filling commences, the selvages of the box shall be bound to the selvages of adjacent boxes with binding wire.

Before filling with stones, gabions shall be anchored at one end or side and stretched from the opposite end by inserting temporary bars and levering them forward. The top and bottom shall be kept stretched by tensioning with tie wires attached to an anchor or equivalent approved method until the gabion has been filled. The gabions shall be inspected at this stage but before filling with stones to ensure that the tie wiring has been properly carried out and the gabion boxes/mattresses are not pulling apart.

The filling shall be carried out by placing individual stones into the gabion by hand in courses in such a manner that the stones are bedded on each other and bonded. No loose stones shall be tipped into the box and the practice of coursing and bonding the outer layer and filling the interior with unlaid stones shall not be permitted.

All l.0 m deep gabions shall be filled in three equal layers, and 0.5 m deep gabions in two equal layers. Where the upper faces of gabion boxes are not covered with further gabions, vertical bracing wires shall be fitted between the top and bottom mesh using two tie wires per square meter of surface. The top layer of stones shall be placed with their flattest side uppermost to provide a small surface for placing the lid. The gabions shall be filled 25 mm above the top so that the lid can be tightly stretched over the stones.

10.2.2.5Securing Lids

The gabion box/mattress compartments shall be filled slightly overfull to allow for subsequent settlement. The lids shall then be laced down with binding, wire to the tops of all partition panels. The lids shall be stretched to fit the sides exactly, by means of a suitable tool, but due care shall be taken to ensure that the gabions are not so full that the lids are over-stretched. The corners shall be temporarily secured first. Gabion boxes/mattresses shall be laid so that the hinge of the lid is on the lower side of slopes and on the outer side in flat planes.

Where laid horizontally, hinges shall not be placed on the downstream side, and where practical shall be placed on the upstream side.

On completion, the boxes shall be completely and tightly filled, square, true to dimensions and the line and level shown on the Drawings

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10.3 Testing

Zinc coating and tensile strength gabion wires shall be carried out by the Contractor as directed by the Engineer. Failure to comply with the Specifications shall lead to the rejection of gabion wires. Tests shall be carried out in accordance with IS 280 and IS 4826 on each lot of supply received at Site.

10.4 Measurement and Payment

Measurement for payment of gabion boxes/mattresses shall be made in place to the dimensions of the gabion boxes/mattresses shown on the Drawings, or approved by the Engineer. The payment shall be made by type at the unit rates per square meter of relevant Items for Machine fabricated gabion boxes. In case of Hand woven gabion boxes, the payment shall be made at the unit rates per square meter of surface area of the gabion boxes.

The unit rates shall include all costs of supply of materials, wires and knitting of wire boxes/mattresses, placing the box/mattress in place all complete, in accordance with these Specifications. Excavation up to an average depth of 150 mm shall be deemed to be included in the rate as dressing of the bed. Excavation beyond this depth shall be paid for separately, unless otherwise specified.

Measurement for payment of boulder filled in gabion boxes shall be made by volume to the lines and dimensions shown on the Drawings, or as directed by the Engineer. Payment for boulder filling shall be made at the unit rate per cubic metre of relevant Item of the Bill of Quantities. The unit rate shall cover the cost of all boulder, labour, materials, equipment and tools, and operations required for the filling of boulder in gabion boxes.

10.5 Geo-textiles

Geo-textile used for sub-surface drains shall be made of polyethylene or polypropylene or polyster or similar fibres, either woven or non-woven. Unless otherwise shown on the Drawing, the geo-textile shall:

sustain a load of not less than 10 kN/m at break and have a minimum failure strain of 10 percent when determined in accordance with BS: 6906 or shall have a grab tensile strength more than 0.4 kN/m and grab elongation corresponding to this limit in accordance with ASTM D4632.

have apparent opening size as shown on the Drawing. If no size is shown on the Drawing, then the apparent size shall be 0.1 mm.

allow water to flow through it at right angles to its principal plane, in either direction at a rate of not less than 50 litres/sq.m./sec. under a constant head of 100 mm, determined in accordance with BS: 6906 (Part 3) or ASTM D4491, unless otherwise shown on the Drawing. The flow rate determined in the test shall be corrected to that applicable to a temperature of 15ºC using data on variation in viscosity of water with temperature.have a minimum puncture resistance of 200 N when determined in accordance with ASTM D4833.have a minimum tear resistance of 350 N when determined in accordance with ASTM D4533.

The higher tensile strength alignment of the geo-textile should in cross sectional direction. Unless otherwise specified, the overlap between two pieces should be at least 0.50 m. The supplier shall provide a method statement detailing installation procedures. Prior to deliver material at site the supplier shall submit a representative geo-textile sample minimum 4.0 m^2, to be retained by the engineer for purpose of comparative testing together with materials sampled from product delivered to site.

Payment for geo-textiles shall be made in the unit rate per square metre for the relevant Item of the Bill of Quantities. The unit rate shall include the cost of material, furnishing, transporting cutting and installing of geo-textiles including its testing. No extra payment shall be made for the overlap between the geo-textile pieces and accessories.

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11 HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS

11.1 Manufacturer

All HDPE pipe and fittings shall be from a single manufacturer, who is fully experienced, reputable and qualified in the manufacture of the HDPE pipe to be furnished. All pipes should of NS Standard and diameter and thickness as per BOQ.

11.2 Finished product evaluation

Production staff shall check each length of pipe produced for the items listed below. The results of all measurements shall be recorded on production sheets, which become part of the manufacturer's permanent records. Pipe in process shall be checked visually, inside and out for cosmetic defects (grooves, pits, hollows, etc.). Pipe outside diameter shall be measured using a suitable periphery tape to ensure conformance with NS Standard. Pipe wall thickness shall be measured at 12 equally spaced locations around the circumference at both ends of the pipe to ensure NS Standard. Pipe length shall be measured. Pipe marking shall be examined and checked for accuracy. Pipe ends shall be checked to ensure they are cut square and clean. Subjected to inside surface to a "reverse bend test" to ensure the pipe is free of oxidation (brittleness).

11.3 Compatibility

Contractor is responsible for compatibility between pipe materials, fittings and appurtenances.

11.4 Fittings

All molded fittings and fabricated fittings shall be fully pressure rated to match the pipe pressure rating to which they are made. All fittings shall be molded or fabricated by the manufacturer. No Contractor fabricated fittings shall be used unless approved by the Engineer. The manufacturer of the HDPE pipe shall supply all HDPE fittings and accessories as well as any adapters and/or specials required to perform the work as shown on the Drawings and specified herein.

11.5 Pipe identification

The following shall be continuously indent printed on the pipe:

A. Name and/or trademark of the pipe manufacturer.
B. Nominal pipe size.

11.6 Joining method

The pipe shall be joined with butt, heat fusion joints. All joints shall be made in strict compliance with the manufacturer's recommendations. A factory qualified joining technician as designated by pipe manufacturer or experienced, trained technician shall perform all heat fusion joints in the presence of the inspector. Lengths of pipe shall be assembled into suitable installation lengths by the butt fusion process. All pipes so joined shall be made from the same class and type of raw material made by the same raw material supplier. Pipe shall be furnished in standard laying lengths not to exceed 50 feet and no shorter than 20 feet. On days butt fusions are to be made, the first fusion shall be a trial fusion in the presence of an Inspector. Heating plate surfaces shall be inspected for cuts and scrapes and shall be free of dirt and residue.

11.7 Installation

11.7.1 General

High Density Polyethylene (HDPE) Pipe shall be installed in accordance with the instruction of the manufacturer, as shown on the Drawings and as specified herein. A factory qualified joining technician as designated by the pipe manufacturer shall perform all heat fusion joints. HDPE shall be installed either by Open Trench Construction or Directional Bore Method.

Division Chief

Care shall be taken in loading, transporting and unloading to prevent damage to the pipe. Pipe or fitting shall not be dropped. All pipe or fitting shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe shall be repaired as directed by the Engineer. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner by the contractor, at his own expense.

Under no circumstances shall the pipe or accessories be dropped into the trench or forced through a directional bore upon "pull-back". Care shall be taken during transportation of the pipe such that it will not be cut, kinked or otherwise damaged. Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe.

Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects, which could damage the pipe. Stacking of the polyethylene pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature conditions. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

Pipe shall be stored on clean level ground to prevent undue scratching or gouging. The handling of the pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. The maximum allowable depth of cuts, scratches or gouges on the exterior of the pipe is 5 percent of wall thickness. The interior pipe surface shall be free of cuts, gouges or scratches.

Pipe shall be laid to lines and grade shown on the Drawings with bedding and backfill as shown on the Drawings. When lying is not in progress, including lunchtime, the open ends of the pipe shall be closed by fabricated plugs, or by other approved means. Sections of pipe with cuts, scratches or gouges exceeding 5 percent of the pipe wall thickness shall be removed completely and the ends of the pipeline rejoined.

The pipe shall be joined by the method of thermal butt fusion. All joints shall be made in strict compliance with the manufacturer's recommendations. Mechanical connections of the polyethylene pipe to auxiliary equipment such as valves, pumps and tanks shall be through flanged connections which shall consists of the following:

A. A polyethylene flange shall be thermally butt-fused to the stub end of the pipe.
B. Flange connections shall be provided with a full-face neoprene gasket.

All HDPE pipe must be at the temperature of the surrounding soil at the time of backfilling and compaction.

If a defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional cost to the Owner. All pipe and fittings shall be thoroughly cleaned before installation, shall be kept clean until they are used in the work and when laid, shall conform to the lines and grades required, kinked or otherwise damaged.

11.7.2 Open Trench Installation

As briefed above the utility Excavation, Trenching, and Backfilling shall apply in its entirety. The centerline of the pipe shall not deviate from a straight line drawn between the centers of the openings at the ends of the pipe by more than 1/16-in per foot of length. If a piece of pipe fails to meet this requirement check for straightness, it shall be rejected and removed from the site. Laying instructions of the manufacturer shall be explicitly followed. Good alignment shall be preserved during installation. Deflection of the pipe shall occur only at those places on design drawings and as approved by the Engineer. Each length of the pipe shall have the assembly mark aligned with the pipe previously laid and held securely until enough backfill has been placed to hold the pipe in place.

Division Chief

Joints shall not be “pulled” or “cramped”. Precautions shall be taken to prevent flotation of the pipe in the trench.

When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe, or disturbance of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not be allowed to extend below top of the pipe. As trench boxes, moveable sheeting, shoring or plates are moved, pipe bedding shall be placed to fill any voids created and the backfill shall be compacted to provide uniform side support for the pipe. Restrained joints shall be installed where shown on the Drawings or as directed by the Engineer.

11.8 Cleaning

At the conclusion of the work, thoroughly clean all of the new pipe lines to remove all dirt, stones, pieces of wood or other material which may have entered during the construction period by forcing a cleaning swab through all mains 4” or greater. Flushing velocities shall be a minimum of **2.5 feet per second.** All flushing shall be coordinated with inspector and **Water Resources and Irrigation Development Division Office**. Debris cleaned from the lines shall be removed from the job site.

11.9 Testing

Pressure testing shall be conducted per Manufacturer’s recommendations and as approved by the Engineer. All HDPE mains shall be field-tested. Contractor shall supply all labor, equipment, material, gages, pumps, meters and incidentals required for testing. Each main shall be pressure tested upon completion of the pipe laying and backfilling operations, including placement of any required temporary roadway surfacing. Air shall be expelled by means of taps at points of highest elevation. Apply initial test pressure and allow standing without makeup pressure for two to three hours, to allow for diametric expansion or pipe stretching stabilizing. After this equilibrium period, apply the specified test pressure and turn the pump off. The final test pressure shall be held for one to three hours.

Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall be witnessed by the resident project representative at the point where the pressure is being monitored and shall show on the recorded pressure read-out submitted to the Engineer of Record.

If any test of pipe laid disclosed leakage significant pressure drop greater than the manufacturer’s recommended loss, the Contractor shall, at his/her own expense, locate and repair the cause of leakage and retest the line.

All visible leaks are to be repaired regardless of the amount of leakage. The Contractor must submit his plan for testing to the Engineer for review at least **10 days** before starting the test and shall notify Inspector a minimum of **48 hours** prior to test.

Division Chief

12 STONE MASONRY

12.1 GENERAL

All stone masonry required to be constructed under the specification, and for all related purposes or as directed by the Engineer, shall consist of the materials herein specified, which shall be proportioned, mixed, formed and placed in accordance with these stipulations and requirements. The stipulations and requirements herein set forth shall apply to all stone work, except when such are specifically modified by the Engineer for any particular item of work.

12.2 MATERIALS

Stone shall be procured from approved sources. The stones to be used shall be from boulders or rock quarrying of granite, quartzite, or similar materials having a minimum specific gravity of 2.4. The compression strength shall be not less than 400kg/cm^2 unless otherwise approved by the Engineer. For use in masonry work, the stone shall be hard, tough compact and durable, free from faults and cleavage. Stone masonry shall be dressed to the size and shape as shown on the Drawings or as required by the Engineer to fit the size of the wall lining or slab in the configuration as shown on the Drawings.

12.2.1 Cement

Special cement shall conform to the applicable standards.

12.2.2 Sand

Sand for mortar used in the construction of stone masonry for walls, lining, paving etc. shall be furnished by the Contractor in accordance with the provision of and in complete conformity with the stipulations and requirements for sand specified in applicable standards.

12.2.3 Water

The water used for the preparation of mortar shall be free from objectionable quantities for silt, organic matter, alkali, sulphates and other salts and other impurities, and will be subject to approval of the Engineer.

12.2.4 Mortar Composition and Mixing

Mortar for stone masonry shall, except where otherwise directed by the Engineer, consist of one part Portland cement and three parts of damp loose mortar sand, by volume and sufficient water to produce the proper consistency for the intended use.

Methods and equipment used for mixing mortar shall be such as will accurately determine and control and amount of each separate ingredient entering into mortar and shall be subject to the approval of the Engineer. If a mixer is used, it shall be or approved design and the mixing time after all ingredients are in the mixer, except for the full amount of water, shall be not less than two minutes.

Motors shall be mixed only in quantities sufficient for immediate use, and all mortar not used within 30 minutes after adding to water to the mix shall be discarded. Re-tempering of mortar will not be allowed. Mixing troughs and pans shall be thoroughly cleaned and washed at the end of each day's work.

12.3 PLACING AND STONE MASONRY

Stone used in masonry shall be properly cleaned before placing and shall be approved by the Engineer. Stone shall not be placed during rains sufficiently heavy or prolonged to wash to mortar from the masonry. Mortar already spread which becomes diluted by rain shall be removed and replaced before continuing with the work. Loads shall not be allowed on the stone masonry. Mortar already spread which becomes diluted by rain shall be removed and allowed on the stone masonry

Division Chief

before it is fully set. Stone to be used in masonry with mortar joints shall be moistened with water from three to four hours before they are used, or by a method which will ensure that each stone is thoroughly and uniformly wetted. Stone masonry shall be placed on properly prepared and firm foundation and in accordance with the Drawings or directions of the Engineer. Foundations used shall be approved by the Engineer before placing the masonry. Walls shall be uncoarsed but shall include a bond stone of at least $0.3m^2$ area showing on the exposed face and continuous through the wall for every m^2 of projected face. Full mortar coverage shall be provided on all non-exposed stone faces.

Stone masonry constructed for a waterway shall be of the best standards of workmanship and objectionable matters in the masonry surface shall be removed by the at the expense of the Contractor. The smoothest practicable finished surface of the masonry will be required whenever it is a part of a waterway, if not otherwise directed by the Engineer.

12.4 POINTING OF STONE MASONRY

Where shown on the Drawings of directed by the engineer, the Contractor shall point masonry surface Mortar for pointing, except as otherwise directed by the Engineer, shall be of the same composition as used for placing the masonry. In preparation of the pointing work the joints at the exposed surface of stone masonry shall be raked out (before the mortar is set) or chiselled out.

The surface shall be cleaned by wire brush and shall be moistened subject to the Engineer's directions the pointing shall be carried out as follows:

Inside pointing shall consist of filling of joints to about 1 cm average depth from the face of stone.

Flat pointing shall consist of joints to about 1 cm and height not less than 2 cm height, above the face to stone.

Raised pointing shall consist of filling of joints to about 1 cm and height not less than 1cm height, above the face of stone.

After raking the joints shall be compressed with a printing too, All tooling of joints shall be done after the mortar has partially set but is still sufficiently plastic to bond. Stones with mortar voids visible beyond the depth of the raking shall be removed and re-laid with fresh mortar unless such voids can be completely filled by other methods as approved by the Engineer.

12.5 CURING AND REPAIR

Stone masonry including pointing shall be used by water curing or other acceptable methods as approved by the Engineer.

When curing by water the stone masonry shall be kept wet continuously for at least 4 days, unless otherwise specified by the Engineer. Water used for curing shall meet the requirements of the specification for water used for mortar.

If after the completion of any stone masonry is out of alignment or not level, or does not confirm to lines and grades shown on the Drawings, it shall be removed land replaced by the contractor at his expense, unless the Engineer grants permissions in writing to patch or replace part of the defective area to his satisfaction.

12.6 PLASTERING CEMENT MORTAR

The joints of the brickwork or stone shall be raked out to a depth of 12mm (1/2") and the surface wall shall be washed and cleaned and kept wet for two days before plastering.

The materials of mortar, cement and sand specified should be of standard specification. The Materials of mortar shall be first dry mixed by measuring with boxes to have the required production as specified and then water added slowly and gradually and mixed thoroughly.

Division Chief

The thickness of plastering shall be as specified usually 12mm (1/2") to ensure uniform thickness of plaster. Patches of 5mm x 15 mm (6") strips 1m (3") apart or 10mm (4") wide plaster shall be applied first at about 2m (6ft) apart to act as a guide, First mortar shall be dashed and pressed over the surface and the brought to a smooth and uniform surface by means of float and trowel. Wall plastering shall be started from top and worked down towards floor. Ceiling plastering shall be completed before starting or wall plaster. All corners and edges shall be rounded and protected from rain, sun, frost, etc.

12.7 MEASUREMENT AND PAYMENT

Stone masonry will be measured for payment by the cubic meter. Quantities for payment will be computed from the lines and dimension shown on the Drawings. Payment for stone masonry will be made at the unit price per cubic meter quoted therefore in Bill of Quantities, which price shall be full compensation for all costs in connection with stone masonry except that separate payment will be made for pointing of the masonry surface where required by the Engineer.

Pointing of stone masonry surface will be measured for payment by the square meter. Quantities for payment will be the square meters or overall (gross) will surface designated by the Engineer to have joint pointing.

Payment for pointing stone masonry surface will be made at the unit price per square meter quoted therefore in the Bill of Quantities.

Division Chief

13 CONSTRUCTION AND MAINTENANCE OF CONTRACTOR'S LABOUR CAMP AND SUPPLY OF WATER AND SURVEY CONSUMABLE DURING CONSTRUCTION

13.1 General

The Contractor shall construct all the temporary labor for construction works to the satisfaction of the Project Manager, and in a manner as to affect the least to the local environment. The camps shall be maintained till they are in use and cleanly removed after the works are completed. The item of work shall consist of the following activities.

A. Construction and maintenance of labor camps including temporary offices and store.
B. Removal of the Camps after the Works is completed.
C. Line clearance for initiating works including clearing of bushes and some trees if any
D. Arrangement of water for constructions as well as for drinking.
E. Procuring survey consumable such as wooden pegs.

13.2 Measurement and payment

Separate measurement for payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Bill of Quantities or incidental to the Project.

Division Chief

14 INSURANCE OF WORKS, DAMAGE OF PROPERTY, LOSS TO THIRD PARTY, AND ACCIDENT TO WORKMEN

14.1 General description

The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover as per the Conditions of Contract from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data 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 damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
D. Personal injury of death.

14.2 Measurement and payment

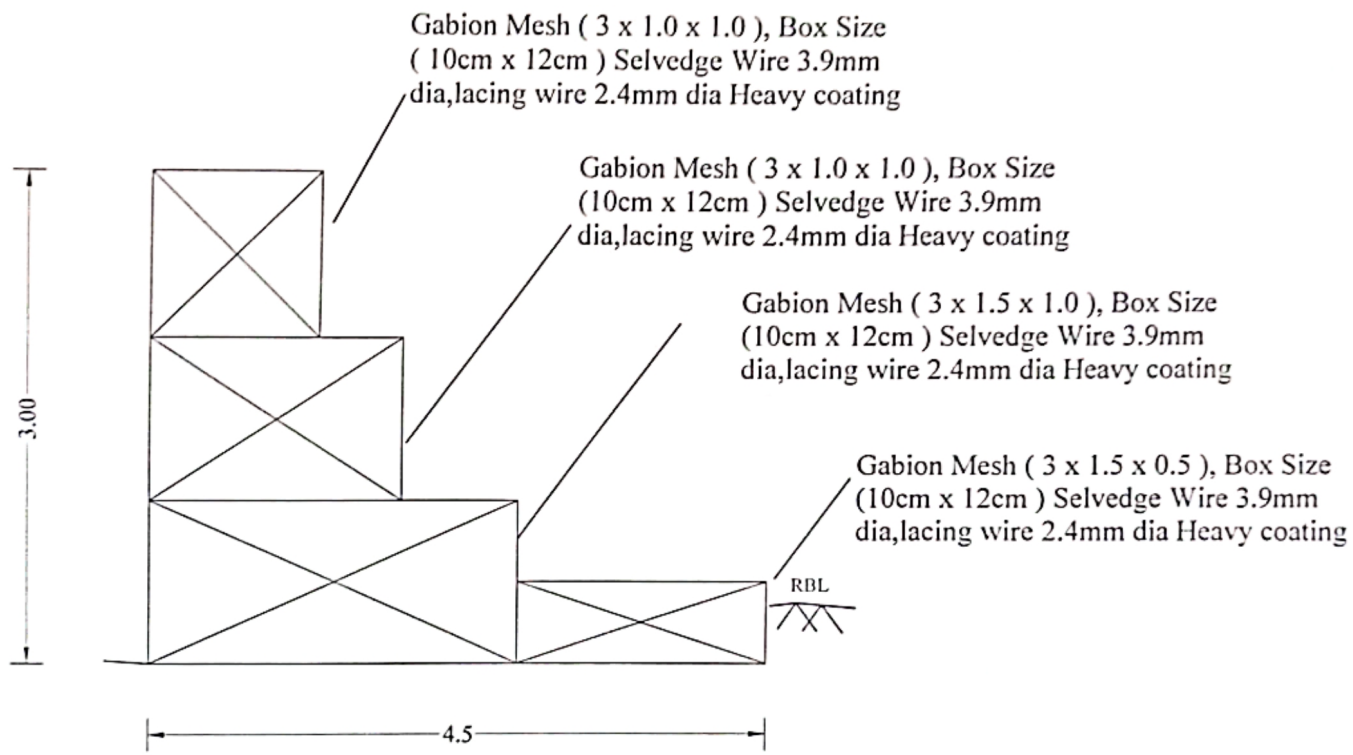
The Contractor shall produce the insurance policy from any insuring company operative and recognized within Nepal. The Contractor shall, immediately after securing the insurance policy (is) shall produce to the Engineer the original bills paid against the premiums. The Contractor shall be paid for insurance under Item as specified in BOQ in the following manner:

A. If the premium amount as per the original bills is more than the amount stated in the BOQ, the amount of the BOQ less any taxes, if applicable, shall be paid. Any amount in excess of BOQ amount shall be borne by the Contractor.
B. If the premium amount as per the bills is less than the amount stated in the BOQ less any taxes, if applicable, the amount of the bills, shall be paid.

Division Chief

Drawings

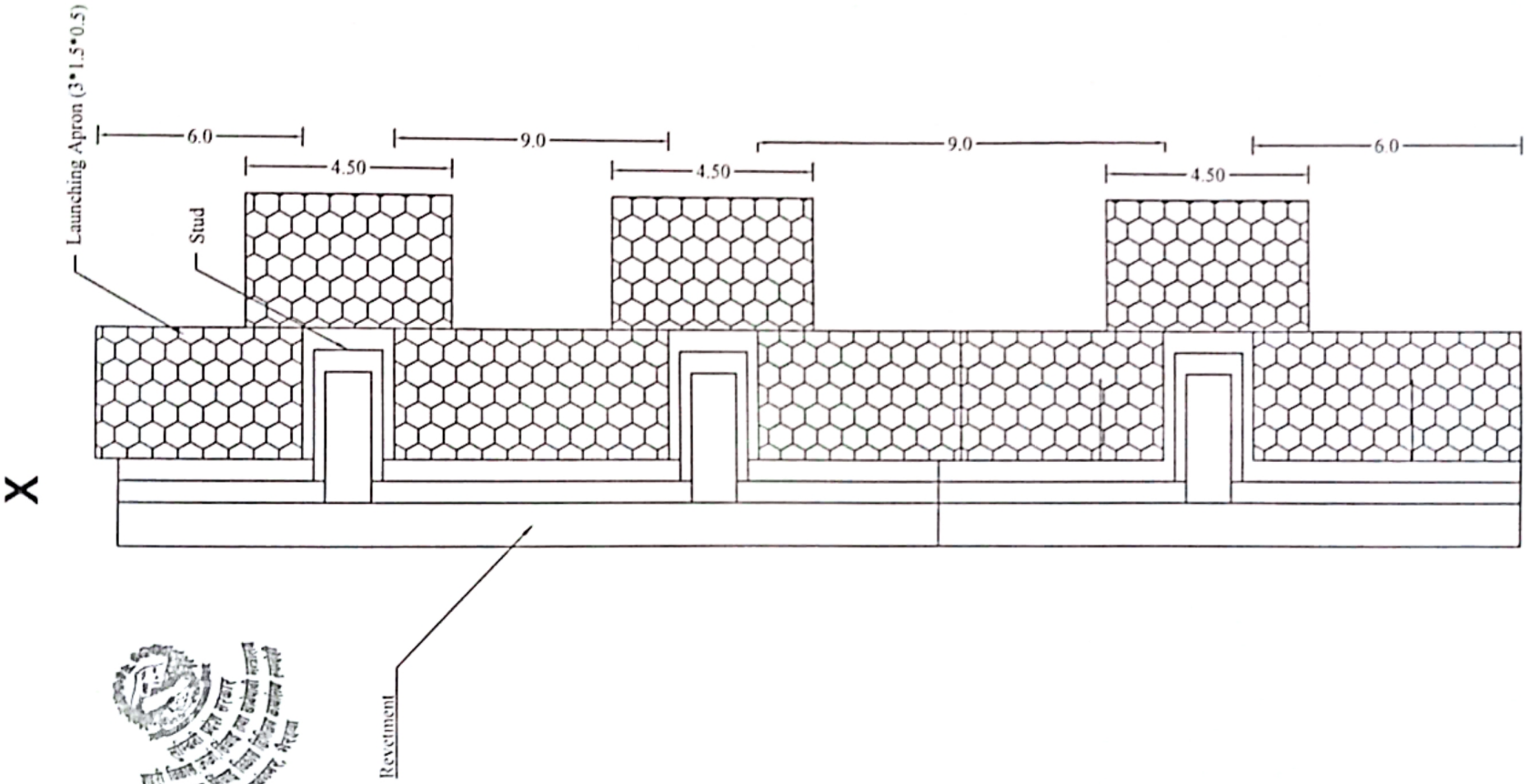
Division Chief



Bank Protection Works

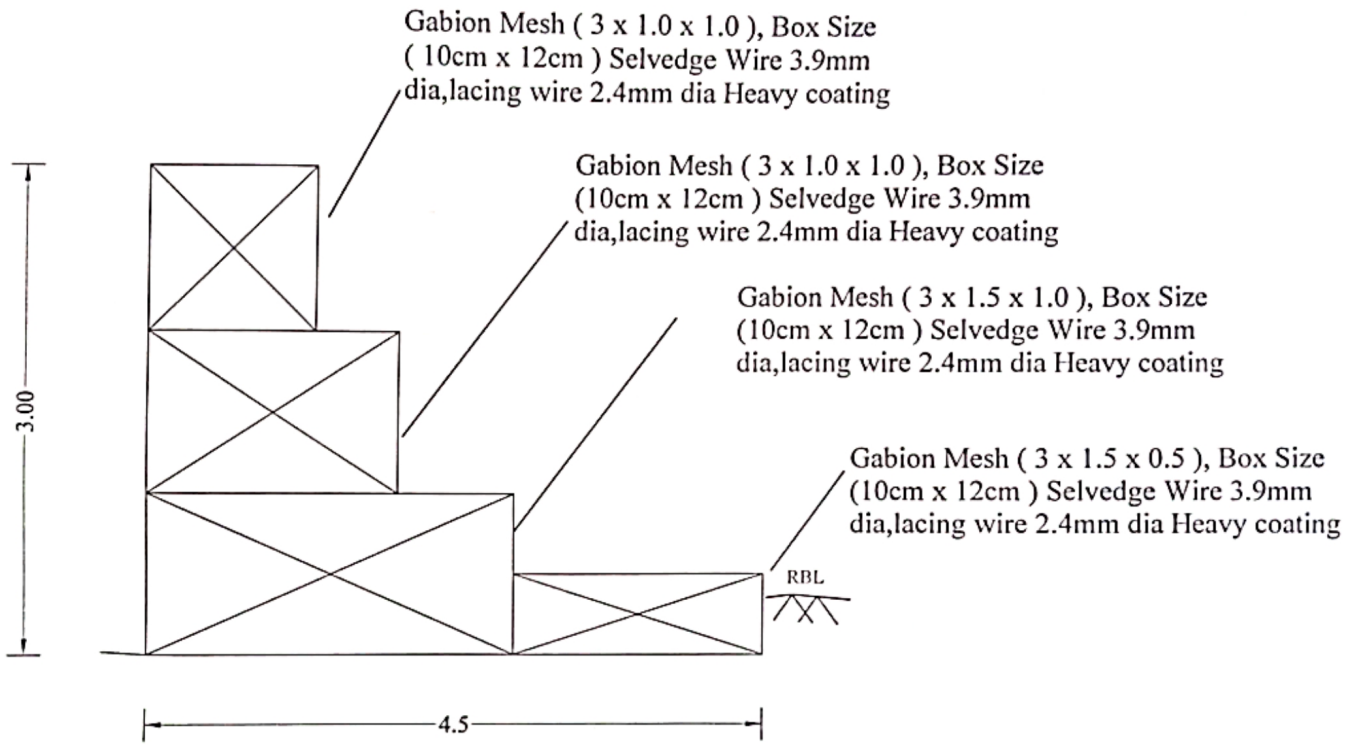
Water Resources and Irrigation Development Division Office Rupandehi	Project Name -पहेलाखोला बनकट्टी समावेसीटोल तटबन्ध कार्यसैनामैना ११	Drawn by Checked by Approved by	Signature	Scale :- As Specified in drawing Note - All Dimensions are in m unless otherwise specified	Drawing no. 01

Division Chief



LUMBINI PROVINCE GOVERNMENT MINISTRY OF URBAN DEVELOPMENT, ENERGY, IRRIGATION AND WATER SUPPLY**WATER RESOURCES & IRRIGATION DEVELOPMENT DIVISION OFFICE,** **RUPANDEHI**SIDDHARTHANAGAR, BHAIRAHAWA	पैनाखोलाको बाँध देखि १०० मिटर पश्चिम पुनर्स्थापन तटबन्ध बनकट्टीसेनानेता ११	DESIGNED BY: CHECKED BY: APPROVED BY:		Date: Drawing No. Sheet No.

Division Chief



Bank Protection Works

Water Resources and Irrigation Development Division Office Rupandehi	**Project Name** बनकट्टी खोला माझगाउँ पहिला खोलामा तटबन्ध कार्यसैनामैना ११		Signature	Scale :- **As Specified in drawing** Note - All Dimensions are in m unless otherwise specified.	Drawing no. 01
		Drawn by			
		Checked by			
		Approved by			

Division Chief

Supplementary Information

Division Chief

SECTION - VI

Bill of Quantities

Division Chief

Lumbini Province Government

Ministry of Urban Development, Energy, Irrigation and Water Supply

Water Resources & Irrigation Development Division Office, Rupandehi

Siddharthanagar, Bhairahawa

F/Y : 2083/084

Bill Of Quantity

Name of Project-:-पैलाखोलाको बाँध देखि १०० मिटर पश्चिम पुलसम्म तटबन्ध बनकट्टी,पहेलाखोला बनकट्टी समावेसीटोल तटबन्ध कार्य,बनकट्टी खोला माझगाउँ पहिला खोलामा तटबन्ध

Contract ID-WRIDDORUP/NCB-02/083-84

Location : सैनामैना ११ रुपन्देही

Name of Work : Construction of Gabion Works

S.N	Description of works	Unit	Quantity	Rate		Amount	Remarks
				In Figure	In words		
A	**Provisional Sum**						
1	Lab test report as per specification	PS	1.00	6,000.00	Rupess Six Thousand Only	6,000.00	
2	Insurance of Works, Plants and Materials; Insurance against accident of Workers and Staffs; and Third Party Insurance	PS	1.00	26,000.00	Rupess Twenty Six Thousand Only	26,000.00	
3	Preparation of as-built drawings of construction of different structures, after completion of the project as per specification and instruction of the Engineer.	PS	1.00	3,000.00	RupessThreeThousand Only	3,000.00	
	Sub Total A (With VAT)					**35,000.00**	
B	**Civil Works**						
1	Excavation of foundation including disposal all complete as per instruction all complete.	m3	305.10				
2	Earthwork in backfilling all complete as per instruction all complete.	m3	217.12				
3	Construction of gabion box ,placing in position, filling boulders , tying by tightening wire closing from the top all complete.	m3	610.75				

Division Chief

Lumbini Province Government

Ministry of Urban Development, Energy, Irrigation and Water Supply

Water Resources & Irrigation Development Division Office, Rupandehi

Siddharthanagar, Bhairahawa

F/Y : 2083/084

Bill Of Quantity

Name of Project-:-पैलाखोलाको बाँध देखि १०० मिटर पश्चिम पुलसम्म तटबन्ध बनकट्टी,पहेलाखोला बनकट्टी समावेसीटोल तटबन्ध कार्य,बनकट्टी खोला माझगाउँ पहिला खोलामा तटबन्ध

Contract ID-WRIDDORUP/NCB-02/083-84

Location : सैनामैना ११ रुपन्देही

Name of Work : Construction of Gabion Works

S.N	Description of works	Unit	Quantity	Rate		Amount	Remarks
				In Figure	In words		
4	Supply machine made gabion box by including necessary lacing wire for different box size (Hexagonal mesh of 10cm*12cm, mesh wire 3mm dia, selvage wire 3.9mm dia, lacing wire 2.4mm dia., heavy zinc coating) with transportation all complete as per instruction.	m2	3,375.00				
5	Supplying and laying of geo-textile filter material as per specification all complete as per instruction.	m2	333.00				
	Sub Total B						
	VAT @13% of B						
	Sub Total (B) With VAT						
	Total (A+B) With VAT						

Name of Contractor/Firm:

Seal:

Signature:

Name of Division Chief: .

Signature: .

Division Chief

PART-III CONDITIONS OF CONTRACT AND CONTRACT FORMS

Division Chief

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Division Chief

Section VII: General Conditions of Contract

Water Resource and Irrigation Development Division Office, Rupandehi

[Name of Contract: Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi

and

Contract Identification No: WRIDDORUP/NCB-02/2083-084]

Division Chief

General Conditions of Contract

This Section provides the General Conditions of Contract that will apply to the Contract for which the Biding document is issued.

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) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid. (d) **Compensation Events** are those defined in GCC 50 hereunder. (e) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 68.1. (f) 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. (g)The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer. (h)The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer. (i)The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract. (j) **Days** are calendar days; months are calendar-months. (k) **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant. (l) A **Defect** is any part of the Works not completed in accordance with the Contract. (m) The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor. (n) The **Defects Liability Period** is the period calculated from the Completion Date where the Contractor remains responsible for remedying defects. (o) **Drawings** include calculations and other information provided or approved by the Project Manager for the execution of the Contract. (p) The **Employer** is the party who employs the Contractor to carry out the Works, as **specified in the SCC**. (q) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

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	(r) **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. (s) The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance. (t) **In writing** or **written** means hand written, type written, printed or electronically made, and resulting in permanent record. (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 (aa) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function. (bb) The **Project Manager** is the person **named in the SCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract. (cc) **Retention Money** means the aggregate of all monies retained by the Employer pursuant to GCC 54.1. (dd) **Schedules** means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bids, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices. (ee) The **Site** is the area defined **as such in the SCC.** (ff) **Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site. (gg) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager. (hh) The **Start Date** is given i**n 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. (ii) 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. (jj) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

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	(kk) A **Variation** is an instruction given by the Project Manager which varies the Works (ll) 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) Letter of 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**.
	3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer's country when (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, the Employer's Country prohibits any import of goods from, or any payments to, a particular country, person, or entity. Where the Employer's country prohibits payments to a particular firm or for particular goods by such an act of compliance, that firm may be excluded.
4.Contract Agreement	4.1 The Parties shall enter into a Contract Agreement within 15 days after the Contractor receives the Letter of Acceptance, unless the Special Conditions establish otherwise. The Contract Agreement shall be based upon the attached Contract forms in Section IX.

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	4.2 Without altering the basic nature or scope of work, the contract may be amended upon mutual written consent as per prevailing Public Procurement Law.
5. Assignment	5.1 Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party (a) may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party; and (b) may, as security in favor of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.
6. Care and Supply of Documents	6.1 The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, one copy of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
	6.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.
	6.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.
	6.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.
7. Confidential Details	7.1 The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.
	7.2 Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.
	7.3 Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this Clause.

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8. Compliance with Laws	8.1 The Contractor shall, in performing the Contract, comply with applicable Laws of Nepal.
9. Joint and Several Liability	9.1 If the Contractor is a joint venture of two or more entities , all such entities shall be jointly and severally liable to the Employer for the fulfillment of the provisions of the Contract, and shall designate one of such persons to act as a leader with authority to bind the joint venture. **The contractor shall not handover the responsibility of the contract to any one member or some members of Joint Venture or any other parties, not involved in the contract.** The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.
10. Project Manager's Decisions	10.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.
11. Delegation	11.1 The Project Manager may delegate any of his duties and responsibilities to other people after notifying the Contractor, and may cancel any delegation after notifying the Contractor.
12. Communications	12.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices and requests, these communications shall be: (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as **stated in the SCC**; and (b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract. However: (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued. Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed.
	12.2 A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.
13. Subcontracting	13.1 **For GON Funded:** A list of approved Subcontractors including its value/works is included as Article 2 (k) of contract Agreement. Approval by the Employer for any of the Subcontractors shall not relieve the Contractor from any of its obligations, duties, or responsibilities under the contract. **For DP Funded:** The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in

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	writing. Subcontracting shall not alter the Contractor's obligations. Bidders may propose subcontracting up to the percentage of total value of contracts as specified in the SCC. The Sub contractor shall meet the qualification requirement as specified **in SCC.** 13.2 The contractor shall give prior notice to the Employer clearly specifying the nature, scope, and responsibilities of the work to be performed, to engage other subcontractors, material suppliers, equipment suppliers, service providers, or other persons or entities during the implementation of the contract. 13.3 Before notifying the Employer as per GCC 13.2, the contractor shall enter into a written agreement with the subcontractor, material suppliers, equipment suppliers, service providers, or other persons or entities clearly specifying the scope of work, responsibilities, quality requirements, duration, payment terms, security, labor-related obligations, and conditions relating to performance of the work. 13.3 Any subcontracting arrangement made in accordance with GCC 13.2 shall not relieve the Contractor of any of its obligations or liabilities under the Contract. 13.4 The contractor shall provide the Employer with details of the payments made to the subcontractor, material suppliers, equipment suppliers, service providers, or other persons or entities engaged under GCC 13.1 and/or GCC 13.2. 13.5 If the contractor is found not to have made payment to the subcontractor, material suppliers, equipment suppliers, service providers, or other persons or entities engaged under GCC 13.1 and/or GCC 13.2 in accordance with the terms of the agreement, the Employer may determine the amount payable to such subcontractor, material suppliers, equipment suppliers, service providers, or other persons or entities and make payment to them from any remaining dues to be paid to the contractor, retention money, or forfeited performance security.
14. Other Contractors	14.1 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
15 Personnel and Equipment	15.1 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.
	15.2 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

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	with the work in the Contract.
	15.3 If the Employer, Project Manager, or Contractor determines, that any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or other prohibited practices during the execution of the Works, then that employee shall be removed in accordance with Clause 15.2 above.
16. Employer's and Contractor's Risk	16.1 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.
17. Employer's Risks	17.1 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.
	17.2 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.
18. Contractor's Risks	18.1 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.
19. Insurance	19.1 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;

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	(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.
	19.2 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.
	19.3 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.
	19.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.
	19.5 Both parties shall comply with any conditions of the insurance policies.
20. Site Investigation Reports	20.1 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 Contractor.
21. Contractor to Construct the Works	21.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
22. The Works to Be Completed within intended Completion Date	22.1 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 intended Completion Date.
23. Design by contractor and Approval by the Project Manager	23.1 The contractor shall be responsible for the design of permanent works as **specified in SCC**.
	23.2 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.
	23.3 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.

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	23.4 The Project Manager's approval shall not alter the Contractor's responsibility for design of temporary works.
24. Safety, Security and Protection of the Environment	24.1 The Contractor shall, throughout the execution, and completion of the works and remedying of any defects therein: a. Have full regard for the safety of all persons entitled to be upon the site and keep the site (so as the same is under his control) and the works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons. b. Provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when necessary or required by the Project Manager or by any duly constituted authority, for the protection of the Works of for the safety and convenience of the public or others. c. Take all reasonable steps to protect the environment on and off the site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. d. Ensure that any cut or fill slopes are planted in grass or other plant cover as soon as possible to protect them from erosion. e. Any spoil or material removed from drains shall be disposed of to designated stable tipping areas as directed by the Project Manager. f. Shall not use fuel wood as a means of heating during the processing or preparation of any materials forming part of the works. g. The Project Manager shall have the power to disallow any working practice or activity of the Contractor or direct that such practices or activities be modified should the Project Manager consider, on the advice of the relevant Government Departments, that the practices or activities will be harmful to wildlife. h. Provide on the Site such lifesaving apparatus as may be appropriate and an adequate and easily accessible first aid outfit or such outfits as may be required by any government ordinance, factory act, etc., subsequently published and amended from time to time.
	24.2 The Contractor shall comply with the Employer's Occupational Health and Safety (OHS) Policy, Guideline and/or Operating Manual, if any, **as specified in the SCC.**
25. Discoveries	25.1 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.
26. Possession of the Site	26.1 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.

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27. Access to the Site	27.1 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.
28.Instructions, Inspections and Audits	28.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
	28.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub consultants to keep accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
	28.3 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 73.2 which provides, inter alia, that acts intended to materially impede the exercise of the GoN's/DP's inspection and audit rights provided for under this Sub-Clause constitute a obstructive practice subject to contract termination.
29.Dispute Settlement	29.1 The Employer and the Contractor shall attempt to settle amicably by direct negotiation any disagreement or dispute arising between them under or in connection with the Contract.
	29.2 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.
30. Procedures for Disputes	30.1 In case of arbitration, the arbitration shall be conducted in accordance with procedures in accordance with law of Nepal at the place **given in the SCC**.
B. Staff and Labor	
31. Forced Labor	31.1 The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor–contracting arrangements.
32. Child Labor	32.1 The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where national laws have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.
33.Non-discrimination and Equal	33.1 The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment

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Opportunity	relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where national law provides for non-discrimination in employment, the Contractor shall comply with national law. When national laws are silent on nondiscrimination in employment, the Contractor shall meet this Sub clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination.
B1. Time Control	
34. Program	34.1 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.
	34.2 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.
	34.3 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.
	34.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.
35. Extension of the Intended Completion Date	35.1 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.
	35.2 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 21 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. Along with full supporting information, the contractor shall also submit a revised work schedule and ensure that the Performance Security, Insurance, and Advance Payment

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	Security remain valid. Within fifteen (15) days of the receipt of Letter of Extension of Intended Completion Date from the Employer, the contractor shall submit Performance Security, Advanced Payment Guarantee (if any) and Insurance Policy documents as required with extended validity.
	35.3 If the contractor fails to submit Performance Security, Advanced Payment Guarantee (if any) and Insurance Policy documents, as required with extended validity within the prescribed time as per ITB 35.2, the Contractor shall pay fine at the rate of 0.01% of the final contract price (without VAT but including PS) per day for a maximum of fifteen (15) days. The Employer may deduct the fine from payments due to the Contractor.
36. Acceleration	36.1 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.
	36.2 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.
37. Delays Ordered by the Project Manager	37.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
38.Management Meetings	38.1 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.
	38.2 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.
39. Early Warning	39.1 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.
	39.2 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.

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C. Quality Control	
40. Identifying Defects	40.1 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.
41. Tests	41.1 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.
42.Correction of Defects	42.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at issuance of taking over certificate pursuant to GCC clause 69.2, and is **defined in the SCC**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
	42.2 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.
43.Uncorrected Defects	43.1 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	
44. Contract Price	44.1 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.
	44.2 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.
45. Changes in the Contract Price	45.1 In the case of an Unit Rate contract: (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 2 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change. (b) 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.
	45.2 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

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	when the Contractor makes such changes to the Activity Schedule.
46. Variations	46.1 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.
	46.2 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.
	46.3 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.
	46.4 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.
	46.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
	46.6 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 45.1** or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.
47.Cash Flow Forecasts	47.1 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.
48.Payment Certificates	48.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
	48.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor within 30 days of submission by contractor.
	48.3 The value of work executed shall be determined by the Project Manager.
	48.4 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

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	comprise the value of completed activities in the Activity Schedule.
	48.5 The value of work executed shall include the valuation of Variations and Compensation Events.
	48.6 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.
49. Payments	49.1 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.
	49.2 If an amount certified is increased in a later certificate or as a result of an award by 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.
	49.3 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.
50.Compensation Events	50.1 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 26.1. (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

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	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.
	50.2 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.
	50.3 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.
	50.4 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.
51. Tax	51.1 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 53.
52. Currency	52.1 The currency of Contracts shall be Nepalese Rupees.
53.Price Adjustment	53.1 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.
	53.2 Adjustment Formulae[5]: 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

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

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	the work carried out in the subject month, determined in accordance with Clause 49; *A* is a constant, specified in the Bidding Forms- Table of Price Adjustment data, representing the nonadjustable portion in contractual payments;[6]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 53.4, 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 53.4
	53.3 Sources of Indices and Weightings: The sources of indices shall be those listed in the Bidding Forms- Table of Price Adjustment data, as approved by the Project Manager and stated in SCC. Indices shall be appropriate for their purpose and shall relate to the Contractor's proposed source of supply of inputs on the basis of which his Contract shall have been computed. As the proposed basis for price adjustment, the Contractor shall have submitted with his bid the tabulation of Weightings and Source of Indices in the Bidding Forms, which shall be subject to approval by the Project Manager.
	53.4 Base, Current and Provisional Indices: The base cost indices or prices shall be those prevailing on the day 30 days prior to the latest date for submission of bids. Current indices or prices shall be those prevailing on the day 30 days prior to the last day of the period to which a particular Interim Payment Certificate is related. If at any time the current indices are not available, provisional indices as determined by the Project Manager will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available.
	53.5 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 46 or for any other reason.
	53.6 Where, price adjustment provision is not applicable pursuant to Sub-clause 53.1 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

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

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	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**..
	53.7 The Price Adjustment amount shall be limited to a maximum of the initial Contract Amount **as specified in the SCC**.
	53.8 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.
54. Retention	54.1 The Employer shall retain from each payment due to theContractor the proportion **stated in the SCC** until Completion of the whole of the Works.
	54.2 Upon the issue of a Defects Liability Certificate by the Project Manager, in accordance with GCC 70.1, half the total amount retained shall be repaid to the Contractor and half when the Contractor has submitted the evidence of submission of tax return to the concerned Internal Revenue Office.
	54.3 The Contractor may substitute retention money with an unconditional bank guarantee issued from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law if: (a) at least eighty (80) percent of the whole works have been completed, (b) progress of the works is satisfactory in accordance with the Contract as per approved work schedule, and (c) it can be assured that the works can be completed at the intended completion date. The validity of the bank guarantee under this sub-clause shall be at least 30 days

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	beyond the end of Defect Liability Period.
	54.4 If retention money is substituted by bank guarantee in accordance with clause 54.3, the bank guarantee shall be submitted either using the Retention Money Security Form included in Section X (Contract Forms) or in another Form acceptable to the employer. The validity of the bank guarantee shall be at least one month more than the end of defect liability period.
55.Liquidated Damages	55.1 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.
	55.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC 49.
56. Bonus	56.1 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.
57.Advance Payment	57.1 Unless otherwise **stated in SCC,** the Employer shall make advance payment to the Contractor of the amounts stated in the SCC, in two equal installments by the date **stated in the SCC**, against provision by the Contractor of an unconditional bank guarantee from Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law in a form 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. The validity of the bank guarantee under this sub-clause shall be at least 30 days beyond the end of intended completion date. The contractor shall submit the list of activities for which the Advance Payment for mobilization to be used along with their time schedules.
	57.2 The Contractor is to use the advance payment only to pay for the purpose of construction site preparation, establishment of temporary camp facilities, construction of workers' housing, mobilization of labors, materials or equipment etc required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying

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	copies of invoices or other documents to the Project Manager.
	57.3 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.
	57.4 If the advance provided under GCC 57.1 is not repaid due to non-performance of the works under the contract, by the contractor within the time period specified in the contract, the Employer shall recover the advance by enforcing the bank guarantee as provided under GCC 57.1, and shall also recover interest on the advance amount from the contractor at a rate **stated in SCC.**
58. Securities	58.1 The Performance Security, including any additional security required as per ITB 29.5, 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 Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law in Nepal 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, and denominated in Nepalese Rupees. The Performance Security shall be valid until a date 30 days beyond the end of the Defect Liability Period. Any additional performance security required as per ITB 29.5 shall be valid until a date 30 days beyond the end of the intended completion date.
	58.2 The performance security issued by any foreign Bank outside Nepal must be counter guaranteed by a Commercial Bank or Financial Institution eligible to issue Bank Guarantee as per prevailing Law in Nepal.
59. Day works	59.1 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.
	59.2 All work to be paid for as Day works shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.
	59.3 The Contractor shall be paid for Day works subject to obtaining signed Day works forms.
60. Cost of Repairs	60.1 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.
F. Force Majeure	
61.Definition of Force	61.1 In this Clause, "Force Majeure" means an exceptional event or circumstance, (a) which is beyond a Party's control;

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Majeure	(b) which such Party could not reasonably have provided against before entering into the Contract; (c) which, having arisen, such Party could not reasonably have avoided or overcome; and (d) which is not substantially attributable to the other Party.
	61.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied: (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies; (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war; (c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel; (d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity; and (e) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.
62. Notice of Force Majeure	62.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
	62.2 The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.
	62.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.
63. Duty to Minimize Delay	63.1 Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Contract as a result of Force Majeure.
	63.2 A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.
64. Consequences of Force	64.1 If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GCC 62, and suffers delay and/or incurs Cost by reason of such Force Majeure, the

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Majeure	Contractor shall be entitled subject to GCC 30 to (a) an extension of time for any such delay, if completion is or will be delayed, under GCC35 ; and (b) if the event or circumstance is of the kind described in sub-paragraphs (a) to (d) of GCC 61.2 and, in the case of subparagraphs (b) to (d), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GCC 19.
	64.2 After receiving this notice, the Project Manager shall proceed in accordance with GCC 10 to agree or determine these matters.
65. Force Majeure Affecting Subcontract or	65.1 If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's nonperformance or entitle him to relief under this Clause.
66.Optional Termination, Payment and Release	66.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 90 days by reason of Force Majeure of which notice has been given under GCC 62, or for multiple periods which total more than 150 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with GCC 72.5.
	66.2 Upon such termination, the Project Manager shall determine the value of the work done and issue a Payment Certificate, which shall include (a) the amounts payable for any work carried out for which a price is stated in the Contract; (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal; (c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works; (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and (e) the Cost of repatriation of the Contractor's staff and labor employed wholly in connection with the Works at the date of termination.

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67. Release from Performance	67.1 Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises, which makes it impossible or unlawful for either or both Parties to fulfill its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance, (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract; and (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under GCC 66 if the Contract had been terminated under GCC 66.
G. Finishing the Contract	
68. Completion	68.1 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.
	68.2 In addition to the other provisions, before acceptance of the completed works, Employer shall verify and assure that such works are within the set objective, quality and appropriate to operate and use.
69. Taking Over	69.1 In the contractor's Opinion, if the works are complete and ready for taking over, the contractor may apply by notice to the Project Manager for a Taking-Over Certificate. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section.
	69.2 The Project Manager shall, within 30 days after receiving the Contractor's application: (a) issue the Taking-Over Certificate to the Contractor if physical progress of works is at least ninety (90) percent in accordance with the Contract except for any minor outstanding work and defects (as listed in the Taking-Over Certificate) which will not substantially affect the use of the Works or Section for their intended purpose (either until or whilst this work is completed and these defects are remedied); or (b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.
	69.3 If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 30 days, and if the Works or Section (as the case may be) are substantially completed in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

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70. Final Account	70.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 60 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 60 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
71. Operating and Maintenance Manuals	71.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the **dates stated in the SCC**.
	71.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the SCC** pursuant to **GCC 71.1,** or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.
72. Termination	72.1 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.
	72.2 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
	72.3 Fundamental breaches of Contract shall include, but shall not be limited to, the following: a) the Contractor uses the advance payment for matters other than the contractual obligations, b) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager; c) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days; d) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation. e) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 90 days of the date of the Project Manager's certificate; f) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager; g) the Project Manager gives two consecutive Notices to update the Program and accelerate the works to ensure compliance with GCC Sub clause 22.1 and the Contractor fails to update the Program and demonstrate acceleration

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	of the works within a reasonable period of time determined by the Project Manager; h)the Contractor does not maintain a Security, which is required; i) 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**; and j) 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 73.1. k)The Contractor fails to submit Performance Security, Advanced Payment Guarantee (if any) and Insurance Policy documents with extended validity within the time prescribed pursuant to GCC 35.3.
	72.4 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 72.3 above, the Project Manager shall decide whether the breach is fundamental or not.
	72.5 Notwithstanding the above, the Employer may terminate the Contract for convenience.
	72.5 Notwithstanding the above, the Employer may terminate the Contract for convenience. 72.6 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.
73.Fraud and Corruption	73.1 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.
	73.2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with GCC Clause 15. For the purposes of this GCC 73; (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party. (ii) "fraudulent practice"[5] 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"[6] is an arrangement between two or more parties designed to achieve an improper purpose, including to influence

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	improperly the actions of another party; (iv) "coercive practice"[7] 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 or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (bb) acts intended to materially impede the exercise of the GON's/DP's inspection and audit rights provided for under GCC28.3.
	73.3 The contractor shall be prosecuted for offenses under prevailing criminal laws, if the contractor: (i) Misuses the Advance Payment or payments received from the Employer; (ii) Receives payment by submitting false information or documents; (iii) Abandons the works before completion; (iv) Commits a serious violation of the contract; or (v) Causes loss or damage to the Employer.
74. Black Listing	74.1 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 or contractor for its conduct for a period of one (1) to three (3) years on the following grounds and seriousness of the act committed by the bidder or contractor: (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. (b) If convicted from a court of law in a criminal offense liable to be disqualified for taking part in procurement contract, (c) If it is established that the Contractor has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
75. Payment upon Termination	75.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
	75.2 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

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	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.
	75.3 If the Contract is terminated because of fundamental breach of Contract or for any other fault by the Contractor, the Employer may: (a) withhold further payments to the Contractor until the costs of design, execution, completion and remedying of any defects, liquidated damages (if any), and all other costs incurred by the Employer, have been established, and/or (b) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the Works, after allowing for any sum due to the Contractor, as Government dues. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor. (c) forfeit the Performance Security. 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.
76. Property	76.1 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.
77.Release from Performance	77.1 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.
78. Suspension of DP Loan/Credit/ Grant	78.1 In the event that the DP 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 DP's suspension notice; and b. if the Contractor has not received sums due him within the 30 days for payment provided for in GCC 49.1, the Contractor may immediately issue a 15-day termination notice.
79. Eligibility	79.1 The Contractor shall have the nationality of an eligible country as specified in Section V of the bidding document. The Contractor shall be deemed to have the nationality of a country if the Contractor 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 subcontractors or suppliers for any part of the Contract including related services.
	79.2 The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries **as specified in SCC** and all expenditures under the Contract will be limited to such materials, equipment,

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	and services. At the Employer's request, the Contractor may be required to provide evidence of the origin of materials, equipment, and services.
	79.3 For purposes of GCC 79.2, "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.
80.ProjectManager's Duties and Authorities	80.1 The Project Manager's duties and authorities are restricted to the extent as **stated in the SCC**.
81.Quarries and Spoil Dumps	81.1 Any quarry operated as part of this Contract shall be maintained and left in a stable condition without steep slopes and be either refilled or drained and be landscaped by appropriate planting. Rock or gravel taken from a river shall be removed over some distance so as to limit the depth of material removed at any one location, not disrupt the river flow or damage or undermine the river banks. The Contractor shall not deposit excavated material on land in Government or private ownership except as directed by the Project Manager in writing or by permission in writing of the authority responsible for such land in Government ownership, or of the owner or responsible representative of the owner of such land in private ownership, and only then in those places and under such conditions as the authority, owner or responsible representative may prescribe.
82. Local Taxation	82.1 The prices bid 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.
83. Value Added Tax	83.1 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.
84. Income Taxes on Staff	84.1 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.
	84.2 The issue of the Final Account Certificate pursuant to clause GCC 70 shall be made only upon submittal by the Contractor of a certificate of income tax clearance from the Government of Nepal.
85. Duties,	85.1 Any element of royalty, duty or tax in the price of any goods including fuel oil, and

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Taxes and Royalties	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.
	85.2 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.
	85.3 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 concerned Local Government (LG) 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 concerned Local Government (LG)
86. Member of Government , etc, not Personally Liable	86.1 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.
87. Approval of Use of Explosives	87.1 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.
88 Compliance with Regulations for Explosives	88.1 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.
89. Permission for Blasting	89.1 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.
90.Records of Explosives	90.1 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.
91. Traffic	91.1 The Contractor shall include the necessary safety procedures regarding and pedestrian traffic diversion that is needed in execution of the works. The

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Diversion	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.
92. Social Security Fund	92.1 The contractor shall enroll the laborers, employees, or other workforce engaged in such work in the Social Security Fund in accordance with prevailing laws. 92.2 The contractor shall be responsible to disburse the remuneration, benefits, and other payments of the laborers, employees, or workforce into the bank account of the concerned individual. 92.3 The contractor shall be responsible for ensuring that the required work permit has been obtained in accordance with prevailing laws in respect of foreign personnel.

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Section VIII: Special Conditions of Contract

Water Resource and Irrigation Development Division Office, Rupandehi

[Name of Contract: Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi

and

Contract Identification No: WRIDDORUP/NCB-02/2083-084]

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Special Conditions of Contract

A. General	
GCC 1.1 (p)	The Employer is ***Water Resource and Irrigation Development Division Office, Rupandehi.***
GCC 1.1 (u)	The Intended Completion Date for the whole of the Works shall be: ***2084/01/15 BS***
GCC 1.1(bb) & GCC 10.1	The Project Manager is ***Division Chief.*** The Project Manager and Engineer are synonyms.
GCC 1.1 (ee)	The Site is located at ***Sainamaina-11, Rupandehi.***
GCC 1.1 (hh)	The Start Date shall be **7 days of date of agreement.**
GCC 1.1 (ll)	The Works consist of Construction of Gabion Protection Works of Bankatti Khola Majhgaun Pahila Kholama Tatbandh, Paila Kholako Bandh dekhi tal 100m Tatbandh Bankatti and Panhela Khola Bankatti Samabesitol Tatbandh Kaarya, Sainamaina-11, Rupandehi
GCC 2.2	Sectional Completions are: ***Not Applicable***
GCC 2.3 (i)	The following documents also form part of the Contract: ***Not Applicable***
GCC 3.1	The language of the contract is **ENGLISH/NEPALI** The law that applies to the Contract is the law of NEPAL
GCC 11.1	The Project Manager ***"may"*** delegate any of his duties and responsibilities.
GCC 12.1 (a)	The agreed electronic transmission shall be: ***[Employer's Email Address: widd6.rupandehi@gmail.com]*** ***[Contractor's Email Address: ……]***
GCC 14.1	Schedule of other contractors: ***Not Applicable***
GCC 19.1	The minimum insurance amounts and deductibles shall be: 1. The minimum cover for loss of or damage to the Works, Plant and Materials is: **115 %** of the Contract Amount. 2. The maximum deductible for insurance of the Works and of Plant and Materials is: ***[10% of sum insured].*** 3. The minimum cover for loss or damage to immovable Equipment/plants is: ***100% (i.e Replacement Cost)*** 4. The maximum deductible for insurance of immovable Equipment/plant is: ***[10% of sum***

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	insured]. 5. The minimum cover for loss of or damage to other property is: ***[50,000.00]*** with unlimited number of occurrences 6. The maximum deductible for insurance of other property is: ***[10% of sum insured].*** 7. The minimum cover for personal injury or death insurance i. for the Contractor's employees is that specified in the Labor act of Nepal and ii. for other people is***: [1 million]*** with an unlimited number of occurrences
GCC 20.1	Site Investigation Reports are: ***Not Applicable***
GCC 23.1	The following shall be designed by the Contractor: ***Temporary Works.***
GCC 24.2	***As per prevailing Rules and Regulations.***
GCC 26.1	The Site Possession Date(s) shall be: ***the day after the Work Order.***
GCC 30.1	The place of arbitration shall be: ***NEPCA***
C. Time Control	
GCC 34.1	The Contractor shall submit for approval a Program for the Works within ***30*** days from the date of the Letter of Acceptance.
GCC 34.3	The period between Program updates is ***60*** days. The amount to be withheld for late submission of an updated Program is ***50,000.00***
D. Quality Control	
GCC 42.1	The Defects Liability Period is: ***365*** days.
E. Cost Control	
GCC 49.1	***Prevailing Interest Rate: 0%***
GCC 53.1	The Contract ***is not*** subject to price adjustment, and the following information regarding coefficients ***does not*** apply.
GCC 53.6	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 Price Bid which is approved by the Project manager and attached as Annex-1.
GCC 53.7	The Price Adjustment amount shall be limited to a maximum of : ***Not Applicable***
GCC 54.1	The proportion of payments retained is: 5 (five) percent.
GCC 55.1	The liquidated damages for the whole of the Works are 0.05 Percent of the final Contract Price

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	(without VAT but including PS) per day. The maximum amount of liquidated damages for the whole of the Works is 10 Percent of the final Contract Price (without VAT but including PS).
GCC 56.1	The provision of bonus ***Not Applicable*** in the contract.
GCC 57.1	The provision of Advance Payments ***Applicable*** in the contract. If Applicable, the Advance Payments shall be: ***20 percent of initial contract amount (without VAT but including PS)]*** and shall be paid in two equal installments and to the Contractor. ***[First installment on submission of APG after contract agreement and second installment on the commencement of work, collection of construction material at site.]***
GCC 57.3	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 ***40%*** 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 price.
GCC 57.4	Recover interest on the advance amount from the Contractor should be at a rate of **10 %**.
GCC 58.1	The Performance Security amount is: **ITB%**
G. Finishing the Contract	
GCC 71.1	The date by which operating and maintenance manuals are required is; ***Not Applicable***
GCC 71.2	The date by which "as built" drawings are required is: ***30 days after work acceptance date.*** The amount to be withheld for failing to produce "as built" drawings and/or Operating and maintenance manuals is: **NRs. 20,0000**
GCC 72.3 (i)	The maximum number of days is: **200**
GCC 79.2	For GoN funded: For the purpose of Country of Origin: "all Countries"
GCC 80	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 13; b. Certifying additional costs determined under General Conditions of Contract Clause 50; 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 35; e. Issuing a Variation under General Conditions of Contract Clause 1 and 46, 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 45;

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Section IX: Contract Forms

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

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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 BDS/SCC]*** to you as your bid price ***Nepalese Rupees*** ..... ***[insert amount of contract price in figures and words including taxes]*** as corrected and modified in accordance with the Instructions to Bidders is hereby selected as substantially responsive evaluated bid closest to the Average Bid Price.

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 evaluated bid closest to the Average Bid Price.]

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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 for the Invitation of Bids dated ***.....[Insert date of bid invitation]*** ……..for execution of the……..***[Insert name of the contract and identification number, as given in the Contract BDS/SCC]*** ……... for the Contract price of Nepalese Rupees ***[insert amount in figures and words including taxes],*** 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, using for that purpose the Performance security Form included in Section X (Contract Forms) of this Bidding Document.

Authorized Signature: ……...

Name and Title of Signatory: ……

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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. This Agreement shall prevail over all other Contract documents.
   (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 List of Eligible Countries as per GCC,
   (f) the General Conditions of Contract;
   (g) the Specification;
   (h) the Drawings;
   (i) Bill of Quantities (or Schedules of Prices for lump sum contracts), and
   (j) Table of Price Adjustment Data
   (k) List of Approved Subcontractors
   (l).....***[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

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Witness, Name Signature, Address, Date List of Approved Subcontractors

In accordance with GCC Sub-Clause 13.1, The following Subcontractors are approved for carrying out the work as specified below.

Name of Subcontractors	Description of Works	Value/Percentage of subcontract

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Performance Security

(On letterhead paper of the Bank)

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

Beneficiary: ..... ***[Insert Name and Address of Employer]*** …….....
Date: .....

Performance Guarantee No.:…….

We have been informed that ... ... ***[insert name of the Contractor, which in the case of a joint venture shall be the name of the joint venture]*** (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 Nepalese Rupees .....***[insert amount in figures* and 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……***[insert day]***……..Day of ……***[insert month, year]***…… **, and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG), 2010 Revisions,, ICC Publication No. 758 , .except that the supporting statement under Article 15(a) is hereby excluded..

……

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 percentage of the Contract Price specified in the Contract in Nepalese Rupees.*

*** Insert the date thirty days after the date specified for the Defect Liability Period. 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.*

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Advance Payment Security

(On letterhead paper of the Bank)

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

Beneficiary: ……***[Insert Name and address of employer]***

Date : ……

Advance Payment Guarantee No……..

We have been informed that **……**…… ***[insert name of the Contractor, which in the case of a joint venture shall be the name of the joint venture]*** (hereinafter called "the Contractor") has entered into Contract No. ..... ***[insert refrence number of the contract]*** ……dated …… ***[insert agreement date]*** with you, for the execution of ***.....[Insert name of the 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 Nepalese Rupees ……. ***[insert amount in figures*and in words]*** is to be made against an advance payment guarantee.

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 Nepalese Rupees …….***[insert*** amount in figures****. =and 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:

(a) Used the advance payment for purposes other than the costs of mobilization in respect of the Works. Or

(b) .Has failed to repay the advance payment when it has become due and payable in accordance with the conditions of the contract, specifying the amount payable by the contractor.

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 .. ***[insert day]***..... day of ... ***[insert month, year]***...**, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG), 2010 Revisions,, ICC Publication No. 758 , except that the supporting statement under Article 15(a) is hereby excluded..

……

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.*

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Retention Money Security

(On letterhead paper of the Bank)

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

Beneficiary: _____ ***[Insert name and Address of Employer]***

Date: _____***[Insert date of issue]***

RETENTION MONEY GUARANTEE No.: ***[Insert guarantee reference number]***

We have been informed that _____ ***[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]*** (hereinafter called "the Contractor") has entered into Contract No. _____ ***[insert reference number of the contract]*** dated _____ with the Beneficiary, 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, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when at least eighty (80) percent of the whole works have been completed, progress of the works is satisfactory in accordance with the Contract as per approved work schedule and it can be assured that the works can be completed at the intended completion date, payment of ***[insert the amount of the Retention Money]*** is to be made against a Retention Money guarantee.

At the request of the Contractor, we, .. . ***[insert name of the Bank]*** ……., as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of Nepalese Rupees _____ ***[insert amount in figures andamount in words]***[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

This guarantee shall expire no later than the …***[insert day]***... day of ……***[insert month, year***… [2], and any demand for payment under it must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG), 2010 Revisions,, ICC Publication No. 758 , except that the supporting statement under Article 15(a) is hereby excluded.

……

Seal of Bank and Signature(s)

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

[1] *The Guarantor shall insert the amount of the Retention Money.*

[2] *Insert the same expiry date which is 30 days more than the end of Defect Liability Period. The Employer should note that in the event of an extension of this date 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.*

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